

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND MARKER PUNCHES

PUNCH DESIGNATION	OS	CARD COORDINATES	PUNCH SOURCE	FUNCTIONAL MEANING
6D TRANSLATOR				
H	164-1	S0 14	D	HOME BOX
To, 1	164-1	S0 15	D	TRANSLATOR TENS
U $\frac{2}{5}$	165-1	S0 17	D	TRANSLATOR UNITS
AC				
AC	164-1	R8 2	D	AREA CODE
AFA				
AFA	164-1	R8 4	D	ALTERNATE FOREIGN AREA
AHA				
AHA	164-1	R8 3	D	ALTERNATE HOME AREA
ALTERNATE ROUTE				
T $\frac{2}{5}$	164-1	R8 5	D	TENS
U $\frac{2}{5}$	164-1	R8 10	D	UNITS
CA4				
CA4	124-1, 136-1	S0 1	D	COME AGAIN - 4 DIGITS
CA5				
CA5	124-1, 136-1	S0 2	D	COME AGAIN - 5 DIGITS
CA6				
CA6	124-1, 136-1	S0 3	D	COME AGAIN - 6 DIGITS
CDC				
CDC $\frac{2}{5}$	164-1	R8 25	D	CONTINUITY AND DIGIT CONTROL
CDLC				
CDLC	164-1	R8 0	M	CANCEL DELAY LOOP CLOSURE
CHANNEL				
L0-9	212-1	S0 50	M	LEFT
R0-9	212-1	R8 50	M	RIGHT
CHK				
CHK	177-1	R1 12	DC	CHECK
CLASS				
To, 1	164-1	S0 22	M	CLASS TENS
$\frac{2}{5}$	164-1	S0 25	M	CLASS UNITS

PUNCH DESIGNATION	OS	CARD COORDINATES	PUNCH SOURCE	FUNCTIONAL MEANING
CODE BARS				
A $\frac{2}{5}$	162-1	S3 0	CT	"A" DIGIT
B $\frac{2}{5}$	162-1	S3 5	CT	"B" DIGIT
C $\frac{2}{5}$	162-1	S3 10	CT	"C" DIGIT
D $\frac{2}{5}$	162-1	S3 15	CT	"D" DIGIT
E $\frac{2}{5}$	162-1	S3 20	CT	"E" DIGIT
F $\frac{2}{5}$	162-1	S3 25	CT	"F" DIGIT
CODE BARS				
CG $\frac{2}{4}$	162-1	S2 22	CT	CARD GROUP
NVO	162-1	S2 21	CT	NOT VIA ONLY
VO	162-1	S2 20	CT	VIA ONLY
CODE CONVERSION				
HN	164-1	R7 12	D	NO CODE CONVERSION HUNDREDS
TN	164-1	R7 13	D	NO CODE CONVERSION TENS
UN	164-1	R7 14	D	NO CODE CONVERSION UNITS
H $\frac{2}{5}$	164-1	R7 15	D	CODE CONVERSION HUNDREDS
T $\frac{2}{5}$	164-1	R7 20	D	CODE CONVERSION TENS
U $\frac{2}{5}$	164-1	R7 25	D	CODE CONVERSION UNITS
CONNECTOR PREFERENCE CONTROL				
CNE	190-1, 198-1	S2 51	M	CONNECTOR EVEN
CNO	190-1, 198-1	S2 50	M	CONNECTOR ODD
ICB	208-1	S2 54	M	INCOMING CONNECTOR BUSY
OCB	207-1	S2 53	M	OUTGOING CONNECTOR BUSY
TCB	198-1	S2 52	M	TRUNK BLOCK CONNECTOR BUSY
CS1, 2				
CS1, 2	162-1	S2 28	CT	CARD SUPPORT

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND
MARKER PUNCHES

RM 3-11 8 SHEETS, SHEET 1

NO.: 4A OR 4M TOLL

ORDER AS BSP ITEM MP-11771

BELL TELEPHONE LABORATORIES, INC.

PRINTED IN U.S.A.

ISSUE 11 WAD 2/2/54
DATE 1-18-52 1-6-54
R.8.8.

MP-11771 8 SHEETS, SHEET 1

ISSUE 1	WAD 2/2/54
DATE 1-18-52	1-6-54
R.B.B.	

TRouble ANALYSIS DATA
INDEX OF DECODER AND MARKER PUNCHES

PUNCH DESIGNATION	OS	CARD COORDINATES	PUNCH SOURCE	FUNCTIONAL MEANING
DIM				
DIM		R6 0	CT	DIM EXCITER LAMP
D				
TR1	160-1, 174-1	S8 8	D	DECODER FIRST TRIAL
TR2	160-1, 174-1	S8 9	D	DECODER SECOND TRIAL
DECODER				
	0-17	178-1	D	DECODER NUMBER
DECODER CONNECTOR				
C0-2	178-1, 220-1	S5 27	DC	CONNECTOR
T0-2	178-1, 220-1	S5 14	DC	TENS
U0-9	178-1, 220-1	S5 17	DC	UNITS
DECODER CROSS				
X 6DT	167-1, 179-1	S8 34	D	CROSS 6 DIGIT TRANSLATION
X CA	124-1, 136-1, 179-1	S8 30	D	CROSS COME AGAIN
X CF	174-1, 179-1	S8 36	D	CROSS CARD FAILURE
X CRK	173-1	S8 33	D	CROSS RELAY CHECK
X DRL	124-1, 136-1, 166-1, 179-1	S8 38	D	CROSS DECODER RELEASE
X IK	160-1, 179-1	S8 32	D	CROSS INTEGRITY CHECK
X REC	179-1	S8 31	D	CROSS RECORDING SIGNAL
X RLT	177-1, 179-1	S8 39	D	CROSS RELEASE AFTER TRANSLATION
X TRB	178-1, 179-1, 220-1	S8 35	D	CROSS TROUBLE RECORDER BUSY
X TRL	178-1, 179-1	S8 37	D	CROSS TROUBLE RELEASE
DECODER INPUT				
3D	124-1, 136-1	S2 0	D	3 DIGIT
5BD	160-1	S2 14	D	NO. 5 BOARD
6D	124-1, 136-1	S2 1	D	6 DIGITS
6DA	124-1, 136-1, 160-1	S2 2	D	6 DIGITS AVAILABLE
CFM	160-1, 175-1	S2 8	D	CARD FAILURE MEMORY
CK1	160-1	S2 7	D	INTEGRITY CHECK
NR0	160-1	S2 6	D	NO REORDER
NV0	162-1	S2 4	D	NOT VIA ONLY

PUNCH DESIGNATION	OS	CARD COORDINATES	PUNCH SOURCE	FUNCTIONAL MEANING
DECODER INPUT (Contd.)				
PF	160-1	S2 9	D	SENDER PREFERENCE
TSA	160-1, 202-1	S2 11	D	TRAFFIC SEPARATION
TSB	160-1	S2 12	D	TRAFFIC SEPARATION
TSC	160-1	S2 13	D	TRAFFIC SEPARATION
VO	162-1	S2 3	D	VIA ONLY
DECODER INPUT CODE				
A $\frac{2}{5}$	162-1	S4 0	D	"A" DIGIT
B $\frac{2}{5}$	162-1	S4 5	D	"B" DIGIT
C $\frac{2}{5}$	162-1	S4 10	D	"C" DIGIT
D $\frac{2}{5}$	162-1	S4 15	D	"D" DIGIT
E $\frac{2}{5}$	162-1	S4 20	D	"E" DIGIT
F $\frac{2}{5}$	162-1	S4 25	D	"F" DIGIT
DECODER PROGRESS				
6DK	162-1	R2 22	CT	6 DIGIT CHECK
ATB	170-1, 172-1	R1 2	D	ALL TRUNKS BUSY
ARS	173-1	R1 4	D	ALTERNATE ROUTE SELECTED
ARST	171-1	R2 12	D	ALTERNATE ROUTE START
CAK	166-1	R2 13	D	COME AGAIN CHECK
CBK	162-1	R2 6	CT	CODE BAR CHECK
CCK	161-1	R2 5	D	CODE CUT-IN CHECK
CK3	160-1	R2 4	D	INTEGRITY CHECK
CKG	155-1, 177-1	R2 0	D	CIRCUIT GROUNDING
COP1	163-1	R2 10	D	CARD OPERATED INDICATION
COP2	163-1	R2 11	D	CARD OPERATED INDICATION

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND
MARKER PUNCHES

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND MARKER PUNCHES

PUNCH DESIGNATION	OS	CARD COORDINATION	PUNCH SOURCE	FUNCTIONAL MEANING
DECODER PROGRESS (Contd.)				
DBS	165-1	R2 18	D	DUPLICATE F.A.T. BOX SHIFT
DCB	170-1, 172-1	R1 0	D	DISCONNECT CODE BARS
DCB2	170-1, 172-1	R1 1	D	DISCONNECT CODE BARS AUXILIARY
DRL	124-1, 136-1, 166-1	R1 8	D	DECODER RELEASE
GPL	173-1	R1 3	D	SUBGROUP LOCK
HBA	167-1	R2 14	D	HOME BOX AUXILIARY
HBI	172-1	R2 29	D	HOME BOX INDICATED
HTK	161-1	R2 1	D	HOME TRANSLATOR CHECK
IT	188-1, 188-2	R2 23	D	INTERTOLL MARKER
ME	168-1	R2 26	D	MARKER ENGAGED
NC	174-1, 175-1	R2 8	D	NO CARD
NCT	162-1, 174-1, 175-1	R2 7	D	NO CARD TIMING
R6D	167-1	R2 20	D	READ 6 DIGITS
RCA	167-1, 170-1, 172-1	R2 28	D	RESTORE CARD ADVANCE
RCD	167-1, 172-1	R2 27	D	RESTORE CARD AND DISCONNECT DECODER
RCRR	173-1	R2 25	D	RESTORE CARD RELAY-TO-RELAY OPERATION
RDRL	166-1	R1 7	D	RESTORE AND DECODER RELEASE
RHC	167-1	R2 19	D	RESTORE HOME CONNECTOR
RLT	177-1	R1 9	D	RELEASE AFTER TRANSLATION
SMC	168-1	R2 3	D	INCOMING TRUNK ON "TC" TRAIN
SMC0	168-1	R2 15	D	SELECT MAGNET CUT-OFF
SMI	168-1	R2 2	D	INCOMING TRUNK ON "IT" TRAIN
TBY	165-1	R2 17	D	TRANSLATOR BUSY
TC	188-2	R2 24	D	TOLL COMPLETING MARKER
TID	165-1	R2 16	D	TRANSLATOR IDLE
TCD	176-1	R1 5	D	TRANSFER CODE DIGITS
TCK	161-1	R2 21	D	TRANSLATOR CONNECTOR CHECK

PUNCH DESIGNATION	OS	CARD COORDINATES	PUNCH SOURCE	FUNCTIONAL MEANING
DECODER PROGRESS (Contd.)				
TKS	170-1, 172-1	R1 6	D	TRUNK SELECTED
VCR	175-1	R2 9	D	VACANT CODE ROUTING
DECODER ROUTE ADVANCE				
GO-3	173-1	S1 10	D	SUBGROUP CHAIN TEST
GB	173-1	S1 14	D	SUBGROUP BUSY
GS0-5	173-1	S1 4	D	TRUNK GROUP GROUND SUPPLY
MB	173-1	S1 16	D	MASTER BUSY
RA	160-1, 170-1	S1 0	D	ROUTE ADVANCE
RA1-3	170-1	S1 1	D	ROUTE ADVANCE CARD TO CARD
RLS	173-1	S1 15	D	CHECK RELEASE OF SUBGROUP "GB" RELAY
RO	173-1	S1 17	D	REORDER
ROIT	168-1	S1 18	D	REORDER REQUEST ON "IT" TRAIN
ROTC	168-1	S1 19	D	REORDER REQUEST ON "TC" TRAIN
DECODER ROUTING INSTRUCTIONS				
CC	170-1	R5 0	D	CARD-TO-CARD
CR	171-1	R5 1	D	CARD-TO-RELAY
FOF	167-1, 191-1	R5 3	D	FOLLOW-WITH-OVERFLOW
FMB	167-1, 191-1	R5 4	D	FOLLOW-WITH-MASTER BUSY
FRO	167-1, 191-1	R5 5	D	FOLLOW-WITH-REORDER
FST	167-1, 191-1	R5 6	D	FOLLOW-WITH-SECOND TRIAL
NPCR	165-1	R5 10	D	NO PRINCIPAL CITY ROUTING
PCR	165-1	R5 9	D	PRINCIPAL CITY ROUTING
RR	171-1	R5 2	D	RELAY-TO-RELAY
DECODER TIME-OUT				
FTD	179-1	S8 52	D	FOREIGN TRANSLATOR DELAY TIMING
MD	179-1	S8 53	D	MARKER DELAY TIMING
TBD	179-1	S8 54	D	TRUNK BLOCK DELAY TIMING
WT	179-1	S8 51	D	WORK TIMER

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND
MARKER PUNCHES

RM 3-11 8 SHEETS, SHEET 3

NO. 4A OR 4M TOLL

BELL TELEPHONE LABORATORIES, INC.

ORDER AS BSP ITEM MP-11771

PRINTED IN U.S.A.

ISSUE 11 WAD 2/2/54
DATE 1-18-52 / 6-54
R.O.B.

8 SHEETS, SHEET 3

MP-11771

ISSUE 1 WAD 2/2/54
 DATE 1-18-52 1-6-54
 R.B.

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND MARKER PUNCHES

<u>PUNCH DESIGNATION</u>	<u>OS</u>	<u>CARD COORDINATION</u>	<u>PUNCH SOURCE</u>	<u>FUNCTIONAL MEANING</u>
DP SDR	0-2	178-1, 220-1	S6 24	DPS DIAL PULSE SENDER
FRAME IDENTIFICATION				
FA-FH	204-1	R3 22	M	FRAME IDENTIFICATION FREQUENCIES LOCKED-IN
IC	205-1	R3 20	M	INCOMING FRAME CUT-IN
OC	205-1	R3 21	M	OUTGOING FRAME CUT-IN
GROUP END				
T0, 1	164-1	R6 23	M	GROUP END TENS
U $\frac{2}{5}$	164-1	R6 25	M	GROUP END UNITS
GROUP START				
T0, 1	164-1	R6 16	M	GROUP START TENS
U $\frac{2}{5}$	164-1	R6 18	M	GROUP START UNITS
INCOMING FRAME GROUP				
I 0-19	205-1	S4 30	M	INCOMING FRAME GROUP
INCOMING FRAME-OUTGOING FRAME				
EV	205-1	S2 40	M	EVEN
OD	205-1	S2 41	M	ODD
EV	205-1	S2 42	M	EVEN
OD	205-1	S2 43	M	ODD
INCOMING SWITCH				
SW 0-9	220-1	S4 50	IL	INCOMING SWITCH
JUNCTOR CONTROL				
JC 0-19	209-1	S0 30	M	JUNCTOR CUT-IN
JUNCTOR PATTERN				
JP 0-17	210-1	R8 30	M	JUNCTOR PATTERN
JPN	210-1	R8 49	M	NORMAL JUNCTOR PATTERN

<u>PUNCH DESIGNATION</u>	<u>OS</u>	<u>CARD COORDINATION</u>	<u>PUNCH SOURCE</u>	<u>FUNCTIONAL MEANING</u>
JUNCTOR WALKING				
CHB	212-1	S2 55	M	ALL CHANNELS BUSY
RTA-RTD	213-1	S2 56	M	CHANNEL RETEST
LATCH MAGNETS				
L 1-4	161-1	S2 15	CT	LATCH MAGNETS
M				
M TR1	190-1	S8 10	M	MARKER FIRST TRIAL
M TR2	190-1	S8 11	M	MARKER SECOND TRIAL
MARKER CROSS				
X	219-1	S7 30	M	MASTER CROSS
XI	205-1, 219-1	S7 38	M	CROSS INCOMING FRAME
XILS	212-1, 219-1	S7 40	M	CROSS INCOMING LINK SLEEVE
XIPS	206-1, 215-1	S7 32	M	CROSS INCOMING PRIMARY SELECT MAGNET
XIS	216-1, 219-1	S7 31	M	CROSS INCOMING TRUNK SLEEVE
XJP	210-1, 219-1	S7 39	M	CROSS JUNCTOR PATTERN
XJS	212-1, 219-1	S7 42	M	CROSS JUNCTOR SLEEVE
XK	210-1, 215-1, 219-1	S7 36	M	CROSS CHECK
XMRL	217-1	S7 53	M	CROSS MARKER RELEASE LEAD
XMS	203-1, 219-1	S7 35	M	CROSS MARKER SLEEVE
XO	205-1, 219-1	S7 37	M	CROSS OUTGOING FRAME
XOLS	210-1, 212-1, 219-1	S7 41	M	CROSS OUTGOING LINK SLEEVE
XRCK	167-1, 170-1, 172-1, 197-1, 219-1	S7 47	M	CROSS REGISTER CHECK LEAD
XSM	215-1, 219-1	S7 43	M	CROSS SELECT MAGNET
XSMI	215-1, 219-1	S7 44	M	CROSS SELECT MAGNET INCOMING
XSMO	215-1, 219-1	S7 45	M	CROSS SELECT MAGNET OUTGOING
XST	198-1, 207-1, 208-1, 219-1	S7 34	M	CROSS START LEAD
XSTR	219-1, 220-1	S7 52	M	CROSS SENDER TROUBLE RELEASE

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND MARKER PUNCHES

<u>PUNCH DESIGNATION</u>	<u>OS</u>	<u>CARD COORDINATION</u>	<u>PUNCH SOURCE</u>	<u>FUNCTIONAL MEANING</u>
MARKER CROSS (Contd.)				
XTB	199-1, 219-1	S7 33	M	CROSS TRUNK BLOCK
XTIF	208-1, 219-1	S7 54	M	CROSS TWO INCOMING FRAMES
XTKS	170-1, 172-1, 202-1, 219-1	S7 48	M	CROSS TRUNK SELECTED LEAD
XTL	193-1, 194-1, 195-1, 219-1	S7 46	M	CROSS TRANSMITTING LEAD
XTOF	207-1, 219-1	S7 55	M	CROSS TWO OUTGOING FRAMES
XTR	219-1, 220-1	S7 50	M	CROSS MARKER TROUBLE RELEASE LEAD
XTRL	174-1, 202-1, 219-1, 220-1	S7 51	M	CROSS TROUBLE RELEASE RELAY OPERATE PATH
MARKER - IT OR COMB.				
0-9	220-1	S7 10	M	MARKER "IT" OR "COMB"
MARKER PROGRESS				
A	216-1	R0 4	M	"A" CHANNEL TEST
AK	215-1	R0 0	M	"A" LINK CHECK
ATB	201-1, 202-1	R1 22	M	ALL TRUNKS BUSY
B	216-1, 217-1	R0 12	M	"B" LINK CONTINUITY AND FALSE GROUND TEST
EK	210-1	R0 1	M	"B" LINK CHECK
C	216-1	R0 5	M	"C" CHANNEL TEST
CCT	216-1	R0 7	M	CHANGE AND CANCEL CONTINUITY TEST
CHS	212-1	R0 3	M	CHANNEL SELECTED
CK	215-1	R0 2	M	"C" LINK CHECK
CKG	190-1	R1 15	M	CHECKING GROUND
CON1	216-1	R0 10	M	CONTINUITY
GCK	200-1	R1 19	M	TRUNK GROUP CUT-OFF CHECK
HMG	216-1	R0 6	M	HOLD MAGNETS GROUNDED
ICK	208-1	R1 26	M	INCOMING CONNECTOR CHECK
IFK	208-1	R1 28	M	INCOMING FRAME CHECK

<u>PUNCH DESIGNATION</u>	<u>OS</u>	<u>CARD COORDINATION</u>	<u>PUNCH SOURCE</u>	<u>FUNCTIONAL MEANING</u>
MARKER PROGRESS (Contd.)				
MRL	217-1	R0 14	M	MARKER RELEASE
MT	216-1	R0 11	M	MARKER TRANSFER
OCK	207-1	R1 25	M	OUTGOING CONNECTOR CHECK
OFK	207-1	R1 27	M	OUTGOING FRAME CHECK
OSC	203-1, 216-1, 217-1	R0 13	M	OUT SLEEVE CONTINUITY
RCK	197-1	R1 16	M	ROUTE REGISTRATION CHECK
RL	217-1	R0 15	M	RELEASE
SCT	203-1, 216-1	R1 21	M	SLEEVE CONTINUITY TEST
SG	203-1, 216-1	R1 24	M	SLEEVE GUARD
SK	214-1	R1 29	M	SELECT MAGNET LOCK-OUT CHECK
T1R1	216-1	R0 9	M	"T1" AND "R1" CONTINUITY TEST "OK"
TB	202-1	R1 23	M	TRUNKS BUSY
TBK	199-1	R1 18	M	TRUNK BLOCK CHECK
TCK	198-1	R1 17	M	TRUNK BLOCK CONNECTOR CHECK
TKS	170-1, 172-1, 202-1	R1 20	M	TRUNK SELECTED
TR	216-1	R0 8	M	"T" AND "R" CONTINUITY TEST "OK"
MARKER REGISTRATION				
ODG	176-1	R4 11	M	"0" DIGITS
4DG	176-1	R4 12	M	"4" DIGITS
5DG	176-1	R4 13	M	"5" DIGITS
CLCT	176-1	R4 10	M	CANCEL LOOP CONTINUITY TEST
FOF	191-1	R4 3	M	FOLLOW-WITH-OVERFLOW
FMB	191-1	R4 4	M	FOLLOW-WITH-MASTER BUSY
FRO	191-1	R4 5	M	FOLLOW-WITH-REORDER
FST	191-1	R4 6	M	FOLLOW-WITH-SECOND TRIAL
HLD	170-1, 172-1, 191-1	R4 7	M	HOLD
MB	171-1, 190-1	R4 0	M	MASTER BUSY
MLCT	176-1	R4 9	M	MAKE LOOP CONTINUITY TEST
NDG	176-1	R4 14	M	NO DIGITS
PRO	181-1	R4 2	M	OVERLOAD ANNOUNCEMENT

TROUBLE ANALYSIS DATA

INDEX OF DECODER AND MARKER PUNCHES

RM 3-11

8 SHEETS, SHEET 5

NO. 4A OR 4M TOLL

ORDER AS BSP ITEM MP-11771

BELL TELEPHONE LABORATORIES, INC.

PRINTED IN U.S.A.

ISSUE 11 WAD 2/2/54
DATE 1-18-52 1-6-54
R.B.B.

MP-11771 8 SHEETS, SHEET 5

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND MARKER PUNCHES

<u>PUNCH DESIGNATION</u>	<u>OS</u>	<u>CARD COORDINATION</u>	<u>PUNCH SOURCE</u>	<u>FUNCTIONAL MEANING</u>	<u>PUNCH DESIGNATION</u>	<u>OS</u>	<u>CARD COORDINATION</u>	<u>PUNCH SOURCE</u>	<u>FUNCTIONAL MEANING</u>
MARKER REGISTRATION (Contd.)					MARKER-SENDER TRANSMITTING (Contd.)				
RO	190-1	R4 1	M	REORDER	SKA	194-1	R0 20	M	SKIP CHECK
MARKER REGISTRATION CODE CONVERSION					TA	195-1	R0 23	M	CODE CONVERSION TENS CHECK
CC H $\frac{2}{5}$	195-1	R5 15	M	CODE CONVERSION HUNDREDS	TB	195-1	R0 24	M	CODE CONVERSION TENS CHECK
CC HN	195-1	R5 12	M	NO CODE CONVERSION HUNDREDS	TSA	170-1, 172-1	R0 27	M	TRUNK SELECTED CHECK
CC T $\frac{2}{5}$	195-1	R5 20	M	CODE CONVERSION TENS	UA	195-1	R0 25	M	CODE CONVERSION UNITS CHECK
CC TN	195-1	R5 13	M	NO CODE CONVERSION TENS	UB	195-1	R0 26	M	CODE CONVERSION UNITS CHECK
CC U $\frac{2}{5}$	195-1	R5 25	M	CODE CONVERSION UNITS	MARKER TIME-OUT				
CC UN	195-1	R5 14	M	NO CODE CONVERSION UNITS	TM1	219-1	S8 57	M	TIME MEASURE "1"
MARKER ROUTE ADVANCE					TM2	219-1	S8 58	M	TIME MEASURE "2"
OF	202-1	S1 27	M	OVERFLOW	TM3	219-1	S8 59	M	TIME MEASURE "3"
MBR	202-1	S1 28	M	MASTER BUSY ROUTE	TMC	218-1	S8 56	M	TIMING CONTROL
ROR	202-1	S1 29	M	REORDER ROUTE	MARKER - TC				
RS1	202-1	S1 25	M	ROUTE SWITCHING	0-9	220-1	S7 20	M	MARKER "TC"
RS3	202-1	S1 26	M	ROUTE SWITCHING	MFP SENDER				
MARKER-SENDER TRANSMITTED CODE CONVERSION					0-2	178-1, 220-1	S6 27	MFS	MULTIFREQUENCY SENDER
CC H $\frac{2}{5}$	195-1	R4 15	M	CODE CONVERSION HUNDREDS	MS				
CC T $\frac{2}{5}$	195-1	R4 20	M	CODE CONVERSION TENS	MS 0-19	203-1	S6 40	M	MARKER SLEEVE
CC U $\frac{2}{5}$	195-1	R4 25	M	CODE CONVERSION UNITS	MS 20-39	203-1	S5 40	M	MARKER SLEEVE
MARKER-SENDER TRANSMITTING					NAC				
CDA	193-1	R0 19	M	CONTINUITY AND DIGIT "A" CHECK	NAC	164-1	R8 1	D	NO AREA CODE
CLA	193-1	R0 16	M	FIRST CLASS CHECK	NCA				
CLB	193-1	R0 17	M	SECOND CLASS CHECK	NCA	166-1	S0 0	D	NO COME AGAIN
CLC	193-1	R0 18	M	THIRD CLASS CHECK	NSK				
DGA	194-1	R0 28	M	DIGIT CONTROL CHECK	NSK	164-1, 176-1	R7 9	M	NO SKIP
HA	195-1	R0 21	M	CODE CONVERSION HUNDREDS CHECK					
HB	195-1	R0 22	M	CODE CONVERSION HUNDREDS CHECK					

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND MARKER PUNCHES

PUNCH DESIGNATION	OS	CARD COORDINATION	PUNCH SOURCE	FUNCTIONAL MEANING
OGT APP.				
IT	164-1	S0 4	D	INTERTOLL
ITC	164-1	S0 6	D	INTERTOLL AND TOLL COMPLETING
TC	164-1	S0 5	D	TOLL COMPLETING
OUTGOING FRAME GROUP				
O 0-19	205-1	S1 30	M	OUTGOING FRAME GROUP
OUTGOING SWITCH				
SW 0-9	220-1	S1 50	OL	OUTGOING SWITCH
R6DT				
R6DT	167-1	R0 29	D	RECORDED 6 DIGIT TRANSLATION
RD				
RD	185-1	R6 1	CT	READ RELAY
ROUTING INST.				
RI $\frac{2}{5}$	164-1	R8 20	D	ROUTING INSTRUCTION
SDR. FR. TENS				
TO-9	178-1, 220-1	S6 4	DPS MFS	SENDER FRAME TENS
SDR. FR. UNITS				
UO-9	178-1, 220-1	S6 14	DPS MFS	SENDER FRAME UNITS
SELECT MAGNET				
0-9	206-1, 215-1	S3 30	M	SELECT MAGNET INCOMING PRIMARY BAY
10-19	206-1, 215-1	S3 40	M	SELECT MAGNET INCOMING FIRST PRIMARY EXTENSION BAY
20-29	206-1, 215-1	S3 50	M	SELECT MAGNET INCOMING SECOND PRIMARY EXTENSION BAY
30-39		S2 30	M	SELECT MAGNET INCOMING THIRD PRIMARY EXTENSION BAY

PUNCH DESIGNATION	OS	CARD COORDINATION	PUNCH SOURCE	FUNCTIONAL MEANING
SK3				
SK3	164-1, 176-1	R7 10	M	SKIP "3"
SK6				
SK6	164-1, 176-1	R7 11	M	SKIP "6"
SOURCE OF RECORD				
C	228-1	S8 2	TR	CONTROLLER
CT		S8 6	TR	CONTROLLER TESTING
D	228-1	S8 0	TR	DECODER
DT		S8 3	TR	DECODER TEST
M	228-1	S8 1	TR	MARKER
MT		S8 4	TR	MARKER TEST
TV		S8 5	TR	TRANSLATION VERIFICATION
TB				
TB $\frac{2}{5}$	192-1	S6 35	M	TRUNK BLOCK RELAY
T.B. CONN.				
OUT. CONN. INC. CONN.				
IC E	208-1	S2 48	M	EVEN
IC O	208-1	S2 49	M	ODD
OC E	207-1	S2 46	M	EVEN
OC O	207-1	S2 47	M	ODD
TBC E	198-1	S2 44	M	EVEN
TBC O	198-1	S2 45	M	ODD
TC				
T 0-2	191-1	S6 30	M	TRUNK BLOCK CONNECTOR TENS
U 0-9	191-1	S5 30	M	TRUNK BLOCK CONNECTOR UNITS
TP				
TP 0-2	164-1	S0 11	M	TRUNK PEG COUNT AND OVERFLOW REGISTER CONTROL

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND
MARKER PUNCHES

ISSUE 1 1-18-52 1-6-54
DATE

ISSUE 1 WAD 2 2/23
 DATE 1-18-52 1-6-54
 R.B.B.

TROUBLE ANALYSIS DATA
INDEX OF DECODER AND MARKER PUNCHES

<u>PUNCH DESIGNATION</u>	<u>OS</u>	<u>CARD COORDINATION</u>	<u>PUNCH SOURCE</u>	<u>FUNCTIONAL MEANING</u>
TPC				
TPC	164-1	S0 10	D	THROUGH TRAFFIC PEG COUNT
TRANSLATOR ENGAGED				
EM	178-1	S5 1	CT	TRANSLATOR EMERGENCY
H	178-1	S5 0	CT	TRANSLATOR HOME
T0, 1	178-1	S5 2	CT	TRANSLATOR TENS
U0-9	178-1	S5 4	CT	TRANSLATOR UNITS
TRANSMITTED MARKER TO SENDER				
ODG	194-1	R3 11	M	"0" DIGITS
4DG	194-1	R3 12	M	"4" DIGITS
5DG	194-1	R3 13	M	"5" DIGITS
20C	193-1	R3 9	M	20 CYCLE RING (TOLL COMPLETING)
DC	193-1	R3 1	M	DC KEY PULSE
DLC	193-1	R3 7	M	DELAYED LOOP CLOSURE
LPD	193-1	R3 4	M	LOOP DIAL
M	193-1	R3 0	M	MANUAL
MF	193-1	R3 2	M	MULTIFREQUENCY PULSE
NSK	194-1	R3 15	M	NO SKIP
SK3	194-1	R3 16	M	SKIP 3
SK6	194-1	R3 17	M	SKIP 6
SXD	193-1	R3 3	M	SIMPLEX DIAL
SXR	193-1	R3 8	M	SIMPLEX (TOLL COMPLETING)
XDD	193-1	R3 5	M	EXPECT DELAY DIAL
XSG	193-1	R3 6	M	EXPECT STOP-GO

<u>PUNCH DESIGNATION</u>	<u>OS</u>	<u>CARD COORDINATION</u>	<u>PUNCH SOURCE</u>	<u>FUNCTIONAL MEANING</u>
TRUNK BLOCK				
TB $\frac{2}{5}$	164-1	R6 11	D	TRUNK BLOCK RELAY NUMBER
TRUNK BLOCK CONNECTOR				
T0-2	164-1	R6 3	D	TRUNK BLOCK CONNECTOR TENS
U $\frac{2}{5}$	164-1	R6 6	D	TRUNK BLOCK CONNECTOR UNITS
TS				
TS 0-2	164-1	S0 7	D	TRAFFIC SEPARATION
TYPE OF RECORD				
CFR	163-1, 174-1, 179-1	S7 2	D	CARD FAILURE
DSTI	160-1	S7 3	D	SENDER REQUEST FOR TRUNK INDICATION
FIF	206-1, 220-1	S7 0	DM	FRAME IDENTIFICATION FAILURE
MFT	206-1	S7 1	M	MULTIFREQUENCY TRANSFER
MSTI	190-1	S7 4	M	SENDER REQUEST FOR TRUNK INDICATION OR OVER REGISTRATION OF INCOMING CODE.
OGT		S7 9	DM	OUTGOING TRUNK TEST
PRO	181-1	S6 1	D	OVERLOAD ANNOUNCEMENT
RO	160-1, 175-1	S6 0	D	RECORDER
RTRF	171-1	S7 5	D	ROUTE TRANSFER
SDT		S7 7	DM	SENDER TEST
TST		S7 6	M	TEST