NCR

M63-15-STD
INTERFACE

FIELD SERVICE
AND TRAINING MANUAL

MS-388
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Educational Publications
CORPORATE EDUCATION

RECORD of REVISIONS

REVISION	NOTES
A	Manual Release
(5-5-74)	
B	Manual updated to incorporate editorial and technical changes and ECO PB 12939A affecting pages
(1-3-75)	1, 11, 12, 16, 18, 20 and 33 thru 41 (add).
C	Manual updated to incorporate ECO's PB 12962A and PB 14280 affecting pages 27 thru 36 and 37
(7-4-75)	thru 41 (deleted).

SCOPE

This manual provides training information pertinent to the M63-11-STD and M63-15-STD Interface.

The individual using this manual should be familiar with the following publications: *M63 Magnetic Tape Transport Service Training Manual* (STM) MS-385 and *M63 Magnetic Tape Transport Field Service Manual* (FSM) MS-386.

This manual serves as the Print Package for the M63-11-STD and M63-15-STD Interface and contains the necessary prints to enable a trained technician to install and maintain these units.

The normal level of repair is expected to be card changing and repairing mechanical assemblies. However, when spare cards are not available, the defective card must be repaired.

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INTERFACE EQUIPMENT

GENERAL

This section contains data pertinent to the translator boards intended to provide an alternative I/O interface when used with tape drive models listed in Scope.

The translator board is mounted on top of the power supply and connected to the transport electronics as shown in Figure 1.

PERFORMANCE CHARACTERISTICS

The use of the translator alters the transport performance characteristics as follows:

a. Stop time is 15.0 msec maximum.
b. Stop distance is 0.19 $\pm$ 0.03 inch.

No other transport characteristics are changed. The Inter-Block Gap (IBG) and access time are determined by the controller timing characteristics. The transport must be wired for the Optional Stop Mode.

SYSTEM CONFIGURATION

The Input/Output (I/O) plug configuration of the transport is shown in Figure 2. For radial hookup, one translator is needed for each transport. Up to four transports, all of the same model type and density, may be daisy-chained from one translator. In this hookup, the transport that supplies power to the translator must be powered on. Daisy-chain connectors are provided for all 7-track translators due to possible density differences. Up to four transports, 7 and 9 tracks, may be daisy-chained by placing 7-track units first and then 9-track units (Figure 3) in the chain.

Power is available from the transport power supply TB2-4 and TB3-3 when the transport is powered on. Power required for each translator is 5.0 VDC at 0.8 amperes maximum.

The I/O transmitters and receivers are the same as those contained within the transport.

I/O PIN ASSIGNMENTS

The I/O pin assignments are shown in Figure 4, 5, and 6.

INTERFACE LINES DESCRIPTION

Each I/O line is listed and described in Table 1.

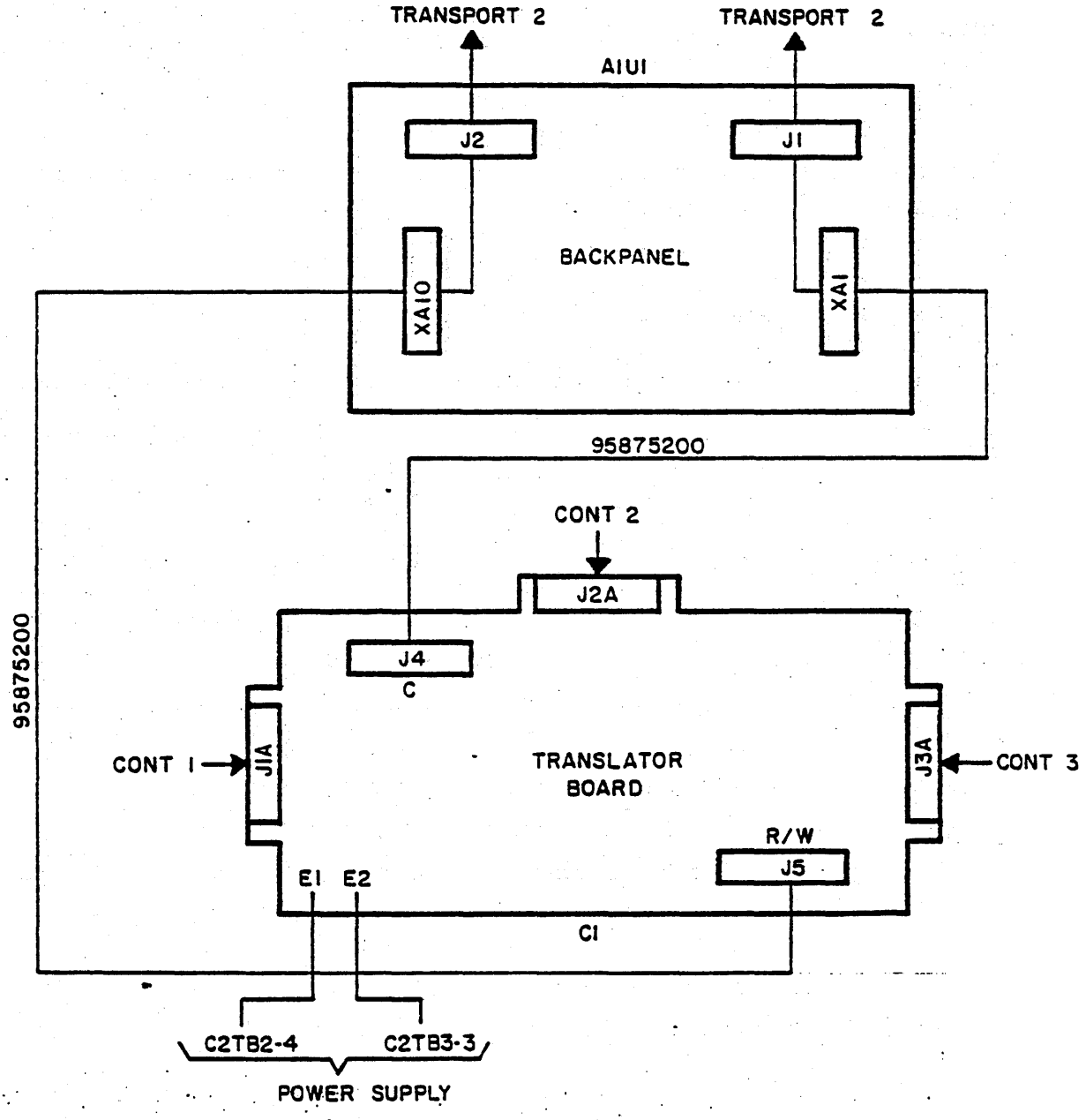


Figure 1. Translator to Transport Cabling

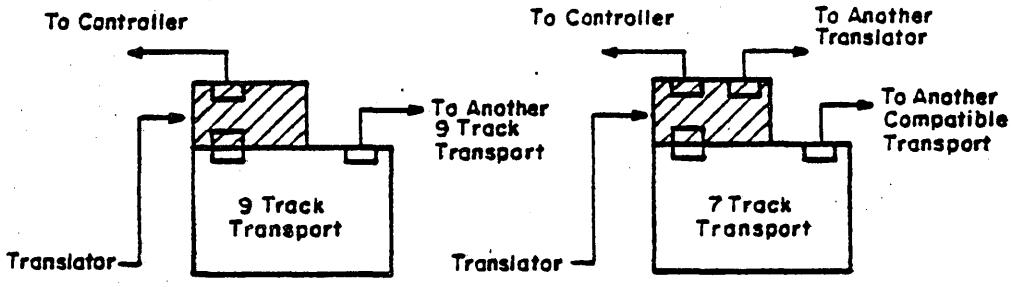


Figure 2. Transport I/O Plug Configuration with Translators

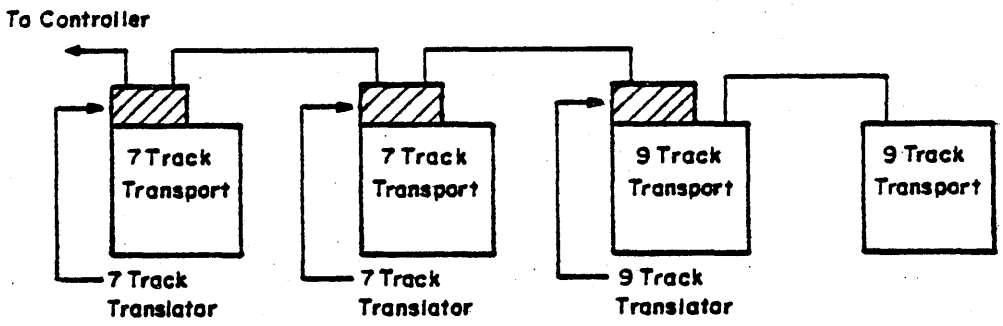


Figure 3. Daisy-Chaining a Mix of 7 Track and 9 Track Transports

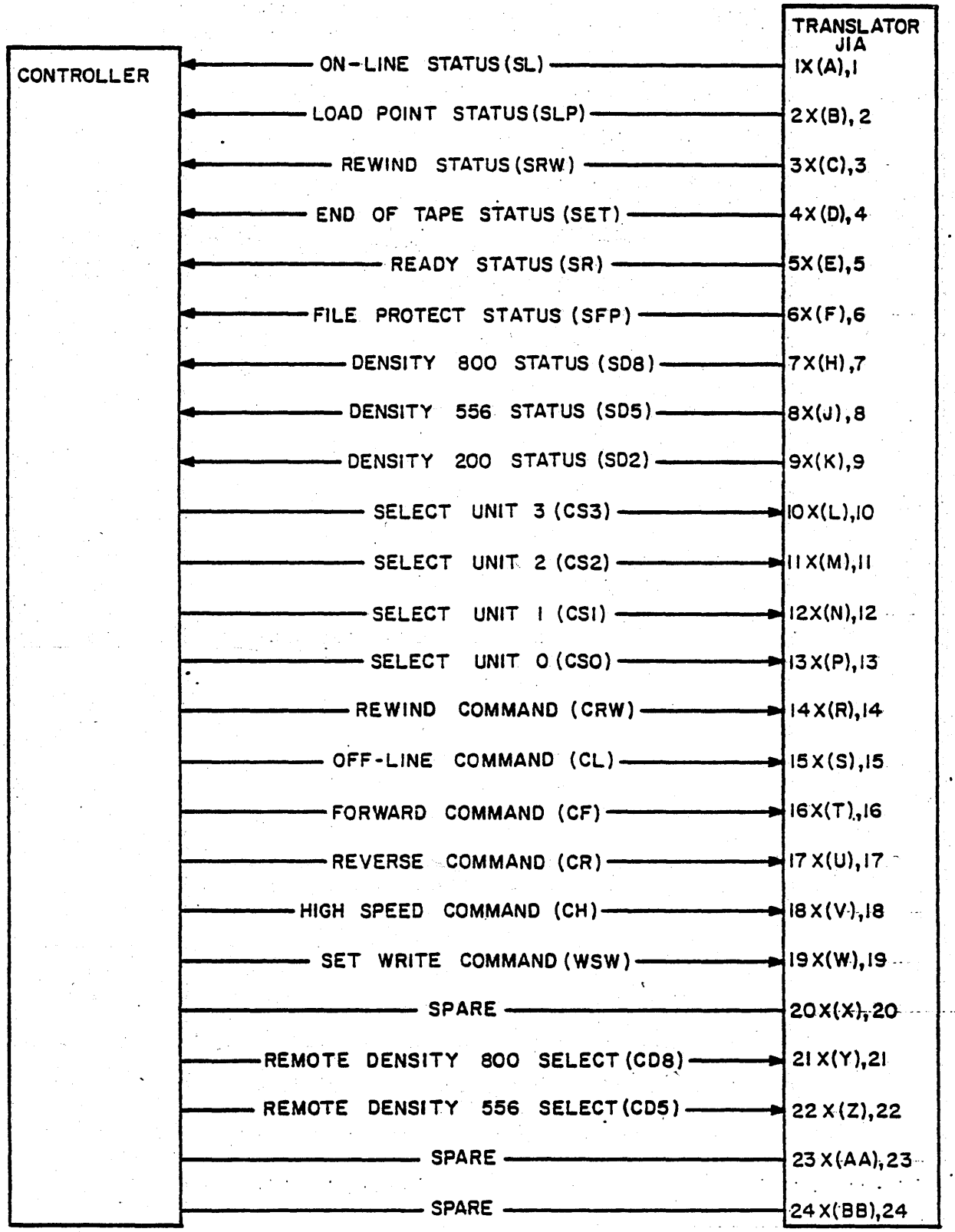


Figure 4. Control and Status Lines

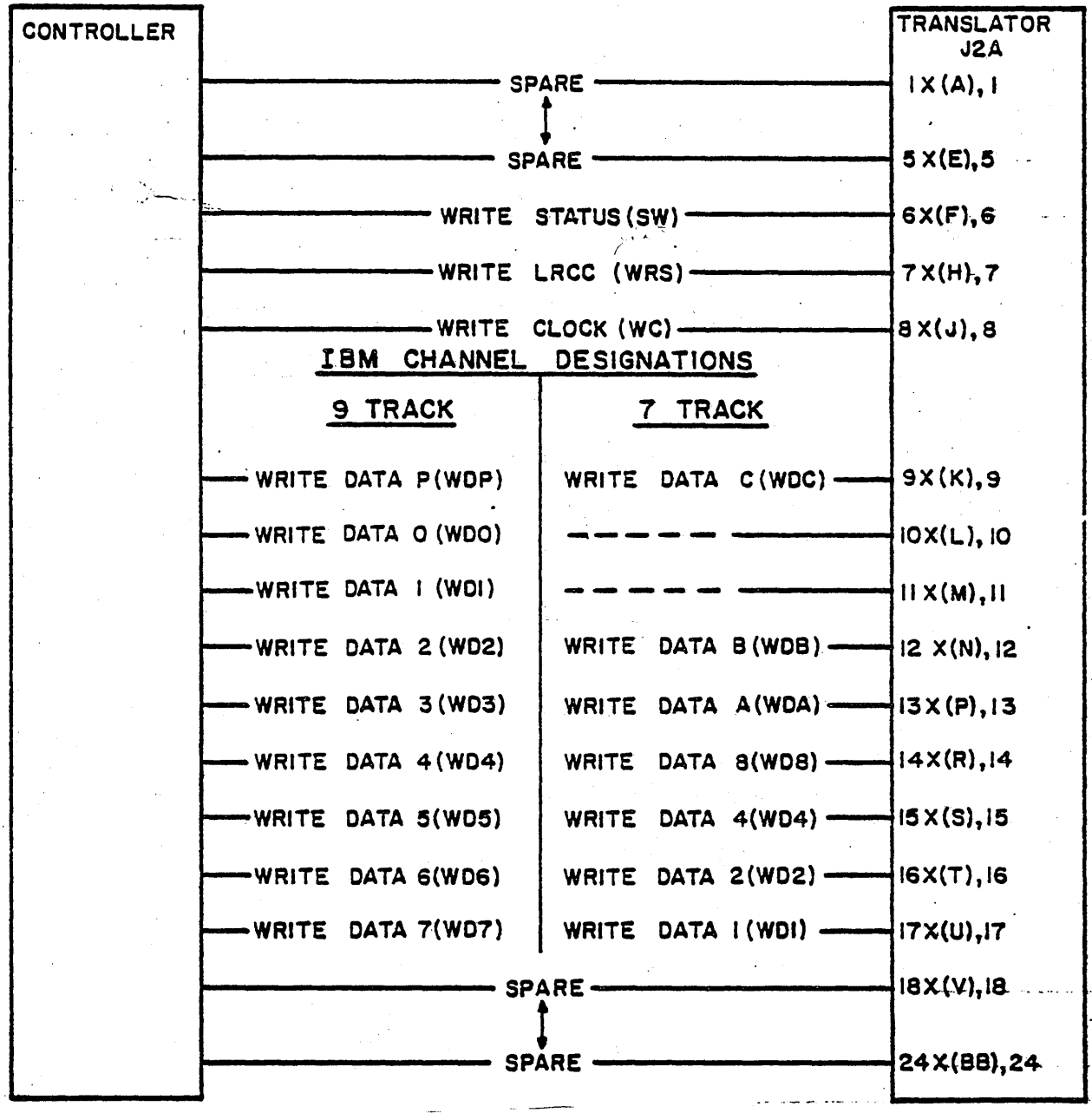


Figure 5. Write Data Lines

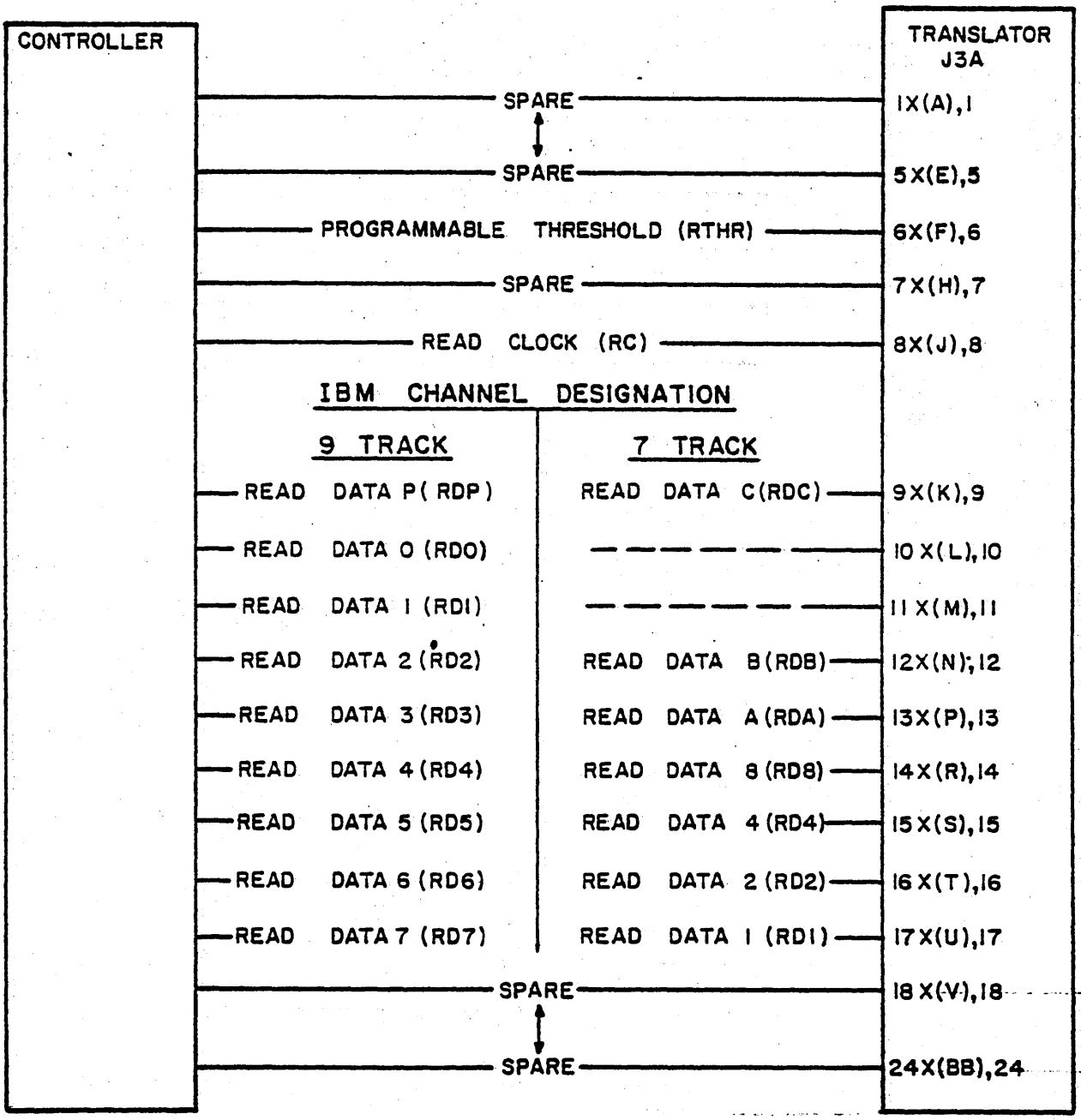


Figure 6. Read Data Lines

Table 1. INTERFACE LINES

NAME	DESCRIPTION
SELECT (CS = COMMAND SELECT)	Selects a particular on-line transport from a group connected to a common interface cable.

NOTE: Four (4) individual lines for units 0, 1, 2 and 3 (Signal Level).

OFF-LINE (CL = COMMAND OFF-LINE) (Signal Level)	Assertion of this clears the write condition and terminates the on-line condition of the selected transport. Assertion should be maintained until acknowledged by the negation of the on-line status.
FORWARD (CF = COMMAND FORWARD) (Signal Level)	Providing the transport is selected, and ready, this command causes tape to be driven in the forward direction.
REVERSE (CR = COMMAND REVERSE) (Signal Level)	When asserted, clears the write condition and causes the tape to be driven in the reverse direction, provided that the transport is selected and ready. Load point status inhibits the response to this command.
REWIND (CRW = COMMAND REWIND) (Signal Level)	Clears the write command on the selected transport and initiates a rewind operation provided that the transport is ready, and not at load point. Tape is positioned at load point at the end of this operation. Assertion should be maintained until acknowledged by rewind status. (Minimum 2 microseconds)
HIGH SPEED (CH - COMMAND HIGH SPEED) (Signal Level)	(Not Used)
REMOTE DENSITY SELECT (CD8 and CD5 = COMMAND DENSITY 800 and 556) (Signal Level)	(Not Used)
SET WRITE (WSW = WRITE SET WRITE) (Signal Level)	The assertion transition of CF causes the WSW line to be sampled following a 20 microsecond maximum delay period.

Table 1. INTERFACE LINES (Cont'd)

NAME	DESCRIPTION
SET WRITE (WSW = WRITE SET WRITE) (Signal Level) (Cont'd)	Assertion transition of the WSW line enables the setting of the selected and online transport write condition provided the transport is ready and write enabled. Negation of the WSW line enables the clearing of the transport's write condition. The desired logic level of WSW shall be maintained for not less than 20 microseconds after the assertion edge of CF.
WRITE DATA (WD = WRITE DATA) WD0 - WD7, WDP (Signal Level)	These lines receive data to be recorded on tape as a character and must be electrically stable at assertion transition time of write clock and for 2 microseconds minimum, thereafter.
WRITE RESET (WRS = WRITE RESET) (Signal Level)	The assertion transition causes the LRCC character to be written on tape, provided the transport is in the write mode. Assertion must be maintained for a minimum of 2 microseconds.
WRITE CLOCK (WC = WRITE CLOCK) (Signal Pulse)	The assertion transition of this pulse causes the character, represented by the write data lines to be written on tape. The transport must be in the write condition and the assertion of the write clock must be maintained for a minimum of 2 microseconds.
PROGRAMMABLE THRESHOLD (PTHR = PROGRAMMABLE THRESHOLD) (Signal Level)	The assertion of this line causes the transport to read data from the tape at a reduced clipping level.
ON-LINE (SL = STATUS ON-LINE) (Signal Level)	Acknowledges that the selected transport has been manually placed in an on-line condition.
READY (SR = STATUS READY) (Signal Level)	Indicates that the transport is selected on-line, the initial loading sequence is complete and the transport is not rewinding.
LOAD POINT (SLP = STATUS LOAD POINT) (Signal Level)	Indicates that the transport is selected, on-line, and the tape is positioned at the load point reflective strip.

Table 1. INTERFACE LINES (Cont'd)

NAME	DESCRIPTION
DENSITY STATUS (SD = STATUS DENSITY) NOTE : Three individual lines SD2, SD5, and SD8 (Signal Level)	Indicates the state of Remote Density Select lines (CD5 and CD8), decoded into 200, 556, 800 CPI. Only one density at a time can be asserted from a selected and on-line transport.
REWIND (SRW - REWIND STATUS) (Signal Level)	Indicates that the selected and on-line transport is engaged in a rewind operation. This status remains true until the tape is positioned at the load point reflective strip.
READ DATA (RD = READ DATA) RD0 - RD7, RDP (Signal Level)	These lines transmit detected characters read from the tape and presents them to the interface. The read data lines are settled at the assertion transition time of read clock, and remain settled until 1 μsec, maximum, before the next read clock.
READ CLOCK (RC = READ CLOCK) (Signal Pulse)	Indicates that a character has been read from tape and is present on the read data lines. Assertion time is 2 μsec, minimum; 3 microseconds, maximum.
WRITE STATUS (SW = STATUS WRITE) (Signal Level)	Indicates that the selected transport is write enabled and current is flowing in the write and erase heads.
FILE PROTECT (SFP = STATUS FILE PROTECT) (Signal Level)	Indicates that the selected and on-line transport is not write enabled (write ring is not present in the file reel).

INSTALLATION

Installation of the Interface Equipment is as follows:

a. Mount the translator mounting bracket on top of the power supply using the three screws supplied.

b. Insert the translator board in the mounting bracket.

c. Install cables as shown in Figure 1.

d. Ensure that the Optional Stop Mode jumper is installed at the transport electronics cage assembly backplane. Attach the locking end of the jumper to XA4 pin 14B. Press the other end onto XA4 pin 15B.

CAUTION

One end of this jumper is equipped with a locking type socket. To remove the jumper from the backplane pin, slightly lift the spring clip and remove the socket from the pin.

THEORY OF OPERATION

The following paragraphs and diagrams briefly describe the theory of operation of the translator. Figure 7 is a block diagram of the Read and Write circuitry. Reference to the logic diagram will aid in understanding the theory of operation of the translator.

a. Write

The Flow Diagram (Figure 8) shows only two bits of data processed through one channel. Each channel is identical. The diagram shows that the Write Register flip-flops change state only on a data transition of False (high) to True (low). This action transforms non-return-to-zero (NRZ) data to non-return-to-zero-inverted (NRZI) data that is useful to the transport.

When the Inter-Block Gap (IBG) is reached and WRS becomes True the LRCC is written.

Figure 9 shows the idealized waveforms for various points in the circuits shown on logic diagram, sheet 2.

b. Read

The Read Operation Flow Diagram (Figure 10) shows data processed for one cell time. Data are entered in the Read flip-flop during the Read or Write gate time (See Figure 11). During the one microsecond Strobe pulse, the data is transferred to the read registers. The Read flip-flops are then cleared of any data and a Read Clock ($\overline{RC}$) pulse is sent to the controller. This informs the controller that data is present on the read data lines. The Read flip-flops convert the data from NRZI to NRZ format.

DIAGRAMS

The diagrams necessary to maintain the translator in an operational status are included at the rear of this manual. For Board Type Assembly Numbers used, refer to Table below.

Data for the more complex components are listed in Table 2. The symbol for these components is also contained within the description. A cross-reference list of element numbers to commercial identification is shown in the beginning of this table.

CARD PLACEMENT CHART

Track	Density	Card Type
9	800	5299
7	800	5214
7	556	5256
7	200	5257

PARTS DATA

Data necessary for ordering replacement components for the printed wiring board are contained at the rear of this manual.

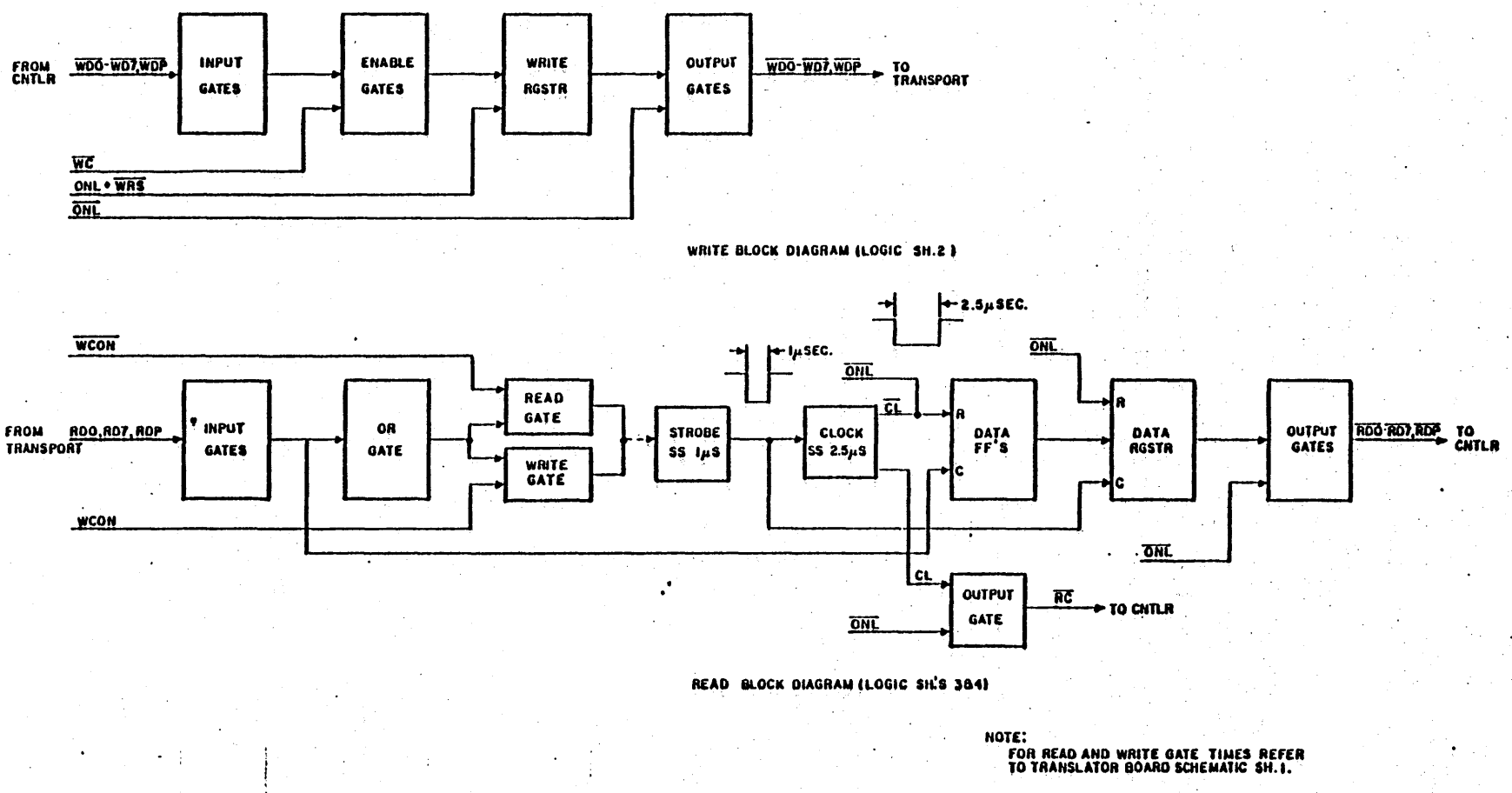


Figure 7. Translator Block Diagram

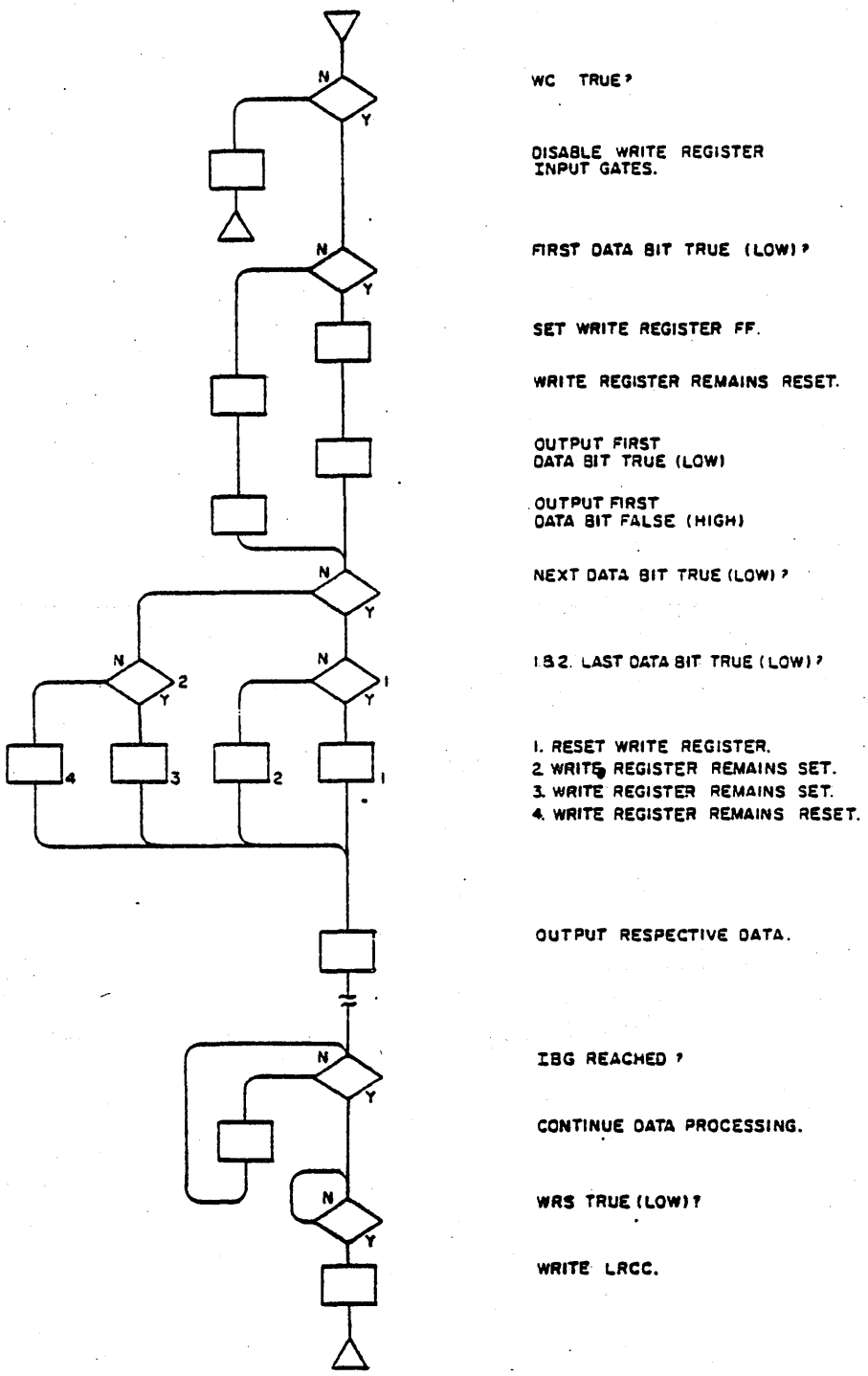


Figure 8. Write Operation

A

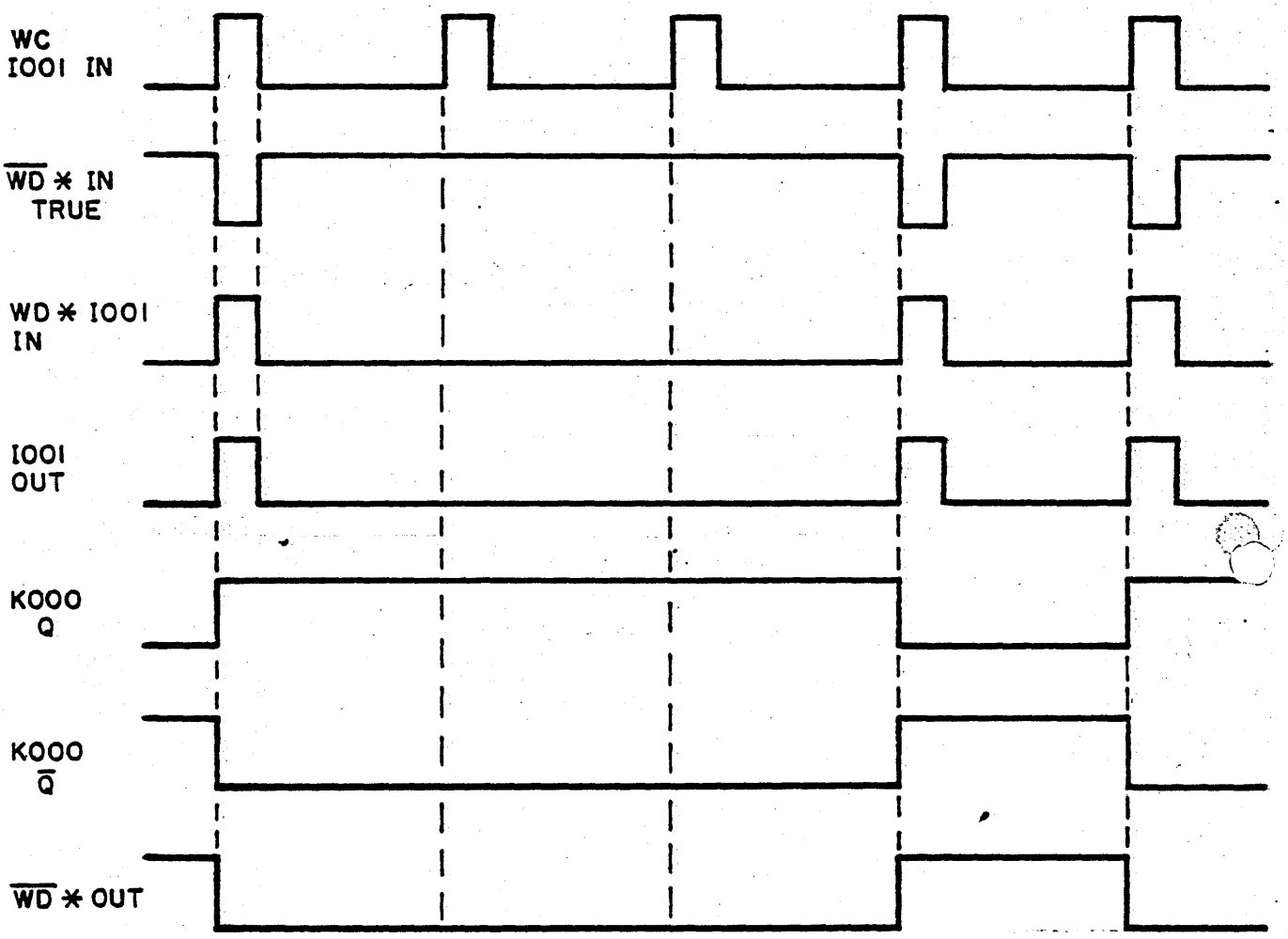


Figure 9. Write Idealized Waveforms

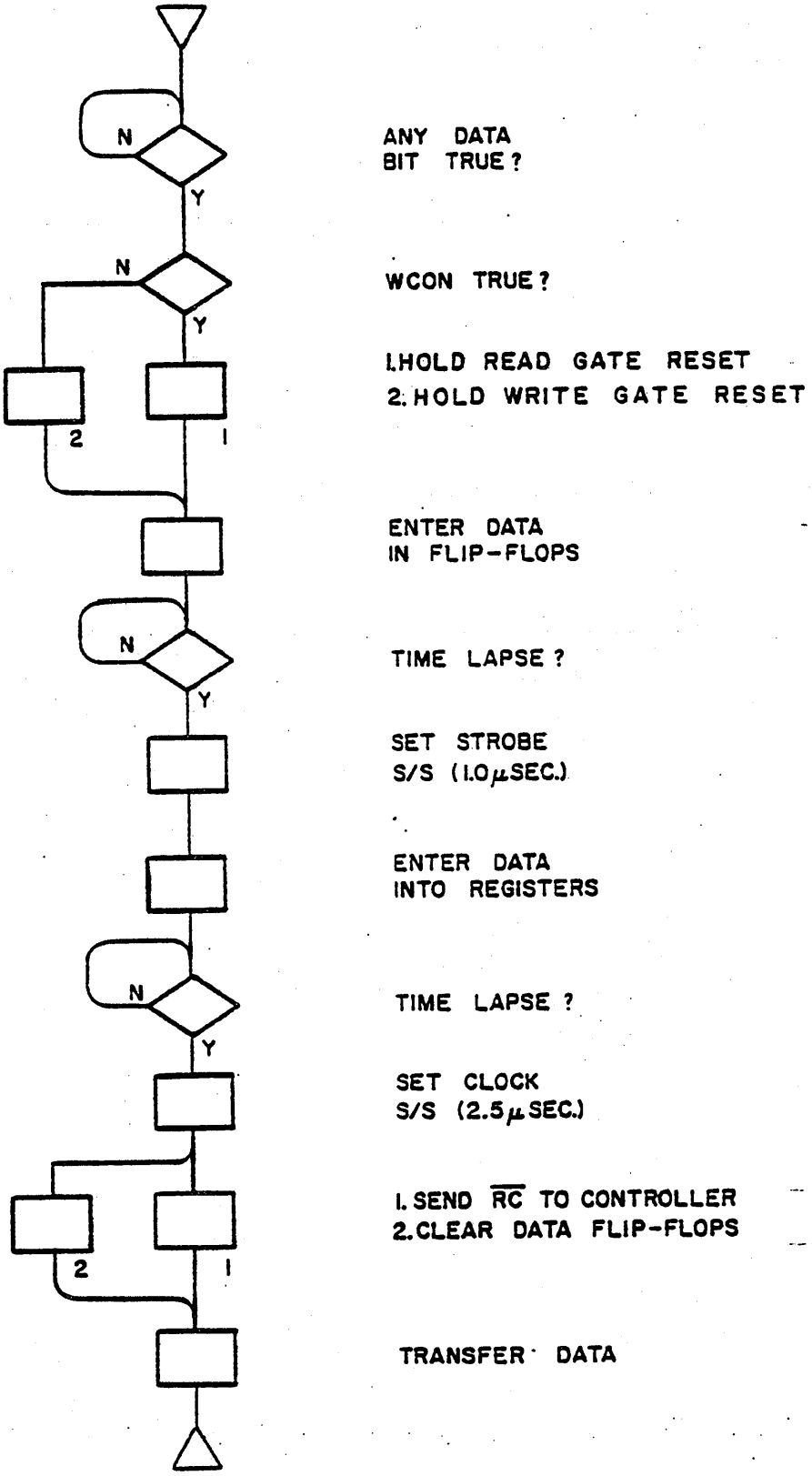
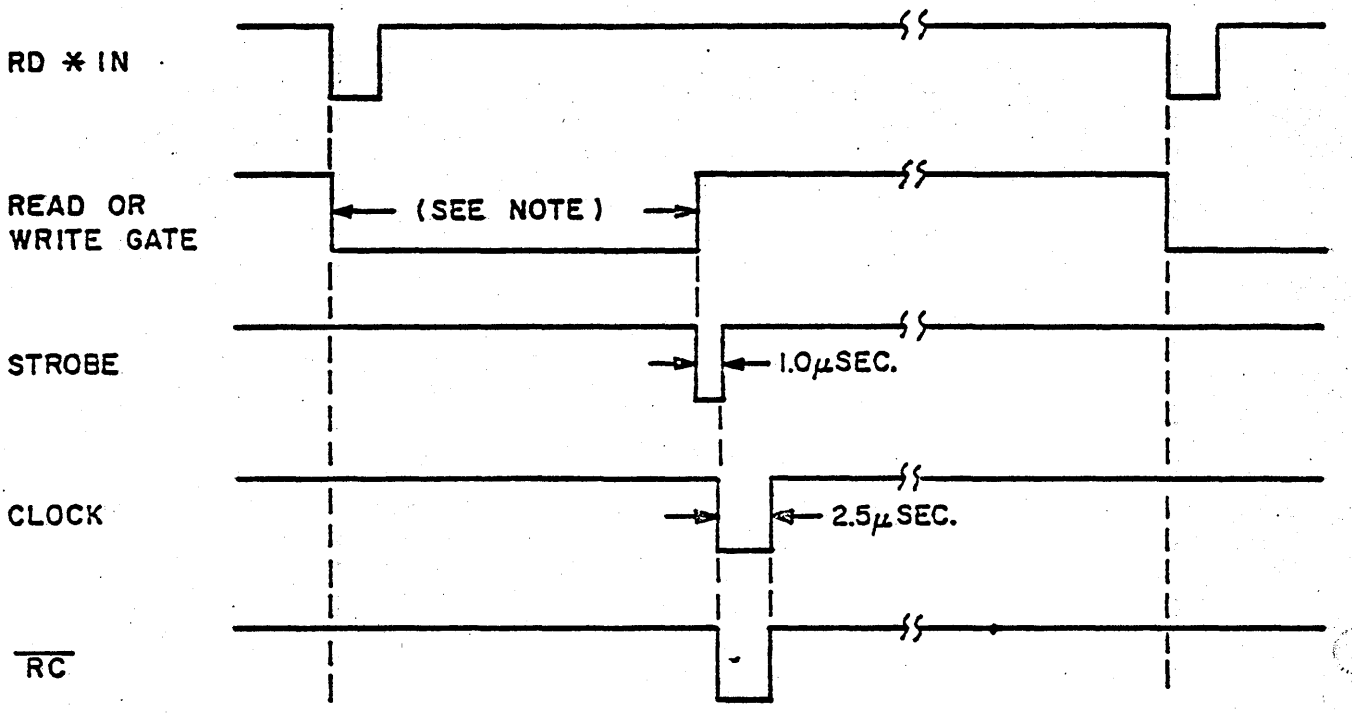


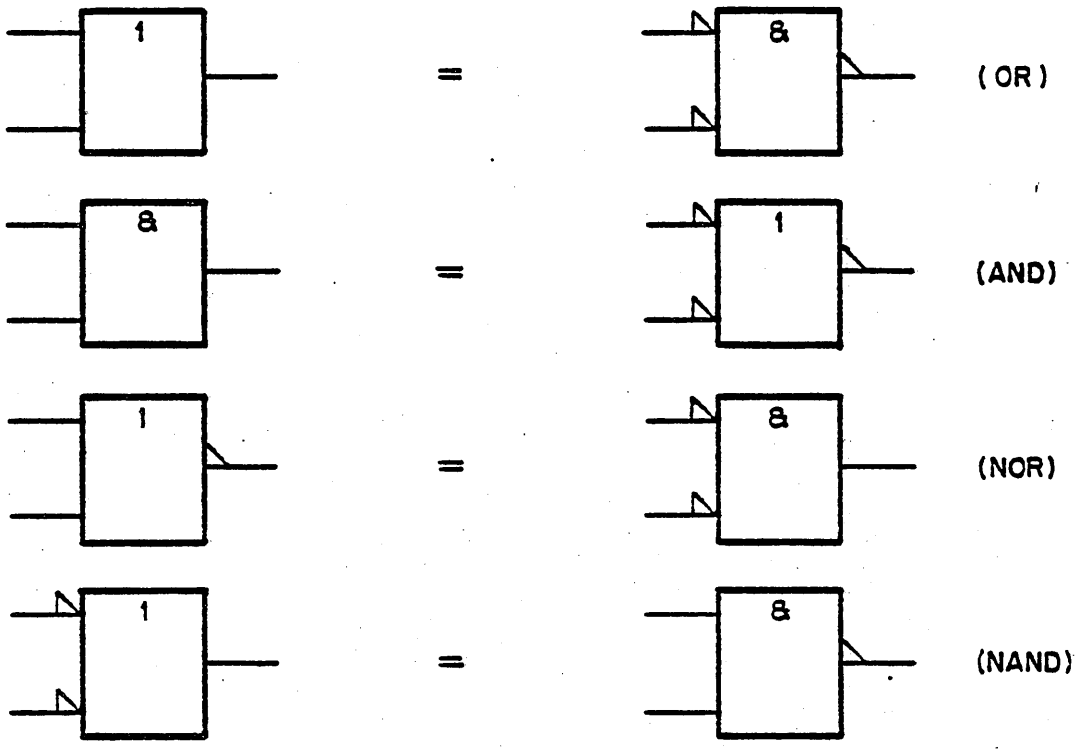
Figure 10. Read Operation



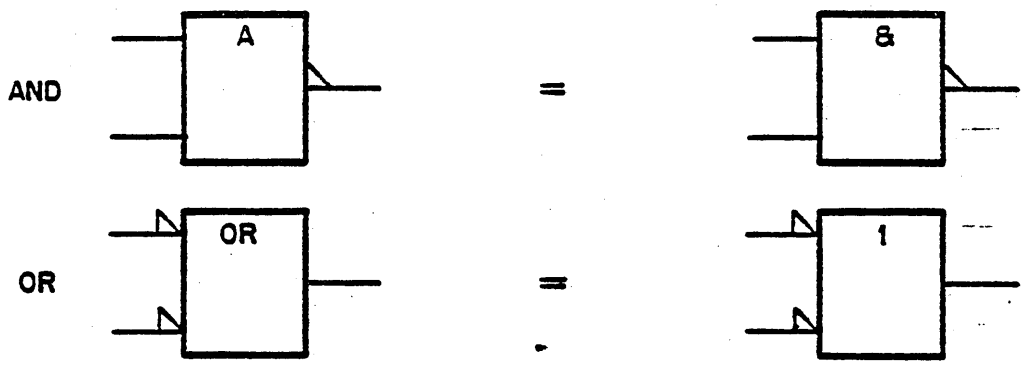
NOTE:
FOR READ AND WRITE GATE TIMES
REFER TO TRANSLATOR BOARD
SCHEMATIC SHEET 1.

Figure 11. Read Timing

TABLE 2. INTEGRATED CIRCUIT DATA



SYMBOLS USED FOR SAME TYPE IC DUE TO CIRCUIT FUNCTION.



SYMBOLS USED INTERCHANGEABLY FOR SAME FUNCTION.

TABLE 2. INTEGRATED CIRCUIT DATA (Cont'd)

CROSS-REFERENCE LIST

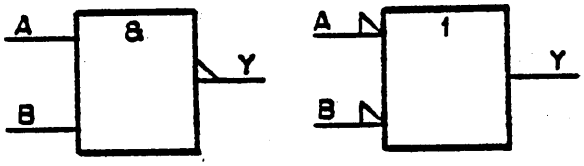
ELEMENT NUMBER	COMMERCIAL NUMBER
140	7400
141	7410
186	837
175	7474
193	74123
201	7408
204	7438
224	7427
519	74174
520	74175

937-SN

ITT 937-SN
F 937-PC

DESCRIPTION

14 pin dual-in-line package which contains four TTL 2-input positive NAND gates.



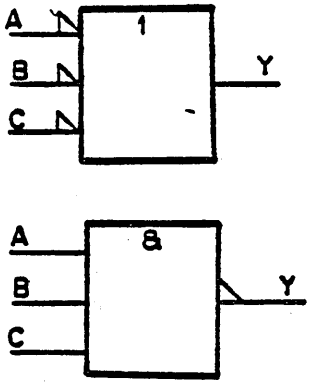
TRUTH TABLE

INPUTS		OUTPUT
A	B	Y
0	0	1
1	0	1
0	1	1
1	1	0

140 (7400)

DESCRIPTION

14 pin dual-in-line package containing three TTL 3-input positive NAND gates.



TRUTH TABLE

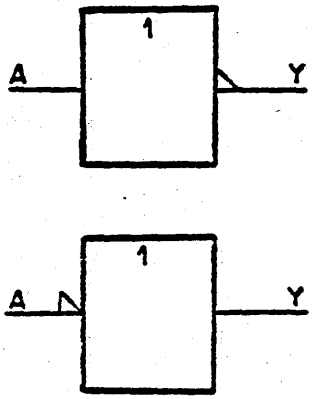
INPUTS			OUTPUT
A	B	C	Y
0	X	X	1
X	0	X	1
X	X	0	1
1	1	1	0

X = EITHER LOGIC 1 OR 0

141 (7410)

DESCRIPTION

14 pin dual-in-line package which contains six TTL inverter circuits.

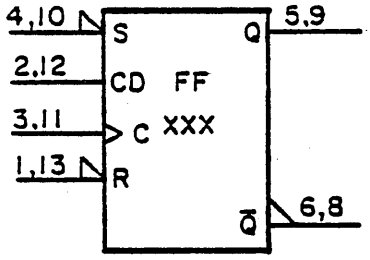


TRUTH TABLE

INPUT	OUTPUT
A	Y
0	1
1	0

DESCRIPTION

14 pin dual-in-line package containing two independent TTL D-type edge-triggered flip-flops. The data appearing on the CD input is transferred to the complementary outpus on the logic 0 to 1 transition of the clock input. After the logic 0 to 1 transition of the clock input, the data input (CD) is locked out. At logic 0 input to the master set (S) input sets Q (pin 8, 9) to logic 1 independently of the clock input. Similarly a logic 0 input to the master reset (R) input sets Q to a logic 0. With both S and R inputs at logic 0, both Q (pin 5, 9) and $\overline{Q}$ (pin 6, 8) outputs are at a logic 1.



TRUTH TABLE

t_n INPUTS			t_{n+1} OUTPUTS	
S	R	D	PIN 5,9 (Q)	PIN 6,8 ($\overline{Q}$)
0	1	X	1	0
1	0	X	0	1
0	0	X	1	1
1	1	1	1	0
1	1	0	0	1

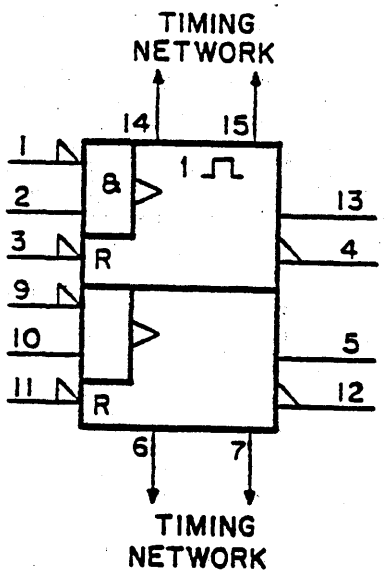
X = EITHER LOGIC 1 OR 0.
t_n = BIT TIME BEFORE LOGIC 0 TO 1 TRANSITION OF CLOCK PULSE.
t_{n+1} = BIT TIME AFTER CLOCK PULSE.

175 (7474)

DESCRIPTION

16 pin dual-in-line package containing two TTL retriggerable single shots having two trigger inputs, one active level 1 (pin 2, 10) and one active level 0 (pin 1, 9). The output pulse duration is a function of an external timing network. The overriding clear input (R) permits any output pulse to be terminated at any time independently of any other inputs.

If the trigger signal is applied to the active 1 input, triggering will occur on the rising edge of the waveforms. By applying the trigger input to the active 0 input, triggering will occur on the falling edge of the waveform. Each time the trigger conditions are met, the external timing capacitor is discharged and a new cycle is started. Successive trigger inputs with a period shorter than the output pulse delay time retrigger the single shot resulting in a continuous true output.



TRUTH TABLE

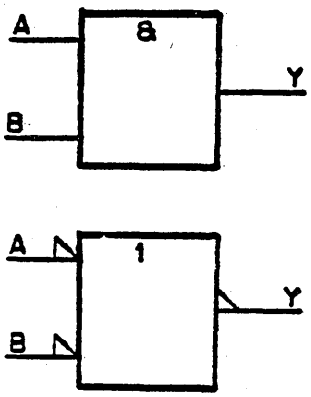
MODE	INPUTS			OUTPUTS[2]	
	PIN 1,9	PIN 2,10	R	PIN 13,5 (Q)	PIN 4,12 ($\overline{Q}$)
MASTER RESET	X	X	0	0	1
TRIGGERING INHIBITED	1 X	X 0	1 1	0 0	1 1
POSITIVE EDGE TRIGGERING	0	0→1	1	POSITIVE PULSE OF WIDTH T	NEGATIVE PULSE OF WIDTH T
NEGATIVE EDGE TRIGGERING	1→0	1	1		

NOTES: 1. X = LOGIC 1 OR 0.
2. WIDTH "T" OF OUTPUT PULSE IS DETERMINED BY THE EXERNAL TIMING NETWORK.

193 (74123)

DESCRIPTION

14 pin dual-in-line package containing four TTL 2-input positive NAND gates.



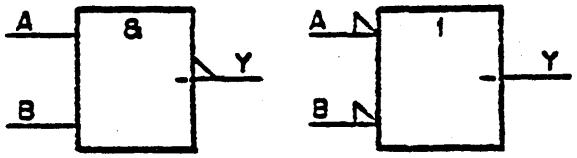
TRUTH TABLE

INPUTS		OUTPUT
A	B	Y
0	0	0
1	0	0
0	1	0
1	1	1

201 (7408)

DESCRIPTION

14 pin dual-in-line package containing four TTL 2-input positive NAND gates with open collector output.



TRUTH TABLE

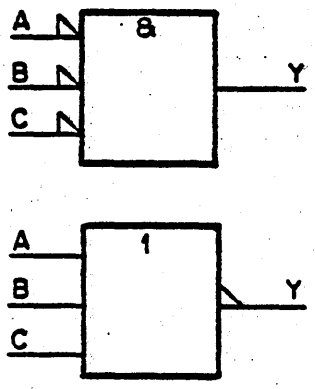
INPUTS		OUTPUT
A	B	Y
0	X	1
X	0	1
1	1	0

X=EITHER LOGIC 1 OR 0

204 (7438)

DESCRIPTION

14 pin dual-in-line package that contains three TTL 3-input positive NOR gates.



TRUTH TABLE

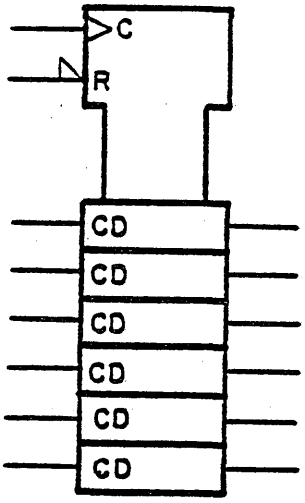
INPUTS			OUTPUT
A	B	C	Y
0	X	X	1
X	0	X	1
X	X	0	1
1	1	1	0

X = EITHER LOGIC 1 OR 0

224 (7427)

DESCRIPTION

16 pin dual-in-line package containing six TTL D-type positive-edge-triggered-flip-flops. Information at the CD inputs meeting the setup time requirements is transferred to the Q inputs on the positive-going edge of the clock pulse. Clock triggering occurs at a particular voltage level and is not directly related to the transition time of the positive-going pulse. When the clock input is either at the high or low level the CD input signal has no effect at the output.



TRUTH TABLE

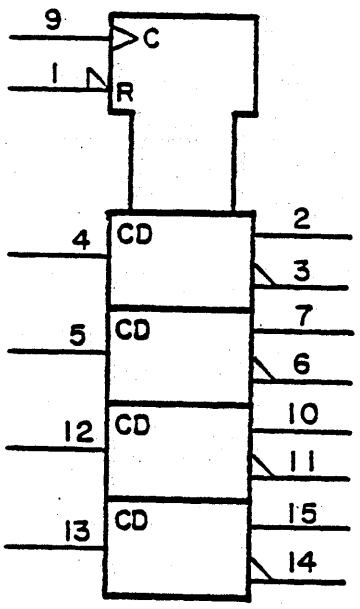
t_n INPUTS			t_{n+1} OUTPUTS
R	C	CD	Q
L	X	X	L
H	↑	H	H
H	↑	L	L
H	L	X	Q_0

H = HIGH LEVEL (STEADY STATE)
L = LOW LEVEL (STEADY STATE)
X = EITHER LOGIC 1 OR 0.
↑ = TRANSITION FROM LOW TO HIGH LEVEL
Q_0 = LEVEL OF Q BEFORE INDICATED STEADY STATE CONDITIONS WERE ESTABLISHED.

519 (74174)

DESCRIPTION

16 pin dual-in-line package containing four TTL D-type positive-edge-triggered flip-flops. Information at the CD inputs meeting the setup time requirements is transferred to the Q outputs on the positive-going edge of the clock pulse. Clock triggering occurs at a particular voltage level and is not directly related to the transition time of the positive-going pulse. When the clock input is either at the high or low level the CD input signal has no effect at the output.

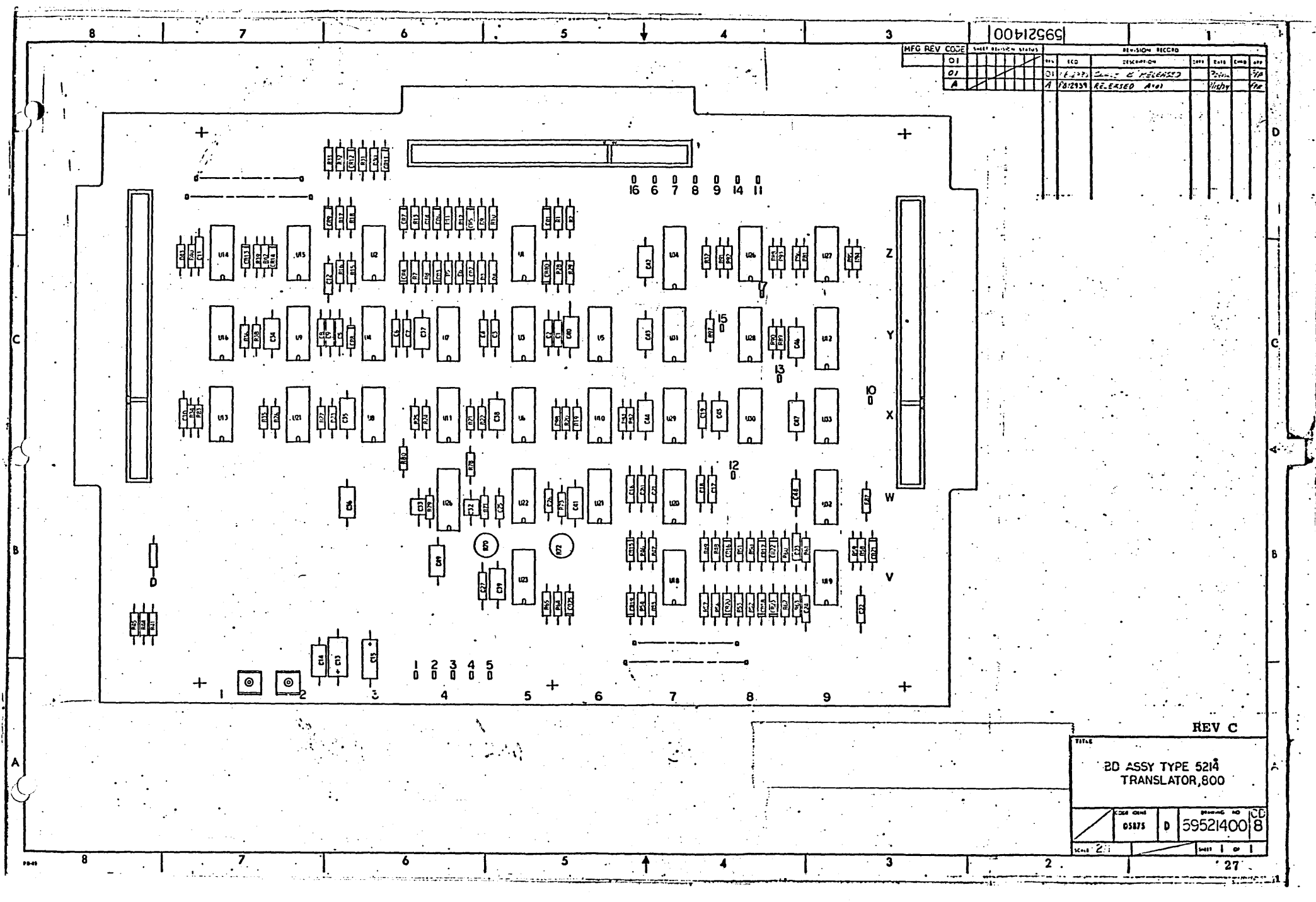


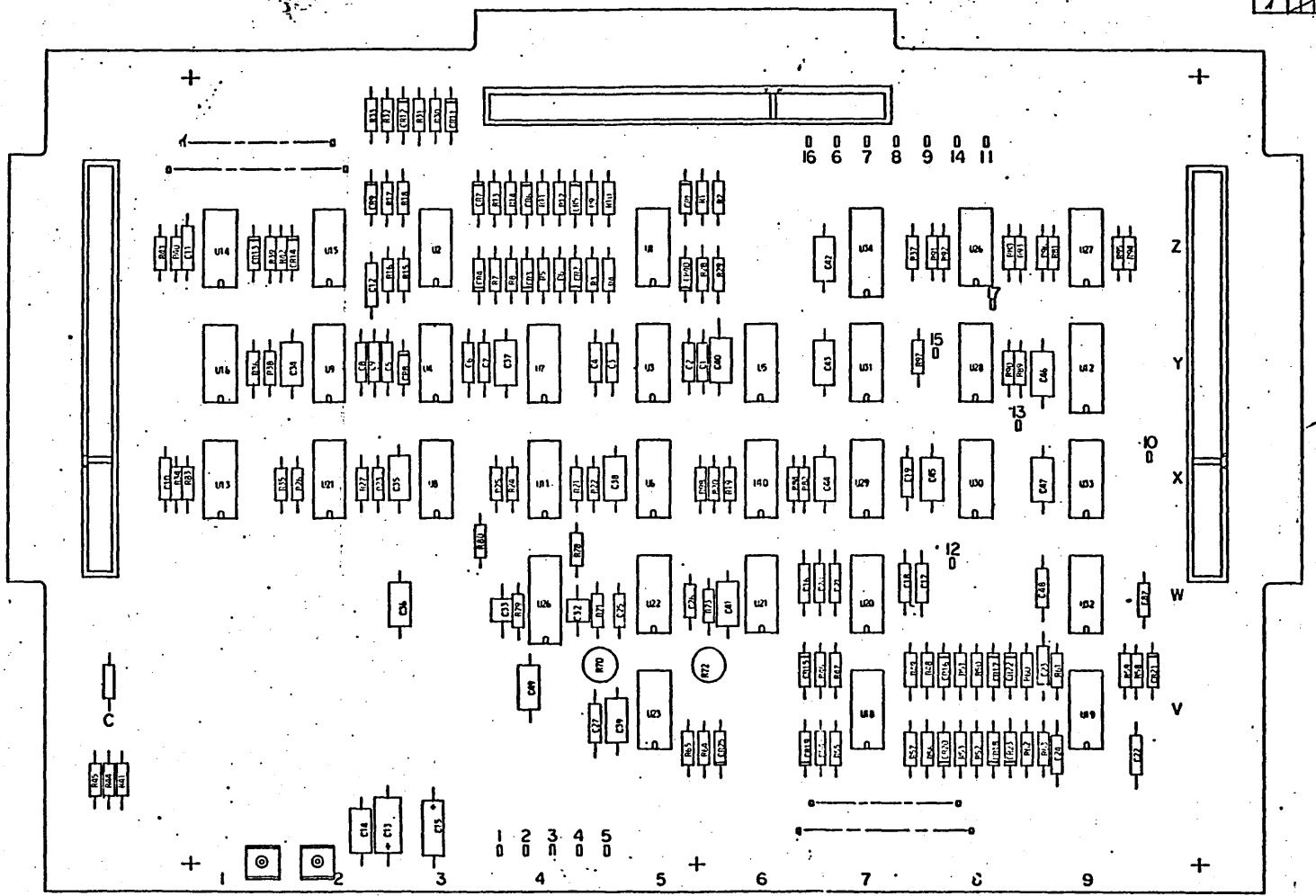
TRUTH TABLE

t_n INPUTS			t_{n+1} OUTPUTS	
R	C	CD	Q	$\overline{Q}$
L	X	X	L	H
H	↑	H	H	L
H	↑	L	L	H
H	L	X	Q_0	$\overline{Q}_0$

H = HIGH LEVEL (STEADY STATE)
L = LOW LEVEL (STEADY STATE)
X = EITHER LOGIC 1 OR 0.
↑ = TRANSITION FROM LOW TO HIGH LEVEL
Q_0 = LEVEL OF Q BEFORE INDICATED STEADY STATE CONDITIONS WERE ESTABLISHED.

520 (74175)


59521400
MFG REV CODE
REVISION RECORD
01
01
A
REV C
2D ASSY TYPE 5214
TRANSLATOR,800
05875
D
59521400
CD 8
SCALE 2:1
SHEET 1 OF 1



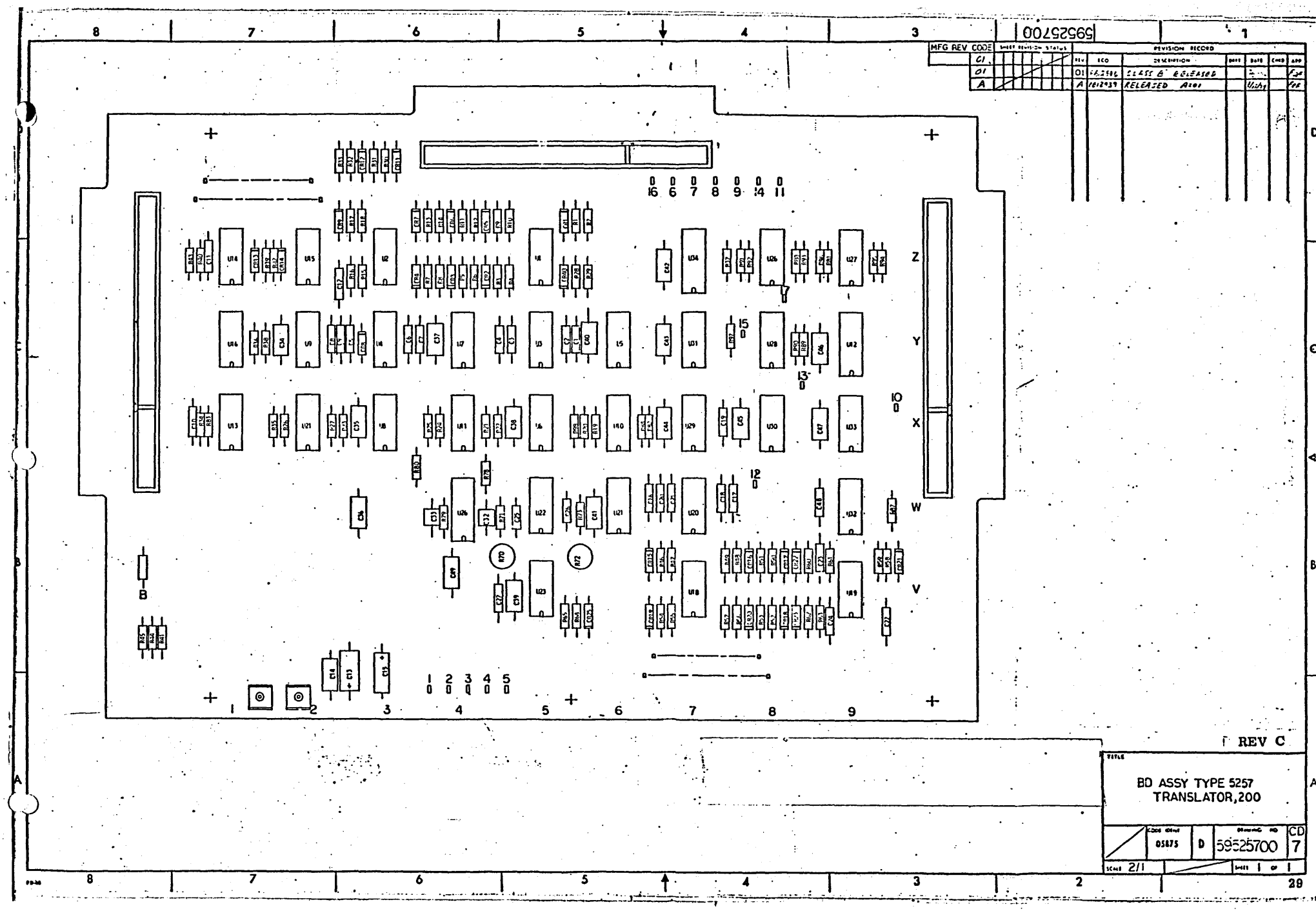
REV C

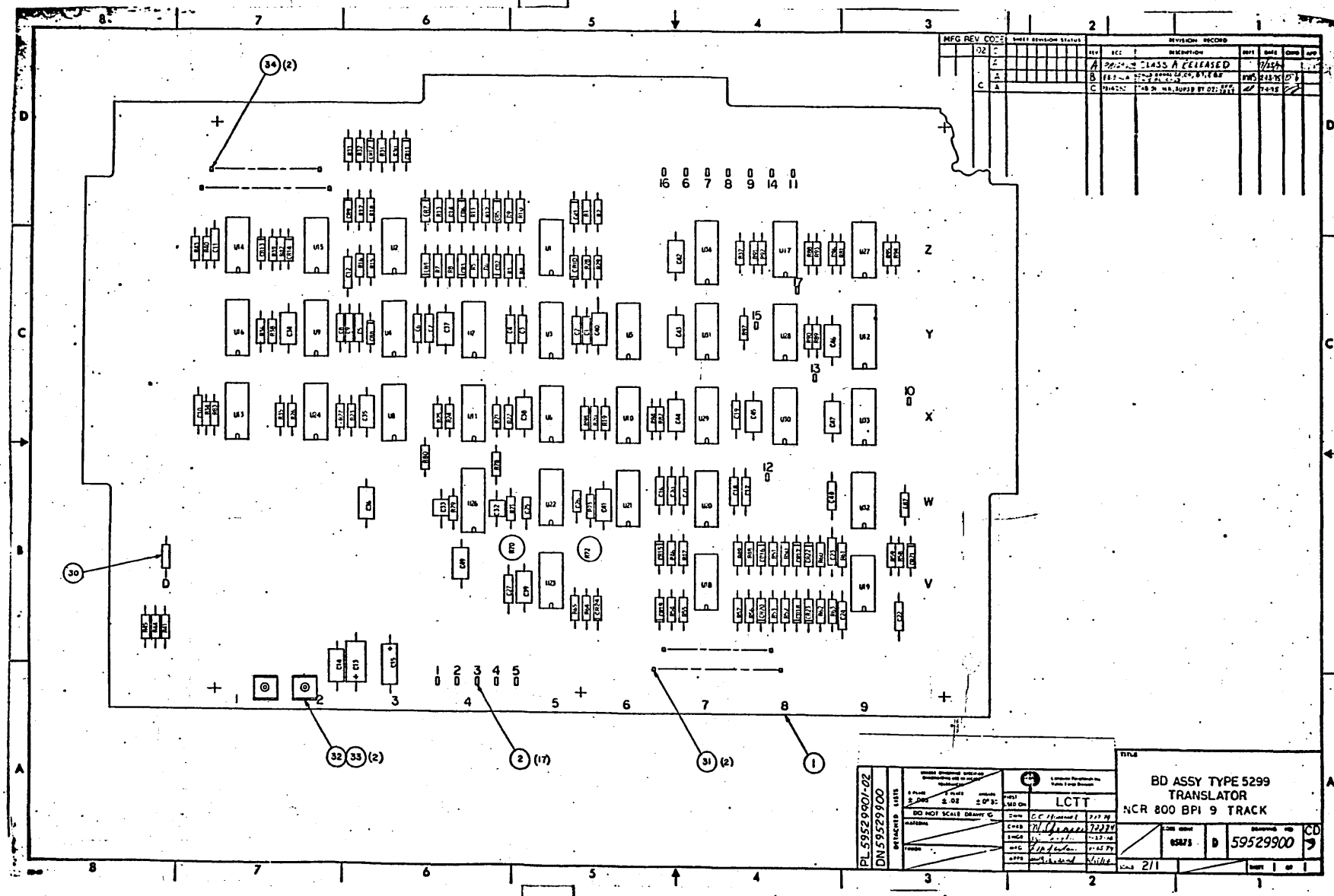
BD ASSY TYPE 5256
TRANSLATOR, 556

CODE IDENT		DRAWING NO	
05875	D	59525600	CD 5

SCALE 2:1 SHEET 1 OF 1

28


59525700
MFG REV CODE
C1
01
A
SHEET REVISION STATUS
REVISION RECORD
REV
ECO
DESCRIPTION
DRWN
DATE
CHKD
APP
01
A
CLASS B RELEASED
RELEASED A101
REV C
TITLE
BD ASSY TYPE 5257
TRANSLATOR,200
CODE IDENT
05875
D
DRAWING NO
59525700
CD
7
SCALE 2/1
SHEET 1 OF 1


BD ASSY TYPE 5299
TRANSLATOR
NCR 800 BPI 9 TRACK
59529900
PL 59529901-02
DN 59529900
LCTT

REV C

86940200

SHEET REVISION STATUS			REVISION RECORD					
4	3	2	REV	ECO	DESCRIPTION	DEPT	DATE	APP
[illegible]	[illegible]	[illegible]	C1	[illegible]	CLASS "I" RELEASED		[illegible]	[illegible]
A	A	A	A	PB[illegible]	RELEASED [illegible]		[illegible]	[illegible]
A	B	A	B	PB[illegible]	[illegible] NOTE [illegible] SHT. 1 CHGD RT3 WAS [illegible]	WB	7-7-75	

NOTES:

1. NOT USED ON NINE TRACK.
2. SEE TABLE BELOW

BD TYPE ASSEMBLY	JUMPER	DENSITY	TRACKS	WRITE GATE	READ GATE	±10% C25,C26	RT1	RT3
8214	D	800BPI	7	16μS	24μS	.0056μF	9.31K	6.04K
8256	C	556BPI	7	21.6μS	34.6μS	.0082μF	9.31K	5.76K
8257	B	200BPI	7	60μS	96μS	.022μF	9.31K	6.04K
8299	D	800BPI	9	17.5μS	24μS	.0056μF	9.31K	6.81K

DETACHED LISTS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES

2 PLACE	3 PLACE	ANGLES
±.005	±.02	±0°30'

DO NOT SCALE DRAWING

MATERIAL

FINISH

FIRST USED ON: LCTT

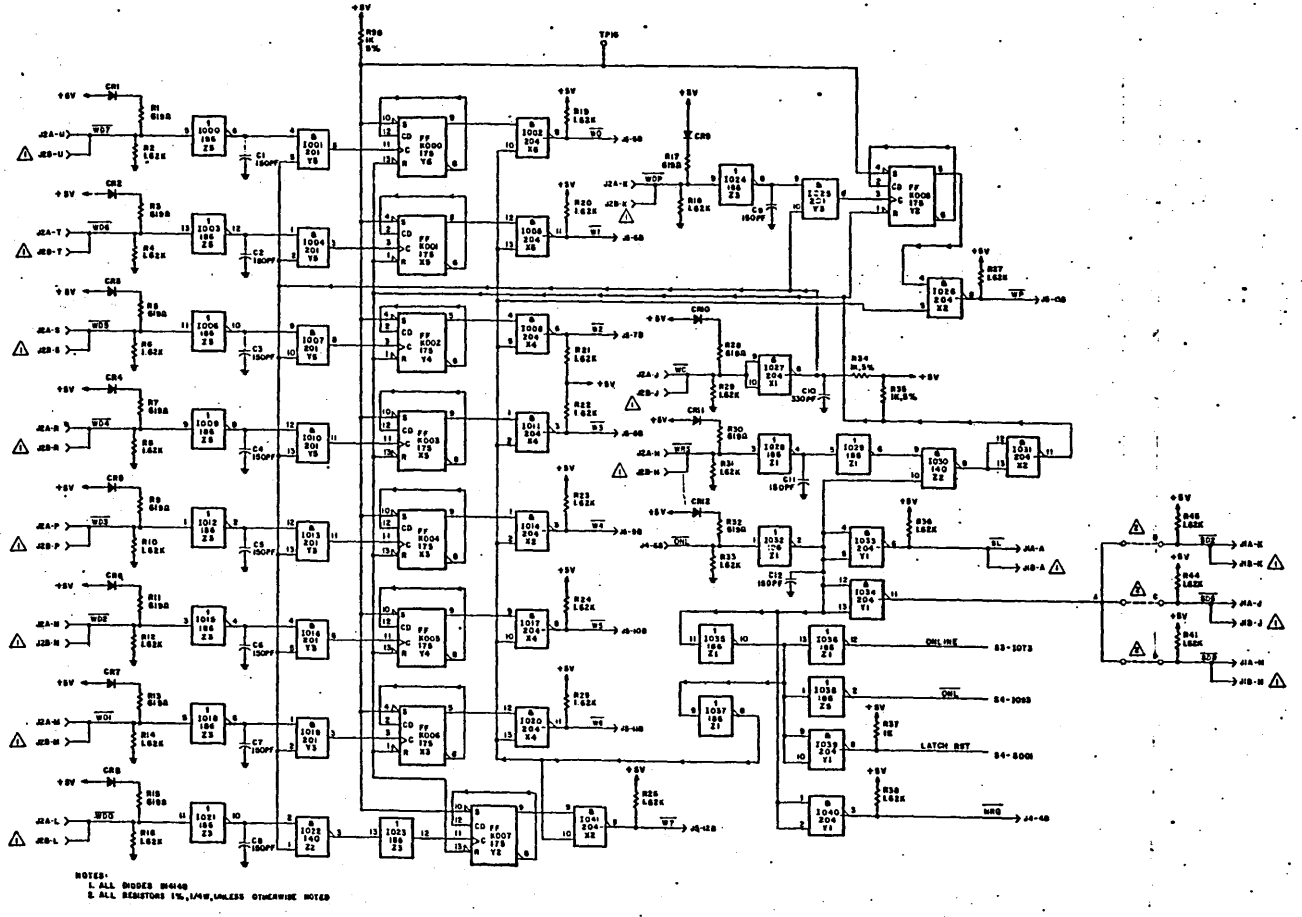
DWN / CHKD / ENGR / MFG / APPD

TITLE: NCR TRANSLATOR BOARD SCHEMATIC

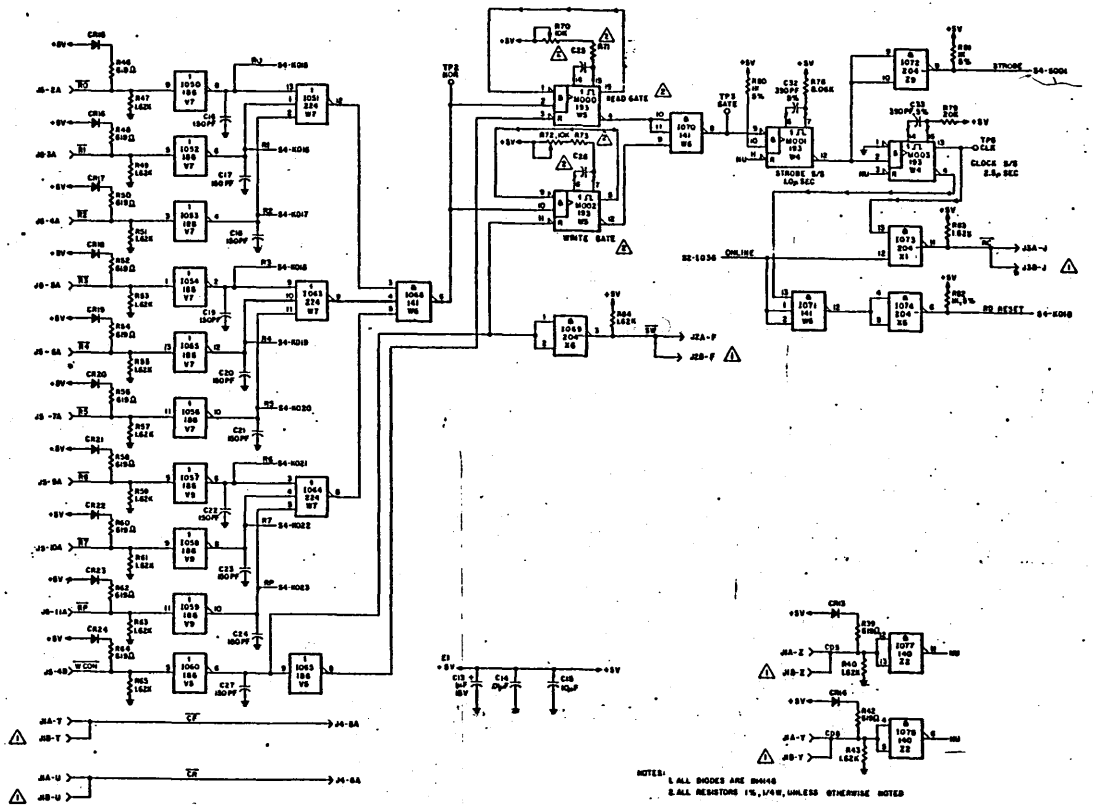
CODE IDENT: 05875 | D | DRAWING NO: 86940200 | CD: 8

SCALE — | SHEET 1 OF 4

REV C

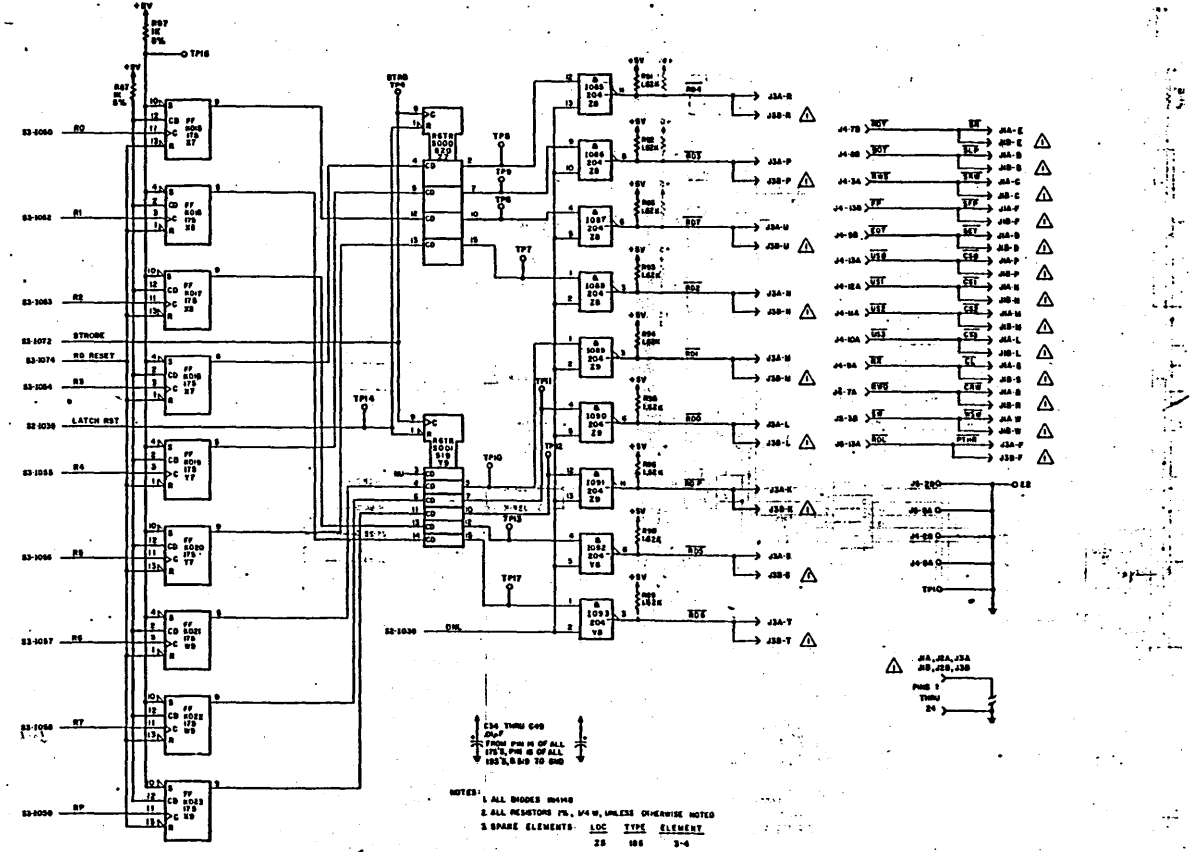

REVISIONS RECORD
SEE SHEET 1
NOTES:
1. ALL DIODES IN4148
2. ALL RESISTORS 1%, 1/4W, UNLESS OTHERWISE NOTED
NCR
TRANSLATOR BOARD
86940200
A
SHEET 2

REV C



NCR TRANSLATOR BOARD

CODE IDENT 05875 | D | DWG NO 86940200 | REV A | SHEET 3


REVISION RECORD
SEE SHEET 1
NCR
TRANSLATOR BOARD
05875
D
86940200
A
SHEET 4
NOTES:
1. ALL DIODES 1N4148
2. ALL RESISTORS 1%, 1/4 W, UNLESS OTHERWISE NOTED
3. SPARE ELEMENTS:
LOC TYPE ELEMENT
Z8 188 3-6
V8 188 1-2/3-6/13-12
Y8 204 9,10-8/12,13-11
X9 175 2,4,3,1-5,6
Y6 175 2,4,3,1-8,8
V5 188 1-2/3-6/13-12/11-10
X1 204 1-11,12-3/4,5-6

INDEX NO.	EQUIPMENT PART NUMBER	ITEM DESCRIPTION
		INTEGRATED CIRCUITS
U1	94690204	INTEGRATED CIRCUIT 837
U2	94690204	INTEGRATED CIRCUIT 837
U3	17185200	INTEGRATED CIRCUIT, 7408
U4	17185200	INTEGRATED CIRCUIT, 7408
U5	94916109	INTEGRATED CIRCUIT, SN7474N
U6	94916109	INTEGRATED CIRCUIT, SN7474N
U7	94916109	INTEGRATED CIRCUIT, SN7474N
U8	94916109	INTEGRATED CIRCUIT, SN7474N
U9	94916109	INTEGRATED CIRCUIT, SN7474N
U10	94874100	INTEGRATED CIRCUIT, 7438
U11	95874100	INTEGRATED CIRCUIT, 7438
U12	95871000	INTEGRATED CIRCUIT, SN74174
U13	95874100	INTEGRATED CIRCUIT, 7438
U14	94690204	INTEGRATED CIRCUIT, 837
U15	94918809	INTEGRATED CIRCUIT, SN7400
U16	95874100	INTEGRATED CIRCUIT, 7438
U17	95874100	INTEGRATED CIRCUIT, 7438
U18	94690204	INTEGRATED CIRCUIT, 837
U19	94690204	INTEGRATED CIRCUIT, 837
U20	15106800	INTEGRATED CIRCUIT, 7247N
U21	36187200	INTEGRATED CIRCUIT, 7410
U22	95876100	INTEGRATED CIRCUIT, 74123
U23	94690204	INTEGRATED CIRCUIT, 837
U24	95874100	INTEGRATED CIRCUIT, 7438
U26	95876100	INTEGRATED CIRCUIT, 74123
U27	95874100	INTEGRATED CIRCUIT, 7438
U28	95874100	INTEGRATED CIRCUIT, 7438
U29	94916109	INTEGRATED CIRCUIT, SN7474N
U30	94916109	INTEGRATED CIRCUIT, SN7474N
U31	94916109	INTEGRATED CIRCUIT, SN7474N
U32	94916109	INTEGRATED CIRCUIT, SN7474N
U33	94916109	INTEGRATED CIRCUIT, SN7474N
U34	95871300	INTEGRATED CIRCUIT, SN74175
		DIODES
CR1	94654700	DIODE, IN4148
CR2	94654700	DIODE, IN4148
CR3	94654700	DIODE, IN4148
CR4	94654700	DIODE, IN4148
CR5	94654700	DIODE, IN4148
CR6	94654700	DIODE, IN4148
CR7	94654700	DIODE, IN4148
CR8	94654700	DIODE, IN4148
CR9	94654700	DIODE, IN4148
CR10	94654700	DIODE, IN4148
CR11	94654700	DIODE, IN4148
CR12	94654700	DIODE, IN4148
CR13	94654700	DIODE, IN4148
CR14	94654700	DIODE, IN4148
CR15	94654700	DIODE, IN4148
CR16	94654700	DIODE, IN4148
CR17	94654700	DIODE, IN4148
CR18	94654700	DIODE, IN4148
CR19	94654700	DIODE, IN4148
CR20	94654700	DIODE, IN4148
CR21	94654700	DIODE, IN4148
CR22	94654700	DIODE, IN4148
CR23	94654700	DIODE, IN4148
CR24	94654700	DIODE, IN4148

INDEX NO.	EQUIPMENT PART NUMBER	ITEM DESCRIPTION
		CAPACITORS
C1	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C2	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C3	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C4	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C5	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C6	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C7	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C8	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C9	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C10	24516125	CAP, FXD, 0.00033 UF, 50WVDC
C11	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C12	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C13	95817072	CAP, ELECT, 1.0 UF, 15WVDC
C14	24561301	CAP, FXD, .01 UF, 25WVDC
C15	94685347	CAP, ELECT, 10 UF, 20V
C16	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C17	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C18	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C19	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C20	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C21	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C22	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C23	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C24	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C25	94690312	CAP, FXD, 0.0056 UF, 100WVDC (USED ON TYPE 5214 BOARD)
C25	94690314	CAP, FXD, 0.0082 UF, 100WVDC (USED ON TYPE 5256 BOARD)
C25	94690319	CAP, FXD, 0.022 UF, 100WVDC (USED ON TYPE 5257 BOARD)
C25	94690312	CAP, FXD, 0.0056 UF, 100WVDC (USED ON TYPE 5299 BOARD)
C26	94690312	CAP, FXD, 0.0056 UF, 100WVDC (USED ON TYPE 5214 BOARD)
C26	94690314	CAP, FXD, 0.0082 UF, 100WVDC (USED ON TYPE 5256 BOARD)
C26	94690319	CAP, FXD, 0.022 UF, 100WVDC (USED ON TYPE 5257 BOARD)
C28	94690312	CAP, FXD, 0.0056 UF, 100WVDC (USED ON TYPE 5299 BOARD)
C27	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C28	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C29	94685320	CAP, ELECT, 0.47 UF, 35V
C30	24501720	CAP, FXD, 0.00015 UF, 50WVDC
C31	94685320	CAP, ELECT, 0.47 UF, 35V
C32	24510413	CAP, FXD, 0.00039 UF, 50WVDC
C33	24510413	CAP, FXD, 0.00039 UF, 50WVDC
C34	24561301	CAP, FXD, .01UF, 25WVDC
C35	24561301	CAP, FXD, .01UF, 25WVDC
C36	24561301	CAP, FXD, .01UF, 25WVDC
C37	24561301	CAP, FXD, .01UF, 25WVDC
C38	24561301	CAP, FXD, .01UF, 25WVDC
C39	24561301	CAP, FXD, .01UF, 25WVDC
C40	24561301	CAP, FXD, .01UF, 25WVDC
C41	24561301	CAP, FXD, .01UF, 25WVDC
C42	24561301	CAP, FXD, .01UF, 25WVDC
C43	24561301	CAP, FXD, .01UF, 25WVDC
C44	24561301	CAP, FXD, .01UF, 25WVDC
C45	24561301	CAP, FXD, .01UF, 25WVDC
C46	24561301	CAP, FXD, .01UF, 25WVDC
C47	24561301	CAP, FXD, .01UF, 25WVDC
C48	24561301	CAP, FXD, .01UF, 25WVDC
C49	24561301	CAP, FXD, .01UF, 25WVDC

INDEX NO.	EQUIPMENT PART NUMBER	ITEM DESCRIPTION
		RESISTORS
R1	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R2	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R3	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R4	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R5	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R6	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R7	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R8	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R9	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R10	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R11	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R12	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R13	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R14	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R15	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R16	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R17	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R18	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R19	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R20	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R21	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R22	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R23	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R24	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R25	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R26	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R27	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R28	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R29	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R30	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R31	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R32	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R33	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R34	24500063	RES, FXD, 1.0K OHMS, 1/4W, 5%
R35	24500063	RES, FXD, 1.0K OHMS, 1/4W, 5%
R36	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R37	24500063	RES, FXD, 1.0K OHMS, 5%
R38	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R39	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R40	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R41	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R42	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R43	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R44	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R45	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R46	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R47	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R48	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R49	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R50	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R51	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R52	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R53	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R54	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R55	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R56	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R57	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R58	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R59	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R60	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R61	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R62	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R63	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R64	95856172	RES, FXD, 619 OHMS, 1/4W, 1%
R65	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R70	95855109	POTENTIOMETER, CERMET, TRIMMER
R71	95856285	RES, FXD, 9310 OHMS, 1/4W, 1%
R72	95855108	POTENTIOMETER, CERMET, TRIMMER
R73	95856267	RES, FXD, 6040 OHMS, 1/4W, 1% (USED ON TYPE 5214, 5257 & 5299 BDS)
R73	95856265	RES, FXD, 5760 OHMS, 1/4W, 1% (USED ON TYPE 5256 BDS)
R78	95856279	RES, FXD, 8060 OHMS, 1/4W, 1%
R79	95856317	RES, FXD, 20K OHMS, 1/4W, 1%
R80	24500063	RES, FXD, 1.0K OHMS, 1/4W, 5%
R81	24500063	RES, FXD, 1.0K OHMS, 1/4W, 5%
R82	24500063	RES, FXD, 1.0K OHMS, 1/4W, 5%
R83	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R84	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R87	24500063	RES, FXD, 1.0K OHMS, 1/4W, 5%
R88	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R89	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R90	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R91	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R92	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R93	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R94	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R95	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R96	95856212	RES, FXD, 1620 OHMS, 1/4W, 1%
R97	24500063	RES, FXD, 1.0K OHMS, 1/4W, 1%
R98	24500063	RES, FXD, 1.0K OHMS, 1/4W, 1%

TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

ELBIT COMPUTERS LTD A SUBSIDIARY OF CONTROL DATA		CODE IDENT.	SHEET 3	WL	DOCUMENT No. 89805300	REV. 01

~~CONDUCTOR~~ PAIR IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION		ACCESS FIND No.	REMARKS	
11	5	24	YEL	SEE ASSY. DWG.	27	TAPE	1,2	T	J2	12	WRITE DATA 5	WH/YW
			WHT		28			16	J2		GND	
12			BRN		29			P	~~J3~~ J2		~~READ~~ WRITE DATA 2	WH/GN
			WHT		30			13			GND	
13			BLU		31			10 18	J3		READ DATA 7	WH/BL
			WHT		32			V	J3		GND	
14			GRN		35			R	J2		WRITE DATA 3	WH/SL
			WHT		36			14			GND	
15			VIO		37			M			WRITE DATA 0	WH/BN
			WHT		38			11	J2		GND	
16			ORN		39			4	J3		READ DATA 1	*WH/BRN
			BLU		40			D			GND	
17			RED		41			3			READ DATA 0	WH/RD
			BLU		42			C	J3		GND	
18			YEL		43			N ~~M~~	J2		WRITE DATA 1	WH/OR
			BLU		44			12			GND	
19			BRN		45			C			WRITE AMPLIFIER RESET	WH/YW
			BLU		46			3			GND	
20			GRN		49			A			WRITE DATA STROBE	WH/BL
			BLU		50			1	J2		GND	

BN

RD

290 287 288 285 82 81 286 295 293

ET-5103

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ELBIT COMPUTERS LTD
A SUBSIDIARY OF
RONSON DATA

CODE IDENT.

SHEET 2

WL

DOCUMENT No. 89805300

REV. 02

TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

PAIR ~~CONDUCTOR~~ IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION		ACCESS FIND No.	REMARKS
1	5	24	WHT	SEE ASSY. DWG.	3	TAPE	12	2	J3	12	READ DATA STROBE WH/BN 89
			BLK		4			B			GND
2			ORN		5			1		✓	READ DATA PARITY WH/RD 80
			BLK		6			A	J3		GND
3			RED		9			U	J2	✓	WRITE DATA ~~6~~ WH/YL 291
			BLK		10			17	J2		GND
4			YEL		11			9	J3		READ DATA 3 WH/GN (84) 85
			BLK		12			K			GND
5			BRN		13			8			READ DATA 2 WH/BL (83) 86
			BLK		14			J			GND
6			BLU		15			14			READ DATA 4 WH/UL (85) 84
			BLK		16			R			GND
7			GRN		17			15			READ DATA 5 WH/SL (86) 83
			BLK		18			S	J3		GND (BN)
8			VIO		19			V	J2		WRITE DATA 7 WH/BK 292
			BLK		20			18			GND (BY)
9			ORN		21			S			WRITE DATA 4 WH/BN 289
			WHT					15	J2		GND
10			RED		25			17	J3		READ DATA 6 WH/OR 87
			WHT		26			U	J3		GND

81-5103

PRINTED IN ISRAEL

89769500 01

3-3

ELBIT COMPUTERS LTD
A SUBSIDIARY OF
CONTROL DATA

CODE IDENT. | SHEET 4 | WL | DOCUMENT No. 89805300 | REV. 01

TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

PAIR ~~CONDUCTOR~~ IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION		ACCESS FIND No.	REMARKS
21	5	24	VIO	SEE ASSY. DWG.	51	TAPE	1,2	L	J2	12	WRITE DATA PARITY WH/VI
			BLU		52			10	J2		GND
22			GRN		53			H	J1		REWIND COMMAND WH/SL
			RED		54			7			GND
23			YEL		57			D			DATA DENSITY SELECT WH/BN
			RED		58			4	J1		GND
24			BRN		59			F	J2		READ THRESHOLD WH/RD
			RED		60			6	J2		GND
25			ORN		-			L	J1		SPARE OFF LINE
			RED		-			10			GND
26			VIO		-			N			REWINDING
			RED		-			12	J1		GND
27			YEL		-			10	J3		NRZ
			GRN		-			L			GND
28			ORN		-			11			7TK
			GRN		-			M	J3		SPARE GND
29			VIO		-			-			NOT USED
			GRN		-			-			
30			BRN		-			-			
			GRN		-			-			NOT USED

TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

ELBIT COMPUTERS LTD A SUBSIDIARY OF CONTROL DATA		CODE IDENT.	SHEET 5	WL	DOCUMENT No. 89805300	REV. 02

PAIR CONDUCTOR IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION		ACCESS FIND No.	REMARKS
31	5	24	VIO	SEE ASSY. DWG.	—	TAPE	1,2	-		12	NOT USED
		↕	BRN		-	↕		-			↕
32			ORN		-			-			
			BRN		-			-			
33			YEL		-			-			
		24	BRN		-	TAPE		-			NOT USED
1	6	22	BRN	SEE ASSY. DWG.	3	UPPER	1,2	R	J1	12	LOAD POINT WH/BN (BR) 93
		↕	BLK		4	↕		14	↕		GND
2			RED		9			M			ON LINE WH/YL 95
			BLK		10			11			GND
3			ORN		13			E			SYNC REVERSE COM WH/BL 300
			BLK		14			5			GND
4			YEL		17	↕		C	↕		SYNC FWD COM WH/SL 294
		22	BLK		18	UPPER		3	J1		GND

ELBIT COMPUTERS LTD
A SUBSIDIARY OF
CONTROL DATA

CODE IDENT.

SHEET 6

WL

DOCUMENT No. 89805300

REV. 02

TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

PAIR CONDUCTOR IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION		ACCESS FIND No.	REMARKS	
5	6	22	GRN	SEE ASSY. DWG.	19	UPPER	1,2	18	J1	12	SELECT 2 WH/BN	282
			BLK		20			8			GND	
6			BLU		21			A			SELECT 1 WH/BN	281
			BLK		22			8			GND	
7			VIO		27			J			SELECT 0 WH/YW	280
			BLK		28			8			GND	
8			GRY		29			P			FILE PROTECT WH/GN	91
			BLK		30			13			GND	
9			WHT		33			U			END OF TAPE WH/VL	94
			BLK		34			17			GND	
10			RED		37			K			SET WRITE STATUS WH/BN	298
			BRN		38			9			GND	
11			ORN		43			T			READY WH/OR	92
			BRN		44			16			GND	
12			YEL		45			F			DATA DENSITY IND WH/YW	NU
			BRN		46			6			GND	
13			GRN		49			V			SELECT 3 WH/BL	283
			BRN		50			8			GND	
14			BLU		-			S			+5V SPARE	TWISTED PAIR
		22	BRN		-	UPPER		S	J1		+5V SPARE	

BN BN BN

ELBIT COMPUTERS LTD
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CODE IDENT. | SHEET 7 | WL | DOCUMENT No. 89805300 | REV. 02

TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

~~PAIR CONDUCTOR~~ IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION	ACCESS FIND No.	REMARKS
15	6	22	V10	SEE ASSY. DWG.	-	UPPER	1,2	-	12	NOT USED
			BRN		-			-		
16			GRY		-			-		
			BRN		-			-		
17			WHT		-			-		
			BRN		-			-		
18			ORN		-			-		
			RED		-			-		
19			YEL		-			-		
		22	RED		-	UPPER		-		NOT USED

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CODE IDENT.

SHEET 2

WL

DOCUMENT No. 89805300

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TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

PAIR ~~CONDUCTOR~~ IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION		ACCESS FIND No.	REMARKS
1	5	24	WHT	SEE ASSY. DWG.	3	TAPE	12	2	J3	12	READ DATA STROBE
			BLK		4			B			GND
2			ORN		5			1			READ DATA PARITY
			BLK		6			A	J3		GND
3			RED		9			U	J2		WRITE DATA 6
			BLK		10			17	J2		GND
4			YEL		11			9	J3		READ DATA 3
			BLK		12			K			GND
5			BRN		13			8			READ DATA 2
			BLK		14			J			GND
6			BLU		15			14			READ DATA 4
			BLK		16			R			GND
7			GRN		17			15			READ DATA 5
			BLK		18			S	J3		GND
8			VIO		19			V	J2		WRITE DATA 7
			BLK		20			18			GND
9			ORN		21			S			WRITE DATA 4
			WHT					15	J2		GND
10			RED		25			17	J3		READ DATA 6
			WHT		26			U	J3		GND

TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

ELBIT COMPUTERS LTD A SUBSIDIARY OF CONTROL DATA		CODE IDENT.	SHEET 3	WL	DOCUMENT No. 89805300	REV. 02

PAIR ~~CONDUCTOR~~ IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION		ACCESS FIND No.	REMARKS
11	5	24	YEL	SEE ASSY. DWG.	27	TAPE	1,2	T	J2	12	WRITE DATA 5
			WHT		28			16	J2		GND
12			BRN		29			P	J3		READ DATA 2
			WHT		30			13			GND
13			BLU		31			18			READ DATA 7
			WHT		32			V	J3		GND
14			GRN		35			R	J2		WRITE DATA 3
			WHT		36			14			GND
15			VIO		37			M			WRITE DATA 0
			WHT		38			11	J2		GND
16			ORN		39			4	J3		READ DATA 1 *
			BLU		40			D			GND
17			RED		41			3			READ DATA 0
			BLU		42			C	J3		GND
18			YEL		43			M	J2		WRITE DATA 1
			BLU		44			12			GND
19			BRN		45			C			WRITE AMPLIFIER RESET
			BLU		46			3			GND
20			GRN		49			A			WRITE DATA STROBE
			BLU		50			1	J2		GND

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TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

PAIR ~~CONDUCTOR~~ IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION		ACCESS FIND No.	REMARKS
21	5	24	VIO	SEE ASSY. DWG.	51	TAPE	1,2	L	J2	12	WRITE DATA PARITY
			BLU		52			10	J2		GND
22			GRN		53			H	J1		REWIND COMMAND
			RED		54			7			GND
23			YEL		57			D			DATA DENSITY SELECT
			RED		58			4	J1		GND
24			BRN		59			F	J2		READ THRESHOLD
			RED		60			6	J2		GND
25			ORN		-			L	J1		SPARE
			RED		-			10			
26			VIO		-			N			
			RED		-			12	J1		
27			YEL		-			10	J3		
			GRN		-			L			
28			ORN		-			11			
			GRN		-			M	J3		SPARE
29			VIO		-			-			NOT USED
			GRN		-			-			
30			BRN		-			-			
			GRN		-			-			NOT USED

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TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

ELBIT COMPUTERS LTD A SUBSIDIARY OF CONTROL DATA		CODE IDENT.	SHEET 5	WL	DOCUMENT No. 89805300	REV. 02

PAIR CONDUCTOR IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION		ACCESS FIND No.	REMARKS
31	5	24	V10	SEE ASSY. DWG.	—	TAPE	1,2	-		12	NOT USED
		↕	BRN		-	↕		-			↕
32			ORN		-			-			
			BRN		-			-			
33			YEL		-			-			
		24	BRN		-	TAPE		-			NOT USED
1	6	22	BRN	SEE ASSY. DWG.	3	UPPER	1,2	R	J1	12	LOAD POINT
		↕	BLK		4	↕		14	↕		GND
2			RED		9			M			ON LINE
			BLK		10			11			GND
3			ORN		13			E			SYNC REVERSE COM
			BLK		14			5			GND
4			YEL		17	↕		C	↕		SYNC FWD COM
		22	BLK		18	UPPER		3	J1		GND

ELBIT COMPUTERS LTD
A SUBSIDIARY OF
CONTROL DATA

CODE IDENT.

SHEET 6

WL

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REV. 02

TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

PAIR CONDUCTOR IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION		ACCESS FIND No.	REMARKS
5	6	22	GRN	SEE ASSY. DWG.	19	UPPER	1,2	18	J1	12	SELECT 2
			BLK		20			8			GND
6			BLU		21			A			SELECT 1
			BLK		22			8			GND
7			VIO		27			J			SELECT 0
			BLK		28			8			GND
8			GRY		29			P			FILE PROTECT
			BLK		30			13			GND
9			WHT		33			U			END OF TAPE
			BLK		34			17			GND
10			RED		37			K			SET WRITE STATUS
			BRN		38			9			GND
11			ORN		43			T			READY
			BRN		44			16			GND
12			YEL		45			F			DATA DENSITY IND
			BRN		46			6			GND
13			GRN		49			V			SELECT 3
			BRN		50			8			GND
14			BLU		-			S			+5V SPARE } TWISTED PAIR
		22	BRN		-	UPPER		S	J1		+5V SPARE }

TABLE 9-1. EXTERNAL CABLE WIRE LIST (CONT'D)

ELBIT COMPUTERS LTD A SUBSIDIARY OF RONTBORDATA		CODE IDENT.	SHEET 7	WL	DOCUMENT No. 89805300	REV. 02

~~BAIR CONDUCTOR~~ IDENT.	FIND No.	GAUGE (REF.)	COLOR (REF.)	LENGHT (APPROX.)	CONTINENTAL ORIGIN		ACCESS FIND No.	ELCO DESTINATION	ACCESS FIND No.	REMARKS
15	6	22	V10	SEE ASSY. DWG.	-	UPPER	1,2	-	12	NOT USED
			BRN		-			-		
16			GRY		-			-		
			BRN		-			-		
17			WHT		-			-		
			BRN		-			-		
18			ORN		-			-		
			RED		-			-		
19			YEL		-			-		
		22	RED		-	UPPER		-		NOT USED

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