
DMS-100* FAMILY

ALL PRODUCT COMPUTING-MODULE LOADS

Volume 5 of 15

RETIRED ENGINEERING MANUALS

97Q4 Standard 05.03 December 1997

* DMS-100 is a trademark of NORTEL Limited.
Volume Separator - Front Page

Release 05.03
December 1997

DMS-100 Family
North American DMS-100
ALL PRODUCTS COMPUTING-MODULE LOADS Vol 5 of 15

CR 1997 NORTEL
ALL RIGHTS RESERVED

NORTEL CONFIDENTIAL: The information contained in this document is the property of NORTEL. Except as specifically authorized in writing by NORTEL, the holder of this document shall keep the information contained herein confidential and shall protect same in whole or in part from disclosure and dissemination to third parties and use same for evaluation, operation, and maintenance purposes only.

Information is subject to change without notice. NORTEL reserves the right to make changes in design or components as progress in engineering and manufacturing may warrant.

DMS, DMS SuperNode, Map, and NT are trademarks of NORTEL.
Publication number: PLN-8991-103
Product release: LEC and up
Document release: 05.03
Date: 09 December 1997
Printed in the United States of America

VOLUME SEPARATOR - BACK PAGE

97/12/09

EMR

RETIRED EQUIPMENT

RETIRED EQUIPMENT

THIS PAGE IS INTENTIONALLY LEFT BLANK

97/12/09

RETIRED EQUIPMENT

EMR1: INTRODUCTION

EMR2: PERIPHERAL MODULES MENU

EMR2-01-DCM-1	DIGITAL CARRIER MODULE	NT2X31AA
EMR2-01-DCM-2	DIGITAL CARRIER MODULE	NT2X31AB
EMR2-01-DCM-3	DIGITAL CARRIER MODULE	NT2X31AC
EMR2-01-DCM-4	DIGITAL CARRIER MODULE	NT2X31AK
EMR2-01-DCM-5	DIGITAL CARRIER MODULE	NT2X31AH
EMR2-01-DCM-6	DIGITAL CARRIER MODULE	NT2X31AL
EMR2-01-DCM-7	DIGITAL CARRIER MODULE	NT2X31AJ
EMR2-01-DCM-8	DIGITAL CARRIER MODULE	NT2X31AT
EMR2-01-DCM-9	DIGITAL CARRIER MODULE	NT2X31AU
EMR2-01-DES-1	DIGITAL ECHO SUPPRESSOR MODULE	NT2X12AA
EMR2-01-DES-2	DIGITAL ECHO SUPPRESSOR MODULE	NT2X12AB
EMR2-01-DES-3	DIGITAL ECHO SUPPRESSOR MODULE	NT2X12AD
EMR2-01-DRA-1	MTM AND DRA MULTIPOWER CONVERTER CP	NT2X58CG
EMR2-01-IMTM-1	INTERNATIONAL MTM FOR DRA	NT2X58AU
EMR2-01-IMTM-10	INTERNATIONAL MAINTENANCE TRUNK MODULE C	NT2X58AY
EMR2-01-IMTM-11	INTERNATIONAL MAINTENANCE TRUNK MODULE S	NT2X58AT
EMR2-01-IMTM-13	INTERNATIONAL MAINTENANCE TRUNK MODULE C	NT2X58CL
EMR2-01-IMTM-4	INTERNATIONAL MAINTENANCE TRUNK MODULE C	NT2X58DB
EMR2-01-IMTMC-1	INT'L MAINTENANCE TRUNK CONTROLLER CP FI	NT2X58AS
EMR2-01-IMTMC-2	SCOPEDIAL U.K. IMTM COMMON CP FILL	NT2X58BA
EMR2-01-IMTMC-3	INT'L MAINTENANCE TRUNK MODULE CP FILL	NT2X58CC
EMR2-01-IMTMC-4	INT'L MAINTENANCE TRUNK MODULE CP FILL	NT2X58DA
EMR2-01-IMTMC-9	U.K. IMTM COMMON CP	NT2X58BB
EMR2-01-ITM8-1	INTERNATIONAL EIGHT WIRE TRUNK MODULE	NT2X52BB
EMR2-01-ITM8C-1	U.K. ITM8 COMMON CP	NT2X52CA
EMR2-01-IT8A-2	INTERNATIONAL EIGHT WIRE TRUNK MODULE WI	NT2X52CC
EMR2-01-IT8C-1	U.K. ITM8 COMMON CP	NT2X52CB
EMR2-01-MTM-1	MAINTENANCE TRUNK MODULE	NT2X58AA
EMR2-01-MTM-12	MAINTENANCE TRUNK MODULE FOR DRA	NT2X58CB
EMR2-01-MTM-2	MAINTENANCE TRUNK MODULE	NT2X58AG
EMR2-01-MTM-3	MAINTENANCE TRUNK MODULE	NT2X58AC
EMR2-01-MTM-4	MAINTENANCE TRUNK MODULE	NT2X58AK
EMR2-01-MTM-5	MAINTENANCE TRUNK MODULE	NT2X58AN
EMR2-01-MTM-6	MAINTENANCE TRUNK MODULE	NT2X58AL
EMR2-01-MTM-7	MAINTENANCE TRUNK MODULE FOR DRA	NT2X58AM
EMR2-01-MTMC-1	MAINTENANCE TRUNK MODULE COMMON CP FILL	NT2X58AW
EMR2-01-MTMC-11	MAINTENANCE TRUNK MODULE COMMON CP	NT2X58AZ
EMR2-01-MTMC-12	MAINTENANCE TRUNK MODULE COMMON CP	NT2X58AX
EMR2-01-MTMC-2	MAINTENANCE TRUNK MODULE COMMON CP FILL	NT2X58AR
EMR2-01-MTMC-3	MAINTENANCE TRUNK MODULE COMMON CP FILL	NT2X58CK
EMR2-01-MTMC-4	MAINTENANCE TRUNK MODULE COMMON CP FILL	NT2X58CJ
EMR2-01-MTMC-5	MAINTENANCE TRUNK MODULE COMMON CP	NT2X58AP
EMR2-01-OAU-1	OFFICE ALARM UNIT	NT2X58AB
EMR2-01-OAU-2	OFFICE ALARM UNIT	NT2X58AD

97/12/09

EMR2-01-TMC-1	DMS-100/200 TRUNK MODULE COMMON CP	NT2X52AK
EMR2-01-TMC-2	DMS-300 TRUNK MODULE COMMON CP	NT2X52AL
EMR2-01-TM2-1	TRUNK MODULE 2 WIRE	NT2X52AA
EMR2-01-TM2-10	TRUNK MODULE 2 WIRE	NT2X52AM
EMR2-01-TM2-4	TRUNK MODULE 2 WIRE	NT2X52AE
EMR2-01-TM4-1	TRUNK MODULE 4 WIRE	NT2X52AB
EMR2-01-TM4-10	TRUNK MODULE 4 WIRE	NT2X52AN
EMR2-01-TM4-2	TRUNK MODULE 4 WIRE	NT2X52AF
EMR2-01-TM8-1	TRUNK MODULE 8 WIRE	NT2X52AC
EMR2-01-TM8-14	TRUNK MODULE 8 WIRE WITH ACCESS	NT2X52AR
EMR2-01-TM8-15	TRUNK MODULE 8 WIRE	NT2X52AV
EMR2-01-TM8-3	TRUNK MODULE 8 WIRE	NT2X52AP
EMR2-01-TM8-4	TRUNK MODULE 8 WIRE	NT2X52AG
EMR2-01-TM8-5	TRUNK MODULE 8 WIRE WITH ACCESS	NT2X52AD
EMR2-01-000	TRUNK MODULE OR DIGITAL CARRIER EQUIP FR	NT0X46AA
EMR2-01-000-10	TRUNK MODULE EQUIPMENT FRAME OR	NT0X46AB
EMR2-02-TAC	TEST ACCESS CONTROLLER EQUIPMENT FRAME	NTCX01AA
EMR2-02-TAN-1	TEST ACCESS NETWORK MODULE	NT5X00AA
EMR2-02-TAN-2	TEST ACCESS NETWORK WITH TM CONNECTIONS	NT5X00AB
EMR2-02-TAN-3	TEST ACCESS NETWORK MODULE	NT5X00AC
EMR2-02-TAN-4	TEST ACCESS NETWORK MODULE WITH TM CONNE	NT5X00AD
EMR2-02-TAN-5	TEST ACCESS NETWORK EQUIPMENT FRAME	NT5X12AB
EMR2-02-000	TEST ACCESS NETWORK EQUIPMENT FRAME	NT5X12AA
EMR2-03-LD-1	LINE DRAWER	NT2X19AA
EMR2-03-LD-2	LINE DRAWER	NT2X19AC
EMR2-03-LMC-1	LINE MODULE CONTROL SHELF	NT2X14AA
EMR2-03-LMC-2	LINE MODULE CONTROL SHELF	NT2X14AC
EMR2-03-LMC-3	LINE MODULE CONTROL SHELF	NT2X14AE
EMR2-03-LMC-4	LINE MODULE CONTROL SHELF	NT2X14AG
EMR2-03-000	LINE MODULE EQUIPMENT FRAME	NT0X45AA
EMR2-03-001	LINE MODULE EQUIPMENT FRAME	NT0X45AB
EMR2-03-002	LINE MODULE EQUIPMENT FRAME	NT0X45AC
EMR2-03-003	LINE MODULE EQUIPMENT FRAME	NT0X45AD
EMR2-03-004	LINE MODULE EQUIPMENT FRAME	NT0X45AE
EMR2-04-RLC-1	REMOTE LINE MODULE CONTROL SHELF	NT2X14AB
EMR2-04-RLC-2	REMOTE LINE MODULE CONTROL SHELF	NT2X14AD
EMR2-04-RLC-3	REMOTE LINE MODULE CONTROL SHELF	NT2X14AF
EMR2-04-RLC-4	REMOTE LINE MODULE CONTROL SHELF	NT2X14AH
EMR2-04-000	REMOTE LINE MODULE EQUIPMENT FRAME	NT0X45BA
EMR2-04-001	REMOTE LINE MODULE EQUIPMENT FRAME	NT0X45BB
EMR2-04-002	REMOTE LINE MODULE EQUIPMENT FRAME (BAY	NT0X45BC
EMR2-04-003	REMOTE LINE MODULE EQUIPMENT FRAME (BAY	NT0X45BD
EMR2-04-004	REMOTE LINE MODULE EQUIPMENT FRAME	NT0X45BE
EMR2-04-005	REMOTE LINE MODULE EQUIPMENT FRAME (BAY	NT0X45BF
EMR2-04-006	REMOTE LINE MODULE EQUIPMENT FRAME (BAY	NT0X45BG
EMR2-04-007	REMOTE LINE MODULE FRAME	NT0X45BH
EMR2-04-008	REMOTE LINE MODULE FRAME (BAY 0)	NT0X45BJ
EMR2-04-009	REMOTE LINE MODULE FRAME (BAY 1)	NT0X45BK
EMR2-05-000	REMOTE CONTROL AND MAINTENANCE EQUIPMENT	NT6X14CA
EMR2-06-DTC-1	DIGITAL TRUNK CONRTOLLER COMMON CP FILL	NT6X02AF
EMR2-06-DTC-10	FXPM DTC COMMON CP (DMS250)	NT6X02LE
EMR2-06-DTC-2	LGC, DTC, OR LTC COMMON CP FILL	NT6X02AC
EMR2-06-DTC-3	DIGITAL TRUNK CONTROLLER COMMON CP FILL	NT6X02AR
EMR2-06-DTC-4	DIGITAL TRUNK CONTROLLER COMMON CP FILL	NT6X02AM

97/12/09

EMR

RETIRED EQUIPMENT

EMR2-06-DTC-5	DIGITAL TRUNK CONTROLLER COMMON CP FILL	NT6X02AQ
EMR2-06-DTC-6	DIGITAL TRUNK CONTROLLER COMMON CP FILL	NT6X02IA
EMR2-06-DTC-7	DIGITAL TRUNK CONTROLLER COMMON CP	NT6X02IH
EMR2-06-DTC-9	DIGITAL TRUNK CONTROLLER COMMON CP	NT6X02IG
EMR2-06-DTCI-1	FXPM ISDN DTC COMMON CP (DMS250)	NT6X02RE
EMR2-06-IDTC-1	INTERNATIONAL DIGITAL TRUNK CONTROLLER	NT6X02KA
EMR2-06-IDTC-2	INTERNATIONAL DIGITAL TRUNK CONTROLLER C	NT6X02BM
EMR2-06-IDTC-3	INTERNATIONAL DIGITAL TRUNK CONTROLLER	NT6X02GA
EMR2-06-IDTC-4	INT'L DIGITAL TRUNK CONTROLLER CP FILL	NT6X02BA
EMR2-06-IDTC-5	INT'L DIGITAL TRUNK CONTROLLER CP FILL	NT6X02BE
EMR2-06-IDTC-6	INT'L DIGITAL TRUNK CONTROLLER CP FILL	NT6X02BN
EMR2-06-IDTC-7	INT'L DIGITAL TRUNK CONTROLLER CP FILL	NT6X02KC
EMR2-06-IDTC-8	INTERNATIONAL DTC COMMON CP	NT6X02GJ
EMR2-06-ILGC-1	INTERNATIONAL LINE GROUP CONTROLLER	NT6X02KB
EMR2-06-ILGC-2	INTERNATIONAL LINE GROUP CONTROLLER	NT6X02HA
EMR2-06-ILGC-3	INT'L LINE GROUP CONTROLLER COMMON CP FI	NT6X02BF
EMR2-06-ILGC-4	INT'L LINE GROUP CONTROLLER COMMON CP FI	NT6X02BD
EMR2-06-ILGC-5	INT'L LINE GROUP CONTROLLER COMMON CP FI	NT6X02KD
EMR2-06-ILGC-6	INTERNATIONAL LINE GROUP CONTROLLER CP	NT6X02BK
EMR2-06-ILGC-7	INTERNATIONAL LINE GROUP CONTROLLER CP	NT6X02HB
EMR2-06-IXPM-1	UNIVERSAL ILGC/IDTC COMMON CP FILL	NT6X02BP
EMR2-06-IXPM-2	INTERNATIONAL DTC/LGC COMMON CIRCUIT PAC	NT6X02GM
EMR2-06-IXPM-3	INTERNATIONAL LINE GROUP CONTROLLER CP I	NT6X02BW
EMR2-06-LGC-1	LGC, DTC, OR LTC COMMON CP FILL	NT6X02AA
EMR2-06-LGC-10	LINE GROUP CONTROLLER COMMON CP	NT6X02RB
EMR2-06-LGC-2	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02AE
EMR2-06-LGC-3	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02AY
EMR2-06-LGC-4	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02AZ
EMR2-06-LGC-5	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02AL
EMR2-06-LGC-6	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02AH
EMR2-06-LGC-7	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02LA
EMR2-06-LGC-8	SCOPEDIAL U.K. LGC COMMON CP, OR DTC COM	NT6X02BC
EMR2-06-LGC-9	LINE GROUP CONTROLLER COMMON CP	NT6X02AT
EMR2-06-LTC-1	LINE TRUNK CONTROLLER COMMON CP FILL	NT6X02AD
EMR2-06-LTC-2	LINE TRUNK CONTROLLER COMMON CP FILL	NT6X02AK
EMR2-06-LTC-3	LINE TRUNK CONTROLLER COMMON CP FILL	NT6X02AG
EMR2-06-LTC-4	LINE TRUNK CONTROLLER COMMON CP FILL	NT6X02MA
EMR2-06-LTC-5	LINE TRUNK CONTROLLER COMMON CP	NT6X02AU
EMR2-06-LTC-6	LINE TRUNK CONTROLLER COMMON CP	NT6X02RC
EMR2-06-RX46BA	CABINETIZED INTERNATIONAL PERIPHERAL EQU	NTRX46BA
EMR2-06-SMA-1	SUBSCRIBER CARRIER MODULE-100 ACCESS (SM	NT6X02TE
EMR2-06-SMA-2	SUBSCRIBER CARRIER MODULE-100 ACCESS COM	NT6X02TF
EMR2-06-SMA-3	SUBSCRIBER CARRIER MODULE-100 ACCESS COM	NT6X02TH
EMR2-06-SMR-1	SUBSCRIBER MODULE REMOTE COMMON	NT6X02CA
EMR2-06-SMR-2	SUBSCRIBER MODULE REMOTE COMMON CP FILL	NT6X02CC
EMR2-06-SMR-3	SUBSCRIBER MODULE REMOTE COMMON CP	NT6X02CP
EMR2-06-SMR-4	SUBSCRIBER MODULE REMOTE COMMON CP	NT6X02CQ
EMR2-06-SMR-5	SUBSCRIBER MODULE REMOTE COMMON CP	NT6X02CS
EMR2-06-SMR-6	SMR COMMON CP FILL KIT	NT6X02CT
EMR2-06-SMS-1	SUBSCRIBER MODULE FOR SLC-96	NT6X02DA
EMR2-06-SMS-10	SUBSCRIBER MODULE - SLC-96	NT6X02DU
EMR2-06-SMS-2	SUBSCRIBER MODULE FOR SLC-96	NT6X02DB
EMR2-06-SMS-3	SUBSCRIBER MODULE FOR SLC-96	NT6X02DD
EMR2-06-SMS-4	SUBSCRIBER MODULE FOR SLC-96	NT6X02DC

97/12/09

EMR

RETIRED EQUIPMENT

EMR2-06-SMS-5	SUBSCRIBER MODULE FOR SLC-96 (SMS) COMMO	NT6X02DJ
EMR2-06-SMS-6	SUBSCRIBER MODULE FOR SLC-96 (SMS) COMMO	NT6X02DH
EMR2-06-SMS-7	SUBSCRIBER MODULE FOR SLC-96 (SMS) COMMO	NT6X02DM
EMR2-06-SMS-8	SUBSCRIBER MODULE SLC-96 W/O PROCESSOR	NT6X02DR
EMR2-06-SMS-9	SUBSCRIBER MODULE - SLC-96	NT6X02DT
EMR2-06-SMSR-1	SUBSCRIBER CARRIER MODULE - 100S REMOTE	NT6X02PA
EMR2-06-SMSR-2	SUBSCRIBER CARRIER MODULE-100S REMOTE	NT6X02PB
EMR2-06-SMSR-3	SUBSCRIBER CARRIER MODULE-100S REMOTE (S	NT6X02PD
EMR2-06-SMSR-4	SUBSCRIBER MOD. SLC-96 REMOTE W/O PROCES	NT6X02PG
EMR2-06-SMSR-5	SUBSCRIBER MOD. SLC-96 REMOTE COMMON CP	NT6X02PH
EMR2-06-SMSR-6	SUBSCRIBER MODULE - SLC-96 REMOTE	NT6X02PJ
EMR2-06-SMSR-7	SUBSCRIBER MODULE - SLC-96 REMOTE	NT6X02PK
EMR2-06-SMU-1	SUBSCRIBER MODULE FOR DMS-1 URBAN CP FIL	NT6X02EA
EMR2-06-SMU-10	SMU PACKFILL	NT6X02ET
EMR2-06-SMU-2	SUBSCRIBER MODULE FOR DMS-1 URBAN CP FIL	NT6X02EB
EMR2-06-SMU-20	ISDN SUBSCRIBER MODULE FOR DMS-1 URBAN C	NT6X02ES
EMR2-06-SMU-3	SUBSCRIBER MODULE FOR DMS-1 URBAN CP FIL	NT6X02AW
EMR2-06-SMU-4	SUBSCRIBER MODULE FOR DMS-1 URBAN (SMU)	NT6X02EG
EMR2-06-SMU-5	SUBSCRIBER MOD. DMS-1U PACKFILL W/O PROC	NT6X02EM
EMR2-06-SMU-6	SUBSCRIBER MODULE FOR DMS-1 URBAN (SMU)	NT6X02EF
EMR2-06-SMU-7	SUBSCRIBER MODULE FOR DMS-1 URBAN (SMU)	NT6X02EK
EMR2-06-SMU-8	SMU PACKFILL	NT6X02EL
EMR2-06-SMU-9	SMU COMMON CIRCUIT PACK KIT	NT6X02ZD
EMR2-06-000	COMMON PERIPHERAL CONTROLLER EQUIPMENT F	NT6X01AA
EMR2-06-6X02AI	DIGITAL TRUNK CONTROLLER COMMON CP (DMS-	NT6X02AI
EMR2-07-ILCM-1	ILCM COMMON CP	NT6X04BA
EMR2-07-ILCM-2	INTERNATIONAL LCM COMMON CP	NT6X04BB
EMR2-07-ILD-2	PCM-30 LINE DRAWER	NT6X05CA
EMR2-07-LCM-1	LINE CONCENTRATING MODULE COMMON CP	NT6X04AA
EMR2-07-LCM-2	LINE CONCENTRATING MODULE COMMON CP	NT6X04AB
EMR2-07-LCM-3	LINE CONCENTRATING MODULE COMMON CP	NT6X04AC
EMR2-07-001	LCE FRAME E/W COMMON FRAMEWORK	NT6X03RA
EMR2-07-002	LCE FRAME E/W EARTHQUAKE FRAMEWORK	NT6X03RB
EMR2-07-003	LINE CONCENTRATING EQUIPMENT FRAME	NT6X03CA
EMR2-07-005	LINE CONCENTRATING EQUIPMENT FRAME E/W C	NT6X03RC
EMR2-07-006	LINE CONCENTRATING EQUIPMENT FRAME E/W E	NT6X03RD
EMR2-08-MSB6-1	MSB6 COMMON CP FILL	NT6X07AA
EMR2-08-MSB6-2	MSB6 COMMON CP	NT6X07AB
EMR2-08-MSB6-3	MSB6 COMMON CP	NT6X07AC
EMR2-08-000	MESSAGE SWITCHING 6 EQUIPMENT FRAME	NT6X06AA
EMR2-08-001	MESSAGE SWITCHING 6 EQUIPMENT FRAME	NT6X06AB
EMR2-08-002	MESSAGE SWITCHING 6 EQUIPMENT FRAME	NT6X06AC
EMR2-11-MSB7-1	MSB7 COMMON CP FILL	NT6X32AA
EMR2-11-MSB7-2	MSB7 COMMON CP FILL	NT6X32AB
EMR2-11-MSB7-3	MSB7 COMMON CP FILL	NT6X32CA
EMR2-11-MSB7-4	MSB7 COMMON CP FILL	NT6X32BA
EMR2-11-001	MSB7 COMMON CIRCUIT PACK	NT6X32CC
EMR2-12-FLIS-1	FLIS COMMON CIRCUIT PACK FILL	NT9X72CA
EMR2-12-LIS-1	LINK INTERFACE UNIT CHELF COMMON CP FILL	NT9X72AA
EMR2-12-LIS-2	LINK INTERFACE UNIT SHELF COMMON CP	NT9X72AD
EMR2-12-LIS-3	LINK INTERFACE UNIT SHELF COMMON CP	NT9X72AC
EMR2-12-LMS-1	LOCAL MESSAGE SWITCH SHELF COMMON CP FIL	NT9X71AA
EMR2-12-LMS-2	LOCAL MESSAGE SWITCH SHELF COMMON CP	NT9X71AB
EMR2-12-000	LINK INTERFACE MODULE CABINET	NT9X70BA

97/12/09

EMR

RETIRED EQUIPMENT

EMR2-12-001	LINK INTERFACE MODULE CABINET	NT9X70AA
EMR2-12-002	ENHANCED MULTI-PURPOSE CABINET	NTEX01AA
EMR2-13-FSP-1	OPM FRAME SUPERVISORY PANEL	NT6X25BB
EMR2-13-I00	INTERNATIONAL OUTSIDE PLANT MODULE	NT8X40AA
EMR2-13-LCM-1	LCM COMMON CP	NT8X04AA
EMR2-13-LCM-2	LCM COMMON CP	NT8X04AB
EMR2-13-LCM-3	LCM-C COMMON CP	NT8X04BA
EMR2-13-000	OUTSIDE PLANT MODULE	NT8X01AA
EMR2-13-001	OUTSIDE PLANT MODULE - 256	NT8X01BA
EMR2-13-002	OUTSIDE PLANT MODULE - 256	NT8X01BB
EMR2-14-HIE-1	HOST INTERFACE EQUIPMENT COMMON CP	NT6X11AA
EMR2-14-HIE-2	HOST INTERFACE EQUIPMENT COMMON CP FILL	NT6X11BA
EMR2-14-HIE-3	HOST INTERFACE EQUIPMENT COMMON CP FILL	NT6X11EA
EMR2-14-HIE-4	HIE COMMON CP	NT6X11AB
EMR2-14-HIE-5	HOST INTERFACE EQUIPMENT COMMON CP	NT6X11BB
EMR2-15-RCC-1	REMOTE CLUSTER CONTROLLER COMMON CP FILL	NT6X12AA
EMR2-15-RCC-10	RCC WITH XPM+	NT6X12AK
EMR2-15-RCC-11	RCC COMMON CP KIT	NT6X12AL
EMR2-15-RCC-2	REMOTE CLUSTER CONTROLLER COMMON CP FILL	NT6X12AC
EMR2-15-RCC-3	REMOTE CLUSTER CONTROLLER COMMON CP FILL	NT6X12AB
EMR2-15-RCC-4	REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12CA
EMR2-15-RCC-5	INTERNATIONAL FRAME RCEI	NT6X10AE
EMR2-15-RCC-6	REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12AD
EMR2-15-RCC-7	REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12AE
EMR2-15-RCC-8	REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12AF
EMR2-15-RCC-9	REMOTE CLUSTER CONTROLLER (RCC)	NT6X12AG
EMR2-15-RCCI-1	ISDN REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12DA
EMR2-15-RCCI-2	ISDN REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12DC
EMR2-15-RCCI-3	ISDN XPM PLUS REMOTE CLUSTER	NT6X12DE
EMR2-15-RCC8	RCC COMMON CP KIT	NT6X12AN
EMR2-15-000	REMOTE CONTROLLER EQUIPMENT FRAME	NT6X10AA
EMR2-15-001	ISDN REMOTE CONTROLLER EQUIPMENT FRAME	NT6X10AD
EMR2-15-002	REMOTE CONTROLLER EQUIPMENT FRAME	NT6X10AC
EMR2-16-RLCC-2	RLCC COMMON CP	NTNX14MA
EMR2-17-IAC-1	INTEGRATED ACCESS CONTROLLER CP	NTBX40BA
EMR2-17-IAC-2	INTEGRATED ACCESS CONTROLLER CP	NTBX40BB
EMR2-17-IAC-4	INTEGRATED ACCESS CONTROLLER COMMON CP	NTBX40BC
EMR2-17-000	INTEGRATED ACCESS EQUIPMENT FRAME	NTBX40AA
EMR2-18-000	ISDN COMMON PERIPHERAL CONTROLLER EQUIPM	NT6X01AB
EMR2-19-LCME-1	ISDN ENHANCED LINE CONCENTRATING MODULE	NTBX31BA
EMR2-19-LCME-2	ISDN ENHANCED LINE CONCENTRATING MODULE	NTBX31BB
EMR2-19-LD-1	ISDN LINE DRAWER	NTBX32AA
EMR2-19-PCKIT-1	LCME PACKFILL UPGRADE KIT	NTBX31PA
EMR2-20-IDNI-1	INTERNATIONAL DIGITAL NETWORK INTERCONNE	NTFX97AA
EMR2-20-ILGC-1	INTERNATIONAL LGC/DTC COMMON CP	NTFX33BA
EMR2-20-ILGC-3	INTERNATIONAL LGC/DTC COMMON CP	NTRX47AB
EMR2-20-ILGC-4	INTERNATIONAL LGC/DTC COMMON CP	NTFX33BC
EMR2-20-ILGC-5	INTERNATIONAL LGC/DTC COMMON CP	NTFX33BD
EMR2-20-IMTM-1	INTERNATIONAL MTM SHELF	NT2X58BC
EMR2-20-LGCI-1	INTERNATIONAL LGC/DTC COMMON CIRCUIT PAC	NTNX33GB
EMR2-20-LGCI-2	LGCI/DTCI COMMON CIRCUIT PACK (OFFSHORE)	NTFX33CB
EMR2-20-LGCI-3	INTERNATIONAL LGC/DTC COMMON CIRCUIT PAC	NTNX33GD
EMR2-20-LGCI-5	INTERNATIONAL LGC/DTC COMMON CIRCUIT PAC	NTNX33GH
EMR2-20-002	INTERNATIONAL CABINET AUXILIARY MODULE	NTFX37AA

97/12/09

EMR

RETIRED EQUIPMENT

EMR2-20-003	INTERNATIONAL CABINET AUXILIARY MODULE	NTFX37AB
EMR2-20-004	INTERNATIONAL CABINET GENERAL MODULE	NTFX47AA
EMR2-20-005	INTERNATIONAL CABINET LGE/DTE ISDN	NTNX33GA
EMR2-21-LTC-1	LGC/DTC OFFSHORE COMMON CP	NT6X02UA
EMR2-22-RCC0-1	OFFSHORE REMOTE CLUSTER	NT6X12DB
EMR2-22-RCC0-2	PCM-30 RCC COMMON CP (PRCC)	NT6X12DD
EMR2-22-RCC0-3	PCM-30 RCC COMMON CP (PRCC)	NT6X12DF
EMR2-24-RCC-1	REMOTE CLUSTER CONTROLLER 2 COMMON CP	NTMX85AA
EMR2-24-002	CRSC EXTENSION CABINET (CEXT) OFFSHORE	NTMX88BA
EMR2-25-RCC2-1	CRSC EXTENSION CABINET (CEXT)	NTMX88AA
EMR2-25-RCC2-2	CABINETIZED REMOTE SWITCHING CENTER	NTMX89AA
EMR2-25-RCC2-3	CABINETIZED REMOTE SWITCHING CENTER (CRS	NTMX89BA
EMR2-25-TM8	8W TRUNK MODULE SHELF PACKFILL	NT2X52AS
EMR2-6-IDTC-10	INTERNATIONAL DIGITAL TRUNK CONTROLLER C	NT6X02JA
EMR2-6-IDTC-11	INTERNATIONAL DIGITAL TRUNK CONTROLLER C	NT6X02KE
EMR2-6-IDTC-8	INTERNATIONAL DIGITAL TRUNK CONTROLLER C	NT6X02QA
EMR2-6-IDTC-9	INTERNATIONAL DIGITAL TRUNK CONTROLLER C	NT6X02GB
EMR2-6-6X02AS	DIGITAL TRUNK CONTROLLER COMMON CP	NT6X02AS
EMR2-6-6X02IC	DIGITAL TRUNK CONTROLLER COMMON CP	NT6X02IC
EMR2-6-6X02RA	DIGITAL TRUNK CONTROLLER COMMON CP	NT6X02RA
EMR2-96-000	PROVISIONING TABLE FOR PRODUCT	PCKDCM
EMR2-97-LCM-1	EXTENDED LCM PROCESSOR CHANGE KIT	NT6X04ZZ
EMR2-97-LCME-1	ISDN LCMI TO LCME UPGRADE KIT	NTBX30BA
EMR2-97-LCME-2	ISDN LCMI TO LCME UPGRADE KIT	NTBX30BB
EMR2-98-CH	PRODUCT CHANGE KIT TO PROVIDE NT0X70AC	NT2X58CH
EMR2-98-000	PROVISIONING TABLE FOR PRODUCT CHANGE KI	T_TM_KITS
EMR2-99-ISDN-1	ISDN UPGRADE CP CHANGE KIT	NT6X02ZA
EMR2-99-LGC-1	LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZR
EMR2-99-LGC-2	LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZS
EMR2-99-LGC-3	LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZU
EMR2-99-LTC-1	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZT
EMR2-99-LTC-2	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZV
EMR2-99-LTC-3	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZW
EMR2-99-LTC-4	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZY
EMR2-99-LTC-5	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZZ
EMR2-99-LTC-6	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZN
EMR2-99-OPM-4	FMT-150B HARDWARE MOUNTING KIT	NT0X1978
EMR2-99-OPM-5	DDM-1000 HARDWARE MOUNTING KIT	NT0X1979
EMR2-99-RCC-1	SIGNALLING PROCESSOR CHANGE KIT	NT6X02ZF
EMR2-99-RCC-2	RCC COMMON CP CHANGE KIT	NT6X12ZY
EMR2-99-RCC-3	RCC TO RCCI PRODUCT CHANGE KIT	NT6X1022
EMR2-99-RCC-4	PRODUCT CHANGE KIT	NT6X12ZE
EMR2-99-RCC-5	PC KIT (6X12AD TO 6X12AG)	NT6X12ZC
EMR2-99-RCC-6	RCC COMMON CP CHANGE KIT	NT6X12ZD
EMR2-99-RCC-7	PC KIT (6X12AF TO 6X12CA)	NT6X12ZZ
EMR2-99-RCC-8	DUAL RCC PC KIT	NT6X12ZG
EMR2-99-RCC-9	RCE FILLER PANEL PC KIT	NT6X10ZY
EMR2-99-RCC9	PC KIT (6X12AL TO 6X12AN)	NT6X12ZJ
EMR2-99-RMM-1	REMOTE MAINTENANCE EQUIPMENT KIT (RCEI 6	NT6X10AJ
EMR2-99-SMR-1	CONVERSION FROM SMR TO DTC OR LGC CHANGE	NT6X02ZG
EMR2-99-SMS-1	EXPANDED SIGNALLING PROCESSOR CHANGE KIT	NT6X02YW
EMR2-99-SMU-1	CONVERSION FROM SMS TO SMU CHANGE KIT	NT6X02ZH
EMR2-99-SMU-2	SMU COMMON CIRCUIT PACK KIT	NT6X02CK
EMR2-99-SMU-4	SMU COMMON CIRCUIT PACK KIT	NT6X02CL

97/12/09

EMR

RETIRED EQUIPMENT

EMR2-99-SMU-6	SMU PRODUCT CHANGE KIT	NT6X02EH
EMR2-99-XPM-10	XPM PLUS PACKFILL CHANGE KIT CCPE MODEL	NTRX36DA
EMR2-99-XPM-11	3 PROCESSOR BKP NL XPM+ UPGRADE KIT	NT6X01XE
EMR2-99-XPM-12	XPM PLUS ISDN PACKFILL CHANGE KIT	NT6X02XB
EMR2-99-XPM-13	XPM PLUS PACKFILL KIT	NT6X02XF
EMR2-99-XPM-18	XPM PLUS 3 PROC. UPGRADE KIT	NTMX70AC
EMR2-99-XPM-19	3 PROC. B/P HOST AND RCC XPM+ UPGRADE KI	NT6X02XH
EMR2-99-XPM-2	PRODUCT CHANGE KIT (AA/AC TO IA/LA/MA)	NT6X02ZE
EMR2-99-XPM-6	XPM PLUS PACKFILL CHANGE KIT	NT6X02XA
EMR2-99-XPM-8	RCC TO XPM PLUS PRODUCT CHANGE KIT	NT6X12ZF
EMR2-99-XPM-9	XPM PLUS PACKFILL CHANGE KIT CCPE MODEL	NTRX36CA

EMR3: DIGITAL NETWORK SUBSYSTEMS MENU

EMR3-01-NC-1	NETWORK CROSSPOINT SHELF	NT0X4820
EMR3-01-NIA-1	NETWORK INTERFACE SHELF A	NT0X4800
EMR3-01-NIB-1	NETWORK INTERFACE SHELF B	NT0X4810
EMR3-01-000	NETWORK FRAME - FULL	NT0X48AA
EMR3-01-001	NETWORK FRAME - HALF	NT0X48AB
EMR3-01-002	NETWORK FRAME - QUARTER	NT0X48AC
EMR3-01-003	NETWORK FRAME - FULL	NT0X48AG
EMR3-01-004	NETWORK FRAME - HALF	NT0X48AH
EMR3-01-005	NETWORK FRAME - QUARTER	NT0X48AJ
EMR3-02-000	DIGITAL NETWORK INTERCONNECTING FRAME	NT0X18AA
EMR3-03-INC-1	NETWORK COMMON CP FILL (INTERNATIONAL)	NT5X13BB
EMR3-03-NC-1	NETWORK COMMON CP FILL	NT5X13AC
EMR3-03-NC0-1	NETWORK CROSSPOINT SHELF PLANE 0	NT5X15AA
EMR3-03-NC1-1	NETWORK CROSSPOINT SHELF PLANE 1	NT5X15AB
EMR3-03-NI-1	NETWORK SERIAL INTERFACE SHELF	NT5X16AA
EMR3-03-000	NETWORK FRAME PLANES COMBINED	NT5X13AA
EMR3-03-001	NETWORK FRAME PLANES COMBINED	NT5X13BA
EMR3-04-NET-1	NETWORK COMMON CIRCUIT PACK FILL	NT8X11AA
EMR3-04-NET-2	NETWORK COMMON CIRCUIT PACK FILL	NT8X11AC
EMR3-04-NET-3	NETWORK COMMON CP FILL (INTERNATIONAL)	NT8X11BA
EMR3-05-CCT-1	ISN CABLING STRUCTURE CABINET	NT0X35BB
EMR3-05-000	ENHANCED NETWORK CABINET	NT9X05AB
EMR3-99-ZW	ISDN KIT	NT5X13ZW
EMR3-99-ZY	POWER CONVERTER CHANGE KIT	NT5X13ZY
EMR3-99-ZZ	GAIN FEATURE CHANGE KIT	NT5X13ZZ

EMR4: CENTRAL CONTROL SUBSYSTEMS MENU

INDEX	OF CENTRAL CONTROL SUBSYSTEMS SECTIONS	
EMR4-01-CCC-1	CCC COMMON CIRCUIT PACKS	NT3X45EV
EMR4-01-CMC-1	CENTRAL MESSAGE CONTROLLER	NT1X32AA
EMR4-01-CPU-1	CENTRAL PROCESSOR UNIT	NT1X41AA
EMR4-01-CPU-2	ENHANCED CPU CAPACITY COMMON CP	NT3X45EH
EMR4-01-CPU-4	ENHANCED LOADROUTE/CPU CAPACITY COMMON C	NT3X45EK
EMR4-01-DS-1	DATA STORE SHELF	NT3X31AB
EMR4-01-PS-1	PROGRAM STORE SHELF	NT3X31AA
EMR4-01-000	CENTRAL CONTROL COMPLEX FRAME	NT0X41AC
EMR4-01-001	CENTRAL CONTROL COMPLEX FRAME (DOUBLE BA	NT3X45EW
EMR4-02-CMPS-1	COMPUTING MODULE PROCESSOR SHELF COMMON	NT9X06AC
EMR4-02-CMPS-2	COMPUTING MODULE PROCESSOR SHELF COMMON	NT9X06AD

97/12/09

EMR

RETIRED EQUIPMENT

EMR4-02-DS-1	CONNECTORIZED DATA STORE SHELF	NT3X31AC
EMR4-02-MSPS-1	MESSAGE SWITCH PROCESSOR SHELF COMMON CP	NT9X04AE
EMR4-02-MSPS-2	MESSAGE SWITCH PROCESSOR SHELF COMMON CP	NT9X04AG
EMR4-02-000	MEMORY EXTENSION FRAME	NT0X41AB
EMR4-02-001	DUAL PLANE COMBINED CORE CABINET	NT9X01BA
EMR4-03-CMC-1	CENTRAL MESSAGE CONTROLLER	NT1X32AB
EMR4-03-CPU-1	CENTRAL PROCESSOR UNIT	NT1X41AB
EMR4-03-DS-1	1M-WORD DATA STORE SHELF	NT3X31AE
EMR4-03-PS-1	1M-WORD PROGRAM STORE SHELF	NT3X31AD
EMR4-03-000	CENTRAL CONTROL COMPLEX (1MW) FRAME	NT0X41AJ
EMR4-03-001	EMI DUAL PLANE COMBINED CORE CABINET	NT9X01JA
EMR4-04-DS-2	1M-WORD CONNECTORIZED DATA STORE SHELF	NT3X31AF
EMR4-04-000	MEMORY EXTENSION FRAME	NT0X41AK
EMR4-05-CPU-1	CENTRAL PROCESSOR UNIT AND MEMORY	NT3X41AA
EMR4-05-DS-1	1M-WORD DATA STORE SHELF	NT3X32AB
EMR4-05-MDC-1	CENTRAL MESSAGE AND I/O DEVICE CONTROLLE	NT2X76AA
EMR4-05-PS-1	1M-WORD PROGRAM STORE SHELF	NT3X32AA
EMR4-05-000	CENTRAL CONTROL FRAME (DOUBLE BAY)	NT3X45AA
EMR4-05-001	DPCC MERIDIAN CABINET INTERFACE	NT9X01PA
EMR4-06-DS-1	1M-WORD CONNECTORIZED DATA STORE SHELF	NT3X32AC
EMR4-06-000	MEMORY EXTENSION FRAME	NT3X45AB
EMR4-06-001	SUPERNODE SPARE STORAGE CABINET	NT9X01FA
EMR4-07-CPU-1	CENTRAL PROCESSOR UNIT AND MEMORY	NT3X41BA
EMR4-07-DS-1	1M-WORD DATA STORE SHELF	NT3X32BB
EMR4-07-PS-1	1M-WORD PROGRAM STORE SHELF	NT3X32BA
EMR4-07-000	CENTRAL CONTROL FRAME (DOUBLE BAY)	NT3X45CA
EMR4-08-DS-1	1M-WORD CONNECTORIZED DATA STORE SHELF	NT3X32BC
EMR4-08-000	MEMORY EXTENSION FRAME	NT3X45CB
EMR4-09-000	CENTRAL CONTROL FRAME (DOUBLE BAY)	NT3X45DA
EMR4-10-CPM-1	CENTRAL PROCESSOR UNIT AND MEMORY	NT3X41DA
EMR4-10-DS-1	4M-WORD DATA STORE SHELF	NT3X32DA
EMR4-10-MDC-1	CENTRAL MESSAGE AND I/O DEVICE CONTROLLE	NT2X76BA
EMR4-10-000	CENTRAL CONTROL COMPLEX FRAME (DOUBLE BA	NT3X45EA
EMR4-10-001	CENTRAL CONTROL COMPLEX FRAME (DOUBLE BA	NT3X45DW
EMR4-11-CCC-1	CCC COMMON CP FILL	NT3X45ED
EMR4-11-CCC-2	CCC COMMON CP FILL	NT3X45EJ
EMR4-11-CPU-1	ENHANCED CPU CAPACITY COMMON CP FILL	NT3X45EF
EMR4-11-CPU-2	BASIC CPU CAPACITY COMMON CP FILL	NT3X45EE
EMR4-12-DS-1	4M-WORD CONNECTORIZED DATA STORE SHELF	NT3X32DB
EMR4-12-000	MEMORY EXTENSION FRAME	NT3X45DB
EMR4-13-CMPS-1	COMPUTING MODULE PROCESSOR SHELF CP FILL	NT9X06AA
EMR4-13-CMPS-2	COMPUTING MODULE PROCESSOR SHELF CP FILL	NT9X06AB
EMR4-13-000	COMPUTING MODULE DUPLEX CABINET	NT9X01AA
EMR4-14-MSPS-1	MESSAGE SWITCH PROCESSOR SHELF CP FILL	NT9X04AA
EMR4-14-MSPS-2	MESSAGE SWITCH PROCESSOR SHELF CP FILL	NT9X04AB
EMR4-14-SLM-1	SLM COMMON CP FILL	NT9X07AA
EMR4-14-SLM-2	SYSTEM LOAD MODULE SHELF COMMON CP	NT9X07AB
EMR4-15-000	MESSAGE SWITCH SIMPLEX CABINET	NT9X01CA
EMR4-16-000	MESSAGE SWITCH DUPLEX CABINET	NT9X01GA
EMR4-17-000	MECHANICAL H/W FOR C42(S/DMS) CABINET	NT9X95AA
EMR4-98-CMPS-1	CM PROCESSOR UPGRADE CHANGE KIT	NT9X06CA
EMR4-98-CMPS-2	CM PROCESSOR UPGRADE KIT	NT9X06CC
EMR4-98-MSPS-1	MS MEMORY UPGRADE KIT	NT9X04AD
EMR4-98-MSPS-2	MESSAGE SWITCH PROCESSOR UPGRADE KIT	NT9X04AF

97/12/09

EMR

RETIRED EQUIPMENT

EMR4-99-DC	FIRMWARE CHANGES FOR BCS-10 SOFTWARE	NT3X45DC
EMR4-99-DD	CENTRAL PROCESSOR ENHANCEMENT	NT3X45DD
EMR4-99-DE	PROGRAM STORE MIXED MEMORY (TWO SHELF PS	NT3X45DE
EMR4-99-DF	PROGRAM STORE MIXED MEMORY (SINGLE SHELF	NT3X45DF
EMR4-99-DG	PROGRAM STORE MIXED MEMORY (CPM SHELF)	NT3X45DG
EMR4-99-DH	DATA STORE MIXED MEMORY LAST SHELF	NT3X45DH
EMR4-99-DJ	DATA STORE EXPANSION MULTIPLE SHELF	NT3X45DJ
EMR4-99-DK	FIRMWARE CHANGES FOR BCS-15/16 SOFTWARE	NT3X45DK
EMR4-99-DL	FIRMWARE CHANGES FOR BCS-15/16 SOFTWARE	NT3X45DL
EMR4-99-DM	FIRMWARE CHANGES FOR 8 MEGAWORDS +	NT3X45DM
EMR4-99-DN	CPM PROGRAM STORE INCREASE	NT3X45DN
EMR4-99-DP	CPM PROGRAM STORE INCREASE	NT3X45DP
EMR4-99-DQ	PROGRAM STORE (PS) MEMORY	NT3X45DQ
EMR4-99-DR	INCREASE TO 3.0 MEGAWORDS	NT3X45DR
EMR4-99-DS	REMOTE SURVEILLANCE & CONTROL VIA WE.	NT3X45DS
EMR4-99-EC	CPM PROGRAM STORE 8MW MEMORY CAPACITY	NT3X45EC
EMR4-99-EM	CPU CAPACITY ENHANCEMENT PC KIT	NT3X45EM
EMR4-99-EN	DATA STORE MIXED MEMORY 256KW AND 1MW CP	NT3X45EN
EMR4-99-EP	NT3X45EP PRODUCT CHANGE KIT	NT3X45EP
EMR4-99-EQ	NT3X45EQ PRODUCT CHANGE KIT	NT3X45EQ
EMR4-99-ER	DATA STORE MIXED MEMORY (INCREASE TO 15.	NT3X45ER
EMR4-99-ES	STRATUM II CLOCK	NT3X45ES
EMR4-99-ET	MIXED MEMORY INCREASE TO 16 MW	NT3X45ET
EMR4-99-EY	CPU CAPACITY ENHANCEMENT	NT3X45EY
EMR4-99-000	PROVISIONING TABLE FOR PRODUCT CHANGE KI	T_CCC_KITS
EMR4-99-001	MEMORY PROVISIONING CONSIDERATIONS	MEMPROV

EMR5: INPUT/OUTPUT SUBSYSTEMS MENU

EMR5-01-BMCA-2	REDUNDANT BMC AMA LSSGR, HDLC LAP B, PSE	NT8M04_D
EMR5-01-BMCA-3	REDUNDANT BMC AMA LSSGR, HDLC ADU, PSEUD	NT8M04_F
EMR5-01-BMCD-1	BILLING MEDIA CONVERTER DEUCE SMDR BISYN	NT8M04_G
EMR5-01-BMCD-2	BILLING MEDIA CONVERTER DEUCE SMDR ASCII	NT8M04_L
EMR5-01-DDU-1	DISK DRIVE UNIT SHELF	NT4X00AA
EMR5-01-DDU-2	DISK DRIVE UNIT SHELF	NT4X00AB
EMR5-01-DDU-3	DISK DRIVE UNIT SHELF	NT NT4X00AC
EMR5-01-DDU-4	DUAL DISK DRIVE UNIT SHELF	NT4X00AF
EMR5-01-DPP-2	DISTRIBUTIVE PROCESSING PERIPHERAL	NT6M01AB
EMR5-01-DSM-1	DATA SET MODULE	NT1X60AA
EMR5-01-DSM-2	DATA SET MODULE SHELF	NT1X60AB
EMR5-01-DSM-7	DATA SET MODEM SHELF	NT5X09AA
EMR5-01-I0C-1	I/O CONTROLLER MODULE	NT1X61AA
EMR5-01-I0C-2	INPUT/OUTPUT CONTROLLER MODULE	NT1X61AB
EMR5-01-I0C-3	INPUT/OUTPUT CONTROLLER COMMON CP FILL	NT1X61AC
EMR5-01-I0C-4	INPUT/OUTPUT CONTROLLER MODULE	NT1X61AD
EMR5-01-I0C-5	INPUT/OUTPUT CONTROLLER COMMON CP	NT1X61AE
EMR5-01-ROS-1	REMOTE OSCILLATOR DMS-CORE SHELF	NT3X95BA
EMR5-01-ROS-2	STRATUM II OSCILLATOR SHELF	NT3X95AA
EMR5-01-000	MAG TAPE CENTRE FRAME	NT0X43AA
EMR5-01-001	MAG TAPE CENTRE FRAME	NT0X43AB
EMR5-01-002	MAG TAPE CENTRE FRAME	NT0X43AC
EMR5-02-DRS-1	DATA UNIT RACKMOUNT SHELF	NT4X25BH
EMR5-02-DRS-2	RACKMOUNT DATA UNIT SHELF	NT4X25DH
EMR5-02-000	#6 SIGNALLING EQUIPMENT FRAME	NT5X08AA

97/12/09

EMR

RETIRED EQUIPMENT

EMR5-02-001	#6 SIGNALLING EQUIPMENT FRAME	NT5X08AB
EMR5-02-002	MODEM EQUIPMENT FRAME	NT0X43BA
EMR5-99-CLC-1	PRODUCT CHANGE KIT	NTRX30ZA
EMR5-99-DDU-1	14 INCH DDU ENHANCEMENT	NT4X00AY
EMR5-99-IOC-1	INPUT/OUTPUT CONTROLLER PRODUCT CHANGE K	NT1X61AX

EMR6: OFFICE ALARM VISUAL AND AUDIBLE EQUIPMEN

EMR7: MERIDIAN BUSINESS SERVICES EQUIPMENT MEN

EMR7-BSAC-1	BUSINESS SERVICE ATTENDANT CONSOLE	NT4X09AB
EMR7-BSAC-2	BUSINESS SERVICE ATTENDANT CONSOLE	NT4X09AE
EMR7-BSAC-3	BUSINESS SERVICE ATTENDANT CONSOLE	NT4X09AF
EMR7-BSAC-4	BUSINESS SERVICE ATTENDANT CONSOLE	NT4X09AG
EMR7-BSAC-5	BUSINESS SERVICE ATTENDANT CONSOLE	NT4X09AH
EMR7-COAX-2	COAX ELIMINATOR SHELF	NT4X25BS
EMR7-P-PHONE-1	MDC ELECTRONIC BUSINESS SETS (EBS)	NT4X20

EMR8: OPERATOR EQUIPMENT MENU

EMR8-AOSS-1	AUXILIARY OPERATOR SERVICES SYSTEM	NT4X70AA
EMR8-AOSS-2	AUXILIARY OPERATOR SERVICES SYSTEM	NT4X70AB
EMR8-AOSS-3	AUXILIARY OPERATOR SERVICES SYSTEM	NT4X70AC
EMR8-AOSS-4	AUXILIARY OPERATOR SERVICES SYSTEM	NT4X70AD
EMR8-ITOPS4-1	ITOPS OPERATOR POSITION	NT4X71DA
EMR8-ITOPS4-2	ITOPS MODULAR POSITION -48V DC	NT4X71DC
EMR8-ITOPS4-3	ITOPS MODULAR POSITION -48V DC	NT4X71DD
EMR8-OOC-1	OVERSEAS OPERATOR CENTRE CONSOLE POSITIO	NT4X71BA
EMR8-OOC-2	OVERSEAS OPERATOR CENTRE MODULAR POSITIO	NT4X71BC
EMR8-OOC-3	OOC MODULAR FORCE MANAGER POSITION 110V	NT4X71BE
EMR8-TOPSPMP-1	TOPS POSITION CONTROLLER (TPC) PACK FILL	NTNX61AB
EMR8-TOPSPMP-10	TOPS POSITION CONTROLLER (TPC) PACK FILL	NTNX61AF
EMR8-TOPSPMP-2	TOPS POSITION CONTROLLER CP FILL	NTNX61AA
EMR8-TOPSPMP-3	AUXILIARY ACCESS EQUIPMENT CABINET	NTNX57AA
EMR8-TOPSPMP-4	TOPS POSITION CONTROLLER (TPC) PACK FILL	NTNX61AC
EMR8-TOPSPMP-5	TOPS POSITION CONTROLLER (TPC) PACK FILL	NTNX61AD
EMR8-TOPSPMP-6	TOPS POSITION CONTROLLER (TPC) PACK FILL	NTNX61AE
EMR8-TOPSPMP-7	TOPS MULTI-PURPOSE POSITION SYSTEM	NTNX51AA
EMR8-TOPSPMP-8	AUXILIARY ACCESS EQUIPMENT (AAE) CABINET	NTNX57AC
EMR8-TOPSPMP-9	POSITION CONTROLLER EQUIPMENT CABINET	NTNX60AA
EMR8-TOPSPMPX-1	TOPS MULTI-PURPOSE EXTENDED SYSTEM	NTNX51BA
EMR8-TOPS4-1	TOPS-4 CONSOLE POSITION 110V AC	NT4X71AA
EMR8-TOPS4-2	TOPS 4 CONSOLE POSITION -48V DC	NT4X71AB
EMR8-TOPS4-3	TOPS-4 MODULAR POSITION 110V AC	NT4X71AC
EMR8-TOPS4-4	TOPS-4 MODULAR POSITION -48V DC	NT4X71AD
EMR8-TOPS4-5	TOPS-4 MODULAR FM POSITION 110V AC	NT4X71AE
EMR8-TOPS4-6	TOPS-4 MODULAR FM POSITION -48V DC	NT4X71AF
EMR8-TOPS4-7	TOPS-4 CONSOLE POSITION -48V DC	NT4X71CB
EMR8-TOPS4-8	TOPS-4 MODULAR POSITION -48V DC	NT4X71CD
EMR8-TOPS4-9	TOPS-4 MODULAR FM POSITION -48V DC	NT4X71CF
EMR8-TUTOR-2	TOPS TUTOR 3B/OOC TRAINING ADAPTOR	NT4X77BA
EMR8-99-AOSS-1	ESD PRODUCT CHANGE KIT FOR AOSS POSITION	NT4X70AZ
EMR8-99-TOPS-1	TOPS 04 PRODUCT CHANGE KIT	NT4X73AX

97/12/09

EMR

RETIRED EQUIPMENT

EMR8-99-TOPS-2	TOPS 04 ESD PRODUCT CHANGE KIT	NT4X71AZ
EMR8-99-TOPS-3	TOPS 04 EQUAL ACCESS KEYCAP PRODUCT CHAN	NT4X76AH

EMR9: CELLULAR MOBILE SUBSYSTEMS MENU

EMR9-01-PMPM-1	PMPM COMMON CP (MTXM)	NT7X41DA
EMR9-01-PMPM-2	PMPM COMMON CP (MTXM)	NT7X41DB
EMR9-01-PMTC-1	PMTC COMMON CP (MTXM)	NT7X52DA
EMR9-01-PMTC-2	PMTC COMMON CP (MTXM)	NT7X52DB
EMR9-01-PMTC-3	PMTC COMMON CP (MTXM)	NT7X52DC
EMR9-01-PMTC-4	PMTC COMMON CP (MTXM)	NT7X52DD
EMR9-01-PMTC-5	PMTC COMMON CP (MTXM)	NT7X52DE
EMR9-01-SNPC-1	SNPC COMMON CP (MTXM)	NT7X42DA
EMR9-01-SNPC-2	SNPC COMMON CP (MTXM)	NT7X42DB
EMR9-01-001	PACKAGED MINI POWER MODULE FRAME	NT7X41AA
EMR9-01-002	SINGLE NETWORK PACKAGED CORE FRAME	NT7X42AA
EMR9-01-003	PACKAGED MINI TRUNK AND	NT7X52AA
EMR9-01-004	DMS PACKAGED SWITCH SYSTEMS	NT7X16
EMR9-02-CSC-1	CSC COMMON CP FILL	NT6X16AB
EMR9-03-CSC-1	CSC COMMON CP	NT6X16AA
EMR9-03-ICP-1	INTELLIGENT CELLULAR PERIPHERAL CP FILL	NTAX75DA
EMR9-03-000	SIMPLEX CELL SITE EQUIPMENT FRAME	NT6X15AA
EMR9-04-000	NOVATEL COMMON EQUIPMENT FRAME	NT3P60AA
EMR9-06-000	NOVATEL RADIO FREQUENCY FRAME	NT3P61AA
EMR9-98-0000	NT800DR ORDERING TABLES	T_NT800DR

EMR10: MERIDIAN CABINET EQUIPMENT MENU

EMR10-MACB-1	MERIDIAN APPLICATIONS CABINET BAY 1	NT1M41AA
EMR10-MACB-2	MERIDIAN APPLICATIONS CABINET BAY 2	NT1M41AP
EMR10-01-DLM-1	DIGITAL LINE MODULE COMMON CP	NT7X50EA
EMR10-01-DLM-2	DIGITAL LINE MODULE COMMON CP	NT7X50EB
EMR10-01-000	CUSTOMIZED DIGITAL LINE EQUIPMENT FRAME	NT7X50AA
EMR10-01-001	PACKAGED CORE DIGITAL MODULE FRAME	NT7X50BA
EMR10-02-IDTC-2	INTERNATIONAL DTC COMMON CP	NTNX33FB
EMR10-02-LGC-1	MERIDIAN CABINET TRUNK MODULE	NTNX33LA
EMR10-02-LGC-2	MERIDIAN CABINET TRUNK MODULE	NTNX33LB
EMR10-02-000	MERIDIAN CABINET TRUNK MODULE	NTNX33AA
EMR10-03-MCLM-1	MCLM-ISDN COMMON CP FILL (LOWER MODULE)	NTNX38NC
EMR10-03-MCLM-2	MCLM-ISDN COMMON CP FILL (UPPER MODULE)	NTNX38ND
EMR10-03-000	MERIDIAN CABINET LINE MODULE - ISDN	NTNX38BA
EMR10-04-000	MERIDIAN CABINET DIGITAL MODULE FRAME	NTNX50AA
EMR10-05-STM-1	MERIDIAN CABINET SERVICE MODULE	NTNX29LA
EMR10-05-STM-10	MCSM COMMON PACK FILL	NTNX29LK
EMR10-05-STM-11	MCSM COMMON PACK FILL	NTNX29LL
EMR10-05-STM-12	MCSM COMMON PACK FILL	NTNX29LM
EMR10-05-STM-2	MERIDIAN CABINET SERVICE MODULE	NTNX29LB
EMR10-05-STM-3	MERIDIAN CABINET SERVICE MODULE	NTNX29LC
EMR10-05-STM-4	MERIDIAN CABINET SERVICE MODULE	NTNX29LD
EMR10-05-STM-5	MERIDIAN CABINET SERVICE MODULE	NTNX29LE
EMR10-05-STM-6	MERIDIAN CABINET SERVICE MODULE	NTNX29LF
EMR10-05-STM-7	MCSM COMMON PACK FILL	NTNX29LG
EMR10-05-STM-8	MCSM COMMON PACK FILL	NTNX29LH
EMR10-05-STM-9	MCSM COMMON PACK FILL	NTNX29LJ

97/12/09

EMR

RETIRED EQUIPMENT

EMR10-05-000	MERIDIAN CABINET SERVICE MODULE	NTNX29AA
EMR10-05-001	MERIDIAN CABINET SERVICE MODULE	NTNX29BA
EMR10-06-CMC-1	CMC/NET COMMON CP	NTNX20LC
EMR10-06-MCCM-1	MERIDIAN CABINET CORE MODULE COMMON CP	NTNX20LA
EMR10-06-NET-1	MERIDIAN CABINET CORE MODULE	NTNX20LB
EMR10-06-000	MERIDIAN CABINET CORE MODULE FRAME	NTNX20AA
EMR10-07-MCMM-1	MERIDIAN CABINET MEMORY MODULE COMMON CP	NTNX21LA
EMR10-07-000	MERIDIAN CABINET MEMORY MODULE FRAME	NTNX21AA
EMR10-08-DSN-1	MERIDIAN CABINET NETWORK MODULE	NTNX40LA
EMR10-08-DSN-2	MERIDIAN CABINET NETWORK MODULE	NTNX40LB
EMR10-09-RIM-1	REMOTE INTERFACE AND MAINTENANCE COMMON	NT7X53AA
EMR10-09-000	MERIDIAN CABINET DIGITAL REMOTE FRAME	NTNX49AA
EMR10-10-MCRM-1	MERIDIAN CABINET REMOTE MODULE COMMON CP	NTNX17BA
EMR10-10-000	MERIDIAN CABINET REMOTE MODULE FRAME	NTNX17AA
EMR10-11-MCPM-1	MERIDIAN CABINET POWER MODULE COMMON CP	NTNX24LA
EMR10-11-000	MERIDIAN CABINET POWER MODULE	NTNX24AA
EMR10-12-MCAM-1	MCAM COMMON CP	NTNX37NA
EMR10-12-MCAM-4	MCAM COMMON CP	NTNX37ND
EMR10-12-MCAM-5	MCAM COMMON CP	NTNX37NE
EMR10-12-PTM-1	MERIDIAN CABINET AUXILIARY MODULE CP FIL	NTNX37LB
EMR10-12-STM-1	MERIDIAN CABINET AUXILIARY MODULE CP FIL	NTNX37LA
EMR10-12-000	MERIDIAN CABINET AUXILIARY MODULE	NTNX37AA
EMR10-13-000	MERIDIAN CABINET GENERAL MODULE FRAME	NTNX47AA
EMR10-14-000	MERIDIAN CABINET SPARE STORAGE FRAME	NTNX22AA
EMR10-18-000	MERIDIAN CORE MODULE	NTMX42AA
EMR10-19-MNET-1	MERIDIAN NETWORK/CPC COMMON CP	NTMX40NA
EMR10-19-MNET-2	MERIDIAN NETWORK/CPC COMMON CP	NTMX40NC
EMR10-19-000	MERIDIAN NETWORK/CONTROLLER MODULE	NTMX40AA
EMR10-20-CPC-11	DTC/DTCI/LTC/LTCI COMMON CP (LOWER MODUL	NTNX33ND
EMR10-20-CPCI-1	MCTM-ISDN COMMON CP (LOWER MODULE)	NTNX33NA
EMR10-20-CPCI-2	MCTM-ISDN COMMON CP (UPPER MODULE)	NTNX33NB
EMR10-20-CPCI-3	DTC/DTCI/LTC/LTCI COMMON CP (UPPER MODUL	NTNX33NE
EMR10-22-MSB7-1	MERIDIAN CABINET SEVEN MODULE	NTNX12LA
EMR10-22-000	MERIDIAN CABINET SEVEN MODULE	NTNX12AA
EMR10-23-000	MERIDIAN CABINET DATA MODEM EXPANSION	NTNX95AA
EMR10-25-000	MERIDIAN CABINET CCS	NTNX34BA
EMR10-26-000	MERIDIAN CABINET CCS6 EXTENSION	NTNX94AA
EMR10-28-MCRM-1	MCRM-I COMMON CP	NTNX17CA
EMR10-28-MCRM-2	MCRM-I COMMON CP	NTNX17BB
EMR10-28-MCRM-3	MCRM-I COMMON CP	NTNX17CB
EMR10-28-000	MERIDIAN CABINET REMOTE MODULE-ISDN	NTNX17AB
EMR10-33-MCRM-3	MCRM PACKFILL	NTNX17BC
EMR10-34-RLCC-1	RLCC COMMON CP	NTNX14LA

EMR11: MAINTENANCE AND TEST EQUIPMENT MENU

EMR11-01-KSM-1	1A2 KEY TELEPHONE SYSTEM MODULE	NT5X55AA
EMR11-01-KSM-2	1A2 KEY TELEPHONE SYSTEM INTERRUPTER	NT5X55AB
EMR11-01-KSS-1	1A2 KEY TELEPHONE SYSTEM STAND ALONE UNI	NT5X58AA
EMR11-01-LOG-1	DMS-100F MAP VOICE COMMUNICATIONS MODULE	MAPVCOMM
EMR11-01-PRT-6	MAP PRINTER (DEC LA75+)	LA75S
EMR11-01-PRT-7	MAP PRINTER (DEC LA424)	LA424-CA
EMR11-01-VDU-1	HEWLETT PACKARD SERIES HP700/22 VDUS	HP700/22
EMR11-01-VDU-2	DEC VT-320 SERIES VDUS	VT-320

97/12/09

EMR

RETIRED EQUIPMENT

EMR11-01-VDU-3	HEWLETT PACKARD SERIES HP700/44 VDU	C1007_
EMR11-01-000	1A2 KEY TELEPHONE SYSTEM EQUIPMENT FRAME	NT5X56AA
EMR11-02-DRTU-1	NSSD MODEL 3704	NT0J04AA
EMR11-02-DRTU-2	NSSD MODEL 3704 DIGITAL REMOTE TEST UNIT	NT0J04AB
EMR11-02-DRTU-3	NSSD MODEL 3704 DIGITAL REMOTE TEST UNIT	NT0J04EA
EMR11-02-FPL-1	3703-03 LOCAL CONTROL FRONT PANEL BROWN	NT0J04BR
EMR11-02-FPL-2	NSSD MODEL 3703-03 LOCAL CONTROL FRONT P	NT0J04BM
EMR11-02-FPL-3	NSSD MODEL 3703-03 LOCAL CONTROL FRONT P	NT0J04BL
EMR11-02-000	NSSD MODEL 3703-03 LOCAL TEST CABINET (B	NT0J04BB
EMR11-02-001	NSSD MODEL 3703-03 LOCAL TEST CABINET (A	NT0J04BA

EMR12: DMS-100P PACKAGED SWITCH EQUIPMENT MENU

EMR12-01-000	PACKAGED CORE SERVICE TRUNK MODULE	NT7X29AD
EMR12-01-PCSM-1	PCSM COMMON CP FILL	NT7X29GF
EMR12-02-000	PACKAGED CORE TRUNK MODULE FRAME	NT7X33AD
EMR12-02-LTC-1	LTC COMMON CP FILL	NT7X33GJ
EMR12-02-SMS-1	SMR/SMS/SMU COMMON CP FILL	NT7X33GK
EMR12-03-000	PACKAGED CORE LINE MODULE FRAME	NT7X38AB
EMR12-04-000	PACKAGED CORE INTERFACE MODULE FRAME	NT7X45AB
EMR12-04-PTM-1	PCIM COMMON CP FILL	NT7X45GC
EMR12-04-PTM-2	PCIM COMMON CP FILL	NT7X45GD
EMR12-05-000	PACKAGED CORE POWER MODULE FRAME	NT7X24AD
EMR12-05-PCPM-1	PCPM COMMON CP FILL	NT7X24GD
EMR12-06-000	PACKAGED CORE BASIC MODULE FRAME	NT7X46AD
EMR12-06-PCBM-1	PCBM COMMON CP FILL	NT7X46GC
EMR12-07-000	PKGD CORE BASIC MODULE (POWER DIST ONLY)	NT7X46AE
EMR12-07-PDC-1	PCBM PDC FUSING	NT7X46GD

EMR13: MISCELLANEOUS SUBSYSTEMS MENU

EMR13-01-CDA-2	COOK DIVISION DIGITAL ANNOUNCER	NT7M25__
EMR13-01-DSM-1	RM46A1 AUXILIARY DATA SET MODULE	905-5060-01
EMR13-01-DSM-2	117VAC RM40A/B DATA SET MODULE	905-5121-001
EMR13-01-DSM-3	-48VDC RM40A/B DATA SET MODULE	905-5121-004
EMR13-01-DSM-4	CASE/DATATEL STAND ALONE DATA SETS	T_CASE_MOD
EMR13-01-DSM-5	CASE RM80 DATA SET MODULE 117VAC	905-5118-001
EMR13-01-DSM-6	CASE RM90 DATA SET MODULE 125VAC	905-5139-001
EMR13-01-DSS-1	DM44R2 AUXILIARY DATA SET SHELF	905-5072-02
EMR13-01-DTH-1	DIGITAL TEST HEAD REMOTE OFFICE TEST LIN	NT7F20AA
EMR13-01-DTH-2	NSSD DIGITAL TEST HEAD	NT7F18AA
EMR13-01-DTH-3	NSSD DIGITAL TEST HEAD SPARES KIT	NT7F19AA
EMR13-01-DTH-4	DIGITAL TEST HEAD ROTL (REMOTE OFC TST L	NT7F18AB
EMR13-01-DTH-5	NSSD DIGITAL TEST HEAD SPARES KIT	NT7F19AB
EMR13-01-FSP-1	MISC EQPT FRAME SUPERVISORY PANEL	NT0X88AA
EMR13-01-FSP-2	REM SRV EQPT FRAME SUPERVISORY PANEL	NT0X88AC
EMR13-01-HDW-01	CHINA PACKAGING HARDWARE KITS	NT0X71CA
EMR13-01-MIS	ZONED MISCELLANEOUS EQUIPMENT CABINET MO	NTRX34AB
EMR13-01-MTMC-1	MAINTENANCE TRUNK MODULE COMMON CP	NT2X58CN
EMR13-01-MTMC-2	MAINTENANCE TRUNK MODULE COMMON CP	NT2X58CP
EMR13-01-RM-1	RCD ANN MODULE 6 CH 6.5 SEC MSG	NT0X03AA
EMR13-01-RM-2	RCD ANN MODULE 12 CH 6.5 SEC MSG	NT0X03AB
EMR13-01-RM-3	RCD ANN MODULE 6 CH 13.5 SEC MSG	NT0X03AC
EMR13-01-RM-4	RCD ANN MODULE 12 CH 13.5 SEC MSG	NT0X03AD

97/12/09

EMR

RETIRED EQUIPMENT

EMR13-01-RSM-1	REMOTE SERVICE MODULE	NT2X58AE
EMR13-01-RSM-2	REMOTE SERVICE MODULE	NT2X58CF
EMR13-01-RSMC-1	REMOTE SERVICE MODULE COMMON CP FILL	NT2X58CE
EMR13-01-RSMC-2	REMOTE SERVICE MODULE COMMON CP	NT2X58CM
EMR13-01-TL1-1	ENHANCED SERVICE TEST UNIT (ESTU)	NT0J42BA
EMR13-01-UDS-2	UDS STAND ALONE DATA SETS PROVISIONING	T_UDS_SA
EMR13-01-000	MISCELLANEOUS EQUIPMENT FRAME	NT0X02AA
EMR13-02-VDU-1	DEC VIDEO DISPLAY UNIT VT241	VT241
EMR13-02-000	4000DB1 DUAL DIAL BACK UNIT	905-5165-001
EMR13-04-000	CABINETIZED MISC SPARE STORAGE	NTRX49AA

EMR14: TABLES MENU

EMR15: COMMON SYSTEM EQUIPMENT MENU

EMR16: POWER REQUIREMENTS MENU

EMR17: GROUNDING REQUIREMENTS MENU

EMR18: CABLES MENU

EMR19: MULTIMEDIA SUBSYSTEMS MENU

EMR20: PEC INDEX

SECTION EMR1

INTRODUCTION

THIS PAGE IS INTENTIONALLY LEFT BLANK

INTRODUCTION

General

This practice provides all the necessary information and guidelines in configuring the DMS-100 Family switches based on office requirements. The document does not replace or displace any standard documentation but rather supplements them from an engineering point of view.

The information contained in the Engineering Manual is derived from DMS standard documentation. This section consolidates the most important aspects of DMS equipment structure into a compact handbook form to provide easy access to information. The Engineering Manual is intended to summarize, not replace the standard documentation and in the event of conflict, the standard documentation supercedes.

Practice Application

The information contained in this practice is applicable to DMS-100 Family equipment which is no longer generally available (retired) to the customers of Northern Telecom. Engineering Manual Active Equipment should be referred to for Northern Telecom products that are classed as generally available.

Issue Control:

The Engineering Manual's Release number is of the form XX.YY, where XX is incremented for each major yearly release and YY is incremented to show each minor quarterly release of that year.

Reason For Reissue

- | This practice has been reissued to reflect the changes to date in the DMS-100 Family office configuration. Change bars ("|") have been included in sections classed as "Release 01.01" to show changes from Release 07.01.
- | Change bars in all other sections reflect changes from their previous release. These change bars do not reflect any changes resulting from Release 01.01.

Module Structure Organization

a) Module Structures

The information in the Engineering Manual Retired Equipment is broken down into the following subsystems from a functional viewpoint:

- EMR1 : Introduction
- EMR2 : Peripheral Modules
- EMR3 : Digital Network Subsystems
- EMR4 : Central Control Subsystems
- EMR5 : Input/Output Subsystems
- EMR6 : Office Alarm Visual and Audible Equipment
- EMR7 : Meridian Business Services Equipment
- EMR8 : Operator Equipment
- EMR9 : Cellular Mobile Subsystems
- EMR10 : Meridian Cabinet Equipment
- EMR11 : Maintenance and Test Equipment
- EMR12 : DMS-100P Packaged Switch Equipment
- EMR13 : Miscellaneous Subsystems
- EMR14 : Tables
- EMR15 : Common System Equipment
- EMR16 : Power Requirements
- EMR17 : Grounding Requirements
- EMR18 : Cables
- EMR19 : Multimedia Subsystems
- EMR20 : Index

The information contained within each section (as listed above) is organized into module structures. A module structure may be a frame and mountable equipment, a shelf assembly and mountable equipment, or a functional grouping of circuit packs. Module structures appear in the section immediately following the frame on which the module structure can be mounted. Module structures that can be mounted on more than one type of frame will appear in only one place within the section. Different versions of the same frame are listed together.

b) Section Numbering

The section numbering reflects the organization of the module structures as mentioned above. A section number looks like the following:

EMRn-AAAAA

where:

EMRn = section of the Engineering Manual Retired Equipment (as listed above).

AAAAA = module structure number

- i) If the module structures are organized into frames and modules (as in peripheral modules - EMR2), then the numbering structuring is as follows:

AAAAA = FR-BBBB

where:

FR = a two digit frame number.

BBBB = a three digit version number of a frame.
(For example, an RLM frame has three versions

FR = 04 for the RLM frame number
BBBB = 000 for NT0X45BH
001 for NT0X45BJ
002 for NT0X45BK)

Note: I00 would represent a frame used for international applications.

or BBBB = a three or four character alphanumeric with a one digit version number for a module.

ex. BBBB = DCM-2

The 3-4 character alphanumeric is closely tied to the functional name of the module structure. The one digit version number distinguishes between module structures with the same 3-4 character alphanumeric. A 3-4 character alphanumeric beginning with the letter "I", indicates that the module

structure is used for international applications.

NOTE: The identifier BBBB is ordered alphabetically within each frame. International module structures are listed last within each frame.

- ii) If the module structures are organized into functional modules (as in Meridian Business Services - EMR7), then the numbering structure is as follows:

AAAAA = CCCC

where:

CCCC = a three or four character alphanumeric with a one digit version number

ex. CCCC = COAX-1

The 3-4 character alphanumeric is closely tied to the functional name of the module structure. The one digit version number distinguishes between module structures with the same 3-4 character alphanumeric.

NOTE: The identifier CCCC is ordered alphabetically within each subsystem.

c) Examples

1. EMR2-04-002
Section EMR2 - Peripheral Modules section
Frame 04 - RLM Frame
Frame Version 002 - RLM Frame (Bay 0) NT0X45BC
2. EMA2-06-I00
Section EMA2 - Peripheral Modules section
Frame 06 - LGE/DTE/LTE Frame
Frame Version I00 - International LGE/DTE Frame NT6X01BA
3. EMR2-01-DCM-3
Section EMR2 - Peripheral Modules section
Frame 01 - TME Frame
Module DCM - Digital Carrier Module
Version 3 - NT2X31AC

4. EMR7-BSAC-2

Section EMR7 - Module Structure Equipment
Subsystem H - IBN
Module BSAC - Business Service Attendant Console
Version 2 - BSAC NT4X09AE

Information Organization

a) Title Line

Each module structure within the Equipment Module Structure section begins with a title line.

Example

REMOTE LINE MODULE FRAME NT0X45BA

The title shows the standard name given to the module and its Product Engineering Code (PEC).

b) Header

The following information is contained in the headers:

RATING
ABBREVIATION NAME
ENGINEERING DESCRIPTION
REFERENCE DOCUMENTATION

i) RATING

RATING contains information on the status of the module structure. The following ratings are applicable to each module structure:

- "Check application date for NT0X45BH"

The user should verify whether or not this module is ready to order for the job to which the module will be applied before the user orders the module. This rating is usually applied to new modules.

- "Replaces NT0X45BE"

Indicates that the module is a replacement (newer version) of an existing module. The user should verify the application date before ordering the new module. The possibility of Field Retrofitting must also be investigated by the user.

- "To be rated MD"

Indicates that the module will be rated MD. The user is to verify the date when this module is to be no longer ordered.

- "To be replaced by NT0X45BL"

Indicates that the module will be replaced by a newer version or a different application. The user is to verify the date when this module is to be ordered. The possibility of Field Retrofitting must also be investigated by the user.

- "MD. Replaced by NT0X02AB"

Indicates that the module has been rated MD and has been replaced by the module indicated.

- "Rating Change Pending"

This rating acts as a warning to the user that one of the above ratings will be applied to the module in the near future.

- "Standard"

Indicates standard equipment where its application dates will not affect its application in jobs currently being engineered by the user.

- "MD"

Indicates that the module has been rated Manufacture Discontinued (MD).

- "A&M"

Indicates that the module may be ordered for additions or maintenance purposes on existing offices only. The module rated A&M cannot be ordered for new offices or offices where this module does not already exist.

ii) ABBREVIATION NAME

The standard NT short forms for the module structure is indicated here. This short form will be used in the writing of manufacturing specifications.

iii) ENGINEERING DESCRIPTION

A brief description of the module structure from a functional viewpoint is contained here.

iv) REFERENCE DOCUMENTATION

Reference to standard NT documents from which relate to the modular structure is listed here.

c) Equipment List

The equipment that is mounted on the module structure is listed in a table with the following headings:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE

where:

EQUIPMENT = standard equipment title

PEC = Product Engineering Code assigned to the equipment. An appearance of "AR" (as required) indicates that there is more than one possible choice of equipment required.

ABBR = standard abbreviation for the equipment and unit number where applicable

QTY = quantity of the equipment to be provided

SHF POS = the shelf position of the equipment on a frame

CP POS = the circuit pack position of the equipment on a shelf. The appearance of an "R" with the position number indicates that the equipment is mounted on the shelf back plane.

RULE = the provisioning rule reference number (an "AP" in this column indicates that the equipment is Always Provided with the module structure)

The information in this table is listed from the top of the frame to the bottom when the module structure refers to a frame, or it is listed from the left of a shelf to the right when the module structure is a shelf. Lines within this table are used to group the equipment into functional modules. Double lines are used to indicate information that applies to several functional modules (or none at all).

A single character flag could appear in the left most column adjacent to the standard equipment title to which it applies. These characters may be one of: #, \$, %, &, *, !, r

These flags are present to indicate a special rating which is applied to the PEC to which it is adjacent. This rating will be indicated at the end of the Equipment List. Possible ratings are the same as those for the Rating section of the header (see section b) item i) above).

d) Notes

This section contains general information which will aid the user in understanding the application of the module structure and in assigning equipment to the module structure. The "NOTES" section does not appear in all module structure sections.

e) Rule

The rules as referenced in the "RULE" column of the equipment list are listed in this section. Each rule outlines the conditions or rules that govern the assignment of the equipment to the module structure.

References

For further information on the DMS-100 Family equipment pertaining to this Engineering Manual Retired Equipment, refer to the following References:

Informative References

DOCUMENT NUMBER	TITLE
EMA	Engineering Manual Active Equipment
EMB	Engineering Manual Building Block Active Equipment
EMC	Engineering Manual Building Block Retired Equipment
MS_X____	Modular Structure Documents
NTP 297-1001-001	Master Index of Northern Telecom Practices
NTP 297-1001-450	DMS-100 Family Provisioning

THIS PAGE IS INTENTIONALLY LEFT BLANK

97/12/09

EMR2

PERIPHERAL MODULES CHAPTER ALL

PERIPHERAL MODULES CHAPTER ALL

THIS PAGE IS INTENTIONALLY LEFT BLANK

97/12/09

PERIPHERAL MODULES CHAPTER ALL

EMR2-01-DCM-1	DIGITAL CARRIER MODULE	NT2X31AA
EMR2-01-DCM-2	DIGITAL CARRIER MODULE	NT2X31AB
EMR2-01-DCM-3	DIGITAL CARRIER MODULE	NT2X31AC
EMR2-01-DCM-4	DIGITAL CARRIER MODULE	NT2X31AK
EMR2-01-DCM-5	DIGITAL CARRIER MODULE	NT2X31AH
EMR2-01-DCM-6	DIGITAL CARRIER MODULE	NT2X31AL
EMR2-01-DCM-7	DIGITAL CARRIER MODULE	NT2X31AJ
EMR2-01-DCM-8	DIGITAL CARRIER MODULE	NT2X31AT
EMR2-01-DCM-9	DIGITAL CARRIER MODULE	NT2X31AU
EMR2-01-DES-1	DIGITAL ECHO SUPPRESSOR MODULE	NT2X12AA
EMR2-01-DES-2	DIGITAL ECHO SUPPRESSOR MODULE	NT2X12AB
EMR2-01-DES-3	DIGITAL ECHO SUPPRESSOR MODULE	NT2X12AD
EMR2-01-DRA-1	MTM AND DRA MULTIPOWER CONVERTER CP	NT2X58CG
EMR2-01-IMTM-1	INTERNATIONAL MTM FOR DRA	NT2X58AU
EMR2-01-IMTM-10	INTERNATIONAL MAINTENANCE TRUNK MODULE C	NT2X58AY
EMR2-01-IMTM-11	INTERNATIONAL MAINTENANCE TRUNK MODULE S	NT2X58AT
EMR2-01-IMTM-13	INTERNATIONAL MAINTENANCE TRUNK MODULE C	NT2X58CL
EMR2-01-IMTM-4	INTERNATIONAL MAINTENANCE TRUNK MODULE C	NT2X58DB
EMR2-01-IMTMC-1	INT'L MAINTENANCE TRUNK CONTROLLER CP FI	NT2X58AS
EMR2-01-IMTMC-2	SCOPE DIAL U.K. IMTM COMMON CP FILL	NT2X58BA
EMR2-01-IMTMC-3	INT'L MAINTENANCE TRUNK MODULE CP FILL	NT2X58CC
EMR2-01-IMTMC-4	INT'L MAINTENANCE TRUNK MODULE CP FILL	NT2X58DA
EMR2-01-IMTMC-9	U.K. IMTM COMMON CP	NT2X58BB
EMR2-01-ITM8-1	INTERNATIONAL EIGHT WIRE TRUNK MODULE	NT2X52BB
EMR2-01-ITM8C-1	U.K. ITM8 COMMON CP	NT2X52CA
EMR2-01-IT8A-2	INTERNATIONAL EIGHT WIRE TRUNK MODULE WI	NT2X52CC
EMR2-01-IT8C-1	U.K. ITM8 COMMON CP	NT2X52CB
EMR2-01-MTM-1	MAINTENANCE TRUNK MODULE	NT2X58AA
EMR2-01-MTM-12	MAINTENANCE TRUNK MODULE FOR DRA	NT2X58CB
EMR2-01-MTM-2	MAINTENANCE TRUNK MODULE	NT2X58AG
EMR2-01-MTM-3	MAINTENANCE TRUNK MODULE	NT2X58AC
EMR2-01-MTM-4	MAINTENANCE TRUNK MODULE	NT2X58AK
EMR2-01-MTM-5	MAINTENANCE TRUNK MODULE	NT2X58AN
EMR2-01-MTM-6	MAINTENANCE TRUNK MODULE	NT2X58AL
EMR2-01-MTM-7	MAINTENANCE TRUNK MODULE FOR DRA	NT2X58AM
EMR2-01-MTMC-1	MAINTENANCE TRUNK MODULE COMMON CP FILL	NT2X58AW
EMR2-01-MTMC-11	MAINTENANCE TRUNK MODULE COMMON CP	NT2X58AZ
EMR2-01-MTMC-12	MAINTENANCE TRUNK MODULE COMMON CP	NT2X58AX
EMR2-01-MTMC-2	MAINTENANCE TRUNK MODULE COMMON CP FILL	NT2X58AR
EMR2-01-MTMC-3	MAINTENANCE TRUNK MODULE COMMON CP FILL	NT2X58CK
EMR2-01-MTMC-4	MAINTENANCE TRUNK MODULE COMMON CP FILL	NT2X58CJ
EMR2-01-MTMC-5	MAINTENANCE TRUNK MODULE COMMON CP	NT2X58AP
EMR2-01-OAU-1	OFFICE ALARM UNIT	NT2X58AB
EMR2-01-OAU-2	OFFICE ALARM UNIT	NT2X58AD
EMR2-01-TMC-1	DMS-100/200 TRUNK MODULE COMMON CP	NT2X52AK
EMR2-01-TMC-2	DMS-300 TRUNK MODULE COMMON CP	NT2X52AL
EMR2-01-TM2-1	TRUNK MODULE 2 WIRE	NT2X52AA
EMR2-01-TM2-10	TRUNK MODULE 2 WIRE	NT2X52AM

97/12/09

EMR2-01-TM2-4	TRUNK MODULE 2 WIRE	NT2X52AE
EMR2-01-TM4-1	TRUNK MODULE 4 WIRE	NT2X52AB
EMR2-01-TM4-10	TRUNK MODULE 4 WIRE	NT2X52AN
EMR2-01-TM4-2	TRUNK MODULE 4 WIRE	NT2X52AF
EMR2-01-TM8-1	TRUNK MODULE 8 WIRE	NT2X52AC
EMR2-01-TM8-14	TRUNK MODULE 8 WIRE WITH ACCESS	NT2X52AR
EMR2-01-TM8-15	TRUNK MODULE 8 WIRE	NT2X52AV
EMR2-01-TM8-3	TRUNK MODULE 8 WIRE	NT2 NT2X52AP
EMR2-01-TM8-4	TRUNK MODULE 8 WIRE	NT2X52AG
EMR2-01-TM8-5	TRUNK MODULE 8 WIRE WITH ACCESS	NT2X52AD
EMR2-01-000	TRUNK MODULE OR DIGITAL CARRIER EQUIP FR	NT0X46AA
EMR2-01-000-10	TRUNK MODULE EQUIPMENT FRAME OR	NT0X46AB
EMR2-02-TAC	TEST ACCESS CONTROLLER EQUIPMENT FRAME	NTCX01AA
EMR2-02-TAN-1	TEST ACCESS NETWORK MODULE	NT5X00AA
EMR2-02-TAN-2	TEST ACCESS NETWORK WITH TM CONNECTIONS	NT5X00AB
EMR2-02-TAN-3	TEST ACCESS NETWORK MODULE	NT5X00AC
EMR2-02-TAN-4	TEST ACCESS NETWORK MODULE WITH TM CONNE	NT5X00AD
EMR2-02-TAN-5	TEST ACCESS NETWORK EQUIPMENT FRAME	NT5X12AB
EMR2-02-000	TEST ACCESS NETWORK EQUIPMENT FRAME	NT5X12AA
EMR2-03-LD-1	LINE DRAWER	NT2X19AA
EMR2-03-LD-2	LINE DRAWER	NT2X19AC
EMR2-03-LMC-1	LINE MODULE CONTROL SHELF	NT2X14AA
EMR2-03-LMC-2	LINE MODULE CONTROL SHELF	NT2X14AC
EMR2-03-LMC-3	LINE MODULE CONTROL SHELF	NT2X14AE
EMR2-03-LMC-4	LINE MODULE CONTROL SHELF	NT2X14AG
EMR2-03-000	LINE MODULE EQUIPMENT FRAME	NT0X45AA
EMR2-03-001	LINE MODULE EQUIPMENT FRAME	NT0X45AB
EMR2-03-002	LINE MODULE EQUIPMENT FRAME	NT0X45AC
EMR2-03-003	LINE MODULE EQUIPMENT FRAME	NT0X45AD
EMR2-03-004	LINE MODULE EQUIPMENT FRAME	NT0X45AE
EMR2-04-RLC-1	REMOTE LINE MODULE CONTROL SHELF	NT2X14AB
EMR2-04-RLC-2	REMOTE LINE MODULE CONTROL SHELF	NT2X14AD
EMR2-04-RLC-3	REMOTE LINE MODULE CONTROL SHELF	NT2X14AF
EMR2-04-RLC-4	REMOTE LINE MODULE CONTROL SHELF	NT2X14AH
EMR2-04-000	REMOTE LINE MODULE EQUIPMENT FRAME	NT0X45BA
EMR2-04-001	REMOTE LINE MODULE EQUIPMENT FRAME	NT0X45BB
EMR2-04-002	REMOTE LINE MODULE EQUIPMENT FRAME (BAY	NT0X45BC
EMR2-04-003	REMOTE LINE MODULE EQUIPMENT FRAME (BAY	NT0X45BD
EMR2-04-004	REMOTE LINE MODULE EQUIPMENT FRAME	NT0X45BE
EMR2-04-005	REMOTE LINE MODULE EQUIPMENT FRAME (BAY	NT0X45BF
EMR2-04-006	REMOTE LINE MODULE EQUIPMENT FRAME (BAY	NT0X45BG
EMR2-04-007	REMOTE LINE MODULE FRAME	NT0X45BH
EMR2-04-008	REMOTE LINE MODULE FRAME (BAY 0)	NT0X45BJ
EMR2-04-009	REMOTE LINE MODULE FRAME (BAY 1)	NT0X45BK
EMR2-05-000	REMOTE CONTROL AND MAINTENANCE EQUIPMENT	NT6X14CA
EMR2-06-DTC-1	DIGITAL TRUNK CONRTOLLER COMMON CP FILL	NT6X02AF
EMR2-06-DTC-10	FXPM DTC COMMON CP (DMS250)	NT6X02LE
EMR2-06-DTC-2	LGC, DTC, OR LTC COMMON CP FILL	NT6X02AC
EMR2-06-DTC-3	DIGITAL TRUNK CONTROLLER COMMON CP FILL	NT6X02AR
EMR2-06-DTC-4	DIGITAL TRUNK CONTROLLER COMMON CP FILL	NT6X02AM
EMR2-06-DTC-5	DIGITAL TRUNK CONTROLLER COMMON CP FILL	NT6X02AQ
EMR2-06-DTC-6	DIGITAL TRUNK CONTROLLER COMMON CP FILL	NT6X02IA
EMR2-06-DTC-7	DIGITAL TRUNK CONTROLLER COMMON CP	NT6X02IH
EMR2-06-DTC-9	DIGITAL TRUNK CONTROLLER COMMON CP	NT6X02IG

97/12/09

EMR2

PERIPHERAL MODULES CHAPTER ALL

EMR2-06-DTCI-1	FXPM ISDN DTC COMMON CP (DMS250)	NT6X02RE
EMR2-06-IDTC-1	INTERNATIONAL DIGITAL TRUNK CONTROLLER	NT6X02KA
EMR2-06-IDTC-2	INTERNATIONAL DIGITAL TRUNK CONTROLLER C	NT6X02BM
EMR2-06-IDTC-3	INTERNATIONAL DIGITAL TRUNK CONTROLLER	NT6X02GA
EMR2-06-IDTC-4	INT'L DIGITAL TRUNK CONTROLLER CP FILL	NT6X02BA
EMR2-06-IDTC-5	INT'L DIGITAL TRUNK CONTROLLER CP FILL	NT6X02BE
EMR2-06-IDTC-6	INT'L DIGITAL TRUNK CONTROLLER CP FILL	NT6X02BN
EMR2-06-IDTC-7	INT'L DIGITAL TRUNK CONTROLLER CP FILL	NT6X02KC
EMR2-06-IDTC-8	INTERNATIONAL DTC COMMON CP	NT6X02GJ
EMR2-06-ILGC-1	INTERNATIONAL LINE GROUP CONTROLLER	NT6X02KB
EMR2-06-ILGC-2	INTERNATIONAL LINE GROUP CONTROLLER	NT6X02HA
EMR2-06-ILGC-3	INT'L LINE GROUP CONTROLLER COMMON CP FI	NT6X02BF
EMR2-06-ILGC-4	INT'L LINE GROUP CONTROLLER COMMON CP FI	NT6X02BD
EMR2-06-ILGC-5	INT'L LINE GROUP CONTROLLER COMMON CP FI	NT6X02KD
EMR2-06-ILGC-6	INTERNATIONAL LINE GROUP CONTROLLER CP	NT6X02BK
EMR2-06-ILGC-7	INTERNATIONAL LINE GROUP CONTROLLER CP	NT6X02HB
EMR2-06-IXPM-1	UNIVERSAL ILGC/IDTC COMMON CP FILL	NT6X02BP
EMR2-06-IXPM-2	INTERNATIONAL DTC/LGC COMMON CIRCUIT PAC	NT6X02GM
EMR2-06-IXPM-3	INTERNATIONAL LINE GROUP CONTROLLER CP I	NT6X02BW
EMR2-06-LGC-1	LGC, DTC, OR LTC COMMON CP FILL	NT6X02AA
EMR2-06-LGC-10	LINE GROUP CONTROLLER COMMON CP	NT6X02RB
EMR2-06-LGC-2	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02AE
EMR2-06-LGC-3	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02AY
EMR2-06-LGC-4	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02AZ
EMR2-06-LGC-5	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02AL
EMR2-06-LGC-6	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02AH
EMR2-06-LGC-7	LINE GROUP CONTROLLER COMMON CP FILL	NT6X02LA
EMR2-06-LGC-8	SCOPE DIAL U.K. LGC COMMON CP, OR DTC COM	NT6X02BC
EMR2-06-LGC-9	LINE GROUP CONTROLLER COMMON CP	NT6X02AT
EMR2-06-LTC-1	LINE TRUNK CONTROLLER COMMON CP FILL	NT6X02AD
EMR2-06-LTC-2	LINE TRUNK CONTROLLER COMMON CP FILL	NT6X02AK
EMR2-06-LTC-3	LINE TRUNK CONTROLLER COMMON CP FILL	NT6X02AG
EMR2-06-LTC-4	LINE TRUNK CONTROLLER COMMON CP FILL	NT6X02MA
EMR2-06-LTC-5	LINE TRUNK CONTROLLER COMMON CP	NT6X02AU
EMR2-06-LTC-6	LINE TRUNK CONTROLLER COMMON CP	NT6X02RC
EMR2-06-RX46BA	CABINETIZED INTERNATIONAL PERIPHERAL EQU	NTRX46BA
EMR2-06-SMA-1	SUBSCRIBER CARRIER MODULE-100 ACCESS (SM	NT6X02TE
EMR2-06-SMA-2	SUBSCRIBER CARRIER MODULE-100 ACCESS COM	NT6X02TF
EMR2-06-SMA-3	SUBSCRIBER CARRIER MODULE-100 ACCESS COM	NT6X02TH
EMR2-06-SMR-1	SUBSCRIBER MODULE REMOTE COMMON	NT6X02CA
EMR2-06-SMR-2	SUBSCRIBER MODULE REMOTE COMMON CP FILL	NT6X02CC
EMR2-06-SMR-3	SUBSCRIBER MODULE REMOTE COMMON CP	NT6X02CP
EMR2-06-SMR-4	SUBSCRIBER MODULE REMOTE COMMON CP	NT6X02CQ
EMR2-06-SMR-5	SUBSCRIBER MODULE REMOTE COMMON CP	NT6X02CS
EMR2-06-SMR-6	SMR COMMON CP FILL KIT	NT6X02CT
EMR2-06-SMS-1	SUBSCRIBER MODULE FOR SLC-96	NT6X02DA
EMR2-06-SMS-10	SUBSCRIBER MODULE - SLC-96	NT6X02DU
EMR2-06-SMS-2	SUBSCRIBER MODULE FOR SLC-96	NT6X02DB
EMR2-06-SMS-3	SUBSCRIBER MODULE FOR SLC-96	NT6X02DD
EMR2-06-SMS-4	SUBSCRIBER MODULE FOR SLC-96	NT6X02DC
EMR2-06-SMS-5	SUBSCRIBER MODULE FOR SLC-96 (SMS) COMMO	NT6X02DJ
EMR2-06-SMS-6	SUBSCRIBER MODULE FOR SLC-96 (SMS) COMMO	NT6X02DH
EMR2-06-SMS-7	SUBSCRIBER MODULE FOR SLC-96 (SMS) COMMO	NT6X02DM
EMR2-06-SMS-8	SUBSCRIBER MODULE SLC-96 W/O PROCESSOR	NT6X02DR

97/12/09

EMR2

PERIPHERAL MODULES CHAPTER ALL

EMR2-06-SMS-9	SUBSCRIBER MODULE - SLC-96	NT6X02DT
EMR2-06-SMSR-1	SUBSCRIBER CARRIER MODULE - 100S REMOTE	NT6X02PA
EMR2-06-SMSR-2	SUBSCRIBER CARRIER MODULE-100S REMOTE	NT6X02PB
EMR2-06-SMSR-3	SUBSCRIBER CARRIER MODULE-100S REMOTE (S	NT6X02PD
EMR2-06-SMSR-4	SUBSCRIBER MOD. SLC-96 REMOTE W/O PROCES	NT6X02PG
EMR2-06-SMSR-5	SUBSCRIBER MOD. SLC-96 REMOTE COMMON CP	NT6X02PH
EMR2-06-SMSR-6	SUBSCRIBER MODULE - SLC-96 REMOTE	NT6X02PJ
EMR2-06-SMSR-7	SUBSCRIBER MODULE - SLC-96 REMOTE	NT6X02PK
EMR2-06-SMU-1	SUBSCRIBER MODULE FOR DMS-1 URBAN CP FIL	NT6X02EA
EMR2-06-SMU-10	SMU PACKFILL	NT6X02ET
EMR2-06-SMU-2	SUBSCRIBER MODULE FOR DMS-1 URBAN CP FIL	NT6X02EB
EMR2-06-SMU-20	ISDN SUBSCRIBER MODULE FOR DMS-1 URBAN C	NT6X02ES
EMR2-06-SMU-3	SUBSCRIBER MODULE FOR DMS-1 URBAN CP FIL	NT6X02AW
EMR2-06-SMU-4	SUBSCRIBER MODULE FOR DMS-1 URBAN (SMU)	NT6X02EG
EMR2-06-SMU-5	SUBSCRIBER MOD. DMS-1U PACKFILL W/O PROC	NT6X02EM
EMR2-06-SMU-6	SUBSCRIBER MODULE FOR DMS-1 URBAN (SMU)	NT6X02EF
EMR2-06-SMU-7	SUBSCRIBER MODULE FOR DMS-1 URBAN (SMU)	NT6X02EK
EMR2-06-SMU-8	SMU PACKFILL	NT6X02EL
EMR2-06-SMU-9	SMU COMMON CIRCUIT PACK KIT	NT6X02ZD
EMR2-06-000	COMMON PERIPHERAL CONTROLLER EQUIPMENT F	NT6X01AA
EMR2-06-6X02AI	DIGITAL TRUNK CONTROLLER COMMON CP (DMS-	NT6X02AI
EMR2-07-ILCM-1	ILCM COMMON CP	NT6X04BA
EMR2-07-ILCM-2	INTERNATIONAL LCM COMMON CP	NT6X04BB
EMR2-07-ILD-2	PCM-30 LINE DRAWER	NT6X05CA
EMR2-07-LCM-1	LINE CONCENTRATING MODULE COMMON CP	NT6X04AA
EMR2-07-LCM-2	LINE CONCENTRATING MODULE COMMON CP	NT6X04AB
EMR2-07-LCM-3	LINE CONCENTRATING MODULE COMMON CP	NT6X04AC
EMR2-07-001	LCE FRAME E/W COMMON FRAMEWORK	NT6X03RA
EMR2-07-002	LCE FRAME E/W EARTHQUAKE FRAMEWORK	NT6X03RB
EMR2-07-003	LINE CONCENTRATING EQUIPMENT FRAME	NT6X03CA
EMR2-07-005	LINE CONCENTRATING EQUIPMENT FRAME E/W C	NT6X03RC
EMR2-07-006	LINE CONCENTRATING EQUIPMENT FRAME E/W E	NT6X03RD
EMR2-08-MSB6-1	MSB6 COMMON CP FILL	NT6X07AA
EMR2-08-MSB6-2	MSB6 COMMON CP	NT6X07AB
EMR2-08-MSB6-3	MSB6 COMMON CP	NT6X07AC
EMR2-08-000	MESSAGE SWITCHING 6 EQUIPMENT FRAME	NT6X06AA
EMR2-08-001	MESSAGE SWITCHING 6 EQUIPMENT FRAME	NT6X06AB
EMR2-08-002	MESSAGE SWITCHING 6 EQUIPMENT FRAME	NT6X06AC
EMR2-11-MSB7-1	MSB7 COMMON CP FILL	NT6X32AA
EMR2-11-MSB7-2	MSB7 COMMON CP FILL	NT6X32AB
EMR2-11-MSB7-3	MSB7 COMMON CP FILL	NT6X32CA
EMR2-11-MSB7-4	MSB7 COMMON CP FILL	NT6X32BA
EMR2-11-001	MSB7 COMMON CIRCUIT PACK	NT6X32CC
EMR2-12-FLIS-1	FLIS COMMON CIRCUIT PACK FILL	NT9X72CA
EMR2-12-LIS-1	LINK INTERFACE UNIT CHELF COMMON CP FILL	NT9X72AA
EMR2-12-LIS-2	LINK INTERFACE UNIT SHELF COMMON CP	NT9X72AD
EMR2-12-LIS-3	LINK INTERFACE UNIT SHELF COMMON CP	NT9X72AC
EMR2-12-LMS-1	LOCAL MESSAGE SWITCH SHELF COMMON CP FIL	NT9X71AA
EMR2-12-LMS-2	LOCAL MESSAGE SWITCH SHELF COMMON CP	NT9X71AB
EMR2-12-000	LINK INTERFACE MODULE CABINET	NT9X70BA
EMR2-12-001	LINK INTERFACE MODULE CABINET	NT9X70AA
EMR2-12-002	ENHANCED MULTI-PURPOSE CABINET	NT6X01AA
EMR2-13-FSP-1	OPM FRAME SUPERVISORY PANEL	NT6X25BB
EMR2-13-I00	INTERNATIONAL OUTSIDE PLANT MODULE	NT8X40AA

97/12/09

EMR2

PERIPHERAL MODULES CHAPTER ALL

EMR2-13-LCM-1	LCM COMMON CP	NT8X04AA
EMR2-13-LCM-2	LCM COMMON CP	NT8X04AB
EMR2-13-LCM-3	LCM-C COMMON CP	NT8X04BA
EMR2-13-000	OUTSIDE PLANT MODULE	NT8X01AA
EMR2-13-001	OUTSIDE PLANT MODULE - 256	NT8X01BA
EMR2-13-002	OUTSIDE PLANT MODULE - 256	NT8X01BB
EMR2-14-HIE-1	HOST INTERFACE EQUIPMENT COMMON CP	NT6X11AA
EMR2-14-HIE-2	HOST INTERFACE EQUIPMENT COMMON CP FILL	NT6X11BA
EMR2-14-HIE-3	HOST INTERFACE EQUIPMENT COMMON CP FILL	NT6X11EA
EMR2-14-HIE-4	HIE COMMON CP	NT6X11AB
EMR2-14-HIE-5	HOST INTERFACE EQUIPMENT COMMON CP	NT6X11BB
EMR2-15-RCC-1	REMOTE CLUSTER CONTROLLER COMMON CP FILL	NT6X12AA
EMR2-15-RCC-10	RCC WITH XPM+	NT6X12AK
EMR2-15-RCC-11	RCC COMMON CP KIT	NT6X12AL
EMR2-15-RCC-2	REMOTE CLUSTER CONTROLLER COMMON CP FILL	NT6X12AC
EMR2-15-RCC-3	REMOTE CLUSTER CONTROLLER COMMON CP FILL	NT6X12AB
EMR2-15-RCC-4	REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12CA
EMR2-15-RCC-5	INTERNATIONAL FRAME RCEI	NT6X10AE
EMR2-15-RCC-6	REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12AD
EMR2-15-RCC-7	REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12AE
EMR2-15-RCC-8	REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12AF
EMR2-15-RCC-9	REMOTE CLUSTER CONTROLLER (RCC)	NT6X12AG
EMR2-15-RCCI-1	ISDN REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12DA
EMR2-15-RCCI-2	ISDN REMOTE CLUSTER CONTROLLER COMMON CP	NT6X12DC
EMR2-15-RCCI-3	ISDN XPM PLUS REMOTE CLUSTER	NT6X12DE
EMR2-15-RCC8	RCC COMMON CP KIT	NT6X12AN
EMR2-15-000	REMOTE CONTROLLER EQUIPMENT FRAME	NT6X10AA
EMR2-15-001	ISDN REMOTE CONTROLLER EQUIPMENT FRAME	NT6X10AD
EMR2-15-002	REMOTE CONTROLLER EQUIPMENT FRAME	NT6X10AC
EMR2-16-RLCC-2	RLCC COMMON CP	NTNX14MA
EMR2-17-IAC-1	INTEGRATED ACCESS CONTROLLER CP	NTBX40BA
EMR2-17-IAC-2	INTEGRATED ACCESS CONTROLLER CP	NTBX40BB
EMR2-17-IAC-4	INTEGRATED ACCESS CONTROLLER COMMON CP	NTBX40BC
EMR2-17-000	INTEGRATED ACCESS EQUIPMENT FRAME	NTBX40AA
EMR2-18-000	ISDN COMMON PERIPHERAL CONTROLLER EQUIPM	NT6X01AB
EMR2-19-LCME-1	ISDN ENHANCED LINE CONCENTRATING MODULE	NTBX31BA
EMR2-19-LCME-2	ISDN ENHANCED LINE CONCENTRATING MODULE	NTBX31BB
EMR2-19-LD-1	ISDN LINE DRAWER	NTBX32AA
EMR2-19-PCKIT-1	LCME PACKFILL UPGRADE KIT	NTBX31PA
EMR2-20-IDNI-1	INTERNATIONAL DIGITAL NETWORK INTERCONNE	NTFX97AA
EMR2-20-ILGC-1	INTERNATIONAL LGC/DTC COMMON CP	NTFX33BA
EMR2-20-ILGC-3	INTERNATIONAL LGC/DTC COMMON CP	NTRX47AB
EMR2-20-ILGC-4	INTERNATIONAL LGC/DTC COMMON CP	NTFX33BC
EMR2-20-ILGC-5	INTERNATIONAL LGC/DTC COMMON CP	NTFX33BD
EMR2-20-IMTM-1	INTERNATIONAL MTM SHELF	NT2X58BC
EMR2-20-LGCI-1	INTERNATIONAL LGC/DTC COMMON CIRCUIT PAC	NTNX33GB
EMR2-20-LGCI-2	LGCI/DTCI COMMON CIRCUIT PACK (OFFSHORE)	NTFX33CB
EMR2-20-LGCI-3	INTERNATIONAL LGC/DTC COMMON CIRCUIT PAC	NTNX33GD
EMR2-20-LGCI-5	INTERNATIONAL LGC/DTC COMMON CIRCUIT PAC	NTNX33GH
EMR2-20-002	INTERNATIONAL CABINET AUXILIARY MODULE	NTFX37AA
EMR2-20-003	INTERNATIONAL CABINET AUXILIARY MODULE	NTFX37AB
EMR2-20-004	INTERNATIONAL CABINET GENERAL MODULE	NTFX47AA
EMR2-20-005	INTERNATIONAL CABINET LGE/DTE ISDN	NTNX33GA
EMR2-21-LTC-1	LGC/DTC OFFSHORE COMMON CP	NT6X02UA

97/12/09

EMR2

PERIPHERAL MODULES CHAPTER ALL

EMR2-22-RCC0-1	OFFSHORE REMOTE CLUSTER	NT6X12DB
EMR2-22-RCC0-2	PCM-30 RCC COMMON CP (PRCC)	NT6X12DD
EMR2-22-RCC0-3	PCM-30 RCC COMMON CP (PRCC)	NT6X12DF
EMR2-24-RCC-1	REMOTE CLUSTER CONTROLLER 2 COMMON CP	NTMX85AA
EMR2-24-002	CRSC EXTENSION CABINET (CEXT) OFFSHORE	NTMX88BA
EMR2-25-RCC2-1	CRSC EXTENSION CABINET (CEXT)	NTMX88AA
EMR2-25-RCC2-2	CABINETIZED REMOTE SWITCHING CENTER	NTMX89AA
EMR2-25-RCC2-3	CABINETIZED REMOTE SWITCHING CENTER (CRS	NTMX89BA
EMR2-25-TM8	8W TRUNK MODULE SHELF PACKFILL	NT2X52AS
EMR2-6-IDTC-10	INTERNATIONAL DIGITAL TRUNK CONTROLLER C	NT6X02JA
EMR2-6-IDTC-11	INTERNATIONAL DIGITAL TRUNK CONTROLLER C	NT6X02KE
EMR2-6-IDTC-8	INTERNATIONAL DIGITAL TRUNK CONTROLLER C	NT6X02QA
EMR2-6-IDTC-9	INTERNATIONAL DIGITAL TRUNK CONTROLLER C	NT6X02GB
EMR2-6-6X02AS	DIGITAL TRUNK CONTROLLER COMMON CP	NT6X02AS
EMR2-6-6X02IC	DIGITAL TRUNK CONTROLLER COMMON CP	NT6X02IC
EMR2-6-6X02RA	DIGITAL TRUNK CONTROLLER COMMON CP	NT6X02RA
EMR2-96-000	PROVISIONING TABLE FOR PRODUCT	PCKDCM
EMR2-97-LCM-1	EXTENDED LCM PROCESSOR CHANGE KIT	NT6X04ZZ
EMR2-97-LCME-1	ISDN LCMI TO LCME UPGRADE KIT	NTBX30BA
EMR2-97-LCME-2	ISDN LCMI TO LCME UPGRADE KIT	NTBX30BB
EMR2-98-CH	PRODUCT CHANGE KIT TO PROVIDE NT0X70AC	NT2X58CH
EMR2-98-000	PROVISIONING TABLE FOR PRODUCT CHANGE KI	T_TM_KITS
EMR2-99-ISDN-1	ISDN UPGRADE CP CHANGE KIT	NT6X02ZA
EMR2-99-LGC-1	LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZR
EMR2-99-LGC-2	LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZS
EMR2-99-LGC-3	LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZU
EMR2-99-LTC-1	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZT
EMR2-99-LTC-2	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZV
EMR2-99-LTC-3	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZW
EMR2-99-LTC-4	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZY
EMR2-99-LTC-5	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZZ
EMR2-99-LTC-6	LTC/LGC COMMON CIRCUIT PACK CHANGE KIT	NT6X02ZN
EMR2-99-OPM-4	FMT-150B HARDWARE MOUNTING KIT	NT0X1978
EMR2-99-OPM-5	DDM-1000 HARDWARE MOUNTING KIT	NT0X1979
EMR2-99-RCC-1	SIGNALLING PROCESSOR CHANGE KIT	NT6X02ZF
EMR2-99-RCC-2	RCC COMMON CP CHANGE KIT	NT6X12ZY
EMR2-99-RCC-3	RCC TO RCCI PRODUCT CHANGE KIT	NT6X1022
EMR2-99-RCC-4	PRODUCT CHANGE KIT	NT6X12ZE
EMR2-99-RCC-5	PC KIT (6X12AD TO 6X12AG)	NT6X12ZC
EMR2-99-RCC-6	RCC COMMON CP CHANGE KIT	NT6X12ZD
EMR2-99-RCC-7	PC KIT (6X12AF TO 6X12CA)	NT6X12ZZ
EMR2-99-RCC-8	DUAL RCC PC KIT	NT6X12ZG
EMR2-99-RCC-9	RCE FILLER PANEL PC KIT	NT6X10ZY
EMR2-99-RCC9	PC KIT (6X12AL TO 6X12AN)	NT6X12ZJ
EMR2-99-RMM-1	REMOTE MAINTENANCE EQUIPMENT KIT (RCEI 6	NT6X10AJ
EMR2-99-SMR-1	CONVERSION FROM SMR TO DTC OR LGC CHANGE	NT6X02ZG
EMR2-99-SMS-1	EXPANDED SIGNALLING PROCESSOR CHANGE KIT	NT6X02YW
EMR2-99-SMU-1	CONVERSION FROM SMS TO SMU CHANGE KIT	NT6X02ZH
EMR2-99-SMU-2	SMU COMMON CIRCUIT PACK KIT	NT6X02CK
EMR2-99-SMU-4	SMU COMMON CIRCUIT PACK KIT	NT6X02CL
EMR2-99-SMU-6	SMU PRODUCT CHANGE KIT	NT6X02EH
EMR2-99-XPM-10	XPM PLUS PACKFILL CHANGE KIT CCPE MODEL	NTRX36DA
EMR2-99-XPM-11	3 PROCESSOR BKP NL XPM+ UPGRADE KIT	NT6X01XE
EMR2-99-XPM-12	XPM PLUS ISDN PACKFILL CHANGE KIT	NT6X02XB

97/12/09

EMR2

PERIPHERAL MODULES CHAPTER ALL

EMR2-99-XPM-13	XPM PLUS PACKFILL KIT	NT6X02XF
EMR2-99-XPM-18	XPM PLUS 3 PROC. UPGRADE KIT	NTMX70AC
EMR2-99-XPM-19	3 PROC. B/P HOST AND RCC XPM+ UPGRADE KI	NT6X02XH
EMR2-99-XPM-2	PRODUCT CHANGE KIT (AA/AC TO IA/LA/MA)	NT6X02ZE
EMR2-99-XPM-6	XPM PLUS PACKFILL CHANGE KIT	NT6X02XA
EMR2-99-XPM-8	RCC TO XPM PLUS PRODUCT CHANGE KIT	NT6X12ZF
EMR2-99-XPM-9	XPM PLUS PACKFILL CHANGE KIT CCPE MODEL	NTRX36CA

97/12/09

EMR2

PERIPHERAL MODULES CHAPTER ALL

DIGITAL CARRIER MODULE

NT2X31AA

RATING: Rated MD. On new jobs replace by NT2X31AB or NT2X31AC as required.

ABBREVIATION NAME: DCM

ENGINEERING DESCRIPTION: The DCM provides an interface between digital carrier transmission systems in the DS-1 format (1.544 Mb/sec) and the DMS network. Each DCM can interface up to 5 systems from both DE-2 and DE-3 channel banks and connect the network via 4 speech links.

REFERENCE DOCUMENTATION: MS2X31AA 01 02

The Digital Carrier Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DCM Shelf Assy	NT2X3101		1			AP
Filler Face Plate 1.125	NT0X50AC		1		01	AP
Filler Face Plate 1.125	NT0X50AC		1		01	AP
* DCM Line	NT2X35AA				03-07	RUL1
DCM Line	NT2X35AB				03-07	RUL1
Filler Face Plate 1.125	NT0X50AC				03-07	RUL2
DCM Signalling	NT2X38AA		1		08	AP
DCM Tone	NT2X37AA		1		09	AP
Network Interface	NT2X36AA		1		10	AP
Filler Face Plate 1.125	NT0X50AC		1		11	AP
Peripheral Msg Processor	NT2X34AA		1		12	AP
CCM Processor	NT2X33AA		1		13	AP
DCM Processor	NT2X32AA		1		14	AP
Filler Face Plate 1.125	NT0X50AC		1		15	AP
Filler Face Plate 1.125	NT0X50AC		1		16	AP
Power Converter (5V/12V)	NT2X07AB		1		17	AP
Power Converter (5V/40A)	NT2X06AB		1		19	AP

* Rating change pending. On new jobs replace with NT2X35AB.

RULE:

- AP 1) When PEC NT2X31AA is ordered, these items are provided.
- RUL1 1) provide one (1) DMS Line card for every T-1/LD-1 system termination or equivalent, up to a maximum of five (5).
- 2) NT2X31AA shall not be used:
- a) to terminate T-1/LD-1 systems which originate on Remote Line Modules (RLM) (instead use NT2X31AC, Section EMR2-01-DCM-3), or
- b) to terminate T-1/LD-1 systems designated as synchronization timing lines in the slave offices of a synchronized pair (instead use NT2X31AB, Section EMR2-01-DCM-2 or NT2X31AC, Section EMR2-01-DCM-3).
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each lo-

cation, 03-07, which is not to be equipped with an NT2X35AA.

DIGITAL CARRIER MODULE

NT2X31AB

RATING: MD. On new jobs replace by NT2X31AH

ABBREVIATION NAME: DCM

ENGINEERING DESCRIPTION: The DCM provides an interface between digital carrier transmission systems in the DS-1 format (1.544 Mb/sec) and the DMS network. Each DCM can interface up to 5 systems from both DE-2 and DE-3 channel banks and connect the network via 4 speech links. NT2X31AB is intended for use in the slave office of a synchronized pair to terminate systems designated as synchronization timing lines.

REFERENCE DOCUMENTATION: MS2X31AB 01 02

The Digital Carrier Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DCM Shelf Assy	NT2X3101		1			AP
Filler Face Plate 1.125	NT0X50AC		1		01	AP
Filler Face Plate 1.125	NT0X50AC		1		02	AP
* DCM Line	NT2X35AA				03-07	RUL1
DCM Line	NT2X35AB				03-07	RUL1
Filler Face Plate 1.125	NT0X50AC				03-07	RUL2
DCM Signalling	NT2X38AB		1		08	AP
DCM Tone	NT2X37AB		1		09	AP
Network Interface	NT2X36AA		1		10	AP
Filler Face Plate 1.125	NT0X50AC		1		11	AP
Peripheral Msg Processor	NT2X34AA		1		12	AP
DCM Processor	NT2X33AB		1		13	AP
DCM Processor	NT2X32AA		1		14	AP
Filler Face Plate 1.125	NT0X50AC		1		15	AP
Filler Face Plate 1.125	NT0X50AC		1		16	AP
Power Converter (5V/12V)	NT2X07AB		1		17	AP
Power Converter (5V/40A)	NT2X06AB		1		19	AP

* Rating change pending. On new jobs replace with NT2X35AB.

RULE:

- AP 1) When PEC NT2X31AB is ordered, these items are provided.
- RUL1 1) Provide one (1) DMS Line card for every T-1/LD-1 system termination or equivalent, up to a maximum of five (5).
- 2) A minimum of two DCM are required in the synchronized slave office to terminate a minimum of two designated timing lines. Either NT2X31AB or NT2X31AC, can be used for this function.
- 3) NT2X31AB shall not be used:
- a) to terminate T-1/LD-1 systems which originate on Remote Line Modules (RLM) (instead use NT2X31AC)
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each lo-

cation, 03-07, which is not to be equipped with an NT2X35AB.

DIGITAL CARRIER MODULE

NT2X31AC

RATING: MD. On new jobs replace by NT2X31AJ.

ABBREVIATION NAME: DCM

ENGINEERING DESCRIPTION: The DCM provides an interface between digital carrier transmission systems in the DS-1 format (1.544 Mb/sec) and the DMS network. Each DCM can interface up to 5 systems from both DE-2 and DE-3 channel banks and connect the network via 4 speech links. NT2X31AC is specifically required to terminate systems which originate on Remote Line Modules (RLM).

REFERENCE DOCUMENTATION: MS2X31AC 01 02

The Digital Carrier Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DCM Shelf Assy	NT2X3101		1			AP
Filler Face Plate 1.125	NT0X50AC		1		01	AP
Filler Face Plate 1.125	NT0X50AC		1		02	AP
* DCM Line	NT2X35AA				03-07	RUL1
DCM Line	NT2X35AB				03-07	RUL1
Filler Face Plate 1.125	NT0X50AC				03-07	RUL2
DCM Signalling	NT2X38AC		1		08	AP
DCM Tone	NT2X37AB		1		09	AP
Network Interface	NT2X36AA		1		10	AP
Filler Face Plate 1.125	NT0X50AC		1		11	AP
Peripheral Msg Processor	NT2X34AA		1		12	AP
DCM Processor	NT2X33AB		1		13	AP
DCM Processor	NT2X32AA		1		14	AP
Filler Face Plate 1.125	NT0X50AC		1		15	AP
Filler Face Plate 1.125	NT0X50AC		1		16	AP
Power Converter (5V/12V)	NT2X07AB		1		17	AP
Power Converter (5V/40A)	NT2X06AB		1		19	AP

* Rating change pending. On new jobs replace with NT2X35AB.

RULE:

- AP 1) When PEC NT2X31AC is ordered, these items are provided.
- RUL1 1) Provide one (1) DMS Line card for every T-1/LD-1 system termination or equivalent, up to a maximum of five (5).
- 2) All systems originating from a given Remote Line Module Control shelf (RLC) must terminate on the same DCM (NT2X31AC) and are assigned only to the lowest numbered consecutive circuits (00 and up).
- 3) The system assigned to circuit 00 is designated the Primary Message Link, while that assigned to 01, if provided, is designated as the back-up.
- 4) Each NT2X31AC can terminate systems from a maximum of one RLC.

- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 03-07, which is not to be equipped with an NT2X35AB.

DIGITAL CARRIER MODULE

NT2X31AK

| RATING: MD. On new jobs replace by NT2X31AL.

ABBREVIATION NAME: DCM

ENGINEERING DESCRIPTION: The DCM provides an interface between digital carrier transmission systems in the DS-1 format (1.544 Mb/sec) and the DMS network. Each DCM can interface up to 5 systems from both DE-2 and DE-3 channel banks and connect the network via 4 speech links. NT2X31AK is specifically required for use in Specialized Common Carrier (SCC) applications.

REFERENCE DOCUMENTATION: MS2X31AK 01 02

The Digital Carrier Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DCM Shelf Assy	NT2X3101		1			AP
Filler Face Plate 2.62	NT0X50AE		1		01	AP
DCM Line	NT2X35AB				03-07	RUL1
Filler Face Plate 1.125	NT0X50AC				03-07	RUL2
DCM Signalling	NT2X38AC		1		08	AP
DCM Tone	NT2X37AC		1		09	AP
Network Interface	NT2X36AA		1		10	AP
Filler Face Plate 1.125	NT0X50AC		1		11	AP
Peripheral Msg Processor	NT2X34AA		1		12	AP
CCM Processor	NT2X33AB		1		13	AP
DCM Processor	NT2X32AA		1		14	AP
Filler Face Plate 1.125	NT0X50AC		1		15	AP
Filler Face Plate 1.125	NT0X50AC		1		16	AP
Power Converter (5V/12V)	NT2X07AB		1		17	AP
Power Converter (5V/40A)	NT2X06AB		1		19	AP
DCM Product Change Kit	NT2X31AP					RUL3

RULE:

- AP 1) When PEC NT2X31AK is ordered, these items are provided.
- RUL1 1) Provide one (1) DMS Line card for every T-1/LD-1 system termination or equivalent, up to a maximum of five (5).
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 03-07, which is not to be equipped with an NT2X35AB.
- RUL3 1) Provide one (1) NT2X31AP MF Tone Enhancement Kit for enhanced outputting of MF Tones.

DIGITAL CARRIER MODULE

NT2X31AH

| RATING: MD.

ABBREVIATION NAME: DCM

ENGINEERING DESCRIPTION: The DCM provides an interface between digital carrier transmission systems in the DS-1 format (1.544 Mb/sec) and the DMS network. Each DCM can interface up to 5 systems from both DE-2 and DE-3 channel banks and connect the network via 4 speech links. NT2X31AH is intended for use in the slave office of a synchronized pair to terminate systems designated as synchronization timing lines. NT2X31AH should not be used to terminate T-1 lines from RLM's. (Canadian use only)

REFERENCE DOCUMENTATION: MS2X31AH 01 05

The Digital Carrier Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DCM Shelf Assy	NT2X3110		1	X		AP
Filler Face Plate 2.62	NT0X50AE		1	X	01	AP
DCM Line	NT2X35AB			X	03-07	RUL1
Filler Face Plate 1.125	NT0X50AC			X	03-07	RUL2
DCM Signalling	NT2X38AB		1	X	08	AP
DCM Tone	NT2X37AB		1	X	09	AP
Network Interface	NT2X36AA		1	X	10	AP
Filler Face Plate 1.125	NT0X50AC		1	X	11	AP
Peripheral Msg Processor	NT2X34AA		1	X	12	AP
DCM Processor	NT2X33AB		1	X	13	AP
DCM Processor	NT2X32AA		1	X	14	AP
Filler Face Plate 1.125	NT0X50AC		1	X	15	AP
Filler Face Plate 1.125	NT0X50AC		1	X	16	AP
Filler Face Plate 2.62	NT0X50AE		1	X	17	AP
Pwr Conv (+/-5V, +/-12V)	NT2X70AA		1	X	19	AP
Desig. Label for NT2X35AB	P0596111			X	03-07	RUL3
Power Converter PC Kit	NT2X70AZ					RUL4

NOTE: 1) "X" can be one of 18, 32, 51, 65.

RULE:

- AP 1) When PEC NT2X31AH is ordered, these items are provided.
- RUL1 1) Provide one (1) DMS Line card for every T-1/LD-1 system termination or equivalent, up to a maximum of five (5).
- 2) A minimum of two DCM are required in the synchronized slave office to terminate a minimum of two designated timing lines. Either NT2X31AH or NT2X31AJ, can be used for this function.
- 3) NT2X31AH shall not be used:-
- a) to terminate T-1/LD-1 systems which originate on Remote Line Modules (RLM) (instead use NT2X31AJ)
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each lo-

cation, 03-07, which is not to be equipped with an NT2X35AB.

RUL3 1) Provide one (1) designation label P0596111, for each NT2X35AB supplied or provide one (1) designation label P0580258 for each NT0X50AC supplied.

RUL4 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70AA to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label.

DIGITAL CARRIER MODULE

NT2X31AL

| RATING: MD.

ABBREVIATION NAME: DCM

ENGINEERING DESCRIPTION: The DCM provides an interface between digital carrier transmission systems in the DS-1 format (1.544 Mb/sec) and the DMS network. Each DCM can interface up to 5 systems from both DE-2 and DE-3 channel banks and connect the network via 4 speech links. NT2X31AL is specifically required for use in Specialized Common Carrier (SCC) applications. NT2X31AL can also terminate systems which originate on RLM's and can terminate systems designated as synchronization timing lines. (Canadian use only)

REFERENCE DOCUMENTATION: MS2X31AL 01 05

The Digital Carrier Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DCM Shelf Assy	NT2X3126		1	X		AP
Filler Face Plate 2.62	NT0X50AE		1	X	01	AP
DCM Line	NT2X35AB			X	03-07	RUL1
Filler Face Plate 1.125	NT0X50AC			X	03-07	RUL2
DCM Signalling	NT2X38AC		1	X	08	AP
DCM Tone	NT2X37AC		1	X	09	AP
Network Interface	NT2X36AA		1	X	10	AP
Filler Face Plate 1.125	NT0X50AC		1	X	11	AP
Peripheral Msg Processor	NT2X34AA		1	X	12	AP
DCM Processor	NT2X33AB		1	X	13	AP
DCM Processor	NT2X32AA		1	X	14	AP
Filler Face Plate 1.125	NT0X50AC		1	X	15	AP
Filler Face Plate 1.125	NT0X50AC		1	X	16	AP
Filler Face Plate 2.62	NT0X50AE		1	X	17	AP
Power Conv (+/-5V, +/-12V)	NT2X70AA		1	X	19	AP
Power Converter PC Kit	NT2X70AZ					RUL3

NOTE: 1) "X" can be one of 18, 32, 51, 65.

RULE:

- AP 1) When PEC NT2X31AL is ordered, these items are provided.
- RUL1 1) Provide one (1) DMS Line card for every T-1/LD-1 system termination or equivalent, up to a maximum of five (5).
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 03-07, which is not to be equipped with an NT2X35AB.
- RUL3 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70AA to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label.

DIGITAL CARRIER MODULE

PEC CODE: NT2X31AJ

CPC CODE: B0213650

| RATING: MD

REPLACES: Not Applicable

REPLACED BY: NT2X31AT

ABBREVIATION NAME: DCM

ENGINEERING DESCRIPTION: The DCM provides an interface between digital carrier transmission systems in the DS-1 format (1.544 Mb/sec) and the DMS network. Each DCM can interface up to 5 systems from both DE-2 and DE-3 channel banks and connect the network via 4 speech links. NT2X31AJ is specifically required to terminate systems which originate on Remote Line Modules (RLM).

REFERENCE DOCUMENTATION: MS2X31AJ 01 05

MARKETS: Applicable markets:

US
Canada

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X31AJ EMR2-01-DCM-7 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 04 17	ECM 288 03	Per ET18819.
97 04 22	ECM 288 07	MD and Retire EMS per EC024-96214.

The Digital Carrier Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DCM Shelf Assy	NT2X3111		1	X		AP
Filler Face Plate 2.65	NT0X50AE		1	X	01	AP
# DCM Line	NT2X35AB			X	03-07	RUL1
Filler Face Plate 1.125	NT0X50AC			X	03-07	RUL2
# DCM Signaling	NT2X38AC		1	X	08	AP
# DCM Tone	NT2X37AB		1	X	09	AP
# Network Interface	NT2X36AA		1	X	10	AP
Filler Face Plate 1.125	NT0X50AC		1	X	11	AP
Peripheral Msg Processor	NT2X34AA		1	X	12	AP
DCM Processor	NT2X33AB		1	X	13	AP
DCM Processor	NT2X32AA		1	X	14	AP
Filler Face Plate 1.125	NT0X50AC		1	X	15	AP
Filler Face Plate 1.125	NT0X50AC		1	X	16	AP
Filler Face Plate 2.62	NT0X50AE		1	X	17	AP
Power Conv (+/-5V,+/-12V)	NT2X70AA		1	X	19	AP
Desig. Label for NT2X35AB	P0596111			X	03-07	RUL3
Power Converter PC Kit	NT2X70AZ					RUL4

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT2X35AB	MD	No Replacement
NT2X38AC	MD	No Replacement
NT2X37AB	MD	No Replacement
NT2X36AA	MD	No Replacement

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 18, 32, 51, 65.

RULES:

- AP 1) When PEC NT2X31AJ is ordered, these items are provided.
- RUL1 1) Provide one (1) DMS Line card for every T-1/LD-1 system termination or equivalent, up to a maximum of five (5).
- 2) All systems originating from a given Remote Line Module Control shelf (RLC) must terminate on the same DCM (NT2X31AJ) and are assigned only to the lowest numbered consecutive circuits (00 and up).
- 3) The system assigned to circuit 00 is designated the Primary Message Link, while that assigned to 01, if provided, is designated as the back-up.
- 4) Each NT2X31AJ can terminate systems from a maximum of one RLC.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 03-07, which is not to be equipped with an NT2X35AB.
- RUL3 1) Provide one (1) designation label P0596111, for each NT2X35AB supplied.
- RUL4 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70AA to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label. NOTE:(Per customer request provide the new Power Converter CP, it is more robust from the ELECTROSTATIC DISCHARGE point of view).

DIGITAL CARRIER MODULE

PEC CODE: NT2X31AT

CPC CODE: B0230675

| RATING: MD

REPLACES: Not Applicable

REPLACED BY: NT2X31AU

ABBREVIATION NAME: DCM

ENGINEERING DESCRIPTION: The DCM provides an interface between digital carrier transmission systems in the DS-1 format (1.544 Mb/sec) and the DMS network. Each DCM can interface up to 5 systems from both DE-2 and DE-3 channel banks and connect the network via 4 speech links. NT2X31AT is specifically required to terminate systems which originate on Remote Line Modules (RLM).

REFERENCE DOCUMENTATION: MS2X31AT 01 02

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: NTI: Ken Clisso Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ken Clisso Dept. 3471 (PPK)

NT2X31AT EMR2-01-DCM-8 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 03 29	----- ECM 288 05	Previous history not available Change per ECD 024-93972. NT2X31AT is MD and replaced with NT2X31AU. Always provided NT2X70AE was replaced with NT2X70AF.

The Digital Carrier Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DCM Shelf Assy	NT2X3128		1	X		AP
Filler Face Plate 2.65	NT0X50AE		1	X	01	AP
DCM Line	NT2X35AB			X	03-07	RUL1
Filler Face Plate 1.125	NT0X50AC			X	03-07	RUL2
DCM Signalling	NT2X38AC		1	X	08	AP
DCM Tone	NT2X37AB		1	X	09	AP
Network Interface	NT2X36AA		1	X	10	AP
Filler Face Plate 1.125	NT0X50AC		1	X	11	AP
Peripheral Msg Processor	NT2X34AA		1	X	12	AP
DCM Control	NT2X33AE		1	X	13	AP
DCM Processor	NT2X32AA		1	X	14	AP
Filler Face Plate 1.125	NT0X50AC		1	X	15	AP
Filler Face Plate 1.125	NT0X50AC		1	X	16	AP
Filler Face Plate 2.62	NT0X50AE		1	X	17	AP
Power Conv (+/-5V,+/-12V)	NT2X70AE		1	X	19	AP
Desig. Label for NT2X35AB	P0596111			X	03-07	RUL3

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

NOTE: 1) "X" can be one of 18, 32, 51, 65.

RULES:

- AP 1) When PEC NT2X31AT is ordered, these items are provided.
- RUL1 1) Provide one (1) DMS Line card for every T-1/LD-1 system termination or equivalent, up to a maximum of five (5).
- 2) All systems originating from a given Remote Line Module Control shelf (RLC) must terminate on the same DCM (NT2X31AT) and are assigned only to the lowest numbered consecutive circuits (00 and up).
- 3) The system assigned to circuit 00 is designated the Primary Message Link, while that assigned to 01, if provided, is designated as the back-up.
- 4) Each NT2X31AT can terminate systems from a maximum of one RLC.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 03-07, which is not to be equipped with an NT2X35AB.
- RUL3 1) Provide one (1) designation label P0596111, for each NT2X35AB supplied.

DIGITAL CARRIER MODULE

PEC CODE: NT2X31AU

CPC CODE: B0242809

| RATING: MD

REPLACES: NT2X31AT

| REPLACED BY: No Replacement

ABBREVIATION NAME: DCM

ENGINEERING DESCRIPTION: The DCM provides an interface between digital carrier transmission systems in the DS-1 format (1.544 Mb/sec) and the DMS network. Each DCM can interface up to 5 systems from both DE-2 and DE-3 channel banks and connect the network via 4 speech links. NT2X31AU is specifically required to terminate systems which originate on Remote Line Modules (RLM).

REFERENCE DOCUMENTATION: MS2X31AU 01 01

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X31AU EMR2-01-DCM-9 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 03 29	ECM 288 05	Introduce DCM NT2X31AU which replaces the NT2X31AT per ECD 024-93972. MD and Retire EMS per EC024-96314.
97 04 22	ECM 288 07	

The Digital Carrier Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DCM Shelf Assy	NT2X3128		1	X		AP
Filler Face Plate 2.65	NT0X50AE		1	X	01	AP
# DCM Line	NT2X35AB			X	03-07	RUL1
Filler Face Plate 1.125	NT0X50AC			X	03-07	RUL2
# DCM Signaling	NT2X38AC		1	X	08	AP
# DCM Tone	NT2X37AB		1	X	09	AP
# Network Interface	NT2X36AA		1	X	10	AP
Filler Face Plate 1.125	NT0X50AC		1	X	11	AP
Peripheral Msg Processor	NT2X34AA		1	X	12	AP
DCM Control	NT2X33AE		1	X	13	AP
DCM Processor	NT2X32AA		1	X	14	AP
Filler Face Plate 1.125	NT0X50AC		1	X	15	AP
Filler Face Plate 1.125	NT0X50AC		1	X	16	AP
Filler Face Plate 2.62	NT0X50AE		1	X	17	AP
Power Conv (+/-5V,+/-12V)	NT2X70AF		1	X	19	AP
Desig. Label for NT2X35AB	P0596111			X	03-07	RUL3

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT2X35AB	MD	No Replacement
NT2X38AC	MD	No Replacement
NT2X37AB	MD	No Replacement
NT2X36AA	MD	No Replacement

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if
they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufac-
tured and cannot be ordered.

NOTES:

- 1) "X" can be one of 18, 32, 51, 65.

RULES:

- AP 1) When PEC NT2X31AU is ordered, these items are provided.
- RUL1 1) Provide one (1) DMS Line card for every T-1/LD-1 system termination or equivalent, up to a maximum of five (5).
- 2) All systems originating from a given Remote Line Module Control shelf (RLC) must terminate on the same DCM (NT2X31AU) and are assigned only to the lowest numbered consecutive circuits (00 and up).
- 3) The system assigned to circuit 00 is designated the Primary Message Link, while that assigned to 01, if provided, is designated as the back-up.
- 4) Each NT2X31AU can terminate systems from a maximum of one RLC.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 03-07, which is not to be equipped with an NT2X35AB.
- RUL3 1) Provide one (1) designation label P0596111, for each NT2X35AB supplied.

DIGITAL ECHO SUPPRESSOR MODULE

NT2X12AA

| RATING: MD. On new jobs replace by NT2X12AD.

ABBREVIATION NAME: DES

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS2X12AA 01 01

The Digital Echo Suppressor Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DES Shelf Assy	NT2X1201		1			AP
Filler Face Plate 1.125	NT0X50AD		1		01	AP
Echo Suppressor CP	NT3X65AA				02-07	RUL1
Filler Face Plate 1.125	NT0X50AC				02-07	RUL2
DCM Signalling	NT2X38AD		1		08	AP
DCM Tone	NT2X37AB		1		09	AP
Network Interface	NT2X36AA		1		10	AP
Filler Face Plate 1.125	NT0X50AC		1		11	AP
Peripheral Msg Processor	NT2X34AA		1		12	AP
DCM Processor	NT2X33AB		1		13	AP
DCM Processor	NT2X32AA		1		14	AP
Filler Face Plate 1.125	NT0X50AC		1		15	AP
Filler Face Plate 1.125	NT0X50AC		1		16	AP
Power Conv (5V/12V)	NT2X07AB		1		17	AP
Power Conv (5V/40A)	NT2X06AB		1		19	AP
Designation Label (NT3X65AA)	P0596112					RUL1

RULE:

- AP 1) When PEC NT2X12AA is ordered, these items are provided.
- RUL1 1) Provide 2 NT3X65AA cards for every 15 echo suppressor circuits required. For the fraction thereof provide 1 additional card if less than 8 circuits otherwise provide 2 (see Note 1).
- 2) In laying out this equipment spread cards evenly over all shelves, first over even numbered slots in ascending order by slot number, then over odd.
- 3) Provide one Designation Label P0596112 per NT3X65AA ordered.
- NOTE: 1) The NT3X65AA comprize a nominal 8 circuits each; however, when equipped in slot 03, 05, or 07, only 7 of these circuits are assignable.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 02-07, which is not to be equipped with an NT3X65AA.

DIGITAL ECHO SUPPRESSOR MODULE

NT2X12AB

| RATING: MD.

ABBREVIATION NAME: DES

ENGINEERING DESCRIPTION: This shelf is obtained when Product Change
Kit, NT2X12AC is applied to NT2X31AA.

REFERENCE DOCUMENTATION: MS2X12AC 01 01

The Digital Echo Suppressor Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DCM Shelf Assy	NT2X3101		1			AP
Filler Face Plate 1.125	NT0X50AC		1		01	AP
Echo Suppressor CP	NT3X65AA				02-07	RUL1
Filler Face Plate 1.125	NT0X50AC				02-07	RUL2
DCM Signalling	NT2X38AD		1		08	AP
DCM Tone	NT2X37AB		1		09	AP
Network Interface	NT2X36AA		1		10	AP
Filler Face Plate 1.125	NT0X50AC		1		11	AP
Peripheral Msg Processor	NT2X34AA		1		12	AP
CCM Processor	NT2X33AB		1		13	AP
DCM Processor	NT2X32AA		1		14	AP
Filler Face Plate 1.125	NT0X50AC		1		15	AP
Filler Face Plate 1.125	NT0X50AC		1		16	AP
Power Converter (5V/12V)	NT2X07AB		1		17	AP
Power Converter (5V/40A)	NT2X06AB		1		19	AP
Designation Label	P0596112					RUL1

RULE:

- AP 1) When PEC NT2X12AB is ordered, these items are provided.
- RUL1 1) Provide 2 NT3X65AA cards for every 15 echo suppressor circuits required. For the fraction thereof provide 1 additional card if less than 8 circuits otherwise provide 2 (see Note 1).
- 2) In laying out this equipment spread cards evenly over all shelves, first over even numbered slots in ascending order by slot number, then over odd.
- 3) Provide one Designation Label P0569112 per NT3X65AA ordered.
- NOTE: 1) The NT3X65AA comprise a nominal 8 circuits each; however, when equipped in slot 03, 05, or 07, only 7 of these circuits are assignable.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 02-07, which is not to be equipped with an NT3X65AA.

DIGITAL ECHO SUPPRESSOR MODULE

NT2X12AD

| RATING: MD.

ABBREVIATION NAME: DES

ENGINEERING DESCRIPTION: The Digital Echo Suppressor shelf houses digital echo suppressor service circuits and interfaces them to the network. The echo suppressor is a voice-operated circuit which reduces echo levels in long-haul trunks by inserting attenuation into the echo path. Digital Echo Suppression is applied to DMS-200 and DMS-300 offices.

REFERENCE DOCUMENTATION: MS2X12AD 01 01

The Digital Echo Suppressor Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DES Shelf Assy	NT2X1202		1	X		AP
Filler Face Plate 1.500	NT0X50AD		1	X	01	AP
Echo Suppressor CP	NT3X65AA			X	02-07	RUL1
Filler Face Plate 1.125	NT0X50AC			X	02-07	RUL2
DCM Signalling	NT2X38AD		1	X	08	AP
DCM Tone	NT2X37AB		1	X	09	AP
Network Interface	NT2X36AA		1	X	10	AP
Filler Face Plate 1.125	NT0X50AC		1	X	11	AP
Peripheral Msg Processor	NT2X34AA		1	X	12	AP
DCM Processor	NT2X33AB		1	X	13	AP
DCM Processor	NT2X32AA		1	X	14	AP
Filler Face Plate 1.125	NT0X50AC		1	X	15	AP
Filler Face Plate 1.125	NT0X50AC		1	X	16	AP
Filler Face Plate 2.62	NT0X50AE		1	X	17	AP
Power Conv (+/-5V,+/-12V)	NT2X70AA		1	X	19	AP
Desig. Label for NT3X65AA	P0596112			X	02-07	RUL3

NOTE: 1) "X" can be one of 18, 32, 51, 65.

RULE:

- AP 1) When PEC NT2X12AD is ordered, these items are provided.
- RUL1 1) Provide 2 NT3X65AA cards for every 15 echo suppressor circuits required. For the fraction thereof provide 1 additional card if less than 8 circuits otherwise provide 2 (see Note 1).
- 2) In laying out this equipment spread cards evenly over all shelves, first over even numbered slots in ascending order by slot number, then over odd.
- NOTE: 1) The NT3X65AA comprize a nominal 8 circuits each; however, when equipped in slot 03, 05, or 07, only 7 of these circuits are assignable.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 02-07, which is not to be equipped with an NT3X65AA.

RUL3 1) Provide one (1) designation label P0596112, for each
NT3X65AA supplied.

MTM AND DRA MULTIPOWER CONVERTER CP
PRODUCT CHANGE KIT

PEC CODE: NT2X58CG

| CPC CODE: B0224136

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: Not Applicable

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: This change kit provides for the replacement of the current equipped Multi-Power Converter circuit pack NT2X09AA (unshielded) with an NT2X09BA (Shielded) circuit pack in offices where NT3X05AA circuit

The codes of the shelves to which this change is applicable are as follows:

NT2X58AC MTM
NT2X58AN MTM
NT2X58AG DRA
NT2X58AK DRA

REFERENCE DOCUMENTATION: N/A

| MARKETS: Applicable markets:

| US
| Canada
| Europe
| Asia/Pacific
| CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58CG EMR2-01-DRA-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 06 20	----- ECM 601 32	Previous history unavailable MD and Retire per EC#018-46900.

The MTM and DRA Multipower Converter CP Product Change Kit is comprised of the following:

	EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
REMOVE	Multi Output Pwr Con NT2X09AA			1	XX	17	
ADD	Multi Output Pwr Con NT2X09BA			1	XX	17	AP
ADD	Des Label (NT2X09BA) P0678476			1	XX	17	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) Description of circuit pack changes is given for one shelf only and operations must be repeated for as many shelves as are equipped
- 2) Shelf position XX can be one of 04,18,32,51,65.

RULES:

- AP 1) When PEC NT2X58CG is ordered, these items are provided.

INTERNATIONAL MTM FOR DRA

PEC CODE: NT2X58AU

| CPC CODE: B0219950

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: Not Applicable

ABBREVIATION NAME: IMTM

ENGINEERING DESCRIPTION: This shelf is primarily intended to house Digital Recorded Announcement (DRA) cards for international switches and is assignable to the ITME frame (NT0X46AB). Always provided equipment is grouped together under the common circuit pack fill.

REFERENCE DOCUMENTATION: MS2X58AU 01 04

MARKETS: Applicable markets:

Europe
Canada
CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AU EMR2-01-IMTM-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 06 20	----- ECM 266 16	Previous history not available MD and Retire per EC#018-46900.

The International MTM For DRA is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
International MTM Shf Assy	NT2X5825		1	X		AP
Trunk Card	AR			X	05-16	RUL1
Filler Face Plate 0.875	NT0X50AC			X	05-16	RUL2

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

- NOTES:
- 1) "X" can be one of 04, 18, 32, 51, 65.
 - 2) Provide one (1) International Maintenance Trunk Module Common Circuit Pack for each NT2X58AU required to be equipped. Maximum four per frame.
 - 3) For international (Turkey) application, provide one (1) NT2X58AS Common CP.

RULES:

- AP 1) When PEC NT2X58AU is ordered, these items are provided.
- RUL1 1) These have to be ordered separately, by their own PEC.
- 2) Refer to Tables A-1 to A-4 in Section EMA14-01-000, for trunk CPs that can be mounted on the IMTM-AU and other related information.

- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-16, which is not to be equipped with a test line or a trunk card.

INTERNATIONAL MAINTENANCE TRUNK MODULE COMMON CP

PEC CODE: NT2X58AY

CPC CODE: B0229318

| RATING: MD

REPLACES: Not applicable

| REPLACED BY: NTFX4101

ABBREVIATION NAME: IMTM

ENGINEERING DESCRIPTION: The IMTM Common Circuit Pack fill contains those cards that are to be provided with each IMTM Shelf Assembly (NT2X58AT or NT2X58AU) ordered for International applications (Turkey).

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Canada
US
CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AY EMR2-01-IMTM-10 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
93 09 28	ECM 601 11	Remove NT0X50AA to match the stocklist
96 09 12	ECM 601 34	MD per EC018-48743

The International Maintenance Trunk Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module Interface CP	NT2X45BA		1	X	1	AP
International Trk Mod CP	NT0X70BA		1	X	2	AP
TM Control CP	NT2X53AA		1	X	3	AP
A-law Codec & Tones CP	NT2X59BA		1	X	4	AP
Multi O/P Pwr Converter	NT2X09AA		1	X	17	AP
Designation Strip	P0701659		1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04, 18, 32, 51 or 65.

RULES:

- 1) When PEC NT2X58AY is ordered, these items are provided.

INTERNATIONAL MAINTENANCE TRUNK MODULE SHELF ASSEMBLY

PEC CODE: NT2X58AT

| CPC CODE: B0219949

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NTFX4101

ABBREVIATION NAME: IMTM

ENGINEERING DESCRIPTION: NT2X58AT is a blank shelf that houses standard MTM equipment for international switches. This shelf is assignable to the ITME frame (NT0X46AB). Always provided equipment is grouped together under the common circuit pack fill.

REFERENCE DOCUMENTATION: MS2X58AT 01 12

| MARKETS: Applicable markets:

| Canada
| US
| CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AT EMR2-01-IMTM-11 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 09 12	----- ECM 601 34	Previous history not available MD per EC018-48743

The International Maintenance Trunk Module Shelf Assembly is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
International MTM Shf Assy	NT2X5824		1	X		AP
Int'l MTM Common Ckt Pack	NT2X58AS	IMTM		X		RUL1
Trunk Card	AR			X	05-16	RUL2
Filler Face Plate 0.875	NT0X50AC			X	05-16	RUL3

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT2X58AS	MD	NT2X58AY
NT2X58AY	MD	NTFX4101

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

- AP 1) When PEC NT2X58AT is ordered, these items are provided.
- RUL1 1) Provide one (1) International Maintenance Trunk Module Common Circuit Pack for each NT2X58AT required to be equipped. Maximum four per frame.
- 2) For international (Turkey) application, provide one (1) NT2X58AS Common CP (see Section EMA2-01-IMTMC-1).

- RUL2 1) These have to be ordered separately, by their own PEC.
- 2) Refer to Tables A-1 to A-4 in Section EMA14-01-000, for trunk CPs that can be mounted on the IMTM-AT and other related information.
- RUL3 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-16, which is not to be equipped with a test line or a trunk card.

INTERNATIONAL MAINTENANCE TRUNK MODULE COMMON CP

PEC CODE: NT2X58CL

| CPC CODE: B0231569

| RATING: MD

| REPLACES: NT2X58CC

| REPLACED BY: NTFX4101

ABBREVIATION NAME: IMTM

ENGINEERING DESCRIPTION: This IMTM Common CP fill contains those cards that are to be provided with each IMTM Shelf Assembly (NT2X58AT or NT2X58AU) for Caribbean applications.

REFERENCE DOCUMENTATION: N/A

| MARKETS: Applicable markets:

| CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58CL EMR2-01-IMTM-13 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 09 12	----- ECM 601 34	Previous history not available MD per EC018-48743

The International Maintenance Trunk Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module Interface CP	NT2X45BA		1		1	AP
International Trk Mod CP	NT0X70BA		1		2	AP
TM Control CP	NT2X53AA		1		3	AP
A-law Codec E/W CEP Tones	NT2X59DA		1		4	AP
Multi O/P Pwr Converter	NT2X09AA		1		17	AP
Filler FP .875	NT0X50AA		1		19	AP
Designation Strip	P0701656		1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04, 18, 32, 51 or 65.

RULES:

- AP 1) When PEC NT2X58CL is ordered, these items are provided.

INTERNATIONAL MAINTENANCE TRUNK MODULE COMMON CP

PEC CODE: NT2X58DB

| CPC CODE: B0229313

| RATING: MD

| REPLACES: NT2X58DA

| REPLACED BY: NTFX4101

ABBREVIATION NAME: IMTM

ENGINEERING DESCRIPTION: This IMTM Common Circuit Pack fill contains those cards that are to be provided with each IMTM Assembly for DMS-250 applications.

REFERENCE DOCUMENTATION: N/A

| MARKETS: Applicable markets:

|
US
CANADA
CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58DB EMR2-01-IMTM-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 09 12	----- ECM 601 34	Previous history not available MD per EC018-48743

The International Maintenance Trunk Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module Interface CP	NT2X45BA		1		1	AP
Trunk Mod Proc (32k) CP	NT0X70AC		1		2	AP
TM Control CP	NT2X53AA		1		3	AP
Group Codec 250 CP	NT2X59EA		1		4	AP
Multi O/P Pwr Converter	NT2X09AA		1		17	AP
Filler FP .875	NT0X50AA		1		19	AP
Designation Strip	P0701657		1			

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04, 18, 32, 51 or 65.

RULES:

- AP 1) When PEC NT2X58DB is ordered, these items are provided.

INTERNATIONAL MAINTENANCE TRUNK MODULE COMMON CP NT2X58AS

| RATING: MD. Replaced by NT2X58AY.

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: The IMTM common circuit pack fill contains those cards that are to be provided with each IMTM shelf assembly (NT2X58AT or NT2X58AU) ordered. One NT2X58AS is ordered for each NT2X58AT and NT2X58AU for international applications (Turkey).

REFERENCE DOCUMENTATION: N/A

The IMTM Common Circuit Pack is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module Interface CP	NT2X45BA		1	X	01	AP
International Trk Mod CP	NT0X70BA		1	X	02	AP
Trunk Module/Control CP	NT2X53AA		1	X	03	AP
A-Law Codec & Tones CP	NT2X59BA		1	X	04	AP
Multi O/P Power Converter	NT2X09AA		1	X	17	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
Power Converter +/-5V & 12V	NT2X70AA		1	X	20	AP
Designation Strip (NT2X58AU)	P0660618		1	X		AP

NOTE: 1) "X" can be one of 04, 18, 32, 51, 65.

RULE:

AP 1) When PEC NT2X58AS is ordered, these items are provided.

SCOPEDIAL U.K. IMTM COMMON CP

NT2X58BA

RATING: MD. Replaced by NT2X58BB.

REFERENCE AND DATE: Standard Documentation, December 1985.

ABBREVIATION NAME: IMTM

ENGINEERING DESCRIPTION: This circuit pack fill is for Scopedial U.K. and Scopedial Spain application. When applied to NT2X58AT shelf assembly, it forms the IMTM for Scopedial. When applied to NT2X58AU shelf assembly, it forms the DRA shelf for Scopedial.

REFERENCE DOCUMENTATION: N/A

The Scopedial U.K. IMTM Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module Interface CP	NT2X45BA		1	X	1	AP
Trunk Module Processor CP	NT0X70AA		1	X	2	AP
TM Control CP	NT2X53AA		1	X	3	AP
A-Law TM Codec e/w BT Tone	NT2X59CA		1	X	4	AP
Multi O/P Power Converter	NT2X09AA		1	X	17	AP
Filler Face Plate	NT0X50AA		1	X	19	AP
Pwr Converter +/-5V, 12V	NT2X70AA		1	X	20	AP
Designation Strip	P0666381		1	X		AP

NOTE: 1) "X" can be one of 04, 18, 32, 51, 65.

RULE:

AP 1) When PEC NT2X58BA is ordered, these items are provided.

INTERNATIONAL MAINTENANCE TRUNK MODULE COMMON CP NT2X58CC

| RATING: MD. Replaced by NT2X58CL.

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: The IMTM common circuit pack fill contains those cards that are to be provided with each IMTM shelf assembly (NT2X58AT or NT2X58AU) ordered. One NT2X58CC is ordered for each NT2X58AT and NT2X58AU for Caribbean Expansion Project.

REFERENCE DOCUMENTATION: N/A

The IMTM Common Circuit Pack is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module Interface CP	NT2X45BA		1	X	01	AP
International Trk Mod CP	NT0X70BA		1	X	02	AP
Trunk Module/Control CP	NT2X53AA		1	X	03	AP
A-Law Codec & Tones CP	NT2X59DA		1	X	04	AP
Multi O/P Power Converter	NT2X09AA		1	X	17	AP
Filler Face Plate	NT0X50AA		1	X	19	AP
Power Converter +/-5V & 12V	NT2X70AD		1	X	20	AP
Designation Strip (NT2X58CC)	P0677211		1	X		AP

NOTE: 1) "X" can be one of 04, 18, 32, 51, 65.

RULE:

AP 1) When PEC NT2X58CC is ordered, these items are provided.

| INTERNATIONAL MAINTENANCE TRUNK MODULE COMMON CP NT2X58DA

RATING: MD. Replaces NT2X58DB.

ABBREVIATION NAME: IMTM

ENGINEERING DESCRIPTION: This IMTM Common Circuit Pack fill contains those cards that are to be provided with each IMTM Assembly for Mercury DMS-250 applications.

REFERENCE DOCUMENTATION: N/A

The International Maintenance Trunk Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module Interface CP	NT2X45BA		1	X	1	AP
Trunk Mod Proc (32k) CP	NT0X70AC		1	X	2	AP
TM Control CP	NT2X53AA		1	X	3	AP
Group Codec Mercury 250 CP	NT2X59EA		1	X	4	AP
Multi O/P Pwr Converter	NT2X09AA		1	X	17	AP
Filler Faceplate .875	NT0X50AA		1	X	19	AP
Power Converter	NT2X70AA		1	X	20	
Designation Strip	P0683200		1			

NOTE:

- 1) X = Shelf Position 04, 18, 32, 51 or 65.

RULE:

- AP 1) When PEC NT2X58DB is ordered, these items are provided.

U.K. IMTM COMMON CP

PEC CODE: NT2X58BB

| CPC CODE: B0229317

| RATING: MD

| REPLACES: NT2X58BA

| REPLACED BY: NTFX4101

ABBREVIATION NAME: IMTM

ENGINEERING DESCRIPTION: This IMTM Common CP fill is for U.K. and Spain application. When applied to NT2X58AT Shelf Assembly, it forms the IMTM. When applied to NT2X58AU Shelf Assembly, it forms the DRA shelf.

REFERENCE DOCUMENTATION: N/A

| MARKETS: Applicable markets:

| Canada
| US
| CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58BB EMR2-01-IMTMC-9 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 09 12	----- ECM 601 34	Previous history not available MD per EC018-48743

The U.K. IMTM Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module Interface CP	NT2X45BA		1	X	1	AP
Trunk Module Processor CP	NT0X70AA		1	X	2	AP
TM Control CP	NT2X53AA		1	X	3	AP
A-law TM Codec E/W BT Tone	NT2X59CA		1	X	4	AP
Multi O/P Pwr Converter	NT2X09AA		1	X	17	AP
Filler FP .875	NT0X50AA		1	X	19	AP
Designation Strip	P0701658		1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if
they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufac-
tured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04, 18, 32, 51 or 65.

RULES:

- AP 1) When PEC NT2X58BB is ordered, these items are provided.

INTERNATIONAL EIGHT WIRE TRUNK MODULE

PEC CODE: NT2X52BB

| CPC CODE: B0219995

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NTFX4101

ABBREVIATION NAME: ITM8

ENGINEERING DESCRIPTION: This shelf is used as an eight wire trunk module for international application. Always provided circuit packs must be provided separately by common circuit pack fill code.

REFERENCE DOCUMENTATION: MS2X52BB 00 01

| MARKETS: Applicable markets:

| US
| Canada
| Europe
| Asia/Pacific
| CALA
| Carrier

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52BB EMR2-01-ITM8-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 09 12	----- ECM 601 34	Previous history not available MD per EC018-48743

The International Eight Wire Trunk Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
8 Wire Trunk Shelf Assy	NT2X5224		1	X		AP
Trunk Card	AR			X	05-19	RUL2
Filler Face Plate	NT0X50AC			X	05-19	RUL3

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

AP 1) When PEC NT2X52BB is ordered, these items are provided.

RUL1 1) The following circuit packs are provisionable on the ITM8 shelf. The provisionable slots are 05-19.

PEC	DESCRIPTION	CKTS/CD
NT1X54AA	Jack Ended Trunk	2
NT2X48CA	MF Receiver	4
NT2X48CB	DTMF Receiver	4
NT5X30BA	Communication Test Line	1

NT2X72BA	4W DC5A Tie Trunk	2
NT2X81BA	2W DC5A Tie Trunk	2
NT2X84BA	Earth Calling Trunk	1
NT2X95BA	Direct Dial Inward Trunk	1

- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not equipped with a circuit pack.

U.K. ITM8 COMMON CP

PEC CODE: NT2X52CA

| CPC CODE: B0228878

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NTFX4101

ABBREVIATION NAME: ITM8

ENGINEERING DESCRIPTION: This circuit pack fill is for U.K. and Spain application. When applied to NT2X52BB shelf assembly, it forms the ITM8.

REFERENCE DOCUMENTATION: SL2X52CA 00 04
MS2X52CA 00 02

MARKETS: Applicable markets:

CALA
Asia/Pacific
Europe

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52CA EMR2-01-ITM8C-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 93 05 07	----- ECM 464 07	Previous history not available ET29683 - Update equipment list and engineering rules based on ECD018-39736. MD per EC018-48743
96 09 12	ECM 601 34	

The U.K. ITM8 Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module Interface CP	NT2X45BA		1	X	1	AP
Trunk Module Processor CP	NT0X70AA		1	X	2	AP
TM Control CP	NT2X53AA		1	X	3	AP
Multi O/P Power Converter	NT2X09AA		1	X	20	AP
Filler Faceplate 1.12	NT0X50AC		1	X	4	AP
Desig. Strip (NT2X52CA)	P0689356		1			AP
% A-Law TM Codec e/w BT Tone	NT2159CA			X	4	RUL1
% Designation Label(NT2159CA)	P0741220			X	4	RUL1
A-Law TM Codec e/w BT Tone	NT2X59CA			X	4	RUL1
Designation Label(NT2X59CA)	P0677817			X	4	RUL1
Trunk Cards	AR			X	5-19	RUL2
Filler Face Plate 1.12	NT0X50AC			X	5-19	RUL3

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.
% The NT2159CA (A/W version 04) is replaced by NT2X59CA (New A/W version 07 or later).

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

- AP 1) When PEC NT2X52CA is ordered, these items are provided.

- RUL1 1) For U.K. and Spain applications, provide one (1) NT2X59CA A-Law TM Codec (New A/W version 07 or later) and one (1) Designation Label P0677817 in card slot 04.
- 2) For U.K. and Spain applications A/W version 04) was initially used. It was replaced by NT2159CA manufactured by Kapsch & Schracks. The NT2159CA is replaced by NT2X59CA (New A/W version 07 or later). Provide one (1) Designation Label P0741220 for each NT2159CA provisioned.
- RUL2 1) The ITM8 provides slots to mount up to fifteen (15) trunk, test and service cards. Refer to Engineering Manual Section Table A (EMA2-14-000) for the cards that can be mounted on ITM8.
- RUL3 1) Provide one (1) Filler Face Plate NT0X50AC for each slot position 05-19 that is not equipped with any trunk, test or service card as described in RUL2.

INTERNATIONAL EIGHT WIRE TRUNK MODULE WITH ACCESS

PEC CODE: NT2X52CC

| CPC CODE: B0225351

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NTFX4101

ABBREVIATION NAME: IT8A

ENGINEERING DESCRIPTION: This shelf is used as an eight wire trunk module for DMS-300 application. This trunk module has leads brought out for connection to a Test Access Network. This shelf provides the capability of connecting external test equipment to trunk facilities and circuits via a purely metallic path through the TAN. It may be equipped on DMS-300 office only

REFERENCE DOCUMENTATION: N/A

| MARKETS: Applicable markets:

| US
Canada
Europe
Asia/Pacific
CALA
Carrier

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52CC EMR2-01-IT8A-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 92 10 02 96 09 12	----- ECM 526 04 ECM 601 34	Previous history not available Section opened in error. MD per EC018-48743

The International Eight Wire Trunk Module With Access is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DMS-300 Trunk Shelf Assy	NT2X5226		1	X		AP
DMS-300 T8A Common CP	NT2X52CB		1	X		RUL1

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

AP 1) When PEC NT2X52CC is ordered, these items are provided.

NOTE 1) For Turkey DMS-300 application, provide one (1) NT2X52CB Common CP for each NT2X52CC required to be equipped.

U.K. ITM8 COMMON CP

PEC CODE: NT2X52CB

| CPC CODE: B0224475

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NTFX4101

ABBREVIATION NAME: IT8A

ENGINEERING DESCRIPTION: This circuit pack fill is for Turkey and Memory DMS-300 application. When applied to NT2X52CC shelf assembly, it forms the IT8A for the DMS-300.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA
Carrier

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52CB EMR2-01-IT8C-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 92 10 02 96 09 12	----- ECM 526 04 ECM 601 34	Previous history not available Section opened in error. MD per EC018-48743

The U.K. ITM8 Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module Interface CP	NT2X45BA		1	X	1	AP
Trunk Module Processor CP	NT0X70AC		1	X	2	AP
TM Control CP	NT2X53AA		1	X	3	AP
A-Law TM Codec DMS-300	NT2X59CB		1	X	4	AP
Trunk Card	AR			X	05-19	RUL1
Filler Face Plate	NT0X50AC			X	05-19	RUL2
Multi O/P Power Converter	NT2X09AA		1	X	20	AP
Designation Strip	P0679482		1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

- AP 1) When PEC NT2X52CB is ordered, these items are provided.
- RUL1 1) Reference section EMA14-01-000 for provisionable trunk cards.
- RUL2 2) Equip filler face plate NT0X50AC in unequipped slots as required.

MAINTENANCE TRUNK MODULE

NT2X58AA

RATING: Rated MD. On new jobs order NT2X58AC.

ABBREVIATION NAME: MTM

REFERENCE DOCUMENTATION: MS2X58AA 01 04

The Maintenance Trunk Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Maint Trk Module Shlf Assy	NT2X5801		1			AP
TM Network Interface	NT2X45AA		1		01	AP
TM Processor	NT0X70AA		1		02	AP
TM Control	NT2X53AA		1		03	AP
Group Codec	NT2X59AA		1		04	AP
Trunk Card	AR				05-16	RUL1
Filler Face Plate 1.125	NT0X50AC				05-16	RUL2
Multioutput Power Converter	NT2X09AA		1		17	AP
Filler Face Plate .875	NT0X50AA		1		19	AP
Power Converter (5V/40A)	NT2X06AB		1		20	AP

RULE:

- AP 1) When PEC NT2X58AA is ordered, these items are provided.
- RUL1 1) The MTM provides slots to mount up to twelve (12) test line and trunk cards.
- 2) Refer to Table A, Section EMA14-01-000, for cards that can be mounted on an MTM. In particular observe User Note (v) on the same page.
- 3) The sum total of the maximum power dissipation per Table A (Section EMA14-01-000) for all cards provisioned on any one shelf shall not exceed 110 watts.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-16, which is not to be equipped with a test line or trunk card.

MAINTENANCE TRUNK MODULE FOR DRA

PEC CODE: NT2X58CB

CPC CODE: B0222569

| RATING: MD

REPLACES: NT2X58AK

| REPLACED BY: NTFX4101

ABBREVIATION NAME: MTM

ENGINEERING DESCRIPTION: This shelf is primarily intended to house Digital Recorded Announcement (DRA) cards. Assignment restrictions are imposed on certain other cards which function in pairs.

REFERENCE DOCUMENTATION: MS2X58CB 01 08

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA
Carrier

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58CB EMR2-01-MTM-12 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
92 10 02	ECM 526 04	Change rating to MD.
93 02 26	ECM 266 10	Change rating to STD.
95 04 05	ECM 601 20	Convert NT2X70AE Power Converter and P0698943 Desig Label to NT2X70AF Power Converter and P0809960 Desig Label per EC 024-93972.
96 09 12	ECM 601 34	MD per EC018-48743

The Maintenance Trunk Module For DRA is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DRA Shelf Assembly	NT2X5830		1	X		AP
Trunk Card	AR			X	05-16	RUL1
Filler Face Plate 0.875	NT0X50AC			X	05-16	RUL2
Pwr Conv CP +/-5V, 12V	NT2X70AF			X	20	RUL3
Designation Label (NT2X70AF)	P0809960			X	20	RUL3

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.
- 2) Provide one MTM/DRA Common CP NT2X58AW per MTM if Digital Data Line Card NT3X05AA/AC is not equipped on this MTM.
- 3) Provide one (1) MTM/DRA Common CP NT2X58AR per MTM if Digital Data line Card NT3X05AA/AC is not equipped on this MTM. This CP Fill has an enhanced TM processor card (NT0X70AC) and is normally required for DMS-250 applications.
- 4) Provide one (1) MTM/DRA Common CP NT2X58CK per MTM if Digital Data Line Card NT3X05AA/AC is equipped on this MTM.
- 5) Provide one (1) MTM/DRA Common CP NT2X58CJ per MTM if Digital Data Line Card NT3X05AA/AC is equipped on this MTM.

This CP Fill has an enhanced TM processor card (NT0X70AC) and is normally required for DMS-250 applications.

RULES:

- AP 1) When PEC NT2X58CB is ordered, these items are provided.
- RUL1 1) The MTM provides slots to mount up to twelve (12) test line and trunk cards.
- 2) Refer to Table A-2, Section EMA14-01-000, for cards that can be mounted on an NT2X58CB. In particular observe Note 4 of the same section.
- 3) The sum total of the maximum power dissipation per Table A-3 (Section EMA14-01-000) for all cards provisioned on any one shelf shall not exceed 110 watts.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-16, which is not to be equipped with a test line or a trunk card.
- RUL3 1) Provide one (1) Power Converter CP NT2X70AF, and one (1) P0809960 Designation Label per MTM/DRA shelf.

MAINTENANCE TRUNK MODULE

PEC CODE: NT2X58AG

| CPC CODE: B0214470

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: No Replacement

ABBREVIATION NAME: MTM

ENGINEERING DESCRIPTION: This shelf is primarily intended to house Digital Recorded Announcement (DRA) cards. Assignment restrictions are imposed on certain other cards which function in pairs.

REFERENCE DOCUMENTATION: MS2X58AG 01 15

| MARKETS: Applicable markets:

| Canada
| US
| CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AG EMR2-01-MTM-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 09 12	----- ECM 601 34	Previous history not available MD per EC018-48743

The Maintenance Trunk Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Maint Trk Module Shlf Assy	NT2X5808		1			AP
TM Network Interface	NT2X45AB		1		01	AP
TM Processor	NT0X70AA		1		02	AP
TM Control	NT2X53AA		1		03	AP
Group Codec	NT2X59AA		1		04	AP
Trunk Card	AR				05-16	RUL1
Filler Face Plate 1.125	NT0X50AC				05-16	RUL2
Multioutput Power Converter	NT2X09AA		1		17	AP
Filler Face Plate .875	NT0X50AA		1		19	AP
Power Converter (5V/40A)	NT2X06AB		1		20	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT2X58AG is ordered, these items are provided.

RUL1 1) The MTM provides slots to mount up to twelve (12) test line and trunk cards.

- 2) Refer to Table A-2, Section EMA14-01-000, for cards that can be mounted on an NT2X58AG. In particular observe User Note (iv) on the same page.
 - 3) The sum total of the maximum power dissipation per Table A-3 (Section EMA14-01-000) for all cards provisioned on any one shelf shall not exceed 110 watts.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 05-16, which is not to be equipped with a test line or a trunk card.

MAINTENANCE TRUNK MODULE

PEC CODE: NT2X58AC

| CPC CODE: B0208783

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NT2X58CA

ABBREVIATION NAME: MTM

ENGINEERING DESCRIPTION: The Maintenance Trunk Module is similar to the TM in operation, however, its primary function is to interface service, test and maintenance circuits and scanner and signal distributor cards.

| REFERENCE DOCUMENTATION: MS2X58AC 01 24

| MARKETS: Applicable markets:

| US
Canada
Europe
Asia/Pacific
CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AC EMR2-01-MTM-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 06 20	----- ECM 601 32	Previous history not available MD and Retire per EC#018-46900.

The Maintenance Trunk Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Maint Trunk Module Shf Assy	NT2X5808		1	X		AP
TM Network Interface	NT2X45AB		1	X	01	AP
TM Processor	NT0X70AA		1	X	02	AP
TM Control	NT2X53AA		1	X	03	AP
Group Codec	NT2X59AA		1	X	04	AP
Trunk Card	AR			X	05-16	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-16	RUL2
Multioutput Power Converter	NT2X09AA		1	X	17	AP
Filler Face Plate .875	NT0X50AA		1	X	19	AP
Power Converter (5V/40A)	NT2X06AB		1	X	20	AP
PC Kit to Provide NT0X70AC	NT2X58CH					RUL3

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

- AP 1) When PEC NT2X58AC is ordered, these items are provided.
- RUL1 1) The MTM provides slots to mount up to twelve (12) test line and trunk cards.

- 2) Refer to Table A-2, Section EMA14-01-000, for cards that can be mounted on an NT2X58AC. In particular observe User Note (iv) on the same page.
 - 3) The sum total of the maximum power dissipation per Table A-3 (Section EMA14-01-000) for all cards provisioned on any one shelf shall not exceed 110 watts.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 05-16, which is not to be equipped with a test line or a trunk card.
- RUL3 1) If an existing MTM is equipped with an Audio Tone Detector CP NT5X29AC, provide one (1) PC Kit to Provide NT0X70AC, NT2X58CH for BCS-28 or higher.

MAINTENANCE TRUNK MODULE

PEC CODE: NT2X58AK

| CPC CODE: B0216556

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NT2X58CB

ABBREVIATION NAME: MTM

ENGINEERING DESCRIPTION: This shelf is primarily intended to house Digital Recorded Announcement (DRA) cards. Assignment restrictions are imposed on certain other cards which function in pairs.

REFERENCE DOCUMENTATION: MS2X58AK 01 14

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AK EMR2-01-MTM-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 06 20	----- ECM 601 32	Previous history not available MD and Retire per EC#018-46900.

The Maintenance Trunk Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Maint Trunk Module Shf Assy	NT2X5819		1	X		AP
TM Network Interface	NT2X45AB		1	X	01	AP
TM Processor	NT0X70AA		1	X	02	AP
TM Control	NT2X53AA		1	X	03	AP
Group Codec	NT2X59AA		1	X	04	AP
Trunk Card	AR			X	05-16	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-16	RUL2
Multioutput Power Converter	NT2X09AA		1	X	17	AP
Filler Face Plate .875	NT0X50AA		1	X	19	AP
Power Conv (+/-5V,+/-12V)	NT2X70AA		1	X	20	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

- AP 1) When PEC NT2X58AK is ordered, these items are provided.
- RUL1 1) The MTM provides slots to mount up to twelve (12) test line and trunk cards.

- 2) Refer to Table A-2, Section EMA14-01-000, for cards that can be mounted on an NT2X58AK. In particular observe User Note (iv) on the same page.
 - 3) The sum total of the maximum power dissipation per Table A-3 (Section EMA14-01-000) for all cards provisioned on any one shelf shall not exceed 110 watts.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 05-16, which is not to be equipped with a test line or a trunk card.

MAINTENANCE TRUNK MODULE

PEC CODE: NT2X58AN

| CPC CODE: B0223073

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NT2X58CA

ABBREVIATION NAME: MTM

ENGINEERING DESCRIPTION: The Maintenance Trunk Module is similar to the TM in operation, however its primary function is to interface service, test and maintenance circuits and scanner and signal distributor cards.

REFERENCE DOCUMENTATION: MS2X58AN 01 07

| MARKETS: Applicable markets:

| US
| Canada
| Europe
| Asia/Pacific
| CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AN EMR2-01-MTM-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 06 20	----- ECM 601 32	Previous history unavailable MD and Retire per EC#018-46900.

The Maintenance Trunk Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Maint Trk Mod Shf Assy	NT2X5808		1	X		AP
Trunk Card	AR			X	05-16	RUL1
Filler Face Plate 0.875	NT0X50AC			X	05-16	RUL2
Pwr Conv DP +/- 5V,12V	NT2X70AE			X	20	RUL3
Pwr Converter Kit	NT2X70AZ					RUL3
PC Kit to Provide NT0X70AC	NT2X58CH					RUL4

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.
- 2) Provide one (1) MTM/DRA Common CP NT2X58AZ per MTM if:
 1. Digital Data Line Card NT3X05AA/AC is not equipped on this MTM.

The NT2X58AZ Common CP Fill replaces the NT2X58AW Common CP Fill.

- 3) Provide one (1) MTM/DRA Common CP NT2X58AX per MTM if:

1. Digital Data Line Card NT3X05AA/AC is not equipped on this MTM.
2. Audio Tone Detector Card NT5X29AC is equipped on this MTM.

This CP Fill has an enhanced TM processor card (NT0X70AC) and is normally required for DMS-250 or Audio Tone Detector Card applications.

The NT2X58AX Common CP Fill replaces the NT2X58AR Common CP Fill.

- 4) Provide one (1) MTM/DRA Common CP NT2X58CP per MTM if:
 1. Digital Data Line Card NT3X05AA/AC is equipped on this MTM.

The NT2X58CP Common CP Fill replaces the NT2X58CK Common CP Fill.

- 5) Provide one (1) MTM/DRA Common CP NT2X58CN per MTM if:
 1. Digital Data Line Card NT3X05AA/AC is equipped on this MTM.
 2. Audio Tone Detector Card NT5X29AC is equipped on this MTM.

This CP Fill has an enhanced TM processor card (NT0X70AC) and is normally required for DMS-250 or Audio Tone Detector Card applications.

The NT2X58CN Common CP Fill replaces the NT2X58CJ Common CP Fill.

RULES:

- AP 1) When PEC NT2X58AN is ordered, these items are provided.

- RUL1 1) The MTM provides slots to mount up to twelve (12) test line and trunk cards.
- 2) Refer to Table A-2, Section EMA14-01-000, for cards that can be mounted on an NT2X58AN. In particular observe User Note (iv) on the same page.
- 3) The sum total of the maximum power dissipation per Table A-3 (Section EMA14-01-000) for all cards provisioned on any one shelf shall not exceed 110 watts.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-16, which is not to be equipped with a test line or a trunk card.
- RUL3 1) When MTM/DRA Common CP NT2X58AZ is provided, also provide one (1) Power Converter CP NT2X70AE.
- 2) As per Customer request, provide one (1) PC Kit NT2X70AZ to change one (1) existing Power Converter CP to an NT2X70AE CP in the field.
- RUL4 1) If an existing MTM is equipped with MTM/DRA Common CP NT2X58AZ/AW/CP/CK and Audio Tone Detector CP NT5X29AC, provide one (1) PC Kit to Provide NT0X70AC, NT2X58CH for BCS-28 or higher.

MAINTENANCE TRUNK MODULE

PEC CODE: NT2X58AL

CPC CODE: B0221231

| RATING: MD

REPLACES: Replaces NT2X58CA for Canadian applications.

REPLACED BY: Not Applicable

ABBREVIATION NAME: MTM

ENGINEERING DESCRIPTION: The Maintenance Trunk Module is similar to the TM in operation, however its primary function is to interface service, test and maintenance circuits and scanner and signal distributor cards.

REFERENCE DOCUMENTATION: MS2X58AL 01 02

MARKETS: Applicable markets:
Canada

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AL EMR2-01-MTM-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 04 05	----- ECM 601 20	Previous history not available Convert NT2X70AE Power Converter and P0698943 Desig Label to NT2X70AF Power Converter and P0809960 Desig Label per EC 024-93972.
96 06 20	ECM 266 16	MD and Retire per EC#018-46900.

The Maintenance Trunk Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
MTM Shelf Assembly	NT2X5839		1	X		AP
Trunk Card	AR			X	05-16	RUL1
Filler Face Plate 0.875	NT0X50AC			X	05-16	RUL2
Power Converter +/- 5V, 12V	NT2X70AF			X	20	RUL3
Designation Label (NT2X70AF)	P0809960			X	20	RUL3

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.

RULES:

- AP 1) When PEC NT2X58AL is ordered, these items are provided.
- RUL1 1) The MTM provides slots to mount up to twelve (12) test line and trunk cards.
- 2) Refer to Table A-2, Section EMA14-01-000, for cards that can be mounted on an NT2X58AL.

- 3) The sum total of the maximum power dissipation per Table A-3 (Section EMA14-01-000) for all cards provisioned on any one shelf shall not exceed 110 watts.
- RUL2 1) When customer requirements specify that Filler Face Plates are ordered, provide one (1) NT0X50AC for each location 05-16 which is not equipped with a test line or a trunk card.
- RUL3 1) Provide one (1) NT2X70AF Power Converter CP and one (1) P0809960 Designation Label per MTM/DRA shelf.

MAINTENANCE TRUNK MODULE FOR DRA

PEC CODE: NT2X58AM

CPC CODE: B0221230

| RATING: MD

REPLACES: Replaces NT2X58CB for Canadian applications.

REPLACED BY: Not Applicable

ABBREVIATION NAME: MTM

ENGINEERING DESCRIPTION: This shelf is primarily intended to house Digital Recorded Announcement (DRA) cards. Assignment restrictions are imposed on certain other cards which function in pairs.

REFERENCE DOCUMENTATION: MS2X58AM 01 02

MARKETS: Applicable markets:

Canada

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AM EMR2-01-MTM-7 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 04 05	----- ECM 601 20	Previous history not available Convert NT2X70AE Power Converter and P0698943 Desig Label to NT2X70AF Power Converter and P0809960 Desig Label per EC 024-93972. MD and Retire per EC#018-46900.
96 06 20	ECM 266 16	

The Maintenance Trunk Module for DRA is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DRA Shelf Assembly	NT2X5841		1	X		AP
Trunk Card	AR			X	05-16	RUL1
Filler Face Plate 0.875	NT0X50AC			X	05-16	RUL2
Power Converter +/- 5V, 12V	NT2X70AF			X	20	RUL3
Designation Label (NT2X70AF)	P0809960			X	20	RUL3

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.

RULES:

- AP 1) When PEC NT2X58AM is ordered, these items are provided.
- RUL1 1) The MTM provides slots to mount up to twelve (12) test line and trunk cards.
- 2) Refer to Table A-2, Section EMA14-01-000, for cards that can be mounted on an NT2X58AM.

- 3) The sum total of the maximum power dissipation per Table A-3 (Section EMA14-01-000) for all cards provisioned on any one shelf shall not exceed 110 watts.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location 05-16 which is not to be equipped with a test line or a trunk card.
- RUL3 1) Provide one (1) NT2X70AF Power Converter CP and one (1) P0809960 Designation Label per MTM/DRA shelf.

| MAINTENANCE TRUNK MODULE COMMON CP

NT2X58AW

| RATING: MD. Replaced by NT2X58AZ.

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: This MTM Common Circuit Pack fill contains those cards that are to be provided with each MTM Assembly (NT2X58CA) or each DRA Assembly (NT2X58CB).

REFERENCE DOCUMENTATION: N/A

The MTM Common Circuit Pack fill is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module I/F CP	NT2X45AB		1	X	1	AP
Trunk Module Processor CP	NT0X70AA		1	X	2	AP
TM/Control CP	NT2X53AA		1	X	3	AP
Group Codec CP	NT2X59AA		1	X	4	AP
Multi O/P Pwr Converter CP	NT2X09AA		1	X	17	AP
Filler Face Plate .875	NT0X50AA		1	X	19	AP
Pwr Conv CP +/- 5V, 12V	NT2X70AA		1	X	20	AP

NOTE: 1) X = Shelf Position 04,18,32,51 or 65

AP 1) When PEC NT2X58AW is ordered, these items are provided.

MAINTENANCE TRUNK MODULE COMMON CP

PEC CODE: NT2X58AZ

| CPC CODE: B0229314

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NTFX4101

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: This MTM Common Circuit Pack fill contains those cards that are to be provided with each MTM Assembly (NT2X58CA) or each DRA Assembly (NT2X58CB).

REFERENCE DOCUMENTATION: N/A

| MARKETS: Applicable markets:

| Canada
| US
| CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AZ EMR2-01-MTMC-11 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 09 12	----- ECM 601 34	Previous history not available MD per EC018-48743

The Maintenance Trunk Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module I/F CP	NT2X45AB		1	X	1	AP
Trunk Module Processor CP	NT0X70AA		1	X	2	AP
TM/Control CP	NT2X53AA		1	X	3	AP
Group Codec CP	NT2X59AA		1	X	4	AP
Multi O/P Pwr Converter CP	NT2X09AA		1	X	17	AP
Filler Face Plate .875	NT0X50AA		1	X	19	AP
Designation Strip	P0701651		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.

RULES:

- AP 1) When PEC NT2X58AZ is ordered, these items are provided.

MAINTENANCE TRUNK MODULE COMMON CP

PEC CODE: NT2X58AX

| CPC CODE: B0229321

| RATING: MD

| REPLACES: NT2X58AR

| REPLACED BY: NTFX4101

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: This MTM Common Circuit Pack fill contains those cards that are to be provided with each MTM Assembly (NT2X58CA) or each DRA Assembly (NT2X58CB).

REFERENCE DOCUMENTATION: N/A

| MARKETS: Applicable markets:

| Canada
| US
| CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AX EMR2-01-MTMC-12 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 09 12	----- ECM 601 34	Previous history not available MD per EC018-48743

The Maintenance Trunk Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module I/F CP	NT2X45AB		1	X	1	AP
Trunk Module Processor CP	NT0X70AC		1	X	2	AP
TM/Control CP	NT2X53AA		1	X	3	AP
Group Codec CP	NT2X59AA		1	X	4	AP
Multi O/P Pwr Converter CP	NT2X09AA		1	X	17	AP
Filler Face Plate .875	NT0X50AA		1	X	19	AP
Design Strip	P0701655		1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65

RULES:

- AP 1) When PEC NT2X58AX is ordered, these items are provided.

MAINTENANCE TRUNK MODULE COMMON CP

NT2X58AR

| RATING: MD. Replaced by NT2X58AX.

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: This MTM Common Circuit Pack fill contains those cards that are to be provided with each MTM Assembly (NT2X58CA) or each DRA Assembly (NT2X58CB).

REFERENCE DOCUMENTATION: N/A

The MTM Common Circuit Pack fill is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module I/F CP	NT2X45AB		1	X	1	AP
Trunk Module Processor CP	NT0X70AC		1	X	2	AP
TM/Control CP	NT2X53AA		1	X	3	AP
Group Codec CP	NT2X59AA		1	X	4	AP
Multi O/P Pwr Converter CP	NT2X09AA		1	X	17	AP
Filler Face Plate .875	NT0X50AA		1	X	19	AP
Pwr Conv CP +/- 5V, 12V	NT2X70AA		1	X	20	AP
Design Strip (NT2X58AN)	P0666382		1			AP

NOTE: 1) X = Shelf Position 04,18,32,51 or 65

AP 1) When PEC NT2X58AR is ordered, these items are provided.

MAINTENANCE TRUNK MODULE COMMON CP

NT2X58CK

| RATING: MD. Replaced by NT2X58CP.

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: This MTM Common Circuit Pack fill contains those cards that are to be provided with each MTM Assembly (NT2X58CA) or each DRA Assembly (NT2X58CB).

REFERENCE DOCUMENTATION: N/A

The MTM Common Circuit Pack fill is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module I/F CP	NT2X45AB		1	X	1	AP
Trunk Module Processor CP	NT0X70AA		1	X	2	AP
TM/Control CP	NT2X53AA		1	X	3	AP
Group Codec CP	NT2X59AA		1	X	4	AP
Multi O/P Pwr Converter CP	NT2X09BA		1	X	17	AP
Filler Face Plate .875	NT0X50AA		1	X	19	AP
Pwr Conv CP +/- 5V, 12V	NT2X70AA		1	X	20	AP
Design Strip (NT2X58AC)	P0667791		1			AP
Design Label (NT2X09BA)	P0678476		1			AP

NOTE: 1) X = Shelf Position 04,18,32,51 or 65

AP 1) When PEC NT2X58CK is ordered, these items are provided.

MAINTENANCE TRUNK MODULE COMMON CP

NT2X58CJ

| RATING: MD. Replaced by NT2X58CN.

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: This MTM Common Circuit Pack fill contains those cards that are to be provided with each MTM Assembly (NT2X58CA) or each DRA Assembly (NT2X58CB).

REFERENCE DOCUMENTATION: N/A

The MTM Common Circuit Pack fill is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trunk Module I/F CP	NT2X45AB		1	X	1	AP
Trunk Module Processor CP	NT0X70AC		1	X	2	AP
TM/Control CP	NT2X53AA		1	X	3	AP
Group Codec CP	NT2X59AA		1	X	4	AP
Multi O/P Pwr Converter CP	NT2X09BA		1	X	17	AP
Filler Face Plate .875	NT0X50AA		1	X	19	AP
Pwr Conv CP +/- 5V, 12V	NT2X70AA		1	X	20	AP
Design Strip (NT2X58AN)	P0666382		1			AP
Design Label (NT2X09BA)	P0678476		1			AP

NOTE: 1) X = Shelf Position 04,18,32,51 or 65

AP 1) When PEC NT2X58CJ is ordered, these items are provided.

MAINTENANCE TRUNK MODULE COMMON CP

PEC CODE: NT2X58AP

| CPC CODE: B0221229

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NTFX4101

ABBREVIATION NAME: Not applicable

ENGINEERING DESCRIPTION: This MTM Common CP fill contains those cards that are to be always provided with each Maintenance Trunk Module (NT2X58AL) or Maintenance Trunk Module for DRA (NT2X58AM).

REFERENCE DOCUMENTATION: N/A

| MARKETS: Applicable markets:

| Canada
| US
| CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X58AP EMR2-01-MTMC-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 09 12	----- ECM 601 34	Previous history not available MD per EC018-48743

The Maintenance Trunk Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate 1.125	NT0X50AC		2	X	01, 02	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
TM Control Card CP	NT4X65AB		1	X	03	AP
TM Group Codec CP	NT2X59AA		1	X	04	AP
Multi Output Power Converter	NT2X09AA		1	X	17	AP
Designation Label	P0701254		1	X		AP
Designation Label (NT0X50AC)	P0580258		2	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65

RULES:

- AP 1) When PEC NT2X58AP is ordered, these items are provided.

OFFICE ALARM UNIT

NT2X58AB

RATING: MD. On new jobs order NT2X58AD.

ABBREVIATION NAME: OAU

ENGINEERING DESCRIPTION:

REFERENCE DOCUMENTATION: MS2X58AB 01 01

The Office Alarm Unit is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Office Alarm Unit Shlf Assy	NT2X5801		1			AP
TM Network Interface	NT2X45AA		1		01	AP
TM Processor	NT0X70AA		1		02	AP
TM Control	NT2X53AA		1		03	AP
Filler Face Plate 1.125	NT0X50AC		1		03	AP
Signal Distributor	NT2X57AA		1		05	AP
Signal Distributor	NT2X57AA		1		06	AP
Signal Distributor	NT2X57AA		1		07	AP
Office Alarm Circuit NO.1	NT2X41AA		1		08	AP
Office Alarm Circuit NO.2	NT2X42AA		1		09	AP
Office Alarm Circuit NO.3	NT2X43AB		1		10	AP
Misc Scanner	NT0X10AA		1		12	AP
Misc Scanner	NT0X10AA		1		13	AP
Misc Scanner	NT0X10AA		1		14	AP
Misc Scanner	NT0X10AA		1		15	RUL1
Misc Scanner	NT0X10AA		1		16	RUL1
Filler Face Plate 1.125	NT0X50AC		1		15	RUL2
Filler Face Plate 1.125	NT0X50AC		1		16	RUL2
Multioutput Power Converter	NT2X09AA		1		17	AP
Filler Face Plate .875	NT0X50AA		1		19	AP
Filler Face Plate 2.62	NT0X50AE		1		20	AP

RULE:

- AP 1) When PEC NT2X58AB is ordered, these items are provided.
- 2) Cards provided with this shelf along with the alarm- dedicated cards provisioned on a separate MTM shelf provide all normal alarm system interface and control functions, including aisle alarm scanning for equipment rows A through H and J through M.
- RUL1 1) Provide one (1) NT0X10AA in slot 15 if at least one of the equipment rows N, P through Z, AA and BB is to be equipped.
- 2) Provide one (1) NT0X10AA in slot 16 if at least one of the equipment rows CC through HH, JJ through NN and PP through RR is to be equipped.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location which is not to be equipped with a NT0X10AA.

OFFICE ALARM UNIT

NT2X58AD

RATING: MD. OAU shelves are not required for new jobs (see Table A, Section EMA14-01-000).

ABBREVIATION NAME: OAU

ENGINEERING DESCRIPTION:

REFERENCE DOCUMENTATION: MS2X58AD 01 02

The Office Alarm Unit is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Office Alarm Unit Shlf Assy	NT2X5808		1			AP
TM Network Interface	NT2X45AB		1		01	AP
TM Processor	NT0X70AA		1		02	AP
TM Control	NT2X53AA		1		03	AP
Filler Face Plate	NT0X50AC		1		04	AP
Signal Distributor	NT2X57AA		1		05	AP
Signal Distributor	NT2X57AA		1		06	AP
Signal Distributor	NT2X57AA		1		07	AP
Office Alarm Circuit NO.1	NT2X41AA		1		08	AP
Office Alarm Circuit NO.2	NT2X42AA		1		09	AP
Office Alarm Circuit NO.3	NT2X43AB		1		10	AP
Misc Scanner	NT0X10AA		1		12	AP
Misc Scanner	NT0X10AA		1		13	AP
Misc Scanner	NT0X10AA		1		14	AP
Misc Scanner	NT0X10AA		1		15	RUL1
Misc Scanner	NT0X10AA		1		16	RUL1
Filler Face Plate	NT0X50AC		1		15	RUL2
Filler Face Plate	NT0X50AC		1		16	RUL2
Multioutput Power Converter	NT2X09AA		1		17	AP
Filler Face Plate .875	NT0X50AA		1		19	AP
Filler Face Plate 2.62	NT0X50AE		1		20	AP

RULE

- AP 1) When PEC NT2X58AD is ordered, these items are provided.
- 2) Cards provided with this shelf along with the alarm- dedicated cards provisioned on a separate MTM shelf provide all normal alarm system interface and control functions, including aisle alarm scanning for equipment rows A through H and J through M.
- RUL1 1) Provide one (1) NT0X10AA in slot 15 if at least one of the equipment rows N, P through Z, AA and BB is to be equipped.
- 2) Provide one (1) NT0X10AA in slot 16 if at least one of the equipment rows CC through HH, JJ through NN and PP through RR is to be equipped.
- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location which is not to be equipped with a NT0X10AA.

DMS-100/200 TRUNK MODULE COMMON CP

PEC CODE: NT2X52AK

| CPC CODE: B0218389

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NTFX4101

| ABBREVIATION NAME: Not Applicable

ENGINEERING DESCRIPTION: This TM Common CP fill contains those cards that are to be always provided with each TM2 Trunk Module 2 Wire (NT2X52AM), TM4 Trunk Module 4 Wire (NT2X52AN), or TM8 Trunk Module 8 Wire (NT2X52AP, NT2X52AV).

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA
Carrier

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52AK EMR2-01-TMC-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 92 10 02	----- ECM 526 04	Previous history not available Add NT2X52AV pec into the engineering description section. MD per EC018-48743
96 09 12	ECM 601 34	

The DMS-100/200 Trunk Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate	NT0X50AC		2	X	01,02	AP
TM Control Card CP	NT4X65AB		1	X	03	AP
TM Group Codec CP	NT2X59AA		1	X	04	AP
Multi Output Power Converter	NT2X09AA		1	X	20	AP
Designation Strip	P0686469		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.

RULES:

- AP 1) When PEC NT2X52AK is ordered, these items are provided.

DMS-300 TRUNK MODULE COMMON CP

PEC CODE: NT2X52AL

| CPC CODE: B0218390

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NTFX4101

| ABBREVIATION NAME: Not applicable

ENGINEERING DESCRIPTION: This TM Common CP fill contains those cards that are to be always provided with each Trunk Module 8-Wire With Access (NT2X52AR).

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA
Carrier

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52AL EMR2-01-TMC-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 09 12	----- ECM 601 34	Previous history not available MD per EC018-48743

The DMS-300 Trunk Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate	NT0X50AC		2	X	01,02	AP
TM Control Card CP	NT4X65AB		1	X	03	AP
Group Codec CP	NT2X59AB		1	X	04	AP
Multi Output Power Converter	NT2X09AA		1	X	20	AP
Designation Strip	P0686470		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.

RULES:

- AP 1) When PEC NT2X52AL is ordered, these items are provided.

TRUNK MODULE 2 WIRE

NT2X52AA

RATING: Rated MD. On new jobs order NT2X52AE.

ABBREVIATION NAME: TM2

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS2X52AA 01 02

The Trunk Module 2 Wire is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trk Mod -30 Pr Shf Assy	NT2X5207		1			AP
TM Network Interface	NT2X45AA		1		01	AP
TM Processor	NT0X70AA		1		02	AP
TM Control	NT2X53AA		1		03	AP
Group Codec	NT2X59AA		1		04	AP
Trunk Card	AR				05-19	RUL1
Filler Face Plate 1.125	NT0X50AC				05-19	RUL2
Multioutput Power Converter	NT2X09AA		1		20	AP

RULE:

AP 1) When PEC NT2X52AA is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.
 2) Up to 15 trunk CP's can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CP's that can be mounted on TM2. In particular observe User Note (v) on the same page.

RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

TRUNK MODULE 2 WIRE

PEC CODE: NT2X52AM

| CPC CODE: B0218391

| RATING: MD

| REPLACES: NT2X52AE

| REPLACED BY: Not Applicable

ABBREVIATION NAME: TM2

ENGINEERING DESCRIPTION: The Trunk Module performs the interface between analog trunks and the network. It performs such tasks as digit reception from dial pulse incoming trunks, control tasks of dial pulse transmission on outgoing trunks, and digital tone distribution.

The TM2 is a module intended for trunks with two leads. There are four leads per card slot and thirty pairs of leads are cabled to the DF. Replaces NT2X52AE for Canadian applications only.

REFERENCE DOCUMENTATION: MS2X52AM 00 02

| MARKETS: Applicable markets:

| Canada

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52AM EMR2-01-TM2-10 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 06 20	----- ECM 430 05	Previous history unavailable MD and Retire per EC#018-46900.

The Trunk Module 2 Wire is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
2W Trunk Shelf Assembly	NT2X5219		1	X		AP
Trunk Card	AR			X	05-19	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-19	RUL2

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.

RULES:

AP 1) When PEC NT2X52AM is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.
2) Up to 15 trunk CPs can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CPs that can be mounted on TM2.

RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

TRUNK MODULE 2 WIRE

PEC CODE: NT2X52AE

| CPC CODE: B0209686

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NT2X52AM for Canadian applications.

ABBREVIATION NAME: TM2

ENGINEERING DESCRIPTION: The Trunk Module provides the interface between analog trunks and the network. It performs such tasks as digit reception from dial pulse incoming trunks, control tasks of dial pulse transmission on outgoing trunks, and digital tone distribution.

The TM2 is a module intended for trunks with two leads. There are four leads per card slot and thirty pairs of leads are cabled to the DF.

REFERENCE DOCUMENTATION: MS2X52AE 01 02

| MARKETS: Applicable markets:

| Canada
| Europe
| Asia/Pacific

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52AE EMR2-01-TM2-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 06 20	----- ECM 601 32	Previous history unavailable MD and Retire per EC#018-46900.

The Trunk Module 2 Wire is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trk Module -30 Pr Shlf Assy	NT2X5207		1	X		AP
TM Network Interface	NT2X45AB		1	X	01	AP
TM Processor	NT0X70AA		1	X	02	AP
TM Control	NT2X53AA		1	X	03	AP
Group Codec	NT2X59AA		1	X	04	AP
Trunk Card	AR			X	05-19	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-19	RUL2
Multioutput Power Converter	NT2X09AA		1	X	20	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

AP 1) When PEC NT2X52AE is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.

- 2) Up to 15 trunk CP's can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CP's that can

be mounted on TM2. In particular observe Note 5 of the same section.

- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

TRUNK MODULE 4 WIRE

NT2X52AB

RATING: Rated MD. On new jobs order NT2X52AF.

ABBREVIATION NAME: TM4

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS2X52AB 01 02

The Trunk Module 4 Wire is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trk Module -60 Pr Shf Assy	NT2X5204		1			AP
TM Network Interface	NT2X45AA		1		01	AP
TM Processor	NT0X70AA		1		02	AP
TM Control	NT2X53AA		1		03	AP
Group Codec	NT2X59AA		1		04	AP
Trunk Card	AR				05-19	RUL1
Filler Face Plate 1.125	NT0X50AC				05-19	RUL2
Multioutput Power Converter	NT2X09AA		1		20	AP

RULE:

AP 1) When PEC NT2X52AB is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.
 2) Up to 15 trunk CP's can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CP's that can be mounted on TM4. In particular observe User Note (v) on the same page.

RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

TRUNK MODULE 4 WIRE

PEC CODE: NT2X52AN

| CPC CODE: B0218392

| RATING: MD

| REPLACES: NT2X52AF

| REPLACED BY: Not Applicable

ABBREVIATION NAME: TM4

ENGINEERING DESCRIPTION: The Trunk Module performs the interface between analog trunks and the network. It performs such tasks as digit reception from dial pulse incoming trunks, control tasks of dial pulse transmission on outgoing trunks, and digital tone distribution.

The TM4 is a module intended for trunks with four and fewer leads. There are eight leads per card slot and sixty pairs of leads are cabled to the DF. Replaces NT2X52AF for Canadian applications only.

REFERENCE DOCUMENTATION: MS2X52AN 00 02

| MARKETS: Applicable markets:

| Canada

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52AN EMR2-01-TM4-10 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 06 20	----- ECM 430 05	Previous history unavailable MD and Retire per EC#018-46900.

The Trunk Module 4 Wire is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
2W/4W Trunk Shelf Assembly	NT2X5220		1	X		AP
Trunk Card	AR			X	05-19	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-19	RUL2

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.

RULES:

AP 1) When PEC NT2X52AN is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.
2) Up to 15 trunk CPs can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CPs that can be mounted on TM4.

RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

TRUNK MODULE 4 WIRE

PEC CODE: NT2X52AF

| CPC CODE: B0209687

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NT2X52AN for Canadian applications.

ABBREVIATION NAME: TM4

ENGINEERING DESCRIPTION: The Trunk Module provides the interface between analog trunks and the network. It performs such tasks as digit reception from dial pulse incoming trunks, control tasks of dial pulse transmission on outgoing trunks, and digital tone distribution.

The TM4 is a module intended for trunks with four and fewer leads. There are eight leads per card slot and sixty pairs of leads are cabled to the DF.

REFERENCE DOCUMENTATION: MS2X52AF 01 02

| MARKETS: Applicable markets:

| Canada
| Europe
| Asia/Pacific

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52AF EMR2-01-TM4-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 06 20	----- ECM 601 32	Previous history unavailable MD and Retire per EC#018-46900.

The Trunk Module 4 Wire is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trk Module -60 Pr Shf Assy	NT2X5204		1	X		AP
TM Network Interface	NT2X45AB		1	X	01	AP
TM Processor	NT0X70AA		1	X	02	AP
TM Control	NT2X53AA		1	X	03	AP
Group Codec	NT2X59AA		1	X	04	AP
Trunk Card	AR			X	05-19	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-19	RUL2
Multioutput Power Converter	NT2X09AA		1	X	20	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

AP 1) When PEC NT2X52AF is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.

- 2) Up to 15 trunk CPs can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CP's that can be

mounted on TM4. In particular observe Note 5 of the same section.

- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

TRUNK MODULE 8 WIRE

NT2X52AC

RATING: Rated MD. On new jobs order NT2X52AG.

ABBREVIATION NAME: TM8

ENGINEERING DESCRIPTION: N/A

| REFERENCE DOCUMENTATION: MS2X52AC 01 03

The Trunk Module 8 Wire is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trk Module -120 Pr Shf Assy	NT2X5201		1			AP
TM Network Interface	NT2X45AA		1		01	AP
TM Processor	NT0X70AA		1		02	AP
TM Control	NT2X53AA		1		03	AP
Group Codec	NT2X59AA		1		04	AP
Trunk Card	AR				05-19	RUL1
Filler Face Plate 1.125	NT0X50AC				05-19	RUL2
Multioutput Power Converter	NT2X09AA		1		20	AP
Product Change Kit	NT2X52AU		1			RUL3

RULES:

AP 1) When PEC NT2X52AC is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.
 2) Up to 15 trunk CP's can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CP's that can be mounted on TM8. In particular observe User Note (v) on the same page.

RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

RUL3 1) When customer requirement specify that a WTA panel is to be provided in a central office which has a NT2X52AC, the NT2X52AU Product Change Kit must be ordered to enable the connection of MONTALK circuits from the WTA to the TM8 shelf.

TRUNK MODULE 8 WIRE WITH ACCESS

PEC CODE: NT2X52AR

CPC CODE: B0220000

| RATING: MD

REPLACES: NT2X52AD

| REPLACED BY: NTFX4101

ABBREVIATION NAME: T8A

ENGINEERING DESCRIPTION: Trunk Module 8 Wire With Access is a 120-pair (TM8) trunk module which has leads brought out for connection to a Test Access Network. The trunk CP must be equipped with access relays. Used only for DMS-300 offices.

NOTE-The NT2X52AR must not be confused with the special function TM8 module, NT2X52AV, used in DMS-100 PBX and Common Carrier applications.

REFERENCE DOCUMENTATION: MS2X52AR 00 03

MARKETS: Applicable markets:

Canada

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52AR EMR2-01-TM8-14 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 94 05 19 96 09 12	----- ECM 522 08 ECM 601 34	Previous history not available NT2X52AV replaces NT2X52AP, Page 1 MD per EC018-48743

The Trunk Module 8 Wire With Access is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
DMS-300 8W Trunk Shelf Assy	NT2X5222		1	X		AP
Trunk Card	AR			X	05-19	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-19	RUL2

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.

RULES:

AP 1) When PEC NT2X52AR is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.
2) Up to 15 trunk CPs can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CPs that can be mounted on TM4.

RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

TRUNK MODULE 8 WIRE

PEC CODE: NT2X52AV

| CPC CODE: B0236478

| RATING: MD

| REPLACES: NT2X52AP

| REPLACED BY: No Replacement

ABBREVIATION NAME: TM8 or T8A

ENGINEERING DESCRIPTION: Due to a limited memory capacity all functional PM S/W Execs cannot be accommodated. Therefore, in certain applications these execs must be split over 2 groups of NT2X52AV shelves. The designation T8A is used in such instances to identify that group which supports special functions associated with PBX and Specialized Common Carrier (SCC) applications (see Table A, Section EMA14).
The NT2X52AV has a flip-plate that allows connections to Wideband Test Access panels using connectorized cables.

REFERENCE DOCUMENTATION: MS2X52AV 00 01

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA
Carrier

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52AV EMR2-01-TM8-15 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 92 10 02	----- ECM 526 04	Previous history not available ET14549 - Add missing packfill info. ET14709 - Add missing packfill info. ET14719 - Add missing packfill info.
96 09 12	ECM 601 34	MD per EC018-48743

The Trunk Module 8 Wire is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
8W Trunk Shelf Assembly	NT2X5234		1	X		AP
Trunk Module Common CP	NT2X52AK		1	X	01	RUL1
Trunk Card	AR			X	05-19	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-19	RUL2

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.

RULES:

- AP 1) When PEC NT2X52AV is ordered, these items are provided.
- RUL1 1) Always provide one (1) NT2X52AK Trunk Module Common CP for each NT2X52AV Trunk Module shelf.
- 2) These cards have to be ordered separately, by their own PEC.
- 3) Up to 15 trunk CPs can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CPs that can be mounted on TM4.

- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

TRUNK MODULE 8 WIRE

NT2X52AP

RATING: MD. Replaces NT2X52AG for Canadian applications only.

ABBREVIATION NAME: TM8 or T8A

ENGINEERING DESCRIPTION: Due to a limited memory capacity all functional PM S/W Execs cannot be accommodated. Therefore, in certain applications these execs must be split over 2 groups of NT2X52AP shelves. The designation T8A is used in such instances to identify that group which supports special functions associated with PBX and Specialized Common Carrier (SCC) applications (see Table A, Section EMA14).

REFERENCE DOCUMENTATION: MS2X52AP 00 03

The Trunk Module 8 Wire is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
8W Trunk Shelf Assembly	NT2X5221		1	X		AP
Trunk Card	AR			X	05-19	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-19	RUL2
Product Change Kit	NT2X52AU		1			RUL3

NOTES:

- 1) X = Shelf Position 04,18,32,51 or 65.

RULES:

AP 1) When PEC NT2X52AP is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.

- 2) Up to 15 trunk CPs can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CPs that can be mounted on TM4.

RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

| RUL3 1) When customer requirements specify that a WTA panel is to be provided in a central office which has a NT2X52AP, the NT2X52AU Product Change Kit must be ordered to enable the connection of MONTALK circuits from the WTA to the TM8 shelf.

TRUNK MODULE 8 WIRE

PEC CODE: NT2X52AG

CPC CODE: B0209688

RATING: MD

REPLACES: NT2X52AC

REPLACED BY: NT2X52AV

ABBREVIATION NAME: TM8 or T8A

ENGINEERING DESCRIPTION: The TM8 provides an interface for eight-wire analog trunk facilities. Up to fifteen trunk interface cards may be assigned to the shelf.

The designation T8A is used to identify a shelf which supports special functions associated with PBX and Specialized Common Carrier applications.

REFERENCE DOCUMENTATION: MS2X52AG 01 03

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA
Carrier

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52AG EMR2-01-TM8-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
92 10 02	ECM 526 04	Change status rating to MD.
94 05 19	ECM 522 08	Retire.
96 06 20	ECM 601 32	MD and Retire per EC#018-46900.

The Trunk Module 8 Wire is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
8-Wire Trunk Shelf Assy	NT2X5201		1	X		AP
TM Network Interface	NT2X45AB		1	X	01	AP
TM Processor	NT0X70AA		1	X	02	AP
TM Control	NT2X53AA		1	X	03	AP
Group Codec	NT2X59AA		1	X	04	AP
Trunk Card	AR			X	05-19	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-19	RUL2
Multioutput Power Converter	NT2X09AA		1	X	20	AP
Product Change Kit	NT2X52AU		1			RUL3

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

AP 1) When PEC NT2X52AG is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.

- 2) Up to 15 trunk CP's can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CP's that can

be mounted on NT2X52AG shelves. In particular observe Note 5 of the same section.

- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.
- RUL3 1) For TM8 Trunk Module shelves, a NT2X52AU Product Change kit must be ordered for each shelf to be connected to a WTA panel. This option is required when a WTA (Wideband Test Access) Panel is engineered in an office with older vintage TM8 shelves.

TRUNK MODULE 8 WIRE WITH ACCESS

PEC CODE: NT2X52AD

| CPC CODE: B0206793

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NT2X52AR for Canadian applications.

ABBREVIATION NAME: T8A

ENGINEERING DESCRIPTION: Trunk Module -120 Pair With Access is a 120 pair (TM8) trunk module which has leads brought out for connection to a Test Access Network. This shelf provides the capability of connecting external test equipment to trunk facilities and circuits via a purely metallic path through the TAN (trunk CP must be equipped with access relays). Used only for DMS-300 offices.

NOTE-Must not be confused with the special function TM8-type module, NT2X52AG, used in DMS-100 PBX, Scope Dial and Common Carrier applications (see Section EMA2-01-TM8-1).

REFERENCE DOCUMENTATION: MS2X52AD 01 04

| MARKETS: Applicable markets:

|
| Canada
| Europe
| Asia/Pacific

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT2X52AD EMR2-01-TM8-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 06 20	----- ECM 601 32	Previous history unavailable MD and Retire per EC#018-46900.

The Trunk Module 8 Wire With Access is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Trk Module -120 Pr Shf Assy	NT2X5208		1	X		AP
TM Network Interface	NT2X45AB		1	X	01	AP
TM Processor	NT0X70AA		1	X	02	AP
TM Control	NT2X53AA		1	X	03	AP
Group Codec	NT2X59AB		1	X	04	AP
Trunk Card	AR			X	05-19	RUL1
Filler Face Plate 1.125	NT0X50AC			X	05-19	RUL2
Multioutput Power Converter	NT2X09AA		1	X	20	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 18, 32, 51, 65.

RULES:

AP 1) When PEC NT2X52AD is ordered, these items are provided.

RUL1 1) These have to be ordered separately, by their own PEC.

- 2) Up to 15 trunk CP's can be accommodated per module. Refer to Table A, Section EMA14-01-000, for trunk CP's that can be mounted on T8A.

- RUL2 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location, 05-19, which is not to be equipped with a trunk card.

TRUNK MODULE EQUIPMENT FRAME
OR DIGITAL CARRIER EQUIPMENT FRAME

NT0X46AA

RATING: MD. On new jobs replace by NT0X46AB.

ABBREVIATION NAME: TME (in general when no DCM's are equipped)

DCE (in general when DCM's are equipped)

| REFERENCE DOCUMENTATION: MS0X46AA 01 05

The Trunk Module Equipment Frame or Digital Carrier Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Framework	NT0X25AA	FW	1			
Perif Frame Supervisory Pnl	NT0X82AA	FSP	1	45		
Basic Assembly Wiring						

Description of NT0X46AA:

NOTE: In this manual the abbreviation 'TM' and the name 'Trunk Module' are general terms used to represent any or all of TM2, TM4, TM8, T8A, ATM.

- NT0X46AA is a general purpose peripheral equipment frame which houses all peripheral module types excluding Line Modules (LM) and Test Access Network Modules (TAN). Allowed types are listed below.
- Two distinct functional names are associated with the hardware:
 - "Digital Carrier Equipment Frame", (DCE) defines the intended function where the frame is configured specifically to house DCM and (or) DES. Subject to certain restrictions, TM, MTM, OAU and AXU shelves are also allowed on this configuration. Two power feeds are provided.
 - "Trunk Module Equipment Frame", (TME) defines the intended function where the frame is configured specifically to house TM, MTM, OAU and AXU. Subject to certain restrictions, DCM and DES shelves are also allowed on this configuration. One power feed is provided.
- The following module types are equipped on NT0X46AA; each is equipped per its corresponding MS:

MODULE =====	PEC ===	ABR ===	MS ==	NOTE =====
Trunk Module 2 Wire	NT2X52AE	TM2	MS2X52AE	d
Trunk Module 4 Wire	NT2X52AF	TM4	MS2X52AF	d
Trunk Module 8 Wire	NT2X52AG	TM8	MS2X52AG	d
Trunk Module 8 Wire	NT2X52AV	TM8	MS2X52AV	d

Retired Equipment
Trunk Module Equipment Frame
or Digital Carrier Equipment Frame

NT0X46AA
EMR2-01-000
Page 2

Trunk Module 8 Wire	NT2X52AG	T8A	MS2X52AG	g, h
Trunk Module 8 Wire With Access	NT2X52AD	T8A	MS2X52AD	c
Digital Echo Suppressor Module	NT2X12AA	DES	MS2X12AA	e
Maintenance Trunk Module	NT2X58AA	MTM	MS2X58AA	d, e
Maintenance Trunk Module	NT2X58AC	MTM	MS2X58AC	d, e, a
Office Alarm Unit	NT2X58AB	OAU	MS2X58AB	a
Office Alarm Unit	NT2X58AD	OAU	MS2X58AD	a
Office Alarm Unit	NT2X58AF	OAU	MS2X58AF	a
Office Alarm X-Connect Field	NT0X62AA	AXU		a, b
Maint Trk Mod for DRA	NT2X58AK	MTM	MS2X58AK	
Maint Trunk Module	NT2X58AG	MTM	MS2X58AG	
Off ALM X-Conn Field	NT3X89AA	AXU	MS3X89AA	
Maint Trunk Module	NT2X58CA	MTM	MS2X58CA	
Maint Trunk Module	NT2X58CB	MTM	MS2X58CB	

* MD.
 \$ MD. Replaced by NT2X52AE.
 & MD. Replaced by NT2X52AF.
 % MD. Replaced by NT2X52AG.
 # MD. Replaced by NT2X31AB or NT2X31AC.
 ! Rating change pending. On new jobs replace with NT2X31AH.
 r Rating change pending. On new jobs replace with NT2X31AJ.

NOTES:

- a) Provide one per system. The OAU and AXU comprise a functional pair and must be mounted together on the same frame. To limit cable congestion and reduce drop lengths locate AXU and OAU in positions 65 and 51 respectively.
- b) The AXU functions purely as a cross-connect facility for the Office Alarm System and is not itself a TM. It therefore requires no speech links to the Network and is not assigned a port there.
- c) Required for DMS 300 only. This module provides 4-wire metallic access which is multiplied to each trunk circuit position for connection to the Test Access Network (TAN).
- d) Refer to User Note (v), Table A, Section EMA14-01-000 for restrictions affecting these module types.
- e) Maximum four (4) per frame.
- g) This physical module is identical with the conventional TM8; unique functional attributes are the result of a different Peripheral Module Software Exec load. Execs are

segregated into different loads because of insufficient TM memory space.

- h) Used only in DMS PBX and Specialized Common Carrier (SCC) applications to house CO access trunks and other selected interfaces.

- 4. Modules are assigned to positions on the frame in the order shown:

DCE,TME: 04, 18, 32, 51, 65

(POS 04 is non-preferred in the DCE configuration.) When 2 power feeds are provided (DCE configuration) POS 04, 32, & 65 are on one feed, POS 18 & 51 are on the other.

- 5. Modules of various types may be combined on frames where required. However due to heat dissipation, power feed availability and service reliability considerations the maximum quantity allowed on one frame is governed by the specific combination as follows:-

- a) max 5 per frame (TME config. only) if,

- (i) all are TM's,
- (ii) 4 are TM's and 1 is a MTM,
- (iii) 1 is an OAU and another is an AXU
(max 1 DCM or DES) (see Note a above)

- b) max 4 per frame for all other combinations:

- (i) if TME configuration:
max 1 DCM or DES per frame.
- (ii) if DCE configuration:
TM & MTM are restricted to positions 04,
32 & 65 (POS 04 is non-preferred)

- 6. Frames are manufactured with the following FSP strapping options per ISOX82-01:-

TME B, C, D
DCE B, E, F

Other combinations are valid and may be implemented in the field especially in arrangements involving older equipment.

- 7. Frame trim hardware:

- 1) When customer requirements specify that Grilles, Frame Doors and (or) Frame Trim Panels are to be ordered for these frames, provide one NT0X08AH, one NT0X71AB and (or) two NT0X72AA per TME, DCE or RSE as required.
8. Local interconnect cable groups are required to be provided with each module ordered. The types to be provided depend on the module types and their locations on the frame as follows:

FOR MODULE TYPE	EQUIPPED IN POSITION	PROVIDE CABLE GROUP PEC	NOTE
TO FSP (POS 45):			
TM	65	NT0X46BA	
TM, MTM	51	NT0X46BB	
TM, MTM	32	NT0X46BC	
TM, MTM	18	NT0X46BD	
TM, MTM	04	NT0X46BE	
MTM (NT2X58AA)	65	NT0X46BF	
MTM (NT2X58AC)	65	NT0X46BN	
OAU (NT2X58AB)	51	NT0X46BG	
OAU (NT2X58AD&AF)	51	NT0X46BM	
DCM, DES	65	NT0X46BH	
DCM, DES	51	NT0X46BJ	
DCM, DES	32	NT0X46BK	
DCM, DES	18	NT0X46BL	
BETWEEN NT2X52AD SHELVES (in addition to the above):			
NT2X52AD	65-51, 32-18, 18-04	NT0X46AF	
NT2X52AD	51-32	NT0X46AK	

TRUNK MODULE EQUIPMENT FRAME OR
DIGITAL CARRIER EQUIPMENT FRAME

PEC CODE: NT0X46AB

CPC CODE: B0212727

| RATING: MD

REPLACES: Not Applicable

| REPLACED BY: NTFX40BA

ABBREVIATION NAME: TME (in general when no DCM's are equipped)

DCE (in general when DCM's are equipped)

ENGINEERING DESCRIPTION: NT0X46AB is a general purpose peripheral equipment frame which houses MTM, IMTM, DCM, DES, TM2, TM4, TM8, T8A, IT8A, AXU, and ITM8 modules.

REFERENCE DOCUMENTATION: MS0X46AB 01 34

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT0X46AB EMR2-01-000-10 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
92 09 14	ECM 266 08	Change module assignments in TME.
92 10 02	ECM 526 04	ET14549 - Change RUL5, note 8, regarding NT2X52AV TM8 shelf
		ET14709 - Change RUL5, note 8, regarding NT2X52AV TM8 shelf
		ET14719 - Change RUL5, note 8, regarding NT2X52AV TM8 shelf
93 01 22	ECM 266 09	ET15709 - Change RUL3 to separate wiring drawings from cables
		ECD 01839293 - Change RUL3, note 3, regarding wiring PECs
93 06 18	ECM 266 11	ET16879 - Change RUL3 Note 3.
93 11 18	ECM 690 01	ET33553 - Clarify RUL9.
93 11 29	ECM 601 12	Introduce equipment required to support EAS.
		Remove the NT0X0008 Cable Assembly from EMS section. This cable is not in the MS of the NT0X46AB frame. This info is covered in ECM 289 (ISG).
93 12 24	ECM 690 02	ECD 018-41945 Introduction of the NT0X46XA Enhanced Alarm Service Change Kit which is required when updating an existing office with EAS.
94 03 09	ECM 690 03	ECD 018-41172 Introduction of the NT3X89CA AXU for new offices.
94 05 19	ECM 522 08	NT2X52AV replaces NT2X52AG/AP, RUL1.
94 09 24	ECM 601 15	EC 018-41956, MD COMMON AND E.Q. FW. ET 19729, revise rule 3 to reflect IMTM requirement
94 10 21	ECM 288 04	ET 20179.
94 11 02	ECM 601 16	ET 20189, add mounting hardware for NT3X89CA. ET 20259
95 03 29	ECM 288 05	Change per ECD 024-93972. NT2X31AT is MD and replaced with NT2X31AU.
96 04 16	ECM 601 30	Add daughter board hardware for AXU per SR RR62671.(RUL12)
96 06 20	ECM 601 32	Fix typo on EMA2-01-DCM-5 in Rule 1 per SR RR64265.
		Fix typo on EMR2-01-DCM-8 in Rule 1.

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
96 09 12	ECM 601 34	Show modules as MD and Retired per EC#018-46900. MD per EC018-48743.

The Trunk Module Equipment Frame or Digital Carrier Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Framework Assembly	NT0X25					RUL4
Trunk Module	AR			XX		RUL1
Trunk Module Common CP Fill	AR			XX		RUL5
Perif Fr Supervisory Panel	NT0X82AB	FSP		45		AP
PC Kit for FSP Modification to extend provision of -48V SP to shf pos 32,18,04	NT0X82XA			45		RUL8
FSP Strapping	NT0X82WA			45		RUL9
TB Jumper	A0324131			45		
Cable Assembly	NT0X95CL			45		
Cable Assembly	NT0X8211			45		
FSP Strapping	NT0X82WB			45		RUL9
TB Jumper	A0324131			45		
Cable Assembly	NT0X95CL			45		
Cable Assembly	NT7X3406			45		
Local Interconnect Cables	AR					RUL3
Logic Ground Bus Bar Assy	NT0X9594					RUL6
Logic Ground Bus Bar H/W	P097F813					RUL6
Cable Ties	P0678310			XX		RUL10
# Office Alarm X-Conn for EAS	NT3X89AB	AXU		65		RUL11
EAS Change Kit	NT0X46XA			65		RUL11
Office Alarm X-Conn for EAS	NT3X89CA	AXU		65R		RUL12
Filler Panel	P0575239			65F		RUL12
Screw	P097F813			65F		RUL12
Lockwasher	P0183220			65F		RUL12
Washer	P0284158			65F		RUL12
Data Link Cntlr. (-48V)	NT3X8906	DLC		65R		RUL12
Data Link Cntlr. (-60V)	NT3X8907	DLC		65R		RUL12
Screw	P0180922			65F		RUL12
Helical Washer	P0182948			65F		RUL12
Flat Washer	P0284139			65F		RUL12
EAS Label Kit	P0747556			65		RUL12

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT3X89AB	STD	NT0X46XA Upgrades
NT0X25AA	MD	NT0X25AH
NT0X25AV	MD	NT0X25AH
NT0X9504	MD	NT0X9594
NT2X52AK	MD	NTFX4101
NT2X52AL	MD	NTFX4101
NT2X52AR	MD	NTFX4101
NT2X52BB	MD	NTFX4101
NT2X52CA	MD	NTFX4101
NT2X52CB	MD	NTFX4101
NT2X52CC	MD	NTFX4101
NT2X58AP	MD	NTFX4101
NT2X58AT	MD	NTFX4101
NT2X58AX	MD	NTFX4101
NT2X58AY	MD	NTFX4101
NT2X58AZ	MD	NTFX4101
NT2X58BB	MD	NTFX4101
NT2X58CB	MD	NTFX4101
NT2X58CL	MD	NTFX4101
NT2X58DB	MD	NTFX4101

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) In this manual the abbreviation 'TM' and the name 'Trunk Module' are general terms used to represent any or all of TM2, TM4, TM8, T8A.
- 2) "XX" in SHF POS can be one of 65,51,32,18 and/or 04.

RULES:

Retired Equipment
Trunk Module Equipment Frame or
Digital Carrier Equipment Frame

NT0X46AB
EMR2-01-000-10
Page 5

- AP 1) When PEC NT0X46AB is ordered, these items are provided.
- 2) Two distinct functional names are associated with the NT0X46AB frame PEC (i.e. DCE and TME):
- a) "Digital Carrier Equipment Frame", (DCE) defines the intended function where the frame is configured specifically to house DCM and (or) DES. Subject to certain restrictions, TM and MTM shelves are also allowed on this configuration. Two power feeds are provided.
 - b) "Trunk Module Equipment Frame", (TME) defines the intended function where the frame is configured specifically to house TM, MTM and AXU. Subject to certain restrictions, DCM and DES shelves are also allowed on this configuration. One power feed is provided.
- RUL1 1) The following trunk modules may be mounted on the NT0X46AB equipment frame. For further information, refer to the section indicated with each module.

MODULE	PEC	ABBR	MS	ENGMAN SECTION	SHF POS
Digital Carrier Module	NT2X31AU	DCM	MS2X31AU	EMA2-01-DCM-5	18-65
Maintenance Trk Module	NT2X58AL	MTM	MS2X58AL	EMR2-01-MTM-6	04-65
Maint Trk Mod for DRA	NT2X58CB	MTM	MS2X58CB	EMA2-01-MTM-2	04-65
Off Alm X-Conn Field	NT3X89AA	AXU	-	-	65
Off Alm X-Conn for EAS	NT3X89AB	AXU	-	-	65
Off Alm X-Conn for EAS	NT3X89CA	AXU	MS3X89CA	-	65
International MTM	NT2X58AT	IMTM	MS2X58AT	EMA2-01-IMTM-1	04-65
Int'l MTM with DRA	NT2X58AU	IMTM	MS2X58AU	EMR2-01-IMTM-1	04-65

The following trunk modules that mount on the NT0X46AB equipment frame are now classed as retired equipment:

MODULE	ABBR	PEC	ENGMAN SECTION	RATING
Digital Carrier Module	DCM	NT2X31AB	EMR2-01-DCM-2	MD
Digital Carrier Module	DCM	NT2X31AG	EMR2-01-DCM-3	MD
Digital Carrier Module	DCM	NT2X31AK	EMR2-01-DCM-4	MD
Digital Carrier Module	DCM	NT2X31AH	EMR2-01-DCM-5	MD
Digital Carrier Module	DCM	NT2X31AL	EMR2-01-DCM-6	MD
Digital Carrier Module	DCM	NT2X31AJ	EMR2-01-DCM-7	MD
Digital Carrier Module	DCM	NT2X31AT	EMR2-01-DCM-8	MD
Digital Echo Suppressor Module	DES	NT2X12AA	EMR2-01-DES-1	MD

Retired Equipment
Trunk Module Equipment Frame or
Digital Carrier Equipment Frame

NT0X46AB
EMR2-01-000-10
Page 6

Digital Echo Suppressor Module	DES	NT2X12AB	EMR2-01-DES-2	MD
Digital Echo Supp Mod	DES	NT2X12AD	EMR2-01-DES-3	MD
Trunk Module 8 Wire	TM8	NT2X52AG	EMR2-01-TM8-4	MD
Trunk Module 8 Wire	TM8	NT2X52AP	EMR2-01-TM8-3	MD
Maintenance Trunk Module	MTM	NT2X58AG	EMR2-01-MTM-2	MD
Maintenance Trunk Module	MTM	NT2X58AC	EMR2-01-MTM-3	
Maintenance Trunk Module for DRA	MTM	NT2X58AK	EMR2-01-MTM-4	
Maintenance Trunk Module	MTM	NT2X58AN	EMR2-01-MTM-5	MD
Digital Carrier Module	DCM	NT2X31AT	EMR2-01-DCM-8	MD
Maint Trk Mod for DRA	MTM	NT2X58AM	EMR2-01-MTM-4	MD
Trunk Module 2 Wire	TM2	NT2X52AE	EMR2-01-TM2-4	MD
Trunk Module 2 Wire	TM2	NT2X52AM	EMR2-01-TM2-10	MD
Trunk Module 4 Wire	TM4	NT2X52AF	EMR2-01-TM4-2	MD
Trunk Module 4 Wire	TM4	NT2X52AN	EMR2-01-TM4-10	MD
Trunk Module 8 Wire	TM8	NT2X52AV	EMR2-01-TM8-5	MD
TM 8 Wire with Access	T8A	NT2X52AD	EMR2-01-TM8-5	MD
TM 8 Wire with Access	T8A	NT2X52AR	EMA2-01-TM8-4	MD
Int'l TM 8 with Access	IT8A	NT2X52CC	EMR2-01-IT8A-1	MD
Int'l TM 8 Wire	ITM8	NT2X58BB	EMR2-01-ITM8-1	MD
Maintenance Trk Module	MTM	NT2X58CA	EMR2-01-MTM-11	MD

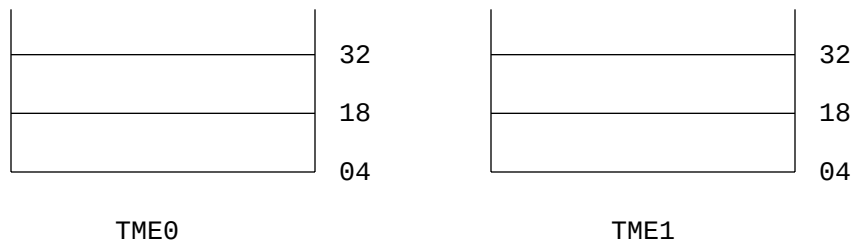
- 2) Provide a maximum of one Alarm Cross-connect (AXU) shelf, NT3X89CA Alarm Cross Connect Panel Assembly, and (2) P0747556 EAS Label Kits, one each for TME frame 00 and TME frame 01 FSP, per office. The NT3X89AB is provided with the NT0X46XA EAS Change Kit used to upgrade existing offices to EAS. One MTM must be provided with the AXU. The AXU and the primary alarm MTM comprise a functional pair and must be mounted together on the same frame. To limit cable congestion and reduce drop lengths locate AXU and this MTM in positions 65 and 51 respectively. Equip on TME frame only. The secondary alarm MTM shall be restricted to position 65 on a different power feed from the primary MTM.

AXU NT3X89AA is replaced by the NT3X89AB/CA versions. The NT3X89AB, contained in the NT0X46XA Kit, is only used for EAS upgrades in existing offices, or to replace damaged equipment. The NT3X89CA also has the EAS feature and is to be provisioned for Initials job applications.

	SHF POS		SHF POS
NT3X89AA/AB/CA AXU		MTM (secondary)	
	65		65
MTM (primary)			
	51		51
FSP		FSP	
	45		45

Retired Equipment
Trunk Module Equipment Frame or
Digital Carrier Equipment Frame

NT0X46AB
EMR2-01-000-10
Page 7



The AXU functions purely as a cross-connect facility for the Office Alarm System and is not itself a TM. It therefore requires no speech links to the Network and is not assigned a port there. See Table D in Section EMA14-04-000 for cards mounted on this unit. Provide (1) NT3X8906 Data Link Control daughter board for each NT3X89CA provisioned in a -48V office, or the NT3X8907 for a -60V office.

- 3) When 2 power feeds are provided (DCE configuration) POS 04, 32, & 65 are on one feed, POS 18 & 51 are on the other.
- 4) Modules of various types may be combined on frames where required. However due to heat dissipation, power feed availability and service reliability considerations the maximum quantity allowed on one frame is governed by the specific combination as follows:-
 - a) A standard Digital Carrier Equipment (DCE) frame can mount the following: (strapping provided)
 - a) 4 DCM shelves (starting in position 18 upwards)
 - b) 2 DCM shelves position 18,51 and up to 2 of:
 - i) TM, MTM*, or DCM in pos. 32,65 (preferred)
 - ii) TM, MTM*, or DCM in pos. 04,32 (non preferred)
 - b) A standard Trunk Module Equipment (TME) frame can mount the following: (strapping provided)
 - a) 5 TM shelves (POS 04 is non-preferred)
 - b) 4 TM shelves + 1 MTM* shelf
 - c) 3 TM/MTM* shelves + 1 MTM (pos 51) + 1 X-Conn (pos 65)
 - d) 4 shelves if 1 DCM &/or 2 or more TM/MTM* are mounted on frame.
 - e) 2 TM + 1 DCM + 1 MTM (pos 51) + 1 X-Conn (pos 65)

* MTM provisionable CP power requirement less than or equal to 110W. If the MTM power requirements exceed 110W, this condition is rated A&M. FSP

strapping must be specified as A,C,D. A separate feed for the MTM shelf is required from the PDC. With these conditions met, the TME can be mounted with the MTM in position 65 only and up to 4 TM's (only) in the other positions.

- f) A quantity of five (5) DRA modules NT2X58AK/AM/CB may be provisioned on a TME frame NT0X46AB if and only if double density DRA cards are provisioned these modules. Any of the double density DRA cards (that is all NT1X76 card with the exception of NT1X76AA which is a single density card), up to a maximum of four (4) per module, may be provisioned. Otherwise, only four (4) DRA modules may be provisioned on a TME frame.
- c) When there are maximum of four modules mounted on a frame, position 04 is non-preferred. In order to standardize shelf position, the MTM and DRA modules are mounted on the frame downwards starting from the highest available shelf position in the following order shown:

MTM, DRA.

The DCM and TM modules are mounted on the frame upwards starting from position 18 in the following order shown:

TM, DCM.

The mounting order is independent of the office module numbering. The following are typical examples of TME shelf positioning.

Four MTM modules per frame:

	SHF POS
MTM	65
MTM	51
FSP	45
MTM	32
MTM	18
Filler panel	04

Three MTMs and one DRA per frame:

SHF
POS

MTM	65
MTM	51
FSP	45
MTM	32
DRA	18
Filler panel	04

Two MTMs and one DRA per frame:

SHF
POS

MTM	65
MTM	51
FSP	45
DRA	32
Filler panel	18
Filler panel	04

Two MTMs, one DRA and one TM per frame:

SHF
POS

MTM	65
MTM	51
FSP	45
DRA	32
TM	18

Filler panel	04

One MTM, one DRA and one TM per frame:

	SHF POS
MTM	65
DRA	51
FSP	45
Filler panel	32
TM	18
Filler panel	04

- 5) Frames are manufactured with the following FSP strapping options per ISOX82-01:

TME B, C, D
DCE B, E, F

Other combinations are valid and may be implemented in the field especially in arrangements involving older equipment.

- 6) For multiple modules of the same type(i.e. six DRA modules and three TME frames) it is recommended to allocate them equally across each TME frame(i.e. two DRA modules per TME frame).
- 7) Provide one filler panel (P0575239) for each shelf position that is not used.

RUL2 1) Reserved for future use.

RUL3 1) Local interconnect cable groups are required to be provided with each module ordered. The types to be provided depend on the module types and their locations on the frame as follows.

FOR MODULE TYPE	EQUIPPED IN POSITION	PROVIDE CABLE GROUP PEC	NOTE
TO FSP (POS 45):			
TM	65	NT0X46BA -	
TM, MTM, IMTM	51	NT0X46BB -	
TM, MTM, IMTM	32	NT0X46BC -	
TM, MTM, IMTM	18	NT0X46BD -	
TM, MTM, IMTM	04	NT0X46BE -	
MTM, DRA, IMTM	65	NT0X46BN -	
DCM	65	NT0X46BH -	
DCM	51	NT0X46BJ -	
DCM	32	NT0X46BK -	
DCM	18	NT0X46BL -	
MTM (NT2X58CA/CB/AL/AM)	65	NT0X46BZ -	2
MTM (NT2X58CA/CB/AL/AM)	51	NT0X46BY -	2
MTM (NT2X58CA/CB/AL/AM)	32	NT0X46CC -	2
MTM (NT2X58CA/CB/AL/AM)	18	NT0X46CA -	2
MTM (NT2X58CA/CB/AL/AM)	04	NT0X46CB -	2
BETWEEN NT2X52AD/AR (T8A) SHELVES (in addition to the above), (DMS-300 offices only):			
NT2X52AD/AR	65-51, 32-18, 18-04	NT0X46AF -	
NT2X52AD/AR	51-32	NT0X46AK -	
FOR MODULE TYPE	EQUIPPED IN POSITION	PROVIDE CABLE GROUP PEC	NOTE
WHEN -48V SP IS REQUIRED, TO FSP (POS 45):			3
MTM/IMTM	65	NT0X95BU	1
MTM/IMTM	51	NT7X3746	1
MTM/IMTM	32	NT0X95BZ	1
MTM/IMTM	18	NT0X4631	1
MTM/IMTM	04	NT0X95BU	1

NOTE:

1. When -48V SP is a requirement for shop-mounted MTM/IMTM shelves, (refer to Table A, Trunk Module Provisionable Cards EMA14-01-000, Note 4, for identities of cards requir-

ing -48V SP), provide the cable assemblies as listed plus the related wiring options specified as follows:

CABLE ASSEMBLY TYPE	EQUIPPED IN POSITION	PROVIDE WIRING INFOR. PEC
NT0X95BU	65	NT0X46WB
NT7X3746	51	NT0X46WC
NT0X95BZ	32	NT0X46WD
NT0X4631	18	NT0X46WE
NT0X95BU	04	NT0X46WF

2. When -48V SP is required and the cable assemblies as listed are to be shipped loose to the field, a copy of LWJ0X46AB must be requested from Documentation Services by Customer Engineering to be sent to the job site to provide the wiring information NT0X46WB/WC/WD/WE/WF as specified. Note that the US does not order the LWJ0X46AB drawing.
3. For non-US jobs, when adding the NT2X58CA/AL and/or NT2X58CB/AM on a shipping loose basis (i.e. extension order), order a copy of the LWJ0X46AB, 21 metres of R0109498 loose wire and 18 metres of R0109478 loose wire to allow installation of modules.

For US jobs, when adding the NT2X58CA/AL and/or NT2X58CB/AM on a shipping loose basis (i.e. extension order), order 21 metres of R0109836 loose wire and 18 metres of R0113096 loose wire to allow installation of modules. Note that US jobs do not order the LWJ0X46AB drawing.

4. Refer to RUL8 for information on the Product Change Kit.

RUL4 1) Provide one (1) framework assembly per MS0X25.

RUL5 1) The following circuit pack fills are provisionable for the various modules on the NT0X46AB.

MODULE	PEC	ENGMAN SECTION
# MTM/DRA Common Circuit Pack	NT2X58AW	EMR2-01-MTMC-1
MTM/DRA Common Circuit Pack	NT2X58AZ	EMA2-01-MTMC-1
\$ MTM/DRA Common Circuit Pack	NT2X58AR	EMR2-01-MTMC-2
MTM/DRA Common Circuit Pack	NT2X58AX	EMA2-01-MTMC-2
% MTM/DRA Common Circuit Pack	NT2X58CK	EMR2-01-MTMC-3
+ MTM/DRA Common Circuit Pack	NT2X58CP	EMR13-01-MTMC-2

Retired Equipment
Trunk Module Equipment Frame or
Digital Carrier Equipment Frame

NT0X46AB
EMR2-01-000-10
Page 13

┐ MTM/DRA Common Circuit Pack	NT2X58CJ	EMR2-01-MTMC-4
+ MTM/DRA Common Circuit Pack	NT2X58CN	EMA13-01-MTMC-1
MTM/DRA Common Circuit Pack	NT2X58AP	EMA2-01-MTMC-5
& Int'l Maint Trk Mod Comm CP	NT2X58AS	EMR2-01-IMTMC-1
Int'l Maint Trk Mod Comm CP	NT2X58AY	EMA2-01-IMTMC-1
@ Int'l Maint Trk Mod Comm CP	NT2X58CC	EMR2-01-IMTMC-3
Int'l Maint Trk Mod Comm CP	NT2X58CL	EMA2-01-IMTMC-3
! Int'l Maint Trk Mod Comm CP	NT2X58DA	EMR2-01-IMTMC-4
Int'l Maint Trk Mod Comm CP	NT2X58DB	EMA2-01-IMTMC-4

Rated MD. Replaced by NT2X58AZ.
 \$ Rated MD. Replaced by NT2X58AX.
 % Rated MD. Replaced by NT2X58CP.
 ┐ Rated MD. Replaced by NT2X58CN.
 & Rated MD. Replaced by NT2X58AY.
 @ Rated MD. Replaced by NT2X58CL.
 ! Rated MD. Replaced by NT2X58DB.
 + Rated MD. No Replacement

NOTE: 1. Provide one (1) MTM/DRA Common CP NT2X58AZ for each NT2X58CA MTM, NT2X58CB DRA, or NT2X58AN MTM that is ordered if:

1. Digital Data Line Card NT3X05AA/AC is not equipped on this MTM/DRA.

The NT2X58AZ Common CP Fill replaces the NT2X58AW Common CP Fill.

2. Provide one (1) MTM/DRA Common CP NT2X58AX for each NT2X58CA MTM, NT2X58CB DRA, or NT2X58AN MTM that is ordered if:

1. Digital Data Line Card NT3X05AA/AC is not equipped on this MTM/DRA
2. Audio Tone Detector Card NT5X29AC is equipped on this MTM.

This CP Fill has an enhanced TM processor card (NT0X70AC) and is normally required for DMS-250 or Audio Tone Detector Card applications.

The NT2X58AX Common CP Fill replaces the NT2X58AR Common CP Fill.

3. Provide one (1) MTM/DRA Common CP NT2X58CP for each NT2X58CA MTM, NT2X58CB DRA, or NT2X58AN MTM that is ordered if:

Retired Equipment	NT0X46AB
Trunk Module Equipment Frame or	EMR2-01-000-10
Digital Carrier Equipment Frame	Page 14

1. Digital Data Line Card NT3X05AA/AC is equipped on this MTM/DRA.

The NT2X58CP Common CP Fill replaces the NT2X58CK Common CP Fill.

4. Provide one (1) MTM/DRA Common CP NT2X58CN for each NT2X58CA MTM, NT2X58CB DRA, or NT2X58AN MTM that is ordered if :

1. Digital Data Line Card NT3X05AA/AC is equipped on this MTM/DRA

2. Audio Tone Detector Card NT5X29AC is equipped on this MTM.

This CP Fill has an enhanced TM processor card (NT0X70AC) and is normally required for DMS-250 or Audio Tone Detector Card applications.

The NT2X58CN Common CP Fill replaces the NT2X58CJ Common CP Fill.

5. Provide one (1) International Maintenance Trunk Module Common Circuit Pack for each NT2X58AT or NT2X58AU required to be equipped. Maximum four per frame.

For international (Turkey) application, provide one (1) NT2X58AY Common CP. For Caribbean application, provide one (1) NT2X58CL Common CP. For DMS-250 application, provide one (1) NT2X58DB Common CP. (The NT2X58AY CP Fill replaces the NT2X58AS CP Fill. The NT2X58CL CP Fill replaces the NT2X58CC CP Fill. The NT2X58DB CP Fill replaces the NT2X58DA CP Fill).

6. For Turkey DMS-300 application, provide one (1) NT2X52CB Common CP for each NT2X52CC required to be equipped.
7. Provide one (1) NT2X58AP Common CP Fill for each NT2X58AL MTM or NT2X58AM DRA that is ordered.
8. Provide one (1) NT2X52AK Common CP Fill for each NT2X52AM, NT2X52AN, NT2X52AP or NT2X52AV TM that is ordered.
9. Provide one (1) NT2X52AL Common CP Fill for each NT2X52AR TM that is ordered.

- RUL6 1) Provide one (1) Logic Ground Bus Bar Assembly (NT0X9594) and Hardware (P097F813 - Qty 6) when one or more Digital Carrier Module (DCM) shelves or Digital Echo Suppressor (DES) shelves are provided.
- RUL7 1) Reserved for future use.
- RUL8 1) Provide one (1) Product Change Kit NT0X82XA to modify the FSP NT0X82AB on the TME frame NT0X46AB in the field when required to add -48V SP to the MTM (NT2X58AC/AN/CA/AL) or IMTM (NT2X58AT) shelf in position 32 and/or 18 and/or 04. This PC Kit is also required when an MTM or IMTM shelf requiring -48V SP is being added to position 51.
- 2) This Product Change Kit modifies TME frames equipped with one (1) power feed only.
- 3) The FSP on all TME frames in the field (without FSP Strapping information NT0X82WA) are arranged to provide -48V SP to MTM/IMTM shelves in positions 65 and 51. Product Change Kit NT0X82XA extends -48V SP to positions 32, 18 and 04. It also modifies the way the -48V SP will be delivered to shelf position 51 from the FSP (i.e. wiring information NT0X46WC connects NT7X3746 Cable Assembly to terminal block TP3 pin 12B of the FSP). Hence, when -48V SP is required on shelf positions 51, 32, 18 and 04, provide one (1) PC Kit NT0X82XA.
- 4) PC Kit NT0X82XA is only applicable to existing TME frames in the field which do not have FSP Strapping Information NT0X82WA.
- 5) -48V SP can be provided to a maximum of any four (4) of the five (5) positions.
- 6) The Product Change Kit does not include cable assemblies per RUL3 which should be ordered on a job basis.
- RUL9 1) For new jobs (initial and extension jobs), when frame type is "TME" and only one (1) power source (A or B) is required, provide one (1) FSP Strapping Information NT0X82WA, two (2) TB Jumpers A0324131 and one (1) each of Cable Assemblies NT0X95CL and NT0X8211. NT0X82WA includes FSP options B,C,D,L. Along with the modified FSP, this hardware always provides the -48V SP to MTM/IMTM shelves in positions 65, 51, 32, 18 and 04.
- 2) For new jobs (initial and extension jobs), when frame type is "DCE" or frame type is "TME" (STP applications only) and

two (2) power sources (A and B) are required, provide one (1) FSP Strapping Information NT0X82WB, one (1) TB Jumper A0324131, two (2) Cable Assemblies NT0X95CL and one (1) Cable Assembly NT7X3406. NT0X82WB includes FSP options B,E,F,M. Along with the modified FSP, this hardware always provide the -48V SP to MTM/IMTM shelves in position 65, 51, 32, 18 and 04.

- 3) The FSP strapping options NT0X82WA and NT0X82WB and associated hardware are applicable to new frames only, not for changing the power feed configuration of existing frames in the field.
- 4) -48V SP can be provided to a maximum of any four (4) of the five (5) positions.
- 5) The FSP Strapping Information and Associated TB Jumpers and Cable Assemblies do not include cable assemblies listed in RUL3 which should be ordered on a job basis.

RUL10 1) Provide five (5) Cable Ties per MTM shelf (NT2X58__) to facilitate dressing of jumper wires.

RUL11 1) When upgrading an office to EAS, provide (1) NT0X46XA Enhanced Alarm Service Change Kit. This Kit contains a NT3X89AB Alarm Cross Connect Panel Assembly and two P0747556 EAS Label Kits. Refer to the NT3X89CA rule for new offices.

RUL12 1) For new offices, provide a maximum of (1) NT3X89CA Alarm Cross Connect Panel Assembly and (2) P0747556 EAS Label Kits, one each for TME frame 00 and TME frame 01 FSP, per office. This AXU also has the EAS feature.

- 2) Provide (1) NT3X8906 Data Link Control daughter board for each NT3X89CA provisioned in a -48V office, or the NT3X8907 for a -60V office. Provide two (2) P0180922 Screws, two (2) P0182948 Helical Washers, and two (2) P0284139 Flat Washers per each daughter board NT3X8907 or NT3X8907 provisioned. See the EMS for NT3X89CA for this mounting hardware.

- 3) Provide (1) one P0575239 Filler Panel, four (4) P097F813, four (4) P0183220, and four (4) P0284158 when NT3X89CA provisioned.

TEST ACCESS CONTROLLER EQUIPMENT FRAME

PEC CODE: NTCX01AA

CPC CODE: B0228597

| RATING: MD

REPLACES: N/A

| REPLACED BY: No Replacement

ABBREVIATION NAME: TACE

ENGINEERING DESCRIPTION: The Test Access Controller Equipment Frame houses the control shelf and up to three Test Head Extension shelves for the Test and Traffic Simulator TAC system.

REFERENCE DOCUMENTATION: MSCX01AA 00 07

MARKETS: Applicable markets:

US
CANADA

ISSUE AUTHOR: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NTCX01AA EMR2-02-TAC CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 03 31	ECM 558 01	MD NTCX02AA and add UP CPs to NTCX0101 ECD 006-20401 introduces NT6X40AC. Introduce NT6X69AC to frame, replace NT2X70AE with AF per EC#006-21322. MD NTCX05AA and NTCX06AA/AB per same EC, MD NTCX05AB per EC#006-20904. Show NT6X46AB as MD per EC024-96637. MD per EC018-49032:NTCX01AA, NTCX06AB,NTCX07AB,NTCX08AB,NTCX10AA, NTCX11AA,NTCX12AA,NTCX15AA,NTBX43AA, NTCX0101,NTCX0301,NTCX03AB,NTCX04AA, NTCX04AB,NTCX05AA.
94 11 30	ECM 558 02	
95 06 21	ECM 558 03	
96 09 17	ECM 558 05	
96 12 24	ECM 558 06	

The Test Access Controller Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Framework Assembly						NOTE4
# Test Head Extension Shelf	NTCX03AB	THE		65		RUL2
Cage Filler Panel Assembly	NT0X84AA			65		RUL2
# EBS Simulator CP	NTCX06AA			65	04-11F 17-24F	RUL15
# EBS Simulator CP	NTCX06AB			65	04-11F 17-24F	RUL15
# POTS Simulator CP	NTCX08AA			65	04-11F 17-24F	RUL3
# COIN Simulator CP	NTCX08AB			65	04-11F 17-24F	RUL3
# ISDN Simulator CP	NTCX11AA			65	04-11F 17-24F	RUL3
# EBS Simulator Paddleboard CP	NTCX05AA			65	04-11R 17-24R	RUL15
# EBS Simulator Paddleboard CP	NTCX05AB			65	04-11R 17-24R	RUL15
# POTS Simulator Paddlebrd CP	NTCX07AA			65	04-11R 17-24R	RUL3
# COIN Simulator Paddlebrd CP	NTCX07AB			65	04-11R 17-24R	RUL3
# ISDN Simulator Paddlebrd CP	NTCX12AA			65	04-11R 17-24R	RUL3
Filler Face Plate	NT0X50YC			65	04-11R 17-24R	RUL3
Filler Face Plate 0.875	NT0X50AA			65	04-11F 17-24F	RUL3
Filler Face Plate 0.875	NT0X50AA			65	14F	RUL14
# Test Head Interface CP	NTCX04AA			65	12,13F 15,16F	RUL4
# Tst Head I/F w/Terminator CP	NTCX04AB			65	13,15F	RUL5
# Power Converter	NT2X70AD			65	01,25F	RUL6
# Power Converter	NT2X70AE			65	01,25F	RUL6
Power Converter	NT2X70AF			65	01,25F	RUL6
Filler Face Plate	NT0X50AE			65	01,25F	RUL6
# Test Head Extension Shelf	NTCX03AB	THE		51		RUL2
Cage Filler Panel Assembly	NT0X84AA			51		RUL2
# EBS Simulator CP	NTCX06AA			51	04-11F 17-24F	RUL15
# EBS Simulator CP	NTCX06AB			51	04-11F 17-24F	RUL15
# POTS Simulator CP	NTCX08AA			51	04-11F	RUL3

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
# COIN Simulator CP	NTCX08AB			51	17-24F 04-11F	RUL3
# ISDN Simulator CP	NTCX11AA			51	17-24F 04-11F	RUL3
# EBS Simulator Paddleboard CP	NTCX05AA			51	17-24F 04-11R	RUL15
# EBS Simulator Paddleboard CP	NTCX05AB			51	17-24R 04-11R	RUL15
# POTS Simulator Paddlebrd CP	NTCX07AA			51	17-24R 04-11R	RUL3
# COIN Simulator Paddlebrd CP	NTCX07AB			51	17-24R 04-11R	RUL3
# ISDN Simulator Paddlebrd CP	NTCX12AA			51	17-24R 04-11R	RUL3
Filler Face Plate	NT0X50YC			51	17-24R 04-11R	RUL3
Filler Face Plate 0.875	NT0X50AA			51	17-24F 04-11F	RUL3
Filler Face Plate 0.875	NT0X50AA			51	14F	RUL14
# Test Head Interface CP	NTCX04AA			51	12,13F 15,16F	RUL4
# Tst Head I/F w/Terminator CP	NTCX04AB			51	13,15F	RUL5
# Power Converter	NT2X70AD			51	01,25F	RUL6
# Power Converter	NT2X70AE			51	01,25F	RUL6
Power Converter	NT2X70AF			51	01,25F	RUL6
Filler Face Plate	NT0X50AE			51	01,25F	RUL6
Frame Supervisory Panel	NT0X28AM	FSP	1	45		AP
# Test Head Ext Shelf Assy	NTCX0301	THE	1	32		AP
# EBS Simulator CP	NTCX06AA			32	04-11F 17-24F	RUL15
# EBS Simulator CP	NTCX06AB			32	04-11F 17-24F	RUL15
# POTS Simulator CP	NTCX08AA			32	04-11F 17-24F	RUL3
# COIN Simulator CP	NTCX08AB			32	04-11F 17-24F	RUL3
# ISDN Simulator CP	NTCX11AA			32	04-11F 17-24F	RUL3
# EBS Simulator Paddleboard CP	NTCX05AA			32	04-11R 17-24R	RUL15
# EBS Simulator Paddleboard CP	NTCX05AB			32	04-11R 17-24R	RUL15
# POTS Simulator Paddlebrd CP	NTCX07AA			32	04-11R	RUL3

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
# COIN Simulator Paddlebrd CP	NTCX07AB			32	17-24R 04-11R	RUL3
# ISDN Simulator Paddlebrd CP	NTCX12AA			32	17-24R 04-11R	RUL3
Filler Face Plate	NT0X50YC			32	17-24R 04-11R	RUL3
Filler Face Plate 0.875	NT0X50AA			32	17-24R 04-11F	RUL3
Filler Face Plate 0.875	NT0X50AA			32	17-24F 14F	RUL14
# Test Head Interface CP	NTCX04AA			32	12,13F 15,16F	RUL4
# Tst Head I/F w/Terminator CP	NTCX04AB			32	13,15F	RUL5
# Power Converter	NT2X70AD			32	01,25F	RUL6
# Power Converter	NT2X70AE			32	01,25F	RUL6
Power Converter	NT2X70AF			32	01,25F	RUL6
Filler Face Plate	NT0X50AE			32	01,25F	RUL6
# Test Access Cntrlr Shf Assy	NTCX0101	TAC	1	18		AP
# TAC Common CP	NTCX02AA		1	18		RUL8
DES Strip Upper CP	P0748889		1	18		RUL8
TAC Unified Proc Wiring	NTCX01WA		1	18		RUL8
Designation Strip	P0700525		1	18		AP-01
DS1 Interface CP	NT6X50AA			18	01-05	RUL7
DS1 Interface CP	NT6X50AB			18	01-05	RUL7
Filler Face Plate 0.875	NT0X50AA			18	01-05	RUL7
DS30A P-Side Interface CP	NT6X48AA			18	6-7	RUL13
Signal Processor CP	NT6X45AF			18	8	RUL8
Filler Face Plate 0.875	NT0X50AA			18	8	RUL8
# Signaling Term Buffer CP	NTBX43AA			18	9	AP-01
Master Processor Memory CP	NT6X47AB			18	10	AP-01
# Signal Processor Memory CP	NT6X46BA			18	11	AP-01
Time Switch CP	NT6X44AA			18	14	AP-01
Message Protocol & Tone CP	NT6X69AB			18	18	AP-01
Channels Supervision Msgs	NT6X42AA			18	20	AP-01
Speech Bus Formatter CP	NT6X41AA			18	21	AP-01
Filler Face Plate 0.875	NT0X50AA			18	24	AP-01
# Signaling Term Buffer CP	NTBX43AA			18	9	RUL8
Filler Face Plate 0.875	NT0X50AA			18	10	RUL8
A-Bus Shorter CP	NT7X80AA			18	11	RUL8
Signal Processor CP	NT6X45AF			18	12	RUL8
Unified Processor	NTMX77AA					RUL8
# ETAC Processor CP	NTCX15AA			18	12	RUL8
Filler Face Plate 0.875	NT0X50AA			18	13	RUL8
Time Switch CP	NT6X44AA			18	14	RUL8
Filler Face Plate 0.875	NT0X50AA			18	15-17	RUL8

Retired Equipment
Test Access Controller Equipment Frame

NTCX01AA
EMR2-02-TAC
Page 5

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
# Message Protocol & Tone CP	NT6X69AB			18	18	RUL8
Message Protocol & Tone CP	NT6X69AC			18	18	RUL8
Des. Label NT6X69AC	P0710476			18	18	RUL8
Filler Face Plate 0.875	NT0X50AA			18	19	RUL8
Channels Supervision Msgs	NT6X42AA			18	20	RUL8
Speech Bus Formatter CP	NT6X41AA			18	21	RUL8
# DS30 Network Interface CP	NT6X40AA			18	22-23	RUL12
DS30 Network Interface CP	NT6X40AC			18	22	RUL12
Filler Face Plate 0.875	NT0X50AA			18	23	RUL12
# TAC DS30 Interface Wiring	NTCX01WB			18	XX	RUL12
TAC DS30 Interface Wiring	NTCX01WC			18	XX	RUL12
Filler Face Plate 0.875	NT0X50AA			18	24	RUL8
# Power Converter	NT2X70AD			18	25	RUL6
# Power Converter	NT2X70AE			18	25	RUL6
Power Converter	NT2X70AF			18	25	RUL6
Cooling Inverter Unit	NT3X90AC	CU		04		RUL9
Cable Assembly	NT0X95BE					RUL10
Cable Assembly	NT0X26GR					RUL10
Cable Assembly	NT0X26GT					RUL10
Cable Assembly	NT0X26GU					RUL10
Cable Assembly	NT0X26GY					RUL10
Power Cable Assembly	NT0X95BA					RUL10
Power Cable Assembly	NT0X95BB					RUL10
Power Cable Assembly	NT0X95BC					RUL10
Power Cable Assembly	NT0X95CH					RUL10
Desig. Label for NT0X50AA	P0578498					RUL11
Desig. Label for NT6X40AC	P0695397					RUL11
Desig. Label for NT6X48AA	P0626877					RUL11
Desig. Label for NT6X50AA	P0626878					RUL11
# Desig. Label for NT2X70AD	P0664133					RUL11
# Desig. Label for NT2X70AE	P0698943					RUL11
Desig. Label for NT2X70AF	P0809960					RUL11
Desig. Label for NTCX04AA	P0702262					RUL11
Desig. Label for NTCX04AB	P0702263					RUL11
# Desig. Label for NTCX06AA	P0702264					RUL11
Desig. Label for NTCX08AA	P0702265					RUL11
Desig. Label for NTCX08AB	P0740317					RUL11
Desig. Label for NTCX11AA	P0741509					RUL11

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NTCX02AA	MD	
NT6X40AA	MD	NT6X40AC
NTCX01WB	MD	NTCX01WC
NT2X70AD	MD	NT2X70AE
NT2X70AE	MD	NT2X70AF
P0698943	MD	P0809960
NT6X69AB	MD	NT6X69AC
NTCX06AA	MD	NTCX06AB
NTCX06AB	MD	No Replacement
NTCX05AA	MD	NTCX05AB
NTCX05AB	MD	NTCX05AC
NTCX08AA	MD	NTCX08AB
NTCX07AA	MD	NTCX07AB
NT6X46BA	MD	NT6X46BB
NTCX07AB	MD	No Replacement
NTCX08AB	MD	No Replacement
NTCX11AA	MD	No Replacement
NTCX12AA	MD	No Replacement
NTCX15AA	MD	No Replacement
NTBX43AA	MD	No Replacement
NTCX0101	MD	No Replacement
NTCX01AA	MD	No Replacement
NTCX0301	MD	No Replacement
NTCX03AB	MD	No Replacement
NTCX04AA	MD	No Replacement
NTCX04AB	MD	No Replacement

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) 'XX' above denotes shelf positions 65, 51, 32.

- 2) THE 0 is assigned to shelf position 32. THE 1 is assigned to shelf position 51. THE 2 is assigned to shelf position 65.
- 3) The NTCX01WB consists of a backpanel wire between pin 43B slot 18-22 and pin 46B slot 18-21. The NTCX01WC consists of a backpanel wire between pin 43B slot 18-22 and pin 43B slot 18-21.
- 4) Provide one framework assembly per MS0X25.

RULES:

- AP 1) When PEC NTCX01AA is ordered, these items are provided.
- AP-01 1) These PECS are Always Provided with the NTCX02AA and are shown here for completeness.
- RUL1 1) Reserved for future use.
- RUL2 1) Provide additional NTCX03AB Test Head Extension Shelves as per customer requirements.
- 2) Provide one (1) NT0X84AA Cage Filler Panel Assembly when no shelf is equipped.
- RUL3 1) For each equipped THE shelf, provide:
- NOTE - refer also to RUL15
- up to sixteen (16) NTCX06AB EBS Simulator CPs,
 - up to sixteen (16) NTCX08AA POTS Simulator CPs, or
 - up to sixteen (16) NTCX08AB COIN Simulator CPs, or
 - up to sixteen (16) NTCX11AA ISDN Simulator CPs.
- 2) For each EBS Simulator CP provisioned, provide:
- one (1) NTCX05AB EBS Simulator Paddleboard CP.
- Assign to the rear of the shelf in the same slot position as its associated EBS Simulator CP.
- 3) For each POTS Simulator CP provisioned, provide:
- one (1) NTCX07AA POTS Simulator Paddleboard CP.

Assign to the rear of the shelf in the same slot position as its associated POTS Simulator CP.

- 4) For each COIN Simulator CP provisioned, provide:

- one (1) NTCX07AB COIN Simulator Paddleboard CP.

Assign to the rear of the shelf in the same slot position as its associated COIN Simulator CP.

- 5) For each ISDN Simulator CP provisioned, provide:

for BRI use:

- one (1) NTCX12AA ISDN Simulator Paddleboard CP

Assign to the rear of the shelf in the same slot position as its associated ISDN Simulator CP.

for BRI/PRI use:

- one (1) NTCX12AA ISDN Simulator Paddleboard CP

Assign to the rear of the shelf in the same slot position as its associated ISDN Simulator CP.

for PRI use:

- no NTCX12AA is required
- provide NT6X50AA/AB's as required according to 2.4.2
- see also RUL 7

- 6) A maximum of sixteen (16) Simulator CP of any type can be assigned to a THE shelf. Positions 04 to 11 comprise one Test Head Group (THG). Positions 17 to 24 comprise the other THG on that shelf. Test Head CP are assigned as follows:

THE Group Number	Test Head	Test Head CP Slot
Odd	TH7	04
	TH6	05
	TH5	06
	TH4	07
	TH3	08
	TH2	09
	TH1	10
	TH0	11
Even	TH0	17
	TH1	18
	TH2	19
	TH3	20
	TH4	21
	TH5	22
	TH6	23
	TH7	24

7) Provision one (1) NT0X50YC Filler Face Plate for each unequipped position 04-11R,17-24R.

8) Provision one (1) NT0X50AA Filler Face Plate for each unequipped position 04-11F,17-24F.

RUL4 1) Provide two (2) NTCX04AA Test Head Interface CP for each THG equipped when not the last THG in the TAC system.

Please refer to RUL5 when the THG is the last THG in the TAC system.

RUL5 1) Provide one (1) NTCX04AB Test Head Interface with Termination CP in the last THG, either in position 13 or position 15.

2) Provide one (1) NTCX04AA Test Head Interface CP in the last THG, either in position 12 or position 16.

RUL6 1) Provide one (1) NT2X70AF Power Converter CP for each THG equipped. Each NT2X70AF provides power to ten (10) CP positions in a Test Head Extension Shelf, as shown below:

IF CP IN POSITIONS:	THEN PROVIDE NT2X70AF IN POSITION:
04-13 15-24	01 25

- 2) Provide one (1) NT0X50AE Filler Face Plate for each unequipped position 01,25.
- 3) Provision one (1) NT2X70AF Power Converter in shelf position 18, slot 25.
- 4) The formerly provided NT2X70AD/AE Power Converter has been changed to MD status and replaced by the NT2X70AF.

- RUL7
- 1) Provide one (1) NT6X50AA/AB DS1 Interface CP for every two DS1 links to the system under test as per customer requirements.
 - 2) Provide one (1) NT0X50AA Filler Face Plate for each unequipped position.
 - 3) Ports per DS-1 CP position are as follows:

CP Pos'n:	5	4	3	2	1
Ports :	0,1	2,3	4,5	6,7	8,9

- RUL8
- 1) For new jobs where a TACE frame is ordered provide CPs in shelf 18 as follows:
 - one (1) NT0X50AA slot 08 Filler Face Plate
 - one (1) NTBX43AA slot 09 ISDN Sig Term Buffer CP
 - one (1) NT0X50AA slot 10 Filler Face Plate
 - one (1) NT7X80AA slot 11 A-bus Shorter
 - one (1) NT0X50AA slot 13 Filler Face Plate
 - one (1) NT6X44AA slot 14 Time Switch
 - one (1) NT0X50AA slot 15 Filler Face Plate
 - one (1) NT0X50AA slot 16 Filler Face Plate
 - one (1) NT0X50AA slot 17 Filler Face Plate
 - one (1) NT6X69AC slot 18 CPP Message Protocol and Tone CP
 - one (1) NT0X50AA slot 19 Filler Face Plate
 - one (1) NTMX71AA slot 19R Terminator
 - one (1) NT6X42AA slot 20 Channel Supervision Message CP
 - one (1) NT6X41AA slot 21 Speech Bus Formatter CP

- one (1) NT0X50AA slot 24 Filler Face Plate
- one (1) P0748889 CP Designation Strip
- one (1) P0710476 slot 18 Des. Label NT6X69AC

- 2) For extension jobs where the NTCX02AA Common CPs exist in shelf position 18 and the TATS BCS level is 36 or greater, it is necessary to upgrade the TAC shelf to the Unified Processor (UP) based architecture. If the job is at TATS BCS 35 level the upgrade is optional, but recommended. Add and remove CPs as follows to upgrade to the UP architecture:

REMOVE NT6X45AF slot 08 Master Processor (MP)
 NT6X47AB slot 10 MP Memory
 NT6X46BA slot 11 SP Memory
 NT6X45AF slot 12 Signaling Processor (SP)

ADD NT0X50AA slot 08 Filler face Plate
 NT0X50AA slot 10 Filler face Plate
 NT7X80AA slot 11 A-bus Shorter
 NTMX71AA slot 19R Terminator
 P0748889 CP designation strip
 NTCX01WA TAC Unified Processor Wiring

- 3) For initial jobs, or extensions when upgrading to the UP architecture ship loose one (1) NTMX77AA Unified Processor CP which will be converted at the job site to an NTCX15AA and mounted in position 12, or provide the NTCX15AA CP and mount at position 12.
- 4) For extension jobs when the NTCX02AA exists and the upgrade to the UP architecture is not necessary, the two (2) NT6X45AF CPs provisioned in slots 8 and 12 should remain in place.

RUL9 1) Provide one (1) NT3X90AC DC Cooling Inverter Unit per frame.

RUL10 1) Provision cable assemblies when shelves are provisioned according to the following table:

FROM SH POS	TO SH POS	CABLE PEC	QTY
65	45	NT0X95BE	1
51	32	NT0X26GR	2
51	18	NT0X26GT	4
65	51	NT0X26GU	2
65	18	NT0X26GY	4
65	45	NT0X95BA	3
51	45	NT0X95BB	1
51	45	NT0X95BC	1
51	45	NT0X95CH	2

- RUL11 1) Provide the appropriate designation label for each CP provided.
- RUL12 1) Always provision one (1) NT6X40AC in 18-22 and one (1) NT0X50AA in 18-23.
- 2) The NT6X40AC requires backpanel wiring changes. Install one (1) NTCX01WC TAC DS30 Interface Wiring and remove one (1) NTCX01WB TAC DS30 Interface Wiring when the NT6X40AC is used. See Note 3.
- 3) The formerly provided two (2) NT6X40AA DS30 Network Interface CPs in 18-22 and 18-23 have been replaced by one (1) NT6X40AC plus the associated backpanel wiring changes. The NT6X40AA has been changed to MD status and is no longer available.
- RUL13 1) Provision two (2) NT6X48AA DS30A Interface CP to interface the Test Head Groups (THG) on the extension shelves (THE 0, THE 1, THE 2). P-side ports are assigned to THG as follows:

NT6X48AA CP POS	P-Side Port	Interfaces to THG
6	19	0
6	18	0
7	17	1
7	16	1
6	15	2
6	14	2
7	13	3
7	12	3
6	11	4
6	10	4
7	9	5
7	8	5

RUL14 1) Always provision these CP on the shelf positions indicated.

RUL15 1) DO NOT provision NTCX05AA/AB or NTCX06AA/AB or associated designation labels. Instead replacement packs NTCX05AC and NTCX06AC are ordered by the customer directly from BNR Automation Hot Line in BNT Ottawa. NOTE - The NTCX05AC (rear) and NTCX06AC (front) in the same shelf slot position must be provided in matching pairs (both AC suffix packs) for proper circuit operation.

TEST ACCESS NETWORK MODULE

PEC CODE: NT5X00AA

CPC CODE: B0207842

| RATING: MD

REPLACES: N/A

REPLACED BY: NT5X00AC

ABBREVIATION NAME: TAN

ENGINEERING DESCRIPTION: The TAN provides metallic access to trunks in DMS-300 machines from Test trunks and (or) jacks on maintenance positions for purposes of testing. To connect to trunk modules use NT5X00AB.

REFERENCE DOCUMENTATION: MS5X00AA-AB 01 03

MARKETS: Applicable markets:

US
CANADA

ISSUE AUTHOR: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT5X00AA EMR2-02-TAN-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 10 23	----- ECM 170 04	Previous history not available Reformat EMS.

The Test Access Network Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Test Access Net Shf Assy	NT5X0001		1			AP
TM Network Interface	NT2X45AA		1		01	AP
TM Processor	NT0X70AA		1		02	AP
TM Control	NT2X53AA		1		03	AP
Relay Circuits	NT5X01AA		GRP 1		04-06	RUL1
			GRP 2		08-10	
			GRP 3		12-14	
			GRP 4		16-18	
Test Posn, Test Trk Cont	NT5X02AA		1		19	RUL2
Filler Face Plate 1.125	NT0X50AC				04-06	RUL3
					08-10	
					12-14	
					16-18	
					19	
Multi-output Power Conv	NT2X09AA		1		20	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT5X00AA is ordered, these items are provided.

- RUL1 1) Utilize one group of three relay card slots per eight (8) TME frames requiring metallic test access.
- 2) Provide one (1) Relay Card in corresponding slots in each group utilized under 1) above per test point appearance required (ie. per test position / test trunk to be given access). Max 3 per group.
- RUL2 1) Provide one (1) Test Posn / Test Trk Cont card if TAN is to be cabled to Test Pos or Test Trunk.
- RUL3 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location which is not to be equipped with either NT5X01AA or NT5X02AA.

TEST ACCESS NETWORK MODULE WITH TM CONNECTIONS

PEC CODE: NT5X00AB

CPC CODE: B0207846

| RATING: MD

REPLACES: N/A

REPLACED BY: NT5X00AD

ABBREVIATION NAME: TAN

ENGINEERING DESCRIPTION: The TAN provides metallic access to trunks in DMS-300 machines from Test trunks and (or) jacks on maintenance positions for purses of testing.

REFERENCE DOCUMENTATION: MS5X00AA-AB 01 03

MARKETS: Applicable markets:

US
CANADA

ISSUE AUTHOR: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT5X00AB EMR2-02-TAN-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 10 23	----- ECM 170 04	Previous history not available Reformat EMS.

The Test Access Network Module With TM Connections is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Test Access Net Shf Assy	NT5X0001		1			AP
TM Network Interface	NT2X45AA		1		01	AP
TM Processor	NT0X70AA		1		02	AP
TM Control	NT2X53AA		1		03	AP
Relay Circuits	NT5X01AA		GRP 1		04-06	RUL1
			GRP 2		08-10	
			GRP 3		12-14	
			GRP 4		16-18	
Test Posn, Test Trk Cont	NT5X02AA		1		19	RUL2
Filler Face Plate 1.125	NT0X50AC				04-06	RUL3
					08-10	
					12-14	
					16-18	
					19	
Multi-output Power Conv	NT2X09AA		1		20	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT5X00AB is ordered, these items are provided.

- RUL1 1) Utilize one group of three relay card slots per eight (8) TME frames requiring metallic test access.
- 2) Provide one (1) Relay Card in corresponding slots in each group utilized under 1) above per test point appearance required. (ie. per test position / test trunk to be given access). Max 3 cards per group.
- RUL2 1) Provide one (1) Test Posn / Test Trk Cont card if TAN is to be cabled to Test Posn or Test Trunk.
- RUL3 1) When customer requirements specify that Filler Face Plates are to be ordered provide one (1) NT0X50AC for each location which is not to be equipped with either NT5X01AA or NT5X02AA.

TEST ACCESS NETWORK MODULE

PEC CODE: NT5X00AC

CPC CODE: B0219225

| RATING: MD

REPLACES: N/A

REPLACED BY: N/A

ABBREVIATION NAME: TAN

ENGINEERING DESCRIPTION: The TAN provides metallic access to trunks in DMS-300 machines from Test trunks and (or) jacks on maintenance positions for purposes of testing. To connect to trunk modules use NT5X00AD.

REFERENCE DOCUMENTATION: MS5X00AC 01 01

MARKETS: Applicable markets:

US
CANADA

ISSUE AUTHOR: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT5X00AC EMR2-02-TAN-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 10 23	----- ECM 170 04	Previous history not available Reformat EMS, MD and Retire per EC018-46077.

The Test Access Network Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Test Access Net. Shf Assy	NT5X0001		1	X	01	AP
TM Network Interface	NT2X45AB		1	X	01	AP
TM Processor	NT0X70AA		1	X	02	AP
TM Control	NT2X53AA		1	X	03	AP
Relay Circuits	NT5X01AA	GRP 1	X	X	04-06	RUL1
		GRP 2	X	X	08-10	
		GRP 3	X	X	12-14	
		GRP 4	X	X	16-18	
Test Posn, Test Trk Cont	NT5X02AA	1	X	X	19	RUL2
Filler Face Plate 1.125	NT0X50AC		X	X	04-06	RUL3
			X	X	08-10	
			X	X	12-14	
			X	X	16-18	
			X	X	19	
Filler Face Plate 1.125	NT0X50AC	3	X	X	7,11,15	AP
Desig. Label (NT0X50AC)	P0580258	3	X	X	7,11,15	AP
Multi-output Power Conv	NT2X09AA	1	X	X	20	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

1) X = Shelf Position 04,18,32,51 or 65.

RULES:

- AP 1) When PEC NT5X00AC is ordered, these items are provided.
- RUL1 1) Utilize one group of three relay card slots per eight (8) TME frames requiring metallic test access.
- 2) Provide one (1) Relay Card in corresponding slots in each group utilized under 1) above per test point appearance required (ie. per test position / test trunk to be given access). Max 3 per group.
- RUL2 1) Provide one (1) Test Posn / Test Trk Cont card if TAN is to be cabled to Test Pos or Test Trunk.
- RUL3 1) Provide one (1) Filler Face Plate 1.125, NT0X50AC for each location which is not to be equipped with either NT5X01AA or NT5X02AA.

TEST ACCESS NETWORK MODULE WITH TM CONNECTIONS

PEC CODE: NT5X00AD

CPC CODE: B0219226

| RATING: MD

REPLACES: N/A

REPLACED BY: N/A

ABBREVIATION NAME: TAN

ENGINEERING DESCRIPTION: The TAN provides metallic access to trunks in DMS-300 machines from Test trunks and (or) jacks on maintenance positions for purposes of testing.

REFERENCE DOCUMENTATION: MS5X00AD 01 01

MARKETS: Applicable markets:

US
CANADA

ISSUE AUTHOR: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT5X00AD EMR2-02-TAN-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 10 23	----- ECM 170 04	Previous history not available Reformat EMS, MD and Retire per EC018-46077.

The Test Access Network Module With TM Connections is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Test Access Net Shf Assy	NT5X0002		1	X		AP
TM Network Interface	NT2X45AB		1	X	01	AP
TM Processor	NT0X70AA		1	X	02	AP
TM Control	NT2X53AA		1	X	03	AP
Relay Circuits	NT5X01AA	GRP 1	X	X	04-06	RUL1
		GRP 2	X	X	08-10	
		GRP 3	X	X	12-14	
		GRP 4	X	X	16-18	
Test Posn, Test Trk Cont	NT5X02AA	1	X	X	19	RUL2
Filler Face Plate 1.125	NT0X50AC		X	X	04-06	RUL3
			X	X	08-10	
			X	X	12-14	
			X	X	16-18	
			X	X	19	
Filler Face Plate 1.125	NT0X50AC	3	X	X	7,11,15	AP
Desig. Label (NT0X50AC)	P0580258	3	X	X	7,11,15	AP
Multi-output Power Conv	NT2X09AA	1	X	X	20	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES: 1) "X" can be one of 65, 51.

RULES:

- AP 1) When PEC NT5X00AD is ordered, these items are provided.
- RUL1 1) Utilize one group of three relay card slots per eight (8) TME frames requiring metallic test access.
- 2) Provide one (1) Relay Card in corresponding slots in each group utilized under 1) above per test point appearance required. (ie. per test position / test trunk to be given access). Max 3 cards per group.
- RUL2 1) Provide one (1) Test Posn / Test Trk Cont card if TAN is to be cabled to Test Posn or Test Trunk.
- RUL3 1) Provide one (1) Filler Face Plate 1.125, NT0X50AC for each location which is not to be equipped with either NT5X01AA or NT5X02AA.

TEST ACCESS NETWORK EQUIPMENT FRAME

PEC CODE: NT5X12AB

CPC CODE: B0212726

| RATING: MD

REPLACES: N/A

REPLACED BY: N/A

ABBREVIATION NAME: TAE

ENGINEERING DESCRIPTION: The Test Access Network Frame houses Test Access Network shelves which provide metallic test access to trunks in DMS-300 offices.

REFERENCE DOCUMENTATION: MS5X12AB 01 05

MARKETS: Applicable markets:

US
CANADA

ISSUE AUTHOR: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT5X12AB EMR2-02-TAN-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 10 23	----- ECM 170 04	Previous history not available Reformat EMS, MD and Retire per EC018-46077.

The Test Access Network Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Test Access Module	AR	TAN		65		RUL1
Test Access Module	AR	TAN		51		RUL1
Perif Frame Sup Panel	NT0X82AB	FSP	1	45		AP
Fuses - QFF1D	A0205205			45	F02-F06	RUL8
Fuses - QFF1A	A0205202			45	F09-F13	RUL9
Dummy Fuses - QFF3A	A0205210			45	F02-F06, F09-F13	RUL10
Test Access Module	NT5X00AC	TAN		32		RUL2
Test Access Module	NT5X00AC	TAN		18		RUL2
Test Access Module	NT5X00AC	TAN		04		RUL2
Basic Assembly Wiring						
Local Interconnect Cables	AR					RUL4
Logic Return Cable Assembly	NT0X0008					RUL11

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES: 1) The Test Access Network Frame provides space to mount up to five (5) Test Access Shelves in locations 04, 18, 32, 51 and 65.

RULES:

AP 1) When PEC NT5X12AB is ordered, these items are provided.

RUL1 1) The types of access shelves that can be mounted are listed below and are equipped per the corresponding MS.

<u>MODULE</u>	<u>PEC</u>	<u>ABR</u>	<u>MS</u>	<u>RULE</u>
Test Access Network	NT5X00AC	TAN	MS5X00AC	RUL2
Test Access Network with TM conn	NT5X00AD	TAN	MS5X00AD	RUL3

RUL2 1) For each additional three (3) test appearance points (test trunks and/or positions) required in the access network provide one (1) NT5X00AC for every NT5X00AD provided.

2) Mount in any position 65, 51, 32, 18, 04 giving positional preference to NT5X00AD shelves.

RUL3 1) Provide one (1) NT5X00AD for every thirty two (32) TME frames, or part thereof, which contains TM shelves requiring test access connections.

2) The first shelf provides the first three (3) test appearance points in the network.

3) Maximum 2 per frame; mount only in positions 65 and 51.

- RUL4 1) Local interconnect cables are to be provided with each module ordered. The types to be ordered depend on the position of the shelf on the frame and on whether or not the Test Pos Test Trk Cont card (NT5X02AA) is provided on the shelf (see MS5X00AC, Section EMA2-02-TAN-1 and MS5X00AD, Section EMA2-02-TAN-2). Details are provided in the following table:

FOR MODULE EQUIPPED AT POS	PROVIDE CABLE	IF NT5X02AA EQUIPPED: PROVIDE CABLE	NOTE
65	2 x NT0X95BA	2 x NT0X95BT	
51	2 x NT0X95BC	NT0X95BW + NT0X95BX	
32	2 x NT0X95BE	NT0X95BY + NT0X95BZ	
18	2 x NT0X95BF	NT0X95BV + NT0X95CA	
04	2 x NT0X95BJ	NT0X95CB + NT0X95CC	

NOTE: This equipment is required for DMS-300 only.

- RUL5 1) When customer requirements specify that Grilles and (or) Frame Trim Panels are to be ordered for these frames, provide one NT0X08AH and (or) two NT0X72AB per TAE as required.
- 2) When customer requirements specify that Grilles are to be ordered for these frames and if the optional Frame Appliance Outlets on the base of DMS bays is required as well, provide one (1) NT0X08AJ per TAE as required.
- 3) For information on the frame doors, refer to Section EMA15-01-002, Frame Doors.

RUL6 1) Reserved for future use.

RUL7 1) Reserved for future use.

RUL8 1) QFF1D Fuses are associated with all TAN modules (with or without NT5X02AA). The fuses are mounted on the Frame Supervisory Panel according to the following table:

For TAN Module Equipped at Shf Pos	Provide Fuse at FSP Pos
65	F02
51	F04
32	F06
18	F03
04	F05

RUL9 1) QFF1A Fuses are associated with TAN modules equipped with NT5X02AA Test Position, Test Trunk Controller. The fuses are mounted on the Frame Supervisory Panel according to the following table:

For TAN Module (With NT5X02AA) Equipped at Shf Pos	Provide Fuse at FSP Pos
65	F09
51	F10
32	F11
18	F12
04	F13

RUL10 1) Provide one Dummy Fuse, QFF3A per unequipped fuse position F02-F06 and F09-F13.

RUL11 1) Provide one (1) NT0X0008 Logic Return Cable Assembly per frame when extending existing offices not equipped with enhanced grounding per IS0X00.

TEST ACCESS NETWORK EQUIPMENT FRAME

NT5X12AA

RATING: MD. On new jobs replace by NT5X12AB.

ABBREVIATION NAME: TAE

ENGINEERING DESCRIPTION: The Test Access Network Equipment Frame houses Test Access Network shelves which provide metallic test access to trunks in DMS-300 offices.

REFERENCE DOCUMENTATION: MS5X12AA 01 01

The Test Access Network Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Framework	NT0X25AA	FW	1			
Perif Frame Supervisory Pnl	NT0X82AA	FSP	1	45		
Basic Assembly Wiring						
Local Interconnect Cables	AR					RUL3

Description of TAE:

- AP 1) When PEC NT5X12AA is ordered, these items are provided.
- 2) The Test Access Network Frame provides space to mount up to 5 test access shelves in locations 04, 18, 32, 51 and 65.
- 3) The types of access shelves that can be mounted are listed below and are equipped per the corresponding MS.

MODULE	PEC	ABR	MS	RULE
Test Access Network	NT5X00AA	TAN	NT5X00AA	RUL1
Test Access Network w TM conn	NT5X00AB	TAN	NT5X00AB	RUL2

RULE:

- RUL1 1) For each additional three (3) test appearance points (test trunks and/or positions) required in the access network provide one (1) NT5X00AA for every NT5X00AB provided.
- 2) Mount in any position 65, 51, 32, 18, 04 giving positional preference to NT5X00AB shelves.
- RUL2 1) Provide one (1) NT5X00AB for every thirty two (32) TME frames, or part thereof, which contains TM shelves requiring test accerss connections.
- 2) The first shelf provides the first three (3) test appearance points in the network.
- 3) Maximum 2 per frame; mount only in positions 65 and 51.

- RUL3 1) Local interconnect cables are required to be provided with each module ordered. The types to be ordered depend on the position of the shelf on the frame and on whether or not the Test Pos Test Trk Cont card (NT5X02AA) is provided on the shelf (see MS5X00AA, Section EMR2-02-TAN-1 and MS5X00AB, section EMR2-02-TAN-2). Details are provided in the following table:

FOR MODULE EQUIPPED AT POS	PROVIDE CABLE	IF NT5X02AA EQUIPPED: PROVIDE CABLE	NOTE
65	2 x NT0X95BA	2 x NT0X95BT	
51	2 x NT0X95BC	NT0X95BW + NT0X95BX	
32	2 x NT0X95BE	NT0X95BY + NT0X95BZ	
18	2 x NT0X95BF	NT0X95BV + NT0X95CA	
04	2 x NT0X95BJ	NT0X95CB + NT0X95CC	

NOTE: This equipment is required for DMS-300 only.

LINE DRAWER

NT2X19AA

| RATING: MD. See MS0X45AA, MS0X45AB and MS0X45BA.

ABBREVIATION NAME: LD

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS2X19AA 01 03

The Line Drawer is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Line Drawer Assy	NT2X1901		1			AP
Line Circuits	AR			00-31		RUL1
Ringing Bus Multiplexer	NT2X20AB		1	32		AP
I/O Bus Interface	NT2X16AB		1	33		AP
I/O Bus Interface	NT2X16AB		1	34		AP
Line Drawer Cutoff Strap	NT2X1914					RUL2

RULE:

- AP 1) When PEC NT2X19AA is ordered, these items are provided.
- RUL1 1) The Line Drawer (LD) provides space to mount up to thirty two (32) line circuit and related cards. Refer to Table C, Section EMA14-03-000, for the types of cards which can mount on NT2X19AA and their associated provisioning rules and assignment restrictions.
- RUL2 1) Provide one (1) Cutoff Strap for each Line Drawer whose line cards are to be held simultaneously cutoff by the method.
- 2) Since straps can be re-used, the quantity to be provided is determined based on the maximum number of Line Drawers which are to be held simultaneously in this state.
- 3) NOTE: NT2X1914 straps cannot be used with NT2X19AC.

LINE DRAWER

NT2X19AC

| RATING: MD.

ABBREVIATION NAME: LD

ENGINEERING DESCRIPTION: The Line Drawer provides space to mount up to thirty-two line circuits and related cards.

REFERENCE DOCUMENTATION: MS2X19AC 01 03

The Line Drawer is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Line Drawer Assy	NT2X1910		1	X		AP
Line Circuits	AR			X	00-31	RUL1
Line Drawer Interface	NT2X02AA		1	X	32	AP
Line Drawer Cutoff Strap	A0285591			X		RUL2
Cable Sleeve Kit	PC2X1920					RUL3

NOTE: 1) "X" can be one of 04, 18, 32, 51.

RULE:

- AP 1) When PEC NT2X19AC is ordered, these items are provided.
- RUL1 1) The Line Drawer (LD) provides space to mount up to thirty two (32) line circuit and related cards. Refer to Table C, Section EMA14-03-000, for the types of cards which can mount on NT2X19AC and their associated provisioning rules and assignment restrictions.
- RUL2 1) Provide one (1) Cutoff Strap for each Line Drawer whose line cards are to be held simultaneously cutoff by this method.
- 2) Since straps can be re-used, the quantity to be provided is determined based on the maximum number of Line Drawers which are to be held simultaneously in this state.
- 3) NOTE: A0285591 straps cannot be used with NT2X19AA.
- RUL3 1) Provide one (1) PC2X1920 for each line drawer to protect cable from rubbing on Aluminium mounting base.

LINE MODULE CONTROL SHELF

NT2X14AA

| RATING: MD. See MS0X45AA.

ABBREVIATION NAME: LMC

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: N/A

The Line Module Control Shelf is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LMC Shelf Assembly	NT2X1401		1			AP
Pwr Conv +24V, Rng Gen 20Hz	NT2X05AA		1		01	AP
Pwr Conv +24V, Rng Gen 20Hz	NT2X05AA		1		02	AP
Ringng Generator I/F	NT2X27AA		1		03	AP
Signalling Processor	NT2X24AB		1		04	AP
Signalling Processor I/F	NT2X25AB		1		05	AP
Filler Face Plate 1.125	NT0X50AC		1		06	AP
Filler Face Plate 1.125	NT0X50AC		1		07	AP
Master Processor	NT2X26AA		1		08	AP
CCM Processor	NT2X33AA		1		09	AP
Peripheral Msg Processor	NT2X34AA		1		10	AP
Filler Face Plate 1.125	NT0X50AC		1		11	AP
Connection Mem & Trans MUX	NT2X22AA		1		12	AP
Receive MUX	NT2X23AA		1		13	AP
Network Interface	NT2X36AA		1		14	AP
Term Address I/F & Tone Gen	NT2X21AA		1		15	AP
Pwr Conv (+/-5V,+/-12V)	NT2X70AA		1		16	AP
Power Converter PC Kit	NT2X70AZ					RUL1

RULE:

- AP 1) When PEC NT2X14AA is ordered, these items are provided.
- RUL1 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70__ to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label.

LINE MODULE CONTROL SHELF

NT2X14AC

| RATING: MD. See MS0X45AB and MS0X45AC.

ABBREVIATION NAME: LMC

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS2X14AC 01 02

The Line Module Control Shelf is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LMC Shelf Assembly	NT2X1408		1			AP
Pwr Conv +24V, Rng Gen 20Hz	NT2X05AA		1		01	AP
Pwr Conv +24V, Rng Gen 20Hz	NT2X05AA		1		02	AP
Ring Gen I/F 20 Hz Bell Sys	NT2X27AA				03	RUL1
Ring Gen I/F Decimonic MF	NT2X27AB				03	RUL1
Ring Gen I/F Harmonic MF	NT2X27AC				03	RUL1
Ring Gen I/F Sync 16 Hz MF	NT2X27AD				03	RUL1
Ring Gen I/F Synchronomic MF	NT2X27AE				03	RUL1
Signalling Processor	NT2X24AB		1		04	AP
Signalling Processor I/F	NT2X25AB		1		05	AP
Filler Face Plate 1.125	NT0X50AC		1		06	AP
Filler Face Plate 1.125	NT0X50AC		1		07	AP
Master Processor	NT2X26AA		1		08	AP
CCM Processor	NT2X33AB		1		09	AP
Peripheral Msg Processor	NT2X34AA		1		10	AP
Filler Face Plate 1.125	NT0X50AC		1		11	AP
Connection Mem & Trans MUX	NT2X22AA		1		12	AP
Receive MUX	NT2X23AA		1		13	AP
Network Interface	NT2X36AA		1		14	AP
* Term Address I/F & Tone Gen	NT2X21AA				15	RUL2
Term Address I/F & Tone Gen	NT2X21AC				15	RUL2
Pwr Converter (+/-5V, +/-12V)	NT2X70AA		1		16	AP
Desig. Label for NT2X27AA	P0598847				03	RUL1
Desig. Label for NT2X27AB	P0598848				03	RUL1
Desig. Label for NT2X27AC	P0598849				03	RUL1
Desig. Label for NT2X27AD	P0599350				03	RUL1
Desig. Label for NT2X27AE	P0599351				03	RUL1
Desig. Label for NT2X21AA	P0598846				15	RUL2
Desig. Label for NT2X21AC	P0612401				15	RUL2
Power Converter PC Kit	NT2X70AZ					RUL3

* Rating change pending. On new jobs replace with NT2X21AC.

RULE:

AP 1) When PEC NT2X14AC is ordered, these items are provided.

RUL1 1) Provide one (1) Ringing Generator I/F per LMC. Select according to the ringing arrangement required for the subscriber lines which are to connect the LME.

- 2) Both LMC on a given LME must be equipped with the same I/F type.
 - 3) Provide one (1) corresponding designation label per LMC.
- RUL2 1) Provide one NT2X21AA per LMC if LME is NT0X45AB. Provide one NT2X21AC per LMC if LME is NT0X45AC. Provide one corresponding designation label per LMC.
- RUL3 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70AA to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label.

LINE MODULE CONTROL SHELF

PEC CODE: NT2X14AE

CPC CODE: B0216810

RATING: MD

REPLACES: N/A

REPLACED BY: No Replacement

ABBREVIATION NAME: LMC

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS2X14AE 01 05

ISSUE AUTHOR: NTI: Bob Belvin DEPT. 3471 (PPK)

MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT2X14AE EMR2-03-LMC-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-- -- -- 95 09 28	--- --- -- ECM 581 02	Previous history not available. MD section per ECD 018-44299

The Line Module Control Shelf is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LMC Shelf Assembly	NT2X1414		1			AP
Pwr Conv +24V, Rng Gen 20Hz	NT2X05AB		1		01	AP
Pwr Conv +24V, Rng Gen 20Hz	NT2X05AB		1		02	AP
Ring Gen I/F 20 Hz Bell Sys	NT2X27AA				03	RUL1
Ring Gen I/F Decimonic MF	NT2X27AB				03	RUL1
Ring Gen I/F Harmonic MF	NT2X27AC				03	RUL1
Ring Gen I/F Sync 16 Hz MF	NT2X27AD				03	RUL1
Ring Gen I/F Synchromonic MF	NT2X27AE				03	RUL1
Rng Gen I/F 20 Hz 150V Coded	NT2X27AF				03	RUL1
Ring						
Signalling Processor	NT2X24AB		1		04	AP
Signalling Processor I/F	NT2X25AB		1		05	AP
Filler Face Plate 1.125	NT0X50AC		1		06	AP
Filler Face Plate 1.125	NT0X50AC		1		07	AP
Master Processor	NT2X26AA		1		08	AP
CCM Processor	NT2X33AB		1		09	AP
Peripheral Msg Processor	NT2X34AA		1		10	AP
Filler Face Plate 1.125	NT0X50AC		1		11	AP
Connection Mem & Trans MUX	NT2X22AA		1		12	AP
Receive MUX	NT2X23AA		1		13	AP
Network Interface	NT2X36AA		1		14	AP
Term Address I/F & Tone Gen	NT2X21AC				15	RUL2
Power Conv (+/-5V,+/-12V)	NT2X70AA		1		16	AP
Desig. Label for NT2X27AA	P0598847				03	RUL1
Desig. Label for NT2X27AB	P0598848				03	RUL1
Desig. Label for NT2X27AC	P0598849				03	RUL1
Desig. Label for NT2X27AD	P0599350				03	RUL1
Desig. Label for NT2X27AE	P0599351				03	RUL1
Desig. Label for NT2X27AF	P0675099				03	RUL1
Desig. Label for NT2X21AC	P0612401				15	RUL2
Power Converter PC Kit	NT2X70AZ					RUL3

RULES:

- AP 1) When PEC NT2X14AE is ordered, these items are provided.
- RUL1 1) Provide one (1) Ringing Generator I/F per LMC. Select according to the ringing arrangement required for the subscriber lines which are to connect the LME.

- 2) Both LMC on a given LME must be equipped with the same I/F type.
 - 3) Provide one (1) corresponding designation label per LMC.
- RUL2 1) Provide one NT2X21AC per LMC if LME is NT0X45AD. Provide one corresponding designation label per LMC.
- RUL3 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70AA to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label.

LINE MODULE CONTROL SHELF

NT2X14AG

| RATING: MD.

ABBREVIATION NAME: LMC

ENGINEERING DESCRIPTION: The LME shelf contains the hardware required to control the line circuits contained in a line module equipment frame and to provide interfacing between the line cards and the network. There exists two LMC's per LME for reliability: one operates in the active mode while the other operates in the standby mode. The NT2X14AG mounts on the NT0X45AE frame.

REFERENCE DOCUMENTATION: MS2X14AG 01 03

The Line Module Control Shelf is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LMC Shelf Assembly	NT2X1416		1	65		AP
Pwr Cnv (+24V),Rng Gen(20Hz)	NT2X05AC		1	65	01	AP
Pwr Cnv (+24V),Rng Gen(20Hz)	NT2X05AC		1	65	02	AP
Ring Gen I/F 20 Hz Bell Sys	NT2X27AA			65	03	RUL1
Ring Gen I/F Decimonic MF	NT2X27AB			65	03	RUL1
Ring Gen I/F Harmonic MF	NT2X27AC			65	03	RUL1
Ring Gen I/F Synchr 16 Hz MF	NT2X27AD			65	03	RUL1
Ring Gen I/F Synchromonic MF	NT2X27AE			65	03	RUL1
Ring Gen I/F 20Hz/105V	NT2X27AF			65	03	RUL1
Signalling Processor	NT2X24AB		1	65	04	AP
Signalling Processor I/F	NT2X25AB		1	65	05	AP
Filler Face Plate 1.125	NT0X50AC		1	65	06	AP
Filler Face Plate 1.125	NT0X50AC		1	65	07	AP
Master Processor	NT2X26AA		1	65	08	AP
CCM Processor	NT2X33AB		1	65	09	AP
Peripheral Message Processor	NT2X34AA		1	65	10	AP
Filler Face Plate 1.125	NT0X50AC		1	65	11	AP
Connection Mem & Trans MUX	NT2X22AA		1	65	12	AP
Receive MUX	NT2X23AA		1	65	13	AP
Network Interface	NT2X36AA		1	65	14	AP
Term Address I/F & Tone Gen	NT2X21AC			65	15	RUL2
Power Conv (+/-5V,+/-12V)	NT2X70AA		1	65	16	AP
Power Converter PC Kit	NT2X70AZ					RUL3
Desig. Label for NT2X27AA	P0598847			65	03	RUL1
Desig. Label for NT2X27AB	P0598848			65	03	RUL1
Desig. Label for NT2X27AC	P0598849			65	03	RUL1
Desig. Label for NT2X27AD	P0599350			65	03	RUL1
Desig. Label for NT2X27AE	P0599351			65	03	RUL1
Desig. Label for NT2X27AF	P0675099			65	03	RUL1
Desig. Label for NT2X21AC	P0612401			65	15	RUL2

RULE:

- AP 1) When PEC is ordered, these items are provided. NT2X14AG
- RUL1 1) Provide one (1) Ringing Generator I/F per LMC. Select according to the ringing arrangement required for the subscriber lines which are to connect the LME.

- 2) Both LMC on a given LME must be equipped with the same I/F type.
 - 3) Provide one (1) corresponding designation label per LMC.
- RUL2 1) Provide one NT2X21AC per LMC if LME is NT0X45AE. Provide one corresponding designation label per LMC.
- RUL3 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70AA to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label.

LINE MODULE EQUIPMENT FRAME

NT0X45AA

| RATING: MD. On new jobs replace by NT0X45AB.

ABBREVIATION NAME: LME (See Note AP 2 below)

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS0X45AA 01 03

The Line Module Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Framework	NT0X25AA	FW	2			AP
Basic Assembly Wiring						AP
Line Module Control Shelf	NT2X14AA	LMC	2	65		AP
Line Shelf Assembly	NT0X4504		2	51		AP
Line Drawer	NT2X19AA	LD				RUL1
Line Fr Supervisory Panel	NT0X29AA	FSP	2	45		AP
Line Shelf Assembly	NT0X4504		2	32		AP
Line Drawer	NT2X19AA	LD				RUL1
Line Shelf Assembly	NT0X4504		2	18		AP
Line Drawer	NT2X19AA	LD				RUL1
Line Shelf Assembly	NT0X4504		2	04		AP
Line Drawer	NT2X19AA	LD				RUL1
Designation Label LD NO.	P0584722					RUL2

RULE:

- AP 1) When PEC NT0X45AA is ordered, these items are provided.
- 2) NT0X45AA is a double bay frame comprising two (2) individual Line Modules (LM) which together function as reliability mates.
- 3) Each LM comes equipped with one (1) Line Module Control Shelf (LMC) and four (4) Line Shelf Assemblies.
- 4) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD), Maximum twenty (20) per LM.
- RUL1 1) Provide one Line Drawer (NT2X19AA) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AA. Line Drawers are positioned in drawer positions 01-05 on each line shelf assembly.
- RUL2 1) Provide two (2) P0584722 per LME. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

LINE MODULE EQUIPMENT FRAME

NT0X45AB

| RATING: MD. On new jobs replace by NT0X45AC.

ABBREVIATION NAME: LME (See Note AP 2 below)

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS0X45AB 01 01

The Line Module Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Framework	NT0X25AA	FW	2			AP
Basic Assembly Wiring						AP
Line Module Control Shelf	NT2X14AC	LMC	2	65		RUL3
Line Shelf Assembly	NT0X4504		2	51		AP
Line Drawer	NT2X19AA	LD				RUL1
Line Fr Supervisory Panel	NT0X29AA	FSP	2	45		AP
Line Shelf Assembly	NT0X4504		2	32		AP
Line Drawer	NT2X19AA	LD				RUL1
Line Shelf Assembly	NT0X4504		2	18		AP
Line Drawer	NT2X19AA	LD				RUL1
Line Shelf Assembly	NT0X4504		2	04		AP
Line Drawer	NT2X19AA	LD				RUL1
Designation Labels LD NO.	P0584722					RUL2

RULE:

- AP 1) When PEC NT0X45AB is ordered, these items are provided.
- 2) NT0X45AB is a double bay frame comprising two (2) individual Line Modules (LM) which together function as reliability mates.
- 3) Each LM is equipped with four (4) Line Shelf Assemblies.
- 4) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD), Maximum twenty (20) per LM.
- RUL1 1) Provide one Line Drawer (NT2X19AA) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AA. Line Drawers are positioned in drawer positions 01-05 on each line shelf assembly.
- RUL2 1) Provide two (2) P0584722 per LME. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).
- RUL3 1) Provide 2 Line Module Controller Shelves (NT2X14AC) per LME. Equip per MS2X14AC. Unless stated to the contrary in NT2X14AC, the two LMC associated with the same LME are to be identically equipped.

LINE MODULE EQUIPMENT FRAME

NT0X45AC

| RATING: MD. On new jobs replace by NT0X45AD.

ABBREVIATION NAME: LME (See Note AP 2 below)

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS0X45AC 01 02

The Line Module Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Framework	NT0X25AA	FW	2			AP
Basic Assembly Wiring						AP
Line Module Control Shelf	NT2X14AC	LMC	2	65		AP
Line Shelf Assembly	NT0X4516		2	51		AP
Line Drawer	NT2X19AC	LD				RUL1
Line Fr Supervisory Panel	NT0X29AB	FSP	2	45		AP
Line Shelf Assembly	NT0X4516		2	32		AP
Line Drawer	NT2X19AC	LD				RUL1
Line Shelf Assembly	NT0X4516		2	18		AP
Line Drawer	NT2X19AC	LD				RUL1
Line Shelf Assembly	NT0X4516		2	04		AP
Line Drawer	NT2X19AC	LD				RUL1
Designation Labels, LD NO.	P0584722					RUL2

RULE:

- AP 1) When PEC NT0X45AC is ordered, these items are provided.
- 2) NT0X45AC is a double bay frame comprising two (2) individual Line Modules (LM) which together function as reliability mates.
- 3) Each LM comes equipped with one (1) Line Module Control Shelf (LMC) and four (4) Line Shelf Assemblies.
- 4) Equip each LMC per MS2X14AC. Unless stated to the contrary in MS2X14AC, the two LMC associated with the same LME are to be identically equipped.
- 5) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD), Maximum twenty (20) per LM.
- RUL1 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC. Line Drawers are positioned in drawer positions 01-05 on each line shelf assembly.
- RUL2 1) Provide two (2) P0584722 per LME. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

LINE MODULE EQUIPMENT FRAME

PEC CODE: NT0X45AD

CPC CODE: B0216811

RATING: MD

REPLACES: N/A

REPLACED BY: No Replacement

ABBREVIATION NAME: LME (See Note AP 2 below)

ENGINEERING DESCRIPTION: NONE

REFERENCE DOCUMENTATION: MS0X45AD 01 03

ISSUE AUTHOR: NTI: Bob Belvin DEPT. 3471 (PPK)

MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT0X45AD EMR2-03-003 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-- -- -- 95 09 28	--- --- -- ECM 581 02	Previous history not available. MD section per ECD 018-44299

The Line Module Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Basic Assembly Wiring						AP
Line Module Control Shelf	NT2X14AE	LMC	2	65		AP
Line Shelf Assembly	NT0X4516		2	51		AP
Line Drawer	NT2X19AC	LD				RUL1
Line Fr Supervisory Panel	NT0X29AB	FSP	2	45		AP
Line Shelf Assembly	NT0X4516		2	32		AP
Line Drawer	NT2X19AC	LD				RUL1
Line Shelf Assembly	NT0X4516		2	18		AP
Line Drawer	NT2X19AC	LD				RUL1
Line Shelf Assembly	NT0X4516		2	04		AP
Line Drawer	NT2X19AC	LD				RUL1
Designation Labels, LD NO.	P0584722					RUL2

RULES:

- AP 1) When PEC NT0X45AD is ordered, these items are provided.
- 2) NT0X45AD is a double bay frame comprising two (2) individual Line Modules (LM) which together function as reliability mates.
- 3) Each LM comes equipped with one (1) Line Module Control Shelf (LMC) and four (4) Line Shelf Assemblies.
- 4) Equip each LMC per MS2X14AE. Unless stated to the contrary in MS2X14AE, the two LMC associated with the same LME are to be identically equipped.
- 5) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD), Maximum twenty (20) per LM.
- RUL1 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC. Line drawers are positioned in drawer positions 01-05 on each line shelf assembly.
- RUL2 1) Provide two (2) P0584722 per LME. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

LINE MODULE EQUIPMENT FRAME

NT0X45AE

| RATING: MD. (Replaces NT0X45AD)

ABBREVIATION NAME: LME

ENGINEERING DESCRIPTION: NT0X45AE is a double bay frame comprising two (2) individual Line Modules (LM) which together function as reliability mates. The Line Module Equipment Frame houses the subscriber line interface circuits and the line module controller which interfaces the line cards with the network. The line cards are stored in line drawers (32 cards per drawer). The LME can hold a maximum of twenty drawers per bay.

REFERENCE DOCUMENTATION: MS0X45AE 01 01

The Line Module Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Line Module Control Shelf	NT2X14AG	LMC	2	65		AP
Line Shelf Assembly	NT0X4516	LS3	2	51		AP
Line Drawer	NT2X19AC	LD		51		RUL1
Line FR Supervisory Panel	NT0X29AB	FSP	2	45		AP
Line Shelf Assembly	NT0X4516	LS2	2	32		AP
Line Drawer	NT2X19AC	LD		32		RUL1
Line Shelf Assembly	NT0X4516	LS1	2	18		AP
Line Drawer	NT2X19AC	LD		18		RUL1
Line Shelf Assembly	NT0X4516	LS0	2	04		AP
Line Drawer	NT2X19AC	LD		04		RUL1
.sep						
Designation Labels, LD No.	P0584722					RUL3

RULE:

- AP 1) When PEC NT0X45AE is ordered, these items are provided.
- 2) Each LM comes equipped with one (1) Line Module Control Shelf (LMC) and four (4) Line Shelf Assemblies.
- 3) Equip each LMC per MS2X14AG. Unless stated to the contrary in MS2X14AG, the two LMC associated with the same LME are to be identically equipped.
- 4) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD), Maximum twenty (20) per LM.
- RUL1 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC.
- 2) Line Drawers are positioned in drawer positions 01-05 on each line shelf assembly.
- 3) Line Drawer mounting positions are as follows:
- Frame Mounting Position 04 - LD00 to LD04

18 - LD05 to LD09
32 - LD10 to LD14
51 - LD15 to LD19

RUL2 1) Reserved for future use.

RUL3 1) Provide two (2) P0584722 per LME. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

REMOTE LINE MODULE CONTROL SHELF

NT2X14AB

| RATING: M.D. See MS0X45BA.

ABBREVIATION NAME: RLC

ENGINEERING DESCRIPTION: N/A

| REFERENCE DOCUMENTATION: MS2X14AB 01 03

The Remote Line Module Control Shelf is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LM/RLM Control Shf Assy	NT2X1407		1			AP
Pwr Cvtr +24V, Rng Gen 20Hz	NT2X05AA		1		01	AP
Pwr Cvtr +24V, Rng Gen 20Hz	NT2X05AA		1		02	AP
Rng Gen I/F 20 Hz Bell Sys	NT2X27AA				03	RUL1
Rng Gen I/F Decimonic MF	NT2X27AB				03	RUL1
Rng Gen I/F Harmonic MF	NT2X27AC				03	RUL1
Rng Gen I/F Synchr 16 Hz MF	NT2X27AD				03	RUL1
Rng Gen I/F Synchromonc MF	NT2X27AE				03	RUL1
Signalling Processor	NT2X24AB		1		04	AP
Signalling Processor I/F	NT2X25AB		1		05	AP
Filler Face Plate 1.125	NT0X50AC		1		06	AP
RLM Extension Memory	NT3X49AA				07	RUL2
Filler Face Plate 1.125	NT0X50AC				07	RUL6
RLM Master Processor	NT2X26AB		1		08	AP
RLM Message Controller	NT3X47AA		1		09	AP
RLM T-1 Line CP	NT3X48AA		1		10	AP
RLM T-1 Line CP	NT3X48AA				11	RUL3
Filler Face Plate 1.125	NT0X50AC				11	RUL6
Connection Mem & Trans MUX	NT2X22AA				12	RUL4
CONN MEM, TRM MUX, T/SPC SW	NT2X22AB				12	RUL4
RLM Control Shelf MUX Kit	NT2X14AZ			65	12	RUL4
Receive MUX	NT2X23AA		1		13	AP
Filler Face Plate 1.125	NT0X50AC		1		14	AP
Term Address I/F & Tone Gen	NT2X21AA				15	RUL5
Power Conv (+/-5V, +/-12V)	NT2X70AA		1		16	AP
Desig. Label for NT2X27AA	P0598847				03	RUL1
Desig. Label for NT2X27AB	P0598848				03	RUL1
Desig. Label for NT2X27AC	P0598849				03	RUL1
Desig. Label for NT2X27AD	P0599350				03	RUL1
Desig. Label for NT2X27AE	P0599351				03	RUL1
Desig. Label for NT3X49AA	P0613372				07	RUL2
Desig. Label for NT3X48AA	P0613371				11	RUL3
Desig. Label for NT2X22AA	P0613369				12	RUL4
Desig. Label for NT2X22AB	P0613370				12	RUL4
Desig. Label for NT2X21AA	P0598846				15	RUL5
Power Converter PC Kit	NT2X70AZ					RUL7

RULE:

AP 1) When PEC NT2X14AB is ordered, these items are provided.

2) The RLM T-1 Line card, NT3X48AA, provided with this shelf will provide the interface for the first two (2) Host-connecting T-1/LD-1 systems (see also RUL3 below).

3) Unless stated to the contrary below, the two RLC associated with the same RLM are to be identically equipped.

RUL1 1) Provide one (1) Ringing Generator I/F per RLC. Select according to the ringing arrangement required for the subscriber lines which are to connect the RLM.

2) Both RLC on a given RLM must be equipped with the same I/F type.

3) Provide one (1) corresponding designation label per RLC.

RUL2 1) Provide one (1) NT3X49AA per two (2) mating RLC when the Emergency Stand Alone (ESA) option is provided.

2) Assign only to the RLC of RLM bay 0.

3) Provide one (1) designation label, PP, for each NT3X49AA provided.

RUL3 1) Provide one (1) additional RLM T-1 line (NT3X48AA) per RLC to interface the third and fourth T-1/LD-1 Host-connecting system.

2) Provide one (1) designation label (P0613371) per NT3X48AA provided.

| RUL4 1) For U.S. jobs provide one (1) Connection Memory, Transmit MUX and Time/Space Switch (NT2X22AB) if the ESA or intra RLM calling option is required, or if the RLC shelf will be supporting a Remote Service Module (RSM) shelf. Note that each bay of an RLM frame which supports an RSM must be equipped with an NT2X22AB card. Check the application date for ESA and intra RLM calling options.

| 2) Otherwise for U.S. jobs provide one (1) Connection Memory and Transmit MUX (NT2X22AA) per control shelf (NT2X14AH).

| 3) For Canadian jobs, provide NT2X22AB in all applications.

| 4) Provide one (1) corresponding designation label.

| 5) For field retrofit of NT2X22Aa with NT2X22AB, provide one (1) NT2X14AZ RLM Control Shelf MUX Kit as required. For Canadian applications only.

- RUL5 1) Provide one (1) Terminal Address I/F and Tone Gen (NT2X21AA) and one designation label (P0598846) per RLC.
- RUL6 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location 07,11 which is unequipped.
- RUL7 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70__ to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label.

REMOTE LINE MODULE CONTROL SHELF

NT2X14AD

| RATING: M.D. See MS0X45BB, MS0X45BC and MS0X45BD.

ABBREVIATION NAME: RLC

ENGINEERING DESCRIPTION: N/A

| REFERENCE DOCUMENTATION: MS2X14AD 01 03

The Remote Line Module Control Shelf is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LM/RLM Control Shelf Assy	NT2X1409		1			AP
Pwr Cvtr +24V, Rng Gen 20Hz	NT2X05AA		1		01	AP
Pwr Cvtr +24V, Rng Gen 20Hz	NT2X05AA		1		02	AP
Rng Gen I/F 20 Hz Bell Sys	NT2X27AA				03	RUL1
Rng Gen I/F Decimonic MF	NT2X27AB				03	RUL1
Rng Gen I/F Harmonic MF	NT2X27AC				03	RUL1
Rng Gen I/F Synchr 16 Hz MF	NT2X27AD				03	RUL1
Rng Gen I/F Synchromonc MF	NT2X27AE				03	RUL1
Signalling Processor	NT2X24AB		1		04	AP
Signalling Processor I/F	NT2X25AB		1		05	AP
Filler Face Plate 1.125	NT0X50AC		1		06	AP
RLM Extension Memory	NT3X49AA				07	RUL2
Filler Face Plate 1.125	NT0X50AC				07	RUL6
RLM Master Processor	NT2X26AB		1		08	AP
RLM Message Controller	NT3X47AA		1		09	AP
RLM T-1 Line CP	NT3X48AA		1		10	AP
RLM T-1 Line CP	NT3X48AA				11	RUL3
Filler Face Plate 1.125	NT0X50AC				11	RUL6
Connection Mem & Trans MUX	NT2X22AA				12	RUL4
CONN MEM, TRM MUX, T/SPC SW	NT2X22AB				12	RUL4
RLM Control Shelf MUX Kit	NT2X14AZ			65	12	RUL4
Receive MUX	NT2X23AA		1		13	AP
Filler Face Plate 1.125	NT0X50AC		1		14	AP
Term Address I/F & Tone Gen	NT2X21AC				15	RUL5
Power Conv (+/-5V, +/-12V)	NT2X70AA		1		16	AP
Desig. Label for NT2X27AA	P0598847				03	RUL1
Desig. Label for NT2X27AB	P0598848				03	RUL1
Desig. Label for NT2X27AC	P0598849				03	RUL1
Desig. Label for NT2X27AD	P0599350				03	RUL1
Desig. Label for NT2X27AE	P0599351				03	RUL1
Desig. Label for NT3X49AA	P0613372				07	RUL2
Desig. Label for NT3X48AA	P0613371				11	RUL3
Desig. Label for NT2X22AA	P0613369				12	RUL4
Desig. Label for NT2X22AB	P0613370				12	RUL4
Desig. Label for NT2X21AC	P0612401				15	RUL5
Power Converter PC Kit	NT2X70AZ					RUL7

RULE:

AP 1) When PEC NT2X14AD is ordered, these items are provided.

- 2) The RLM T-1 Line card, NT3X48AA, provided with this shelf will provide the interface for the first two (2) Host-connecting T-1/LD-1 systems (see also RUL3 below).
- 3) If the intra switching option is required, do not provision any interbay links on RLM DS-1 ports 0 and 1 (see also RUL3 below).
- 4) Unless stated to the contrary below, the two RLC associated with the same RLM are to be identically equipped.

RUL1 1) Provide one (1) Ringing Generator I/F per RLC. Select according to the ringing arrangement required for the subscriber lines which are to connect the RLM.

2) Both RLC on a given RLM must be equipped with the same I/F type.

3) Provide one (1) corresponding designation label per RLC.

RUL2 1) Provide one (1) NT3X49AA per two (2) mating RLC when the Emergency Stand Alone (ESA) option is provided.

2) Assign only to the RLC of RLM bay 0.

3) Provide one (1) designation label, P0613372, for each NT3X49AA provided.

RUL3 1) Provide one (1) additional RLM T-1 line (NT3X48AA) per RLC to interface the third and fourth T-1/LD-1 Host-connecting system.

2) If the intra switching option is required, a maximum of two interbay links per RLM (i.e. RLM DS-1 ports 2 and 3) can be provided.

3) Provide one (1) designation label, P0613371 per NT3X48AA provided.

| RUL4 1) For U.S. jobs provide one (1) Connection Memory, Transmit MUX and Time/Space Switch (NT2X22AB) if the ESA or intra RLM calling option is required or if the RLC shelf will be supporting a Remote Service Module (RSM) shelf. Note that each bay of an RLM frame which supports an RSM must be equipped with an NT2X22AB card. Check the application date for ESA and intra RLM calling options.

| 2) Otherwise for U.S. jobs, provide one (1) Connection Memory and Transmit MUX (NT2X22AA) per control shelf (NT2X14AH).

- 3) For Canadian jobs, provide NT2X22AB in all applications.
 - 4) Provide one (1) corresponding designation label.
 - 5) For field retrofit of NT2X22AA with NT2X22AB, provide one (1) NT2X14AX RLM Control Shelf MUX Kit as required. For Canadian applications only.
- RUL5 1) Provide one (1) Terminal Address I/F and Tone Gen (NT2X21AC) and one designation label (P0612401) per RLC.
- RUL6 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location 07,11 which is unequipped.
- RUL7 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70AA to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label.

REMOTE LINE MODULE CONTROL SHELF

NT2X14AF

| RATING: MD.

ABBREVIATION NAME: RLC

ENGINEERING DESCRIPTION: N/A

| REFERENCE DOCUMENTATION: MS2X14AF 01 06

The Remote Line Module Control Shelf is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LM/RLM Control Shelf Assy	NT2X1415		1			AP
Pwr Cvtr +24V, Rng Gen 20Hz	NT2X05AB		1		01	AP
Pwr Cvtr +24V, Rng Gen 20Hz	NT2X05AB		1		02	AP
Rng Gen I/F 20 Hz Bell Sys	NT2X27AA				03	RUL1
Rng Gen I/F Decimonic MF	NT2X27AB				03	RUL1
Rng Gen I/F Harmonic MF	NT2X27AC				03	RUL1
Rng Gen I/F Synchr 16 Hz MF	NT2X27AD				03	RUL1
Rng Gen I/F Synchromonc MF	NT2X27AE				03	RUL1
Rng Gen I/F 20 Hz 150V	NT2X27AF				03	RUL1
Coded Ringing						
Signalling Processor	NT2X24AB		1		04	AP
Signalling Processor I/F	NT2X25AB		1		05	AP
Filler Face Plate 1.125	NT0X50AC		1		06	AP
RLM Extension Memory	NT3X49AA				07	RUL2
Filler Face Plate 1.125	NT0X50AC				07	RUL6
RLM Master Processor	NT2X26AB		1		08	AP
RLM Message Controller	NT3X47AA		1		09	AP
RLM T-1 Line CP	NT3X48AA		1		10	AP
RLM T-1 Line CP	NT3X48AA				11	RUL3
Filler Face Plate 1.125	NT0X50AC				11	RUL6
Connection Mem & Trans MUX	NT2X22AA				12	RUL4
CONN MEM, TRM MUX, T/SPC SW	NT2X22AB				12	RUL4
RLM Control Shelf MUX Kit	NT2X14AZ			65	12	RUL4
Receive MUX	NT2X23AA		1		13	AP
Filler Face Plate 1.125	NT0X50AC		1		14	AP
Term Address I/F & Tone Gen	NT2X21AC				15	RUL5
Power Conv (+/-5V,+/-12V)	NT2X70AA		1		16	AP
Desig. Label for NT2X27AA	P0598847				03	RUL1
Desig. Label for NT2X27AB	P0598848				03	RUL1
Desig. Label for NT2X27AC	P0598849				03	RUL1
Desig. Label for NT2X27AD	P0599350				03	RUL1
Desig. Label for NT2X27AE	P0599351				03	RUL1
Desig. Label for NT2X27AF	P0675099				03	RUL1
Desig. Label for NT3X49AA	P0613372				07	RUL2
Desig. Label for NT3X48AA	P0613371				11	RUL3
Desig. Label for NT2X22AA	P0613369				12	RUL4
Desig. Label for NT2X22AB	P0613370				12	RUL4
Desig. Label for NT2X21AC	P0612401				15	RUL5
Power Converter PC Kit	NT2X70AZ					RUL6

RULE:

Retired Equipment
Remote Line Module Control Shelf

NT2X14AF
EMR2-04-RLC-3
Page 2

- AP 1) When PEC NT2X14AF is ordered, these items are provided.
- 2) The RLM T-1 Line card, NT3X48AA, provided with this shelf will provide the interface for the first two (2) Host-connecting T-1/LD-1 systems (see also RUL3 below).
- 3) If the intra switching option is required, do not provision any interbay links on RLM DS-1 ports 0 and 1 (see also RUL3 below).
- 4) Unless stated to the contrary below, the two RLC associated with the same RLM are to be identically equipped.
- RUL1 1) Provide one (1) Ringing Generator I/F per RLC. Select according to the ringing arrangement required for the subscriber lines which are to connect the RLM.
- 2) Both RLC on a given RLM must be equipped with the same I/F type.
- 3) Provide one (1) corresponding designation label per RLC.
- RUL2 1) Provide one (1) NT3X49AA per two (2) mating RLC when the Emergency Stand Alone (ESA) option is provided.
- 2) Assign only to the RLC of RLM bay 0.
- 3) Provide one (1) designation label, P0613372, for each NT3X49AA provided.
- RUL3 1) Provide one (1) additional RLM T-1 line (NT3X48AA) per RLC to interface the third and fourth T-1/LD-1 Host- connecting system.
- 2) If the intra switching option is required, a maximum of two interbay links per RLM (i.e. RLM DS-1 ports 2 and 3) can be provided.
- 3) Provide one (1) designation label, P0613372 per NT3X48AA provided.
- | RUL4 1) For U.S. jobs provide one (1) Connection Memory, Transmit MUX and Time/Space Switch (NT2X22AB) if the ESA or intra RLM calling option is required, or if the RLC shelf will be supporting a Remote Service Module (RSM) shelf. Note that each bay of an RLM frame which supports an RSM must be equipped with an NT2X22AB card. Check the application date for ESA and intra RLM calling options.

- | 2) Otherwise for U.S. jobs, provide one (1) Connection Memory and Transmit MUX (NT2X22AA) per control shelf (NT2X14AH).
- | 3) For Canadian jobs, provide NT2X22AB in all applications.
- | 4) Provide one (1) corresponding designation label.
- | 5) For field retrofit of NT2X22AA with NT2X22AB, provide one (1) NT2X14AZ RLM Control Shelf MUX Kit as required. For Canadian applications only.
- RUL5 1) Provide one (1) Terminal Address I/F and Tone Gen (NT2X21AC) and one designation label (P0612401) per RLC.
- RUL6 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location 07,11 which is unequipped.
- RUL7 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70AA to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label.

REMOTE LINE MODULE CONTROL SHELF

PEC CODE: NT2X14AH

CPC CODE: B0222787

RATING: MD

REPLACES: N/A

REPLACED BY: No Replacement

ABBREVIATION NAME: RLC

ENGINEERING DESCRIPTION: The RLC shelf functions in a similar manner to the LMC shelf of the LME frame. the RLC controls the line cards at the remote location and interfaces them to the network. There exists two RLC's per RLM for reliability: one operates in the active mode while the other is in the standby mode. the NT2X14AH mounts on the NT0X45BH/BJ/BK frame.

REFERENCE DOCUMENTATION: MS2X14AH 01 04

ISSUE AUTHOR: NTI: Bob Belvin DEPT. 3471 (PPK)

MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT2X14AH EMR2-04-RLC-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-- -- -- 95 09 28	--- --- -- ECM 581 02	Previous history not available. MD section per ECD 018-44299

The Remote Line Module Control Shelf is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LM/RLM Control Shelf Assy	NT2X1417		1	65		AP
Pwr Cnv(+24V),Rng Gen(20Hz)	NT2X05AC		1	65	01	AP
Pwr Cnv(+24V),Rng Gen(20Hz)	NT2X05AC		1	65	02	AP
Rng Gen I/F 20 Hz Bell Sys	NT2X27AA			65	03	RUL1
Rng Gen I/F Decimonic MF	NT2X27AB			65	03	RUL1
Rng Gen I/F Harmonic MF	NT2X27AC			65	03	RUL1
Rng Gen I/F Synchr 16 Hz MF	NT2X27AD			65	03	RUL1
Rng Gen I/F Synchromonc MF	NT2X27AE			65	03	RUL1
Rng Gen I/F 20Hz/105V	NT2X27AF			65	03	RUL1
Signalling Processor	NT2X24AB		1	65	04	AP
Signalling Processor I/F	NT2X25AB		1	65	05	AP
RLM Extension Memory	NT3X49AA			65	07	RUL2
Filler Face Plate 1.125	NT0X50AC			65	06, 07	RUL6
RLM Master Processor	NT2X26AB		1	65	08	AP
RLM Message Controller	NT3X47AA		1	65	09	AP
RLM T-1 Line CP	NT3X48AA		1	65	10	AP
RLM T-1 Line CP	NT3X48AA			65	11	RUL3
Filler Face Plate 1.125	NT0X50AC			65	11, 14	RUL6
Connection Mem & Trans MUX	NT2X22AA			65	12	RUL4
CONN MEM, TRM MUX, T/SPC SW	NT2X22AB			65	12	RUL4
RLM Control Shelf MUX Kit	NT2X14AZ			65	12	RUL4
Receive MUX	NT2X23AA		1	65	13	AP
Term Address I/F & Tone Gen	NT2X21AC			65	15	RUL5
Power Conv (+/-5V,+/-12V)	NT2X70AA		1	65	16	AP
Power Converter PC Kit	NT2X70AZ					RUL7
Desig. Label for NT2X27AA	P0598847			65	03	RUL1
Desig. Label for NT2X27AB	P0598848			65	03	RUL1
Desig. Label for NT2X27AC	P0598849			65	03	RUL1
Desig. Label for NT2X27AD	P0599350			65	03	RUL1
Desig. Label for NT2X27AE	P0599351			65	03	RUL1
Desig. Label for NT2X27AF	P0675099			65	03	RUL1
Desig. Label for NT3X49AA	P0613372			65	07	RUL2
Desig. Label for NT3X48AA	P0613371			65	11	RUL3
Desig. Label for NT2X22AA	P0613369			65	12	RUL4
Desig. Label for NT2X22AB	P0613370			65	12	RUL4
Desig. Label for NT2X21AC	P0599140			65	15	RUL5

RULES:

- AP 1) When PEC NT2X14AH is ordered, these items are provided.
- 2) The RLM T-1 Line card, NT3X48AA, provided with this shelf will provide the interface for the first two (2) Host-connecting T-1/LD-1 systems (see also RUL3 below).
- 3) If the intra switching option is required, do not provision any interbay links on RLM DS-1 ports 0 and 1 (see also RUL3 below). Check application date.
- 4) Unless stated to the contrary below, the two RLC associated with the same RLM are to be identically equipped.
- RUL1 1) Provide one (1) Ringing Generator I/F per RLC. Select according to the ringing arrangement required for the subscriber lines which are to connect the RLM.
- 2) Both RLC on a given RLM must be equipped with the same I/F type.
- 3) Provide one (1) corresponding designation label per RLC.
- RUL2 1) Provide one (1) NT3X49AA per two (2) mating RLC when the Emergency Stand Alone (ESA) option is provided. Check application date for the ESA option.
- 2) Assign only to the RLC of RLM bay 0.
- 3) Provide one (1) designation label, P0613372, for each NT3X49AA provided.
- RUL3 1) Provide one (1) additional RLM T-1 line (NT3X48AA) per RLC to interface the third and fourth T-1/LD-1 Host-connecting system when RLM traffic indicates a requirement.
- 2) If the intra switching option is required, a maximum of two interbay links per RLM (i.e. RLM DS-1 ports 2 and 3) can be provided. Check the application date for intra-switching option.
- 3) Provide one (1) designation label, P0613371 per NT3X48AA provided.
- RUL4 1) For U.S. jobs, provide one (1) Connection Memory, Transmit MUX and Time/Space Switch (NT2X22AB) if the ESA or intra RLM calling option is required, or if the RLC shelf will be supporting a Remote Service Module (RSM) shelf. Note that each bay of an RLM frame which supports an RSM must be equipped with an NT2X22AB card. Check the application date for ESA and intra RLM calling options.

- 2) Otherwise for U.S. jobs, provide one (1) Connection Memory and Transmit MUX (NT2X22AA) per control shelf (NT2X14AH).
 - 3) For Canadian jobs, provide NT2X22AB in all applications.
 - 4) Provide one (1) corresponding designation label.
 - 5) For field retrofit of NT2X22Aa with NT2X22AB, provide one (1) NT2X14AZ RLM Control Shelf MUX Kit as required. For Canadian applications only.
- RUL5 1) Provide one (1) Terminal Address I/F and Tone Gen (NT2X21AC) and one designation label (P0612401) per RLC.
- RUL6 1) When customer requirements specify that Filler Face Plates are to be ordered, provide one (1) NT0X50AC for each location 06,07,11,14 which is unequipped.
- RUL7 1) Provide one (1) NT2X70AZ Power Converter PC Kit to modify the existing NT2X70AA to the NT2X70AE. This PC kit contains one (1) NT2X70AE and one (1) designation label.

REMOTE LINE MODULE EQUIPMENT FRAME

NT0X45BA

| RATING: MD. On new jobs replace by NT0X45BB.

ABBREVIATION NAME: RLM

ENGINEERING DESCRIPTION:

REFERENCE DOCUMENTATION: MS0X45BA 01 02

The Remote Line Module Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Line Mod Ctrl Shf	NT2X14AB	RLC	2	65		RUL2
Line Shelf Assembly	NT0X4504		2	51		AP
Line Drawer	NT2X19AA	LD				RUL1
Line Fr Supervisory Panel	NT0X29AA	FSP	2	45		AP
Line Shelf Assembly	NT0X4504		2	32		AP
Line Drawer	NT2X19AA	LD				RUL1
Line Shelf Assembly	NT0X4504		2	18		AP
Line Drawer	NT2X19AA	LD				RUL1
Line Shelf Assembly	NT0X4504		2	04		AP
Line Drawer	NT2X19AA	LD				RUL1
Remote Line Mod Frame Assy	NT0X4509	BAY0	1			AP
Remote Line Mod Frame Assy	NT0X4510	BAY1	1			AP
Designation Labels LD No.	P0584722					RUL3

RULE:

- AP 1) When PEC NT0X45BA is ordered, these items are provided.
- 2) NT0X45BA is a double bay frame comprising two (2) individual Line Modules which together function as reliability mates.
- 3) Each RLM is equipped with eight (8) Line Shelf Assemblies.
- 4) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD). Maximum forty (40) per frame.
- RUL1 1) Provide one Line Drawer (NT2X19AA) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AA. Line drawers are positioned in drawer positions 01-05 on each line shelf assembly.
- 2) Line Drawers are not equipped in position 19 (bays 0 and 1) of any RLM which must interface a Remote Service Module

(RSM) (see MS0X02AB, Section EMA13-01-000, for RSM provisioning rules). Instead drawer connectors at these positions are used to extend the control bus from the Remote Line Module Control shelves (RLC) to the Remote Service Module (RSM). Cabling distances must not exceed 15 feet.

- RUL2 2 1) Provide two (2) Remote Line Module Control shelves, NT2X14AB, per frame. Equip each per MS2X14AB. Unless stated to the contrary in MS2X14AB, the two RLC associated with the same RLM are to be identically equipped.
- RUL3 1) Provide two (2) P0584722 per RLM. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

REMOTE LINE MODULE FRAME

NT0X45BB

| RATING: MD. On new job replace by NT0X45BE.

ABBREVIATION NAME: RLM

ENGINEERING DESCRIPTION:

REFERENCE DOCUMENTATION: MS0X45BB 01 02

The Remote Line Module Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Line Mod Ctrl Shlf	NT2X14AD	RLC	2	65		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	2	51		AP RUL1
Line Fr Supervisory Panel	NT0X29AB	FSP	2	45		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	2	32		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	2	18		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	2	04		AP RUL1
Remote Line Mod Frame Assy	NT0X4517		1			AP
Remote Line Mod Frame Assy	NT0X4518		1			AP
Designation Labels LD No.	P0584722					RUL2

RULE:

- AP 1) When PEC NT0X45BB is ordered, these items are provided.
- 2) NT0X45BB is a double bay frame comprising two (2) individual Remote Line Modules which together function as reliability mates.
- 3) Each RLM is equipped with eight (8) Line Shelf Assemblies.
- 4) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD), maximum twenty (40 per frame).
- 5) Each RLM is equipped with two (2) Remote Line Module Control Shelves, NT2X14AD, equip each per MS2X14AD. Unless stated to the contrary in MS2X14AD, the two RLC associated with the same RLM are to be identically equipped.
- RUL1 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC. Line

drawers are positioned in drawer positions 01-05 on each line shelf assembly.

- 2) Line Drawers are not equipped in position 19 (bays 0 and 1) of any RLM which must interface a Remote Service Module (RSM) (see MS0X02AB, Section EMA13-01-000, for RSM provisioning rules). Instead drawer connectors at these positions are used to extend the control bus from the Remote Line Module Control shelves (RLC) to the Remote Service Module (RSM). Cabling distances must not exceed 25 feet.

RUL2 1) Provide two (2) P0584722 per RLM. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

REMOTE LINE MODULE FRAME (BAY 0)

NT0X45BC

| RATING: MD. On new jobs replace by NT0X45BF.

ABBREVIATION NAME: RLM

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS0X45BC 01 02

The Remote Line Module Frame (Bay 0) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Line Mod Ctrl Shf	NT2X14AD	RLC	1	65		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	51		AP RUL1
Line Fr Supervisory Panel	NT0X29AB	FSP	1	45		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	32		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	18		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	04		AP RUL1
Remote Line Mod Frame Assy Designation Labels LD No.	NT0X4517 P0584722		1			AP RUL2

NOTE:

- 1) When an RLM site has the intra-RLM calling option, the method of configuring an inter-bay link is to loop the DS-1 traffic back at the DS-X or ORB. For this purpose the maximum distance between the RLM and the DF (DS-X, ORB, etc.) where the loop back will occur is 350 feet. This does not degrade the 700 foot RLM-ORB limit as long as a DS-X is used between the RLM and ORB.

RULE:

- AP
- 1) When PEC NT0X45BC is ordered, these items are provided.
 - 2) NT0X45BC is a single bay frame comprising one (1) Remote Line Module. NT0X45BC must be paired with NT0X45BD. NT0X45BC, bay 0, is the left side of the pair, and NT0X45BD, bay 1, is the right side of the pair. This permits the ordering of the double bay RLM as two separate

single bay RLM frames so that the installer can use smaller building doors and can maneuver through narrow turns and corners.

- 3) Each RLM is equipped with four (4) Line Shelf Assemblies.
 - 4) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD). There can be a maximum of twenty (20) LD's per frame.
 - 5) Each RLM is equipped with one (1) Remote Line Module Control Shelf, NT2X14AD. Equip each per MS2X14AD. Unless stated to the contrary in MS2X14AD, the RLC associated with bay 0 is to be identically equipped with the RLC associated with bay 1.
- RUL1
- 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC. Line drawers are positioned in drawer positions 01-05 on each line shelf assembly.
 - 2) Line Drawers are not equipped in position 19 (bays 0 and 1) of any RLM which must interface a Remote Service Module (RSM) (see MS0X02AB, Section EMA13-01-000, for RSM provisioning rules). Instead drawer connectors at these positions are used to extend the control bus from the Remote Line Module Control shelves (RLC) to the Remote Service Module (RSM). Cabling distances must not exceed 25 feet.
- RUL2
- 1) Provide one (1) P0584722 per RLM. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

REMOTE LINE MODULE FRAME (BAY 1)

NT0X45BD

| RATING: MD. On new jobs replace by NT0X45BG.

ABBREVIATION NAME: RLM

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS0X45BD 01 02

The Remote Line Module Frame (Bay 1) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Line Mod Ctrl Shf	NT2X14AD	RLC	1	65		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	51		AP RUL1
Line Fr Supervisory Panel	NT0X29AB	FSP	1	45		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	32		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	18		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	04		AP RUL1
Remote Line Mod Frame Assy Designation Labels LD No.	NT0X4518 P0584722		1			AP RUL2

NOTE:

- 1) When an RLM site has the intra-RLM calling option, the method of configuring an inter-bay link is to loop the DS-1 traffic back at the DS-X or ORB. For this purpose the maximum distance between the RLM and the DF (DS-X, ORB, etc.) where the loop back will occur is 350 feet. This does not degrade the 700 foot RLM-ORB limit as long as a DS-X is used between the RLM and ORB.

RULE:

- AP
- 1) When PEC NT0X45BD is ordered, these items are provided.
 - 2) NT0X45BD is a single bay frame comprising one (1) Remote Line Module. NT0X45BD must be paired with NT0X45BC. NT0X45BC, bay 0, is the left side of the pair, and NT0X45BD, bay 1, is the right side of the pair. This permits the ordering of the double bay RLM as two separate

single bay RLM frames so that the installer can use smaller building doors and can maneuver through narrow turns and corners.

- 3) Each RLM is equipped with four (4) Line Shelf Assemblies.
 - 4) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD). There can be a maximum of twenty (20) LD's per frame.
 - 5) Each RLM is equipped with one (1) Remote Line Module Control Shelf, NT2X14AD. Equip each per MS2X14AD. Unless stated to the contrary in MS2X14AD, the RLC associated with bay 1 is to be identically equipped with the RLC associated with bay 0.
- RUL1
- 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC. Line drawers are positioned in drawer positions 01-05 on each line shelf assembly.
 - 2) Line Drawers are not equipped in position 19 (bays 0 and 1) of any RLM which must interface a Remote Service Module (RSM) (see MS0X02AB, Section EMA13-01-000, for RSM provisioning rules). Instead drawer connectors at these positions are used to extend the control bus from the Remote Line Module Control shelves (RLC) to the Remote Service Module (RSM). Cabling distances must not exceed 25 feet.
- RUL2
- 1) Provide one (1) P0584722 per RLM. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

REMOTE LINE MODULE FRAME

NT0X45BE

| RATING: MD.

ABBREVIATION NAME: RLM

ENGINEERING DESCRIPTION:

REFERENCE DOCUMENTATION: MS0X45BE 01 04

The Remote Line Module Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Line Module Ctrl Shf	NT2X14AF	RLC	2	65		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	2	51		AP RUL1
Line Fr Supervisory Panel	NT0X29AB	FSP	2	45		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	2	32		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	2	18		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	2	04		AP RUL1
Basic Assembly Wiring & H/W Designation Labels LD No.	P0584722					AP RUL2

NOTE:

- 1) When an RLM site has the intra-RLM calling option, the method of configuring an inter-bay link is to loop the DS-1 traffic back at the DS-X or ORB. For this purpose the maximum distance between the RLM and the DF (DS-X, ORB, etc.) where the loop back will occur is 350 feet. This does not degrade the 700 foot RLM-ORB limit as long as a DS-X is used between the RLM and ORB.

RULE:

- AP
- 1) When PEC NT0X45BE is ordered, these items are provided.
 - 2) NT0X45BE is a double bay frame comprising two (2) individual Remote Line Modules which together function as reliability mates.
 - 3) Each RLM is equipped with eight (8) Line Shelf Assemblies.

- 4) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD), maximum twenty (40 per frame).
 - 5) Each RLM is equipped with two (2) Remote Line Module Control Shelves, NT2X14AF, equip each per MS2X14AF. Unless stated to the contrary in MS2X14AF, the two RLC associated with the same RLM are to be identically equipped.
- RUL1
- 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC. Line drawers are positioned in drawer positions 01-05 on each line shelf assembly.
 - 2) Line Drawers are not equipped in position 19 (bays 0 and 1) of any RLM which must interface a Remote Service Module (RSM) (see MS0X02AB, Section EMA13-01-000, for RSM provisioning rules). Instead drawer connectors at these positions are used to extend the control bus from the Remote Line Module Control shelves (RLC) to the Remote Service Module (RSM). Cabling distances must not exceed 25 feet.
- RUL2
- 1) Provide two (2) P0584722 per RLM. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

REMOTE LINE MODULE FRAME (BAY 0)

NT0X45BF

| RATING: MD.

ABBREVIATION NAME: RLM

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS0X45BF 01 04

The Remote Line Module Frame (Bay 0) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Line Module Ctrl Shf	NT2X14AF	RLC	1	65		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	51		AP RUL1
Line Fr Supervisory Panel	NT0X29AB	FSP	1	45		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	32		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	18		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	04		AP RUL1
Basic Assembly Wiring & H/W Designation Labels LD No.	P0584722					AP RUL2

NOTE:

- 1) When an RLM site has the intra-RLM calling option, the method of configuring an inter-bay link is to loop the DS-1 traffic back at the DS-X or ORB. For this purpose the maximum distance between the RLM and the DF (DS-X, ORB, etc.) where the loop back will occur is 350 feet. This does not degrade the 700 foot RLM-ORB limit as long as a DS-X is used between the RLM and ORB.

RULE:

- AP 1) When PEC NT0X45BF is ordered, these items are provided.
- 2) NT0X45BF is a single bay frame comprising one (1) Remote Line Module. NT0X45BF must be paired with NT0X45BG. NT0X45BF, bay 0, is the left side of the pair, and NT0X45BG, bay 1, is the right side of the pair. This permits the ordering of the double bay RLM as two separate single bay RLM frames so that the installer can use smaller

building doors and can maneuver through narrow turns and corners.

- 3) Each RLM is equipped with four (4) Line Shelf Assemblies.
 - 4) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD). There can be a maximum of twenty (20) LD's per frame.
 - 5) Each RLM is equipped with one (1) Remote Line Module Control Shelf, NT2X14AF. Equip each per MS2X14AF. Unless stated to the contrary in MS2X14AF, the RLC associated with bay 0 is to be identically equipped with the RLC associated with bay 1.
- RUL1
- 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC. Line drawers are positioned in drawer positions 01-05 on each line shelf assembly.
 - 2) Line Drawers are not equipped in position 19 (bays 0 and 1) of any RLM which must interface a Remote Service Module (RSM) (see MS0X02AB, Section EMA13-01-000, for RSM provisioning rules). Instead drawer connectors at these positions are used to extend the control bus from the Remote Line Module Control shelves (RLC) to the Remote Service Module (RSM). Cabling distances must not exceed 25 feet.
- RUL2
- 1) Provide one (1) P0584722 per RLM. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

REMOTE LINE MODULE FRAME (BAY 1)

NT0X45BG

| RATING: MD.

ABBREVIATION NAME: RLM

ENGINEERING DESCRIPTION: N/A

REFERENCE DOCUMENTATION: MS0X45BG 01 04

The Remote Line Module Frame (Bay 1) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Line Module Ctrl Shf	NT2X14AF	RLC	1	65		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	51		AP RUL1
Line Fr Supervisory Panel	NT0X29AB	FSP	1	45		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	32		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	18		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LD	1	04		AP RUL1
Basic Assembly Wiring & H/W Designation Labels LD No.	P0584722					AP RUL2

NOTE:

- 1) When an RLM site has the intra-RLM calling option, the method of configuring an inter-bay link is to loop the DS-1 traffic back at the DS-X or ORB. For this purpose the maximum distance between the RLM and the DF (DS-X, ORB, etc.) where the loop back will occur is 350 feet. This does not degrade the 700 foot RLM-ORB limit as long as a DS-X is used between the RLM and ORB.

RULE:

- AP
- 1) When PEC NT0X45BG is ordered, these items are provided.
 - 2) NT0X45BG is a single bay frame comprising one (1) Remote Line Module. NT0X45BG must be paired with NT0X45BF. NT0X45BF, bay 0, is the left side of the pair, and NT0X45BG, bay 1, is the right side of the pair. This permits the ordering of the double bay RLM as two separate

single bay RLM frames so that the installer can use smaller building doors and can maneuver through narrow turns and corners.

- 3) Each RLM is equipped with four (4) Line Shelf Assemblies.
 - 4) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD). There can be a maximum of twenty (20) LD's per frame.
 - 5) Each RLM is equipped with one (1) Remote Line Module Control Shelf, NT2X14AF. Equip each per MS2X14AF. Unless stated to the contrary in MS2X14AF, the RLC associated with bay 1 is to be identically equipped with the RLC associated with bay 0.
- RUL1
- 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC. Line drawers are positioned in drawer positions 01-05 on each line shelf assembly.
 - 2) Line Drawers are not equipped in position 19 (bays 0 and 1) of any RLM which must interface a Remote Service Module (RSM) (see MS0X02AB, Section EMA13-01-000, for RSM provisioning rules). Instead drawer connectors at these positions are used to extend the control bus from the Remote Line Module Control shelves (RLC) to the Remote Service Module (RSM). Cabling distances must not exceed 25 feet.
- RUL2
- 1) Provide one (1) P0584722 per RLM. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

REMOTE LINE MODULE FRAME

NT0X45BH

| RATING: MD. (Replaces NT0X45BE)

ABBREVIATION NAME: RLM

ENGINEERING DESCRIPTION: NT0X45BH is a double bay frame comprising two (2) individual Remote Line Modules which together function as reliability mates. The Remote Line Module Frame is very similar in structure to the LME frame. The RLM is a specially equipped Line Module (LM) which communicates with its host office via DS1 carrier links instead of 4-wire speech links to the network.

REFERENCE DOCUMENTATION: MS0X45BH 01 01

The Remote Line Module Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Line Mod Ctrl Shlf	NT2X14AH	RLC	2	65		AP
Line Shelf Assembly	NT0X4516	LS3	2	51		AP
Line Drawer	NT2X19AC	LD		51		RUL1
Line Fr Supervisory Panel	NT0X29AB	FSP	2	45		AP
Line Shelf Assembly	NT0X4516	LS2	2	32		AP
Line Drawer	NT2X19AC	LD		32		RUL1
Line Shelf Assembly	NT0X4516	LS1	2	18		AP
Line Drawer	NT2X19AC	LD		18		RUL1
Line Shelf Assembly	NT0X4516	LS0	2	04		AP
Line Drawer	NT2X19AC	LD		04		RUL1

RULE:

- AP 1) When PEC NT0X45BH is ordered, these items are provided.
- 2) Each RLM is equipped with eight (8) Line Shelf Assemblies.
- 3) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD), maximum twenty (40 per frame).
- 4) Each RLM is equipped with two (2) Remote Line Module Control Shelves, NT2X14AH, equip each per MS2X14AH. Unless stated to the contrary in MS2X14AH, the two RLC associated with the same RLM are to be identically equipped.
- 5) When an RLM site has the intra-RLM calling option, the method of configuring an inter-bay link is to loop the DS-1 traffic back at the DS-X or ORB. For this purpose the maximum distance between the RLM and the DF (DS-X, ORB, etc.) where the loop back will occur is 350 feet. This does not degrade the 700 foot RLM-ORB limit as long as a DS-X is used between the RLM and ORB. Check application date of this option.
- RUL1 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC.

- 2) Line Drawers are not equipped in position 19 (bays 0 and 1) of any RLM which must interface a Remote Service Module (RSM) (see MS0X02AB, Section EMA13-01-000, for RSM provisioning rules). Instead drawer connectors at these positions are used to extend the control bus from the Remote Line Module Control shelves (RLC) to the Remote Service Module (RSM). Cabling distances must not exceed 25 feet.
- 3) Line Drawers are positioned in drawer positions 01-05 on each line shelf assembly.
- 4) For RLM XX0 and RLM XX1, the following are the mounting positions (Note LD = Line Drawer):

Frame Mounting Position 04 - LD00 to LD04
18 - LD05 to LD09
32 - LD10 to LD14
51 - LD15 to LD19

REMOTE LINE MODULE FRAME (BAY 0)

PEC CODE: NT0X45BJ

CPC CODE: B0222784

RATING: MD

REPLACES: N/A

REPLACED BY: No Replacement

ABBREVIATION NAME: RLM

ENGINEERING DESCRIPTION: NT0X45BJ is a single bay frame comprising one (1) Remote Line Module. NT0X45BJ must be paired with NT0X45BK. NT0X45BJ, bay 0, is the left side of the pair, and NT0X45BK, bay 1, is the right side of the pair. This permits the ordering of the double bay RLM as two separate single bay RLM frames so that the installer can use smaller building doors and can maneuver through narrow turns and corners.

REFERENCE DOCUMENTATION: MS0X45BJ 01 01

ISSUE AUTHOR: NTI: Bob Belvin DEPT. 3471 (PPK)

MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT0X45BJ EMR2-04-008 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-- -- -- 95 09 28	--- --- -- ECM 581 02	Previous history not available. MD section per ECD 018-44299

The Remote Line Module Frame (Bay 0) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Line Mod Ctrl Shlf	NT2X14AH	RLC	1	65		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LS3 LD	1	51 51		AP RUL1
Line FR Supervisory Panel	NT0X29AB	FSP	1	45		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LS2 LD	1	32 32		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LS1 LD	1	18 18		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LS0 LD	1	04 04		AP RUL1
Designation Labels LD No.	P0584722					RUL2

RULES:

- AP
- 1) When PEC NT0X45BJ is ordered, these items are provided.
 - 2) Each RLM is equipped with four (4) Line Shelf Assemblies.
 - 3) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD). There can be a maximum of twenty (20) LD's per frame.
 - 4) Each RLM is equipped with one (1) Remote Line Module Control Shelf, NT2X14AH. Equip each per MS2X14AH. Unless stated to the contrary in MS2X14AH, the RLC associated with bay 0 is to be identically equipped with the RLC associated with bay 1.
 - 5) When an RLM site has the intra-RLM calling option, the method of configuring an inter-bay link is to loop the DS-1 traffic back at the DS-X or ORB. For this purpose the maximum distance between the RLM and the DF (DS-X, ORB, etc.) where the loop back will occur is 350 feet. This does not degrade the 700 foot RLM-ORB limit as long as a DS-X is

used between the RLM and ORB. Check application date of this option.

- RUL1
- 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC.
 - 2) Line Drawers are not equipped in position 19 (bays 0 and 1) of any RLM which must interface a Remote Service Module (RSM) (see MS0X02AB, Section EMA13-01-000, for RSM provisioning rules). Instead drawer connectors at these positions are used to extend the control bus from the Remote Line Module Control shelves (RLC) to the Remote Service Module (RSM). Cabling distances must not exceed 25 feet.
 - 3) Line Drawers are positions in drawer positions 01-05 on each line shelf assembly.
 - 4) For RLM XX0 the following are the mounting positions (Note LD = Line Drawer):

Frame Mounting Position 04 - LD00 to LD04
18 - LD05 to LD09
32 - LD10 to LD14
51 - LD15 to LD19

- RUL2
- 1) Provide one (1) P0584722 per RLM. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

REMOTE LINE MODULE FRAME (BAY 1)

PEC CODE: NT0X45BK

CPC CODE: B0222785

RATING: MD

REPLACES: N/A

REPLACED BY: No Replacement

ABBREVIATION NAME: RLM

ENGINEERING DESCRIPTION: NT0X45BK is a single bay frame comprising one (1) Remote Line Module. NT0X45BK must be paired with NT0X45BJ. NT0X45BJ, bay 0, is the left side of the pair, and NT0X45BK, bay 1, is the right side of the pair. This permits the ordering of the double bay RLM as two separate single bay RLM frames so that the installer can use smaller building doors and can maneuver through narrow turns and corners.

REFERENCE DOCUMENTATION: MS0X45BK 01 01

ISSUE AUTHOR: NTI: Bob Belvin DEPT. 3471 (PPK)

MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT0X45BK EMR2-04-009 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-- -- -- 95 09 28	--- --- -- ECM 581 02	Previous history not available. MD section per ECD 018-44299

The Remote Line Module Frame (Bay 1) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Line Mod Ctrl Shlf	NT2X14AH	RLC	1	65		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LS3 LD	1	51 51		AP RUL1
Line FR Supervisory Panel	NT0X29AB	FSP	1	45		AP
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LS2 LD	1	32 32		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LS1 LD	1	18 18		AP RUL1
Line Shelf Assembly Line Drawer	NT0X4516 NT2X19AC	LS0 LD	1	04 04		AP RUL1
.sep Designation Labels LD No.	P0584722					RUL2

RULES:

- AP
- 1) When PEC NT0X45BK is ordered, these items are provided.
 - 2) Each RLM is equipped with four (4) Line Shelf Assemblies.
 - 3) Each Line Shelf Assembly can accommodate up to five (5) Line Drawers (LD). There can be a maximum of twenty (20) LD's per frame.
 - 4) Each RLM is equipped with one (1) Remote Line Module Control Shelf, NT2X14AH. Equip each per MS2X14AH. Unless stated to the contrary in MS2X14AH, the RLC associated with bay 1 is to be identically equipped with the RLC associated with bay 0.
 - 5) When an RLM site has the intra-RLM calling option, the method of configuring an inter-bay link is to loop the DS-1 traffic back at the DS-X or ORB. For this purpose the maximum distance between the RLM and the DF (DS-X, ORB, etc.) where the loop back will occur is 350 feet. This does not degrade the 700 foot RLM-ORB limit as long as a DS-X is

used between the RLM and ORB. Check application date of this option.

- RUL1
- 1) Provide one Line Drawer (NT2X19AC) to accommodate up to thirty two (32) Line Cards. Equip per MS2X19AC.
 - 2) Line Drawers are not equipped in position 19 (bays 0 and 1) of any RLM which must interface a Remote Service Module (RSM) (see MS0X02AB, Section EMA13-01-000, for RSM provisioning rules). Instead drawer connectors at these positions are used to extend the control bus from the Remote Line Module Control shelves (RLC) to the Remote Service Module (RSM). Cabling distances must not exceed 25 feet.
 - 3) Line Drawers are positioned in drawer positions 01-05 on each line shelf assembly.
 - 4) For RLM XX1 the following are the mounting positions (Note LD = Line Drawer):

Frame Mounting Position 04 - LD00 to LD04
18 - LD05 to LD09
32 - LD10 to LD14
51 - LD15 to LD19

- RUL2
- 1) Provide one (1) P0584722 per RLM. Each part contains LD designation numbers for twenty (20) Line Drawers (00 through 19).

REMOTE CONTROL AND MAINTENANCE EQUIPMENT FRAME

PEC CODE: NT6X14CA

CPC CODE: B0221815

| RATING: MD

REPLACES: Not Applicable

REPLACED BY: Not Applicable

ABBREVIATION NAME: RCME

ENGINEERING DESCRIPTION: Temporary RSC substitute based on RLCM which will reduce the cost of retrofitting.

REFERENCE DOCUMENTATION: MS6X14CA 00 10

MARKETS: Applicable markets:
US

ISSUE AUTHOR: NTI: Barry Bond Dept. 3471 (PPK)

MAIN CONTACT: NTI: Barry Bond Dept. 3471 (PPK)

NT6X14CA EMR2-05-000 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 12 09	ECM 618 18	Retire Section, no longer orderable.

The Remote Control and Maintenance Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Frame Supervisory Panel	NT6X25AB	FSP	1	70		AP
Filler Face Plate	NT0X50AJ		7	70	1-7	AP
Alarm & Converter Drive CP	NT0X91AA		1	70	10	AP
Alarm Drive & Prot Ckt NET	NT0X91AE		1	70	9	AP
Alarm Drive & Prot Ckt NET	NT0X91AE				8,11	RUL2
Host I/F Equip Shf Assy	NT6X11CB		1	56		RUL3
HIE Common CP	NT6X11AA	HIE2		56		RUL3
Filler Panel	P0575239			56		RUL4
Filler Face Plate	NT0X50AH			56	1,5	RUL5
Filler Face Plate	NT0X50AG			56	9	RUL6
Filler Face Plate	NT0X50AA			56	13	RUL5
DS-1 Interface CP	NT6X50AA			56	21	RUL8
Filler Face Plate	NT0X50AA			56	14-16, 21	RUL6
Baffle Assembly	NT6X1003			53		AP
Host I/F Equip Shf Assy	NT6X11CA			39		RUL3
HIE Common CP	NT6X11AA	HIE1		39		RUL3
Filler Panel	P0575239			39		RUL4
Filler Face Plate	NT0X50AH			39	1,5	RUL5
Filler Face Plate	NT0X50AG			39	9	RUL6
Filler Face Plate	NT0X50AA			39	13	RUL5
DS-1 Interface CP	NT6X50AA			39	21	RUL8
Filler Face Plate	NT0X50AA			39	14-16, 21	RUL6
Baffle Assembly	NT6X1402			34		AP
Rmt Maint Module Shf Assy	NT6X13CA			21		RUL9
RMM CP Fill	NT6X13AB	RMM		21		RUL9
Filler Panel	P0575239			21		RUL4
Provisionable Circuit Packs	AR				3-16	RUL10
Filler Face Plate	NT0X50AC				3-16	RUL11
Baffle Assembly	NT6X1003			18		AP
Host I/F Equip Shf Assy	NT6X1104			04		AP
HIE Common CP	NT6X11AA	HIE0		04		RUL12
Filler Face Plate	NT0X50AH			04	1,5	RUL5
Filler Face Plate	NT0X50AG			04	9	RUL6

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate	NT0X50AA			04	13	RUL5
DS-1 Interface CP	NT6X50AA			04	21	RUL8
Filler Face Plate	NT0X50AA			04	14-16, 21	RUL6
Desig. Label for NT6X50AA	P0626878			56, 39, 04	21	RUL14
RCME Paddle Boards	NT6X1462			56, 39, 04	17R, 18R	RUL16
TIE Wraps	P0633700					RUL16
Logic Return Cable Assembly	NT0X0010					RUL17

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT6X14CA is ordered, these items are provided.

RUL1 1) Reserved for future use.

- 2) Refer to Engineering Manual Section EMA15-03-000 for further information pertaining to EMI application.
- RUL2 1) Provide two (2) additional NT0X91AE Alarm Drive and Protection CP when second HIE shelf is equipped (position 39).
- RUL3 1) Provide one (1) HIE Shelf Assembly and one (1) HIE Common CP fill to interface each additional LCM up to a maximum of three (3) HIE shelves total on RCME frame. Equip HIE shelves from the bottom up.
- 2) When shelves NT6X11CA/CB are field mounted, order one (1) PC6X14CB (PC6X14CB provides wiring information for all three shelves in position 21, 39 and 56) and the following loose wire:
- a) for shelf position 39, order 28.0M (R0109438) of NT-26CR wire.
- b) for shelf position 56, order 25.0M (R0109498) of NT-26CR wire.
- RUL4 1) Provide Filler Panel P0575239 when position is not equipped with shelf assembly.
- RUL5 1) Provide Filler Face Plate in positions indicated.
- RUL6 1) Provide Filler Face Plate in positions shown if not equipped with circuit pack.
- RUL7 1) Unassigned
- RUL8 1) Provide one (1) additional NT6X50AA DS-1 Interface CP (total 3) if more than four (4) T1 lines are required (maximum 6).
- RUL9 1) Provide one (1) NT6X13CA RMM Shelf Assembly and one (1) NT6X13AB RMM Common CP fill when ESA is required and/or service circuits or trunks are to be equipped on the RCME.
- 2) When shelf NT6X13CA is field mounted, order one (1) PC6X14CB (PC6X14CB provides wiring information for all three shelves in position 21, 39 and 56) and the following loose wire:
- a) for shelf position 21 order 32.0M (R0109478) & 16.0M (R0109498) of NT-26CR wire.

- RUL10 1) There are fourteen (14) provisionable slots on the RMM. Refer to Table A, Section EMA14-01-000 for RMM provisionable circuit packs.
- 2) Slots 13-16 are currently wired together to allow the operation of DRAM circuitry in these slots when the DRA software becomes available for remotes. The NT2X10AB, NT2X11AA Line Test Unit (LTU) pair is not operational in these slots because of the DRA wiring and therefore should not be provisioned in slots 13-16. All other applicable RMM CPs are allowed in slots 13-16, however, these slots should be reserved whenever possible to allow for the future DRA application.
- RUL11 1) Provide one (1) NT0X50AC Filler Face Plate for each unequipped slot on the RMM shelf.
- RUL12 1) Provide one (1) HIE Common CP fill to equip HIE shelf at position four.
- RUL14 1) Provide one (1) corresponding designation label for each NT6X47AB, NT6X45AF, NT6X75AA and NT6X50AA provided.
- RUL15 1) Reserved for future use.
- RUL16 1) Provide two (2) NT6X1462 Paddle Boards and six (6) TYE Wraps, P0633700 per shelf per RUL3.
- RUL17 1) Provide one (1) NT0X0010 Logic Return Cable Assembly per frame when extending existing offices not equipped with Enhanced Grounding per IS0X00. When this frame is equipped for EMI with 8 inch rear extension, do not provide this cable assembly.
- 2) For U.S. offices, this frame does not require the provisionable cable assembly when extending a non-ISG office with current grounding methods. Instead a provisionable switchboard cable is run from the NT0X9504 bus bar assembly in each frame to the PDC battery return plate. (Refer to item 1GZ in the switchboard cabling section of the Grounding Requirements (1.3) of Section 350000000.)

DIGITAL TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02AF

CPC CODE: B0222548

| RATING: MD

REPLACES: NT6X02AC

REPLACED BY: NT6X02AJ

ABBREVIATION NAME: DTC

ENGINEERING DESCRIPTION: The NT6X02AF is the common circuit pack
fill for DTC application.The Digital Trunk Controller (DTC) Module is
the peripheral controller module for all
digital trunking, except for host remote
links.

No U.S. application.

REFERENCE DOCUMENTATION: SL6X02AF

MARKETS: Applicable markets:

Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02AF EMR2-06-DTC-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 06	----- ECM 373 42	Previous history unavailable MD and Reformat EMS.

The Digital Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate 0.875	NT0X50AA		2	X+14	6-7	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Master Processor Memory CP	NT6X47AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AA		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X+14	15-17	AP
CPP Message Protocol CP	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0663292		1	X+14	1	AP
Filler Face Plate 0.875	NT0X50AC		2	X	6-7	AP
LGC/DTC Processor CP	NT6X45AA		1	X	8	AP
Master Processor Memory CP	NT6X47AA		1	X	9	AP
Master Processor Memory CP	NT6X47AA		1	X	10	AP
Signal Processor Memory CP	NT6X46AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X	15-17	AP
CPP Message Protocol CP	NT6X69AA		1	X	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X01AA	P0663292		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) DTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AF is ordered, these items are provided.

FXPM DTC COMMON CP (DMS250)

PEC CODE: NT6X02LE

CPC CODE: B0231824

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02LF

ABBREVIATION NAME: DTC

ENGINEERING DESCRIPTION: The NT6X02LE is the common circuit packfill for FXPM DTC applications on DSM-250 systems.

REFERENCE DOCUMENTATION: SL6X02LE

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02LE EMR2-06-DTC-10 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 11	----- ECM 616 36	Previous history unavailable MD and Reformat EMS.

The FXPM DTC Common CP (DMS250) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate 0.875	NT0X50AA		2	X+14, X	24	AP
Channel Supervision Mgs CP	NT6X42AA		2	X+14, X	20	AP
Speech Bus Formatter	NT6X41AA		2	X+14, X	21	AP
Time Switch CP	NT6X44AB		2	X+14, X	14	AP
Desig. Strip for NT6X02LE	P0714412		2	X+14, X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One FXPM DTC Common CP can be assigned to shelf mounting position 65 and 51 and the other to shelf mounting positions 32 and 18 (for one Enhanced DTC, X=51 and the other X=18).
- 2) For more information on the frame refer to the Engineering Manual section on NT6X01AB (EMA2-18-000).

RULES:

AP 1) When PEC NT6X02LE is ordered, these items are provided.

LGC COMMON CP, OR DTC COMMON CP, OR LTC COMMON CP

PEC CODE: NT6X02AC

| CPC CODE: B0221711

| RATING: MD

| REPLACES: NT6X02AA

| REPLACED BY: NT6X02AE, NT6X02AQ, NT6X02AD

| ABBREVIATION NAME: LGC/DTC/LTC

ENGINEERING DESCRIPTION: The NT6X02AC is the common circuit pack fill for LGC/DTC/LTC application.

The Line Group Controller (LGC) Module is the host office peripheral controller module for all subscriber lines in either host or remote location.

The Digital Trunk Controller (DTC) Module is the peripheral controller module for all digital trunking, except for host remote links.

The Line Trunk Controller (LTC) Module is the host office peripheral controller module for subscriber lines in host location, remote location and for digital trunking.

REFERENCE DOCUMENTATION:

| MARKETS: Applicable markets:

Canada
US
CALA
Asia/Pacific
Europe

| ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

| MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02AC EMR2-06-DTC-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history unavailable.
95 02 19	ECM 373 36	Change to MD status per EC 11-17804.

The LGC Common CP, or DTC Common CP, or LTC Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate 0.875	NT0X50AA		2	X+14	6-7	AP
LGC/DTC Processor CP	NT6X45AA		1	X+14	8	AP
Master Processor Memory CP	NT6X47AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AA		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AA		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X+14	15-17	AP
Message Interface CP	NT6X43AA		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X02AC	P0660560		1	X+14	1	AP
Filler Face Plate 0.875	NT0X50AA		2	X	6-7	AP
LGC/DTC Processor CP	NT6X45AA		1	X	8	AP
Master Processor Memory CP	NT6X47AA		1	X	9	AP
Master Processor Memory CP	NT6X47AA		1	X	10	AP
Signal Processor Memory CP	NT6X46AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AA		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X	15-17	AP
Message Interface CP	NT6X43AA		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X02AC	P0660560		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One LGC Common CP, DTC Common CP or LTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AA is ordered, these items are provided.

DIGITAL TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02AR

| CPC CODE: B0226315

| RATING: MD

| REPLACES: NT6X02AM

| REPLACED BY: NT6X02IA

ABBREVIATION NAME: DTC

ENGINEERING DESCRIPTION: The NT6X02AR is the common circuit packfill
for DTC application.The Digital Trunk Controller (DTC) Module is
the host office peripheral controller module
for digital trunking in a host location.

REFERENCE DOCUMENTATION:

MARKETS: Applicable markets:
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02AR EMR2-06-DTC-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available.
94 10 28	ECM 373 33	Change status to MD per EC 11-17809.

The Digital Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate 0.875	NT0X50AA		1	X+14	6	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	7	AP
LGC/DTC Processor CP	NT6X45AF		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X+14	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AF		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0687242		1	X+14	1	AP
Filler Face Plate 0.875	NT0X50AA		1	X	6	AP
Filler Face Plate 0.875	NT0X50AA		1	X	7	AP
LGC/DTC Processor CP	NT6X45AF		1	X	8	AP
Filler Face Plate .875	NT0X50AA		1	X	9	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AF		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X01AA	P0687242		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One DTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AR is ordered, these items are provided.

DIGITAL TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02AM

| CPC CODE: B0223591

| RATING: MD
NT6X02AR only. Rating Change Pending.

| REPLACES: NT6X02AQ

| REPLACED BY: NT6X02AR

ABBREVIATION NAME: DTC

ENGINEERING DESCRIPTION: The NT6X02AM is the common circuit packfill
for DTC application.The Digital Trunk Controller (DTC) Module is
the host office peripheral controller module
for digital trunking in a host location.

REFERENCE DOCUMENTATION:

MARKETS: Applicable markets:
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02AM EMR2-06-DTC-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available.
94 10 28	ECM 373 33	Change status to MD per EC 11-17809.

The Digital Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate 0.875	NT0X50AA		1	X+14	6	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	7	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X+14	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Message Protocol CP	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0685368		1	X+14	1	AP
Filler Face Plate 0.875	NT0X50AA		1	X	6	AP
Filler Face Plate 0.875	NT0X50AA		1	X	7	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Message Protocol CP	NT6X69AA		1	X	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X01AA	P0685368		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One DTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AM is ordered, these items are provided.

DIGITAL TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02AQ

| CPC CODE: B0223590

| RATING: MD

| REPLACES: NT6X02AC

| REPLACED BY: NT6X02AM

ABBREVIATION NAME: DTC

ENGINEERING DESCRIPTION: The NT6X02AQ is the common circuit packfill for DTC application. The Digital Trunk Controller (DTC) Module is the host office peripheral controller module for digital trunking in a host location.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02AQ EMR2-06-DTC-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available.
92 10 09	ECM 239 04	New EM section template.
94 10 28	ECM 373 33	Change status to MD per EC 11-17809.

The Digital Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate 0.875	NT0X50AA		2	X+14	6-7	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Message Protocol CP	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0663293		1	X+14	1	AP
Filler Face Plate 0.875	NT0X50AA		2	X	6-7	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Message Protocol CP	NT6X69AA		1	X	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X01AA	P0663293		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One DTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AQ is ordered, these items are provided.

DIGITAL TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02IA

| CPC CODE: B0227500

| RATING: MD

| REPLACES: NT6X02AQ, NT6X02AR

| REPLACED BY: NT6X02IC

ABBREVIATION NAME: DTC

ENGINEERING DESCRIPTION: The NT6X02IA is the common circuit packfill
for DTC application.The Digital Trunk Controller (DTC) Module is
the host office peripheral controller module
for digital trunking in a host location.NT6X02IA is required for offices with BCS-27
if new MSG exists or if used for CCS7.

REFERENCE DOCUMENTATION:

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02IA EMR2-06-DTC-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available.
94 10 28	ECM 373 33	Change status to MD per EC 11-17790.

The Digital Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Mast Proc Memory Plus CP	NT6X47AB		1	X+14	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X+14	11	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X+14	18	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip for NT6X01AA	P0695398		1	X+14	1	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X	11	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X	18	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip for NT6X01AA	P0695398		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One DTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.

- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02IA is ordered, these items are provided.

DIGITAL TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02IH

CPC CODE: B0242759

| RATING: MD

REPLACES: NT6X02IG

| REPLACED BY: NT6X02CZ

ABBREVIATION NAME: DTC

ENGINEERING DESCRIPTION: NT6X02IH is the common circuit pack fill for DTC application.

The Digital Trunk Controller (DTC) Module is the host office peripheral controller module for digital trunking in a host location.

REFERENCE DOCUMENTATION: SL6X02IH 00 01

MARKETS: Applicable markets:

US
Canada
Europe

ISSUE AUTHOR: Erica Keltner Dept. 3471 (PPK)

MAIN CONTACT: Erica Keltner Dept. 3471 (PPK)

NT6X02IH EMR2-06-DTC-7 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 03 29	ECM 373 38	Introduce the NT6X02IH DTC Common CP. Answer ET#22259 to correct 'replaces' PEC.
95 04 27	ECM 373 40	
96 04 26	ECM 373 45	EC 024-95240 MDs the NT6X02IH and replaces it with NT6X02CZ.

The Digital Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Converter +/-5V & 12V	NT2X70AF		1	X+14	25	AP
Desig. Label (NT2X70AF)	P0809960		1	X+14	25	AP
Designation Strip	P0741369		1	X+14		AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Converter +/-5V & 12V	NT2X70AF		1	X	25	AP
Desig. Label (NT2X70AF)	P0809960		1	X	25	AP
Designation Strip	P0741369		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For frame mounting, X = 18 for one module and X = 51 for the other.
- 2) For cabinet mounting, X = 5 for one module and X = 33 for the other.

RULES:

AP 1) When PEC NT6X02IH is ordered, these items are provided.

DIGITAL TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02IG

CPC CODE: B0236502

| RATING: MD

| REPLACES: NT6X02IC

| REPLACED BY: NT6X02IH

ABBREVIATION NAME: DTC

ENGINEERING DESCRIPTION: NT6X02IG is the common circuit pack fill for DTC application.

The Digital Trunk Controller (DTC) Module is the host office peripheral controller module for digital trunking in a host location.

REFERENCE DOCUMENTATION: SL6X02IG 00 01

MARKETS: Applicable markets:

US
Canada
Europe

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02IG EMR2-06-DTC-9 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
93 02 25	ECM 673 01	Introduction of the NT6X02IG DTC CP to support DWS in the NT6X01AD.
93 12 01	ECM 673 06	Modify EMS of the NT6X02IG to match the current stocklist of the NT6X02IG as reported in ET 17909.
95 03 29	ECM 373 38	MD the NT6X02IG DTC Common CP.

The Digital Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Converter +/-5V & 12V	NT2X70AE		1	X+14	25	AP
Designation Strip	P0741369		1	X+14		AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Converter +/-5V & 12V	NT2X70AE		1	X	25	AP
Designation Strip	P0741369		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One DTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

AP 1) When PEC NT6X02IG is ordered, these items are provided.

FXPM ISDN DTC COMMON CP (DMS250)

PEC CODE: NT6X02RE

CPC CODE: B0232115

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02RF

ABBREVIATION NAME: DTCI

ENGINEERING DESCRIPTION: The NT6X02RE is the common circuit packfill
for FXPM ISDN DTC applications on DSM-250
systems.

REFERENCE DOCUMENTATION: SLNT6X02RE

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02RE EMR2-06-DTCI-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 11	----- ECM 616 36	Previous history unavailable MD and Reformat EMS.

The FXPM ISDN DTC Common CP (DMS250) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate 0.875	NT0X50AA		2	X+14, X	24	AP
Channel Supervision Mgs CP	NT6X42AA		2	X+14, X	20	AP
Speech Bus Formatter	NT6X41AA		2	X+14, X	21	AP
Time Switch CP	NT6X44AB		2	X+14, X	14	AP
Desig. Strip for NT6X02RE	P0731301		2	X+14, X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One FXPM DTC Common CP can be assigned to shelf mounting position 65 and 51 and the other to shelf mounting positions 32 and 18 (for one Enhanced DTC, X=51 and the other X=18).
- 2) For more information on the frame refer to the Engineering Manual section on NT6X01AB (EMA2-18-000).

RULES:

AP 1) When PEC NT6X02RE is ordered, these items are provided.

INTERNATIONAL DIGITAL TRUNK CONTROLLER CP

PEC CODE: NT6X02KA

CPC CODE: B0227213

| RATING: MD

REPLACES:

REPLACED BY: NT6X02KC.

ABBREVIATION NAME: IDTC

ENGINEERING DESCRIPTION: The NT6X02KA is the common circuit pack
fill originally used in the Digital Trunk
Controller for China applications.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Asia/Pacific

ISSUE AUTHOR: NTI: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ken Clisso Dept. 3471 (PPK)

NT6X02KA EMR2-06-IDTC-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 09	----- ECM 383 06	Previous history not available. MD NT6X02KA.

The International Digital Trunk Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
MSG Interface CP	NT6X69KA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Label	P0700672		1	X+14		AP
Time Switch	NT6X44AB		1	X	7	AP
MSG Interface CP	NT6X69KA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP
Designation Label	P0700672		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

- AP 1) When PEC NT6X02KA is ordered, these items are provided.

INTERNATIONAL DIGITAL TRUNK CONTROLLER CP

PEC CODE: NT6X02BM

CPC CODE: B0227185

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02BN.

ABBREVIATION NAME: IDTC

ENGINEERING DESCRIPTION: The NT6X02BM is the common circuit pack fill for the International Digital Trunk Controller used for DPNSS #1 applications.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X02BM EMR2-06-IDTC-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 10	----- ECM 644 20	Previous history not available MD Section

The International Digital Trunk Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
MSG Interface CP	NT6X69DA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Label	P0694589		1	X+14		AP
Time Switch	NT6X44AB		1	X	7	AP
MSG Interface CP	NT6X69DA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP
Designation Label	P0694589		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

- AP 1) When PEC NT6X02BM is ordered, these items are provided.

INTERNATIONAL DIGITAL TRUNK CONTROLLER CP

PEC CODE: NT6X02GA

CPC CODE: B0223724

| RATING: MD

REPLACES: N/A

REPLACED BY: N/A

ABBREVIATION NAME: IDTC

ENGINEERING DESCRIPTION: The NT6X02GA is the common circuit pack
fill for the Digital Trunk Controller used
for Caribbean Expansion Project.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X02GA EMR2-06-IDTC-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 10	----- ECM 644 20	Previous history not available MD Section

The International Digital Trunk Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
MSG Interface CP	NT6X43FA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Backplane Paddleboard	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
CP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Backplane Paddleboard	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Strip	P0681928		1	X+14		AP
Time Switch	NT6X44AB		1	X	7	AP
MSG Interface CP	NT6X43FA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Backplane Paddleboard	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Backplane Paddleboard	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP
Designation Strip	P0681928		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One (1) IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

- AP 1) When PEC NT6X02GA is ordered, these items are provided.

INTERNATIONAL DIGITAL TRUNK CONTROLLER CP

PEC CODE: NT6X02BA

CPC CODE: B0218778

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02QA.

ABBREVIATION NAME: IDTC

ENGINEERING DESCRIPTION: The NT6X02BA is the common circuit pack fill for the Digital Trunk Controller used for International applications.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

ISSUE AUTHOR: NTI: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ken Clisso Dept. 3471 (PPK)

NT6X02BA EMR2-06-IDTC-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 10	----- ECM 644 20	Previous history not available MD Section

The International Digital Trunk Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
MSG Interface CP	NT6X43BA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Label	P0679488		1	X+14		AP
Time Switch	NT6X44AB		1	X	7	AP
MSG Interface CP	NT6X43BA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP
Designation Label	P0679488		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES: 1) One IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.

2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

AP 1) When PEC NT6X02BA is ordered, these items are provided.

INTERNATIONAL LINE GROUP CONTROLLER CP
INTERNATIONAL DIGITAL TRUNK CONTROLLER CP

PEC CODE: NT6X02BE

| CPC CODE: B0223242

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02BP.

ABBREVIATION NAME: ILGC/IDTC

ENGINEERING DESCRIPTION: The NT6X02BE is the common circuit pack fill for the Line Group Controller or Digital Trunk Controller used for Scopedial Spain.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X02BE EMR2-06-IDTC-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 10	----- ECM 644 20	Previous history not available MD Section

The ILGC/IDTC CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
MSG Interface CP	NT6X43EA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Backplane Paddleboard	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Backplane Paddleboard	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Strip	P0681937		1	X+14		AP
Time Switch	NT6X44AB		1	X	7	AP
MSG Interface CP	NT6X43EA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Backplane Paddleboard	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Backplane Paddleboard	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP
Designation Strip	P0681937		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES: 1) one ILGC Common CP or IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.

2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

AP 1) When PEC NT6X02BE is ordered, these items are provided.

INTERNATIONAL DIGITAL TRUNK CONTROLLER CP

PEC CODE: NT6X02BN

CPC CODE: B0229214

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02BP

ABBREVIATION NAME: IDTC

ENGINEERING DESCRIPTION: The NT6X02BN is the common circuit pack fill for the International Digital Trunk Controller used for Mercury UK applications with New Messaging requirements (e.g. DPNSS#1).

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X02BN EMR2-06-IDTC-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 10	----- ECM 644 20	Previous history not available MD Section

The International Digital Trunk Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
MSG Interface CP	NT6X69DA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AC		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Strip	P0701252		1			AP
Time Switch	NT6X44AB		1	X	7	AP
MSG Interface CP	NT6X69DA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AC		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section 43A-06-I00).

RULES:

- AP 1) When PEC NT6X02BN is ordered, these items are provided.

INTERNATIONAL DIGITAL TRUNK CONTROLLER CP

PEC CODE: NT6X02KC

CPC CODE: B0229311

| RATING: MD

| REPLACES: N/A

REPLACED BY: NT6X02KE.

ABBREVIATION NAME: IDTC

ENGINEERING DESCRIPTION: The NT6X02KC is the common circuit pack
fill used in the Digital Trunk Controller
for China applications.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Asia/Pacific

ISSUE AUTHOR: NTI: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ken Clisso Dept. 3471 (PPK)

NT6X02KC EMR2-06-IDTC-7 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 09	----- ECM 383 06	Previous history not available. MD NT6X02KC.

The International Digital Trunk Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
MSG Interface CP	NT6X69KA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AC		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Designation Strip	P0700672		1	X+14		AP
Designation Label (NT6X40AC)	P0695397		1	X+14	23	AP
Time Switch	NT6X44AB		1	X	7	AP
MSG Interface CP	NT6X69KA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AC		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Designation Strip	P0700672		1	X		AP
Designation Label(NT6X40AC)	P0695397		1	X	23	AP

EQUIPMENT FLAGGED '#' :

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section 43A-06-I00).

RULES:

- AP 1) When PEC NT6X02KC is ordered, these items are provided.

INTERNATIONAL DTC COMMON CP

PEC CODE: NT6X02GJ

CPC CODE: B0235252

| RATING: MD

REPLACES:

REPLACED BY:

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: The NT6X02GJ is the common circuit pack fill used in the Digital Trunk Controller for International DTE applications such as NTNX33FA International Cabinet DTE Fiber.

| NT6X02GJ is replaced by NTNX33FC International DTC Common CP and provisionable CPs.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

ISSUE AUTHOR: NTI: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ken Clisso Dept. 3471 (PPK)

NT6X02GJ EMR2-06-IDTC-8 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
93 03 15	ECM 648 01	ECD 011-16850.
95 04 27	ECM 648 10	A&M NT6X02GJ.
95 08 04	ECM 648 11	MD NT6X02GJ.
95 08 10	ECM 644 20	MD NT6X02GJ.

The International DTC Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Faceplate	NT0X50AA		4	X+14,X	05,06	AP
Universal Time Switch CP	NT6X44EA		2	X+14,X	07	AP
Protocol & Downld Messg CP	NT6X69LA		2	X+14,X	10	AP
LGC/DTC Processor CP	NT6X45BA		2	X+14,X	12	AP
SP Memory Plus CP	NT6X46BB		2	X+14,X	13	AP
LGC/DTC Processor CP	NT6X45BA		2	X+14,X	14	AP
MP Memory Plus CP	NT6X47AB		4	X+14,X	15,16	AP
SP Memory Plus CP	NT6X46BB		2	X+14,X	17	AP
LGC/DTC Processor CP	NT6X45BA		2	X+14,X	18	AP
Filler Faceplate	NT0X50AA		2	X+14,X	20	AP
Channel Supervision Msg CP	NT6X42AA		2	X+14,X	21	AP
Speech Bus Formatter CP	NT6X41AB		2	X+14,X	22	AP
DS30 Network Interface CP	NT6X40AC		2	X+14,X	23	AP
Filler Faceplate	NT0X50AA		2	X+14,X	24	AP
Designation Strip	P0734230		2	X+14,X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One Meridian IDTC Common CP can be assigned to the cabinet in shelf mounting positions 47 and 33 (X=33), and the other to shelf positions 19 and 05 (X=05).
- 2) Refer to the section on NTN33FA MCTM for more information on the cabinet.

RULES:

AP 1) When PEC NT6X02GJ is ordered, these items are provided.

INTERNATIONAL LINE GROUP CONTROLLER CP

PEC CODE: NT6X02KB

CPC CODE: B0227212

| RATING: MD

| REPLACES: N/A

REPLACED BY: NT6X02KD.

ABBREVIATION NAME: ILGC

ENGINEERING DESCRIPTION: The NT6X02KB is the common circuit pack originally used for the Line Group Controller for China applications.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Asia/Pacific

ISSUE AUTHOR: NTI: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ken Clisso Dept. 3471 (PPK)

NT6X02KB EMR2-06-ILGC-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 09	----- ECM 383 06	Previous history not available. MD NT6X02KB.

The International Line Group Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
CPP Message Protocol CP	NT6X69KA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Strip	P0700672		1	X+14		AP
Time Switch	NT6X44AB		1	X	7	AP
CPP Msg Protocol CP	NT6X69KA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP
Designation Strip	P0700672		1	X		AP

EQUIPMENT FLAGGED '#' :

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One ILGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

- AP 1) When PEC NT6X02KB is ordered, these items are provided.

INTERNATIONAL LINE GROUP CONTROLLER CP

PEC CODE: NT6X02HA

CPC CODE: B0223729

| RATING: MD

REPLACES: N/A

REPLACED BY: N/A

ABBREVIATION NAME: ILGC

ENGINEERING DESCRIPTION: The NT6X02HA is the common circuit pack
fill for the Line Group Controller used for
Caribbean Expansion Project.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X02HA EMR2-06-ILGC-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 10	----- ECM 644 20	Previous history not available MD Section

The International Line Group Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
Msg Protocol & Tones CP	NT6X69FA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Backplane Paddleboard	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Backplane Paddleboard	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Strip	P0687350		1	X+14		AP
Time Switch	NT6X44AB		1	X	7	AP
Msg Protocol & Tones CP	NT6X69FA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Backplane Paddleboard	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Backplane Paddleboard	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP
Designation Strip	P0687350		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One (1) ILGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

- AP 1) When PEC NT6X02HA is ordered, these items are provided.

INTERNATIONAL LINE GROUP CONTROLLER CP

PEC CODE: NT6X02BF

CPC CODE: B0225047

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02BK.

ABBREVIATION NAME: ILGC

ENGINEERING DESCRIPTION: The NT6X02BF is the common circuit pack
fill for the Line Group Controller used for
International applications. (Turkey only)

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X02BF EMR2-06-ILGC-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 10	----- ECM 644 20	Previous history not available MD Section

The International Line Group Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
CPP Message Protocol CP	NT6X69AA		1	X+14	10	AP
CPCE Tone Gen (Turkey) CP	NT6X79BA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Strip	P0679487		1	X+14		AP
Time Switch	NT6X44AB		1	X	7	AP
CPP Msg Protocol CP	NT6X69AA		1	X	10	AP
CPCE Tone Gen (Turkey) CP	NT6X79BA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP
Designation Strip	P0679487		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES: 1) One ILGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.

2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

AP 1) When PEC NT6X02BF is ordered, these items are provided.

INTERNATIONAL LINE GROUP CONTROLLER CP
INTERNATIONAL DIGITAL TRUNK CONTROLLER CP

PEC CODE: NT6X02BD

CPC CODE: B0223241

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02 .

ABBREVIATION NAME: IDTC

ENGINEERING DESCRIPTION: The NT6X02BD is the common circuit pack fill for the Line Group Controller or Digital Trunk Controller used for Mercury UK applications.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X02BD EMR2-06-ILGC-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 10	Previous history not available ECM 644 20	MD Section

The ILGC/IDTC CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
MSG Interface CP	NT6X43DA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Backpanel Paddleboard	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Backpanel Paddleboard	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Strip	P0681927		1	X+14		AP

Time Switch	NT6X44AB		1	X	7	AP
MSG Interface CP	NT6X43DA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Backpanel Paddleboard	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Backpanel Paddleboard	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP
Designation Strip	P0681927		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES: 1) one ILGC Common CP or IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.

2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

AP 1) When PEC NT6X02BD is ordered, these items are provided.

INTERNATIONAL LINE GROUP CONTROLLER CP

PEC CODE: NT6X02KD

CPC CODE: B0229312

| RATING: MD

| REPLACES: N/A

REPLACED BY: NT6X02KF.

ABBREVIATION NAME: ILGC

ENGINEERING DESCRIPTION: The NT6X02KD is the common circuit pack used for the Line Group Controller used for China applications.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Asia/Pacific

ISSUE AUTHOR: NTI: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ken Clisso Dept. 3471 (PPK)

NT6X02KD EMR2-06-ILGC-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 08 09	----- ECM 383 06	Previous history not available. MD NT6X02KD.

The International Line Group Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
CPP Message Protocol CP	NT6X69KA		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AC		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Designation Strip	P0700672		1	X+14		AP
Designation Label(NT6X40AC)	P0695397		1	X+14	23	AP
Time Switch	NT6X44AB		1	X	7	AP
CPP Msg Protocol CP	NT6X69KA		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AC		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Designation Strip	P0700672		1	X		AP
Designation Label(NT6X40AC)	P0695397		1	X	23	AP

EQUIPMENT FLAGGED '#' :

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One ILGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section 43A-06-I00).

RULES:

- AP 1) When PEC NT6X02KD is ordered, these items are provided.

INTERNATIONAL LINE GROUP CONTROLLER CP

PEC CODE: NT6X02BK

CPC CODE: B0226006

| RATING: MD

REPLACES:

REPLACED BY:

ABBREVIATION NAME: ILGC

ENGINEERING DESCRIPTION: The NT6X02BK is the common circuit pack fill
for the Line Group Controller used for
International (Turkey) applications.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02BK EMR2-06-ILGC-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 02 19	ECM 373 36	Change to MD status per EC 11-17823. Retire this Engineering Manual.

The International Line Group Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
CPP Message Protocol CP	NT6X69BB		1	X+14	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	12	AP
SP Memory Plus CP	NT6X46AB		1	X+14	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	15	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46AB		1	X+14	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X+14	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X+14	25	AP
Designation Strip	P0687243		1	X+14		AP
Time Switch	NT6X44AB		1	X	7	AP
CPP Msg Protocol CP	NT6X69BB		1	X	10	AP
Filler Face Plate 0.875	NT0X50AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AD		1	X	12	AP
SP Memory Plus CP	NT6X46AB		1	X	13	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	13R	AP
LGC/DTC Processor CP	NT6X45AD		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	15	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46AB		1	X	17	AP
LGC/DTC Processor CP	NT6X45AD		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	20	AP
CPC Back Panel Paddle Board	NT6X1205		1	X	20R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AB		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +-5,12V 50 amp CP	NT2X70AD		1	X	25	AP
Designation Strip	P0687243		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One ILGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

- AP 1) When PEC NT6X02BK is ordered, these items are provided.

INTERNATIONAL LINE GROUP CONTROLLER CP

PEC CODE: NT6X02HB

CPC CODE: B0230010

| RATING: MD

| REPLACES: NT6X02HA

| REPLACED BY: NT6X02JB

ABBREVIATION NAME: ILGC

ENGINEERING DESCRIPTION: The NT6X02HB is the common circuit pack
fill for the Line Group Controller used for
Caribbean Expansion Project.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

CALA

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X02HB EMR2-06-ILGC-7 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----1	-----1	Previous history not available.
95 08 03	ECM 644 19	MD Section

The International Line Group Controller CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch	NT6X44AB		1	X+14	7	AP
Msg Protocol & Tones CP	NT6X69FA		1	X+14	10	AP
SP Memory Plus CP	NT6X46BA		1	X+14	13	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46BA		1	X+14	17	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AC		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Designation Strip	P0701830		1	X+14		AP
Time Switch	NT6X44AB		1	X	7	AP
Msg Protocol & Tones CP	NT6X69FA		1	X	10	AP
SP Memory Plus CP	NT6X46BA		1	X	13	AP
MP Memory Plus CP	NT6X47AB		1	X	16	AP
SP Memory Plus CP	NT6X46BA		1	X	17	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS-30 Network I/F CP	NT6X40AC		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Designation Strip	P0701830		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One (1) ILGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

- AP 1) When PEC NT6X02HB is ordered, these items are provided.

UNIVERSAL ILGC/IDTC COMMON CP

PEC CODE: NT6X02BP

CPC CODE: B0229742

| RATING: MD

REPLACES:

REPLACED BY: NT6X02BW

ABBREVIATION NAME: ILGC/IDTC

ENGINEERING DESCRIPTION: The NT6X02BP is the common circuit pack fill for the ILGC/IDTC applications. It contains upgraded memory CPs.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02BP EMR2-06-IXPM-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 02 19	ECM 373 36	Change to MD status per EC 24-93165. Retire this Engineering Manual.

The Universal ILGC/IDTC Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
CPP Message Protocol CP	NT6X69LA		1	X+14	10	AP
SP Memory Plus CP	NT6X46BA		1	X+14	13	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46BA		1	X+14	17	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AC		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Designation Strip	P0705350		1	X+14		AP
CPP Message Protocol CP	NT6X69LA		1	X+14	10	AP
SP Memory Plus CP	NT6X46BA		1	X+14	13	AP
MP Memory Plus CP	NT6X47AB		1	X+14	16	AP
SP Memory Plus CP	NT6X46BA		1	X+14	17	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS-30 Network I/F CP	NT6X40AC		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Designation Strip	P0705350		1	X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One ILGC/IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

- AP 1) When PEC NT6X02BP is ordered, these items are provided.

INTERNATIONAL DTC/LGC COMMON CIRCUIT PACK

PEC CODE: NT6X02GM

CPC CODE: B0236858

| RATING: MD

REPLACES: Not Applicable

REPLACED BY: NT6X02JB

ABBREVIATION NAME: IDTC
ILGCENGINEERING DESCRIPTION: The NT6X02GM is the common circuit pack
fill for International LGC/DTC applications.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Ken Clisso Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X02GM EMR2-06-IXPM-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
93 03 01	ECM 644 01	ECDs 011-16490, & 011-16850.
95 04 03	ECM 644 17	ECD 024-93969. MD NT6X02GM.

The International DTC/LGC Common Circuit Pack is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch CP	NT6X44EA		2	X+14,X	7	AP
Filler Faceplate .875	NT0X50AA		2	X+14,X	11	AP
Filler Faceplate .875	NT0X50AA		2	X+14,X	20	AP
Filler Faceplate .875	NT0X50AA		2	X+14,X	24	AP
Power Coverter +-5V +-12V	NT2X70AE		2	X+14,X	25	AP
Designation Strip	P0739124		2	X+14,X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One ILGC/IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

- AP 1) When PEC NT6X02GM is ordered, these items are provided.

INTERNATIONAL LINE GROUP CONTROLLER CP
INTERNATIONAL DIGITAL TRUNK CONTROLLER CP

PEC CODE: NT6X02BW

CPC CODE: B0230906

| RATING: MD

REPLACES: NT6X02BP

REPLACED BY:

ABBREVIATION NAME: ILGC/IDTC

ENGINEERING DESCRIPTION: The NT6X02BW is the common circuit pack fill
for ILGC/IDTC applications. It contains up-
graded memory circuit packs.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02BW EMR2-06-IXPM-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 02 19	ECM 373 36	Change to MD status per EC 24-93165. Retire this Engineering Manual.

The ILGC/LDTC Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
CPP Msg Protocol & Downld CP	NT6X69LA		1	X+14	10	AP
SP Memory Plus CP	NT6X46BA		1	X+14	13	AP
4 MB MP Memory CP	NT6X47AC		1	X+14	16	AP
SP Memory Plus CP	NT6X46BA		1	X+14	17	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X+14	22	AP
DS30 Network Interface CP	NT6X40AC		1	X+14	23	AP
Filler Faceplate .875	NT0X50AA		1	X+14	24	AP
Designation Strip	P0709655		1	X+14		AP
CPP Msg Protocol & Downld CP	NT6X69LA		1	X	10	AP
SP Memory Plus CP	NT6X46BA		1	X	13	AP
4 MB MP Memory CP	NT6X47AC		1	X	16	AP
SP Memory Plus CP	NT6X46BA		1	X	17	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	21	AP
Speech Bus Formatter CP	NT6X41AB		1	X	22	AP
DS30 Network Interface CP	NT6X40AC		1	X	23	AP
Filler Faceplate .875	NT0X50AA		1	X	24	AP
Designation Strip	P0709655		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if
they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufac-
tured and cannot be ordered.

NOTES:

- 1) One ILGC/IDTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01BA (Section EMA2-06-I00).

RULES:

- AP 1) When PEC NT6X02BW is ordered, these items are provided.

LGC COMMON CP, OR DTC COMMON CP, OR LTC COMMON CP

PEC CODE: NT6X02AA

| CPC CODE: B0215485

| RATING: MD

| REPLACES: None

| REPLACED BY: NT6X02AC

ABBREVIATION NAME: LGC
(when used as a Line Group Controller)
LTC
(when used as a Line Trunk Controller)
DTC
(when used as a Digital Trunk Controller)

ENGINEERING DESCRIPTION: The NT6X02AA is the common circuit pack fill for LGC/LTC/DTC application.

The Line Group Controller (LGC) Module is the host office peripheral controller module for all subscriber lines in either host or remote location.

The Digital Trunk Controller (DTC) Module is the peripheral controller module for all digital trunking, except for host remote links.

The Line Trunk Controller (LTC) Module is the host office peripheral controller module for subscriber lines in host location, remote location and for digital trunking.

The NT6X02AA has been replaced by NT6X02AC.

REFERENCE DOCUMENTATION:

MARKETS:	Applicable markets:			
	Canada			
	US			
	CALA			
	Asia/Pacific			
	Europe			
ISSUE AUTHOR:	Darrell Deeds	Dept. 3471	(PPK)	
MAIN CONTACT:	Steve Martin	Dept. 3471	(PPK)	

NT6X02AA EMR2-06-LGC-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history unavailable.
95 02 19	ECM 373 36	Change to MD status per EC 11-17804.

The LGC Common CP, or DTC Common CP, or LTC Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AA		1	X+14	8	AP
Master Processor Memory CP	NT6X47AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AA		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AA		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		2	X+14	15-17	AP
Message Interface CP	NT6X43AA		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Conv +/-5V & 12V CP	NT2X70AB		1	X+14	25	AP
Des Strip for NT6X02AA	P0626885		1	X+14	1	AP
LGC/DTC Processor CP	NT6X45AA		1	X	8	AP
Master Processor Memory CP	NT6X47AA		1	X	9	AP
Master Processor Memory CP	NT6X47AA		1	X	10	AP
Signal Processor Memory CP	NT6X46AA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AA		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		2	X	15-17	AP
Message Interface CP	NT6X43AA		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Conv +/-5V & 12V CP	NT2X70AB		1	X	25	AP
Des Strip for NT6X02AA	P0626885		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

- AP 1) When PEC NT6X02AA is ordered, these items are provided.
- 2) One LGC Common CP, DTC Common CP or LTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 3) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).
- 4) For any Canadian and Caribbean jobs, initials or extensions, with a ship date (D date) of 36/85 or later and an in service date of 41/85 or later, the following common circuit pack fills are to be used instead of NT6X02AA:

For DTC CP, use NT6X02AF
For LTC CP, use NT6X02AG
For LGC CP, use NT6X02AH

LINE GROUP CONTROLLER COMMON CP

PEC CODE: NT6X02RB

CPC CODE: B0229373

| RATING: MD

| REPLACES:

| REPLACED BY: NT6X02LC

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: The NT6X02RB is the common circuit pack fill for a field-upgraded LGC for Canadian offices only. The NT6X02RB LGC cannot be ordered for new modules.

The Line Group Controller (LGC) Module is the host office peripheral controller module for all subscriber lines in either host or remote location.

The NT6X02RB is required to allow field upgrade from NT6X46AB and NT6X1205 to NT6X46BA Extended SP Memory CP.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02RB EMR2-06-LGC-10 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 02 19	ECM 373 36	Change to MD status per EC 11-17790. Retire this Engineering Manual.

The Line Group Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
MP Memory Plus CP	NT6X47AB		1	X+14	10	AP
SP Memory Plus CP	NT6X46BA		1	X+14	11	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Msg Protocol Cp	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator Cp	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X+14	21	AP
Filler Faceplate	NT0X50AA		1	X+14	24	AP
Designation Strip	P0703899		1	X+14		AP
MP Memory Plus CP	NT6X47AB		1	X+14	10	AP
SP Memory Plus CP	NT6X46BA		1	X+14	11	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Msg Protocol Cp	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator Cp	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X+14	21	AP
Filler Faceplate	NT0X50AA		1	X+14	24	AP
Designation Strip	P0703899		1	X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if
they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufac-
tured and cannot be ordered.

NOTES:

- 1) One LGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 (X=51), and the other to shelf mounting positions 32 and 18 (X=18).
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02RB is ordered, these items are provided.

LINE GROUP CONTROLLER COMMON CP

PEC CODE: NT6X02AE

| CPC CODE: B0222128

| RATING: MD

| REPLACES: NT6X02AC

| REPLACED BY: NT6X02AH

ABBREVIATION NAME: LGC

ENGINEERING DESCRIPTION: The NT6X02AE is the common circuit pack fill
for LGC application.

The Line Group Controller (LGC) Module is
the host office peripheral controller module
for all subscriber lines in either host or
remote location.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02AE EMR2-06-LGC-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 03 02	ECM 616 30	Change status to MD per EC #11-17809.

The Line Group Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	13	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X+14	15-17	AP
Message Interface CP	NT6X43AA		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0663290		1	X+14	1	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Filler Face Plate 0.875	NT0X50AA		1	X	13	AP
Time Switch CP	NT6X44AA		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X	15-17	AP
Message Interface CP	NT6X43AA		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X01AA	P0663290		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One LGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AE is ordered, these items are provided.

LINE GROUP CONTROLLER COMMON CP

PEC CODE: NT6X02AY

| CPC CODE: B0222549

| RATING: MD

| REPLACES: NT6X02AZ

| REPLACED BY: NT6X02AH

ABBREVIATION NAME: LGC

ENGINEERING DESCRIPTION: NT6X02AY is a LGC common circuit pack fill
for field retrofitting only.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02AY EMR2-06-LGC-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
92 10 09	ECM 239 04	New EM section template.
95 03 02	ECM 616 30	Change status to MD per EC #11-17809.

The Line Group Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate 0.875	NT0X50AA		5	X+14	1-5	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	13	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Message Protocol CP	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AB		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0663291		1	X+14	1	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
Filler Face Plate 0.875	NT0X50AA		5	X	1-5	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Filler Face Plate 0.875	NT0X50AA		1	X	13	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Message Protocol CP	NT6X69AA		1	X	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AB		1	X	25	AP
Desig. Strip for NT6X01AA	P0663291		1	X	1	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One LGC Common CP, DTC Common CP or LTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AY is ordered, these items are provided.

LINE GROUP CONTROLLER COMMON CP

PEC CODE: NT6X02AZ

| CPC CODE: B0222129

| RATING: MD

| REPLACES: NT6X02AA

| REPLACED BY: NT6X02AY

ABBREVIATION NAME: LGC

ENGINEERING DESCRIPTION: NT6X02AZ is a LGC common circuit pack fill
for field retrofitting only.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02AZ EMR2-06-LGC-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 03 02	ECM 616 30	Change status to MD per EC #11-17809.

The Line Group Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate 0.875	NT0X50AA		5	X+14	1-5	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Filler Face Plate 0.875	NT0X50AA		3	X+14	15-17	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	13	AP
Message Interface CP	NT6X43AA		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AB		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0663289		1	X+14	1	AP
Filler Face Plate 0.875	NT0X50AA		5	X	1-5	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Filler Face Plate 0.875	NT0X50AA		3	X	15-17	AP
Time Switch CP	NT6X44AA		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		1	X	13	AP
Message Interface CP	NT6X43AA		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AB		1	X	25	AP
Desig. Strip for NT6X01AA	P0663289		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One LGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AZ is ordered, these items are provided.

LINE GROUP CONTROLLER COMMON CP

PEC CODE: NT6X02AL

CPC CODE: B0222745

| RATING: MD

REPLACES: NT6X02AH (Canadian applications)

REPLACED BY: N/A

ABBREVIATION NAME: LGC

ENGINEERING DESCRIPTION: The NT6X02AL is the common circuit pack
fill for LGC application.The Line Group Controller (LGC) Module is
the host office peripheral controller module
for all subscriber lines in either host or
remote location.

REFERENCE DOCUMENTATION: SL6X02AL

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02AL EMR2-06-LGC-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 06	----- ECM 373 42	Previous history unavailable MD and Reformat EMS.

The Line Group Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AF		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X+14	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AF		1	X+14	12	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	13	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0685380		1	X+14	1	AP
LGC/DTC Processor CP	NT6X45AF		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AF		1	X	12	AP
Filler Face Plate 0.875	NT0X50AA		1	X	13	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X01AA	P0685380		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) LGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AL is ordered, these items are provided.

LINE GROUP CONTROLLER COMMON CP

PEC CODE: NT6X02AH

| CPC CODE: B0222547

| RATING: MD

| REPLACES: NT6X02AE

| REPLACED BY: NT6X02LA (U.S.), NT6X02AL (Canada)

ABBREVIATION NAME: LGC

ENGINEERING DESCRIPTION: The NT6X02AH is the common circuit pack
fill for LGC application.The Line Group Controller (LGC) Module is
the host office peripheral controller module
for all subscriber lines in either host or
remote location.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02AH EMR2-06-LGC-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
92 10 09	ECM 239 04	New EM section template.
95 03 02	ECM 616 30	Change status to MD per EC #11-17809.

The Line Group Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	13	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Message Protocol CP	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0663293		1	X+14	1	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Filler Face Plate 0.875	NT0X50AA		1	X	13	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Message Protocol CP	NT6X69AA		1	X	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X01AA	P0663293		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) LGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AH is ordered, these items are provided.

LINE GROUP CONTROLLER COMMON CP

PEC CODE: NT6X02LA

| CPC CODE: B0227501

| RATING: MD

| REPLACES:

| REPLACED BY: NT6X02LC

ABBREVIATION NAME: LGC

ENGINEERING DESCRIPTION: NT6X02LA is the common circuit pack fill for LGC application.

The Line Group Controller (LGC) Module is the host office peripheral controller module for all subscriber lines in either host or remote location.

NT6X02LA is required for offices with BCS-27.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02LA EMR2-06-LGC-7 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available.
95 04 04	ECM 616 33	NT6X02LA is changed to MD status. Retire this Engineering Manual.

The Line Group Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Mast Proc Memory Plus CP	NT6X47AB		1	X+14	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X+14	11	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X+14	18	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip for NT6X01AA	P0695398		1	X+14	1	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X	11	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X	18	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip for NT6X01AA	P0695398		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES: 1) LGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.

2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

AP 1) When PEC NT6X02LA is ordered, these items are provided.

SCOPEDIAL U.K. LGC COMMON CP, OR
DTC COMMON CP, OR LTC COMMON CP

PEC CODE: NT6X02BC

| CPC CODE: B0222397

| RATING: MD

REPLACES:

REPLACED BY:

ABBREVIATION NAME: LTC/LGC/DTC

ENGINEERING DESCRIPTION: The NT6X02BC Common CP provides the always provided circuit packs for both shelves that form the LTC/LGC/DTC.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02BC EMR2-06-LGC-8 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 02 19	ECM 373 36	Change to MD status per EC 11-17823. Retire this Engineering Manual.

The Scopedial U.K. LGC Common CP, or DTC Common CP, or LTC Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Proc Memory Plus CP	NT6X47AB		1	X+14	10	AP
Signal Proc Memory Plus CP	NT6X46AB		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	13	AP
Time Switch CP w M-Law to	NT6X44BA		1	X+14	14	AP
A-Law Conversion						
Filler Face Plate 0.875	NT0X50AA		3	X+14	15-17	AP
Message Interface CP	NT6X43CA		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AB		2	X+14	22	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	23-24	AP
Pwr Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Designation Strip	P0679455		1	X+14		AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Proc Memory Plus CP	NT6X47AB		1	X	10	AP
Signal Proc Memory Plus CP	NT6X46AB		1	X	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Filler Face Plate 0.875	NT0X50AA		1	X	13	AP
Time Switch CP w M-Law to	NT6X44BA		1	X	14	AP
A-Law Conversion						
Filler Face Plate 0.875	NT0X50AA		3	X	15-17	AP
Message Interface CP	NT6X43CA		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AB		2	X	22	AP
Filler Face Plate 0.875	NT0X50AA		1	X	23-24	AP
Pwr Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Designation Strip	P0679455		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One LGC Common CP, DTC Common CP or LTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA Scopedial - U.K. (EMA2-17-000).

RULES:

- AP 1) When PEC NT6X02BC is ordered, these items are provided.

LINE GROUP CONTROLLER COMMON CP

PEC CODE: NT6X02AT

CPC CODE: B0227092

| RATING: MD

| REPLACES: NT6X02AH

| REPLACED BY: NT6X02LC

ABBREVIATION NAME: LGC

ENGINEERING DESCRIPTION: The NT6X02AT is the common circuit pack fill for a field-upgraded LGC. The NT6X02AT cannot be ordered for new modules.

The Line Group Controller (LGC) Module is the host office peripheral controller module for all subscriber lines in either host or remote location.

NT6X02AT is required for BCS-27 field-upgraded offices.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02AT EMR2-06-LGC-9 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 02 19	ECM 373 36	Change to MD status per EC 11-17790. Retire this Engineering Manual.

The Line Group Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AC		1	X+14	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Message Protocol CP	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip for NT6X01AA	P0698739		1	X+14	1	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AC		1	X	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Message Protocol CP	NT6X69AA		1	X	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip for NT6X01AA	P0698739		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) LGC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AT is ordered, these items are provided.

LINE TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02AD

| CPC CODE: B0222127

| RATING: MD

| REPLACES: NT6X02AC

| REPLACED BY: NT6X02AG

ABBREVIATION NAME: LTC

ENGINEERING DESCRIPTION: The NT6X02AD is the common circuit pack fill
for LTC application.

The Line Trunk Controller (LTC) Module is
the host office peripheral controller module
for subscriber lines in host location, re-
mote location and for digital trunking.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02AD EMR2-06-LTC-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 03 02	ECM 616 30	Change status to MD per EC #11-17809.

The Line Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X+14	15-17	AP
Message Interface CP	NT6X43AA		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0663290		1	X+14	1	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X	15-17	AP
Message Interface CP	NT6X43AA		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X01AA	P0663290		1	X	1	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One LTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AD is ordered, these items are provided.

LINE TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02AK

CPC CODE: B0222743

| RATING: MD

REPLACES: NT6X02AG (Canadian applications)

REPLACED BY: NT6X02MA

ABBREVIATION NAME: LTC

ENGINEERING DESCRIPTION: The NT6X02AK is the common circuit pack
fill for LTC application.

The Line Trunk Controller (LTC) Module is
the host office peripheral controller module
for subscriber lines in host location, re-
mote location and for digital trunking.

REFERENCE DOCUMENTATION: SL6X02AK

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02AK EMR2-06-LTC-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 06	----- ECM 373 42	Previous history unavailable MD and Reformat EMS.

The Line Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AF		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X+14	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AF		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X+14	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0685380		1	X+14	1	AP
LGC/DTC Processor CP	NT6X45AF		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X	11	AP
LGC/DTC Processor CP	NT6X45AF		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X	18	AP
Filler Face Plate 0.875	NT0X50AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X01AA	P0685380		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One LTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AK is ordered, these items are provided.

LINE TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02AG

| CPC CODE: B0222546

| RATING: MD

| REPLACES: NT6X02AD

| REPLACED BY: NT6X02MA (U.S.), NT6X02AK (Canada)

ABBREVIATION NAME: LTC

ENGINEERING DESCRIPTION: The NT6X02AG is the common circuit pack fill for LTC application.

The Line Trunk Controller (LTC) Module is the host office peripheral controller module for subscriber lines in host location, remote location and for digital trunking.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02AG EMR2-06-LTC-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
92 10 09	ECM 239 04	New EM section template.
95 03 02	ECM 616 30	Change status to MD per EC #11-17809.

The Line Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Message Protocol CP	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip for NT6X01AA	P0663293		1	X+14	1	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Message Protocol CP	NT6X69AA		1	X	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip for NT6X01AA	P0663293		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One LTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AG is ordered, these items are provided.

LINE TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02MA

| CPC CODE: B0227502

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: NT6X02MC

| ABBREVIATION NAME: LTC

ENGINEERING DESCRIPTION: The NT6X02MA is the common CP fill for LTC application.

The Line Trunk Controller (LTC) Module is the host office peripheral controller module for subscriber lines in host location, remote location and for digital trunking.

NT6X02MA is required for offices with BCS-27.

| REFERENCE DOCUMENTATION: SL6X02MA

| MARKETS: Applicable markets:

| US
| Canada
| CALA

| ISSUE AUTHOR: Steve Martin Dept. 3471 (PPK)

| MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02MA EMR2-06-LTC-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 06 20	----- ECM 678 21	Previous history not available MD Pec NT6X02MA.

The Line Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Mast Proc Memory Plus CP	NT6X47AB		1	X+14	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X+14	11	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X+14	18	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip for NT6X01AA	P0695398		1	X+14	1	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X	10	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X	11	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Msg Protocol & Tone CP	NT6X69AB		1	X	18	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip for NT6X01AA	P0695398		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One LTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.

- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02MA is ordered, these items are provided.

LINE TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02AU

| CPC CODE: B0227093

| RATING: MD

| REPLACES: NT6X02AG

| REPLACED BY: NT6X02MC

ABBREVIATION NAME: LTC

ENGINEERING DESCRIPTION: The NT6X02AU is the common circuit pack fill for a field-upgraded LTC module. The NT6X02AU cannot be ordered for new modules.

The Line Trunk Controller (LTC) Module is the host office peripheral controller module for subscriber lines in host location, remote location and for digital trunking.

NT6X02AU is required for BCS-27 field-upgraded offices.

REFERENCE DOCUMENTATION:

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02AU EMR2-06-LTC-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 02 19	ECM 373 36	Change to MD status per EC 11-17790.

The Line Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AC		1	X+14	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Message Protocol CP	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip for NT6X01AA	P0698739		1	X+14	1	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AC		1	X	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP
Time Switch CP	NT6X44AA		1	X	14	AP
CPP Message Protocol CP	NT6X69AA		1	X	18	AP
CPCE Tone Generator CP	NT6X79AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip for NT6X01AA	P0698739		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One LTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AU is ordered, these items are provided.

LINE TRUNK CONTROLLER COMMON CP

PEC CODE: NT6X02RC

CPC CODE: B0229374

| RATING: MD

| REPLACES:

| REPLACED BY: NT6X02MC

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: The NT6X02RC is the common circuit pack fill for a field-upgraded LTC for Canadian offices only. The NT6X02RC LTC cannot be ordered for new modules.

The Line Trunk Controller (LTC) Module is the host office peripheral controller module for all subscriber lines in either host or remote location, and for digital trunking.

The NT6X02RC is required to allow field upgrade from NT6X46AB and NT6X1205 to NT6X46BA Extended SP Memory CP.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02RC EMR2-06-LTC-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 02 19	ECM 373 36	Change to MD status per EC 11-17790. Retire this Engineering Manual.

The Line Trunk Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
MP Memory Plus CP	NT6X47AB		1	X+14	10	AP
SP Memory Plus CP	NT6X46BA		1	X+14	11	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Msg Protocol Cp	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator Cp	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X+14	21	AP
Filler Faceplate	NT0X50AA		1	X+14	24	AP
Designation Strip	P0703899		1	X+14		AP
MP Memory Plus CP	NT6X47AB		1	X+14	10	AP
SP Memory Plus CP	NT6X46BA		1	X+14	11	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
CPP Msg Protocol Cp	NT6X69AA		1	X+14	18	AP
CPCE Tone Generator Cp	NT6X79AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X+14	21	AP
Filler Faceplate	NT0X50AA		1	X+14	24	AP
Designation Strip	P0703899		1	X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if
they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufac-
tured and cannot be ordered.

NOTES:

- 1) One LTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 (X=51), and the other to shelf mounting positions 32 and 18 (X=18).
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02RC is ordered, these items are provided.

CABINETIZED INTERNATIONAL PERIPHERAL EQUIPMENT
FIBER ISDN (CIPE)

PEC CODE: NTRX46BA

CPC CODE: B0235911

RATING: MD

REPLACES: Not Applicable

| REPLACED BY: NTRX46CA (NTZZ37AC)

ABBREVIATION NAME: CLGO (CABINETIZED LGCO EQUIPMENT)
CDTO (CABINETIZED DTCO EQUIPMENT)
(The bottom module, LGCO/DTCO, in the cabinet determines the cabinet type).

ENGINEERING DESCRIPTION: The NTRX46BA Cabinetized (Streamline) International Peripheral Equipment Fiber ISDN (CIPE) houses one or two dual shelf XPM modules each configured as either Line Group Controller Offshore ISDN (LGCO) or Digital Trunk Controller Offshore ISDN (DTCO).

CIPE connects to the network through either DS-30 Trunks (twisted pairs) or DS-512 trunks (fiber optic cables).

CIPE connects to the Line Card Modules (LCMs) via DS-30A trunks (twisted pairs).

CIPE may also interface directly to external PCM-30 trunks (either twisted pair or coax).

all connections to the network, line card modules, or PCM-30 trunks pass through the bulkhead for EMI protection.

CIPE is air cooled with a fan unit integrated into the base of the cabinet.

NTRX46BA has the following enhancements over NTRX46AA:

- The MSP (Modular Supervisory Panel), located at the top of the cabinet,

distributes 48 VDC or 60 VDC power,

- EN Class B performance,
(molded cables), and
- European Community safety requirements
including UK and Germany safety features.

REFERENCE DOCUMENTATION: MSRX46BA 00 00

MARKETS: Applicable markets:

CALA
Asia/Pacific
Europe

| ISSUE AUTHOR: Richard Mathias Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NTRX46BA EMR2-06-RX46BA CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
92 12 21	ECM 669 01	Transfer from API310, update per ECD 011-16850, and clarify NT6X28AA provisioning ET110670
93 08 31	ECM 669 03	Clarify provisioning of DS30A port cables per ET112300. Add that a minimum of 4 NT6X27 is required per equipped module.
95 04 03	ECM 669 05	Update NT2X70AE to NT2X70AF per EC 024-93969.
95 07 18	ECM 669 06	Changes per ECD 024-94287. MD NTRX46BA and replaced it with NTRX46CA model B.
95 09 18	ECM 468 09	Retire EMS.

The Cabinetized International Peripheral Equipment Fiber ISDN (CIPE) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
CIPE MSP Kit	NTRX4641	MSP		61		RUL1
Offshore CPC Shelf Assy	NT6X0216		4	47,33 19,05		AP
International CIPE Common CP	NTRX46BB	DTC0/ LGC0		X		RUL2
Filler Faceplate	NT0X50AA		2	X+14,X 01		AP-01
# PCM-30 Trunk Interface CP	NT6X27AC			X+14,X 02-05		RUL5
PCM-30 Trunk Interface CP	NT6X27BB			X+14,X 02-05		RUL5
Filler Faceplate	NT0X50AA			X+14,X 02-05		RUL4
DS30A LCM Interface CP	NT6X48AA			X+14,X 06,07		RUL6
Filler Faceplate	NT0X50AA			X+14,X 06,07		RUL4
LGC/DTC Processor CP	NT6X45BA		2	X+14,X 08		AP-01
4 MB MP Memory CP	NT6X47AC		2	X+14,X 09		AP-01
Filler Faceplate	NT0X50AA		2	X+14,X 10		AP-01
SP Memory Plus CP	NT6X46BB		2	X+14,X 11		AP-01
LGC/DTC Processor CP	NT6X45BA		2	X+14,X 12		AP-01
Continuity Tone Detector CP	NT6X70AA			X+14,X 13		RUL7
CLASS Modem Resource CP	NT6X78AA			X+14,X 13		RUL7
Filler Faceplate	NT0X50AA			X+14,X 13		RUL4
Universal Time Switch CP	NT6X44EA		2	X+14,X 14		AP-01
Universal Tone Receiver CP	NT6X92CA		2	X+14,X 15		AP-01
Filler Faceplate	NT0X50AA		2	X+14,X 16		AP-01
Universal Tone Receiver CP	NT6X92CA		2	X+14,X 17		AP-01
Msg Prot & Download Tones CP	NT6X69LB		2	X+14,X 18		AP-01
PCM-30 Signalling CP	NT6X28AA			X+14,X 19		RUL16
Filler Faceplate	NT0X50AA			X+14,X 19		RUL4
Channel Supervision MSG CP	NT6X42AA		2	X+14,X 20		AP-01

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Speech Bus Formatter CP	NT6X41AB		2	X+14,X	21	AP-01
DS30 Network Interface CP	NT6X40AC			X+14,X	22	RUL10
DS30 Interface Cable Assy	NTRX4622			X+14,X	22	RUL10
Connector Key Bracket	P0638263			X+14,X	22R	RUL10
# DS-512 XPM Interface CP	NT6X40CA			X+14,X	22	RUL10
# DS-512 XPM Paddle Board	NT6X40DA			X+14,X	22R	RUL10
DS-512 XPM Interface CP	NT6X40FA			X+14,X	22	RUL10
DS-512 XPM Paddle Board	NT6X40GA			X+14,X	22R	RUL10
Filler Faceplate .875	NT0X50AA		4	X+14,X	23,24	AP-01
# Power Converter +-5V 50A CP	NT2X70AE			X+14,X	25	RUL2
Power Converter +-5V 50A CP	NT2X70AF			X+14,X	25	RUL2
Power Converter 60V to +-5V	NT2X70KA			X+14,X	25	RUL2
Designation Strip (NTRX46BB)	P0738099		2	X+14,X		AP-01
CPC Filler Faceplate	NT6X02AB			X+14,X		RUL2
PCM-30 2x8 PCB Wiring List	NTRX46WA			X+14,X		RUL5
PCM-30 (Send) Cable Assy	NTRX4614			X+14,X		RUL5
PCM-30 (Receive) Cable Assy	NTRX4615			X+14,X		RUL5
CIPE PCM30 Coaxial PCB Assy	NTRX4619			47		RUL5
CIPE PCM30 Coaxial PCB Assy	NTRX4618			33		RUL5
CIPE PCM30 Coaxial PCB Assy	NTRX4617			19		RUL5
CIPE PCM30 Coaxial PCB Assy	NTRX4616			05		RUL5
Personality Plate	P0734655			47		RUL5
Personality Plate	P0734654			33		RUL5
Personality Plate	P0734653			19		RUL5
Personality Plate	P0734652			05		RUL5
PCB Filler Plate	P0734805			X+14,X		RUL5
PAN HD MACH SCR	P0124483			X+14,X		RUL5
NUT, HEX MACH SCR	P0125952			X+14,X		RUL5
Lock Washer, EXT Tooth	P0423632			X+14,X		RUL5
PCM-30 Twist Pair I/F Assy	NTRX4620			X+14,X		RUL5
PCM-30 Twist Pair I/F Assy	NTRX4621			X+14,X		RUL5
Fiber I/F H/W Assembly	NT6X02BU			X		RUL10
Optical Fiber Danger Label	P0736273			X		RUL10

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Opt. Fiber Danger Lbl German	P0737638			X		RUL10
Snap Bushing	P0682727			X		RUL10
DS-30A Interfce 6-Port Cable	NTRX4625					RUL6
DS-30A Interfce 6-Port Cable	NTRX4626					RUL6
DS-30A Interfce 6-Port Cable	NTRX4627					RUL6
DS-30A Interfce 6-Port Cable	NTRX4628					RUL6
DS-30A Interfce 4-Port Cable	NTRX4629					RUL6
DS-30A Interfce 4-Port Cable	NTRX4630					RUL6
DS-30A Interfce 4-Port Cable	NTRX4631					RUL6
DS-30A Interfce 4-Port Cable	NTRX4632					RUL6
DS-30A Interfce 6-Port Cable	NTRX4633					RUL6
DS-30A Interfce 6-Port Cable	NTRX4634					RUL6
DS-30A Interfce 6-Port Cable	NTRX4635					RUL6
DS-30A Interfce 6-Port Cable	NTRX4636					RUL6
DS-30A Interfce 4-Port Cable	NTRX4637					RUL6
DS-30A Interfce 4-Port Cable	NTRX4638					RUL6
DS-30A Interfce 4-Port Cable	NTRX4639					RUL6
DS-30A Interfce 4-Port Cable	NTRX4640					RUL6
Cooling Unit	NTNX27CA	CU		00		RUL1
Cooling Unit (60 VDC)	NTRX51AA	CU		00		RUL1
EMI Kit Single Bulkhead	NTRX2516					RUL11
EMI Ready Door Kit	NTRX2513					RUL11
Cable Trough Assembly	NTNX5511					RUL12
Leveling Foot Kit	NTRX2523					RUL13
CLGO Label (NTRX46BA)	P0734499					RUL1
CDTO Label (NTRX46BA)	P0734500					RUL1
Desig. Label (NTBX01AA)	P0697918					RUL14
Desig. Label (NTBX02AA)	P0697919					RUL14
Desig. Label (NT2X70AE)	P0698943					RUL14
Desig. Label (NT2X70AF)	P0809960					RUL14
Desig. Label (NT6X27AC)	P0706381					RUL14
Desig. Label (NT6X27BB)	P0739157					RUL14
Desig. Label (NT6X28AA)	P0653635					RUL14
Desig. Label (NT6X40AC)	P0695397					RUL14
Desig. Label (NT6X40CA)	P0710477					RUL14
Desig. Label (NT6X40FA)	P0729895					RUL14
Desig. Label (NT6X48AA)	P0626877					RUL14

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Desig. Label (NT6X69LB)	P0733549					RUL14
Desig. Label (NT6X70AA)	P0628358					RUL14
Desig. Label (NT6X78AA)	P0699568					RUL14
C28 English Label Kit	NTRX3541					RUL15
C28 German Label Kit	NTRX3542					RUL15

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT2X70AE	MD	NT2X70AF
NT6X27AC	MD	NT6X27BB
NT6X40CA	A&M	NT6X40FA
NT6X40DA	A&M	NT6X40GA

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For the lower module in the frame, X=05 (i.e.. shelf positions 05 and 19), and for the upper module in the frame X=33 (i.e.. shelf positions 33 and 47).
- 2) PLGC (PCM-30 Line Group Controller) supports lines and PCM-30 remote links, while PDTC (PCM-30 Digital Trunk Controller) supports PCM-30 trunking.

Modules of different types may be mixed on the frame if required.

RULES:

- AP 1) When PEC NTRX46BA is ordered, these items are provided.
- AP-01 1) This PEC is always provided in the NTRX46BB Common Circuit Pack, and is shown here for completeness.
- RUL1 1) Provide for each CIPE:
- one (1) NTRX4641 CIPE MSP Kit.
 - When the power supply is 48 VDC
 - one (1) NTN27CA Cooling Unit, or
 - When the power supply is 60 VDC
 - one (1) NTRX51AA Cooling Unit.
- 2) Provide for each CIPE:
- one (1) P0734499 CLGO Label (NTRX46BA), or
 - one (1) P0734500 CDT0 Label (NTRX46BA).

The cabinet name is derived from the bottom module (i.e. the first one assigned) as tabulated below, even when the top module is not the same as the bottom module:

BOTTOM MODULE NAME	RESULTING CABINET NAME	CABINET ABREVIATED NAME
LGCO	International ISDN Line Group Equipment	CLGO
DTCO	International ISDN Trunk Group Equipment	CDT0

- RUL2 1) For each equipped module, provide:
- one (1) NTRX46BB International CIPE Common CP,
 - When the power supply is 48 VDC
 - two (2) NT2X70AF Power Converters +-5V 50A CPs, or
 - When the power supply is 60 VDC
 - two (2) NT2X70KA Power Converters +-5V 50A CPs.
- 2) The formerly provided NT2X70AE Power Converter has been changed to MD status and replaced by the NT2X70AF.
- 3) If the second module is not equipped on the last CIPE, provide:

- one (1) NT6X02AB Common Peripheral Controller Module Filler Faceplate Kit.

RUL3 1) Reserved for future use. peripheral where the

RUL4 1) For each equipped module, for each slot which is unequipped with a circuit pack, provide:
- one (1) NT0X50AA Filler Face Plate.

RUL5 1) For each equipped module, provide:

- minimum four (4) and up to eight (8) NT6X27BB PCM-30 Interface CPs

per customer requirements.

Each PCM-30 Interface CP supports two (2) PCM-30 ports. The following table is a listing of PCM-30 ports per circuit pack location.

CP POS	5	5	4	2
SHF POS X+14	PORTS 2,3	PORTS 6,7	PORTS 10,11	PORTS 14,15
SHF POS X	PORTS 0,1	PORTS 4,5	PORTS 8,9	PORTS 12,13

For lower module X is shelf position 05 and X+14 is shelf position 19.

For upper module X is shelf position 33 and X+14 is shelf position 47.

Assign NT6X27BB to module starting at port 0 and continue in sequential order to port 15.

- 2) PCM-30 interface may be provided in one of the following versions:
 - a) Enhanced for EMI PCM-30 Interfacing,
 - b) Basic PCM-30 Interfacing,

as detailed below:

a) Enhanced for EMI PCM-30 Interfacing:

For Twisted pair wiring from backplane to bulkhead, and coaxial cable from bulkhead to MDF (This is an EMI enhanced version and is preferred), provide:

- For each module
 - two (2) NTRX4614 PCM-30 (Send) Cable Assys,
 - two (2) NTRX4615 PCM-30 (Receive) Cable Assys, and
 - two (2) NTRX46WA PCM-30 2x8 PCB Wiring Lists.
- For each module equipped in shelf positions 05 and 19
 - One (1) NTRX4616 PCM-30 I/F Assy in shelf position 05, and
 - One (1) NTRX4617 PCM-30 I/F Assy in shelf position 19, and
- For each module equipped in shelf positions 33 and 47
 - One (1) NTRX4618 PCM-30 I/F Assy in shelf position 33, and
 - One (1) NTRX4619 PCM-30 I/F Assy in shelf position 47.

When Enhanced PCM-30 interface is not required, provide:

- For each module equipped in shelf positions 05 and 19
 - One (1) P0734652 Personality Plate in shelf position 05, and
 - One (1) P0734653 Personality Plate in shelf position 19, and
- For each module equipped in shelf positions 33 and 47
 - One (1) P0734654 Personality Plate in shelf position 33, and
 - One (1) P0734655 Personality Plate in shelf position 47,

and for each P0734652, P0734653, P0734654, and P0734655 Personality Plate above, provide:

- one (1) P0734805 PCB Filler Plate,
- one (1) P0124483 PAN HD MACH SCR,
- one (1) P0125952 NUT, HEX MACH SCR, and
- one (1) P0423632 Lock Washer, EXT Tooth.

b) Basic PCM-30 Interfacing:

For twisted pair wiring from backplane to MDF via the cabinet bulkhead provide:

- two (2) NTRX4620 PCM-30 Twisted Pair Interface Assemblies and
- two (2) NTRX4621 PCM-30 Twisted Pair Interface Assemblies.
- one (1) P0711579 Designation Labels sheet
(One sheet contains sufficient cable connector designation labels for both modules in the frame).

RUL6 1) For each equipped module:

- For PLGC applications, provide:
 - four (4) NT6X48AA 30A LCM Interface CPs to interface links from LCMI, LCME, and/or LCM.
- For PDTC applications provide:
 - four (4) NT0X50AA Filler Face Plates.

2) The NT6X48AA CP are assigned in pairs for reliability. One member of the pair interfaces the same DS30A ports as the other member. Each member of the pair occupies the same CP position, with one CP assigned to LGAI/LTAI 0 (lower shelf of the module) and the other assigned to LGAI/LTAI 1 (upper shelf of the module).

3) The two pairs of NT6X48AA provide interfaces for up to twenty (20) DS30A ports (links) from LCMIs, LCMES and/or LCMs. The following is a listing of DS30A ports per DS30A LCM Interface CP, NT6X48AA location.

	CP POS 6	CP POS 7
PORT	2	0
PORT	3	1
PORT	6	4
PORT	7	5
PORT	10	8

PORT	11	9
PORT	14	12
PORT	15	13
PORT	18	16
PORT	19	17

- 4) Assign ports to DS30A in the following sequence: 19, 17, 18, 16, 15, 13, 14, 12, 11, 9, 10, 8, 7, 5, 6, 4, 3, 1, 2 and 0 (if unused by DCH or PCM-30). In an extension job, when adding new DCH ports (RUL3), the DS30A ports may have to be reconfigured in accordance with this rule.

The ports for DS30A must be selected from the those ports that remain after assignment of port circuits to DCH in RUL3 and to PCM-30 circuits in RUL5.

- 5) DS30A Port Cables shall be provisioned by the job engineer based on CCS/line requirements. These cables connect DS30A signals from the backplane of the CIPE using 2X4 connectors (1 port per connector), to the CIPE bulkhead. Cables are equipped with six 2X4 connectors (6-Port cables) or four 2X4 connectors (4-Port cables) and shall be provisioned based on port requirements.

For each LCM linked to the LGC module, provide:

- One (1) DS30A 6-Port Cable or
One (1) DS30A 4-Port Cable.

Since only eight (8) 6-port and 4-port cables may be provisioned per LGC module, the maximum number of LCMs which may be linked to an LGC module is eight (8).

A further restriction is that, since only four (4) 6-port cables may be provisioned per LGC module, the maximum number of LCMs which may be linked to an LGC module with six (6) links is four (4).

There is no restriction on the order in which the DS30A Port Cables may be assigned.

The DS30A port cables for each of the two LGC modules in the cabinet are listed in the following tables.

DS30A PORT CABLES FOR LGC MODULE ON SHELVES 05 AND 19		
CABLE PEC	6-PORT OR 4-PORT CABLE	BULKHEAD CONNECTOR DESIGNATION
NTRX4625	6-PORT	0P0
NTRX4626	6-PORT	0P1
NTRX4627	6-PORT	0P2
NTRX4628	6-PORT	0P3
NTRX4629	4-PORT	0P4
NTRX4630	4-PORT	0P5
NTRX4631	4-PORT	0P6
NTRX4632	4-PORT	0P7

DS30A PORT CABLES FOR LGC MODULE ON SHELVES 33 AND 47		
CABLE PEC	6-PORT OR 4-PORT CABLE	BULKHEAD CONNECTOR DESIGNATION
NTRX4633	6-PORT	1P0
NTRX4634	6-PORT	1P1
NTRX4635	6-PORT	1P2
NTRX4636	6-PORT	1P3
NTRX4637	4-PORT	1P4
NTRX4638	4-PORT	1P5
NTRX4639	4-PORT	1P6
NTRX4640	4-PORT	1P7

- RUL7 1) When this PCM-30 DTC is handling CCIS/CCS7 voice trunking, provide for each equipped module:

- two (2) NT6X70AA Continuity Tone Detector CPs.

This CP supports a Continuity Test (COT), and is recommended whenever analog facilities are employed in part or all of the transmission path.

When the facility is end-to-end digital, this CP is not required since digital facilities employ other means of fault detection.

- 2) When the Calling Number Delivery/Calling Number Display (CND) feature is ordered, provide for each equipped PCM-30 LGC module:

- two (2) NT6X78AA, CLASS Modem Resource CPs.

- RUL9 1) Reserved for future use. trunks.

- RUL10 1) When DS30 copper network interface is required in a non-ENET office, provide for each equipped module:

- two (2) NT6X40AC DS30 Network Interface CPs,
- two (2) NTRX4622 DS30 Interface Cable Assys, and
- two (2) P0638263 Connector Key Brackets.

Otherwise, when fiber network interface is required in an ENET office, provide for each equipped module:

- two (2) NT6X40FA DS-512 XPM Interface CPs,
- two (2) NT6X40GA DS-512 XPM Paddle Boards,
- one (1) NT6X02BU Fiber I/F H/W Assembly, and
- two (2) P0682727 Snap Bushing,
- two (2) P0736273 Optical Fiber Danger Label (English), or
- two (2) P0737638 Optical Fiber Danger Label (German).

- 2) The formerly provided NT6X40CA and NT6X40DA functional pair has been changed to A&M status and replaced by the NT6X40FA and NT6X40GA pair.

- RUL11 1) For EMI compliant applications, provide for each CIPE:

- one (1) NTRX2516 EMI Kit, Single Bulkhead (NTRX2516 includes NTRX2522 EMI Door Kit).

- 2) Alternatively, provide for each CIPE:

- one (1) NTRX2513 EMI Ready Door Kit as required.
- RUL12 1) When overhead cabling is required, provide for each CIPE:
- one (1) NTN5511 Cable Trough Assembly.
- RUL13 1) When cabinets are in a non-earthquake zone, provide for each CIPE:
- one (1) NTRX2523 Leveling Foot Kit.
- RUL14 1) Provide the appropriate designation label for each CP provided.
- RUL15 1) Provide one (1) of the following label kits per cabinet:
- one (1) NTRX3541 C28 English Label Kit, or
 - one (1) NTRX3542 C28 German Label Kit.
- RUL16 1) For each equipped LGC/DTC which supports PCM30 links (NT6X27 PCM-30 Interface CPs provided per RUL5), or for each equipped LGC module which supports links to an LCM (NT6X48 DS30A LCM Interface CPs provided per RUL5), and the LCM is equipped with a PCM30 line drawer such as the NT6X05CA, provide:
- two (2) NT6X28AA PCM-30 Signaling Interface CPs.

SUBSCRIBER CARRIER MODULE-100 ACCESS (SMA)

PEC CODE: NT6X02TE

CPC CODE: B0236501

RATING: MD

REPLACES: None

REPLACED BY: NT6X02TF

ABBREVIATION NAME: SMA

ENGINEERING DESCRIPTION: The Subscriber Carrier Module-100 Access (SMA) is the peripheral controller module for interface of the AccessNode to the DMS-100.

REFERENCE DOCUMENTATION: SL6X02TE 00 02

MARKETS: Applicable markets:

Canada
US

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02TE EMR2-06-SMA-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
93 03 08	ECM 676 01	Introduce SMA packfill NT6X02TE
94 10 24	ECM 676 04	MD NT6X02TE per EC#024-92942, rep NTBX01AB with NTBX01AC per EC#011-21078, chg pec design. strip.
94 11 16	ECM 676 05	Correct per latest stocklist.
95 02 06	ECM 676 06	Retire this Manual Section.

The Subscriber Carrier Module-100 Access (SMA) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Unified Processor	NTMX77AA		2	X,X+14	12	AP
Enhanced ISDN Sig. Pre-Proc	NTBX01AC		2	X,X+14	16	AP
CPP Msg Protocol & Tone CP	NT6X69AC		2	X,X+14	18	AP
SMU Pad/Ring CP	NT6X80BA		2	X,X+14	19	AP
XPM PLUS Terminator PB	NTMX71AA		2	X,X+14	19R	AP
Channel Supervision Msg CP	NT6X42AA		2	X,X+14	20	AP
Speech Bus Formatter	NT6X41AA		2	X,X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		2	X,X+14	24	AP
Power Converter +/-5&12V CP	NT2X70AE		2	X,X+14	25	AP
Desig. Strip (NT6X02TE)	P0738958		2	X,X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

NOTE: 1) One SMA Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X =51.

RULES:

AP 1) When PEC NT6X02TE is ordered, these items are provided.

SUBSCRIBER CARRIER MODULE-100 ACCESS COMMON CP

PEC CODE: NT6X02TF

CPC CODE: B0240845

| RATING: MD

REPLACES: NT6X02TE

| REPLACED BY: NT6X02TH

ABBREVIATION NAME: SMA

ENGINEERING DESCRIPTION: The Subscriber Carrier Module-100 Access is the peripheral controller module for the interface of the AccessNode to the DMS-100. The NT6X02TF does not contain NT6X69 or NT6X80 circuit packs, which were contained in the NT6X02TE. The NT6X69 and NT6X80 must now be provisioned separately per office requirements.

REFERENCE DOCUMENTATION: SL6X02TF 00 02

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02TF EMR2-06-SMA-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 08 01	ECM 616 22	Introduce the NT6X02TF packfill.
94 10 24	ECM 676 04	Update per latest stocklist and changes per EC#011-21078.
95 04 10	ECM 676 09	MD and Retire this packfill.

The Subscriber Carrier Module-100 Access Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Unified Processor	NTMX77AA		1	X	12	AP
Enhanced ISDN Sig. Pre-Proc	NTBX01AC		1	X	16	AP
XPM PLUS Terminator PB	NTMX71AA		1	X	19R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Converter +/-5&12V CP	NT2X70AE		1	X	25	AP
Desig. Strip (NT6X02TF)	P0803132		1	X		AP
Unified Processor	NTMX77AA		1	X+14	12	AP
Enhanced ISDN Sig. Pre-Proc	NTBX01AC		1	X+14	16	AP
XPM PLUS Terminator PB	NTMX71AA		1	X+14	19R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Converter +/-5&12V CP	NT2X70AE		1	X+14	25	AP
Desig. Strip (NT6X02TF)	P0803132		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For frame mounting, X = 18 for one module and X = 51 for the other.

- 2) For cabinet mounting, $X = 5$ for one module and $X = 33$ for the other.

RULES:

- AP 1) When PEC NT6X02TF is ordered, these items are provided.

SUBSCRIBER CARRIER MODULE-100 ACCESS COMMON CP

PEC CODE: NT6X02TH

CPC CODE: B0241648

| RATING: MD.

REPLACES: NT6X02TF and NT6X02TG

| REPLACED BY: NT6X02TJ

ABBREVIATION NAME: SMA

ENGINEERING DESCRIPTION: The Subscriber Carrier Module-100 Access is the peripheral controller module for the interface of the AccessNode to the DMS-100. The NT6X69, NT6X80 and NTB01 are provisioned separately per office requirements.

REFERENCE DOCUMENTATION: SL6X02TH 00 01
NT6X02TH REL 01

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: Erica Keltner Dept. 3471 (PPK)

MAIN CONTACT: Erica Keltner Dept. 3471 (PPK)

NT6X02TH EMR2-06-SMA-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 04 10	ECM 676 09	Introduce the NT6X02TH packfill per EC#024-94037.
95 11 08	ECM 676 12	EC 011-21580 Introduces NT6X02TJ to replace NT6X02TH. The Unified Proc. and Terminator PB were pulled out of the NT6X02TH Packfill and made provisionable. EC 024-95220 MDs NT6X02TH.

The Subscriber Carrier Module-100 Access Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Unified Processor	NTMX77AA		1	X	12	AP
XPM PLUS Terminator PB	NTMX71AA		1	X	19R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Converter +/-5&12V CP	NT2X70AF		1	X	25	AP
Designation Strip	P0803132		1	X		AP
Design. Label (NT2X70AF)	P0809960		1	X	25	AP
Unified Processor	NTMX77AA		1	X+14	12	AP
XPM PLUS Terminator PB	NTMX71AA		1	X+14	19R	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Converter +/-5&12V CP	NT2X70AF		1	X+14	25	AP
Designation Strip	P0803132		1	X+14		AP
Design. Label (NT2X70AF)	P0809960		1	X+14	25	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For frame mounting, X = 18 for one module and X = 51 for the other.

- 2) For cabinet mounting, X = 5 for one module and X = 33 for the other.

RULES:

- AP 1) When PEC NT6X02TH is ordered, these items are provided.

SUBSCRIBER MODULE REMOTE COMMON CP

PEC CODE: NT6X02CA

| CPC CODE: B0218977

| RATING: MD

| REPLACES: None

| REPLACED BY: NT6X02CQ

ABBREVIATION NAME: SMR

ENGINEERING DESCRIPTION: The Subscriber Module Remote (SMR) module is the peripheral controller module for direct digital interface to the DMS-1R Remote Concentrator Terminal (RCT).

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02CA EMR2-06-SMR-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
92 11 04	ECM 231 08	Reflect Rating Change Pending; To be rated A&M.
95 02 19	ECM 373 36	Change to MD status per EC 11-17790.

The Subscriber Module Remote Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
SCM A Bit/B Word CP	NT6X81AA		1	X+14	13	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X+14	15-17	AP
Message Interface CP	NT6X43AA		1	X+14	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		2	X+14	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip	P0667783		1	X+14	1	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
SCM A Bit/B Word CP	NT6X81AA		1	X	13	AP
Time Switch CP	NT6X44AA		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X	15-17	AP
Message Interface CP	NT6X43AA		1	X	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		2	X	22-23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip	P0667783		1	X	1	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMR Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02CA is ordered, these items are provided.

SUBSCRIBER MODULE REMOTE COMMON CP

PEC CODE: NT6X02CC

CPC CODE: B0227503

| RATING: MD

REPLACES: N/A

REPLACED BY: No replacement

ABBREVIATION NAME: SMR

ENGINEERING DESCRIPTION: The Subscriber Module Remote (SMR) module is the peripheral controller module for direct digital interface to the DMS-1R Remote Concentrator Terminal (RCT).

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: David Terwey Dept. 3471 (PPK)

MAIN CONTACT: NTI: William Stanley Dept. 3471 (PPK)

NT6X02CC EMR2-06-SMR-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 92 11 04	----- ECM 231 08	Previous history not available Reflect Rating Change Pending; To be rated A&M.
94 01 24	ECM 231 11	MD this pack fill

The Subscriber Module Remote Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46BA		1	X+14	11	AP
SCM A Bit/B Word CP	NT6X81BA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
Message Interface CP	NT6X43AA		1	X+14	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip	P0695484		1	X+14	1	AP
Desig. Label (NT6X81BA)	P0706627		1	X+14	1	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46BA		1	X	11	AP
SCM A Bit/B Word CP	NT6X81BA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
Message Interface CP	NT6X43AA		1	X	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip	P0695484		1	X	1	AP
Desig. Label (NT6X81BA)	P0706627		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMR Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02CC is ordered, these items are provided.

SUBSCRIBER MODULE REMOTE COMMON CP

PEC CODE: NT6X02CP

CPC CODE: B0231409

| RATING: MD

REPLACES: N/A

REPLACED BY: No replacement

ABBREVIATION NAME: SMR

ENGINEERING DESCRIPTION: The Subscriber Module Remote (SMR) module is the peripheral controller module for direct digital interface to the DMS-1R Remote Concentrator Terminal (RCT).

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: David Terwey Dept. 3471 (PPK)

MAIN CONTACT: NTI: William Stanley Dept. 3471 (PPK)

NT6X02CP EMR2-06-SMR-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 92 11 04	----- ECM 231 08	Previous history not available Reflect Rating Change Pending; To be rated A&M.
94 01 24	ECM 231 11	Correct number of NT6X45AF XPM Proc CP MD this pack fill

The Subscriber Module Remote Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
XPM Processor CP	NT6X45AF		2	X+14	8, 12	AP
Master Processor Memory CP	NT6X47AC		1	X+14	10	AP
Signal Processor Memory CP	NT6X46BB		1	X+14	11	AP
SCM A Bit/B Word CP	NT6X81BA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
Message Interface CP	NT6X43AA		1	X+14	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X02CP)	P0711634		1	X+14		AP
XPM Processor CP	NT6X45AF		2	X	8, 12	AP
Master Processor Memory CP	NT6X47AC		1	X	10	AP
Signal Processor Memory CP	NT6X46BB		1	X	11	AP
SCM A Bit/B Word CP	NT6X81BA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
Message Interface CP	NT6X43AA		1	X	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X02CP)	P0711634		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMR Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02CP is ordered, these items are provided.

SUBSCRIBER MODULE REMOTE COMMON CP

PEC CODE: NT6X02CQ

CPC CODE: B02331412

| RATING: MD

REPLACES: N/A

REPLACED BY: No replacement

ABBREVIATION NAME: SMR

ENGINEERING DESCRIPTION: The Subscriber Module Remote (SMR) module is the peripheral controller module for direct digital interface to the DMS-1R Remote Concentrator Terminal (RCT). The NT6X02CQ is required for BCS-31 when field upgrading NT6X02CA modules.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: David Terwey Dept. 3471 (PPK)

MAIN CONTACT: NTI: William Stanley Dept. 3471 (PPK)

NT6X02CQ EMR2-06-SMR-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 92 11 04	----- ECM 231 08	Previous history not available Reflect Rating Change Pending; To be rated A&M.
94 01 24	ECM 231 11	Correct number of NT6X45AC XPM Proc CP MD this pack fill

The Subscriber Module Remote Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
XPM Processor CP	NT6X45AC		2	X+14	8, 12	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AC		1	X+14	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
SCM A Bit/B Word CP	NT6X81BA		1	X+14	13	AP
Time Switch CP	NT6X44AA		1	X+14	14	AP
Message Interface CP	NT6X43AA		1	X+14	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip	P0711635		1	X+14		AP
XPM Processor CP	NT6X45AC		2	X	8, 12	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AC		1	X	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP
SCM A Bit/B Word CP	NT6X81BA		1	X	13	AP
Time Switch CP	NT6X44AA		1	X	14	AP
Message Interface CP	NT6X43AA		1	X	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip	P0711635		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMR Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02CQ is ordered, these items are provided.

SUBSCRIBER MODULE REMOTE COMMON CP

PEC CODE: NT6X02CS

CPC CODE: B0232781

| RATING: MD

REPLACES: N/A

REPLACED BY: No replacement

ABBREVIATION NAME: SMR

ENGINEERING DESCRIPTION: The Subscriber Module Remote (SMR) module is the peripheral controller module for direct digital interface to the DMS-1R Remote Concentrator Terminal (RCT).

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: David Terwey Dept. 3471 (PPK)

MAIN CONTACT: NTI: William Stanley Dept. 3471 (PPK)

NT6X02CS EMR2-06-SMR-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 92 11 04	----- ECM 231 08	Previous history not available Reflect Rating Change Pending; To be rated MD.
94 01 24	ECM 231 11	Correct number of NT6X45AF XPM Proc CP MD this pack fill

The Subscriber Module Remote Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
XPM Processor CP	NT6X45AF		2	X+14	8, 12	AP
Master Processor Memory CP	NT6X47AC		1	X+14	10	AP
Signal Processor Memory CP	NT6X46BA		1	X+14	11	AP
SCM A Bit/B Word CP	NT6X81BA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
Message Interface CP	NT6X43AA		1	X+14	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X02CS)	P0726663		1	X+14		AP
XPM Processor CP	NT6X45AF		2	X	8, 12	AP
Master Processor Memory CP	NT6X47AC		1	X	10	AP
Signal Processor Memory CP	NT6X46BA		1	X	11	AP
SCM A Bit/B Word CP	NT6X81BA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
Message Interface CP	NT6X43AA		1	X	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X02CS)	P0726663		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMR Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02CS is ordered, these items are provided.

SMR COMMON CP FILL KIT

PEC CODE: NT6X02CT

CPC CODE: B0235816

| RATING: MD

REPLACES: N/A

REPLACED BY: No replacement

ABBREVIATION NAME: SMR

ENGINEERING DESCRIPTION: The NT6X02CT is the common circuit pack fill for SMR application. The Subscriber Module Remote (SMR) Module is the host office peripheral controller module for digital loop carrier remote.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Canada
CALA
Asia/Pacific
Europe

ISSUE AUTHOR: NTI: David Terwey Dept. 3471 (PPK)

MAIN CONTACT: NTI: William Stanley Dept. 3471 (PPK)

NT6X02CT EMR2-06-SMR-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
92 12 18	ECM 231 09	ECD 011-15666 Introduce the SMR with new messaging
94 01 24	ECM 231 11	MD this pack fill

The SMR Common CP Fill Kit is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
A Bit/B Word CP	NT6X81BA		1	X+14	13	AP
Message Proto. Tone Gen CP	NT6X69AC		1	X+14	18	AP
SCM PAD/RING Card CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Designation Strip	P0740302		1	X+14		AP
A Bit/B Word CP	NT6X81BA		1	X	13	AP
Message Proto. Tone Gen CP	NT6X69AC		1	X	18	AP
SCM PAD/RING Card CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Designation Strip	P0740302		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMR Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

AP 1) When PEC NT6X02CT is ordered, these items are provided.

SUBSCRIBER MODULE FOR SLC-96 COMMON CP

PEC CODE: NT6X02DA

CPC CODE: B0219975

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02DB

ABBREVIATION NAME: SMS

ENGINEERING DESCRIPTION: The Subscriber Module for SLC-96 (SMS) is the peripheral controller module for direct digital interface to the SLC-96.

REFERENCE DOCUMENTATION: SL6X02DA

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02DA EMR2-06-SMS-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 06	----- ECM 328 23	Previous history unavailable MD and Reformat EMS.

The Subscriber Module For SLC-96 Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
A-Bit Message Card CP	NT6X86AA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X+14	15-17	AP
Msg interface CP	NT6X43AA		1	X+14	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		1	X+14	22	AP
DS30 Network Interface CP	NT6X40AA		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip (NT6X01AA)	P0673900		1	X+14	1	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
A-Bit Message Card CP	NT6X86AA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X	15-17	AP
Msg interface CP	NT6X43AA		1	X	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		1	X	22	AP
DS30 Network Interface CP	NT6X40AA		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip (NT6X01AA)	P0673900		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMS Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02DA is ordered, these items are provided.

SUBSCRIBER MODULE - SLC-96
COMMON CP KIT

PEC CODE: NT6X02DU

CPC CODE: B0242902

| RATING: MD

REPLACES: NT6X02DT

| REPLACED BY: NT6X02DV

ABBREVIATION NAME: SMS

ENGINEERING DESCRIPTION: The NT6X02DU SMS packfill provides the common circuit packs for one module. This packfill does not include processors.

REFERENCE DOCUMENTATION: SL6X02DU 00 01

MARKETS: Applicable markets:

US
CALA

ISSUE AUTHOR: Erica Keltner Dept. 3471 (PPK)

MAIN CONTACT: Erica Keltner Dept. 3471 (PPK)

NT6X02DU EMR2-06-SMS-10 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 05 16	ECM 328 21	Introduce NT6X02DU packfill per EC#024-94037.
96 04 26	ECM 373 45	EC 024-95240 MD's NT6X02DU & replaces it with NT6X02DV.

The Subscriber Module - SLC-96 Common CP Kit is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Channel Supervision Msg.	NT6X42AA		2	X,X+14	20	AP
Speech Bus Formatter	NT6X41AA		2	X,X+14	21	AP
Filler faceplate	NT0X50AA		2	X,X+14	24	AP
Power Converter	NT2X70AF		2	X,X+14	25	AP
Designation Strip	P0810540		2	X,X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For frame mounting, X = 18 for one module and X = 51 for the other.
- 2) For cabinet mounting, X = 5 for one module and X = 33 for the other.

RULES:

- AP 1) When PEC NT6X02DU is ordered, these items are provided.

SUBSCRIBER MODULE FOR SLC-96 COMMON CP

PEC CODE: NT6X02DB

CPC CODE: B0225763

| RATING: MD

REPLACES: NT6X02DA

REPLACED BY: N/A

ABBREVIATION NAME: SMS

ENGINEERING DESCRIPTION: The Subscriber Module for SLC-96 (SMS) is the peripheral controller module for direct digital interface to the SLC-96. The NT6X02DB requires BCS-22 or later.

REFERENCE DOCUMENTATION: SL6X02DB

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02DB EMR2-06-SMS-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 06	----- ECM 328 23	Previous history unavailable MD and Reformat EMS.

The Subscriber Module For SLC-96 Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45CA		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
LGC/DTC Processor CP	NT6X45CA		1	X+14	12	AP
A-Bit Message Card CP	NT6X86AA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X+14	15-17	AP
Msg interface CP	NT6X43AA		1	X+14	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40BA		1	X+14	22	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip (NT6X01AA)	P0685042		1	X+14	1	AP
LGC/DTC Processor CP	NT6X45CA		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP
LGC/DTC Processor CP	NT6X45CA		1	X	12	AP
A-Bit Message Card CP	NT6X86AA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X	15-17	AP
Msg interface CP	NT6X43AA		1	X	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40BA		1	X	22	AP
Filler Face Plate 0.875	NT0X50AA		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip (NT6X01AA)	P0685042		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMS Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02DB is ordered, these items are provided.

SUBSCRIBER MODULE FOR SLC-96 COMMON CP

PEC CODE: NT6X02DD

CPC CODE: B0230094

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02DJ

ABBREVIATION NAME: SMS

ENGINEERING DESCRIPTION: The Subscriber Module for SLC-96 (SMS) is the peripheral controller module for direct digital interface to the SLC-96. The NT6X02DD is required for BCS-28 for all new SMS applications.

REFERENCE DOCUMENTATION: SL6X02DD

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02DD EMR2-06-SMS-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 06	----- ECM 328 23	Previous history unavailable MD and Reformat EMS.

The Subscriber Module For SLC-96 Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46BA		1	X+14	11	AP
A-Bit Message Card CP	NT6X86AA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X01AA)	P0705031		1	X+14	1	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46BA		1	X	11	AP
A-Bit Message Card CP	NT6X86AA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X01AA)	P0705031		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMS Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02DD is ordered, these items are provided.

SUBSCRIBER MODULE FOR SLC-96 COMMON CP

PEC CODE: NT6X02DC

CPC CODE: B0227505

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02DJ

ABBREVIATION NAME: SMS

ENGINEERING DESCRIPTION: The Subscriber Module for SLC-96 (SMS) is the peripheral controller module for direct digital interface to the SLC-96. The NT6X02DC is required for BCS-28 when field upgrading NT6X02DA/DB SMS modules.

REFERENCE DOCUMENTATION: SL6X02DC

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02DC EMR2-06-SMS-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 06	----- ECM 328 23	Previous history unavailable MD and Reformat EMS.

The Subscriber Module For SLC-96 Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AC		1	X+14	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
A-Bit Message Card CP	NT6X86AA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X01AA)	P0673900		1	X+14	1	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AC		1	X	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP
A-Bit Message Card CP	NT6X86AA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X01AA)	P0673900		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMS Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02DC is ordered, these items are provided.

SUBSCRIBER MODULE FOR SLC-96 (SMS) COMMON CP

PEC CODE: NT6X02DJ

CPC CODE: B0231410

| RATING: MD

REPLACES: NT6X02DC, NT6X02DD

REPLACED BY: NT6X02DS

ABBREVIATION NAME: SMS

ENGINEERING DESCRIPTION: The Subscriber Module for SLC-96 (SMS) is the peripheral controller module for direct digital interface to the SLC-96. The NT6X02DJ is required for BCS-31 when field upgrading NT6X02DC/DD SMS modules.

REFERENCE DOCUMENTATION: SL6X02DJ

MARKETS: Applicable markets:

Canada
US

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02DJ EMR2-06-SMS-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 10 24	ECM 328 16	MD per EC 024-92942.
95 02 19	ECM 373 36	Retire this Engineering Manual.

The Subscriber Module For SLC-96 (SMS) Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Master Processor Memory CP	NT6X47AC		1	X+14	10	AP
A-Bit Message Card CP	NT6X86AA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X02DJ)	P0711628		1	X+14	1	AP
Master Processor Memory CP	NT6X47AC		1	X	10	AP
A-Bit Message Card CP	NT6X86AA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X02DJ)	P0711628		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMS Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mount-

ing positions 32 and 18. For one module X=18 and for the other module X=51.

- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).
- 3) This PEC cannot be ordered. It is for field upgrade only.

RULES:

- AP 1) When PEC NT6X02DJ is ordered, these items are provided.

SUBSCRIBER MODULE FOR SLC-96 (SMS) COMMON CP

PEC CODE: NT6X02DH

CPC CODE: B0231287

RATING: MD

REPLACES: NT6X02DM

REPLACED BY: NT6X02DR

ABBREVIATION NAME: SMS

ENGINEERING DESCRIPTION: The Subscriber Module for SLC-96 (SMS) is the peripheral controller module for direct digital interface to the SLC-96. The NT6X02DH is required for all new SMS applications.

REFERENCE DOCUMENTATION: SL6X02DH

MARKETS: Applicable markets:

Canada
US

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02DH EMR2-06-SMS-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 10 24	ECM 328 16	MD per EC 024-92942.
95 02 19	ECM 373 36	Retire this Engineering Manual.

The Subscriber Module For SLC-96 (SMS) Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
XPM Processor CP	NT6X45BA		2	X+14	8,12	AP
Master Processor Memory CP	NT6X47AC		1	X+14	10	AP
Signal Processor Memory CP	NT6X46BB		1	X+14	11	AP
A-Bit Message Card CP	NT6X86AA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/- 5V & 12V	NT2X70AE		1	X+14	25	AP
Desig. Strip (NT6X02DH)	P0711629		1	X+14	1	AP
XPM Processor CP	NT6X45BA		2	X	8,12	AP
Master Processor Memory CP	NT6X47AC		1	X	10	AP
Signal Processor Memory CP	NT6X46BB		1	X	11	AP
A-Bit Message Card CP	NT6X86AA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/- 5V & 12V	NT2X70AE		1	X	25	AP
Desig. Strip (NT6X02DH)	P0711629		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMS Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02DH is ordered, these items are provided.

SUBSCRIBER MODULE FOR SLC-96 (SMS) COMMON CP

PEC CODE: NT6X02DM

CPC CODE: B0232779

RATING: MD

| REPLACES: NT6X02DJ

| REPLACED BY: NT6X02DH

ABBREVIATION NAME: SMS

ENGINEERING DESCRIPTION: The Subscriber Module for SLC-96 (SMS) is the peripheral controller module for direct digital interface to the SLC-96. The NT6X02DM is required for all new SMS applications.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02DM EMR2-06-SMS-7 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 01 24	ECM 328 13	MD per EC 011-18209.
95 02 19	ECM 373 36	Retire this Engineering Manual.

The Subscriber Module For SLC-96 (SMS) Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
XPM Processor CP	NT6X45BA		2	X+14	8,12	AP
Master Processor Memory CP	NT6X47AC		1	X+14	10	AP
Signal Processor Memory CP	NT6X46BA		1	X+14	11	AP
A-Bit Message Card CP	NT6X86AA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/- 5V & 12V	NT2X70AE		1	X+14	25	AP
Desig. Strip (NT6X02DM)	P0726662		1	X+14	1	AP
XPM Processor CP	NT6X45BA		2	X	8,12	AP
Master Processor Memory CP	NT6X47AC		1	X	10	AP
Signal Processor Memory CP	NT6X46BA		1	X	11	AP
A-Bit Message Card CP	NT6X86AA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/- 5V & 12V	NT2X70AE		1	X	25	AP
Desig. Strip (NT6X02DM)	P0726662		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMS Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02DM is ordered, these items are provided.

SUBSCRIBER MODULE SLC-96 W/O PROCESSOR

PEC CODE: NT6X02DR

CPC CODE: B0239730

RATING: MD

REPLACES: NT6X02DH

REPLACED BY: NT6X02DS

ABBREVIATION NAME: SMS

ENGINEERING DESCRIPTION: The NT6X02DR SMS packfill provides the common circuit packs for one module. The processor packs must be ordered separately.

REFERENCE DOCUMENTATION: SL6X02DR 00 01

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02DR EMR2-06-SMS-8 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 03 01	ECM 678 10	Introduce NT6X02DR packfill.
94 10 24	ECM 328 16	MD per EC 024-92942.
95 02 19	ECM 373 36	Retire this Engineering Manual.

The SUBSCRIBER MODULE SLC-96 W/O PROCESSOR is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
A-Bit Message Card CP	NT6X86AA		2	X,X+14	13	AP
Time Switch CP	NT6X44AB		2	X,X+14	14	AP
SCM Pad/Ring Card CP	NT6X80AA		2	X,X+14	19	AP
Channel Supervision Msg.	NT6X42AA		2	X,X+14	20	AP
Speech Bus Formatter	NT6X41AA		2	X,X+14	21	AP
Filler faceplate	NT0X50AA		2	X,X+14	24	AP
Power Converter	NT2X70AE		2	X,X+14	25	AP
Designation Strip	P0746913		2	X,X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) Shelf position XX can be either 18 or 51.

RULES:

- AP 1) When PEC NT6X02DR is ordered, these items are provided.

SUBSCRIBER MODULE - SLC-96
COMMON CP KIT

PEC CODE: NT6X02DT

CPC CODE: B0242751

| RATING: MD

REPLACES: NT6X02DS

| REPLACED BY: NT6X02DU

ABBREVIATION NAME: SMS

ENGINEERING DESCRIPTION: The NT6X02DT SMS packfill provides the common circuit packs for one module. This packfill does not include processors.

REFERENCE DOCUMENTATION: SL6X02DT 00 01

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02DT EMR2-06-SMS-9 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 04 04	ECM 328 19	Introduce NT6X02DT packfill.
95 05 16	ECM 328 21	MD NT6X02DT packfill per EC#024-94037.

The Subscriber Module - SLC-96 Common CP Kit is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch CP	NT6X44AB		2	X,X+14	14	AP
Channel Supervision Msg.	NT6X42AA		2	X,X+14	20	AP
Speech Bus Formatter	NT6X41AA		2	X,X+14	21	AP
Filler faceplate	NT0X50AA		2	X,X+14	24	AP
Power Converter	NT2X70AF		2	X,X+14	25	AP
Designation Strip	P0724375		2	X,X+14		AP
Design. Label NT2X70AF	P0809960		2	X,X+14	25	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For frame mounting, X = 18 for one module and X = 51 for the other.
- 2) For cabinet mounting, X = 5 for one module and X = 33 for the other.

RULES:

AP 1) When PEC NT6X02DT is ordered, these items are provided.

SUBSCRIBER CARRIER MODULE-100S REMOTE
(SMS-R) COMMON CP

PEC CODE: NT6X02PA

CPC CODE: B0228465

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02PB

ABBREVIATION NAME: SMS-R

ENGINEERING DESCRIPTION: The Subscriber Carrier Module-100S Remote(SMS-R) is the peripheral controller module for direct digital interface from the RSC to the SLC-96. Refer to Appropriate Software Packaging ECM for detailed BCS availability.

REFERENCE DOCUMENTATION: SL6X02PA

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02PA EMR2-06-SMSR-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 06	----- ECM 454 14	Previous history unavailable MD and Reformat EMS.

The Subscriber Carrier Module-100S Remote (SMS-R) Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
MP Memory Plus CP	NT6X47AB		1	X+14	10	AP
SP Memory Plus CP	NT6X46BA		1	X+14	11	AP
A-Bit Message Card CP	NT6X86AA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
Msg interface CP	NT6X43AA		1	X+14	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
SMS-R DS-30A C-Side Intf CP	NT8X18BA		1	X+14	22	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X02PA)	P0702031		1	X+14	1	AP
MP Memory Plus CP	NT6X47AB		1	X	10	AP
SP Memory Plus CP	NT6X46BA		1	X	11	AP
A-Bit Message Card CP	NT6X86AA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
Msg interface CP	NT6X43AA		1	X	18	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
SMS-R DS-30A C-Side Intf CP	NT8X18BA		1	X	22	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X02PA)	P0702031		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMS-R Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02PA is ordered, these items are provided.

SUBSCRIBER CARRIER MODULE-100S REMOTE
(SMS-R) COMMON CP

PEC CODE: NT6X02PB

CPC CODE: B0230881

| RATING: MD

REPLACES: NT6X02PA

REPLACED BY: NT6X02PD

ABBREVIATION NAME: SMS-R

ENGINEERING DESCRIPTION: The Subscriber Carrier Module-100S Remote(SMS-R) is the peripheral controller module for direct digital interface from the RSC to the SLC-96. Refer to Appropriate Software Packaging ECM for detailed BCS availability.

REFERENCE DOCUMENTATION: SL6X02PB

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02PB EMR2-06-SMSR-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 07 06	----- ECM 454 14	Previous history unavailable MD and Reformat EMS.

The Subscriber Carrier Module-100S Remote (SMS-R) Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
MP Memory Plus CP	NT6X47AC		1	X+14	10	AP
A-Bit Message Card CP	NT6X86AA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
SMS-R DS-30A C-Side Intf CP	NT8X18BA		1	X+14	22	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X02PB)	P0709088		1	X+14	1	AP

MP Memory Plus CP	NT6X47AC		1	X	10	AP
A-Bit Message Card CP	NT6X86AA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
SMS-R DS-30A C-Side Intf CP	NT8X18BA		1	X	22	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X02PB)	P0709088		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMS-R Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02PB is ordered, these items are provided.

SUBSCRIBER CARRIER MODULE-100S REMOTE
(SMS-R) COMMON CP

PEC CODE: NT6X02PD

CPC CODE: B0231290

RATING: MD

REPLACES: NT6X02PA

REPLACED BY: NT6X02PG

ABBREVIATION NAME: SMS-R

ENGINEERING DESCRIPTION: The Subscriber Carrier Module-100S Remote (SMS-R) is the peripheral controller module for direct digital interface from the RSC to the SLC-96.

REFERENCE DOCUMENTATION: SL6X02PD 00 02

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02PD EMR2-06-SMSR-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-- -- --	-----	Previous history not available.
94 08 01	ECM 616 22	Show NT6X02PD replaced by NT6X02PG.
94 10 24	ECM 678 15	MD NT6X02PD per EC 024-92942.
95 03 02	ECM 454 10	Retire this Engineering Manual.

The Subscriber Carrier Module-100S Remote (SMS-R) Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
SCM DS1 Interface CP	NT6X45BA		2	X+14	8,12	AP
MP Memory Plus CP	NT6X47AC		1	X+14	10	AP
SP Memory Plus CP	NT6X46BB		1	X+14	11	AP
A-Bit Message Card CP	NT6X86AA		1	X+14	13	AP
Time Switch CP	NT6X44AB		1	X+14	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Converter CP	NT2X70AE		1	X+14	25	AP
Desig. Strip (NT6X02PD)	P0711633		1	X+14	1	AP
SCM DS1 Interface CP	NT6X45BA		2	X	8,12	AP
MP Memory Plus CP	NT6X47AC		1	X	10	AP
SP Memory Plus CP	NT6X46BB		1	X	11	AP
A-Bit Message Card CP	NT6X86AA		1	X	13	AP
Time Switch CP	NT6X44AB		1	X	14	AP
SCM Pad/Ring CP	NT6X80AA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Converter CP	NT2X70AE		1	X	25	AP
Desig. Strip (NT6X02PD)	P0711633		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For frame mounting, X = 18 for one module and X = 51 for the other.
- 2) For cabinet mounting, X = 5 for one module and X = 33 for the other.

RULES:

- AP 1) When PEC NT6X02PD is ordered, these items are provided.

SUBSCRIBER MOD. SLC-96 REMOTE W/O PROCESSOR

PEC CODE: NT6X02PG

CPC CODE: B0239729

RATING: MD

REPLACES: NT6X02PD

REPLACED BY: NT6X02PH

ABBREVIATION NAME: SMS-R

ENGINEERING DESCRIPTION: The NT6X02PG SMS-R Packfill provides the common circuit packs for one module. The processor packs must be ordered separately.

REFERENCE DOCUMENTATION: SL6X02PG 00 01

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02PG EMR2-06-SMSR-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 03 01	ECM 678 10	Introduce NT6X02PG packfill.
94 08 01	ECM 616 22	Correct typographical error. Add cabinet shelf positions.
94 10 24	ECM 678 15	MD NT6X02PG per EC 024-92942.
95 03 02	ECM 454 10	Retire this Engineering Manual.

The SUBSCRIBER MOD. SLC-96 REMOTE W/O PROCESSOR is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
A-Bit Message Card CP	NT6X86AA		2	X,X+14	13	AP
Time Switch CP	NT6X44AB		2	X,X+14	14	AP
SCM Pad/Ring Card CP	NT6X80AA		2	X,X+14	19	AP
Channel Supervision Msg.	NT6X42AA		2	X,X+14	20	AP
Speech Bus Formatter	NT6X41AA		2	X,X+14	21	AP
Filler faceplate	NT0X50AA		2	X,X+14	24	AP
Power Converter	NT2X70AE		2	X,X+14	25	AP
Designation Strip	P0746912		2	X,X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For frame mounting, X = 18 for one module and X = 51 for the other.
- 2) For cabinet mounting, X = 5 for one module and X = 33 for the other.

RULES:

- AP 1) When PEC NT6X02PG is ordered, these items are provided.

SUBSCRIBER MODULE - SLC-96 REMOTE
COMMON CP KIT

PEC CODE: NT6X02PH

CPC CODE: B0240844

| RATING: MD

REPLACES: NT6X02PG

| REPLACED BY: NT6X02PJ

ABBREVIATION NAME: SMS-R

ENGINEERING DESCRIPTION: The NT6X02PH SMS-R packfill provides the common circuit packs for one module. This packfill does not include processors.

REFERENCE DOCUMENTATION: SL6X02PH 00 01

MARKETS: Applicable markets:

US
Canada
CALA

| ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02PH EMR2-06-SMSR-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 06 30	ECM 678 11	Introduce NT6X02PH packfill.
95 03 29	ECM 454 11	MD and Retire this EMS.

The Subscriber Module - SLC-96 Remote Common CP Kit is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch CP	NT6X44AB		2	X,X+14	14	AP
Channel Supervision Msg.	NT6X42AA		2	X,X+14	20	AP
Speech Bus Formatter	NT6X41AA		2	X,X+14	21	AP
Filler faceplate	NT0X50AA		2	X,X+14	24	AP
Power Converter	NT2X70AE		2	X,X+14	25	AP
Designation Strip	P0724374		2	X,X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) Shelf position XX can be either 18 or 51.

RULES:

- AP 1) When PEC NT6X02PH is ordered, these items are provided.

SUBSCRIBER MODULE - SLC-96 REMOTE
COMMON CP KIT

PEC CODE: NT6X02PJ

CPC CODE: B0242858

| RATING: MD

REPLACES: NT6X02PH

| REPLACED BY: NT6X02PK

ABBREVIATION NAME: SMS-R

ENGINEERING DESCRIPTION: The NT6X02PJ SMS-R packfill provides the common circuit packs for one module. This packfill does not include processors.

REFERENCE DOCUMENTATION: SL6X02PJ 00 01

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02PJ EMR2-06-SMSR-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 03 29	ECM 454 11	Introduce NT6X02PJ packfill.
95 05 11	ECM 454 13	MD and Retire NT6X02PJ per EC#024-94037.

The Subscriber Module - SLC-96 Remote Common CP Kit is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch CP	NT6X44AB		2	X,X+14	14	AP
Channel Supervision Msg.	NT6X42AA		2	X,X+14	20	AP
Speech Bus Formatter	NT6X41AA		2	X,X+14	21	AP
Filler faceplate	NT0X50AA		2	X,X+14	24	AP
Power Converter	NT2X70AF		2	X,X+14	25	AP
Designation Strip	P0724374		2	X,X+14		AP
Designation Label NT2X70AF	P0809960		2	X,X+14	25	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) Shelf position X can be either 18 or 51.

RULES:

- AP 1) When PEC NT6X02PJ is ordered, these items are provided.

SUBSCRIBER MODULE - SLC-96 REMOTE
COMMON CP KIT

PEC CODE: NT6X02PK

CPC CODE: B0242989

| RATING: MD

REPLACES: NT6X02PJ

| REPLACED BY: NT6X02PL

ABBREVIATION NAME: SMS-R

ENGINEERING DESCRIPTION: The NT6X02PK SMS-R packfill provides the common circuit packs for one module. This packfill does not include processors.

REFERENCE DOCUMENTATION: SL6X02PK 00 01

MARKETS: Applicable markets:

US
CALA

ISSUE AUTHOR: Erica Keltner Dept. 3471 (PPK)

MAIN CONTACT: Erica Keltner Dept. 3471 (PPK)

NT6X02PK EMR2-06-SMSR-7 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 05 11	ECM 454 13	Introduce NT6X02PK packfill per EC#024-94037.
96 04 26	ECM 373 45	EC 024-95240 MDs NT6X02PK and replaces it with NT6X02PL.

The Subscriber Module - SLC-96 Remote Common CP Kit is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Channel Supervision Msg.	NT6X42AA		2	X,X+14	20	AP
Speech Bus Formatter	NT6X41AA		2	X,X+14	21	AP
Filler faceplate	NT0X50AA		2	X,X+14	24	AP
Power Converter	NT2X70AF		2	X,X+14	25	AP
Designation Strip	P0810540		2	X,X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) Shelf position X can be either 18 or 51 for frame application, or 5 and 33 for cabinet application.

RULES:

- AP 1) When PEC NT6X02PK is ordered, these items are provided.

SUBSCRIBER MODULE FOR DMS-1 URBAN COMMON CP

PEC CODE: NT6X02EA

CPC CODE: B0219976

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02EB

ABBREVIATION NAME: SMU

ENGINEERING DESCRIPTION: The Subscriber Module Urban (SMU) is the peripheral controller module for direct digital interface to the DMS-1 Urban (RCU).

REFERENCE DOCUMENTATION: SL6X02EA

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02EA EMR2-06-SMU-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 06 29	----- ECM 314 21	Previous history unavailable Reformat, MD and Retire

The Subscriber Module For DMS-1 Urban Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AC		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46AB		1	X+14	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X+14	12	AP
Time Switch CP	NT6X44CA		1	X+14	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X+14	15-17	AP
Message Interface CP	NT6X69AB		1	X+14	18	AP
SMU Pad/Ring CP	NT6X80BA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
DS30 Network Interface CP	NT6X40AA		1	X+14	22	AP
DS30 Network Interface CP	NT6X40AA		1	X+14	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X+14	25	AP
Desig. Strip (NT6X01AA)	P0678464		1	X+14	1	AP
LGC/DTC Processor CP	NT6X45AC		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46AB		1	X	11	AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	11R	AP
LGC/DTC Processor CP	NT6X45AC		1	X	12	AP
Time Switch CP	NT6X44CA		1	X	14	AP
Filler Face Plate 0.875	NT0X50AA		3	X	15-17	AP
Message Interface CP	NT6X69AB		1	X	18	AP
SMU Pad/Ring CP	NT6X80BA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
DS30 Network Interface CP	NT6X40AA		1	X	22	AP
DS30 Network Interface CP	NT6X40AA		1	X	23	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	X	25	AP
Desig. Strip (NT6X01AA)	P0678464		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMU Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02EA is ordered, these items are provided.

SMU PACKFILL

PEC CODE: NT6X02ET

CPC CODE: B0242752

| RATING: MD

REPLACES: NT6X02EP

| REPLACED BY: NT6X02EU

ABBREVIATION NAME: SMU

ENGINEERING DESCRIPTION: The NT6X02ET SMU Packfill provides the common circuit packs for one module.

REFERENCE DOCUMENTATION: SL6X02ET 00 01
PC6X02ET 00 01

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: Erica Keltner Dept. 3471 (PPK)

MAIN CONTACT: Erica Keltner Dept. 3471 (PPK)

NT6X02ET EMR2-06-SMU-10 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 03 30	ECM 314 20	Introduce NT6X02ET SMU Packfill
96 04 26	ECM 373 45	EC 024-95240 MD's NT6X02ET & replaces it with NT6X02EU.

The SMU PACKFILL is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch CP	NT6X44CA		2	X, X+14	14	AP
Channel Supervision Msg. CP	NT6X42AA		2	X, X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		2	X, X+14	21	AP
Filler Faceplate	NT0X50AA		2	X, X+14	24	AP
Power Converter CP	NT2X70AF		2	X, X+14	25	AP
Designation Strip (NT6X02EP)	P0724452		2	X, X+14		AP
Designation Strip (NT2X70AF)	P0809960		2	X, X+14	25	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
N/A		

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For frame mounting, X = 18 for one module and X = 51 for the other.
- 2) For cabinet mounting, X = 5 for one module and X = 33 for the other.

RULES:

- AP 1) When PEC NT6X02ET is ordered, these items are provided.

SUBSCRIBER MODULE FOR DMS-1 URBAN COMMON CP

PEC CODE: NT6X02EB

CPC CODE: B0227504

| RATING: MD

REPLACES: NT6X02EA

REPLACED BY: NT6X02ET

ABBREVIATION NAME: SMU

ENGINEERING DESCRIPTION: The Subscriber Module Urban (SMU) is the peripheral controller module for direct digital interface to the DMS-1 Urban (RCU).

NT6X02EB is required for BCS-27 offices.

REFERENCE DOCUMENTATION: SL6X02EB

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02EB EMR2-06-SMU-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 06 29	----- ECM 314 21	Previous history unavailable Reformat, MD and Retire

The Subscriber Module For DMS-1 Urban Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Master Processor Memory CP	NT6X47AB		1	X+14	10	AP
Signal Processor Memory CP	NT6X46BA		1	X+14	11	AP
Time Switch CP	NT6X44CA		1	X+14	14	AP
Message Interface CP	NT6X69AB		1	X+14	18	AP
SMU Pad/Ring CP	NT6X80BA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X01AA)	P0695483		1	X+14	1	AP
Master Processor Memory CP	NT6X47AB		1	X	10	AP
Signal Processor Memory CP	NT6X46BA		1	X	11	AP
Time Switch CP	NT6X44CA		1	X	14	AP
Message Interface CP	NT6X69AB		1	X	18	AP
SMU Pad/Ring CP	NT6X80BA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X01AA)	P0695483		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMU Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02EB is ordered, these items are provided.

ISDN SUBSCRIBER MODULE FOR DMS-1 URBAN COMMON CP

PEC CODE: NT6X02ES

CPC CODE: B0241059

| RATING: MD

REPLACES: NT6X02EL

| REPLACED BY: NT6X02CX

ABBREVIATION NAME: SMUI

ENGINEERING DESCRIPTION: The NT6X02ES is the common circuit packfill for the ISDN Subscriber Module Urban. The NT6X02ES does not contain NT6X69 or NT6X80 circuit packs, which were contained in the NT6X02EL. The NT6X69 and NT6X80 must now be provisioned separately per office requirements.

REFERENCE DOCUMENTATION: SL6X02ES 00 01

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Barbara Berkley Dept. 3471 (PPK)

MAIN CONTACT: Barbara Berkley Dept. 3471 (PPK)

NT6X02ES EMR2-06-SMU-20 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 08 01	ECM 616 22	Introduce the NT6X02ES packfill.
94 11 18	ECM 616 28	Correct per stocklist.
96 11 22	ECM 616 45	Per SR RR60487 add note for E911 applications on SMU.
97 05 30	ECM 714 05	MD section per EC 24-97867.

The ISDN Subscriber Module for DMS-1 Urban Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch (SMU) CP	NT6X44CA		1	X	14	AP
Channel Supervision Msg CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X02ES)	P0800308		1	X		AP
Time Switch (SMU) CP	NT6X44CA		1	X+14	14	AP
Channel Supervision Msg CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X02ES)	P0800308		1	X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For frame mounting, X = 18 for one module and X = 51 for the other.
- 2) For cabinet mounting, X = 5 for one module and X = 33 for the other.
- 3) SMUs supporting LDTPSAPS (Line Appear on Digital Trunks, Public Answering Point) (E911 service) must remain dedicated only to LDTPSAPS to ensure priority service to E911.

Due to this consideration, SMUs weith LDTs will NOT allow NT6X92BB/BC/EA (UTR/GTR) to be datafilled.

RULES:

AP 1) When PEC NT6X02ES is ordered, these items are provided.

SUBSCRIBER MODULE FOR DMS-1 URBAN COMMON CP

PEC CODE: NT6X02AW

CPC CODE: B0227819

| RATING: MD

REPLACES: N/A

REPLACED BY: NT6X02ET

ABBREVIATION NAME: SMU

ENGINEERING DESCRIPTION: The Subscriber Module Urban (SMU) is the peripheral controller module for direct digital interface to the DMS-1 Urban (RCU). This module is for field upgrades only.

NT6X02AW is required for BCS-27 field-upgraded offices.

REFERENCE DOCUMENTATION: SL6X02AW

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02AW EMR2-06-SMU-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 06 29	----- ECM 314 21	Previous history unavailable Reformat, MD and Retire

The Subscriber Module For DMS-1 Urban Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
MP Memory Plus CP	NT6X47AB		1	X+14	10	AP
SP Memory Plus CP	NT6X46AC		1	X+14	11	AP
Comm Periph Ctl BP Paddle	NT6X1205		1	X+14	11R	AP
Time Switch (SMU) CP	NT6X44CA		1	X+14	14	AP
CPP Msg Proto & Tone CP	NT6X69AB		1	X+14	18	AP
SMU Pad/Ring CP	NT6X80BA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X01AA)	P0698740		1	X+14	1	AP
MP Memory Plus CP	NT6X47AB		1	X	10	AP
SP Memory Plus CP	NT6X46AC		1	X	11	AP
Comm Periph Ctl BP Paddle	NT6X1205		1	X	11R	AP
Time Switch (SMU) CP	NT6X44CA		1	X	14	AP
CPP Msg Proto & Tone CP	NT6X69AB		1	X	18	AP
SMU Pad/Ring CP	NT6X80BA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter CP	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X01AA)	P0698740		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMU Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02AW is ordered, these items are provided.

SUBSCRIBER MODULE FOR DMS-1 URBAN (SMU) COMMON CP

PEC CODE: NT6X02EG

CPC CODE: B0231289

RATING: MD

REPLACES: NT6X02EB

REPLACED BY: NT6X02EM

ABBREVIATION NAME: SMU

ENGINEERING DESCRIPTION: The Subscriber Module Urban (SMU) is the peripheral controller module for direct digital interface to the DMS-1 Urban (RCU).

NT6X02EG is required for BCS-31 offices.

REFERENCE DOCUMENTATION: SL6X02EG 00 03

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02EG EMR2-06-SMU-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-- -- --	-----	Previous history not available.
94 08 01	ECM 616 22	Show NT6X02EG replaced by NT6X02EM.
94 10 24	ECM 314 17	MD NT6X02EG per EC#024-92942.
95 01 31	ECM 373 35	Retire this Manual Section.

The Subscriber Module For DMS-1 Urban (SMU) Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
XPM Processor CP	NT6X45BA		2	X+14	8,12	AP
Master Processor Memory CP	NT6X47AC		1	X+14	10	AP
Signal Processor Memory CP	NT6X46BB		1	X+14	11	AP
Time Switch CP	NT6X44CA		1	X+14	14	AP
SMU Pad/Ring CP	NT6X80BA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Conv +/-5V & 12V CP	NT2X70AE		1	X+14	25	AP
Desig. Strip (NT6X02EG)	P0711631		1	X+14	1	AP

XPM Processor CP	NT6X45BA		2	X	8,12	AP
Master Processor Memory CP	NT6X47AC		1	X	10	AP
Signal Processor Memory CP	NT6X46BB		1	X	11	AP
Time Switch CP	NT6X44CA		1	X	14	AP
SMU Pad/Ring CP	NT6X80BA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Conv +/-5V & 12V CP	NT2X70AE		1	X	25	AP
Desig. Strip (NT6X02EG)	P0711631		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) For frame mounting, X = 18 for one module and X = 51 for the other.
- 2) For cabinet mounting, X = 5 for one module and X = 33 for the other.

RULES:

- AP 1) When PEC NT6X02EG is ordered, these items are provided.

SUBSCRIBER MOD. DMS-1U PACKFILL W/O PROCESSOR

PEC CODE: NT6X02EM

CPC CODE: B0239728

| RATING: MD

REPLACES: NT6X02EG

| REPLACED BY: NT6X02EP

ABBREVIATION NAME: SMU

ENGINEERING DESCRIPTION: The NT6X02EM SMU packfill provides the common circuit packs for one module. The processor packs must be ordered seperately.

REFERENCE DOCUMENTATION: SL6X02EM 00 01

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: NTI: William Stanley Dept. 3471 (PPK)

NT6X02EM EMR2-06-SMU-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 03 01	ECM 678 10	Introduce NT6X02EM packfill.
95 01 31	ECM 373 35	MD NT6X02EM and retire Manual Section.

The SUBSCRIBER MOD. DMS-1U PACKFILL W/O PROCESSOR is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch CP	NT6X44CA		2	X,X+14	14	AP
SCM Pad/Ring Card CP	NT6X80BA		2	X,X+14	19	AP
Channel Supervision Msg.	NT6X42AA		2	X,X+14	20	AP
Speech Bus Formatter	NT6X41AA		2	X,X+14	21	AP
Filler faceplate	NT0X50AA		2	X,X+14	24	AP
Power Converter	NT2X70AE		2	X,X+14	25	AP
Designation Strip	P0746914		2	X,X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) Shelf position XX can be either 18 or 51.

RULES:

- AP 1) When PEC NT6X02EM is ordered, these items are provided.

SUBSCRIBER MODULE FOR DMS-1 URBAN (SMU) COMMON CP

PEC CODE: NT6X02EF

CPC CODE: B0231288

| RATING: MD

| REPLACES: NT6X02EB, NT6X02AW

| REPLACED BY: NT6X02EP

ABBREVIATION NAME: SMU

ENGINEERING DESCRIPTION: The Subscriber Module Urban (SMU) is the peripheral controller module for direct digital interface to the DMS-1 Urban (RCU).

This module is the result of the application of an NT6X02EH Product Change Kit to an existing NT6X02EB or NT6X02AW SMU Module. This module cannot be ordered new.

REFERENCE DOCUMENTATION:

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X02EF EMR2-06-SMU-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available.
95 02 19	ECM 373 36	Change status to MD per EC 24-93022. Retire this Engineering Manual.

The Subscriber Module For DMS-1 Urban (SMU) Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch CP	NT6X44CA		1	X+14	14	AP
SMU Pad/Ring CP	NT6X80BA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X02EF)	P0711630		1	X+14	1	AP
Time Switch CP	NT6X44CA		1	X	14	AP
SMU Pad/Ring CP	NT6X80BA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X02EF)	P0711630		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMU Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

AP 1) When PEC NT6X02EF is ordered, these items are provided.

SUBSCRIBER MODULE FOR DMS-1 URBAN (SMU) COMMON CP

PEC CODE: NT6X02EK

CPC CODE: B0232780

RATING: MD

| REPLACES: NT6X02EF

| REPLACED BY: NT6X02EG

ABBREVIATION NAME: SMU

ENGINEERING DESCRIPTION: The Subscriber Module Urban (SMU) is the peripheral controller module for direct digital interface to the DMS-1 Urban (RCU). NT6X02EK is required for BCS-31 offices.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Canada
US

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02EK EMR2-06-SMU-7 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 01 24	ECM 314 12	MD per EC 011-18209.
95 02 19	ECM 373 36	Retire this Engineering Manual.

The Subscriber Module For DMS-1 Urban (SMU) Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
XPM Processor CP	NT6X45BA		2	X+14	8,12	AP
Master Processor Memory CP	NT6X47AC		1	X+14	10	AP
Signal Processor Memory CP	NT6X46BA		1	X+14	11	AP
Time Switch CP	NT6X44CA		1	X+14	14	AP
SMU Pad/Ring CP	NT6X80BA		1	X+14	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Power Comb +/-5V & 12V CP	NT2X70AE		1	X+14	25	AP
Desig. Strip (NT6X02EK)	P0726661		1	X+14	1	AP

XPM Processor CP	NT6X45BA		2	X	8,12	AP
Master Processor Memory CP	NT6X47AC		1	X	10	AP
Signal Processor Memory CP	NT6X46BA		1	X	11	AP
Time Switch CP	NT6X44CA		1	X	14	AP
SMU Pad/Ring CP	NT6X80BA		1	X	19	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Power Comb +/-5V & 12V CP	NT2X70AE		1	X	25	AP
Desig. Strip (NT6X02EK)	P0726661		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One SMU Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000).

RULES:

- AP 1) When PEC NT6X02EK is ordered, these items are provided.

SMU PACKFILL

PEC CODE: NT6X02EP

CPC CODE: B0240843

| RATING: MD

REPLACES: NT6X02EM

| REPLACED BY: NT6X02ET

ABBREVIATION NAME: Not Applicable

ENGINEERING DESCRIPTION: The NT6X02EP SMU Packfill provides the common circuit packs for one module.

REFERENCE DOCUMENTATION: SL6X02EP 00 01
PC6X02EP 00 01

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02EP EMR2-06-SMU-8 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 08 26	ECM 314 14	Introduce NT6X02EP SMU Packfill
95 03 30	ECM 314 20	MD and Retire packfill per EC#024-93972.

The SMU PACKFILL is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Time Switch CP	NT6X44CA		2	X, X+14	14	AP
Channel Supervision Msg. CP	NT6X42AA		2	X, X+14	20	AP
Speech Bus Formatter CP	NT6X41AA		2	X, X+14	21	AP
Filler Faceplate	NT0X50AA		2	X, X+14	24	AP
Power Converter CP	NT2X70AE		2	X, X+14	25	AP
Designation Strip (NT6X02EP)	P0724452		2	X, X+14		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
N/A		

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" in SH POS is equal to 18 or 51.

RULES:

- AP 1) When PEC NT6X02EP is ordered, these items are provided.

SMU COMMON CIRCUIT PACK KIT

PEC CODE: NT6X02ZD

CPC CODE: B0229720

| RATING: MD

REPLACES: N/A

REPLACED BY: N/A

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: This change kit provides hardware modification to the NT6X01AA frame when converting a NT6X02DB(SMS) module to a NT6X02EA(SMU) module.

REFERENCE DOCUMENTATION: SL6X02ZD

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Steve Martin Dept. 3471 (PPK)

MAIN CONTACT: NTI: Steve Martin Dept. 3471 (PPK)

NT6X02ZD EMR2-06-SMU-9 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 06 29	----- ECM 314 21	Previous history unavailable Reformat, MD and Retire

The SMU Common Circuit Pack Kit is comprised of the following:

ACTION	EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
REMOVE	SMS Processor	NT6X45CA		4	18, 32 or 51, 65	8, 12	AP
REMOVE	A Bit Message Card	NT6X86AA		2	18, 32 or 51, 65	13	AP
REMOVE	Time Switch	NT6X44AB		2	18, 32 or 51, 65	14	AP
REMOVE	Msg Interface	NT6X43AA		2	18, 32 or 51, 65	18	AP
REMOVE	SCM Pad/Ring Card	NT6X80AA		2	18, 32 or 51, 65	19	AP
REMOVE	DS30 Network Intrf	NT6X40BA		2	18, 32 or 51, 65	22	AP
REMOVE	Filler Faceplate	NT0X50AA		2	18, 32 or 51, 65	23	AP
REMOVE	Des Strip	P0685042		2	18, 32 or 51, 65		
ADD	LGC/DTC Processor	NT6X45AC		4	18, 32 or 51, 65	8, 12	AP
ADD	Time Switch	NT6X44CA		2	18, 32 or 51, 65	14	AP
ADD	CPP Msg Proto&Tone	NT6X69AB		2	18, 32 or 51, 65	18	AP
ADD	SMU Pad/Ring	NT6X80BA		2	18, 32 or 51, 65	19	AP
ADD	DS30 Network Intrf	NT6X40AA		4	18, 32 or 51, 65	22, 23	AP
ADD	Des Strip	P0678464		2	18, 32 or 51, 65		

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) Provide minimum one (1) maximum two (2) NT6X02ZD Common Circuit Pack Kit per frame when converting NT6X02 Modules as follows:

FROM		TO	
DESCRIPTION	MODULE	DESCRIPTION	MODULE
SMS Common CP	NT6X02DB	SMU Common CP	NT6X02EA

RULES:

- AP 1) When PEC NT6X02ZD is ordered, these items are provided.

COMMON PERIPHERAL CONTROLLER EQUIPMENT FRAME

PEC CODE: NT6X01AA

CPC CODE: B0215484

RATING: MD

REPLACES: None

REPLACED BY: NT6X01AD (NTZZ17AT)

ABBREVIATION NAME: LGE (LINE GROUP EQUIPMENT FRAME)
DTE (DIGITAL TRUNK EQUIPMENT FRAME)
LTE (LINE TRUNK EQUIPMENT FRAME)
SME (SUBSCRIBER MODULE EQUIPMENT FRAME)

ENGINEERING DESCRIPTION: NT6X01AA is a general purpose Common Peripheral Controller Equipment Frame which houses Line Group Controller (LGC), Digital Trunk Controller (DTC), Line Trunk Controller (LTC), Subscriber Module for SLC-96 (SMS), Subscriber Module Rural (SMR), Subscriber Module Urban (SMU), and Subscriber Module-100S Remote (SMS-R). Refer to ECM 678 when upgrading to or providing XPM+ on the NT6X01AA frame.

REFERENCE DOCUMENTATION: MS6X01AA 01 04

MARKETS: Applicable markets:

Canada
US
CALA
Asia/Pacific
Europe

ISSUE AUTHOR: Barbara Berkley Dept. 3471 (PPK)

MAIN CONTACT: Barbara Berkley Dept. 3471 (PPK)

NT6X01AA EMR2-06-000 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available.
92 11 12	ECM 373 15	Reflect repackaging of Enhanced Office Recovery feature in BCS-34. Reflect rating change pending on SMR. Show that NT6X70 Cont. Tone Det. CPs are prov. in LTCs (per IS6X01). Make clear that existing NT6X40CA/DA may not be upgraded to NT6X40FA/GA.
92 12 18	ECM 231 09	ECD 011-15666 Introduce the SMR field upgrade kit
93 02 25	ECM 673 01	ECD 011-17434 Introduces the NT6X02YS field upgrade kit required to support the DWS feature in the NT6X01AA CPCE frame. The NT6X02XC kit is added for XPM to XPM+ upgrades.
93 04 01	ECM 673 02	Corrected RUL26, RUL25 was referred to twice. The second occurrence of RUL25 should have been RUL26.
93 06 25	ECM 373 19	EC 024-88946 Add the Universal Connector Kit. MD NT6X02BU Kit
93 07 14	ECM 373 20	EC 011-18163. Add NTMX76AA Extended Distances Msg.
93 08 30	ECM 373 21	Make the rule for UTRs in the SMS module clear.
93 09 27	ECM 373 22	EC 011-17725 Add 16 C-side port capability for SMS; ET 17449 Add note to remove DS-30 I/F in slot 23 of old XPMs when upgrading to DS-512
94 01 24	ECM 314 12	MD packfills: NT6X02CB/CC/CP/CQ/CS/CT/DM/EK
94 03 01	ECM 678 10	Add SCM packfills to support XPM+.

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
		Replace NT6X02XC with NT6X02XF.
94 03 21	ECM 373 24	Add note for DMS250 application. Not to use NT6X46BB and NT6X62AB's
94 04 07	ECM 373 25	Add text in the EM sections to clarify the provisioning of the NT6X78 CMR card in the LTC/LGC.
94 05 02	ECM 373 26	Allow provisioning of new XPM+ modules on existing NT6X01AAs
94 06 30	ECM 678 11	Include information for XPM+ on SMS and SMS-R modules.
94 07 14	ECM 314 13	Add capability for UTR on SMU modules. Add rules for ADSI/SCWID support.
94 07 31	ECM 373 28	Add NT6X02PH and NT6X02DS Engineering Manual Section numbers, identify MD and A&M packfills.
94 09 06	ECM 678 14	Add NT6X02EP and NT6X02WE and NT6X80BB information.
94 10 24	ECM 328 16	Add NT6X85AC and NT6X92BC information per EC 024-92938. MD NT6X02DH/DJ/DR/ IC/PD/PH per EC#024-92942.
94 12 12	ECM 678 17	Add NT6X02XG and NTMX70AB per EC#011- 21135, chg NT6X02XF to A&M status. Fix typo in rul3. MD NT6X85BA.
95 02 19	ECM 373 36	EC 024-93299 allows ADSI/SCWID for XPM as well as XPM+ modules. Update provisioning table to include latest packfills. Clarify rules for NTMX70AB and NT6X02XG.
95 03 13	ECM 373 37	EC 024-93747 adds NT7X05AA. Simplify XPM+ rule text.
95 04 04	ECM 328 19	Add NT2X70AF info per EC#024-93972, and MD NT2X70AE. MD NT6X43AA per

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
		EC#024-91889.
95 04 20	ECM 328 20	Clarify RUL2.
95 05 04	ECM 678 20	Update per EC#024-94170 to provision one NT6X0250 with XPM+ field upgrade.
95 08 17	ECM 678 22	Update per EC#024-94576 introducing NT6X02WG Product Change Kit
95 11 08	ECM 678 24	EC 024-94348 Show NT6X44AA as the replacement for NT6X44AB. EC 024-92020 MD's NT6X44AB & replaces it with NT6X44AA.
96 04 26	ECM 373 45	Introduce Global Tone Receiver (GTR), NT6X92EA, that will eventually replace all NT6X92 UTRs. Check availability dates. EC 024-95240-MDs NT6X02PK/IH/ET/DU and replaces them with NT6X02PL/CZ/EU/DV, respectively. This change was done to remove NT2X70AFs from the stocklists. -Introduce NT6X40AD/FB to replace NT6X40AC/FA, respectively. -Change status of NT6X40CA from A&M to MD in the flaglist. -Add NT2X70AY as an orderable item. -Clarify that NT6X50AB is required for fiber applications. -Re-clarify rules on NT6X69AC/AD. -Add NT6X01XF as an orderable kit and correct the mounting pos of NT6X0130.
96 06 14	ECM 678 26	SR RR63752- Update description to refer to ECM 678 for upgrading or provisioning XPM+. Also, clarify RUL25 to show use of NTMX70AB.
96 11 22	ECM 314 23	Per SR RR60487 add note for E911 applications on SMU. Correct product rating for NT6X40AC, product is still rated STD, not MD. Update rules/flaglist per MD EC 24-96637.

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
97 01 07	ECM 373 47	Add clarification to Rule 17 on restrictions for use of NT6X69AD. Per EC 024-96669 MD NT6X01AA.
97 03 11	ECM 714 02	Per ECD 024-97290 provision NTMX76AB. Clarify notes on NT2X70AF.
97 04 01	ECM 714 03	MD NT6X0130 and NT6X01XF per ECD 024-96637. Per ECD 024-96698, NT6X45BB and NT6X45CA MD'd. Per ECD 024-97224, NT6X02EH MD'd.
97 04 23	ECM 714 04	EC 024 97732 introduces SMR to SMU and SMS to SMU change kits. Update equipment list and flaglist to reflect MD of NT6X0130 and NT6X01XF (should have been included in iss.02) Update flaglist to show NT6X45BB/CA status and replacements (SR RR74572).
97 05 30	ECM 714 05	ECD 024 97867 MDs the NT6X02XF kit.
97 11 17	ECM 714 08	Add advanced provisioning info. for NT6X41AC circuit pack.

The Common Peripheral Controller Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Common Peripheral Controller	AR			51		RUL1
CPC Filler Face Plate	NT6X02AB			51		RUL7
Controller Array Shf Assy	NT6X0201	CPA1	1	65		AP
Controller Array Shf Assy	NT6X0201	CPA0	1	51		AP
# Auxiliary Fuse Panel	NT6X0130			44		RUL23
# Auxiliary Fuse Panel Upg Kit	NT6X01XF			44		RUL23
# XPM Formatter/Clock CP	NT6X41AC			XX	21	RUL34
# SCM DS1 Interface CP	NT6X85AA			XX	1-5	RUL3
# SCM DS1 Interface CP	NT6X85AB			XX	1-5	RUL3
# SMU DS1 Interface CP	NT6X85BA			XX	1-5	RUL3
SMU DS1 Interface CP	NT6X85AC			XX	1-5	RUL3
DS1 Interface CP	NT6X50AA			XX	1-5	RUL3
DS1 Interface CP	NT6X50AB			XX	1-5	RUL3
DS1 Echo Cancellation	NT6X50EC			XX	1-5	RUL3
DS0A Interface CP	NT6X55AB			XX	1-5	RUL3
DS30A LCM Interface CP	NT6X48AA			XX	6, 7	RUL4
XPM Processor CP	NT6X45AF			XX	8, 12	RUL13
XPM Processor CP	NT6X45BA			XX	8, 12	RUL13
# XPM Processor CP	NT6X45BB			XX	8, 12	RUL13
# XPM Processor CP	NT6X45CA			XX	8, 12	RUL13
Wiring Option	NT6X0205			XX	12	RUL21
Unified Processor	NTMX77AA			XX	12	AP01
Master Proc Memory Plus CP	NT6X47AB			XX	09	RUL15
Master Proc Memory Plus CP	NT6X47AC			XX	10	RUL15
# SP Memory Plus CP	NT6X46BA			XX	11	RUL19
Signal Proc Memory Plus CP	NT6X46BB			XX	11	RUL19
						RUL20
						NOTE5
Continuity Tone Detector CP	NT6X70AA			XX	13	RUL5
# CLASS Modem Resource CP	NT6X78AA			XX	13	RUL18
CLASS Modem Resource CP	NT6X78AB			XX	13	RUL18
A-Bit Message CP	NT6X86AB			XX	13	RUL27
Des. Label (NT6X86AB)	P0724376			XX	13	RUL27
Time Switch CP	NT6X44AA			XX	14	RUL26
# Time Switch CP	NT6X44AB			XX	14	RUL26
Enhanced Time Switch CP	NTAX78AA			XX	14	RUL26
# Universal Tone Receiver	NT6X92BA			XX	15-16	RUL10
# Universal Tone Receiver	NT6X92BB			XX	15, 16, 17	RUL10
# Universal Tone Receiver	NT6X92BC			XX	15, 16, 17	RUL10

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Global Tone Receiver	NT6X92EA			XX	15, 16, 17	RUL10
Peripheral Loader CP	NT7X05AA			XX	15, 17	RUL31
# CLASS Modem Resource CP	NT6X78AA			XX	16	RUL18
CLASS Modem Resource CP	NT6X78AB			XX	16	RUL18
STR/BBF CP	NT6X62AB			XX	16	RUL22 NOTE5
# Message Interface CP	NT6X43AA			XX	18	RUL17
# CPP Msg Protocol & Tone CP	NT6X69AB			XX	18	RUL17
CPP Msg Protocol & Tone CP	NT6X69AC			XX	18	RUL17
CPP Msg Protocol & Tone CP	NT6X69AD			XX	18	RUL17
Extended Distance Msg.	NTMX76AA			XX	18	RUL17
Extended Distance Msg.	NTMX76AB			XX	18	RUL17
# Pad/Ring Card	NT6X80AA			XX	19	RUL28
# Des. Label (NT6X80AA)	P0666355			XX	19	RUL28
Pad/Ring Card	NT6X80BB			XX	19	RUL28
Des. Label (NT6X80BB)	P0800015			XX	19	RUL28
Terminator Card	NTMX71AA			XX	19R	AP01
DS30 Network Interface CP	NT6X40AC			XX	22	RUL14
DS30 Network Interface CP	NT6X40AD			XX	22	RUL14
# DS30 Network Interface CP	NT6X40BA			XX	22	RUL14
# DS-512 XPM Interface CP	NT6X40CA			XX	22	RUL14
# DS-512 Link Paddle Board	NT6X40DA			XX	22R	RUL14
# DS-512 XPM Interface CP	NT6X40FA			XX	22	RUL14
DS-512 XPM Interface CP	NT6X40FB			XX	22	RUL14
DS-512 Link Paddle Board	NT6X40GA			XX	22R	RUL14
# H/W Assy (FXPM Bracket)	NT6X02BU			XX	22	RUL2
Universal Connector Kit	NT6X02UF			XX	22R	RUL2
Fiber Cable Conversion Kit	NT6X0251			XX	22R	RUL2
Universal Ground Point	NT6X0250					RUL2, RUL25
SMS-R DS-30A C-Side Intf CP	NT8X18BA			XX	22	RUL9
# Power Conv +/-5V & 12V CP	NT2X70AD			XX	25	RUL16
# Power Conv +/-5V & 12V CP	NT2X70AE			XX	25	RUL16
Power Conv +/-5V & 12V CP	NT2X70AF			XX	25	RUL16
NT2X70AF Upgrade Kit	NT2X70AY			XX	25	RUL16
Filler Face Plate 0.875	NT0X50AA			XX	1-9, 13, 19 15-17 23	RUL11
Frame Supervisory Panel	NT0X28AM	FSP		45		AP
Controller Array Shf Assy	NT6X0201	CPA1	1	32		AP
Controller Array Shf Assy	NT6X0201	CPA0	1	18		AP
Common Peripheral Controller	AR			18		RUL1

Retired Equipment
Common Peripheral Controller Equipment Frame

NT6X01AA
EMR2-06-000
Page 7

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
# Cooling Inverter Unit	NT3X90AB	CU		04		RUL8
# Cooling Inverter Unit	NT3X90AA	CU		04		RUL8
DC Cooling Inverter Unit	NT3X90AC	CU		04		RUL8
Logic Return Cable Assy	NT0X0009					RUL12
DTC Common CP Upgrade Kit	NT6X02YS			XX		RUL24
# XPM to XPM+ Upgrade Kit	NT6X02XC			XX		RUL25
# XPM PLUS Packfill Kit	NT6X02XF			XX		RUL25
XPM PLUS Packfill Kit	NT6X02XG			XX		RUL25
XPM PLUS Paddleboard Kit	NTMX70AB			XX		RUL25
NT6X86AB Change Kit	NT6X02WC			XX		RUL29
NT6X80BB/86AB Change Kit	NT6X02WG			XX		RUL29
NT6X80BB Change Kit	NT6X02WE			XX		RUL30
SMR to SMU Kit	NT6X02YA			XX		RUL32
SMR to SMS Kit	NT6X02YB			XX		RUL33
Desig. Label for NT6X50AA	P0626878			XX		RUL6
Desig. Label for NT6X50AB	P0690976			XX		RUL6
Desig. Label for NT6X50EC	P0731675			XX		RUL6
Desig. Label for NT6X55AB	P0702525			XX		RUL6
# Desig. Label for NT6X85AA	P0666351			XX		RUL6
# Desig. Label for NT6X85AB	P0686754			XX		RUL6
# Desig. Label for NT6X85BA	P0748462			XX		RUL6
Desig. Label for NT6X85AC	P0801996			XX		RUL6
Desig. Label for NT6X48AA	P0626877			XX		RUL6
# Desig. Label for NT6X45AF	P0685029			XX		RUL6
Desig. Label for NT6X45BA	P0665152			XX		RUL6
# Desig. Label for NT6X45BB	P0702191			XX		RUL6
# Desig. Label for NT6X45CA	P0705066			XX		RUL6
Desig. Label for NT6X47AB	P0666374			XX		RUL6
Desig. Label for NT6X47AC	P0711663			XX		RUL6
Desig. Label for NT6X46BB	P0711664			XX		RUL6
# Desig. Label for NT6X46BA	P0698315			XX		RUL6
Desig. Label for NT6X70AA	P0628358			XX		RUL6
# Desig. Label for NT6X78AA	P0699568			XX		RUL6
Desig. Label for NT6X78AB	P0731980			XX		RUL6
# Desig. Label for NT6X92BA	P0676183			XX		RUL6
# Desig. Label for NT6X92BB	P0690565			XX		RUL6
# Desig. Label for NT6X92BC	P0737431			XX		RUL6
Desig. Label for NT6X92EA	P0835224			XX		RUL6
# Desig. Label for NT6X43AA	P0666352			XX		RUL6
# Desig. Label for NT6X69AB	P0698317			XX		RUL6
Desig. Label for NT6X69AC	P0710476			XX		RUL6

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Desig. Label for NT6X69AD	P0800014			XX		RUL6
Desig. Label for NTMX76AA	P0744109			XX		RUL6
Desig. Label for NTMX76AB	P0857783			XX		RUL6
Desig. Label for NT6X40AC	P0695397			XX		RUL6
Desig. Label for NT6X40AD	P0834806			XX		RUL6
# Desig. Label for NT6X40BA	P0705065			XX		RUL6
# Desig. Label for NT6X40CA	P0710477			XX		RUL6
# Desig. Label for NT6X40FA	P0729895			XX		RUL6
Desig. Label for NT6X40FB	P0834807			XX		RUL6
Desig. Label for NT8X18BA	P0712505			XX		RUL6
# Desig. Label for NT2X70AE	P0698943			XX		RUL6
Desig. Label for NT2X70AF	P0809960			XX		RUL6
Desig. Label for NT6X62AB	P0711789			XX		RUL6
Desig. Label for NT6X44AA	P0698316			XX		RUL6
# Desig. Label for NT6X44AB	P0664134			XX		RUL6
Desig. Label for NT7X05AA	P0808071			XX		RUL6
Desig. Label for NTAX78AA	P0737140			XX		RUL6

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT6X41AC	LTD	N/A
NT2X70AD	MD	NT2X70AE
NT3X90AA	MD	NT3X90AC
NT3X90AB	MD	NT3X90AC
NT6X02BU	MD	NT6X02UF
NT6X02CB	MD	No Replacement
NT6X02CC	MD	No Replacement
NT6X02CP	MD	No Replacement
NT6X02CQ	MD	No Replacement
NT6X02CS	MD	No Replacement
NT6X02CT	MD	No Replacement
NT6X02DH	MD	NT6X02DR
NT6X02DJ	MD	NT6X02DS
NT6X02DM	MD	NT6X02DH
NT6X02DR	MD	NT6X02DS
NT6X02EK	MD	NT6X02EG
NT6X02IC	MD	NT6X02IG
NT6X02PD	MD	NT6X02PG
NT6X02PG	MD	NT6X02PH
NT6X02XC	MD	NT6X02XF
NT6X02XF	MD	NT6X02XG

PEC	RATING	REPLACED BY PEC
NT6X40BA	MD	NT6X40AC
NT6X40CA	MD	NT6X40FA
NT6X40DA	A&M	NT6X40GA
NT6X46BA	MD	NT6X46BB
NT6X69AB	MD	NT6X69AC
NT6X78AA	MD	NT6X78AB
NT6X80AA	MD	NT6X80BB
NT6X85AA	MD	NT6X85AB
NT6X85AB	MD	NT6X85AC
NT6X85BA	MD	NT6X85AB/AC
NT6X92BA	MD	NT6X92BB
P0664133	MD	P0698943
P0666351	MD	P0686754
P0698317	A&M	P0710476
P0699568	MD	P0731980
P0710477	A&M	P0729895
NT2X70AE	MD	NT2X70AF
NT6X43AA	MD	No Replacement
NT6X02DS	MD	NT6X02DT
NT6X02EP	MD	NT6X02ET
NT6X02IG	MD	NT6X02IH
NT6X02PH	MD	NT6X02PJ
NT6X44AB	MD	NT6X44AA
P0664134	MD	P0698316
NT6X02PJ	MD	NT6X02PK
NT6X02DT	MD	NT6X02DU
NT6X92BB	MD	NT6X92BC
NT6X92BC	STD*	NT6X92EA
P0690565	STD*	P0835224
P0737431	STD*	P0835224
NT6X02IH	MD	NT6X02CZ
NT6X02PK	MD	NT6X02PL
NT6X02ET	MD	NT6X02EU
NT6X02DU	MD	NT6X02DV
NT6X40AC	STD	-----
NT6X40FA	MD	NT6X40FB
P0695397	MD	P0834806
P0729895	MD	P0834807
NT6X45BB	MD	NT6X45BA
NT6X45CA	MD	NT6X45EA
NT6X0130	MD	No Replacement
NT6X01XF	MD	No Replacement

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) In SHF POS, XX can be one of 18, 32, 51, or 65.
- 2) NT6X01AA is a general purpose Common Peripheral Controller Equipment Frame which houses Line Group Controller (LGC), Digital Trunk Controller (DTC), Line Trunk Controller (LTC), Subscriber Module for SLC-96 (SMS), Subscriber Module Rural (SMR), Subscriber Module Urban (SMU), and Subscriber Module-100S Remote (SMS-R) modules. The NT6X01AA has been MD'd and replaced with NT6X01AD. Each of these modules is housed in two adjacent shelves (i.e., a pair of shelves on positions 65 and 51 and a pair of shelves on positions 32 and 18).

Four distinct functional names are associated with this hardware:

Line Group Equipment (LGE) defines the intended function where the frame is configured specifically to house LGC.

Digital Trunk Equipment (DTE) defines the intended function where the frame is configured specifically to house DTC. A toll office requires only DTE frames.

Line Trunk Equipment (LTE) defines the intended function where the frame is configured specifically to house LTC.

Subscriber Module Equipment (SME) defines the intended function where the frame is configured specifically to house SMR, SMS, SMU, or SMS-R.

In a very small office or in an office where it is desirable to save the last frame, one (1) LGC, DTC, LTC, or SCM module may also be combined in this configuration on the upper side of the frame (i.e. second module on the frame). The frame name will be derived from the bottom module within the frame (i.e. first module on the frame).

- 3) SMUs supporting LDTPSAPS (Line Appear on Digital Trunks, Public Service Answering Point) (E911 service) must remain

dedicated only to LDTPSAPS to ensure priority service to E911. Due to this consideration, SMUs with LDTs will NOT allow NT6X92BB/BC/EA (UTR/GTR) to be datafilled.

- 4) Each LGC/DTC/LTC/SMR/SMU module requires four cables per plane to the Speech Link Connecting Panel. The four Speech Link Cable Groups from one module are to be adjacent in one Peripheral Speech Link (PSL) panel. One LGC/DTC/LTC/SMR/SMU module uses up one quarter of a PSL panel on SLC frame.

Each SMS module has a minimum of three and a maximum of sixteen DS-30 ports to the network. Hence, from one to four Speech Link Cable Groups on a PSL are required for each SMS module.

- 5) For DMS-250 applications the NT6X46BB is now acceptable for provisioning.
- 6) Support for the Analog Display Services Interface (ADSI) and the Spontaneous Call Waiting ID (SCWID) feature of BCS-36+ requires the NT6X78 Class Modem Resource (CMR) CPs, NT6X92 Universal Tone Receiver (UTR) CPs or Global Tone Receiver (GTR) CPs, and the NT6X69AD Message Protocol and Tone CPs. ADSI and SCWID are line features and are not applicable to DTC modules. In the case of the SMS-R module, the necessary CPs to support the ADSI/SCWID feature must be provided in the Remote Switching Center (RSC) which is hosting the SMS-R, rather than in the SMS-R module itself.

RULES:

- AP 1) When PEC NT6X01AA is ordered, these items are provided.
- AP-01 1) When the NT6X02XG XPM+ Upgrade Kit is ordered, these items are provided.
- RUL1 1) The following peripheral controller modules may be mounted on the NT6X01AA Common Peripheral Equipment Frame. Provide one (1) appropriate common circuit pack set (packfill) to equip one peripheral controller module (both shelves). Additional circuit packs will also be required depending on module type and customer requirements. Refer to the Engineering Manual Section listed with each packfill for a list of included circuit packs and their mounting locations.

MODULE TYPE	PACKFILL	MANUAL SECTION
Retired Equipment		NT6X01AA
Common Peripheral Controller Equipment Frame		EMR2-06-000
		Page 12

#	LGC/DTC/LTC	NT6X02AC	EMR2-06-DTC-2
#	LGC/DTC/LTC	NT6X02BC	EMR2-06-LGC-8
#	DTC	NT6X02AF	EMR2-06-DTC-1
#	DTC	NT6X02AQ	EMR2-06-DTC-5
#	DTC	NT6X02AM	EMR2-06-DTC-4
#	DTC	NT6X02AR	EMR2-06-DTC-3
#	DTC	NT6X02AS	EMR2-06-DTC-7
#	DTC	NT6X02IA	EMR2-06-DTC-6
#	DTC	NT6X02IC	EMR2-06-DTC-8
#	DTC	NT6X02IG	EMR2-06-DTC-9
#	DTC	NT6X02IH	EMR2-06-DTC-7
	DTC	NT6X02CZ	EMA2-06-DTC-8
#	LGC	NT6X02AH	EMR2-06-LGC-6
#	LGC	NT6X02AE	EMR2-06-LGC-2
#	LGC	NT6X02AY	EMR2-06-LGC-3
#	LGC	NT6X02AZ	EMR2-06-LGC-4
#	LGC	NT6X02AL	EMR2-06-LGC-5
#	LGC	NT6X02AT	EMR2-06-LGC-9
#	LGC	NT6X02LA	EMR2-06-LGC-7
	LGC	NT6X02LC	EMA2-06-LGC-1
#	LTC	NT6X02AD	EMR2-06-LTC-1
#	LTC	NT6X02AG	EMR2-06-LTC-3
#	LTC	NT6X02AK	EMR2-06-LTC-2
#	LTC	NT6X02AU	EMR2-06-LTC-2
#	LTC	NT6X02MA	EMR2-06-LTC-4
	LTC	NT6X02MC	EMA2-06-LTC-1
#	SMR	NT6X02CA	EMR2-06-SMR-1
#	SMR	NT6X02CC	EMR2-06-SMR-2
#	SMR	NT6X02CP	EMR2-06-SMR-3
#	SMR	NT6X02CQ	EMR2-06-SMR-4
#	SMR	NT6X02CS	EMR2-06-SMR-5
#	SMR	NT6X02CT	EMR2-06-SMR-6
#	SMS	NT6X02DA	EMR2-06-SMS-1
#	SMS	NT6X02DB	EMR2-06-SMS-2
#	SMS	NT6X02DC	EMR2-06-SMS-4
#	SMS	NT6X02DD	EMR2-06-SMS-3
#	SMS	NT6X02DJ	EMR2-06-SMS-5
#	SMS	NT6X02DH	EMR2-06-SMS-6
#	SMS	NT6X02DM	EMR2-06-SMS-7
#	SMS	NT6X02DR	EMR2-06-SMS-8
#	SMS	NT6X02DS	EMR2-06-SMS-9
#	SMS	NT6X02DT	EMR2-06-SMS-9
#	SMS	NT6X02DU	EMR2-06-SMS-10
	SMS	NT6X02DV	EMA2-06-SMS-8

NOTES:

Indicates Manufacturing Discontinued (MD) status.

	MODULE TYPE	PACKFILL	MANUAL SECTION
#	SMU	NT6X02EA	EMR2-06-SMU-1
#	SMU	NT6X02EB	EMR2-06-SMU-2
#	SMU	NT6X02AW	EMR2-06-SMU-3
#	SMU	NT6X02EF	EMR2-06-SMU-6
#	SMU	NT6X02EG	EMR2-06-SMU-4
#	SMU	NT6X02EK	EMR2-06-SMU-7
#	SMU	NT6X02EM	EMR2-06-SMU-5
#	SMU	NT6X02EP	EMR2-06-SMU-8
#	SMU	NT6X02ET	EMR2-06-SMU-10
	SMU	NT6X02EU	EMA2-06-SMU-8
#	SMS-R	NT6X02PA	EMR2-06-SMSR-1
#	SMS-R	NT6X02PB	EMR2-06-SMSR-2
#	SMS-R	NT6X02PD	EMR2-06-SMSR-3
#	SMS-R	NT6X02PG	EMR2-06-SMSR-4
#	SMS-R	NT6X02PH	EMR2-06-SMSR-5
#	SMS-R	NT6X02PJ	EMR2-06-SMSR-6
#	SMS-R	NT6X02PK	EMR2-06-SMSR-7
	SMS-R	NT6X02PL	EMA2-06-SMSR-6

NOTES:

Indicates Manufacturing Discontinued (MD) status.

- 2) Provide peripheral controller modules per customer requirements. One (1) NT6X01AA Common Peripheral Equipment Frame can accommodate a maximum of two (2) peripheral controller modules.
- 3) Each module can be mounted on shelf assembly pair on positions 65 and 51 or on shelf assembly pair on positions 32 and 18. When a shelf assembly pair is equipped with LGC, DTC or LTC module, the two shelves making up the module become LGA, DTA or LTA.
- 4) Provide one (1) NT6X02ZJ Product Change Kit for each module equipped with NT6X46AB Signaling Processor CPs to provide support for BCS-27 and higher. The NT6X02ZJ Kit provides two (2) NT6X46AC SP Memory Plus CPs to replace the NT6X46ABs.
- 5) The following CPC modules CP Fills are to be provided in order to satisfy the BCS-27 expanded memory requirement:

DTC	NT6X02IA	or later
LGC	NT6X02LA	or later
LTC	NT6X02MA	or later
SMU	NT6X02EB	

- 6) Provision one (1) NT6X02XG XPM+ Product Change Kit, in addition to the appropriate packfill, to equip one new module to be mounted on an existing NT6X01AA CPCE Frame with the Unified Processor (XPM+) configuration. Refer to RUL25.

RUL2 1) Provide one Universal Connector Kit (NT6X02UF) per new module when either DS30 (Copper) or DS512 (Fiber) network interface is being used.

- 2) When upgrading a module from DS30 (Copper) to DS512 (Fiber) provide one Universal Connector Kit (NT6X02UF) and one Fiber Cable Conversion Kit (NT6X0251) per module being upgraded. If a module already has the FXPM Bracket (NT6X02BU) or the Universal Connector Kit (NT6X02UF) assigned to it, do not provide the Universal Connector Kit (NT6X02UF).

- 3) Provide one Universal Ground Point Cable (NT6X0250) per frame when the first Universal Connector Kit is provided OR when doing an XPM+ field upgrade to a frame. Refer to RUL25. Only one Universal Ground Point is required per frame.

RUL3 1) For U.S. Applications Only

Provide maximum ten (10) NT6X50AA or NT6X50AB, DS1 Interface CP for each LTC/LGC/DTC module as per customer requirements. NT6X50AB is required for applications where a fiber span (SONET) is used.

Provide maximum ten (10) NT6X50AA, DS-1 Interface CP for each SMR module as per customer requirements.

For Canadian Applications Only

The NT6X50AB CP will only be provided if the customer orders the Extended Super Frame (ESF) Format and/or 64 Kb/s clear channel capability based on B8ZS. The enhanced features of the NT6X50AB (i.e. ESF and 64 KB/s clear channel capability based on B8ZS) will not be available on SMRs. If the Customer only wants the NT6X50AA feature set, only the NT6X50AA CP will be provided. Hence, provide maximum ten (10) NT6X50AA or NT6X50AB, DS-1 Interface CP for each DTC/LGC/LTC/SMR module as per customer requirements.

For Canadian & U.S. Applications

Provide max. ten (10) NT6X85AB SCM DS-1 Interface CP for each SMS and SMS-R module per customer requirements. Rat-

ing change is pending for the NT6X85AB. Provide max. ten (10) NT6X85AC DS-1 Interface CPs when the NT6X85AC is available for this application per manufacturing phase-in plan.

For each SMU, provide maximum ten (10) NT6X85AC DS-1 Interface CPs. The NT6X85AC replaces the formerly provided NT6X85AB for SMU applications immediately.

The NT6X85AC is generally available and is used for SMS and SMS-R applications.

- 2) One NT6X50AA or NT6X50AB provides interfaces for up to two (2) T-1 spans. The following table is a listing of DS1 ports per circuit pack location.

CP POS	5	4	3	2	1
SHF POS X+14	PORTS 2, 3	PORTS 6, 7	PORTS 10, 11	PORTS 14, 15	PORTS 18, 19
SHF POS X	PORTS 0, 1	PORTS 4, 5	PORTS 8, 9	PORTS 12, 13	PORTS 16, 17

For the lower module in the frame X=18 (i.e., shelf positions 18 and 32),

and for the upper module in the frame X=51 (i.e., shelf positions 51 and 65).

The DS1 ports in the Trunk Member Table of the DMS switch are referred to as circuits. The DS1 port number equals the circuit number.

- 3) For DTC, assign the DS-1 hardware in the module such that the DS-1 ports (circuits) start from port 0 and increase in a sequential order (i.e. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19). This assignment is really critical only if there are 18 or less than 18 core equipped DS-1 ports/circuits. For new offices this rule must be strictly adhered to.

- 4) For LGC/LTC, assign first the DS30A LCM Interface CP in the module (see RUL4). Then assign the DS-1 Interface CP in the module such that the DS-1 ports(circuits) start from 0 and ascend sequentially (0,1,2,...) The LGC/LTC DS-1 ports (circuits) that are used by digital trunking, links to RSC, links to RLCM, and links to OPM are to be picked from this block of ports (circuits). For new offices, this rule must be strictly adhered to.

This rule is critical in LGC/LTC that have fewer than 16 network ports and when 18 or less than 18 DS-1 ports are used for trunking or homing remotes.

- 5) Provide one (1) NT6X55AB CP for each DS0A (56 Kb/s) signaling link required. This CP can be provisioned in any slot that an NT6X50 CP is allowed. The NT6X55AB CP consumes two (2) DS1 ports and uses one of the 24 channels of the first DS1 port for the DS0A channel. The remaining 47 channels cannot be used. Therefore, the NT6X55AB CPs should be evenly distributed across all DTCs to minimize the port impact.
- 6) Provide a maximum of 10 NT6X50EC DS-1 with Echo Cancellation per CPCI module per customer requirements. The NT6X50EC is identical to the NT6X50AB except this circuit pack includes echo cancellation. All provisioning rules for the NT6X50AB apply to the NT6X50EC. The modifications to the NT6X50AB apply to the NT6X50EC. The modifications to the backplane required to bring in -48V power and the different software that controls the board operation will not allow the NT6X50EC to be backward compatible with NT6X50AA/AB circuit packs.

- RUL4
- 1) Provide maximum four (4) NT6X48AA, DS30A LCM Interface CP for each LGC/LTC module as per customer requirements (not to be assigned to DTC/SMR). Otherwise provide one (1) NT0X50AA for each unequipped position.
 - 2) One pair of NT6X48AA provides interfaces for up to ten (10) DS30A ports (links) from LCM's. Assign one member of the pair to LGA/LTA 0 (lower shelf within the module) and the other to LGA/LTA 1 (upper shelf within the module). One member of the pair has the same DS30A ports as the other member of the card pair. Both cards of the pair occupy the same CP position but on different shelves.
 - 3) The following is a listing of DS30A ports per DS30A LCM Interface CP, NT6X48AA location.

	CP POS 6	CP POS 7
PORT	2	0
PORT	3	1
PORT	6	4
PORT	7	5
PORT	10	8
PORT	11	9
PORT	14	12
PORT	15	13
PORT	18	16
PORT	19	17

- 4) For LGC/LTC's equipped with one (1) pair of DS30A LCM Interface CP in the module (i.e., in card slot 06 only) the port circuits must start and follow the sequence, 19, 18, 15, 14, 11, 10, 7, 6, 3 and 2.

In the event of a later installation of a second pair of DS30A LCM Interface CP, the port/circuits must be reconfigured to spread the port/circuits across both pairs of CP.

For LGC/LTC, equipped with two (2) pairs of DS30A LCM Interface CP in the module (i.e. in card slots 06 and 07) the port/circuits must start and follow the sequence 19, 17, 18, 16, 15, 13, 14, 12, 11, 9, 10, 8, 7, 5, 6, 4, 3, 1, 2 and 0. LGC/LTC DS30A ports that are assigned to LCM are to be picked from this block of ports (circuits). Then assign the DS-1 Interface CP in the module.

This rule is critical in LGC/LTC that have fewer than 16 network ports and in addition one of the following applies:

- 18 or less than 18 DS-1 ports (circuits) are used for digital trunking
- 18 or less than 18 DS-1 ports (circuits) are used for RSC

- 18 or less than 18 DS-1 ports (circuits) are used for RSC and for digital trunking

For initial offices, always provide two (2) pairs of NT6X48AA cards and perform the assignment sequence as noted above when two (2) pairs of NT6X48AA cards are required.

- RUL5 1) Provide two NT6X70AA, Continuity Tone Detector circuit packs for each DTC when this module is handling CCIS/CCS7 voice trunking. Otherwise provide one (1) NT0X50AA for each unequipped position.

Per customer request, and if the NT6X78 CMR CP is not required, provide two NT6X70AA circuit packs in each LTC module for purposes of testing trunks.

- RUL6 1) Provide one (1) Designation Label for each CP supplied.

- RUL7 1) If the second module is not equipped on the last SME/LGE/DTE/LTE frame, provide one (1) Common Peripheral Controller module Filler Face Plate, NT6X02AB.

- RUL8 1) Provide one (1) Cooling Inverter Unit, NT3X90AB, or DC Fan Cooling Unit, NT3X90AC for the first or only LGE/DTE/LTE/SME frame equipped in the office and each group of frames served by a different PDC. Thereafter, provide one (1) Cooling Inverter Unit, NT3X90AA, or DC Fan Cooling Unit, NT3X90AC, for each subsequent frame. On new jobs, provide one (1) DC cooling unit NT3X90AC.

- RUL9 1) Provide two (2) NT8X18BA, SMS-R DS30A C-Side Intf CP, per SMS-R module. Mount circuit packs in slot 22 of the upper and lower shelves of the module. This rule only applies to the following modules: NT6X02PD and later.

- RUL10 1) The NT6X92BB/BC is a combined service circuit that can perform the function of Digitone Receiver for lines and MF Receiver for trunks. The NT6X92EA, which is the Global Tone Receiver, replaces the NT6X92BB/BC UTRs. The difference between UTR and GTR is that the GTR is LSSGR/CCITT compliant and can be used in all markets. One pair of NT6X92-- provides up to thirty circuits. Zero (0), two (2) or four (4) NT6X92-- may be ordered based on customers requirements.

- 2) In order to support UTR/GTR's, the peripheral controller must be equipped with the following common circuit pack fills:

PERIPHERAL CONTROLLER MODULE	COMMON CIRCUIT PACK FILL
DTC	NT6X02AQ or later
LGC	NT6X02AH or later
LTC	NT6X02AG or later
SMS	NT6X02DF/DJ/DH/DS
SMU	NT6X02EG/EK/EM/EP

- 3) The UTR/GTR is assignable to slots 15 and 16 in the shelf. One member of the UTR/GTR pair is assigned to the lower shelf in the module and its mate is assigned to the same slot in the upper shelf of the same module. The first UTR/GTR card is assigned to slot 15 in DTC/LGC/LTC and SMU modules, and the second UTR/GTR is assigned to slot 16 of the DTC/LGC/LTC module. Support for UTR/GTRS on the SMU module requires BCS-36. Support for the ADSI/SCWID feature requires that the module be equipped with UTR/GTRS, see NOTE 6.
- 4) UTR/GTR cards located in a particular DTC/LGC/LTC module will service all lines and trunks connected to that module. This includes all lines in LCM's, RLCM's and OPM's.
- 5) A BCS-35 feature added support for UTRs on SMS modules. The UTRs may be used with SMS packfills NT6X02DF/DJ/DH/DS and mount in slot 17 of both shelves. If UTRs are NOT required, provide two NT0X50AAs and mount them in slot 17 of each shelf. Use of UTR/GTRS requires the NT6X69AC/AD Messaging packs (to avoid exceeding power consumption limits) and BCS-35 as a minimum. The NT6X92EA GTR can exist anywhere UTRs exist.
- 6) The NT6X92EA GTR cannot exist in the same module with UTRs. For any module that has UTRs and additional tone receivers are needed, the UTRs must be replaced with GTRs in addition to the GTRs required.

- RUL11 1) Provide one Filler Face Plate 0.875 for each card position 1-9, 13, 15-17, 19, 23 that is unequipped.

NOTE: Check with provisioned modules circuit pack fill for Filler Face Plates already provided with that pack fill.

- RUL12 1) Provide one (1) NT0X0009 Logic Return Cable Assembly per frame when extending existing offices not equipped with enhanced grounding per IS0X00.
- 2) For U.S. offices, this frame does not require the provisionable cable assembly when extending a non-ISG office with current grounding methods. Instead a provisionable switchboard cable is run from the NT0X9504 bus bar assembly in each frame to the PDC battery return plate.

- RUL13 1) Provide four (4) NT6X45BA XPM Processor CP, for each new DTC/LGC/LTC/SMU module ordered NOT equipped with new messaging. Also provide four NT6X45BA CP for each new SMS module at BCS-28 or later. Mount circuit packs in slots 08, 12 of the upper and lower shelves of the peripheral modules. This rule only applies to the following modules: NT6X02IA/IC, NT6X02LA/LC, NT6X02MA/MC, NT6X02EB, NT6X02DC, NT6X02DD, NT6X02DJ, NT6X02EF, NT6X02PB. Refer to RUL25 for provisioning XPM PLUS processor circuit packs required for new messaging.

Provide four (4) NT6X45EA XPM Processor CP, for each new SMS module. Mount circuit packs in slots 08, 12 of the upper and lower shelves of the peripheral modules.

- 2) If optional software feature package NTXA67AA (Extended XPM Diagnostics) is being used by an XPM, provide four (4) NT6X45BA for each DTC/LGC/LTC/SMU/SMS module being upgraded (U.S. only).

For pre-BCS-34 offices requiring the software feature NTXA66AA (Enhanced Office Recovery), provide four (4) NT6X45BA DTC/LGC/LTC/SMU/SMS module being upgraded.

Effective with BCS-34 the code for the Enhanced Office Recovery feature is included in the NTX001AA (Common Basic) software package, i.e., the NTXA66AA package is not to be ordered for offices at BCS-34 and above. If the Enhanced Office Recovery feature is required, then provide four (4) NT6X45BA for each DTC/LGC/LTC/SMU/SMS module being upgraded.

For Canadian upgrades Change Application Dept 1955 BRW will retrofit with the NT6X45BA CP (i.e., Systems Application Engineering will not retrofit existing Canadian offices). However, after Change Application field upgrades an office,

Systems Application Engineering will update the office records accordingly.

- 3) Provide four (4) NT6X45AF XPM Processor CP, for each NT6X02CC SMR module. Mount circuit packs in slots 08, 12 of the upper and lower shelves of the peripheral modules.
- RUL14 1) Provide two NT6X40AD, DS30 Network Interface CP for each DTC/LGC/LTC/SMU/SMS module requiring up to sixteen DS-30 ports to the network. The NT6X40AD is backwards compatible with the NT6X40AC. The NT6X40AD has enhanced diagnostic functionality when installed in both shelves of a module in offices with XPM05 or later load. If the office has XPM05 or later but mixes the NT6X40AD in a module with NT6X40AC, or if the office has XPM04 or earlier load, then the enhanced diagnostic capability cannot be utilized and the NT6X40AD acts like the NT6X40AC.
- 2) Provide two NT6X40AC, DS30 Network Interface CP for each SMS module ordered requiring a maximum of four DS30 ports to the network.

If CLASS feature/hardware, NT6X78AA, and the NT6X85AA DS1 Interface CP are provided in the NT6X02DC module, replace the two (2) NT6X40AA packs with one (1) NT6X40AC pack in slot 22. If the NT6X85AB is used, the NT6X40 packs do not have to be replaced. If a mix of NT6X85AA and AB's exist, replace the NT6X40 packs. This replacement is due to the power limitations of the NT2X70 power converter when supporting both shelves.

- 3) Provide two (2) NT6X40FB, DS512 XPM Interface CP, and two (2) NT6X40GA, DS512 Link Paddle Board, for each DTC/LGC/LTC/SMU/SMS module requiring fiber interface to ENET (except SMSR). The NT6X40FB replaces NT6X40FA and is backwards compatible. The NT6X40FB has enhanced diagnostic functionality when installed in both shelves of a module in offices with XPM04 or later load. If the office has XPM04 or later but mixes the NT6X40FB in a module with NT6X40FA, or if the office has XPM03 or earlier load, then the enhanced diagnostic capability cannot be utilized and the NT6X40FB acts like the NT6X40FA.

Existing NT6X40CA/DA may not be upgraded to NT6X40FA/GA.

Do not mix the NT6X40CA Network Interface pack and the NT6X40GA Paddle board on the same module. Also, do not mix the NT6X40FA/FB Network Interface pack and the NT6X40DA paddle board on the same module.

- 4) When upgrading an older CPC module from DS30 to DS512 be sure to remove all NT6X40 DS30 I/F cards. On some older modules a DS30 I/F card may be in slot 23. Replace the DS30 card in slot 23 with a filler face plate.

- RUL15 1) Provide one (1) NT6X02EQ PC Kit to each DTC/LGC/LTC module to be upgraded for 4 MB MP Memory. The NT6X02EQ PC Kit replaces the two NT6X47AB MP Memory Plus circuit packs in slot 10 with two NT6X47AC packs. This rule only applies to the following modules:

DTC (CCS7) :	BCS-27	and later	(NT6X02AS/IA)
DTC (other):	BCS-33	and later	(NT6X02AS/IA)
LGC (all) :	BCS-31	and later	(NT6X02AT/LA)
LTC (all) :	BCS-30	and later	(NT6X02AU/MA)

Per customer request, the NT6X47AB packs removed from modules upgraded via a PC Kit may be used to upgrade other relevant modules. Do not order new NT6X47AB packs for the upgrade of NT6X02AS/AT/AU/IA/LA/MA modules. Provide two (2) office supplied NT6X47AB MP Memory Plus CP to slot 09 of the upper and lower shelves of each DTC/LGC/LTC modules to be upgraded. One NT6X47AC in slot 10 has the same memory capacity as two (2) NT6X47AB in slots 9 and 10.

- 2) In CANADA - Provide two (2) NT6X47AB, MP Memory Plus CP, for each DTC module. Mount circuit packs in slot 09 of the upper and lower shelves of the DTC module. These packs are needed in addition to the two always provided with the pack fill. NT6X47AB is a requirement for BCS-27.
- 3) NT6X47AB is a requirement for BCS-27 (in the above applications only).
- 4) Provide one (1) NT6X02DK Product Change Kit for each SMS module to be upgraded to BCS-31. The NT6X02DK PC Kit replaces the two (2) NT6X47AB MP Memory Plus circuit packs in slot 10 with two (2) NT6X47AC circuit packs. This rule only applies to the following modules: NT6X02DC, NT6X02DD.

Per customer request, two (2) office supplied NT6X47AB CP may be provisioned in slot 9 of each NT6X02DD/DC module to be upgraded to BCS-31. Do not order new NT6X47AB packs for the upgrade of SMS modules.

Per customer request, two (2) office supplied NT6X47AB CP may be provisioned in slot 9 of each NT6X02EB/AW module to

be upgraded to BCS-31. Do not order new NT6X47AB packs for the upgrade of SMU modules.

- 6) Provide two (2) new or office supplied NT6X47AB, MP Memory Plus CP, for each SMR module to meet BCS-31 gating hardware requirements. Mount circuit packs in slot 09 of the upper and lower shelves of the module. These packs are needed in addition to the two always provided with the pack fill. This rule only applies to the following modules: NT6X02CC, NT6X02CQ.
- 7) Provide two (2) NT6X47AC, MP Memory Plus CP, for each DTC/LGC/LTC/SMU modules ordered.

All new SMU applications in Canadian offices, and specifically those at BCS-30 or higher, are to be equipped with NT6X47ACs. For existing SMUs in Canadian offices which will be getting BCS-30, Change Application Dept. will retrofit NT6X47AB with NT6X47AC. SAE/EAE will update office records accordingly.

Mount circuit packs in slot 10 of the upper and lower shelves of each module. One (1) NT6X47AC in slot 10 has the same memory capacity as two (2) NT6X47AB CPs in slot 9 and 10. This rule only applies to the following modules: NT6X02IC, NT6X02LC, NT6X02MC, NT6X02EF.

- RUL16
- 1) Provide two (2) NT2X70AF Power Converter CP, for each NEW DTC/LGC/LTC/SMU/SMR/SMS module ordered. Mount circuit packs in slot 25 of the upper and lower shelves of the peripheral modules. This rule only applies to the following modules: NT6X02IA/IC, NT6X02LA/LC, NT6X02MA/MC, NT6X02EB, NT6X02DD, NT6X02EF, NT6X02CC, NT6X02CP, NT6X02CS. The following packfills were created once the NT2X70AF and label was removed from the stocklist and made provisionable. As a result, two (2) NT2X70AF CPs need to be provided for NT6X02CZ, NT6X02EU, NT6X02DV, and NT6X02PL.
 - 2) Provide one NT2X70AY to upgrade an always provided NT2X70AE to NT2X70AF. For all existing DTC7+ and DTC+ applications the NT2X70AD CP or NT2X70AF may be used. The NT2X70AF must be used for all new production (for all peripheral modules).

- RUL17
- 1) Following is the rule on when to provide NT6X69AC or NT6X69AD. Provide two (2) NT6X69AD CPP Message Protocol CPs for all modules except for any office at BCS-35 or below, SMS module with the MP/SP processor, or any SMS-R module. These exceptions still require NT6X69AC.

For offices at BCS-36+ and later that support ADSI or SCWID features, two (2) NT6X69AD CPs are required for LGC/LTC/SMUs.

Mount circuit packs in slot 18 of the upper and lower shelves of upper and lower shelves of the peripheral modules.

The following is the minimum packfill level at which NT6X69AC/AD is provisionable: NT6X02IC, NT6X02LC, NT6X02MC, NT6X02EF, NT6X02PB, NT6X02DD. The NT6X69AC is the minimum level required for interfacing ENET.

- 2) For pre-BCS-28 offices, the NT6X43AA Message Interface CP must be provisioned for each new SMS module ordered. This rule only applies to the NT6X02DD module.
- 3) For field upgrading existing SMS modules with MP/SP processor, two (2) NT6X69AC CPs and one (1) NT6X02ZJ kit are provisioned for each module. The NT6X69AC CPs mount in slot 18. This field upgrade changes the NT6X02DA/DB module to a NT6X02DC.
- 4) Provide one (1) NT6X02BQ Product Change Kit for each existing DTC/LGC/LTC module to be upgraded to interface ENET. The NT6X02BQ contains (2) NT6X69AC circuit packs. The NT6X02BQ will convert the NT6X02IA/AS to NT6X02IC, the NT6X02LA/AT to LC, and the NT6X02MA/AU to NT6X02MC. This kit applies to offices at BCS-35 and below.
- 5) Provide two (2) NTMX76AA Extended Distance Msg CP to upgrade an existing LGC+ or LTC+ module to support Extended Distance Capability. The NTMX76AA supports both the DMSX and HDLC messaging protocols.

NOTE: A module to be equipped with NTMX76AA Extended Distance Msg CP requires XPM PLUS per RUL25.

- 6) The NT6X69AD cannot be used in DMS-10 applications, SMSR applications, SMS with MP/SP (non-XPM+) with XPM03 or lower s/w loads, or with DTC's configured in a DMS250 or DMS200 LAT load application (including large tandem).
- 7) Provide two (2) NTMX76AB Extended Distance Msg CP instead of the NTMX76AAs, in the host and remote, when the ADSI/SCWID feature is required with extended distance capability.

- RUL18 1) Provide two (2) NT6X78AB CLASS Modem Resource (CMR) CPs for each LGC/LTC module that is to provide CLASS Calling Number Delivery (CND) to the lines that subtend the module or is supporting ADSI or SCWID. If an LGC/LTC is only going to host RSC's, and all the RSC's hosted have CMR cards, then the LGC/LTC does not require CMR cards. If the LGC/LTC has a mix of RSCs/RLCMs/LCMs, and the LCMs/RLCMs are to have the CND, ADSI, or SCWID feature, then the LGC/LTC requires CMR cards. This rule only applies to the following modules: NT6X02LA/LC, NT6X02MA/MC, NT6X02AT, NT6X02AU.
- 2) Provide two (2) NT6X78AB Class Modem Resource CP (CMR) for each SMS/SMU module that is to provide CLASS Calling Number Delivery (CND) to the lines that subtend the module or is supporting ADSI or SCWID. Mount the CMR cards in slot 16 of the upper and lower shelves of the modules. This rule does NOT apply to the following modules: NT6X02DA/DB/EA.
- 3) Do not provision CMR cards in the SMS-R module. If the CND, ADSI, or SCWID feature is required for the lines subtending an SMS-R module, the necessary CMR cards must be provisioned in the Remote Switching Center (RSC) which is hosting that SMS-R.

4) For Canadian Applications Only

When the NT6X78AA/NT6X78AB cards are provisioned into an LGC, LTC or SMS module, EITHER:

1. Retrofit the NT6X69AA/NT6X79AA card combination (if existing) to an NT6X69AB card via the application of the NT6X12ZY PC Kit,

OR

2. Limit the number of NT6X50AA DS-1 cards to four per shelf (i.e. eight per module).

This is required to limit the shelf's overall +5 volt power requirements to below 55 amps. When applying the NT6X78AB card, note that it only requires 0.7 amps, versus the NT6X78AA card, which requires 3.5 amps.

- RUL19 1) Provide two (2) NT6X46BB, SP Memory Plus CP, for each SMS-R or DTC module ordered or per NT6X02AI/ID DMS-250 module. Mount circuit packs in slot 11 of the upper and lower shelves of the peripheral modules. This rule only applies to the following SMS-R modules: NT6X02PB/PD.

- 2) Slots 11 and 11R have been made provisionable to ease future design development. This rule only applies to the following modules: NT6X02DJ, NT6X02EF.
- RUL20 1) Provide two (2) NT6X46BB, Signal Proc Memory Plus CP, for each DTC module at NT6X02IC or later, LGC module at NT6X02LC or later, LTC module at NT6X02MC or later, SMU module at NT6X02EM or later, SMS at NT6X02DR or later, or SMS-R at NT6X02PG or later. Mount circuit packs in slot 11 of the upper and lower shelves of the peripheral modules. Do not use NT6X46BB in NT6X02AI/ID DMS-250 modules.
- RUL21 1) Provide one (1) NT6X0205, Wiring Option, for each shelf of a SMS-R module ordered. The Wiring Option grounds pins 73B, 74B, and 75B of slot 12. This rule applies to the NT6X02PB and NT6X02PD module.
- RUL22 1) Provide two (2) NT6X62AB, Special Tone Receiver CP, for each DTC module when Reorigination and/or Blue Box Fraud features are required. Mount circuit packs in slot 16 of the upper & lower shelves of the DTC.
- 2) The NT6X62AB STR/BBF CP is for DMS-250 applications only.
- RUL23 1) The NT6X50EC cannot be provisioned into the NT6X01AA. Therefore the NT6X0130 and NT6X01XF are not required and have been MD'd.
- RUL24 1) Provide one (1) NT6X02YS Product Change Kit per existing DTC7 module when upgrading the NT6X01AA for the DWS Feature. This product change kit will remove the NT6X44AA Time Switch Packs, add the NTAX78AA Enhanced Time Switch Packs, and add the required straps to the DTC7 backplane.
- RUL25 1) One (1) NT6X02XG XPM+ Product Change Kit provides the NTMX77AA Unified Processor CPs, the NTMX71AA Terminator Cards, and the paddlecards and cables for the necessary backplane wiring modifications required to support the NTMX77AA, on one (1) module of an existing NT6X01AA CPCE Frame. When the NTMX77AA Unified Processor is used, the MP/SP processor combination (i.e., NT6X45 per RUL13, NT6X47 per RUL15, and NT6X46 per RUL19) is NOT used.
- 2) Provide one (1) NT6X02XG Product Change Kit, in addition to the appropriate packfill per RUL1, to provide XPM PLUS capability for a new module to be mounted in an existing NT6X01AA frame in the field which has an empty module position available.

Provide one (1) NT6X0250 Universal Ground Point for a field upgrade of a frame to XPM+. However, in the event there is already an NT6X0250 Ground Point on the frame from a previous fiber upgrade, a second Ground Point is NOT required.

- 3) Provide one (1) NT6X02XG Product Change Kit to upgrade one existing XPM module equipped with the MP/SP processor combination to the Unified Processor (XPM+) configuration when the office does NOT already have NTMX77AA CPs and NTMX71AA Paddlecards stocked on site.
- 4) When the office already has the necessary NTMX77AA CPs and NTMX71AA Paddlecards stocked on site or when a new module with NTMX77AA CPs and NTMX71AA Paddlecards is being installed in an unequipped module position, provide one (1) NTMX70AB XPM Plus Paddlecard Kit.

The NTMX70AB Kit does not contain NTMX77AA, NTMX71AA, nor P0735417 Designation Labels for NTMX77AA.

- 5) The existing packfill of an XPM module to be upgraded to XPM+ must be at a minimum level prior to application of the NT6X02XG Kit or the NTMX70AB Kit. Refer to the Engineering Manual Sections for the NT6X02XG or the NTMX70AB for that information. In the case of an existing SMS or SMS-R module, application of the NT6X02WC NT6X86AB Product Change Kit will also be required. See RUL29.
- 6) The formerly provided NT6X02XC and NT6X02XF XPM PLUS Upgrade Kits have been replaced with the NT6X02XG.

RUL26 1) Provide two (2) Time Switch circuit packs NT6X44AA per NT6X02IG/IH/PK DTC module NOT supporting the Dialable Wideband Service feature. The NT6X44AB CP, which is functionally no different than NT6X44AA, is compatible with NT6X02/PK module not supporting Dialable Wideband Service feature. The NT6X44AB is replaced by NT6X44AA.

- 2) Provide two (2) Enhanced Time Switch circuit packs NTAX78AA per NT6X02IG DTC-DWS to support the Dialable Wideband Service feature.

RUL27 1) Provide two (2) NT6X86AB A-Bit Message packs per SMS module equipped with the NT6X02DS packfill. The NT6X86AB is required when using the Unified Processor (NTMX77--). Mount in slot 13. Provide labels for these packs.

- 2) Provide two (2) NT6X86AB A-Bit Message packs per SMS-R module equipped with the NT6X02PH packfill. The NT6X86AB is

required when using the Unified Processor (NTMX77--). Mount in slot 13. Provide labels for these packs.

- RUL28 1) Provide two (2) NT6X80BB Pad Ring CPs per SMS module equipped with the NT6X02DS packfill or per SMS-R module equipped with the NT6X02PH or later packfill. Mount in slot 19. Provide labels for these packs.
- 2) Provide two (2) NT6X80BB Pad Ring CPs per SMU module equipped with the NT6X02EP packfill. Provide labels for these packs.
- RUL29 1) The NT6X02WC Prod. Chg. Kit was provided to upgrade one existing SMS module with NT6X02DR packfill to NT6X02DS. This kit supplied two NT6X86AB packs and labels to replace existing NT6X86AAs and made slots 13 and 19 provisionable. NT6X02DS is the minimum packfill for SMS+. The NT6X02WC Kit should no longer be used. Provide one NT6X02WG Kit instead.
- 2) The NT6X02WC Prod. Chg. Kit was provided to upgrade one existing SMS-R module with NT6X02PG packfill to NT6X02PH. This kit supplied two NT6X86AB packs and labels to replace existing NT6X86AAs and made slots 13 and 19 provisionable. NT6X02PH is the minimum packfill for SMS-R+. The NT6X02WC Kit should no longer be used. Provide one NT6X02WG Kit instead.
- 3) Where the NT6X02WC Kit has been deployed replace the existing NT6X80 CPs with NT6X80BB CPs. Order two NT6X80BB CPs and two labels for each module. The NT6X02WC Kit is not to be used for upgrades. Future upgrades will use NT6X02WG Kit. See EMS for more info.
- RUL30 1) Provide one (1) NT6X02WE Product Change Kit to upgrade one existing SMU module with NT6X02EM packfill to NT6X02EP. For field application only. In the NT6X02EM module, slot 19 is always provided with NT6X80BAs. Product change kit NT6X02WE makes slot 19 provisionable with only the NT6X80BBs.
- RUL31 1) Provide two (2) NT7X05AA Peripheral Loader CPs when support for the Peripheral Loader Option is required. A module to be equipped with NT7X05AA CPs must also be equipped with NTMX77AA Unified Processor CPs (XPM+) per RUL25.
- 2) The NT7X05AA Peripheral Loader CPs mount in card slot 15 of an SMS module, in all other modules they mount in card slot 17.

- RUL32 1) Provide one NT6X02YA (per module) to upgrade existing SMR (NT6X02CQ) to SMU (NT6X02EU). Refer to the NT6X02YA engineering manual section for further details (section includes information for upgrading from previous versions of the SMR packfill).
- RUL33 1) Provide one NT6X02YB (per module) to upgrade existing SMR (NT6X02CT) to SMS (NT6X02EU). Refer to the NT6X02YB engineering manual section for further details (section includes information for upgrading from previous versions of the SMR packfill).
- RUL34 1) NT6X41AC XPM Formatter/Clock CP is only available for V0 jobs.
- 2) Provide two (2) NT6X41AC per XPM module in place of the NT6X41AA.
- 3) The NT6X41AC can directly replace the NT6X41AA and is fully backwards compatible with any XPM type (LTC, DTCI, SMS, etc.) and any software baseline.
- 4) The CP designation label for the NT6X41AC has not yet been defined.

DIGITAL TRUNK CONTROLLER COMMON CP (DMS-250)

PEC CODE: NT6X02AI

CPC CODE: B0230079

| RATING: MD

REPLACES:

REPLACED BY:

ABBREVIATION NAME: DTC

ENGINEERING DESCRIPTION: The NT6X02AI is the common circuit pack fill
for DTC application.The Digital Trunk Controller (DTC) Module is
the host office peripheral controller module
for digital trunking in a host location.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Steve Martin Dept. 3471 (PPK)

NT6X02AI EMR2-06-6X02AI CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
95 02 19	ECM 373 36	Change to MD status per EC 11-17823. Retire this Engineering Manual.

The Digital Trunk Controller Common CP (DMS-250) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Channel Supervision Mgs CP	NT6X42AA		1	X+14	20	AP
Speech Bus Formatter	NT6X41AA		1	X+14	21	AP
Filler Face Plate .875 CP	NT0X50AA		1	X+14	24	AP
Desig. Strip for NT6X02AI	P0707197		1	X+14	1	AP
Channel Supervision Mgs CP	NT6X42AA		1	X	20	AP
Speech Bus Formatter	NT6X41AA		1	X	21	AP
Filler Face Plate .872	NT0X50AA		1	X	24	AP
Desig. Strip for NT6X02AI	P0707197		1	X	1	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One DTC Common CP can be assigned on the frame to shelf mounting positions 65 and 51 and the other to shelf mounting positions 32 and 18. For one module X=18 and for the other module X=51.
- 2) For more information on the frame refer to the section on NT6X01AA (Section EMA2-06-000) or NT6X01AB (Section EMA2-18-000).

RULES:

AP 1) When PEC NT6X02AI is ordered, these items are provided.

INTERNATIONAL LCM COMMON CP

PEC CODE: NT6X04BA

CPC CODE: B0219847

| RATING: MD

REPLACES: None

REPLACED BY: NT6X04BB

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: The ILCM Common CP includes the always required circuit packs for both Line Concentration Array shelves that make up an ILCM.

REFERENCE DOCUMENTATION: SL6X04BA

MARKETS: Applicable markets:

Europe
Asia/Pacific

ISSUE AUTHOR: Ron Hogan Dept. 3471 (PPK)

MAIN CONTACT: James Marsden Dept. 3471 (PPK)

NT6X04BA EMR2-07-ILCM-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 06 27	ECM 619 23	Reformat EMS.
94 10 28	ECM 286 10	Change to A&M status; replaced by NT6X04BB.
95 09 15	ECM 619 34	Change to MD status per EC 011-21411. MD NT6X51AA per EC 024-92020.

The International LCM Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Power Converter 5V/15V CP	NT6X53AA		1	X+17	1	AP
#LCM Processor CP	NT6X51AA		1	X+17	4	AP
LCM Processor CP	NT6X51AB		1	X+17	4	AP
Internat'l Digroup Cntrl CP	NT6X52AB		1	X+17	5	AP
Designation Label (NT6X53AA)	P0633543			X+17	1	AP
Designation Label (NT6X51AA)	P0633541			X+17	4	AP
Designation Label (NT6X52AB)	P0654980			X+17	5	AP
Power Converter 5V/15V CP	NT6X53AA		1	X	1	AP
#LCM Processor CP	NT6X51AA		1	X	4	AP
LCM Processor CP	NT6X51AB		1	X	4	AP
Internat'l Digroup Cntrl CP	NT6X52AB		1	X	5	AP
Designation Label (NT6X53AA)	P0633543			X	1	AP
Designation Label (NT6X51AA)	P0633541			X	4	AP
Designation Label (NT6X52AB)	P0654980			X	5	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT6X51AA	MD	NT6X51AB

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

NOTE: 1) One ILCM Common CP can be assigned on the frame to shelf mounting positions 55 and 38 and the other to shelf mounting positions 21 and 04 (i.e. for one LCM X=04 and for the other ILCM X=38).

- 2) For more information on the frame refer to the section on NT6X03AA, Line Concentrating Equipment (Section EMA2-07-000).

RULES:

- AP 1) When PEC NT6X04BA is ordered, these items are provided.

INTERNATIONAL LCM COMMON CP

PEC CODE: NT6X04BB

CPC CODE: B0229232

| RATING: MD

REPLACES: NT6X04BA

REPLACED BY: NT6X04BC

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: The ILCM Common CP includes the always required circuit packs for both Line Concentration Array shelves that make up an ILCM.

The NT6X04BB includes NT6X51AB LCM Processor CPs which provide enhanced capacity.

REFERENCE DOCUMENTATION: SL6X04BB

MARKETS: Applicable markets:

Europe
Asia/Pacific

| ISSUE AUTHOR: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: Ron Hogan Dept. 3471 (PPK)

NT6X04BB EMR2-07-ILCM-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 06 27	ECM 619 23	Reformat EMS.
94 12 09	ECM 286 12	Change to A&M status; replaced by NT6X04BC.
97 03 21	ECM 619 43	Reflect MD status as per EC 024-96698. Also MD PEC NT6X51AB per above EC.

The International LCM Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Power Converter	NT6X53AA		1	Y	1	AP
LCM Processor	NT6X51AB		1	Y	4	AP
International Digroup Cont	NT6X52AB		1	Y	5	AP
Designation Label (NT6X53AA)	P0633543		1	Y	1	AP
Designation Label (NT6X51AB)	P0701604		1	Y	4	AP
Designation Label (NT6X52AB)	P0654980		1	Y	5	AP
Power Converter	NT6X53AA		1	X	1	AP
LCM Processor	NT6X51AB		1	X	4	AP
International Digroup Cont	NT6X52AB		1	X	5	AP
Designation Label (NT6X53AA)	P0633543		1	X	1	AP
Designation Label (NT6X51AB)	P0701604		1	X	4	AP
Designation Label (NT6X52AB)	P0654980		1	X	5	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) When used on the ILCE frame (NT6X03AA), one ILCM Common CP can be assigned on the frame to shelf mounting positions 38 and 55 and the other to shelf mounting positions 04 and 21 (i.e. for one ILCM X=04,Y=21; for the other ILCM X=38,Y=55).

When used on the IRLCM frame (NT6X14AA), there is only one ILCM Common CP assigned at shelf mounting positions, 04 and 21 (i.e. X=04 and Y=21).

When used on the IOPM (NT8X40AA), there is only one ILCM Common CP assigned at shelf mounting positions, 19 and 33 (i.e. X=19 and Y=33).

- 2) For more information on the frame refer to the section for the frame in question.

RULES:

- AP 1) When PEC NT6X04BB is ordered, these items are provided.

PCM-30 LINE DRAWER

PEC CODE: NT6X05CA

| CPC CODE: B0230929

| RATING: MD

| REPLACES: N/A

| REPLACED BY: No Replacement (GPP Product)

ABBREVIATION NAME: LD

ENGINEERING DESCRIPTION: The PCM-30 Line Drawer houses one PCM-30 Interface Card. Five PCM-30 Line Drawers will fit on one Line Concentrating Array Shelf of an LCM. A maximum of ten PCM-30 Line Drawers can be assigned to one LCM or ILCM.

REFERENCE DOCUMENTATION: N/A

| MARKETS: Applicable markets:

| Europe

| ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT6X05CA EMR2-07-ILD-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 97 03 21	----- ECM 619 43	Previous history not available MD EMS per EC 024-96494. Replaced by GPP Product. This EC also MDs the NT6X27CA and NT6X54CA PECS.

The PCM-30 Line Drawer is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Line Drawer Assembly	NT6X0505		1	X		AP
PCM-30 I/F Card	NT6X27CA		1	X	00	AP
PLD Bus Interface Card	NT6X54CA		1	X	32	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) "X" can be one of 04, 21, 38, 55.
- 2) The PCM-30 Line Drawer provides two (2) PCM-30 ports for interface to Type 1 Mercury Communications Limited Multiplexor (MEL MUX) equipment.

RULES:

- AP 1) When PEC NT6X05CA is ordered, these items are provided.

LINE CONCENTRATING MODULE COMMON CP

PEC CODE: NT6X04AA

CPC CODE: B0125920

| RATING: MD

REPLACES: None

REPLACED BY: NT6X04AB

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: The LCM Common CP includes the always required circuit packs for both Line Concentration Array shelves that make up an LCM.

REFERENCE DOCUMENTATION: SL6X04AA

MARKETS: Applicable markets:

Canada
US

ISSUE AUTHOR: Ron Hogan Dept. 3471 (PPK)

MAIN CONTACT: James Marsden Dept. 3471 (PPK)

NT6X04AA EMR2-07-LCM-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 10 28	ECM 286 10	Change to A&M status; replaced by NT6X04AB.
95 09 15	ECM 619 34	Change to MD status per EC 011-21411. MD NT6X51AA per EC 024-92020.

The Line Concentrating Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Power Converter 5V/15V CP	NT6X53AA		1	X+17	1	AP
#LCM Processor CP	NT6X51AA		1	X+17	4	AP
LCM Processor CP	NT6X51AB		1	X+17	4	AP
Digroup Controller CP	NT6X52AA		1	X+17	5	AP
Designation Label (6X51AA)	P0633541		1	X+17		AP
Designation Label (6X52AA)	P0633542		1	X+17		AP
Designation Label (6X53AA)	P0633543		1	X+17		AP
Power Converter 5V/15V CP	NT6X53AA		1	X	1	AP
#LCM Processor CP	NT6X51AA		1	X	4	AP
LCM Processor CP	NT6X51AB		1	X	4	AP
Digroup Controller CP	NT6X52AA		1	X	5	AP
Designation Label (6X51AA)	P0633541		1	X		AP
Designation Label (6X52AA)	P0633542		1	X		AP
Designation Label (6X53AA)	P0633543		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT6X51AA	MD	NT6X51AB

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

1. ON LCE FRAME

1.1 One LCM Common CP can be assigned on the frame to shelf mounting positions 55 and 38 and the other to shelf mount-

ing positions 21 and 04 (i.e. for one LCM X=04 and for the other LCM X=38).

- 1.2 For more information on the frame refer to the section on NT6X03AA, Line Concentrating Equipment (Section EMA2-07-000).

2. ON RLCM FRAME

- 2.1 One LCM Common CP can be assigned on the frame to shelf mounting positions 21 and 04 (i.e. X = 04).

- 2.2 For more information on the frame refer to the section on NT6X14AA, Remote Line Concentrating Module/International Remote Line Concentrating Module (Section EMA2-14-000).

RULES:

- AP 1) When PEC NT6X04AA is ordered, these items are provided.

LINE CONCENTRATING MODULE COMMON CP

PEC CODE: NT6X04AB

CPC CODE: B0227508

| RATING: MD

REPLACES: NT6X04AA

REPLACED BY: NT6X04AC

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: The LCM Common CP includes the always required circuit packs for both Line Concentration Array shelves that make up an LCM.

The NT6X04AB includes NT6X51AB LCM Processor CPs which provide enhanced capacity.

REFERENCE DOCUMENTATION: SL6X04AB

MARKETS: Applicable markets:

Canada
US

ISSUE AUTHOR: Ron Hogan Dept. 3471 (PPK)

MAIN CONTACT: Ron Hogan Dept. 3471 (PPK)

NT6X04AB EMR2-07-LCM-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 06 27	ECM 619 23	Reformat EMS.
94 10 28	ECM 286 10	Change to A&M status; replaced by NT6X04AC.
95 11 27	ECM 619 38	Change to MD status per EC 011-21411.
97 03 21	ECM 619 43	Reflect MD status as per EC 024-96698. Also MD PEC NT6X51AB per above EC.

The Line Concentrating Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Power Converter 5V/15V CP	NT6X53AA		1	X+17	1	AP
Extended LCM Processor CP	NT6X51AB		1	X+17	4	AP
Digroup Controller CP	NT6X52AA		1	X+17	5	AP
Designation Label (6X51AB)	P0701604		1	X+17		AP
Designation Label (6X52AA)	P0633542		1	X+17		AP
Designation Label (6X53AA)	P0633543		1	X+17		AP
Power Converter 5V/15V CP	NT6X53AA		1	X	1	AP
Extended LCM Processor CP	NT6X51AB		1	X	4	AP
Digroup Controller CP	NT6X52AA		1	X	5	AP
Designation Label (6X51AB)	P0701604		1	X		AP
Designation Label (6X52AA)	P0633542		1	X		AP
Designation Label (6X53AA)	P0633543		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

1. ON LCE FRAME

- 1.1 One LCM Common CP can be assigned on the frame to shelf mounting positions 55 and 38 and the other to shelf mounting positions 21 and 04 (i.e. for one LCM X=04 and for the other LCM X=38).

1.2 For more information on the frame refer to the section on NT6X03AA, Line Concentrating Equipment (Section 43A-07-000).

2. ON RLCM FRAME

2.1 One LCM Common CP can be assigned on the frame to shelf mounting positions 21 and 04 (i.e. X = 04).

2.2 For more information on the frame refer to the section on NT6X14AA, Remote Line Concentrating Module/International Remote Line Concentrating Module (Section 43A-14-000).

RULES:

AP 1) When PEC NT6X04AB is ordered, these items are provided.

LINE CONCENTRATING MODULE COMMON CP

PEC CODE: NT6X04AC

CPC CODE: B0233330

| RATING: MD

REPLACES: NT6X04AB

REPLACED BY: NT6X04AD

ABBREVIATION NAME: N/A

ENGINEERING DESCRIPTION: The LCM Common CP includes the always required circuit packs for both Line Concentration Array shelves that make up an LCM.

The NT6X04AC includes one designation label for each shelf rather than a separate designation label for each circuit pack.

REFERENCE DOCUMENTATION: SL6X04AC

MARKETS: Applicable markets:

Canada
US
Europe
Asia/Pacific

| ISSUE AUTHOR: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: Ron Hogan Dept. 3471 (PPK)

NT6X04AC EMR2-07-LCM-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
92 12 22	ECM 619 12	Introduces NT6X04AC
94 12 09	ECM 286 12	Change to A&M status; replaced by NT6X04AD.
97 03 21	ECM 619 43	Reflect MD status as per EC 024-96698. Also MD PEC NT6X51AB per above EC.

The Line Concentrating Module Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Des. Label 6X04AC	P0726429		1	X+17		AP
Power Converter 5v/15v CP	NT6X53AA		1	X+17	1	AP
Lcm Processor CP	NT6X51AB		1	X+17	4	AP
Lcm Digroup Control Card CP	NT6X52AA		1	X+17	5	AP
Des. Label 6x04ac	P0726429		1	X		AP
Power Converter 5v/15v CP	NT6X53AA		1	X	1	AP
Lcm Processor CP	NT6X51AB		1	X	4	AP
Lcm Digroup Control Card CP	NT6X52AA		1	X	5	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

1. ON LCE FRAME

1.1 One LCM Common CP can be assigned on the frame to shelf mounting positions 55 and 38 and the other to shelf mounting positions 21 and 04 (i.e. for one LCM X=04 and for the other LCM X=38).

1.2 For more information on the frame refer to the section on NT6X03AA, Line Concentrating Equipment (Section 43A-07-000).

2. ON RLCM FRAME

- 2.1 One LCM Common CP can be assigned on the frame to shelf mounting positions 21 and 04 (i.e. X = 04).
- 2.2 For more information on the frame refer to the section on NT6X14AA, Remote Line Concentrating Module/International Remote Line Concentrating Module (Section 43A-14-000).

RULES:

- AP 1) When PEC NT6X04AC is ordered, these items are provided.

LINE CONCENTRATING EQUIPMENT FRAME
E/W COMMON FRAMEWORK

PEC CODE: NT6X03RA

| CPC CODE: B0222081

| RATING: MD

| REPLACES: Not applicable

| REPLACED BY: Not applicable

ABBREVIATION NAME: LCE

ENGINEERING DESCRIPTION: The NT6X03RA is a pre-built LCE frame equipped with the common framework, NT0X25AA. The NT6X03RA has be initially defined for U.S. application only.

REFERENCE DOCUMENTATION: MS6X03RA 00 07

| MARKETS: Applicable markets:

| US

| ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT6X03RA EMR2-07-001 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 97 03 21	----- ECM 619 43	Previous history not available MD EMS per EC 024-97224 and EC 018- 48828 (MD NT6X30AA).

The Line Concentrating Equipment Frame e/w Common Framework is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Common Framework	NT0X25AA	FW	1			AP
LCE Frame Supervisory Panel	NT6X35AA	FSP	1	72		AP
Ringing Generator CP	NT6X30AA		2	72		AP
LCM Common CP	NT6X04AA	LCM1	1	38		RUL5
Line Con. Array Shelf Assy	NT6X0401	LCA1	1	55		AP
Line Drawer	NT6X05AA	LD		55		RUL1
Line Con. Array Shelf Assy	NT6X0401	LCA0	1	38		AP
Line Drawer	NT6X05AA	LD		38		RUL1
LCM Common CP	NT6X04AA	LCM0	1	04		RUL5
Line Con. Array Shelf Assy	NT6X0401	LCA1		21		AP
Line Drawer	NT6X05AA	LD		21		RUL1
Line Con. Array Shelf Assy	NT6X0401	LCA0	1	04		AP
Line Drawer	NT6X05AA	LD		04		RUL1
Designation Labels, LSG No.	P0631765					RUL3
Rear Panels (Non-Earthquake)	NT6X0354					RUL4

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES: 1) NT6X03RA is a pre-built fully equipped LCE frame. It comes complete with two (2) LCM's, Common Framework and two (2) Ringing Generators.

2) This is for U.S. (RTP) application only.

RULES:

- AP 1) When PEC NT6X03RA is ordered, these items are provided.
- RUL1 1) Provide one Line Drawer (NT6X05AA) to accommodate up to sixty-four (64) Line Cards in two logical drawers called Line Sub Group (LSG). Line Drawers are positions in drawer positions 01-05 on each line shelf assembly.
- RUL2 1) When customer requirements specify that Grilles and (or) Frame Trim Panels are to be ordered for these frames, provide one (1) NT0X08AH and (or) two (2) NT0X72AB per NT6X03AA as required.
- RUL3 1) Provide one (1) P0631765 per LCE frame. Each item contains LSG designation numbers for the Line Sub Groups in both LCM's.
- RUL4 1) Provide one (1) NT6X0354 per LCE for Non-EMI frames. Compatible with common framework (NT0X25AA) only, and must be field installed.
- RUL5 1) Provide one (1) NT6X04AA per Line Concentrating Module (maximum two (2) per frame).

LCE FRAME E/W EARTHQUAKE FRAMEWORK

PEC CODE: NT6X03RB

| CPC CODE: B0222082

| RATING: MD

| REPLACES: Not applicable

| REPLACED BY: Not applicable

ABBREVIATION NAME: LCE

ENGINEERING DESCRIPTION: The NT6X03RB is a pre-built LCE frame equipped with the EMI Earthquake Framework, NT0X25AH. The NT6X03AB has been initially defined for U.S. applications only.

REFERENCE DOCUMENTATION: MS6X03RB 00 08

| MARKETS: Applicable markets:

| US

| ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT6X03RB EMR2-07-002 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 97 03 21	----- ECM 619 43	Previous history not available MD EMS per EC 024-97224 and EC 018- 48828 (MD NT6X30AA).

The LCE Frame e/w Earthquake Framework is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LCE Frame Supervisory Panel	NT6X35AA	FSP	1	72		AP
Ringing Generator CP	NT6X30AA		2	72		AP
LCM Common CP	NT6X04AA	LCM1	1	38		RUL5
Line Con. Array Shelf Assy	NT6X0401	LCA1	1	55		AP
Line Drawer	NT6X05AA	LD		55		RUL1
Line Con. Array Shelf Assy	NT6X0401	LCA0	1	38		AP
Line Drawer	NT6X05AA	LD		38		RUL1
LCM Common CP	NT6X04AA	LCM0	1	04		RUL5
Line Con. Array Shelf Assy	NT6X0401	LCA1	1	21		AP
Line Drawer	NT6X05AA	LD		21		RUL1
Line Con. Array Shelf Assy	NT6X0401	LCA0	1	04		AP
Line Drawer	NT6X05AA	LD		04		RUL1
Designation Labels, LSG No.	P0631765					RUL3
Rear Panel E/Q	NT6X0357					RUL4
Earthquake Framework	NT0X25AH	FW	1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES: 1) NT6X03RB is a pre-built fully equipped LCE frame. It comes complete with two (2) LCM's, Common Framework and two (2) Ringing Generators.

2) This is for U.S. (RTP) application only.

RULES:

- AP 1) When PEC NT6X03RB is ordered, these items are provided.
- RUL1 1) Provide one Line Drawer (NT6X05AA) to accommodate up to sixty-four (64) Line Cards in two logical drawers called Line Sub Group (LSG). Line Drawers are positions in drawer positions 01-05 on each line shelf assembly.
- RUL2 1) When customer requirements specify that Grilles and (or) Frame Trim Panels are to be ordered for these frames, provide one (1) NT0X08AH and (or) two (2) NT0X72AB per NT6X03AA as required.
- RUL3 1) Provide one (1) P0631765 per LCE frame. Each item contains LSG designation numbers for the Line Sub Groups in both LCM's.
- RUL4 1) Provide one (1) NT6X0357 per LCE for Non-EMI frames, compatible earthquake Framework (NT0X25AH) and must be field installed.
- RUL5 1) Provide one (1) NT6X04AA per Line Concentrating Module (maximum two (2) per frame).

LINE CONCENTRATING EQUIPMENT FRAME

PEC CODE: NT6X03CA

CPC CODE: B0221901

| RATING: Cancelled.

| REPLACES: Not applicable

| REPLACED BY: NT6X03AA

ABBREVIATION NAME: LCE

ENGINEERING DESCRIPTION: The NT6X03CA LCE is for configuration in a remote site with a RCME frame or retrofitted to an RSC configuration.

REFERENCE DOCUMENTATION: MS6X03CA 00 06

MARKETS: Applicable markets:

Canada
US
Europe
Asia/Pacific

| ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT6X03CA EMR2-07-003 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
92 12 22	ECM 619 12	Include NT6X04AC LCM Common CP
93 05 14	ECM 619 14	Cancel code. Replaced by NT6X03AA.
97 03 21	ECM 619 43	Show NT6X03AA as MD per EC 018-48828. MD NT6X04AB/AC per EC 024-96698.

The NT6X03CA is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LCE Frame Supervisory Panel	NT6X35AA	FSP	1	72		AP
# Ringing Generator CP	NT6X30AA			72		RUL6
Ringing Generator CP	NT6X30CA			72		RUL6
# LCM Common CP	NT6X04AB	LCM1		33		RUL2
# LCM Common CP	NT6X04AC	LCM1		38		RUL2
LCM Common CP	NT6X04AD	LCM1		38		RUL2
Line Con. Array Shelf Assy	NT6X0401	LCA1	1	55		AP
Line Drawer	NT6X05AA	LD		55		RUL3
Line Con. Array Shelf Assy	NT6X0401	LCA0	1	38		AP
Line Drawer	NT6X05AA	LD		38		RUL3
# LCM Common CP	NT6X04AB	LCM0		04		RUL2
# LCM Common CP	NT6X04AC	LCM0		04		RUL2
LCM Common CP	NT6X04AD	LCM0		04		RUL2
Line Con. Array Shelf Assy	NT6X0401	LCA1	1	21		AP
Line Drawer	NT6X05AA	LD		21		RUL3
Line Con. Array Shelf Assy	NT6X0401	LCA0	1	04		AP
Line Drawer	NT6X05AA	LD		04		RUL3
Designation Labels, LSG No.	P0631765					RUL5
Rear Panels (Non-Earthquake)	NT6X0354					RUL7
Rear Panels (Earthquake)	NT6X0357					RUL8
Paddle Board	NT6X0362					RUL9
TYE Straps	P0633700					RUL9
Connectory Key Bracket	P0666360					RUL10

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT6X04AB	MD	NT6X04AC
NT6X04AC	MD	NT6X04AD
NT6X30AA	MD	NT6X30CA

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

% To be replaced by NT6X04AC

NOTES:

- 1) NT6X03CA is a single bay frame which can be equipped with up to two (2) independent Line Concentrating Modules.
- 2) One LCM module is composed of 2 shelves. Each LCE can have up to two (2) LCM's. One LCM on shelf mounting positions 38 and 55 and the other on shelf mounting positions 04 and 21. The two (2) bare shelf assemblies do not become an LCM till they are equipped with one NT6X04AA, LCM Common CP. Then the shelf assembly becomes a Line Concentrating Array Shelf (LCA) that can house up to five (5) Line Drawers. Within each LCM the lower LCA is LCA 0 and the upper LCA is LCA 1.
- 3) One Frame Supervisory Panel, NT6X35AA always contains one FSP Alarm CP, NT6X36AA.

RULES:

- AP 1) When PEC NT6X03CA is ordered, these items are provided.
- RUL1 1) Reserved for future use.
- RUL2 1) Provide one (1) NT6X04AC, LCM Common CP for each LCM module equipped in the LCE frame. Refer to Flag %.
- RUL3 1) Provide one Line Drawer (NT6X05AA) to accommodate up to sixty-four (64) Line Cards in two logical drawers called Line Sub Group (LSG). Line Drawers are positions in drawer positions 01-05 on each line shelf assembly.
- RUL4 1) Reserved for future use.
- RUL5 1) Provide one (1) P0631765 per LCE frame. Each item contains LSG designation numbers for two (2) LCM's consisting of

twenty (20) Line Sub Groups (00 through 19) housed in ten (10) Line Drawers.

- RUL6 1) Provide two (2) Ringing Generators if analog ringing is required. Data Unit and Business Set do not require analog ringing. Ringing type and level is set by switch settings in the Ringing Generators.
- 2) Even if there is only one LCM/LCE and if analog ringing is required, then provide two (2) Ringing Generators. Normally one Ringing Generator serves one LCM. Under failure condition the remaining good Ringing Generator can serve the two LCMs.
- 3) Each Ringing Generator contains the following always provided circuit packs:
- 1 NT6X37AA Ringing Amplifier CP
 - 1 NT6X38AA Ringing Control CP
- Provide spare NT6X30AA, Ringing Generator.
- 4) The two (2) Ringing Generators are positioned horizontally within the FSP top cavity and occupy the whole frame width.
- RUL7 1) Provide one (1) NT6X0354 per LCE for Non-EMI frames. Compatible with common framework (NT0X25AA) only, and must be field installed. Required for U.S. and International applications only, as per individual customer requirements.
- RUL8 1) Provide one (1) NT6X0357 per LCE for Non-EMI frames. Compatible with Earthquake framework (NT0X25AH) only, and must be field installed. Required for U.S. and International applications only, as per individual customer requirements.
- RUL9 1) Provide two (2) NT6X0362 per LCM (maximum four per frame) when line drawers are present, and provide three (3) P0633700 TYE Straps per NT6X0362 Paddle Board.
- 2) Provide these items when the LCE is homing on the HIE module.
- RUL10 1) Provide two (2) P0666360 Connector Key Brackets per LCM (maximum four per frame) when Paddle Board, NT6X0362 is not required.

LINE CONCENTRATING EQUIPMENT FRAME
E/W COMMON FRAMEWORK

PEC CODE: NT6X03RC

CPC CODE: B0228288

| RATING: Cancelled

REPLACES: Not applicable

REPLACED BY: NT6X03AA

ABBREVIATION NAME: LCE

ENGINEERING DESCRIPTION: The NT6X03RC is a pre-built LCE frame equipped with the common framework, NT0X25AA. The NT6X03RC has been initially defined for U.S. application only.

REFERENCE DOCUMENTATION: MS6X03RC 00 01

MARKETS: Applicable markets:

US

| ISSUE AUTHOR: NTI: William Stanley Dept. 3471 (PPK)

| MAIN CONTACT: NTI: James Marsden Dept. 3471 (PPK)

NT6X03RC EMR2-07-005 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 93 05 14	----- ECM 619 14	Previous history not available Update EMS format. Cancel code.

The Line Concentrating Equipment Frame e/w Common Framework is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LCE Frame Supervisory Panel	NT6X35AA	FSP	1	72		AP
Ringing Generator CP	NT6X30AA		2	72	1,2	AP
LCM Common CP	NT6X04AB	LCM1	1	38		AP
Line Con. Array Shelf Assy	NT6X0401	LCA1	1	55		AP
Line Drawer	NT6X05AA	LD		55		RUL1
Line Drawer Filler	NT6X05AX			55		RUL5
Line Con. Array Shelf Assy	NT6X0401	LCA0	1	38		AP
Line Drawer	NT6X05AA	LD		38		RUL1
Line Drawer Filler	NT6X05AX			38		RUL5
LCM Common CP	NT6X04AB	LCM0	1	04		AP
Line Con. Array Shelf Assy	NT6X0401	LCA1		21		AP
Line Drawer	NT6X05AA	LD		21		RUL1
Line Drawer Filler	NT6X05AX			21		RUL5
Line Con. Array Shelf Assy	NT6X0401	LCA0	1	04		AP
Line Drawer	NT6X05AA	LD		04		RUL1
Line Drawer Filler	NT6X05AX			04		RUL5
Common Framework	NT0X25AA	FW	1			AP
Designation Labels, LSG No.	P0631765					RUL3
Rear Panels (Non-Earthquake)	NT6X0354					RUL4

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) NT6X03RC is a pre-built fully equipped LCE frame. It comes complete with two (2) LCM's, Common Framework and two (2) Ringing Generators.
- 2) This is for U.S. (RTP) application only.

RULES:

- AP 1) When PEC NT6X03RC is ordered, these items are provided.
- RUL1 1) Provide one Line Drawer (NT6X05AA) to accommodate up to sixty-four (64) Line Cards in two logical drawers called Line Sub Group (LSG). Line Drawers are positioned in drawer positions 01-05 on each line shelf assembly.
- RUL2 1) Reserved for future use.
- RUL3 1) Provide one (1) P0631765 per LCE frame. Each item contains LSG designation numbers for the Line Sub Groups in both LCM's.
- RUL4 1) Provide one (1) NT6X0354 per LCE for Non-EMI frames. Compatible with common framework (NT0X25AA) only, and must be field installed.
- RUL5 1) Provide one (1) NT6X05AX, Line Drawer Filler, in any position not occupied by a line drawer.

LINE CONCENTRATING EQUIPMENT FRAME
E/W EARTHQUAKE FRAMEWORK

PEC CODE: NT6X03RD

CPC CODE: B0228289

| RATING: Cancelled

REPLACES: Not applicable

REPLACED BY: NT6X03AA

ABBREVIATION NAME: LCE

ENGINEERING DESCRIPTION: The NT6X03RD is a pre-built LCE frame equipped with the EMI Earthquake Framework, NT0X25AH. The NT6X03RD has been initially defined for U.S. applications only.

REFERENCE DOCUMENTATION: MS6X03RD 00 01

MARKETS: Applicable markets:

US

| ISSUE AUTHOR: NTI: William Stanley Dept. 3471 (PPK)

| MAIN CONTACT: NTI: James Marsden Dept. 3471 (PPK)

NT6X03RD EMR2-07-006 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 93 05 14	----- ECM 619 14	Previous history not available Update section format. Cancel code.

The Line Concentrating Equipment Frame e/w Earthquake Framework is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LCE Frame Supervisory Panel	NT6X35AA	FSP	1	72		AP
Ringing Generator CP	NT6X30AA		2	72	1,2	AP
Line Con. Array Shelf Assy	NT6X0401	LCA1	1	55		AP
Line Drawer	NT6X05AA	LD		55		RUL1
Line Drawer Filler	NT6X05AX			55		RUL5
LCM Common CP	NT6X04AB	LCM1	1	38		AP
Line Con. Array Shelf Assy	NT6X0401	LCA0	1	38		AP
Line Drawer	NT6X05AA	LD		38		RUL1
Line Drawer Filler	NT6X05AX			38		RUL5
Line Con. Array Shelf Assy	NT6X0401	LCA1	1	21		AP
Line Drawer	NT6X05AA	LD		21		RUL1
Line Drawer Filler	NT6X05AX			21		RUL5
LCM Common CP	NT6X04AB	LCM0	1	04		AP
Line Con. Array Shelf Assy	NT6X0401	LCA0	1	04		AP
Line Drawer	NT6X05AA	LD		04		RUL1
Line Drawer Filler	NT6X05AX			04		RUL5
Earthquake Framework	NT0X25AH	FW	1			AP
Designation Labels, LSG No.	P0631765					RUL3
Rear Panel E/Q	NT6X0357					RUL4

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) NT6X03RD is a pre-built fully equipped LCE frame. It comes complete with two (2) LCM's, Common Framework and two (2) Ringing Generators.
- 2) This is for U.S. (RTP) application only.

RULES:

- AP 1) When PEC NT6X03RD is ordered, these items are provided.
- RUL1 1) Provide one Line Drawer (NT6X05AA) to accommodate up to sixty-four (64) Line Cards in two logical drawers called Line Sub Group (LSG). Line Drawers are positioned in drawer positions 01-05 on each line shelf assembly.
- RUL2 1) Reserved for future use.
- RUL3 1) Provide one (1) P0631765 per LCE frame. Each item contains LSG designation numbers for the Line Sub Groups in both LCM's.
- RUL4 1) Provide one (1) NT6X0357 per LCE for Non-EMI frames, compatible earthquake Framework (NT0X25AH) and must be field installed.
- RUL5 1) Provide one (1) NT6X05AX, Line Drawer Filler, in any position not occupied by a line drawer.

MSB6 COMMON CP

NT6X07AA

RATING: MD. Replaced by NT6X07AB.

ABBREVIATION NAME:

ENGINEERING DESCRIPTION:

REFERENCE DOCUMENTATION: N/A

The MSB6 Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Power Conv +/-5V & 12V CP	NT2X70AD		1	65	01	AP
CCIS Signalling Terminal CP	NT6X65AA		1	65	11	AP
Signalling Terminal CP	NT6X68AB		1	65	12	AP
Signalling Terminal I/F CP	NT6X68AA		1	65	13	AP
Signalling Term Buffer CP	NT6X67AA		1	65	14	AP
LGC/DTC Processor CP	NT6X45AC		1	65	15	AP
Master Processor Memory CP	NT6X47AB		1	65	17	AP
Signal Processor Memory CP	NT6X46AB		1	65	18	AP
Comm Perih Ctl Term BD	NT6X1205		1	65	18R	AP
LGC/DTC Processor CP	NT6X45AC		1	65	19	AP
Message Interface CP	NT6X43AA		1	65	20	AP
Channel Supervision MSG CP	NT6X42AA		1	65	21	AP
Speech Bus Formatter CP	NT6X41AA		1	65	22	AP
DS30 Network Interface CP	NT6X40AA		2	65	23-24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	65	25	AP
Designation Label (NT6X07AA)	P0679491		1	65		AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	51	01	AP
CCIS Signalling Terminal CP	NT6X65AA		1	51	11	AP
Signalling Terminal CP	NT6X68AB		1	51	12	AP
Signalling Terminal I/F CP	NT6X68AA		1	51	13	AP
Signalling Term Buffer CP	NT6X67AA		1	51	14	AP
LGC/DTC Processor CP	NT6X45AC		1	51	15	AP
Master Processor Memory CP	NT6X47AB		1	51	17	AP
Signal Processor Memory CP	NT6X46AB		1	51	18	AP
Comm Perih Ctl Term BD	NT6X1205		1	51	18R	AP
LGC/DTC Processor CP	NT6X45AC		1	51	19	AP
Message Interface CP	NT6X43AA		1	51	20	AP
Channel Supervision MSG CP	NT6X42AA		1	51	21	AP
Speech Bus Formatter CP	NT6X41AA		1	51	22	AP
DS30 Network Interface CP	NT6X40AA		2	51	23-24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	51	25	AP
Designation Label (NT6X07AA)	P0679491		1	51		AP

RULE:

- AP 1) When PEC NT6X07AA is ordered, these items are provided.
- 2) One MSB6 Common CP can be assigned on the frame to shelf mounting positions 65 and 51.

- 3) For more information on the frame refer to the section on NT6X06AA.

MSB6 COMMON CP

PEC CODE: NT6X07AB

| CPC CODE: B0219634

| RATING: MD

| REPLACES: N/A

| REPLACED BY: No Replacement

ABBREVIATION NAME: MSB6

ENGINEERING DESCRIPTION: The Message Switch and Buffer provides and maintains a path from the CCIS6/CCITT6 digital signalling link, which is switched through the network, to the CCIS6/CCITT6 signalling terminal. MSB6 also performs the message switching and distribution functions between the DTC's and the appropriate signalling terminals.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Canada
US
Europe
Asia/Pacific

ISSUE AUTHOR: NTI: Bob Belvin DEPT. 3471 (PPK)

MAIN CONTACT: NTI: Jerry Palmer Dept. 3471 (PPK)

NT6X07AB EMR2-08-MSB6-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-- -- -- 95 09 25	--- --- -- ECM 293 06	Previous history not available. MD section

The MSB6 Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Power Conv +/-5V & 12V CP	NT2X70AD		1	65	01	AP
CCIS Signalling Terminal CP	NT6X65AA		1	65	11	AP
Signalling Terminal I/F CP	NT6X68AA		1	65	13	AP
Signalling Term Buffer CP	NT6X67AA		1	65	14	AP
LGC/DTC Processor CP	NT6X45AC		1	65	15	AP
Master Processor Memory CP	NT6X47AB		1	65	17	AP
Signal Processor Memory CP	NT6X46AB		1	65	18	AP
Comm Perih Ctl Term BD	NT6X1205		1	65	18R	AP
LGC/DTC Processor CP	NT6X45AC		1	65	19	AP
Message Interface CP	NT6X43AA		1	65	20	AP
Channel Supervision MSG CP	NT6X42AA		1	65	21	AP
Speech Bus Formatter CP	NT6X41AA		1	65	22	AP
DS30 Network Interface CP	NT6X40AA		2	65	23-24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	65	25	AP
Designation Label (NT6X07AB)	P0679490		1	65		AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	51	01	AP
CCIS Signalling Terminal CP	NT6X65AA		1	51	11	AP
Signalling Terminal I/F CP	NT6X68AA		1	51	13	AP
Signalling Term Buffer CP	NT6X67AA		1	51	14	AP
LGC/DTC Processor CP	NT6X45AC		1	51	15	AP
Master Processor Memory CP	NT6X47AB		1	51	17	AP
Signal Processor Memory CP	NT6X46AB		1	51	18	AP
Comm Perih Ctl Term BD	NT6X1205		1	51	18R	AP
LGC/DTC Processor CP	NT6X45AC		1	51	19	AP
Message Interface CP	NT6X43AA		1	51	20	AP
Channel Supervision MSG CP	NT6X42AA		1	51	21	AP
Speech Bus Formatter CP	NT6X41AA		1	51	22	AP
DS30 Network Interface CP	NT6X40AA		2	51	23-24	AP
Power Conv +/-5V & 12V CP	NT2X70AD		1	51	25	AP
Designation Label (NT6X07AB)	P0679490		1	51		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One MSB6 Common CP is assigned on the frame to shelf mounting position 51. However, hardware is included for both shelf positions 65 and 51.
- 2) For more information on the frame refer to the section on NT6X06AB/AC (Section EMA2-08-000).

RULES:

- AP 1) When PEC NT6X07AB is ordered, these items are provided.

MSB6 COMMON CP

PEC CODE: NT6X07AC

CPC CODE: B0225130

| RATING: Manufacture Discontinued (MD)

REPLACES: Not Applicable

REPLACED BY: NT6X07AD.

ABBREVIATION NAME: MSB6

ENGINEERING DESCRIPTION: The Message Switch and Buffer provides and maintains a path from the CCIS6/CCITT6 digital signalling link, which is switched through thenetwork, to the CCIS6/CCITT6 signalling terminal. MSB6 also performs the message switching and distribution functions between the DTC's and the appropriate signalling terminals.

REFERENCE DOCUMENTATION: MS6X06AC 00 09

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: Ganesh Ram Dept. S646 (BRW)

MAIN CONTACT: ganesh Ram Dept. S646 (BRW)

NT6X07AC EMR2-08-MSB6-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 93 10 15	----- ECM 293 03	Previous history not available Manufacture Discontinued.

The MSB6 Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
CCIS Signalling Terminal CP	NT6X65AA		1	65	11	AP
Signalling Terminal I/F CP	NT6X68AA		1	65	13	AP
Signalling Term Buffer CP	NT6X67AA		1	65	14	AP
LGC/DTC Processor CP	NT6X45AC		1	65	15	AP
Master Processor Memory CP	NT6X47AB		1	65	17	AP
Signal Processor Memory CP	NT6X46AB		1	65	18	AP
Comm Perih Ctl Term BD	NT6X1205		1	65	18R	AP
LGC/DTC Processor CP	NT6X45AC		1	65	19	AP
Message Interface CP	NT6X43AA		1	65	20	AP
Channel Supervision MSG CP	NT6X42AA		1	65	21	AP
Speech Bus Formatter CP	NT6X41AA		1	65	22	AP
DS30 Network Interface CP	NT6X40AA		2	65	23-24	AP
Designation Label (NT6X07AC)	P0705097		1	65		AP
CCIS Signalling Terminal CP	NT6X65AA		1	51	11	AP
Signalling Terminal I/F CP	NT6X68AA		1	51	13	AP
Signalling Term Buffer CP	NT6X67AA		1	51	14	AP
LGC/DTC Processor CP	NT6X45AC		1	51	15	AP
Master Processor Memory CP	NT6X47AB		1	51	17	AP
Signal Processor Memory CP	NT6X46AB		1	51	18	AP
Comm Perih Ctl Term BD	NT6X1205		1	51	18R	AP
LGC/DTC Processor CP	NT6X45AC		1	51	19	AP
Message Interface CP	NT6X43AA		1	51	20	AP
Channel Supervision MSG CP	NT6X42AA		1	51	21	AP
Speech Bus Formatter CP	NT6X41AA		1	51	22	AP
DS30 Network Interface CP	NT6X40AA		2	51	23-24	AP
Designation Label (NT6X07AC)	P0705097		1	51		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if
they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One MSB6 Common CP is assigned on the frame to shelf mounting position 51. However, hardware is included for both shelf positions 65 and 51.
- 2) For more information on the frame refer to the section on NT6X06AC (Section EMA2-08-000).

RULES:

- AP 1) When PEC NT6X07AC is ordered, these items are provided.

MESSAGE SWITCHING 6 EQUIPMENT FRAME

NT6X06AA

RATING: MD. Replaced by NT6X06AB.

ABBREVIATION NAME: MS6E

ENGINEERING DESCRIPTION: The Message Switching 6 Equipment houses DMS Common Channel Interoffice Signalling (CCIS) hardware composed of: Message Switching Buffer 6 (MSB6), Signalling Terminals, Modem and Inverters. The Signalling Terminals and associated Modems within a frame are set up in two groups. Each group has up to eight (8) elements. The MSB6 communicates with the Digital Trunk Controller (DTC) via up to eight (8) network ports per plane. The MSB6 switches signalling messages between ST's and CCIS trunks (on DTC's). The Signalling Terminal provides interface functions between DMS and the Signalling Network.

REFERENCE DOCUMENTATION: MS6X06AA 00 05

The Message Switching 6 Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
MSB6 Common CP	NT6X07AA			65		RUL3
Sign Term Array 6 Shf Assy	NT6X0701	STA6	1	65		AP
CCIS Signalling Terminal CP	NT6X65AA				04-10	RUL1
Filler Face Plate	NT0X50AA				04-10	RUL1
Filler Face Plate	NT0X50AA				16	RUL1
Des Label for NT6X65AA	P0626891				04-10	RUL2
Des Label for NT0X50AA	P0578498				04-10	RUL1
					16	
MSB6 Common CP	NT6X07AA			51		RUL3
Sign Term Array 6 Shf Assy	NT6X0701	STA6	1	51		AP
CCIS Signalling Terminal CP	NT6X65AA				04-10	RUL1
Filler Face Plate	NT0X50AA				04-10	RUL1
Filler Face Plate	NT0X50AA				16	RUL1
Des Label for NT6X65AA	P0626891				04-10	RUL2
Des Label for NT0X50AA	P0578498				04-10	RUL1
					16	
Frame Supervisory Panel	NT0X28AN	FSP	1	45		AP
Cooling Inverter Unit	NT3X90AB	CU	1	32		AP
Data Set Module	NT5X0804	DSM	1	19		AP
Modem CP	C0054355			19	01-08	RUL1
Modem CP	C0054355			19	09-16	RUL1
Cover Panel Assembly	NT5X0806			19		AP
Inverter	NT0X87AA			11		AP
Inverter	NT0X87AA			04		AP
Cover Panel Assembly	NT5X0806			04		AP

RULE:

- AP 1) When PEC NT6X06AA is ordered, these items are provided.
- 2) Each frame comes equipped with 2 CCIS Signalling Terminal cards (NT6X65AA) equipped in slots 6511 and 5111 as per NT6X07AA. The two Modem cards (C0054355) equipped in slots 3301 and 3309 are provisionable as per RUL1 shown below.

Together, these comprise the first two links of the first signalling layer assigned to this frame.

- 3) The Data Set Module comes equipped with one AC Power Supply Modified CP, NT5X0813.
- 4) Two Cover Panel Assemblies, NT5X0806 are always provided. One NT5X0806 is used to cover the Data Set Module and the spaces below and above it. The second NT5X0806 is used to cover the two Inverters and the empty space between them.
- 5) The two always provided 6 Signalling Terminal Array shelves on positions 65 and 51 make up the Message Switching Buffer Module 6, MSB6.

The lower shelf, STA6 0, is "A" powered.

The upper shelf, STA6 1, is "B" powered.

- 6) Frame Supervisory Panel NT0X28AN has one always provided Converter Drive & Protection CP, NT0X91AE and one Alarm & Converter Drive CP, NT0X91AA.
- 7) The inverter on position 04 is to be "B" powered. The inverter on position 11 is to be "A" powered. The power cord for channels 1-8 (i.e. plug no. 1 on the power pack) on the DSM is to be plugged into the inverter on position 04. The power cord for channels 9-16 (i.e. plug no. 2 on the power pack) on the DSM is to be plugged into the inverter on position 11.

- RUL1
- 1) Provide one Modem CP, C0054355 per link (i.e. 2 Modems per signalling layer) required.
 - 2) With each Modem pair in the Data Set Module there is a corresponding pair of CCIS Signalling Terminals, NT6X65AA provided in the 6 Signalling Terminal Array 6 Shelf pair (MSB6) located in positions 65 and 51. The two CCIS Signalling Terminal CP NT6X65AA associated with a signalling layer must be provided on separate shelves (NT6X0701) within the same frame (NT6X06AA) as shown in the table below.
 - 3) The provisioned C0054355 and NT6X65AA cards are to be assigned to slots in the order listed below. There is a fixed interconnection between slots at shelf position 33 and those at positions 65 and 51.

MODEM CHANNEL POSITION IN THE DSM	NT6X65AA LOCATION	C0054355 SHELF MOUNTING POSITION IN THE D MODEM CHANNEL POSITION IN THE DS
2	65-10	33-02
10	51-10	33-10
3	65-09	33-03
11	51-09	33-11
4	65-08	33-04
12	51-08	33-12
5	65-07	33-05
13	51-07	33-13
6	65-06	33-06
14	51-06	33-14
7	65-05	33-07
15	51-05	33-15
8	65-04	33-08
16	51-04	33-16

NT6X65AA and C0054355 are always provided for in channels 1 and 9.

- 4) Provide one (1) Filler Face Plate, NT0X50AA, and Design Label P0578498 in each shelf position 65 and 51, CP Positions 04-10 which is not to be equipped with NT6X65AA.
- 5) Provide one (1) Filler Face Plate, NT0X50AA, and Design Label P0578498 in each shelf position 65 and 51 for card slot 16 to satisfy forced air cooling requirements.

RUL2 Provide one (1) Designation Label P0626891 corresponding to each NT6X65AA card provisioned per RUL1.

RUL3 Provide one (1) NT6X07AA, MSB6 Common CP, in order to equip the MSB6 module in the MS6E frame.

MESSAGE SWITCHING 6 EQUIPMENT FRAME

PEC CODE: NT6X06AB

CPC CODE: B0219684

| RATING: Manufacture Discontinued (MD'd)

REPLACES: Not Applicable

REPLACED BY: NT6X06AC

ABBREVIATION NAME: MS6E

ENGINEERING DESCRIPTION: The Message Switching 6 Equipment (MS6E) houses DMS Common Channel Interoffice Signalling (CCIS) hardware and DMS CCITT #6 Signalling (for DMS-300 application) hardware. The MS6E is composed of the Message Switch and Buffer 6 (MSB6), Signalling Terminals (ST), modems and inverters. The Signalling Terminals and associated modems are setup into two groups of eight (8) on the MS6E frame. The MSB6 communicates with the Digital Trunk Controllers (DTC) via up to 8 network ports per plane. The MSB6 switches signalling messages between the ST's and the CCIS or CCITT #6 trunks on the DTC's via the Inter-Peripheral Message Links (IPML's), i.e. nailed-up connections through the network. The signalling terminal provides the interface function between the DMS and the signalling network.

REFERENCE DOCUMENTATION: MS6X06AB 00 09

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: NTC: Jerry Palmer Dept. 3471 (RTP)

MAIN CONTACT: NTC: Jerry Palmer Dept. 3471 (RTP)

NT6X06AB EMR2-08-001 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 94 02 16	----- ECM 293 04	Previous History Not Available Introduction of ECD: 024-90990

The Message Switching 6 Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
MSB6 Common CP	NT6X07AB	MSB6		51		RUL2
Sig. Term Array 6 Shf Assy	NT6X0701	STA61	1	65		AP
CCIS Signalling Terminal CP	NT6X65AA	ST		65	04-10	RUL3
Filler Face Plate	NT0X50AA			65	04-10	RUL3
Filler Face Plate	NT0X50AA			65	16	RUL3
Signalling Terminal I/F	NT6X68AA			65	12	RUL4
STI with Terminator	NT6X68AB			65	12	RUL5
Power Converter Kit	NT2X70AZ			65	01, 25	RUL1
Sig. Term Array 6 Shf Assy	NT6X0701	STA60	1	51		AP
CCIS Signalling Terminal CP	NT6X65AA	ST		51	04-10	RUL3
Filler Face Plate	NT0X50AA			51	04-10	RUL3
Filler Face Plate	NT0X50AA			51	16	RUL3
Signalling Terminal I/F	NT6X68AA			51	12	RUL4
STI with Terminator	NT6X68AB			51	12	RUL5
Power Converter Kit	NT2X70AZ			51	01, 25	RUL1
Frame Supervisory Panel	NT0X28AN	FSP	1	45		AP
Cooling Inverter Unit	NT3X90AB	CU	1	32		AP
AC Modem Shelf	NT5X08AC	DSM	1	19		RUL10
Modem CP	A0302338			19	01-08	RUL3
Modem CP	A0302338			19	09-16	RUL3
Cover Panel Assembly	NT5X0806		1	19		AP
\$ Inverter	NT0X87AA	INV		11		RUL11
\$ Ground Cable	NT0X4306			11		RUL11
LaMarche Inverter	A0367433	INV		11		RUL13
Ground Cable	NTMX1659			11		RUL13
\$ Inverter	NT0X87AA	INV		04		RUL11
\$ Ground Cable	NT0X0009			04		RUL11
Cover Panel Assembly	NT5X0806		1	04		AP
LaMarche Inverter	A0367433	INV		03		RUL13
Ground Cable	NTMX1660			03		RUL13
Logic Return Cable Assembly	NT0X0008					RUL12
Desig. Label for NT6X65AA	P0626891			51, 65	04-10	RUL6
Desig. Label for NT6X68AA	P0643138			51, 65	12	RUL7
Desig. Label for NT6X68AB	P0643139			51, 65	12	RUL8
Desig. Label for NT0X50AA	P0643139			51, 65	04-10	RUL3

EQUIPMENT FLAGGED '#':

	PEC	RATING	REPLACED BY PEC
\$	NT6X06AB Valid for Canadian Applications Only	MD	Not Applicable

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

- AP 1) When PEC NT6X06AB is ordered, these items are provided.
- 2) Each frame comes equipped with 2 CCIS Signalling Terminal cards (NT6X65AA) equipped in slots 6511 and 5111 as per NT6X07AB. The two Modem cards (A0302338) equipped in slots 01 and 09 of shelf position 19 are provisionable as per RUL3 shown below. Together, these comprise the first two links of the first signalling layer assigned to this frame.
- 3) Two Cover Panel Assemblies, NT5X0806 are always provided. One NT5X0806 is used to cover the Data Set Module and the spaces below and above it. The second NT5X0806 is used to cover the two Inverters and the empty space between them.
- 4) The two always provided 6 Signalling Terminal Array shelves on positions 65 and 51 make up the Message Switching Buffer Module 6, MSB6.

The lower shelf, STA6 0, is "A" powered.
The upper shelf, STA6 1, is "B" powered.

- 5) Frame Supervisory Panel NT0X28AN has one always provided Converter Drive & Protection CP, NT0X91AE and one Alarm & Converter Drive CP, NT0X91AA.
 - 6) One Cooling Inverter Unit NT3X90AB at position 32 is always provided.
- RUL1 1) Provide four (4) NT2X70AZ Power Converter Kits when upgrading, per telco request, Power Converter CP's to NT2X70AE. This applies only to the NT6X07AB module.
- RUL2 Provide one (1) NT6X07AB, MSB6 Common CP, in order to equip the MSB6 module in the MS6E frame. The MSB6 is a dual shelf peripheral; i.e. one NT6X07AB consists of hardware for both shelf positions 51 and 65.
- RUL3 1) Provide one Signalling Terminal CP (NT6X65AA) per signalling link. In CCIS and CCITT #6, signalling links are provisioned in pairs (i.e. a signalling layer). The two CCIS ST CP's associated with a signalling layer must be provided on separate STA6 shelves (NT6X0701) within the same MS6E (NT6X06AB) as shown in the Table below. Note that the 2 STA6 shelves are powered by different power feeds (A & B), for reliability purposes.
- 2) Provide one Modem CP, A0302338 per signalling link (i.e. 2 Modems per signalling layer) required.
 - 3) For each Modem pair in the Data Set Module there is a corresponding pair of CCIS Signalling Terminals, NT6X65AA provided in the Signalling Terminal Array 6 Shelf pair (STA6) located in positions 65 and 51.
 - 4) The provisioned A0302338 and NT6X65AA cards are to be assigned to slots in the order listed below. There is a fixed interconnection between slots at shelf position 19 and those at positions 65 and 51.

MODEM CHANNEL POSITION IN THE DSM	NT6X65AA LOCATION	A0302338 (MODEM CP) DSM SHELF POSITION ON THE MS6E MODEM CHANNEL POSITION IN THE DSM
1	65-11 *	19-01 } Job Engineer to
9	51-11 *	19-09 } provide these
		} two modem packs
2	65-10	19-02
10	51-10	19-10
3	65-09	19-03
11	51-09	19-11
4	65-08	19-04
12	51-08	19-12
5	65-07	19-05
13	51-07	19-13
6	65-06	19-06
14	51-06	19-14
7	65-05	19-07
15	51-05	19-15
8	65-04	19-08
16	51-04	19-16

* NT6X65AA is always provided (AP) in slots 65-11 and 51-11. However, corresponding modems in slots 19-01 and 19-09 must be provisioned.

- 5) When more than 16 NT6X65AA, CCIS Signalling Terminal CP are required, the additional hardware is mounted on a Signalling Terminal 6 Equipment frame (ST6E) and a Data Modem Extension frame (DME).
- 6) Provide one (1) Filler Face Plate, NT0X50AA, and Design Label P0578498 in each shelf position 65 and 51, CP Positions 04-10 which is not to be equipped with NT6X65AA.
- 7) Provide one (1) Filler Face Plate, NT0X50AA, and Design Label P0578498 in each shelf position 65 and 51, for position 16 to satisfy forced air cooling requirements.

RUL4 Provide one (1) NT6X68AA Signalling Terminal Pack per shelf 65 and 51 when an ST6E NT6X09AA Signalling Terminal Extension Frame will be provided in the same office.

RUL5 Provide one (1) NT6X68AB Signalling Terminal Interface With Terminator per shelf 65 and 51 when an NT6X09AA ST6E is not provided.

RUL6 Provide one (1) Designation Label P0626891 corresponding to each NT6X65AA card provisioned per RUL3.

- RUL7 Provide one (1) designation label P0643138 when an NT6X68AA pack is provided.
- RUL8 Provide one (1) designation label P0643139 when an NT6X68AB pack is provided.
- RUL9 (Reserved for future use)
- RUL10 Provide one (1) NT5X08AC, AC Modem Shelf which will accommodate up to sixteen Modem Cards as per customer requirements.
- RUL11 1) Provide two (2) Inverter units, NT0X87AA, in each shelf position 04 and 11. Provide the NT0X4306 ground cable kit for the inverter located at position 11 and the NT0X0009 ground cable kit for the inverter located at position 04.
- 2) The inverter on position 04 is to be "B" powered. The inverter on position 11 is to be "A" powered. The power cord for channels 1-8 (i.e. plug no. 1 on the power pack) on the DSM is to be plugged into the inverter on position 04. The power cord for channels 9-16 (i.e. plug no. 2 on the power pack) on the DSM is to be plugged into the inverter on position 11.
- RUL12 1) Provide one (1) NT0X0008 Logic Return Cable Assembly per frame when extending existing offices not equipped with enhanced grounding per IS0X00.
- RUL13 1) For US Applications - Provide two (2) LaMarche Inverter units to be shipped loose from the frame. These will be field installed in positions 03 and 11. Provide the NTMX1659 ground cable kit for the inverter located in position 11 and the NTMX1660 ground cable kit for the inverter located in position 03.
- 2) For Upgrade of Existing NT0X87AA inverters to UL Compliant Lamarche Inverters in Existing MS6E frames (per telco request) - When Upgrading the NT0X87AA to LaMarche provide one LaMarche inverter unit per shelf position 03 and 11 and the appropriate Lamarche upgrade kit (one per inverter). The NTMX1661 Lamarche upgrade kit is required for NON-ISG applications. The NTMX1662 LaMarche upgrade kit is required for ISG applications. Do not provide the NTMX1659/60 kits as all ground cables required are provided in the NTMX1661/62 upgrade kits.

- 3) The inverter on position 03 is to be "B" powered. The inverter on position 11 is to be "A" powered. The power cord for channels 1-8 (i.e. plug no. 1 on the power pack) on the DSM is to be plugged into the inverter on position 04. The power cord for channels 9-16 (i.e. plug no. 2 on the power pack) on the DSM is to be plugged into the inverter on position 11.

MESSAGE SWITCHING 6 EQUIPMENT FRAME

PEC CODE: NT6X06AC

CPC CODE: B0223110

| RATING: Manufacture Discontinued (MD'd)

REPLACES: NT6X06AB

REPLACED BY: Not Applicable

ABBREVIATION NAME: MS6E

ENGINEERING DESCRIPTION: The Message Switching 6 Equipment (MS6E) houses DMS Common Channel Interoffice Signalling (CCIS) hardware and DMS CCITT #6 Signalling (for DMS-300 application) hardware. The MS6E is composed of the Message Switch and Buffer 6 (MSB6), Signalling Terminals (ST), modems and inverters. The Signalling Terminals and associated modems are setup into two groups of eight (8) on the MS6E frame. The MSB6 communicates with the Digital Trunk Controllers (DTC) via up to 8 network ports per plane. The MSB6 switches signalling messages between the ST's and the CCIS or CCITT #6 trunks on the DTC's via the Inter-Peripheral Message Links (IPML's), i.e. nailed-up connections through the network. The signalling terminal provides the interface function between the DMS and the signalling network.

The MS6E can also be connected to an Enhanced Network in a non-fiberised configuration.

REFERENCE DOCUMENTATION: SL6X06AC 00 06
MS6X06AC 00 09

MARKETS:

Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: NTC: Jerry Palmer Dept. 3471 (RTP)

MAIN CONTACT: NTC: Jerry Palmer Dept. 3471 (RTP)

NT6X06AC EMR2-08-002 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 93 10 15	----- ECM 293 03	Previous History Not Available Introduction of NT6X69LB in MS6E to allow MS6E function in ENET appl. Introduction of ECD:024-90990.
94 02 16	ECM 293 04	

The Message Switching 6 Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Sig. Term Array 6 Shf Assy	NT6X0701	STA61	2	51,65		AP
CCIS Signalling Terminal CP	NT6X65AA	ST		51,65	04-10	RUL3
Desig Label (NT6X65AA)	P0626891			51,65	04-10	RUL3
Filler Face Plate	NT0X50AA			51,65	04-10	RUL3
Filler Face Plate	NT0X50AA			51,65	16	RUL3
Signalling Terminal I/F	NT6X68AA			51,65	12	RUL4
Desig Label (NT6X68AA)	P0643138			51,65	12	RUL4
STI with Terminator	NT6X68AB			51,65	12	RUL5
Desig Label (NT6X68AB)	P0643139			51,65	12	RUL5
Power Conv. +/-5V & 12V CP	NT2X70AE			51,65	01,25	RUL13
Desig Label (NT2X70AE)	P0698943			51,65	01,25	RUL13
Power Converter Kit	NT2X70AZ			51,65	01,25	RUL13
MSB6 Common CP	NT6X07AB	MSB6		51,65		RUL2
MSB6 Common CP	NT6X07AC	MSB6		51,65		RUL2
MSB6 Common CP	NT6X07AD	MSB6		51,65		RUL2
CCIS Signalling Terminal CP	NT6X65AA		2	51,65	11	RUL2
Signalling Terminal I/F CP	NT6X68AA		2	51,65	13	RUL2
Signalling Term Buffer CP	NT6X67AA		2	51,65	14	RUL2
LGC/DTC Processor CP	NT6X45AC		2	51,65	15	RUL2
Master Processor Memory CP	NT6X47AB		2	51,65	17	RUL2
Signal Processor Memory CP	NT6X46BB		2	51,65	18	RUL2
Comm Perih Ctl Term BD	NT6X1205		2	51,65	18R	RUL2
LGC/DTC Processor CP	NT6X45AC		2	51,65	19	RUL2
CPP Message Protocol	NT6X69LA		2	51,65	20	RUL2
Designation Label (NT6X69LA)	P0733549		2	51,65		RUL2
CPP Msg Protocol & Downld CP	NT6X69LB		2	51,65	20	RUL2
Designation Label (NT6X69LB)	P0733549		2	51,65		RUL2
Channel Supervision MSG CP	NT6X42AA		2	51,65	21	RUL2
Speech Bus Formatter CP	NT6X41AA		2	51,65	22	RUL2
DS30 Network Interface CP	NT6X40AC		4	51,65	23-24	RUL2
New Messaging Wiring option	NT6X06WA			51,65		RUL2
PC Upgrade Kit for New Mes.	NT6X07WA			51,65		RUL2
Designation Label (NT6X07AC)	P0705097		2	51,65		RUL2
Frame Supervisory Panel	NT0X28AN	FSP	1	45		AP
DC Fan Cooling Unit	NT3X90AC	CU	1	32		AP
AC Modem Shelf	NT5X08AC	DSM		19		RUL10
Modem CP	A0302338			19	01-08	RUL3
Modem CP	A0302338			19	09-16	RUL3

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
\$ Inverter	NT0X87AA	INV		11		RUL11
\$ Ground Cable	NT0X4306			11		RUL11
LaMarche Inverter	A0367433	INV	1	11		RUL15
Ground Cable Kit	NTMX1659		1	11		RUL15
\$ Inverter	NT0X87AA	INV		04		RUL11
\$ Ground Cable	NT0X0009			04		RUL11
Cover Panel Assembly	NT5X0806		1	04		AP
LaMarche Inverter	A0367433	INV	1	03		RUL15
Ground Cable kKt	NTMX1660		1	03		RUL15
LaMarche Upgrade Kit (for Non-ISG application)	NTMX1661					RUL15
LaMarche Upgrade Kit (for ISG application)	NTMX1662					RUL15
Logic Return Cable Assembly	NT0X0008					RUL12

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT6X06AC	MD	Not Applicable

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if
they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufac-
tured and cannot be ordered.

NOTES:

RULES:

- AP 1) When PEC NT6X06AC is ordered, these items are provided.
- 2) Each frame comes equipped with 2 CCIS Signalling Terminal cards (NT6X65AA) equipped in slots 65, 11 and 51,11 as per NT6X07AB/AC/AD. The two Modem cards (A0302338) equipped in slots 01 and 09 of shelf position 19 are provisionable as per RUL3 shown below. Together, these comprise the first two links of the first signalling layer assigned to this frame.
- 3) Two Cover Panel Assemblies, NT5X0806 are always provided. One NT5X0806 is used to cover the Data Set Module and the spaces below and above it. The second NT5X0806 is used to cover the two Inverters and the empty space between them.
- 4) The two always provided 6 Signalling Terminal Array shelves on positions 65 and 51 make up the Message Switching Buffer Module 6, MSB6.
- The lower shelf, STA6 0, is "A" powered.
The upper shelf, STA6 1, is "B" powered.
- 5) Frame Supervisory Panel NT0X28AN has one always provided Converter Drive & Protection CP, NT0X91AE and one Alarm & Converter Drive CP, NT0X91AA.
- 6) One Cooling Inverter Unit NT3X90AC at position 32 is always provided.

RUL1 1) Reserved for future use.

RUL2 1) Provide one (1) NT6X07AB/AC/AD, MSB6 Common CP, in order to equip the MSB6 module in the MS6E frame. The MSB6 is a dual shelf peripheral; i.e. one NT6X07AB/AC/AD consists of hardware for both shelf positions 51 and 65. Note that NT6X07AB, AC and AD are all MD'd. Hence provision as per item 2 in this rule for new offices.

- 2) For Junctored or Enhanced Network connectivity provide the following:

Two (2) CCIS Signalling Terminal CP, NT6X65AA
two (2) Signalling Terminal I/F CP, NT6X68AA
two (2) Signalling Term Buffer CP, NT6X67AA
two (2) LGC/DTC Processor CP, NT6X45AC
two (2) Master Processor Memory CP, NT6X47AB

two (2) Signal Processor Memory CP, NT6X46BB
two (2) Comm Perih Ctl Term BD, NT6X1205
two (2) LGC/DTC Processor CP, NT6X45AC
two (2) Channel Supervision MSG CP, NT6X42AA
two (2) Speech Bus Formatter CP, NT6X41AA
four (4) DS30 Network Interface CP, NT6X40AC
two (2) Designation Label (NT6X07AC), P0705097

- 3) Provide two (2) NT6X69LA circuit packs when JNET termination is required.
- 4) Provide two (2) NT6X69LB circuit packs and two (2) P0713213 when ENET termination is required. Of all the items in the above rule, the NT6X69LB is the most critical. The Enhanced Network will only work with new messaging. The NT6X69LB must be used when ENET connectivity is desired.
- 5) Provide one (1) NT6X06WA New Messaging wiring option when an NT6X06AD is provided. The NT6X06WA is required for new Messaging Functionality.
- 6) Provide one (1) NT6X07WA PC Kit for Upgrading NT6X06AA/AB/AC to AD for New Messaging.

- RUL3
- 1) Provide one Signalling Terminal CP (NT6X65AA) per signalling link. In CCIS and CCITT #6, signalling links are provisioned in pairs (i.e. a signalling layer). The two CCIS ST CP's associated with a signalling layer must be provided on separate STA6 shelves (NT6X0701) within the same MS6E (NT6X06AC) as shown in the Table below. Note that the 2 STA6 shelves are powered by different power feeds (A & B), for reliability purposes.
 - 2) Provide one P0626891 designation label for each NT6X65AA provided.
 - 3) Provide one Modem CP, A0302338 per signalling link (i.e. 2 Modems per signalling layer) required.
 - 4) For each Modem pair in the Data Set Module there is a corresponding pair of CCIS Signalling Terminals, NT6X65AA provided in the Signalling Terminal Array 6 Shelf pair (STA6) located in positions 65 and 51.
 - 5) The provisioned A0302338 and NT6X65AA cards are to be assigned to slots in the order listed below. There is a fixed interconnection between slots at shelf position 19 and those at positions 65 and 51.

MODEM CHANNEL POSITION IN THE DSM	NT6X65AA LOCATION	A0302338 (MODEM CP) DSM SHELF POSITION ON THE MS6E MODEM CHANNEL POSITION IN THE DSM
1	65-11 *	19-01 } Job Engineer to
9	51-11 *	19-09 } provide these
		} two modem packs
2	65-10	19-02
10	51-10	19-10
3	65-09	19-03
11	51-09	19-11
4	65-08	19-04
12	51-08	19-12
5	65-07	19-05
13	51-07	19-13
6	65-06	19-06
14	51-06	19-14
7	65-05	19-07
15	51-05	19-15
8	65-04	19-08
16	51-04	19-16

* NT6X65AA is always provided (AP) in slots 65-11 and 51-11. However, corresponding modems in slots 19-01 and 19-09 must be provisioned.

- 6) When more than 16 NT6X65AA, CCIS Signalling Terminal CP are required, the additional hardware is mounted on a Signalling Terminal 6 Equipment frame (ST6E) and a Data Modem Extension frame (DME).
- 7) Provide one (1) Filler Face Plate, NT0X50AA, and Design Label P0578498 in each shelf position 65 and 51, CP Positions 04-10 which is not to be equipped with NT6X65AA.
- 8) Provide one (1) Filler Face Plate, NT0X50AA, in each shelf position 65 and 51, CP Position 16 to satisfy forced air cooling requirements.

- RUL4
- 1) Provide one (1) NT6X68AA Signalling Terminal Pack per shelf 65 and 51 when an ST6E NT6X09AA Signalling Terminal Extension Frame will be provided in the same office.
 - 2) Provide one (1) designation label P0643138 when an NT6X68AA pack is provided.

- RUL5 1) Provide one (1) NT6X68AB Signalling Terminal Interface With Terminator per shelf 65 and 51 when an NT6X09AA ST6E is not provided.
- 2) Provide one (1) designation label P0643139 when an NT6X68AB pack is provided.
- RUL6 1) Reserved for future use.
- RUL7 1) Reserved for future use.
- RUL8 1) Reserved for future use.
- RUL9 1) Reserved for future use.
- RUL10 1) Provide one (1) NT5X08AC, AC Modem Shelf which will accommodate up to sixteen Modem Cards as per customer requirements.
- RUL11 1) For Canadian Applications - Provide two (2) NT0X87AA Inverter Units shipped loose from the frame. These will be field installed in positions 04 and 11. Provide the NT0X4306 ground cable kit for the inverter located at position 11 and the NT0X0009 ground cable kit for the inverter located at position 04.
- 2) The inverter on position 04 is to be "B" powered. The inverter on position 11 is to be "A" powered. The power cord for channels 1-8 (i.e. plug no. 1 on the power pack) on the DSM is to be plugged into the inverter on position 04. The power cord for channels 9-16 (i.e. plug no. 2 on the power pack) on the DSM is to be plugged into the inverter on position 11.
- RUL12 1) Provide one (1) NT0X0008 Logic Return Cable Assembly per frame when extending existing offices not equipped with enhanced grounding per IS0X00.
- RUL13 1) Provide four (4) NT2X70AE Power Converter CP for each new MSB6 module ordered. This rule only applies to the NT6X07AC module. Note that NT6X07AC module is MD'd.
- 2) Provide four (4) NT2X70AZ Power Converter Kits when upgrading, per telco request, Power Converter CP's to NT2X70AE. This applies only to the NT6X07AB module. Note that NT6X07AB module is MD'd.
- 3) Provide one (1) designation label P0698943 when a NT2X70AE pack is provided.

RUL14 1) Reserved for future use.

RUL15 1) For US Applications - Provide two (2) LaMarche Inverter units to be shipped loose from the frame. These will be field installed in positions 03 and 11. Provide the NTMX1659 ground cable kit for the inverter located in position 11 and the NTMX1660 ground cable kit for the inverter located in position 03.

2) For Upgrade of Existing NT0X87AA inverters to UL Compliant Lamarche Inverters in Existing MS6E frames (per telco request) - When Upgrading the NT0X87AA to LaMarche provide one LaMarche inverter unit per shelf position 03 and 11 and the appropriate Lamarche upgrade kit (one per inverter). The NTMX1661 Lamarche upgrade kit is required for NON-ISG applications. The NTMX1662 LaMarche upgrade kit is required for ISG applications. Do not provide the NTMX1659/60 kits as all ground cables required are provided in the NTMX1661/62 upgrade kits.

3) The inverter on position 03 is to be "B" powered. The inverter on position 11 is to be "A" powered. The power cord for channels 1-8 (i.e. plug no. 1 on the power pack) on the DSM is to be plugged into the inverter on position 04. The power cord for channels 9-16 (i.e. plug no. 2 on the power pack) on the DSM is to be plugged into the inverter on position 11.

MSB7 COMMON CP

NT6X32AA

| RATING: MD. Replaced by NT6X32CA

ABBREVIATION NAME: MS7E

ENGINEERING DESCRIPTION: The Message Switch and Buffer provides and maintains a path from the CCS7 digital signalling link which is switched through the network, to the CCS7 Signalling Terminal. MSB7 also performs the message switching and distribution functions between the DTC's and the appropriate Signalling Terminal.

REFERENCE DOCUMENTATION: N/A

The MSB7 Common CP is comprised of the following: d

Power Conv. +/-5V & 12V	NT2X70AB	1	32	1	AP
Signalling Terminal I/F CP	NT6X68AC	1	32	9	AP
Signalling Term Buffer CP	NT6X67AA	1	32	10	AP
LGC/DTC Processor CP	NT6X45AE	1	32	11	AP
MP Memory Plus CP	NT6X47AB	1	32	13	AP
SP memory Plus CP	NT6X46AB	1	32	15	AP
Comm Periph CTL BP Paddle	NT6X1205	1	32	15R	AP
LGC/DTC Processor CP	NT6X45AE	1	32	16	AP
DS30A LCM I/F CP	NT6X48AA	1	32	17	AP
Time Switch CP	NT6X44AB	1	32	18	AP
CPP MSG Protocall CP	NT6X69AA	1	32	20	AP
Channel Supervision MGS CP	NT6X42AA	1	32	22	AP
Speech Bus Formatter CP	NT6X41AA	1	32	23	AP
DS30 Network I/F CP	NT6X40AB	1	32	24	AP
Power Converter +/-5V & 12V	NT2X70AB	1	32	25	AP
Filler Face Plate 0.875	NT0X50AA	4	32	12, 14 19, 21	AP
Designation Label (NT6X32AA) P0671179		1	32		AP
Power Conv. +/-5V & 12V	NT2X70AB	1	18	1	AP
Signalling Terminal I/F CP	NT6X68AC	1	18	9	AP
Signalling Term Buffer CP	NT6X67AA	1	18	10	AP
LGC/DTC Processor CP	NT6X45AE	1	18	11	AP
MP Memory Plus CP	NT6X47AB	1	18	13	AP
SP memory Plus CP	NT6X46AB	1	18	15	AP
Comm Periph CTL BP Paddle	NT6X1205	1	18	15R	AP
LGC/DTC Processor CP	NT6X45AE	1	18	16	AP
DS30A LCM I/F CP	NT6X48AA	1	18	17	AP
Time Switch CP	NT6X44AB	1	18	18	AP
CPP MSG Protocall CP	NT6X69AA	1	18	20	AP
Channel Supervision MGS CP	NT6X42AA	1	18	22	AP
Speech Bus Formatter CP	NT6X41AA	1	18	23	AP
DS30 Network I/F CP	NT6X40AB	1	18	24	AP
Power Converter +/-5V & 12V	NT2X70AB	1	18	25	AP
Filler Face Plate 0.875	NT0X50AA	4	18	12, 14 19, 21	AP
Designation Label (NT6X32AA) P0671179		1	18		AP

RULE:

- AP 1) When PEC NT6X32AA is ordered, these items are provided.
- 2) One (1) MSB7 Common CP is assigned on the frame to shelf mounting position 18. However, hardware is included for both shelf positions 18 and 32.

MSB7 COMMON CIRCUIT PACK

NT6X32AB

| RATING: MD. Replaced by NT6X32CA.

ABBREVIATION NAME: MSB7

ENGINEERING DESCRIPTION: The Message Switch and Buffer provides and maintains a path from the CCS7 digital signalling link which is switched through the network, to the CCS7 Signalling Terminal. MSB7 also performs the message switching and distribution functions between the DTC's and the appropriate Signalling Terminal.

NT6X32AB is required for BCS-27 field-upgraded offices.

REFERENCE DOCUMENTATION: N/A

The MSB7 Common Circuit Pack is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Signalling Terminal I/F CP	NT6X68AC		1	32	9	AP
Signalling Term Buffer CP	NT6X67AA		1	32	10	AP
MP Memory Plus CP	NT6X47AB		1	32	13	AP
SP memory Plus CP	NT6X46AC		1	32	15	AP
Comm Periph Back Panel PB	NT6X1205		1	32	15R	AP
DS30A LCM I/F CP	NT6X48AA		1	32	17	AP
Time Switch CP	NT6X44AB		1	32	18	AP
CPP MSG Protocall CP	NT6X69AA		1	32	20	AP
Channel Supervision MGS CP	NT6X42AA		1	32	22	AP
Speech Bus Formatter CP	NT6X41AA		1	32	23	AP
Designation Label	P0698741		1	32		AP
Signalling Terminal I/F CP	NT6X68AC		1	18	9	AP
Signalling Term Buffer CP	NT6X67AA		1	18	10	AP
MP Memory Plus CP	NT6X47AB		1	18	13	AP
SP memory Plus CP	NT6X46AC		1	18	15	AP
Comm Periph Back Panel PB	NT6X1205		1	18	15R	AP
DS30A LCM I/F CP	NT6X48AA		1	18	17	AP
Time Switch CP	NT6X44AB		1	18	18	AP
CPP MSG Protocall CP	NT6X69AA		1	18	20	AP
Channel Supervision MGS CP	NT6X42AA		1	18	22	AP
Speech Bus Formatter CP	NT6X41AA		1	18	23	AP
Designation Label	P0698741		1	18		AP

RULE:

- AP 1) When PEC NT6X32AB is ordered, these items are provided.
- 2) One (1) MSB7 Common CP is assigned on the frame to shelf mounting position 18. However, hardware is included for both shelf positions 18 and 32.

MSB7 COMMON CIRCUIT PACK

NT6X32CA

RATING: MD. Replaced by NT6X32CC.

ABBREVIATION NAME: MSB7

ENGINEERING DESCRIPTION: The Message Switch and Buffer provides and maintains a path from the CCS7 digital signalling link which is switched through the network, to the CCS7 Signalling Terminal. MSB7 also performs the message switching and distribution functions between the DTC's and the appropriate Signalling Terminal.

REFERENCE DOCUMENTATION: N/A

The MSB7 Common Circuit Pack is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Signalling Terminal I/F CP	NT6X68AC		1	32	9	AP
Signalling Term Buffer CP	NT6X67AA		1	32	10	AP
MP Memory Plus CP	NT6X47AB		1	32	13	AP
SP memory Plus CP	NT6X46BA		1	32	15	AP
DS30A LCM I/F CP	NT6X48AA		1	32	17	AP
Time Switch CP	NT6X44AB		1	32	18	AP
CPP MSG Protocall CP	NT6X69AB		1	32	20	AP
Channel Supervision MGS CP	NT6X42AA		1	32	22	AP
Speech Bus Formatter CP	NT6X41AA		1	32	23	AP
Designation Label (NT6X32CA)	P0695485		1	32		AP
Signalling Terminal I/F CP	NT6X68AC		1	18	9	AP
Signalling Term Buffer CP	NT6X67AA		1	18	10	AP
MP Memory Plus CP	NT6X47AB		1	18	13	AP
SP memory Plus CP	NT6X46BA		1	18	15	AP
DS30A LCM I/F CP	NT6X48AA		1	18	17	AP
Time Switch CP	NT6X44AB		1	18	18	AP
CPP MSG Protocall CP	NT6X69AB		1	18	20	AP
Channel Supervision MGS CP	NT6X42AA		1	18	22	AP
Speech Bus Formatter CP	NT6X41AA		1	18	23	AP
Designation Label (NT6X32CA)	P0695485		1	18		AP

RULE:

- AP 1) When PEC NT6X32CA is ordered, these items are provided.
- 2) One (1) MSB7 Common CP is assigned on the frame to shelf mounting position 18. However, hardware is included for both shelf positions 18 and 32.

MSB7 COMMON CP

NT6X32BA

| RATING: MD. Replaced by NT6X32DA.

ABBREVIATION NAME: MSB7

ENGINEERING DESCRIPTION: The Message Switch and Buffer provides and maintains a path from the DPNSS digital signalling link which is switched through the network, to the DPNSS Signalling Terminal. MSB7 also performs the message switching and distribution functions between the DTC's and the appropriate Signalling Terminal.

REFERENCE DOCUMENTATION: N/A

The MSB7 Common CP is comprised of the following:

Power Conv. +/-5V & 12V	NT2X70AB	1	32	1	AP
Signalling Terminal I/F CP	NT6X68AC	1	32	9	AP
Signalling Term Buffer CP	NT6X67AA	1	32	10	AP
LGC/DTC Processor CP	NT6X45AE	1	32	11	AP
MP Memory Plus CP	NT6X47AB	1	32	13	AP
SP memory Plus CP	NT6X46AB	1	32	15	AP
CPC Back Panel Paddle Board	NT6X1205	1	32	15R	AP
LGC/DTC Processor CP	NT6X45AE	1	32	16	AP
DS30A LCM I/F CP	NT6X48AA	1	32	17	AP
Time Switch (DPNSS) CP	NT6X44DA	1	32	18	AP
CPP MSG Protocall CP	NT6X69AA	1	32	20	AP
Channel Supervision MGS CP	NT6X42AA	1	32	22	AP
Speech Bus Formatter CP	NT6X41AA	1	32	23	AP
DS30 Network I/F CP	NT6X40AB	1	32	24	AP
Power Converter +/-5V & 12V	NT2X70AB	1	32	25	AP
Filler Face Plate 0.875	NT0X50AA	4	32	12, 14 19, 21	AP
Designation Label (NT6X32BA)	P0689921	1	32		AP
Power Conv. +/-5V & 12V	NT2X70AB	1	18	1	AP
Signalling Terminal I/F CP	NT6X68AC	1	18	9	AP
Signalling Term Buffer CP	NT6X67AA	1	18	10	AP
LGC/DTC Processor CP	NT6X45AE	1	18	11	AP
MP Memory Plus CP	NT6X47AB	1	18	13	AP
SP memory Plus CP	NT6X46AB	1	18	15	AP
CPC Back Panel Paddle Board	NT6X1205	1	18	15R	AP
LGC/DTC Processor CP	NT6X45AE	1	18	16	AP
DS30A LCM I/F CP	NT6X48AA	1	18	17	AP
Time Switch (DPNSS) CP	NT6X44DA	1	18	18	AP
CPP MSG Protocall CP	NT6X69AA	1	18	20	AP
Channel Supervision MGS CP	NT6X42AA	1	18	22	AP
Speech Bus Formatter CP	NT6X41AA	1	18	23	AP
DS30 Network I/F CP	NT6X40AB	1	18	24	AP
Power Converter +/-5V & 12V	NT2X70AB	1	18	25	AP
Filler Face Plate 0.875	NT0X50AA	4	18	12, 14 19, 21	AP
Designation Label (NT6X32BA)	P0689921	1	18		AP

RULE:

- AP 1) When PEC NT6X32BA is ordered, these items are provided.
- 2) One (1) MSB7 Common CP is assigned on the frame to shelf mounting position 18. However, hardware is included for both shelf positions 18 and 32.

MSB7 COMMON CIRCUIT PACK

PEC CODE: NT6X32CC

CPC CODE: B0218978

| RATING: MD

REPLACES: Not Applicable

REPLACED BY: NT6X32CE

ABBREVIATION NAME: MSB7

ENGINEERING DESCRIPTION: The Message Switch and Buffer provides and maintains a path from the CCS7 digital signalling link which is switched through the network, to the CCS7 Signalling Terminal. MSB7 also performs the message switching and distribution functions between the DTC's and the appropriate Signalling Terminal.

REFERENCE DOCUMENTATION: SL6X32CC

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA
Carrier

ISSUE AUTHOR: NTI: Jerry Palmer Dept. 3471 (NTI)

MAIN CONTACT: NTI: Jerry Palmer Dept. 3471 (NTI)

NT6X32CC EMR2-11-001 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
92 09 25	ECM 271 11	Add slot numbers for NT0X50AA filler face plates. (ET14709)
95 09 11	ECM 271 14	Change status of section to MD per ECD 024-93165.
96 01 26	ECM 271 17	Change status of section to A&M per ECD 024-95822.
96 08 22	ECM 271 18	Change status of section to MD per ECD 024-96109.

The MSB7 Common Circuit Pack is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler faceplate	NT0X50AA		1	32	12	AP
Signalling Terminal I/F CP	NT6X68AC		1	32	9	AP
Signalling Term Buffer CP	NT6X67AA		1	32	10	AP
MP Memory Plus CP	NT6X47AB		1	32	13	AP
DS30A LCM I/F CP	NT6X48AA		1	32	17	AP
Time Switch CP	NT6X44AB		1	32	18	AP
Channel Supervision MGS CP	NT6X42AA		1	32	22	AP
Speech Bus Formatter CP	NT6X41AA		1	32	23	AP
Designation Label (NT6X32CC)	P0708176		1	32		AP
Filler faceplate	NT0X50AA		1	18	12	AP
Signalling Terminal I/F CP	NT6X68AC		1	18	9	AP
Signalling Term Buffer CP	NT6X67AA		1	18	10	AP
MP Memory Plus CP	NT6X47AB		1	18	13	AP
DS30A LCM I/F CP	NT6X48AA		1	18	17	AP
Time Switch CP	NT6X44AB		1	18	18	AP
Channel Supervision MGS CP	NT6X42AA		1	18	22	AP
Speech Bus Formatter CP	NT6X41AA		1	18	23	AP
Designation Label (NT6X32CC)	P0708176		1	18		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

- AP 1) When PEC NT6X32CC is ordered, these items are provided.
- AP 1) When PEC NT6X32CC is ordered, these items are provided.
 2) One (1) MSB7 Common CP is assigned on the frame to
 shelf mounting position 18. However, hardware is included
 for both shelf positions 18 and 32.

FLIS COMMON CIRCUIT PACK FILL

PEC CODE: NT9X72CA

CPC CODE:

| RATING: MD

REPLACES: Not Applicable

REPLACED BY: Not Applicable

ABBREVIATION NAME: LIS

ENGINEERING DESCRIPTION: The FLIS Common Circuit Pack Fill equips the Link Interface Unit Shelf with always provided circuit packs.

REFERENCE DOCUMENTATION:

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

ISSUE AUTHOR: NTI: Ken Clisso Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ken Clisso Dept. 3471 (PPK)

NT9X72CA EMR2-12-FLIS-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
93 08 27	ECM 612 07	Solving ET #: 16909.
94 06 30	ECM 612 10	Changes per EC 018-43057
94 08 09	ECM 612 11	ECD 006-19337, MD'd NT9X72CA pack fill kit.

The FLIS Common Circuit Pack Fill is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
+5V Power Converter	NT9X30AA		2		04F, 36F	AP
-5V Power Converter	NT9X31AA		2		01F, 33F	AP
LIS F-Bus Controller CP	NT9X96AA		2		07F, 32F	AP
LIS Fiber INTF Paddle Board	NT9X98AA		2		07R, 32R	AP
F-Bus A Terminator PB	NTEX20AA		1		30R	AP
F-Bus B Terminator PB	NTEX20BA		1		8R	AP
PB Filler Face Plate	NT9X19BA		10		10R, 12R, 14R, 16R, 18R, 20R, 22R, 24R, 26R, 28R,	AP
FLIS Shelf Des. strip(REAR)	P0730475		1			AP
FLIS Shelf Des. strip(FRONT)	P0730476		1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT9X72CA is ordered, these items are provided.

| LINK INTERFACE UNIT SHELF COMMON CP

NT9X72AA

| RATING: Replaced by NT9X72AC.

ABBREVIATION NAME: LIS

ENGINEERING DESCRIPTION: The Link Interface Unit Shelf Common CP
equips the Link Interface Unit Shelf with
always provided circuit packs.

REFERENCE DOCUMENTATION: N/A

The Link Interface Unit Shelf Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
+5V Power Converter	NT9X30AA		1		36F	AP
F-Bus Repeater/Term CP	NT9X74AA		2		32F, 07F	AP
+5V Power Converter	NT9X30AA		1		04F	AP
Filler Face Plate	NT9X19EA		2		33F, 1F	AP
PB Filler Face Plate	NT9X19BA		16		08R, 11R, 13R, 14R, 16R, 17R, 19R, 20R, 22R, 23R, 25R, 26R, 28R, 29R,	AP
Shelf Pack Fill Rear Label	P0689613		1			AP
Shelf Pack Fill Front Label	P0689615		1			AP

RULE:

AP 1) When PEC NT9X72AA is ordered, these items are provided.

LINK INTERFACE UNIT SHELF COMMON CP

PEC CODE: NT9X72AD

CPC CODE: B0232708

| RATING: MD

REPLACES: Not Applicable

REPLACED BY: Not Applicable

ABBREVIATION NAME: LIS

ENGINEERING DESCRIPTION: The Link Interface Unit Shelf Common CP equips the Link Interface Unit Shelf with always provided circuit packs and prepares the shelf for future applications (Ethernet, etc.).

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA
Carrier

ISSUE AUTHOR: NTI: Ganesh Ram Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ganesh Ram Dept. 3471 (PPK)

NT9X72AD EMR2-12-LIS-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 11 15	----- ECM 620 33	Previous history not available MD'd as per ECD:018-46903.

The Link Interface Unit Shelf Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
STP Filler Pack	NT9X19EA		1		01F	AP
+5V Power Converter	NT9X30AA		1		04F	AP
STP Filler Pack	NT9X19EA		1		33F	AP
+5V Power Converter	NT9X30AA		1		36F	AP
PB Filler Face Plate	NT9X19BA		14		08R, 11R, 13R, 14R, 16R, 17R, 19R, 20R, 22R, 23R, 25R, 26R 28R, 29R	AP
LIS Desig. Label Front	P0689615		1			AP
LIS Desig. Label Rear	P0689613		1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT9X72AD is ordered, these items are provided.

LINK INTERFACE UNIT SHELF COMMON CP

PEC CODE: NT9X72AC

CPC CODE: B0230725

| RATING: MD

REPLACES: Not Applicable

REPLACED BY: Not Applicable

ABBREVIATION NAME: LIS

ENGINEERING DESCRIPTION: The Link Interface Unit Shelf Common CP
equips the Link Interface Unit Shelf with
always provided circuit packs.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA
Carrier

ISSUE AUTHOR: NTI: Ganesh Ram Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ganesh Ram Dept. 3471 (PPK)

NT9X72AC EMR2-12-LIS-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 96 11 15	----- ECM 620 33	Previous history not available MD'd as per ECD:018-46903.

The Link Interface Unit Shelf Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate	NT9X19EA		2		1F, 33F	AP
+5V Power Converter	NT9X30AA		1		04F, 36F	AP
PB Filler Face Plate	NT9X19BA		16		08R, 11R, 13R, 14R, 16R, 17R, 19R, 20R, 22R, 23R, 25R, 26R, 28R, 29R	AP
Shelf Pack Fill Rear Label	P0689613		1			AP
Shelf Pack Fill Front Label	P0689615		1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT9X72AC is ordered, these items are provided.

LOCAL MESSAGE SWITCH SHELF COMMON CP

NT9X71AA

RATING: Standard

ABBREVIATION NAME: LMS

ENGINEERING DESCRIPTION: The Local Message Switch Shelf Common CP
equips the Local Message Switch with always
provided circuit packs.

REFERENCE DOCUMENTATION: N/A

The Local Message Switch Shelf Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
+5V Power Converter	NT9X30AA		1		36F	AP
MS P-Bus Terminator CP	NT9X49CA		1		32F	AP
LMS F-Bus Rate Adapter CP	NT9X73AA		1		31F	AP
MS 4-Port CP	NT9X17AA		2		29F, 30F	AP
Mapper CP	NT9X15AA		1		24F	AP
Memory 6M CP	NT9X14BB		1		23F	AP
CPU 16 MHz CP	NT9X13DA		1		22F	AP
MS Clock CP	NT9X53AA		1		21F	AP
T-Bus Access CP	NT9X52AA		2		19F, 20F	AP
MS Clock CP	NT9X53AA		1		18F	AP
CPU 16 MHz CP	NT9X13DA		1		17F	AP
Memory 6M CP	NT9X14BB		1		16F	AP
Mapper CP	NT9X15AA		1		15F	AP
MS 4-Port CP	NT9X17AA		2		09F, 10F	AP
LMS F-Bus Rate Adapter CP	NT9X73AA		1		08F	AP
MS P-Bus Terminator CP	NT9X49CA		1		07F	AP
+5V Power Converter	NT9X30AA		1		04F	AP
F-Bus Extension PB e/w Term	NT9X79BA		2		31R, 08R	AP
DS-30 4-Port CPNTA (STP)	NT9X23BA		4		29R, 30R, 09R, 10R	AP
Remote Term I/F Add	NT9X26AA		2		22R, 17R	AP
Filler Face Plate	NT9X19AA		8		25F-28F, 11F-14F	AP
Filler Face Plate	NT9X19EA		2		33F, 01F	AP
PB Filler Face Plate	NT9X19BA		18		32R, 23R-28R, 18R-21R, 11R-16R, 07R	AP
Shelf Pack Fill Rear Label	P0689618		1			AP
Shelf Pack Fill Front Label	P0689616		1			AP

RULE:

AP 1) When PEC NT9X71AA is ordered, these items are provided.

LOCAL MESSAGE SWITCH SHELF COMMON CP

PEC CODE: NT9X71AB

CPC CODE: B0230241

| RATING: MD

REPLACES: Not Applicable

REPLACED BY: Not Applicable

ABBREVIATION NAME: LMS

ENGINEERING DESCRIPTION: The Local Message Switch Shelf Common CP
equips the Local Message Switch with always
provided circuit packs.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Canada
US
CALA
Asia/Pacific
Europe

ISSUE AUTHOR: NTI: Ganesh Ram Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ganesh Ram Dept. 3471 (PPK)

NT9X71AB EMR2-12-LMS-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 11 16	ECM 620 22	EC 018-43987 - Replace NT9X49CA with NT9X49CC.
96 11 15	ECM 620 33	As per EC 018-46903, NT9X71AB is MD'd. Hence, retire this section.

The Local Message Switch Shelf Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
+5V Power Converter	NT9X30AA		1		04F	AP
MS P-Bus Terminator CP	NT9X49CC		1		07F	AP
Designation Label (NT9X49CC)	P0735103		1		07F	AP
MS 4-Port CP	NT9X17AA		2		09F, 10F	AP
Mapper CP	NT9X15AA		1		15F	AP
Memory 6M CP	NT9X14BB		1		16F	AP
MS Clock CP	NT9X53AA		1		18F	AP
T-Bus Access CP	NT9X52AA		2		19F, 20F	AP
MS Clock CP	NT9X53AA		1		21F	AP
Memory 6M CP	NT9X14BB		1		23F	AP
Mapper CP	NT9X15AA		1		24F	AP
MS 4-Port CP	NT9X17AA		2		29F, 30F	AP
MS P-Bus Terminator CP	NT9X49CC		1		32F	AP
Designation Label (NT9X49CC)	P0735103		1		32F	AP
+5V Power Converter	NT9X30AA		1		36F	AP
F-Bus Extension PB e/w Term	NT9X79BA		2		08R, 31R	AP
DS-30 4-Port CPNTA (STP)	NT9X23BA		4		09R, 10R, 29R, 30R	AP
Remote Term I/F Add	NT9X26AA		2		22R, 17R	AP
Filler Face Plate	NT9X19AA		8		11F-14F, 25F-28F	AP
Filler Face Plate	NT9X19EA		2		33F, 01F	AP
PB Filler Face Plate	NT9X19BA		18		07R, 11R-16R, 18R-21R, 23R-28R, 32R	AP
Shelf Pack Fill Rear Label	P0689618		1			AP
Shelf Pack Fill Front Label	P0689616		1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT9X49CA NT9X71AB	A&M MD	NT9X49CC NONE, Use Rul6 of of Main Section.

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT9X71AB is ordered, these items are provided.

LINK INTERFACE MODULE CABINET

PEC CODE: NT9X70BA

CPC CODE: B0228986

RATING: MD

REPLACES: Not Applicable

REPLACED BY: NTZZ30SE

ABBREVIATION NAME: LIM

ENGINEERING DESCRIPTION:

The Link Interface Module forms a functional block of the CCS7 Signalling Transfer Point. The Link Interface Module interfaces the CCS7 message links. Each LIM cabinet houses up to thirty-six (36) individual Link Interface Units each of which can accommodate one DS-0 message link, or one (1) V.35 message link, or up to thirty-six (36) individual Ethernet Interface Units, each of which can accommodate one Ethernet link, or up to thirty-six (36) Frame Relay Service Units, each of which can accommodate one channelized or non-channelized T1 DataSPAN interface, or up to thirty-six (36) of a combination of the above.

The NT9X70BA is capable of providing Channelized Access for LIU7s in order to remove the need of interfacing the LIU7s to an OEM channel bank. Channelized Access provides connection to the DMS network using DS-30 protocol.

REFERENCE DOCUMENTATION: MS9X70BA 01 08

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific

MARKETS:

Applicable markets:

CALA
Carrier

ISSUE AUTHOR: NTI: Ganesh Ram Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ganesh Ram Dept. 3471 (PPK)

NT9X70BA EMR2-12-000 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
92 08 03	ECM 620 05	Add NIU and -60V information.
92 11 11	ECM 620 07	Add restriction for maximum of 11 XLIU per DMS Switch.
94 10 11	ECM 620 21	ET19749.
96 11 15	ECM 620 33	Solve SR RR6A105 to state the maximum number of XLIUs in the LPP cabinet.

The Link Interface Module Cabinet is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Common Cabinet Equipment	NT9X0101	FW	1			AP
Local Msg Switch Shf Assy	NT9X7101	LMS	1	39		AP
& Local Msg Switch Shf Com CP	NT9X71AB	LMS		39		RUL1
# Power Converter CP	NT9X30AA		2	39	4F, 36F	RUL15
Global +5V Power Converter	NT9X30AB			39	4F, 36F	RUL15
T-Bus Access CP	NT9X52AA		2	39	19F, 20F	RUL15
6 Meg Memory CP	NT9X14BB		2	39	16F, 23F	RUL15
Mapper CP	NT9X15AA		2	39	15F, 24F	RUL15
# Message Switch 4 Port CP	NT9X17AA		4	39	9F, 10F, 29F, 30F	RUL15
Message Switch 4 Port CP	NT9X17AD		4	39	9F, 10F, 29F, 30F	RUL15
Message Switch P-Bus Term.	NT9X49CA		2	39	7F, 32F,	RUL15
Message Switch Clock	NT9X53AA		2	39	18F, 21F	RUL15
DS-30 4 Port PB	NT9X23BA		4	39	9R, 10R 29R, 30R	RUL15
F-Bus Extender PB	NT9X79BA		2	39	8R, 31R	RUL15
LMS DS-30 X-Link Cable Assy	NT9X0171			39		RUL1
LMS DS-30 X-Link Cable Assy	NT9X7025			39		RUL1
LMS F-BUS Rate Adapter CP	NT9X73BA			39	08F, 31F	RUL8
# CPU 16 MHz CP	NT9X13DB			39	17F, 22F	RUL7
CPU 16 MHz CP	NT9X13DD			39	17F, 22F	RUL7
# Remote Terminal I/F PB	NT9X26AA			39	17R, 22R	RUL16
Remote Terminal I/F PB	NT9X26AB			39	17R, 22R	RUL16
Filler Faceplate	NT9X19AA			39	11F-14F 25F-28F	RUL1
PB Filler Faceplate	NT9X19BA			39	7R, 11R-16R, 18R-21R, 23R-28R, 32R	RUL1
Power Converter Faceplate	NT9X19EA			39	1F, 33F	RUL1
Bulkhead Assembly (LF)	NT9X6509		1	39		AP
Bulkhead Assembly (RT)	NT9X6536		1	39		AP
LMS Design Strip Front	P0689616			39		RUL18
LMS Design Strip Rear	P0689618			39		RUL18
Designation Label NT9X13DB	P0696239			39		RUL7
Designation Label NT9X73BA	P0709458			39		RUL8
Designation Label NT9X73AB	P0705003			39		RUL16
Link I/F Unit Shelf Assy	NT9X7204	LIS		XX		RUL2
\$ LIU7/DCP Shelf Comm CP	NT9X72BA	LIS		XX		RUL2
LIS Shelf Front Des. Strip	P0715483			XX		RUL2
LIS Shelf Rear Des. Strip	P0709179			XX		RUL2

Retired Equipment
Link Interface Module Cabinet

NT9X70BA
EMR2-12-000
Page 4

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Bulkhead Conn Cover Plate	NTEX5025			XX		RUL2
Power Converter CP	NT9X30AA			XX	4F, 36F	RUL2
Intra F-Bus A term. PB	NTEX20AA			XX	30R	RUL2
Intra F-Bus B term. PB	NTEX20BA			XX	8R	RUL2
Bulkhead Assembly	NT9X6534			XX		RUL9
F-Bus Extender Paddleboard	NT9X79AA		26, 13	7R, 32R		RUL3
F-Bus Extender Paddleboard	NT9X79BA		00	7R, 32R		RUL3
F-Bus Repeater CP	NT9X74CA			XX	7F, 32F	RUL17
F-Bus Repeater CP	NT9X74DA			XX	7F, 32F	RUL17
# IPF Proc and FBUS I/F CP	NTEX22AA			XX	8F, 10F, 12F, 14F, 16F, 18F, 20F, 22F, 24F, 26F, 28F, 30F	RUL4
# IPF Proc and FBUS I/F (8Meg)	NTEX22BA			XX	8F, 10F, 12F, 14F, 16F, 18F, 20F, 22F, 24F, 26F, 28F, 30F	RUL4
Enhanced CPU-IPF CP (8Meg)	NTEX22BB			XX	8F, 10F, 12F, 14F, 16F, 18F, 20F, 22F, 24F, 26F, 28F, 30F	RUL4
STP Signalling Terminal CP	NT9X76AA			XX	9F, 11F, 13F, 15F, 17F, 19F, 21F, 23F, 25F, 27F, 29F, 31F	RUL4
Enhanced STP Signalling Terminal CP	NT9X76BA		12	XX	9F, 11F, 13F, 15F, 17F, 19F, 21F, 23F, 25F, 27F, 29F, 31F	RUL4
JAPAN ISUP LIU7 Circuit Pack	NT9X76CA		10	XX	9F, 11F, 13F, 15F, 17F, 19F, 21F, 23F, 25F, 27F, 29F, 31F	RUL4
Ethernet Interface CP	NT9X84AA			XX	9F, 11F,	RUL4

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Frame Relay Analog I/F PB	NTEX30AA			XX	13F, 15F, 17F, 19F, 21F, 23F, 25F, 27F, 29F, 31F 9F, 11F,	RUL4
Frame Relay Service I/F CP	NTEX31AA			XX	13F, 15F, 17F, 19F, 21F, 23F, 25F, 27F, 29F, 31F 9F, 11F,	RUL4
Enhanced FRAP T1 Procc CP	NTEX31BA			XX	13F, 15F, 17F, 19F, 21F, 23F, 25F, 27F, 29F, 31F 9F, 11F,	RUL4
APUX Processor Circuit Pack	NT9X14DB		10	XX	13F, 15F, 17F, 19F, 21F, 23F, 25F, 27F, 29F, 31F 9F, 11F,	RUL4
Channel Bus Control Unit:0	NTEX25AA		1	XX	19F	RUL4
Channel Bus Control Unit:1	NTEX25BA		1	XX	21F	RUL4
# V.35 Interface Paddleboard	NT9X77AA			XX	9R, 11R, 13R, 15R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL4
V.35 Interface Paddleboard	NT9X77AB			XX	9R, 11R, 13R, 15R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL4
# V.35/RS232 I/F Paddleboard	NT9X77BA		12	XX	9R, 11R, 13R, 15R, 17R, 19R,	RUL4

Retired Equipment
Link Interface Module Cabinet

NT9X70BA
EMR2-12-000
Page 6

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
# DS0A Interface Paddleboard	NT9X78AA			XX	21R, 23R, 25R, 27R, 29R, 31R 9R, 11R, 13R, 15R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL4
# Enhanced DS0A Interface PB	NT9X78BA			XX	9R, 11R, 13R, 15R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL4
# Enhanced DS0A Interface PB	NT9X78CA			XX	9R, 11R, 13R, 15R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL4
Ethernet Access Unit I/F PB	NT9X85AA			XX	9R, 11R, 13R, 15R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL4
HDLC Frame Processor CP	NTFX10AA		10	XX	9F, 11F, 13F, 15F, 17F, 23F, 25F, 27F, 29F, 31F	RUL4
Channel Bus Interface PB	NTEX26AA		10	XX	9R, 11R, 13R, 15R, 17R, 23R, 25R, 27R, 29R, 31R	RUL4
DS30 Link I/F PB	NTEX28AA		2	XX	19R, 21R	RUL4
CBUS Interface PB	NTFX09AA		10	XX	9R, 11R, 13R, 15R, 17R, 23R, 25R, 27R, 29R, 31R	RUL4
Filler Face Plate	NT9X19AA			XX	08F-31F	RUL5

Retired Equipment
Link Interface Module Cabinet

NT9X70BA
EMR2-12-000
Page 7

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
PB Filler Face Plate	NT9X19BA			XX	9R, 11R, 13R, 15R, 17R, 19R, 21R, 23R 25R, 27R 29R, 31R	RUL5
Power Converter Face Plate	NT9X19EA			XX	1F, 33F	RUL5
LIU (two slot) ID Label (NTEX22AA, NT9X76AA)	P0709181					RUL4
LIU (two slot) ID Label (NTEX22AA, NT9X76AA)	P0734382					RUL4
LIU (two slot) ID Label (NTEX22BB, NT9X76AA)	P0738554					RUL4
Desig. Label NTEX22BA	P0732781					RUL4
Desig. Label NTEX22BB	P0735913					RUL4
Desig. Label NT9X77AA	P0704358					RUL4
Desig. Label NT9X77BA	P0731938					RUL4
Desig. Label NT9X78AA	P0689620					RUL4
Desig. Label NT9X78BA	P0704359					RUL4
Desig. Label NT9X78CA	P0732783					RUL4
Desig. Label NT9X74DA	P0733871					RUL17
Desig. Label NT9X79AA	P0689621					RUL6
Desig. Label NT9X78BA	P0689622					RUL6
EIU ID Label Front (NTEX22AA, NT9X84AA)	P0711662					RUL4
EIU ID Label Front (NTEX22BA, NT9X84AA)	P0734383					RUL4
Desig. Label NT9X85AA	P0711661					RUL4
FRU (two slot) ID Label (NTEX22AA, NTEX31AA)	P0711676					RUL4
FRU (two slot) ID Label (NTEX22BB, NTEX31AA)	P0735917					RUL4
EFRAP (two slot) ID Label (NTEX22BB, NTEX31BA)	P0735916					RUL4
NIU ID Label Unit:0 (NTEX22BB, NTEX25AA)	P0735918					RUL4
NIU ID Label Unit:1 (NTEX22BB, NTEX25BA)	P0735919					RUL4
Desig. Label NTEX28AA	P0733137					RUL4
Desig. Label NTEX26AA	P0733875					RUL4
XLIU ID Label (NTEX22BB, NTFX10AA)	P0735914					RUL4
Desig. Label NTFX09AA	P0732784					RUL4
Desig. Label NTEX30AA	P0711675					RUL4
STP Cable Assembly	NT9X0193					RUL4
Ethernet Cable Assembly	NT9X0190					RUL4

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
NIU DS30 Cable to Bulkhead	NT9X7020		4	XX		RUL4
NIU Inter CBC Cable	NT9X7021		2	XX		RUL4
FRIU Cable Assembly	NT9X0191					RUL4
Desig. Label (NT9X79AA)	P0689621					RUL6
Desig. Label (NT9X79BA)	P0689622					RUL6
Kick Plate Assembly (Brown)	NT0X2430					RUL10
Kick Plate Assembly (Grey)	NT0X2516					RUL10
Frame Fail Lamp (Brown)	NT0X24BT					RUL10
Frame Fail Lamp (Grey)	NT0X24CN					RUL10
Overhead (Frame) Pwr Blk Kit	NTEX5001					RUL13
Power Connection Boot Kit	NT9X0322					RUL13
Exterior Cabinet Label-Grey	P0709852					RUL11
Exterior Cabinet Label-Brown	P0696930					RUL11
Exterior Cabinet Label-Brown	P0702398					RUL11
DMS-STP Cabinet Label-Brown	P0710445					RUL11
DMS-STP Cabinet Label-Grey	P0710446					RUL11
Interior Cabinet FSP Label	P0709837					RUL11
FSP LIS ID Labels	P0702397					RUL11
FSP LIM ID Labels	P0713189					RUL11
FSP LMS ID Labels	P0713190					RUL11
PDC LIS/LMS ID Labels	P0701886					RUL11
PDC LIM ID Labels	P0713182					RUL11
LIU Cable Routing Labels	P0714420			26		RUL12
LIU Cable Routing Labels	P0714421			13		RUL12
LIU Cable Routing Labels	P0714422			00		RUL12
FRIU Cable Routing Labels	P0714414			26		RUL12
FRIU Cable Routing Labels	P0714415			26		RUL12
FRIU Cable Routing Labels	P0714416			13		RUL12
FRIU Cable Routing Labels	P0714417			13		RUL12
FRIU Cable Routing Labels	P0714418			00		RUL12
FRIU Cable Routing Labels	P0714419			00		RUL12
NIU Cable Routing Labels	P0735393			26		RUL12
NIU Cable Routing Labels	P0735391			13		RUL12
NIU Cable Routing Labels	P0735392			00		RUL12
Disc Fan Warning Label Eng	P0675710					RUL14
High Voltage Label English	P0675711					RUL14
High Voltage Label English	P0675712					RUL14
High Voltage Lbl Eng/French	P0689137					RUL14
High Voltage Lbl Eng/French	P0689138					RUL14

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT9X13DB	MD	NT9X13DD
NT9X17AA	MD	NT9X17AD
NT9X77AA	MD	NT9X77AB
NT9X78AA	MD	NT9X78BA
NT9X78BA	MD	NT9X78DA
NT9X78CA	MD	NT9X78DA
NT9X71AB	MD	NONE. Use Rul 6.
NT9X30AA *	MD	NT9X30AB

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

* Meaning this CP is MD'd only in this product. It may not have been MD'd in other products. Check the availability in other products.

\$ Rating Change Pending. On all new jobs do not order the fill kits. All circuit packs are now provisonable.

NOTES:

- 1) XX can be either shelf position 00, 13 or 26.
- 2) LIU7 and FRIU DCP may be mixed on the LIM(LPP) in BCS33 and beyond subject to engineering rules yet to be specified.

RULES:

AP 1) When PEC NT9X70BA is ordered, these items are provided.

2) The NT9X0101 is comprised of the following:

NT0X24AA Cabinet Framework
NT9X03AA Frame Supervisory Panel
A0345301 Core Cooling Unit
Cabinet Common Cabling & FSP Cabling

The NT0X24AA framework provides earthquake and EMI protection. The framework is 72" high, 28" deep and 42" wide. The NT9X03AA FSP is mounted at position 52. The A0345301 Cooling Unit is located immediately below position 0.

RUL1 1) On new jobs do not provision the NT9X71AB Common Circuit Pack Fill. All circuit packs that were part of the NT9X71AB are now provisionable.

2) Provide two (2) NT9X0171, LMS DS-30 X-Link Cable Assembly, per cabinet for NON-RAISED floor office applications.

3) Provide two (2) NT9X7025, LMS DS-30 X-Link Cable Assembly, per cabinet for RAISED floor office applications.

4) Provide one NT9X19AA Filler Faceplate for every unused slot in the front of the LMS shelf.

5) Provide one NT9X19BA Paddlerboard Filler Faceplate for every unused slot in the rear of the LMS shelf.

6) Provide two NT9X19EA Power Converter Filler Faceplate for slots in the front of the LMS shelf.

RUL2 1) Always provision three (3) NT9X7204 Link I/F Unit Shelf Assy.

2) On new jobs do not provision the NT9X72BA Common Circuit Pack Fill. All circuit packs that were part of the NT9X72BA are now provisionable.

3) Provide two Power Converter CP, one (1) INTRA F-Bus A Termination PB, one (1) INTRA F-Bus B Termination PB per required LIS shelf.

4) Provide one Bulkhead Connector Cover Plate for each unused connector position on the LIS shelf bulkheads. The number of connector positions on the bulkhead is 16. Subtract the

number of connector positions assigned per bulkhead per the cable assembly diagrams in RUL4 from 16 to calculate the number of Bulkhead Connector Cover Plates required per bulkhead.

- 5) Provide two Bulkhead Configuration labels per LIS shelf. The labels are mounted on the inside of the rear cabinet doors adjacent to the shelf bulkheads. The labels provide a surface that allows the customer to record cabling configuration information for each bulkhead.
- 6) Provide one LIS shelf Front Des Strip and one LIS rear Des. Strip Per LIS. The LIS shelf front Des Strip includes labels for all NT9X19AA, NT9X19EA, NT9X30AA and NT9X74CA CP. All other CP's will require a label to be provisioned. The LIS shelf rear Des Strip includes labels for all NT9X19BA, NTEX20AA and NTEX20BA Paddle Boards. All other Paddle Boards will require a label to be provisioned.

RUL3 1) Provide two (2) NT9X79BA F-Bus Extender Paddleboard With Termination for the bottom most LIS on the frame (Position 00). Provide two (2) NT9X79AA F-Bus Extender Paddleboards for each of the other two Link Interface Shelves.

RUL4 1) Each LIS will support up to twelve (12) two slot Link Interface Units (LIU7). Ethernet Interface Units (EIU), Frame Relay Interface Units (FRIU) or a combination of both up to a maximum of of thirty-six (36) units per LIM cabinet.

When the JAPAN ISUP LIU7 circuit pack is used (NT9X76CA), a maximum of ten (10) JAPAN ISUP LIUs can be provided per LIS shelf, up

This restriction exists because the ISUP LIU7 can only be used when channelized access is used on an LIS shelf. That is, an NIU must provided before the JAPAN ISUP LIU can be provided.

The Japan ISUP LIU7 requires the NTEX22BB IPF Proc and F-BUS CP.

The only paddleboard that can be used with the NT9X76CA JAPAN ISUP LIU7 is the NTEX26AA, the Channel BUS Interface paddleboard. to a maximum of thirty (30) LIUs per LPP cabinet.

The individual two slot LIU7s are provisioned as follows:

Provide EITHER - one (1) NT9X77AA V.35 Interface Paddleboard when interfacing a V.35 signalling link,

- OR - one (1) NT9X78AA DS0A Interface Paddleboard when interfacing a DS0A signalling link,
- OR - one (1) NT9X78BA Enhanced DS0A Interface Paddleboard when interfacing a DS0A signalling link and when Enhanced Maintenance capability is required.
- OR - one (1) NT9X78CA Enhanced DS0A Interface with 56/64 kb per second capacity and enhanced maintenance is required.
Note:
The NT9X78CA can only be used for BCS33 and higher applications. The 64 kb software capacity is only for international markets at this time. The NT9X78CA can be used in domestic applications at BCS33 and higher, but it can only be datafilled with 56 kb per second capacity.
- OR - one (1) NTEX26AA Channel Bus Interface PB for channelized access applications.

Provide one (1) NT9X76AA STP - Signalling Terminal CP.

Provide one (1) NTEX22AA IPF Proc and F-Bus Interface CP or one (1) NTEX22BA IPF Proc and F-Bus Interface CP for 8Meg requirements.

Provide one (1) NT9X0193 STP Cable Assembly from each LIU7 Paddleboard to LIS Bulkhead.

Provide one (1) P0709181 LIU (two slot) Identification Label per LIU when NTEX22AA and NT9X76AA are provisioned.

Provide one (1) P0734382 LIU (two slot) Identification Label per LIU when NTEX22BA and NT9X76AA are provisioned.

Provide one (1) P0738554 LIU (two slot) Identification Label per LIU when NTEX22BB and NT9X76AA are provisioned.

Provide one (1) P0732781 Designation Label per LIU when NTEX22BA is provisioned as an upgrade to the NTEX22AA.

Provide one (1) P0689620 Designation Label when NT9X78AA is provisioned.

Provide one (1) P0704359 Designation Label when NT9X78BA is provisioned.

Provide one (1) P0732783 Designation Label when NT9X78CA is provisioned.

Provide one (1) P0704358 Designation Label when NT9X77AA is provisioned.

Provide one (1) P0733875 Designation Label per NTEX26AA provisioned.

The individual two slot EIUs are provisioned as follows:

Provide one (1) NTEX22AA Integrated Processor and FBUS Interface CP or one (1) NTEX22BA IPF Proc and F-Bus Interface CP (8Meg).

Provide one (1) NT9X84AA Ethernet Interface Circuit Pack.

Provide one (1) NT9X85AA Ethernet Access Unit Interface Paddleboard to allow the ethernet standard interface for the EIU.

Provide one (1) NT9X0190 Ethernet Cable Assembly from each EIU Paddleboard (NT9X85AA) to LIS Bulkhead.

Provide one (1) P0711662 EIU Identification Label Front per EIU when NTEX22AA and NT9X84AA are provisioned.

Provide one (1) P0734383 EIU (two slot) Identification Label per EIU when NTEX22BA and NT9X84AA are provisioned.

Provide one (1) P0732781 Designation Label per EIU when NTEX22BA is provisioned as an upgrade to the NTEX22AA.

Provide one (1) Designation Label P0711661 per EIU (NT9X85AA).

The individual two slot FRIU are provisioned as follows:

Provide one (1) NTEX30AA Frame Relay T1 Access paddleboard for each channelized or non-channelized T1 access circuit required.

For BCS 33 and earlier provide one (1) NTEX31AA Frame Relay Access Proc CP.

For BCS 34 and greater provide one (1) NTEX31BA EFRAP Enhanced Frame Relay Application Process. When an existing office reaches BCS 34 or greater, the NTEX31AA must be upgraded to an NTEX31BA.

For BCS 33 and earlier provide one (1) NTEX22AA IPF Proc and F-Bus Interface CP. The NTEX22BA IPF Proc and F-Bus Interface CP (8Meg) is not to be ordered for FRIUs.

For BCS 34 and greater provide one (1) NTEX22BB Enhanced IPF Process and F-Bus Interface CP (8Meg). When an existing office reaches BCS 34 and greater the NTEX22AA must be upgraded to NTEX22BB.

Provide one (1) P0735917 FRU ID Label per FRIU when NTEX22BB and NTEX31AA are provisioned.

Provide one (1) P0734384 FRAP ID Label per FRIU when NTEX22BA and NTEX31AA are provisioned.

Provide one (1) P0732782 EFRAP ID Label per FRIU when NTEX22BB and NTEX31BA are provisioned.

Provide two (2) NT9X0191 FRIU Cable Assembly from each FRIU Paddleboard to LIS Bulkhead.

Provide one (1) P0711675 Desig. Label NTEX30AA per FRIU.

The NIU on a LIS shelf is provisioned as follows:

Provide two (2) NTEX22BB Enhanced CPU-IPF Circuit Pack.

Provide one (1) NTEX25AA Channel Bus Control Unit:0 CP.

Provide one (1) NTEX25BA Channel Bus Control Unit:1 CP.

Provide two (2) NTEX28AA DS30 Link Interface Paddleboard to allow the NIU to interface the Switching Network.

Provide four (4) NT9X7020 NIU DS30 Cable Assembly from the NIU Paddleboards to LIS Bulkhead.

Provide two (2) NT9X7021 NIU Inter CBC Cable to connect between the NIU Paddleboards.

Provide one (1) NIU ID Label Unit:0, P0735918, per NIU (CPs NTEX22BB, NTEX25AA).

Provide one (1) NIU ID Label Unit:1, P0735919, per NIU (CPs NTEX22BB, NTEX25BA).

Provide one (1) Designation Label P0733137 per NTEX28AA provisioned.

The XLIU on a LIS shelf is provisioned as follows: Each DMS Switch can have a maximum of thirty (30) XLIUs, X.25/X.75 Link Interface Unit. However, the configuration of only twenty four (24) XLIUs with 6 NIUs have been verified in the LPP cabinet. (Refer to SEB 92-02-001) For example with 6 NIUs, each shelf in a three shelf LPP, in which all the shelves contain XLIUs, should have exactly 8 XLIUs.

Provide one (1) NTEX22BB Enhanced CPU-IPF Circuit Pack.

Provide one (1) NTFX10AA HDLC Frame Processor CP.

Provide one (1) NTFX09AA CBUS Interface Paddleboard to allow the XLIU to interface the CBUS.

Provide one (1) XLIU ID Label, P0735914, per XLIU (CPs NTEX22BB, NTFX10AA).

Provide one (1) Designation Label P0732784 per NTFX09AA provisioned.

The individual APUX processor application is provisioned as follows:

Provide:

one (1) NTEX22BB Enhanced CPU-IPF CP

one (1) NT9X14DB UNIX application processor,

AND

one (1) NT9X19BA paddleboard filler faceplate.

Provide one (1) APUX Identification Label Front, P0735915, per APUX (CPs NTEX22BB, NT9X14DB).

There is no cabling associated with the APUX application.

The LIS shelf must be equipped with Channelized Access to use the APUX application.

A maximum of ten (10) APUXs can be assigned to one LIS shelf, up to a maximum of thirty (30) APUXs per LPP cabinet.

- 2) The cards which make up an LIU7 are assigned to the following CP positions on the LIS:

LIS CP POS			
LIU7 POSITION	NTEX22AA	NT9X76AA	NT9X78AA/BA/CA
	NTEX22BA	NT9X76BA	or NT9X77AA
	NTEX22BB	NT9X76CA	or NT9X77BA
NUMBER/SHELF			or NTEX26AA
LIU7 #1	8	9	9R
LIU7 #2	10	11	11R
LIU7 #3	12	13	13R
LIU7 #4	14	15	15R
LIU7 #5	16	17	17R
LIU7 #6	18	19	19R
LIU7 #7	20	21	21R
LIU7 #8	22	23	23R
LIU7 #9	24	25	25R
LIU7 #10	26	27	27R
LIU7 #11	28	29	29R
LIU7 #12	30	31	31R

The cards which make up an EIU are assigned to the following CP positions on the LIS:

LIS CP POS			
EIU POSITION	NTEX22AA	NT9X84AA	NT9X85AA
	NTEX22BA		
	NTEX22BB		
NUMBER/SHELF			
EIU #1	8	9	9R
EIU #2	10	11	11R
EIU #3	12	13	13R
EIU #4	14	15	15R
EIU #5	16	17	17R
EIU #6	18	19	19R
EIU #7	20	21	21R
EIU #8	22	23	23R
EIU #9	24	25	25R
EIU #10	26	27	27R
EIU #11	28	29	29R
EIU #12	30	31	31R

The cards which make up an FRIU are assigned to the following CP positions on the LIS:

FRIU POSITION NUMBER/SHELF	LIS CP POS		
	NTEX22AA NTEX22BB	NTEX31AA NTEX31BA	NTEX30AA
FRIU #1	8	9	9R
FRIU #2	10	11	11R
FRIU #3	12	13	13R
FRIU #4	14	15	15R
FRIU #5	16	17	17R
FRIU #6	18	19	19R
FRIU #7	20	21	21R
FRIU #8	22	23	23R
FRIU #9	24	25	25R
FRIU #10	26	27	27R
FRIU #11	28	29	29R
FRIU #12	30	31	31R

For reliability the LIU7/EIU/FRIU must be assigned to positions 00, 13, and 26 in the following order:

Links in a linkset should be spread across LIU7/EIU/FRIU in this order. Also, office sites should be consecutively datafilled as shown below.

L M S												
LIU7/EIU/FRIU												
#1		#3		#5		#7		#9		#12		
LIS 01	1	7	13	19	25	31	34	28	22	16	10	4
LIS 02	5	11	17	23	29	35	22	26	20	14	8	2
LIS 03	3	9	15	21	27	33	36	30	24	18	12	6
(CP POS)	0 8	1 0	1 2	1 4	1 6	1 8	2 0	2 2	2 4	2 6	2 8	3 0

ASSIGNMENT SEQUENCE OF LIU7/EIU/FRIU
TO LINK INTERFACE MODULE (NT9X70BA)

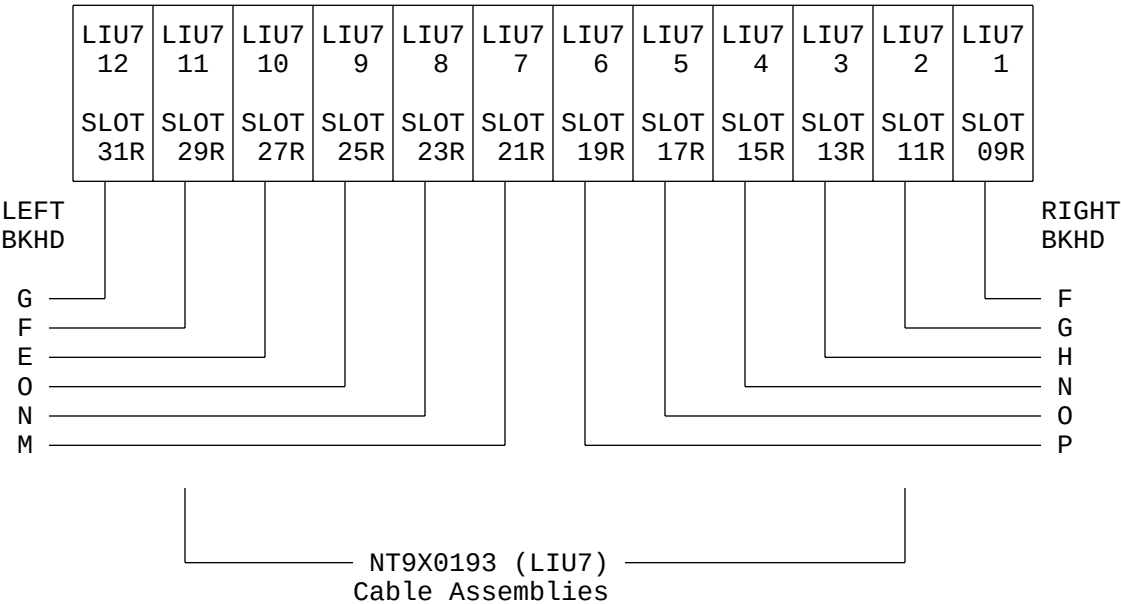
Refer to NOTE 1 for mixing of LIU7 and EIU with FRIU on the LIM.

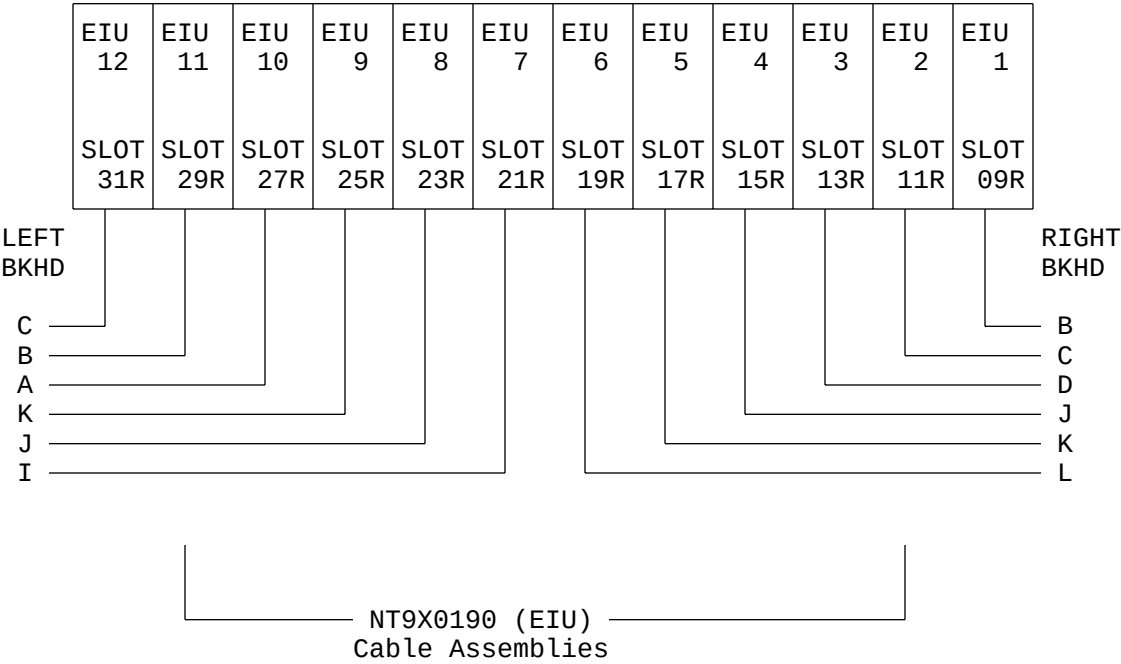
In an office, the LIU7/EIU can be number from LIU/EIU 0 to LIU/EIU 750. FRIU can be numbered from FRIU 0 to FRIU 611.

The LIU7/EIU/FRIUs are to be numbered sequentially in a LIM frame starting with LIS 01 (shelf position 26) (LIU #1

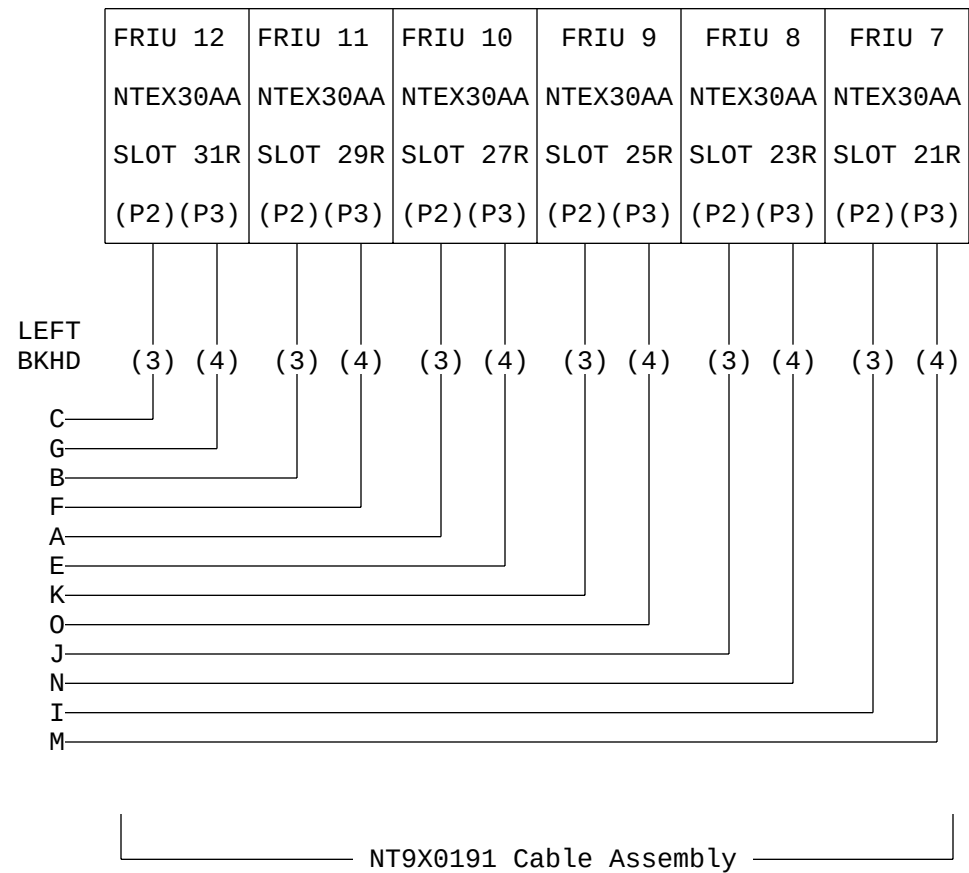
through to LIU #12), followed by LIS 02 (shelf position 13) (LIU #1 through to LIU #12), followed by LIS 03 (shelf position 00) (LIU #1 through to LIU #12). The positions will be numbered consecutively regardless of whether the LIU7/EIU/FRIU is equipped or not.

3) Following is the rear view of LIS 01, LIS 02, LIS 03 arrangement and cable provisioning:

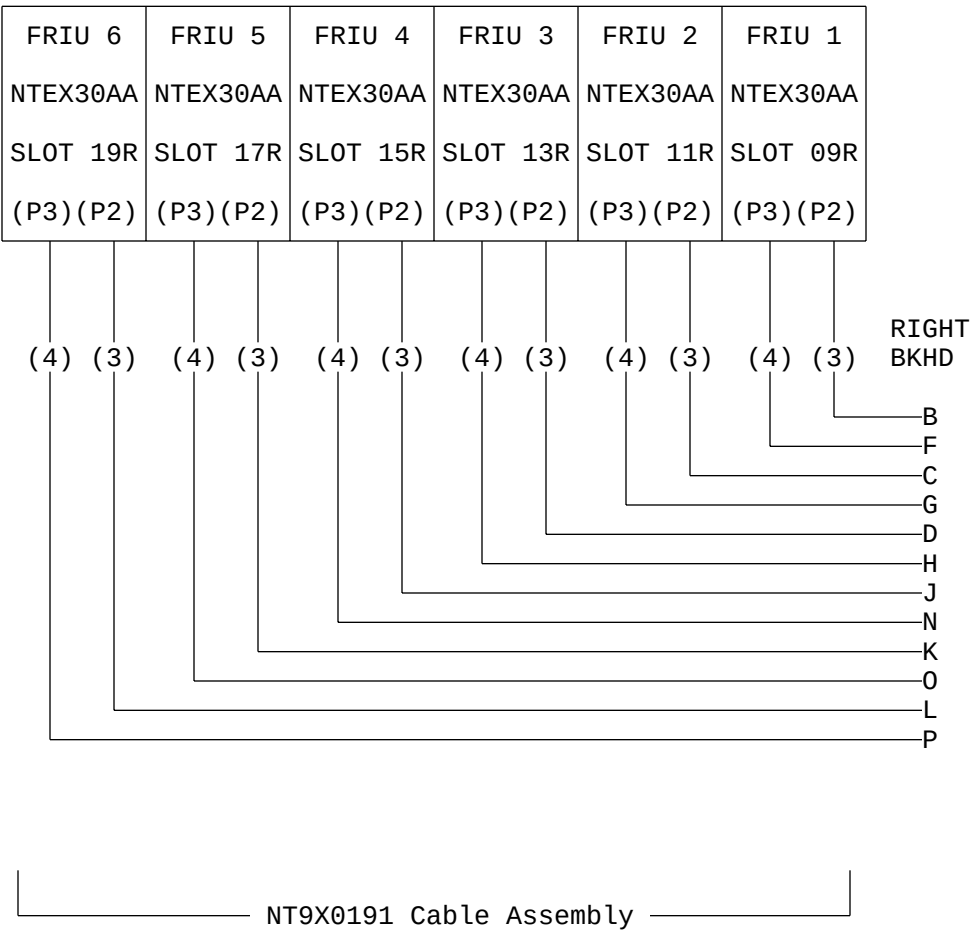




Following is the rear view of LIS 01, LIS 02, LIS 03 arrangement and cable (NT9X0191) provisioning:

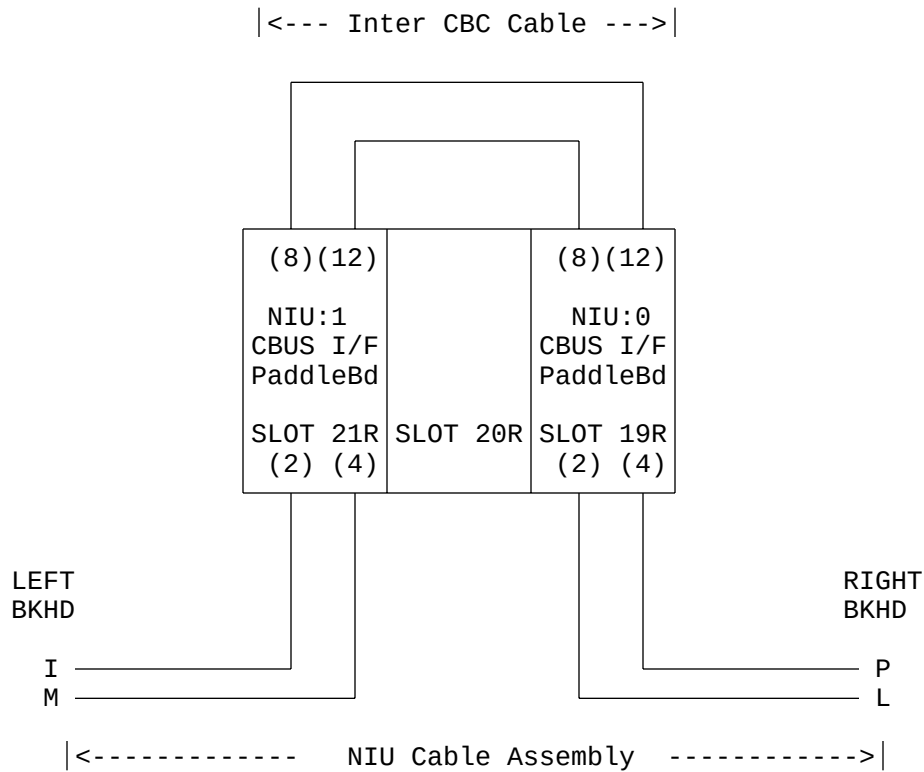


P2 and P3 are connector designations while (3) and (4) are the actual markings on the paddleboard. (Shown here for reference only)



P2 and P3 are connector designations while (3) and (4) are the actual markings on the paddleboard. (Shown here for reference only).

Following is the rear view of LIS 01, LIS 02, LIS 03 arrangement and cable provisioning for NIU:



- RUL5 1) Provide one NT9X19AA Filler Face plates and one NT9X19BA Paddleboard filler plate for each unequipped LIU7/EIU/FRIU position on a LIS shelf. Provide two NT9X19EA for each equiped LIS shelf.
- RUL6 1) Provide one (1) Designation Label corresponding to each card provisioned.
- RUL7 1) Provide two (2) NT9X13DB CPU 16 MHZ CP to be mounted on the LMS shelf in slots 17 and 22.
2) Provide two (2) NT9X13DB Designation Labels P0696239.
- RUL8 1) Provide two (2) NT9X73BA LMS F-Bus Rate Adapter CP to be mounted on the LMS shelf in slots 08 and 31.
2) Provide two (2) NT9X73BA Designation Labels P0709458.

- RUL9 1) Provide six (two (2) per LIS shelf) Bulkhead Assembly NT9X6534. Each pair are to be mounted in shelf positions 26, 13, and 00.
- 2) Provide one NTEX5025, Bulkhead Connector Cover Plate, for each unused connector on the NT9X6534 bulkhead. A maximum of 16 cover plates be provided per bulkhead.
- RUL10 1) Provide one (1) NT0X2516 Kick Plate Assembly (Grey) per grey LIM cabinet NT9X70BA. Use only with other grey exterior parts.
- 2) Provide one (1) NT0X24BT, Frame Fail Lamp (Brown), per brown LIM cabinet NT9X70BA. Use only with other brown exterior parts.
- 3) Provide one (1) NT0X24CN, Frame Fail Lamp (Grey), per grey LIM cabinet NT9X70BA. Use only with other grey exterior parts.
- RUL11 1) The following labels are to be ordered when the DMS-SCP LIM cabinets have been provided:

DESCRIPTION	PEC	PROVISIONING RULES
Exterior Cabinet Label (Grey)	P0709852	Provide one per office.
Exterior Cabinet Label (Brown)	P0696930	Provide one per office. Contains the LIM 00 to LIM 11 labels.
Exterior Cabinet Label (Brown)	P0702398	Provide one per office. Contains the LIM 12 to LIM 16 labels.
DMS-STP Cabinet Label (Grey)	P0710446	Provide one per STP/LPP frame.
DMS-STP Cabinet Label (Brown)	P0710445	Provide one per STP/LPP frame.
Interior Cabinet FSP Label	P0709837	Provide one per two LIM frames (NT9X70AA and/or NT9X70BA).
FSP LIS ID Label	P0702397	Provide one per office. Contains the LIS 01/LIS 02/LIS 03 labels.

FSP LIM ID Label P0713189 Provide one per office. Contains the LIM 00 to LIM 16 labels.

FSP LMS ID Label P0713190 Provide one per office. Contains the LMS 00 to LMS 16 labels.

PDC LIS ID Label P0701886 Provide one per office. Contains the LIS 01/LIS 02/LIS 03 labels and the LMS 0/LMS 1 labels.

PDC LIM ID Label P0713182 Provide one per office. Contains the LIM B1-ABS labels.

- RUL12 1) Provide one sheet of LIU cable routing labels per shelf when LIUs are provisioned on that shelf. The NIU labels are provided when the NIU is assigned in slot 18F of a shelf.
- 2) FRIU Cable Routing Labels are provisioned per half shelf per the following table. One sheet provides sufficient labels for both pl

Shelf	Slots	LIU/EIU Label	FRIU Label
26	31R-21R	P0735397	P0714414
26	19R-09R	P0714420	P0714415
13	31R-21R	P0735398	P0714416
13	19R-09R	P0714421	P0714417
00	31R-21R	P0735399	P0714418
00	19R-09R	P0714422	P0714419

- RUL13 1) Provide one NTEX5001, Overhead (Frame) Power Block Kit, for overhead cabling of LPP frame.

- 2) Provide one NT9X0322, Power Connection Boot Kit, per LIM when not provisioned with the NTEX5001 Kit.

- RUL14 1) Provide one P0675711, Warning Label English "High Voltage", per cabinet for English only applications.

- 2) Provide four P0675712, Warning Label English "High Voltage", per cabinet for English only applications.

- 3) Provide one P0689137, Warning Label Eng/French "High Voltage/Haute Tension", per cabinet for English/French applications.
 - 4) Provide four P0689138, Warning Label Eng/French "High Voltage/Haute Tension", per cabinet for English/French applications. 5) Provide one P0675710 label per cabinet.
- RUL15 1) These items are provisionable but always required on the LMS shelf. Provide the quantities shown in the QTY column for each cabinet.
- RUL16 1) Provide Two (2) NT9X26AB RTIF Paddle Boards and two P0705003 Designation Labels per LMS.
- 2) The NT9X26AA was always provided on the NT9X71AB LMS shelf and is shown here for completeness. Do not provide the NT9X26AA on new jobs.
- RUL17 1) Provide two NT9X74DA F-Bus Repeater CP for each LIS that requires either Channelized Access, Frame Relay, or DMS-PH applications. Otherwise, provide two NT9X74CA F-Bus Repeater CP for each LIS not supporting any of the above applications.
- 2) Provide two P0733871 F-Bus repeater CP label when NT9X74DA is provisioned.
- RUL18 1) The P0689616 strip contains labels for two NT9X19EA's, two NT9X30AA's, two NT9X49CA's, four NT9X17AA's, two NT9X15AA's, two NT9X14BB's, two NT9X53AA's, two NT9X52AA's and NT9X19AA's. Provide one per LMS.
- 2) The P0689618 strip contains labels for NT9X19BA two NT9X79BA's, two NT9X26AA's, AND four NT9X23BA's. Provide one per LMS.

LINK INTERFACE MODULE CABINET

PEC CODE: NT9X70AA

CPC CODE: B0225110

RATING: MD

REPLACES:

REPLACED BY: NT9X70BB

ABBREVIATION NAME: LIM

ENGINEERING DESCRIPTION: The Link Interface Module forms a functional block of the CCS7 Signalling Transfer Point. The Link Interface Module interfaces the CCS7 message links. Each LIM cabinet houses up to twenty-four (24) individual Link Interface Units each of which can accommodate one DS-0 message link, or up to twenty-four (24) individual Ethernet Interface Units each of which can accommodate one Ethernet link, or up to twenty-four (24) of a combination of the above.

The NT9X70AA supports channelized access of LIU7s and also Frame Relay applications. Channelized access of LIU7s to the DMS network removes the need of OEM channel banks in order to interface PCM-30 from the LIM cabinet to the public network.

| REFERENCE DOCUMENTATION: MS9X70AA 01 18

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA
Carrier

ISSUE AUTHOR: Ganesh Ram Dept. 3471 (PPK)

MAIN CONTACT: Ganesh Ram Dept. 3471 (PPK)

NT9X70AA EMR2-12-001 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
92 08 03	ECM 620 05	Add NIU and -60V information
92 10 02	ECM 620 06	Make minor fixes for various typing errors. Add restrictions on NT9X78CA (only BCS33 and higher software.)
93 03 12	ECM 620 10	NTEX22BA replaces NTEX22AA.
93 06 04	ECM 620 12	Correct typing error NT0X2416 should be NT0X2516.
95 03 14	ECM 620 25	MD this document per EC#18-43913.
96 11 15	ECM 620 33	Solve SR RR68777 to state the legal mounting slot for NTEX28AA. Changed the mounting slot for NTEX22BB as per MS9X70AA 0118 document.

The Link Interface Module Cabinet is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Common Cabinet Equipment	NT9X0101	FW	1			AP
Local Msg Switch Shf Assy	NT9X7101		1	39		AP
% Local Msg Switch Shf Com CP	NT9X71AA	LMS		39		RUL1
Local Msg Switch Shf Com CP	NT9X71AB	LMS		39		RUL1
LMS-FBUS Rate Adapter CP	NT9X73AA			39	8F, 31F	RUL8
* CPU 16 MHz CP	NT9X13DA			39	17F, 22F	RUL9
CPU 16 MHz CP	NT9X13DB			39	17F, 22F	RUL9
Cable Bulkhead	NT9X6502		1	39		AP
Cable Bulkhead	NT9X6509		1	39		AP
Desig. Label NT9X13DA	P0685359					RUL9
Desig. Label NT9X13DB	P0696239					RUL9
Desig. Label NT9X73AA	P0709457					RUL8
Link I/F Unit Shelf Assy	NT9X7201		1	XX		AP
# Link I/F Unit Shelf Comm CP	NT9X72AA	LIS		XX		RUL2
# Link I/F Unit Shelf Comm CP	NT9X72AC	LIS		XX		RUL2
# Link I/F Unit Shelf Comm CP	NT9X72AD	LIS		XX		RUL2
Cable Bulkhead	NT9X6502		1	XX		AP
Cable Bulkhead	NT9X6509		1	XX		AP
CBUS Repeater/ Terminator CP	NT9X74DA			XX	7F, 32F	RUL7
F-Bus Repeater CP	NT9X74BA			XX	7F, 32F	RUL7
F-Bus Extender Paddleboard	NT9X79AA		26, 13		7R, 32R	RUL3
F-Bus Ext W Terminations PB	NT9X79BA			00	7R, 32R	RUL3
Intra FBUS B Termination PB	NTEX20BA			XX	10R	RUL7
Intra FBUS A Termination PB	NTEX20AA			XX	31R	RUL7
! Link General Processor CP	NT9X13CA			XX	8F, 11F, 14F, 17F, 20F, 23F, 26F, 29F	RUL4
STP Signalling Terminal CP	NT9X76AA			XX	9F, 12F, 15F, 18F, 21F, 24F, 27F, 30F	RUL4
F-Bus Interface CP	NT9X75AA			XX	10F, 13F, 16F, 19F, 22F, 25F, 28F, 31F	RUL4
Filler Faceplate	NT9X19AA			XX	8F, 11F, 14F, 17F, 20F, 23F, 26F, 29F	RUL4

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
# V.35 Interface Paddleboard	NT9X77AA			XX	9R, 12R, 15R, 18R, 21R, 24R, 27R, 30R	RUL4
DS0A Interface Paddleboard	NT9X78AA			XX	9R, 12R, 15R, 18R, 21R, 24R, 27R, 30R	RUL4
# Enhanced DS0A Interface PB	NT9X78BA			XX	9R, 12R, 15R, 18R, 21R, 24R, 27R, 30R	RUL4
# Enhanced DS0A Interface PB 56/64Kbs	NT9X78CA			XX	9R, 12R, 15R, 18R, 21R, 24R, 27R, 30R	RUL4
Frame Relay Unit CP	NTEX31AA			XX	9F, 12F, 15F, 18F	RUL4
Frame Relay Unit I/F PB	NTEX30AA			XX	9R, 12R, 15R, 18R	RUL4
Ethernet Interface CP	NT9X84AA			XX	9F, 12F, 15F, 18F, 21F, 24F, 27F, 30F	RUL4
Ethernet Access Unit I/F PB	NT9X85AA			XX	9R, 12R, 15R, 18R, 21R, 24R, 27R, 30R	RUL4
@ Integrated Processor & FBUS Interface CP	NTEX22AA			XX	10F, 13F, 16F, 19F, 22F, 25F, 28F, 31F	RUL4
# Integrated Processor & FBUS Interface CP	NTEX22BA			XX	10F, 13F, 16F, 19F, 22F, 25F, 28F, 31F	RUL4
Integrated Processor & FBUS Interface CP	NTEX22BB			XX	10F, 13F, 16F, 19F, 22F, 25F, 28F, 31F	NOTE
Channel Bus Ctrl CP (left)	NTEX25AA			XX	18F	RUL4
Channel Bus Ctrl CP (right)	NTEX25BA			XX	21F	RUL4
Channel Access DS-30 PB	NTEX28AA			XX	18R, 21R	RUL4
Channel Access Bus I/F PB	NTEX26AA			XX	9R, 12R, 15R, 18R, 21R, 24R, 27R, 30R	RUL4

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LIU Identification Label	P0689623					RUL4
LIU ID (2-slot)	P0709181			XX		RUL4
Desig. Label NT9X77AA	P0704358					RUL4
Desig. Label NT9X78AA	P0689620					RUL4
Desig. Label NT9X78BA	P0704359					RUL4
Desig. Label NT9X78CA	P0732783					RUL4
Desig. Label NT9X84AA	P0711662					RUL4
Desig. Label NT9X85AA	P0711661					RUL4
Desig. Label NTEX22BA	P0732781					RUL4
Desig. Label NTEX22BB	P0738272					RUL4
Desig. Label NTEX25AA	P0731993					RUL4
Desig. Label NTEX25BA	P0731994					RUL4
Desig. Label NT9X74BA	P0707873					RUL7
Desig. Label NT9X74DA	P0731903					RUL7
Desig. Label NTEX20AA	P0704360					RUL7
Desig. Label NTEX20BA	P0704361					RUL7
Desig. Label NTEX28AA	P0731905					RUL4
Desig. Label NTEX26AA	P0733875					RUL4
DS-30 Cable Assembly	NT9X0145					RUL4
Ethernet Cable Assembly	NT9X0190					RUL4
Frame Relay Cable Assembly	NT9X0191					RUL4
NIU DS-30 Cable Assembly	NT9X7020		4	XX		RUL4
Inter-CBC Cable Assembly	NT9X7021		2	XX		RUL4
Filler Face Plate	NT9X19AA			XX,	8F-31F	RUL5
PB Filler Face Plate	NT9X19BA			XX,	9R,12R, 15R,18R, 21R,24R, 27R,30R	RUL5
Desig. Label (NT9X79AA)	P0689621					RUL6
Desig. Label (NT9X79BA)	P0689622					RUL6

Exterior Cabinet Label-Grey	P0709852					RUL10
Exterior Cabinet Label-Brown	P0696930					RUL10
Exterior Cabinet Label-Brown	P0702398					RUL10
DMS-STP Cabinet Label-Brown	P0710445					RUL10
DMS-STP Cabinet Label-Grey	P0710446					RUL10
Interior Cabinet FSP Label	P0709837					RUL10
Interior Cabinet Model Label	P0697354					RUL10
Rear Basic FSP Label	P0675735					RUL10
Front Basic FSP Label	P0675706					RUL10
FSP LIS ID Labels	P0702397					RUL10
FSP LIM ID Labels	P0696931					RUL10
PDC LIS/LIM ID Labels	P0701886					RUL10
LIS 00-50 FSP Labels	P0696932					RUL10

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LIM 00-16 Labels	P0713189					RUL10
LMS 00-16 Labels	P0713190					RUL10
FSP Labels (NT9X71AA/72AA)	P0697356					RUL10
LIM Blowers	P0713182					RUL10
LIS Ethernet/FRS Bulkhead	NT9X7022		6	00,13,26		RUL11
PC Kit for EIU/NIU Retrofit	NT9X70AZ					RUL4
Frame Fail Lamp (Brown)	NT0X24BT					RUL12
Frame Fail Lamp (Grey)	NT0X24CN					RUL12
Kick Plate Ass (Brown)	NT0X2430					RUL12
Kick Plate Ass (Gray)	NT0X2516					RUL12
Rear Kickplate (Gray)	NT0X24CU					RUL13
Overhead Power Block Kit	NTEX5101					RUL13
Power Boot Kit	NT9X0322		1			RUL13
Grounding Point Assy (front)	NT9X0320		1			RUL13
Grounding Point Assy (rear)	NT9X0321		1			RUL13
FSP Terminal Block (TB1)	A0368392		2			RUL13
Cover Assembly						
Cooling Unit Terminal Blocks	P0707194		8			RUL13
TB3-TB4 Cover and Latches	P0707195		1			RUL13
Input Filler Tape	R0108397		1			RUL13
Warning Label, English ONLY	P0675711		1			RUL14
"High Voltage"						
Warning Label,English/French	P0689137		1			RUL14
"High Voltage/Haute Tension"						
Warning Label, English ONLY	P0675712		4			RUL15
"High Voltage"						
Warning Label,English/French	P0689138		4			RUL15
"High Voltage/Haute Tension"						
Warning Label, English ONLY	P0675710		1			RUL16
"Disconnect Fan"						
Warning Label,English/French	P0689136		1			RUL16
"Disconnect Fan"						

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NTEX22BA	MD	NTEX22BB
NT9X76BA	MD	NT9X76DA
NT9X76CA	MD	NT9X76DA
NT9X77AA	MD	NT9X77AB
NT9X72AC	MD	Ind. Packs
NT9X72AD	MD	Ind. Packs

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) In SHF Pos, XX can be one of 26, 13, or 00.

RULES:

- AP 1) When PEC NT9X70AA is ordered, these items are provided.
- 2) The NT9X0101 is comprised of the following:

NT0X24AA Cabinet Framework
 NT9X03AA Frame Supervisory Panel
 A0345301 Core Cooling Unit
 Cabinet Common Cabling & FSP Cabling

The NT0X24AA framework provides earthquake and EMI protection. The framework is 72" high, 28" deep and 42" wide. The NT9X03AA FSP is mounted at position 52. The A0345301 Cooling Unit is located immediately below position 0.

- RUL1 1) Provide one (1) NT9X71AB LMS Shelf Common CP to equip the Local Message Switch Shelf. The NT9X71AB replaces the NT9X71AA on all new offices.
- RUL2 1) Provide three (3) (one per shelf) NT9X72AC LIU Shelf Common CP to equip the LIS shelves. Note: All three LIS shelves must be equipped with common circuit packs.
- 2) Provide three (3) (one per shelf) NT9X72AD LIU Shelf Common CP to equip the LIS shelves for use with 2-slot LIUs. The 2-slot LIU will work with the NT9X72AC packfill. The NT9X72AD packfills prepares the shelf for future applications (Ethernet Interface, Frame Relay, etc.). Note: All three LIS shelves must be equipped with common circuit packs.
- RUL3 1) Provide two (2) NT9X79BA F-Bus Extender Paddleboards with termination for the bottom most LIS on the frame (Position 00). Provide two (2) NT9X79AA F-Bus Extender Paddleboards for each of the other two Link Interface Shelves.
- RUL4 1) Each LIS will either have two (2) NIUs or NONE. The NIUs must occupy the positions in the MIDDLE of the shelf.

The NIUs are provisioned as follows:

Provide one (1) NTEX25AA Channel Bus Controller CP (left).
provide one (1) P0731993 Designation Label for NTEX25AA.

Provide one (1) NTEX25BA Channel Bus Controller CP (right).
provide one (1) P0731994 Designation Label for NTEX25BA.

provide two (2) NTEX22BB Integrated Proc. & FBUS I/F.
provide two (2) P0738272 Designation Label for NTEX22BB.

Check availability of NTEX22BB before ordering.

Provide two (2) NTEX28AA Link Interface Paddleboard.
provide two (2) P0731905 Designation Label for NTEX28AA.

Provide four (4) NT9X7020 CBUS DS-30 Cable Assembly.

Provide two (2) NT9X7021 Inter CBUS Cable Assembly.

Provide two (2) NT9X19AA Filler Faceplate.

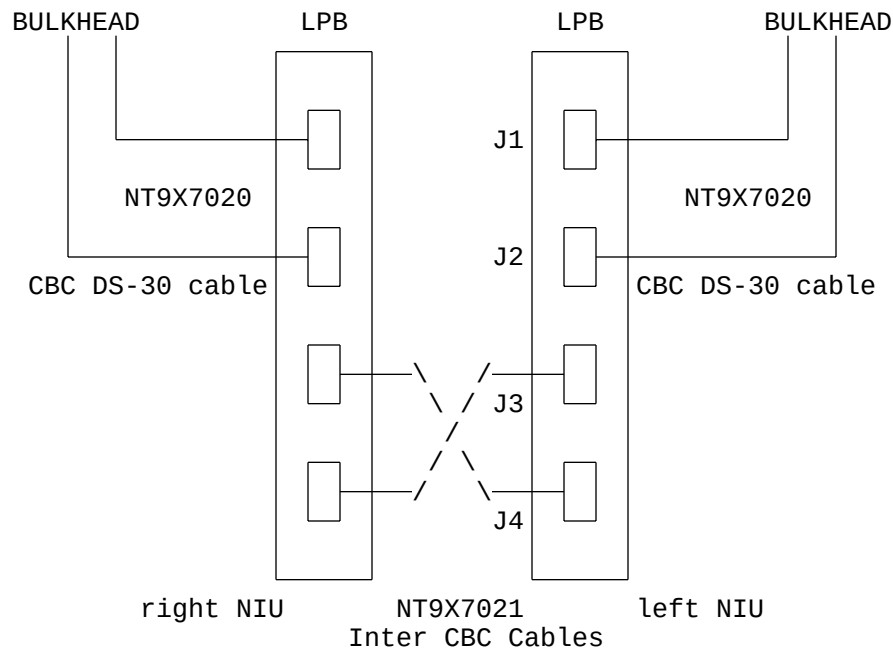
The cards which made the NIUs are assigned to the following CP positions on the LIS:

	18R			21R		Rear
Filler	NTEX28AA	Filler		Filler	NTEX28AA	
Filler	NTEX25AA	NTEX22BB	Filler	NTEX25BA	NTEX22BB	Front
17	18	19	20	21	22	

NIU (left)

NIU (right)

Following is the rear view of the NIUs showing the cable connections:



NIU cable connections (rear view)

Two NT9X7020 cables are used for each PB. Each cable carries two DS30 ports for a total of four ports for each paddleboard. The four DS30 ports on the PB behind unit-0 are connected to plane-0 of the network, while the four DS30 ports on the PB behind unit-1 are connected to

plane-1. The NT9X7021 inter-CBC cables are used for inter-NTEX25 communications and are also used to pass plane-data from one side to another. This allows the active unit to receive and transmit data to and from both planes.

- 2) Each LIS supports up to eight (8) Link Interface Units (LIU7), Ethernet Interface Units (EIU) or a combination of both up to a maximum of twenty-four (24) LIU7s or EIUs or a combination of both per LIM cabinet.
Each LIS supports up to a maximum of four (4) Frame Relay Interface Units (FRIUs) per shelf and up to twelve (12) FRIUs per LIM cabinet.
The remaining positions not occupied by FRIUs can be populated with LIU7s, EIUs or a combination of both.

The individual LIU7s are provisioned as follows:

Provide EITHER one (1) NT9X77AA V.35 Interface Paddleboard when interfacing a V.35 signalling link, OR

Provide one (1) NT9X78AA DS0A Interface Paddleboard when interfacing a DS0A signalling link,

OR

Provide one (1) NT9X78BA Enhanced DS0A Interface Paddleboard when interfacing a DS0A signalling link and when Enhanced Maintenance capability is required.

OR

Provide one (1) NT9X78CA Enhanced DS0A 56/64Kbs Interface Paddleboard when interfacing a DS0A signalling link and when Enhanced Maintenance capability and 64Kbs transmission speed is required.

Note:

The NT9X78CA paddleboard can only be provisioned for BCS33 and higher software loads. The 64Kbs capability is currently available for international applications only. For domestic applications, the NT9X78CA can be provided for BCS33 and higher jobs, but only 56Kbs can be datafilled in software.

OR

Provide one (1) NTEX26AA Channel Bus Interface PB when interfacing DS-30 from the network through the NTEX28AA Link Interface paddleboard.

Note: The NTEX26AA paddleboard cannot occupy slots 18R and 21R because the NIUs use these slots for the NTEX28AA Link Interface paddleboards.

for 3 slot LIU7:

Provide one (1) NT9X76AA STP - Signalling Terminal Circuit Pack.

Provide one (1) NT9X13CA Link General Processor Circuit Pack.

Provide one (1) NT9X75AA F-Bus Interface Circuit Pack.

Provide one (1) NT9X0145 Cable Assembly from each Paddleboard to LIS Bulkhead.

Provide one (1) P0689623 LIU Identification Label.

Provide one (1) P0704358 Designation Label when NT9X77AA is provisioned.

Provide one (1) P0689620 Designation Label (NT9X78AA).

Provide one (1) P0704359 Designation Label when NT9X78BA is provisioned.

Provide one (1) P0732783 Designation Label when NT9X78CA is provisioned.

Provide one (1) P0733875 Designation Label when NTEX26AA is provisioned.

For 2 slot LIU7:

Provide one (1) NTEX22AA Integrated Proc. & FBUS I/F.
OR

Provide one (1) NTEX22BB Integrated Proc. & FBUS I/F.
provide one (1) P0738272 Designation Label when NTEX22BB is provisioned.

Provide one (1) NT9X76AA Signalling Terminal Ckt Pack.

Provide one (1) NT9X19AA Filler Faceplate.

Provide one (1) NT9X0145 Cable Assembly from each Paddleboard to LIS Bulkhead.

Provide one (1) P0709181 LIU Identification Label.

Provide one (1) P0704358 Designation Label when NT9X77AA is provisioned.

Provide one (1) P0689620 Designation Label (NT9X78AA).

Provide one (1) P0704359 Designation Label when NT9X78BA is provisioned.

Provide one (1) P0732783 Designation Label when NT9X78CA is provisioned.

- 3) The cards which make up an LIU7 are assigned to the following CP positions on the LIS:

3 Slot LIU7:		LIS CP POS		
LIU7 POSITION	NT9X13CA Filler	NT9X76AA	NT9X75AA NTEX22BA NTEX22BB	NT9X78AA/BA NT9X78CA NT9X77AA NTEX26AA
NUMBER/SHELF				
LIU7 #1	8	9	10	9R
LIU7 #2	11	12	13	12R
LIU7 #3	14	15	16	15R
LIU7 #4	17	18	19	18R*
LIU7 #5	20	21	22	21R*
LIU7 #6	23	24	25	24R
LIU7 #7	26	27	28	27R
LIU7 #8	29	30	31	30R

2 Slot LIU7:		LIS CP POS		
LIU7 POSITION	NT9X19AA	NT9X76AA	NTEX22BA NTEX22BB	NT9X78AA/BA NT9X78CA NT9X77AA NTEX26AA
NUMBER/SHELF				
LIU7 #1	8	9	10	9R
LIU7 #2	11	12	13	12R
LIU7 #3	14	15	16	15R
LIU7 #4	17	18	19	18R*
LIU7 #5	20	21	22	21R*
LIU7 #6	23	24	25	24R
LIU7 #7	26	27	28	27R
LIU7 #8	29	30	31	30R

* Note:

The NTEX26AA cannot occupy slot positions 18R and 21R. 18R and 21R are reserved for NTEX28AA paddleboards when NIUs are provided.

It is recommended for reliability that the LIU7s be assigned to shelf positions 00, 13, and 26 in the following order:

Links in a linkset should be spread across LIU7s in this order. Also, office sites should be consecutively datafilled as shown below.

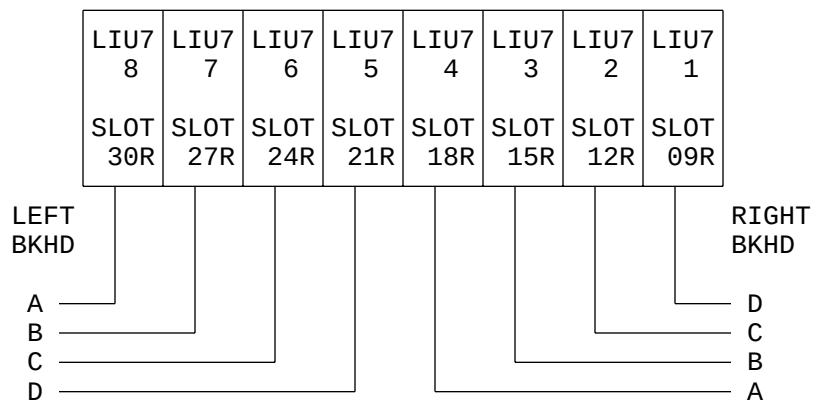
L M S								
LIU7								
	#1	#2	#3	#4	#5	#6	#7	#8
LIS 01	1	7	13	19	22	16	10	4
LIS 02	5	11	17	23	20	14	8	2
LIS 03	3	9	15	21	24	18	12	6
(CP POS)	0 8	1 1	1 4	1 7	2 0	2 3	2 6	3 1

ASSIGNMENT SEQUENCE OF LIU7s
TO LINK INTERFACE MODULE (NT9X70AA)

In an office, the LIU7s can be numbered from LIU 0 to LIU 750.

The LIU7s are to be numbered sequentially in a LIM frame starting with LIS 01 (shelf position 26) (LIU #1 through to LIU #8), followed by LIS 02 (shelf position 13) (LIU #1 through to LIU #8), followed by LIS 03 (shelf position 00) (LIU #1 through to LIU #8). The LIU7 positions will be numbered consecutively regardless of whether the LIU7 is equipped or not.

- 4) Following is the rear view of LIS 01, LIS 02, LIS 03 arrangement and cable provisioning:



└──NT9X0145 Cable Assemblies──┘

- 5) The individual three slot EIUs are provisioned as follows:

Provide one (1) NTEX22BA Integrated Processor and FBUS Interface Circuit Pack.

Provide one (1) P0732781 Designation Label (NTEX22BA).
OR

Provide one (1) NTEX22BB Integrated Processor and FBUS Interface Circuit Pack.

Provide one (1) P0738272 Designation Label (NTEX22BB).

Provide one (1) NT9X84AA Ethernet Interface Circuit Pack.

Provide one (1) P0711662 Designation Label (NT9X84AA).

Provide one (1) NT9X19AA Filler Face Plate.

Provide one (1) NT9X85AA Ethernet Access Unit Interface Paddleboard.

Provide one (1) P0711661 Designation Label (NT9X85AA).

Provide one (1) NT9X0190 Ethernet Cable Assembly from each EIU Paddleboard to LIS Bulkhead.

6) The individual three slot FRIUs are provisioned as follows:

Provide one (1) NTEX22BA Integrated Processor and FBUS Interface Circuit Pack.

Provide one (1) P0732781 Designation Label (NTEX22BA).
OR

Provide one (1) NTEX22BB Integrated Processor and FBUS Interface Circuit Pack.

Provide one (1) P0738272 Designation Label (NTEX22BB).

Provide one (1) NTEX31AA Frame Relay Interface Circuit Pack.

Provide one (1) P0711676 Design. Label (NTEX22AA/NTEX31AA).
OR

Provide one (1) P0734384 Design. Label (NTEX22BA/NTEX31AA).
OR

Provide one (1) P0735917 Design. Label (NTEX22BB/NTEX31AA).

Provide one (1) NT9X19AA Filler Face Plate.

Provide one (1) NTEX30AA Ethernet Access Unit Interface Paddleboard.

Provide one (1) P0711675 Designation Label (NTEX30AA).

Provide one (1) NT9X0191 Frame Relay Cable Assembly from each FRIU Paddleboard to LIS Bulkhead.

For Field applications only, if EIUs or NIUs are be mounted on this cabinet, provide one (1) NT9X70AZ Product Change Kit for EIU/NIU Retrofit per NT9X70AA.

Provide two (2) NT9X7022 Product Change Kits per LIS shelf (NT9X7201) for NIU/EIU retrofit when changes are to be made to the NT9X70AA frame bulkheads on the manufacturing shop floor.

These kits provides the proper bulkheads (on each LIS shelf) that are compatible with the 15-pin D-type connector.

RUL5 1) Provide three (3) NT9X19AA Filler Face Plates and one (1) NT9X19BA Paddleboard Filler Face Plate for each unequipped LIU7/EIU on each of the three Link Interface Shelves.

RUL6 1) Provide one (1) Designation Label corresponding to each card provisioned.

RUL7 1) When NT9X72AA LIU Shelf Common CP is equipped, do not provision these CPs.

2) When NT9X72AC or NT9X72AD LIU Shelf Common CP is equipped, provision two (2) NT9X74BA F-Bus Repeater CP, one (1) NTEX20AA Intra FBUS a Termination PB, and one (1) NTEX20BA Intra FBUS B Termination PB. only when LIU7s, EIUs are provisioned,

OR

provision two (2) NT9X74DA CBUS Repeater/Terminator CP, one (1) NTEX20AA Intra FBUS a Termination PB, and one (1) NTEX20BA Intra FBUS B Termination PB. only when NIUs or FRIUs are provisioned.

3) Provide CP Designation Labels for each NT9X74BA, NTEX20AA, and NTEX20BA CP provisioned.

RUL8 1) Provide two (2) NT9X73AA LMS-FBUS Rate Adapter CP when the LMS CP fill NT9X71AB is provided. The NT9X73AA should only be used in conjunction with the NT9X72AA/AC/AD LIS CP Fills.

2) Provide CP Designation Labels for each NT9X73AA provisioned.

RUL9 1) Provide two (2) NT9X13DB CPU CP per LMS Shelf. This CP is needed for PBUS Protection Parity. Offices must be

equipped with BCS28 or higher. The LMS CP fill NT9X71AB must be provided.

- 2) The NT9X13DB replaces the NT9X13DA on all new applications or existing offices when PBUS Protection Parity is required (BCS28 and higher).
- 3) Provide CP Designation Labels for each NT9X13DB provisioned.

RUL10 1) The following labels are to be ordered when the DMS-SCP LIM cabinets have been provided:

DESCRIPTION	PEC	PROVISIONING RULES
Exterior Cabinet Label (Grey)	P0709852	Provide one per office.
Exterior Cabinet Label (Brown)	P0696930	Provide one per office. Contains the LIM 00 to LIM 11 labels.
Exterior Cabinet Label (Brown)	P0702398	Provide one per office. Contains the LIM 12 to LIM 16 labels.
DMS-STP Cabinet Label (Grey)	P0710446	Provide one per STP/LPP frame.
DMS-STP Cabinet Label (Brown)	P0710445	Provide one per STP/LPP frame.
Interior Cabinet FSP Label	P0709837	Provide one per two LIM frames (NT9X70AA and/or NT9X70BA).
Rear FSP Label	P0675735	Provide one per LIM frame.
Interior Label	P0697354	Provide one per NT9X70AA LIM frame.
Front FSP Label	P0675706	Provide one per LIM frame.
FSP LIS ID Label	P0702397	Provide one per office. Contains the LIS 01/LIS 02/LIS 03 labels.
FSP LIM ID Label	P0696931	Provide one per office. Contains the LIM 00 to LIM 16 labels.
PDC LIM ID Label	P0701886	Provide one per office. Contains the LIS 01/LIS 02/LIS 03 labels

- and the LMS 0/LMS 1 labels.
- LIS 00-50 Label P0696932 Provide one per office
- LIM 00-16 Label P0713189 Provide one per office
- LMS 00-16 Label P0713190 Provide one per office
- FSP Label P0697356 Provide one per office
- LIM Blowers P0713182 Provide one per office
- RUL11 1) Provision six (6) NT9X7022 LIS Ethernet/FRS Bulkheads per NT9X70AA cabinet. Provide for new manufacture only.
- RUL12 1) Provide one (1) NT0X24BT, Frame Fail Lamp (Brown), per brown LIM cabinet NT9X70AA. Use only with other brown exterior parts.
- 2) Provide one (1) NT0X24CN, Frame Fail Lamp (Grey), per grey LIM cabinet NT9X70AA. Use only with other grey exterior parts.
- 3) Provide one (1) NT0X24CU, Rear Kick Plate (Gray), per gray cabinet.
- RUL13 1) Provide one (1) NTEX5001 Overhead Power Block Kit for overhead power cabling of the SuperNode frame.
- 2) Always provide (1) NT9X0322 Power Boot Kit.
- 3) For all British Telecom offices provide:
one (1) NT9X0320 Grounding Point Assembly (front)
one (1) NT9X0321 Grounding Point Assembly (rear)
one (1) A0368392 FSP Terminal Block (TB1) Cover Assembly
two (2) P0707194 Cooling Unit Terminal Blocks
eight (8) P0707195 TB3-TB4 Cover and Latches
for all British Telecom offices.
- RUL14 1) Provide one (1) P0675711 or P0689137 Label to be applied to Supernode FSP Unit. (apply to Brown Cabinet Only)
- RUL15 1) Provide four (4) P0675712 or P0689138 Labels per cabinet. (apply to Brown Cabinet Only)

ENHANCED MULTI-PURPOSE CABINET

PEC CODE: NTEX01AA

CPC CODE: B0232471

RATING: MD

REPLACES: Not Applicable

REPLACED BY: NTEX01AB

ABBREVIATION NAME: EMC

ENGINEERING DESCRIPTION: The Enhanced Multi-Purpose Cabinet houses up to two (2) Link Interface Shelves (LIS). The first shelf, referred to as LIS 1, is mounted in shelf position 26. The second shelf, if equipped, is referred to as LIS 2 and is mounted in shelf position 13.

REFERENCE DOCUMENTATION: MSEX01AA 01 07

MARKETS: Applicable markets:

Canada
US
CALA
Asia/Pacific
Europe

ISSUE AUTHOR: NTC: Ganesh Ram DEPT. S646 (BRW)

MAIN CONTACT: NTC: Ganesh Ram DEPT. S646 (BRW)

NTEX01AA EMR2-12-002 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
93 02 01	ECM 612 04	NTEX22AA is A&M. Bulkhead modifications
93 06 08	ECM 612 06	Introduction of DMS Packet Handler.
95 08 28	ECM 612 16	Retire this section.
97 02 28	ECM 612 20	Update MD items to this section.
97 09 05	ECM 612 21	MD NT0X24BT and NT0X24CN as per ECD: 018-51456. The replacement NT9X0105 is always included with the cabinet Stocklist.

The Fiberized LIS is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
E-Core Common Equipment	NT9X0101		1			AP
Link Interface Shelf Assy	NT9X7204		2	26,13		RUL1
Link Interface Shelf CP FILL	NT9X72CA		2	26,13		RUL2
Bulkhead Assembly Left	NT9X6534		2	26,13		RUL6
Bulkhead Assembly Right	NT9X6580		2	26,13		RUL6
FLIS Cable Assembly	NT9X9820			26,13		RUL6
Composite Clock Cable Assy	NTEX0120			26,13		RUL6
# IPF Proc and F-Bus I/F CP	NTEX22BA			26,13	08F,10F, 12F,14F, 16F,18F, 20F,22F, 24F,13F, 28F,30F	RUL3
Enhanced CPU-IPF CP	NTEX22BB			26,13	8F,10F, 12F,14F, 16F,18F, 20F,22F, 24F,26F, 28F,30F	RUL3
32MB ASU Processor & FBUS Controller	NTEX22CA			26,13	8F,10F, 12F,14F, 16F,18F, 20F,22F, 24F,26F, 28F,30F	RUL3
NIU Cha. Bus Controller CP Unit 0	NTEX25AA			26,13	19F	RUL3
NIU Cha. Bus Controller CP Unit 1	NTEX25BA			26,13	21F	RUL3
STP Signalling Terminal CP	NT9X76AA			26,13	09F,11F, 13F,15F, 17F,19F, 21F,23F, 25F,27F, 29F,31F	RUL3
# Enhanced DS0A Interface PB	NT9X78BA			26,13	09R,11R, 13R,15R, 17R,19R, 21R,23R, 25R,27R, 29R,31R	RUL3
STP DS0-A Interface PB	NT9X78DA			26,13	09R,11R, 13R,15R,	RUL3

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
# V.35 Interface PB	NT9X77AA			26, 13	17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R 09R, 11R, 13R, 15R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL3
V.35 Interface PB - ISG	NT9X77AB			26, 13	09R, 11R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL3
Channel Bus Interface PB	NTEX26AA			26, 13	9R, 11R, 13R, 15R, 17R, 23R, 25R, 27R, 29R, 31R	RUL3
DMS Packet Handler Proc. CP	NTFX10AA			26, 13	11F, 13F, 15F, 17F, 23F, 25F, 27F, 29F	RUL3
DMS Packet Handler I/F PB	NTFX09AA			26, 13	11R, 13R, 15R, 17R, 23R, 25R, 27R, 29R	RUL3
Ethernet Interface CP	NT9X84AA			26, 13	9F, 11F, 13F, 15F, 17F, 19F, 21F, 23F, 25F, 27F, 29F, 31F	RUL3
Ethernet Access Unit I/F PB	NT9X85AA			26, 13	9R, 11R, 13R, 15R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL3
Enhanced Frame Relay I/F CP	NTEX31BA			26, 13	9F, 11F, 13F, 15F, 17F, 19F, 21F, 23F, 25F, 27F, 29F, 31F	RUL3

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Frame Relay Service I/F PB	NTEX30AA			26, 13	9R, 11R, 13R, 15R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL3
Filler Face Plate	NT9X19AA			26, 13	08F-31F	RUL4
PADBD Filler Face Plate	NT9X19BA			26, 13	09R, 11R, 13R, 15R, 17R, 19R, 21R, 23R, 25R, 27R, 29R, 31R	RUL4
V.35/DS0/DS0A Cable Assy.	NT9X0193			26, 13		RUL3
Inter CBC Cable Assembly	NT9X7021			26, 13		RUL3
NIU Cable Assembly	NT9X7020			26, 13		RUL3
EIU Cable Assembly	NT9X0190			26, 13		RUL3
FRU Cable Assembly	NT9X0191			26, 13		RUL3
NT9X76AA Designation Label	P0727757					RUL3
NTEX28AA Designation Label	P0733137					RUL3
NTEX26AA Designation Label	P0733875					RUL3
NT9X85AA Designation Label	P0711661					RUL3
NTEX30AA Designation Label	P0711675					RUL3
NTFX09AA Designation Label	P0732784					RUL3
NTEX22BB Designation Label	P0735913					RUL3
NT9X77AA Designation Label	P0704358					RUL3
NT9X77AB Designation Label	P0804444					RUL3
NT9X78BA Designation Label	P0704359					RUL3
NIU Cable Routing Labels	P0735393			26		RUL3
NIU Cable Routing Labels	P0735391			13		RUL3
NTEX22BB/NTEX25AA I.D Label (2 Slots)	P0735918					RUL3
NTEX22BB/NTEX25BA I.D Label (2 Slots)	P0735919					RUL3
NTEX22BB/NTFX10AA I.D Label (2 Slots)	P0735914					RUL3
NTEX22BB/NT9X84AA I.D Label (2 Slots)	P0738387					RUL3
NTEX22BB/NTEX31BA I.D Label (2 Slots)	P0735916					RUL3
Desig. Label NTEX22CA	P0837660					RUL3
Desig. Label NT9X77AB	P0804444					RUL3
Desig. Label NT9X78DA	P0803615					RUL3
LIU ID Label (NTEX22CA/NT9X76AA)	P0859948					RUL3
EIU ID Label Front	P0859950					RUL3

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
(NTEX22CA, NT9X84AA) NIU ID Label Unit:0	P0859952					RUL3
(NTEX22CA,NTEX25AA) NIU ID Label Unit:1	P0859953					RUL3
(NTEX22CA,NTEX25BA) XLIU ID Label	P0859986					RUL3
(NTEX22CA,NTFX10AA) Rear Bottom Shelf ID Label	P0675703			26,13		RUL3
Blank Shelf Assembly	NT0X24BD		1	13		RUL5
Warning Label English only "HIGH VOLTAGE"	P0675712					RUL3
Warning Label Eng/French "HIGH VOLTAGE"	P0689138					RUL3
Warning Label English only "HIGH VOLTAGE"	P0675711					RUL3
Warning Label Eng/French "HIGH VOLTAGE"	P0689137					RUL3
LIU Cable Routing labels	P0714420					RUL3
LIU Cable Routing labels	P0714421					RUL3
Overhead power block kit	NTEX5001					RUL8
Screws & Washers	P097F813					RUL8
	P0284154					RUL8
	P0183220					RUL8
Kick Plate Assembly (Brown)	NT0X2430					RUL9
Kick Plate Assembly (Grey)	NT0X2416					RUL10
# Frame fail light kit (Brown)	NT0X24BT					RUL9
# Frame fail light kit (Grey)	NT0X24CN					RUL10
Bulkhead Cover Plate Assy.	NTEX5025			26,13		RUL11
LIU Cable Routing Labels	P0714420			26		RUL12
	P0714421			13		RUL12
Ext. Cab. Label (EMC 00-05)	P0733690					RUL13
Ext. Cab. Label (EMC 06-11)	P0733691					
Ext. Cab. Label (EMC 12-16)	P0733692					
PDC Designation Label	P0733693					RUL14
FSP Designation Label	P0733694					RUL14
Interior Cabinet label	P0733695					RUL14
Blank Shelf Assembly	NT0X24BD		1	39		RUL7
Blank Shelf Assembly	NT0X24BD		1	00		RUL7

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NTEX22AA	MD	NTEX22BA
NTEX22BA	MD	NTEX22BB
NT9X77AA	MD	NT9X77AB
NT9X78BA	MD	NT9X78DA
NT0X24BT	MD	NT9X0105 (Note 1)
NT0X24CN	MD	NT9X0105 (Note 1)

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) The Provisionable Frame fail lights NT0X24BT and P0674502 (in Brown) or NT0X24CN and P0699441 (in Grey) are MD'd. The new NT9X0105 Black LAMP Bezel will always be provided with the cabinet.

RULES:

AP 1) When PEC NTEX01AA is ordered, these items are provided.

2) The NT9X0101 is comprised of the following:

- NT0X24AA Cabinet Framework
- NT9X03AA Frame Supervisory Panel
- A0345301 Cooling Unit
- Cabinet Common Cabling & FSP Cabling

The NT0X24AA framework provides earthquake and EMI protection. The framework is 72" high, 28" deep and 42" wide. The NT9X03AA FSP is mounted at position 52. The A0345301 Cooling Unit is located immediately below position 0.

RUL1 1) Provision one (1) NT9X7204 Link Interface Shelf Assembly in shelf position 26.

RUL2 1) For each LIS shelf, provision one (1) FLIS Common Circuit Pack Fill NT9X72CA to equip each LIS shelf NT9X7204.

NOTE: An office to be equipped with a (F)LIS has to be pre-configured with

- NT9X13DC Processor (to raise MS memory capacity to 10 MB)
- 2 Inter MS Links(IMLS)

RUL3 1) Each Link Interface Unit (LIU) is composed of two circuit packs and one paddleboard. The first circuit pack is the NTEX22 IPF Processor and F-Bus Interface and is provisioned in an even-numbered slot from 8F to 30F.

1A) The NTEX22CA is fully backward compatible with the 4-MB NTEX22AA and the 8-MB NTEX22BA/BB ASU processors, and can co-exist with either or both, on the same shelf. CSP06 will be the first platform software release supporting the NTEX22CA.

1B) The first application for the NTEX22CA is for the Cellular Digital Packet Data (CDPD) services. The CDPD provides the functionality of transporting datagrams between the Mobile-End Systems (M-ES) and Private/Public Data Networks. There are three types of Application Specific Units such as EIU, XLIU and NIU that provide support for CDPD service. The NTEX22CA can only be used on these ASUs used on CDPD services. Note that the APU (APUX), VPU and the FRIU applications are not supported by the NTEX22CA at this time.

1C) The second circuit pack is the NT9X76AA STP Signalling Terminal and is provisioned in the next highest (odd-numbered) slot (from 9F to 31F). The paddleboard is either an NT9X77AA/AB V.35 Interface or an NT9X78BA/DA Enhanced DS0A Interface and is provisioned behind the NT9X76AA (in an odd-numbered slot from 9R to 31R).

Note that the NT9X77AA is MD'd and is replaced by the NT9X77AB. Also, the NT9X78BA is MD'd and is replaced by the NT9X78DA.

Up to twelve (12) LIUs may be provisioned per LIS shelf, with the left-most LIU occupying slots 8F, 9F and 9R, and the right-most LIU occupying slots 30F, 31F and 31R.

If only one LIS shelf is provisioned, LIUs forming a pair should be provisioned in different halves of the shelf with LIUs being assigned from the sides towards the middle.

If two LIS shelves are provisioned, LIUs forming a pair should be provisioned in opposite halves of different shelves with LIUs being assigned from the sides towards the middle of each shelf.

- 2) One LIS will support one pair of Network Interface Unit (NIU) and upto a maximum of ONE per SSLPP Cabinet. The NIU can be located only in the centre of the LIS shelf, and it is divided into two halves. Unit 0 for Plane 0 and Unit 1 for Plane 1 respectively. The NIU provides a connection from the SSLPP Cabinet to the network, and unit 0 and unit 1 cannot be split over two shelves.

Each Network Interface Unit (NIU) is composed of two circuit packs and one paddleboard.

Refer to Figure below for Unit 0 and Unit 1.

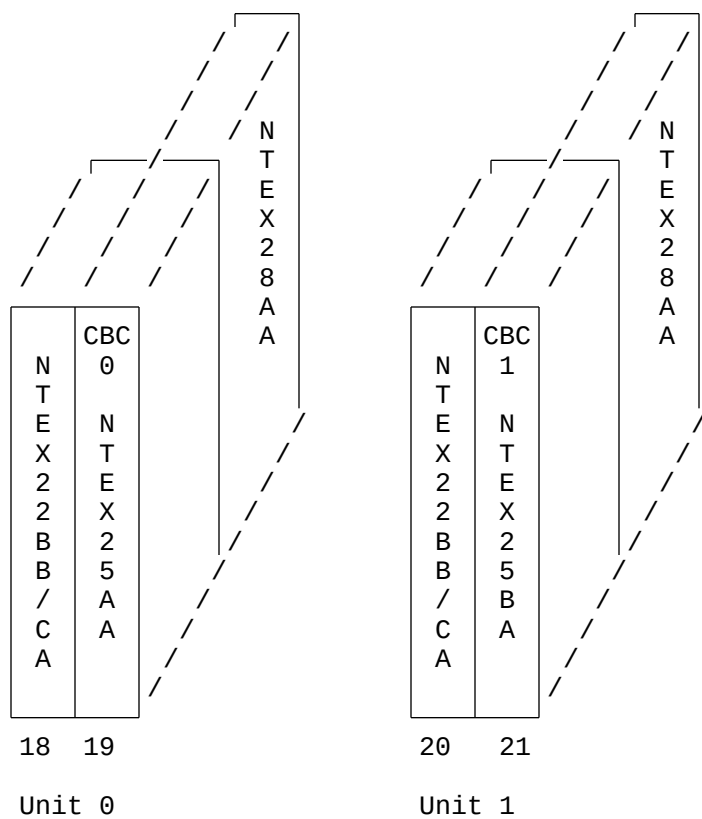


Figure NIU Unit 0 and Unit 1 Configuration.

- 3) One LIS will support up to eight (8) DMS Packet Handler plus two (2) LIU7s per application. The SSLPP cabinet can support up to a maximum of eight (8) DMS packet handler and two LIU7s.

Each DMS Packet Handler is composed of two circuit packs and one paddleboard. Note that LIS MUST be provisioned with NIUs to use the DMS Packet Handler configuration, and NIUs cannot be split over two shelves.

Refer to Figure below.

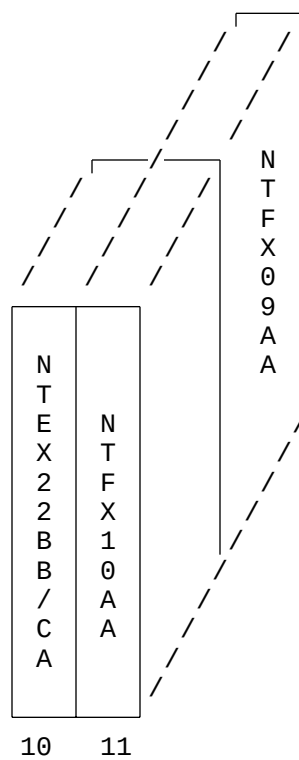


Figure DMS - Packet Handler Configuration

- 4) Channelized access provides access to the SSLPP over the network without the need of an external OEM Channel Bank. An OEM channel bank was previously required to interface 56/64 Kbps LIU7 to the PCM30.

Channelized Access also provides the advantage of LIU sparing and also increases the number of applications available through the SSLPP. Refer to Figure 6 below for Channelized configuration.

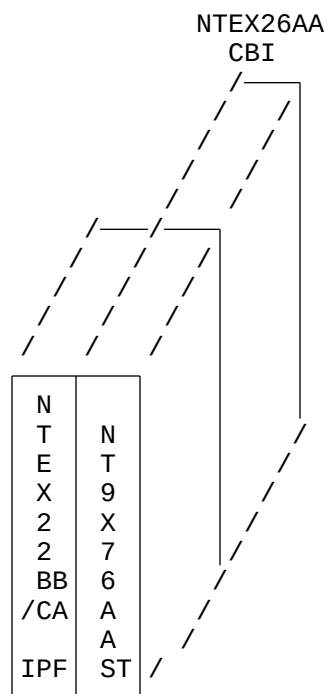


Figure 6 LIU configuration requiring channelized access.

Provide one (1) NTEX26AA for each LIU requiring channelized access. The Channel Bus Interface Paddleboard (NTEX26AA) provides an interface from the CBUS to the ST (Signalling Terminal) card (NT9X76AA), and hence, does not have any external cable connections to it. When in receive mode, the CBI selects data from the CBUS, selects the proper channel then transfers the data serially to the NT9X76AA. In transmit mode, the CBI drives the proper channels on both CBUSs. The CBI also provides CBUS functions related to fault detection and isolation.

- 5) The Frame Relay Service (FRS) is a new high speed, connection oriented, switched packet data service. DATASPAN is the Northern Telecom trade name for this service. The slot provisioning for the FRIU are identical to its provisioning on the LPP LIS.

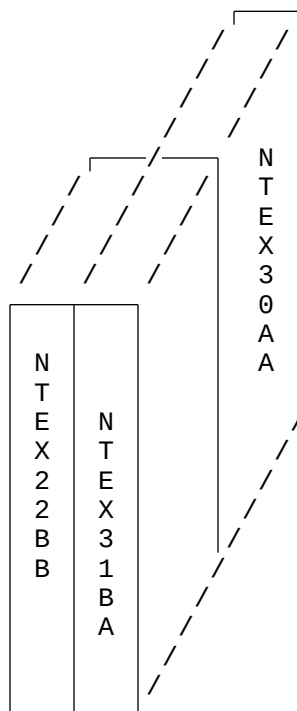


Figure 7 Frame Relay Interface Unit (FRIU).

- 6) The Ethernet Interface Unit (EIU) is an interface between DMS-BUS and an Ethernet Local Area Network (LAN). This allows for support of a variety of industry standard external communications interfaces (i.e. synchronous, asynchronous) and attachment of computers and work stations to the switch. It is based on the industry standard IEEE 802.3 10BASE5. The slot provisioning for the EIU are identical to its provisioning on the LPP LIS.

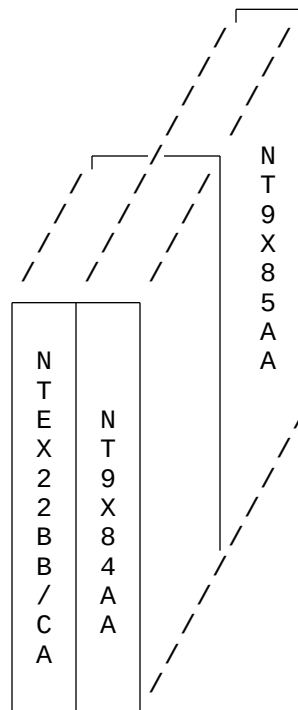


Figure 7 Ethernet Interface Unit (EIU).

- 6) Provision one (1) NT9X0193 STP Cable Assembly from each LIU paddleboard to the LIS bulkhead.
- 7) Provision one (1) NT9X0190 EIU Cable Assembly from each paddleboard (NT9X85AA) to the LIS bulkhead.
- 8) Provision two (2) NT9X0191 FRU Cable Assembly from each paddleboard (NTEX30AA) to the LIS bulkhead.
- 9) Provision two (2) NT9X7021 Cable assemblies for the LIS shelf requiring NIUs (Network Interface Units). These ca-

bles cross connect the two NTEX28AA paddleboards. Also provision four (4) NT9X7020 cable assemblies for the LIS shelf with NIUs. These cables connect the paddleboard to the bulkheads.

- 10) Provision labels as required for different Application Specification Units (ASUs) provisioned.

Provision one (1) P0675703 Rear Bottom Shelf ID Label per LIS provisioned.

Provision one (1) P0709181 LIU (two slot) Identification Label per LIU provisioned.

Provision one (1) P0704358 Designation Label per NT9X77AA provisioned.

Provision one (1) P0704359 Designation Label per NT9X78BA provisioned.

Provision one (1) P0735918 NIU (two slot) Identification Label for Unit 0 provisioned.

Provision one (1) P0735919 NIU (two slot) Identification Label for Unit 1 provisioned.

Provision one (1) P0733137 Designation Label per NTEX28AA paddle board provisioned.

Provision one (1) P0735914 two slot Identification Label for NTFX10AA/NTEX22 DMS Packet Handler configuration.

Provision one (1) P0732784 Designation Label per NTFX09AA paddle board provisioned in DMS Packet Handler configuration

Provision one (1) sheet of NIU cable routing labels when NIUs are provisioned in that shelf.

Provision one (1) P0714420 Designation Label when equipping LIS on shelf position 26.

Provision one (1) P0714421 Designation Label when equipping LIS on shelf position 13.

- 5) Provision four (4) Labels P0675712 (HIGH VOLTAGE) per EMC cabinet for jobs requiring english language only.

Provision four (4) Labels P0689138 (HIGH VOLTAGE) per EMC cabinet for jobs requiring bilingual documentation.

Provision one (1) Label P0675711 (HIGH VOLTAGE) per EMC cabinet for jobs requiring english language only.

Provision one (1) Labels P0689137 (HIGH VOLTAGE) per EMC cabinet for jobs requiring bilingual documentation.

RUL4 1) Provision NT9X19AA Filler Face Plates and NT9X19BA Paddleboard Filler Face Plates for the unoccupied slots.

RUL5 1) Provision one (1) NT9X7204 Link Interface Shelf Assembly in shelf position 13 if more than twelve (12) LIUs are required. Otherwise, provision one (1) NT0X24BD Blank Shelf Assembly.

RUL6 1) For each LIS shelf, provision one (1) NT9X6534 Bulkhead Assembly left, one (1) NT9X6580 Bulkhead Assembly right, one (1) NT9X9820 FLIS Cable Assembly and two (2) NTEX0120 Composite Clock Cable Assemblies.

RUL7 1) Provision one (1) NT0X24BD Blank Shelf Assembly in shelf position 13.

2) Provision one (1) NT0X24BD Blank Shelf Assembly in shelf position 00.

RUL8 1) Provision one (1) NTEX5001 Overhead power block kit for use in non-raised floor application.

2) Provision four (4) P097F813 screws, one (1) P0284154 washer and one (1) P0183220 locker washer when a link interface shlef assembly NT9X7204 is required in shelf position 13.

| RUL9 1) MD'd. The NT9X0105 is included with the cabinet stocklist.

| RUL10 1) MD'd. The NT9X0105 is included with the cabinet stocklist.

RUL11 1) Provision one (1) NTEX5025 Bulkhead cover plate assembly for each unequipped position in the NT9X6534 or NT9X6580 bulkheads.

RUL12 1) Provision one (1) sheet of LIU cable routing labels per shelf when LIUs are provisioned in that shelf.

RUL13 1) Provision P0733690 for EMC cabinets numbered from 00-05.

2) Provision P0733691 for EMC cabinets numbered from 06-11.

- 3) Provision P0733692 for EMC cabinets numbered from 12-16.
- RUL14 1) Provision one (1) P0733693 PDC label per office as required.
- 2) Provision one (1) P0733694 FSP label per office as required.
- 3) Provision P0733695 Interior Cabinet label as required.

OPM FRAME SUPERVISORY PANEL

PEC CODE: NT6X25BB

CPC CODE: B0221712

| RATING: MD

REPLACES: N/A

| REPLACED BY: NO REPLACEMENT

ABBREVIATION NAME: Not Applicable

ENGINEERING DESCRIPTION: The OPM Frame Supervisory Panel distributes power to the OPM shelves.

REFERENCE DOCUMENTATION: AD6X25BB 00 06
SL6X25BB 00 03

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Mark Sorrell Dept. 3471 (PPK)

MAIN CONTACT: NTI: Mark Sorrell Dept. 3471 (PPK)

NT6X25BB EMR2-13-FSP-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-- -- -- 96 08 29	--- --- -- ECM 514 15	Previous history not available. MD per EC 024-96253.

The OPM Frame Supervisory Panel is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
FSP Alarm Card	NT6X36AA		1		X	AP
Converter Dr.& Protect Ckt	NT0X91AE		1		X	AP
Alarm & Converter Dr. card	NT0X91AA		1		X	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

INTERNATIONAL OUTSIDE PLANT MODULE

PEC CODE: NT8X40AA

CPC CODE: B0229449

| RATING: A&M

REPLACES: None

REPLACED BY: None

ABBREVIATION NAME: IOPM

ENGINEERING DESCRIPTION: The International Outside Plant Module is similar to the IRLCM in features, capacity, etc. but has its own environmentally enclosed cabinet. It is intended to be mounted on a concrete pad as outside plant equipment. In this cabinet is contained an HIE, LCM, LCA, RMM, FSP, DF, Battery Charging Unit, Power Control Unit, AC Breakers, Fans and Heaters.

Different from the OPM, the IOPM has an auxiliary compartment at the rear, identical in size to the original main cabinet which therefore increases the size to twice that of the OPM.

The IOPM supports up to 550 lines, employing from 2-6 PCM-30 links to the host DMS.

REFERENCE DOCUMENTATION: MS8X40AA 00 02

MARKETS: Applicable markets:

Europe
Asia/Pacific

ISSUE AUTHOR: NTC: Mark Sorrell Dept. 3471 (RTP)

MAIN CONTACT: NTC: Mark Sorrell Dept. 3471 (RTP)

NT8X40AA EMR2-13-I00 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 04 28	----- ECM 452 05	Previous history not available STATUS OF SECTION IS A&M.

The International Outside Plant Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
IOPM Cabinet Assembly	NT0X19AB					RUL1
Mounting Hardware Kit	NT0X1935					RUL2
Mounting Template	NT0X1970					RUL2
Main Compartment (Bay 0)						
Booster Fan Unit	NT8X06BA		1	46		AP
Line Concentration Array Shf	NT8X0401	LCM	2	19, 33		AP
ILCM Common CP	NT6X04BB			19		RUL7
Line Drawer	NT6X05BA			19, 33		RUL7
Line Drawer Filler Kit	NT6X05AX			19, 33		RUL7
Line Cards	AR			19, 33		RUL7
Designation Labels (LSGs)	P0631765			19, 33		RUL7
Host Interface Equip Assy	NT6X1101	HIE	1	05		AP
HIE Common CP (Turkey/CEP)	NT6X11BB			05		RUL9
Ringing Generator	NT6X60AA			05	1, 5	RUL10
Filler Face Plate (3.70)	NT0X50AH			05	1, 5	RUL10
Master Processor Memory	NT6X47AB			05	14	RUL8
LGC/DTC Processor	NT6X45BA			05	15	RUL8
ESA Clock and Tone Card(CEP)	NT6X75DA			05	16	RUL8
PCM_30 Interface Card	NT6X27AB			05	21	RUL4
Filler Face Plate 0.875	NT0X50AA			05	13-16 21	RUL5
Power Conv + & -5 Volt, 12V	NT2X70AE			05	22, 25	RUL21
Filler Face Plate	NT0X50AG			05	09	RUL6
Desig Label for NT6X45BA	P0665152			05	15	RUL30
Desig Label for NT6X47AB	P0666374			05	14	RUL30
Desig Label for NT6X75DA	P0690064			05	16	RUL30
Desig Label for NT6X27AB	P0678466			05	21	RUL30
Desig Label for NT2X70AE	P0698943			05	22, 25	RUL30
Desig Label for NT6X60AA	P0642014			05	1, 5	RUL30
Environmental Control Unit	NT8X06AB		1	00		AP
Wiring 3-Wire 220VAC Ph-Ph	NT8X40WA					RUL35
Wiring 2-Wire 220VAC Sngl Ph	NT8X40WB					RUL35
AC Power Cable Assy (H1)	NT8X0123					RUL35

Retired Equipment
International Outside Plant Module

NT8X40AA
EMR2-13-I00
Page 3

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
AC Power Cable Assy (H0) Jumper	NT8X0124 A0319292					RUL35 RUL35
Main Compartment (Bay 1)						
Rectifier	J2427B-1L1		1	39		AP
Power Control Unit	NT8X05AA		1	35		AP
Battery Charging Unit Assy Battery Charger Common CP	NT8X0301 NT8X03AA	BCU	1	32 32		AP RUL34
YUASA Batteries	A0323985					RUL12
Battery Tray	P0661751					RUL12
Retainer Bar	P0661753					RUL12
Desig Label for Batteries	P0664827					RUL12
Rectifier	J2427B-1L1		1	28		AP
Frame Supervisory Panel Filler Face Plate	NT6X25BB NT0X50AJ	FSP	1	19 19	1-7	AP RUL15
Remote Maintenance Mod Assy	NT6X1301	RMM	1	05		AP
RMM Common CP	NT6X13DA			05		RUL31
Metallic Test Unit Analog	NT4X98BB			05	3	RUL24
Metallic Test Unit Ctrlr	NT4X97AA			05	4	RUL24
Rmt Metallic Test Access	NT3X09AA			05	6	RUL26
Rmt Metallic Test Access	NT3X09BA			05	5	RUL25
Filler Face Plate	NT0X50AC			05	7	RUL22
Scan Card	NT0X10AA			05	8	RUL32
Incoming/Outgoing Test Trk	NT2X90AC			05	9,10	RUL33
Digitone Receiver (ESA)	NT2X48CC			05	11-16	RUL8
Service Circuit Packs	AR			05	13,14	RUL16
Filler Face Plate	NT0X50AC			05	3-16	RUL16
RMM Cable Assembly	NT6X1438			05		RUL11
Desig. Label(NT2X48CC)	P0678469			05		RUL30
Environmental Control Unit	NT8X06AB		1	00		AP
Des Label OPE 00 0 - 43 0	P0660996					RUL17
Des Label OPE 44 0 - 87 0	P0660997					RUL17
Des Label OPE 88 0 - 99 0	P0660998					RUL17
Des Label OPE 00 1 - 43 1	P0661767					RUL17
Des Label OPE 44 1 - 87 1	P0661768					RUL17
Des Label OPE 88 1 - 99 1	P0661201					RUL17

Retired Equipment
International Outside Plant Module

NT8X40AA
EMR2-13-I00
Page 4

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Des Label ECU:000 - 104	P0660990					RUL17
Des Label ECU:105 - 209	P0660991					RUL17
Des Label ECU:210 - 314	P0660992					RUL17
Des Label ECU:315 - 399	P0660993					RUL17
Des Label BCU:000 - 104	P0660994					RUL17
Des Label BCU:105 - 199	P0660995					RUL17
Des Label LCM 00 0 - 99 0	P0660999					RUL17
Des Label LCM 00 1 - 99 1	P0661200					RUL17
Line Card Insert/Rmvl Tool	QTH56A					RUL17
Line Card Removal Tool	QTH57A					RUL17
Dbl Slot LC Insert/Removal	QTH58A					RUL17
AC Schematic Label 3-Wire	P0703366					RUL35
AC Schematic Label 2-Wire	P0711201					RUL35
END ACCESS COMPARTMENT						
Left Hand BIX Mount Col	NT0X1904		1	CTR		AP
Green BIX Con Retainers	QRE3A		27	CTR		AP
25 Pair Greaseless Cons	P0612212		27	CTR		AP
Green BIX Con Retainers	QRE3A			CTR		RUL13
25 Pair Greaseless Cons	P0612212			CTR		RUL13
25 Pair Con for RMM/HIE	P0612212		4	CTR		AP
Green BIX Con Ret RMM/HIE	QRE3A		4	CTR		AP
100 Pair MPC Protector Con	P0613810		8	CTR		AP
Gas Tube Prot. Mod QMP6A5	QMP6A5			CTR		RUL14
Carbon Block Prot Mod QMP3A5	QMP3A5			CTR		RUL14
Right Hand Mounting Col	NT0X1905			RH		RUL13
Green BIX Con Retainers	QRE3A			RH		RUL13
25 Pair Greaseless Con	P0612212			RH		RUL13
Des Card line pr 1-600	P0613827					RUL18
Des Card line pr 601-1200	P0613828					RUL18
Des Card line pr 1201-1800	P0613829					RUL18
Misc BIX/MPC Tools	AR					RUL19
BIX Conn. Tool QTBI16A	QTBI16A					RUL19
Conn. Tool Carrying Pouch	C0054642					RUL19
Touch Up Paint	R0113260					RUL20
Crouse-Hines Elec Plug	APJ3485-S22					RUL29
End Access Cover	P0702884					RUL23
Port Hole Cover	P0702885					RUL27

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
AUXILIARY COMPARTMENT (BAY 2)						
RG-59/U Coax.Cable Conn.	A0360696					RUL28
RG-179/U Coax.Cable Conn.	A0360953					RUL28
PCM-30 Patch Panel	NT8X45AA		1			AP
IOPM Fan Unit	NT8X41AA		1	00		AP
AUXILIARY COMPARTMENT (BAY 3)						
IOPM Fan Unit	NT8X41AA		1	00		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if
they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufac-
tured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT8X40AA is ordered, these items are provided.

RUL1 1) Provide one (1) Cabinet Assembly, NT0X19AB for the IOPM.

- RUL2 1) Provide one (1) NT0X1970 and one (1) NT0X1935 to mount the IOPM on a concrete pad. Also provide one NTP 297-2181-200, DMS-100 OPM Cabinet Description, Installation and Maintenance prior to pad construction.
- RUL3 1) Provide one (1) NT8X0176 Installers Assembly Kit for each NT8X40AA IOPM ordered. This kit is used for installation purposes. Refer to Installation Manual IM925 for more information.
- RUL4 1) Provide one (1) NT6X27AB, PCM-30 Interface CP in slot 21 when the PCM-30 links, 5 and 6, are required to the host. Refer to NTP 297-1001-450 for Traffic Criteria and Capacities for link provisioning. Two 6X27 CPs are always provided (minimum of 1 port on each should be provisioned). One NT6X27AB CP provides 2 ports.
- RUL5 1) Provide one (1) Filler Face Plate, NT0X50AA, for each unequipped slot position 13-16, 21 in the HIE.
- RUL6 1) One (1) NT0X50AG, Filler Face Plate should always be provisioned in slot 09 of the HIE.
- RUL7 1) Provide one (1) ILCM Common CP kit and up to 10 line drawers for each IOPM. Only 550 lines cards can be provisioned - due to thermal constraints. This ILCM is similar to the host ILCM and utilizes the same line card types. Refer to the host ILCM provisioning rules for line card provisioning.

Line Drawers must be assigned in the OPM in the following sequence:

LSG 00 & 01, 08 & 09, 06 & 07, 04 & 05, 02 & 03, 18 & 19, 16 & 17, 14 & 15, 12 & 13, 10 & 11.

- 2) Provide one (1) NT6X05AX Line Drawer Filler per unfilled line drawer location per NT8X0401.
- 3) Provide one P0631765 per IOPM and affix line sub-group labels to drawers as required.
- 4) Due to thermal constraints, a maximum of 550 line cards can be provisioned instead of the full 640 line cards possible. Do not provision line cards in 10 odd slots in the line sub-groups 10, 12, 14, 16, 18 and in any odd slots of the top-most line subgroups 11, 13, 15, 17, 19.

- RUL8 1) Provide one (1) NT6X47AB, CP, one (1) NT6X45BA CP and one (1) NT6X75DA CP when the ESA option is specified. Also, based on traffic requirements, provide a minimum one (1) NT2X48CC Digitone Receivers in the RMM.
- RUL9 1) Provide one NT6X11BB per NT8X40AA, INTL Outside Plant Module.
- RUL10 1) Provide two (2) NT6X60AA, Ringing Generator Modules per NT6X11BB HIE packfill to provide analog ringing.
- 2) Provide two (2) NT0X50AH in the HIE (CP POS 1,5) if the Ringing Generator Modules are not provided.
- RUL11 1) Provide one NT6X1438 cable when the MTU(Metallic Test Unit) is required.
- RUL12 1) Provision Yuasa battery strings when battery backup is a requirement in the IOPM. One Yuasa battery string provides one hour of battery backup and must be equipped in string pairs as follows:
- Pair 1 Strings 0 and 4
 Pair 2 Strings 1 and 5
 Pair 3 Strings 2 and 6
 Pair 4 Strings 3 and 7

Order four (4) A0323985 Yuasa batteries to equip one battery string. Also order one (1) P0661751 Battery Tray, one (1) P0661753 Retainer Bar, eight (8) P097F813 Screws, one (1) P0664827 Designation Label, and three (3) NT8X0126 Cable Assemblies for each equipped battery string.

Also provision one cable assembly for each equipped battery string as shown below:

String Number	Cable Assembly
0	NT8X0143
0	NT8X0151
1	NT8X0144
1	NT8X0152
2	NT8X0145
2	NT8X0153

3	NT8X0129
3	NT8X0154
4	NT8X0147
4	NT8X0155
5	NT8X0148
5	NT8X0140
6	NT8X0128
6	NT8X0157
7	NT8X0150
7	NT8X0158

RUL13 1) The left hand BIX mounting column is always equipped with green BIX connectors totalling 675 pair to terminate the LCM, HIE and RMM equipment. In order to use the End Compartment as a cross-connect facility, additional green BIX connectors must be provisioned. The left hand column can mount an additional 14 green BIX connectors capable of terminating up to 350 outside plant pairs. Extended outside plant termination facilities are available by provisioning the right hand BIX mounting column and up to 41 green BIX connectors or terminations for an additional 1025 pairs.

RUL14 1) Provision up to a maximum of 800 MPC protectors (type specified by the Telco) for protection of the LCM, HIE and RMM circuitry (ie. for lines, PCM30 links and special service). Only the QMP6A5 and QMP3A5 are compatible with the IOPM.

RUL15 1) Provide one filler faceplate, NT0X50AJ, for each position, 1-7.

RUL16 1) Provide one (1) NT0X50AC for each unequipped position 3-16. Slots 13-16 are currently wired together to allow the operation of DRAM circuitry in these slots when the DRA software becomes available for remotes. The NT4X97AA, NT4X98BB MTU pair is not operational in these slots because of the DRA wiring and therefore, should not be provisioned in slots 13-16. All other applicable RMM CPs are allowed in slots 13-16, however, these slots should be reserved whenever possible to allow for the future DRA application. Slots 13-16 are pre-wired to the BIX cross connect facility. Applicable CPs for these slots are as follows:

NT2X90AC	Incoming/Outgoing Test Trunk
NT3X04AA	Incoming Test Trunk for AECO LTD

NT0X10AA Miscellaneous Scan Card
NT2X57AA Signal Distribution Card

Slots 11 and 12 are not pre-wired to the BIX cross connect facility and may only be used for cards that do not require cabling.

RUL17 1) Provision as required.

RUL18 1) Provide Outside Plant Line Designation Labels as required.

RUL19 1) BIX and MPC Test and Maintenance Tools are available per Telco request. Refer to the latest issue of the Northern Telecom T80 Outside Plant Products ordering catalog for details.

Provide BIX QTB1X16A connection tools and pouches per Telco requirement, to terminate wiring on the BIX connectors.

RUL20 1) Provide one (1) can IOPM Touch Up Paint (R0113260) as required.

RUL21 1) Provide two(2) NT2X70AE power converters per NT6X11BB (HIE).

RUL22 1) This slot is pre-wired for an NT2X57AA used to support the NT6X77AA, Remote Alarm Panel. the NT6X77AA is not available, therefore, the NT2X57AA is not required. Provide instead one (1) NT0X50AC, Filler Face Plate.

RUL23 1) Provide one P0702884 End Access Cover for the left BIX column on the IOPM.

RUL24 1) Provision one (1) NT4X97AA and one (1) NT4X98BB MTU in slots 3 and 4.

RUL25 1) Provision one (1) NT3X09BA in slot 5 on all initial IOPM systems for Battery maintenance and diagnostics.

RUL26 1) Provide one (1) NT3X09AA in slot 06 for line testing.

RUL27 1) Provide one P0702885 Port Hole Cover for the left side cable duct of the IOPM.

RUL28 1) When the customer is using RG-59/U COAX cables, provide A0360696 (31-70008) 75 Ohms BNC plug as required.

2) When the customer is using RG-179/U COAX cables, provide A0360953 (31-70013) 75 Ohms BNC plug as required.

- RUL29 1) Provide one (1) APJ3485-S22 electrical plug for each IOPM system when an Emergency Generator must be connected to the IOPM.
- RUL30 1) Provide Designation Labels as required.
- RUL31 1) Provide one NT6X13DA RMM Common CP Fill, per NT8X40AA, INTL Outside Plant Module.
- RUL32 1) Provide one (1) NT0X10AA Scan Card for alarm detection. This CP is pre-wired to internal IOPM circuitry.
- RUL33 1) Provide one (1) NT2X90AC in slot 9 for LTP/Talk Monitor function and in slot 10 for Operator Verification.
- RUL34 1) Provision one (1) Battery Charger Common CP kit with battery backup is a requirement.
- RUL35 1) For 220 volts AC (phase-to-phase) 3-wire power configuration, provide one (1) NT8X40WA Wiring, one (1) P0703366 Schematic Label, one (1) NT8X0123 AC Power Cable Assembly (H1), and one (1) NT8X0124 AC Power Cable Assembly (H0).
- 2) For 220 volts AC single phase 2-wire power configuration, provide one (1) NT8X40WB Wiring, one (1) P0711201 Schematic Label, and two (2) A0319292 Jumpers.

LCM COMMON CP

PEC CODE: NT8X04AA

| CPC CODE: B0221390

| RATING: MD

| REPLACES: N/A

| REPLACED BY: NT8X04AB

ABBREVIATION NAME: LCM

ENGINEERING DESCRIPTION: The Line Concentration Module (LCM) is identical to the host LCM supporting up to ten (10) line drawers at 64 line cards per drawer. The OPM LCM supports all of the line features available at the host. This includes POTS, party lines, coin lines, IBN stations, Business Sets, Data Units, Attendant Consoles and DataPath. The RLCM features Intra-Switching and Emergency Stand Alone are also available with the OPM.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

MAIN CONTACT: NTI: James Marsden Dept. 3471 (PPK)

NT8X04AA EMR2-13-LCM-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 95 10 04	----- ECM 619 35	Previous history not available Reformat section and MD NT8X04AA per EC 024-92020.

The LCM Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Power Converter	NT6X53AA		1	33	1	AP
LCM Processor	NT6X51AA		1	33	4	AP
Digroup Controller	NT6X52AA		1	33	5	AP
Design Label (NT6X51AA)	P0633541		1	33		AP
Design Label (NT6X52AA)	P0633542		1	33		AP
Design Label (NT6X53AA)	P0633543		1	33		AP
Power Converter	NT6X53AA		1	19	1	AP
LCM Processor	NT6X51AA		1	19	4	AP
Digroup Controller	NT6X52AA		1	19	5	AP
Design Label (NT6X51AA)	P0633541		1	19		AP
Design Label (NT6X52AA)	P0633542		1	19		AP
Design Label (NT6X53AA)	P0633543		1	19		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

| AP 1) When PEC NT8X04AA is ordered, these items are provided.

LCM COMMON CP

PEC CODE: NT8X04AB

CPC CODE: B0227509

| RATING: Manufacture Discontinue

REPLACES: NT8X04AA

| REPLACED BY: NT8X04AC

ABBREVIATION NAME: LCM

ENGINEERING DESCRIPTION: The Line Concentration Module (LCM) is identical to the host LCM supporting up to ten (10) line drawers at 64 line cards per drawer. The OPM LCM supports all of the line features available at the host. This includes POTS, party lines, coin lines, IBN stations, Business Sets, Data Units, Attendant Consoles and DataPath. The RLCM features Intra-Switching and Emergency Stand Alone are also available with the OPM.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Canada
US

ISSUE AUTHOR: NTI: Mark Sorrell Dept. 3471 (PPK)

MAIN CONTACT: NTI: Mark Sorrell Dept. 3471 (PPK)

NT8X04AB EMR2-13-LCM-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 06 27	ECM 619 23	Reformat EMS.
95 10 04	ECM 619 35	Show NT8X04AB as the replacement for NT8X04AA.
96 10 23	ECM 562 15	Show NT8X04AC as the replacement for NT8X04AB per EC 024-96698.

The LCM Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Power Converter	NT6X53AA		1	33	1	AP
LCM Processor	NT6X51AB		1	33	4	AP
Digroup Controller	NT6X52AA		1	33	5	AP
Design Label (NT6X51AB)	P0701604		1	33		AP
Design Label (NT6X52AA)	P0633542		1	33		AP
Design Label (NT6X53AA)	P0633543		1	33		AP
Power Converter	NT6X53AA		1	19	1	AP
LCM Processor	NT6X51AB		1	19	4	AP
Digroup Controller	NT6X52AA		1	19	5	AP
Design Label (NT6X51AB)	P0701604		1	19		AP
Design Label (NT6X52AA)	P0633542		1	19		AP
Design Label (NT6X53AA)	P0633543		1	19		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT8X04AB is ordered, these items are provided.

LCM-C COMMON CP

PEC CODE: NT8X04BA

CPC CODE: B0229331

RATING: MD

REPLACES: Not applicable

REPLACED BY: NT8X04BD

ABBREVIATION NAME: LCM-C

ENGINEERING DESCRIPTION: The Line Concentration Module-Combined(LCM-C) has the same redundancy capabilities as the standard LCM. The line drawers mounted in the LCM-C are the same standard line drawers used in the LCM. The LCM-C supports up to four(4) line drawers at 64 cards per drawer. Five(5) line drawer control cables will be equipped on the controller backplanes and tied off to facilitate future line expansion capabilities. The OPM-256 LCM-C supports all of the line features available at the host. This includes POTS, party lines, coin lines, IBN stations, Business Sets, Data Units, Attendant Consoles and Data Path. The RLCM features Intra- Switching and Emergency Stand Alone are also available with the OPM-256.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Canada
US

| ISSUE AUTHOR: NTI: Mark Sorrell Dept. 3471 (PPK)

MAIN CONTACT: NTI: Mark Sorrell Dept. 3471 (PPK)

NT8X04BA EMR2-13-LCM-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 94 06 27 97 05 05	----- ECM 619 23 ECM 514 17	Previous history not available Reformat EMS. MD NT8X04BA and replace with NT8X04BD per EC 024-96698.

The LCM-C Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Power Converter	NT6X53AA		1	33	1	AP
LCM Processor	NT6X51AB		1	33	4	AP
Digroup Controller	NT6X52AA		1	33	5	AP
Power Converter	NT6X53AA		1	33	22	AP
LCM Processor	NT6X51AB		1	33	25	AP
Digroup Controller	NT6X52AA		1	33	26	AP
Desig.Label for NT6X51AB	P0701604		2	33		AP
Desig.Label for NT6X52AA	P0633542		2	33		AP
Desig.Label for NT6X53AA	P0633543		2	33		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if
they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufac-
tured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT8X04BA is ordered, these items are provided.

OUTSIDE PLANT MODULE

NT8X01AA

RATING: MD. Replaced by NTZZ19PA.

ABBREVIATION NAME: OPM-640

ENGINEERING DESCRIPTION: The Outside Plant Module is similar to the RLCM in features, capacity etc., however the equipment is housed in an environmentally controlled cabinet. It is intended to be mounted on a concrete pad as outside plant equipment. This cabinet contains the following: HIE, LCM, LCA, RMM, and FSP shelves, DF, Battery Charging Unit, Power Control Unit, AC Breakers, Fans and Heaters. The OPM supports up to 640 lines, employing from 2-6 DS1 links to the host DMS.

REFERENCE DOCUMENTATION: MS8X01AA 00 12
SL8X01AA 00 21

MARKETS: Applicable markets:

Canada
US
CALA
Asia/Pacific
Europe

NT8X01AA EMR2-13-000 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
91 04 12	ECM 514 01	Replaces the NT8X01AA OPM Cabinet with the NTZZ19PA OPM Cabinet.
91 12 06	ECM 514 02	Adds NT6X47AC CP for BCS-33 ESA.
92 02 07	ECM 514 03	Adds FMT-6 Fiber Interface, and the DRTU.
92 10 02	ECM 514 04	Updates rules for DRTU.

The Outside Plant Module is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
OPM Cabinet Assembly	NT0X19AA					RUL1
Mounting Hardware Kit	NT0X1935					RUL2
Mounting Template	NT0X1934					RUL2
Mounting Plate Assembly	NT0X1929					RUL2
Installers Assembly Kit	NT8X0176					RUL3

The Outside Plant Equipment (Bay 0) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Booster Fan Unit	NT8X06BA	BFU	1	46		AP
Line Concentration Array Shf	NT8X0401	LCM	2	19,33		AP
&LCM Common CP	NT8X04AA			19		RUL7
LCM Common CP	NT8X04AB			19		RUL7
Extended LCM Processor PCKit	NT6X04ZZ			19		RUL43
Line Drawer	NT6X05AA			19,33		RUL7
Line Drawer Filler Kit	NT6X05AX			19,33		RUL7
Line Cards	AR			19,33		RUL7
Designation Labels	P0631765			19,33		RUL7
Host Interface Equip Assy	NT6X1101	HIE	1	05		AP
HIE Common CP	NT6X11AA			05		RUL9
HIE Common CP	NT6X11AB			05		RUL9
Ringing Generator	NT6X60AA			05	1,5	RUL10
Filler Face Plate	NT0X50AH			05	1,5	RUL10
Filler Face Plate	NT0X50AG			05	09	RUL6
Master Processor Memory	NT6X47AB			05	14	RUL8
Master Processor Memory	NT6X47AC			05	14	RUL8
LGC/DTC Processor	NT6X45AF			05	15	RUL8
ESA Clock and Tone Card	NT6X75AA			05	16	RUL8
ESA PC Kit (Canada Only)	NT8X01WA					RUL8
DS-1 Interface Card	NT6X50AA			05	21	RUL4
Filler Face Plate 0.875	NT0X50AA			05	13-16 21	RUL5
Power Conv + & -5 Volt, 12V	NT2X70AE			05	22,25	RUL41
Power Conv Change Kit	NT2X70AZ			05	22,25	RUL42
Desig Label for NT6X45AF	P0685029			05	15	RUL30
Desig Label for NT6X47AB	P0666374			05	14	RUL30
Desig Label for NT6X47AC	P0711663			05	14	RUL8
Desig Label for NT6X75AA	P0642015			05	16	RUL30
Desig Label for NT6X50AA	P0626878			05	21	RUL30
Desig Label for NT2X70AE	P0698943			05	22,25	RUL30
Desig Label for NT6X60AA	P0642014			05	1,5	RUL30
Environmental Control Unit	NT8X06AB	ECU	1	00		AP

The Outside Plant Equipment (Bay 1) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Rectifier	J2427B-1L1	RECT	1	39		AP
Power Control Unit	NT8X05AA		1	35		AP
Battery Charging Unit Assy	NT8X0301	BCU	1	32		AP
Battery Charger Common CP	NT8X03AA			32		RUL34
\$Gates Batteries	A0283945					RUL11
\$Battery Tray	P0652872					RUL11
\$Retainer Bar	P0652909					RUL11
Desig Label for Batteries	P0664827					RUL11
YUASA Batteries	A0323985					RUL12
Battery Tray	P0661751					RUL12
Retainer Bar	P0661753					RUL12
Desig Label for Batteries	P0664827					RUL12
Rectifier	J2427B-1L1	RECT	1	28		AP
Frame Supervisory Panel	NT6X25BB	FSP	1	19		AP
Fault Loc/Order Wire Access	QPP519			19	1	RUL39
Dual-Amplified Type FL Filter	QFP127			19	1R	RUL39
Single Passive Type FL Filter	QFP127			19	1R	RUL39
Office Repeater	QRY18			19	2-7	RUL39
Filler Face Plate	NT0X50AJ			19	1-7	RUL39
Remote Maintenance Mod Assy	NT6X1301	RMM	1	05		AP
RMM Common CP	NT6X13AB			05		RUL9
#Metallic Test Unit Analog	NT4X98AA			05	3	RUL24
#Line Test Unit Analog	NT2X10AB			05	3	RUL24
Line Test Unit Analog	NT2X10AC			05	3	RUL24
Multi-Line Test Unit Analog	NT2X10BA			05	3	RUL24
#Metallic Test Unit Ctrlr	NT4X97AA			05	4	RUL24
#Line Test Unit Digital	NT2X11AA			05	4	RUL24
%Line Test Unit Digital	NT2X11AC			05	4	RUL24
Line Test Unit Digital	NT2X11AD			05	4	RUL24
Line Test Unit Digital	NT2X11BA			05	4	RUL24
#Rmt Metallic Test Access	NT3X09AA			05	5	RUL25
Rmt Metallic Test Access	NT3X09BA			05	5	RUL25
Rmt Metallic Test Access	NT3X09AA			05	6	RUL26
Filler Face Plate	NT0X50AC			05	7	RUL37
Scan Card	NT0X10AA			05	8	RUL35
Incoming/Outgoing Test Trk	NT2X90			05	9,10	RUL36
Digitone Receiver (ESA)	NT2X48AB			05	11-16	RUL8

Retired Equipment
Outside Plant Module

NT8X01AA
EMR2-13-000
Page 5

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Incomming/Outgoing Test Trk	NT2X90			05	13,14	RUL38
Inc Tst Trk For AECO LTD	NT3X04AA			05	13,14	RUL38
Miscellaneous Scan Card	NT0X10AA			05	13,14	RUL38
Signal Distribution Card	NT2X57AA			05	13,14	RUL38
Filler Face Plate	NT0X50AC			05	3-16	RUL38
Environmental Control Unit	NT8X06AB	ECU	1	00		AP
Des Label OPE 00 0 - 43 0	P0660996					RUL17
Des Label OPE 44 0 - 87 0	P0660997					RUL17
Des Label OPE 88 0 - 99 0	P0660998					RUL17
Des Label OPE 00 1 - 43 1	P0661767					RUL17
Des Label OPE 44 1 - 87 1	P0661768					RUL17
Des Label OPE 88 1 - 99 1	P0661201					RUL17
Des Label ECU:000 - 104	P0660990					RUL17
Des Label ECU:105 - 209	P0660991					RUL17
Des Label ECU:210 - 314	P0660992					RUL17
Des Label ECU:315 - 399	P0660993					RUL17
Des Label BCU:000 - 104	P0660994					RUL17
Des Label BCU:105 - 199	P0660995					RUL17
Des Label LCM 00 0 - 99 0	P0660999					RUL17
Des Label LCM 00 1 - 99 1	P0661200					RUL17
Line Card Insert/Rmvl Tool	QTH56A					RUL17
Line Card Removal Tool	QTH57A					RUL17
Dbl Slot LC Insert/Removal	QTH58A					RUL17
LRS Remote Test Head	AR					RUL16
LRS Test Head Mounting H/W	NT8X09AA					RUL15
DRTU-Brown Unit	NT0J04AE					RUL40
DRTU Mounting Hardware Kit	NT8X09BA					RUL40

The OPE BAY 0 ROW B (BACK WALL) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Single FMT-6 Kit	NT0X1989			33		RUL40
Dual FMT-6 Kit	NT0X1990			33		RUL40
FMT6 PC Kit (Single To Dual)	NT8X01ZA			33		RUL40
Single-Mode Pigtail	NT3E19AA			33		RUL40
Multi-Mode Pigtail	NT3E44AA			33		RUL40
LRS Remote Test Head	AR					RUL16
LRS Test Head Mtg Kit	NT8X09AA			05		RUL15
DRTU Unit	NT0J42AA			05		RUL15
DRTU Cable Kit	NT0J41BA			05		RUL15

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
END COMPARTMENT ACCESS						
Left Hand BIX Mount Col	NT0X1904		1	LH		AP
Green BIX Con Retainers	QRE3A		27	LH		AP
25 Pair Greaseless Cons	P0612212		27	LH		AP
Green BIX Con Retainers	QRE3A			LH		RUL13
25 Pair Greaseless Cons	P0612212			LH		RUL13
25 Pair Con for RMM/HIE	P0612212		4	LH		AP
Green BIX Con Ret RMM/HIE	QRE3A		4	LH		AP
100 Pair MPC Protector Con	P0613810		8	LH		AP
Gas Tube Prot. Mod QMP6A5	QMP6A5			LH		RUL14
Carbon Block Prot Mod QMP3A5	QMP3A5			LH		RUL14
Right Hand Mounting Col	NT0X1905			RH		RUL13
Green BIX Con Retainers	QRE3A			RH		RUL13
25 Pair Greaseless Con	P0612212			RH		RUL13
Des Card line pr 1-600	P0613827					RUL18
Des Card line pr 601-1200	P0613828					RUL18
Des Card line pr 1201-1800	P0613829					RUL18
Misc BIX/MPC Tools	AR					RUL19
Corr Tool (Bix) QTBIX16A	QTBIX16A					RUL19
Corr Tool Carrying Pouch	C0054642					RUL19
Touch Up Paint	R0113260					RUL20
OPM Warning Label	P0678472					RUL27
Battery Label Plate (U.S.)	P0688741					RUL28
OPM Caution Label	P0685443		1			AP
Batt Warning Label (French)	P0686878					RUL21
Batt Warning Label (US)	P0686456					RUL22
Gate Open/Close Warn Label	P0685441					RUL23
ECU Switch Warning Label	P0685442					RUL23
Crouse-Hinds Elec Plug	APJ3485-S22					RUL29

FLAGS:

All existing OPM installations (U.S.) must be retrofitted to replace these CP's per Rule 25 and 26.

% Rating Change Pending (see Rule 24).

\$ Rated MD.

& Replaced by NT8X04AB on new jobs.

└ Replaced by NT6X11AB on new jobs.

NOTES:

- 1) The Total -48V power consumption of the provisionable packs in the RMM must not exceed 110 watts. Refer to the chart below for RMM provisionable circuit pack power consumption.

PEC	MAXIMUM POWER CONSUMPTION
NT0X10AA	2.0
NT2X10AC	9.0
NT2X10BA	9.0
NT2X11AC	8.5
NT2X11BA	15.0
NT2X48AB	12.0
NT2X57AA	4.5
NT2X90AB/AC/AD	1.5
NT3X04AA	28.0
NT3X09AA	4.0
NT3X09BA	11.5
NT2X59 & NT6X74	25.0

RULES:

AP 1) When PEC NT8X01AA is ordered, these items are provided.

RUL1 1) Provide one (1) Cabinet Assembly, NT0X19AA for the OPM.

- RUL2 1) Provide one (1) NT0X1934 and one (1) NT0X1935 when the OPM is to be mounted on a concrete pad. Also provide one NTP 640-2181-200, DMS-100 OPM Cabinet Description, Installation and Maintenance prior to pad construction.

For all OPM installations engineered in the U.S., an RFS for advance shipment of the above items must be initiated by the Systems Engineer as soon as the mounting arrangement is identified. An advance ship note must be placed in the specification.

For all OPM's engineered in Canada, the mounting kit NT0X1934 will be merchandise ordered and the NT0X1935 is shipped loose with the OPM. The Customer Engineer must ensure that the Telco is aware of this requirement.

Provide one (1) NT0X1929 and one (1) NT0X1935 when the OPM is to be mounted on railroad ties.

- RUL3 1) Provide one (1) NT8X0176 Installers Assembly Kit per Telco District or Telco specifications. This kit is used for installation purposes. Refer to Installation Manual IM925 for more information.

- RUL4 1) Provide one (1) NT6X50AA, DS-1 Interface CP when the DS-1 links 5 and 6 are required to the host. Refer to NTP 297-1001-450 Section 450/2, Traffic Criteria and Capacities for link provisioning.

- RUL5 1) Provide one (1) Filler Face Plate for each unequipped slot position 13-16, 21 in the HIE.

- RUL6 1) One (1) NT0X50AG, Filler Face Plate should always be provisioned in slot 09 of the HIE.

- RUL7 1) Provide one (1) LCM Common CP kit and up to ten (10) Line Drawers for each OPM. This LCM is identical to the host LCM and utilizes the same line card types. Refer to the host LCM provisioning rules for line card provisioning.

- 2) When less than 10 Line Drawers are provided Line Drawers must be assigned in the OPM in the following sequence:

LSG 00 & 01, 08 & 09, 06 & 07, 04 & 05, 02 & 03, 18 & 19, 16 & 17, 14 & 15, 12 & 13, 10 & 11.

However, if a full compliment of 10 line drawers is provided initially, the normal assignment scheme is appropriate.

- 3) Provide one (1) NT6X05AX Line Drawer Filler per unfilled line drawer location per NT8X0401.
 - 4) Provide one (1) P0631765 (Line Drawer Identification Label) and affix to Line Drawer Line Subgroups as required.
- RUL8
- 1) Provide one (1) NT6X47AB, CP, one (1) NT6X45AF CP and one (1) NT6X75AA CP when the ESA option is specified. Also, based on traffic requirements, provide a minimum one (1) NT2X48AB Digitone Receivers in the RMM.
 - 2) For Canadian offices only, when an existing OPM is being modified in the field for the ESA feature, provide one (1) Product Change Kit NT8X01WA.
 - 3) Existing OPMs with the NT6X47AB, MP Memory CP, that are going to BCS-33 need to be upgraded to the NT6X47AC, MP Memory CP. Provide one (1) NT6X47AC, MP Memory CP, and one (1) P0711663 Designation Label for each OPM requiring this upgrade.
- RUL9
- 1) Provide one (1) per NT8X01AA, Outside Plant Module.
- RUL10
- 1) Provide two (2) NT6X60AA, Ringing Generator Modules per HIE to provide analog ringing.
 - 2) Provide two (2) NT0X50AH in the HIE (CP POS 1,5) if the Ringing Generator Modules are not provided.
- RUL11
- 1) The Gates batteries are Manufacture Discontinued, however, the following information is retained for historical purposes. Refer to RULE #12 for replacements.
 - 2) Provision Gates battery strings when battery backup is a requirement in the OPM and the Telco specifies Gates.
 - 3) Battery strings must be grouped in pairs (See Rule #12 Item 2 for battery pairing sequence). One battery string provides one hour of battery backup. Order four (4) A0283945 Gates Batteries to equip one battery string.
 - 4) Provide one (1) P0652872 Battery Tray, one (1) P0652909 Retainer Bar, eight (8) P097F813 Screws, one (1) P0664827 Designation Label, and three (3) NT8X0125 Cable Assemblies for each equipped battery string.

- 5) Provide one cable assembly for each equipped battery string as shown below:

STRING NUMBER	CABLE ASSEMBLY	STRING NUMBER	CABLE ASSEMBLY
0	NT8X0135	4	NT8X0136
0	NT8X0127	4	NT8X0128
1	NT8X0137	5	NT8X0138
1	NT8X0129	5	NT8X0130
2	NT8X0139	6	NT8X0140
2	NT8X0131	6	NT8X0132
3	NT8X0141	7	NT8X0142
3	NT8X0133	7	NT8X0134

Note:

1. When the LRS test head is equipped in the OPM only six (6) battery strings are possible.
2. When the DRTU is equipped in the OPM, Battery Strings Three (3) and Seven (7) must be removed.

RUL12 1) Provision Yuasa battery strings when battery backup is a requirement in the OPM and the Telco specifies Yuasa batteries.

- 2) One Yuasa battery string provides one hour of battery backup and must be equipped in string pairs as follows:

Pair 1 Strings 0 and 4
 Pair 2 Strings 1 and 5
 Pair 3 Strings 2 and 6
 Pair 4 Strings 3 and 7

Order four (4) A0323985 Yuasa batteries to equip one battery string.

- 3) Provide one (1) P0661751 Battery Tray, one (1) P0661753 Retainer Bar, eight (8) P097F813 Screws, one (1) P0664827 Designation Label, and three (3) NT8X0126 Cable Assemblies for each equipped battery string.

- 4) Provide one cable assembly for each equipped battery string as shown below:

STRING NUMBER	CABLE ASSEMBLY	STRING NUMBER	CABLE ASSEMBLY
0	NT8X0143	4	NT8X0147
0	NT8X0151	4	NT8X0155
1	NT8X0144	5	NT8X0148
1	NT8X0152	5	NT8X0140
2	NT8X0145	6	NT8X0128
2	NT8X0153	6	NT8X0157
3	NT8X0129	7	NT8X0150
3	NT8X0154	7	NT8X0158

Note that eight Yuasa battery strings are allowed when a LRS test head is equipped.

- RUL13 1) The left hand BIX mounting column is always equipped with green BIX connectors totalling 675 pair to terminate the LCM, HIE and RMM equipment. In order to use the End Compartment as a cross-connect facility, additional green BIX connectors must be provisioned. The left hand column can mount an additional 14 green BIX connectors capable of terminating up to 350 outside plant pairs. Extended outside plant termination facilities are available by provisioning the right hand BIX mounting column and up to 41 green BIX connectors for terminations for an additional 1025 pairs.
- RUL14 1) Provision up to a maximum of 800 MPC protectors (type specified by the Telco) for protection of the LCM, HIE and RMM circuitry (ie. for lines, DS-1 links and special service). Only the QMP6A5 and QMP3A5 are compatible with the OPM.
- RUL15 1) Provide one (1) NT8X09AA, LRS Test Head Mounting Kit, when the LRS Test Head is required in the OPM. Also, provide one (1) PC8X09AA Drawing. The LRS Test Head Unit shall be provided by the Telco.
- 2) Provide one (1) NT0J42AA, DRTU Unit, when the Digital Remote Test Unit capability is required in the OPM. Also, provide one (1) NT0J41BA, DRTU Cable Kit.

RUL16 1) A Loop Reporting System (LRS) Remote Test Head may be provisioned when specified by the Telco. Because of the complexity of the hardware, software and firmware engineering process, the Network Support System Division (NSSD) will be responsible for engineering the LRS Test Head.

- 2) When the Telco specifies a requirement for the LRS unit, the Engineer must contact by telephone, Mr. Henry Boyle, Customer Engineering Manager (NSSD) giving him information collected at CI. This telephone call must be followed by a memorandum verifying the information. The following information must be given to NSSD:

Telco Name

Telco Contact (name and telephone)

Name of the LRS Host

Address of the location of LRS unit shipment

- 3) The NSSD Engineering department will visit the Telco and engineer the LRS system. After engineering completion, the NSSD Engineer will contact the OPM Engineer and supply the proper LRS ordering codes to be placed in the OPM Main Equipment List and ordered in the 996 spec.

- 4) The Telco may also order the LRS Test Head direct from NSSD. When this occurs, NTI is only responsible for providing the NT8X09AA Mounting Kit.

RUL17 1) Provision as required.

RUL18 1) Provide Outside Plant Line Designation Labels as required based on the quantity of Protector Modules provided per RULE #14.

RUL19 1) BIX and MPC Test and Maintenance Tools are available per Telco request. Refer to the latest issue of the Northern Telecom T80 Outside Plant Products ordering catalog for details.

- 2) Provide additional Bix connection tools and pouches per Telco specifications, to terminate wiring on the BIX con-

nectors. NOTE: Two(2) BIX Connection Tools (QTBIX16A) are provided in the NT8X0176 (OPM Installation Kit).

- RUL20 1) Provide one (1) can OPM Touch Up Paint (R0113260) as required. NOTE: One can of Paint (R0113260) is provided in the NT8X0176 (OPM Installation Kit).
- RUL21 1) Provide one (1) warning label (P0686878) when OPM is furnished with GATES batteries and french language labels are required.
- RUL22 1) Provide one (1) warning label (P0686456) for each GATES battery tray (P0652872), maximum eight (8) lables. (U.S. Market only)
- RUL23 1) Provide one (1) gate caution label (P0685441) and two (2) ECU switch caution labels (P0685442) when French language labels are required.
- RUL24 1) The NT2X10AB, NT2X11AA LTU has been replaced by the improved NT2X10AC, NT2X11AC LTU effective immediately. The PECs for the MTU pair NT4X79AA and NT4X98AA have been Canceled and replaced by the PECs NT2X10BA and NT2X11BA. However, the provisioning of LTUs and/or MTUs is different depending on the application and the Market where used as follows:

* For U.S. Applications:

- For All New OPM-640 Jobs: Provision one (1) NT2X10AC and one (1) NT2X11AD LTU in slots 3 and 4.
- For Existing Jobs: Jobs utilizing the NTX106AA Software Package must be retrofitted with the NT2X11AD.
- MTU Provisioning: The NT2X10BAs/NT2X11BAs are not provisionable for any U.S. application until further notice.

* For Canadian Applications:

- For New Jobs: Provision one (1) NT2X10BA MTU Analog CP and one (1) NT2X11BA MTU Controller CP in slots 3 and 4.
- For Existing Jobs: On all existing OPM systems a retrofit must be performed to replace the existing LTU with the NT2X10AC/NT2X11AC LTU. This retrofit

must be coordinated with New Product Introduction and Configuration Management.

- NT2X10AA/AB and NT2X11AA/AD are not used in this Market.

- RUL25 1) Effective immediately provision one (1) NT3X09BA in slot 5 on all initial OPM systems for Battery maintenance and diagnostics.
- 2) The NT3X09AA in slot 05 has been replaced by the NT3X09BA 8X8 MTA effective immediately. When provisioning new OPM systems see Rule 26. For all existing OPM's (U.S.) a retrofit must be performed to replace the NT3X09AA with an NT3X09BA. This retrofit must be coordinated with New Product Introduction and Configuration Management.
- RUL26 1) Provide one (1) NT3X09AA in slot 06 for line testing.
- RUL27 1) Provide one (1) battery warning label P0678472 when the OPM is equipped with battery strings.
- RUL28 1) Provide one (1) label plate P0688741 for each provisioned battery string (U.S. market only).
- RUL29 1) Provide one (1) APJ3485-S22 electrical plug for each OPM system when an Emergency Generator must be connected to the OPM. This plug is used as an adapter for the Telco Generators.
- RUL30 1) Provide Designation Labels as required.
- RUL31 Reserved For Future Use
- RUL32 Reserved For Future Use
- RUL33 Reserved For Future Use
- RUL34 1) Provision one (1) Battery Charger Common CP kit when battery backup is a requirement.
- RUL35 1) Provide one (1) NT0X10AA Scan Card for alarm detection. This CP is pre-wired to internal OPM circuitry.
- RUL36 1) Provide one (1) NT2X90AD, Incoming/Outgoing Test Trunk, in Slot 9 for LTP/Talk Monitor function and in Slot 10 for Operator Verification.

RUL37 1) This slot is pre-wired for an NT2X57AA used to support the NT6X77AA, Remote Alarm Panel. The NT6X77AA is not available, therefore, the NT2X57AA is not required. Provide instead one (1) NT0X50AC, Filler Face Plate.

RUL38 1) Provide one (1) NT0X50AC for each unequipped position 3-16.

- 2) Slots 13-16 are currently wired together to allow the operation of DRAM circuitry in these slots when the DRA software becomes available for remotes. The NT2X10AB, NT2X11AA/AC/AD LTU pair is not operational in these slots because of the DRA wiring and therefore, should not be provisioned in slots 13-16. All other applicable RMM CPs are allowed in slots 13-16, however, these slots should be reserved whenever possible to allow for the future DRA application. Slots 13-16 are pre-wired to the BIX cross connect facility. Applicable CPs for these slots are as follows:

NT2X90AB/AC/AD	Incoming/Outgoing Test Trunk
NT3X04AA	Incoming Test Trunk for AECO LTD
NT0X10AA	Miscellaneous Scan Card
NT2X57AA	Signal Distribution Card

Slots 11 and 12 are not pre-wired to the BIX cross connect facility and may only be used for cards that do not require cabling.

RUL39 1) The OPM FSP is designed to mount seven cards as follows:

* Fault Locate/Order-Wire (FL/OW) Access Unit in card slot #1. These cards may be one of the following:

- FL/OW Access Unit with Dial-Pulse Correction Circuits (QPP519A). See Rule 39 Item 2 below.
- FL/OW Access Unit with simple jack access to order Wire (QPP519B). See Rule 39 Item 3 below.

Note: The Fault Locate Filter either the Dual-Amplified Type (QFB127) or the Single Passive Type (QFB128) must be provided in conjunction with the FL/OW Access unit and is installed on the rear of the unit. This circuit filters the fault locate signal to provide the proper fault locate tone.

See Rule 39 Item 4 for detail provisioning.

- * T1 Span Office Repeaters. This circuit is available in several configurations which are assignable to slots 2 thru 7. Refer to Item 5 for details.
 - * If non of the above units are supplied then the Filler Face Plates (NT0X50AJ) are required in slots 1 thru 7 (See Rule 39 Item 6).
- 2) Provide one (1) QPP519A in slot #1 if the Fault-Signal Loopback feature, Dial-Pulse correction, termination of the order wire pair, and jack access for both a 2-wire telephone and a 4-wire headset is required. The QPP519A provides mounting space for a Mimi-T1 line fault locate filter, either a switchable dual amplifier filter (QFB127) or a single input passive filter (QFB128). These circuits allow fault location to be performed from the host when the OPM is unmanned.
 - 3) Provide the one QPP519B in slot #1 if the Fault-Signal Loopback feature, simple through connection between the Order-Wire pair and the CO switching equipment, and jack access to the Order-Wire pair via a 2-Wire telephone only is required. The QPP519B provides mounting space for a Mimi-T1 line fault locate filter, either a switchable dual amplifier filter (QFB127) or a single input passive filter (QFB128). These circuits allow fault location to be performed from the host when the OPM is unmanned.
 - 4) Provide one (1) Fault Locate Filter in conjunction with a FL/OW Access Unit QPP519 to provide the BandPass Frequency specified by the Telco. Two types are available and are provided to support Telco applications as follows:
 - * Provide the QFB127 (Dual-Amplified Filter) to provide two amplifiers under the control of a Fault Locator Access Voltage from the CO to select regenerators 1 or 2. This filter supports from 12 to 24 repeaters split evenly between the amplifiers. Add the suffix (A thru M) to select the BandPass Frequency as specified by the Telco per the chart below.
 - * Provide the QFB128 (Single Passive Filter) to provide a common output from regenerators 1 and 2. This unit support up to 12 repeaters. Add suffix (A thru M) to select the BandPass Frequency as specified by the Telco per the chart below.

Note: The Fault Locate Filter is shipped loose to the job site and are to be installed on the QPP519 per

NTP 368-2141-103 Section 8 - "Installation of QPP519
type Order Wire Access Unit".

* BANDPASS FILTER CHART

Dual Amplified Type QFB127			Single Passive Type QFB128		
FILTER	FREQUENCY		FILTER	FREQUENCY	
QFB127A	832	Hz	QFB128A	832	Hz
QFB127B	928		QFB128B	928	
QFB127C	1048		QFB128C	1048	
QFB127D	1206		QFB128D	1206	
QFB127E	1340		QFB128E	1340	
QFB127F	1508		QFB128F	1508	
QFB127G	1722		QFB128G	1722	
QFB127H	2008		QFB128H	2008	
QFB127J	2193		QFB128J	2193	
QFB127K	2413		QFB128K	2413	
QFB127L	2680		QFB128L	2680	
QFB127M	3017		QFB128M	3017	

- 5) Provision one (1) Office Repeaters (QRY18) for each DS-1 link to the host. Select these units in accordance with the features required by the Telco and order by quoting the complete "Q-Code" to feature cross reference given in the table below.

QRY18 REPEATER CODE	FEATURE/APPLICATION MATRIX	
	LINE POWERING REQUIRED	PERFORMANCE MONITOR and FAULT-SIGNAL LOOPBACK REQUIRED
QRY18A	YES	NO
QRY18B1	YES	YES
QRY18C	NO	NO
QRY18D1	NO	YES
QRY18F	*YES	NO
QRY18G1	*YES	YES
QRY18L1	NO	YES

* These units apply negative voltage only for line powering.

Note: Office Repeaters are to be assigned per the following Information:

DS1 PORT	HIE SHELF CP POS	FSP CP POS
0	19	2
2	19	3
4	21	4
5	21	5
3	20	6
1	20	7

- 6) Provide one (1) NT0X50AJ Filler Face Plate for each unequipped position 1-7.

RUL40 1) Provide one (1) NT0X1989, Single FMT-6 Kit, when a fiber interface (without redundancy) from the Host to the OPM is required. Also provide, EITHER two (2) NT3E19AA, Single-Mode Pigtail, if the OPM is connected to the Host via singlemode outside plant fiber; OR two (2) NT3E44AA, Multi-Mode Pigtail, if the OPM is connected to the Host via multimode outside plant fiber.

- 2) Provide one (1) NT0X1990, Dual FMT-6 Kit, when a fiber interface from the Host to the OPM is required AND redundancy and/or more than four (4) links are required. Also provide, EITHER four (4) NT3E19AA, Single-Mode Pigtail, if the OPM is connected to the Host via singlemode outside plant fiber; OR four (4) NT3E44AA, Multi-Mode Pigtail, if the OPM is connected to the Host via multimode outside plant fiber.

- 3) Provide one (1) NT0X10AA, Scan Card, in Slot 07 of the RMM for FMT-6 alarms.

- 4) When the FMT-6 option is provided for the OPM the Fault Locate/Order Wire CPs and Repeaters are not required in the FSP, provide (7) NT0X50AJ (Filler Face Plates) instead. See Rule 12.

RUL41 1) Provide two(2) NT2X70AE power converters per NT6X11AB (HIE).

RUL42 1) Provide two(2) NT2X70AZ product change kits for power converter upgrades when requested by the Telco.

RUL43 1) Upgrading the NT6X04AA (LCM Common CP) shall be performed differently in the U.S. and Canadian Markets as follows:

For U.S. Applications:

- * Provide one(1) NT6X04ZZ (Extended LCM Processor Product Change Kit) per NT8X04AA (LCM Common CP) to be upgraded.

For Canadian Applications:

- * Changes applicable to the NT6X04ZZ shall be performed by the BRW Change Application Dept. 1955. Therefore, System Applications Engineering Depts. shall not provide the NT6X04ZZ on any jobs. However, upon notification from Dept. 1955 (BRW Change Application Dept.) System Applications Engineering shall update office records accordingly.

2) The NT6X04ZZ (PC Kit) contains:

Qty two(2) NT6X51AB - Extended LCM Processor CP
Qty two(2) P0701604 - Designation Label For NT6X51AB.

OUTSIDE PLANT MODULE - 256

NT8X01BA

RATING: MD. Replaced by NTZZ19AA.

ABBREVIATION NAME: OPM-256

ENGINEERING DESCRIPTION: The Outside Plant Module - 256 (OPM-256) is similar to the RLCM in features, capacity etc., however, the equipment is housed in an environmentally controlled cabinet. It is intended to be mounted on a concrete pad as outside plant equipment. In this cabinet is contained an HIE, LCM-C, RMM and FSP shelves, DF, Battery Charging Unit, Power Control Unit, AC Breakers, Fans and Heaters. The OPM-256 supports up to 256 lines, employing from 2-6 DS1 links to the host DMS.

REFERENCE DOCUMENTATION: MS8X01BA 00 06

MARKETS: Applicable markets:

Canada
US
CALA
Asia/Pacific
Europe

NT8X01BA EMR2-13-001 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
91 04 12	ECM 514 01	Replaces the NT8X01BA OPM Cabinet with the NTZZ19AA OPM Cabinet.
91 12 06	ECM 514 02	Adds NT6X47AC CP for BCS-33 ESA.
92 02 07	ECM 514 03	Adds FMT-6 Fiber Interface, DRTU, and the DE-4E Channel Bank.
92 10 02	ECM 514 04	Updates rules for DRTU.

The Outside Plant Module - 256 is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
OPM Cabinet Assembly	NT0X19AA					RUL1
1/2 Pint Dark Brn Paint	R0113260					RUL1
Mounting Hardware Kit	NT0X1935					RUL2
Mounting Template	NT0X1934					RUL2
Mounting Plate Assembly	NT0X1929					RUL2
Installers Assembly Kit	NT8X0176					RUL3

RULES:

- AP 1) When PEC NT8X01BA is ordered, these items are provided.
- RUL1 1) Provide one (1) Cabinet Assembly, NT0X19AA per NT8X01BA Cabinet.
- 2) Provide one can of touch up paint of the appropriate color per OPM Cabinet ordered or per Telco specifications.
- RUL2 1) Provide one (1) NT0X1934 and one (1) NT0X1935 when the OPM-256 is to be mounted on a concrete pad.
- 2) For all OPM-256 installations engineered in the U.S., an RFS for advance shipment of the above items must be initiated by the Systems Engineer as soon as the mounting arrangement is identified. An advance ship note must be placed in the specification.
- 3) For all OPM-256's engineered in Canada, the mounting kit NT0X1934 will be merchandise ordered and the NT0X1935 is shipped loose with the OPM-256. The Customer Engineer must ensure that the Telco is aware of this requirement.
- 4) Provide one (1) NT0X1929 and one (1) NT0X1935 when the OPM-256 is to be mounted on railroad ties.
- RUL3 1) Provide one (1) NT8X0176 Installers Assembly Kit per Telco specifications. This kit is used for installation purposes. Refer to Installation Manual IM925 for more information.
- RUL4 1) Reserved For Future Use.

The Outside Plant Equipment (Bay 0) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Booster Fan Unit	NT8X06BA	BFU	1	46		AP
Line Concentration Array Shf	NT8X0404	LCM-C	1	33		AP
LCM-C Common CP	NT8X04BA			33		RUL7
Line Drawer	NT6X05AA			33		RUL7
Line Drawer Filler Panel	NT6X05AX			33		RUL7
Line Cards	AR			33		RUL7
Designation Labels	P0631765			33		RUL30
Filler Panel	NT0X84AA	FP		19		RUL35
4P Stubl Prot Assy Line UG	NT8X09AB	LCM-C	1	19		RUL36
5P Stubl Prot Assy Line UG	NT8X09AC	LCM-C	1	19		RUL36
5P Line UG Kit W/50' Stub	NT8X09AD	LCM-C	1	19		RUL36
576-Line Upgrade Kit CP Fill	NT8X04BB			19		RUL37
Line Drawer	NT6X05AA			19		RUL37
Line Drawer Filler Panel	NT6X05AX			19		RUL37
Line Cards	AR			19		RUL37
Designation Labels	P0631765			19		RUL37
FMT-150B Hardware Mtg Kit	NT0X1978			21		RUL38
DDM-1000 Hardware Mtg Kit	NT0X1979			21		RUL38
DE-4E Mtg Kit 4Pin-Stubless	NT0X1980			20		RUL38
DE-4E Mtg Kit 5Pin-Stubless	NT0X1981			20		RUL38
DE-4E Mtg Kit 5Pin-50ft Stub	NT0X1982			20		RUL38
Host Interface Equip Assy	NT6X1101	HIE	1	05		AP
> HIE Common CP	NT6X11AA			05		RUL9
Power Conv Change Kit	NT2X70AZ			05	22, 25	RUL9
HIE Common CP	NT6X11AB			05		RUL9
Ringin Generator	NT6X60AA			05	1, 5	RUL10
Filler Face Plate	NT0X50AH			05	1, 5	RUL10
Filler Face Plate	NT0X50AG			05	09	RUL6
Master Processor Memory	NT6X47AB			05	14	RUL8
Master Processor Memory	NT6X47AC			05	14	RUL8
LGC/DTC Processor	NT6X45AF			05	15	RUL8
ESA Clock and Tone Card	NT6X75AA			05	16	RUL8
DS-1 Interface Card	NT6X50AA			05	21	RUL4
Filler Face Plate 0.875	NT0X50AA			05	13-16, 21	RUL5
Desig Label for NT6X45AF	P0685029			05	15	RUL30
Desig Label for NT6X47AB	P0666374			05	14	RUL30
Desig Label for NT6X47AC	P0711663			05	14	RUL8

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Desig Label for NT6X75AA	P0642015			05	16	RUL30
Desig Label for NT6X50AA	P0626878			05	21	RUL30
Desig Label for NT6X60AA	P0642014			05	1,5	RUL30
Environmental Control Unit Heater	NT8X06AB A0302484	ECU	1	00		AP AP

ROW B - BACK WALL

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Single FMT-6 Kit	NT0X1989			33		RUL39
Dual FMT-6 Kit	NT0X1990			33		RUL39
FMT6 PC Kit (Single To Dual)	NT8X01ZA			33		RUL39
Single-Mode Pigtail	NT3E19AA			33		RUL39
Multi-Mode Pigtail	NT3E44AA			33		RUL39
LRS Test Head Mtg Kit	NT8X09AA			05		RUL34
DRTU Unit	NT0J42AA			05		RUL34
DRTU Cable Kit	NT0J41BA			05		RUL34

The Outside Plant Equipment (Bay 1) is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Rectifier	J2427B-1L1	RECT	1	39		AP
Power Control Unit	NT8X05AA		1	35		AP
Battery Charging Unit Assy	NT8X0301	BCU	1	32		AP
Battery Charger Common CP	NT8X03AA			32		RUL13
YUASA Batteries	A0323985					RUL12
Battery Tray	P0661751					RUL12
Retainer Bar	P0661753					RUL12
Desig Label for Batteries	P0664827					RUL12
Rectifier	J2427B-1L1	RECT	1	28		AP
Frame Supervisory Panel	NT6X25BB	FSP	1	19		AP
AC Circuit Breaker UG Kit	NT6X2582			19		RUL33
Fault Loc/Order Wire Access	QPP519			19	1	RUL14
Office Repeater	QRY18			19	2-7	RUL14
Filler Face Plate	NT0X50AJ			19	1-7	RUL14
Remote Maintenance Mod Assy	NT6X1301	RMM	1	05		AP
RMM Common CP	NT6X13AB			05		RUL9
Line Test Unit Analog	NT2X10AC			05	3	RUL24
Line Test Unit Digital	NT2X11AD			05	4	RUL24
Rmt Metallic Test Access	NT3X09BA			05	5	RUL25
Rmt Metallic Test Access	NT3X09AA			05	6	RUL26
Filler Face Plate	NT0X50AC			05	7	RUL22
Scan Card	NT0X10AA			05	8	RUL20
Incoming/Outgoing Test Trk	NT2X90AD			05	9,10	RUL21
Digitone Receiver (ESA)	NT2X48AB			05	11-16	RUL11
Service Circuit Packs	AR			05	13,14	RUL23
Filler Face Plate	NT0X50AC			05	3-16	RUL23
Environmental Control Unit	NT8X06AB		1	00		AP
Heater	A0302484		1	00		AP
Des Label OPE 00 0 - 43 0	P0660996					RUL17
Des Label OPE 44 0 - 87 0	P0660997					RUL17
Des Label OPE 88 0 - 99 0	P0660998					RUL17
Des Label OPE 00 1 - 43 1	P0661767					RUL17
Des Label OPE 44 1 - 87 1	P0661768					RUL17
Des Label OPE 88 1 - 99 1	P0661201					RUL17

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Des Label ECU:000 - 104	P0660990					RUL17
Des Label ECU:105 - 209	P0660991					RUL17
Des Label ECU:210 - 314	P0660992					RUL17
Des Label ECU:315 - 399	P0660993					RUL17
Des Label BCU:000 - 104	P0660994					RUL17
Des Label BCU:105 - 199	P0660995					RUL17
Des Label LCM 00 0 - 99 0	P0660999					RUL17
Des Label LCM 00 1 - 99 1	P0661200					RUL17
Line Card Insert/Rmvl Tool	QTH57A					RUL17
Line Card Removal Tool	QTH57A					RUL17
Dbl Slot LC Insert/Removal	QTH58A					RUL17

END COMPARTMENT ACCESS

Left Hand BIX Mount Col	NT0X1904		1	LH		AP
Green BIX Con Retainers	QRE3A		12	LH		AP
25 Pair Greaseless Cons	P0612212		12	LH		AP
Green BIX Con Retainers	QRE3A			LH		RUL15
25 Pair Greaseless Cons	P0612212			LH		RUL15
25 Pair Con for RMM/HIE	P0612212		4	LH		AP
Green BIX Con Ret RMM/HIE	QRE3A		4	LH		AP
100 Pair MPC Protector Con	P0613810		3	LH		AP
* Gas Tube Prot. Mod QMP6A5	QMP6A5			LH		RUL16
Gas Tube Prot. Mod QMP6A4G	QMP6A4G			LH		RUL16
\$ Carbon Block Prot Mod QMP3A5	QMP3A5			LH		RUL16
Right Hand Mounting Col	NT0X1905			RH		RUL15
Green BIX Con Retainers	QRE3A			RH		RUL15
25 Pair Greaseless Con	P0612212			RH		RUL15
Des Card line pr 1-600	P0613827					RUL18
Des Card line pr 601-1200	P0613828					RUL18
Des Card line pr 1201-1800	P0613829					RUL18
Misc BIX/MPC Tools	AR					RUL19
Corr Tool (Bix) QTBIX16A	QTBIX16A					RUL19
Corr Tool Carrying Pouch	C0054642					RUL19
Touch Up Paint	R0113260					RUL31
OPM Warning Label	P0678472					RUL27
Battery Label Plate (U.S.)	P0688741					RUL28
OPM Caution Label	P0685443		1			AP
Batt Warning Label (US)	P0686456					RUL32
Crouse-Hines Elec Plug	APJ3485-S22					RUL29

FLAGS:

\$ Rate Change Pending - Provision Gas Tube Protectors Only Until Further Notice.

* MD. Replaced by QMP6A4G. Notice.

> MD. Replaced by NT6X11AB.

NOTES:

- 1) The total -48V power consumption of the provisionable packs in the RMM must not exceed 110 watts. Refer to the chart below for RMM provisionable circuit pack power consumption.

PEC	MAXIMUM POWER CONSUMPTION
NT0X10AA	2.0
NT2X10AC	9.0
NT2X11AD	8.5
NT2X48AB	12.0
NT2X57AA	4.5
NT2X90AD	1.5
NT3X04AA	28.0
NT3X09AA	4.0
NT3X09BA	11.5

RULES:

- RUL4 1) Provide one (1) NT6X50AA, DS-1 Interface CP when the DS-1 links 5 and 6 are required to the host. Refer to NTP 297-1001-450 Section 450/2, Traffic Criteria and Capacities for link provisioning.
- RUL5 1) Provide one (1) Filler Face Plate for each unequipped slot position 13-16, 21 in the HIE.
- RUL6 1) One (1) NT0X50AG, Filler Face Plate should always be provisioned in slot 09 of the HIE.

- RUL7 1) Provide one (1) LCM-C Common CP kit and up to four (4) Line Drawers for each OPM-256. This LCM-C is functionally identical to the host LCM and utilizes the same line card types. Refer to the host LCM provisioning rules for line card provisioning.
- 2) Line Drawers must be assigned in the OPM-256 in the following sequence:
- LSG 00 & 01, 02 & 03, 04 & 05, 06 & 07.
- However, if a full complement of 10 Line Drawers is provided initially, the normal assignment scheme is appropriate.
- 3) Provide one (1) NT6X05AX Line Drawer Filler per unfilled line drawer location per NT8X0401.
- 4) Provide one (1) P0631765 (Line Drawer Identification Label) and affix to Line Drawer Line Subgroups as required.
- RUL8 1) Provide one (1) NT6X47AB CP, one (1) NT6X45AF CP and one (1) NT6X75AA CP when the ESA option is specified.
- 2) Existing OPMs with the NT6X47AB, MP Memory CP, that are going to BCS-33 need to be upgraded to the NT6X47AC, MP Memory CP. Provide one (1) NT6X47AC, MP Memory CP, and one (1) P0711663 Designation Label for each OPM requiring this upgrade.
- RUL9 1) Provide one (1) NT6X11AB HIE Common CP per NT8X01BA. In the event an office is equipped with a NT6X11AA (HIE Common CP Fill) provisioning an NT2X70AZ (Power Converter Change Kit) will make the NT6X11AA functionally the same as the NT6X11AB.
- RUL10 1) Provide two (2) NT6X60AA, Ringing Generator Modules per HIE to provide analog ringing.
- 2) Provide two (2) NT0X50AH in the HIE (CP POS 1,5) if the Ringing Generator Modules are not provided.
- RUL11 1) Based on traffic requirements, provide a minimum one (1) NT2X48AB, Digitone Receiver in the RMM.
- RUL12 1) Provision Yuasa battery strings when battery backup is a requirement in the OPM-256.

- 2) One Yuasa battery string provides one hour of battery backup and must be equipped in string pairs as follows:

Pair 1 Strings 0 and 4
 Pair 2 Strings 1 and 5
 Pair 3 Strings 2 and 6
 Pair 4 Strings 3 and 7

Order four (4) A0323985 Yuasa batteries to equip one battery string.

- 3) Provide one (1) P0661751 Battery Tray, one (1) P0661753 Retainer Bar, eight (8) P097F813 Screws, one (1) P0664827 Designation Label, and three (3) NT8X0126 Cable Assemblies for each equipped battery string.
- 4) Provide one cable assembly for each equipped battery string as shown below:

STRING NUMBER	CABLE ASSEMBLY	STRING NUMBER	CABLE ASSEMBLY
0	NT8X0143	4	NT8X0147
0	NT8X0151	4	NT8X0155
1	NT8X0144	5	NT8X0148
1	NT8X0152	5	NT8X0140
2	NT8X0145	6	NT8X0128
2	NT8X0153	6	NT8X0157
3	NT8X0129	7	NT8X0150
3	NT8X0154	7	NT8X0158

Note that eight Yuasa battery strings are allowed when a LRS test head is equipped.

- RUL13 1) Provision one (1) Battery Charger Common CP kit when battery backup is a requirement.

- RUL14 1) The OPM FSP is designed to mount seven cards as follows:

* Fault Locate/Order-Wire (FL/OW) Access Unit in card slot #1. These cards may be one of the following:

- FL/OW Access Unit with Dial-Pulse Correction Circuits (QPP519A). See Rule 14 Item 2 below.

- FL/OW Access Unit with simple jack access to order Wire (QPP519B). See Rule 14 Item 3 below.

Note: The Fault Locate Filter either the Dual-Amplified Type (QFB127) or the Single Passive Type (QFB128) must be provided in conjunction with the FL/OW Access unit and is installed on the rear of the unit. This circuit filters the fault locate signal to provide the proper fault locate tone.

See Rule 14 Item 4 for detail provisioning.

- * T1 Span Office Repeaters. This circuit is available in several configurations which are assignable to slots 2 thru 7. Refer to Item 5 for details.
 - * If none of the above units are supplied then the Filler Face Plates (NT0X50AJ) are required in slots 1 thru 7 (See Rule 14 Item 6).
- 2) Provide one (1) QPP519A in slot #1 if the Fault-Signal Loopback feature, Dial-Pulse correction, termination of the order wire pair, and jack access for both a 2-wire telephone and a 4-wire headset is required. The QPP519A provides mounting space for a Mini-T1 line fault locate filter, either a switchable dual amplifier filter (QFB127) or a single input passive filter (QFB128). These circuits allow fault location to be performed from the host when the OPM is unmanned.
 - 3) Provide the one QPP519B in slot #1 if, the Fault-Signal Loopback feature, the simple through connection between the Order-Wire pair and the CO switching equipment, and jack access to the Order-Wire pair via a 2-Wire telephone only is required. The QPP519B provides mounting space for a Mini-T1 line fault locate filter, either a switchable dual amplifier filter (QFB127) or a single input passive filter (QFB128). These circuits allow fault location to be performed from the host when the OPM is unmanned.
 - 4) Provide one (1) Fault Locate Filter in conjunction with a FL/OW Access Unit QPP519 to provide the BandPass Frequency specified by the Telco. Two types are available and are provided to support Telco applications as follows:
 - * Provide the QFB127 (Dual-Amplified Filter) to provide two amplifiers under the control of a Fault Locator Access Voltage from the CO to select regenerators 1 or 2. This filter supports from 12 to 24 repeaters split

evenly between the amplifiers. Add the suffix (A thru M) to select the BandPass Frequency as specified by the Telco per the chart below.

- * Provide the QFB128 (Single Passive Filter) to provide a common output from regenerators 1 and 2. This unit support up to 12 repeaters. Add suffix (A thru M) to select the BandPass Frequency as specified by the Telco per the chart below.

Note: The Fault Locate Filter is shipped loose to the job site and are to be installed on the QPP519 per NTP 368-2141-103 Section 8 - "Installation of QPP519 type Order Wire Access Unit".

- * BANDPASS FILTER CHART

Dual Amplified Type QFB127		Single Passive Type QFB128	
FILTER	FREQUENCY	FILTER	FREQUENCY
QFB127A	832 Hz	QFB128A	832 Hz
QFB127B	928	QFB128B	928
QFB127C	1048	QFB128C	1048
QFB127D	1206	QFB128D	1206
QFB127E	1340	QFB128E	1340
QFB127F	1508	QFB128F	1508
QFB127G	1722	QFB128G	1722
QFB127H	2008	QFB128H	2008
QFB127J	2193	QFB128J	2193
QFB127K	2413	QFB128K	2413
QFB127L	2680	QFB128L	2680
QFB127M	3017	QFB128M	3017

- 5) Provision one (1) Office Repeaters (QRY18) for each DS-1 link to the host. Select these units in accordance with the features required by the Telco and order by quoting the complete "Q-Code" to feature cross reference given in the table below.

QRY18 REPEATER CODE	FEATURE/APPLICATION MATRIX	
	LINE POWERING REQUIRED	PERFORMANCE MONITOR and FAULT-SIGNAL LOOPBACK REQUIRED
QRY18A	YES	NO
QRY18B1	YES	YES
QRY18C	NO	NO
QRY18D1	NO	YES
QRY18F	*YES	NO
QRY18G1	*YES	YES
QRY18L1	NO	YES

* These units apply negative voltage only for line powering.

Note: Office Repeaters are to be assigned per the following Information:

DS1 PORT	HIE SHELF CP POS	FSP CP POS
0	19	2
2	19	3
4	21	4
5	21	5
3	20	6
1	20	7

- 6) Provide one (1) NT0X50AJ Filler Face Plate for each unequipped position 1-7. When the Fiber Mounting Kit is provided; the Fault Locate/ Order Wire Circuit and Office Repeaters are NOT required.

Therefore, NT0X50AJs are not to be provided or removed when the Fiber Unit is provided.

- RUL15 1) The left hand BIX mounting column is always equipped with green BIX connectors totalling 400 pair to terminate the

LCM-C, HIE and RMM equipment. In order to use the End Compartment as a cross-connect facility, additional green BIX connectors must be provisioned. The left hand column can mount an additional 29 green BIX connectors capable of terminating up to 725 outside plant pairs. Extended outside plant termination facilities are available by provisioning the right hand BIX mounting column and up to 41 green BIX connectors or terminations for an additional 1025 pairs.

- RUL16 1) Provision up to a maximum of 300 MPC protectors (type specified by the Telco) for protection of the LCM-C, HIE and RMM circuitry (ie. for lines, DS-1 links and special service). Only the QMP6A5 and QMP3A5 are compatible with the OPM-256.
- RUL17 1) Provision as required.
- RUL18 1) Provide Outside Plant Line Designation Labels as required.
- RUL19 1) BIX and MPC Test and Maintenance Tools are available per Telco request. Refer to the latest issue of the Northern Telecom T80 Outside Plant Products ordering catalog for details.
- 2) Provide BIX QTBIX16A connection tools and pouches per Telco specifications, to terminate wiring on the BIX connectors.
- RUL20 1) Provide one (1) NT0X10AA Scan Card for alarm detection. This CP is pre-wired to internal OPM-256 circuitry.
- RUL21 1) Provide one (1) NT2X90AD in slot 9 for LTP/Talk Monitor function and in slot 10 for Operator Verification.
- RUL22 1) Provide one (1) NT0X50AC for each unequipped position 07.
- RUL23 1) Provide one (1) NT0X50AC for each unequipped position 13-16.

Slots 13-16 are currently wired together to allow the operation of DRAM circuitry in these slots when the DRA software becomes available for remotes. The NT2X10AC, NT2X11AD LTU pair is not operational in these slots because of the DRA wiring and therefore, should not be provisioned in slots 13-16. All other applicable RMM CPs are allowed in slots 13-16, however, these slots should be reserved whenever possible to allow for the future DRA application. Slots 13-16 are pre-wired to the BIX cross connect facility. Applicable CPs for these slots are as follows:

NT2X90AD	Incoming/Outgoing Test Trunk
NT3X04AA	Incoming Test Trunk for AECO LTB
NT0X10AA	Miscellaneous Scan Card
NT2X57AA	Signal Distribution Card

Slots 11 and 12 are not pre-wired to the BIX cross connect facility and may only be used for cards that do not require cabling.

- RUL24 1) Provision one (1) NT2X10AC and one (1) NT2X11AD LTU in slots 3 and 4 on OPM-256 systems.
- RUL25 1) Provision one (1) NT3X09BA in slot 5 on all OPM-256 systems for Battery maintenance and diagnostics.
- RUL26 1) Provide one (1) NT3X09AA in slot 06 for line testing.
- RUL27 1) Provide one (1) battery warning label P0678472 when the OPM-256 is equipped with YUASA battery strings.
- RUL28 1) Provide one (1) label plate P0688741 for each provisioned battery string.
- RUL29 1) Provide one (1) APJ3485-S22 electrical plug for each OPM-256 system when an Emergency Generator must be connected to the OPM-256.
- RUL30 1) Provide Designation Labels as required.
- RUL31 1) Provide one (1) can OPM-256 Touch Up Paint (R0113260) as required.
- RUL32 1) Provide one (1) warning label (P0686456) for each YUASA battery tray (P0661751), maximum eight (8) labels.
- RUL33 1) If equipment per Rule #38 is provided, then the NT6X2582 (AC Circuit Breaker Kit) is always required.
- RUL34 1) Provide one (1) NT8X09AA, LRS Test Head Mounting Kit, when the LRS Test Head is required in the OPM. Also, provide one (1) PC8X09AA Drawing. The LRS Test Head Unit shall be provided by the Telco.
- 2) Provide one (1) NT0J42AA, DRTU Unit, when the Digital Remote Test Unit capability is required in the OPM. Also, provide one (1) NT0J41BA, DRTU Cable Kit.

- RUL35 1) Provide one NT0X84AA (Filler Panel) in Bay 0 shelf position 19 if the optional equipment shelves are not provisioned at shelf position 19 or 20.
- RUL36 1) Provide the 320 Line Upgrade with 4 or 5-Pin Stubless or 5-Pin with 50 foot Stub as per Telco specifications. The option chosen must be of the same configuration as the original 256-Line option (See Rule #32).
- 2) These kits contain the Line Shelf and all required installation and wiring hardware.
- RUL37 1) Provide one NT8X04BB (320-Line Upgrade CP-Fill) per 320-Line Upgrade installed in the OPM-256.
- 2) Provide up to five (5) line drawers per 320-Line Upgrade Option as required.
- 3) Provide one NT6X05AX (Line Drawer Filler Panel) per unequipped Line Drawer position;
- 4) Provide one set or use exist P0631765 Line Drawer Designation Labels as per Rule #4 Item #4. Affix labels to line subgroups as required.
- 5) If equipment is provisioned/installed per Rule #38, then this shelf option can not be provisioned on the same OPM.
- RUL38 1) Provide the appropriate Fiber Shelf Hardware Kit which corresponds to the unit being provisioned (NT FMT-150B or ATT DDM-1000). These kits contain the mounting hardware and required wiring only. The Telco must purchase the actual shelf from the vendor.
- When a Fiber Shelf is provided for the OPM the Fault Locate/Order Wire CPs and Repeaters are not required in the FSP, provide 7 NT0X50AJ (Filler Face Plates) instead. See Rule 14.
- 2) Provide the appropriate DE-4E Channel Bank Kit which corresponds to the Protection Scheme ordered on this OPM. These kits contain the mounting hardware and required wiring only. The Telco must purchase the actual DE-4E Shelf (NT4S42CA) from the vendor.
- 3) Provide one (1) NT0X10AA, Scan Card, in Slot 07 of the RMM for Fiber Shelf/Channel Bank alarms.

- 4) The Line Upgrade Shelves, Fiber Shelves, and Channel Bank Shelf occupy the same physical space when installed. Therefore, installing one of these options automatically prohibits the use of the other choices on the same OPM.

- RUL39
- 1) Provide one (1) NT0X1989, Single FMT-6 Kit, when a fiber interface (without redundancy) from the Host to the OPM is required. Also provide, EITHER two (2) NT3E19AA, Single-Mode Pigtail, if the OPM is connected to the Host via singlemode outside plant fiber; OR two (2) NT3E44AA, Multi-Mode Pigtail, if the OPM is connected to the Host via multimode outside plant fiber.
 - 2) Provide one (1) NT0X1990, Dual FMT-6 Kit, when a fiber interface from the Host to the OPM is required AND redundancy and/or more than four (4) links are required. Also provide, EITHER four (4) NT3E19AA, Single-Mode Pigtail, if the OPM is connected to the Host via singlemode outside plant fiber; OR four (4) NT3E44AA, Multi-Mode Pigtail, if the OPM is connected to the Host via multimode outside plant fiber.
 - 3) Provide one (1) NT0X10AA, Scan Card, in Slot 07 of the RMM for FMT-6 alarms.
 - 4) When the FMT-6 option is provided for the OPM the Fault Locate/Order Wire CPs and Repeaters are not required in the FSP, provide (7) NT0X50AJ (Filler Face Plates) instead. See Rule 14.

OUTSIDE PLANT MODULE - 256

PEC CODE: NT8X01BB

| CPC CODE: B0231373

| RATING: MD

| REPLACES: N/A

| REPLACED BY: No Replacement

ABBREVIATION NAME: OPM-256

ENGINEERING DESCRIPTION: The Outside Plant Module - 256 (OPM-256) is similar to the RLCM in features, capacity etc., however, the equipment is housed in an environmentally controlled cabinet. It may be mounted in an outdoor or an indoor environment. The OPM-256 supports up to 256 lines standard and may be upgraded to 576 lines. It employs from 2-6 DS1 links to communicate with the host DMS.

The following equipment is provisioned standard in the OPM-256 cabinet: HIE, LCM-C, RMM, FSP shelves, DF, Battery Charging Unit, Power Control Unit, AC Breakers, Fans, 5-Pin Stubless Connection System, and Heaters.

The following equipment may be provisioned in addition to the standard equipment:

* Mounting Hardware Kits only for:

- NTIs' FMT-150B Fiber Interface Shelf, or
- AT&Ts' DDM-1000 Fiber Shelf shelf, or
- NTIs' DE-4 Channel Bank Shelf

* 576-Line Upgrade Kit in the following configurations:

- 4 or 5-Pin Stubless
- 5-Pin with 50 ft. Stub option

* Other options include cabinet color
(i.e. Maple Brn, Ivory, and Grey-Green).

REFERENCE DOCUMENTATION: MS8X01BB 00 02

MARKETS: Applicable markets:
US

ISSUE AUTHOR: NTI: Bob Belvin DEPT. 3471 (PPK)

MAIN CONTACT: NTI: Mark Sorrell Dept. 3471 (PPK)

NT8X01BB EMR2-13-002 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-- -- -- 95 09 28	--- --- -- ECM 514 13	Previous history not available. MD section per ECD 024-93165 (NT6X11AB has been MDd as well as NTZZ19AA, which calls out the NT8X01BB)

The NT8X01BB is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
OPM Cabinet Assy Maple Brown	NT0X19AC					RUL1
1/2 Pint Maple Brn Paint	C2502606					RUL1
OPM Cabinet Assy Grey-Green	NT0X19AD					RUL1
1/2 Pint Grey-Green Paint	C2502607					RUL1
OPM Cabinet Assy Ivory	NT0X19AE					RUL1
1/2-Pt Ivory Touchup Paint	C2502608					RUL1
Mounting Hardware Kit	NT0X1935					RUL2
Mounting Template	NT0X1934					RUL2
Mounting Plate Assembly	NT0X1929					RUL2
Installers Assembly Kit	NT8X0176					RUL3

* OUTSIDE PLANT EQUIPMENT (BAY 0)

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Booster Fan Unit	NT8X06BA	BFU	1	46		AP
Line Concentration Array Shf	NT8X0404	LCM-C	0	33		AP
LCM-C Common CP	NT8X04BA			33		RUL4
Line Drawer	NT6X05AA			33		RUL4
Line Drawer Filler Panel	NT6X05AX			33		RUL4
Line Cards	AR			33		RUL4
Designation Labels	P0631765			33		RUL4
Filler Panel	NT0X84AA	FP		19		RUL5
4P Stubl Prot Assy Line UG	NT8X09AB	LCM-C	1	19		RUL6
5P Stubl Prot Assy Line UG	NT8X09AC	LCM-C	1	19		RUL6
5P Line UG Kit W/50' Stub	NT8X09AD	LCM-C	1	19		RUL6
100pr 5P Protector CA-Stub	NT8X0804			LHC		RUL32
576-Line Upgrade Kit CP Fill	NT8X04BB			19		RUL7
Line Drawer	NT6X05AA			19		RUL7
Line Drawer Filler Panel	NT6X05AX			19		RUL7
Line Cards	AR			19		RUL7
Designation Labels	P0631765			19		RUL7
FMT-150B Hardware Mtg Kit	NT0X1978			21		RUL8
DDM-1000 Hardware Mtg Kit	NT0X1979			21		RUL8
DE4 Channel Bank H/W Mtg Kt	NT0X1980			20		RUL8
Host Interface Equip Assy	NT6X1108	HIE	1	05		AP
# HIE Common CP	NT6X11AA			05		RUL9
# HIE Common CP	NT6X11AB			05		RUL9
Ringin Generator	NT6X60AA			05	1, 5	RUL10
Filler Face Plate	NT0X50AH			05	1, 5	RUL10
Filler Face Plate	NT0X50AG			05	09	RUL11
Master Processor Memory	NT6X47AB			05	14	RUL12
LGC/DTC Processor	NT6X45AF			05	15	RUL12
ESA Clock and Tone Card	NT6X75AA			05	16	RUL12
ESA PC-Kit (Canada Only)	NT8X01WA					RUL12
DS-1 Interface Card	NT6X50AA			05	21	RUL13
Filler Face Plate 0.875	NT0X50AA			05	13-16	RUL14
					21	
Power Conv + & -5 Volt, 12V	NT2X70AE			05	22, 25	RUL9
Power Conv Change Kit	NT2X70AZ			05	22, 25	RUL9
Desig Label for NT6X60AA	P0642014			05	1, 5	RUL15

Desig Label for NT6X47AB	P0666374	05	14	RUL15
Desig Label for NT6X45AF	P0685029	05	15	RUL15
Desig Label for NT6X75AA	P0642015	05	16	RUL15

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Desig Label for NT6X50AA	P0626878				05 21	RUL15
Desig Label for NT2X70AE	P0698943				05 22, 25	RUL15
Environmental Control Unit Heater	NT8X06AB A0302484	ECU	1	00		AP AP
ROW B - BACK WALL						
Pending UL Approved URTU	Location					

* OUTSIDE PLANT EQUIPMENT (BAY 1)

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Rectifier	J2427B-1L1	RECT	1	39		AP
Power Control Unit	NT8X05AA		1	35		AP
Battery Charging Unit Assy	NT8X0301	BCU	1	32		AP
Battery Charger Common CP	NT8X03AC			32		RUL17
* Battery Charger Common CP	NT8X03AA			32		RUL17
YUASA Batteries	A0323985					RUL18
Battery Tray	P0661751					RUL18
Retainer Bar	P0661753					RUL18
Desig Label for Batteries	P0664827					RUL18
Rectifier	J2427B-1L1	RECT	1	28		AP
Frame Supervisory Panel	NT6X25BC	FSP		19		AP
Fault Loc/Order Wire Access	QPP519			19	1	RUL21
Office Repeater	QRY18			19	2-7	RUL21
Filler Face Plate	NT0X50AJ			19	1-7	RUL21
Remote Maintenance Mod Assy	NT6X1301	RMM	1	05		AP
RMM Common CP	NT6X13AB			05		RUL22
Line Test Unit Analog (LTU)	NT2X10AC			05	3	RUL23
Line Test Unit Analog (MTU)	NT2X10BA			05	3	RUL23
Line Test Unit Digital (LTU)	NT2X11AD			05	4	RUL23
Line Test Unit Digital (MTU)	NT2X11BA			05	4	RUL23
Rmt Metallic Test Access	NT3X09BA			05	5	RUL23
Rmt Metallic Test Access	NT3X09AA			05	6	RUL23
Scan Card	NT0X10AA			05	7-8	RUL23
Signal Distribution (SD) CP	NT2X57AA			05	13-16	RUL23
Incoming/Outgoing Test Trk	NT2X90AD			05	9,10	RUL23
					13-16	
Digitone Receiver (ESA)	NT2X48AB			05	9-15	RUL23
Scan Card	NT3X04AA			05	13-16	RUL23
Filler Face Plate	NT0X50AC			05	3-16	RUL24
Environmental Control Unit	NT8X06AB		1	00		AP
Heater	A0302484		1	00		AP

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Des Label OPE 00 0 - 43 0	P0660996					RUL31
Des Label OPE 44 0 - 87 0	P0660997					RUL31
Des Label OPE 88 0 - 99 0	P0660998					RUL31
Des Label OPE 00 1 - 43 1	P0661767					RUL31
Des Label OPE 44 1 - 87 1	P0661768					RUL31
Des Label OPE 88 1 - 99 1	P0661201					RUL31
Des Label ECU:000 - 104	P0660990					RUL31
Des Label ECU:105 - 209	P0660991					RUL31
Des Label ECU:210 - 314	P0660992					RUL31
Des Label ECU:315 - 399	P0660993					RUL31
Des Label BCU:000 - 104	P0660994					RUL31
Des Label BCU:105 - 199	P0660995					RUL31
Des Label LCM 00 0 - 99 0	P0660999					RUL31
Des Label LCM 00 1 - 99 1	P0661200					RUL31

*

END COMPARTMENT ACCESS

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Left Hand BIX Mount Col	NT0X2004			1	LHC	AP
4-Pin Protector Blk Assy	NT8X08BB				LHC	RUL32
5-Pin Prot Blk W/50' Stub	NT8X08BE				LHC	RUL32
5-Pin Prot Blk W/O Stub	NT8X08BF				LHC	RUL32
100pr 5P Protector CA-Stub	NT8X0804				LHC	RUL32
Green BIX Con Retainers	QRE3A				LHC	RUL32
25 Pair Greaseless Cons	QCBE1B				LHC	RUL32
# Gas Tube Prot. Mod QMP6A5	QMP6A5				LHC	RUL33, RUL34
4-Pin Gas Tube Prot. Mod	QMP6A4G				LHC	RUL33, RUL34
5-Pin Gas Tube Prot. Mod	303M-08S1GA				LHC	RUL33
Right Hand Col Maple Brn	NT0X2005				RHC	RUL34
Green BIX Con Retainers	QRE3A				RHC	RUL34
25 Pair Greaseless Con	QCBE1B				RHC	RUL34
Des Card line pr 1-600	P0613827					RUL35
Des Card line pr 601-1200	P0613828					RUL35
Des Card line pr 1201-1800	P0613829					RUL35
Misc BIX/MPC Tools	AR					RUL36
Line Card Insert/Rmvl Tool	QTH56A					RUL36
Line Card Removal Tool	QTH57A					RUL36
Dbl Slot LC Insert/Removal	QTH58A					RUL36
Corr Tool (Bix) QTBIX16A	QTBIX16A					RUL36
Corr Tool Carrying Pouch	C0054642					RUL36
OPM Warning Label	P0678472					RUL37
Battery Label Plate (U.S.)	P0688741					RUL38
OPM Caution Label	P0685443			1		AP
Batt Warning Label (US)	P0686456					RUL39
Crouse-Hines Elec Plug	APJ3485-S22					RUL40

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT6X11AA NT6X11AB QPM6A5	MD. MD. MD.	NT6X11AB No Replacement QPM6A4G

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

* RATE CHANGE PENDING. Refer to URT0/URTS Schedule for US Applications or RT0/RTS Schedule for Canadian Applications to determine the exact availability dates for the NT8X03AC. Note: The NT8X03AC CP Fill is backward compatible to NT8X03AA.

NOTES:

RULES:

AP 1) When PEC NT8X01BB is ordered, these items are provided.

RUL1 1) Provide one (1) Cabinet Assembly, NT0X19AC/AD/AE in accordance with the desired color option for the OPM-256. Note: If color option other than NT0X19AC (Maple Brown) is selected, delivery time is increased by two weeks.

2) Provide one can of touch up paint of the appropriate color per OPM Cabinet ordered or per Telco specifications.

RUL2 1) Provide one (1) NT0X1934 and one (1) NT0X1935 when the OPM-256 is to be mounted on a concrete pad.

2) For all OPM-256 installations engineered in the U.S., an RFS for advance shipment of the above items must be initiated by the Systems Engineer as soon as the mounting ar-

rangement is identified. An advance ship note must be placed in the specification.

- 3) For all OPM-256's engineered in Canada, the mounting template NT0X1934 will be merchandise ordered and the NT0X1935 is shipped loose with the OPM-256. The Customer Engineer must ensure that the Telco is aware of this requirement.
- 4) Provide one (1) NT0X1929 and one (1) NT0X1935 when the OPM-256 is to be mounted on railroad ties.

RUL3 1) Provide the NT8X0176 Installers Assembly Kit per Telco specifications. This kit is used for installation purposes. Refer to Installation Manual IM925 for more information. RUL4 1) Provide one (1) LCM-C Common CP kit (NT8X04BA) and up to four (4) Line Drawers for each OPM-256 shelf position 33. This LCM-C is functionally identical to the host LCM and utilizes the same line card types. Refer to the host LCM provisioning rules for line card provisioning.

- 2) Line Drawers must be assigned in the OPM-256 in the following sequence:

LSG 00 & 01, 02 & 03, 04 & 05, 06 & 07.

However, if a full complement of 9 Line Drawers is provided per Rule #7, the normal assignment scheme is appropriate.

- 3) Provide one (1) NT6X05AX Line Drawer Filler per unfilled line drawer location per NT8X0401.
- 4) Provide one (1) P0631765 (Line Drawer Identification Label) and affix to Line Drawer Line Subgroups as required.

RUL5 1) Provide one NT0X84AA (Filler Panel) in Bay 0 shelf position 19 if the optional equipment shelves are not provisioned at shelf position 19 or 20.

RUL6 1) Provide the 320 Line Upgrade with 4 or 5-Pin Stubless or 5-Pin with 50 foot Stub as per Telco specifications. The option chosen must be of the same configuration as the original 256-Line option (See Rule #32).

- 2) These kits contain the Line Shelf and all required installation and wiring hardware.

RUL7 1) Provide one NT8X04BB (320-Line Upgrade CP-Fill) per 320-Line Upgrade installed in the OPM-256.

- 2) Provide up to five (5) line drawers per 320-Line Upgrade Option as required.
 - 3) Provide one NT6X05AX (Line Drawer Filler Panel) per unequipped Line Drawer position;
 - 4) Provide one set or use existing P0631765 Line Drawer Designation Labels as per Rule #4 Item #4. Affix labels to line subgroups as required.
 - 5) If equipment is provisioned/installed per Rule #8, then this shelf option cannot be provisioned on the same OPM.
- RUL8
- 1) Provide the appropriate Fiber/Channel Bank hardware kit which corresponds to the unit being provisioned. These kits contain the mounting hardware and required wiring only. The Telco must purchase and install the actual shelf via their own resources.
 - 2) If equipment is provisioned/installed per Rule #7, then these shelf options cannot be provisioned on the same OPM.
 - 3) If Fiber shelf is an upgrade to an In Service Unit and Office Repeater Cards are installed in the FSP, they must be removed and Seven NT0X50AJ (Filler Face Plates) provided.
- RUL9
- 1) Provide one (1) NT6X11AB HIE Common CP per NT8X01BB.
 - 2) When the NT6X11AB is provided provide 2 NT2X70AE Power packs.
 - 3) Existing OPM-256 modules may be equipped with the NT6X11AA (HIE CP Fill) in such instances - provide one NT2X70AAZ (PC Kit) to replace the NT2X70AAs with AEs.
- RUL10
- 1) Provide two (2) NT6X60AA, Ringing Generator Modules per HIE to provide analog ringing.
 - 2) Provide two (2) NT0X50AH in the HIE (CP POS 1,5) if the Ringing Generator Modules are not provided.
- RUL11
- 1) One (1) NT0X50AG, Filler Face Plate should always be provisioned in slot 09 of the HIE.
- RUL12
- 1) Provide one (1) NT6X47AB CP, one (1) NT6X45AF CP and one (1) NT6X75AA CP when the ESA option is specified.
 - 2) Provide the NT8X01WA in addition to the other ESA components for Canadian Applications only.

- RUL13 1) Provide one (1) NT6X50AA, DS-1 Interface CP when the DS-1 links 5 and 6 are required to the host. Refer to NTP 297-1001-450 Section 450/2, Traffic Criteria and Capacities for link provisioning.
- RUL14 1) Provide one (1) Filler Face Plate for each unequipped slot position 13-16, 21 in the HIE.
- RUL15 1) Provide Designation Labels as required.
- RUL16 1) Reserved for future use.
- RUL17 1) Provision one (1) Battery Charger Common CP kit when battery backup is a requirement.
- RUL18 1) Provision Yuasa battery strings when battery backup is a requirement in the OPM-256.
- 2) One Yuasa battery string provides one hour of battery backup and must be equipped in string pairs as follows:
- Pair 1 Strings 0 and 4
 Pair 2 Strings 1 and 5
 Pair 3 Strings 2 and 6
 Pair 4 Strings 3 and 7
- Order four (4) A0323985 Yuasa batteries to equip one battery string.
- 3) Provide one (1) P0661751 Battery Tray, one (1) P0661753 Retainer Bar, eight (8) P097F813 Screws, one (1) P0664827 Designation Label, and three (3) NT8X0126 Cable Assemblies for each equipped battery string.
- 4) Provide one cable assembly for each equipped battery string as shown below:

STRING NUMBER	CABLE ASSEMBLY	STRING NUMBER	CABLE ASSEMBLY
0	NT8X0143	4	NT8X0147
0	NT8X0151	4	NT8X0155
1	NT8X0144	5	NT8X0148
1	NT8X0152	5	NT8X0140
2	NT8X0145	6	NT8X0128
2	NT8X0153	6	NT8X0157

3	NT8X0129	7	NT8X0150
3	NT8X0154	7	NT8X0158

Note that eight Yuasa battery strings are allowed when a LRS test head is equipped.

RUL19 1) Reserved For Future Use.

RUL20 1) Reserved For Future Use.

RUL21 1) The OPM FSP repeater cards are not required if the Fiber shelf option is selected. However, if the fiber shelf is not selected provide one Fault Locate Order Wire Access Card in FSP Slot #1 and up to Six (6) Office Repeater cards in FSP Slots 2-7, as follows:

* Fault Locate/Order-Wire (FL/OW) Access Unit in card slot #1. These cards may be one of the following:

- FL/OW Access Unit with Dial-Pulse Correction Circuits (QPP519A). See Rule 21 Item 2 below.
- FL/OW Access Unit with simple jack access to order Wire (QPP519B). See Rule 21 Item 3 below.

Note: The Fault Locate Filter either the Dual-Amplified Type (QFB127) or the Single Passive Type (QFB128) must be provided in conjunction with the FL/OW Access unit and is installed on the rear of the unit. This circuit filters the fault locate signal to provide the proper fault locate tone.

See Rule 21 Item 4 for detail provisioning.

* T1 Span Office Repeaters. This circuit is available in several configurations which are assignable to slots 2 thru 7. Refer to Item 5 for details.

* If none of the above units are supplied then the Filler Face Plates (NT0X50AJ) are required in slots 1 thru 7 (See Rule 21 Item 6).

2) Provide one (1) QPP519A in slot #1 if the Fault-Signal Loopback feature, Dial-Pulse correction, termination of the order-wire pair, and jack access for both a 2-wire telephone and a 4-wire headset is required. The QPP519A provides mounting space for a Mini-T1 line fault locate

filter, either a switchable dual amplifier filter (QFB127) or a single input passive filter (QFB128). These circuits allow fault location to be performed from the host when the OPM is unmanned.

- 3) Provide the one QPP519B in slot #1 if, the Fault-Signal Loopback feature, the simple through connection between the Order-Wire pair and the CO switching equipment, and jack access to the Order-Wire pair via a 2-Wire telephone only is required. The QPP519B provides mounting space for a Mini-T1 line fault locate filter, either a switchable dual amplifier filter (QFB127) or a single input passive filter (QFB128). These circuits allow fault location to be performed from the host when the OPM is unmanned.
- 4) Provide one (1) Fault Locate Filter in conjunction with a FL/OW Access Unit QPP519 to provide the BandPass Frequency specified by the Telco. Two types are available and are provided to support Telco applications as follows:
 - * Provide the QFB127 (Dual-Amplified Filter) to provide two amplifiers under the control of a Fault Locator Access Voltage from the CO to select regenerators 1 or 2. This filter supports from 12 to 24 repeaters split evenly between the amplifiers. Add the suffix (A thru M) to select the BandPass Frequency as specified by the Telco per the chart below.
 - * Provide the QFB128 (Single Passive Filter) to provide a common output from regenerators 1 and 2. This unit supports up to 12 repeaters. Add suffix (A thru M) to select the BandPass Frequency as specified by the Telco per the chart below.

Note: The Fault Locate Filter is shipped loose to the job site and are to be installed on the QPP519 per NTP 368-2141-103 Section 8 - "Installation of QPP519 type Order Wire Access Unit".

* BANDPASS FILTER CHART

Dual Amplified
Type QFB127Single Passive
Type QFB128

FILTER	FREQUENCY	FILTER	FREQUENCY
QFB127A	832 Hz	QFB128A	832 Hz
QFB127B	928	QFB128B	928
QFB127C	1048	QFB128C	1048
QFB127D	1206	QFB128D	1206
QFB127E	1340	QFB128E	1340
QFB127F	1508	QFB128F	1508
QFB127G	1722	QFB128G	1722
QFB127H	2008	QFB128H	2008
QFB127J	2193	QFB128J	2193
QFB127K	2413	QFB128K	2413
QFB127L	2680	QFB128L	2680
QFB127M	3017	QFB128M	3017

- 5) Provision one (1) Office Repeaters (QRY18) for each DS-1 link to the host. Select these units in accordance with the features required by the Telco and order by quoting the complete "Q-Code" to feature cross reference given in the table below.

QRY18 REPEATER CODE	FEATURE/APPLICATION MATRIX	
	LINE POWERING REQUIRED	PERFORMANCE MONITOR and FAULT-SIGNAL LOOPBACK REQUIRED
QRY18A	YES	NO
QRY18B1	YES	YES
QRY18C	NO	NO
QRY18D1	NO	YES
QRY18F	*YES	NO
QRY18G1	*YES	YES
QRY18L1	NO	YES

* These units apply negative voltage only for line powering.

Note: Office Repeaters are to be assigned per the following Information:

DS1 PORT	HIE SHELF CP POS	FSP CP POS
0	19	2
2	19	3
4	21	4
5	21	5
3	20	6
1	20	7

- 6) Provide one (1) NT0X50AJ Filler Face Plate for each unequipped position 1-7.

RUL22 1) Provide one NT6X13AB (RMM Common Cp Fill) per OPM provisioned.

RUL23 1) Service Circuits provisionable on the RMM have specific card slot assignments and functions as detailed in the following chart.

Note: Slot Assignments as detailed below are specific to the OPM256. RMM Slot Assignments are different in other Remote Office applications.

SLOT	2 X 1 0 A C	2 X 1 1 A D	2 X 1 0 B A	2 X 1 1 B A	3 X 0 9 B A	3 X 0 9 A A	0 X 1 0 A A	2 X 5 7 A A	2 X 9 0 A D	2 X 4 8 A A	3 X 0 4 A E
03	2	X	2	X	X	X	X	X	X	X	X
04	X	2	X	2	X	X	X	X	X	X	X
05	X	X	X	X	3	X	X	X	X	X	X
06	X	X	X	X	X	4	X	X	X	X	X
07	X	X	X	X	X	X	5	X	X	X	X
08	X	X	X	X	X	X	5	X	X	X	X
09	X	X	X	X	X	X	X	X	7	8	X
10	X	X	X	X	X	X	X	X	7	8	X
11	X	X	X	X	X	X	X	X	X	8	X
12	X	X	X	X	X	X	X	X	X	8	X
13	X	X	X	X	X	X	5	6	7	8	9
14	X	X	X	X	X	X	5	6	7	8	9
15	X	X	X	X	X	X	5	6	7	8	9
16	X	X	X	X	X	X	5	6	7	X	9

The Character " X " above indicates an invalid assignment for the associated cp. The Numbers (2 thru 9) in each column refer to RUL23 Items 2 thru 9 below.

- 2) One LTU pair (NT2X10AC and NT2X11AD) is Always Required in slots 03 and 04. Canadian Applications require a MTU pair (NT2X10BA and NT2X11BA) to be provisioned in lieu of the

LTU pair. However, when the MTU is provided certain restrictions per RUL23 Item 3 below apply.

- 3) One (1) NT3X09BA is Always Required in slot 05 on all OPM-256 systems for Battery Diagnostics and Line Testing. After standard assignments the NT3X09BA has one Horizontal Connection Left which may be used in one of three (3) ways:
 - * For the third optionally provisionable NT2X90AD assignable to slots 9, 10, and/or 13 thru 16, or
 - * For an optional NT3X04AA assignable to slots 13 thru 16, or
 - * For the second test multiple on a MTU pair (NT2X10BA/NT2X11BA). Presently, the MTU is used in Canadian Applications Only on the OPM.
- 4) One (1) NT3X09AA is Always Required in slot 06 on all OPM-256 systems for Battery Control.
- 5) The NT0X10AA is provisionable in Slots 07, 08, and 13-16 as follows:
 - * One (1) NT0X10AA is Always Required in slot 07 when the NT0X1978/79/80 is provisioned. Otherwise, provide one NT0X50AC in slot 07.
 - * One (1) NT0X10AA Scan Card is Always Required in slot 08 for the Alarm Detection. This CP is pre-wired to internal OPM-256 circuitry.
 - * Additional NT0X10AAs may be provisioned in Slots 13-16 per Telco specifications.
- 6) The NT2X57AA is optional, provisionable per Telco specifications in slots 13-16 for external devices.
- 7) A Maximum of three (3) NT2X90ADs is provisionable on the RMM with certain restrictions (refer to RUL23 Item 3 for restrictions) as follows:
 - * One (1) NT2X90AD in slot 9 for LTP/Talk Monitor function and in Slot 10 for Operator Verification function is optionally provisionable.
 - * A third NT2X90AD is optionally provisionable in Slots 13 thru 16 as needed, subject to the restrictions per RUL23 Item 3.

8) A maximum of four (4) NT2X48ABs is provisionable on the OPM-256 given the following restrictions:

1. A Maximum Of Four (4) NT2X48ABs are provisionable when the quantity of NT2X90ADs is limited to one (1) and assigned in Slot 9 or 10.
2. Three NT2X48ABs may be provided if NT2X90ADs are provided in slots 9 and 10.
3. Provisioning Two NT2X48ABs is recommended for ESA operation.
4. Calculate Digitone Receivers (DTRs) as follows:

Holding Time Divided by 100 (HT/100)

For Example: .079 divided by 100 = DTRs Required

Note: .079 is the average holding time for a 7-digit call. The NT2X48AB (Digitone Receiver (DTR)) is a two slot card which occupies the assigned slot and the slot below it.

A minimum of one NT2X48AB is Always Required when the ESA option is provided. The NT2X48AB (Digitone Receiver) is a two slot card which occupies the assigned slot and the slot below it. This card is provisionable in slots 10 thru 15.

9) One NT3X04AA is optionally provisionable in Slots 13 thru 16 for the Automate Electric (AE) #1 Local Test Desk (#1LTD) interface. The Specific slot used and/or the validity of it use is dependent upon the restrictions defined in RUL23 Item 3 & 8 above.

- 10) The total -48V power consumption of the provisionable packs in the RMM must not exceed 110 watts. Refer to the chart below for RMM provisionable circuit pack power consumption.

PEC	MAXIMUM POWER CONSUMPTION
NT0X10AA	2.0
NT2X10BA	15.0
NT2X11BA	9.0
NT2X10AC	9.0
NT2X11AD	8.5
NT2X48AB	12.0
NT2X57AA	4.5
NT2X90AD	1.5
NT3X04AA	28.0
NT3X09AA	4.0
NT3X09BA	11.5

- RUL24 1) Provide one (1) NT0X50AC for each unequipped position 3-16.
- RUL25 1) Reserved For Future Use.
- RUL26 1) Reserved For Future Use
- RUL27 1) Reserved For Future Use
- RUL28 1) Reserved For Future Use
- RUL29 1) Reserved For Future Use
- RUL30 1) Reserved For Future Use
- RUL31 1) Provision this equipment and designation labels as required.
- RUL32 1) When provisioning the End Compartment the provisioner must choose a circuit termination methodology (i.e. 4 or 5-Pin Stubless or 5-Pin with 50 foot Stub Option). This selection is totally dependant on the Telco's preference.

The End Compartment is broken down into two (2) columns - the Left Hand Column (LHC) and the Right Hand Column (RHC). This rule defines the LHC provisioning only, refer to RULE #34 for RHC provisioning.

- 2) The Left Hand Column is Always Provided; however, it must be equipped with Protector Blocks (4 or 5-Pin Stubless, or 5-Pin w/Stub Option - Plus the 50ft. Cable Stub itself) Protector Modules, BIX Connectors, and BIX Connector Retainers for the initial 256 Lines as follows:

* Protector Blocks: Select one PEC from the list below as specified by the Telco. Each PEC includes 3-blocks for Lines Plus 1 for Service Circuits -- for the Initial 256-Lines only. Additional blocks required for the Line Upgrade is included in the Stock List for each kit.

- NT8X08BB - For 4-Pin Applications
- NT8X08BF - For 5-Pin Applications w/o 50' Stub
- NT8X08BE - For 5-Pin Applications w/50' Stub. Provision four (4) NT8X0804 (50' Cable Stub) to complete this application.

- 3) The required quantity of Bix Connectors and Retainers to terminate the internal circuitry to the 96pr Blocks are included in the NT8X08BB/BF Stock List for the initial 256 Lines with out the Stub Option. Note: Bix Connectors and Retainers are not required when Protector Blocks with the 50 Foot Stub Option is provided.

However, when the NT8X08BB/BF and/or NT8X09AB/AD is provisioned and the Telco requests Outside Plants Pairs to be terminated in the OPM on the Left Hand Column (LHC), additional Bix Connectors and Retainers must be provisioned for the LHC.

The LHC can mount an additional 29 green BIX connectors Max, capable of terminating up to 725 outside plant pairs. Extended outside plant termination facilities are available by provisioning the RHC (See Rule #34). One BIX Connector can terminate 25pr and the Protector Blocks are 96pr blocks; therefore, the quantity of additional Bix Connectors (QCBE1B) and Retainers (QRE3A) are provisioned on a four(4) per protector block basis.

By extrapolation we determine the following minimums for terminating Outside Plant Pairs on the LHC:

4 BIX Connectors/Retainer (BC/R) Per Blocks
4 Blocks Per Initial 256 Lines & SVC CKTS
256 Lines = 256pr

SVC CKTS = 96pr

4 X 4 = 16 BC/R Min Requirement

29 Minus 16 = 13 BC/R Spare

13 X 25 = 325pr Spared or Available for Line Upgrade (e.g.
325 - 320 = 5 Spare.

- 4) When the 50 ft. Stub option is required, provide four(4) NT8X0804 per NT8X08BE ordered and/or three (3) per NT8X09AC ordered.

- RUL33 1) Provision MPC Gas Protector Modules in the LHC for protecting the LCM-C (lines), the HIE (DS1 Links), and the RMM (Special Service) circuitry.
- 2) Provision QMP6A4G Protector Modules for 4-Pin Protector Blocks or 303M-08S1GA for 5-Pin Protector Blocks.
- 3) Protector Blocks are provisioned on a One Per Outside Plant Pair Plus Spares (for Lines) plus an additional quantity of 96 (for Trunks and Service Circuits). Using the parameters defined in RULE #32 we derive the following formulae for the Minimum protection Required Plus protection for spare circuits:

c1 = # Lines Provisioned + 96(for Svc Ckts) = Min Protectors Req'd

c2 = Telco Specified Qty Spare + c1 = Total Protectors Req'd

For Example

c1 256 + 320 + 96 = 672

c2 spares + c1 = total required

- RUL34 1) Provision one NT0X2005 (RHC Maple Brown) on the NT8X01BB - OPM and up to 33 green BIX connectors (QCBE1B) for terminations of an additional 1025 pairs.
- 2) Given the condition 4-Protector Blocks are Always Required with the LHC on the Initial order with 256 Lines and an additional 3-Protector Blocks are Always Provided with the Line Upgrade Kits.

Provision the BIX Connectors (QCBE1B) on a four (4) per protector block basis. Provision the associated Connector Retainers (QRE3A) on a one per Connector (QCBE1B) basis.

- RUL35 1) Provide one each Outside Plant Line Designation Labels in addition to those Always Provided (AP).
- RUL36 1) BIX and MPC Test and Maintenance Tools are available per Telco request. Refer to the latest issue of the Northern Telecom T80 Outside Plant Products ordering catalog for details.
- 2) Provide BIX QTBIX16A connection tools and pouches per Telco specifications, to terminate wiring on the BIX connectors. NOTE: two (2) NTBIX16As are included in the NT8X0176 Installation Kit.
- RUL37 1) Provide one (1) battery warning label P0678472 when the OPM-256 is equipped with YUASA battery strings.
- RUL38 1) Provide one (1) label plate P0688741 for each provisioned battery string.
- RUL39 1) Provide one (1) warning label (P0686456) for each YUASA battery tray (P0661751), maximum eight (8) labels.
- RUL40 1) Provide one (1) APJ3485-S22 electrical plug for each OPM-256 system when an Emergency Generator must be connected to the OPM-256.

HOST INTERFACE EQUIPMENT COMMON CP

NT6X11AA

RATING: MD.

ABBREVIATION NAME: HIE

| ENGINEERING DESCRIPTION: The Host Interface Equipment (HIE) module houses the circuitry required to communicate with the host during normal operation and to support the OPM during the Emergency Stand Alone mode. Communication with the host is via a minimum of 2 or a maximum of 6 DS-1 links. Two DS-1 PCBs are always provided. The number of links required is traffic dependent. Optionally, Northern Telcom office repeaters may be provisioned and mounted in the Frame Supervisory Panel (FSP).

REFERENCE DOCUMENTATION: N/A

The HIE Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate	NT0X50AA		1	XX	12	AP
Link Control Card CP	NT6X73AA		1	XX	17	AP
Link Control Card CP	NT6X73AA		1	XX	18	AP
DS1 Interface CP	NT6X50AA		1	XX	19	AP
DS1 Interface CP	NT6X50AA		1	XX	20	AP
Pwr Converter + & -5V, 12V	NT2X70AA		1	XX	22	AP
Pwr Converter + & -5V, 12V	NT2X70AA		1	XX	25	AP
Desig. Label for NT6X11AA	P0639580		1	XX		AP

NOTE:

- 1) "XX" can be 56, 39, 04.

RULE:

- AP 1) When PEC NT6X11AA is ordered, these items are provided.

HOST INTERFACE EQUIPMENT COMMON CP

PEC CODE: NT6X11BA

| CPC CODE: B0223112

| RATING: MD

| REPLACES: N/A

| REPLACED BY: NT6X11BB.

ABBREVIATION NAME: HIE

ENGINEERING DESCRIPTION: The Host Interface Equipment (HIE) is housed on an HIE shelf. The HIE module provides PCM-30 interface between the host and the remote. The ESA option and ringing generators are supported by the HIE module. The NT6X11BA is for international use only.

REFERENCE DOCUMENTATION: MSMX 00 00
SLMX 00 00

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA
Carrier

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X11BA EMR2-14-HIE-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
93 02 19 95 08 08	ECM 381 04 ECM 286 14	Changes due to Trouble Ticket 108810 Change status to MD.

The Host Interface Equipment Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate	NT0X50AA		1	38	12	AP
Link Control Card CP	NT6X73BA		1	38	17	AP
Link Control Card CP	NT6X73BA		1	38	18	AP
PCM-30 Interface CP	NT6X27AB		1	38	19	AP
PCM-30 Interface CP	NT6X27AB		1	38	20	AP
Pwr Converter + & -5V, 12V	NT2X70AD		1	38	22	AP
Pwr Converter + & -5V, 12V	NT2X70AD		1	38	25	AP
Designation Strip	P0678462					AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT6X11BA is ordered, these items are provided.

HOST INTERFACE EQUIPMENT COMMON CP

PEC CODE: NT6X11EA

| CPC CODE: B0225675

| RATING: MD

| REPLACES: N/A

| REPLACED BY: NT6X11EB.

ABBREVIATION NAME: HIE

ENGINEERING DESCRIPTION: The Host Interface Equipment (HIE) is housed on an HIE shelf. The HIE module provides PCM-30 interface between the host and the remote. The ESA option and ringing generators are supported by the HIE module. This HIE circuit pack fill is for Mercury UK application.

REFERENCE DOCUMENTATION: MSMX 00 00
SLMX 00 00

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA
Carrier

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Ken Clisso Dept. 3471 (PPK)

NT6X11EA EMR2-14-HIE-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
93 02 19 95 08 08	ECM 381 04 ECM 286 14	Changes due to Trouble Ticket 108810 Change status to MD.

The Host Interface Equipment Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate	NT0X50AA		1	38	12	AP
Link Control Card CP	NT6X73BA		1	38	17	AP
Link Control Card CP	NT6X73BA		1	38	18	AP
PCM-30 Interface CP	NT6X27AB		1	38	19	AP
PCM-30 Interface CP	NT6X27AB		1	38	20	AP
Pwr Converter + & -5V, 12V	NT2X70AD		1	38	22	AP
Pwr Converter + & -5V, 12V	NT2X70AD		1	38	25	AP
Designation Strip	P0678462		1			AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT6X11EA is ordered, these items are provided.

HIE COMMON CP

PEC CODE: NT6X11AB

CPC CODE: B0229354

| RATING: MD

REPLACES: NT6X11AA

REPLACED BY: Provisionable Circuit Packs

ABBREVIATION NAME: HIE

ENGINEERING DESCRIPTION: The Host Interface Equipment (HIE) module houses the circuitry required to communicate with the host during normal operation and to support the remote during the Emergency Stand Alone mode. Communication with the host is via a minimum of 2 or a maximum of 6 DS-1 links. Two (2) DS-1 PCBs are always provided. The number of links required is traffic dependent. Optionally, Northern Telecom office repeaters may be provisioned and mounted in the Frame Supervisory Panel (FSP).

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X11AB EMR2-14-HIE-4 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 01 17	ECM 286 09	Retired section since all items are now provisionable.
94 12 09	ECM 286 12	Change status to A&M.
95 08 08	ECM 286 14	Change status to MD.

The HIE Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate	NT0X50AA		1	XX	12	AP
Link Control Card CP	NT6X73AA		1	XX	17	AP
Link Control Card CP	NT6X73AA		1	XX	18	AP
DS1 Interface CP	NT6X50AA			XX	19	AP
DS1 Interface CP	NT6X50AA			XX	20	AP
Desig Label for NT6X11AB	P0701836		1	XX		

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) Shelf position "XX" for OPM is 05.

RULES:

- AP 1) When PEC NT6X11AB is ordered, these items are provided.

HOST INTERFACE EQUIPMENT COMMON CP

PEC CODE: NT6X11BB

CPC CODE: B0229355

| RATING: MD

REPLACES: NT6X11BA

REPLACED BY: NT6X11BC

ABBREVIATION NAME: HIE

ENGINEERING DESCRIPTION: The Host Interface Equipment (HIE) is housed on an HIE shelf. The HIE module provides PCM-30 interface between the host and the remote. The ESA option and ringing generators are supported by the HIE module. The NT6X11BB is for international use only.

REFERENCE DOCUMENTATION: N/A

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA
Carrier

ISSUE AUTHOR: Bob Belvin Dept. 3471 (PPK)

MAIN CONTACT: Darrell Deeds Dept. 3471 (PPK)

NT6X11BB EMR2-14-HIE-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
93 02 19	ECM 381 04	Changes due to Trouble Ticket 108810
94 12 09	ECM 286 12	Change status to A&M and retire this Manual Section.
95 08 08	ECM 286 14	Change status to MD.

The Host Interface Equipment Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Face Plate	NT0X50AA		1	38	12	AP
Link Control Card CP	NT6X73BA		1	38	17	AP
Link Control Card CP	NT6X73BA		1	38	18	AP
PCM-30 Interface CP	NT6X27AB		1	38	19	AP
PCM-30 Interface CP	NT6X27AB		1	38	20	AP
Pwr Converter + & -5V, 12V	NT2X70AD		1	38	22	AP
Pwr Converter + & -5V, 12V	NT2X70AD		1	38	25	AP
Designation Strip	P0701837					AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT6X11BB is ordered, these items are provided.

REMOTE CLUSTER CONTROLLER COMMON CP

NT6X12AA

RATING: MD. Replaced by NT6X12AB.

ABBREVIATION NAME: RCC

ENGINEERING DESCRIPTION: The Remote Cluster Controller module acts as the remote controller for the LCM's in the RSC. (No U.S. application)

REFERENCE DOCUMENTATION: N/A

The RCC Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AE		1	21	8	AP
Filler Face Plate 0.875	NT0X50AA		1	21	10	AP
MP Memory Plus CP	NT6X47AB		1	21	11	AP
SP Memory Plus CP	NT6X46AB		1	21	12	AP
LGC/DTC Processor CP	NT6X45AE		1	21	13	AP
Time Switch CP	NT6X44AA		1	21	15	AP
Universal Tone Receiver CP	NT6X92AA		1	21	16	AP
CPP Msg Protocol CP	NT6X69AA		1	21	17	AP
CPCE Tone Generator CP	NT6X79AA		1	21	18	AP
Host Link Formatter CP	NT6X72AA		1	21	19	AP
DS1 Interface CP	NT6X50AA		1	21	20	AP
Filler Face Plate 0.875	NT0X50AA		1	21	24	AP
Pwr Con +/-5V,12V 50 Amp CP	NT2X70AD		1	21	25	AP
Desig. Strip (NT6X12AA)	P0670793		1	21		AP
LGC/DTC Processor CP	NT6X45AE		1	04	8	AP
Filler Face Plate 0.875	NT0X50AA		1	04	10	AP
MP Memory Plus CP	NT6X47AB		1	04	11	AP
SP Memory Plus CP	NT6X46AB		1	04	12	AP
LGC/DTC Processor CP	NT6X45AE		1	04	13	AP
Time Switch CP	NT6X44AA		1	04	15	AP
Universal Tone Receiver CP	NT6X92AA		1	04	16	AP
CPP Msg Protocol CP	NT6X69AA		1	04	17	AP
CPCE Tone Generator CP	NT6X79AA		1	04	18	AP
Host Link Formatter CP	NT6X72AA		1	04	19	AP
DS1 Interface CP	NT6X50AA		1	04	20	AP
Filler Face Plate 0.875	NT0X50AA		1	04	24	AP
Pwr Con +/-5V,12V 50 Amp CP	NT2X70AD		1	04	25	AP
Desig. Strip (NT6X12AA)	P0670793		1	04		AP

RULE:

- AP 1) When PEC NT6X12AA is ordered, these items are provided.

RCC WITH XPM+

PEC CODE: NT6X12AK

CPC CODE: B0237306

| RATING: MD

REPLACES: N/A

| REPLACED BY: No Replacement (RSC-S)

ABBREVIATION NAME: RCC+

ENGINEERING DESCRIPTION: The NT6X12AK packfill equips one RCC module, utilizing the Unified Processor (XPM+). The Unified Processor increases the memory and capacity of the RCC, compared to MP/SP configurations.

REFERENCE DOCUMENTATION: SL6X12AK 00 02

MARKETS: Applicable markets:

US
Canada
CALA

| ISSUE AUTHOR: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: Ron Hogan Dept. 3471 (PPK)

NT6X12AK EMR2-15-RCC-10 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
93 02 22	ECM 678 01	Introduce NT6X12AK packfill.
93 11 16	ECM 678 07	Revise slot positions.
94 01 07	ECM 678 09	Remove NT6X72AB from SL6X12AK.
97 03 07	ECM 618 28	MD per EC 024-96637. (MD NT6X92BB).

The RCC with XPM+ is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler faceplates	NT0X50AA		8	18,32	8,9, 10,11	AP
Unified Processor	NTMX77AA		2	18,32	13	AP
Desig. label (NTMX77AA)	P0735417		2	18,32	13	AP
Time Switch CP	NT6X44AA		2	18,32	15	AP
Universal Tone Receiver	NT6X92BB		2	18,32	16	AP
Terminator Card	NTMX71AA		2	18,32	18R	AP
Desig. Strip (NT6X12AK)	P0713149		2	18,32		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT6X12AK is ordered, these items are provided.

RCC COMMON CP KIT

PEC CODE: NT6X12AL

CPC CODE: B0238160

| RATING: MD

REPLACES: NT6X12AK

| REPLACED BY: No Replacement (RSC-S)

ABBREVIATION NAME: RCC

ENGINEERING DESCRIPTION: The NT6X12AL packfill equips one RCC module but requires that either the Unified Processor or the MP/SP circuit packs are provided seperately. The Messaging CPs and Remote Formatter CPs must also be provided.

REFERENCE DOCUMENTATION: SL6X12AL 00 02

MARKETS: Applicable markets:

US
Canada
CALA

| ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT6X12AL EMR2-15-RCC-11 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 01 07	ECM 678 09	Introduce NT6X12AL EMS.
94 06 17	ECM 618 14	Add NT6X72AB to match SL.
97 03 07	ECM 618 28	MD per EC 024-96637. (MD NT6X72AB and NT6X92BB).

The RCC Common CP Kit is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler faceplates	NT0X50AA		6	18,32	9,10, 24	AP
Time Switch CP	NT6X44AA		2	18,32	15	AP
Universal Tone Receiver	NT6X92BB		2	18,32	16	AP
Remote Formatter CP	NT6X72AB		2	18,32	19	AP
Desig. Strip (NT6X12AL/DG)	P0739325		2	18,32		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT6X12AL is ordered, these items are provided.

RCC COMMON CP

PEC CODE: NT6X12AC

CPC CODE: B0226005

| RATING: MD

REPLACES: N/A

REPLACED BY: Replaced by NT6X12AF.

ABBREVIATION NAME: RCC

ENGINEERING DESCRIPTION: The Remote Cluster Controller Module acts as the remote controller for the LCMs in the RSC.

REFERENCE DOCUMENTATION: MS6X10AC 01 15

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Barry Bond Dept. 3471 (PPK)

MAIN CONTACT: NTI: Barry Bond Dept. 3471 (PPK)

NT6X12AC EMR2-15-RCC-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 09 01	ECM 618 22	Changed rating status to MD per EC 11-17790.

The RCC Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AF		1	X+14	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	9	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X+14	11	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X+14	12	AP
LGC/DTC Processor CP	NT6X45AF		1	X+14	13	AP
Time Switch CP	NT6X44AA		1	X+14	15	AP
Univ. Tone Receiver CP	NT6X92BB		1	X+14	16	AP
CPP MSG Protocol & Tone CP	NT6X69AB		1	X+14	17	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	18	AP
Host Link Formatter CP	NT6X72AA		1	X+14	19	AP
DS-1 Interface Mgs CP	NT6X50AA		1	X+14	20	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Converter +/-5V & 12V	NT2X70AD		1	X+14	25	AP
Designation Strip	P0686331		1	X+14		AP
LGC/DTC Processor CP	NT6X45AF		1	X	8	AP
Filler Face Plate 0.875	NT0X50AA		1	X	9	AP
Mast Proc Memory Plus CP	NT6X47AB		1	X	11	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X	12	AP
LGC/DTC Processor CP	NT6X45AF		1	X	13	AP
Time Switch CP	NT6X44AA		1	X	15	AP
Univ. Tone Receiver CP	NT6X92BB		1	X	16	AP
CPP MSG Protocol & Tone CP	NT6X69AB		1	X	17	AP
Filler Face Plate 0.875	NT0X50AA		1	X	18	AP
Host Link Formatter CP	NT6X72AA		1	X	19	AP
DS-1 Interface Mgs CP	NT6X50AA		1	X	20	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Converter +/-5V & 12V	NT2X70AD		1	X	25	AP
Designation Strip	P0686331		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One RCC Common CP can be assigned on the frame to shelf mounting positions 18 and 32 (i.e. X & X+14 respectively).
- 2) For more information on the frame refer to the section on NT6X10AC (Section EMA2-15-000)

RULES:

- AP 1) When PEC NT6X12AC is ordered, these items are provided.

REMOTE CLUSTER CONTROLLER COMMON CP

PEC CODE: NT6X12AB

CPC CODE: B0220939

| RATING: MD

REPLACES: N/A

REPLACED BY: Replaced by NT6X12CA/AD

ABBREVIATION NAME: RCC

ENGINEERING DESCRIPTION: The Remote Cluster Controller Module acts as the remote controller for the LCM's in the RSC.

REFERENCE DOCUMENTATION: MS6X10AC 01 15

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Barry Bond Dept. 3471 (PPK)

MAIN CONTACT: NTI: Barry Bond Dept. 3471 (PPK)

NT6X12AB EMR2-15-RCC-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 09 01	ECM 618 22	Changed rating status to MD per EC 11-17823.

The Remote Cluster Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45AE		1	X+14	8	AP
Filler Face Plate	NT0X50AA		1	X+14	9	AP
Master Processor Memory CP	NT6X47AB		1	X+14	11	AP
Signal Processor CP	NT6X46AB		1	X+14	12	AP
LGC/DTC Processor CP	NT6X45AE		1	X+14	13	AP
Time Switch CP	NT6X44AA		1	X+14	15	AP
Univ. Tone Receiver Card CP	NT6X92BB		1	X+14	16	AP
CPP MSG Protocall	NT6X69AA		1	X+14	17	AP
CPCE Tone Generator CP	NT6X79AA		1	X+14	18	AP
Host Link Formatter CP	NT6X72AA		1	X+14	19	AP
DS-1 Interface Mgs CP	NT6X50AA		1	X+14	20	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Pwr Converter +/-5V & 12V	NT2X70AD		1	X+14	25	AP
Desig. Strip (NT6X12AB)	P0686330		1	X+14		AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	12R	AP
LGC/DTC Processor CP	NT6X45AE		1	X	8	AP
Filler Face Plate	NT0X50AA		1	X	9	AP
Master Processor Memory CP	NT6X47AB		1	X	11	AP
Signal Processor CP	NT6X46AB		1	X	12	AP
LGC/DTC Processor CP	NT6X45AE		1	X	13	AP
Time Switch CP	NT6X44AA		1	X	15	AP
Univ. Tone Receiver Card CP	NT6X92BB		1	X	16	AP
CPP MSG Protocall	NT6X69AA		1	X	17	AP
CPCE Tone Generator CP	NT6X79AA		1	X	18	AP
Host Link Formatter CP	NT6X72AA		1	X	19	AP
DS-1 Interface Mgs CP	NT6X50AA		1	X	20	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Pwr Converter +/-5V & 12V	NT2X70AD		1	X	25	AP
Desig. Strip (NT6X12AB)	P0686330		1	X		AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	12R	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One RCC Common CP can be assigned on the frame to shelf mounting positions 18 and 32 (i.e. X & X+14 respectively).
- 2) For more information on the frame refer to the section on NT6X10AC (Section EMA2-15-000)

RULES:

- AP 1) When PEC NT6X12AB is ordered, these items are provided.

REMOTE CLUSTER CONTROLLER COMMON CP

NT6X12CA

RATING: MD. Replaces NT6X12AB. Replaced By NT6X12AG

ABBREVIATION NAME: RCC

ENGINEERING DESCRIPTION: The NT6X12CA is the Common Circuit Pack fill for the RCC application.

The Remote Control Cluster (RCC) module is an LTC type peripheral controller module, in a remote site, which is an interface between the DS-1 links to an LGC/LTC at the host and the LCM's, DS-1 trunks, and RMM at the remote site.

REFERENCE DOCUMENTATION: N/A

The Remote Cluster Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Mast Proc Memory Plus CP	NT6X47AB		1	X+14	11	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	15	AP
Univ. Tone Receiver CP	NT6X92BB		1	X+14	16	AP
CPP MSG Protocol & Tone CP	NT6X69AB		1	X+14	17	AP
Host Link Formatter CP	NT6X72AA		1	X+14	19	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Designation Strip	P0698702		1	X+14		AP
Mast Proc Memory Plus CP	NT6X47AB		1	X	11	AP
Sig Proc Memory Plus CP	NT6X46BA		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	15	AP
Univ. Tone Receiver CP	NT6X92BB		1	X	16	AP
CPP MSG Protocol & Tone CP	NT6X69AB		1	X	17	AP
Host Link Formatter CP	NT6X72AA		1	X	19	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Designation Strip	P0698702		1	X		AP

RULES:

- AP 1) When PEC NT6X12CA is ordered, these items are provided.
- 2) One RCC Common CP can be assigned on the frame to shelf mounting positions 18 and 32 (i.e. X & X+14 respectively).
- 3) For more information on the frame refer to the section on NT6X10AC (Section EMA2-15-000).

INTERNATIONAL FRAME RCEI

PEC CODE: NT6X10AE

CPC CODE: B0231484

RATING: MD

REPLACES: N/A

REPLACED BY: N/A

ABBREVIATION NAME: RCEI

ENGINEERING DESCRIPTION: The International Frame Remote Controller Equipment ISDN supports one dual shelf PCM-30 Remote Cluster Controller ISDN (PRCC) and a single Remote Maintenance Module (RMM) shelf. This frame functions as a remote peripheral controller for international applications (outside North America).

REFERENCE DOCUMENTATION: MS6X10AE 00 03

MARKETS: Applicable markets:

Europe
Asia/Pacific
CALA

| ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT6X10AE EMR2-15-RCC-5 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
92 10 01	ECM 645 01	NT6X10AE per ECDs 018-37356, 011-16614
92 10 15	ECM 645 02	Add NT6X10WA/WB Wrng Lst per 011-16614
94 03 18	ECM 645 04	MD NT6X10AE per ECD 011-17783
97 03 14	ECM 645 09	Update NT6X10AE per EC 024-96090, EC 024-95726 and EC 024-96698 as follows: MD NT6X12DD, NT6X12DF, NTBX01AA, NTBX02AA and NT6X45BC. Show NTBX01AB as MD per EC 024-96589. Show NT2X70AE as MD per EC 006-22439.

The International Frame RCEI is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler Panel	P0575239		1	65		AP
Remote Mtce Mod Shelf Assy	NT6X1301		1	51		AP
Remote Mtce Mod Common CP	NT6X13EA	RMM		51		RUL1
Filler Face Plate 1.12	NT0X50AC			51	01-16	RUL1
Filler Face Plate 1.22	NT0X50AG			51	17	RUL1
Filler Face Plate 1.62	NT0X50AE			51	20	RUL1
Maintenance Trunk Card	AR			51	3-16	RUL2
Filler Face Plate 1.12	NT0X50AC			51	3-16	RUL3
Remote Cntrl Eqpt Fr Panel	NT0X28EC	FSP	1	45		AP
PRCC Common CP	NT6X12DB	RCCO		18		RUL4
# PRCC Common CP	NT6X12DD	RCCO		18		RUL4
# PRCC Common CP	NT6X12DF	RCCO		18		RUL4
Wiring List	NT6X10WA			18		RUL4
Wiring List	NT6X10WB			18		RUL4
Remote Cntrl Array Sh Assy	NT6X1210		2	32,18		AP
Filler Face Plate	NT0X50AA			32,18	1-5	RUL3
# D Channel Handler	NTBX02AA			32,18	1-5	RUL7
D Channel Handler	NTBX02BA			32,18	1-5	RUL7
DS-30A LCM Interface CP	NT6X48AA			32,18	6-7	RUL5
Filler Face Plate	NT0X50AA			32,18	6-7	RUL3
# LGC/DTC Processor CP	NT6X45BC			32,18	08	RUL4
LGC/DTC Processor CP	NT6X45BA			32,18	08	RUL4
Filler Face Plate	NT0X50AA			32,18	08	RUL4
Filler Face Plate	NT0X50AA			32,18	09	RUL4
4 MB MP Memory CP	NT6X47AC			32,18	10	RUL4
Filler Face Plate	NT0X50AA			32,18	10	RUL4
F Filler Face Plate	NT0X50AA			32,18	11	RUL4
SP Memory Plus CP	NT6X46BB			32,18	12	RUL4
XPM Plus Processor CP	NTMX77AA			32,18	12	RUL4
XPM Plus Paddleboard	NTMX71AA			32,18	12R	RUL4

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
# LGC/DTC Processor CP	NT6X45BC			32,18	13	RUL4
LGC/DTC Processor CP	NT6X45BA			32,18	08	RUL4
Filler Face Plate	NT0X50AA			32,18	13	RUL4
Domestic Universal Tone Rcvr	NT6X92CA			32,18	14	RUL4
Time Switch CP	NT6X44EA			32,18	15	RUL4
# ISDN Signaling Pre-processor	NTBX01AA			32,18	16	RUL4
# XPM Plus ISDN Sig Preproc CP	NTBX01AB			32,18	16	RUL4
ISDN Signaling Pre-processor	NTBX01BA			32,18	16	RUL4
CPP Message & Tone CP	NT6X69LA			32,18	17	RUL4
Filler Face Plate	NT0X50AA			32,18	18	RUL4
Enhanced PCM 30 Interface CP	NT6X27BB			32,18	20	RUL4
PCM-30 Interface CP	NT6X27AC			32,18	21-23	RUL6
Enhanced PCM-30 Interface CP	NT6X27BB			32,18	21-23	RUL6
Filler Face Plate	NT0X50AA			32,18	21-23	RUL3
Filler Face Plate	NT0X50AA			32,18	24	RUL4
# Pwr Converter +/-5V & 12V	NT2X70AE			32,18	25	RUL11
Pwr Converter +/-5V & 12V	NT2X70AF			32,18	25	RUL11
Cooling Inverter Fan Unit	NT3X90AC			04		RUL9
Desig. Label NT0X50AA	P0578498					RUL8
Desig. Label NT2X70AE	P0698943					RUL8
Desig. Label NT6X27AC	P0734411					RUL8
Desig. Label NT6X27BB	P0739157					RUL8
Desig. Label NT6X44EA	P0705061					RUL8
Desig. Label NT6X48AA	P0626877					RUL8
Desig. Label NT6X69LA	P0705062					RUL8
Desig. Label NT6X92CA	P0677831					RUL8
Desig. Label NTBX01AB	P0735418					RUL8
Desig. Label NTBX02AA	P0697919					RUL8
Desig. Label NTMX77AA	P0735417					RUL8
Logic Cable Return Assy	NT0X0009					RUL10
EMI Hardware	AR					RUL12

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT6X12DD	MD	No Replacement
NT6X12DF	MD	No Replacement
NTBX01AA	MD	NTBX01BA
NTBX01AB	MD	NTBX01BA
NTBX02AA	MD	NTBX02BA
NT2X70AE	MD	NT2X70AF
NT6X45BC	MD	NT6X45BA

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT6X10AE is ordered, these items are provided.

RUL1 1) If service circuits and/or diagnostic circuits are required, provide:

- one (1) NT6X13EA RMM Common CP
(shelf position 51).

2) Otherwise, when NT6X13EA RMM Common CP is not specified for shelf position 51, provide:

- sixteen (16) NT0X50AC Filler Face Plate 1.12,
- one (1) NT0X50AG Filler Face Plate 2.22, and
- one (1) NT0X50AE Filler Face Plate 2.62.

- RUL2 1) Provision service circuits and/or trunks on the RMM shelf, CP positions 03-16, as per customer requirements. Refer to section EMA14-01-000 for details of provisionable cards on the RMM.
- RUL3 1) In each unequipped CP slot, provide:
- one (1) NT0X50AA Filler Face Plate.
- RUL4 1) In offices with the XPM (MP/SP) feature, to equip the PRCC module, provide for each RCEI frame:
- one (1) NT6X12DB/DD PRCC Common CP,
- Or, when NT6X27BB Enhanced PCM-30 Interface CP is required, the following Common CP and CPs:
- one (1) NT6X12DF PRCC Common CP,
 - two (2) NTBX01AA ISDN Signaling Pre-processor CPS,
 - eight (8) NT0X50AA Filler Faceplates .875, (in CP slots 09,11,18,24),
 - two (2) NT6X27BB Enhanced PCM 30 Interface CPS,
 - two (2) NT6X44EA Time Switch CPS,
 - four (4) NT6X45BC LGC/DTC Processor CPS,
 - two (2) NT6X46BB SP Memory Plus CPS,
 - two (2) NT6X47AC 4 MB MP Memory CPS,
 - two (2) NT6X69LA CPP Message & Tone CPS,
 - two (2) NT6X72BA Host Link Formatter CPS, and
 - two (2) NT6X92CA Domestic Universal Tone Rcvr CPS.
- 2) In offices with the XPM Plus (UP) feature, to equip the PRCC module, provide for each RCEI frame:
- one (1) NT6X12DF PRCC Common CP,
 - two (2) NTBX01AB ISDN Signaling Pre-processor CPS,
 - twelve (12) NT0X50AA Filler Face Plates, (in CP slots 08,09,11,13,18,24),
 - two (2) NT6X27BB Enhanced PCM 30 Interface CPS,
 - two (2) NT6X44EA Time Switch CPS,
 - two (2) NTMX77AA XPM Plus Processor CPS,
 - two (2) NTMX71AA XPM Plus Paddleboards,
 - two (2) NT6X69LA CPP Message & Tone CPS,
 - two (2) NT6X72BA Host Link Formatter CPS,
 - two (2) NT6X92CA Domestic Universal Tone Rcvr CPS,
 - one (1) NT6X10WA Wiring List, and
 - one (1) NT6X10WB Wiring List.

- RUL5 1) For RSC offices equipped with an RMM shelf and/or LCMs, LCMIs, or LCMEs, provide:
- four (4) NT6X48AA DS30A LCM Interface CPs.
- 2) The two pairs of NT6X48AA provide interfaces for up to twenty (20) DS30A ports (links) from LCMs, LCMIs, or LCMEs. Assign one member of each pair to ISDN Remote Controller Array RCAI 0 (lower shelf within the module) and the other to RCAI 1 (upper shelf within the module). One member of the pair has the same DS30A ports as the other member of the card pair. Both cards of the pair occupy the same CP position but on different shelves.
- 3) The following is a listing of DS30A ports per NT6X48AA CP location.

	CIRCUIT PACK SLOT	
	6	7
PORT	2	0
PORT	3	1
PORT	6	4
PORT	7	5
PORT	10	8
PORT	11	9
PORT	14	12
PORT	15	13
PORT	18	16
PORT	19	17

- 4) Assign DS30A ports to LCM, LCMI, or LCME in the following order: 19,17,18,16,15,13,14,12,11,9,10,8,7,5,6,4,3, and 2.

- RUL6 1) For the host interface from the RCEI, provide per customer requirements:

- maximum six (6) NT6X27AC/BB PCM-30 Interface CPs (in CP slots 21-23).

These are in addition to the two (2) NT6X27AC PCM-30 Interface CPs always provided with the NT6X12DB/DD PRCC Common CP, or the two (2) NT6X27BB PCM-30 Interface CPs provisioned per RUL4 in CP slot 20.

- 2) One NT6X27AC/BB provides interfaces for up to two (2) PCM-30 links. The following table is a listing of PCM-30 ports (Host I/F) per CP.

	CIRCUIT PACK SLOT			
	20	21	22	23
SHELF POSITION 32	PORTS 2,3	PORTS 6,7	PORTS 10,11	PORTS 14,15
SHELF POSITION 18	PORTS 0,1	PORTS 4,5	PORTS 8,9	PORTS 12,13

- RUL7 1) For each NT6X12DB/DD/DF PRCC Common CP, provide per customer requirements:

- maximum ten (10) NTB02AA D Channel Handler CPs.

- 2) The PRCC has a total of 20 accessible P-side ports shared between DS-30A, and optional Packet Handler interfaces. DCHs are provided in an N+1 sparing arrangement.

- 3) Ports for the DCH should be assigned starting with port 19 and descending, using odd ports only (19,17,15...).

- RUL8 1) Provide the appropriate designation label for each CP provided.

- RUL9 1) For each RCEI frame, provide:

- one (1) NT3X90AC DC Cooling Inverter Unit (at shelf position 04).

RUL10 1) when extending existing offices not equipped with Isolated System Grounding, provide for each RCEI frame:

- one (1) NT0X0009 Logic Return Cable Assembly.

When this frame is equipped for EMI with 8 inch rear extension do not provide this cable assembly.

RUL11 1) For each NT6X12DB/DD/DF PRCC Common CP provided, provide:

- two (2) NT2X70AE Power Converter CPs.

RUL12 1) For EMI applications, provide the following for 8-inch rear extension:

A) Hardware per MS0X32

B) One (1) each of the following Cable Assemblies:

NT6X1440, NT6X1010, NT6X1011, NT6X1013, NT6X1014,
NT7X0101, NT0X9503

C) Miscellaneous hardware:

QTY	PEC	DESCRIPTION
1	P097F814	Screw
2	P0183220	Washer
1	P0069242	Screw
1	P0065747	Nut
3	P097Y579	Lock Washer
1	P0183028	SP Washer
3	P0642031	Cable Bracket
6	P097F813	Screw

REMOTE CLUSTER CONTROLLER COMMON CP

PEC CODE: NT6X12AD

CPC CODE: B0227818

| RATING: MD

REPLACES: N/A

REPLACED BY: Replaced by NT6X12AF.

ABBREVIATION NAME: RCC

ENGINEERING DESCRIPTION: The Remote Cluster Controller Module acts as the remote controller for the LCMs in the RSC. This pack fill is for upgrading and cannot be ordered.

REFERENCE DOCUMENTATION: MS6X10AC 01 15

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Barry Bond Dept. 3471 (PPK)

MAIN CONTACT: NTI: Barry Bond Dept. 3471 (PPK)

NT6X12AD EMR2-15-RCC-6 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 09 01	ECM 618 22	Changed rating status to MD per EC 11-17790.

The Remote Cluster Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Master Processor Memory CP	NT6X47AB		1	X+14	11	AP
Signal Processor CP	NT6X46AC		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	15	AP
Univ. Tone Receiver Card CP	NT6X92BB		1	X+14	16	AP
CPP MSG Protocol	NT6X69AA		1	X+14	17	AP
CPCE Tone Generator CP	NT6X79AA		1	X+14	18	AP
Host Link Formatter CP	NT6X72AA		1	X+14	19	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X12AD)	P0696404		1	X+14		AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	12R	AP
Master Processor Memory CP	NT6X47AB		1	X	11	AP
Signal Processor CP	NT6X46AC		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	15	AP
Univ. Tone Receiver Card CP	NT6X92BB		1	X	16	AP
CPP MSG Protocol	NT6X69AA		1	X	17	AP
CPCE Tone Generator CP	NT6X79AA		1	X	18	AP
Host Link Formatter CP	NT6X72AA		1	X	19	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X12AD)	P0696404		1	X		AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	12R	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One RCC Common CP can be assigned on the frame to shelf mounting positions 18 and 32 (i.e. X & X+14 respectively).
- 2) For more information on the frame refer to the section on NT6X10AC (Section EMA2-15-000)

RULES:

- AP 1) When PEC NT6X12AD is ordered, these items are provided.

REMOTE CLUSTER CONTROLLER COMMON CP

PEC CODE: NT6X12AE

CPC CODE: B0229376

| RATING: MD

REPLACES: N/A

REPLACED BY: Replaced by NT6X12AF.

ABBREVIATION NAME: RCC

ENGINEERING DESCRIPTION: The Remote Cluster Controller Module acts as the remote controller for the LCM's in the RSC. This pack fill is for upgrading and cannot be ordered.

REFERENCE DOCUMENTATION: MS6X10AC 01 15

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Barry Bond Dept. 3471 (PPK)

MAIN CONTACT: NTI: Barry Bond Dept. 3471 (PPK)

NT6X12AE EMR2-15-RCC-7 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 09 01	ECM 618 22	Changed rating status to MD per EC 11-17790.

The Remote Cluster Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Master Processor Memory CP	NT6X47AB		1	X+14	11	AP
Signal Processor CP	NT6X46BA		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	15	AP
Univ. Tone Receiver Card CP	NT6X92BB		1	X+14	16	AP
CPP MSG Protocol	NT6X69AA		1	X+14	17	AP
CPPE Tone Generator CP	NT6X79AA		1	X+14	18	AP
Host Link Formatter CP	NT6X72AA		1	X+14	19	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X12AE)	P0703797		1	X+14		AP
Master Processor Memory CP	NT6X47AB		1	X	11	AP
Signal Processor CP	NT6X46BA		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	15	AP
Univ. Tone Receiver Card CP	NT6X92BB		1	X	16	AP
CPP MSG Protocol	NT6X69AA		1	X	17	AP
CPPE Tone Generator CP	NT6X79AA		1	X	18	AP
Host Link Formatter CP	NT6X72AA		1	X	19	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X12AE)	P0703797		1	X		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One RCC Common CP can be assigned on the frame to shelf mounting positions 18 and 32 (i.e. X & X+14 respectively).
- 2) For more information on the frame refer to the section on NT6X10AC (Section EMA2-15-000).

RULES:

- AP 1) When PEC NT6X12AE is ordered, these items are provided.

REMOTE CLUSTER CONTROLLER COMMON CP

PEC CODE: NT6X12AF

CPC CODE: B0229411

| RATING: MD

REPLACES: N/A

REPLACED BY: Replaced by NT6X12AF.

ABBREVIATION NAME: RCC

ENGINEERING DESCRIPTION: The Remote Cluster Controller Module acts as the remote controller for the LCM's in the RSC. This pack fill is for upgrading and cannot be ordered.

REFERENCE DOCUMENTATION: MS6X10AC 01 15

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: NTI: Barry Bond Dept. 3471 (PPK)

MAIN CONTACT: NTI: Barry Bond Dept. 3471 (PPK)

NT6X12AF EMR2-15-RCC-8 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
95 09 01	ECM 618 22	Changed rating status to MD per EC 11-17790.

The Remote Cluster Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Master Processor Memory CP	NT6X47AB		1	X+14	11	AP
Signal Processor CP	NT6X46AC		1	X+14	12	AP
Time Switch CP	NT6X44AA		1	X+14	15	AP
Univ. Tone Receiver Cd CP	NT6X92BB		1	X+14	16	AP
CPP MSG Protocall	NT6X69AB		1	X+14	17	AP
Host Link Formatter CP	NT6X72AA		1	X+14	19	AP
Filler Face Plate 0.875	NT0X50AA		1	X+14	24	AP
Desig. Strip (NT6X12AF)	P0702108		1	X+14		AP
Comm Periph Ctl Term Bd	NT6X1205		1	X+14	12R	AP
Master Processor Memory CP	NT6X47AB		1	X	11	AP
Signal Processor CP	NT6X46AC		1	X	12	AP
Time Switch CP	NT6X44AA		1	X	15	AP
Univ. Tone Receiver Cd CP	NT6X92BB		1	X	16	AP
CPP MSG Protocall	NT6X69AB		1	X	17	AP
Host Link Formatter CP	NT6X72AA		1	X	19	AP
Filler Face Plate 0.875	NT0X50AA		1	X	24	AP
Desig. Strip (NT6X12AF)	P0702108		1	X		AP
Comm Periph Ctl Term Bd	NT6X1205		1	X	12R	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) One RCC Common CP can be assigned on the frame to shelf mounting positions 18 and 32 (i.e. X & X+14 respectively).
- 2) For more information on the frame refer to the section on NT6X10AC (Section EMA2-15-000).

RULES:

- AP 1) When PEC NT6X12AF is ordered, these items are provided.

REMOTE CLUSTER CONTROLLER (RCC)
COMMON CIRCUIT PACK FILL

PEC CODE: NT6X12AG

| CPC CODE: B0231222

| RATING: MD

| REPLACES: Not Applicable

| REPLACED BY: No Replacement (RSC-S)

ABBREVIATION NAME: RCC

ENGINEERING DESCRIPTION: The NT6X12GA is the Common Circuit Packfill for the Remote Cluster Controller (RCC) application.

The RCC module is an LTC type peripheral controller module, in a Remote Switching Center (RSC). The RCC serves as the interface between the Host Office via C-Side DS-1 Trunks and as the peripheral controller for Lines (LCMs), Service Circuits (RMM), Remote-Off-Remote applications (OPM, RLCM, & RLCC) and DS-1 Trunking (CDO/PBX).

REFERENCE DOCUMENTATION: SL6X12AG 00 01
MS6X10AC 01 13

MARKETS: Applicable markets:

US
Canada
Europe
Asia/Pacific
CALA

| ISSUE AUTHOR: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: Ron Hogan Dept. 3471 (PPK)

NT6X12AG EMR2-15-RCC-9 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 97 03 07	----- ECM 618 28	Previous history not available. MD per EC 024-96637. (MD NT6X72AB and NT6X92BB).

The Remote Cluster Controller (RCC) Common Circuit Pack Fill is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Shelf Des Strip RCC	P0713149		2	18,32		AP
Filler Face Plate .875	NT0X50AA		6	18,32	09-10, 24	AP
4MB Master Proc (MP) Mem CP	NT6X47AC		2	18,32	11	AP
Signal Proc (SP) Memory CP	NT6X46BB		2	18,32	12	AP
Time Switch CP	NT6X44AA		2	18,32	15	AP
Domestic Univ Tone Rec'vr	NT6X92BB	UTR	2	18,32	16	AP
Remote Formatter CP	NT6X72AB		2	18,32	19	AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT6X12AG is ordered, these items are provided.

ISDN REMOTE CLUSTER CONTROLLER COMMON CP

PEC CODE: NT6X12DA

CPC CODE: B0228423

| RATING: MD

| REPLACES: None

| REPLACED BY: NT6X12DC

ABBREVIATION NAME: RCCI

ENGINEERING DESCRIPTION: The ISDN Remote Cluster Controller Common CP provides the necessary circuit packs to equip one RCCI module.

REFERENCE DOCUMENTATION: MS6X10AD 00 10

MARKETS: Applicable markets:

US
Canada

ISSUE AUTHOR: Darrell Deeds Dept. 3471 (PPK)

MAIN CONTACT: Barry Bond Dept. 3471 (PPK)

NT6X12DA EMR2-15-RCCI-1 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 04 18	ECM 610 10	Change to MD per ECD 11-18384 This product is replaced by NT6X12DC.

The ISDN Remote Cluster Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45BC		4	xx	08,13	AP
Filler Faceplate .875	NT0X50AA		4	xx	09,24	AP
MP Memory Plus CP	NT6X47AB		4	xx	10,11	AP
SP Memory Plus CP	NT6X46BA		2	xx	12	AP
Domestic Universal Tone Rcvr	NT6X92BB		2	xx	14	AP
Time Switch CP	NT6X44AA		2	xx	15	AP
ISDN Signaling Pre-processor	NTBX01AA		2	xx	16	AP
CPP Message & Tone CP	NT6X69AB		2	xx	17	AP
Host Link Formatter CP	NT6X72AB		2	xx	19	AP
DS-1 E.F.F. Card CP	NT6X50AB		2	xx	20	AP
Designation Label (NT6X12DA)P0705186			2	xx		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) xx denotes either shelf 18 or 32.

RULES:

- AP 1) When PEC NT6X12DA is ordered, these items are provided.

ISDN REMOTE CLUSTER CONTROLLER COMMON CP

PEC CODE: NT6X12DC

CPC CODE: B0234273

| RATING: MD

REPLACES: NT6X12DA

REPLACED BY: RSC-SONET

ABBREVIATION NAME: RCCI

ENGINEERING DESCRIPTION: The ISDN Remote Cluster Controller Common CP provides the necessary circuit packs to equip one RCCI module. When utilizing the NT6X12DC packfill, the Master Processor, Signal Processor and Messaging Interface circuit packs must be provisioned.

REFERENCE DOCUMENTATION: MS6X10AD 00 10

MARKETS: Applicable markets:

US
Canada

| ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT6X12DC EMR2-15-RCCI-2 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
94 04 18	ECM 610 10	Change to A&M per Product Line Mgr. This product is replaced by RSC-SONET.
97 03 14	ECM 610 16	Change rating to MD per EC 024-96090, EC 024-95726, EC 024-96637 and EC 024-96698.

The ISDN Remote Cluster Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
LGC/DTC Processor CP	NT6X45BC		4	xx	08,13	AP
Filler Faceplate .875	NT0X50AA		4	xx	09,24	AP
Domestic Universal Tone Rcvr	NT6X92BB		2	xx	14	AP
Time Switch CP	NT6X44AA		2	xx	15	AP
ISDN Signaling Pre-processor	NTBX01AA		2	xx	16	AP
Host Link Formatter CP	NT6X72AB		2	xx	19	AP
DS-1 E.F.F. Card CP	NT6X50AB		2	xx	20	AP
Designation Label (NT6X12DC)	P0732155		2	xx		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) xx denotes either shelf 18 or 32.

RULES:

- AP 1) When PEC NT6X12DC is ordered, these items are provided.

ISDN XPM PLUS REMOTE CLUSTER
CONTROLLER COMMON CP

PEC CODE: NT6X12DE

CPC CODE: B0235931

| RATING: MD

REPLACES: None

REPLACED BY: RSC-SONET

ABBREVIATION NAME: RCCI

ENGINEERING DESCRIPTION: The XPM Plus Remote Cluster Controller Common CP provides the circuit packs to equip one XPM Plus RCCI module.

REFERENCE DOCUMENTATION: SL6X12DE 00 01

MARKETS: Applicable markets:

US
Canada

| ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT6X12DE EMR2-15-RCCI-3 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
92 10 15	ECM 610 05	Initial introduction of PEC
93 03 08	ECM 610 08	Correct pack fill based on stocklist
94 04 18	ECM 610 10	Change to A&M per Product Line Mgr. This product is replaced by RSC-SONET.
97 03 14	ECM 610 16	Change rating to MD per EC 024-96090 and EC 024-96637.

The ISDN XPM Plus Remote Cluster Controller Common CP is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Unified Processor	NTMX77AA		1	X+14	13	AP
Filler Faceplate .875	NT0X50AA		2	X+14	09,24	AP
Domestic Universal Tone Rcvr	NT6X92BB		1	X+14	14	AP
Time Switch CP	NT6X44AA		1	X+14	15	AP
Enhanced ISDN Sig Pre-proc	NTBX01AB		1	X+14	16	AP
Host Link Formatter CP	NT6X72AB		1	X+14	19	AP
DS-1 E.F.F. Card CP	NT6X50AB		1	X+14	20	AP
XPM Plus Terminator PB	NTMX71AA		1	X+14	18R	AP
Unified Processor	NTMX77AA		1	X	13	AP
Filler Faceplate .875	NT0X50AA		2	X	09,24	AP
Domestic Universal Tone Rcvr	NT6X92BB		2	X	14	AP
Time Switch CP	NT6X44AA		2	X	15	AP
Enhanced ISDN Sig Pre-proc	NTBX01AB		2	X	16	AP
Host Link Formatter CP	NT6X72AB		2	X	19	AP
DS-1 E.F.F. Card CP	NT6X50AB		2	X	20	AP
XPM Plus Terminator PB	NTMX71AA		2	X	18R	AP
Hook-up wire (5M)	R0109836					AP
Hook-up wire (1M)	R0113096					AP
Designation Strip (NT6X12DE)	P0737805					AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) X denotes either shelf 18

RULES:

- AP 1) When PEC NT6X12DE is ordered, these items are provided.

RCC COMMON CP KIT

PEC CODE: NT6X12AN

CPC CODE: B0241551

| RATING: MD

REPLACES: NT6X12AL

| REPLACED BY: No Replacement (RSC-S)

ABBREVIATION NAME: RCC

ENGINEERING DESCRIPTION: This packfill equips one RCC module but requires that either the Unified Processor or the MP/SP circuit packs are provided separately. The Messaging CPs and Remote Formatter CPs must also be provisioned separately.

REFERENCE DOCUMENTATION: SL6X12AN 00 01
MS6X10AC 01 13

MARKETS: Applicable markets:

US
Canada
CALA

| ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

| MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT6X12AN EMR2-15-RCC8 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 10 17	ECM 618 17	Replaces NT6X12AL. Differences are: 6X72__ and 92__ were in 6X12AL CP Fill but are now provisional per 24-92938. MD per EC 024-96090.
97 03 07	ECM 618 28	

The RCC Common CP Kit is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Filler faceplates	NT0X50AA		6	18,32	09,10, 24	AP
Time Switch CP	NT6X44AA		2	18,32	15	AP
Desig. Strip (NT6X12AN)	P0802683		2	18,32		AP

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

RULES:

AP 1) When PEC NT6X12AN is ordered, these items are provided.

REMOTE CONTROLLER EQUIPMENT FRAME

PEC CODE: NT6X10AA

CPC CODE: B0215959

RATING: MD

REPLACES: Not Applicable

REPLACED BY: NT6X10AC (MD), RSC-Sonet

ABBREVIATION NAME: RCE

ENGINEERING DESCRIPTION: The Remote Controller Equipment Frame houses the Remote Cluster Controller Module (RCC) and the Remote Maintenance Module (RMM) used in a Remote Switching Centre (RSC).

REFERENCE DOCUMENTATION: MS6X10AA 00 08

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: Ron Hogan Dept. 3471 (PPK)

MAIN CONTACT: Ron Hogan Dept. 3471 (PPK)

NT6X10AA EMR2-15-000 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
96 02 07	ECM 618 24	Add RCE filler panel PC KT to NT6X10AA
96 04 26	ECM 618 26	MD NT6X92AA per EC 011-17813. Intro- duce NT6X92EA GTR per Design info. MD NT6X10AA per EC 024-96090.
96 08 09	ECM 618 27	MD NT6X10ZY per EC 024-96698.
97 03 07	ECM 618 28	MD NT6X10AB per EC 024-96090. For record purposes show NT6X12AB as MD per EC 011-17823. Correct Rule 4 part 2 to solve SR RR6A556.
97 10 16	ECM 618 33	MD NT2X11AA per EC 018-51489.

The Remote Controller Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
RCE Frame Supervisory Panel	NT0X28AR	FSP	1	73		AP
Filler Panel	P0643574		1	68		AP
RMM Common CP	NT6X13AB	RMM1	1			RUL2
RMM Shelf Assembly	NT6X1301		1	55		RUL3
Provisionable Cards	AR			55	3-16	RUL4
Filler Face Plate 0.875	NT0X50AC			55	3-16	RUL4
Filler Panel	P0575239			55		AP
#Remote Controller Equip Kit	NT6X10AB		1	55		RUL12
Baffle Assembly	NT6X1003			52		AP
RMM Common CP	NT6X13AB	RMM0	1	38		RUL2
RMM Shelf Assembly	NT6X1301		1	38		AP
Provisionable Cards	AR			38	3-16	RUL4
Filler Face Plate 0.875	NT0X50AC			38	3-16	RUL4
Baffle Assembly	NT6X1003			35		AP
#RCC Common CP	NT6X12AB	RCC	1	04, 21		RUL5
RCA Shelf Assembly	NT6X1201	RCA1	1	21		AP
DS1 Interface CP	NT6X50AA			21	1-5	RUL6
DS30A LCM Interface CP	NT6X48AA			21	6, 7	RUL7
Master Memory Processor CP	NT6X47AB		1	21	9	RUL8
#Universal Tone Receiver CP	NT6X92AA		1	21	14	RUL9
Universal Tone Receiver CP	NT6X92EA		1	21	14	RUL9
Designation Label (NT6X92EA)	P0835224		1	21	14	RUL9
DS1 Interface CP	NT6X50AA			21	21-23	RUL10
Filler Face Plate 0.875	NT0X50AA			21	1-7, 9, 14, 21-23	RUL13
Baffle Assembly	NT6X1003			18		AP
RCA Shelf Assembly	NT6X1201	RCA0	1	04		AP
DS1 Interface CP	NT6X50AA			04	1-5	RUL6
DS30A LCM Interface CP	NT6X48AA			04	6, 7	RUL7
Master Memory Processor CP	NT6X47AB		1	04	9	RUL8
#Universal Tone Receiver CP	NT6X92AA		1	04	14	RUL9
Universal Tone Receiver CP	NT6X92EA		1	04	14	RUL9
Designation Label (NT6X92EA)	P0835224		1	04	14	RUL9
DS1 Interface CP	NT6X50AA			04	21-23	RUL10
Filler Face Plate 0.875	NT0X50AA			04	1-7,	RUL13

Retired Equipment
Remote Controller Equipment Frame

NT6X10AA
EMR2-15-000
Page 3

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
					9, 14, 21-23	
Desig. Label (NT6X50AA)	P0626878			21,04	1-5	RUL11
Desig. Label (NT6X48AA)	P0626877			21,04	6,7	RUL11
#Filler Panel PC Kit	NT6X10ZY			04		RUL15
Logic Return Cable Assembly	NT0X0009					RUL14

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT6X92AA	MD	NT6X92EA
NT6X10ZY	MD	No Replacement
NT6X10AB	MD	No Replacement
NT6X12AB	MD	No Replacement
NT2X11AA	MD	NT2X11BA

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

NOTE: 1) The Remote Switching Centre (RSC) consists of one (1) Remote Cluster Controller (RCC), zero (0), one (1) or two (2) Remote Maintenance Modules (RMM) and up to nine (9) Line Concentrating Modules (LCM) which are assigned to the RCC. The Remote Controller Equipment frame (RCE) houses the RCC, which occupies the two lower shelf positions and the RMM's which occupy the next two shelf position. The LCM's are housed on standard LCE frames. The LCM's, LCE, Line Drawers, Line Cards, Ringing Generators and Line Drawer Cutoff Straps are provisioned as in the host.

- 2) Two (2) RSC's can share one (1) LCE frame, that is, one LCM is assigned to one RCC and the other LCM is assigned to another RCC.

RULES:

- AP 1) When PEC NT6X10AA is ordered, these items are provided.
- 1) The RMM shelf assembly NT6X1301 is always provided for shelf position 38 but is provisionable for shelf position 55. The FSP is always provided.
- RUL1 1) (Reserved for future use)
- RUL2 1) Provide 0,1 or 2 Remote Maintenance Module Common Circuit Packs (NT6X13AB) per customer requirements to support the RMM provisionable service circuits and/or trunks.
- 2) Place the first RMM on shelf position 38 and the second RMM on shelf position 55. It is desirable to equip the first RMM (shelf position 38) fully prior to filling the second RMM, unless otherwise indicated.
 - 3) Each RMM requires 1 RCC port and uses a DS30A link to the RCC.
 - 4) The RMM shelf is shareable between RLCM's, RSC's and RLCM & RSC in the same site.
 - 5) For more information on the RMM common circuit pack fill, refer to the section on RMM (section EMA2-15-RMM-1).
- RUL3 1) Provide one (1) Remote Maintenance Module Shelf Assembly (NT6X1301) to accommodate the second RMM Common Circuit Pack (NT6X13AB) located on shelf position 55 of the RSE frame. The RMM Shelf Assembly for the first RMM (shelf position 38) is always provided with the RCE circuit pack fill NT6X10AA.
- 2) Provide one (1) Remote Controller Equipment Kit (NT6X10AB) when RMM shelf (shelf position 55) is equipped.
- RUL4 1) The following circuit packs are provisionable on the RMM shelf. The total power consumption of the provisionable circuit packs in one RMM must not exceed 110 watts.

PEC	DESCRIPTION	MAX. POWER CONSUMPTION

	Retired Equipment	NT6X10AA
	Remote Controller Equipment Frame	EMR2-15-000

NT0X10AA	Scan CP	6.0 watts
NT2X10AA	LTU A CP	27.0
NT2X11AA	(MD) LTU B CP	13.0
NT2X57AA	SD Card I CP	8.0
NT2X90AB	I/O Test Trunk	2.5
NT3X04AA	I/C Tst Trk for Loc Tst	28.0
NT3X09AA	Remote Metallic Access CP	6.0

For further information on circuit packs that are provisionable on the RMM, refer to the tables section (EMA14-01-000).

2) Unassigned.

3) For each unequipped position (CP position 3-16) provide one NT0X50AA Filler FACE Plate.

RUL5 1) Provide one (1) Remote Cluster Controller Circuit Pack (NT6X12AA) per RSE frame (NT6X10AA). The RCC Common Circuit Pack fill NT6X12AA contains the always provided circuit packs that are mounted on RCA 00 and RCA 01.

2) The RCC is dedicated to one RSC only.

3) For more information on the RCC Common Circuit Pack fill, refer to the section on RCC (Section EMR2-15-RCC-1).

RUL6 1) Provide a maximum of ten (10) NT6X50AA DS1 Interface Circuit Packs for the peripheral face of the Remote Switching Centre (RSC) per customer requirements. These circuit packs are used for digital trunking and/or connection to subtending remotes. The NT6X50AA circuit packs are spread over RCA 00 and RCA 01.

2) One (1) NT6X50AA provides two ports per circuit pack.

3) The following is a listing of DS1 ports (peripheral face) per circuit pack location. Maximum of twenty ports are available.

DS1 CIRCUIT PACK SHELF POSITION AND PORT LOCATION						
SHELF	CIRCUIT PACK POSITION	5	4	3	2	1
21	PORTS	2 & 3	6 & 7	10 & 11	14 & 15	18 & 19

04	PORTS	0 & 1	4 & 5	8 & 9	12 & 13	16 & 17

- 4) For each DS1 circuit pack card position (shelf position 1-5) that is not equipped with a NT6X50AA CP, provide one (1) NT0X50AA Filler Face Plate.

- RUL7 1) Provide a maximum of four (4) NT6X48AA DS30A Interface Circuit Packs per NT6X12AA module as per customer requirements.
- 2) One pair of NT6X48AA provides ten ports per circuit pack, e.g. pos 04-06 & 21-06, 04-07 & 21-07.
- 3) The following table is a listing of DS30A ports per circuit pack location.

	POS 7	POS 6
PORT	0	2
PORT	1	3
PORT	4	6
PORT	5	7
PORT	8	10
PORT	9	11
PORT	12	14
PORT	13	15
PORT	16	18
PORT	17	19

- 4) For each DS30A circuit pack position (shelf pos 6,7) that is not equipped with a NT6X48AA CP, provide one (1) NT0X50AA Filler Face Plate.

- RUL8 1) Provide one (1) Master Memory Processor Circuit Pack (NT6X47AB) when Emergency Stand Alone (ESA) feature is required. Otherwise, provide one (1) NT0X50AA Filler Face Plate for the unequipped position. Check application date for ESA feature.

- RUL9 1) Provide two (2) Universal Tone Receivers as per customer requirements. They are to be placed in slot 14 of RCA 00 and RCA 01. The UTR is a combined service circuit that can perform the function of a Digitone Receiver for lines and a MF Receiver for trunks two (2) UTR cards (NT6X92AA) are always provided in the RCC Common CP (NT6X12AA). An RSC can have 0, 2 or 4 UTR's.

- 2) If the second pair of UTR's are not provided, provide two (2) NT0X50AA Filler Face Plates.
 - 3) All new orders should use the NT6X92EA GTR (upon general availability). Do not mix the NT6X92EA with other types of NT6X92 within the same module. The NT6X92EA is a LSSGR/CCITT compliant tone receiver.
 - 4) Provide one Designation Label P0835224 for each NT6X92EA.
- RUL10
- 1) Provide a maximum of six (6) NT6X50AA DS1 Interface Circuit Packs per NT6X12AA module as per customer requirements. These circuit packs are used for linking the RCC to the host LGC or LTC. The NT6X50AA circuit packs are spread over RCA 00 and RCA 01.
 - 2) One (1) NT6X50AA provides two ports per circuit pack.

- 3) The following is a listing of DS1 ports (host face) per circuit pack location. Position 20 is already provided in the RCC Common CP fill NT6X12AA.

DS1 CIRCUIT PACK SHELF POSITION AND PORT RELATION					
SHELF	CIRCUIT PACK POSITION	20	21	22	23
21	PORTS	2 & 3	6 & 7	10 & 11	14 & 15
04	PORTS	0 & 1	4 & 5	8 & 9	12 & 13

- 4) For each DS1 Circuit Pack card position (card position 1-5) that is not equipped with a NT6X50AA CP, provide one (1) NT0X50AA Filler Face Plate.

RUL11 1) Provide one (1) Designation Label for each NT6X48AA and NT6X50AA ordered.

- 2) Provide two (2) Designation Labels P0626878 for the two (2) DS1 Circuit Packs (NT6X50AA) provided in the RMM Common CP fill (NT6X12AA).

RUL12 1) Provide one (1) Remote Controller Equipment Kit when RMM shelf is equipped in shelf position 55.

RUL13 1) Provide Filler Face Plates, NT0X50AA in unequipped card positions 1-7, 9, 14, 21-23 of shelves 21 and 04.

RUL14 1) Provide one (1) NT0X0009 Logic Return Cable Assembly per frame when extending existing offices not equipped with enhanced grounding per IS0X00. When this frame is equipped for EMI with 8 inch rear extension do not provide this cable assembly.

- 2) For U.S. offices, this frame does not require the provisionable cable assembly when extending a non-ISG office with current grounding methods. Instead a provisionable switchboard cable is run from the NT0X9504 bus bar assembly in each frame to the PDC battery return plate. (Refer to item 1GZ in the switchboard cabling section of the Grounding Requirements (1.3) of Section 35000000.)

RUL15 1) Provision one (1) NT6X10ZY Filler Panel PC Kit per RCC module during conversion from RCC to RCC2 (for field upgrades only). This kit removes the NT6X12 RCC controller shelves and adds two NT0X84AA full shelf filler panels. The NT6X10ZY PC Kit has been rated "Manufacture Discontinued". See ECM586 for RCC to RCC2 conversions.

ISDN REMOTE CONTROLLER EQUIPMENT FRAME

PEC CODE: NT6X10AD

CPC CODE: B0228424

RATING: MD

REPLACES: None

REPLACED BY: RSC-SONET

ABBREVIATION NAME: RCEI

ENGINEERING DESCRIPTION: The ISDN Remote Controller Equipment Frame holds a maximum of one (1) dual shelf ISDN Remote Control Cluster (RCCI) and a maximum of two (2) Remote Maintenance Modules (RMM). This frame is required for an RCCI.

REFERENCE DOCUMENTATION: MS6X10AD 00 12
MS6X10DA 00 01

MARKETS: Applicable markets:
US
Canada

ISSUE AUTHOR: NTI: Ron Hogan Dept. 3471 (PPK)

MAIN CONTACT: NTI: Ron Hogan Dept. 3471 (PPK)

NT6X10AD EMR2-15-001 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
-----	-----	Previous history not available
92 10 15	ECM 610 05	ECD 011-15507 Replace NT6X10AB with NT6X10AJ ADD XPM PLUS Via NT6X12DE RCC PC-Fill
93 03 08	ECM 610 08	Correct EM per stock list NT6X12DE
94 04 18	ECM 610 10	Change to A&M per Product Line Mgr. This product is replaced by RSC-SONET.
96 01 25	ECM 610 13	Change per ECD 024-95280. Add NT6X10ZY Upgrade kit and NT2X70AF PWR CONV.
96 08 09	ECM 610 15	Update NT6X10AD per EC 024-96391 to introduce the new NT6X10DA RMME frame (field product only) and the new NT6X10ZA Product Change Kit to allow field conversions of existing NT6X10AD RCEI frames to the new NT6X10DA RMME. MD EMS NT6X10AD per EC 024-96090. MD NT6X10ZY PC Kit per EC 024-96698.
97 03 14	ECM 610 16	Update NT6X10AD per EC 024-96090, EC 024-96637 and EC 024-95726 as follows: MD NT6X10AB, NT6X10AJ, NT6X12ZB, NT6X12ZE, NT6X12DC, NT6X12DE, NT6X1025 and NTBX02AA. Show NT0X25AV as MD per MS0X25.
97 10 16	ECM 610 17	Update NT6X10AD per EC 018-51489 as follows: MD NT2X10AB, NT2X11AA, and NT2X11AC.

The ISDN Remote Controller Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
# Remote Control Eqpt Kit	NT6X10AB			65		RUL2
# Remote Control Eqpt Kit	NT6X10AJ			65		RUL2
Remote Mtce Mod Common CP	NT6X13AB	RMM		65		RUL2
Maintenance Trunk Card	AR			65	3-16	RUL3
Filler Face Plate 1.12	NT0X50AC			65	3-16	RUL4
Filler Panel	P0575239			65		RUL2
@ RMM Cable Assembly	NT6X1438			65		RUL17
# Power Alarm Cable Assembly	NT6X1025			65		RUL16
Remote Mtce Mod Shelf Assy	NT6X1301		1	51		AP
Remote Mtce Mod Common CP	NT6X13AB	RMM		51		RUL2
Maintenance Trunk Card	AR			51	3-16	RUL3
Filler Face Plate 1.12	NT0X50AC			51	3-16	RUL4
-48V SP Batt Supply Cable	NT6X1438			51		AP
Remote Cntrl Eqpt Fr Panel	NT0X28EC	FSP	1	45		AP
# RCCI Common CP	NT6X12DA	RCCI		32,18		RUL5
# RCCI Common CP	NT6X12DC	RCCI		32,18		RUL5
# RCCI Common CP XPM Plus	NT6X12DE	RCCI		32,18		RUL5
# PC Kit RCCI NT6X12DA-DC	NT6X12ZB			18		RUL21
# PC Kit RCCI NT6X12DC-DE	NT6X12ZE			18		RUL22
# RCE Filler Panel PC Kit	NT6X10ZY			18		RUL23
NT6X10AC/AD to NT6X10DA	NT6X10ZA			18		RUL24
PC Kit						
Remote Cntrl Array Sh Assy	NT6X1206		1	32,18		AP
DS-1 Interface CP	NT6X50AB			32,18	1-5	RUL6
Filler Face Plate 0.875	NT0X50AA			32,18	1-5	RUL4
# D Channel Handler	NTBX02AA			32,18	1-5	RUL10
D Channel Handler	NTBX02BA			32,18	1-5	RUL10
DS-30A LCM Interface CP	NT6X48AA			32,18	6-7	RUL7
Filler Face Plate 0.875	NT0X50AA			32,18	6-7	RUL4
Filler Faceplate	NT0X50AA			32,18	8,10 11,12	RUL18
Master Processor Memory CP	NT6X47AC			32,18	11	RUL18
Signal Processor Memory CP	NT6X46BB			32,18	12	RUL19
Message Interface CP	NT6X69AC			32,18	17	RUL20
CLASS Modem Resource CP	NT6X78AB			32,18	18	RUL15
\$ CLASS Modem Resource CP	NT6X78AA			32,18	18	RUL15
Filler Face Plate 0.875	NT0X50AA			32,18	18	RUL4
DS-1 Interface Mgs CP	NT6X50AB			32,18	21-23	RUL9
Filler Face Plate 0.875	NT0X50AA			32,18	21-23	RUL4
# Pwr Converter +/-5V & 12V	NT2X70AE			32,18	25	RUL14

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Pwr Converter +/-5V & 12V	NT2X70AF			32,18	25	RUL14
Designation Label NT0X50AA	P0578498			32,18	1-7,10 14,18, 21-23	RUL11
Designation Label NT6X50AB	P0690976			32,18	1-5, 21-23	RUL11
Designation Label NTBX02AA	P0697919			32,18	1-5	RUL11
Designation Label NT6X48AA	P0626877			32,18	6-7	RUL11
Designation Label NT6X78AB	P0731980			32	18	RUL11
\$ Designation Label NT6X78AA	P0699568			32,18	18	RUL11
Designation Label NT2X70AE	P0698943			32,18	25	RUL11
Designation Label NT2X70AF	P0809960			32,18	25	RUL11
Cooling Inverter Fan Unit	NT3X90AC			04		RUL12
Logic Cable Return Assy	NT0X0009					RUL13
# Universal Frame (Canada)	NT0X25AV					RUL1
Common Framework (U.S.)	NT0X25AA					RUL1
Earthquake Frame (U.S.)	NT0X25AH					RUL1

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT2X70AE	MD	NT2X70AF
NT6X10ZY	MD	No Replacement
NT6X10AB	MD	NT6X10AJ
NT6X10AJ	MD	No Replacement
NT6X12ZB	MD	No Replacement
NT6X12ZE	MD	No Replacement
NT6X12DC	MD	No Replacement
NT6X12DE	MD	No Replacement
NT6X1025	MD	No Replacement
NTBX02AA	MD	NTBX02BA
NT0X25AV	MD	NT0X25AH
NT2X10AB	MD	NT2X10BA
NT2X11AA	MD	NT2X11BA
NT2X11AC	MD	NT2X11BA

DEV - DEVELOPMENT. These products are in the development phase.
Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

Rating change pending. On new jobs replace with NT6X12DC.

\$ Rating change pending. NT6X78AA is being Replaced with NT6X78AB. Check availability dates prior to provisioning either CP.

@ Rating change pending. On new jobs included with NT6X10AJ.

NOTES:

- 1) The following labels should be provisioned for all RCEI applications:

RCEI FSP Shelf labels: Order one of each P0715228 and P0715229

RCEI PDC Frame labels: Order one of each P0715232, P0715233 and P0715234

RCEI FSP Frame labels: Order one of each P0715235 and P0715236

RULES:

- AP 1) When PEC NT6X10AD is ordered, these items are provided.
- RUL1 1) For Canadian applications, provide one NT0X25AV frame per RCEI.
- 2) For non-earthquake applications in the United States. Provide one (1) NT0X25AA framework per RCEI.
- 3) For earthquake applications in the United States. Provide one (1) NT0X25AH framework per RCEI.
- RUL2 1) NT6X10AB has been MD'ed and replaced by NT6X10AH
- 2) Provide one NT6X13AB RMM Common CP for shelf position 51 if service circuits and/or diagnostic circuits are required. If Telco service circuits and/or diagnostic requirements specify a second RMM Shelf, provision one (1) Remote Control Equipment Product Change Kit (NT6X10AJ) and one (1) Remote Maintenance Module Common CP (NT6X13AB) in shelf position 65. Otherwise provide Filler Panel (P0575239) in shelf position 65.
- 3) If RMM Common CP (NT6X13AB) is not specified for shelf position 51, the following filler face plates must be provisioned.

QTY	PEC	CP POS
2	NT0X50AC	1, 2
1	NT0X50AG	17
1	NT0X50AE	20

14

NT0X50AC

3-16

- RUL3 1) As per Rule 2, provide one(1) Remote Maintenance Module (RMM) Common CP (NT6X13AB) per Telco requirements to support provisionable service circuits and/or trunks. Circuit packs required for locations 03-16 will be provided with job engineering information.
- 2) Slots 13-16 are currently wired together to allow the operation of DRAM circuitry in these slots when the DRA software becomes available for remotes. The NT2X10AB/AC, NT2X11AA/AC/AD Line Test Unit (LTU) pair and the NT2X10BA, NT2X11BA Multi-Test Unit (LTU) pair and the NT2X10BA NT2X11BA Multi-Line Test Unit (MTU) pair are not operational in these slots because of the DRA wiring and therefore should not be provisioned in slots 13-16. All other applicable RMM CPs are allowed in slots 13-16, however, these slots should be reserved whenever possible to allow for the future DRA application. The NT2X10AB, NT2X11AA, and NT2X11AC CPs are rated MD.
- 3) The total -48V power consumption of the provisionable circuit packs in the RMM must not exceed 110 Watts. Power ratings on circuit packs are as follows:

CIRCUIT PACK CODES	MAXIMUM POWER CONSUMPTION

% NT0X10AA	2.0 WATTS
# NT2X10AB	9.0 WATTS
* NT2X10AC	6.7 WATTS
* NT2X10BA	15.0 WATTS
# NT2X11AA	8.5 WATTS
# NT2X11AC	8.5 WATTS
* NT2X11BA	9.0 WATTS
NT2X57AA	4.5 WATTS
NT2X90AC	1.5 WATTS
NT2X90AD	1.5 WATTS
NT3X04AA	28.0 WATTS
* NT3X09AA	4.0 WATTS
* NT3X09BA	11.5 WATTS

- * NOTE: NT3X09BA CP replaces NT3X09AA CP.
 NT2X10BA CP replaces NT2X10AB/AC.
 NT2X11BA CP replaces NT2X11AA/AC/AD.
 Check availability date.

% One NT0X10AA always required in Slot 10 on any RMM Pro
 # NT2X10AB, NT2X11AA, and NT2X11AC are rated MD.

- 4) Provide one (1) Scan Point Circuit Pack (NT0X10AA) for every 14 scan points required in a remote office. When connected to out of office leads, these CP must be located in even card slot positions. One NT0X10 is always required in Slot 10 of any RMM provisioned. One Scan Point is used on the NT0X10 in slot 10, the remaining 13 Scan Points are available as required.
- 5) One Line Test Unit (LTU) consists of one (1) NT2X10AB/AC CP and one (1) NT2X11AA/AC/AD CP. One Multi-Line Test Unit (MTU) consists of one (1) NT2X10BA CP and one (1) NT2X11BA CP. The LTU must be installed with the NT2X10AB/AC occupying an odd card slot followed by the NT2X11AA/AC/AD occupying an even card slot. The MTU must be installed with the NT2X10BA occupying an odd card slot followed by the NT2X11BA occupying an even card slot. The LTU pair and MTU pair are not operational in slots 13 to 16 because of the DRA wiring and therefore should not be provisioned in slots 13 to 16. The NT2X10AB, NT2X11AA, and NT2X11AC CPs are rated MD.
- 6) Provide one (1) Signal Distributor (SD) Circuit Pack (NT2X57AA) for every 14 SD points required in a remote office. When connected to out of office leads, these CP must be located in even card slot positions.
- 7) Provide one (1) Incoming/Outgoing Test Trunk Circuit Pack (NT2X90AC/AD) with an accompanying Balanced Network (NT2X77AA) on an "as required" basis. A NT2X90AC/AD must be combined with a LTU/MTU on a per circuit basis to provide talk monitor feature. When connected to out of office leads, these CP must be located in even card slot positions.

NT2X90AC is for Canadian application only.

NT2X90AD is for U.S. application only.

- 8) Provide one (1) incoming test trunk (NT3X04AA) for each Automatic Electric CO. local test board interface on an "as required" basis.
- 9) Provide one (1) Remote Metallic Access Circuit Pack (NT3X09AA) for two (2) LCMs at the remote site. One NT3X09AA CP has the capacity to interface up to eight NT2X90AD test multiples.

Provide one (1) 8X8 MTA Circuit Pack (NT3X09BA) for four (4) LCM's at the remote site. One NT3X09BA CP has the ca-

capacity to interface up to eight (8) NT2X90AC/AD test multiples. NT3X09BA CP replaces NT3X09AA CP.

- RUL4 1) Provide one (1) NT0X50AC Filler Face Plate 1.12 in each CP position not equipped with a CP provisioned in card slots 03-16 of shelf position 51 and/or 65 (RMM) per RUL3. Provide one (1) NT0X50AA Filler Face Plate 0.875 in each position not provisioned with a CP in card slots 01-05, 06-07, 14, 18 and 20-23 of shelf positions 18 and 32 (RCC) per RUL6, RUL7, RUL8, RUL9 RUL10 and RUL15.
- RUL5 1) Provide one NT6X12DC RCCI Common CP for the RCEI frame. The circuit packs mount in shelf positions 18 and 32. Maximum one (1) RCCI per frame. NT6X12DC replaces NT6X12DA for all new applications.
- 2) When NT6X12DC is provided, slots 10,11,12 and 17 are provisionable. The Master and Signal Processor CPs and Message Interface CP must be provisioned per Rules 18,19 and 20.
- 3) For new RSCI office, with host offices having BCS 34 or later, provide the RCCI XPM Plus Common CP fill kit(NT6X12DE). If the host office is not at BCS 34 or later do not provide the NT6X12DE kit. The NT6X12DE provides the RCCI with the Unified Processor that is required when the host office reaches BCS 34 and later. Refer to RUL22 for the upgrade of an existing RCCI office..
- RUL6 1) Provide maximum nine (9) NT6X50AB, DS1 Interface CP, for the RCCI per customer requirements.
- 2) One NT6X50AB provides interfaces for up to two (2) T-1 spans. The following table is a listing of DS1 ports per circuit pack location.

CP POS	5	4	3	2	1
SHF POS 32	PORTS 2, 3	PORTS 6, 7	PORTS 10, 11	PORTS 14, 15	PORTS 18, 19
SHF POS 18	RESERVE FOR RMM USE	PORTS 4, 5	PORTS 8, 9	PORTS 12, 13	PORTS 16, 17

The DS1 ports in the Trunk Member Table of the DMS switch are referred to as circuits. The DS1 port number equals the circuit number.

- 3) Recommended RCCI DS-1 assignments are as follows: Assign the DS-1 Interface CP in the module such that DS-1 ports (circuits) start from port 2 and increase in a sequential order (2,3,4 ... 17,18,19).

- RUL7 1) Provide four (4) NT6X48AA DS30A LCM Interface CP for RSC offices equipped with RMM shelf(s) and remote LCMS.
- 2) One pair of NT6X48AA provides interfaces for up to ten (10) DS30A ports (links) from LCM's. Assign one member of the pair to RCC 0 (lower shelf within the module) and the other to RCC 1 (upper shelf within the module). One member of the pair has the same DS30A ports as the other member of the card pair. Both cards of the pair occupy the same CP position but on different shelves.
- 3) The following is a listing of DS30A ports per NT6X48AA CP.

	CP POS 6	CP POS 7
PORT	2	0
PORT	3	1
PORT	6	4
PORT	7	5
PORT	10	8
PORT	11	9
PORT	14	12
PORT	15	13
PORT	18	16
PORT	19	17

- 4) An RCC Module must be provisioned with four (4) DS-30A LCM Interface CP (NT6X48AA) (i.e. a CP in card slot 6 & 7). The ports from each LCM should be spread evenly across both circuit packs.
The recommended RCC to LCM DS30A port spread is in the following order 19,17,18,16,15,13,14,12,11,9,10,8,7,5,6,4,3, and 2.
RCC DS-30A ports that are assigned to LCM are to be picked from this block of ports (circuits). Then assign the DS-1 Interface CP in the module (see RUL6).

RUL8 1) Provide one (1) NT0X50AA Filler Face Plate 0.875 in card slot 10 if CP position is not equipped with a circuit pack.

RUL9 1) Provide maximum eight (8) NT6X50AB, DS1 Interface CP for the host interface from the RCCI per customer requirements. Two (2) NT6X50ABs are Always Provided with the NT6X12DA/DC/DE modules.

- 2) One NT6X50AB provides interfaces for up to two (2) T-1 spans. The following table is a listing of DS1 ports (Host I/F) per CP.

CP POS	20	21	22	23
SHF POS 32	PORTS 2, 3	PORTS 6, 7	PORTS 10, 11	PORTS 14, 15
SHF POS 18	PORTS 0, 1	PORTS 4, 5	PORTS 8, 9	PORTS 12, 13

- 3) The first two host links must be ports 0 and 2.

- 4) In Dual RCCI configurations, the first two interlinks must be ports 1 and 3, connected to the mate RCCI ports 1 and 3. Subsequent interlinks can be assigned to any ports.

RUL10 1) Provide a maximum of nine (9) NTB02AA D Channel Handlers per NT6X12DA/DC/DE per customer requirements.

- 2) Provide one (1) P0697919 label for each NTB02AA DCH.

- 3) The RCCI has a total of 20 accessible P-side ports shared between DS-30A, DS-1 and optional Packet Handler interfaces. D Channel Handlers use one P-side port and one DS-1 slot per DCH. The basic rules are:

DS-30A ports + # DS-1 ports + DCH < or = 19 (excl.RMM)
DS-1 slots < or = 9 (1 slot per DCH)

DCHs are provided in an N+1 sparing arrangement. Each provisioned DCH reduces the number of available P-side DS-1 slots by one, limiting the number of P-side slots for DS-1 links to the Packet Handler. The number of P-side slots left over for these links can be derived as follows:
 $S = 9 - (m+1)$ where $m = \#$ active DCH

- 4) Ports for the DCH should be assigned starting with port 19 and descending, using odd ports only (19,17,15...).

RUL11 1) Provide one (1) Designation label for each provisionable CP on shelves 18 and 32 (NT6X12DC includes labels for slots 10-12 and 17, NT6X12DE includes labels for slots 10-13 and 17).

RUL12 1) Provide one (1) DC Cooling Inverter Unit (NT3X90AC) at shelf 04 of each RCEI.

RUL13 1) Provide one (1) NT0X0009 Logic Return Cable Assembly per frame when extending existing offices not equipped with enhanced grounding per IS0X00. When this frame is equipped for EMI with 8 inch rear extension do not provide this cable assembly.

- 2) For U.S. offices, this frame does not require the provisionable cable assembly when extending a non-ISG office with current grounding methods. Instead a provisionable switchboard cable is run from the NT0X9504 bus bar assembly in each frame to the PDC battery return plate. (Refer to item 1GZ in the switchboard cabling section of the Grounding Requirements (1.3) of Section 350000000.)

RUL14 1) Provide two (2) NT2X70AF Power Converters for each NT6X12DA, NT6X12DC or NT6X12DE RCCI module. Mount power converters in slot 25 of the upper and lower shelves.

RUL15 1) The NT6X78AA is being replaced by the NT6X78AB. Check Availability Reports prior to provisioning either CP.

- 2) When the calling Number Delivery/Calling Number Display (CND) feature is ordered, provide two (2) NT6X78AA/AB, CLASS Modem Resource CP, for each RCC module requiring the CND feature. Mount circuit packs in slot 18 of the upper and lower shelves of the peripheral modules.
 - 3) Due to power restrictions, use of NT6X78AA/AB limits the total number of DS-1 cards (NT6X50AB), including both C-side and P-side, to no more than ten (10) per RCCI.
 - 4) Provide one P0699568 label for each NT6X78AA provided or one P0731980 per NT6X78AB provided.
- RUL16 1) This equipment is no longer required to be provisioned - it is now included in SL6X10AJ for new jobs.
- 2) Information included below is for record purposes only and applies to NT6X10AB only: Provide one (1) NT6X1025 Power Alarm Cable Assembly when 2nd RMM is provisioned in position 65.
- RUL17 1) This equipment is no longer required to be provisioned - it is now included in SL6X10AJ for new jobs.
- 2) Information included below is for record purposes only and applies to NT6X10AB only: Provide one (1) RMM Cable Assembly NT6X1438 when the MTU is required.
- RUL18 1) Provide two (2) NT6X47AC MP Memory CPs when RCCI packfill NT6X12DC is applied. These packs mount in slot 11 of both RCCI shelves. No designation label is required since the Always Provided designation strips provided with the NT6X12DC include these packs. These CP are not required with the NT6X12DE.
- 2) Provide NT0X50AA fillers when RCCI packfill NT6X12DC is applied and mount them in slot 10 of both RCCI shelves.
 - 2) When NT6X12DE is provided filler face plates in slots 8,10,11,12.
- RUL19 1) Provide two (2) NT6X46BB SP Memory CPs when RCCI packfill NT6X12DC is applied. These packs mount in slot 12 of both RCCI shelves. No designation label is required since the Always Provided designation strips provided with the NT6X12DC include these packs. This circuit pack is not required with the NT6X12DE.

- 2) When upgrading existing NT6X12DA to NT6X12DC packfill (using the NT6X12ZB kit), the existing NT6X46BA packs may be retained if there is no LCME subtending the RCCI. If there is a subtending LCME or for new orders, the NT6X46BB must be provided.
- RUL20 1) Provide two (2) NT6X69AC Message Interface CPs when RCCI packfill NT6X12DC/DE is applied. These packs mount in slot 17 of both RCCI shelves. No designation label is required since the Always Provided designation strips provided with the NT6X12DC/DE include these packs.
- RUL21 1) Provide one (1) NT6X12ZB RCCI Packfill Upgrade Kit to convert one existing NT6X12DA RCCI packfill to NT6X12DC. This kit makes slots 10, 11, 12 and 17 provisionable. The required Master and Signal Processor CPs and Message Interface CPs must be provided per Rules 18, 19 and 20.
- RUL22 1) Provide one (1) NT6X12ZE RCCI Packfill Upgrade Kit to convert the NT6X12DC to NT6X12DE. The NT6X12DE kit provides the Unified processor CPs (NTMX77AA, NTMX71AA) and the NTB01BA Enhanced ISDN Signaling Pre-Processor. Refer to the NT6X12ZE upgrade kit for complete information on the NT6X12ZE upgrade kit. If the RCCI module is an NT6X12DA then the RCCI must be upgraded to an NT6X12DC first then upgraded to an NT6X12DE.
- RUL23 1) Provision one (1) NT6X10ZY filler panel Pc kit per RCC module during conversion from RCC to RCC2 (For Field Upgrades Only). This kit removes the NT6X12 RCC Controller Shelves and adds two NT0X84AA full shelf filler panels. The NT6X10ZY has been rated "Manufacture Discontinued".
- RUL24 1) Provide one (1) NT6X10ZA PC Kit to convert a NT6X10AD RCEI frame to a NT6X10DA RMME frame. Application of this kit removes the NT6X12 RCC controller shelves from positions 18 & 32, the NT0X28EC FSP from position 45, and also changes the PEC/designation of the frame from NT6X10AD/RCEI to NT6X10DA/RMME.
- 2) See NT6X10DA Engineering Manual Section for provisioning of either NT6X13 RMM shelves or NT0X84AA full shelf filler panels into shelf position 18 or 32, and a NT0X28AS FSP into pos 45 of the new NT6X10DA RMME frame.

REMOTE CONTROLLER EQUIPMENT FRAME

PEC CODE: NT6X10AC

CPC CODE: B0223705

RATING: MD

REPLACES: NT6X10AA

REPLACED BY: RSC-Sonet

ABBREVIATION NAME: RCE

ENGINEERING DESCRIPTION: The Remote Controller Equipment Frame holds a maximum of one (1) dual shelf Remote Control Cluster (RCC) and a maximum of two (2) Remote Maintenance Modules (RMM). This frame is required for an RSC.

REFERENCE DOCUMENTATION: IS6X12 01 10
MS6X10AC 01 18
MS6X10DA 00 01
SL6X10AC 02 10

MARKETS: Applicable markets:

US
Canada
CALA

ISSUE AUTHOR: Ron Hogan Dept. 3471 (PPK)

MAIN CONTACT: Ron Hogan Dept. 3471 (PPK)

NT6X10AC EMR2-15-002 CHANGE HISTORY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
----- 92 10 28	----- ECM 618 05	Previous history not available Implement ECD 011-15507 which includes: - Replacing NT6X10AB w/NT6X10AH - Changing NT6X1438 From Provisionable to AP in RMM 65. - Remove Requirement for NT6X1025. - Remove Requirement for NT6X1438. Resolve ET 12819 Correct NT6X69AC Slot Assignment in RUL11. Resolve ET 13509 Clarify Provisioning The NT6X1438 Cable Resolve ET 13719 Clarify Provisioning The NT6X1438 Cable Resolve ET 14089 Add Engr. Manual Section For NT6X12ZC
93 02 22	ECM 678 01	Add NT6X12AK and NT6X12ZF for XPM+ support on new shipments and upgrades, respectively (EC 011-17959).
93 03 25	ECM 618 08	ET-16459 Remove NT6X1439 Cable from EMA NT6X10AC (EMA2-15-000)
93 12 16	ECM 618 10	This issue incorporates the following: ECD 011-18384: Add NT6X12AL, NT6X12ZG, NT6X45BD, and P0739325. Change EM to New Format. ET-42893 - Change Provisioning Rules for NT2X90AC VS NT2X90AD for Canadian Applications. ET-22778 - Add NT6X45BD ET-22778 - Correct Assignment Rules for NTMX77AA and NTMX71AA. Remove Common Framework (NT0X25AA) and Rename NT0X25AH to Universal Frwk. Remove additional AP-nn notations. ECD 011-19126: Allow NT6X45BD on Mono RCC, Modify NT6X50AA/AB Provisioning Rules.
94 01 07	ECM 678 09	Make NT6X72-- provisionable with the NT6X12AK and NT6X12AL packfills. Declare NT6X45BC A&M, replaced by 45BD and resolve issues from ET 45373.
94 03 21	ECM 618 12	ECD 11-17790 MD NT6X12ZY

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
94 05 20	ECM 618 13	ET 18619 - Added NT0X50AA to section 2 of RUL1 and adjusted slot positions of NT0X50AA in equipment list.
94 06 17	ECM 618 14	Removed NT6X72AB as a provisionable CP since it is in NT6X12AK and AL and was being double shipped. Clarified Kit information.
94 07 05	ECM 618 15	Add NT6X12AF to XPM+ upgrade info. Update Equipment list per latest SL.
94 10 17	ECM 618 17	ET 19189 - Change NT6X13016 to 6X1306 in Equip List, removed RUL3-items now in NT6X10AC SL, updated AP-01 items. ECD 11-20918 MD NT6X12ZF kit -replaced by NT6X02XG, Added NTMX70AB kit. ECD 011-20381 Added NT6X69AD and its Designation Label.
94 12 09	ECM 618 18	ECD 24-92938 Added NT6X12AN RCC CP Fill. Added NT6X12ZJ Upgrade Kit.
95 03 03	ECM 618 19	Added NT6X72AB and NT6X92BC as provisionable CPs.
95 03 21	ECM 618 20	Correct NT0X50AA RUL. Removed XPM PLUS as a requirement for ADSI/SCWID from the RULE for NT6X69AD. This Feature will now work with MP/SP per ECD 24-93299.
95 05 11	ECM 618 21	Updated RCC CP Fill provisioning. MD NT2X70AE and Des Label, replaced by NT2X70AF and P0809960 Des Label per ECD 24-93969.
95 09 01	ECM 618 22	Added NT7X05AA Peripheral Loader CP per ECD 11-21293.
95 10 27	ECM 618 23	MD NT6X12ZD and NT6X72AA.
96 02 07	ECM 618 24	EC 024-95229 - Modify rules for NT6X69AC/AD.
96 04 26	ECM 618 26	EC 024-95280 - Introduction of the NT6X10ZY PC Kit for RCC to RCC2 conversions.
96 08 09	ECM 618 27	Add Universal Ground Point NT6X0250. Introduce the NT6X92EA GTR to the RCE per Design information. Modify Rule 7 per EC 024-95240. MD NT6X10AC per EC 024-96090.
		Update NT6X10AC per EC 024-96391 to

Engineering Manual Section Change History		
DATE	DOCUMENT	REASON
97 03 07	ECM 618 28	introduce the new NT6X10DA RMME frame (field product only) and the new NT6X10ZA Product Change Kit to allow field conversions of existing NT6X10AC RCE frames to the new NT6X10DA RMME. MD NT6X10ZY PC Kit per EC 024-96698. MD NT6X12ZJ, NT6X12AN, NT6X12ZG and NT6X02ZF EMSs and NT6X1022, NT6X12AH, NT6X12AK, and NT6X12AL PECs per EC 024-96090. MD NT6X72AB, NT6X92BB PECs and NT6X12ZC, NT6X12ZZ and NT6X12AG EMSs per EC 024-96637. NT6X10AH is un-MD per EC 018-50958. Removed part 10 of Rule 2 as it is not required for the RSC product. Solved SR RR6A556.
97 05 14	ECM 618 30	Update NT6X10AC Rules 2 and 7 per EPSA recommendations for ILD-R applications.
97 10 16	ECM 618 33	Update NT6X10AC per EC 018-51489 to MD NT2X10AB and NT2X11AA.

The Remote Controller Equipment Frame is comprised of the following:

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Remote Control Eqpt Kit	NT6X10AH			65		RUL1
Misc. Scan Point CP	NT0X10AA			65	10	RUL1
PC Kit RMM RCE 65	PC6X10AH			65		RUL1
Jumper Wire NT-26CR BL/GR pr	R0109478			65		RUL1
Jumper Wire NT-26CR GR/OR pr	R0109503			65		RUL1
# Remote Control Eqpt Kit	NT6X10AB			65		RUL1
Remote Mtce Mod Common CP	NT6X13AB	RMM		65, 51		RUL1
Designation Strip (NT6X13AB)	P0653639		1	65, 51		AP-01
TM Group Codec CP	NT2X59AA		1	65, 51	01	AP-01
RMM Control Card CP	NT6X74AB		1	65, 51	02	AP-01
Maintenance Trunk Card	AR			65, 51	3-16	RUL2
Filler Face Plate 1.12	NT0X50AC			65, 51	3-16	RUL4
Multi O/P Pwr Converter	NT2X09AA		1	65, 51	17	AP-01
Filler Face Plate .875	NT0X50AA		1	65, 51	19	AP-01
Power Converter Comm Feat.	NT2X06AB		1	65, 51	20	AP-01
Filler Panel	P0575239			65		RUL1
Remote Mtce Mod Shelf Assy	NT6X1306		1	51		AP
-48V SP Batt Supply Cable	NT6X1438		1	51		AP
26AWG Ca Assy(RMM Pwr Mon)	NT6X1029		1	51		AP
Remote Cntrl Eqpt Fr Panel	NT0X28AS	FSP	1	45		AP
RCC PC Kit NT6X12AB TO AD	NT6X02ZJ			18		RUL5
# RCC PC Kit NT6X12AC TO CA	NT6X02ZF			18		RUL5
# RCC PC Kit NT6X12AD TO AF	NT6X12ZY			18		RUL5
# RCC PC Kit NT6X12AE TO CA	NT6X12ZY			18		RUL5
# RCC PC Kit NT6X12AD TO AG	NT6X12ZC			18		RUL5
# RCC PC Kit NT6X12AF TO CA	NT6X12ZZ			18		RUL5
# RCC PC Kit NT6X12CA TO AG	NT6X12ZD			18		RUL5
# RCC to XPM+ Change Kit	NT6X12ZF					RUL5
RCC to XPM+ Change Kit	NT6X02XG					RUL5
# RCC PC Kit NT6X12AL TO AN	NT6X12ZJ			18		RUL5
XPM+ Paddleboard Kit	NTMX70AB					RUL21
# Dual RCC PC Kit	NT6X12ZG			18		RUL5
Remote Cntrl Array Sh Assy	NT6X1201		2	32, 18		AP
# Rmt Clster Cntrl Cmmn CP	NT6X12AB	RCC		18		RUL6
# Rmt Clster Cntrl Cmmn CP	NT6X12AC	RCC		18		RUL6
# Rmt Clster Cntrl Cmmn CP	NT6X12AD	RCC		18		RUL6
# Rmt Clster Cntrl Cmmn CP	NT6X12AE	RCC		18		RUL6
# Rmt Clster Cntrl Cmmn CP	NT6X12AF	RCC		18		RUL6
# Rmt Clster Cntrl Cmmn CP	NT6X12CA	RCC		18		RUL6
# RCC Common CP Fill (MP/SP)	NT6X12AG	RCC		18, 32		RUL6

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
# Rmt Clster Cntrl Cmmn CP	NT6X12AK	RCC		18,32		RUL6
# Rmt Clster Cntrl Cmmn CP	NT6X12AL	RCC		18,32		RUL6
# RCC Common CP Fill (XPM+)	NT6X12AN	RCC		18,32		RUL6
Desig. Strip (NT6X12AN)	P0802683		2	18,32		AP-02
Filler faceplates	NT0X50AA		6	18,32	9,10,24	AP-02
Time Switch CP	NT6X44AA		2	32,18	15	AP-02
DS-1 Interface CP	NT6X50AA			32,18	1-5	RUL7
DS-1 Interface CP	NT6X50AB			32,18	1-5	RUL7
Filler Face Plate 0.875	NT0X50AA			32,18	1-5	RUL4
DS-30A LCM Interface CP	NT6X48AA			32,18	6-7	RUL8
Filler Face Plate 0.875	NT0X50AA			32,18	6-8	RUL4
# LGC/DTC Processor CP	NT6X45BC			32,18	8,13	RUL9
LGC/DTC Processor CP	NT6X45BD			32,18	8,13	RUL9
Peripheral Loader CP	NT7X05AA		2	32,18	12	RUL23
Unified Processor CP	NTMX77AA			32,18	13	RUL9
XPM+ Terminator Card	NTMX71AA			32,18	18R	RUL9
# Univ. Tone Receiver Card CP	NT6X92BB			32,18	14,16	RUL10
# Univ. Tone Receiver Card CP	NT6X92BC			32,18	14,16	RUL10
Global Tone Receiver Card CP	NT6X92EA			32,18	14,16	RUL10
Filler Face Plate 0.875	NT0X50AA			32,18	11-14	RUL4
Enhanced Messaging Cp	NT6X69AC		2	32,18	17	RUL11
Enhanced Messaging CP	NT6X69AD		2	32,18	17	RUL11
CLASS Modem Resource CP	NT6X78AB		2	32,18	18	RUL12
Filler Face Plate 0.875	NT0X50AA			32,18	17-18	RUL4
# NT6X50AB Upgrade Kit	NT6X12AH			32,18	20	RUL13
EFF DS-1 Interface CP	NT6X50AB			32,18	20-23	RUL13
DS-1 Interface Mgs CP	NT6X50AA			32,18	20-23	RUL13
Filler Face Plate 0.875	NT0X50AA			32,18	20-23	RUL4
# Pwr Converter +/-5V & 12V	NT2X70AE		2	32,18	25	RUL14
Pwr Converter +/-5V & 12V	NT2X70AF		2	32,18	25	RUL14
# Host Link Formatter CP	NT6X72AB		2	18,32	19	RUL22
# Host Link Formatter CP	NT6X72AA		2	18,32	19	RUL22
# Filler Panel PC Kit	NT6X10ZY			18		RUL24
NT6X10AC/AD to NT6X10DA	NT6X10ZA			18		RUL26
PC Kit						
Designation Label NT0X50AA	P0578498			32,18	1-7, 14, 21-23	RUL15
Designation Label NT6X50AA	P0626878			32,18	1-5, 21-23	RUL15
Designation Label NT6X50AB	P0690976			32,18	1-5, 21-23	RUL15
Designation Label NT6X48AA	P0626877			32,18	6-7	RUL15
Designation Label NT6X45BC	P0713576			32,18	8,13	RUL15
Designation Label NT6X45BD	P0739326			32,18	8,13	RUL15
Designation Label NT7X05AA	P0808071		2	32,18	12	RUL15

EQUIPMENT	PEC	ABBR	QTY	SHF POS	CP POS	RULE
Designation Label NTMX77AA	P0735417			32,18	13	RUL15
Designation Label NT6X69AC	P0710476		2	32,18	17	RUL15
Designation Label NT6X69AD	P0800014		2	32,18	17	RUL15
Designation Label NT6X78AB	P0731980		2	32,18	18	RUL15
# Designation Label NT2X70AE	P0698943		2	32,18	25	RUL15
Designation Label NT2X70AF	P0809960		2	32,18	25	RUL15
Designation Label NT6X72AB	P0733837		2	18,32	19	RUL15
# Designation Label NT6X92BB	P0690565			32,18	14,16	RUL15
# Designation Label NT6X92BC	P0737431			18,32	14,16	RUL15
Designation Label NT6X92EA	P0835224			18,32	14,16	RUL15
# Cooling Inverter Fan Unit	NT3X90AB			04		RUL16
Cooling Inverter Fan Unit	NT3X90AC			04		RUL16
Logic Cable Return Assy	NT0X0009					RUL17
# RCC to RCCI Change Kit	NT6X1022					RUL18
Maintenance Tool Kit	NT0X58AD					RUL19
Remote Alarm Panel	NT0X63AC					RUL20
Universal Ground Point	NT6X0250		1	56R		RUL25

EQUIPMENT FLAGGED '#':

PEC	RATING	REPLACED BY PEC
NT6X12AB	MD	NT6X12CA
NT6X12AC	MD	NT6X12AF
NT6X12AD	MD	NT6X12AF
NT6X12AE	MD	NT6X12AF
NT6X12AF	MD	NT6X12AG
NT6X12CA	MD	NT6X12AG
NT6X10AB	MD	NT6X10AH
NT3X90AB	MD	NT3X90AC
NT6X45BC	A&M	NT6X45BD
NT6X12ZY	MD	No Replacement
NT6X12ZF	MD	NT6X02XG
NT2X70AE	MD	NT2X70AF
P0698943	MD	P0809960
NT6X12ZD	MD	No Replacement
NT6X72AA	MD	NT6X72AB
NT6X92BC	STD*	NT6X92EA
P0690565	STD*	P0835224

PEC	RATING	REPLACED BY PEC
P0737431	STD*	P0835224
NT6X10ZY	MD	No Replacement
NT6X92BB	MD	NT6X92EA
NT6X72AB	MD	No Replacement
NT6X1022	MD	No Replacement
NT6X02ZF	MD	No Replacement
NT6X12ZC	MD	No Replacement
NT6X12ZZ	MD	No Replacement
NT6X12ZJ	MD	No Replacement
NT6X12AG	MD	No Replacement
NT6X12AH	MD	No Replacement
NT6X12AK	MD	NT6X12AN
NT6X12AL	MD	NT6X12AN
NT6X12AN	MD	No Replacement
NT6X12ZG	MD	No Replacement
NT2X10AB	MD	NT2X10BA
NT2X11AA	MD	NT2X11BA

DEV - DEVELOPMENT. These products are in the development phase. Please contact NPPM prior to ordering.

A&M - ADDITIONS & MAINTENANCE. These products can only be ordered if they are already in use in that office.

MD - MANUFACTURED DISCONTINUED. These products are no longer manufactured and cannot be ordered.

NOTES:

- 1) Refer to ECM-125 for RCE Doors, Grilles and Trim Panels.
- 2) STD* in flaglist means that the rating of this PEC is still standard pending change. Check availability before ordering replacement PEC.

RULES:

AP 1) When PEC NT6X10AC is ordered, these items are provided.

AP-01 When PEC NT6X13AB is provided these items are always included. They are shown here for completeness.

AP-02 When PEC NT6X12AN is provided these items are always included. They are shown here for completeness.

RUL1 1) Provide one NT6X13AB RMM Common CP for shelf position 51 if service circuits and/or diagnostic circuits are required. If Telco service circuits and/or diagnostic requirements specify a second RMM Shelf, provision one (1) Remote Control Equipment Kit (NT6X10AH) and one (1) Remote Maintenance Module Common CP (NT6X13AB) in shelf position 65. Otherwise provide Filler Panel (P0575239) in shelf position 65.

2) If RMM Common CP (NT6X13AB) is not specified for shelf position 51, the following filler face plates must be provisioned.

QTY	PEC	CP POS
2	NT0X50AC	1,2
1	NT0X50AG	17
1	NT0X50AG	19
1	NT0X50AA	20
14	NT0X50AC	3-16

3) One NT0X10AA is always required in slot 10 on each NT6X1306 equipped in the office (i.e. RMM 00 to 03 inclusive).

Note: Pin 2A of the RMM Backplane is connected to the NT0X10AA which corresponds to scan point SC100. This scan point must be always reserved for the RMM Power Feed Alarm monitoring function. The remaining 13-scan points are available for other assignments as applicable.

4) NT6X10AH Ship Loose Rule: When the NT6X10AH is shipped loose to the job site always provide the following:

* One PC Kit PC6X10AH to provide a loose wiring diagram. Note: An Engineering Manual Insert for PC6X10AH was not created as this kit documents a Change Procedure only and does not include any hardware.

* Always provision 8.0 meters of R0109478 and 10.0 meters of R0109503 NT-26CR Jumper wire.

RUL2 1) Circuit packs required for locations 03-16 will be provided with job engineering information.

2) Slots 13-16 are currently wired together to allow the operation of DRAM circuitry in these slots when the DRA soft-

ware becomes available for remotes. The NT2X10AA/AB, NT2X11AA/AD Line Test Unit (LTU) pair and the NT2X10BA, NT2X11BA Multi-Test Unit (MTU) pair will not operate in these slots because of the DRA wiring, therefore, should not be provisioned in these slots. The NT2X10AB and NT2X11AA CPs are MD.

- 3) The total -48V power consumption of the provisionable circuit packs in the RMM must not exceed 110 Watts. Power ratings of the circuit packs are as follows:

CIRCUIT PACK CODES	MAXIMUM POWER CONSUMPTION
NT2X59 & 6X74	25.0 WATTS
NT0X10AA	2.0 WATTS
+ NT2X10AA	9.0 WATTS
+ NT2X10AB	9.0 WATTS
% NT2X10BA	20.0 WATTS
+ NT2X11AA	8.5 WATTS
# NT2X11AD	8.5 WATTS
% NT2X11BA	9.0 WATTS
NT2X57AA	4.5 WATTS
* NT2X90AC	1.5 WATTS
NT2X90AD	1.5 WATTS
NT3X04AA	28.0 WATTS
* NT3X09AA	4.0 WATTS
* NT3X09BA	11.5 WATTS
NT4X98AA	19.2 WATTS
NT4X97AA	7.5 WATTS

+ Manufacturer Discontinued.

Standard for U.S. Applications. Rate Change Pending. On New Jobs use the MTU pair NT2X10BA and NT2X11BA. Manufacturer Discontinued for Canadian Applications.

% Standard only for US and Canadian Applications.

* NT3X09BA CP replaces NT3X09AA CP.

* NT2X90AD CP replaces NT2X90AC CP for all applications. Check availability date.

- 4) Always provide one (1) Scan Point Circuit Pack (NT0X10AA) in slot 10 in the RMM shelf. This scan point must be the first point i.e.. SC100; which accounts for 1 of the 14 available Scan Points on the card. The remain 13 Scan

Points may be assigned to other functions as required. Provide one NT0X10AA for every 14 scan points required in a remote office. When connected to out of office leads, these CP must be located in even card slot positions.

- 5) One Line Test Unit (LTU) consists of one (1) NT2X10AA/AB CP and one (1) NT2X11AA/AD CP. One Multi-Line Test Unit (MTU) consists of one (1) NT2X10BA CP and one (1) NT2X11BA CP. Note: Rate change Pending on the LTU Pair therefore, provision MTU pair for all applications. The MTU pair must be installed with the NT2X10BA occupying an odd card slot followed by the NT2X11BA occupying an even card slot. The LTU or the MTU pair is not operational in slots 13 to 16 because of the DRA wiring. The NT2X10BA and NT2X11BA pair will not operate if it is installed onto slot 9 & 10. The NT2X10AB and NT2X11AA CPs are MD.

The MTU pair of one (1) NT2X10BA and one (1) NT2X11BA must be provisioned in the RMM that is connected to the LCM (LCE) containing the ISDN Line Drawer for Remotes.

- 6) Provide one (1) Signal Distributor (SD) Circuit Pack (NT2X57AA) for every 14 SD points required in a remote office. When connected to out of office leads, these CP must be located in even card slot positions.
- 7) Provide one (1) Incoming/Outgoing Test Trunk Circuit Pack (NT2X90AD) with an accompanying Balance Network (NT2X77AA) on an "as required" basis. A NT2X90AD must be combined with a LTU or MTU pair on a per circuit basis to provide talk monitor feature. When connected to circuits terminating outside of the Switching Center, these CPs must be located in even card slot positions.

NT2X90AC is MD and replaced by NT2X90AD for all applications.

- 8) Provide one (1) incoming test trunk (NT3X04AA) for each Automatic Electric CO. local test board interface on an "as required" basis.
- 9) Provide one (1) Remote Metallic Access Circuit Pack (NT3X09AA) for two (2) LCMs at the remote site. One NT3X09AA CP has the capacity to interface up to eight NT2X90AD test multiples. Replaced By NT3X09BA.

Provide one (1) 8X8 MTA Circuit Pack (NT3X09BA) for four (4) LCM's at the remote site. One NT3X09BA CP has the ca-

capacity to interface up to eight (8) NT2X90AC/AD test multiples. NT3X09BA CP replaces NT3X09AA CP.

10) Unassigned.

11) One Metallic Test Unit (MTU) consists of one NT4X97 and one NT4X98 circuit pack. The MTU must be inserted into adjacent locations with the NT4X97 occupying an even number slot and the NT4X98 occupying the odd slot immediately preceeding the NT4X97.

RUL3 1) Reserved for Future Use.

RUL4 1) Provide one (1) Filler Face in unequipped slots on RCE shelf 65, 51, 32, and 18 as follows:

- * NT0X50AC Filler Face Plate 1.12 in each CP position not equipped with a CP provisioned in card slots 03-16 of shelf position 51 and/or 65 (RMM) per RUL2.

- * NT0X50AA Filler Face Plate 0.875 in each position not provisioned with a CP in card slots 01-05, 06-08, 10-14, 17-18, and 20-23 of shelf positions 18 and 32. also provide appropriate number (6 or 8) when XPM+ Upgrade Kit NT6X02XG is provisioned.

- RUL5 1) The RCC Product Change (PC) kits shall be used to upgrade RCCs as defined below:

RCC CP Fill	CHANGE KIT	RESULT	MARKET	NOTE
NT6X12AB NT6X12AB	----- NT6X02ZJ	NT6X12AE NT6X12AD	BRW US	(1) SP & MP Mem UG (BCS27)
NT6X12AC NT6X12AC	----- NT6X02ZF	NT6X12CA NT6X12CA	BRW US	(2) PROCESSOR MEMORY UG
NT6X12AD NT6X12AE	NT6X12ZY NT6X12ZY	NT6X12AF NT6X12CA	US BRW	(3) MSG & CLASS CMR CP UG
NT6X12AD	NT6X12ZC	NT6X12AG	US	(4) MSG & CLASS CMR CP UG
NT6X12AF	NT6X12ZZ	NT6X12CA	BRW/US	(5)
NT6X12CA	NT6X12ZD	NT6X12AG	BRW/US	(6)
NT6X12AG	NT6X02XG	NT6X12AK	BRW/US	(7) XPM PLUS Interim Step
NT6X12 AA/AB/AC/ AD/AE/AF/ AG/	NT6X12ZG	NT6X12AL	BRW/US	(8) Dual RCC Upgrade
NT6X12AL	NT6X12ZJ	NT6X12AN	BRW/US	(9)

Note:

1. Apply the NT6X02ZJ PC Kit when upgrading an office to BCS-27 or to a Dual RSC to increase the peripheral processor memory.

This kit contains two (2) NT6X46AC circuit packs for expanding the processor memory and two (2) new designation strips. This upgrade kit changes slots 8 and 13 to provisionable slots for NT6X45AF cards. Also, slot 10 is changed to allow for the provisioning of the second NT6X47AB (The first NT6X47AB (slot 11) remains AP).

In Canada, Change Application Dept. 1955 BRW will field upgrade existing peripheral modules as required (i.e. Systems Application Engineering will not order this kit). However, after Change Application field upgrades an office, Systems Application Engineering will update the office records to reflect NT6X12AE RCC module and CP changes as above.

For U.S. offices, provide one (1) NT6X02ZJ, Product Change Kit, for each existing RCC module NT6X12AB to be upgraded to NT6X12AD.

NT6X02ZJ Kit upgrades RCC module NT6X12AB to AD, where NT6X12AD is Field Application Only.

2. Apply the NT6X02ZF PC Kit when extending the Enhanced Office Recovery Features (NTXA67 & NTXA66) to the RSC.

Provide one (1) NT6X02ZF, PC Kit on US and Canadian jobs to replace four (4) NT6X45AF with NT6X45BA including Design Labels for Processor memory expansion in the RCC module in the RCE frame. This PC Kit upgrades the NT6X12AC to the NT6X12CA.

3. NT6X12ZY Kit has been MD per ECD 11-17790.

4. Apply NT6X12ZC PC Kit to RCC packfill NT6X12AD to upgrade to the NT6X12AG level. This kit completely re-vamps the NT6X12AD by:

- * Changing the NT6X72AA Formatter CP & Label with NT6X72AB CP & Label
- * Removing the NT6X79AA & NT6X69AA from slots 18 & 17, respectively. Now provisionable in those slots are the CMR CP NT6X78AB and the Messaging CP NT6X69AB/AC as available. The NT6X69AC is required if connected to a Host configured with ENET.
- * Remove NT6X46AC in slot 12 and replace it with NT6X46BB and label.
- * Remove NT6X47AB in Slot 11 and replace it with NT6X47AC and Label.
- * Changes slot 10 from provisionable with a NT6X47AB to always provided with a NT0X50AA and label.

5. Apply NT6X12ZZ to replace the NT6X46AC SP Memory CP with the NT6X46BA power optimized version. Kit converts NT6X12AF to NT6X12CA.

The NT6X12ZZ Kit includes two NT6X46BA and Labels.

The NT6X12CA packfill may be upgraded directly to NT6X12AL as follows. If the site contains NT6X72AAs it should be upgraded to the NT6X12AN packfill level, which makes the NT6X72-- and NT6X92-- packs provisionable. This will negate the need to purchase NT6X72AB packs.

- * Use NT6X02XG Kit - Remove any vintage NT6X45 (shelf 18/32 - pos 8,13). Remove any vintage NT6X46 (shelf 18/32 - pos 12). Remove any vintage NT6X47 (shelf 18/32 - pos 10,11).
- * Order (2) NT6X72AB and (2) Des Labels, P0733837. Use them to replace the (2) NT6X72AA cards (shelf 18/32 - pos 19).
- * Order NT6X12AL Designation Strip, P0739325.
- * NOTICE: If upgrading to NT6X12AN, the NT6X72AA CP does not have to be upgraded.

6. NT6X12ZD Kit has been MD per ECD 11-17790.

7. Apply NT6X02XG to upgrade one NT6X12AD, NT6X12AG or NT6X12CA RCC module to NT6X12AL with XPM PLUS. The Remote Formatter CPs (NT6X72AB) are included in NT6X12AL. Existing NT6X72AAs will work with XPM+ and sites with these CP should be upgraded to the NT6X12AN packfill which makes the NT6X72-- and NT6X92-- packs provisionable. This will negate the need to purchase NT6X72AB packs. With the NT6X12AL packfill:

- * Slots for processors (8-13) become Provisionable.
- * NT6X45--, NT6X46-- and NT6X47-- replaced by NTMX77AA Unified Processor.

8. Provide either the NT6X12ZG kit (for MP/SP configuration) or provide XPM PLUS to all existing Dual RCCs or Mono RCCs that are being upgraded to Dual RCC. NT6X12ZG replaces the existing NT6X45-- packs with NT6X45BD which are required for Dual RCC applications.

9. Apply NT6X12ZJ to upgrade one NT6X12AL to NT6X12AN. The Remote Formatter CPs (NT6X72--) and Univ. Tone Receiver Card CP (NT6X92--) are made provisionable by this Change Kit.

10. For more information concerning upgrading the host processors, refer to ECM 373.

RUL6 1) Provide (1) NT6X12AN RCC XPM+ Common CP for the RCE frame for all new orders. The circuit packs mount in shelf positions 18 and 32. Maximum one (1) RCC per frame. The NT6X12AN replaces the NT6X12AL for all new orders. Note: The processor (MX77), Message Protocol and Tone CPs (NT6X69--), Remote Formatter CPs (NT6X72--), and Universal Tone Receiver Card CPs (NT6X92--) must be provisioned separately.

2) The XPM+ configuration should be used on all new orders except extensions (i.e. Mono to Dual upgrades) to existing MP/SP offices. Provide one NT6X12AG RCC Common CP for the RCE frame for new orders that will utilize the MP/SP processor configuration. The circuit packs mount in shelf positions 18 and 32. Maximum one (1) RCC per frame. The NT6X12AG replaces the NT6X12CA. Note: The processor (NT6X45--) and Message Protocol and Tone CPs (NT6X69--) must be provisioned separately.

3) THE ADSI/SCWID function requires the NT6X69AD vintage of the Message Protocol and Tone CPs and the CLASS Modem Resource CPs (NT6X78--) in addition to the RCC CP Fill (either MP/SP or XPM+) and associated provisional CPs which are the Remote Formatter CPs (NT6X72--) and Universal Tone Receiver Card CPs (NT6X92--).

RUL7 1) Provide a maximum of nine DS1 CPs (either the Standard DS1 CP (NT6X50AA) or the Extended Frame Format (EFF) CP (NT6X50AB)). Choosing the NT6X50AA vs the NT6X50AB is simply a matter of customer preference in the RSC, at this time. NT6X50AAs and ABs may be mixed on the P-Side.

These DS1 Interface CPs are used for Peripheral Side (P-Side) Trunking for the RCC per customer requirements.

2) One NT6X50AA/AB provides interface for up to two (2) T-1 spans. The following table is a listing of DS1 ports per circuit pack location.

CP POS	5	4	3	2	1

SHF POS 32	PORTS 2, 3	PORTS 6, 7	PORTS 10, 11	PORTS 14, 15	PORTS 18, 19
SHF POS 18	PORTS 0, 1*	PORTS 4, 5	PORTS 8, 9	PORTS 12, 13	PORTS 16, 17

The DS1 ports in the Trunk Member Table of the DMS switch are referred to as circuits. The DS1 port number equals the circuit number. Ports 0 & 1 are reserved for control of the RMM shelves and thus cannot be assigned for DS1 trunking.

* - Ports 0 and 1 are not available for peripheral side trunking.

- 3) Recommended RCC (P side) trunking DS-1 assignments are as follows:

Assign the DS-1 Interface CP in the module such that DS-1 ports (circuits) start from port 2 and increase in a sequential order (2,3,4 ... 17,18,19). The RCC DS-1 ports (circuits) that are used by digital trunking are to be picked from this block of ports.

- 4) The NT6X50AB should be used in applications where Fiber spans (Sonet) are part of the link. The NT6X50AA should not be used in Sonet applications.
- 5) The NT6X50AB should be used for ISDN Line Drawer for Remote applications. ISDN Line Drawer for Remotes requires 64kbs clear channel capability on the C-side link back to the Host for a single RCC.

On a Dual RCC, if ILD-R is present on one of the RCCs, you do not need to have NT6X50AB on the interlinks or on the RCC without the ILD-R.

If both RCCs have ILD-R, you need NT6X50AB on the C-side links of both, and also on the interlinks' interface of both RCCs.

- RUL8 1) Provide four (4) NT6X48AA DS30A LCM Interface CP for RSC offices equipped with RMM shelf(s) and remote LCMs.
- 2) One pair of NT6X48AA provides interfaces for up to ten (10) DS30A ports (links) from LCM's. Assign one member of the pair to RCC 0 (lower shelf within the module) and the other

to RCC 1 (upper shelf within the module). One member of the pair has the same DS30A ports as the other member of the card pair. Both cards of the pair occupy the same CP position but on different shelves.

- 3) The following is a listing of DS30A ports per NT6X48AA CP location.

	CP POS 6	CP POS 7
PORT	2	0
PORT	3	1
PORT	6	4
PORT	7	5
PORT	10	8
PORT	11	9
PORT	14	12
PORT	15	13
PORT	18	16
PORT	19	17

- 4) An RCC Module must be provisioned with four (4) DS-30A LCM Interface CP (NT6X48AA) (i.e. a CP in card slot 6 & 7). The ports from each LCM should be spread evenly across both circuit packs.

The recommended RCC to LCM DS30A port spread is in the following order 19,17,18,16,15,13,14,12,11,9,10,8,7,5,6,4,3, and 2.

RCC DS-30A ports that are assigned to LCM are to be picked from this block of ports (circuits). Then assign the DS-1 Interface CP in the module (see RUL7).

- RUL9 1) The RCC may be provisioned with one of three Processor CPs as follows:

PROCESSOR PROCESSOR RULE

NT6X45BC Provide in the RCC on an Additions and Maintenance (A&M) basis only in cases where NTX152AA/AB S/W is not provisioned.

NT6X45BD When XPM+ is not required, provision the CP for the following:

- * For Mono RSCs where NTX152AA/AB is provided.
- * For all Dual RSCs upgrades/extension to MP/SP offices

NTMX77/71 Provision the XPM+ processor on all new orders except extensions (i.e. Mono to Dual upgrades) to existing MP/SP offices.

RUL10 1) Lines and Trunks on a RSC are serviced by an always required Universal Tone Receiver (UTR) CP in card slot 16 of both shelves 18 and 32. The NT6X92BC replaces the NT6X92BB UTR card. If an additional UTR is required for traffic considerations, provide one (1) UTR in card slot 14 of both shelves 18 and 32. However, to allow sufficient current for the operation of the second UTR ; IF THE SECOND UTR IS PROVISIONED IN SLOT 14 THEN THE RCC IS RESTRICTED TO A MAXIMUM OF 12 NT6X50AA TOTAL CIRCUIT PACKS. Provision the NT6X92 Designation Label per RUL15.

- 2) All new orders should use the NT6X92EA GTR (upon general availability). The NT6X92EA GTR will replace all previous NT6X92 tone receivers upon general availability. Do not mix the NT6X92EA with other types of NT6X92 within the same module. The NT6X92EA is a LSSGR/CCITT compliant tone receiver.

RUL11 1) Provide two (2) NT6X69AD packs in BCS36 and higher applications. The NT6X69AD replaces the NT6X69AC in all new applications. The NT6X69AC should only be ordered for BCS35 and lower applications. The NT6X69AD is required for the ADSI/SCWID feature. The ADSI/SCWID feature requires CLASS Modem Resource (NT6X78--), UTR (NT6X92--), and BCS 36+ or above to function. Provision either the NT6X69AD Designation Label, P0800014, or the NT6X69AC Designation Label, P0710476, per RUL15.

RUL12 1) When the calling Number Delivery/Calling Number Display (CND) feature is ordered, provide two (2) NT6X78AB, CLASS

Modem Resource CP, for each RCC module requiring the CND feature.

- 2) Mount circuit packs in slot 18 of the upper and lower shelves of the peripheral modules. NT6X78AB replaces NT6X78AA.
- 3) IF either the NT6X12AD or the NT6X12AE RCC Common CP is used with the older NT6X78AA vintage, the NT6X12ZY PC Kit must also be applied (see RUL5).
- 4) When the CMR Card (NT6X78AA/AB) is provisioned the Messaging cp must be NT6X69AB or later.

- RUL13 1) Provide minimum of two (2) to a maximum eight (8) DS-1 Interface CPs to enable RCC C-Side Connection to the host peripheral. These ports may be either the standard DS-1 Interface CP (NT6X50AA) or the Extended Frame Format (EFF) DS-1 Interface CP (NT6X50AB). Selecting either the NT6X50AA or NT6X50AB is per customer preference. Note: The NT6X50AB does not provide any additional features in the RSC at this time.

The NT6X50AA or NT6X50AB may be provisioned on the C-Side of the RCC or RCC+ based on the following:

- * The Host and the RCC DS-1 CP must match (e.g. If 6X50ABs on C-Side of RCC, then they must terminate on 6X50ABs on the P-Side of the host XPM).
- * NT6X50AB CPs may be provisioned on the C-Side of the RCC effective in BCS-31. RCC Packfills where slot 20 is Always Provided (AP) with a NT6X50AA must be upgraded
- * The span must be datafilled in table LTCPSINV with a tuple from table CARRMTC which contains the correct card type. This is because the NT6X50s for the C-SIDE interface in an RCC which has received a load and static data, take on the parameters from the datafill of the NT6X50s that they interface with in the host LGC/LTC.
- * When an RCC is at ROM level (i.e. the RCC does not contain a load), the NT6X50s for interfacing the C-SIDE T1 spans get their parameters from an address hardwired on the RCC backplane. The strapping on all RCC shelves release AG and below is configured from the factory for NT6X50AA cards for interfacing the C-SIDE T1 spans.

The strapping can be modified to support the NT6X50AB cards with various formatting modes and zero code mode configurations. If an RCC shelf release NT6X12AG or lower, is currently provisioned with NT6X50AB cards for the C-SIDE T1 spans or is to be upgraded with NT6X50AB cards, then CAP 1411 must be applied to the frame or NT6X50AA cards must be installed.

- 2) The following are the four possible configurations which may be found in the field and the recommended corrective actions. The recommended actions are only for RCCs with NT6X45 type processor cards.

Host	Remote	Actions
-----	-----	-----
6X50AA	6X50AA	- Verify that the spans are datafilled in table LTCPSINV with the DEFAULT tuple for RCCs from table CARRMTC
6X50AA	6X50AB	Preferred: (NT6X50ABs on both ends) - If NT6X45BCs or higher are NOT equipped in the RCC, then they MUST be installed by applying CAP 1203 to the RCC - Replace the 6X50AAs in the host w/6X50ABs by applying CAP 1199 - Apply CAP 1411 to the RCC to modify the backplane strapping for NT6X50ABs Optional: (NT6X50AAs on both ends) - Replace 6X50ABs in the remote w/6X50AAs by applying CAP 1532
6X50AB	6X50AA	Preferred: (NT6X50ABs on both ends) - If NT6X45BCs or higher are NOT equipped in the RCC, then they MUST be installed by applying CAP 1203 to the RCC - Replace the NT6X50AAs in the remote with NT6X50ABs by applying CAP 1411 Optional: (NT6X50AAs on both ends) - Replace the 6X50ABs in the host w/6X50AAs by applying CAP 1532
6X50AB	6X50AB	- If NT6X45BCs or higher are NOT equipped in the RCC, then they MUST be installed by applying CAP 1203 to the RCC - Apply CAP 1411 to the RCC to modify the backplane strapping for NT6X50ABs

- 3) Provide one (1) NT6X12AH per RCC equipped with a NT6X12CA or earlier RCC Common CP Fill. See RULE #9. This kit accommodates the following:

- * Remove NT6X50AA in slot 20 and replace it with NT6X50AB and Labels.
- * Provisioning of the NT6X45BC/BD and label, in slots 8 & 13 as well as the NTMX77/71 and Label in slots 13 & 19R.
- * The Kit NT6X12AH contains the following:
 - 2 P0690976 DESIGN LABEL (NT6X50AB)
 - 2 NT6X50AB DS-1 E.F.F. CARD CP

Two (2) NT6X50AAs are always provided with the NT6X12AA/AB/AC modules. One NT6X50AA/AB provides interfaces for up to two (2) T-1 spans.

- 4) The following table is a listing of DS1 ports (Host I/F) per CP.

CP POS	20	21	22	23
SHF POS 32	PORTS 2, 3	PORTS 6, 7	PORTS 10, 11	PORTS 14, 15
SHF POS 18	PORTS 0, 1	PORTS 4, 5	PORTS 8, 9	PORTS 12, 13

- 5) The recommended number of RSCs off of the same host LGC/LTC is two if the following conditions are met:
- a) 2 RSCs from a single configuration
 - b) 1 RSC from a dual configuration and 1 RSC from a single configuration
 - c) Traffic, Real Time and software nodal requirements do not exceed the recommended engineering limits.
- 6) A host LGC/LTC can support a maximum software datafilling of 18 Peripheral side (P-side) software nodes up to BCS-22. BCS-23 and later can support up to 62 P-side nodes. A node is defined as follows:

Host LCMS, RSC LCMS, RMMs, RCC, RLCM, OPM, ESA processor (for the RLCM or OPM) and dummy software nodes.

The DS1 links for a dual RSCs are assigned as follows;

- 0 and 2 - DMS host
- 1 and 3 interlinks to other RCC (1 & 3 respectively)
- 4 - 15 interlinks to other RCC or to DMS host

- RUL14 1) Provide two (2) NT2X70AF Power Converters per NT6X12AG, NT6X12AK, NT6X12AL, or NT6X12AN RCC module. Mount power converters in slot 25 of shelf 18 and 32.
- RUL15 1) Provide one (1) Designation Label corresponding to each CP
- RUL16 1) Provide one (1) Cooling Inverter Fan Unit (NT3X90AB) or DC Cooling Inverter Unit (NT3X90AC) at shelf position 04 for each Remote Equipment Frame (NT6X10AC). NT3X90AB is replaced by NT3X90AC.
- RUL17 1) Provide one (1) NT0X0009 Logic Return Cable Assembly per frame when extending existing offices not equipped with enhanced grounding per IS0X00. When this frame is equipped for EMI with 8 inch rear extension do not provide this cable assembly.
- 2) For U.S. offices, this frame does not require the provisionable cable assembly when extending a non-ISG office with current grounding methods. Instead a provisionable switchboard cable is run from the NT0X9504 bus bar assembly in each frame to the PDC battery return plate. (Refer to item 1GZ in the switchboard cabling section of the Grounding Requirements (1.3) of Section 350000000.)
- RUL18 1) Provide one (1) NT6X1022 Product Change Kit to convert one existing NT6X12CA-equipped RCC to a NT6X12AD-equipped RCCI. This kit includes instructions for reusing some circuit packs from the RCC on the RCCI. Application of this kit also converts the frame from a NT6X10AC RCE to a NT6X10AD RCEI.
- RUL19 1) Provide one (1) NT0X58AD (Maintenance Tool Kit) when maintenance tools are requested by the Telco.
- 2) PEC NT0X58AD consists of the following equipment:
- 1 - Switchboard lamp extractor
 - 1 - Step ladder

- 1 - Lamp cap extractor
- 5 - Lamps
- 1 - Stationary tool
- 5 - Small card circuit pack extractor
- 1 - Portable Lamp
- 1 - Circuit pack extender assembly
- 1 - Fiber stick tool

- RUL20 1) Provision the NT0X63AC (Alarm Panel) quantity as required per Telco request when an Alarm Condition indicator is required at the RSC site.
- RUL21 1) Provide one NTMX70AB XPM+ Paddleboard kit per module to supply the paddleboards and interconnect cables for the backplane wiring upgrade required for XPM+ on RCCs. This kit should only be provided when the customer already has the required NTMX77AA and NTMX71AA packs but still needs backplane wiring. (This would apply when a customer has previously- provided NT6X12ZF kits that have not yet been installed and wants to add the backplane wiring using paddleboards, rather than wire wrap.) Since the contents of NTMX70AB are included in NT6X02XG, both kits should not be provided.
- RUL22 1) Provide (2) NT6X72AB in slot 19, shelves 18 and 32, to provide the RCC with a Host Link Formatting capability. Provision the NT6X72AB Designation Label, P0733837, per RUL15.
- 2) The NT6X72AA is shown as provisionable, even though it has been MD and all new production now uses a latter vintage, to show that it is allowable to use existing NT6X72AAs from older RCC CP Fills when upgrading to the new XPM+ RCC CP Fills.
- RUL23 1) Provision (2) NT7X05AA Peripheral Loader CPs in slot 12, shelves 18 and 32, if the Peripheral Recovery Loader Option is specified. This pack and Option require XPM+ hardware and XPM05 based software, such as NA004.
- 2) Provision the NT7X05AA Designation Labels, P0808071, per RUL15.
- RUL24 1) Provision one (1) NT6X10ZY Filler Panel PC Kit per RCC module during conversion from RCC to RCC2 (for field upgrades only). This kit removes the NT6X12 RCC controller shelves and adds two NT0X84AA full shelf filler panels. This kit has been rated "Manufacture Discontinued".

- RUL25 1) Provide one (1) NT6X0250 Ground Point on new frames for initials and extensions or on existing frames when upgrading to XPM+ and no ground point exists. Only one Ground Point is needed per frame. If the job database does not show the Ground Point as assigned miscellaneous to the frame which is upgrading to XPM+, Equipment Application Engineering shall provide one per frame and contact the System Application Engineer to update the office records. The ground point is required for proper grounding of maintenance personnel when working on the rear of the frame.
- RUL26 1) Provide one (1) NT6X10ZA PC Kit to convert a NT6X10AC RCE frame to a NT6X10DA RMME frame. Application of this kit removes the NT6X12 RCC controller shelves from positions 18 & 32, and also changes the PEC/designation of the frame from NT6X10AC/RCE to NT6X10DA/RMME.
- 2) See NT6X10DA Engineering Manual Section for provisioning of either NT6X13 RMM shelves or NT0X84AA full shelf filler panels into shelf position 18 or 32 of the new NT6X10DA RMME frame.