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USED ON

FRAME SO	PROJECT	DSGN CONT
SD-5D116-01	MESSAGE SWITCH CABINET	IM
SD-5D106-01	MESSAGE SWITCH CABINET	IM

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT DRAWING	J50006ED

BT13

5ESS® SWITCHING EQUIPMENT
MESSAGE INTERFACE/CLOCK UNIT, MODEL 2 CIRCUIT
(MICU2)

DWG SIZE 6S | ISSUE 7B

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DESIGNATION MNEMONICS INDEX

MNEMONIC	ES/SYM	DEFINITION
+SENSE	1/2	PLUS VOLTAGE SENSE
+12	1/2	PLUS 12 VOLT POWER
+5	1/2	PLUS 5 VOLT POWER
+5COND	2/1	PLUS 5 VOLTS CONDITIONED POWER FOR OPTIC RECEIVER
-48	2/4	MINUS 48 VOLT POWER FROM FUSE PANEL
-48VA	1/2	-48V POWER FEED TO LUG A
-48VB	1/1	-48V POWER FEED TO LUG B
-48VC	4/4	-48V POWER FEED TO LUG C
-48VRTNA	1/2	-48V RETURN POWER FEED TO LUG A
-48VRTNB	1/1	-48V RETURN POWER FEED TO LUG B
-48VRTNC	4/4	-48V RETURN POWER FEED TO LUG C
ACKCLRO	2/2	SIDE A, CLOCK CLEAR, ACTIVE 0
ALMD	1/2	FUSE ALARM
AS	4/2	ADDRESS SHIFT CLOCK SIGNAL, TP, FROM CLRT TO CCB ON THE TN248 CONTROL
BASSWF	4/3	ACTIVE / STANDBY SWITCH FROM THE TN245 SYNCHRONIZER TO THE TN248 CONTROL
BBUFER	2/1	B LINK BUFFER ERRORS
BDSFBIT	2/2	B LINK DISABLE F BIT
BLKORW1	3/3	TEST POINT ON THE TN861 FOR THE READ/WRITE OF THE CONTROL AND DIAGNOSTIC ACCESS LINK
BLSWPF	4/3	LINK POSITION PRIMARY / SECONDARY SWITCH FROM THE TN245 SYNCHRONIZER TO THE TN248 CONTROL
BMAEN	2/2	B LINK MESSAGE TIME SLOT ADDRESS ENABLE
BMA(0-7)	2/2	B LINK MESSAGE TIME SLOT ADDRESS BIT (0 - 7)
BP(1,2)	4/2	BREAK POINT (1,2)
BSRF(0,1)(0,1)	4/1,3	BASIC SYNCHRONOUS REFERENCE FREQUENCY 0,1 (SIDE 0 AND 1)
BTPAR	3/1	PULL UP LEAD FOR PARITY LEAD THAT IS NOT USED IN A SINGLE MODULE OFFICE
B7CP1LB	3/6	SIGNAL FROM TN859 TO TN861 FOR CENTRAL PROCESSOR INTERVENTION SEQUENCE
CARD	1/1	LOW VOLTAGE ALARM
CBASW	4/2	CONTROL COMMUNICATIONS BUFFER, ALL SEEMS WELL
CCBE	4/2	CCB ENABLE STROBE, TP, FROM CLRT TO CCB ON THE TN248 CONTROL
CCBOD	4/2	CLB ORDER DATA , TP, FROM CLRT TO CCB ON THE TN248 CONTROL
CCBP	4/2	"CCB PULSE" STROBE, TP, FROM CLRT TO CCB ON THE TN248 CONTROL
CCBRD	4/2	"CCB REPLY DATA", TP, FROM CCB TO CLRT ON THE TN248 CONTROL
CCCOM1(0-7)	3/4	INCOMING DATA FROM A MODULE MESSAGE PROCESSOR, SIDE 1, MESSAGE INTERFACE BUS (0 - 7) (BOARD A)
CERAM0	2/1	CHIP ENABLE RAM ACTIVE LOW OUTPUT
CIAPAR	3/3	TEST POINT THAT DISABLES THE CONTROL INTERFACE PARITY ON THE TN861
CIA(0-8)	3/3	TEST POINT THAT DISABLES THE CONTROL AND DIAGNOSTIC ACCESS LINK, BUS (0 - 8) ON THE TN861
CIBIT(0-7)	3/2	THE DATA DISTRIBUTION BIT (0 - 7) LEAD FROM THE TN861 TO THE TN860
CI2MNT	3/2	A SIGNAL FROM THE TN860 THAT ENABLES THE ADDRESS SELECT OF THE TIME SLOT SWITCHING ON THE TN861
CI4MH	3/2	A 4 MHZ CLOCK FROM THE TN860 SENT TO THE TN861 TO VERIFY CORRECT CLOCKING OF THE TIME SLOT COUNTER
CI8KH	3/2	A SIGNAL FROM THE TN860 TO THE TN861 THAT ENABLES THE TIME SLOT COUNTER TO LOAD
CKCCI	2/2	CLOCK FOR CENTRAL CONTROLLER INTERVENTION
CKCCI(0,1)	3/1	THE DIFFERENTIAL CLOCK SIGNAL FOR THE CENTRAL PROCESSOR INTERVENTION
CK1NIT0	2/2	TEST POINT ON THE TN835 TO CLEAR THE CLOCK CIRCUITRY
CKMTS	2/2	CLOCK FOR MESSAGE TIME SLOT LINK
CK2MI	2/1	CLOCK 2 MHZ (RISING EDGE SYNC)
CK32	2/2	CLOCK 32 MHZ
CLK4M0	2/2	4 MHZ CLOCK TO OPPOSITE LINK INTERFACE
CLRH1	4/2	5 MHZ COUNTER CLEAR STROBE, TP, ON THE TN248 CONTROL
CLRPRE	3/5	TEST POINT THAT DISABLES THE SYNCHRONIZATION TO THE MODULE MESSAGE PROCESSOR
CLRSYNC1	3/3	CLEAR PULSE FOR THE TN862 SYNC DECODE
CPI	3/1	THE TTL TRANSMIT DATA OF CENTRAL PROCESSOR INTERVENTION TO THE LINK INTERFACE
CPITSTCK	3/3	TEST POINT THAT DISABLES THE CLOCK ON THE TN861 GATE ARRAY
CPI(0,1)	3/1	THE DIFFERENTIAL TRANSMIT DATA OF THE CENTRAL PROCESSOR INTERVENTION
CPI2	3/3	THE LEAD FOR INSERTING CENTRAL PROCESSOR INTERVENTION TO THE LINK INTERFACE
CS0	4/2	LOW BYTE EPROM PARITY SIGNAL, TP, ON THE TN248 CONTROL
CS1	4/2	HIGH BYTE EPROM PARITY SIGNAL, TP, ON THE TN248 CONTROL
DATAB(0-7)	3/3	TEST POINT THAT ENABLES READS AND WRITES OF THE CONTROL INTERFACE BUS (0 - 7)
DBP1	4/1	2.048 MHZ OSCILLATOR OUTPUT BREAKPOINT ON THE TN246 DPLL
DBP(2-5)	4/1	DPLL "A" COUNTER LOAD INPUT BREAKPOINT ON THE TN246 DPLL
DBP(6-9)	4/1	DPLL "B" COUNTER LOAD INPUT BREAKPOINT ON THE TN246 DPLL
DDFC	4/2	ADDRESS DECODE INHIBIT, TP, ON THE TN248 CONTROL
DECOD(0-2)	3/3	A 3 BIT BINARY SIGNAL THAT WHEN DECODED, IS THE TIME SLOT SEQUENCER
DFRSQ	2/2	DISABLE FRAME SEQUENCE
DS	4/2	"DATA SHIFT" CLOCK SIGNAL, TP, FROM CLRT TO CCB ON THE TN248 CONTROL
DSCR	2/2	DISABLE SCRAMBLING
ECTR	2/1	ERROR COUNTER
EKWAL0	3/3	AN EQUAL ZERO CHECK, USED IN CENTRAL PROCESSOR INTERVENTION
ENMASK0	2/2	ENABLE MASK, ACTIVE LOW
EPE8	4/2	BREAKPOINT OUTPUT FOR EPROM PROMUS COMPATIBILITY ON TN248 CONTROLLER
EQUAL0	3/3	EQUAL ZERO SIGNAL USED IN THE COMPARISON PARITY CHECKER
EQUIPTS	3/3	SIGNAL FROM THE TN861 TO THE TN860, USED TO ENABLE THE INPUT PARITY CHECKER
ESR5ER1	3/5	INTERRUPT LEAD FOR ERROR SOURCE REGISTER FIVE
EXHIGH	3/1	PULL UP FOR THE LINK INTERFACE LEADS, NOT USED IN A SINGLE MODULE OFFICE
EXOM(1,2)1	4/2	EXERCISE OVEN MONITOR (1 IS INNER OVEN, 2 IS OUTER OVEN) ACTIVE HIGH
EXTC	4/2	EXTERNAL CRYSTAL OSCILLATOR INPUT, TP, FOR CLOCK GENERATOR CHIP ON THE TN248 CONTROL
EXTTVCK	2/2	TEST POINT ON THE TN835 FOR EXTERNAL TEST VECTOR CLOCK
FAS	1/1	FUSE ALARM SPARE
FBIT	2/2	F BIT SIGNAL
FOIN	2/4	FIBER OPTIC INPUT
FOOUT	2/3	FIBER OPTIC OUTPUT
FRCSRPER	3/3	FROM THE TN861 TO THE TN860 IN THE MESSAGE INTERFACE TO FORCE BAD COMPARISON PARITY ERROR
FRC4MER0	3/3	DISABLES 4 MHZ CLOCK TO ALL MESSAGE INTERFACE BUSSES
FREER	2/2	FREE RUN
FRSQ	2/2	FRAME SEQUENCE
FRSQT3	2/2	FRAME SEQUENCE TAP 3
FSLAVE	2/2	FORCE SLAVE MODE
FTSPARER	3/3	A SIGNAL FROM THE TN861 TO THE TN860 IN THE MESSAGE INTERFACE TO GENERATE BAD PARITY TO THE LINK INTERFACE
FUSEALM	4/4	FUSE ALARM
GODATAB0	3/3	TEST POINT ON THE TN861 TO ENABLE THE VECTOR TEST BUS
GRD(EQL)	FS1-4	GROUND AT EQUIPMENT LOCATION (EQL)
HIPLBLD	4/1	LOOP BACK LOAD
HIPLCL	4/1	DPLL DAC REGISTER CLEAR STROBE, TP, ON TN246 DPLL
HIPLLCL	4/1	DPLL "A" COUNTER CLEAR STROBE, TP, ON TN246 DPLL
HIPLLD	4/1	DPLL "A" COUNTER LOAD STROBE, TP, ON TN246 DPLL
HIPR	4/1	DPLL 2 KHZ REF. INHIBIT STROBE, TP, ON TN246 DPLL
IDAT(0-7)CRA	3/4	THE MINUS DIFFERENTIAL INCOMING DATA FROM THE MODULE MESSAGE PROCESSOR ON SIDE 1 OF THE MESSAGE INTERFACE BUS (0 - 7), BOARD A
IDAT(0-7)SRA	3/4	THE MINUS DIFFERENTIAL INCOMING DATA FROM THE MODULE MESSAGE PROCESSOR ON SIDE 0 OF THE MESSAGE INTERFACE BUS (0 - 7), BOARD A
INDAT(0-7)CA	3/4	THE PLUS DIFFERENTIAL INCOMING DATA FROM THE MODULE MESSAGE PROCESSOR ON SIDE 1 OF THE MESSAGE INTERFACE BUS (0 - 7), BOARD A
INDAT(0-7)SA	3/4	THE PLUS DIFFERENTIAL INCOMING DATA FROM THE MODULE MESSAGE PROCESSOR ON SIDE 0 OF THE MESSAGE INTERFACE BUS (0 - 7), BOARD A

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE D2	ISSUE 3D
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DESIGNATION MNEMONICS INDEX

MNEMONIC	ES/SYM	DEFINITION
INFR	2/1	IN FRAME
INTZKHZ	4/3	2 KHZ REFERENCE FROM THE TN245 SYNCHRONIZER TO TN246 DPPL AND THE TN248 CONTROL
IOVMON	4/4	INNER OVEN MONITOR
LDHI	4/2	5 MHZ COUNTER LOAD STROBE, TP, ON TN248 CONTROL
LIINTI	2/2	THE LINK INTERFACE INTERRUPT SIGNAL FROM LINK INTERFACE
LIINTO	3/1	THE PLUS DIFFERENTIAL LINK INTERFACE INTERRUPT SIGNAL TO THE 3B PROCESSOR
LIRCVDI	2/2	LINK INTERFACE RECEIVE DATA
LISELI	3/1	THE PLUS DIFFERENTIAL LINK INTERFACE "SELECT" SIGNAL FROM THE FOUNDATION PERIPHERAL CONTROLLER
LISELO	3/1	THE TTL LINK INTERFACE "SELECT" DATA TO THE LINK INTERFACE
LISR	3/1	THE MINUS DIFFERENTIAL LINK INTERFACE SELECT" SIGNAL FROM THE FOUNDATION PERIPHERAL CONTROLLER
LITRCO	3/1	THE TTL "CLOCK" SIGNAL USED FOR CLOCKING DATA FROM THE FOUNDATION PERIPHERAL CONTROLLER TO THE LINK INTERFACE
LITRMDO	3/1	THE "DATA OUT" SIGNAL FROM THE FOUNDATION PERIPHERAL CONTROLLER TO THE LINK INTERFACE
LIVDO	3/1	THE TTL DATA VALID SIGNAL TO THE LINK INTERFACE
LIX25CI	2/2	LINK INTERFACE, X.25
LIX25C(O,OR)	3/1	THE DIFFERENTIAL CLOCK SIGNAL FOR X.25 LINK FROM THE FOUNDATION PERIPHERAL CONTROLLER
LIX25R(VI,IR)	3/1	THE DIFFERENTIAL DATA SIGNAL FOR X.25 LINK FROM THE FOUNDATION PERIPHERAL CONTROLLER
LIX25RVO	3/1	THE TTL DATA SIGNAL FOR X.25 LINK TO THE LINK INTERFACE
LIX25XI	2/1	LINK INTERFACE X.25
LIX25X(O,OR)	3/1	THE DIFFERENTIAL DATA SIGNAL FOR X.25 LINK TO THE FOUNDATION PERIPHERAL CONTROLLER
LI8K	4/1	SINGLE MODULE OFFICE "NCLK" 8 KHZ OUTPUT FROM THE TN246 DPLL TO THE LINK INTERFACE
LI8KIN	2/2	LINK INTERFACE 8 KHZ INPUT
LI8MIN	2/2	LINK INTERFACE 8 MHZ CLOCK INPUT
LOOP	2/2	NETWORK CONTROL AND TIMING LINK LOOP AROUND
MASTER(0,1)	2/2	MASTER SIGNAL, ACTIVE (LOW, HIGH)

MNEMONIC	ES/SYM	DEFINITION
MATEEN	2/2	MATE ENABLE
MATE4M0	2/2	MATE 4 MHZ CLOCK TO THE OPPOSITE MESSAGE INTERFACE/CLOCK UNIT
MIBPER1	3/2	A SIGNAL FROM THE TN860 TO THE TN861, WHICH INDICATES BAD PARITY RECEIVED FROM A MODULE MESSAGE PROCESSOR
MIB(0-7)ODAT	3/5	MESSAGE INTERFACE BUS (0 - 7), TTL DATA FROM THE MESSAGE INTERFACE TO A MODULE MESSAGE PROCESSOR VIA THE TN862 BUFFER BOARD
MICLK	3/5	THE CLOCK PULSE FROM THE FOUNDATION PERIPHERAL CONTROLLER USED BY THE TN861 TO CLOCK THE SHIFT REGISTERS
MIDIN	3/3	DATA FROM THE TN861 DURING MESSAGE INTERFACE SELECTION
MIDOUT	3/5	CONTROL AND DIAGNOSTIC ACCESS LINK DATA INTO THE TN861
MIGO	3/5	THE DATA VALID SIGNAL OF THE CONTROL AND DIAGNOSTIC ACCESS LINK
MIINT	3/3	A SIGNAL FROM THE TN861 TO CAUSE AN INTERRUPT OF THE MESSAGE INTERFACE
MISEL	3/5	A SIGNAL FROM THE TN859 THAT ENABLES THE SHIFT REGISTERS ON THE TN861
MI1RNGC	3/5	A SIGNAL SENT TO THE TN861 TO CLOCK THE CENTRAL PROCESSOR SEQUENCE
MI1SNKO	3/5	NORMALIZED SYNCHRONIZATION PULSE SENT FROM THE TN859 TO THE TN861 FOR CLEARING THE TIME SLOT COUNTER
MI12MNT	3/5	A 2 MHZ CLOCK FROM THE TN859, USED TO CLOCK THE RECEIVE TIME SLOT COUNTER ON THE TN861
MMPER1	3/2	A SIGNAL FROM THE TN860 TO THE TN861 THAT INDICATES A MISMATCH ERROR
NCINT	3/1	THE NETWORK CLOCK INTERRUPT SIGNAL FROM THE NETWORK CLOCK
NCSEL(I,IR)	3/1	THE DIFFERENTIAL NETWORK CLOCK "SELECT" SIGNAL FROM THE FOUNDATION PERIPHERAL CONTROLLER
NCURPR	2/1	NEGATIVE LEAD OF THE CURRENT PROGRAMMING RESISTOR
ODAT(0-7)CRA	3/4	THE MINUS DIFFERENTIAL DATA SIGNAL ON THE MESSAGE INTERFACE, BUS (0 - 7), SIDE 1, TO THE MODULE MESSAGE PROCESSOR BOARD A
ODAT(0-7)SRA	3/4	THE MINUS DIFFERENTIAL DATA SIGNAL ON THE MESSAGE INTERFACE, BUS (0 - 7), SIDE 0, TO THE MODULE MESSAGE PROCESSOR BOARD A

MNEMONIC	ES/SYM	DEFINITION
ONECDU	3/3	SIGNAL FROM THE TN861 TO THE TN860 WHICH ENABLES THE SERIAL/ PARALLEL CONVERTER TO RECEIVE DATA FROM SIDE 0 OR SIDE 1 ON THE MESSAGE INTERFACE BUS
OOS(N,P)	1/1	OUT OF SERVICE (NEG, POS)
OOS3(B,BR)	1/1	OUT OF SERVICE AND ITS RETURN
OOS3BR(0,1)	4/4	OUT OF SERVICE TO 3B (0,1) RETURN
OOS3B(0,1)	4/4	OUT OF SERVICE TO 3B 0,1
OOVMON	4/2	OUTER OVEN MONITOR
OPEMI11	3/5	LINK INTERFACE RECEIVE TIME SLOT PARITY ERROR LEAD
OTDAT(0-7)CA	3/4	THE PLUS DIFFERENTIAL DATA SIGNAL ON THE MESSAGE INTERFACE, BUS (0 - 7), SIDE 1, TO THE MODULE MESSAGE PROCESSOR BOARD A
OTDAT(0-7)SA	3/4	THE PLUS DIFFERENTIAL DATA SIGNAL ON THE MESSAGE INTERFACE, BUS (0 - 7), SIDE 0, TO THE MODULE MESSAGE PROCESSOR BOARD A
OUTOIN1	3/3	I/O DIRECTION LEAD FOR THE MESSAGE INTERFACE CONTROL BUS
PCE2	4/2	LOW BYTE EPROM CHIP ENABLE, TP, ON THE TN248 CONTROL
PCE3	4/2	HIGH BYTE EPROM CHIP ENABLE, TP, ON TN248 CONTROL
PCURPR	2/1	POSITIVE LEAD OF THE CURRENT PROGRAMMING RESISTOR
PERSLCT1	3/3	CONTROL DATA BUS SELECT LEAD FOR THE TN860
POSLL	4/2	TEST POINT FOR LOSS OF CLOCK AND SANITY DETECTORS
PU5V	2/2	MATE ENABLE INPUT
PWR5	2/1	POWER, 5 VOLTS
RA(0-6)	2/2	READ ADDRESS BIT (0 - 6)
RA7EN	2/2	TEST POINT ON THE TN835 TO TEST CLOCK CIRCUITRY
RCVDAT(0,OR)	3/1	RECEIVE DATA (ZERO AND ZERO RETURN)
RD1	3/3	READ PULSE FOR THE TN859, TN860 AND THE TN861
RECV	2/4	RECEIVE NCT LINK INPUT DATA
REF1(N,NA,P)	4/3	REFERENCE 1 (NEGATIVE, NEGATIVE A AND POSITIVE RAIL)
REF2(N,NA,P)	4/3	REFERENCE 2 (NEGATIVE, NEGATIVE A AND POSITIVE RAIL)
REF(3-8)(N,P)	4/1,3	REFERENCE 3 (NEGATIVE AND POSITIVE RAIL)
RINGQB00	3/2	A SIGNAL SENT FROM THE TN860 TO THE TN861 THAT IS USED FOR CLOCKING THE TIME SLOT SWITCHING PARITY ERROR DETECTOR

MNEMONIC	ES/SYM	DEFINITION
RINGQD00	3/2	A CLOCKING PULSE FROM THE TN860 TO THE TN861 USED TO READ THE TIME SLOT SWITCHING MEMORY
RMTPRE	2/1	RECEIVE MESSAGE TIME SLOT PARITY ERROR
RMTRPI	2/2	RECEIVE MESSAGE TIME SLOT PARITY INVERT
RMTS	2/2	RECEIVE MESSAGE TIME SLOT
RPAR	2/1	RECEIVE PARITY
RPARINV	2/2	RECEIVE PARITY INVERT
RQIP3(B,BR)	1/1	REQUEST IN PROGRESS AND IT'S RETURN
RST	4/2	MICROPROCESSOR HARDWARE RESET, TP, ON THE TN248 CONTROL
RS(1-3)	1/1	REMOTE START AND SHUT DOWN
RXP	3/1	THE TTL PARITY, X.25 DATA TO THE LINK INTERFACE
RXP(0,1)	3/1	THE DIFFERENTIAL PARITY, X.25 DATA FROM THE FOUNDATION PERIPHERAL CONTROLLER
SA	4/2	"SERIAL ADDRESS" DATA, TP, FROM CLRT TO CCB ON THE TN248 CONTROL
SCX3(B,BR)	1/1	SCAN POINT X AND IT'S RETURN
SXC3BR(0,1)	4/4	SCAN X RETURN TO 3B 0,1
SCX3B(0,1)	4/4	SCAN Y TO 3B RETURN 0,1
SCY3(B,BR)	1/1	SCAN POINT Y AND IT'S RETURN
SCY3BR(0,1)	4/4	SCAN Y TO 3B RETURN 0,1
SCY3B(0,1)	4/4	SCAN Y TO 3B 0,1
SCZ3(B,BR)	1/1	SCAN POINT 2 AND IT'S RETURN
SELSDLCP	2/2	SELECT SDLC LINK FROM THE PROCESSOR
SELTEST	2/1	SELECT TEST MODE
SELTSI	2/2	SELECT TSI OR MI
SERQOUT	3/3	TEST POINT ON THE TN861 TO MONITOR CENTRAL PROCESSOR INTERVENTION PARITY
SETTSC	2/1	SET TIME SLOT COUNTER
SHIFT	2/2	SHIFT SIGNAL
SICODE	2/2	SEND IDLE CODE
SNKER0	3/5	SYNCHRONOUS ERROR 0
SPB(1-8)	4/3	STRAP BREAK POINTS (1-8)
SREF	4/1	SYNCHRONOUS REFERENCE

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2		DWG SIZE	ISSUE
		D2	3D
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DESIGNATION MNEMONICS INDEX

MNEMONIC	ES/SYM	DEFINITION
SRPERR0	3/2	SIGNAL FROM THE TN860 TO THE TN861 THAT INDICATS COMPARISON PARITY ERRORS
SSCOM1(0-7)	3/4	THE DATA SIGNAL FROM THE MODULE MESSAGE PROCESSOR RECEIVED ON THE MESSAGE INTERFACE BUS (0 - 7), SIDE 0, BOARD A
STP1	2/2	SLAVE TEST POINT, ACTIVE HIGH
SYBEB	4/2	SYNCHRONIZER BOARD ENABLE INPUT, FROM THE TN248 CONTROL
SYNCER1	3/4	MESSAGE INTERFACE BUS SYNC ERROR PULSE FROM THE TN862 TO THE TN861
SYNCM1B(0-7)	3/5	MESSAGE INTERFACE BUS (0 - 7); SYNC PULSE SENT TO THE MODULE MESSAGE PROCESSOR
SYNC(0-7)CA	3/4	THE PLUS DIFFERENTIAL SYNC SIGNAL ON THE MESSAGE INTERFACE BUS (0 - 7), SIDE 1, TO THE MODULE MESSAGE PROCESSOR BOARD A
SYNC(0-7)CRA	3/4	THE MINUS DIFFERENTIAL SYNC SIGNAL ON THE MESSAGE INTERFACE BUS (0 - 7), SIDE 1, TO THE MODULE MESSAGE PROCESSOR BOARD A
SYNC(0-7)SA	3/4	THE PLUS DIFFERENTIAL SYNC SIGNAL ON THE MESSAGE INTERFACE BUS (0 - 7), SIDE 0, TO THE MODULE MESSAGE PROCESSOR BOARD A
SYNC(0-7)SRA	3/4	THE MINUS DIFFERENTIAL SYNC SIGNAL ON THE MESSAGE INTERFACE BUS (0 - 7), SIDE 0, TO THE MODULE MESSAGE PROCESSOR BOARD A
S(0,1)SELG	4/2	SYNC 0 SELECT, ACTIVE LOW
SYN2M	2/2	SYNC 2 MHZ
TB(A,B)	4/2	TIME BASE (A,B)
TB(A,B)STRT	4/2	TIME BASE (A,B) START
TBIN(N,P)	4/2	TIME BASE IN (NEGATIVE, POSITIVE RAILS)
TB(0,1)(N,P)	4/4	TIME BASE OUT (NEGATIVE, POSITIVE RAILS)
TESTCK	2/1	TEST CLOCK 32 MHZ INPUT
TESTD	2/1	TEST POINT ON THE TN834 FOR CLOCK RECOVERY CIRCUITRY
TMSCL(K,KR)	3/5	THE DIFFERENTIAL CLOCK SIGNAL THAT CLOCKS DATA FROM THE TIME MULTIPLEXED SWITCH TO THE CONTROL AND DIAGNOSTIC ACCESS LINK
TMSDI(N,NR)	3/5	THE DIFFERENTIAL DATA SIGNAL FROM THE TIME MULTIPLEXED SWITCH TO THE MESSAGE INTERFACE
TMSDOU(T,TR)	3/5	THE DIFFERENTIAL DATA SIGNAL FROM THE TIME MULTIPLEXED SWITCH TO THE CONTROL AND DIAGNOSTIC ACCESS LINK

MNEMONIC	ES/SYM	DEFINITION
TMSED	4/3	TIME MULTIPLEXED SWITCH ENERGY DETECTOR OUTPUT, SCAN POINT, FROM THE TN245 SYNCHRONIZER TO THE TN248 CONTROL
TMSE(L,LR)	3/5	THE DIFFERENTIAL SELECT PULSE THAT ENABLES THE TIME MULTIPLEXED SWITCH TO RECEIVE DATA
TMSG(O,OR)	3/5	THE DIFFERENTIAL PULSE FROM THE FOUNDATION PERIPHERAL CONTROLLER TO SIGNAL THE TIME MULTIPLEXED SWITCH TO DECODE
TMSIN(T,TR)	3/5	THE DIFFERENTIAL TIME MULTIPLEXED SWITCH INTERRUPT
TMSO(N,P)	4/1	TIME MULTIPLEXED SWITCH SIDE 0 (NEGATIVE, POSITIVE RAILS)
TMSRD(Y,YR)	3/5	THE DIFFERENTIAL "READY" SIGNAL FROM THE TIME MULTIPLEXED SWITCH TO THE MESSAGE INTERFACE
TMSRS(T,TR)	3/5	THE DIFFERENTIAL "RESET" SIGNAL FROM THE TIME MULTIPLEXED SWITCH TO THE MESSAGE INTERFACE
TMSRTN(N,P)	4/2	TIME MULTIPLEXED SWITCH RETURN (NEGATIVE AND POSITIVE RAILS)
TMSSRQ(T,TR)	3/5	THE DIFFERENTIAL "REQUEST" SIGNAL SENT FROM THE TIME MULTIPLEXED SWITCH TO ENABLE THE FOUNDATION PERIPHERAL CONTROLLER TO RECEIVE A RESPONSE
TMTPRE	2/1	TRANSMIT MESSAGE TIME SLOT PARITY ERROR
TMTPREB	3/1	THE LINK INTERFACE PARITY LEAD IN A SINGLE MODULE OFFICE
TMTPRI	2/2	TRANSMIT MESSAGE TIME SLOT PARITY INVERT
TMTS	2/2	TRANSMIT MESSAGE TIME SLOT
TPAR	2/1	TRANSMIT PARITY
TPARINV	2/2	TRANSMIT PARITY INVERT
TPPCS	2/2	TEST POINT PHASE COMPARE SLAVE MODE
TRCLK	3/5	4 MHZ CLOCK SIGNAL SENT FROM THE TN859 TO THE TN862 TO GENERATE THE MESSAGE INTERFACE BUS CLOCK
TRCLKER0	3/5	TRANSMIT CLOCK ERROR ZERO
TRCLK(1,IR)	3/1	THE DIFFERENTIAL CLOCK SIGNAL THAT IS USED TO CLOCK DATA FROM THE FOUNDATION PERIPHERAL CONTROLLER TO THE DESIGNATED UNIT
TRMDAT(1,IR)	3/1	THE DIFFERENTIAL "DATA OUT" SIGNAL FROM THE FOUNDATION PERIPHERAL CONTROLLER
TRPCM	2/2	TEST POINT PHASE COMPARE MASTER MODE
TSBIT(0-6)	3/2	BIT (0 - 6) OF THE PARALLEL FORMATED DATA SENT FROM THE TN860 TO THE LINK INTERFACE
TSIMTSS	2/2	TSI MESSAGE TIME SLOT SELECT

MNEMONIC	ES/SYM	DEFINITION
TSPAR	3/2	THE PARITY BUS ON THE TN860
TST(A,B)	1/1	FUSE ALARM TEST A AND B
TSTRD0	3/3	TEST POINT THAT ENABLES THE TN861 TO READ THE DIFFERENT REGISTERS
TSTSYNC0	3/3	TEST SYNC PULSE ON THE MESSAGE INTERFACE BUS (TN862)
TSTVCTR	3/2	TEST POINT THAT DISABLES THE TN860'S SERIAL / PARALLEL CONVERTERS
TSTVCTR0	3/3	TEST POINT THAT DISABLES MANY FEATURES ON THE TN861
TSTVTR80	3/2	TEST POINT THAT DISABLES THE TN860'S RING COUNTERS
TSTWR0	3/3	TEST POINT THAT ENABLES THE TN861 TO WRITE THE DIFFERENT REGISTERS
TWOCDU	3/3	A SIGNAL FROM THE TN861 TO THE TN860 WHICH ENABLES THE TN860 TO RECEIVE DATA FROM SIDE 0 OR SIDE 1 MESSAGE INTERFACE BUS
TXP	2/1	TRANSMIT X.25 PROTOCOL
TXP(0,1)	3/1	THE DIFFERENTIAL X.25 DATA PARITY TO THE FOUNDATION PERIPHERAL CONTROLLER
VALDAT(),IR)	3/1	THE DIFFERENTIAL "DATA VALID" SIGNAL FROM THE FOUNDATION PERIPHERAL CONTROLLER TO THE LINK INTERFACE
VCXOED	4/1	VOLTAGE CONTROLLED CRYSTAL OSCILLATOR SCANPOINT, FROM THE TN246 DPLL UNIT TO THE TN248 CONTROL
WA7IN	2/1	WRITE ADDRESS BIT 7 INPUT
WENO	2/1	WRITE ENABLE, ACTIVE LOW
WR1	3/3	WRITE PULSE FOR THE TN859, TN860 AND THE TN861
XADD(08-12)	4/2	TRANSMIT ADDRESS (8-12)
XADR0(0-7)	4/1,2	TRANSMIT ADDRESS (0-7)
XBHE0	4/2	TRANSMIT BUS HIGH ENABLE, ACTIVE LOW
XCED	4/3	CROSS COUPLE ENERGY DETECTOR SCAN POINT, FROM THE TN245 SYNCHRONIZER TO THE TN248 CONTROL
XCPLIN(N,P)	4/2	CROSS COUPLE IN, NEGATIVE AND POSITIVE RAILS
XCPLO(N,P)	4/1	CROSS COUPLE OUT, NEGATIVE AND POSITIVE RAILS
XDATA(00-15)	4/2	BI-DIRECTIONAL MICROPROCESSOR DATA BUS, FROM THE TN248 CONTROL TO THE TN245 SYNCHRONIZER AND TN246 DPLL
XDEN0	4/2	TRANSMIT DATA ENABLE, ACTIVE LOW
XDT1R0	4/2	TRANSMIT DATA ACTIVE HIGH, ROAD ACTIVE LOW
XMIT	2/1	TRANSMIT NETWORK CONTROL AND TIMING LINK DATA

MNEMONIC	ES/SYM	DEFINITION
X(RD,WR)0	4/2	TRANSMIT (READ, WRITE), ACTIVE LOW
0COP	3/1	NETWORK CLOCK "CLOCK" INPUT FROM MESSAGE INTERFACE (TN859) TO THE TN248 CONTROL
0FPCAC(T,TR)	3/5	THE DIFFERENTIAL SIGNAL WHICH INDICATES THAT SIDE 0 FOUNDATION PERIPHERAL CONTROLLER IS ACTIVE
0IDOP	4/2	NCLK REPLY OUTPUT, FROM THE TN248 CONTROL TO THE MESSAGE INTERFACE
0LIINTR	3/1	THE MINUS DIFFERENTIAL LINK INTERFACE INTERRUPT SIGNAL TO THE FOUNDATION PERIPHERAL CONTROLLER
0MIIN(T,TR)	3/5	THE DIFFERENTIAL MESSAGE INTERFACE INTERRUPT OF THE CONTROL AND DIAGNOSTIC ACCESS LINK, SIDE 0
0MISE(L,LR)	3/5	THE DIFFERENTIAL MESSAGE INTERFACE SELECT OF THE CONTROL AND DIAGNOSTIC ACCESS LINK, SIDE 0
0MKTP	3/2	TEST VECTOR TEST POINTS FOR THE TIME SLOT SWITCHING
0NCINTR	3/1	THE MINUS DIFFERENTIAL NETWORK CLOCK INTERRUPT SIGNAL TO THE FOUNDATION PERIPHERAL CONTROLLER
0NINTOP	4/2	NETWORK CLOCK INTERRUPT OUTPUT, FROM THE TN248 CONTROL TO MESSAGE INTERFACE
0ODOP	3/1	NETWORK CLOCK ORDER INPUT, FROM THE MESSAGE INTERFACE TO THE TN248 CONTROL
OR(P,X,Y,Z)	2/1	SIDE 0, RECEIVE NIBBLE BUS, BITS(P, X, Y, Z)
0SYN6MS	2/2	SIDE 0, SYNC 6 MILLISECONDS
0TMSINT	3/5	SIDE 0, TMS, INTERRUPT
0TMSINTR	3/5	THE DIFFERENTIAL TIME MULTIPLEXED SWITCH INTERRUPT OF THE CONTROL AND DIAGNOSTIC LINK, SIDE 0
0TMSRD(Y,YR)	3/5	THE DIFFERENTIAL TIME MULTIPLEXED SWITCH "READY" PULSE THAT ENABLES THE FOUNDATION PERIPHERAL CONTROLLER TO SEND DATA

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MNEMONIC	ES/SYM	DEFINITION
0TMSRQTR	3/5	THE MINUS DIFFERENTIAL TIME MULTIPLEXED SWITCH PULSE THAT SIGNALS THE FOUNDATION PERIPHERAL CONTROLLER TO RECEIVE A RESPONSE
0TMSRS(T,TR)	3/5	THE DIFFERENTIAL RESET SIGNAL FROM THE TIME MULTIPLEXED SWITCH TO THE FOUNDATION PERIPHERAL CONTROLLER
0TMSSE(L,LR)	3/5	THE DIFFERENTIAL SELECT SIGNAL THAT ENABLES THE TIME MULTIPLEXED SWITCH TO RECEIVE DATA FROM THE FOUNDATION PERIPHERAL CONTROLLER
0TMSSRQT	3/5	THE PLUS DIFFERENTIAL TIME MULTIPLEXED SWITCH PULSE THAT SIGNALS THE FOUNDATION PERIPHERAL CONTROLLER TO RECEIVE A RESPONSE
0T(P,X,Y,Z)	3/2	PART OF PARALLEL DATA NIBBLE BUS FROM THE TN860 TO THE LINK INTERFACE, BITS(P, X, Y, Z)
0WIAC(T,TR)	3/5	THE DIFFERENTIAL "WHO'S ACTIVE" PULSE FROM THE MESSAGE INTERFACE TO THE FOUNDATION PERIPHERAL CONTROLLER
1CL(K,KR)	3/5	THE DIFFERENTIAL CLOCK SIGNAL THAT IS USED TO CLOCK DATA FROM THE FOUNDATION PERIPHERAL CONTROLLER TO THE DESIGNATED UNIT, SIDE 1
1DI(N,NR)	3/5	THE DIFFERENTIAL DATA SENT FROM THE FOUNDATION PERIPHERAL CONTROLLER TO THE MESSAGE INTERFACE
1DOU(T,TR)	3/5	THE DIFFERENTIAL DATA SENT FROM THE FOUNDATION PERIPHERAL CONTROLLER TO THE MESSAGE INTERFACE
1FPCAC(T,TR)	3/5	THE DIFFERENTIAL SIGNAL THAT SELECTS THE FOUNDATION PERIPHERAL CONTROLLER, SIDE 1 ACTIVE
1G(O,OR)	3/5	THE DIFFERENTIAL "DATA VALID" SIGNAL THAT ENABLES EACH UNIT TO DECODE THE GIVEN MESSAGE, SIDE 1
1LIIN(T,TR)	3/5	THE DIFFERENTIAL LINK INTERFACE INTERRUPT OF THE CONTROL AND DIAGNOSTIC ACCESS LINK, SIDE 1
1LISE(L,LR)	3/5	THE DIFFERENTIAL LINK INTERFACE SELECT OF THE CONTROL AND DIAGNOSTIC ACCESS LINK, SIDE 1
1MIIN(T,TR)	3/5	THE DIFFERENTIAL MESSAGE INTERRUPT OF THE CONTROL AND DIAGNOSTIC ACCESS LINK, SIDE 1
1MISE(L,LR)	3/5	THE DIFFERENTIAL MESSAGE INTERFACE SELECT OF THE CONTROL AND DIAGNOSTIC ACCESS LINK, SIDE 1
1NCIN(T,TR)	3/5	THE DIFFERENTIAL NETWORK CLOCK INTERRUPT OF THE CONTROL AND DIAGNOSTIC ACCESS LINK, SIDE 1
1NCSE(L,LR)	3/5	THE DIFFERENTIAL NETWORK CLOCK SELECT OF THE CONTROL AND DIAGNOSTIC LINK, SIDE 1

MNEMONIC	ES/SYM	DEFINITION
1TMSIN(T,TR)	3/5	THE DIFFERENTIAL TIME MULTIPLEXED SWITCH INTERRUPT OF THE CONTROL AND DIAGNOSTIC ACCESS LINK, SIDE 1
1TMSRD(Y,YR)	3/5	THE DIFFERENTIAL TIME MULTIPLEXED SWITCH "READY" PULSE THAT ENABLES THE FOUNDATION PERIPHERAL CONTROLLER TO SEND DATA, SIDE 1
1TMSRQ(T,TR)	3/5	THE DIFFERENTIAL TIME MULTIPLEXED SWITCH PULSE THAT SIGNALS THE FOUNDATION PERIPHERAL CONTROLLER TO RECEIVE A RESPONSE, SIDE 1
1TMSRS(T,TR)	3/5	THE DIFFERENTIAL "RESET" SIGNAL FROM THE TIME MULTIPLEXED SWITCH, TO THE FOUNDATION PERIPHERAL CONTROLLER, SIDE 1
1TMSSE(L,LR)	3/5	THE DIFFERENTIAL SIGNAL THAT ENABLES THE TIME MULTIPLEXED SWITCH TO RECEIVE DATA FROM THE FOUNDATION PERIPHERAL CONTROLLER, SIDE 1
1UPTMP	2/1	SIDE 1, MICROPROCESSOR TRANSMIT MESSAGE PARITY
1UPTMTD	2/1	SIDE 1, MICROPROCESSOR TRANSMIT MESSAGE DATA
1WAIC(T,TR)	3/5	THE DIFFERENTIAL "WHO'S ACTIVE" PULSE FROM THE MESSAGE INTERFACE TO THE FOUNDATION PERIPHERAL CONTROLLER, SIDE 1
(1-7)MKTP	3/2	COMMUNITY (1-7), TEST POINT
2MCLK	4/1	2.048 MHZ CLOCK OUTPUT FROM THE TN246 DPLL TO THE TN245 SYNCHRONIZER TO CLOCK THE PHASE COUNTER FOR ALTERNATE LINE, DEFAULTED ACTIVE/STANDBY AND TMS LOOPBACK PHASE REGISTERS
259CR(4-6)1	3/3	CLOCKING AND ENABLE LEADS FOR THE TN859'S CONTROL AND ERROR SOURCE REGISTERS
259ER(1,2)1	3/3	ADDRESS DECODING ERROR SOURCE REGISTERS ON THE TN861
259SLCT1	3/3	ENABLE PULSE FOR DATA INTERFACE FROM THE TN861 TO THE TN859
260CR31	3/3	ADDRESS DECODING FOR CONTROL REGISER 3 ON THE TN861
260ER(1,2)1	3/3	ADDRESS DECODING FOR REGISTER 3 AND 4 ON THE TN861
4MCK(0-7)CA	3/4	THE PLUS DIFFERENTIAL 4 MHZ CLOCK SIGNAL ON THE MESSAGE INTERFACE BUS (0 - 7), SIDE 0 OR 1, SENT TO THE MODULE MESSAGE PROCESSOR, BOARD A
4MCK(0-7)CRA	3/4	THE MINUS DIFFERENTIAL 4 MHZ CLOCK SIGNAL ON THE MESSAGE INTERFACE BUS (0 - 7), SIDE 0 OR 1, SENT TO THE MODULE MESSAGE PROCESSOR, BOARD A
4MCK(0-7)SA	3/4	THE PLUS DIFFERENTIAL 4 MHZ CLOCK SIGNAL ON THE MESSAGE INTERFACE BUS (0 - 7), SIDE 0 OR 1, SENT TO THE MODULE MESSAGE PROCESSOR, BOARD A

MNEMONIC	ES/SYM	DEFINITION
4MCK(0-7)SRA	3/4	THE MINUS DIFFERENTIAL 4 MHZ CLOCK SIGNAL ON THE MESSAGE INTERFACE BUS (0 - 7), SIDE 0 OR 1, SENT TO THE MODULE MESSAGE PROCESSOR, BOARD A
4MHRTN	3/4	4 MHZ RETURN FROM THE TN862 TO THE TN859 FOR ENERGY DETECTION
4MZ6ZERO	3/4	CLOCK ERROR DETECTION LEAD FROM THE TN862 TO THE TN861 REGISTER 2
6MSIN	2/2	6 MILLI-SECOND SYNC INPUT
8KHZ	2/2	8 KHZ CLOCK
8KLIT	2/2	SINGLE MODULE OFFICE 8 KHZ LOOPBACK SIGNAL INPUT FROM LINK INTERFACE TO THE TN245 SYNCHRONIZER
8MHIN	2/2	8 MHZ INPUT
8MHZ	2/2	8 MHZ CLOCK

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EQUIP LOC	APP NO.	FIGURE SH NO.
CIRCUIT PACKS		
04-008	2	C2
04-068	4	C2
04-076	4	C2
04-084	4	C2
04-092	4	C2
04-100	3	C2
04-110	5	C2
04-110	6	C2
04-120	5	C2
04-120	6	C2
04-130	7	C2
04-130	20	C4
04-130	9(R)	C2
04-130	9(S)	C2
04-142	10	C3
04-142	21	C4
04-142	22(A)	C4
04-142	22(B)	C4
04-142	11(N)	C3
04-142	11(P)	C3
04-152	12	C3
04-152	13	C3
04-152	15(L)	C3
04-152	15(M)	C3
04-152	14(T)	C3
04-152	14(U)	C3
04-176	19(C)	C4
04-176	19(D)	C4
04-176	18(E)	C4
04-176	18(F)	C4
04-176	17(G)	C3
04-176	17(H)	C3
04-176	16(J)	C3
04-176	16(K)	C3
DESIG		
NCU0SL	16(J)	C3
NCU0SL	16(K)	C3
NCU0SL	17(G)	C3
NCU0SL	17(H)	C3
NCU0SL	18(E)	C4
NCU0SL	18(F)	C4
NCU0SL	19(C)	C4
NCU0SL	19(D)	C4
NCUCD	2	C2
NCUCNTRL	11(N)	C3
NCUCNTRL	11(P)	C3
NCUCNTRL	10	C3
NCUCNTRL	21	C4
NCUCNTRL	22(A)	C4
NCUCNTRL	22(B)	C4
NCUDPLL	7	C2
NCUDPLL	20	C4
NCULI1	5	C2
NCULI1	6	C2
NCULI2	6	C2
NCULI2	5	C2
NCUMI0	3	C2
NCUMI1	4	C2
NCUMI2	4	C2

DESIG	APP NO.	FIG. SH NO.
CIRCUIT PACKS(CONT)		
NCUMI3	4	C2
NCUMI4	4	C2
NCUSYNC0	15(L)	C3
NCUSYNC0	13	C3
NCUSYNC0	14(T)	C3
NCUSYNC0	12	C3
NCUSYNC0	14(U)	C3
NCUSYNC0	15(M)	C3
NCUSYNC1	9(R)	C2
NCUSYNC1	9(S)	C2

DESIG	LOCATION FS/SYM	APP/FIG	EQPT
BERG SWITCH			
TSLSW	2/5	5	04-110
TSLSW	2/5	6	04-110
CIRCUIT PACK-CP			
NCU0SL	4/4	16(J)	04-176
NCU0SL	4/4	16(K)	04-176
NCU0SL	4/4	17(G)	04-176
NCU0SL	4/4	17(H)	04-176
NCU0SL	4/4	18(E)	04-176
NCU0SL	4/4	18(F)	04-176
NCU0SL	4/4	19(C)	04-176
NCU0SL	4/4	19(D)	04-176
NCUCD	1/1	2	04-008
NCUCNTRL	4/2	11(N)	04-142
NCUCNTRL	4/2	11(P)	04-142
NCUCNTRL	4/2	10	04-142
NCUCNTRL	4/2	21	04-142
NCUCNTRL	4/2	22(A)	04-142
NCUCNTRL	4/2	22(B)	04-142
NCUDPLL	4/1	7	04-130
NCUDPLL	4/1	20	04-130
NCULI1	2/1	5	04-120
NCULI1	2/1	6	04-120
NCULI2	2/2	6	04-110
NCULI2	2/2	5	04-110
NCUMI0	3/1	3	04-100
NCUMI1	3/5	4	04-092
NCUMI2	3/2	4	04-084
NCUMI3	3/3	4	04-076
NCUMI4	3/4	4	04-068
NCUSYNC0	4/3	15(L)	04-152
NCUSYNC0	4/3	13	04-152
NCUSYNC0	4/3	14(T)	04-152
NCUSYNC0	4/3	12	04-152
NCUSYNC0	4/3	14(U)	04-152
NCUSYNC0	4/3	15(M)	04-152
NCUSYNC1	4/1	9(R)	04-130
NCUSYNC1	4/1	9(S)	04-130
CONVERTER			
COUCONV	1/2	2	04-024
FIBOPT RECV			
NCTRCV	2/4	2	03-120B
FIBOPT XMIT			
NCU0SL	2/3	2	03-120A

DESIG	LOCATION FS/SYM	CAD
3B1OP		
CKCCI0	3/1	002
CKCCI1	3/1	002
CPI0	3/1	002
CPI1	3/1	002
LIX25C0	3/1	002
LIX25C0R	3/1	002
LIX25RIR	3/1	002
LIX25RVI	3/1	002
LIX25C0	3/1	002
LIX25X0R	3/1	002
RXP0	3/1	002
RXP1	3/1	002
TXP0	3/1	002
TXP1	3/1	002
3B1OP CROSS COUPLE SIDE		
COS3B	1/1	002
COS3BR	1/1	002
RQIP3B	1/1	002
RQIP3BR	1/1	002
SCI3B	1/1	002
SCI3BR	1/1	002
SCY3B	1/1	002
SCY3BR	1/1	002
SCZ3B	1/1	002
SCZ3BR	1/1	002
3B1OP SAME SIDE		
COS3B	1/1	002
COS3BR	1/1	002
RQIP3B	1/1	002
RQIP3BR	1/1	002
SCI3B	1/1	002
SCI3BR	1/1	002
SCY3B	1/1	002
SCY3BR	1/1	002
SCZ3B	1/1	002
SCZ3BR	1/1	002
3B1OP SIDE 0		
COS3B0	4/4	006
COS3BR0	4/4	006
SCI3B0	4/4	006
SCI3BR0	4/4	006
SCY3B0	4/4	006
SCY3BR0	4/4	006
3B1OP SIDE 1		
COS3B1	4/4	006
COS3BR1	4/4	006
SCI3B1	4/4	006
SCI3BR1	4/4	006
SCY3B1	4/4	006
SCY3BR1	4/4	006

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DESIG	LOCATION FS/SYM	CAD
ANALOG TRANSMISSION FACILITY		
BSRF00	4/3	009
BSRF01	4/3	009
BSRF10	4/1	009
BSRF11	4/1	009
CONN CKT		
4MCK0CA	3/4	005
4MCK0CRA	3/4	005
4MCK0SA	3/4	005
4MCK0SRA	3/4	005
4MCK1CA	3/4	005
4MCK1CRA	3/4	005
4MCK1SA	3/4	005
4MCK1SRA	3/4	005
4MCK2CA	3/4	005
4MCK2CRA	3/4	005
4MCK2SA	3/4	005
4MCK2SRA	3/4	005
4MCK3CA	3/4	005
4MCK3CRA	3/4	005
4MCK3SA	3/4	005
4MCK3SRA	3/4	005
4MCK4CA	3/4	005
4MCK4CRA	3/4	005
4MCK4SA	3/4	005
4MCK4SRA	3/4	005
4MCK5CA	3/4	005
4MCK5CRA	3/4	005
4MCK5SA	3/4	005
4MCK5SRA	3/4	005
4MCK6CA	3/4	005
4MCK6CRA	3/4	005
4MCK6SA	3/4	005
4MCK6SRA	3/4	005
4MCK7CA	3/4	005
4MCK7CRA	3/4	005
4MCK7SA	3/4	005
4MCK7SRA	3/4	005
IDAT0CRA	3/4	005
IDAT0SRA	3/4	005
IDAT1CRA	3/4	005
IDAT1SRA	3/4	005
IDAT2CRA	3/4	005
IDAT2SRA	3/4	005
IDAT3CRA	3/4	005
IDAT3SRA	3/4	005
IDAT4CRA	3/4	005
IDAT4SRA	3/4	005
IDAT5CRA	3/4	005
IDAT5SRA	3/4	005
IDAT6CRA	3/4	005
IDAT6SRA	3/4	005
IDAT7CRA	3/4	005
IDAT7SRA	3/4	005
INDAT0CA	3/4	005
INDAT0SA	3/4	005
INDAT1CA	3/4	005
INDAT1SA	3/4	005
INDAT2CA	3/4	005
INDAT2SA	3/4	005
INDAT3CA	3/4	005
INDAT3SA	3/4	005
INDAT4CA	3/4	005
INDAT4SA	3/4	005

DESIG	LOCATION FS/SYM	CAD
CONN CKT (CONT)		
INDAT5CA	3/4	005
INDAT5SA	3/4	005
INDAT7CA	3/4	005
INDAT7SA	3/4	005
ODAT0CRA	3/4	005
ODAT0SRA	3/4	005
ODAT1CRA	3/4	005
ODAT1SRA	3/4	005
ODAT2CRA	3/4	005
ODAT2SRA	3/4	005
ODAT3CRA	3/4	005
ODAT3SRA	3/4	005
ODAT4CRA	3/4	005
ODAT4SRA	3/4	005
ODAT5CRA	3/4	005
ODAT5SRA	3/4	005
ODAT6CRA	3/4	005
ODAT6SRA	3/4	005
ODAT7CRA	3/4	005
ODAT7SRA	3/4	005
OTDAT0CA	3/4	005
OTDAT0SA	3/4	005
OTDAT1CA	3/4	005
OTDAT1SA	3/4	005
OTDAT2CA	3/4	005
OTDAT2SA	3/4	005
OTDAT3CA	3/4	005
OTDAT3SA	3/4	005
OTDAT4CA	3/4	005
OTDAT4SA	3/4	005
OTDAT5CA	3/4	005
OTDAT5SA	3/4	005
OTDAT6CA	3/4	005
OTDAT6SA	3/4	005
OTDAT7CA	3/4	005
OTDAT7SA	3/4	005
SYNC0CA	3/4	005
SYNC0CRA	3/4	005
SYNC0SA	3/4	005
SYNC0SRA	3/4	005
SYNC1CA	3/4	005
SYNC1CRA	3/4	005
SYNC1SA	3/4	005
SYNC1SRA	3/4	005
SYNC2CA	3/4	005
SYNC2CRA	3/4	005
SYNC2SA	3/4	005
SYNC2SRA	3/4	005
SYNC3CA	3/4	005
SYNC3CRA	3/4	005
SYNC3SA	3/4	005
SYNC3SRA	3/4	005
SYNC4CA	3/4	005
SYNC4CRA	3/4	005
SYNC4SA	3/4	005
SYNC4SRA	3/4	005

DESIG	LOCATION FS/SYM	CAD
CONN CKT (CONT)		
SYNC5CA	3/4	005
SYNC5CRA	3/4	005
SYNC5SA	3/4	005
SYNC5SRA	3/4	005
SYNC6CA	3/4	005
SYNC6CRA	3/4	005
SYNC6SA	3/4	005
SYNC6SRA	3/4	005
SYNC7CA	3/4	005
SYNC7CRA	3/4	005
SYNC7SA	3/4	005
SYNC7SRA	3/4	005
DSX		
REF0N	4/3	008
REF0P	4/3	008
REF1N	4/3	008
REF1P	4/3	008
REF2N	4/3	008
REF2P	4/3	008
REF3N	4/3	008
REF3P	4/3	008
REF4N	4/1	008
REF4P	4/1	008
REF5N	4/1	008
REF5P	4/1	008
REF6N	4/1	008
REF6P	4/1	008
REF7N	4/1	008
REF7P	4/1	008
FOUNDATION PERIPHERAL CONTROLLER UNIT		
OFPCACT	3/5	002
OFPCACTR	3/5	002
OLIINTR	3/1	002
OMIINT	3/5	002
OMIINTR	3/5	002
OMISEL	3/5	002
OMISELR	3/5	002
ONCINTR	3/1	002
OTMSINT	3/5	002
OTMSINTR	3/5	002
6TMSRDY	3/5	002
6TMSRDYR	3/5	002
6TMSRCTR	3/5	002
6TMSRST	3/5	002
6TMSRSTR	3/5	002
6TMSSEL	3/5	002
6TMSSELR	3/5	002
6TMSSRCT	3/5	002

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE	ISSUE
C2	7B

AT&T	SD-5D082-01	SHEET A6

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LEAD INDEX (CONT)

DESIG	LOCATION FS/SYM	CAD
FOUNDATION PERIPHERAL CONTROLLER UNIT (CONT)		
0WIACT	3/5	002
0WIACTR	3/5	002
1CLK	3/5	002
1CLKR	3/5	002
1DIN	3/5	002
1DINR	3/5	002
1DOUT	3/5	002
1DOUTR	3/5	002
1FPCACT	3/5	002
1FPCACTR	3/5	002
1GO	3/5	002
1GOR	3/5	002
1LIINT	3/5	002
1LIINTR	3/5	002
1LISEL	3/5	002
1LISELR	3/5	002
1MIINT	3/5	002
1MIINTR	3/5	002
1MISEL	3/5	002
1MISELR	3/5	002
1NCINT	3/5	002
1NCINTR	3/5	002
1NCSEL	3/5	002
1NCSELR	3/5	002
1TMSINT	3/5	002
1TMSINTR	3/5	002
1TMSRDY	3/5	002
1TMSRDYR	3/5	002
1TMSROT	3/5	002
1TMSROTR	3/5	002
1TMSRST	3/5	002
1TMSRSTR	3/5	002
1TMSSEL	3/5	002
1TMSSELR	3/5	002
1WIACT	3/5	002
1WIACTR	3/5	002
LIINTO	3/1	002
LISELI	3/1	002
LISR	3/1	002
NCINT	3/1	002
NCSELI	3/1	002
NCSELIR	3/1	002
RCVDATO	3/1	002
RCVDATOR	3/1	002
TRCLKI	3/1	002
TRCLKIR	3/1	002
TRMDATI	3/1	002
TRMDATIR	3/1	002
VALDATI	3/1	002
VALDATIR	3/1	002
FUSE ALARM BUS		
FUSEALR	4/4	006
FUSE PANEL		
-48VA	1/2	010
-48VB	1/1	010
-48VC	4/4	010
-48VRTNA	1/2	010
-48VRTNB	1/1	010
-48VRTNC	4/4	010

DESIG	LOCATION FS/SYM	CAD
FUSE PANEL (CONT)		
ALMD	1/2	003
FAS	1/1	003
TSTB	1/1	003
NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL 2		
TB1B	4/4	006
TB1P	4/4	006
TBBINN	4/2	006
TBBINP	4/2	006
XCPLINN	4/2	006
XCPLINP	4/2	006
OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE		
OSYNCRS	2/2	004
OMSIN	2/2	004
OMHIN	2/2	004
OMHZ	2/2	004
CLK4M0	2/2	004
GRD04100	3/1	004
MATE4M0	2/2	004
MATEEN	2/2	004
PU5V	2/2	004
TIME MULTIPLEXED SWITCH UNIT		
TMSCLK	3/5	011
TMSCLKR	3/5	011
TMSDIN	3/5	011
TMSDINR	3/5	011
TMSDOUT	3/5	011
TMSDOUTR	3/5	011
TMSGO	3/5	011
TMSGOR	3/5	011
TMSINT	3/5	011
TMSINTR	3/5	011
TMSRDY	3/5	011
TMSRDYR	3/5	011
TMSRST	3/5	011
TMSRSTR	3/5	011
TMSSEL	3/5	011
TMSSELR	3/5	011
TMSSROT	3/5	011
TMSSROTR	3/5	011
TIME SLOT INTERCHANGER UNIT		
FOIN	2/4	004
FOOUT	2/3	004

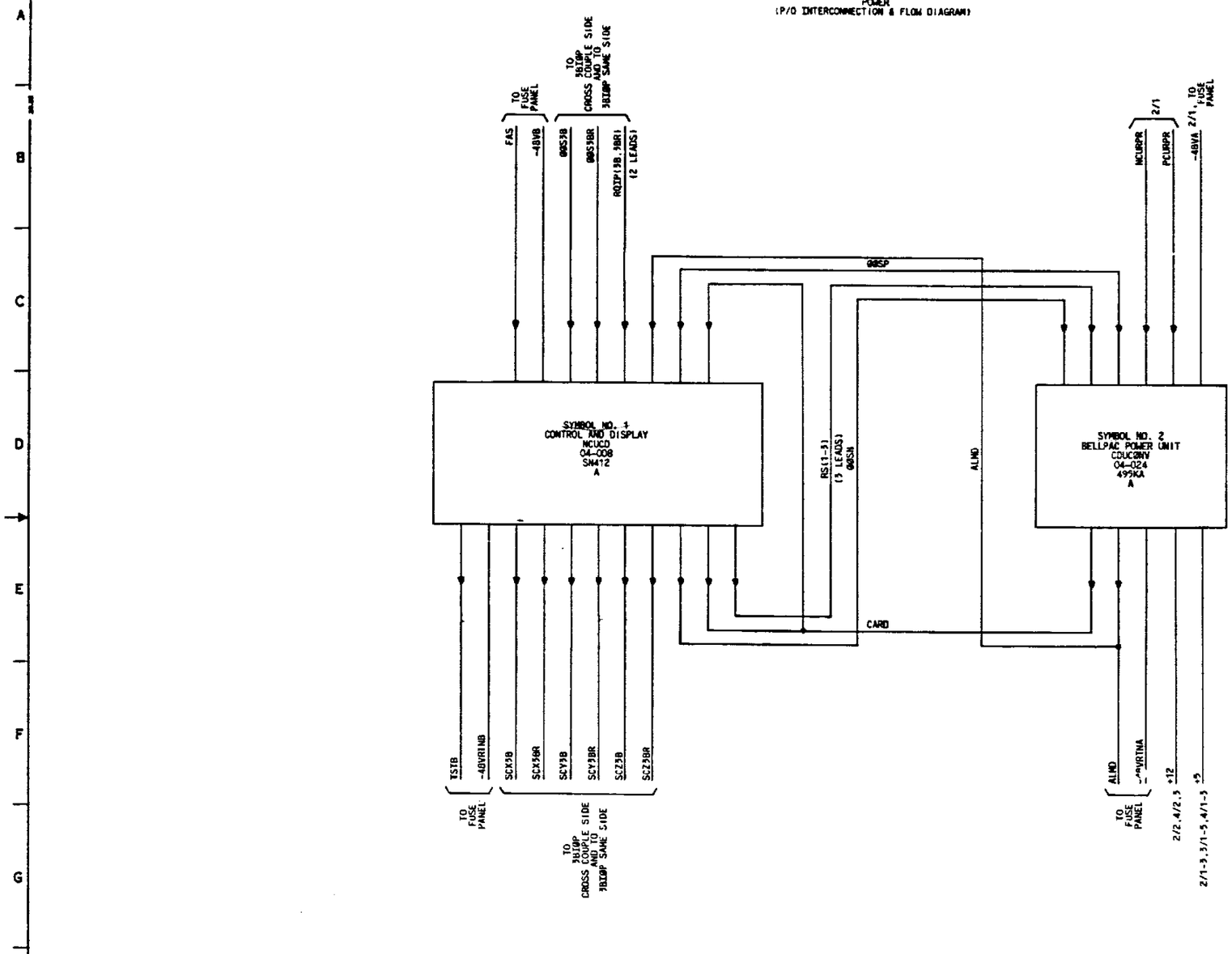
MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DMG SIZE: D2 | ISSUE: 7B

AT&T | SD-5D082-01 | A7

PART OF FS I

POWER
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2		DWG SIZE: A3	ISSUE: 3D
AT&T BELL LABORATORIES	SD-50082-01		B1AA

PART OF FS 1

POWER

SYMBOL NO. 1

CONTROL AND DISPLAY

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUCD	04-008	SN412	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
NC	O	SCZ1	014			
	O	SCZ0	015			
	O	SCZR	016			
	O	SCX1	017			
	O	SCX0	018			
	O	SCXR	019			
	O	TSTIN	049			
	O	SCY1	118			
	O	SCY0	119			
	O	SCYR	120			
	I	OOSO	010			
	I	OOS1	011			
	I	RQIP1	021			
	I	RQIP0	022			
	I	OOSR	112			
	I	INH	114			
	I	FAS	121			
-48VB	PWR	-48	006			
	PWR	-48	007			
	PWR	-48	008			
	PWR	-48	106			
	PWR	-48	107		TO FUSE PANEL	
	PWR	-48	108			
-48VRTNB	I	ZRTN	149			
	GRD	-48RTN	003			
	GRD	-48RTN	004		TO FUSE PANEL	
	GRD	-48RTN	102			
	GRD	-48RTN	103			
	GRD	-48RTN	104			
ALMD	I	AD	117		1/2	
CARD	OT	CARD	123		1/2	
	I	PINT	048		1/1	
FAS	I	FAS	045		TO FUSE PANEL	
OOSN	O	OOS48P	109		1/2	
OOSP	I	OOSCONV	111		1/2	
OOS3B	I	OOS3B	151		TO 3B10P CROSS COUPLE SIDE AND TO 3B10P SAME SIDE	
OOS3BR	I	OOSR	051		TO 3B10P CROSS COUPLE SIDE AND TO 3B10P SAME SIDE	
RQIP3B	I	RQIP3B	152		TO 3B10P CROSS COUPLE SIDE AND TO 3B10P SAME SIDE	
RQIP3BR	I	RQIP3BR	052		TO 3B10P CROSS COUPLE SIDE AND TO 3B10P SAME SIDE	
RS1	O	S1	124		1/2	
RS2	O	S2	122		1/2	
RS3	O	S3	009		1/2	
SCX3B	O	SCX3B	154		TO 3B10P CROSS COUPLE SIDE AND TO 3B10P SAME SIDE	
SCX3BR	O	SCXR	054		TO 3B10P CROSS COUPLE SIDE AND TO 3B10P SAME SIDE	
SCY3B	O	SCY3B	153		TO 3B10P CROSS COUPLE SIDE AND TO 3B10P SAME SIDE	

SYMBOL NO. 1 (CONT)

CONTROL AND DISPLAY

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUCD	04-008	SN412	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
SCY3BR	O	SCYR	053		TO 3B10P CROSS COUPLE SIDE AND TO 3B10P SAME SIDE	
SCZ3B	O	SCZ3B	155		TO 3B10P CROSS COUPLE SIDE AND TO 3B10P SAME SIDE	
SCZ3BR	O	SCZR	055		TO 3B10P CROSS COUPLE SIDE AND TO 3B10P SAME SIDE	
TSTA	O	TSTA	146			
TSTB	O	TSTB	046		TO FUSE PANEL	

SYMBOL NO. 2

BELLPAC POWER UNIT

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
CDUCONV	04-024	495KA	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
NC	O	INT	012			
	O	INT	112			
	I	RS4	010			
+SENSE	I	SA(+)	018			
	I	SC(+)	019			
+12	PWR	VOUT2(+)	024		1/2	
	PWR	VOUT2(+)	123		1/2	
	PWR	VOUT2(+)	124		1/2	
	PWR	VOUT2(+)	224		1/2	
	PWR	VOUT2(+)	324		1/2	
	PWR	VOUT2(+)	323		2/2,4/2 4/3	
+5	PWR	VOUT1(+)	045		1/2	
	PWR	VOUT1(+)	046		1/2	
	PWR	VOUT1(+)	047		1/2	
	PWR	VOUT1(+)	048		1/2	
	PWR	VOUT1(+)	049		1/2	
	PWR	VOUT1(+)	050		1/2	
	PWR	VOUT1(+)	051		1/2	
	PWR	VOUT1(+)	052		1/2	
	PWR	VOUT1(+)	053		1/2	
	PWR	VOUT1(+)	054		1/2	
	PWR	VOUT1(+)	055		1/2	
	PWR	VOUT1(+)	056		1/2	
	PWR	VOUT1(+)	145		1/2	
	PWR	VOUT1(+)	146		1/2	
	PWR	VOUT1(+)	147		1/2	
	PWR	VOUT1(+)	148		1/2	
	PWR	VOUT1(+)	149		1/2	
	PWR	VOUT1(+)	150		1/2	
	PWR	VOUT1(+)	151		1/2	
	PWR	VOUT1(+)	152		1/2	
	PWR	VOUT1(+)	153		1/2	
	PWR	VOUT1(+)	154		1/2	

SYMBOL NO. 2 (CONT)

BELLPAC POWER UNIT

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
CDUCONV	04-024	495KA	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	PWR	VOUT1(+)	155		1/2	
	PWR	VOUT1(+)	156		1/2	
	PWR	VOUT1(+)	245		1/2	
	PWR	VOUT1(+)	246		1/2	
	PWR	VOUT1(+)	247		1/2	
	PWR	VOUT1(+)	248		1/2	
	PWR	VOUT1(+)	249		1/2	
	PWR	VOUT1(+)	250		1/2	
	PWR	VOUT1(+)	251		1/2	
	PWR	VOUT1(+)	252		1/2	
	PWR	VOUT1(+)	253		1/2	
	PWR	VOUT1(+)	254		1/2	
	PWR	VOUT1(+)	255		1/2	
	PWR	VOUT1(+)	256		1/2	
	PWR	VOUT1(+)	345		1/2	
	PWR	VOUT1(+)	346		1/2	
	PWR	VOUT1(+)	347		1/2	
	PWR	VOUT1(+)	348		1/2	
	PWR	VOUT1(+)	349		1/2	
	PWR	VOUT1(+)	350		1/2	
	PWR	VOUT1(+)	351		1/2	
	PWR	VOUT1(+)	352		1/2	
	PWR	VOUT1(+)	353		1/2	
	PWR	VOUT1(+)	354		1/2	
	PWR	VOUT1(+)	355		1/2	
	PWR	VOUT1(+)	356		1/2	
	PWR	SB(+)	118		2/1,2/2 2/3,3/1 3/2,3/3 3/4,3/5 4/1,4/2 4/3	
-48VA	PWR	VIN(-)	006		1/2	
	PWR	VIN(-)	007		1/2	
	PWR	VIN(-)	008		1/2	
	PWR	VIN(-)	106		1/2	
	PWR	VIN(-)	107		1/2	
	PWR	VIN(-)	108		1/2	
	PWR	VIN(-)	206		1/2	
	PWR	VIN(-)	207		1/2	
	PWR	VIN(-)	208		1/2	
	PWR	VIN(-)	306		1/2	
	PWR	VIN(-)	307		2/1 TO FUSE PANEL	
	PWR	VIN(-)	308		1/2	
-48VRTNA	GRD	VIN(+)	003			
	GRD	VIN(+)	004			
	GRD	VIN(+)	005			
	GRD	VIN(+)	102			
	GRD	VIN(+)	103			
	GRD	VIN(+)	104			
	GRD	VIN(+)	203			
	GRD	VIN(+)	204			
	GRD	VIN(+)	205			
	GRD	VIN(+)	302		TO FUSE PANEL	
	GRD	VIN(+)	303			
	GRD	VIN(+)	304			
ALMD	O	ALM2	014		1/1 TO FUSE PANEL	
CARD	OT	ALM1	113		1/1	
GRD04024	GRD	FRGRD	000			

SYMBOL NO. 2 (CONT)

BELLPAC POWER UNIT

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
CDUCONV	04-024	495KA	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD	FRGRD	001			
	GRD	VOUT2(-)	022			
	GRD	VOUT2(-)	023			
	GRD	VOUT1(-)	032			
	GRD	VOUT1(-)	033			
	GRD	VOUT1(-)	034			
	GRD	VOUT1(-)	035			
	GRD	VOUT1(-)	036			
	GRD	VOUT1(-)	037			
	GRD	VOUT1(-)	038			
	GRD	VOUT1(-)	039			
	GRD	VOUT1(-)	040			
	GRD	VOUT1(-)	041			
	GRD	VOUT1(-)	042			
	GRD	VOUT1(-)	043			
	GRD	FRGRD	100			
	GRD	FRGRD	101			
	GRD	S(-)	119			
	GRD	VOUT2(-)	122			
	GRD	VOUT1(-)	132			
	GRD	VOUT1(-)	133			
	GRD	VOUT1(-)	134			
	GRD	VOUT1(-)	135			
	GRD	VOUT1(-)	136			
	GRD	VOUT1(-)	137			
	GRD	VOUT1(-)	138			
	GRD	VOUT1(-)	139			
	GRD	VOUT1(-)	140			
	GRD	VOUT1(-)	141			
	GRD	VOUT1(-)	142			
	GRD	VOUT1(-)	143			
	GRD	FRGRD	200			
	GRD	FRGRD	201			
	GRD	VOUT2(-)	222			
	GRD	VOUT2(-)	223			
	GRD	VOUT1(-)	232			
	GRD	VOUT1(-)	233			
	GRD	VOUT1(-)	234			
	GRD	VOUT1(-)	235			
	GRD	VOUT1(-)	236			
	GRD	VOUT1(-)	237			
	GRD	VOUT1(-)	238			
	GRD	VOUT1(-)	239			
	GRD	VOUT1(-)	240			
	GRD	VOUT1(-)	241			
	GRD	VOUT1(-)	242			
	GRD	VOUT1(-)	243			
	GRD	FRGRD	300			
	GRD	FRGRD	301			
	GRD	VOUT2(-)	322			

PART OF FS 1

SYMBOL(S) 1 2

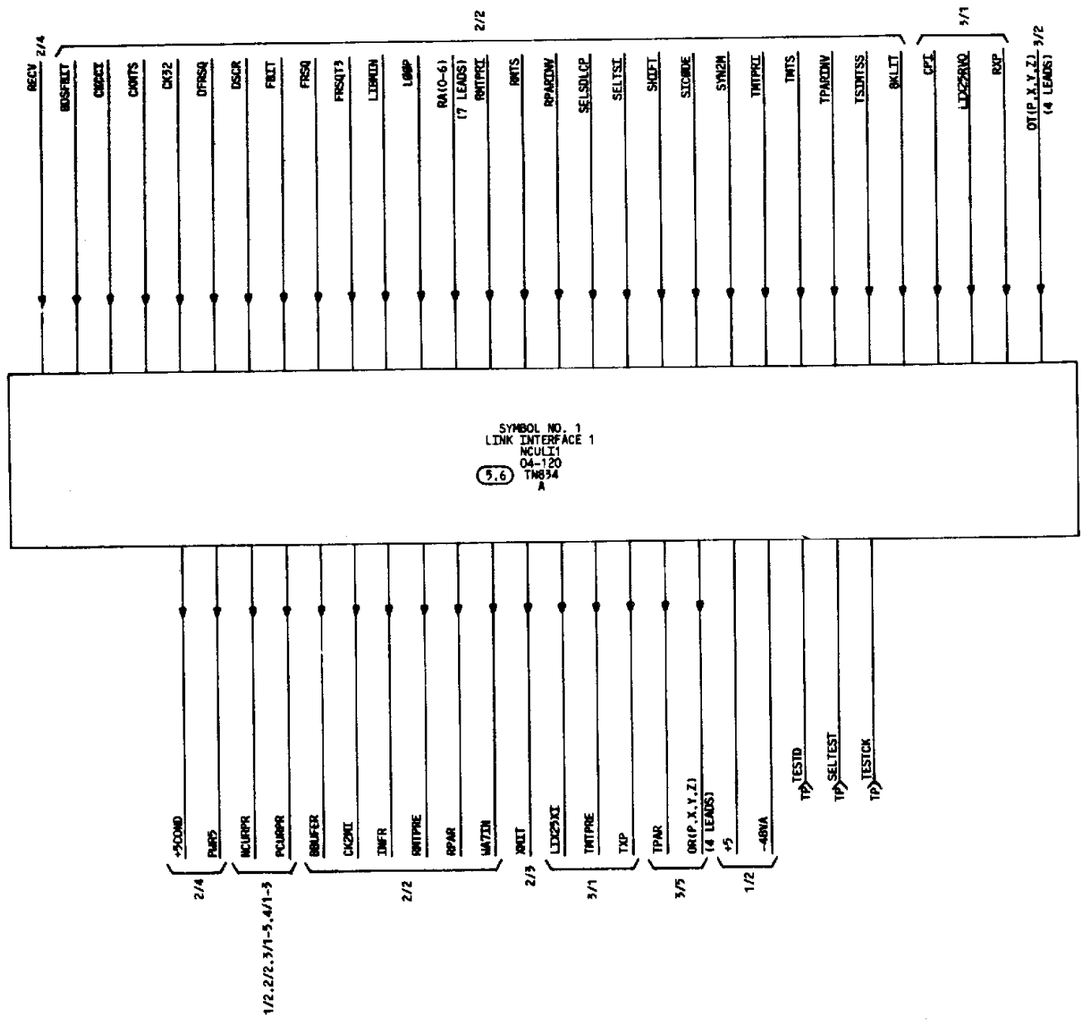
MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE	ISSUE
D	3D

ATET BELL LABORATORIES	SD-5D082-01	B1CA

PART OF FS 2

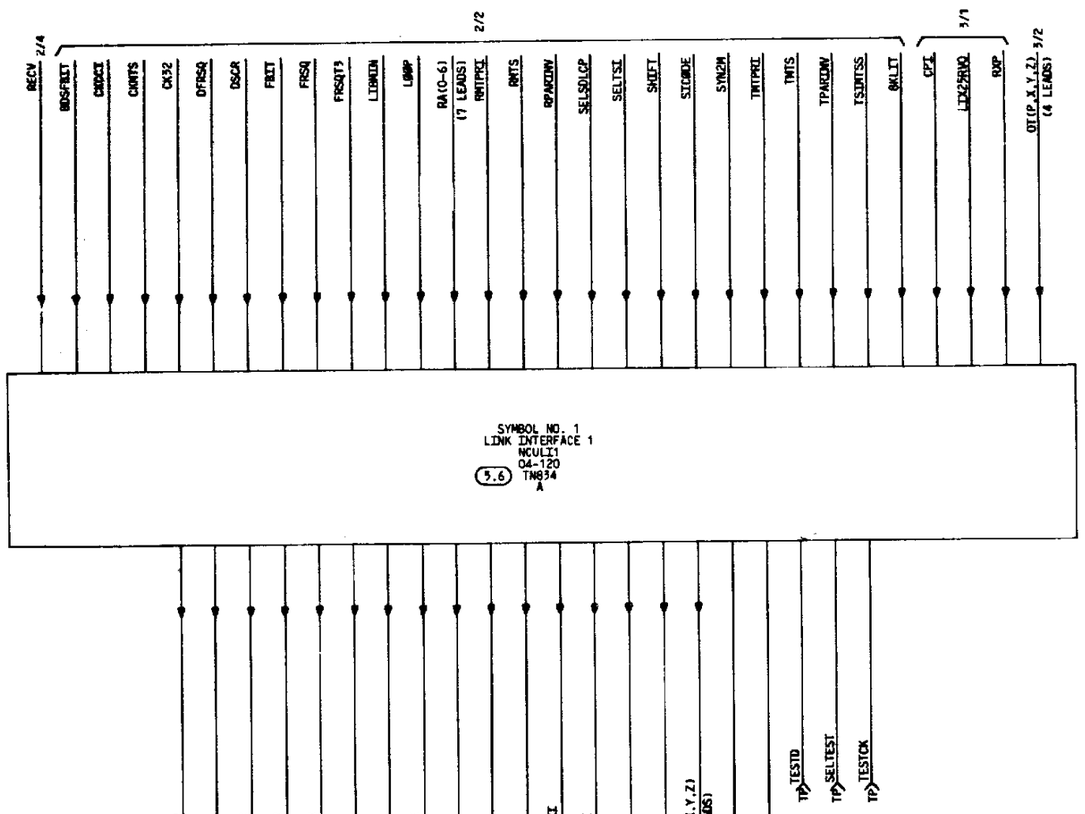
LINK INTERFACE
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE B	ISSUE 3D
AT&T BELL LABORATORIES	SD-50082-01	B2AA

PART OF FS 2

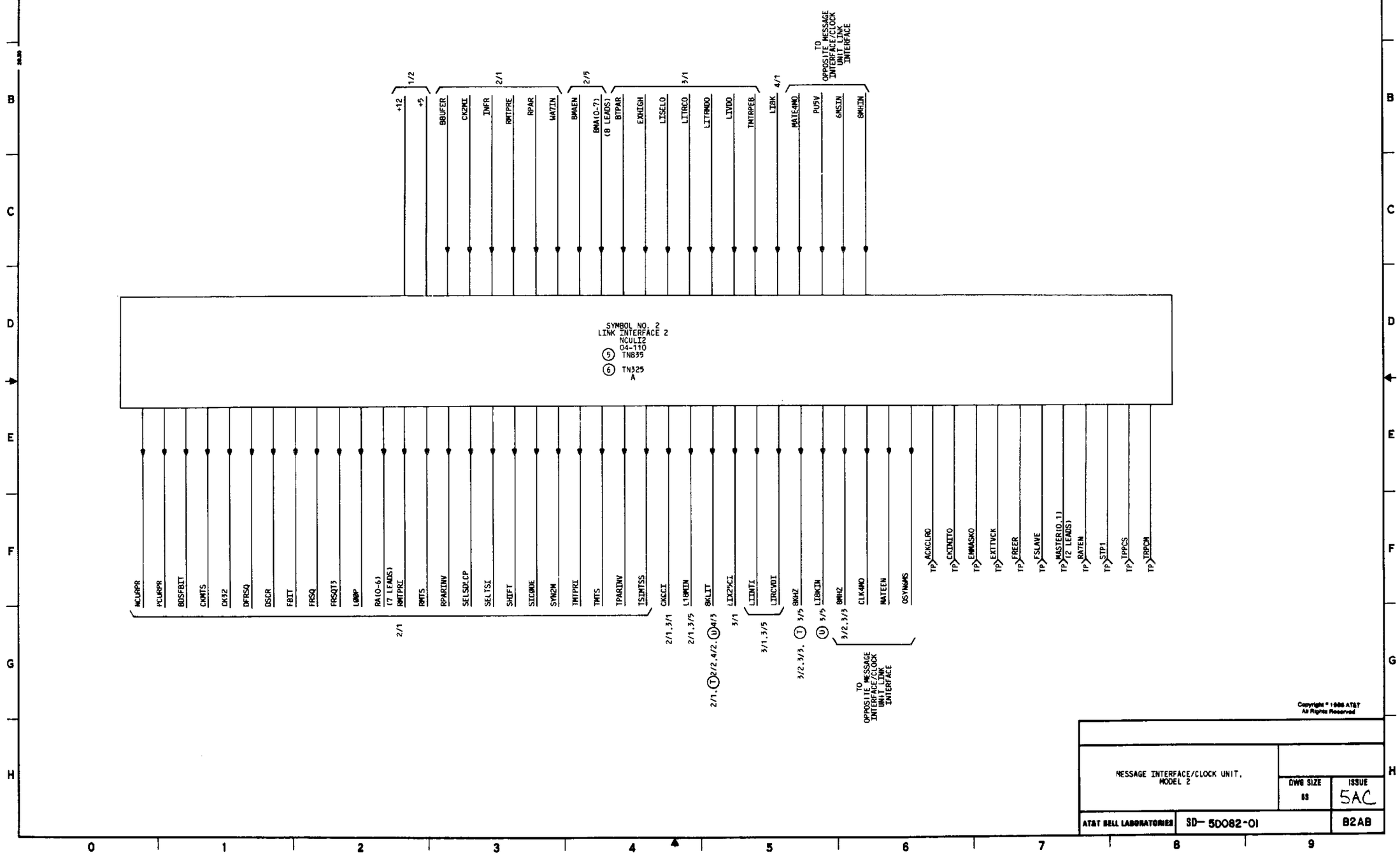
LINK INTERFACE
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE B	ISSUE 3D
AT&T BELL LABORATORIES SD-5D082-01		B2AA

PART OF FS 2

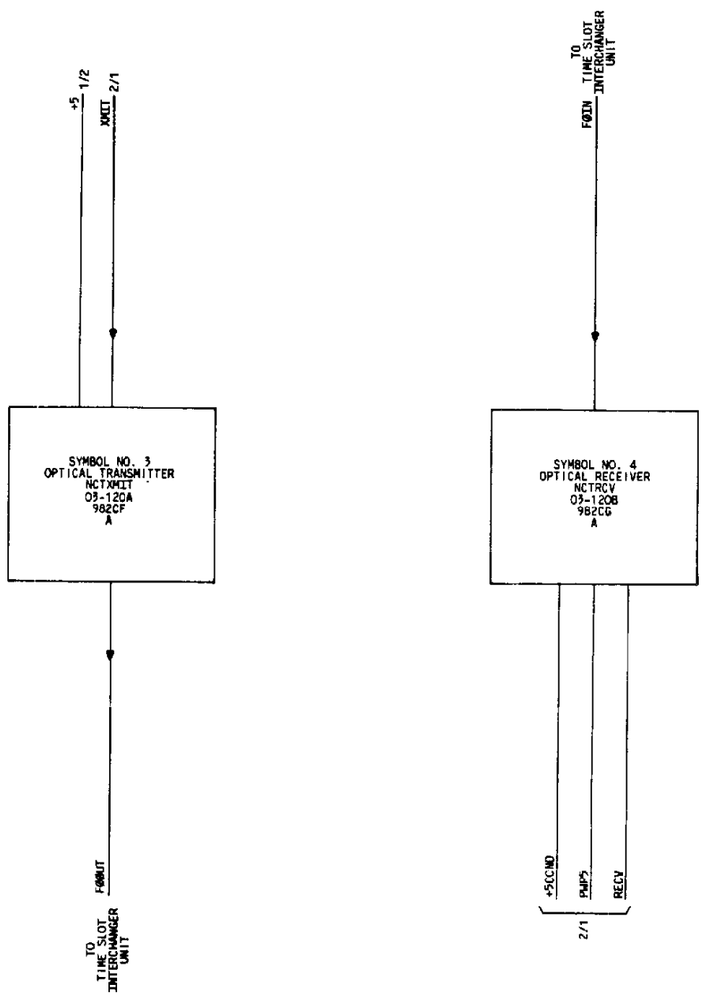
LINK INTERFACE
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE: 8S	ISSUE: 5AC
AT&T BELL LABORATORIES	SD- 5D082-01	82AB

PART OF FS 2

LINK INTERFACE
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT. MODEL 2	DWG SIZE B5	ISSUE 3D
AT&T BELL LABORATORIES	SD-5D082-01	B2AC

PART OF FS 2

LINK INTERFACE

SYMBOL NO. 1

LINK INTERFACE 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCULI1	04-120	TN834	A	(5)
NCULI1	04-120	TN834	A	(6)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
NC	O	CCIOUP	047			
	O	1RP	140			
	O	1RZ	141			
	O	1RY	142			
	O	1RX	143			
	O	RMTD1UP	145			
	O	RMTP1UP	146			
	O	CCI1UP	147			
	I	1TP	103			
	I	1TZ	104			
	I	1TY	105			
	I	1TX	106			
	(5)I	RESETCK	244			
	(6)I	RESETCK				
	I	RINITO	245			
	I	CLR67B	304			
	I	CLR67A	305			
	I	CLR32B	306			
	I	CLR4B	307			
	I	CLR4A	308			
+5	PWR	+5	000		1/2	
	PWR	+5	001		1/2	
	PWR	+5	100		1/2	
	PWR	+5	101		1/2	
	PWR	+5	102		1/2	
+5COND	O	COND5	122		2/4	
-48VA	PWR	-48	017		1/2	
BBUFER	(5)O	BUFER	248		2/2	
BDSFBIT	(5)I	DSFBIT	345		2/2	
CERAM0	O	CERAM0	351			
	I	CERAM0A	251			
CKCCI	I	CKCCI	148		2/2	
CKMTS	I	CKMTS	048		2/2	
CK2MI	O	CK2M1	034		2/2	
CK32	I	CK32	333		2/2	
CPI	I	TCCI	013		3/1	
DFRSO	I	DFRSO	215		2/2	
DSCR	I	DSCR	239		2/2	
ECTR	O	ECTR	246			
	I	ECTRIN	348			
FBIT	I	FBIT	243		2/2	
FRSO	I	FRSO	319		2/2	
FRSOT3	(5)I	FRSOT3	346		2/2	
GRD04120	I	RECVRET	120			
	GRD	GRD	002			
	GRD	GRD	008			
	GRD	GRD	020			
	GRD	GRD	033			
	GRD	GRD	035			
	GRD	GRD	107			
	GRD	GRD	116			
	GRD	GRD	134			
	GRD	GRD	200			
	GRD	GRD	201			
	GRD	GRD	220			
	GRD	GRD	222			
	GRD	GRD	223			
	GRD	GRD	232			

SYMBOL NO. 1 (CONT)

LINK INTERFACE 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCULI1	04-120	TN834	A	(5)
NCULI1	04-120	TN834	A	(6)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD	GRD	233			
	GRD	GRD	235			
	GRD	GRD	300			
	GRD	GRD	301			
	GRD	GRD	320			
	GRD	GRD	322			
	GRD	GRD	323			
	GRD	GRD	332			
	GRD	GRD	334			
	GRD	GRD	336			
INFR	O	INFR	247		2/2	
	I	INFRIN	347		2/1	
LIX25RV0	I	OUPTMTD	011		3/1	
LIX25XI	O	RMTDOUP	045		3/1	
LI8MIN	(5)I	CK8MH	202		2/2	
LOOP	I	LOOP	238		2/2	
NCURPR	OT	-CURPR	012		2/2,3/1 3/2,3/3 3/4,3/5 1/2,4/1 4/2,4/3	
PCURPR	OT	+CURPR	112		2/2,3/1 3/2,3/4 4/1,4/3 1/2,3/3 3/5,4/2	
PWR5	O	+5	019		2/4	
RA0	I	RA0	344		2/2	
RA1	I	RA1	343		2/2	
RA2	I	RA2	342		2/2	
RA3	I	RA3	341		2/2	
RA4	I	RA4	340		2/2	
RA5	I	RA5	339		2/2	
RA6	I	RA6	338		2/2	
RECV	I	RECV	121		2/4	
RMTPRE	O	RMTPRE	150		2/2	
RMTPRI	I	RMTPRI	149		2/2	
RMTS	I	RMTS	136		2/2	
RPAR	O	RPAR	240		2/2	
RPARINV	I	RPARINV	241		2/2	
RXP	I	OUPTMP	010		3/1	
SELSDLCP	I	SELSDLCP	218		2/2	
SELTEST	(5)TP	SELTEST	317			
SELTSI	I	SELTSI	214		2/2	
SETTSC	I	SETTSC	303			
SHIFT	I	SHIFT	237		2/2	
SICODE	I	SICODE	242		2/2	
SYN2M	I	SYN2M	321		2/2	
TESTCK	(5)TP	TESTCK	316			
TESTD	(5)TP	TESTD	318			
TMTPRE	O	TMTPRE	050		3/1	
TMTPRI	I	TMTPRI	049		2/2	
TMTS	I	TMTS	219		2/2	
TPAR	O	TPAR	213		3/5	
TPARINV	I	TPARINV	216		2/2	
TSIMTSS	I	TSIMTSS	217		2/2	
TXP	O	RMTPOUP	046		3/1	
WA7IN	O	WA7OUT	236		2/2	
	I	WA7IN	335		2/1	
WEN0	O	WREN0	354			
	I	WRENOB	253			
	I	WRENOA	254			

SYMBOL NO. 1 (CONT)

LINK INTERFACE 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCULI1	04-120	TN834	A	(5)
NCULI1	04-120	TN834	A	(6)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
XMIT	O	XMIT	108		2/3	
ORP	O	ORP	040		3/5	
ORX	O	ORX	043		3/5	
ORY	O	ORY	042		3/5	
ORZ	O	ORZ	041		3/5	
OTP	I	OTP	003		3/2	
OTX	I	OTX	006		3/2	
OTY	I	OTY	005		3/2	
OTZ	I	OTZ	004		3/2	
1UPTMP	I	1UPTMP	110			
1UPTMTD	I	1UPTMTD	111			
8KLIT	I	RA7	337		2/2	

SYMBOL NO. 2

LINK INTERFACE 2

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCULI2	04-110	TN835	A	(5)
NCULI2	04-110	TN325	A	(6)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
NC	O	ASYN2M0	009			
	O	ARMTS	018			
	O	ACK32	110			
	O	ATMTS	118			
	O	ASSDLCP	234			
	O	ALOOP	235			
	O	ARPARINV	236			
	O	ATPARINV	237			
	O	ADFRSQ	238			
	O	AS1CODE	239			
	O	ASELTSI	240			
	(5)O	ADSFBIT	241			
	O	TSIMTSA	242			
	O	RMTPRIA	243			
	O	TMTPRIA	244			
	O	ACK4K1	245			
	O	ASHIFT	246			
	O	OPCCICK	249			
	O	1SYN6MS	306			
	O	1UPMTCK	348			
	O	1PCCICK	349			
	O	1UPINT	350			
	O	1UPOUT	351			
	I	CKSEL	011			
	I	A8KREF	014			
	I	AMA7	045			
	I	AMA6	046			
	I	AMA5	047			
	I	AMA4	048			
	I	AMA3	049			
	I	AMA2	050			
	I	AMA1	051			
	I	AMA0	052			

SYMBOL NO. 2 (CONT)

LINK INTERFACE 2

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCULI2	04-110	TN835	A	(5)
NCULI2	04-110	TN325	A	(6)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	I	AMAEN	053			
	I	RMTPREA	144			
	I	TMTPREA	146			
	I	SRCKMTS	151			
	I	EXTCK	211			
	(5)I	ABUFER	247			
	I	CLR1	333			
	I	1UPDATA	352			
	I	1UPCK	353			
	I	1UPCMD	354			
	I	1UPACT	355			
+12	PWR	+12	024		1/2	
	PWR	+12	124		1/2	
+5	PWR	+5	000		1/2	
	PWR	+5	001		1/2	
	PWR	+5	100		1/2	
	PWR	+5	101		1/2	
ACKCLR0	(5)TP	ACKCLR0	152			
	(6)I	ACKCLR0				
BBUFER	(5)I	BBUFER	347		2/1	
BDSFBIT	(5)O	BDSFBIT	341		2/1	
BMAEN	I	BMAEN	042		2/5	305
BMA0	I	BMA0	041		2/5	305
BMA1	I	BMA1	040		2/5	305
BMA2	I	BMA2	039		2/5	305
BMA3	I	BMA3	038		2/5	305
BMA4	I	BMA4	037		2/5	305
BMA5	I	BMA5	036		2/5	305
BMA6	I	BMA6	035		2/5	305
BMA7	I	BMA7	034		2/5	305
BTPAR	I	BTPAR	320		3/1	
CKCCI	O	LCCICK	149		2/1,3/1	
CKINITO	TP	CKINITO	032			
CKMTS	O	CKMTSL	148		2/1	
CK2MI	I	ACK2M1	023		2/1	
	I	BCK2M1	123		2/1	
CK32	O	BCK32	310		2/1	
CLK4M0	(5)O	1CK161	016		TO OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE	
	(6)O	MTCK4M0				
DFRSO	O	BDFRSO	338		2/1	
DSCR	O	DSCR	150		2/1	
ENMASK0	(5)TP	ENMASK0	154			
EXHIGH	I	AINFR	022		3/1	
	I	JPPARE0	056		3/1	
	I	ATPAR	120		3/1	
EXTTVCK	IP	EXTTVCK	153			
FBIT	O	BCK4K1	345		2/1	

PART OF FS 2

SYMBOL(S) 1 2

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE C2	ISSUE 3D
AT&T BELL LABORATORIES	SD-5D082-01	B2CA

PART OF FS 2

LINK INTERFACE

SYMBOL NO. 2 (CONT)

LINK INTERFACE 2

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCULI2	04-110	TN835	A	(5)
NCULI2	04-110	TN325	A	(6)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
FREER	TP	FREER	204			
FRSQ	O	FRSQ	216		2/1	
FRSQT3	(5)O	FSQT3	217		2/1	
FSLAVE	(5)TP	FSLAVE	035			
GRD04110	I	ARPAR	020			
	GRD	GRD	006			
	GRD	GRD	008			
	GRD	GRD	010			
	GRD	GRD	013			
	GRD	GRD	015			
	GRD	GRD	033			
	GRD	GRD	044			
	GRD	GRD	105			
	GRD	GRD	107			
	GRD	GRD	109			
	GRD	GRD	111			
	GRD	GRD	114			
	GRD	GRD	116			
	GRD	GRD	133			
	GRD	GRD	142			
	GRD	GRD	200			
	GRD	GRD	201			
	GRD	GRD	206			
	GRD	GRD	208			
	GRD	GRD	210			
	GRD	GRD	213			
	GRD	GRD	215			
	GRD	GRD	222			
	GRD	GRD	223			
	GRD	GRD	232			
	GRD	GRD	233			
	GRD	GRD	256			
	GRD	GRD	300			
	GRD	GRD	301			
	GRD	GRD	307			
	GRD	GRD	309			
	GRD	GRD	311			
	GRD	GRD	314			
	GRD	GRD	316			
	GRD	GRD	322			
	GRD	GRD	323			
	GRD	GRD	332			
	GRD	GRD	356			
INFR	I	BINFR	122		2/1	
LIINT1	O	OUPINT	250		3/1,3/5	
LIRCVDI	O	OUPOUT	251		3/1,3/5	
LISELO	I	OUPACT	255		3/1	
LITRCO	I	OUPCK	253		3/1	
LITRMDO	I	OUPDATA	252		3/1	
LIVDO	I	OUPCMD	254		3/1	
LIX25C1	O	OUPMTCK	248		3/1	
LI8K	I	EXTREF	313		4/1	
LI8K1N	O	1SYN8KH	207		(U)3/5	
LI8M1N	O	1CK8MH	308		2/1,3/5	
LOOP	O	BLOOP	335		2/1	
MASTER0	(6)TP	MASTER0	003			
MASTER1	(6)TP	MASTER1	203			
MATEEN	O	MATEEN	156		TO OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE	

SYMBOL NO. 2 (CONT)

LINK INTERFACE 2

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCULI2	04-110	TN835	A	(5)
NCULI2	04-110	TN325	A	(6)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
MATE4M0	I	MATE4M0	113		TO OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE	
NCURPR	OT	-CURPR	012		2/1	
PCURPR	OT	+CURPR	112		2/1	
PU5V	I	MATEENIN	155		TO OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE	
RA0	O	RA0	141		2/1	
RA1	O	RA1	140		2/1	
RA2	O	RA2	139		2/1	
RA3	O	RA3	138		2/1	
RA4	O	RA4	137		2/1	
RA5	O	RA5	136		2/1	
RA6	O	RA6	135		2/1	
RA7EN	TP	RA7EN	224			
RMTPRE	I	RMTPREB	143		2/1	
RMTPRI	O	RMTPR1B	343		2/1	
RMTS	O	BRMTS	218		2/1	
RPAR	I	BRPAR	220		2/1	
RPARINV	O	BRPARINV	336		2/1	
SELSDLCP	O	BSSDLCP	334		2/1	
SELTSI	O	BSELTSI	340		2/1	
SHIFT	O	BSHIFT	346		2/1	
SICODE	O	BSICODE	339		2/1	
STP1	(5)TP	FREEO	303			
	(6)TP	STP1				
SYNZM	O	BSYNZMO	209		2/1	
TMTPREB	I	TMTPREB	145		3/1	
TMTPRI	O	TMTPR1B	344		2/1	
TMTS	O	BTMTS	318		2/1	
TPARINV	O	BTPARINV	337		2/1	
TPPCS	TP	TPPCS	103			
TRPCM	TP	TPPCM	304			
TSIMTSS	O	TSIMTSB	342		2/1	
HA7IN	I	B8KREF	214		2/1	
OSYN6MS	O	OSYN6MS	106		TO OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE	
6MSIN	(5)I	6MSIN	115		TO OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE	
	(6)I	6MS1N				
8KHZ	O	OSYN8KH	007		3/2,3/3	
8KLIT	I	RA7A	132	(T)	2/2	
	O	RA7	134		2/1,4/2 (T)2/2,(U)4/3	
8MHIN	I	8MHIN	315		TO OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE	
8MHZ	O	OCK8MH	108		3/2,3/3 TO OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE	

SYMBOL NO. 3

OPTICAL TRANSMITTER

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCTXMIT	03-120A	982CF	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
+5	PWR	+5	102		1/2	
FOOUT	O	FOOUT	FO		TO TIME SLOT INTERCHANGER UNIT	
GRD04126	GRD	GRD	002			
	GRD	GRD	008			
	GRD	GRD	107			
XMIT	I	XMIT	108		2/1	

SYMBOL NO. 4

OPTICAL RECEIVER

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCTRCV	03-120B	982CG	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
+5COND	PWR	+5COND	109		2/1	
-48	PWR	-48PWR	004			
FOIN	I	FOIN	FO		TO TIME SLOT INTERCHANGER UNIT	
GRD04126	GRD	GRD	007			
	GRD	GRD	103			
	GRD	GRD	107			
PWR5	PWR	+5PWR	006		2/1	
RECV	PWR	RECV	108		2/1	

PART OF FS 2

SYMBOL(S) 2 3 4

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE C2

ISSUE 5AC

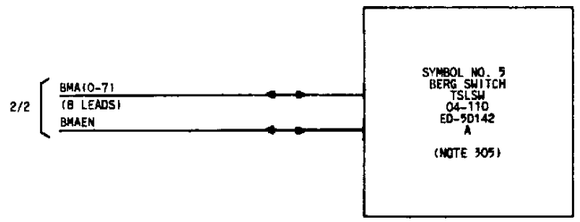
AT&T BELL LABORATORIES

SD-5D082-01

B2CB

PART OF FS 2

LINK INTERFACE
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2		DWG SIZE 66	ISSUE 3D
AT&T BELL LABORATORIES	98-50082-01		B2CC

PART OF FS 2

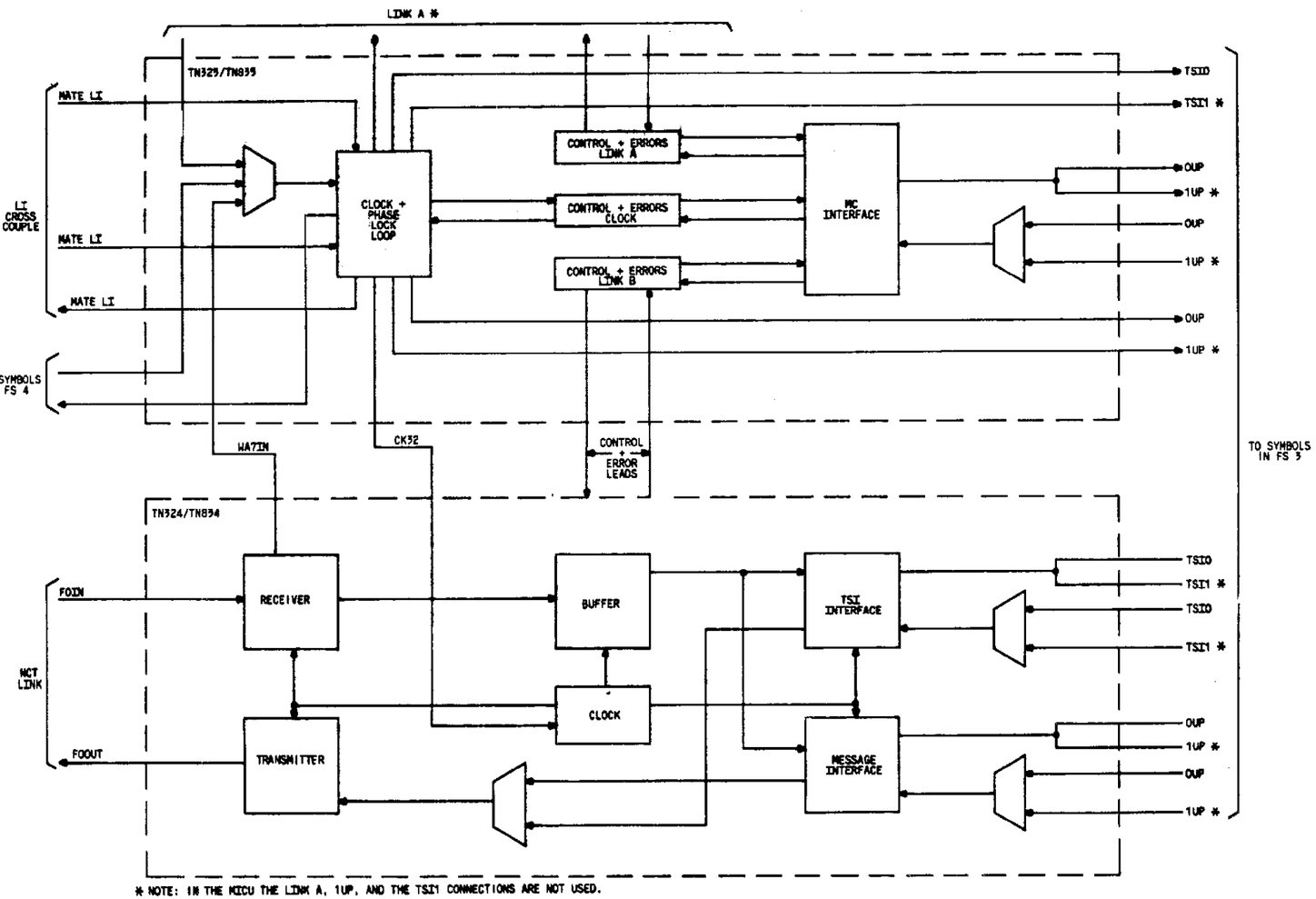
LINK INTERFACE

COMPOSITE DIAGRAM 1

NOTES:

1. THE TN834 LINK INTERFACE 1 CIRCUIT PACK PROVIDES THE INTERFACE FOR THE FIBER OPTIC NCT LINK. IT ALSO PROVIDES A SERIAL INTERFACE FOR THE MESSAGE TIME SLOTS (THIS INTERFACE IS USED IN SINGLE MODULE OFFICE) AND A NIBBLE BUS INTERFACE FOR THE DATA TIME SLOTS (THIS IS USED IN THE MULTI MODULE OFFICE).

2. THE TN329 OR TN835 LINK INTERFACE 2 CIRCUIT PACK PROVIDES ALL THE TIMING FOR THE LINK INTERFACE ALONG WITH THE CROSS-COUPLING FOR SYNCHRONIZING WITH THE MATE LINK INTERFACE. IT ALSO PROVIDES THE CONTROL AND DIAGNOSTIC ACCESS INTERFACE OF THE CONTROL REGISTERS AND ERROR REGISTERS BY AN EXTERNAL PROCESSOR, NAMELY THE FOUNDATION PERIPHERAL CONTROLLER.

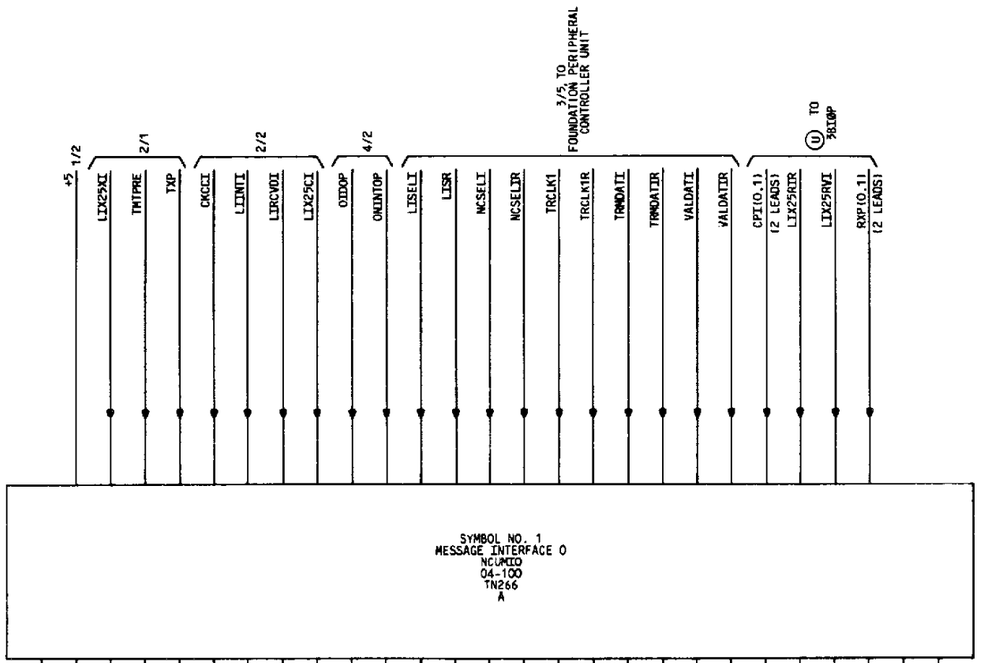


* NOTE: IN THE MICU THE LINK A, 1UP, AND THE TSI1 CONNECTIONS ARE NOT USED.

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE A4	ISSUE 3D
AT&T BELL LABORATORIES	SD-80062-01	SIZE B2GA

PART OF FS 3

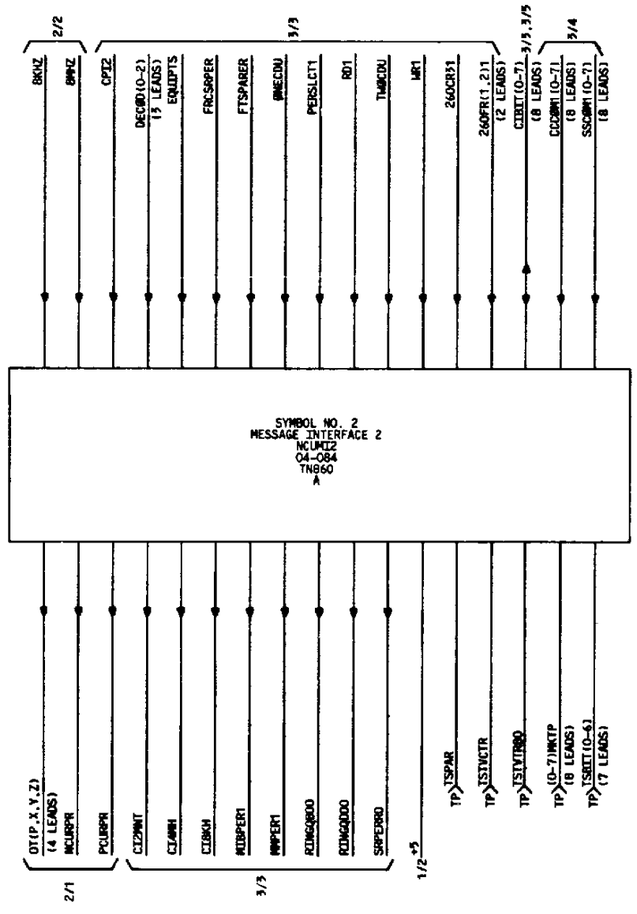
MESSAGE INTERFACE
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE B3	ISSUE 5AC
AT&T BELL LABORATORIES	SD-5D082-01	B3AA

PART OF FS 3

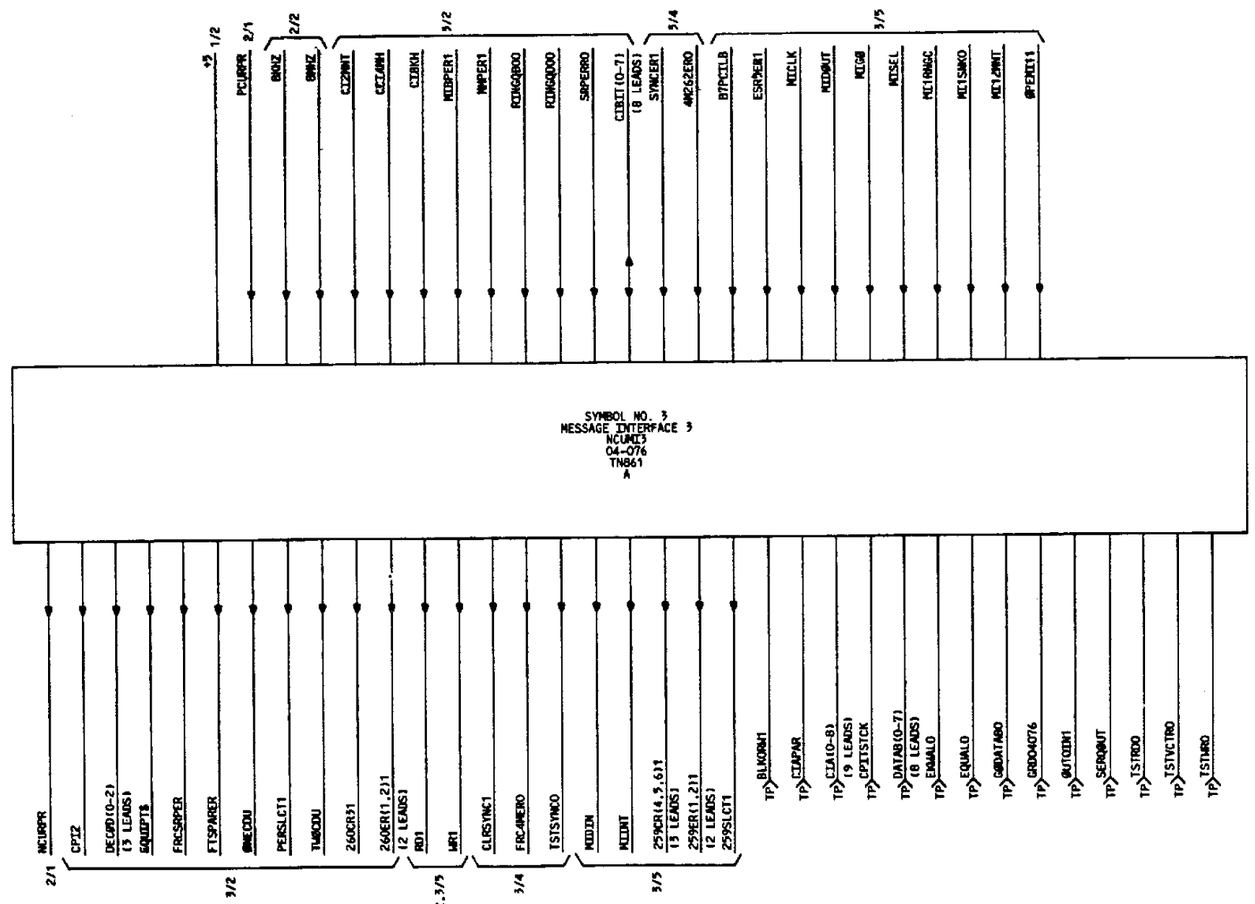
MESSAGE INTERFACE
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE 08	ISSUE 3D
AT&T BELL LABORATORIES	SD-50082-01	B3AB

PART OF FS 3

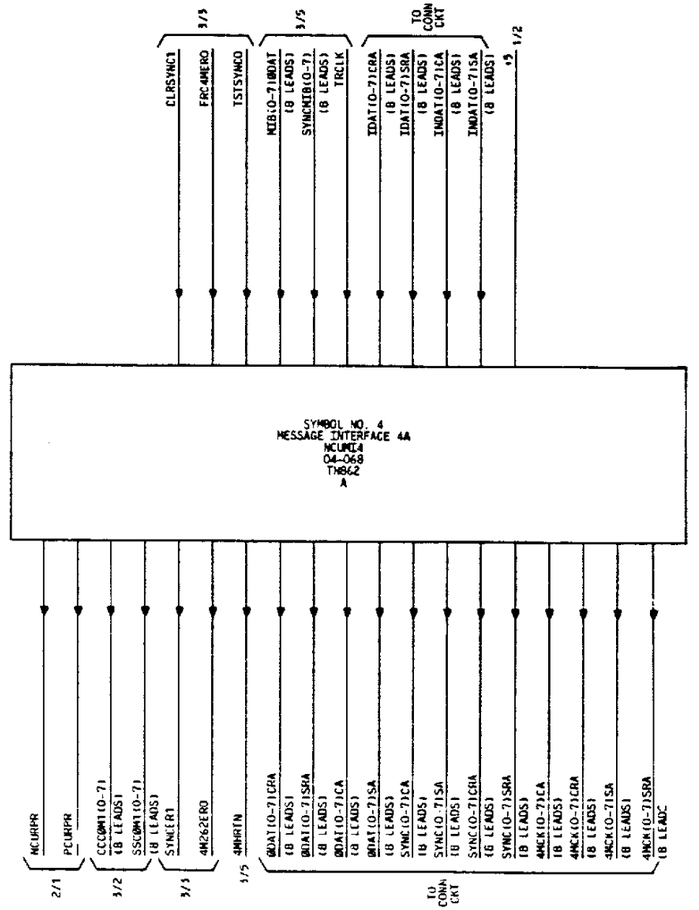
MESSAGE INTERFACE
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE: B5	ISSUE: 3D
AT&T BELL LABORATORIES	SD-5D082-01	B3AC

PART OF FS 3

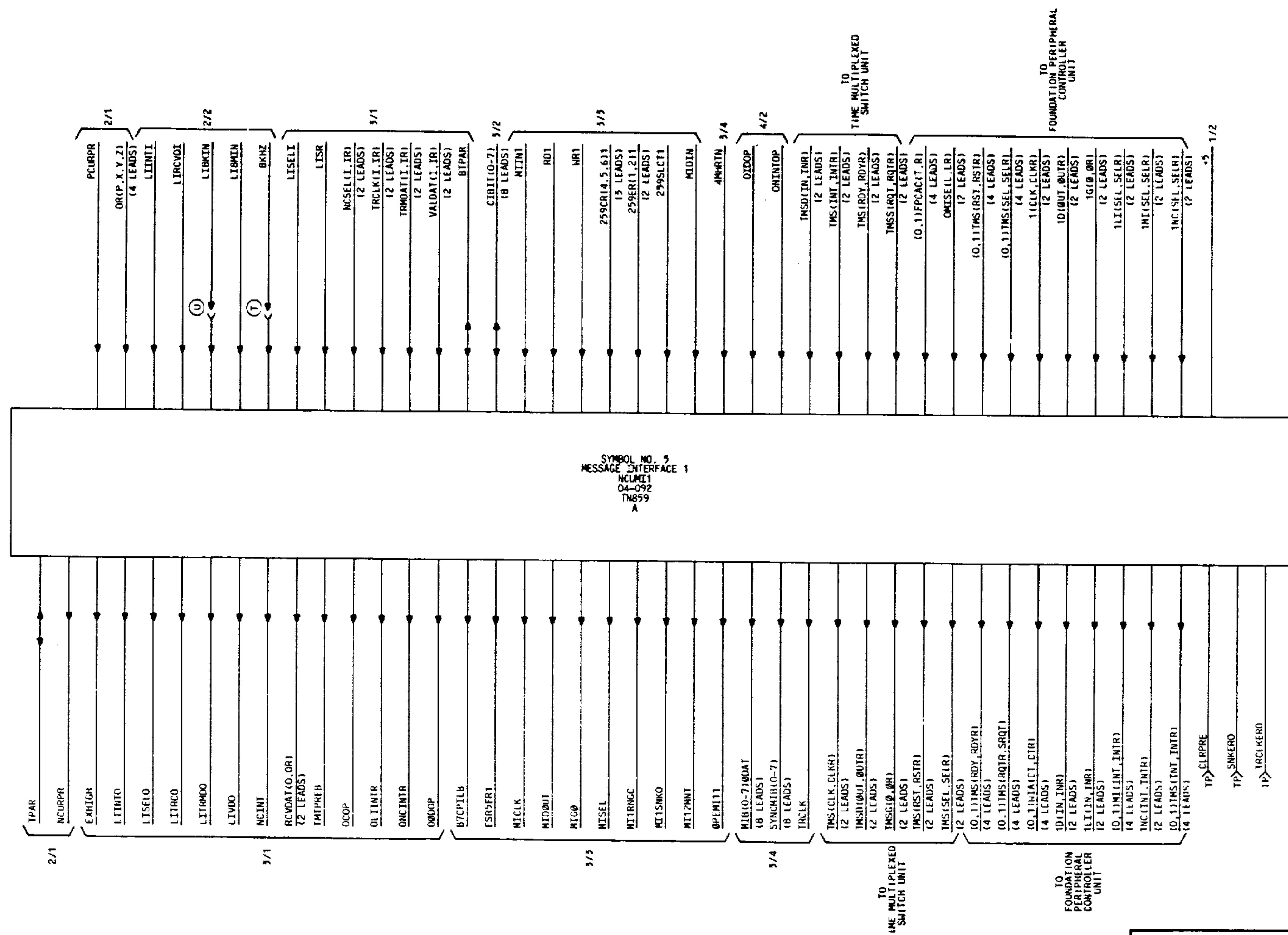
MESSAGE INTERFACE
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT. MODEL 2	DWG SIZE B8	ISSUE 3D
AT&T BELL LABORATORIES	SD-50082-01	B3AD

PART OF FS 3

MESSAGE INTERFACE
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE 83	ISSUE 5AC
AT&T BELL LABORATORIES	SD-5D082-01	B3AE

PART OF FS 3

MESSAGE INTERFACE

SYMBOL NO. 1

MESSAGE INTERFACE 0

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI0	04-100	TN266	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
+5	PWR	+5	000		1/2	
	PWR	+5	001		1/2	
	PWR	+5	100		1/2	
	PWR	+5	101		1/2	
BTPAR	O	HIGH	107		3/5,2/2	
CKCCI	I	CKCCI	006		2/2	
CKCCI0	O	CKCCI0	034		(U)TO 3B10P	
CKCCI1	O	CKCCI1	134		(U)TO 3B10P	
CPI	O	CPI	106		2/1	
CPI0	I	CPI0	033		(U)TO 3B10P	
CPI1	I	CPI1	133		(U)TO 3B10P	
EXHIGH	OT	HIGH	007		3/5	
	I				2/2	
GRD04100	GRD	GRD	200			
	GRD	GRD	201			
	GRD	GRD	245			
	GRD	GRD	248			
	GRD	GRD	300			
	GRD	GRD	301			
	GRD	GRD	348		TO OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE	
LIINTI	I	LIINT	247		2/2	
LIINTO	OT	LIINTO	340		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
LIRCVDI	I	LIDIN	346		2/2	
LISELI	I	LIS	234		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
LISELO	OT	LISO	350		3/5	
	I				2/2	
LISR	I	LISR	334		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
LITRCO	OT	LICO	250		3/5	
	I				2/2	
LITRMDO	OT	LIDOUT	249		3/5	
	I				2/2	
LIVDO	OT	LIGDO	349		3/5	
	I				2/2	
LIX25CI	I	LISDLCCI	246		2/2	
LIX25CO	O	LISDLCC	139		(U)TO 3B10P	
LIX25COR	O	LISDLCCR	039		(U)TO 3B10P	
LIX25RIR	I	LISDLCRR	037		(U)TO 3B10P	
LIX25RVI	I	LISDLCR	137		(U)TO 3B10P	
LIX25RVO	O	LISDLCRO	347		2/1	
LIX25XI	I	LISDLCXI	345		2/1	
LIX25XO	O	LISDLCX	138		(U)TO 3B10P	
LIX25XOR	O	LISDLCXR	038		(U)TO 3B10P	
NCINT	OT	NCINTO	339		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
NCSELI	I	NCS	233		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
NCSELIR	I	NCSR	333		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
NCURPR	OT	-CURPR	012		2/1	
PCURPR	OT	+CURPR	112		2/1	

SYMBOL NO. 1 (CONT)

MESSAGE INTERFACE 0

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI0	04-100	TN266	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
RCVDAT0	OT	DIN	337		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
RCVDATOR	OT	DINR	237		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
RXP	O	RXP	105		2/1	
RXP0	I	RXP0	035		(U)TO 3B10P	
RXP1	I	RXP1	135		(U)TO 3B10P	
TMTPRE	I	TMTPRE	047		2/1	
TMTPREB	OT	TMTPRE	147		3/5	
	I				2/2	
TRCLK1	I	CLK	235		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
TRCLKIR	I	CLKR	335		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
TRMDATI	I	DOUT	338		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
TRMDATIR	I	DOUTR	238		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
TXP	I	TXP	005		2/1	
TXP0	O	TXP0	036		(U)TO 3B10P	
TXP1	O	TXP1	136		(U)TO 3B10P	
VALDATI	I	GO	236		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
VALDATIR	I	GOR	336		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
0COP	OT	NCCO	102		3/5,4/2	
0IDOP	I	NCDIN	104		4/2	
0LIINTR	OT	LIINT1	240		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
0NCINTR	OT	NCINT1	239		3/5 TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
0NINTOP	I	NCINT	004		4/2	
0ODOP	OT	NCDOUT	103		3/5	
	I				4/2	

SYMBOL NO. 2

MESSAGE INTERFACE 2

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI2	04-084	TN860	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
NC	I	SSCOM27	223			
	I	SSCOM26	233			
	I	SSCOM25	236			
	I	SSCOM24	240			
	I	SSCOM23	244			
	I	SSCOM22	248			
	I	SSCOM21	252			
	I	SSCOM20	256			
	I	CCCOM27	323			
	I	CCCOM26	333			
	I	CCCOM25	336			
	I	CCCOM24	340			
	I	CCCOM23	344			
	I	CCCOM22	348			
	I	CCCOM21	352			
	I	CCCOM20	356			
+5	PWR	+5	000		1/2	
	PWR	+5	001		1/2	
	PWR	+5	100		1/2	
	PWR	+5	101		1/2	
CCCOM10	I	CCCOM10	156		3/4	
CCCOM11	I	CCCOM11	152		3/4	
CCCOM12	I	CCCOM12	148		3/4	
CCCOM13	I	CCCOM13	144		3/4	
CCCOM14	I	CCCOM14	140		3/4	
CCCOM15	I	CCCOM15	136		3/4	
CCCOM16	I	CCCOM16	133		3/4	
CCCOM17	I	CCCOM17	123		3/4	
CIBIT0	IO	CIBIT0	015		3/3,3/5	
CIBIT1	IO	CIBIT1	115		3/3,3/5	
CIBIT2	IO	CIBIT2	215		3/3,3/5	
CIBIT3	IO	CIBIT3	315		3/3,3/5	
CIBIT4	IO	CIBIT4	016		3/3,3/5	
CIBIT5	IO	CIBIT5	116		3/3,3/5	
CIBIT6	IO	CIBIT6	216		3/3,3/5	
CIBIT7	IO	CIBIT7	316		3/3,3/5	
CI2MNT	O	CI2MNT	010		3/3	
CI4MH	O	CI4MH	310		3/3	
CI8KH	O	CI8KH	313		3/3	
CPI2	I	CPI	110		3/3	
DECOD0	I	DECOD0	107		3/3	
DECOD1	I	DECOD1	207		3/3	
DECOD2	I	DECOD2	307		3/3	
EQUIPTS	I	EQUIPTS	342		3/3	
FRCSRPER	I	FRCSRPER	209		3/3	
FTSPARER	I	FTSPARER	213		3/3	
GRD04084	GRD	GRD	009			
	GRD	GRD	022			
	GRD	GRD	032			
	GRD	GRD	046			
	GRD	GRD	054			
	GRD	GRD	117			
	GRD	GRD	138			
	GRD	GRD	150			
	GRD	GRD	200			
	GRD	GRD	201			
	GRD	GRD	232			
	GRD	GRD	246			
	GRD	GRD	254			
	GRD	GRD	300			

SYMBOL NO. 2 (CONT)

MESSAGE INTERFACE 2

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI2	04-084	TN860	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD	GRD	301			
	GRD	GRD	309			
	GRD	GRD	317			
	GRD	GRD	322			
	GRD	GRD	338			
	GRD	GRD	350			
MIBPER1	O	MIBPER1	105		3/3	
MMPER1	O	MMPER1	205		3/3	
NCURPR	OT	-CURPR	012		2/1	
ONECDU	I	ONECDU	142		3/3	
PCURPR	OT	+CURPR	112		2/1	
PERSLCT1	I	PERSLCT1	202		3/3	
RD1	I	RD1	203		3/3	
RINGQB00	O	RNGQB00	318		3/3	
RINGQD00	O	CIRGQD0	013		3/3	
SRPERR0	O	SRPERR0	211		3/3	
SSCOM10	I	SSCOM10	056		3/4	
SSCOM11	I	SSCOM11	052		3/4	
SSCOM12	I	SSCOM12	048		3/4	
SSCOM13	I	SSCOM13	044		3/4	
SSCOM14	I	SSCOM14	040		3/4	
SSCOM15	I	SSCOM15	036		3/4	
SSCOM16	I	SSCOM16	033		3/4	
SSCOM17	I	SSCOM17	023		3/4	
TSBIT0	TP	TSBIT0	042			
TSBIT1	TP	TSBIT1	043			
TSBIT2	TP	TSBIT2	145			
TSBIT3	TP	TSBIT3	146			
TSBIT4	TP	TSBIT4	147			
TSBIT5	TP	TSBIT5	049			
TSBIT6	TP	TSBIT6	050			
TSPAR	TP	TSPAR	051			
TSTVCTR	TP	TSTVCTR	132			
TSTVTRB0	TP	TSTVTRB0	305			
TWOCDU	I	TWOCDU	242		3/3	
WR1	I	WR1	204		3/3	
0MKTP	TP	0MKTP	218			
0TP	O	0TP	003		2/1	
0TX	O	0TX	006		2/1	
0TY	O	0TY	005		2/1	
0TZ	O	0TZ	004		2/1	
1MKTP	TP	1MKTP	219			
2MKTP	TP	2MKTP	220			
260CR31	I	260CR31	308		3/3	
260ER11	I	260ER11	208		3/3	
260ER21	I	260ER21	108		3/3	
3MKTP	TP	3MKTP	221			
4MKTP	TP	4MKTP	118			
5MKTP	TP	5MKTP	119			
6MKTP	TP	6MKTP	120			

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SYMBOL(S) 1 2

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE: C2

ISSUE: 5AC

AT&T BELL LABORATORIES

SD-5D082-01

R3CA

PART OF FS 3
MESSAGE INTERFACE

SYMBOL NO. 2 (CONT)
MESSAGE INTERFACE 2

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI2	04-084	TN860	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
7MKTP	TP	7MKTP	121			
8KHZ	I	8KHZ	304		2/2	
8MHZ	I	8MHZ	103		2/2	

SYMBOL NO. 3
MESSAGE INTERFACE 3

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI3	04-076	TN861	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
NC	O	PMPADR51	221			
	O	PMPADR31	222			
	O	PMPADR11	223			
	O	PMPADR41	321			
	O	PMPADR21	322			
	I	PMPERD	124			
+5	PWR	+5	000		1/2	
	PWR	+5	001		1/2	
	PWR	+5	100		1/2	
	PWR	+5	101		1/2	
BLKORW1	TP	BLKORW1	153			
B7CP1LB	I	B7CP1LB	207		3/5	
CIAPAR	TP	CIAPAR	318			
CIA0	TP	CIA0	215			
CIA1	TP	CIA1	216			
CIA2	TP	CIA2	217			
CIA3	TP	CIA3	218			
CIA4	TP	CIA4	219			
CIA5	TP	CIA5	220			
CIA6	TP	CIA6	315			
CIA7	TP	CIA7	316			
CIA8	TP	CIA8	317			
CIBIT0	IO	CIBIT0	234		3/2	
CIBIT1	IO	CIBIT1	235		3/2	
CIBIT2	IO	CIBIT2	333		3/2	
CIBIT3	IO	CIBIT3	334		3/2	
CIBIT4	IO	CIBIT4	335		3/2	
CIBIT5	IO	CIBIT5	336		3/2	
CIBIT6	IO	CIBIT6	337		3/2	
CIBIT7	IO	CIBIT7	338		3/2	
CI2MNT	I	CI2MNT	032		3/2	
CI4MH	I	CI4MH	303		3/2	
CI8KH	I	CI8KH	203		3/2	
CLRSYNC1	O	CLRSYNC1	005		3/4	
CPITSTCK	TP	CPITSTCK	008			
CPI2	O	CPI	237		3/2	
DATAB0	TP	DATAB0	253			
DATAB1	TP	DATAB1	353			
DATAB2	TP	DATAB2	254			
DATAB3	TP	DATAB3	354			
DATAB4	TP	DATAB4	255			
DATAB5	TP	DATAB5	355			

SYMBOL NO. 3 (CONT)
MESSAGE INTERFACE 3

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI3	04-076	TN861	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DATAB6	TP	DATAB6	256			
DATAB7	TP	DATAB7	356			
DECOD0	O	BTSA0	210		3/2	
DECOD1	O	BTSA1	212		3/2	
DECOD2	O	BTSA2	214		3/2	
EKWAL0	TP	EKWAL0	117			
EQUAL0	TP	EQUAL0	111			
EQUIPTS	O	MI2EQP	305		3/2	
ESRSER1	I	ESRSER1	021		3/5	
FRCSRPER	O	FSRPE21	038		3/2	
FRC4MER0	O	FRC4MER0	308		3/4	
FTSPARER	O	FTSPE21	040		3/2	
GODATAB0	TP	GODATAB0	352			
GRD04076	TP	TST1GRD0	007			
	TP	DISBLSR1	135			
	GRD	GRD	004			
	GRD	GRD	024			
	GRD	GRD	033			
	GRD	GRD	051			
	GRD	GRD	053			
	GRD	GRD	055			
	GRD	GRD	104			
	GRD	GRD	144			
	GRD	GRD	147			
	GRD	GRD	154			
	GRD	GRD	200			
	GRD	GRD	201			
	GRD	GRD	204			
	GRD	GRD	236			
	GRD	GRD	250			
	GRD	GRD	300			
	GRD	GRD	301			
	GRD	GRD	304			
	GRD	GRD	309			
	GRD	GRD	313			
	GRD	GRD	319			
	GRD	GRD	339			
	GRD	GRD	351			
MIBPER1	I	MIBPER1	141		3/2	
MICLK	I	1MHCLK	050		3/5	
MIDIN	O	DATAOUT	054		3/5	
MIDOUT	I	DATAIN	056		3/5	
MIGO	I	DATVLD0	156		3/5	
MIINT	O	INTFPC0	114		3/5	
MISEL	I	MISLCT0	052		3/5	
MI1RNGC	I	MI1RNGC	017		3/5	
MI1SNK0	I	MI1SNK0	002		3/5	
MI12MNT	I	MI12MNT	213		3/5	
MMPER1	I	MMPER1	103		3/2	
NCURPR	OT	-CURPR	012		2/1	
ONECDU	O	MI21CDU	105		3/2	
OPEMI11	I	OPEMI11	020		3/5	
OUT01N1	TP	OUT01N1	252			
PCURPR	I	+CURPR	112		2/1	
PERSLCT1	O	PERSLCT1	240		3/2	
RD1	O	RD1	238		3/2,3/5	
RINGOB00	I	RINGOB00	310		3/2	
RINGODO0	I	RINGODO0	314		3/2	
SERQOUT	TP	SEQOUT	142			
SRPERR0	I	SRPEMI20	014		3/2	

SYMBOL NO. 3 (CONT)
MESSAGE INTERFACE 3

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI3	04-076	TN861	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
SYNCER1	I	SYNCER1	107		3/4	
TSTRD0	TP	TSTRD0	233			
TSTSYNC0	O	TSTSYNC0	307		3/4	
TSTVCTR0	TP	TSTVCTR0	152			
TSTWR0	TP	TSTWR0	133			
TWOCDU	O	MI22CDU	205		3/2	
WR1	O	WR1	239		3/2,3/5	
259CR41	O	259CR41	122		3/5	
259CR51	O	259CR51	121		3/5	
259CR61	O	259CR61	119		3/5	
259ER11	O	259ER11	120		3/5	
259ER21	O	259ER21	022		3/5	
259SLCT1	O	259SLCT1	340		3/5	
260CR31	O	260CR31	324		3/2	
260ER11	O	260ER11	224		3/2	
260ER21	O	260ER21	323		3/2	
4M262ER0	I	4M262ER0	108		3/4	
8KHZ	I	8KHZ	048		2/2	
8MHZ	I	8MHZ	150		2/2	
CCCOM10	O	CCMIB0	211		3/2	
CCCOM11	O	CCMIB1	210		3/2	
CCCOM12	O	CCMIB2	209		3/2	
CCCOM13	O	CCMIB3	208		3/2	
CCCOM14	O	CCMIB4	207		3/2	
CCCOM15	O	CCMIB5	206		3/2	
CCCOM16	O	CCMIB6	205		3/2	
CCCOM17	O	CCMIB7	204		3/2	
CLRSYNC1	I	CLRSYNC1	202		3/3	
FRC4MER0	I	FRC4MER0	303		3/3	
GRD04068	GRD	GRD	003			
	GRD	GRD	040			
	GRD	GRD	041			
	GRD	GRD	042			
	GRD	GRD	043			
	GRD	GRD	044			
	GRD	GRD	140			
	GRD	GRD	141			
	GRD	GRD	142			
	GRD	GRD	143			
	GRD	GRD	144			
	GRD	GRD	200			
	GRD	GRD	201			

SYMBOL NO. 4
MESSAGE INTERFACE 4A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI4	04-068	TN862	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
+5	PWR	+5	000		1/2	
	PWR	+5	001		1/2	
	PWR	+5	100		1/2	
	PWR	+5	101		1/2	

SYMBOL NO. 4 (CONT)
MESSAGE INTERFACE 4A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI4	04-068	TN862	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD	GRD	212			
	GRD	GRD	240			
	GRD	GRD	241			
	GRD	GRD	242			
	GRD	GRD	243			
	GRD	GRD	244			
	GRD	GRD	300			
	GRD	GRD	301			
	GRD	GRD	312			
	GRD	GRD	340			
	GRD	GRD	341			
	GRD	GRD	342			
	GRD	GRD	343			
	GRD	GRD	344			
IDATOCRA	I	INDATOCR	055		TO CONN CKT	
IDATOSRA	I	INDATOSR	255		TO CONN CKT	
IDAT1CRA	I	INDAT1CR	051		TO CONN CKT	
IDAT1SRA	I	INDAT1SR	251		TO CONN CKT	
IDAT2CRA	I	INDAT2CR	047		TO CONN CKT	
IDAT2SRA	I	INDAT2SR	247		TO CONN CKT	
IDAT3CRA	I	INDAT3CR	038		TO CONN CKT	
IDAT3SRA	I	INDAT3SR	238		TO CONN CKT	
IDAT4CRA	I	INDAT4CR	034		TO CONN CKT	
IDAT4SRA	I	INDAT4SR	234		TO CONN CKT	
IDAT5CRA	I	INDAT5CR	023		TO CONN CKT	
IDAT5SRA	I	INDAT5SR	223		TO CONN CKT	
IDAT6CRA	I	INDAT6CR	019		TO CONN CKT	
IDAT6SRA	I	INDAT6SR	219		TO CONN CKT	
IDAT7CRA	I	INDAT7CR	015		TO CONN CKT	
IDAT7SRA	I	INDAT7SR	215		TO CONN CKT	
INDAT0CA	I	INDAT0C	155		TO CONN CKT	
INDAT0SA	I	INDAT0S	355		TO CONN CKT	
INDAT1CA	I	INDAT1C	151		TO CONN CKT	
INDAT1SA	I	INDAT1S	351		TO CONN CKT	
INDAT2CA	I	INDAT2C	147		TO CONN CKT	
INDAT2SA	I	INDAT2S	347		TO CONN CKT	
INDAT3CA	I	INDAT3C	138		TO CONN CKT	
INDAT3SA	I	INDAT3S	338		TO CONN CKT	
INDAT4CA	I	INDAT4C	134		TO CONN CKT	
INDAT4SA	I	INDAT4S	334		TO CONN CKT	
INDAT5CA	I	INDAT5C	123		TO CONN CKT	
INDAT5SA	I	INDAT5S	323		TO CONN CKT	
INDAT6CA	I	INDAT6C	119		TO CONN CKT	
INDAT6SA	I	INDAT6S	319		TO CONN CKT	
INDAT7CA	I	INDAT7C	115		TO CONN CKT	
INDAT7SA	I	INDAT7S	315		TO CONN CKT	
MIB0ODAT	I	MIB0DAT	011		3/5	
MIB1ODAT	I	MIB1DAT	010		3/5	
MIB2ODAT	I	MIB2DAT	009		3/5	
MIB3ODAT	I	MIB3DAT	008		3/5	

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SYMBOL(S) 2 3 4

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE D2	ISSUE 3D
AT&T BELL LABORATORIES	SD-5D082-01	83CB

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MESSAGE INTERFACE

SYMBOL NO. 4 (CONT)

MESSAGE INTERFACE 4A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI4	04-068	TN862	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
MIB40DAT	I	MIB4DAT	007		3/5	
MIB50DAT	I	MIB5DAT	006		3/5	
MIB60DAT	I	MIB6DAT	005		3/5	
MIB70DAT	I	MIB7DAT	004		3/5	
NCURPR	OT	-CURPR	012		2/1	
ODAT0CRA	O	OTDAT0CR	056		TO CONN CKT	
ODAT0SRA	O	OTDAT0SR	256		TO CONN CKT	
ODAT1CRA	O	OTDAT1CR	052		TO CONN CKT	
ODAT1SRA	O	OTDAT1SR	252		TO CONN CKT	
ODAT2CRA	O	OTDAT2CR	048		TO CONN CKT	
ODAT2SRA	O	OTDAT2SR	248		TO CONN CKT	
ODAT3CRA	O	OTDAT3CR	039		TO CONN CKT	
ODAT3SRA	O	OTDAT3SR	239		TO CONN CKT	
ODAT4CRA	O	OTDAT4CR	035		TO CONN CKT	
ODAT4SRA	O	OTDAT4SR	235		TO CONN CKT	
ODAT5CRA	O	OTDAT5CR	024		TO CONN CKT	
ODAT5SRA	O	OTDAT5SR	224		TO CONN CKT	
ODAT6CRA	O	OTDAT6CR	020		TO CONN CKT	
ODAT6SRA	O	OTDAT6SR	220		TO CONN CKT	
ODAT7CRA	O	OTDAT7CR	016		TO CONN CKT	
ODAT7SRA	O	OTDAT7SR	216		TO CONN CKT	
OTDAT0CA	O	OTDAT0C	156		TO CONN CKT	
OTDAT0SA	O	OTDAT0S	356		TO CONN CKT	
OTDAT1CA	O	OTDAT1C	152		TO CONN CKT	
OTDAT1SA	O	OTDAT1S	352		TO CONN CKT	
OTDAT2CA	O	OTDAT2C	148		TO CONN CKT	
OTDAT2SA	O	OTDAT2S	348		TO CONN CKT	
OTDAT3CA	O	OTDAT3C	139		TO CONN CKT	
OTDAT3SA	O	OTDAT3S	339		TO CONN CKT	
OTDAT4CA	O	OTDAT4C	135		TO CONN CKT	
OTDAT4SA	O	OTDAT4S	335		TO CONN CKT	
OTDAT5CA	O	OTDAT5C	124		TO CONN CKT	
OTDAT5SA	O	OTDAT5S	324		TO CONN CKT	
OTDAT6CA	O	OTDAT6C	120		TO CONN CKT	
OTDAT6SA	O	OTDAT6S	320		TO CONN CKT	
OTDAT7CA	O	OTDAT7C	116		TO CONN CKT	
OTDAT7SA	O	OTDAT7S	316		TO CONN CKT	
PCURPR	OT	+CURPR	112		2/1	
SSCOM10	O	SSMIB0	311		3/2	
SSCOM11	O	SSMIB1	310		3/2	
SSCOM12	O	SSMIB2	309		3/2	
SSCOM13	O	SSMIB3	308		3/2	
SSCOM14	O	SSMIB4	307		3/2	
SSCOM15	O	SSMIB5	306		3/2	
SSCOM16	O	SSMIB6	305		3/2	
SSCOM17	O	SSMIB7	304		3/2	
SYNCER1	O	SYNCER1	102		3/3	
SYNCMIB0	I	SNKMIB0	111		3/5	
SYNCMIB1	I	SNKMIB1	110		3/5	
SYNCMIB2	I	SNKMIB2	109		3/5	
SYNCMIB3	I	SNKMIB3	108		3/5	
SYNCMIB4	I	SNKMIB4	107		3/5	
SYNCMIB5	I	SNKMIB5	106		3/5	
SYNCMIB6	I	SNKMIB6	105		3/5	
SYNCMIB7	I	SNKMIB7	104		3/5	
SYNCOCA	O	SYNCOC	153		TO CONN CKT	
SYNCOCRA	O	SYNCOCR	053		TO CONN CKT	
SYNCOSA	O	SYNCOS	353		TO CONN CKT	

SYMBOL NO. 4 (CONT)

MESSAGE INTERFACE 4A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI4	04-068	TN862	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
SYNC0SRA	O	SYNC0SR	253		TO CONN CKT	
SYNC1CA	O	SYNC1C	149		TO CONN CKT	
SYNC1CRA	O	SYNC1CR	049		TO CONN CKT	
SYNC1SA	O	SYNC1S	349		TO CONN CKT	
SYNC1SRA	O	SYNC1SR	249		TO CONN CKT	
SYNC2CA	O	SYNC2C	145		TO CONN CKT	
SYNC2CRA	O	SYNC2CR	045		TO CONN CKT	
SYNC2SA	O	SYNC2S	345		TO CONN CKT	
SYNC2SRA	O	SYNC2SR	245		TO CONN CKT	
SYNC3CA	O	SYNC3C	136		TO CONN CKT	
SYNC3CRA	O	SYNC3CR	036		TO CONN CKT	
SYNC3SA	O	SYNC3S	336		TO CONN CKT	
SYNC3SRA	O	SYNC3SR	236		TO CONN CKT	
SYNC4CA	O	SYNC4C	132		TO CONN CKT	
SYNC4CRA	O	SYNC4CR	032		TO CONN CKT	
SYNC4SA	O	SYNC4S	332		TO CONN CKT	
SYNC4SRA	O	SYNC4SR	232		TO CONN CKT	
SYNC5CA	O	SYNC5C	121		TO CONN CKT	
SYNC5CRA	O	SYNC5CR	021		TO CONN CKT	
SYNC5SA	O	SYNC5S	321		TO CONN CKT	
SYNC5SRA	O	SYNC5SR	221		TO CONN CKT	
SYNC6CA	O	SYNC6C	117		TO CONN CKT	
SYNC6CRA	O	SYNC6CR	017		TO CONN CKT	
SYNC6SA	O	SYNC6S	317		TO CONN CKT	
SYNC6SRA	O	SYNC6SR	217		TO CONN CKT	
SYNC7CA	O	SYNC7C	113		TO CONN CKT	
SYNC7CRA	O	SYNC7CR	013		TO CONN CKT	
SYNC7SA	O	SYNC7S	313		TO CONN CKT	
SYNC7SRA	O	SYNC7SR	213		TO CONN CKT	
TRCLK	I	MIBCLK	103		3/5	
TSTSYNC0	I	TSTSYNC0	302		3/3	
4MCK0CA	O	4MCK0C	154		TO CONN CKT	
4MCK0CRA	O	4MCK0CR	054		TO CONN CKT	
4MCK0SA	O	4MCK0S	354		TO CONN CKT	
4MCK0SRA	O	4MCK0SR	254		TO CONN CKT	
4MCK1CA	O	4MCK1C	150		TO CONN CKT	
4MCK1CRA	O	4MCK1CR	050		TO CONN CKT	
4MCK1SA	O	4MCK1S	350		TO CONN CKT	
4MCK1SRA	O	4MCK1SR	250		TO CONN CKT	
4MCK2CA	O	4MCK2C	146		TO CONN CKT	
4MCK2CRA	O	4MCK2CR	046		TO CONN CKT	
4MCK2SA	O	4MCK2S	346		TO CONN CKT	
4MCK2SRA	O	4MCK2SR	246		TO CONN CKT	
4MCK3CA	O	4MCK3C	137		TO CONN CKT	
4MCK3CRA	O	4MCK3CR	037		TO CONN CKT	
4MCK3SA	O	4MCK3S	337		TO CONN CKT	
4MCK3SRA	O	4MCK3SR	237		TO CONN CKT	
4MCK4CA	O	4MCK4C	133		TO CONN CKT	
4MCK4CRA	O	4MCK4CR	033		TO CONN CKT	
4MCK4SA	O	4MCK4S	333		TO CONN CKT	
4MCK4SRA	O	4MCK4SR	233		TO CONN CKT	
4MCK5CA	O	4MCK5C	122		TO CONN CKT	
4MCK5CRA	O	4MCK5CR	022		TO CONN CKT	
4MCK5SA	O	4MCK5S	322		TO CONN CKT	
4MCK5SRA	O	4MCK5SR	222		TO CONN CKT	
4MCK6CA	O	4MCK6C	118		TO CONN CKT	
4MCK6CRA	O	4MCK6CR	018		TO CONN CKT	
4MCK6SA	O	4MCK6S	318		TO CONN CKT	
4MCK6SRA	O	4MCK6SR	218		TO CONN CKT	
4MCK7CA	O	4MCK7C	114		TO CONN CKT	

SYMBOL NO. 4 (CONT)

MESSAGE INTERFACE 4A

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI4	04-068	TN862	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
4MCK7CRA	O	4MCK7CR	014		TO CONN CKT	
4MCK7SA	O	4MCK7S	314		TO CONN CKT	
4MCK7SRA	O	4MCK7SR	214		TO CONN CKT	
4MHRTN	O	4MFDBK	002		3/5	
4M262ER0	O	4M262ER0	203		3/3	

SYMBOL NO. 5

MESSAGE INTERFACE 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI1	04-092	TN859	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
+5	PWR	+5	000		1/2	
	PWR	+5	001		1/2	
	PWR	+5	100		1/2	
	PWR	+5	101		1/2	
BTPAR	IO	SE2LIPR	119		3/1	
B7CP1LB	O	B7CP1LB	305		3/3	
CIBIT0	IO	CIBIT0	306		3/2	
CIBIT1	IO	CIBIT1	206		3/2	
CIBIT2	IO	CIBIT2	307		3/2	
CIBIT3	IO	CIBIT3	207		3/2	
CIBIT4	IO	CIBIT4	308		3/2	
CIBIT5	IO	CIBIT5	208		3/2	
CIBIT6	IO	CIBIT6	309		3/2	
CIBIT7	IO	CIBIT7	209		3/2	
CLRPRE	TP	CLRPREO	113			
ESR5ER1	O	ESR5ER1	006		3/3	
EXHIGH	OT	EXHIGH	007		3/1	
GRD04092	GRD	GRD	009			
	GRD	GRD	011			
	GRD	GRD	013			
	GRD	GRD	044			
	GRD	GRD	108			
	GRD	GRD	110			
	GRD	GRD	144			
	GRD	GRD	200			
	GRD	GRD	201			
	GRD	GRD	203			
	GRD	GRD	205			
	GRD	GRD	211			
	GRD	GRD	214			
	GRD	GRD	244			
	GRD	GRD	245			
	GRD	GRD	248			
	GRD	GRD	300			
	GRD	GRD	301			
	GRD	GRD	304			
	GRD	GRD	310			
	GRD	GRD	314			
	GRD	GRD	348			
LIINTI	I	LIINT	247		2/2	
LIINTO	OT	OLIINT	340		3/1	
LIRCVDI	I	LIDIN	346		2/2	

SYMBOL NO. 5 (CONT)

MESSAGE INTERFACE 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI1	04-092	TN859	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
LISEL1	I	OLISEL	234		3/1	
LISEL0	OT	LISEL	350		3/1	
LISR	I	OLISELR	334		3/1	
LITRC0	OT	LICLK	250		3/1	
LITRMD0	OT	LIDOUT	249		3/1	
LIVD0	OT	LIGO	349		3/1	
LI8KIN	I	LI8KIN	303	(U)	2/2	
LI8MIN	I	LI8MIN	204		2/2	
MI300DAT	O	MIB00DAT	315		3/4	
MIB10DAT	O	MIB10DAT	215		3/4	
MIB20DAT	O	MIB20DAT	316		3/4	
MIB30DAT	O	MIB30DAT	216		3/4	
MIB40DAT	O	MIB40DAT	317		3/4	
MIB50DAT	O	MIB50DAT	217		3/4	
MIB60DAT	O	MIB60DAT	318		3/4	
MIB70DAT	O	MIB70DAT	218		3/4	
MICLK	O	MICLK	021		3/3	
MIDIN	I	MIDIN	122		3/3	
MIDOUT	O	MIDOUT	022		3/3	
MIGO	O	MIGO	121		3/3	
MIINT	I	MIINT	020		3/3	
MISEL	O	MISEL	120		3/3	
MI1RNGC	O	MI1RNGC	005		3/3	
MI1SNKO	O	MI1SNKO	008		3/3	
MI12MNT	O	MI12MNT	313		3/3	
NCINT	OT	ONCINT	339		3/1	
NCSELI	I	ONCSEL	233		3/1	
NCSELIR	I	ONCSELR	333		3/1	
NCURPR	OT	-CURPR	012		2/1	
OPEMI11	O	OPEMI11	103		3/3	
PCURPR	I	+CURPR	112		2/1	
RCVDATO	OT	ODIN	337		3/1	
RCVDATOR	OT	ODINR	237		3/1	
RD1	I	RD1	106		3/3	
SNKER0	TP	SNKER0	018			
SYNCMIB0	O	SYNCMIB0	014		3/4	
SYNCMIB1	O	SYNCMIB1	114		3/4	
SYNCMIB2	O	SYNCMIB2	015		3/4	
SYNCMIB3	O	SYNCMIB3	115		3/4	
SYNCMIB4	O	SYNCMIB4	016		3/4	
SYNCMIB5	O	SYNCMIB5	116		3/4	
SYNCMIB6	O	SYNCMIB6	017		3/4	
SYNCMIB7	O	SYNCMIB7	117		3/4	
TMSCLK	O	TMSCLK	039		TO TIME MULTIPLEXED SWITCH UNIT	
TMSCLKR	O	TMSCLKR	139		TO TIME MULTIPLEXED SWITCH UNIT	
TMSDIN	I	TMSDIN	138		TO TIME MULTIPLEXED	

PART OF FS 3

SYMBOL(S) 4 5

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE D2

ISSUE 5AC

AT&T BELL LABORATORIES

SD-5D082-01

B3CC

PART OF FS 3

MESSAGE INTERFACE

SYMBOL NO. 5 (CONT)

MESSAGE INTERFACE 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI1	04-092	TN859	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
TMSDINR	I	TMSDINR	038		SWITCH UNIT TO TIME MULTIPLEXED SWITCH UNIT	
TMSDOUT	O	TMSDOUT	135		TO TIME MULTIPLEXED SWITCH UNIT	
TMSDOUTR	O	TMSDOUTR	035		TO TIME MULTIPLEXED SWITCH UNIT	
TMSGO	O	TMSGO	036		TO TIME MULTIPLEXED SWITCH UNIT	
TMSGOR	O	TMSGOR	136		TO TIME MULTIPLEXED SWITCH UNIT	
TMSINT	I	TMSINT	032		TO TIME MULTIPLEXED SWITCH UNIT	
TMSINTR	I	TMSINTR	132		TO TIME MULTIPLEXED SWITCH UNIT	
TMSRDY	I	TMSRDY	133		TO TIME MULTIPLEXED SWITCH UNIT	
TMSRDYR	I	TMSRDYR	033		TO TIME MULTIPLEXED SWITCH UNIT	
TMSRST	O	TMSRST	140		TO TIME MULTIPLEXED SWITCH UNIT	
TMSRSTR	O	TMSRSTR	040		TO TIME MULTIPLEXED SWITCH UNIT	
TMSSEL	O	TMSSEL	137		TO TIME MULTIPLEXED SWITCH UNIT	
TMSSELR	O	TMSSELR	037		TO TIME MULTIPLEXED SWITCH UNIT	
TMSSRQT	I	TMSSRQT	034		TO TIME MULTIPLEXED SWITCH UNIT	
TMSSRQTR	I	TMSSRQTR	134		TO TIME MULTIPLEXED SWITCH UNIT	
TMTPREB	OT	DISABL1	107		3/1	
TPAR	IO	SE2LIPR	019		2/1	
TRCLK	O	TRCLK	344		3/4	
TRCLKERO	TP	TRCLKERO	118			
TRCLKI	I	OCLK	235		3/1	
TRCLKIR	I	OCLKR	335		3/1	
TRMDATI	I	ODOUT	338		3/1	
TRMDATIR	I	ODOUTR	238		3/1	
VALDATI	I	OGO	236		3/1	
VALDATIR	I	OGOR	336		3/1	
WR1	I	WR1	105		3/3	
OCOP	OT	NCCLK	124		3/1	
OFPCACT	I	OFPCACT	342		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OFPCACTR	I	OFPCACTR	242		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OIDOP	I	NCDIN	123		4/2	
OLIINTR	OT	OLIINTR	240		3/1	
OMIINT	O	OMIINT	320		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	

SYMBOL NO. 5 (CONT)

MESSAGE INTERFACE 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI1	04-092	TN859	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
OMIINTR	O	OMIINTR	220		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OMISEL	I	OMISEL	322		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OMISELR	I	OMISELR	222		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
ONCINTR	OT	ONCINTR	239		3/1	
ONINTOP	I	NCINT	023		4/2	
OODOP	OT	NCDOUT	024		3/1	
ORP	I	LIDPIN	210		2/1	
ORX	I	LIDXIN	312		2/1	
ORY	I	LIDYIN	212		2/1	
ORZ	I	LIDZIN	311		2/1	
OTMSINT	O	OTMSINT	321		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OTMSINTR	O	OTMSINTR	221		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OTMSRDY	O	OTMSRDY	324		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OTMSRDYR	O	OTMSRDYR	224		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OTMSRQTR	O	OTMSRQTR	243		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OTMSRST	I	OTMSRST	319		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OTMSRSTR	I	OTMSRSTR	219		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OTMSSEL	I	OTMSSEL	323		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OTMSSELR	I	OTMSSELR	223		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OTMSSRQT	O	OTMSRQT	343		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OWIACT	O	OWIACT	341		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
OWIACTR	O	OWIACTR	241		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1CLK	I	1CLK	048		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1CLKR	I	1CLKR	148		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1DIN	O	1DIN	150		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1DINR	O	1DINR	050		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1DOUT	I	1DOUT	151		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1DOUTR	I	1DOUTR	051		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1FPCACT	I	1FPCACT	155		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	

SYMBOL NO. 5 (CONT)

MESSAGE INTERFACE 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI1	04-092	TN859	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
1FPCACTR	I	1FPCACTR	055		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1GO	I	1GO	049		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1GOR	I	1GOR	149		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1LIINT	O	1LIINT	153		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1LIINTR	O	1LIINTR	053		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1LISEL	I	1LISEL	047		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1LISELR	I	1LISELR	147		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1MIINT	O	1MIINT	352		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1MIINTR	O	1MIINTR	252		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1MISEL	I	1MISEL	354		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1MISELR	I	1MISELR	254		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1NCINT	O	1NCINT	152		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1NCINTR	O	1NCINTR	052		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1NCSEL	I	1NCSEL	046		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1NCSELR	I	1NCSELR	146		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1TMSINT	O	1TMSINT	353		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1TMSINTR	O	1TMSINTR	253		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1TMSRDY	O	1TMSRDY	356		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1TMSRDYR	O	1TMSRDYR	256		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1TMSRQT	O	1TMSRQT	156		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1TMSRQTR	O	1TMSRQTR	056		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1TMSRST	I	1TMSRST	351		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1TMSRSTR	I	1TMSRSTR	251		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1TMSSEL	I	1TMSSEL	355		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1TMSSELR	I	1TMSSELR	255		TO FOUNDATION PERIPHERAL	

SYMBOL NO. 5 (CONT)

MESSAGE INTERFACE 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUMI1	04-092	TN859	A	

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
					CONTROLLER UNIT	
1WIACT	O	1WIACT	154		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
1WIACTR	O	1WIACTR	054		TO FOUNDATION PERIPHERAL CONTROLLER UNIT	
259CR41	I	259CR41	004		3/3	
259CR51	I	259CR51	003		3/3	
259CR61	I	259CR61	213		3/3	
259ER11	I	259ER11	002		3/3	
259ER21	I	259ER21	202		3/3	
259SLCT1	I	259SLCT1	104		3/3	
4MHRTN	I	4MHRTN	102		3/4	
8KHZ	I	L18K1N	303	(T)	2/2	

PART OF FS 3
SYMBOL(S) 5

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE C2 | ISSUE 5AC

AT&T BELL LABORATORIES | SD-50082-01 | B3CD

PART OF FS 3

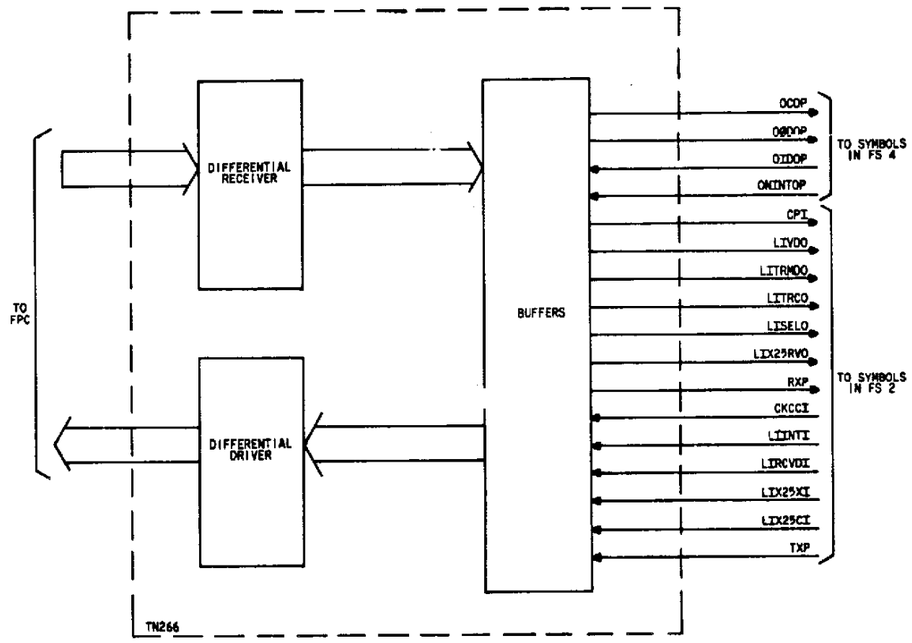
MESSAGE INTERFACE

COMPOSITE DIAGRAM 1

MESSAGE INTERFACE 0

NOTES:

1. THE TN266 MESSAGE INTERFACE 0 CIRCUIT PACK CHANGES THE DIFFERENTIAL SIGNALS FROM THE FOUNDATION PERIPHERAL CONTROLLER (FPC) TO TTL AND BUFFERS THEM TO THE APPROPRIATE CIRCUITS.
2. THIS CIRCUIT PACK IS ONLY USED IN A SINGLE MODULE OFFICE. THE CONTROL AND DIAGNOSTIC ACCESS LINK AND THE MESSAGE TIME SLOT ARE SENT TO THE DIFFERENT CIRCUITS VIA THIS CIRCUIT PACK.



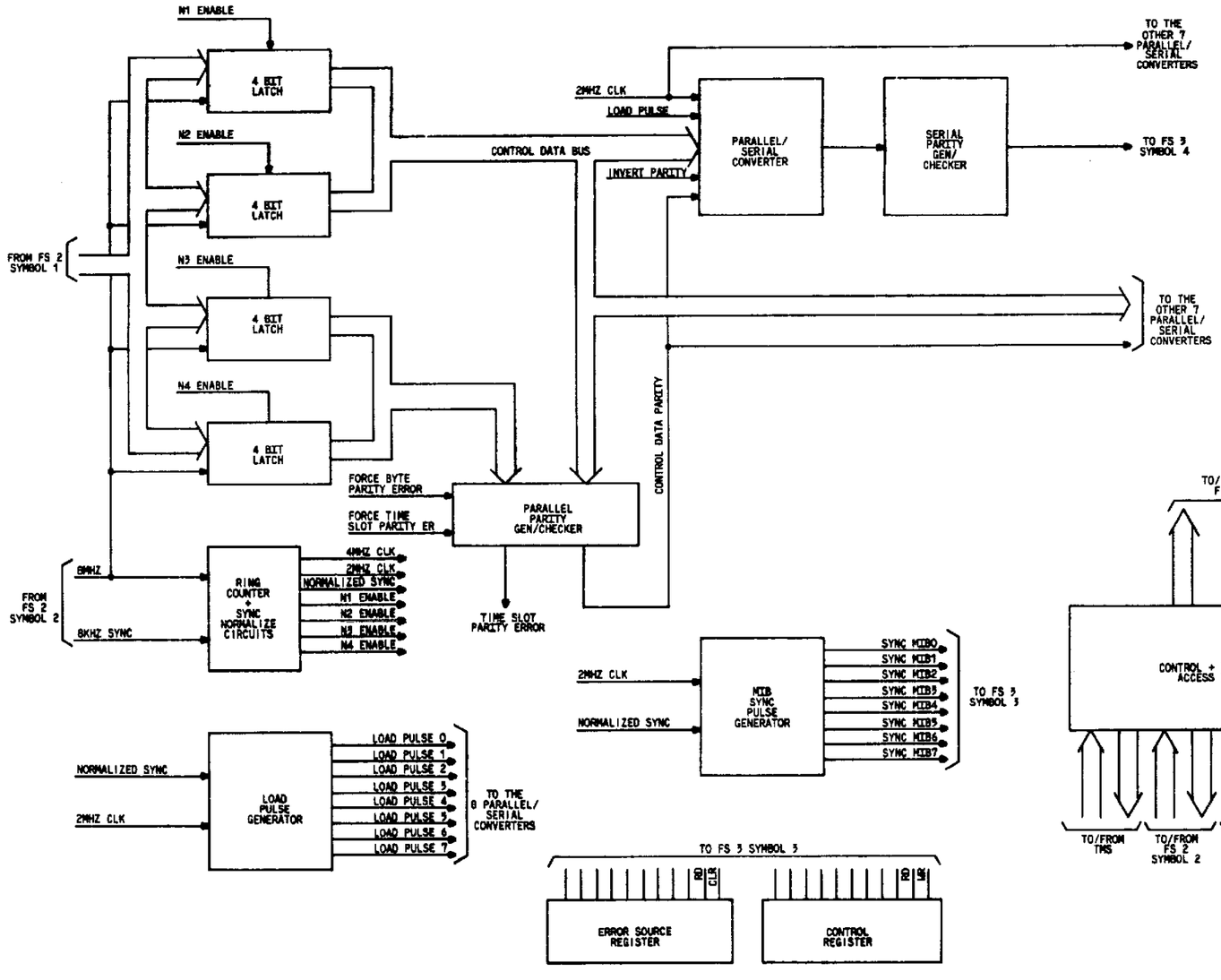
MESSAGE INTERFACE/CLOCK UNIT. MODEL 2'	DWG SIZE A5	ISSUE 3D
AT&T BELL LABORATORIES	3D-5D082-01	B3GA

PART OF FS 3

MESSAGE INTERFACE

COMPOSITE DIAGRAM 2

MESSAGE INTERFACE 1



NOTES:

1. THE TN859 MESSAGE INTERFACE 1 CIRCUIT PACK HAS TWO FUNCTIONS. FIRST IS TO TRANSMIT AND RECEIVE DIFFERENTIAL AND TTL SIGNALS FROM THE FOUNDATION PERIPHERAL CONTROLLER. SECOND IS TO RECEIVE THE CONTROL TIME SLOTS FROM THE LINK INTERFACE AND TRANSMIT THEM TO THE MESSAGE MODULE PROCESSOR VIA THE MESSAGE INTERFACE BUS (MIB).

   THE FIRST FUNCTION IS USED IN INTERFACING WITH THE FOUNDATION PERIPHERAL CONTROLLER. THESE SIGNALS, COMING FROM THE CONTROL AND DIAGNOSTIC ACCESS LINK (CDAL), ARE CONVERTED FROM DIFFERENTIAL TO TTL AND SENT TO THE APPROPRIATE SUBDEVICE. THESE SUBDEVICES INCLUDE THE NETWORK CLOCK, LINK INTERFACE, TIME MULTIPLEXED SWITCH, AND THE MESSAGE INTERFACE. THE TN859 PERFORMS INVERSELY ON SIGNALS FROM THE SUBDEVICES GOING TO THE FOUNDATION PERIPHERAL CONTROLLER.

   IN THE SECOND FUNCTION, THE MESSAGE INTERFACE TAKES THE CONTROL TIME SLOTS OFF THE NIBBLE BUS FROM THE LINK INTERFACE, CHANGES THEM INTO A SERIAL STREAM AND SENDS THEM TO THE MODULE MESSAGE PROCESSOR. THE TN859 HAS EIGHT OF THESE PARALLEL TO SERIAL CONVERTERS AND SERIAL PARITY GENERATOR/CHECKERS TO HANDLE ALL EIGHT OF THE MESSAGE INTERFACE BUSES.

   THIS CIRCUIT PACK IS USED IN A MULTIMODULE OFFICE ONLY AND IN CONJUNCTION WITH TN860, TN861 AND TN862.

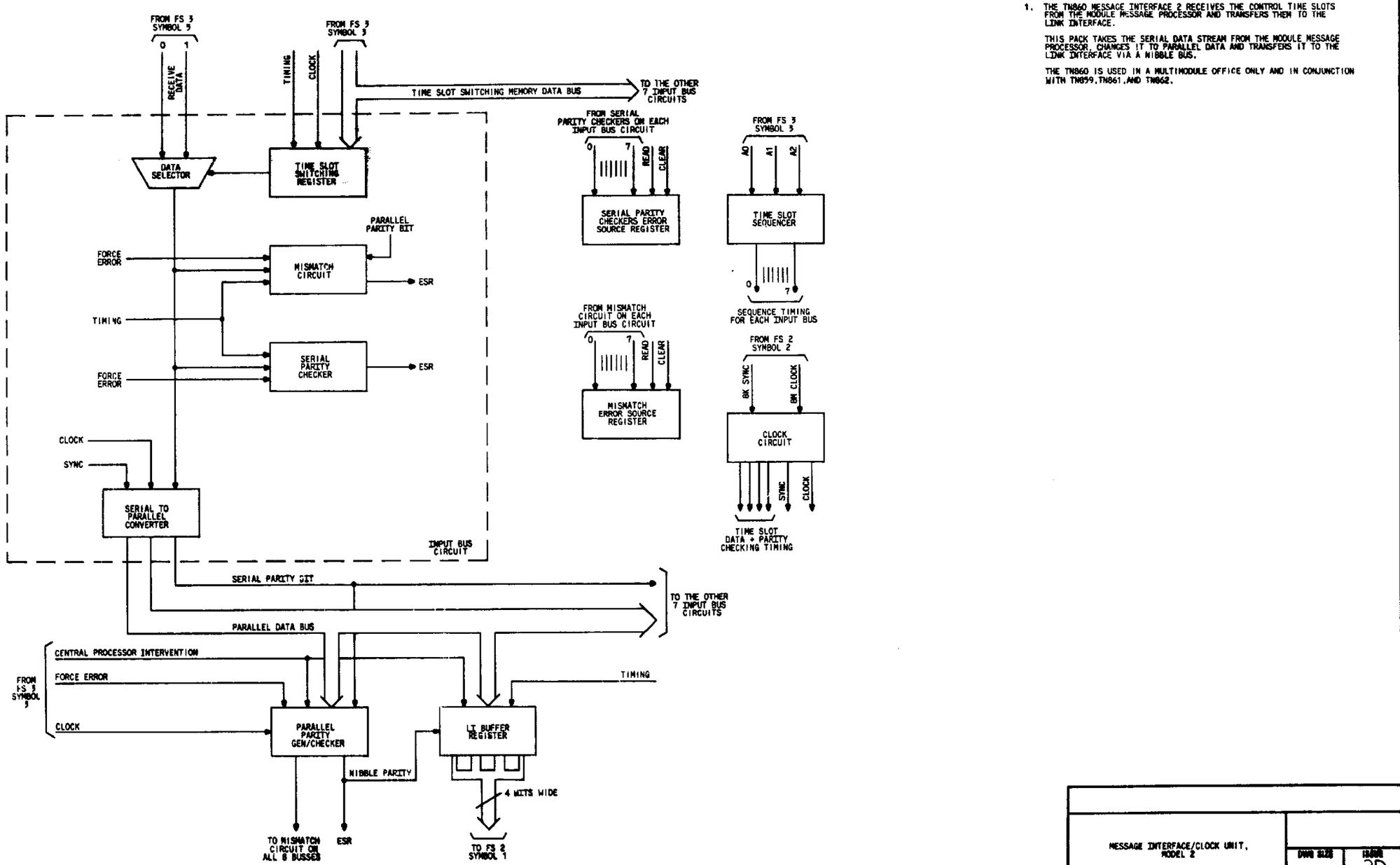
MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE B	ISSUE 3D
AT&T BELL LABORATORIES	30- 5D082-01	8308

PART OF FS 3

MESSAGE INTERFACE

COMPOSITE DIAGRAM 3

MESSAGE INTERFACE 2



NOTES:

1. THE TN860 MESSAGE INTERFACE 2 RECEIVES THE CONTROL TIME SLOTS FROM THE MODULE MESSAGE PROCESSOR AND TRANSFERS THEM TO THE LINK INTERFACE.

   THIS PACK TAKES THE SERIAL DATA STREAM FROM THE MODULE MESSAGE PROCESSOR, CHANGES IT TO PARALLEL DATA AND TRANSFERS IT TO THE LINK INTERFACE VIA A NIBBLE BUS.

   THE TN860 IS USED IN A MULTIMODULE OFFICE ONLY AND IN CONJUNCTION WITH TN859, TN861, AND TN862.

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE B	ISSUE 3D
AT&T BELL LABORATORIES	SD- 5D082-01	856C

PART OF FS 3

MESSAGE INTERFACE

COMPOSITE DIAGRAM 4

MESSAGE INTERFACE 3

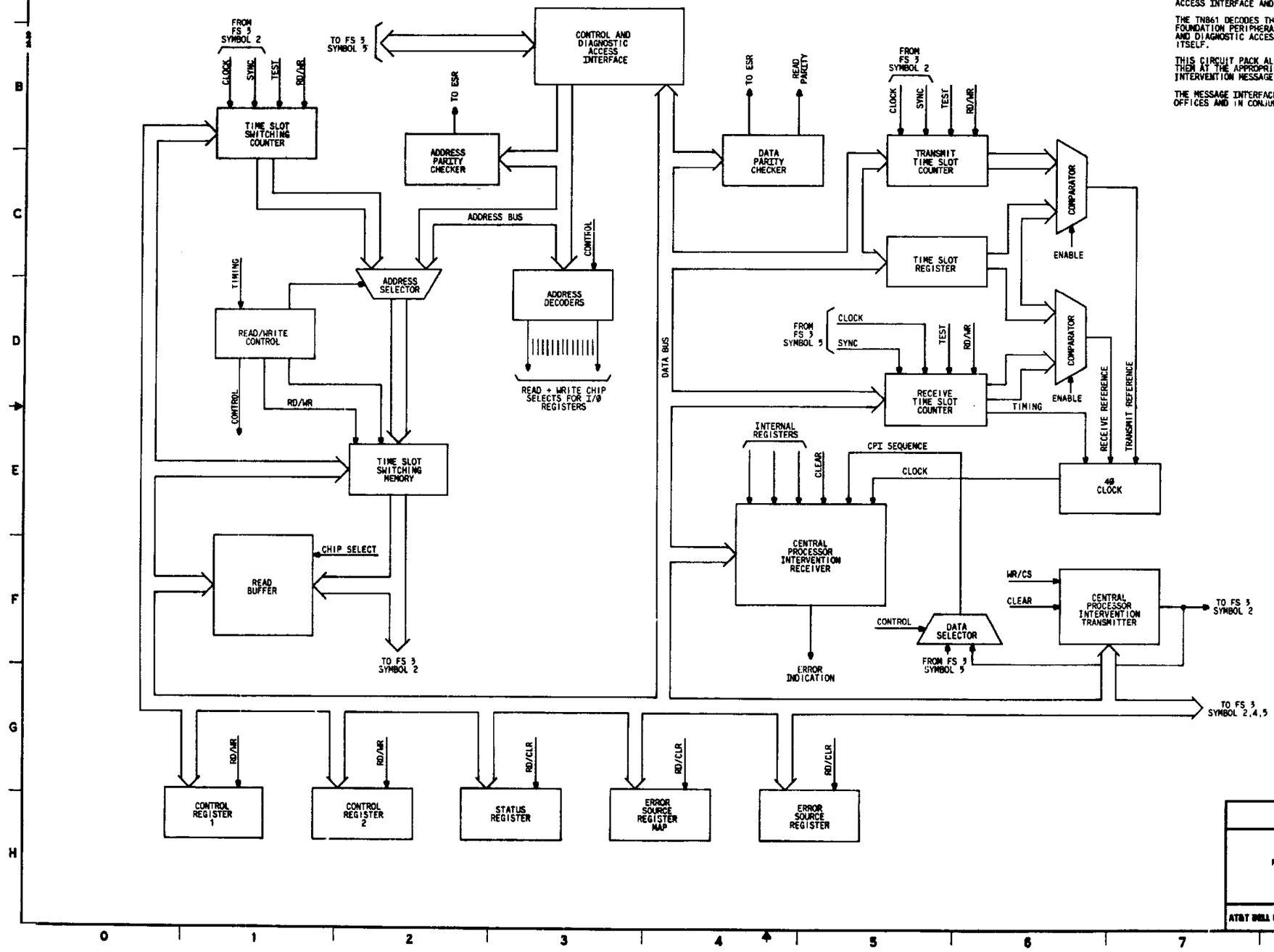
NOTES:

1. THE TN861 MESSAGE INTERFACE 3 CIRCUIT PACK IS THE CONTROL CENTER FOR THE MESSAGE INTERFACE. THIS PACK HAS THE CONTROL AND DIAGNOSTIC ACCESS INTERFACE AND THE TIME SLOT SWITCHING CIRCUIT.

   THE TN861 DECODES THE CONTROL AND DIAGNOSTIC MESSAGES FROM THE FOUNDATION PERIPHERAL CONTROLLER VIA THE TN859. THIS CONTROL AND DIAGNOSTIC ACCESS CIRCUIT IS USED ONLY ON THE MESSAGE INTERFACE ITSELF.

   THIS CIRCUIT PACK ALSO TRACKS EACH TIME SLOT IN ORDER TO LATCH THEM AT THE APPROPRIATE TIME AND TO PLACE THE CENTRAL PROCESSOR INTERVENTION MESSAGE INTO THE PROPER TIME SLOT.

   THE MESSAGE INTERFACE 3 CIRCUIT PACK IS ONLY USED IN MULTIMODULE OFFICES AND IN CONJUNCTION WITH TN860, TN859 AND TN862.



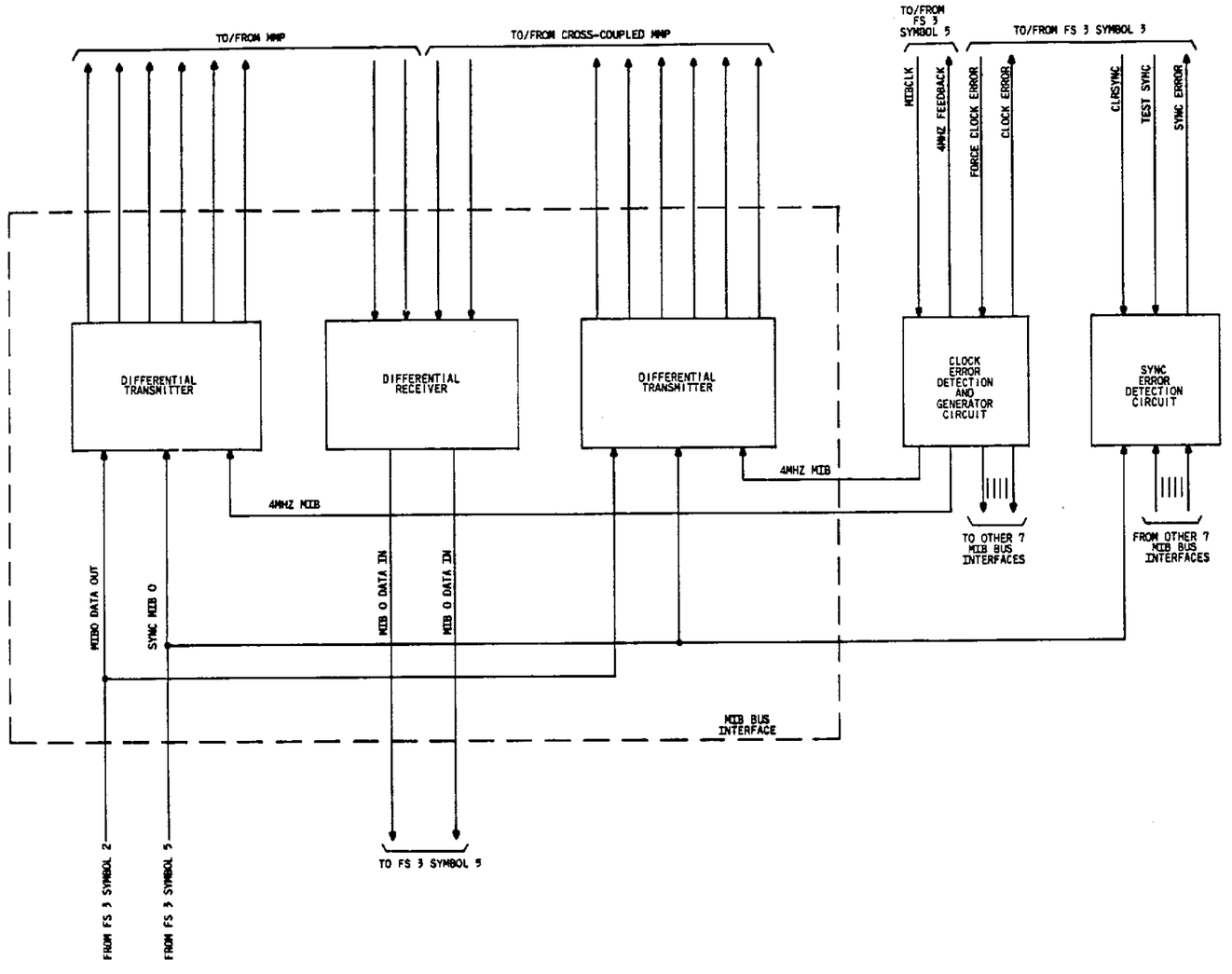
MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE B	ISSUE 3D
AT&T BELL LABORATORIES	SD-5D082-01	8360

PART OF FS 3

MESSAGE INTERFACE

COMPOSITE DIAGRAM 5

MESSAGE INTERFACE 4



NOTES:

1. THE TN862 MESSAGE INTERFACE 4 CIRCUIT PACKS MAIN FUNCTION IS TO INTERFACE WITH THE MESSAGE INTERFACE BUS (MIB)

   THE MIB IS A DIFFERENTIALLY DRIVEN BUS AND HAS TO CONVERT FROM DIFFERENTIAL TO TTL LEVELS FOR THE SAME SIDE AND CROSS-COUPLED SIDE MMP.

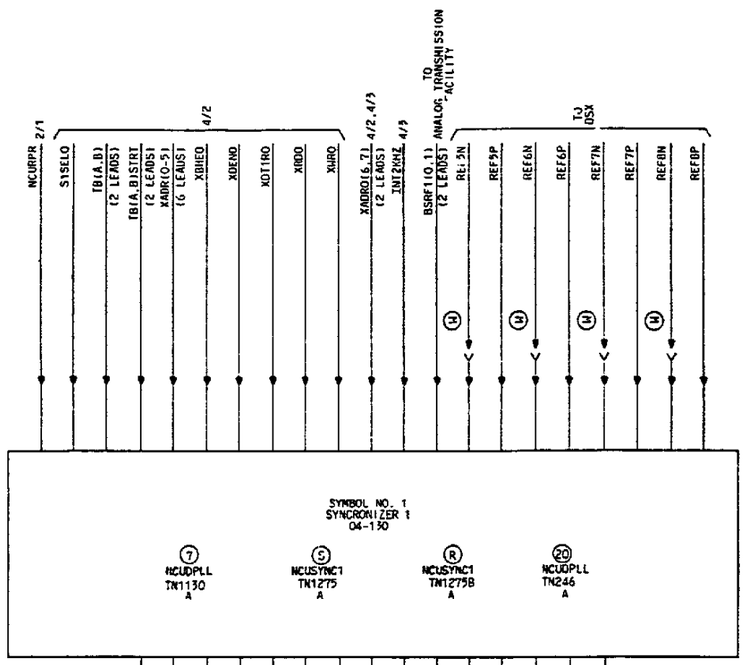
   THIS PACK ALSO CONTAINS A SYNC ERROR DETECTION AND CLOCK ERROR DETECTION AND GENERATION CIRCUIT.

   ON THE TN862 ARE EIGHT MIB BUS INTERFACES, ONLY ONE IS SHOWN IN THE DRAWING. THIS BOARD IS USED IN MULTIMODULE OFFICES ONLY AND IN CONJUCTION WITH TN859, TN860 AND TN861

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2		DWG SIZE A4	ISSUE 3D
AT&T BELL LABORATORIES	3D-5D062-01		B3GE

PART OF FS 4

NETWORK CLOCK
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE	ISSUE
6S	7B

AT&T	SD-5D082-01	B4AA

PART OF FS 4

NETWORK CLOCK
(P/O INTERCONNECTION & FLOW DIAGRAM)

IGVMON 4/4
NCURPR 2/1
PCURPR
BKLIT 2/2
ORDOP 3/1
SREF 4/1
VCXOED
BASSHF 4/3
BISMPF
TMSED
XCED
TBOIN_P) 4/4
(2 LEADS)
TMSRTNIN_P) 4/3 FROM TIME MULTIPLEXED SWITCH UNIT
(2 LEADS)
XCPLININ_P) 4/3 TO NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL 2
(2 LEADS)
TBSININ_P) 1/2
(2 LEADS)
+12
+5

SYMBOL NO. 2
CONTROL
04-142

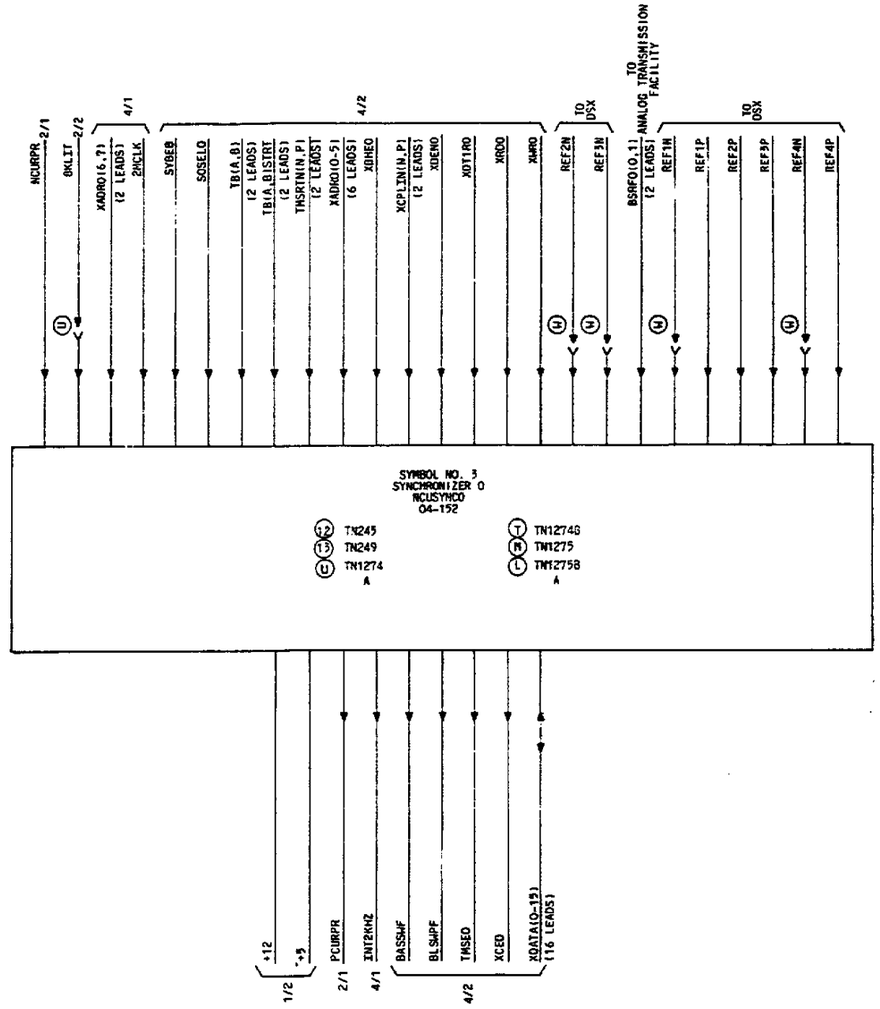
10 NCUCNTRL TM1131 A
P NCUCNTRL MC5D215 A
N NCUCNTRL MC5D215A2 A
21 NCUCNTRL MC5D201A1 A
B NCUCNTRL MC50222 A
A NCUCNTRL MC50222A2 A

OIOOP 3/1,3/9
ONINTOP
SISELO 4/1
LINK
TMSRIN_P)
(2 LEADS)
XCPLRIN_P)
(2 LEADS)
TBIA_B)
(2 LEADS)
TBIA_BISTRT
(2 LEADS)
XADRO(0-9)
(6 LEADS)
XDATA(0-15) 4/1,4/3
(16 LEADS)
XDENO
XOT1RO
XROO
XWRO
XBHEO
SYBEB 4/3
SOSELO
EXMM(1,2)1)
(2 LEADS) 4/4
QBIVMON
TP> CBASW
TP> CCBE
TP> CCBP
TP> CCBRD
TP> CCBOD
TP> CLRHI
TP> CSIO_1)
(2 LEADS)
TP> DDEC
TP> DS
TP> EPEB
TP> EXTC
TP> LDME
TP> PCE(2,3)
(2 LEADS)
TP> POSLL
TP> RST
TP> SA
TP> XADDI8-12)
(5 LEADS)
3/1 TP> OOOP
4/1 TP> XADRO(6,7)
(2 LEADS)
TP> A2

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2		DWG SIZE: B5	ISSUE: 7B
AT&T	SD-5D082-01		B4AB

PART OF FS 4

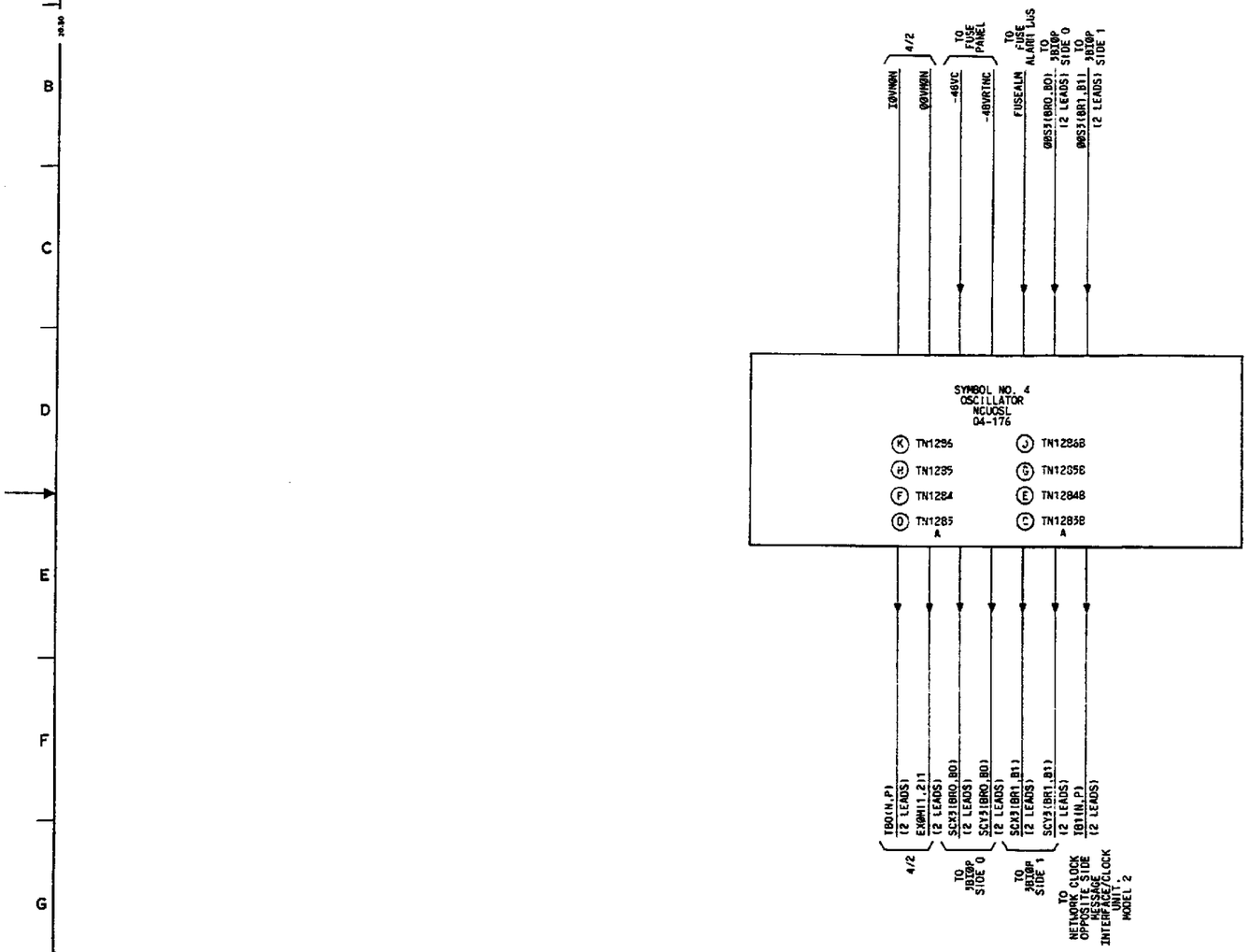
NETWORK CLOCK
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE: E5	ISSUE: 7B
AT&T	SD-5D082-01	B4AC

PART OF FS 4

NETWORK CLOCK
(P/O INTERCONNECTION & FLOW DIAGRAM)



MESSAGE INTERFACE/CLOCK UNIT. MODEL 2		DWG SIZE	ISSUE
		6S	7B
AT&T	SD-5D082-01		84AD

PART OF FS 4

NETWORK CLOCK

SYMBOL NO. 1

SYNCRONIZER 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUDPLL	04-130	TN1130	A	(7)
NCUSYNC1	04-130	TN1275	A	9(S)
NCUSYNC1	04-130	TN12758	A	9(R)
NCUDPLL	04-130	TN246	A	(20)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
NC	(8)O	REF2CLK	005			
	(9)O	REF2CLK				
	(9)O	R4PCM2	007			
	(9)O	R4PCM1	008			
	(9)O	REF4CLK	009			
	(9)O	R3PCM2	014			
	(9)O	R3PCM1	015			
	(9)O	REF3CLK	016			
	(8)O	BSRFCLK	017			
	(9)O	BSRFCLK				
	(8)O	R1PCM2	021			
	(9)O	R1PCM2				
	(8)O	R1PCM1	022			
	(9)O	R1PCM1				
	(8)O	REF1CLK	023			
	(9)O	REF1CLK				
	(8)I	TSTBSRF	037			
	(9)I	TSTBSRF				
	(2)GRD	GRD	032			
	(7)GRD	GRD	156			
	(20)GRD	GRD				
+5	PWR	+5	000		1/2	
	PWR	+5	001		1/2	
	PWR	+5	100		1/2	
	PWR	+5	101		1/2	
BSRF10	(8)I	BSRF0	318		TO ANALOG TRANSMISSION FACILITY	
	(9)I	BSRF0				
BSRF11	(8)I	BSRF1	317		TO ANALOG TRANSMISSION FACILITY	
	(9)I	BSRF1				
DBP1	(7)O	DP10	138			
	(20)O	DBP1				
	(7)I	ZCLK	038			
	(20)I	DBP1				
DBP2	(7)TP	BP2I	039			
	(20)I	DBP2				
	(7)TP	BP20	139			
	(20)O	DBP2				
DBP3	(7)TP	BP3I	040			
	(20)I	DBP3				
	(7)TP	BP30	140			
	(20)O	DBP3				
DBP4	(7)TP	BP4I	041			
	(20)I	DBP4				
	(7)TP	BP40	141			
	(20)O	DBP4				
DBP5	(7)TP	BP5I	042			
	(20)I	DBP5				
	(7)TP	BP50	142			
	(20)O	DBP5				
DBP6	(7)TP	BP6I	043			
	(20)I	DBP6				
	(7)TP	BP60	143			
	(20)O	DBP6				
DBP7	(7)TP	BP7I	045			
	(20)I	DBP7				
	(7)TP	BP70	145			
	(20)O	DBP7				
DBP8	(7)TP	BP8I	046			
	(20)I	DBP8				
	(7)TP	BP80	146			
	(20)O	DBP8				

SYMBOL NO. 1 (CONT)

SYNCRONIZER 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUDPLL	04-130	TN1130	A	(7)
NCUSYNC1	04-130	TN1275	A	9(S)
NCUSYNC1	04-130	TN12758	A	9(R)
NCUDPLL	04-130	TN246	A	(20)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
DBP9	(7)TP	BP9I	036			
	(20)I	DBP9				
	(7)TP	BP90	136			
	(20)O	DBP9				
GRD04130	(7)O	EXCLOOT	116			
	(8)GRD	GRD				
	(9)GRD	GRD				
	(9)GRD	GRD	011			
	(20)GRD	GRD				
	GRD	GRD	013			
	GRD	GRD	019			
	(9)GRD	GRD	033			
	(20)GRD	GRD				
	(9)GRD	GRD	034			
	(20)GRD	GRD				
	GRD	GRD	035			
	(9)GRD	GRD	055			
	(20)GRD	GRD				
	GRD	GRD	056			
	(8)GRD	GRD	107			
	(9)GRD	GRD				
	(9)GRD	GRD	111			
	(20)GRD	GRD				
	GRD	GRD	113			
	GRD	GRD	119			
	(9)GRD	GRD	132			
	(20)GRD	GRD				
	(9)GRD	GRD	133			
	(20)GRD	GRD				
	(9)GRD	GRD	134			
	(20)GRD	GRD				
	GRD	GRD	135			
	(9)GRD	GRD	155			
	(20)GRD	GRD				
	GRD	GRD	200			
	GRD	GRD	201			
	(9)GRD	GRD	211			
	(20)GRD	GRD				
	(9)GRD	GRD	212			
	(20)GRD	GRD				
	GRD	GRD	213			
	(9)GRD	GRD	214			
	(20)GRD	GRD				
	(9)GRD	GRD	216			
	(20)GRD	GRD				
	(9)GRD	GRD	219			
	(20)GRD	GRD				
	(9)GRD	GRD	224			
	(20)GRD	GRD				
	(2)GRD	GRD	232			
	(9)GRD	GRD	233			
	(20)GRD	GRD				
	(9)GRD	GRD	234			
	(20)GRD	GRD				
	(2)GRD	GRD	235			
	(9)GRD	GRD	239			
	(20)GRD	GRD				
	(9)GRD	GRD	240			
	(20)GRD	GRD				
	GRD	GRD	245			
	(9)GRD	GRD	246			
	(20)GRD	GRD				
	(2)GRD	GRD	255			
	GRD	GRD	256			

SYMBOL NO. 1 (CONT)

SYNCRONIZER 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUDPLL	04-130	TN1130	A	(7)
NCUSYNC1	04-130	TN1275	A	9(S)
NCUSYNC1	04-130	TN12758	A	9(R)
NCUDPLL	04-130	TN246	A	(20)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	GRD	GRD	300			
	GRD	GRD	301			
	(8)GRD	GRD	309			
	(9)GRD	GRD				
	(8)GRD	GRD	341			
	(9)GRD	GRD				
HIPLBLD	(7)TP	HIPLBLD	104			
	(20)TP	HIPLBLD				
HIPLCL	(7)TP	HIPLCL	004			
	(9)O	R2PCM1				
	(20)TP	HIPLCL				
HIPLLCL	(7)TP	HIPLLCL	003			
	(9)O	R2PCM2				
	(20)TP	HIPLLCL				
HIPLLD	(7)TP	HIPLLD	103			
	(20)TP	HIPLLD				
HIPR	(7)TP	HIPR	002			
	(20)TP	HIPR				
INT2KHZ	(7)I	ZEREF	120		4/3	
	(20)I	INT2KHZ				
LI8K	(7)OT	LI8K	215		4/2	
	(20)OT	LI8K			2/2	
NCURPR	(7)I	R5I	012		2/1	
	(9)I	PRRES0				
	(20)I	R5I				
PCURPR	(7)OT	R50	112		2/1	
	(9)I	PRRES1				
	(20)OT	R50				
REF5N	(9)I	75REF1	353	(N)	(N)4/1	
					TO DSX	
	(8)I	REF1N	354	(N)	(N)4/1	
	(9)I	REF1N				
REF5P	(8)I	REF1P	355		TO DSX	
	(9)I	REF1P				
REF6N	(9)I	75REF2	306	(N)	(N)4/1	
	(8)I	REF2N	307	(N)	(N)4/1	
	(9)I	REF2N			TO DSX	
REF6P	(8)I	REF2P	308		TO DSX	
	(9)I	REF2P				
REF7N	(9)I	75REF3	338	(N)	(N)4/1	
	(9)I	REF3N	339	(N)	(N)4/1	
					TO DSX	
REF7P	(9)I	REF3P	340		TO DSX	
REF8N	(9)I	75REF4	321	(N)	(N)4/1	
	(9)I	REF4N	322	(N)	(N)4/1	
					TO DSX	
REF8P	(9)I	REF4P	323		TO DSX	
SREF	(7)O	SREF	121		4/2	
S1SEL0	(7)I	PLLBSF	236		4/2	
	(9)I	BDSEL0				
	(20)I	DPLLBEB				
TBA	(8)I	TBAEN	348		4/2	
	(9)I	TBAIN				
TBASTRT	(8)I	TBASTRT	345		4/2	
	(9)I	TBASTRT				
TBB	(8)I	TBBIN	347		4/2	
	(9)I	TBBIN				
TBBSTRT	(8)I	TBBSTRT	344		4/2	
	(9)I	TBBSTRT				
THSON	(7)OT	THSBKR	220		4/2	
	(20)TP	THSBKR				
THSOP	(7)OT	THSBKT	221		4/2	
	(20)TP	THSBKT				
VCXOED	(7)O	VCXOED	210		4/2	
	(20)O	VCXOED				
XADR00	(7)I	ABT	247		4/2	
	(9)I	XADR00				
	(20)I	XADD00				

SYMBOL NO. 1 (CONT)

SYNCRONIZER 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUDPLL	04-130	TN1130	A	(7)
NCUSYNC1	04-130	TN1275	A	9(S)
NCUSYNC1	04-130	TN12758	A	9(R)
NCUDPLL	04-130	TN246	A	(20)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
XADR01	(7)I	A1T	248		4/2	
	(9)I	XADR01				
	(20)I	XADD01				
XADR02	(7)I	A2T	249		4/2	
	(9)I	XADR02				
	(20)I	XADD02				
XADR03	(7)I	A3T	250		4/2	
	(9)I	XADR03				
	(20)I	XADD03				
XADR04	(7)I	A4T	251		4/2	
	(9)I	XADR04				
	(20)I	XADD04				
XADR05	(7)I	A5T	252		4/2	
	(9)I	XADR05				
	(20)I	XADD05				
XADR06	(8)I	XADR06	044		4/2	
	(9)I	XADR06			4/3	
XADR07	(8)I	XADR07	144		4/2	
	(9)I	XADR07			4/3	
XBHE0	(7)I	BHEF	243		4/2	
	(20)I	XBHEBB				
XCPLOW	(7)OT	XC2KR	217		4/2	
	(20)TP	XC2KR				
XCPLOP	(7)OT	XC2KT	218		4/2	
	(20)TP	XC2KT				
XDATA00	(7)IO	ED80	047		4/2	
	(9)I	XDATA00				
	(20)IO	XDATA00				
XDATA01	(7)IO	ED81	048		4/2	
	(9)I	XDATA01				
	(20)IO	XDATA01				
XDATA02	(7)IO	ED82	049		4/2	
	(9)I	XDATA02				
	(20)IO	XDATA02				
XDATA03	(7)IO	ED83	050		4/2	
	(9)I	XDATA03				
	(20)IO	XDATA03				
XDATA04	(7)IO	ED84	051		4/2	
	(9)I	XDATA04				
	(20)IO	XDATA04				
XDATA05	(7)IO	ED85	052		4/2	
	(9)I	XDATA05				
	(20)IO	XDATA05				
XDATA06	(7)IO	ED86	053		4/2	
	(9)I	XDATA06				
	(20)IO	XDATA06				
XDATA07	(7)IO	ED87	054		4/2	
	(9)I	XDATA07				
	(20)IO	XDATA07				
XDATA08	(7)IO	ED88	147		4/2	
	(9)I	XDATA08				
	(20)IO	XDATA08				
XDATA09	(7)IO	ED89	148		4/2	
	(9)I	XDATA09				
	(20)IO	XDATA09				
XDATA10	(7)IO	ED810	149		4/2	

PART OF FS 4

SYMBOL(S) 1

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE	ISSUE
D2	7B

AT&T | SD-5D082-01 | B4CA

PART OF FS 4

NETWORK CLOCK

SYMBOL NO. 1 (CONT)

SYNCHRONIZER 1

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUDPLL	04-130	TN1130	A	(7)
NCUSYNC1	04-130	TN1275	A	9(S)
NCUSYNC1	04-130	TN1275B	A	9(R)
NCUDPLL	04-130	TN246	A	(20)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	(9)I	XDATA10				
	(20)IO	XDATA10				
XDATA11	(7)IO	ED811	150		4/2	
	(9)I	XDATA11				
	(20)IO	XDATA11				
XDATA12	(7)IO	ED812	151		4/2	
	(9)I	XDATA12				
	(20)IO	XDATA12				
XDATA13	(7)IO	ED813	152		4/2	
	(9)I	XDATA13				
	(20)IO	XDATA13				
XDATA14	(7)IO	ED814	153		4/2	
	(9)I	XDATA14				
	(20)IO	XDATA14				
XDATA15	(7)IO	ED815	154		4/2	
	(9)I	XDATA15				
	(20)IO	XDATA15				
XDEN0	(8)I	XDEN0	238		4/2	
	(9)I	XDEN0				
XDT1R0	(8)I	XDT1R0	237		4/2	
	(9)I	XDT1R0				
XRD0	(7)I	RDF	242		4/2	
	(9)I	XRD0				
	(20)I	XRDDB				
XMR0	(7)I	MRF	241		4/2	
	(9)I	XMR0				
	(20)I	XMRDB				
2MCLK	(7)O	X2CLK	118		4/3	
	(20)O	2MCLK				

SYMBOL NO. 2

CONTROL

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUCNTRL	04-142	TN1131	A	(10)
NCUCNTRL	04-142	MC5D215	A	11(P)
NCUCNTRL	04-142	MC5D215A2	A	11(N)
NCUCNTRL	04-142	MC5D201A1	A	(21)
NCUCNTRL	04-142	MC5D222	A	Z2(B)
NCUCNTRL	04-142	MC5D222A2	A	Z2(A)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
NC	(10)PWR	+12	124			
	(21)PWR	+12				
	(1)O	L1OUT1	003			
	(1)O	XADR14	045			
	(1)O	INTO	104			
	(2)O	VPINR	115			
	(1)O	XADR13	Z44			
	(1)O	1NINTN	302			
	(1)O	1IDN	306			
	(1)O	1NINTP	307			
	(1)O	1IDP	311			
	(1)O	0NINTP	314			
	(1)O	0IDP	318			
	(1)O	0NINTN	319			
	(1)O	0IDN	323			
	(1)I	PDE0	105			

SYMBOL NO. 2 (CONT)

CONTROL

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUCNTRL	04-142	TN1131	A	(10)
NCUCNTRL	04-142	MC5D215	A	11(P)
NCUCNTRL	04-142	MC5D215A2	A	11(N)
NCUCNTRL	04-142	MC5D201A1	A	(21)
NCUCNTRL	04-142	MC5D222	A	Z2(B)
NCUCNTRL	04-142	MC5D222A2	A	Z2(A)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	(1)I	CONTSEL	118			
	(2)I	VPIN	215			
	(1)I	1CN	304			
	(1)I	1ODN	305			
	(1)I	1SP	308			
	(1)I	1CP	309			
	(1)I	1ODP	310			
	(1)I	0SP	315			
	(1)I	0CP	316			
	(1)I	0ODP	317			
	(1)I	0ON	321			
	(1)I	0ODEN	322			
	(1)I	LIIN1	353			
	(2)GRD	GRD	033			
	(2)GRD	GRD	034			
	(2)GRD	GRD	055			
	(2)GRD	GRD	133			
	(2)GRD	GRD	134			
	(2)GRD	GRD	155			
	(10)GRD	GRD	156			
	(21)GRD	GRD				
	(2)GRD	GRD	Z14			
	(2)GRD	GRD	Z16			
	(2)GRD	GRD	Z33			
	(2)GRD	GRD	Z34			
	(2)GRD	GRD	Z39			
	(2)GRD	GRD	Z40			
	(2)GRD	GRD	Z46			
	(2)GRD	GRD	255			
	(1)GRD	GRD	303			
	(1)GRD	GRD	320			
+12	(10)PWR	+12	024			1/2
	(21)PWR	+12				
+5	PWR	+5	000			1/2
	PWR	+5	001			1/2
	PWR	+5	100			1/2
	PWR	+5	101			1/2
AS	(10)TP	AS	043			
	(21)TP	AS				
BASSWF	(10)I	BASSWF	020			4/3
	(21)I	BASSWF				
BLSWPF	(10)I	BLSWPF	114			4/3
	(21)I	BLSWPF				
BP1	(10)I	BP1B	016			
	(21)I	CBP1				
	(10)I	BP1A	017			
	(21)O	CBP1				
BP2	(10)I	BP2B	Z20			
	(21)I	CBP2				
	(10)I	BP2A	Z21			
	(21)O	CBP2				
CBASW	(10)TP	CBASW	038			
	(21)TP	CCBASW				
CCBE	(10)TP	CCBE	037			
	(21)TP	CCBE				
CCBP	(10)TP	CCBP	036			
	(21)TP	CCBP				
CCBRD	(10)TP	CCBRD	039			
	(21)TP	CCBRD				
CCBOD	(10)TP	CCBOD	040			
	(21)TP	CCBOR				
CLRHI	(10)TP	CLRHI	010			

SYMBOL NO. 2 (CONT)

CONTROL

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUCNTRL	04-142	TN1131	A	(10)
NCUCNTRL	04-142	MC5D215	A	11(P)
NCUCNTRL	04-142	MC5D215A2	A	11(N)
NCUCNTRL	04-142	MC5D201A1	A	(21)
NCUCNTRL	04-142	MC5D222	A	Z2(B)
NCUCNTRL	04-142	MC5D222A2	A	Z2(A)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	(21)TP	CLRHI				
CS0	(10)TP	CS0	206			
	(11)I	PDATEN1				
	(21)TP	CS0				
CS1	(10)TP	CS1	205			
	(11)I	PDBDIR				
	(21)TP	CS1				
DDEC	(10)TP	DDEC	110			
	(21)TP	DDEC				
DS	(10)TP	DS	041			
	(21)TP	DS				
EPEB	(10)TP	PLE	011			
	(11)PWR	+5				
	(21)TP	PLE				
	(10)O	EPEB	014			
	(11)I	PVPPIN				
	(21)O	EPEB				
	(1)I	EPRVCC	015			
EXDM11	(1)OT	EXDM11	340			4/4
EXDM21	(1)OT	EXDM21	339			4/4
EXTC	(10)TP	EXTC	219			
	(21)TP	EXTC				
GRD04142	(10)I	DADD	167			
	(11)GRD	GRD				
	(21)GRD	GRD				
	(10)I	DDAT	108			
	(11)GRD	GRD				
	(21)GRD	GRD				
	(10)I	D1NC	109			
	(11)GRD	GRD				
	(21)GRD	GRD				
	(10)I	LEN	111			
	(21)GRD	GRD				
	(10)I	PCE1	Z12			
	(11)GRD	GRD				
	(21)GRD	GRD				
	(10)I	CLKS	213			
	(11)GRD	GRD				
	(21)GRD	GRD				
	GRD	GRD	013			
	GRD	GRD	019			
	(2)GRD	GRD	032			
	GRD	GRD	035			
	GRD	GRD	056			
	GRD	GRD	113			
	GRD	GRD	119			
	(11)GRD	GRD	132			
	(21)GRD	GRD				
	GRD	GRD	135			
	GRD	GRD	200			
	GRD	GRD	201			
	GRD	GRD	Z11			
	(11)GRD	GRD	Z24			
	(21)GRD	GRD				
	(11)GRD	GRD	Z32			
	(21)GRD	GRD				
	GRD	GRD	Z65			
	GRD	GRD	Z56			
	GRD	GRD	300			
	GRD	GRD	301			
	(1)GRD	GRD	313			
	(1)GRD	GRD	324			

SYMBOL NO. 2 (CONT)

CONTROL

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUCNTRL	04-142	TN1131	A	(10)
NCUCNTRL	04-142	MC5D215	A	11(P)
NCUCNTRL	04-142	MC5D215A2	A	11(N)
NCUCNTRL	04-142	MC5D201A1	A	(21)
NCUCNTRL	04-142	MC5D222	A	Z2(B)
NCUCNTRL	04-142	MC5D222A2	A	Z2(A)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	(1,GRD	GRD	332			
	(1)GRD	GRD	356			
IOVMON	(1)I	IOVMON	341		4/4	
LDH1	(10)TP	LDH1	009			
	(21)TP	LDHI				
LISK	(1)OT	LIOUT0	006		4/1	
MCURPR	(10)I	RDR1&	012		2/1	
	(11)I	PRRES0				
	(21)O	RIR1&				
OOVMON	(1)O	OOVMON	342		4/4	
PCE2	(10)TP	PCE2	Z10			
	(11)I	PPGRU0				
	(21)TP	PCE2				
PCE3	(10)TP	PCE3	209			
	(11)I	PPGRL0				
	(21)TP	PCE3				
PCURPR	(10)I	RIR1&	112		2/1	
	(11)I	PRRES1				
	(21)O	RDR1&				
POSLL	(10)TP	POSLL	204			
	(11)I	PADREN1				
	(21)TP	POSV				
RST	(10)TP	RST	106			
	(11)I	RESET0				
	(21)TP	RST				
SA	(10)TP	SA	042			
	(21)TP	SA				
SREF	(10)I	INT2KHZ	120		4/1	
	(21)I	INT2KHZ				
SYBEB	(10)O	SYBEB	235		4/3	
	(21)O	SYBEB				
SOSEL0	(1)O	SOSEL0	136		4/3	
S1SEL0	(10)O	OPLLBEB	236		4/1	
	(11)O	S1SSEL0				
	(21)O	OPLLBEB				
TBA	(1)O	TBAOUT	348		4/1,4/3	
TBASTRT	(1)O	TBASTRT	345		4/1,4/3	
TBB	(1)O	TBBOUT	347		4/1,4/3	
TBBINH	(1)I	TBBINH	334		TO NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL Z	
TBBIMP	(1)I	TBBIMP	335		TO NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL Z	
TBBSTRT	(1)O	TBBSTRT	344		4/1,4/3	
TBOH	(1)I	TBAINH	336		4/4	
TBOP	(1)I	TBAIMP	337		4/4	
TMSED	(10)I	TMSED	117		4/3	
	(21)I	TMSED				

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SYMBOL(S) 1 2

MESSAGE INTERFACE/CLOCK UNIT, MODEL Z

DWG SIZE	ISSUE
02	7B

AT&T	SD-5D082-01	B4C8

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PART OF FS 4

NETWORK CLOCK

SYMBOL NO. 2 (CONT)

CONTROL

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUCNTRL	04-142	TN1131	A	(10)
NCUCNTRL	04-142	MC5D215	A	11(P)
NCUCNTRL	04-142	MC5D215A2	A	11(N)
NCUCNTRL	04-142	MC5D201A1	A	(21)
NCUCNTRL	04-142	MC5D222	A	22(B)
NCUCNTRL	04-142	MC5D222A2	A	22(A)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
TMSON	(1)OT	TMSON	007		4/1	
TMSOP	(1)OT	TMSOP	008		4/1	
TMSRTNN	(1)I	TMSRTNN	222		4/3 FROM TIME MULTIPLEXED SWITCH UNIT	
TMSRTNP	(1)I	TMSRTNP	223		4/3 FROM TIME MULTIPLEXED SWITCH UNIT	
VCXOED	(10)I	VCXOED	116		4/1	
	(21)I	VCXOED				
XADD08	(10)TP	ADD08	140			
	(11)O	XADR08				
	(21)TP	XADD08				
XADD09	(10)TP	ADD09	141			
	(11)O	XADR09				
	(21)TP	XADD09				
XADD10	(10)TP	ADD10	142			
	(11)O	XADR10				
	(21)TP	XADD10				
XADD11	(10)TP	ADD11	143			
	(11)O	XADR11				
	(21)TP	XADD11				
XADD12	(10)TP	ADD12	144			
	(11)O	XADR12				
	(21)TP	XADD12				
XADR00	(10)O	ADD00	247		4/1,4/3	
	(11)O	XADR00				
	(21)O	XADD00				
XADR01	(10)O	ADD01	248		4/1,4/3	
	(11)O	XADR01				
	(21)O	XADD01				
XADR02	(10)O	ADD02	249		4/1,4/3	
	(11)O	XADR02				
	(21)O	XADD02				
XADR03	(10)O	ADD03	250		4/1,4/3	
	(11)O	XADR03				
	(21)O	XADD03				
XADR04	(10)O	ADD04	251		4/1,4/3	
	(11)O	XADR04				
	(21)O	XADD04				
XADR05	(10)O	ADD05	252		4/1,4/3	
	(11)O	XADR05				
	(21)O	XADD05				
XADR06	(10)TP	ADD06	138		4/1	
	(11)O	XADR06				
	(21)TP	XADD06				
XADR07	(10)TP	ADD07	139		4/1	
	(11)O	XADR07				
	(21)TP	XADD07				
XBHE0	(10)O	BHEB	243		4/1,4/3	
	(11)O	XBEH0				
	(21)O	XBHEBB				
XCED	(10)I	XCED	018		4/3	
	(21)I	XCED				
XCPLINN	(1)I	XCPLINN	217		4/3 TO NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	
XCPLINP	(1)I	XCPLINP	218		4/3 TO NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	

SYMBOL NO. 2 (CONT)

CONTROL

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUCNTRL	04-142	TN1131	A	(10)
NCUCNTRL	04-142	MC5D215	A	11(P)
NCUCNTRL	04-142	MC5D215A2	A	11(N)
NCUCNTRL	04-142	MC5D201A1	A	(21)
NCUCNTRL	04-142	MC5D222	A	22(B)
NCUCNTRL	04-142	MC5D222A2	A	22(A)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
XCPLON	(1)OT	XCPLON	004		4/1	
XCPLOP	(1)OT	XCPLOP	005		4/1	
XDATA00	(10)O	DATA00	047		4/1,4/3	
	(11)I	XDATA00				
	(21)IO	XDATA00				
XDATA01	(10)O	DATA01	048		4/1,4/3	
	(11)I	XDATA01				
	(21)IO	XDATA01				
XDATA02	(10)O	DATA02	049		4/1,4/3	
	(11)I	XDATA02				
	(21)IO	XDATA02				
XDATA03	(10)O	DATA03	050		4/1,4/3	
	(11)I	XDATA03				
	(21)IO	XDATA03				
XDATA04	(10)O	DATA04	051		4/1,4/3	
	(11)I	XDATA04				
	(21)IO	XDATA04				
XDATA05	(10)O	DATA05	052		4/1,4/3	
	(11)I	XDATA05				
	(21)IO	XDATA05				
XDATA06	(10)O	DATA06	053		4/1,4/3	
	(11)I	XDATA06				
	(21)IO	XDATA06				
XDATA07	(10)O	DATA07	054		4/1,4/3	
	(11)I	XDATA07				
	(21)IO	XDATA07				
XDATA08	(10)O	DATA08	147		4/1,4/3	
	(11)I	XDATA08				
	(21)IO	XDATA08				
XDATA09	(10)O	DATA09	148		4/1,4/3	
	(11)I	XDATA09				
	(21)IO	XDATA09				
XDATA10	(10)O	DATA10	149		4/1,4/3	
	(11)I	XDATA10				
	(21)IO	XDATA10				
XDATA11	(10)O	DATA11	150		4/1,4/3	
	(11)I	XDATA11				
	(21)IO	XDATA11				
XDATA12	(10)O	DATA12	151		4/1,4/3	
	(11)I	XDATA12				
	(21)IO	XDATA12				
XDATA13	(10)O	DATA13	152		4/1,4/3	
	(11)I	XDATA13				
	(21)IO	XDATA13				
XDATA14	(10)O	DATA14	153		4/1,4/3	
	(11)I	XDATA14				
	(21)IO	XDATA14				
XDATA15	(10)O	DATA15	154		4/1,4/3	
	(11)I	XDATA15				
	(21)IO	XDATA15				
XDENO	(1)O	XDENO	238		4/1,4/3	
XDTIRO	(1)O	XDTIRO	237		4/1,4/3	
XRDO	(10)O	RDDB	242		4/1,4/3	
	(11)O	XRDO				
	(21)O	XRDDB				
XWRO	(10)O	WRDB	241		4/1,4/3	
	(11)O	XWRO				
	(21)O	XWRDB				
0C0P	(10)TP	CLOCK	102		3/1	
	(11)I	MICLOCK				
	(21)I	CLOCK				
0IDOP	(10)O	REPLY	103		3/1,3/5	
	(11)O	MIREPLY				
	(21)O	REPLY				
0MINTOP	(10)O	INTRP	203		3/1,3/5	
	(11)O	MIINTRP				
	(21)O	INTPR				
0ODOP	(10)I	ORDER	202		3/1	
	(11)I	MIORDER				

SYMBOL NO. 2 (CONT)

CONTROL

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUCNTRL	04-142	TN1131	A	(10)
NCUCNTRL	04-142	MC5D215	A	11(P)
NCUCNTRL	04-142	MC5D215A2	A	11(N)
NCUCNTRL	04-142	MC5D201A1	A	(21)
NCUCNTRL	04-142	MC5D222	A	22(B)
NCUCNTRL	04-142	MC5D222A2	A	22(A)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	(21)I	ORDER				
&KLIT	(1)I	LIINO	350		2/2	

SYMBOL NO. 3

SYNCRONIZER 0

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUSYNCO	04-152	TN245	A	(12)
NCUSYNCO	04-152	TN249	A	(13)
NCUSYNCO	04-152	TN1274	A	14(U)
NCUSYNCO	04-152	TN12748	A	14(T)
NCUSYNCO	04-152	TN1275	A	15(N)
NCUSYNCO	04-152	TN12758	A	15(L)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
NC	(12)PWR	+12	124			
	(13)PWR	+12				
	(14)O	REF2CLK	005			
	(15)O	REF2CLK				
	(1)O	R4PCN2	007			
	(1)O	R4PCN1	008			
	(1)O	REF4CLK	009			
	(1)O	R3PCN2	014			
	(1)O	R3PCN1	015			
	(1)O	REF3CLK	016			
	(14)O	BSRFCLK	017			
	(15)O	BSRFCLK				
	(14)O	R1PCN2	021			
	(15)O	R1PCN2				
	(14)O	R1PCN1	022			
	(15)O	R1PCN1				
	(14)O	REF1CLK	023			
	(15)O	REF1CLK				
	(12)I	HIDEFCL	002			
	(13)TP	HIDEFCL				
	(12)I	HIDEFPR	003			
	(13)TP	HIDEFPR				
	(14)O	R2PCN2				
	(15)O	R2PCN2				
	(12)I	HICLR	004			
	(13)TP	HICLR				
	(14)O	R2PCN1				
	(15)O	R2PCN1				
	(12)I	INITP	036			
	(13)TP	INITP				
	(12)I	HIT1CLR	037			
	(13)TP	HIT1CLR				
	(14)I	TSTBSRF				
	(15)I	TSTBSRF				
	(12)I	HIINCLR	103			
	(13)TP	HIINCLR				
	(12)I	HICNTPR	104			
	(13)TP	HICNTPR				
	(12)I	INITS	136			
	(13)TP	INITS				
	(1)GRD	GRD	032			

SYMBOL NO. 3 (CONT)

SYNCRONIZER 0

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUSYNCO	04-152	TN245	A	(12)
NCUSYNCO	04-152	TN249	A	(13)
NCUSYNCO	04-152	TN1274	A	14(U)
NCUSYNCO	04-152	TN12748	A	14(T)
NCUSYNCO	04-152	TN1275	A	15(N)
NCUSYNCO	04-152	TN12758	A	15(L)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	(1)GRD	GRD	156			
+12	(12)PWR	+12	024		1/2	
	(13)PWR	+12				
+5	PWR	+5	000		1/2	
	PWR	+5	001		1/2	
	PWR	+5	100		1/2	
	PWR	+5	101		1/2	
BASSMF	(12)O	BASSMF	020		4/2	
	(13)O	BASSMF				
BLSMPF	(12)O	BLSMPF	114		4/2	
	(13)O	BLSMPF				
BSRF00	(14)I	BSRF0	318		TO ANALOG TRANSMISSION FACILITY	
	(15)I	BSRF0				
BSRF01	(14)I	BSRF1	317		TO ANALOG TRANSMISSION FACILITY	
	(15)I	BSRF1				
GRD4152	(12)I	EXLOOT	116			
	(13)GRD	GRD				
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	011			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	013			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	019			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	033			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	034			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	035			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	055			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	056			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(14)GRD	GRD	107			
	(15)GRD	GRD				
	(13)GRD	GRD	111			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	113			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	179			

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SYMBOL(S) 2 3

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE	ISSUE
12	7B

AT&T	SD-5D082-01	B4CC

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PART OF FS 4

NETWORK CLOCK

SYMBOL NO. 3 (CONT)

SYNCRONIZER 0

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUSYNC0	04-152	TN245	A	(12)
NCUSYNC0	04-152	TN249	A	(13)
NCUSYNC0	04-152	TN1274	A	14(U)
NCUSYNC0	04-152	TN12748	A	14(T)
NCUSYNC0	04-152	TN1275	A	15(M)
NCUSYNC0	04-152	TN12758	A	15(L)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	132			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	133			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	134			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	135			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	155			
	(14)GRD	GRD				
	(15)GRD	GRD				
	GRD	GRD	200			
	GRD	GRD	201			
	(13)GRD	GRD	211			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	212			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	213			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	214			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	216			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	219			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	224			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(1)GRD	GRD	232			
	(13)GRD	GRD	233			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	234			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	239			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	240			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	245			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	246			
	(14)GRD	GRD				
	(15)GRD	GRD				
	(13)GRD	GRD	256			
	(14)GRD	GRD				
	(15)GRD	GRD				
	GRD	GRD	300			
	GRD	GRD	301			
(14)GRD	GRD		309			
(15)GRD	GRD					

SYMBOL NO. 3 (CONT)

SYNCRONIZER 0

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUSYNC0	04-152	TN245	A	(12)
NCUSYNC0	04-152	TN249	A	(13)
NCUSYNC0	04-152	TN1274	A	14(U)
NCUSYNC0	04-152	TN12748	A	14(T)
NCUSYNC0	04-152	TN1275	A	15(M)
NCUSYNC0	04-152	TN12758	A	15(L)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	(14)GRD	GRD	341			
	(15)GRD	GRD				
INT2KHZ	(12)O	ZKREF	120		4/1	
	(13)O	INT2KHZ				
NCURPR	(12)I	RIR28	012		2/1	
	(13)I	RIR28				
	(14)I	PRRES0				
	(15)I	PRRES0				
PCURPR	(12)OT	ROR28	112		2/1	
	(13)OT	ROR28				
	(14)I	PRRES1				
	(15)I	PRRES1				
REF1N	(1)I	75REF1	353	(W)		
	(14)I	REF1N	354	(W)	TO DSX	
	(15)I	REF1N				
	(12)I	PT1R	254		(W)4/3	
	(13)I	PT1R				
REF1NA	I	75REF1	353			
REF1P	(12)I	PT1T	255		TO DSX	
	(13)I	PT1T				
	(14)I	REF1P	355			
	(15)I	REF1P				
REF2N	(1)I	75REF2	306	(W)		
	(14)I	REF2N	307	(W)	TO DSX	
	(15)I	REF2N				
	(12)I	ST1R	207		(W)4/3	
	(13)I	ST1R				
REF2NA	I	75REF2	306			
REF2P	(12)I	ST1T	208			
	(13)I	ST1T				
	(14)I	REF2P	308		TO DSX	
	(15)I	REF2P				
REF3N	(1)I	75REF3	338	(W)	(W)4/3	
	(1)I	REF3N	339	(W)	(W)4/3	
					TO DSX	
REF3P	(1)I	REF3P	340		TO DSX	
REF4N	(1)I	75REF4	321	(W)	(W)4/3	
	(1)I	REF4N	322	(W)	(W)4/3	
					TO DSX	
REF4P	(1)I	REF4P	323		TO DSX	
SPB1	(12)O	BP10	138			
	(13)O	SBP1				
	(12)I	BP1I	038			
	(13)I	SBP1				
SPB2	(12)O	BP20	139			
	(13)O	SBP2				
	(12)I	BP2I	039			
	(13)I	SBP2				
SPB3	(12)O	BP30	140			
	(13)O	SBP3				
	(12)I	BP3I	040			
	(13)I	SBP3				
SPB4	(12)O	BP40	141			
	(13)O	SBP4				
	(12)I	BP4I	041			
	(13)I	SBP4				
SPB5	(12)O	BP50	142			
	(13)O	SBP5				
	(12)I	BP5I	042			
	(13)I	SBP5				
SPB6	(12)O	BP60	143			
	(13)O	SBP6				

SYMBOL NO. 3 (CONT)

SYNCRONIZER 0

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUSYNC0	04-152	TN245	A	(12)
NCUSYNC0	04-152	TN249	A	(13)
NCUSYNC0	04-152	TN1274	A	14(U)
NCUSYNC0	04-152	TN12748	A	14(T)
NCUSYNC0	04-152	TN1275	A	15(M)
NCUSYNC0	04-152	TN12758	A	15(L)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	(12)I	BP6I	043			
	(13)I	SBP6				
SPB7	(12)O	BP70	145			
	(13)O	SBP7				
	(12)I	BP7I	045			
	(13)I	SBP7				
SPB8	(12)O	BP80	146			
	(13)O	SBP8				
	(12)I	BP8I	046			
	(13)I	SBP8				
SYBEB	(12)I	SBSF	235		4/2	
	(13)I	SYBEB				
SOSEL0	(14)I	BOSEL0	236		4/2	
	(15)I	BOSEL0				
TBA	(14)I	TBAIN	348		4/2	
	(15)I	TBAIN				
TBASTRT	(14)I	TBASTRT	345		4/2	
	(15)I	TBASTRT				
TBB	(14)I	TBBIN	347		4/2	
	(15)I	TBBIN				
TBBSTRT	(14)I	TBBSTRT	344		4/2	
	(15)I	TBBSTRT				
TMSED	(12)O	TMSED	117		4/2	
	(13)O	TMSED				
TMSRTNN	(12)I	&CTMSR	220		4/2	
	(13)TP	&CTMSR				
TMSRTNP	(12)I	&CTMST	221		4/2	
	(13)TP	&CTMST				
XADR00	(12)I	A0T	247		4/2	
	(13)I	XADD00				
	(14)I	XADR00				
	(15)I	XADR00				
XADR01	(12)I	A1T	248		4/2	
	(13)I	XADD01				
	(14)I	XADR01				
	(15)I	XADR01				
XADR02	(12)I	A2T	249		4/2	
	(13)I	XADD02				
	(14)I	XADR02				
	(15)I	XADR02				
XADR03	(12)I	A3T	250		4/2	
	(13)I	XADD03				
	(14)I	XADR03				
	(15)I	XADR03				
XADR04	(12)I	A4T	251		4/2	
	(13)I	XADD04				
	(14)I	XADR04				
	(15)I	XADR04				
XADR05	(12)I	A5T	252		4/2	
	(13)I	XADD05				
	(14)I	XADR05				
	(15)I	XADR05				
XADR06	(14)I	XADR06	044		4/1	
	(15)I	XADR06				
XADR07	(14)I	XADR07	144		4/1	
	(15)I	XADR07				
XBHE0	(12)I	BHEF	243		4/2	
	(13)I	XBHEB8				
XCED	(12)O	XCED	018		4/2	
	(13)O	XCED				
XCPLINN	(12)I	ZXCR	217		4/2	
	(13)TP	ZXCR				
XCPLINP	(12)I	ZXCT	218		4/2	
	(13)TP	ZXCT				
XDATA00	(12)IO	ED80	047		4/2	
	(13)IO	XDATA00				
	(14)I	XDATA00				
	(15)I	XDATA00				

SYMBOL NO. 3 (CONT)

SYNCRONIZER 0

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUSYNC0	04-152	TN245	A	(12)
NCUSYNC0	04-152	TN249	A	(13)
NCUSYNC0	04-152	TN1274	A	14(U)
NCUSYNC0	04-152	TN12748	A	14(T)
NCUSYNC0	04-152	TN1275	A	15(M)
NCUSYNC0	04-152	TN12758	A	15(L)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
XDATA01	(12)IO	ED81	048		4/2	
	(13)IO	XDATA01				
	(14)I	XDATA01				
	(15)I	XDATA01				
XDATA02	(12)IO	ED82	049		4/2	
	(13)IO	XDATA02				
	(14)I	XDATA02				
	(15)I	XDATA02				
XDATA03	(12)IO	ED83	050		4/2	
	(13)IO	XDATA03				
	(14)I	XDATA03				
	(15)I	XDATA03				
XDATA04	(12)IO	ED84	051		4/2	
	(13)IO	XDATA04				
	(14)I	XDATA04				
	(15)I	XDATA04				
XDATA05	(12)IO	ED85	052		4/2	
	(13)IO	XDATA05				
	(14)I	XDATA05				
	(15)I	XDATA05				
XDATA06	(12)IO	ED86	053		4/2	
	(13)IO	XDATA06				
	(14)I	XDATA06				
	(15)I	XDATA06				
XDATA07	(12)IO	ED87	054		4/2	
	(13)IO	XDATA07				
	(14)I	XDATA07				
	(15)I	XDATA07				
XDATA08	(12)IO	ED88	147		4/2	
	(13)IO	XDATA08				
	(14)I	XDATA08				
	(15)I	XDATA08				
XDATA09	(12)IO	ED89	148		4/2	
	(13)IO	XDATA09				
	(14)I	XDATA09				
	(15)I	XDATA09				
XDATA10	(12)IO	ED810	149		4/2	
	(13)IO	XDATA10				
	(14)I	XDATA10				
	(15)I	XDATA10				
XDATA11	(12)IO	ED811	150		4/2	
	(13)IO	XDATA11				
	(14)I	XDATA11				
	(15)I	XDATA11				
XDATA12	(12)IO	ED812	151		4/2	
	(13)IO	XDATA12				
	(14)I	XDATA12				
	(15)I	XDATA12				
XDATA13	(12)IO	ED813	152		4/2	
	(13)IO	XDATA13				
	(14)I	XDATA13				
	(15)I	XDATA13				
XDATA14	(12)IO	ED814	153		4/2	
	(13)IO	XDATA14				
	(14)I	XDATA14				
	(15)I	XDATA14				
XDATA15	(12)IO	ED815	154		4/2	

PART OF FS 4

SYMBOL(S) 3

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE	ISSUE
D2	7B

AT&T | SD-5D082-01 | B4CD

PART OF FS 4

NETWORK CLOCK

SYMBOL NO. 3 (CONT)

SYNCRONIZER 0

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUSYNC0	04-152	TN245	A	(12)
NCUSYNC0	04-152	TN249	A	(13)
NCUSYNC0	04-152	TN1274	A	14(U)
NCUSYNC0	04-152	TN1274B	A	14(T)
NCUSYNC0	04-152	TN1275	A	15(M)
NCUSYNC0	04-152	TN1275B	A	15(L)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
	(13)IO	XDATA15				
	(14)I	XDATA15				
	(15)I	XDATA15				
XDEN0	(14)I	XDEN0	238		4/2	
	(15)I	XDEN0				
XDT1R0	(14)I	XDT1R0	237		4/2	
	(15)I	XDT1R0				
XRD0	(12)I	RDF	242		4/2	
	(13)I	XRD0B				
	(16)I	XRD0				
	(15)I	XRD0				
XWR0	(12)I	WRF	241		4/2	
	(13)I	XWR0B				
	(14)I	XWR0				
	(15)I	XWR0				
2MCLK	(12)I	2CLK	118		4/1	
	(13)I	2MCLK				
8KLIT	(12)I	8KLIT	215	(U)	2/2	
	(13)TP	8KLIT				

SYMBOL NO. 4

OSCILLATOR

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUOSL	04-176	TN1286	A	16(K)
NCUOSL	04-176	TN1286B	A	16(J)
NCUOSL	04-176	TN1285	A	17(H)
NCUOSL	04-176	TN1285B	A	17(G)
NCUOSL	04-176	TN1284	A	18(F)
NCUOSL	04-176	TN1284B	A	18(E)
NCUOSL	04-176	TN1283	A	19(D)
NCUOSL	04-176	TN1283B	A	19(C)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
NC	PWR	+5VDC	005			
	PWR	+15VDC	015			
-48VC	(16)I	-48VIN	000			
	(17)PWR	-48VIN				
	(18)PWR	-48VIN				
	(19)PWR	-48VIN				
	(16)I	-48VIN	100		TO FUSE PANEL	
	(17)PWR	-48VIN				
	(18)PWR	-48VIN				
	(19)PWR	-48VIN				
-48VRTNC	PWR	-48VRTN	001		TO FUSE PANEL	
	PWR	-48VRTN	101			
EXOM11	(18)OT	EXOM11	040		4/2	
	(19)OT	EXOM11				
EXOM21	(18)OT	EXOM21	039		4/2	
	(19)OT	EXOM21				
FUSEALM	I	FUSEALM	237		TO FUSE ALARM BUS	
GRD04176	GRD	GRD	200			
	GRD	GRD	201			
	GRD	GRD	300			
	GRD	GRD	301			
IOVMON	(16)PWR	IOVMON	041		4/2	
	(17)PWR	IOVMON				
	(18)O	IOVMON				
	(19)O	IOVMON				

SYMBOL NO. 4 (CONT)

OSCILLATOR

DESIG	EQPT LOC	CODE	ELEM IDENT	OPT
NCUOSL	04-176	TN1286	A	16(K)
NCUOSL	04-176	TN1286B	A	16(J)
NCUOSL	04-176	TN1285	A	17(H)
NCUOSL	04-176	TN1285B	A	17(G)
NCUOSL	04-176	TN1284	A	18(F)
NCUOSL	04-176	TN1284B	A	18(E)
NCUOSL	04-176	TN1283	A	19(D)
NCUOSL	04-176	TN1283B	A	19(C)

LEAD DESIG	FUNC	TERM. MOD	TERM.	TERM. OPT	DESTINATION	NOTE
00S3BR0	(16)I	00S3BR	016		TO 3BIOP SIDE 0	
	(17)I	00S3BR				
	(18)I	00S3BR				
	(19)I	00S3BR				
00S3BR1	(16)I	00S3BR	051		TO 3BIOP SIDE 1	
	(17)I	00S3BR				
	(18)I	00S3BR				
	(19)I	00S3BR				
00S3B0	I	00S3B	116		TO 3BIOP SIDE 0	
00S3B1	I	00S3B	151		TO 3BIOP SIDE 1	
00VMON	(16)PWR	OVMON	042		4/2	
	(17)PWR	00VMON				
	(18)O	00VMON				
	(19)O	00VMON				
SCX3BR0	0	SCX3BR	019		TO 3BIOP SIDE 0	
SCX3BR1	0	SCX3BR	054		TO 3BIOP SIDE 1	
SCX3B0	0	SCX3B	119		TO 3BIOP SIDE 0	
SCX3B1	0	SCX3B	154		TO 3BIOP SIDE 1	
SCY3BR0	0	SCY3BR	018		TO 3BIOP SIDE 0	
SCY3BR1	0	SCY3BR	053		TO 3BIOP SIDE 1	
SCY3B0	0	SCY3B	118		TO 3BIOP SIDE 0	
SCY3B1	0	SCY3B	153		TO 3BIOP SIDE 1	
TB0N	0	TBOUT0N	036		4/2	
TB0P	0	TBOUT0P	037		4/2	
TB1N	0	TBOUT1N	034		TO NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	
TB1P	0	TBOUT1P	035		TO NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	

PART OF FS 4
SYMBOL(S) 3 4

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE	ISSUE
12	7B

AT&T	SD-5D082-01	B4CE

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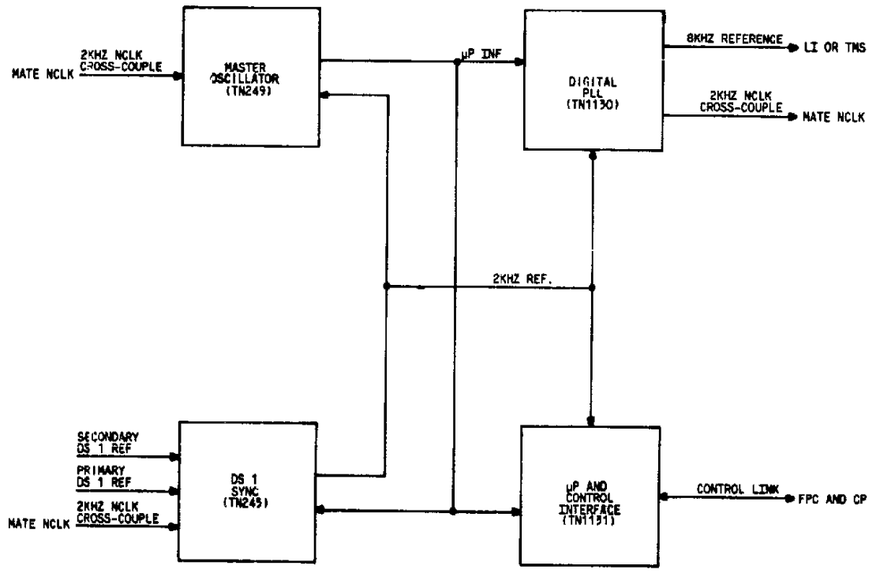
PART OF FS 4

NETWORK CLOCK 1

COMPOSITE DIAGRAM I

STAND ALONE CLOCK



NOTES:

1. THE 5ESS DIGITAL SWITCHING SYSTEM MUST INTERFACE WITH OTHER SWITCHING SYSTEMS. THIS IS TO PREVENT ANY LOSS OF DATA BETWEEN SYSTEMS. THE NETWORK CLOCK (NCLK) PROVIDES THIS SYCHRONIZING. FOR THE 5ESS TO THE SURROUNDING SYSTEMS.

2. IN THE DOMESTIC MULTIMODULE OFFICE TN1130 IS THE DIGITAL PHASE LOCK LOOP CIRCUIT PACK. IT PROVIDES THE 8KHZ REFERENCE FOR THE 5ESS OFFICE. IT ALSO PROVIDES THE 2KHZ CROSS-COUPLE CLOCK TO THE MATE NETWORK CLOCK.

3. THE TN1191 IS THE MICROPROCESSOR AND CONTROL INTERFACE CIRCUIT PACK. IT CONTAINS AN 8086 MICROPROCESSOR WHICH HANDLES ALL THE PROCESSING FOR THE NETWORK CLOCK. IT ALSO CONTAINS THE INTERFACE TO THE CENTRAL PROCESSOR VIA THE FPC.

4. THE TN245 IS THE DS 1 SYNCHRONIZER. IT RECEIVES AND SYNCS ON THE DS 1 FROM ANOTHER SWITCHING SYSTEM SO THAT THE 5ESS IS SYNCHRONIZED WITH OTHER SWITCHING SYSTEMS. IT ALSO RECEIVES THE 2KHZ CROSS-COUPLE CLOCK FROM THE MATE NETWORK CLOCK.

5. THE TN249 IS THE STAND ALONE SYNCHRONIZER CIRCUIT PACK. IT REPLACES THE TN245 WHEN THERE ARE NO DS 1 LINES AVAILABLE IT HANDLES SYNCHRONIZATION BY AN INTERNAL OSCILLATOR. IT ALSO HANDLES THE 2KHZ CROSS-COUPLE FROM THE MATE NETWORK CLOCK.

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE 00	ISSUE 3D
ATT BELL LABORATORIES	90-50082-01	84GA

PART OF FS 4

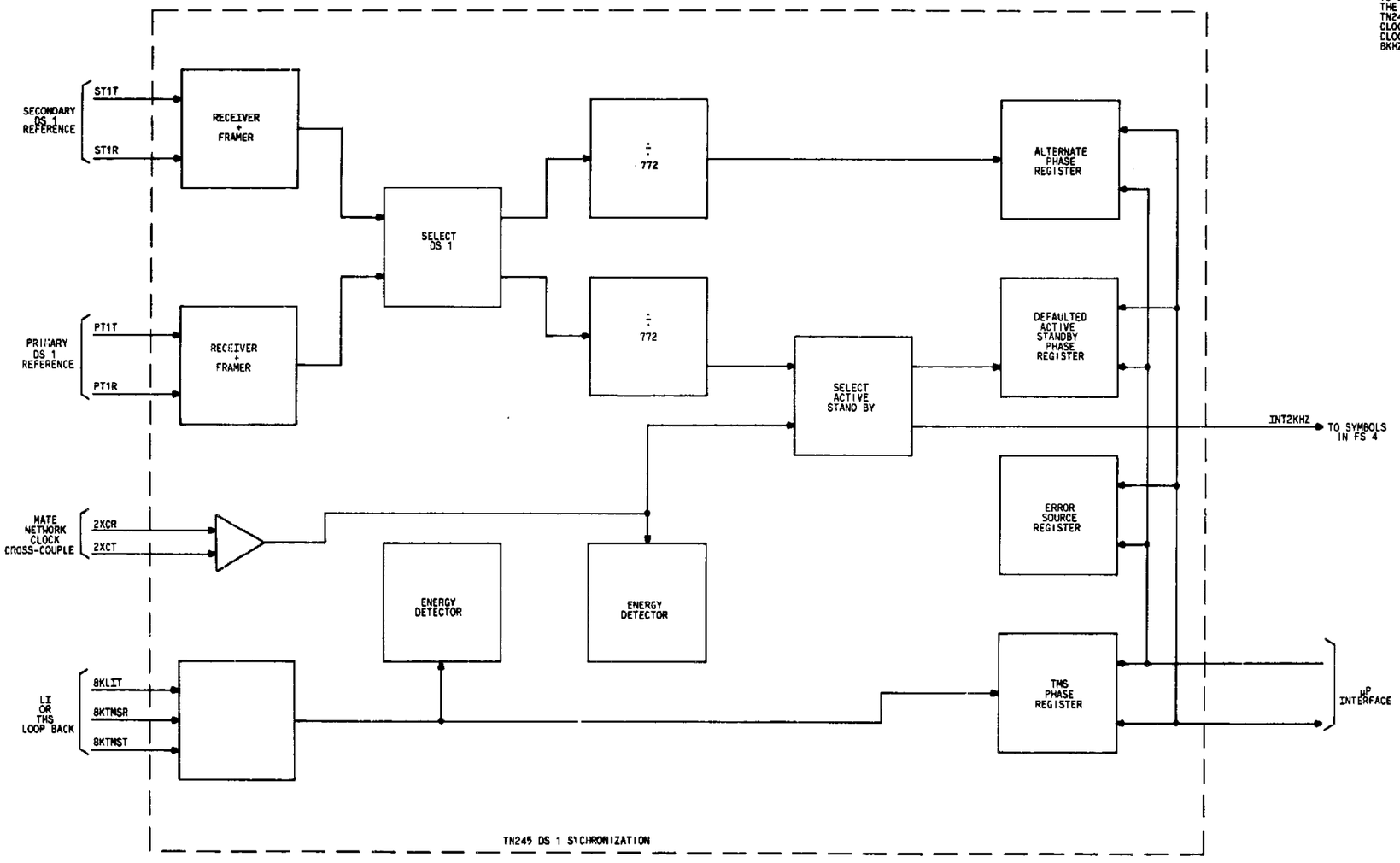
NETWORK CLOCK 1

COMPOSITE DIAGRAM 2

DS 1 SYCHRONIZATION

NOTES:

1. THE DS 1 SYNCHRONIZATION CIRCUIT PACK HAS THE FUNCTION OF SELECTING A REFERENCE FROM ONE OF THREE POSSIBLE SYCHRONIZATION SOURCES FOR EACH NETWORK CLOCK. THESE INCLUDE A PRIMARY AND SECONDARY DS 1 LINE AND A CROSS-COUPLE SOURCE SUPPLIED BY THE MATE NETWORK CLOCK.
2. THE TN245 WHEN IN AN ACTIVE MODE SELECTS ITS REFERENCE FROM ONE OF THE TWO INCOMING DS 1 LINES. IT IS THEN DIVIDED DOWN TO 2KHZ RATE AND SENT OUT AS THE SYNC CLOCK FOR THE REST OF THE NETWORK CLOCK. WHEN IT IS IN THE STANDBY MODE, THE TN245 RECEIVES ITS REFERENCE FROM THE INCOMING CROSS-COUPLED CLOCK. THE INTERNAL 2KHZ IS DERIVED FROM THIS CROSS-COUPLED CLOCK. THIS CIRCUIT PACK ALSO HAS ENERGY DETECTORS FOR THE 8KHZ CLOCK COMING FROM THE LINK INTERFACE OR THE TMS.



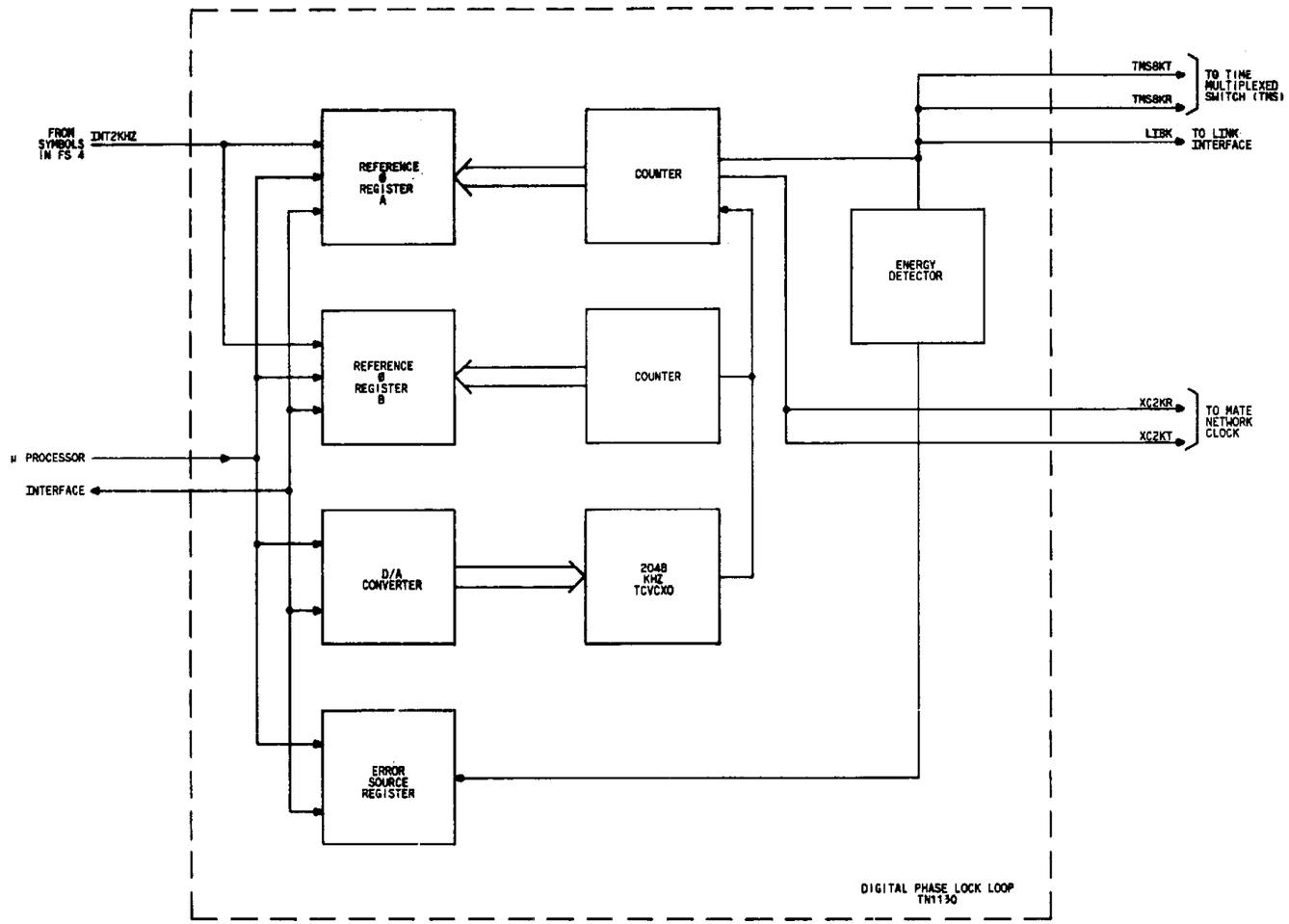
MESSAGE INTERFACE/CLOCK UNIT, MODEL 2		DWG SIZE 8S	ISSUE 3D
AT&T BELL LABORATORIES	3D- 5D082-01		B4GB

PART OF FS 4

NETWORK CLOCK 1

COMPOSITE DIAGRAM 3

PHASE LOCK LOOP



NOTES:

1. THE PHASE LOCK LOOP CONSISTS OF A D/A CONVERTER, A 2.048MHZ VOLTAGE CONTROLLED CRYSTAL OSCILLATOR (VCXO), AND A DUPLICATED PHASE COMPARATOR.

   THE PHASE LOCK LOOP RECEIVES THE SAME 2KHZ REFERENCE FROM THE SYNCHRONIZATION UNIT THAT THE CONTROLLER UNIT'S 8086 μP USES AS AN INTERRUPT. THE μP RECEIVES THE INTERRUPT AND THEN COLLECTS THE PHASE COMPARATOR DATA FROM THE DPLL CIRCUIT PACK. THIS DATA REPRESENTS THE NUMBER OF 2.048MHZ CLOCK PULSES THAT HAVE OCCURED SINCE THE LAST INTERRUPT. THE NUMBER OF VCXO CLOCKS WHICH ARE INSIDE THE REFERENCE PERIOD ARE INTERPRETED AS A MEASURE OF THE PHASE DIFFERENCE BETWEEN THE VCXO AND THE REFERENCE. EIGHT CONSECUTIVE PHASE MEASUREMENTS ARE AVERAGED IN SOFTWARE AND THE RESULTING MEAN FED INTO A PROPORTIONAL PLUS INTEGRAL FILTERING EQUATION. THE FILTERED RESULT, A 12 BIT DIGITAL WORD, STEERS A D/A CONVERTER PROVIDING AN ANALOG VOLTAGE TO SHIFT THE VCXO FEQUENCY. THUS KEEPING THE VCXO SYNCHRONIZED WITH THE REST OF THE CLOCK.

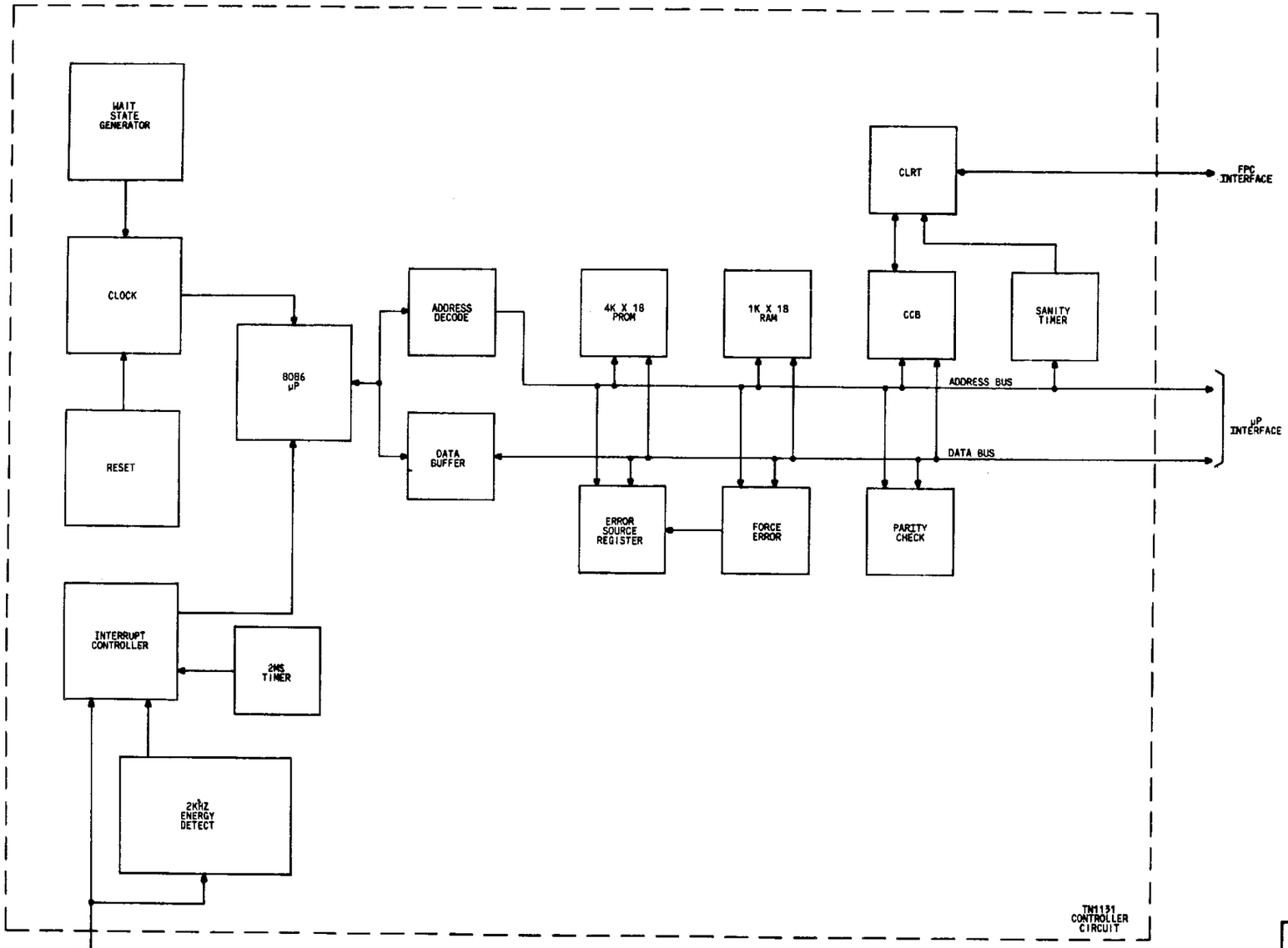
MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE 00	ISSUE 3D
AT&T BELL LABORATORIES	SD-5D082-01	B4GC

PART OF FS 4

NETWORK CLOCK 1

COMPOSITE DIAGRAM 4

CONTROLLER CIRCUIT



NOTES:

1. THE TN248 CONTROLLER CIRCUIT PACK CONSISTS OF TWO SECTIONS. THE FIRST IS COMPOSED OF AN 8086 MICROCOMPUTER SYSTEM. THE SECOND SECTION CONTAINS TWO LSI DEVICES WHICH COMPRISE THE SERIAL CONTROL LINK INTERFACE TO THE FOUNDATION PERIPHERAL CONTROLLER.

   THE CONTROL LINK RECEIVER TRANSMITTER (CLRT) AND THE CONTROL COMMUNICATION BUFFER (CCB) ARE THE TWO LSI DEVICES THAT INTERFACE WITH THE FOUNDATION PERIPHERAL CONTROLLER (BEING THE ONLY EXTERNAL COMMUNICATION WITH THE NETWORK CLOCK).

2. THE MICROPROCESSOR HAS TWO FUNCTIONS. FIRST IS HANDLING THE MESSAGES FROM THE FPC AND SECOND IS PERFORMING THE DIGITAL PHASE LOCK LOOP FILTERING.

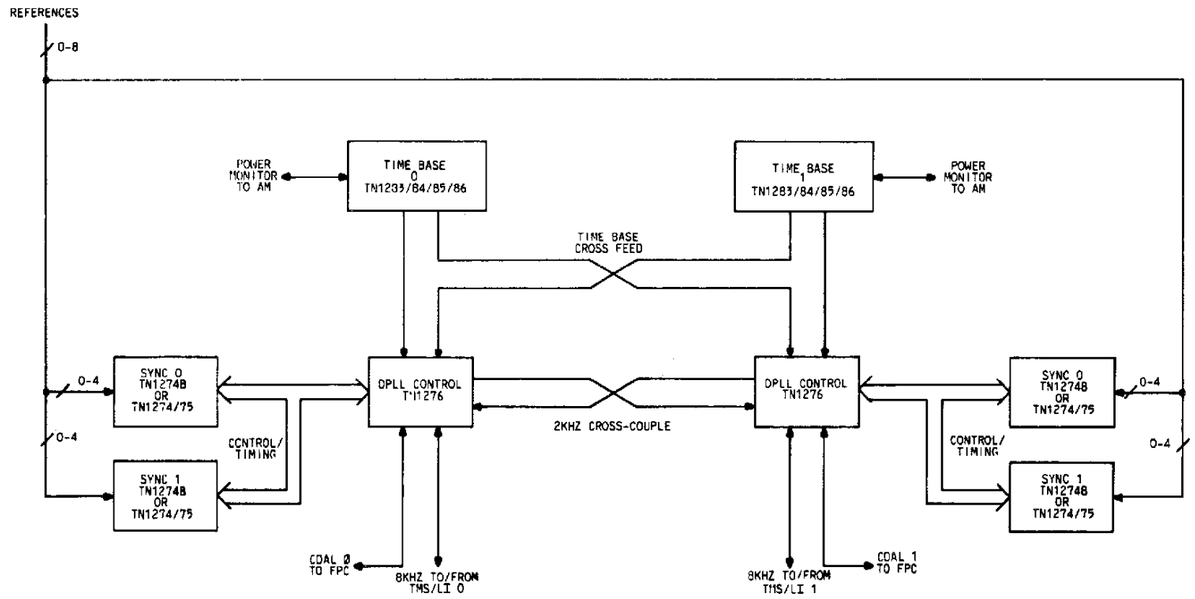
MESSAGE INTERFACE/CLOCK UNIT, MODEL 3	DWG SIZE: B	ISSUE: 3D
AT&T BELL LABORATORIES	SD-5D062-01	8460

PART OF FS 4

NETWORK CLOCK 2

COMPOSITE DIAGRAM 5

ARCHITECTURE



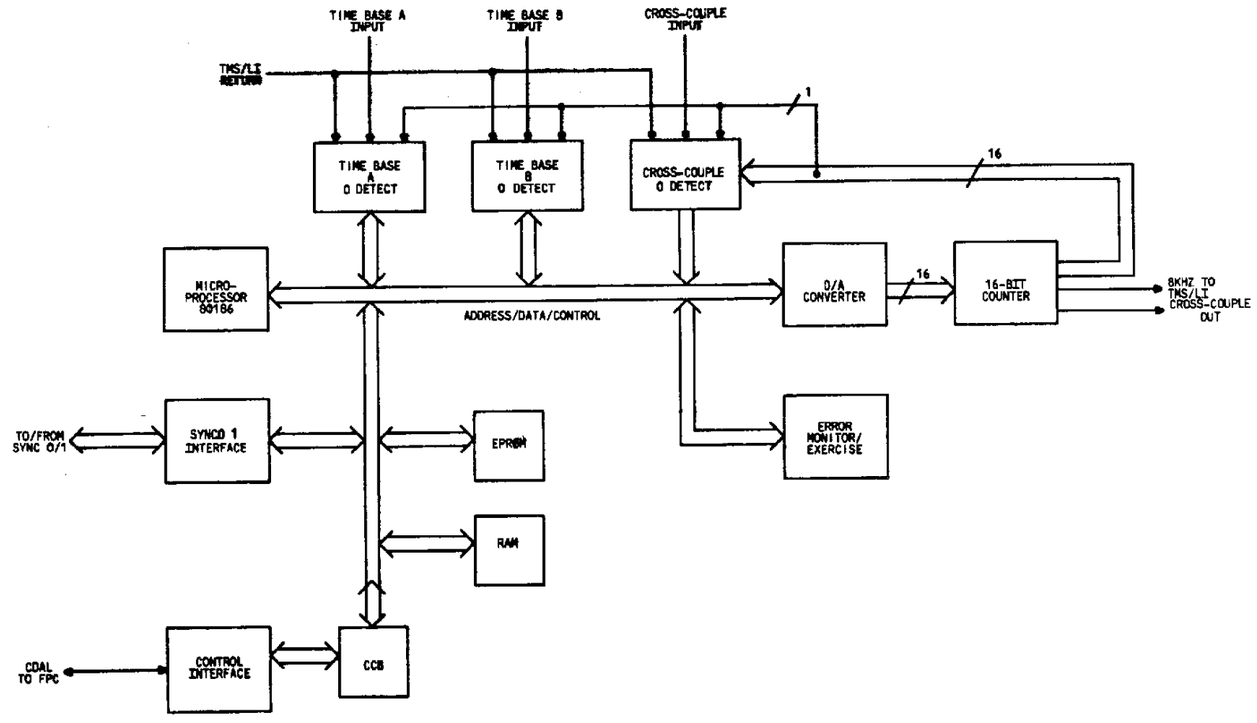
MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE 03	ISSUE 5AC
AT&T BELL LABORATORIES	SD- 5D082-01	B4GE

PART OF FS 4

NETWORK CLOCK 2

COMPOSITE DIAGRAM 6

DPLL CONTROLLER



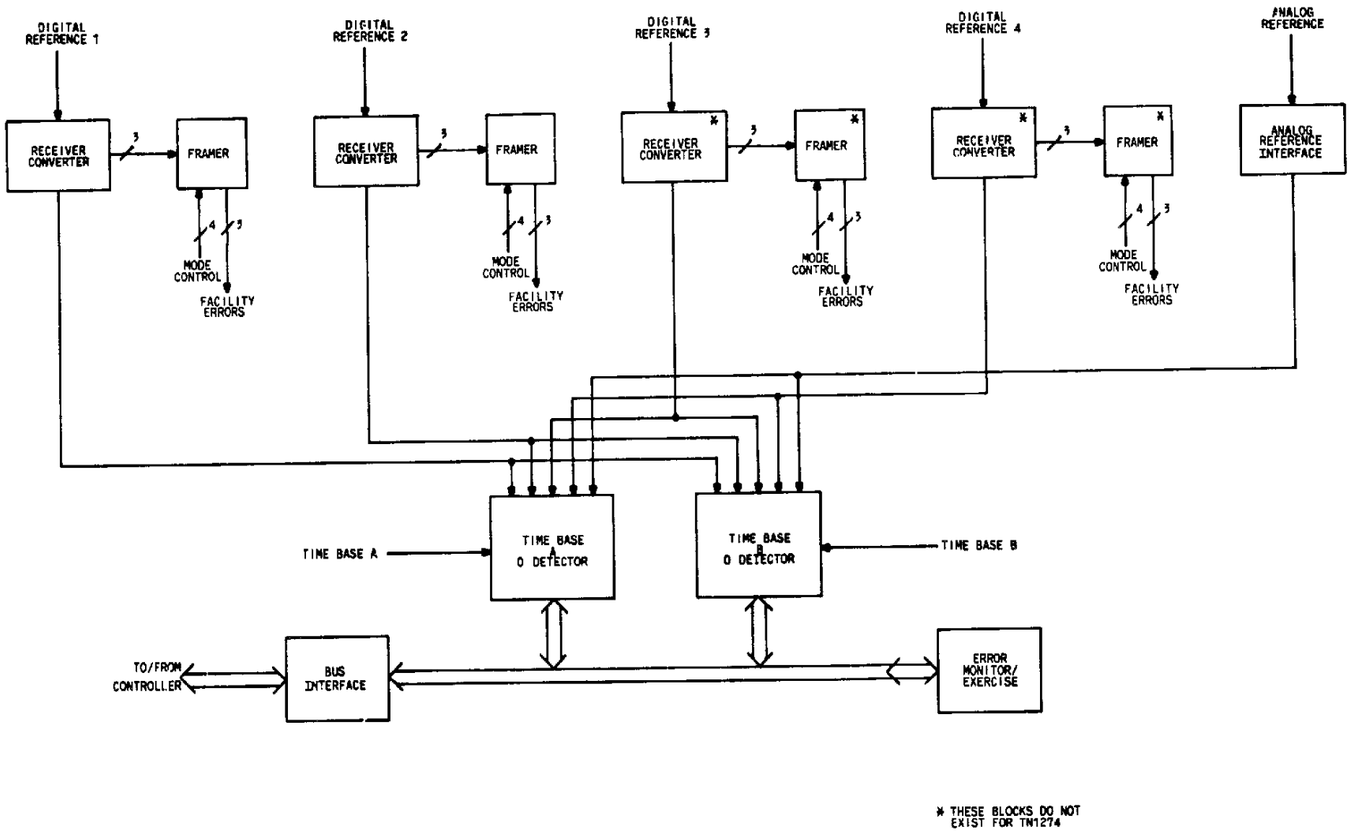
MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE: M	ISSUE: 3D
AT&T BELL LABORATORIES	SD-50082-01	843F

PART OF FS 4

NETWORK CLOCK 2

COMPOSITE DIAGRAM 7

SYNCHRONIZER



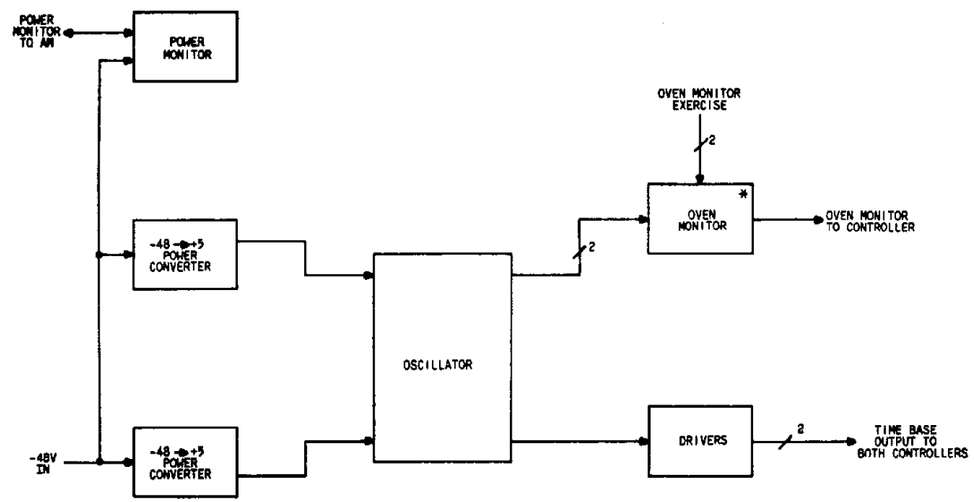
MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE	ISSUE
		3D
AT&T BELL LABORATORIES	SD- 5D082-01	B4GG

PART OF FS 4

NETWORK CLOCK 2

COMPOSITE DIAGRAM 8

TIME BASE OSCILLATOR



*FOR TN1285/86, THE OSCILLATOR DOES NOT USE A DOUBLE-OVEN CONSTRUCTION AND THEREFORE THESE OVEN-MONITOR CIRCUITS ARE NOT REQUIRED.

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE A4	ISSUE 3D
AT&T BELL LABORATORIES	SD- 5D082-01	B4GH

APP FIG. I

WIRING AS PER FS 1-4

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2		DWG SIZE B	ISSUE 3D
AT&T BELL LABORATORIES	SD-50082-01		C1

APP FIG. 2

CIRCUIT PACK

EQPT LOC	04-008		EQPT LOC
DESIG	NCUCD		DESIG
CODE	SN412		CODE
OPTION			OPTION
ELEM IDENT			ELEM IDENT
CKT		CKT	CKT
	DESIG	FS/SYM	
A		1/1	A

CONVERTER

OPTION	DESIG	FS/SYM	CODE
	CDUCONV	1/2	495KA

FIBOPT RECV

OPTION	DESIG	FS/SYM	CODE
	NCTRCV	2/4	982CG

FIBOPT XMIT

OPTION	DESIG	FS/SYM	CODE
	NCTXMIT	2/3	982CF

APP FIG. 3

CIRCUIT PACK

EQPT LOC	04-100		EQPT LOC
DESIG	NCUMIO		DESIG
CODE	TN288		CODE
OPTION			OPTION
ELEM IDENT			ELEM IDENT
CKT	DESIG	FS/SYM	CKT
A		3/1	A

APP FIG. 4

CIRCUIT PACK

EQPT LOC	04-068		04-078		04-084		04-092		EQPT LOC
DESIG	NCUM4		NCUM3		NCUM2		NCUM1		DESIG
CODE	TN862		TN861		TN860		TN859		CODE
OPTION									OPTION
ELEM IDENT									ELEM IDENT
CKT	DESIG	FS/SYM	DESIG	FS/SYM	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		3/4		3/3		3/2		3/5	A

(5) APP FIG. 5

CIRCUIT PACK

EQPT LOC	04-110		04-120		EQPT LOC
DESIG	NCULI2		NCULI1		DESIG
CODE	TN835		TN834		CODE
OPTION					OPTION
ELEM IDENT					ELEM IDENT
CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		2/2		2/1	A

BERG SWITCH

OPTION	DESIG	FS/SYM	CODE
	TSLSW	2/5	EDSDF142

(6) APP FIG. 6

CIRCUIT PACK

EQPT LOC	04-110		04-120		EQPT LOC
DESIG	NCULI2		NCULI1		DESIG
CODE	TN325		TN834		CODE
OPTION					OPTION
ELEM IDENT					ELEM IDENT
CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		2/2		2/1	A

BERG SWITCH

OPTION	DESIG	FS/SYM	CODE
	TSLSW	2/5	EDSDF142

(7) APP FIG. 7

CIRCUIT PACK

EQPT LOC	04-130		EQPT LOC
DESIG	NCUDFLL		DESIG
CODE	TN1130		CODE
OPTION			OPTION
ELEM IDENT			ELEM IDENT
CKT	DESIG	FS/SYM	CKT
A		4/1	A

APP FIG. 9

CIRCUIT PACK

EQPT LOC	04-130		04-130		EQPT LOC
DESIG	NCUSYNC1		NCUSYNC1		DESIG
CODE	TN1275B		TN1275		CODE
OPTION	R		S		OPTION
ELEM IDENT					ELEM IDENT
CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		4/1		4/1	A

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE	ISSUE
C2	7B

AT&T	SD-5D082-01	SHEET C2

APP FIG. 10

CIRCUIT PACK

EQPT LOC	04-142		EQPT LOC
DESIG	NCUCNTRL		DESIG
CODE	TN1131		CODE
OPTION			OPTION
ELEM IDENT			ELEM IDENT
CKT	DESIG	FS/SYM	CKT
A		4/2	A

APP FIG. 11

CIRCUIT PACK

EQPT LOC	04-142		04-142		EQPT LOC
DESIG	NCUCNTRL		NCUCNTRL		DESIG
CODE	MCSD215A2		MCSD215		CODE
OPTION	N		P		OPTION
ELEM IDENT					ELEM IDENT
CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		4/2		4/2	A

APP FIG. 12

CIRCUIT PACK

EQPT LOC	04-152		EQPT LOC
DESIG	NCUSYNC0		DESIG
CODE	TN245		CODE
OPTION			OPTION
ELEM IDENT			ELEM IDENT
CKT	DESIG	FS/SYM	CKT
A		4/3	A

APP FIG. 13

CIRCUIT PACK

EQPT LOC	04-152		EQPT LOC
DESIG	NCUSYNC0		DESIG
CODE	TN249		CODE
OPTION			OPTION
ELEM IDENT			ELEM IDENT
CKT	DESIG	FS/SYM	CKT
A		4/3	A

APP FIG. 14

CIRCUIT PACK

EQPT LOC	04-152		04-152		EQPT LOC
DESIG	NCUSYNC0		NCUSYNC0		DESIG
CODE	TN1274B		TN1274		CODE
OPTION	T		U		OPTION
ELEM IDENT					ELEM IDENT
CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		4/3		4/3	A

APP FIG. 15

CIRCUIT PACK

EQPT LOC	04-152		04-152		EQPT LOC
DESIG	NCUSYNC0		NCUSYNC0		DESIG
CODE	TN1275B		TN1275		CODE
OPTION	L		M		OPTION
ELEM IDENT					ELEM IDENT
CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		4/3		4/3	A

APP FIG. 16

CIRCUIT PACK

EQPT LOC	04-176		04-176		EQPT LOC
DESIG	NCU09L		NCU09L		DESIG
CODE	TN1286B		TN1286		CODE
OPTION	J		K		OPTION
ELEM IDENT					ELEM IDENT
CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		4/4		4/4	A

APP FIG. 17

CIRCUIT PACK

EQPT LOC	04-176		04-176		EQPT LOC
DESIG	NCU09L		NCU09L		DESIG
CODE	TN1285B		TN1285		CODE
OPTION	G		H		OPTION
ELEM IDENT					ELEM IDENT
CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		4/4		4/4	A

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE: C2 | ISSUE: 7B

AT&T | SD-5D082-01 | SHEET: C3

APP FIG. 18

CIRCUIT PACK

EQPT LOC	04-176	04-176	EQPT LOC
DESIG	MCU0SL	MCU0SL	DESIG
CODE	TN1284B	TN1284	CODE
OPTION	E	F	OPTION
ELEM IDENT	CKT	CKT	ELEM IDENT

CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		4/4		4/4	A

APP FIG. 19

CIRCUIT PACK

EQPT LOC	04-176	04-176	EQPT LOC
DESIG	MCU0SL	MCU0SL	DESIG
CODE	TN1283B	TN1283	CODE
OPTION	C	D	OPTION
ELEM IDENT	CKT	CKT	ELEM IDENT

CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		4/4		4/4	A

APP FIG. 20

CIRCUIT PACK

EQPT LOC	04-130	EQPT LOC
DESIG	MCU0PLL	DESIG
CODE	TN246	CODE
OPTION		OPTION
ELEM IDENT	CKT	ELEM IDENT

CKT	DESIG	FS/SYM	CKT
A		4/1	A

APP FIG. 21

CIRCUIT PACK

EQPT LOC	04-142	EQPT LOC
DESIG	MCUCNTRL	DESIG
CODE	MC5D201A1	CODE
OPTION		OPTION
ELEM IDENT	CKT	ELEM IDENT

CKT	DESIG	FS/SYM	CKT
A		4/2	A

APP FIG. 22

CIRCUIT PACK

EQPT LOC	04-14Z	04-142	EQPT LOC
DESIG	MCUCNTRL	MCUCNTRL	DESIG
CODE	MC5D222A2	MC5D222	CODE
OPTION	A	B	OPTION
ELEM IDENT	CKT	CKT	ELEM IDENT

CKT	DESIG	FS/SYM	DESIG	FS/SYM	CKT
A		4/2		4/2	A

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE	ISSUE
C2	7B

AT&T	SD-5D082-01	C4

CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
E & D	1 1/3	-48VA	1
M1 C1/CLK	3	-48B	1
OSC	1 1/3	-48C	1

BATTERY SYMBOL	VOLTAGE RANGE
-48V	-47.75 TO -52.5

102. (REFER TO NOTE 201).

EQUIPMENT NOTES:

201. UNLESS OTHERWISE SPECIFIED ALL BACKPALNE WIRING WILL BE AUTOMATIC MACHINE WIRING (A-D4) 30 GAUGE, WHICH HAS BEEN PROCESSED BY THE WESWRAP PROGRAMS.

204. THESE CADS ARE USED WHEN NON-COAXIAL (PADDLE BOARD) TYPE T1 TERMINATION IS NEEDED.

205. THESE CADS ARE USED WHEN COAXIAL TYPE T1 TERMINATION IS NEEDED.

206. THESE CADS ARE USED WHEN THE BASIC SYSTEM REFERENCE FREQUENCY (BSRF) IS NEEDED (COAX TERMINATION ONLY).

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE: B

ISSUE: 3D

AT&T BELL LABORATORIES | 3D-5D082-01 | D6

INFORMATION NOTES:

301. UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS,
CAPACITANCE VALUES ARE IN MICROFARADS,
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN VOLTS.

302.

FEATURE OR OPTION		PROVIDE APP FIG	PROVIDE APP OR WRG	PROVIDE QUANTITY
BACKPLANE AND WIRING		1		1
	OPTIONAL WIRING WHEN USING COAXIAL TYPE T1 TERMINATION		W	
	OPTIONAL WIRING WHEN USING NON-COAXIAL (PADDLE BOARD) TYPE T1 TERMINATION		Y	
MINIMUM EQUIPAGE	MULTI-MODULE OFFICE	2,4,5	Y	
	SINGLE MODULE OFFICE	2,3,6	Z	
NETWORK CLOCK 1 MEDIUM STABILITY (STRATUM 3) FOR LOCAL APPLICATION				1 PER UNIT
	24 CHANNEL EXTERNAL SYNCHRONIZATION (SINGLE MODULE)	12, 22, 21		
	24 CHANNEL STAND ALONE (SINGLE MODULE)	13, 20, 21		
	24 CHANNEL EXTERNAL SYNCHRONIZATION (MULTI-MODULE)	7, 10, 12		
	STAND ALONE SYNCHRONIZATION (MULTI-MODULE)	7, 10, 13		
NETWORK CLOCK 2-24 CHANNEL (SEE NOTE 307 & 308)				
	24 CHANNEL EXTERNAL SYNCHRONIZATION MEDIUM STABILITY FOR LOCAL APPLICATION (STRATUM 3)	11, 14, 16	N, T, J	
	24 CHANNEL EXTERNAL SYNCHRONIZATION HIGH STABILITY FOR TOLL APPLICATION (STRATUM 2)	22, 14, 18	A, T, E	
	30 CHANNEL EXTERNAL SYNCHRONIZATION MEDIUM STABILITY FOR LOCAL APPLICATION (STRATUM 3)	11, 14, 17	N, T, G	
	30 CHANNEL EXTERNAL SYNCHRONIZATION HIGH STABILITY FOR TOLL APPLICATION (STRATUM 2)	22, 14, 19	A, T, C	
NETWORK CLOCK 2-30 CHANNEL (SEE NOTE 307 & 308)				
	30 CHANNEL EXTERNAL SYNCHRONIZATION MEDIUM STABILITY FOR LOCAL APPLICATION (STRATUM 3)	11, 15, 17	M, L, G	

INFORMATION NOTES: (CONT.)

302. (CONT.)

FEATURE OR OPTION		PROVIDE APP FIG	PROVIDE APP OR WRG	PROVIDE QUANTITY
NETWORK CLOCK 2-30 CHANNEL (SEE NOTE 307 & 308) (CONT.)				1 PER UNIT
	30 CHANNEL EXTERNAL SYNCHRONIZATION HIGH STABILITY FOR TOLL APPLICATION (STRATUM 2)	22, 15, 19	A, L, C	
	REQUIRED IF MORE THAN 1 ANALOG REFERANCE IS REQUIRED, OR MORE THAN 4 DIGITAL REFERENCES ARE REQUIRED, OR MORE THAN 1 ANALOG AND 3 DIGITAL REFERENCES ARE REQUIRED.	9		

303.

RECORD OF FIGURES, WIRING AND APPARATUS CHANGES							
CHANGED CIR ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT STD	USE IN CIRCUIT AIM	USE IN CIRCUIT MD
SAC	T	U		T	U	
				AVAIL		DA
7B SEE NOTE *	R,N,L,J, G,E,C,A	S,P M,K,H, F,D,B	308	R,N,L,J, G,E,C,A		S,P M,K,H, F,D,B

* PRIOR TO ISSUE 7B, COLUMNS HEADED "STD", "MD", ETC., CONVEYED APPLICATION INFORMATION. AT ISSUE 7B, COLUMNS HEADED "AVAIL" AND "DA" NOW INDICATE THE AVAILABILITY OF THE PRODUCT.

INFORMATION NOTES: (CONT.)

304.

CIRCUIT PACK CODE OR MICROCODE	COMMON LANGUAGE EQUIPMENT IDENTIFICATION CODE (CLEI)
ED5D142	
MC5D201A1	
MC5D215(TN1276)	
MC5D215A2(TN1276)	ESMDADFAAA
MC5D222(TN1276)	ESMDB01AXX
MC5D222A2(TN1276)	ESMDADGAAA
SN412	ESPQ05CA
TN245	ESPQ16CA
TN246	
TN249	ESPQ16QAXX
TN266	ESPQ17JA
TN525	ESPQ18HA
TN834	ESPQ29YAXX
TN835	ESPQ29ZAXX
TN859	ESPQ31BAXX
TN860	ESPQ31CAXX
TN861	ESPQ30ZAXX
TN862	ESPQ31EAXX
TN1130	
TN1131	
TN1274	ESPQ21HAXX
TN1274B	ESPQ37PAXX
TN1275	ESPQ21JAXX
TN1275B	ESPQ33EA
TN1283	ESPQ40TAXX
TN1283B	ESPQAA8A
TN1284	ESPQ00VAXX
TN1284B	ESPQ39LA
TN1285	
TN1285B	ESPQ3JBA
TN1286	
TN1286B	ESPQ39MA
485KA	PWPQ54EAXX
982CF	
982CG	

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE: C2 | ISSUE: 7B

AT&T | SD-5D082-01 | SHEET: D2

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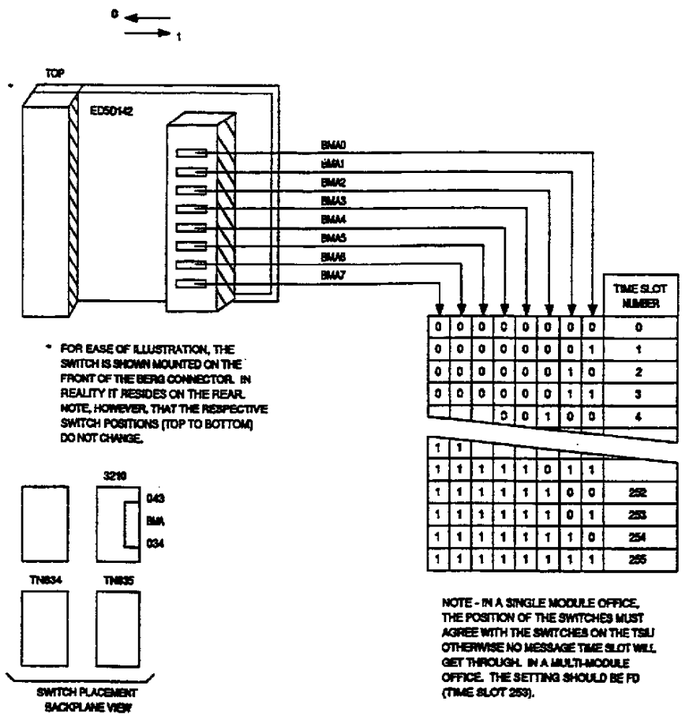
INFORMATION NOTES: (CONT.)

305. LINK INTERFACE TIME SLOT SWITCH:

WHEN THE SWITCH IS DEPRESSED IN THE DIRECTION OF THE CONNECTOR, IT IS IN A ZERO STATE, AND WHEN DEPRESSED IN THE DIRECTION AWAY FROM THE CONNECTOR IT IS IN A ONE STATE.

SWITCH POSITION:



* FOR EASE OF ILLUSTRATION, THE SWITCH IS SHOWN MOUNTED ON THE FRONT OF THE BERG CONNECTOR. IN REALITY IT RESIDES ON THE REAR. NOTE, HOWEVER, THAT THE RESPECTIVE SWITCH POSITIONS (TOP TO BOTTOM) DO NOT CHANGE.

NOTE - IN A SINGLE MODULE OFFICE, THE POSITION OF THE SWITCHES MUST AGREE WITH THE SWITCHES ON THE TSIU OTHERWISE NO MESSAGE TIME SLOT WILL GET THROUGH. IN A MULTI-MODULE OFFICE, THE SETTING SHOULD BE F0 (TIME SLOT 253).

306. THE FOLLOWING GROUND NETS CAN BE CONSIDERED COMMON.

GRD04024
GRD04068
GRD04069
GRD04078
GRD04084
GRD04092
GRD04103
GRD04110
GRD04120
GRD04158
GRD04168
GRD04174

INFORMATION NOTES: (CONT.)

307. WHEN NETWORK CLOCK 2 IS PROVIDED, SOFTWARE GENERIC 5E2(2) OR LATER IS REQUIRED FOR DOMESTIC AND 5EE1(2) OR LATER IS REQUIRED FOR INTERNATIONAL.

308. OPTIONS R,N,L,,I,G,E,C AND A IDENTIFY CIRCUIT PACKS WHICH HAVE CEPT VOLTAGE COMPLICANCE AND AUTO REFERENCE RESTORAL (ARR) CAPABILITY. THE ARR FEATURE IS PROVIDED VIA SOFTWARE. THESE CIRCUIT PACKS REPLACE THE CIRCUIT PACKS IDENTIFIED BY OPTIONS S,P,M,K,H,F,D AND B RESPECTIVELY, WHICH DO NOT HAVE CEPT VOLTAGE COMPLIANCE AND ARR CAPABILITY. OPTIONS S,P,M,K,H,F,D AND B ARE ESTABLISHED AND RATED DA TO DOCUMENT THE PRIOR ARRANGEMENT.

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE: C2 | ISSUE: 7B

AT&T | SD-5D082-01 | SHEET 03

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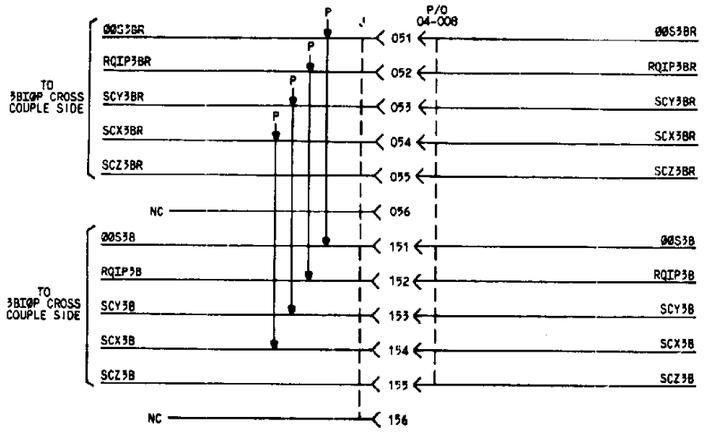
NOTES:

1. THE FOLLOWING SHOWS THE SYMBOLIC EQUIVALENT OF THE TABULAR PRESENTATION.

CAD 002

CONTROL AND DIAGNOSTIC ACCESS LINK

TO CONNECTION					FROM CONNECTION				
DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....J				04-008	JACK/CP	.....			
TO 3BIØP CROSS COUPLE SIDE	ØØS3BR		P000	051	ØØS3BR				
	RQIP3BR		P001	052	RQIP3BR				
	SCY3BR		P002	053	SCY3BR				
	SCX3BR		P003	054	SCX3BR				
	SCZ3BR			055	SCZ3BR				
	NC			056					
TO 3BIØP CROSS COUPLE SIDE	ØØS3B		P000	151	ØØS3B				
	RQIP3B		P001	152	RQIP3B				
	SCY3B		P002	153	SCY3B				
	SCX3B		P003	154	SCX3B				
	SCZ3B			155	SCZ3B				
	NC			156					

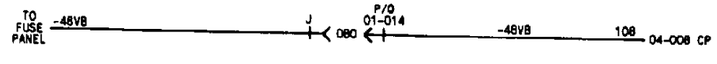


2. THE FOLLOWING SHOWS THE SYMBOLIC EQUIVALENT OF THE TABULAR PRESENTATION.

CAD 010

POWER AND GROUND ACCESS

TO CONNECTION					FROM CONNECTION				
DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....J				04-014	LUG	.....			
TO FUSE PANEL	-48VB			080	-48VB	04-008 CP	108		



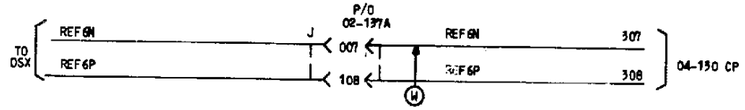
NOTES: (CONT)

3. THE FOLLOWING SHOWS THE SYMBOLIC EQUIVALENT OF THE TABULAR PRESENTATION.

CAD 008

NETWORK CLOCK COAX REFERENCE CABLE

TO CONNECTION					FROM CONNECTION				
DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....J				02-137A	COAX	.....			
TO DSX	REF6N			007	REF6N	04-130 CP	307		(W)
	REF6P			108	REF6P	04-130 CP	308		

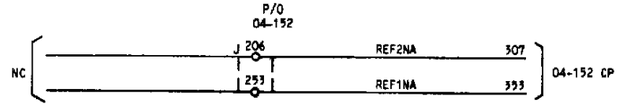


4. THE FOLLOWING SHOWS THE SYMBOLIC EQUIVALENT OF THE TABULAR PRESENTATION.

CAD 012

NON-FUNCTIONAL POINTS AT PACK LOCATIONS

TO CONNECTION					FROM CONNECTION				
DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....J				04-152	TF	.....			
	NC			206	REF2NA	04-052 CP	307		
	NC			253	REF1NA	04-152 CP	353		



MESSAGE INTERFACE/CLOCK UNIT, MODEL 2		DWG SIZE 86	ISSUE 3D
AT&T BELL LABORATORIES	SD-5D082-01		GBI

CAD 1
UNIT SYMBOL

ELEMENT IDENTIFIER
A

POWER

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
-48VA	P	01-032-080	04-024-307	1/2	
-48VB	P	01-014-080	04-008-107	1/1	
-48VC	I	01-169-080	04-176-100	4/4	
-48VRTNA	G	01-036-080	04-024-302	1/2	
-48VRTNB	G	01-018-080	04-008-004	1/1	
-48VRTNC	P	01-173-080	04-176-001	4/4	
ALMD	O	04-008-145	04-024-014	1/2	
FAS	I	04-008-045	04-008-045	1/1	
TSTB	O	04-008-046	04-008-046	1/1	

ELEMENT IDENTIFIER
B

CONTROL AND DIAGNOSTIC ACCESS LINK

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
LIINTO	O	04-092-340	04-100-340	3/1	
LISELI	I	04-092-234	04-100-234	3/1	
LISR	I	04-092-334	04-100-334	3/1	
NCINT	O	04-092-339	04-100-339	3/1	
NCSELI	I	04-092-233	04-100-233	3/1	
NCSELIR	I	04-092-333	04-100-333	3/1	
RCVDATO	O	04-092-337	04-100-337	3/1	
RCVDATOR	O	04-092-237	04-100-237	3/1	
TMSCLK	O	04-092-039	04-092-039	3/5	
TMSCLKR	O	04-092-139	04-092-139	3/5	
TMSDIN	I	04-092-138	04-092-138	3/5	
TMSDINR	I	04-092-038	04-092-038	3/5	
TMSDOUT	O	04-092-135	04-092-135	3/5	
TMSDOUTR	O	04-092-035	04-092-035	3/5	
TMSGD	O	04-092-036	04-092-036	3/5	
TMSGDR	O	04-092-136	04-092-136	3/5	
TMSINT	I	04-092-032	04-092-032	3/5	
TMSINTR	I	04-092-132	04-092-132	3/5	
TMSRDY	I	04-092-133	04-092-133	3/5	
TMSRDYR	I	04-092-033	04-092-033	3/5	
TMSRST	O	04-092-140	04-092-140	3/5	
TMSRSTR	O	04-092-040	04-092-040	3/5	
TMSSEL	O	04-092-137	04-092-137	3/5	
TMSSELR	O	04-092-037	04-092-037	3/5	
TMSSRQT	I	04-092-034	04-092-034	3/5	
TMSSRQTR	I	04-092-134	04-092-134	3/5	
TRCLKI	I	04-092-235	04-100-235	3/1	
TRCLKIR	I	04-092-335	04-100-335	3/1	
TRMDATI	I	04-092-338	04-100-338	3/1	
TRMDATIR	I	04-092-238	04-100-238	3/1	
VALDATI	I	04-092-236	04-100-236	3/1	
VALDATIR	I	04-092-336	04-100-336	3/1	
OFPCACT	I	04-092-342	04-092-342	3/5	
OFPCACTR	I	04-092-242	04-092-242	3/5	
OLIINTR	O	04-092-240	04-100-240	3/1	
OMIINT	O	04-092-320	04-092-320	3/5	
OMIINTR	O	04-092-220	04-092-220	3/5	
OMISEL	I	04-092-322	04-092-322	3/5	
OMISELR	I	04-092-222	04-092-222	3/5	
ONCINTR	O	04-092-239	04-100-239	3/1	
OTMSINT	O	04-092-321	04-092-321	3/5	
OTMSINTR	O	04-092-221	04-092-221	3/5	
OTMSRDY	O	04-092-324	04-092-324	3/5	
OTMSRDYR	O	04-092-224	04-092-224	3/5	
OTMSRQTR	O	04-092-243	04-092-243	3/5	
OTMSRST	I	04-092-319	04-092-319	3/5	

ELEMENT IDENTIFIER (CONT)
B

CONTROL AND DIAGNOSTIC ACCESS LINK

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
OTMSRSTR	I	04-092-219	04-092-219	3/5	
OTMSSEL	I	04-092-323	04-092-323	3/5	
OTMSSELR	I	04-092-223	04-092-223	3/5	
OTMSSRQT	O	04-092-343	04-092-343	3/5	
OWIACT	O	04-092-341	04-092-341	3/5	
OWIACTR	O	04-092-241	04-092-241	3/5	
1CLK	I	04-092-048	04-092-048	3/5	
1CLKR	I	04-092-148	04-092-148	3/5	
1DIN	O	04-092-150	04-092-150	3/5	
1DINR	O	04-092-050	04-092-050	3/5	
1DOUT	I	04-092-151	04-092-151	3/5	
1DOUTR	I	04-092-051	04-092-051	3/5	
1FPCACT	I	04-092-155	04-092-155	3/5	
1FPCACTR	I	04-092-055	04-092-055	3/5	
1GD	I	04-092-049	04-092-049	3/5	
1GDR	I	04-092-149	04-092-149	3/5	
1LIINT	O	04-092-153	04-092-153	3/5	
1LIINTR	O	04-092-053	04-092-053	3/5	
1LISEL	I	04-092-047	04-092-047	3/5	
1LISELR	I	04-092-147	04-092-147	3/5	
1MIINT	O	04-092-352	04-092-352	3/5	
1MIINTR	O	04-092-252	04-092-252	3/5	
1MISEL	I	04-092-354	04-092-354	3/5	
1MISELR	I	04-092-254	04-092-254	3/5	
1NCINT	O	04-092-152	04-092-152	3/5	
1NCINTR	O	04-092-052	04-092-052	3/5	
1NCSEL	I	04-092-046	04-092-046	3/5	
1NCSELR	I	04-092-146	04-092-146	3/5	
1TMSINT	O	04-092-353	04-092-353	3/5	
1TMSINTR	O	04-092-253	04-092-253	3/5	
1TMSRDY	O	04-092-356	04-092-356	3/5	
1TMSRDYR	O	04-092-256	04-092-256	3/5	
1TMSRQT	O	04-092-156	04-092-156	3/5	
1TMSRQTR	O	04-092-056	04-092-056	3/5	
1TMSRST	I	04-092-351	04-092-351	3/5	
1TMSRSTR	I	04-092-251	04-092-251	3/5	
1TMSSEL	I	04-092-355	04-092-355	3/5	
1TMSSELR	I	04-092-255	04-092-255	3/5	
1WIACT	O	04-092-154	04-092-154	3/5	
1WIACTR	O	04-092-054	04-092-054	3/5	

ELEMENT IDENTIFIER
C

MESSAGE LINK

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
CLK4MO	O	04-100-149	04-110-016	2/2	
FDIN	I	03-126B-FO	03-120B-FO	2/4	
FDOUT	O	03-126A-FO	03-120A-FO	2/3	
GRD04100	G	04-100-054	04-100-348	3/1	
GRD04100	G	04-100-055	04-100-348	3/1	
GRD04100	G	04-100-056	04-100-348	3/1	
GRD04100	G	04-100-049	04-100-348	3/1	
GRD04100	G	04-100-050	04-100-348	3/1	
GRD04100	G	04-100-051	04-100-348	3/1	
GRD04100	G	04-100-052	04-100-348	3/1	
GRD04100	G	04-100-053	04-100-348	3/1	
IDATOCRA	I	04-068-055	04-068-055	3/4	
IDATOSRA	I	04-068-255	04-068-255	3/4	
IDAT1CRA	I	04-068-051	04-068-051	3/4	
IDAT1SRA	I	04-068-251	04-068-251	3/4	

ELEMENT IDENTIFIER (CONT)
C

MESSAGE LINK

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
IDAT2CRA	I	04-068-047	04-068-047	3/4	
IDAT2SRA	I	04-068-247	04-068-247	3/4	
IDAT3CRA	I	04-068-038	04-068-038	3/4	
IDAT3SRA	I	04-068-238	04-068-238	3/4	
IDAT4CRA	I	04-068-034	04-068-034	3/4	
IDAT4SRA	I	04-068-234	04-068-234	3/4	
IDAT5CRA	I	04-068-023	04-068-023	3/4	
IDAT5SRA	I	04-068-223	04-068-223	3/4	
IDAT6CRA	I	04-068-019	04-068-019	3/4	
IDAT6SRA	I	04-068-219	04-068-219	3/4	
IDAT7CRA	I	04-068-015	04-068-015	3/4	
IDAT7SRA	I	04-068-215	04-068-215	3/4	
INDAT0CA	I	04-068-155	04-068-155	3/4	
INDAT0SA	I	04-068-355	04-068-355	3/4	
INDAT1CA	I	04-068-151	04-068-151	3/4	
INDAT1SA	I	04-068-351	04-068-351	3/4	
INDAT2CA	I	04-068-147	04-068-147	3/4	
INDAT2SA	I	04-068-347	04-068-347	3/4	
INDAT3CA	I	04-068-138	04-068-138	3/4	
INDAT3SA	I	04-068-338	04-068-338	3/4	
INDAT4CA	I	04-068-134	04-068-134	3/4	
INDAT4SA	I	04-068-334	04-068-334	3/4	
INDAT5CA	I	04-068-123	04-068-123	3/4	
INDAT5SA	I	04-068-323	04-068-323	3/4	
INDAT6CA	I	04-068-119	04-068-119	3/4	
INDAT6SA	I	04-068-319	04-068-319	3/4	
INDAT7CA	I	04-068-115	04-068-115	3/4	
INDAT7SA	I	04-068-315	04-068-315	3/4	
MATEEN	O	04-100-152	04-110-156	2/2	
MATE4MO	I	04-100-156	04-110-113	2/2	
ODAT0CRA	O	04-068-056	04-068-056	3/4	
ODAT0SRA	O	04-068-256	04-068-256	3/4	
ODAT1CRA	O	04-068-052	04-068-052	3/4	
ODAT1SRA	O	04-068-252	04-068-252	3/4	
ODAT2CRA	O	04-068-048	04-068-048	3/4	
ODAT2SRA	O	04-068-248	04-068-248	3/4	
ODAT3CRA	O	04-068-039	04-068-039	3/4	
ODAT3SRA	O	04-068-239	04-068-239	3/4	
ODAT4CRA	O	04-068-035	04-068-035	3/4	
ODAT4SRA	O	04-068-235	04-068-235	3/4	
ODAT5CRA	O	04-068-024	04-068-024	3/4	
ODAT5SRA	O	04-068-224	04-068-224	3/4	
ODAT6CRA	O	04-068-020	04-068-020	3/4	
ODAT6SRA	O	04-068-220	04-068-220	3/4	
ODAT7CRA	O	04-068-016	04-068-016	3/4	
ODAT7SRA	O	04-068-216	04-068-216	3/4	
OTDAT0CA	O	04-068-156	04-068-156	3/4	
OTDAT0SA	O	04-068-356	04-068-356	3/4	
OTDAT1CA	O	04-068-152	04-068-152	3/4	
OTDAT1SA	O	04-068-352	04-068-352	3/4	
OTDAT2CA	O	04-068-148	04-068-148	3/4	
OTDAT2SA	O	04-068-348	04-068-348	3/4	
OTDAT3CA	O	04-068-139	04-068-139	3/4	
OTDAT3SA	O	04-068-339	04-068-339	3/4	
OTDAT4CA	O	04-068-135	04-068-135	3/4	
OTDAT4SA	O	04-068-335	04-068-335	3/4	
OTDAT5CA	O	04-068-124	04-068-124	3/4	
OTDAT5SA	O	04-068-324	04-068-324	3/4	
OTDAT6CA	O	04-068-120	04-068-120	3/4	
OTDAT6SA	O	04-068-320	04-068-320	3/4	
OTDAT7CA	O	04-068-116	04-068-116	3/4	
OTDAT7SA	O	04-068-316	04-068-316	3/4	
PU5V	I	04-100-153	04-110-155	2/2	
SYNC0CA	O	04-068-153	04-068-153	3/4	
SYNC0CRA	O	04-068-053	04-068-053	3/4	
SYNC0SA	O	04-068-353	04-068-353	3/4	

ELEMENT IDENTIFIER (CONT)
C

MESSAGE LINK

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
SYNC0SRA	O	04-068-253	04-068-253	3/4	
SYNC1CA	O	04-068-149	04-068-149	3/4	
SYNC1CRA	O	04-068-049	04-068-049	3/4	
SYNC1SA	O	04-068-349	04-068-349	3/4	
SYNC1SRA	O	04-068-249	04-068-249	3/4	
SYNC2CA	O	04-068-145	04-068-145	3/4	
SYNC2CRA	O	04-068-045	04-068-045	3/4	
SYNC2SA	O	04-068-345	04-068-345	3/4	
SYNC2SRA	O	04-068-245	04-068-245	3/4	
SYNC3CA	O	04-068-136	04-068-136	3/4	
SYNC3CRA	O	04-068-036	04-068-036	3/4	
SYNC3SA	O	04-068-336	04-068-336	3/4	
SYNC3SRA	O	04-068-236	04-068-236	3/4	
SYNC4CA	O	04-068-132	04-068-132	3/4	
SYNC4CRA	O	04-068-032	04-068-032	3/4	
SYNC4SA	O	04-068-332	04-068-332	3/4	
SYNC4SRA	O	04-068-232	04-068-232	3/4	
SYNC5CA	O	04-068-121	04-068-121	3/4	
SYNC5CRA	O	04-068-021	04-068-021	3/4	
SYNC5SA	O	04-068-321	04-068-321	3/4	
SYNC5SRA	O	04-068-221	04-068-221	3/4	
SYNC6CA	O	04-068-117	04-068-117	3/4	
SYNC6CRA	O	04-068-017	04-068-017	3/4	
SYNC6SA	O	04-068-317	04-068-317	3/4	
SYNC6SRA	O	04-068-217	04-068-217	3/4	
SYNC7CA	O	04-068-113	04-068-113	3/4	
SYNC7CRA	O	04-068-013	04-068-013	3/4	
SYNC7SA	O	04-068-313	04-068-313	3/4	
SYNC7SRA	O	04-068-213	04-068-213	3/4	
OSYN6MS	O	04-100-155	04-110-106	2/2	
4MCK0CA	O	04-068-154	04-068-154	3/4	
4MCK0CRA	O	04-068-054	04-068-054	3/4	
4MCK0SA	O	04-068-354	04-068-354	3/4	
4MCK0SRA	O	04-068-254	04-068-254	3/4	
4MCK1CA	O	04-068-150	04-068-150	3/4	
4MCK1CRA	O	04-068-050	04-068-050	3/4	
4MCK1SA	O	04-068-350	04-068-350	3/4	
4MCK1SRA	O	04-068-250	04-068-250	3/4	
4MCK2CA	O	04-068-146	04-068-146	3/4	
4MCK2CRA	O	04-068-046	04-068-046	3/4	
4MCK2SA	O	04-068-346	04-068-346	3/4	
4MCK2SRA	O	04-068-246	04-068-246	3/4	
4MCK3CA	O	04-068-137	04-068-137	3/4	
4MCK3CRA	O	04-068-037	04-068-037	3/4	
4MCK3SA	O	04-068-337	04-068-337	3/4	
4MCK3SRA	O	04-068-237	04-068-237	3/4	
4MCK4CA	O	04-068-133	04-068-133	3/4	
4MCK4CRA	O	04-068-033	04-068-033	3/4	
4MCK4SA	O	04-068-333	04-068-333	3/4	
4MCK4SRA	O	04-068-233	04-068-233	3/4	
4MCK5CA	O	04-068-122	04-068-122	3/4	
4MCK5CRA	O	04-068-022	04-068-022	3/4	
4MCK5SA	O	04-068-322	04-068-322	3/4	
4MCK5SRA	O	04-068-222	04-068-222	3/4	
4MCK6CA	O	04-068-118	04-068-118	3/4	
4MCK6CRA	O	04-068-018	04-068-018	3/4	
4MCK6SA	O	04-068-318	04-068-318	3/4	

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE: D2
ISSUE: 3D

AT&T BELL LABORATORIES | SD-5D082-01 | GB2

CAD 1
UNIT SYMBOL

ELEMENT IDENTIFIER (CONT)

C

MESSAGE LINK

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
4MCK6SRA	O	04-068-218	04-068-218	3/4	
4MCK7CA	O	04-068-114	04-068-114	3/4	
4MCK7CRA	O	04-068-014	04-068-014	3/4	
4MCK7SA	O	04-068-314	04-068-314	3/4	
4MCK7SRA	O	04-068-214	04-068-214	3/4	
6MSIN	I	04-100-150	04-110-115	2/2	
8MHIN	I	04-100-151	04-110-315	2/2	
8MHZ	O	04-100-154	04-110-108	2/2	

ELEMENT IDENTIFIER

D

CLOCK TIMING

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
BSRF00	I	02-162B-015	04-152-318	4/3	
BSRF01	I	02-162B-116	04-152-317	4/3	
BSRF10	I	02-137B-015	04-130-318	4/1	
BSRF11	I	02-137B-116	04-130-317	4/1	
FUSEALM	I	04-176-237	04-176-237	4/4	
REF1N	I	06-162B-053	04-152-354	4/3	(W)
REF1N	I	04-152-354	04-152-354	4/3	(W)
REF1P	I	04-152-355	04-152-255	4/3	
REF1P	I	06-162B-154	04-152-255	4/3	
REF2N	I	02-162A-007	04-152-307	4/3	(W)
REF2N	I	04-152-307	04-152-307	4/3	(W)
REF2P	I	04-152-308	04-152-308	4/3	
REF2P	I	02-162A-108	04-152-308	4/3	
REF3N	I	06-162A-038	04-152-339	4/3	(W)
REF3N	I	04-152-339	04-152-339	4/3	(W)
REF3P	I	04-152-340	04-152-340	4/3	
REF3P	I	06-162A-139	04-152-340	4/3	
REF4N	I	02-162C-023	04-152-322	4/3	(W)
REF4N	I	04-152-322	04-152-322	4/3	(W)
REF4P	I	04-152-323	04-152-323	4/3	
REF4P	I	02-162C-124	04-152-323	4/3	
REF5N	I	06-137B-053	04-130-353	4/1	(W)
REF5N	I	04-130-354	04-130-353	4/1	(W)
REF5P	I	04-130-355	04-130-355	4/1	
REF5P	I	06-137B-154	04-130-355	4/1	
REF6N	I	02-137A-007	04-130-307	4/1	(W)
REF6N	I	04-130-307	04-130-307	4/1	(W)
REF6P	I	04-130-308	04-130-308	4/1	
REF6P	I	02-137A-108	04-130-308	4/1	
REF7N	I	04-130-339	04-130-339	4/1	(W)
REF7N	I	06-137A-038	04-130-339	4/1	(W)
REF7P	I	06-137A-139	04-130-340	4/1	
REF7P	I	04-130-340	04-130-340	4/1	
REF8N	I	02-137C-023	04-130-322	4/1	(W)
REF8N	I	04-130-322	04-130-322	4/1	(W)
REF8P	I	04-130-323	04-130-323	4/1	
REF8P	I	02-137C-124	04-130-323	4/1	
TBBINN	I	04-142-334	04-142-334	4/2	
TBBINP	I	04-142-335	04-142-335	4/2	
TB1N	O	04-176-034	04-176-034	4/4	
TB1P	O	04-176-035	04-176-035	4/4	
TMSRTNN	I	04-152-220	04-142-222	4/2	
TMSRTNP	I	04-152-221	04-142-223	4/2	
XCPLINN	I	04-152-217	04-142-217	4/2	
XCPLINP	I	04-152-218	04-142-218	4/2	

ELEMENT IDENTIFIER

E

SCAN AND DISTRIBUTE

TERM. MODIFIER	FUNC	ACCESS TERM.	FS TERM.	LOC FS/SYM	NOTE
CKCCI0	O	04-100-034	04-100-034	3/1	
CKCCI1	O	04-100-134	04-100-134	3/1	
CPI0	I	04-100-033	04-100-033	3/1	
CPI1	I	04-100-133	04-100-133	3/1	
L1X25CO	O	04-100-139	04-100-139	3/1	
L1X25COR	O	04-100-039	04-100-039	3/1	
L1X25RIR	I	04-100-037	04-100-037	3/1	
L1X25RVI	I	04-100-137	04-100-137	3/1	
L1X25XO	O	04-100-138	04-100-138	3/1	
L1X25XOR	O	04-100-038	04-100-038	3/1	
OOS3B	I	04-008-138	04-008-151	1/1	
OOS3B	I	04-008-151	04-008-151	1/1	
OOS3BR	I	04-008-038	04-008-051	1/1	
OOS3BR	I	04-008-051	04-008-051	1/1	
OOS3BR0	I	04-176-016	04-176-016	4/4	
OOS3BR1	I	04-176-051	04-176-051	4/4	
OOS3B0	I	04-176-116	04-176-116	4/4	
OOS3B1	I	04-176-151	04-176-151	4/4	
RQIP3B	I	04-008-139	04-008-152	1/1	
RQIP3B	I	04-008-152	04-008-152	1/1	
RQIP3BR	I	04-008-052	04-008-052	1/1	
RQIP3BR	I	04-008-039	04-008-052	1/1	
RXP0	I	04-100-035	04-100-035	3/1	
RXP1	I	04-100-135	04-100-135	3/1	
SCX3B	O	04-008-141	04-008-154	1/1	
SCX3B	O	04-008-154	04-008-154	1/1	
SCX3BR	O	04-008-054	04-008-054	1/1	
SCX3BR	O	04-008-041	04-008-054	1/1	
SCX3BR0	O	04-176-019	04-176-019	4/4	
SCX3BR1	O	04-176-054	04-176-054	4/4	
SCX3B0	O	04-176-119	04-176-119	4/4	
SCX3B1	O	04-176-154	04-176-154	4/4	
SCY3B	O	04-008-153	04-008-153	1/1	
SCY3B	O	04-008-140	04-008-153	1/1	
SCY3BR	O	04-008-053	04-008-053	1/1	
SCY3BR	O	04-008-040	04-008-053	1/1	
SCY3BR0	O	04-176-018	04-176-018	4/4	
SCY3BR1	O	04-176-053	04-176-053	4/4	
SCY3B0	O	04-176-118	04-176-118	4/4	
SCY3B1	O	04-176-153	04-176-153	4/4	
SCZ3B	O	04-008-155	04-008-155	1/1	
SCZ3B	O	04-008-142	04-008-155	1/1	
SCZ3BR	O	04-008-042	04-008-055	1/1	
SCZ3BR	O	04-008-055	04-008-055	1/1	
TXP0	O	04-100-036	04-100-036	3/1	
TXP1	O	04-100-136	04-100-136	3/1	

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE D2

ISSUE 3D

AT&T BELL LABORATORIES

SD-5D082-01

GB3

CAD 002

CONTROL AND DIAGNOSTIC ACCESS LINK

TO CONNECTION: DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION: LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....	J			04-008	JACK/CP	.....			
TO 3B10P SAME SIDE	OOS3BR			038	OOS3BR	04-008	CP 051		
	RQIP3BR			039	RQIP3BR	04-008	CP 052		
|	SCY3BR			040	SCY3BR	04-008	CP 053		
|	SCX3BR			041	SCX3BR	04-008	CP 054		
|	SCZ3BR			042	SC23BR	04-008	CP 055		
	NC			043					
TO 3B10P SAME SIDE	OOS3B			138	OOS3B	04-008	CP 151		
	RQIP3B			139	RQIP3B	04-008	CP 152		
|	SCY3B			140	SCY3B	04-008	CP 153		
|	SCX3B			141	SCX3B	04-008	CP 154		
|	SCZ3B			142	SC23B	04-008	CP 155		
	NC			143					
.....	J			04-008	JACK/CP	.....			
TO 3B10P CROSS COUPLE SIDE	OOS3BR		P000	051	OOS3BR				
	RQIP3BR		P001	052	RQIP3BR				
|	SCY3BR		P002	053	SCY3BR				
|	SCX3BR		P003	054	SCX3BR				
|	SCZ3BR			055	SC23BR				
	NC			056					
TO 3B10P CROSS COUPLE SIDE	OOS3B		P000	151	OOS3B				
	RQIP3B		P001	152	RQIP3B				
|	SCY3B		P002	153	SCY3B				
|	SCX3B		P003	154	SCX3B				
|	SCZ3B			155	SC23B				
	NC			156					
.....	J			04-100	JACK/CP	.....			
(U)TO 3B10P	CP10		P004	033	CP10				
|	CKCC10		P005	034	CKCC10				
|	RXP0		P006	035	RXP0				
|	TXP0		P007	036	TXP0				
|	LIX25RIR		P008	037	LIX25RIR				
|	LIX25XOR		P009	038	LIX25XOR				
|	LIX25COR		P010	039	LIX25COR				
	NC			040					
(U)TO 3B10P	CP11		P004	133	CP11				
|	CKCC11		P005	134	CKCC11				
|	RXP1		P006	135	RXP1				
|	TXP1		P007	136	TXP1				
|	LIX25RVI		P008	137	LIX25RVI				
|	LIX25XO		P009	138	LIX25XO				
|	LIX25CO		P010	139	LIX25CO				
	NC			140					
.....	J			04-092	JACK/CP	.....			
	NC			232					
TO FOUNDATION PERIPHERAL CONTROLLER UNIT	NCSEL1		P011	233	NCSEL1				
	L1SEL1		P012	234	L1SEL1				
	TRCLK1		P013	235	TRCLK1				
|	VALDAT1		P014	236	VALDAT1				
|	RCVDAT0R		P015	237	RCVDAT0R				
|	TRMDAT1R		P016	238	TRMDAT1R				
|	ONCINTR		P017	239	ONCINTR				
|	OL1INTR		P018	240	OL1INTR				
|	OW1ACTR		P019	241	OW1ACTR				
|	OFPCACTR		P020	242	OFPCACTR				
|	OTMSRQTR		P021	243	OTMSRQTR				
	NC			332					
TO FOUNDATION PERIPHERAL CONTROLLER UNIT	NCSEL1R		P011	333	NCSEL1R				
	L1SR		P012	334	L1SR				
	TRCLK1R		P013	335	TRCLK1R				
|	VALDAT1R		P014	336	VALDAT1R				
|	RCVDAT0		P015	337	RCVDAT0				
|	TRMDAT1		P016	338	TRMDAT1				
|	NCINT		P017	339	NCINT				
|	L1INT0		P018	340	L1INT0				
|	OW1ACT		P019	341	OW1ACT				
|	OFPCACT		P020	342	OFPCACT				
|	OTMSSRQT		P021	343	OTMSSRQT				
.....	J			04-092	JACK/CP	.....			
	NC			045					
TO FOUNDATION PERIPHERAL CONTROLLER UNIT	1NCSEL		P022	046	1NCSEL				
	1L1SEL		P023	047	1L1SEL				
	1CLK		P024	048	1CLK				
|	1GO		P025	049	1GO				

CAD 002

(CONT'D)

TO CONNECTION: DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION: LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....	J			04-092 (CONT'D)	JACK/CP	.....			
|	1DINR		P026	050	1DINR				
|	1DOUTR		P027	051	1DOUTR				
|	1NCINTR		P028	052	1NCINTR				
|	1L1INTR		P029	053	1L1INTR				
|	1WIACTR		P030	054	1WIACTR				
|	1FPCACTR		P031	055	1FPCACTR				
|	1TMSRQTR		P032	056	1TMSRQTR				
	NC			145					
TO FOUNDATION PERIPHERAL CONTROLLER UNIT	1NCSELR		P022	146	1NCSELR				
	1L1SELR		P023	147	1L1SELR				
	1CLKR		P024	148	1CLKR				
|	1GOR		P025	149	1GOR				
|	1DIN		P026	150	1DIN				
|	1DOUT		P027	151	1DOUT				
|	1NCINT		P028	152	1NCINT				
|	1L1INT		P029	153	1L1INT				
|	1WIACT		P030	154	1WIACT				
|	1FPCACT		P031	155	1FPCACT				
|	1TMSRQT		P032	156	1TMSRQT				
.....	J			04-092	JACK/CP	.....			
TO FOUNDATION PERIPHERAL CONTROLLER UNIT	OTMSRSTR		P033	219	OTMSRSTR				
	OMIINTR		P034	220	OMIINTR				
	OTMSINTR		P035	221	OTMSINTR				
|	OMISELR		P036	222	OMISELR				
|	OTMSSELR		P037	223	OTMSSELR				
|	OTMSRDYR		P038	224	OTMSRDYR				
|	OTMSRST		P033	319	OTMSRST				
|	OMIINT		P034	320	OMIINT				
|	OTMSINT		P035	321	OTMSINT				
|	OMISEL		P036	322	OMISEL				
|	OTMSSEL		P037	323	OTMSSEL				
|	OTMSRDY		P038	324	OTMSRDY				
.....	J			04-092	JACK/CP	.....			
TO FOUNDATION PERIPHERAL CONTROLLER UNIT	1TMSRSTR		P039	251	1TMSRSTR				
	1MIINTR		P040	252	1MIINTR				
	1TMSINTR		P041	253	1TMSINTR				
|	1MISELR		P042	254	1MISELR				
|	1TMSSELR		P043	255	1TMSSELR				
|	1TMSRDYR		P044	256	1TMSRDYR				
|	1TMSRST		P039	351	1TMSRST				
|	1MIINT		P040	352	1MIINT				
|	1TMSINT		P041	353	1TMSINT				
|	1MISEL		P042	354	1MISEL				
|	1TMSSEL		P043	355	1TMSSEL				
|	1TMSRDY		P044	356	1TMSRDY				

CAD 003

FUSE BLOCK LINK

TO CONNECTION: DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION: LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....	J			04-008	JACK/CP	.....			
TO FUSE PANEL	FAS			045	FAS				
|	TSTB			046	TSTB				
	NC			047					
TO FUSE PANEL	ALMD			145	ALMD	04-024	CP 014		
	NC			146					
	NC			147					

CAD 004

LINK INTERFACE CABLES

TO CONNECTION: DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION: LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....	J			03-126A	JACK/CP	.....			
TO TIME SLOT INTERCHANGER UNIT	FOOUT			FO	FOOUT	03-120A	CP FO		
.....	J			03-126B	JACK/CP	.....			
TO TIME SLOT INTERCHANGER UNIT	FOIN			FO	FOIN	03-120B	CP FO		
.....	J			04-110	JACK/CP	.....			
	NC			034	BMA7				305
	NC			035	BMA6				305
	NC			036	BMA5				305
	NC			037	BMA4				305
	NC			038	BMA3				305
	NC			039	BMA2				305
	NC			040	BMA1				305
	NC			041	BMA0				305
	NC			042	BMAEN				305
	NC			043	GRD04110				305
.....	J			04-100	JACK/CP	.....			
TO OPPOSITE MESSAGE INTERFACE/CLOCK UNIT LINK INTERFACE	GRD04100		P000	049	GRD04100				
	GRD04100		P001	050	GRD04100				
	GRD04100		P002	051	GRD04100				
	GRD04100		P003	052	GRD04100				
	GRD04100		P004	053	GRD04100				
|	GRD04100		P005	054	GRD04100				
|	GRD04100		P006	055	GRD04100				
|	GRD04100		P007	056	GRD04100				
|	CLK4M0		P000	149	CLK4M0	04-110	CP 016		
|	6MSIN		P001	150	6MSIN	04-110	CP 115		
|	8MHIN		P002	151	8MHIN	04-110	CP 315		
|	MATEEN		P003	152	MATEEN	04-110	CP 156		
|	PU5V		P004	153	PU5V	04-110	CP 155		
|	8MHZ		P005	154	8MHZ	04-110	CP 108		
|	OSYN6MS		P006	155	OSYN6MS	04-110	CP 106		
|	MATE4M0		P007	156	MATE4M0	04-110	CP 113		

CAD 005

MESSAGE INTERFACE BUS

TO CONNECTION: DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION: LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....	J			04-068	JACK/CP	.....			
TO CONN CKT	SYNC7CRA		P000	013	SYNC7CRA				
|	4MCK7CRA		P001	014	4MCK7CRA				
|	1DAT7CRA		P002	015	1DAT7CRA				
|	0DAT7CRA		P003	016	0DAT7CRA				
|	SYNC7CA		P000	113	SYNC7CA				
|	4MCK7CA		P001	114	4MCK7CA				
|	INDAT7CA		P002	115	INDAT7CA				
|	OTDAT7CA		P003	116	OTDAT7CA				

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE: D2

ISSUE: 5AC

AT&T BELL LABORATORIES

SD-5D082-01

GB4

CAD 005
(CONT'D)

TO CONNECTION DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC6CRA		P004	017	SYNC6CRA				
|	4MCK6CRA		P005	018	4MCK6CRA				
|	IDAT6CRA		P006	019	IDAT6CRA				
|	ODAT6CRA		P007	020	ODAT6CRA				
|	SYNC6CA		P004	117	SYNC6CA				
|	4MCK6CA		P005	118	4MCK6CA				
|	INDAT6CA		P006	119	INDAT6CA				
|	OTDAT6CA		P007	120	OTDAT6CA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC5CRA		P008	021	SYNC5CRA				
|	4MCK5CRA		P009	022	4MCK5CRA				
|	IDAT5CRA		P010	023	IDAT5CRA				
|	ODAT5CRA		P011	024	ODAT5CRA				
|	SYNC5CA		P008	121	SYNC5CA				
|	4MCK5CA		P009	122	4MCK5CA				
|	INDAT5CA		P010	123	INDAT5CA				
|	OTDAT5CA		P011	124	OTDAT5CA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC4CRA		P012	032	SYNC4CRA				
|	4MCK4CRA		P013	033	4MCK4CRA				
|	IDAT4CRA		P014	034	IDAT4CRA				
|	ODAT4CRA		P015	035	ODAT4CRA				
|	SYNC4CA		P012	132	SYNC4CA				
|	4MCK4CA		P013	133	4MCK4CA				
|	INDAT4CA		P014	134	INDAT4CA				
|	OTDAT4CA		P015	135	OTDAT4CA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC3CRA		P016	036	SYNC3CRA				
|	4MCK3CRA		P017	037	4MCK3CRA				
|	IDAT3CRA		P018	038	IDAT3CRA				
|	ODAT3CRA		P019	039	ODAT3CRA				
|	SYNC3CA		P016	136	SYNC3CA				
|	4MCK3CA		P017	137	4MCK3CA				
|	INDAT3CA		P018	138	INDAT3CA				
|	OTDAT3CA		P019	139	OTDAT3CA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC2CRA		P020	045	SYNC2CRA				
|	4MCK2CRA		P021	046	4MCK2CRA				
|	IDAT2CRA		P022	047	IDAT2CRA				
|	ODAT2CRA		P023	048	ODAT2CRA				
|	SYNC2CA		P020	145	SYNC2CA				
|	4MCK2CA		P021	146	4MCK2CA				
|	INDAT2CA		P022	147	INDAT2CA				
|	OTDAT2CA		P023	148	OTDAT2CA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC1CRA		P024	049	SYNC1CRA				
|	4MCK1CRA		P025	050	4MCK1CRA				
|	IDAT1CRA		P026	051	IDAT1CRA				
|	ODAT1CRA		P027	052	ODAT1CRA				
|	SYNC1CA		P024	149	SYNC1CA				
|	4MCK1CA		P025	150	4MCK1CA				
|	INDAT1CA		P026	151	INDAT1CA				
|	OTDAT1CA		P027	152	OTDAT1CA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC0CRA		P028	053	SYNC0CRA				
|	4MCK0CRA		P029	054	4MCK0CRA				
|	IDAT0CRA		P030	055	IDAT0CRA				
|	ODAT0CRA		P031	056	ODAT0CRA				
|	SYNC0CA		P028	153	SYNC0CA				
|	4MCK0CA		P029	154	4MCK0CA				
|	INDAT0CA		P030	155	INDAT0CA				
|	OTDAT0CA		P031	156	OTDAT0CA				

CAD 005
(CONT'D)

TO CONNECTION DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC7SRA		P032	213	SYNC7SRA				
|	4MCK7SRA		P033	214	4MCK7SRA				
|	IDAT7SRA		P034	215	IDAT7SRA				
|	ODAT7SRA		P035	216	ODAT7SRA				
|	SYNC7SA		P032	313	SYNC7SA				
|	4MCK7SA		P033	314	4MCK7SA				
|	INDAT7SA		P034	315	INDAT7SA				
|	OTDAT7SA		P035	316	OTDAT7SA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC6SRA		P036	217	SYNC6SRA				
|	4MCK6SRA		P037	218	4MCK6SRA				
|	IDAT6SRA		P038	219	IDAT6SRA				
|	ODAT6SRA		P039	220	ODAT6SRA				
|	SYNC6SA		P036	317	SYNC6SA				
|	4MCK6SA		P037	318	4MCK6SA				
|	INDAT6SA		P038	319	INDAT6SA				
|	OTDAT6SA		P039	320	OTDAT6SA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC5SRA		P040	221	SYNC5SRA				
|	4MCK5SRA		P041	222	4MCK5SRA				
|	IDAT5SRA		P042	223	IDAT5SRA				
|	ODAT5SRA		P043	224	ODAT5SRA				
|	SYNC5SA		P040	321	SYNC5SA				
|	4MCK5SA		P041	322	4MCK5SA				
|	INDAT5SA		P042	323	INDAT5SA				
|	OTDAT5SA		P043	324	OTDAT5SA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC4SRA		P044	232	SYNC4SRA				
|	4MCK4SRA		P045	233	4MCK4SRA				
|	IDAT4SRA		P046	234	IDAT4SRA				
|	ODAT4SRA		P047	235	ODAT4SRA				
|	SYNC4SA		P044	332	SYNC4SA				
|	4MCK4SA		P045	333	4MCK4SA				
|	INDAT4SA		P046	334	INDAT4SA				
|	OTDAT4SA		P047	335	OTDAT4SA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC3SRA		P048	236	SYNC3SRA				
|	4MCK3SRA		P049	237	4MCK3SRA				
|	IDAT3SRA		P050	238	IDAT3SRA				
|	ODAT3SRA		P051	239	ODAT3SRA				
|	SYNC3SA		P048	336	SYNC3SA				
|	4MCK3SA		P049	337	4MCK3SA				
|	INDAT3SA		P050	338	INDAT3SA				
|	OTDAT3SA		P051	339	OTDAT3SA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC2SRA		P052	245	SYNC2SRA				
|	4MCK2SRA		P053	246	4MCK2SRA				
|	IDAT2SRA		P054	247	IDAT2SRA				
|	ODAT2SRA		P055	248	ODAT2SRA				
|	SYNC2SA		P052	345	SYNC2SA				
|	4MCK2SA		P053	346	4MCK2SA				
|	INDAT2SA		P054	347	INDAT2SA				
|	OTDAT2SA		P055	348	OTDAT2SA				
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC1SRA		P056	249	SYNC1SRA				
|	4MCK1SRA		P057	250	4MCK1SRA				
|	IDAT1SRA		P058	251	IDAT1SRA				
|	ODAT1SRA		P059	252	ODAT1SRA				
|	SYNC1SA		P056	349	SYNC1SA				
|	4MCK1SA		P057	350	4MCK1SA				
|	INDAT1SA		P058	351	INDAT1SA				
|	OTDAT1SA		P059	352	OTDAT1SA				

CAD 005
(CONT'D)

TO CONNECTION DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....J			04-068		JACK/CP				
TO CONN CKT	SYNC0SRA		P060	253	SYNC0SRA				
|	4MCK0SRA		P061	254	4MCK0SRA				
|	IDAT0SRA		P062	255	IDAT0SRA				
|	ODAT0SRA		P063	256	ODAT0SRA				
|	SYNC0SA		P060	353	SYNC0SA				
|	4MCK0SA		P061	354	4MCK0SA				
|	INDAT0SA		P062	355	INDAT0SA				
|	OTDAT0SA		P063	356	OTDAT0SA				

CAD 006
NETWORK CLOCK CABLES

TO CONNECTION DESTINATION	LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	TERMINATION	TERMINAL	OPT	NOTE
.....J			04-142		JACK/CP				
	NC			232	GRD04142				
	NC			233					
	NC			234					
	NC			235	SYBEB				
	NC			332	GRD04142				
	NC			333					
TO NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	TBBINN			334	TBBINN				
	TBBINP			335	TBBINP				
.....J			04-152		JACK/CP				
	NC			216	GRD04152				
TO NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	XCPLINN			217	XCPLINN				
	XCPLINP			218	XCPLINP				
	NC			316					
	NC			317	BSRF01				
	NC			318	BSRF00				
.....J			04-152		JACK/CP				
	NC			219	GRD04152				
FROM TIME MULTIPLEXED SWITCH UNIT	TMSRTNN			220	TMSRTNN				
	TMSRTNP			221	TMSRTNP				
	NC			319					
	NC			320					
	NC			321	REF4N				(W)

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2

DWG SIZE	ISSUE
C2	3D

AT&T BELL LABORATORIES	SD-5D082-01	GB5

CAD 006

(CONT'D)

TO CONNECTION DESTINATION	TO CONNECTION LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	FROM CONNECTION TERMINATION	FROM CONNECTION TERMINAL	OPT	NOTE
	.....J			04-176	JACK/CP	.....			
TO 3B10P SIDE 0	00S3BR0			016	00S3BR0				
	NC			017					
TO 3B10P SIDE 0	SCY3BR0			018	SCY3BR0				
	SCX3BR0			019	SCX3BR0				
	00S3B0			116	00S3B0				
	NC			117					
TO 3B10P SIDE 0	SCY3B0			118	SCY3B0				
	SCX3B0			119	SCX3B0				
	.....J			04-176	JACK/CP	.....			
	NC			032					
	NC			033					
TO NETWORK CLOCK OPPOSITE SIDE MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	TB1N			034	TB1N				
	TB1P			035	TB1P				
	NC			132	GRD04176				
	NC			133					
	NC			134					
	NC			135					
	.....J			04-176	JACK/CP	.....			
TO 3B10P SIDE 1	00S3BR1			051	00S3BR1				
	NC			052					
TO 3B10P SIDE 1	SCY3BR1			053	SCY3BR1				
	SCX3BR1			054	SCX3BR1				
	NC			055					
	NC			056	GRD04176				
TO 3B10P SIDE 1	00S3B1			151	00S3B1				
	NC			152					
TO 3B10P SIDE 1	SCY3B1			153	SCY3B1				
	SCX3B1			154	SCX3B1				
	NC			155					
	NC			156					
	.....J			04-176	JACK/CP	.....			
	NC			232	GRD04176				
	NC			233					
	NC			234					
	NC			235					
	NC			236					
TO FUSE ALARM BUS	FUSEALM			237	FUSEALM				
	NC			238					
	NC			239					
	NC			240					
	NC			241					
	NC			242					
	NC			243	GRD04176				
	NC			332	GRD04176				
	NC			333					
	NC			334					
	NC			335					
	NC			336					
	NC			337					
	NC			338					
	NC			339					
	NC			340					
	NC			341					
	NC			342					
	NC			343	GRD04176				

(V) CAD 007

NETWORK CLOCK REFERENCE CABLE(NOTE 204)

TO CONNECTION DESTINATION	TO CONNECTION LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	FROM CONNECTION TERMINATION	FROM CONNECTION TERMINAL	OPT	NOTE
	.....J			04-130	JACK/CP	.....			
	NC			207					
	NC			208					
	NC			209					
TO DSX	REF6N			307	REF6N			(W)	
	REF6P			308	REF6P				
	NC			309	GRD04130				
	.....J			04-130	JACK/CP	.....			
	NC			222					
	NC			223					
	NC			224	GRD04130				
TO DSX	REF8N			322	REF8N			(W)	
	REF8P			323	REF8P				
	NC			324	GRD04130				
	.....J			04-130	JACK/CP	.....			
	NC			239	GRD04130				
	NC			240	GRD04130				
	NC			241	XWR0				
TO DSX	REF7N			339	REF7N			(W)	
	REF7P			340	REF7P				
	NC			341	GRD04130				
	.....J			04-130	JACK/CP	.....			
	NC			254					
	NC			255	GRD04130				
	NC			256	GRD04130				
TO DSX	REF5N			354	REF5N			(W)	
	REF5P			355	REF5P				
	NC			356	GRD04130				
	.....J			04-152	JACK/CP	.....			
	NC			207	REF2N				
	NC			208	REF2P				
	NC			209					
TO DSX	REF2N			307	REF2N			(W)	
	REF2P			308	REF2P				
	NC			309	GRD04152				
	.....J			04-152	JACK/CP	.....			
	NC			222					
	NC			223					
	NC			224	GRD04152				
TO DSX	REF4N			322	REF4N			(W)	
	REF4P			323	REF4P				
	NC			324	GRD04152				
	.....J			04-152	JACK/CP	.....			
	NC			239	GRD04152				
	NC			240	GRD04152				
	NC			241	XWR0				
TO DSX	REF3N			339	REF3N			(W)	
	REF3P			340	REF3P				
	NC			341	GRD04152				
	.....J			04-152	JACK/CP	.....			
	NC			254	REF1N				
	NC			255	REF1P				
	NC			256	GRD04152				
TO DSX	REF1N			354	REF1N			(W)	
	REF1P			355	REF1P				
	NC			356	GRD04152				

(W) CAD 008

NETWORK CLOCK COAX REFERENCE CABLE(NOTE 205)

TO CONNECTION DESTINATION	TO CONNECTION LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	FROM CONNECTION TERMINATION	FROM CONNECTION TERMINAL	OPT	NOTE
	.....J			02-137A	COAX	.....			
TO DSX	REF6N			007	REF6N	04-130 CP	307	(W)	
	REF6P			108	REF6P	04-130 CP	308		
	.....J			02-137C	COAX	.....			
TO DSX	REF8N			023	REF8N	04-130 CP	322	(W)	
	REF8P			124	REF8P	04-130 CP	323		
	.....J			02-162A	COAX	.....			
TO DSX	REF2N			007	REF2N	04-152 CP	307	(W)	
	REF2P			108	REF2P	04-152 CP	308		
	.....J			02-162C	COAX	.....			
TO DSX	REF4N			023	REF4N	04-152 CP	322	(W)	
	REF4P			124	REF4P	04-152 CP	323		
	.....J			06-137A	COAX	.....			
TO DSX	REF7N			038	REF7N	04-130 CP	339	(W)	
	REF7P			139	REF7P	04-130 CP	340		
	.....J			06-137B	COAX	.....			
TO DSX	REF5N			053	REF5N	04-130 CP	353	(W)	
	REF5P			154	REF5P	04-130 CP	355		
	.....J			06-162A	COAX	.....			
TO DSX	REF3N			038	REF3N	04-152 CP	339	(W)	
	REF3P			139	REF3P	04-152 CP	340		
	.....J			06-162B	COAX	.....			
TO DSX	REF1N			053	REF1N	04-152 CP	354	(W)	
	REF1P			154	REF1P	04-152 CP	255		

(X) CAD 009

REFERENCE FREQUENCY CABLE(NOTE 206)

TO CONNECTION DESTINATION	TO CONNECTION LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	FROM CONNECTION TERMINATION	FROM CONNECTION TERMINAL	OPT	NOTE
	.....J			02-137B	COAX	.....			
TO ANALOG TRANSMISSION FACILITY	BSRF10			015	BSRF10	04-130 CP	318		
	BSRF11			116	BSRF11	04-130 CP	317		
	.....J			02-162B	COAX	.....			
TO ANALOG TRANSMISSION FACILITY	BSRF00			015	BSRF00	04-152 CP	318		
	BSRF01			116	BSRF01	04-152 CP	317		

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2	DWG SIZE C2	ISSUE 3D
AT&T BELL LABORATORIES SD-5D082-01		GB6

CAD 010

POWER AND GROUND ACCESS

TO CONNECTION DESTINATION	TO CONNECTION LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	FROM CONNECTION TERMINATION	FROM CONNECTION TERMINAL	OPT	NOTE
	.....J			01-014	LUG	.....			
TO FUSE PANEL	-48VB			0B0	-48VB	04-008 CP	108		
	.....J			01-018	LUG	.....			
TO FUSE PANEL	-48VRTNB			0B0	-48VRTNB	04-008 CP	004		
	.....J			01-032	LUG	.....			
TO FUSE PANEL	-48VA			0B0	-48VA	04-024 CP	307		
	.....J			01-036	LUG	.....			
TO FUSE PANEL	-48VRTNA			0B0	-48VRTNA	04-024 CP	302		
	.....J			01-169	LUG	.....			
TO FUSE PANEL	-48VC			0B0	-48VC	04-176 CP	100		
	.....J			01-173	LUG	.....			
TO FUSE PANEL	-48VRTNC			0B0	-48VRTNC	04-176 CP	101		

CAD 011

TIME MULTIPLEXED SWITCH CABLES

TO CONNECTION DESTINATION	TO CONNECTION LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	FROM CONNECTION TERMINATION	FROM CONNECTION TERMINAL	OPT	NOTE
	.....J			04-092	JACK/CP	.....			
TO TIME MULTIPLEXED SWITCH UNIT	TMSINT		P000	032	TMSINT				
	TMSRDYR		P001	033	TMSRDYR				
	TMSSRQT		P002	034	TMSSRQT				
	TMSDOUTR		P003	035	TMSDOUTR				
	TMSGO		P004	036	TMSGO				
	TMSSELR		P005	037	TMSSELR				
	TMSDINR		P006	038	TMSDINR				
	TMSCLK		P007	039	TMSCLK				
	TMSRSTR		P008	040	TMSRSTR				
	NC			041					
	NC			042					
	NC			043					
TO TIME MULTIPLEXED SWITCH UNIT	TMSINTR		P000	132	TMSINTR				
	TMSRDY		P001	133	TMSRDY				
	TMSSRQTR		P002	134	TMSSRQTR				
	TMSDOUT		P003	135	TMSDOUT				
	TMSGOR		P004	136	TMSGOR				
	TMSSEL		P005	137	TMSSEL				
	TMSDIN		P006	138	TMSDIN				
	TMSCLKR		P007	139	TMSCLKR				
	TMSRST		P008	140	TMSRST				
	NC			141					
	NC			142					
	NC			143					

CAD 012

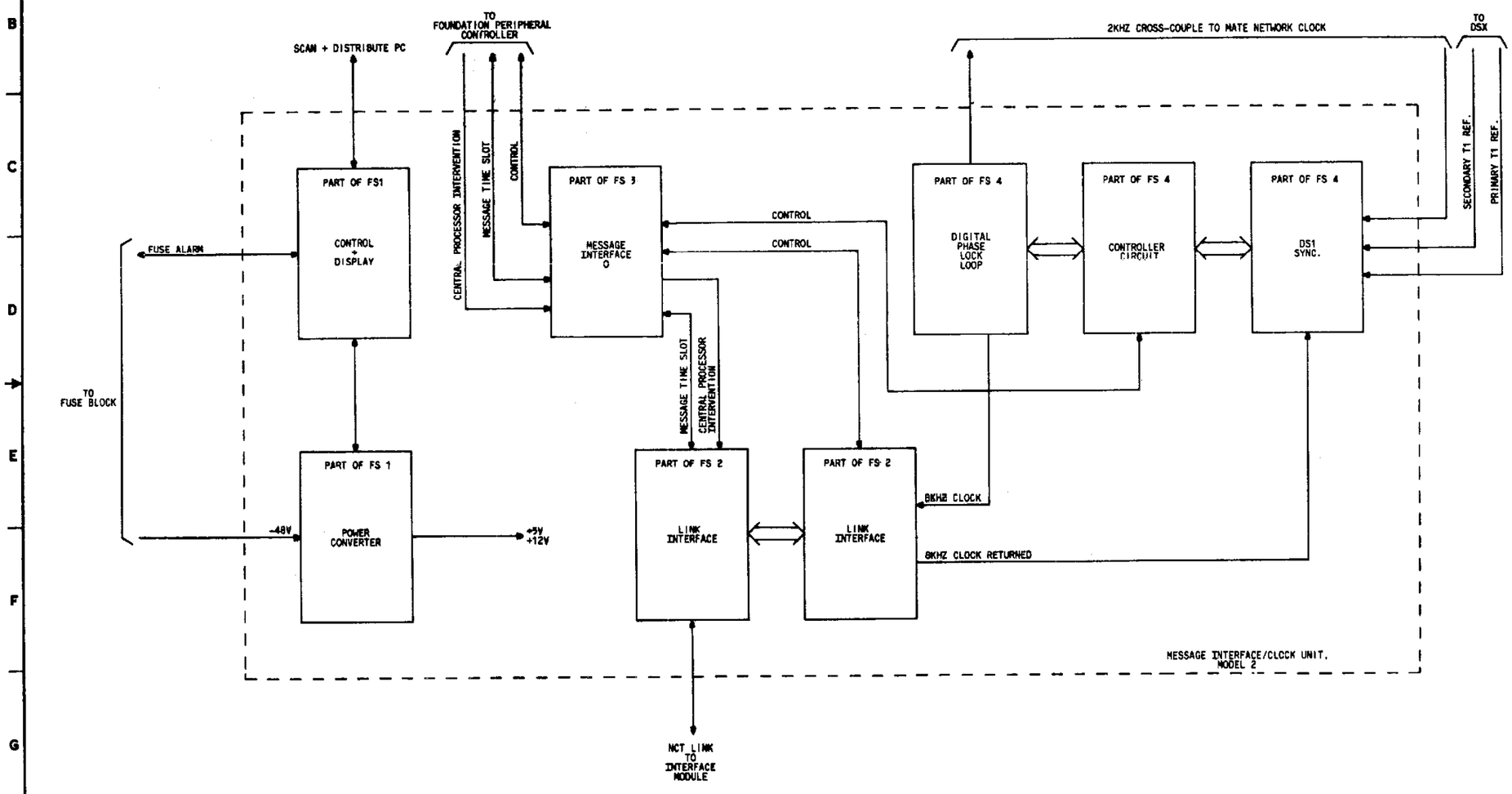
NON-FUNCTIONAL POINTS AT PACK LOCATIONS

TO CONNECTION DESTINATION	TO CONNECTION LEAD DESIG	METHOD	WIRE SYM	TERMINAL	FROM CONNECTION LEAD DESIG	FROM CONNECTION TERMINATION	FROM CONNECTION TERMINAL	OPT	NOTE
	.....J			04-152	TF	.....			
	NC			206	REF2NA	04-152 CP	306		
	NC			253	REF1NA	04-152 CP	353		
	.....J			04-176	TF	.....			
	NC			013	GRD04176				
	NC			024	GRD04176				
	NC			043	GRD04176				
	NC			113	GRD04176				
	NC			143	GRD04176				
	NC			213	GRD04176				
	NC			224	GRD04176				
	NC			256	GRD04176				
	NC			313	GRD04176				
	NC			324	GRD04176				
	NC			356	GRD04176				

MESSAGE INTERFACE/CLOCK UNIT, MODEL 2		DWG SIZE C2	ISSUE 3D
AT&T BELL LABORATORIES	SD-5D082-01		GB7

BD 1

CIRCUIT BLOCK DIAGRAM
SINGLE MODULE OFFICE



MESSAGE INTERFACE/CLOCK UNIT. MODEL 2	DWG SIZE B	ISSUE 3D
AT&T BELL LABORATORIES	3D-5D082-01	H1