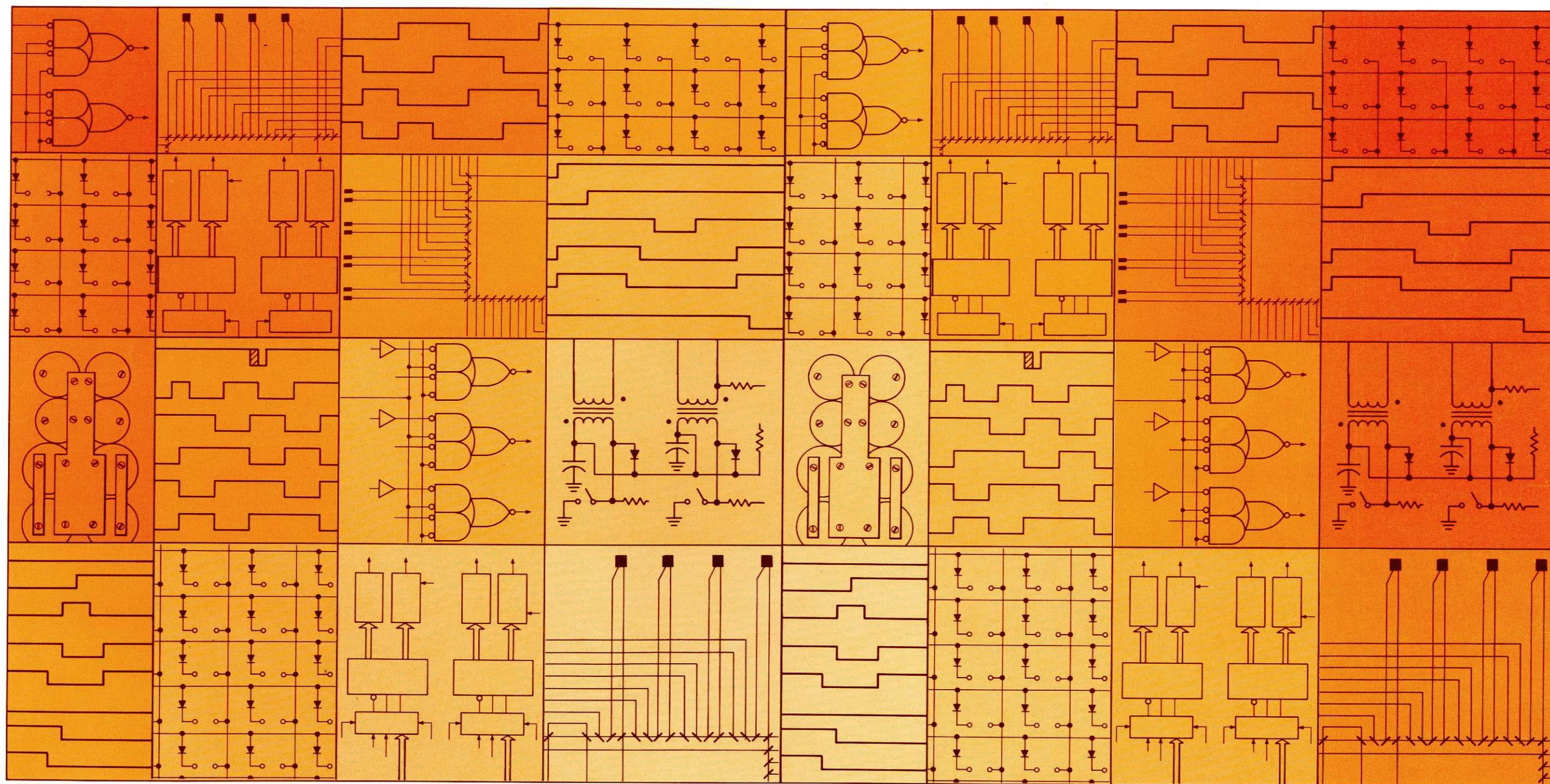


pdp8/e
pdp8/f & pdp8/m

TA8-Ø
cassette interface
engineering drawings



digital

TA8-~~Ø~~
cassette interface
engineering drawings

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

SEQUENCE

SEQUENCE

DRAWING DIRECTORY	B-DD-TA8-Ø
PWR WIRING & CABLE CONF.	C-IC-TA8-Ø-1
CABINET CONFIGURATION	C-AR-TA8-Ø-Ø
PARTS LIST	A-PL-TA8-Ø-Ø
ACCESSORY LIST	A-AL-TA8-Ø-4
PARTS LIST	A-PL-TA8-E-Ø
INTERFACE MODULE	D-CS-M8331-Ø
CABLE I/O	C-UA-BCØ8R-Ø-Ø
CASSETTE SYSTEM INTERFACE	A-SP-TA8-Ø-3
DRAWING DIRECTORY	B-DD-TU6Ø-Ø
FIELD INSTALLATION AND ACCEPTANCE PROCEDURE	A-SP-TA8-Ø-6

UNIT VARIATIONS

PRINT SET TYPE

VARIATION

TITLE

TA8-AA

TA8-E + TU60-AA

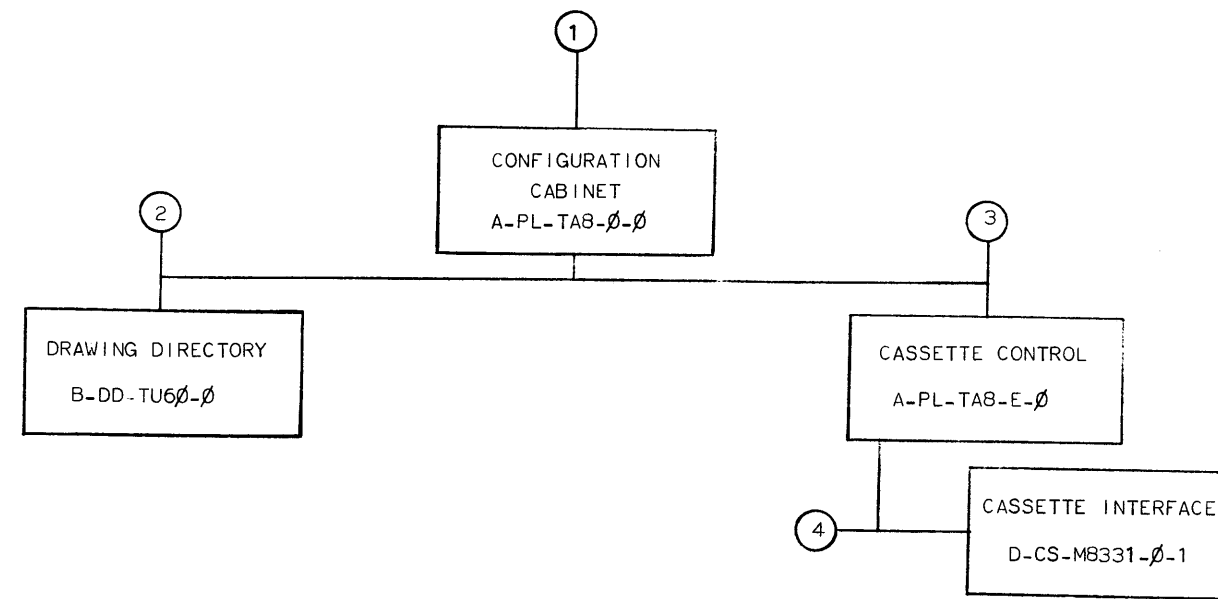
TA8-AB

TA8-E + TU60-AB

1 x

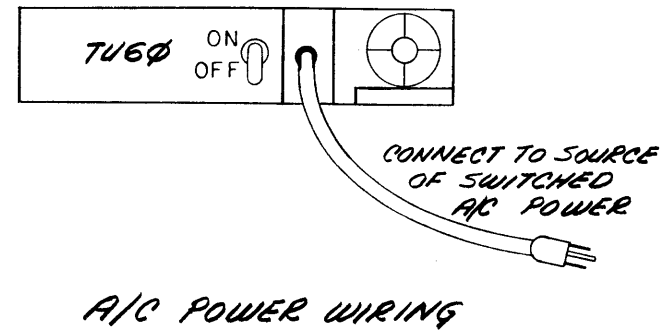
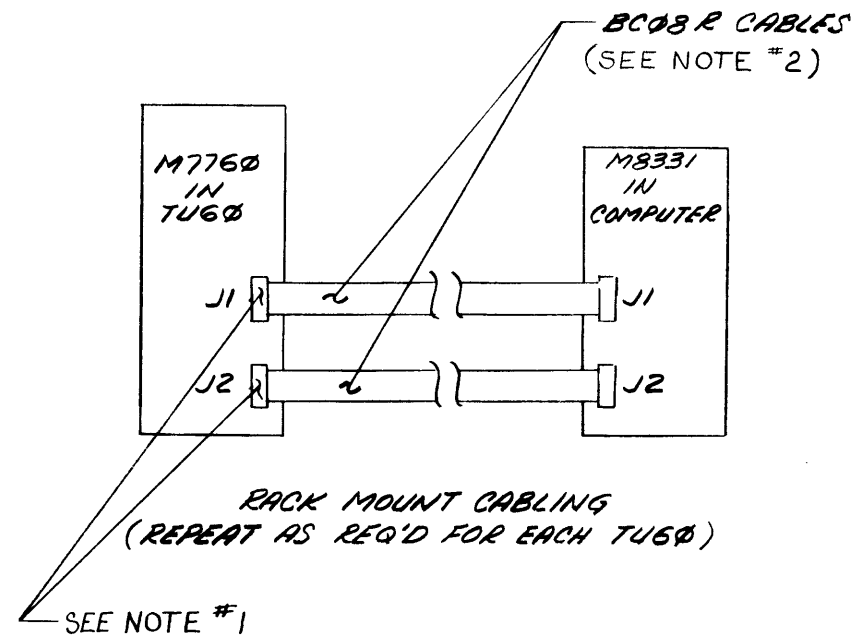
	X
--	---

REVISIONS				USED ON OPTION/MODEL	DRN.	DATE	TITLE					
DATE	CHG. NO.	REV			ROBICHAUD	7/22/78						
1/73	TA8-1	A			CHK'D.	DATE	CASSETTE SYSTEM					
					FERGUSON	8/31/78						
					PROJ ENG.	DATE						
					PROD.	DATE						
8/73	TA8-2	B			FIELD SERV.	DATE	SIZE	CODE	NUMBER			REV
							B	DD	TA8-0			B
					SHEET	1 OF 3	DIST					



TITLE	SHEET 2 OF 3	SIZE	CODE	NUMBER	REV
CASSETTE SYSTEM (TAB-E)		B	DD	TAB-Ø	B

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1973



NOTES:

1. INSTALL CONNECTOR SO THE LETTERING ON THE CONNECTOR FACES DOWN.
2. ON EACH END OF CABLE, LABEL J1 OR J2 AND "THIS SIDE UP" AS REQUIRED.

REV	DATE	BY	CHK'D	DATE
A	1-15-73	L.NARHI		
B	5-24-73	L.NARHI		

FIRST USED ON OPTION/MODEL TAB-E	QTY.	DESCRIPTION	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS .XXX = .005 .XX = .02 .X = .1	ANGLES ±0° 30'	ENG PROJ. ENG. PROD.	DATE 7-25-72 8-1-72 9-7-72	DATE
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓		TITLE POWER WIRING AND CABLE CONFIGURATION (TAB-E)		
MATERIAL NEXT HIGHER ASSY.		SIZE CODE C IC		
FINISH SCALE SHEET 1 OF 1		NUMBER TAB-0-1		
		REV B		

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NOTES:

1. ONE (1) M8331 (TAB-E) MODULE REQ'D FOR EACH TU60. FOR TWO (2) OR MORE TU60'S, CHANGE IOT CODES PER DRAWING D-C5-M8331-0-1 FOR EACH TU60 BEYOND #1
2. TWO (2) BC08R-10 CABLES REQ'D PER TU60.
3. ~~FOR TABLE-TOP TU60'S ONE (1) 7008624 IS REQ'D PER TU60.~~

	TU60 #6
	TU60 #5
	TU60 #4
	TU60 #3
TU60 #8	TU60 #2
TU60 #7	TU60 #1
	COMPUTER PDP 8/E, FORM
	EXPANDER BOX

FRONT VIEW

REV.	A
TAB-00001	1-12-73
L. NARHI	
TAB-00002	2-29-73
L. NARHI	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TAB-E				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DATE 7-25-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
DECIMALS .XXX = .005 .XX = .02 .X = .1	CHK'D 9-1-72	DATE 9-1-72	TITLE CONFIGURATION, CABINET (TAB-E)	
ANGLES ±0° 30'	ENG. 9-1-72	DATE 9-1-72	REV. B	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	PROJ. ENG. 9-1-72	DATE 9-1-72	SIZE CODE C AR	
MATERIAL	PROD. 9-1-72	DATE 9-1-72	NUMBER TAB8-0-0	
FINISH	NEXT HIGHER ASSY. 9-01-TAB-0	SCALE NONE	DIST.	
	SHEET 1 OF 1			

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY	L.NARHI	CHECKED	SECTION
DATE	7/6/72	DATE	1
ENG	L.NARHI	PROD <i>MD</i>	ISSUED SECT.
DATE	7/6/72	DATE <i>9/1/72</i>	1

[illegible]

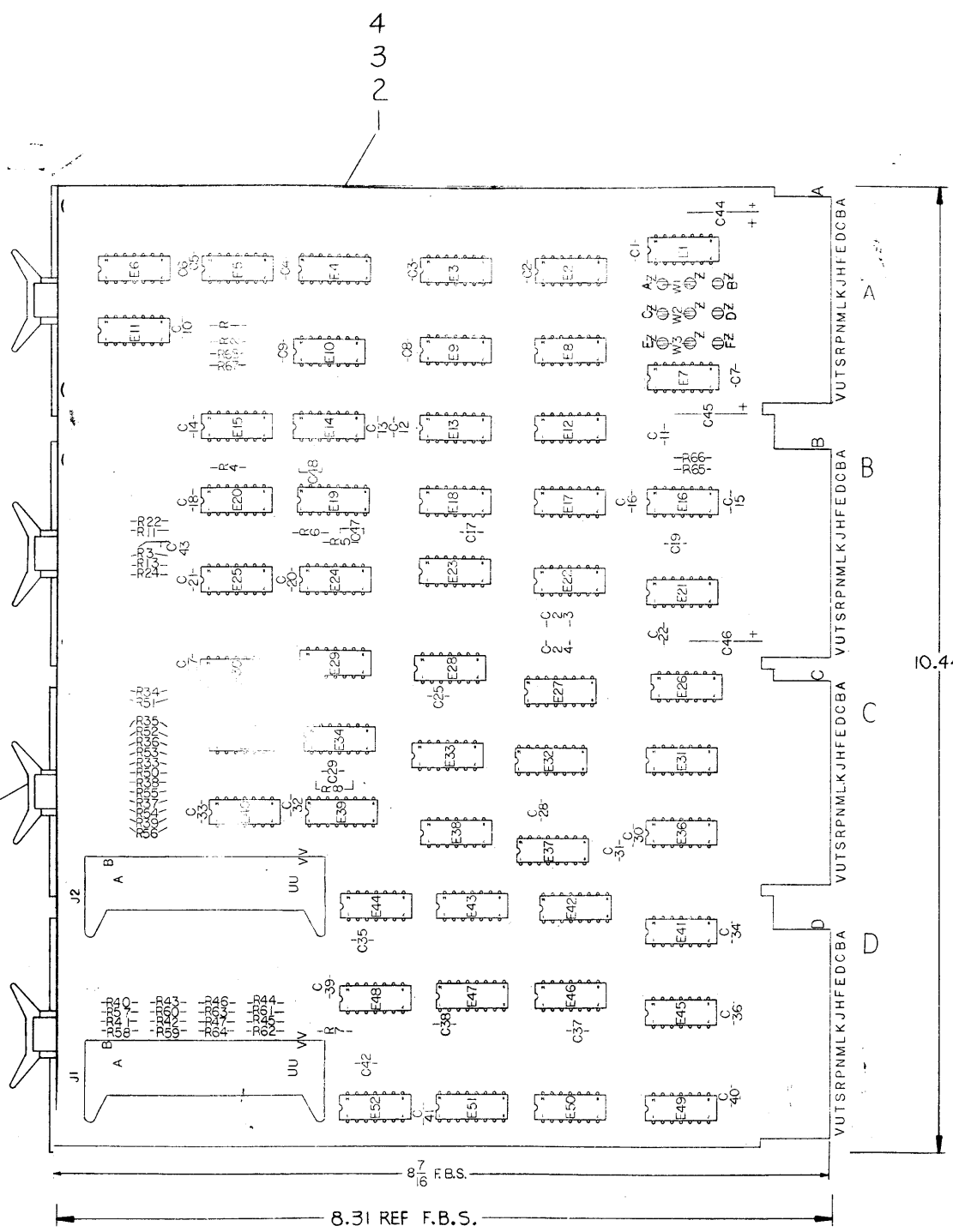
DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				LEGEND		QUANTITY / VARIATION															
ACCESSORY LIST				D DOCUMENT DN DOCUMENT CHANGE NOTICE PA PAPER TAPE ASCII PB PAPER TAPE BINARY PM PAPER TAPE READ-IN-MODE																	
MADE BY L.NARHI DATE 7-6-72		CHECKED DATE		SECTION I																	
ENG L.NARHI DATE 7-6-72		PROD M.D.CONROY DATE 9-7-72		ISSUED SECT. I																	
ITEM NO.	DWG NO. / PART NO.		DESCRIPTION			TA8-AA	TA8-AB									KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE
1	LIBKIT-Ø8-TA8EA-A-K		CASSETTE MAINDECS			1	1														
2	DEC-ØØ-TU6Ø-DB		TU6Ø, MAINTENANCE MANUAL			1	1														
3	DEC-8E-HR3B-D		PDP 8/E MAINTENANCE MANUAL - VOL 3			1	1														
4	36-11226		DEC 15Ø CASSETTES			2	2														
5	B-DD-TA8-Ø		TA8-Ø PRINT SET			1	1														
6	M8331		TA E INTERFACE MODULE			1	1														
7	BCØ8R-1Ø		INTERFACE CABLES			2	2														
8	D-UA-TU6Ø-Ø-Ø		MOUNTING HARDWARE			1	1														
9	74-1Ø69Ø		SHIPPING BRACKET			1	1														
10	12Ø9154		CHASSIS SLIDES			1	1														
	NOTE: SHIP ITEM 11		IN LIEU OF ITEM 3 UNTIL THIS MANUAL BECOMES IN																		
			ITS FINAL FORM A PART OF THE PDP-8E MAINTENANCE MANUAL VOL. 3																		
11	DEC-8E-HR3B-D-TA8-E		TA8-E MAINTENANCE MANUAL			1	1														
TITLE CASSETTE SYSTEM				ASSY. NO. / /		SIZE CODE A AL		NUMBER TA8-Ø-4								REV. B		ECO NO TA8-00002			
				SHEET 1 OF 1		DIST.															

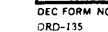
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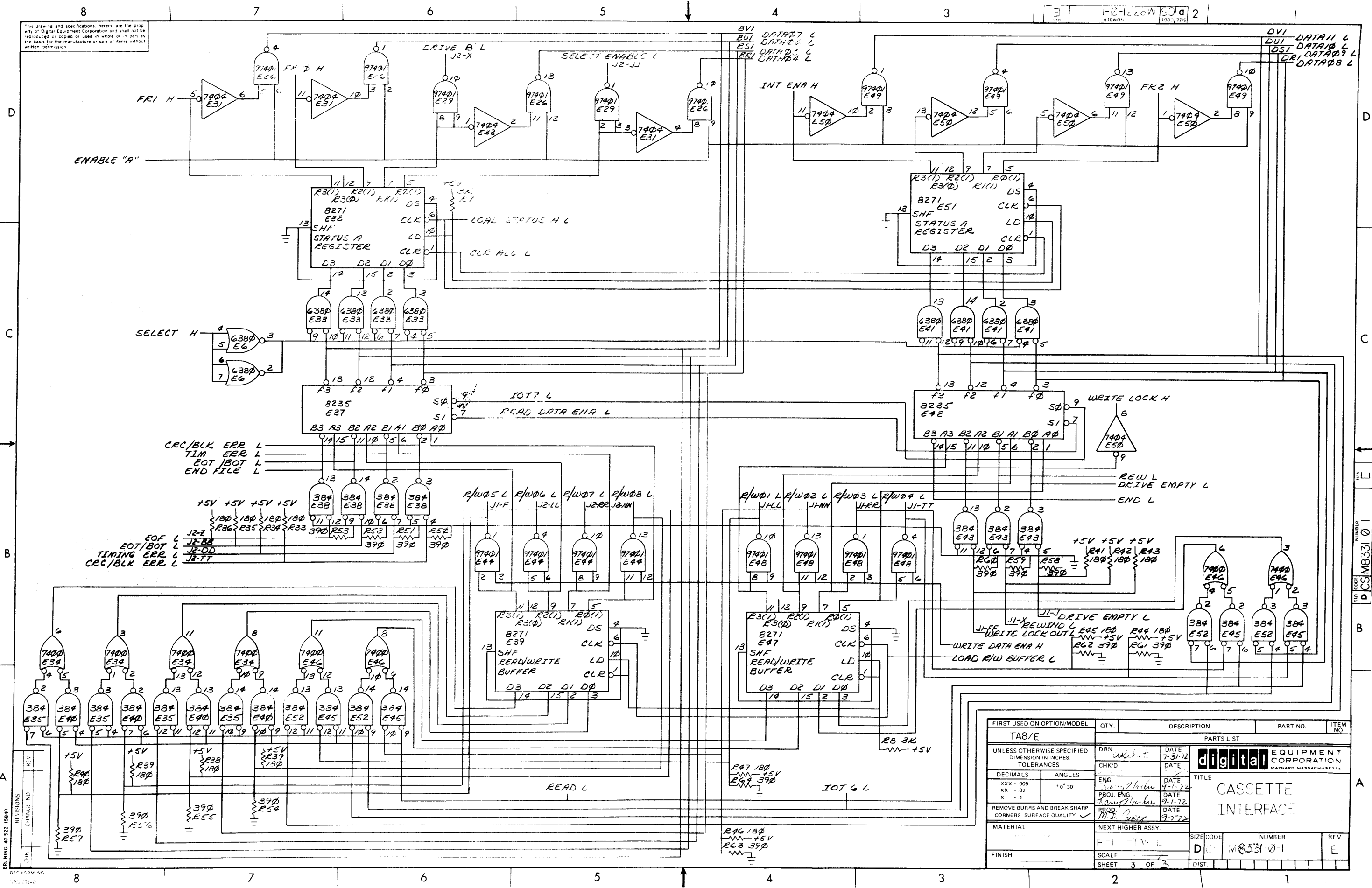
NOTES:
1. TO CHANGE IOT CODES
ARRANGE JUMPERS PER
TABLE BELOW:

IOT CODE	JUMPERS					
	A	B	C	D	E	F
70	X		X		X	
71	X		X		X	
72	X			X	X	
73	X			X		X
74		X	X		X	
75		X	X			X
76		X		X	X	
77		X		X		X

AN X INDICATES A JUMPER
INSTALLED AT THAT LOCATION







FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
TAB/E					
UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
DIMENSION IN INCHES		CHK'D	DATE		
TOLERANCES				TITLE CASSETTE INTERFACE	
DECIMALS		ENG	DATE		
ANGLES		PROJ. ENG.	DATE	SIZE CODE D	
XXX - 005		BROD	DATE		
XX - 02				NUMBER M8331-0-1	
X - 1					
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				REV. E	
MATERIAL		NEXT HIGHER ASSY.			
FINISH		SCALE		SHEET 3 OF 3	
		DIST.			

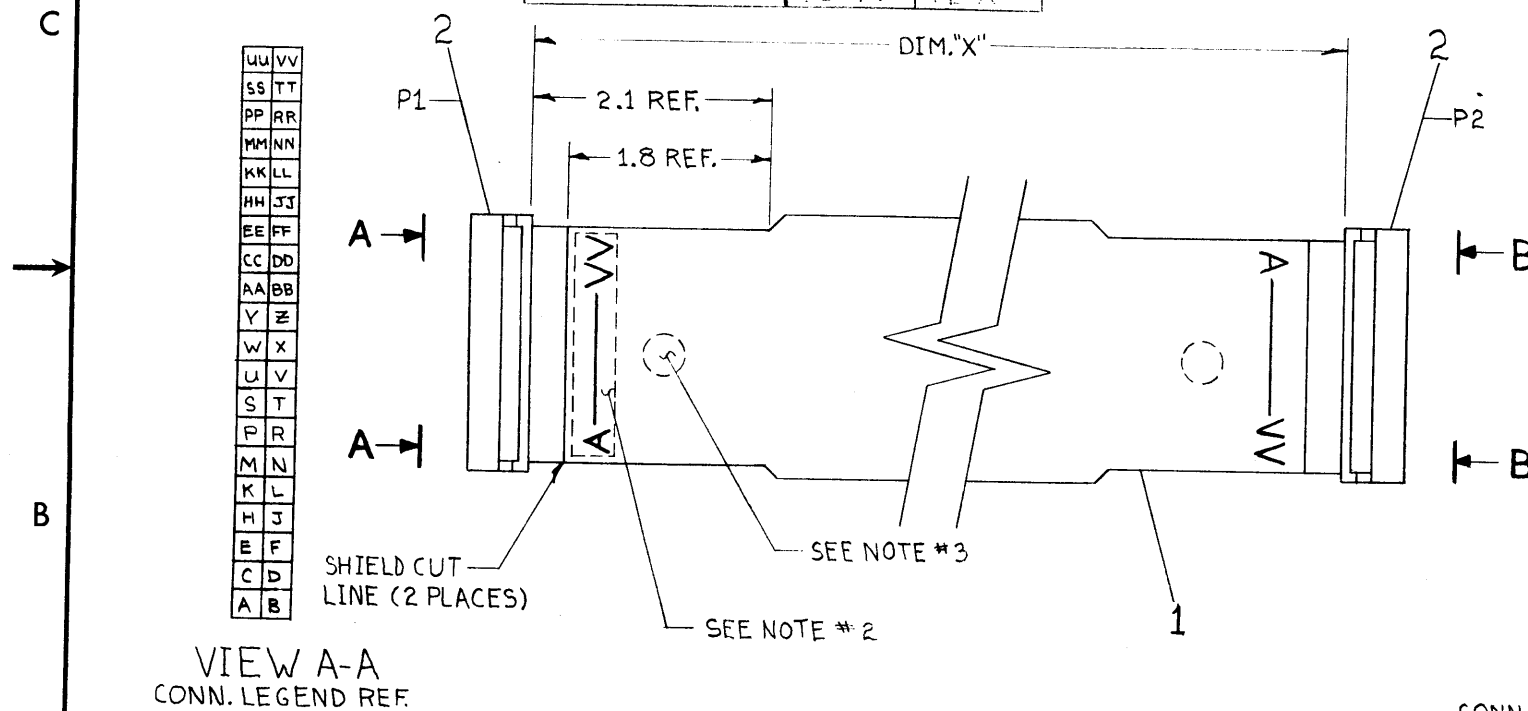
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WIRE TABLE			
FROM	TO	FROM	TO
P1-A	P2-VV	P1-Y	P2-X
P1-B	P2-UI	P1-Z	P2-W
P1-C	P2-TT	P1-AA	P2-V
P1-D	P2-SS	P1-PB	P2-U
P1-E	P2-PP	P1-CC	P2-T
P1-F	P2-PE	P1-JJ	P2-S
P1-G	P2-NN	P1-EE	P2-R
P1-H	P2-MM	P1-FF	P2-Q
P1-K	P2-LL	P1-UV	P2-N
P1-L	P2-KK	P1-JJ	P2-M
P1-M	P2-JJ	P1-UV	P2-L
P1-N	P2-II	P1-UV	P2-K
P1-O	P2-II	P1-UV	P2-J
P1-P	P2-II	P1-UV	P2-I
P1-R	P2-EE	P1-NN	P2-H
P1-S	P2-DD	P1-PP	P2-F
P1-T	P2-DD	P1-RR	P2-E
P1-U	P2-BB	P1-SS	P2-D
P1-V	P2-AA	P1-TT	P2-C
P1-W	P2-ZZ	P1-UU	P2-B
P1-X	P2-Y	P1-VV	P2-A

LEGEND		
NUMBER	DIM "X"	PRECUT LENGTH
BC08R-01	1 FT	1 FT 1.5 IN ± 1 IN
BC08R-02	2 FT	2 FT 1.5 IN ± 1 IN
BC08R-03	3 FT	3 FT 1.5 IN ± 1 IN
BC08R-04	4 FT	4 FT 1.5 IN ± 1 IN
BC08R-05	5 FT	5 FT 1.5 IN ± 1 IN
BC08R-06	6 FT	6 FT 1.5 IN ± 1 IN
BC08R-07	7 FT	7 FT 1.5 IN ± 1 IN
BC08R-08	8 FT	8 FT 1.5 IN ± 1 IN
BC08R-09	9 FT	9 FT 1.5 IN ± 1 IN
BC08R-10	10 FT	10 FT 1.5 IN ± 1 IN
BC08R-12	12 FT	12 FT 1.5 IN ± 1 IN
BC08R-20	20 FT	20 FT 1.5 IN ± 1 IN
BC08R-25	25 FT	25 FT 1.5 IN ± 1 IN
BC08R-30	30 FT	30 FT 1.5 IN ± 1 IN
BC08R-36	36 FT	36 FT 1.5 IN ± 1 IN
BC08R-42	42 FT	42 FT 1.5 IN ± 1 IN
BC08R-48	48 FT	48 FT 1.5 IN ± 1 IN
BC08R-54	54 FT	54 FT 1.5 IN ± 1 IN
BC08R-60	60 FT	60 FT 1.5 IN ± 1 IN
BC08R-75	75 FT	75 FT 1.5 IN ± 1 IN
BC08R-A0	100 FT	100 FT 1.5 IN ± 2 FT
BC08R-A3	130 FT	130 FT 1.5 IN ± 2 FT
BC08R-A6	160 FT	160 FT 1.5 IN ± 2 FT

NOTES:

1. ASSEMBLE THIS CABLE PER PROCESS SPEC #7606485-0-0.
2. CONNECTOR LEGEND IDENTIFICATION TO BE PLACED ON SHIELD SIDE OF CABLE IN THIS AREA AS SHOWN.
3. INSPECTION & TEST STAMPS TO BE PLACED AT EACH END OF THE CABLE ASSEMBLY.



VIEW A-A
CONN. LEGEND REF.

VIEW B-B
CONN. LEGEND REF.

FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES		PARTS LIST			
TOLERANCES		DRN. D.FONTAINE	DATE 8-28-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
		CHK'D. J.FLEMING	DATE 8-28-70		
DECIMALS	ANGLES	ENG. P.GARDNER	DATE 9-3-70		
.xxx = .005	±0° 30'	PROJ. ENG. P.GARDNER	DATE 9-3-70		
.xx = .02		PROD. DONALD	DATE 9-4-70		
.x = .1				TITLE BCØ8R I/O CABLE	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY √					
MATERIAL		NEXT HIGHER ASSY.			
				SIZE CODE	
FINISH		SCALE NONE		NUMBER	
		SHEET 1 OF 1		REV.	
		DIST.		J	

REV.	J
CHANGE NO.	00004
REVISED & REDRAWN	7-16-73
P. GARDNER	7-17-73

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DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 8/21/72

TA8-E CASSETTE SYSTEM INTERFACE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	CHANGE PER ECO	TA8-00001	NARHI	12/72	L Narhi	1/1/73
B	CHANGE PER ECO	TA8-00002	NARHI	8/73	L Narhi	8/31/73

ENG Larry Narhi	APPD L Narhi	SIZE A	CODE SP	NUMBER TA8-Ø-3	REV B
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ENGINEERING SPECIFICATION



CONTINUATION SHEET

TITLE TA8-E CASSETTE SYSTEM INTERFACE

1. Overall Description

The TA8-E is an interface between a PDP8/E, M or F computer and the TU6Ø cassette drives. The tape format is: 8-bit serial word, programmable block length, and up to 92K, (see graph at end of spec.) 8-bit words per cassette cartridge of the Phillips type.

2. General Description

- 2.1 The basic system consists of one TU6Ø (Dual Drive) and one interface module, the M8331, and interface cables 2-BCØ8R-10.
- 2.2 Two cassette drives are contained in one chassis.

The cassette system, TA8-E, has the following variations:

TA8-AA - M8331 module & TU6Ø-AA, Rack Mount, 115VAC
TA8-AB - M8331 module & TU6Ø-AB, Rack Mount, 23ØVAC

Jumpers on the interface card can be arranged to select IOT codes 7Ø through 77. Code 7Ø for the first TU6Ø, and code 77 for the eighth, or last TU6Ø.

- 2.3 The entire interface is contained on one 8½"quad module.
- 2.4 Operating temperature is Ø° to 55°C and 15% to 90% relative humidity, non-condensing. Power required is +5.Ø volts at 2.4 amps for the M8331, and 1.5 amp at 12ØVAC for the TU6Ø drive.

3. Specifications of Vendor Supplied Equipment

See purchase spec for applicable board components.

4. Programming

	SIZE A	CODE SP	NUMBER TA8-Ø-3	REV B
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ENGINEERING SPECIFICATION



CONTINUATION SHEET

TITLE TA8-E CASSETTE SYSTEM INTERFACE

4.1 The IOT codes for the TA8-E are as follows:

Mnemonic	Octal	Function
KCLR	67X0	Clear all. Clears Status A and B registers. See note below.
KSDR	67X1	Skip on Data flag, for either a read or a write.
KSEN	67X2	Skip on, EOT/BOT or EOF or Drive Empty or Timing Error, Block Error or Write Lock and "Write" True.
KSBF	67X3	Skip on Ready Flag.
KLSA	67X4	Load Status A from AC 4-11, clear AC, load complement Status A back into AC.
KSAF	67X5	Skip on any flag or error condition.
KGOA	67X6	Assert the contents of Status A, transfer data into the AC for a read, out of the AC into the Read/Write buffer for a write. This command has three functions: a) Causes the command in Status A register to be executed by the TU60; b) For a Read command the first KGOA causes the tape to start moving, then upon receipt of the data flag, the second KGOA loads the first byte into the AC; c) For a write command, Status A is set up for a Write, the AC is loaded with the first byte to be written and then KGOA is issued which causes the tape to move and to write the first byte on tape.
KRSB	67X7	Read Status B into AC 4-11.

SIZE	CODE	NUMBER	REV
A	SP	TA8-0-3	B

SHEET 3 OF 7

ENGINEERING SPECIFICATION



CONTINUATION SHEET

TITLE TA8-E CASSETTE SYSTEM INTERFACE

Status A register definition:

AC Bit	Function
11	Enable Interrupts
10	Not used
09	Not used
08 } 07 } 06 }	Function Register
05	Drive B 0=A, 1=B
04	Select Enable

NOTE: Upon selection of a drive, "Ready" and "EOT/BOT" flags will appear in Status B. EOT/BOT will only appear obviously, if the tape is at EOT or BOT.

Function Register

000 - Read
001 - Rewind
010 - Write
011 - Backspace to File Gap
100 - Write Gap
101 - Backspace Block Gap
110 - Read/Write CRC Character
111 - Space Forward File Gap

Status "B" Register Definition:

AC Bit	Function
11	Ready flag
10	Write lock out
09	Rewind
08	Drive empty
07	End of file flag
06	EOT/BOT
05	Timing Error
04	CRC/Block error

4.2 There are no maintenance instructions.

SIZE	CODE	NUMBER	REV
A	SP	TA8-0-3	B

SHEET 4 OF 7

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE TA8-E CASSETTE SYSTEM INTERFACE

Error Flags: These will appear at the end of the block if true, but timing error flag will be raised when it occurs. Error flags are cleared by KGOA.

Drive Empty: The bit in Status B will be a one if there is no cassette in the drive. The skip and interrupt tests will occur if the drive is empty.

EOT/BOT: This flag will be true whenever the optical sensors have detected clear leader/trailer. Bit is held false for 125 ms after a motion command to allow tape to move off clear leader/trailer.

Rewind: Will remain true as long as drive re-winding and is selected.

Write Lock Out: Bit is true in Status B if tab is missing on cassette or the Drive is empty or Drive is rewinding. Bit will not interrupt or skip unless attempting a Write command.

Ready Flag: This bit is asserted in Status B when a drive is selected and is able to accept commands from the interface. This bit is false when commands are being executed.

Data Flag: This flag appears for every byte including the two CRC bytes. Flag is cleared by KGOA. Flag timing averages 1.78 ms per flag.

4.5 There are no operator controls on the interface.

SIZE
ACODE
SPNUMBER
TA8-0-3REV
B

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE TA8-E CASSETTE SYSTEM INTERFACE

5. Interface Specifications

All signals leaving the interface going to the cassette drives are open collector Nand gates type 97401. All signals from the cassette drives are received with Untilogic gates type SP380 or equivalent. Both drivers and receivers are terminated with a 390 ohm resistor to ground and a 180 ohm resistor to +5.0 volts, at the interface end only.

The one exception is "START". This line has a 390 ohm resistor to ground at the interface and a 180 ohm resistor at the TU60, to +5 volts.

All signals to and from the cassette drive are low true levels including Status B bits. The only exception is the Read/Write level. Read is true when the level is at +3 volts. Write is true when the level is at 0 volts.

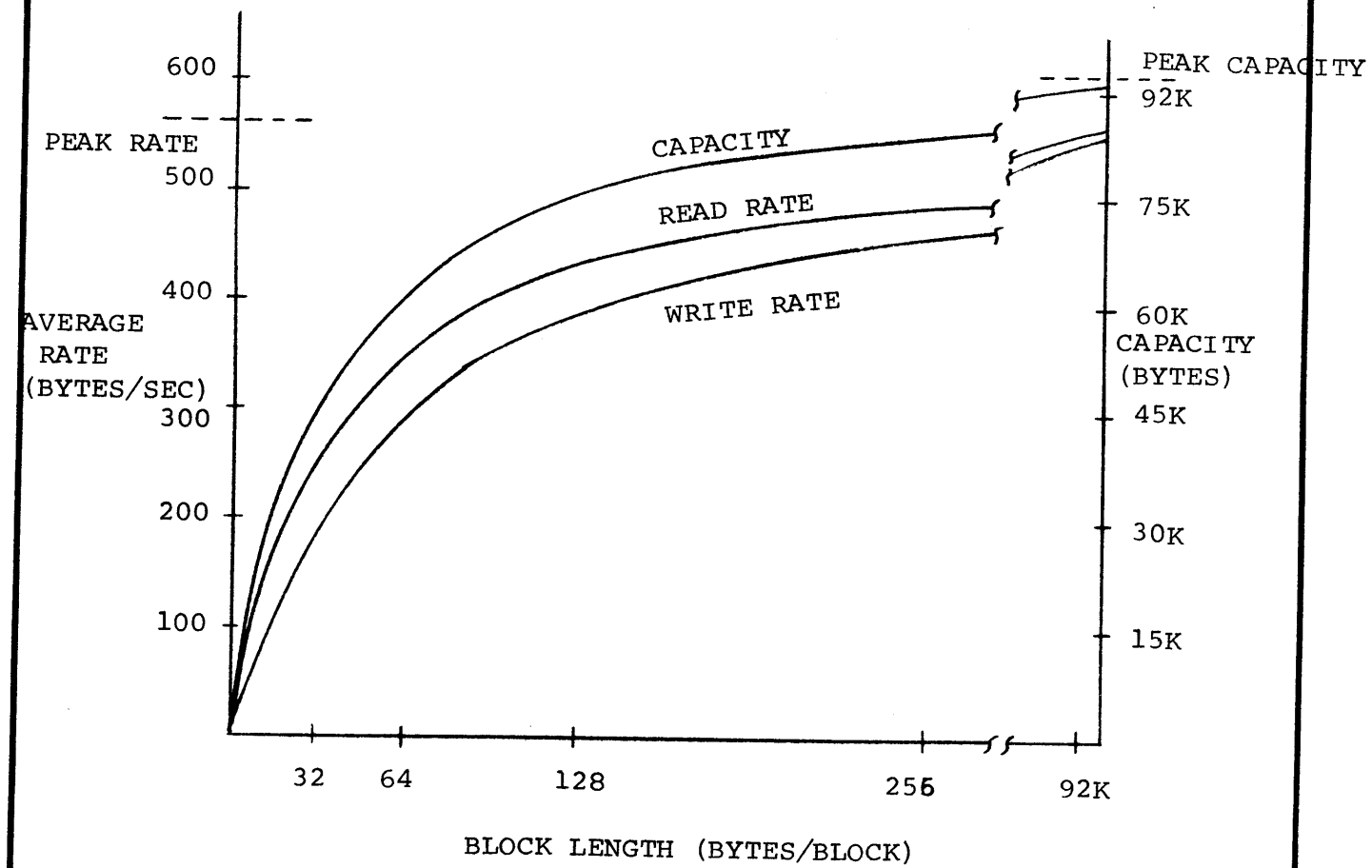
SIZE
ACODE
SPNUMBER
TA8-0-3REV
B

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE





DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

X				
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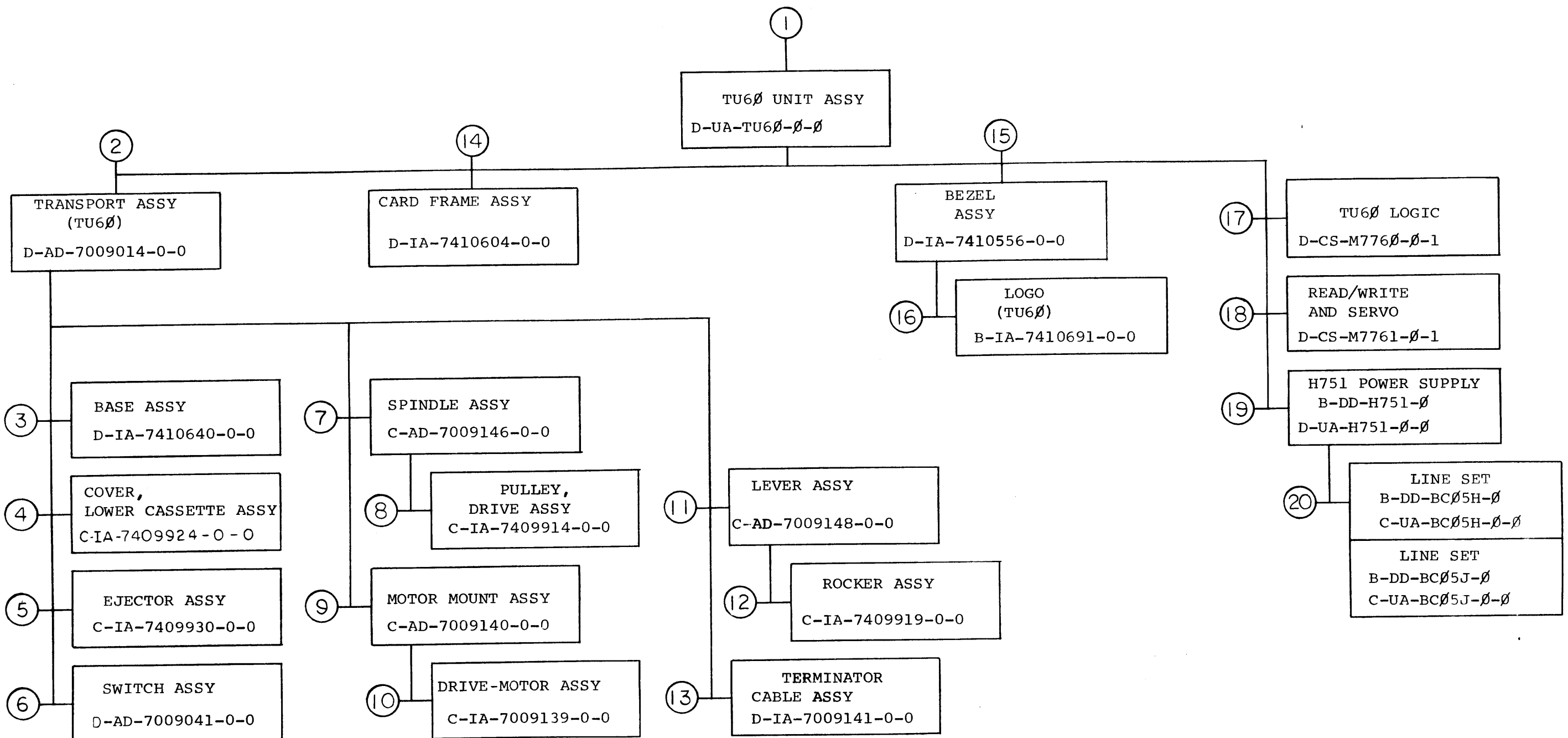
	SEQUENCE
INDEX DIRECTORY	B-DD-TU6Ø-Ø
TU6Ø LOGIC (M776Ø)	D-CS-M776Ø-Ø-1
READ/WRITE AND SERVO (M7761)	D-CS-M7761-Ø-1
TERMINATOR, CASSETTE DRIVE	D-CS-5410135-0-1
H751 POWER SUPPLY	B-DD-H751-Ø
CASSETTE DRIVE WIRING DIAGRAM	D-WD-TU6Ø-Ø-WD
TU6Ø UNIT ASSEMBLY	D-UA-TU6Ø-Ø-Ø
TU6Ø UNIT ASSEMBLY	A-PL-TU6Ø-Ø-Ø
TRANSPORT ASSEMBLY (TU6Ø)	D-AD-7009014-0-0
TRANSPORT ASSEMBLY (TU6Ø)	A-PL-7009014-0-0
BASE ASSEMBLY	D-IA-7410640-0-0
SWITCH ASSEMBLY	D-AD-7009141-0-0
SPINDLE ASSEMBLY	C-AD-7009146-0-0
MOTOR MOUNT ASSEMBLY	C-AD-7009140-0-0
DRIVE MOTOR ASSEMBLY	C-IA-7009139-0-0
LEVER ASSEMBLY	C-AD-7009148-0-0

[illegible]

REVISIONS			USED ON OPTION/MODEL		DRN.	DATE	TITLE			
DATE	CHG. NO.	REV			W. MAJOR	1/9/73	TU60 DECASSETTE			
2/73	TU60-07	A			CHK'D.	DATE				
					W. Major	1/17/73				
					PROJ ENG.	DATE				
					W. Major	1/18/73				
					PROD.	DATE				
					W. Major	1/18/73				
					FIELD SERV.	DATE				
					W. Major	1-19-73				
8/73	TU60-12	B			SHEET	1 OF 4	SIZE	CODE	NUMBER	REV
							B	DD	TU60-0	B
							DIST			

DRB 106

DEC 16--(325)--1062--1--N871



TITLE	SHEET 2 OF 4	SIZE	CODE	NUMBER	REV
TU60 DECASSETTE		B	DD	TU60-0	B

CUSTOMER PRINT SET					MECHANICAL					CUSTOMER PRINT SET					MECHANICAL							
TU6Ø-Ø					FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	TU6Ø-Ø					FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	
					4	C-IA-7409924-0-0		1	COVER, LOWER CASSETTE ASSY		X					10	C-IA-7009139-0-0		1	DRIVE-MOTOR ASSY		
						C-MD-7409905-0-0		1	COVER, LOWER CASSETTE								C-MD-7409913-0-0		1	SLEEVE, MOTOR		
						C-MD-7410541-0-0		1	PIN, SPRING, COVER, CASSETTE													
						B-MD-7410552-0-0		1	LENS													
											X						11	C-AD-7009148-0-0		1	LEVER ASSY	
																		C-MD-7409931-0-0		1	LEVER, ROCKER	
					5	C-IA-7409930-0-0		1	EJECTOR ASSY									B-MD-7409932-0-0		1	ROLLER, IDLER	
						C-MD-7409907-0-0		1	EJECTOR													
						B-MD-7410543-0-0		1	ROLLER, EJECTOR													
X					6	D-AD-7009141-0-0		1	SWITCH ASSY								12	C-IA-7409919-0-0		1	ROCKER ASSY	
						C-MD-7409926-0-0		1	BLOCK, SWITCH									C-MD-7409916-0-0		1	PLATE, ROCKER	
						C-MD-7409935-0-0		1	SPACER, MICRO SWITCH									B-MD-7409921-0-0		1	SLEEVE, ROCKER	
																		B-MD-7409922-0-0		1	SHAFT, IDLER	
X					7	C-AD-7009146-0-0		1	SPINDLE ASSY								14	D-IA-7410604-0-0		1	CARD FRAME ASSY	
						D-MD-7410509-0-0		1	COUPLING, CASSETTE DRIVE (2MM)									E-MD-7409942-0-0		1	FRAME, CARD	
						C-MD-7410692-0-0		1	BEARING, SPINDLE									C-MD-7410587-0-0		1	STAND-OFF, THREADED	
					8	C-IA-7409914-0-0		1	PULLEY, DRIVE ASSY								15	D-IA-7410556-0-0		1	BEZEL ASSY	
						C-MD-7410535-0-0		1	PULLEY, DRIVE									C-MD-7409882-0-0		1	ADAPTER, BEZEL	
						C-MD-7410527-0-0		1	SPINDLE									D-MD-7410579-0-0		1	INLAY, BEZEL	
																		D-CS-1209226-0-0		1	BEZEL 5 1/4"	
X					9	C-AD-7009140-0-0		1	MOTOR MOUNT ASSY								16	B-IA-7410691-0-0		1	LOGO (TU6Ø)	
						C-MD-7409915-0-0		1	PIVOT, MOTOR									A-SS-7410691-0-1		1	SILK SCREEN	
						C-MD-7409910-0-0		1	MOUNT, MOTOR													
																	19	B-DD-H751-Ø		3	H751 POWER SUPPLY	
																		D-UA-H751-Ø-Ø		2	H751 POWER SUPPLY	
																		E-IA-5310191-0-0		1	CHASSIS, POWER SUPPLY	

CUSTOMER PRINT SET CODES	X = PRINT OF DOCUMENT INCLUDED IN PRINT SET C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED	TITLE	TU6Ø DECASSETTE		SHEET 4 OF 4	SIZE	CODE	NUMBER	REV
						B	DD	TU6Ø-Ø	B

8

7

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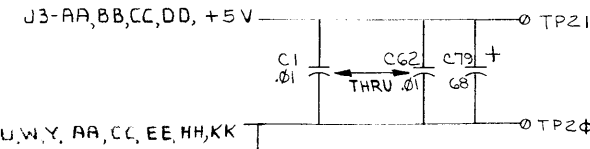
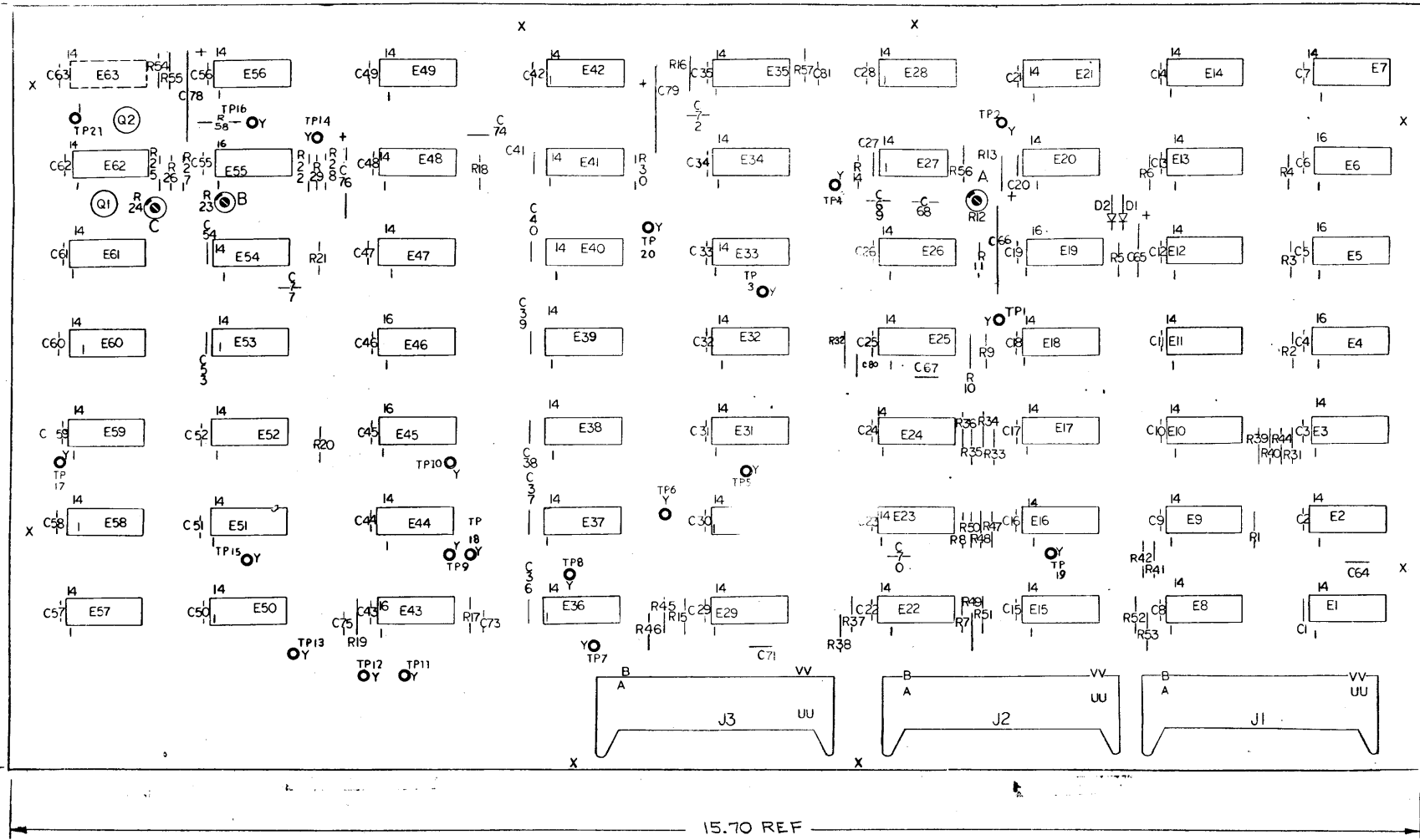
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NOTES:

1. UNLESS OTHERWISE SPECIFIED:
RESISTANCE IS IN OHMS
CAPACITANCE IS IN MICROFARADS



- J1 A, B, C, E, H, K, M, P, S, U, W, Y, AA, CC, EE, HH, KK, MM, PP, SS, UU, VV.
J2 A, B, C, E, H, K, M, P, S, U, W, Y, AA, CC, EE, HH, KK, MM, PP, SS, UU, VV.
J3 M, N, P, R

IC TYPE	GND	+5V
7435	8	14
8271	8	16
380	1	8
74193	8	16
74123	8	16
IC TYPE	GND	+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE.		
IC PIN LOCATIONS		

BRUNING 40-522 15699

DEC FORM NO. DRD 135A

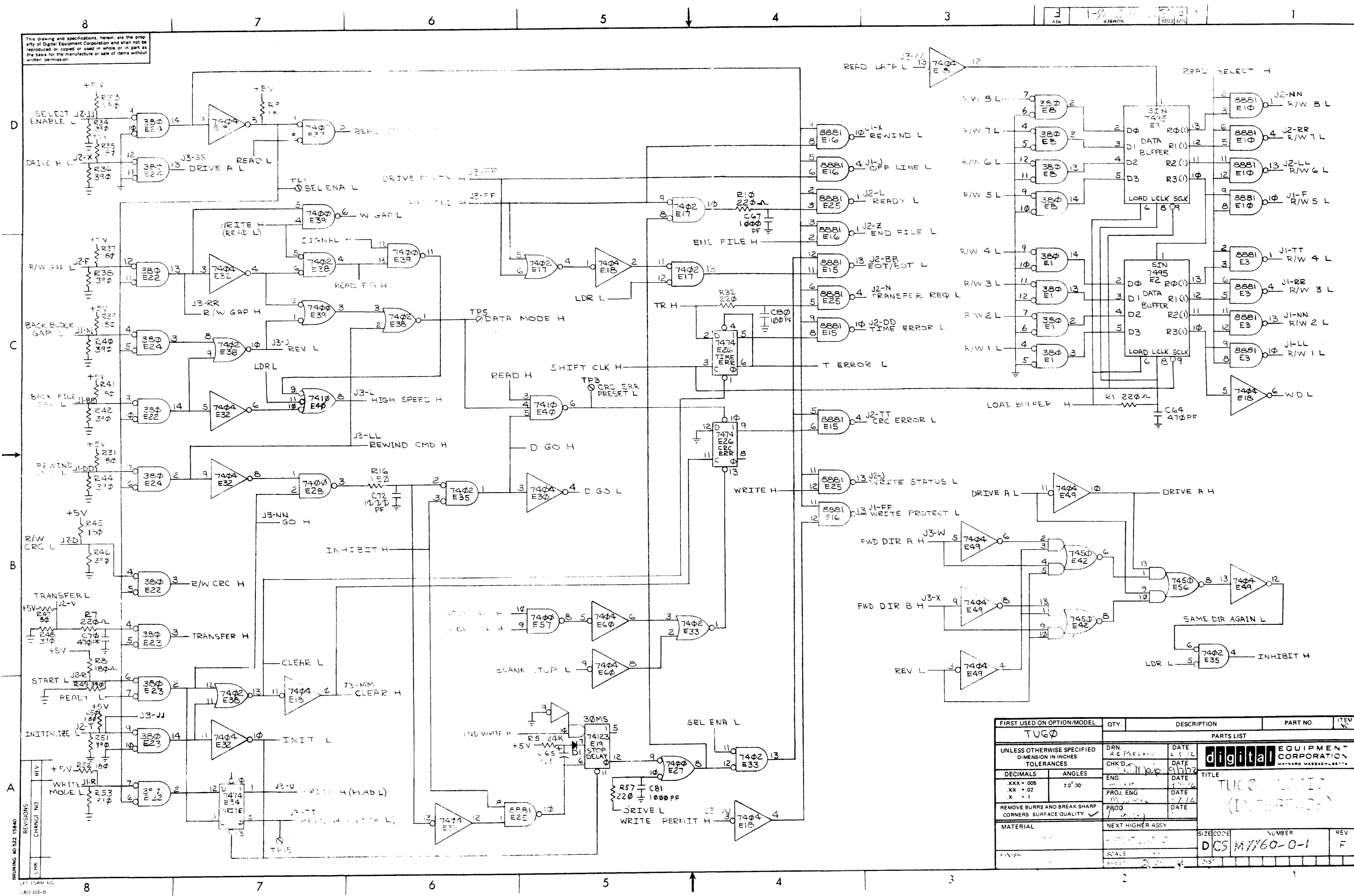
COMPONENT SUBSTITUTION

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	R26	RES 620 1/4W 5%	1303178	52
1	R25	RES 680 1/4W 5%	1301424	51
1	R11	RES 5.6 K 1/4W 5%	1301874	50
1	C66	CAP 180 MFD 6V 20% S.TANT	1000086	49
1	R56	RES 30K 1/4W 5%	1302394	48
11	R34, R36, R38, R40, R42, R44, R46, R48, R49, R51, R53	RES 390 1/4W 5%	1300309	47
1	R16, R58	RES 150 1/4W 5%	1300250	46
1	R5	RES 24K 1/4W 5%	1304837	45
2	R12, R24	RES 20K 1/2W 10% G2P POT	1309150-13	44
1	R55	RES 2K 1/4W 5%	1302388	43
1	R23	RES 200 1/2W 10% G2P POT	1309150-10	42
1	R22	RES 47K 1/4W 5%	1302177	41
1	R27	RES 12K 1/4W 5%	1300488	40
1	R28	RES 14.7K 1/8W 1%	1302941	39
11	R8, R33, R35, R37, R39, R41, R45, R47, R31, R50, R52	RES 180 1/4W 5%	1301322	38
1	R17	RES 10K 1/4W 5%	1300479	37
7	R13, R34, R36, R38, R40, R42, R44, R46, R48, R49, R51, R53	RES 1K 1/4W 5%	1300365	36
2	R6, R29	RES 470 1/4W 5%	1300316	35
10	R1, R7, R10, R13, R14, R15, R18, R21, R32, R57	RES 220 1/4W 5%	1300271	34
1	R19	RES 20K 1/4W 5%	1302391	33
1	E53	IC DEC 7427	1910878	32
3	E19, E43, E55	IC DEC 74123	1910436	31
2	E45, E46	IC DEC 74193	1910018	30
1	E21	IC DEC 7486	1910011	29
5	E18, E22, E23, E24	IC DEC 380	1909485	28
3	E11, E12, E13	IC DEC 7416	1909928	27
5	E3, E10, E15, E16, E25	IC DEC 8881	1909705	26
6	E18, E22, E23, E47, E49, E60	IC DEC 7404	1909686	25
3	E4, E5, E6	IC DEC 8271	1909615	24
2	E2, E9	IC DEC 7495	1909055	23
8	E17, E20, E23, E25, E38, E50, E58, E59	IC DEC 7402	1909004	22
2	E41, E52	IC DEC 7401	1905570	21
2	E42, E56	IC DEC 7450	1905580	20
2	E40, E54	IC DEC 7410	1905576	19
9	E27, E28, E29, E31, E33, E48, E51, E57, E61	IC DEC 7400	1905575	18
8	E7, E14, E26, E34, E36, E37, E44, E62	IC DEC 7474	1905547	17
2	D1, D2	DIODE D664	1100114	16
1	C76	CAP 6.8 MFD 35V 10% S.TANT	1005306	15
1	C65	CAP 3.9 MFD 10V 10% S.TANT	1000064	14
64	C1 THRU C62, C73, C75	CAP .01 MFD 100V 20% DISC	1001610	13
2	C78, C79	CAP 68 MFD 15V 10% S.TANT	1000082	12
4	C67, C77, C72, C81	CAP 1000 PF 100V 5% MICA	1000042	11
4	C68, C69, C71, C74	CAP 680 PF 100V 5% DM	1000076	10
2	C64, C70	CAP 470 PF 100V 5% DM	1000024	9
3	J1, J2, J3	CONNECTOR, 40 PIN	1209941	8
21	TP1 THRU TP21	LUG, SWAGE #1026-2	9007791	7
2	Q1, Q2	TRANS, G534-D PNP 310MW	1503409	6
1	C80	CAP 100 PF 100V 5% DM	1000016	5
REF		MODULE ECO HISTORY	B-M-M M7760-0-1	4
REF		ASSY/DRILLING HOLE LAYOUT	E-AH-M7760-0-5	3
REF		X-Y COORDINATE FILE LOCATION	K-CO-M7760-0-4	2
1		ETCHED CIRCUIT BOARD	5010025	1

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
ETCH BOARD REV E				
DRN	W. Major	DATE 5/15/72	digital EQUIPMENT CORPORATION WATFORD MASSACHUSETTS TU60 LOGIC	
CHK'D	W. Major	DATE 5/18/72		
ENG	M. Leis	DATE 5/18/72		
PROJ. ENG	M. Leis	DATE 5/18/72		
PROD.	M. Leis	DATE 5/18/72		
NEXT HIGHER ASSY				
B-D-TU60-2				
SCALE				
SHEET 1 OF 3				
SEMICONDUCTOR CONVERSION CHART				
DEC NO.	EIA NO.	DEC NO.	EIA NO.	
D664	IN3620			

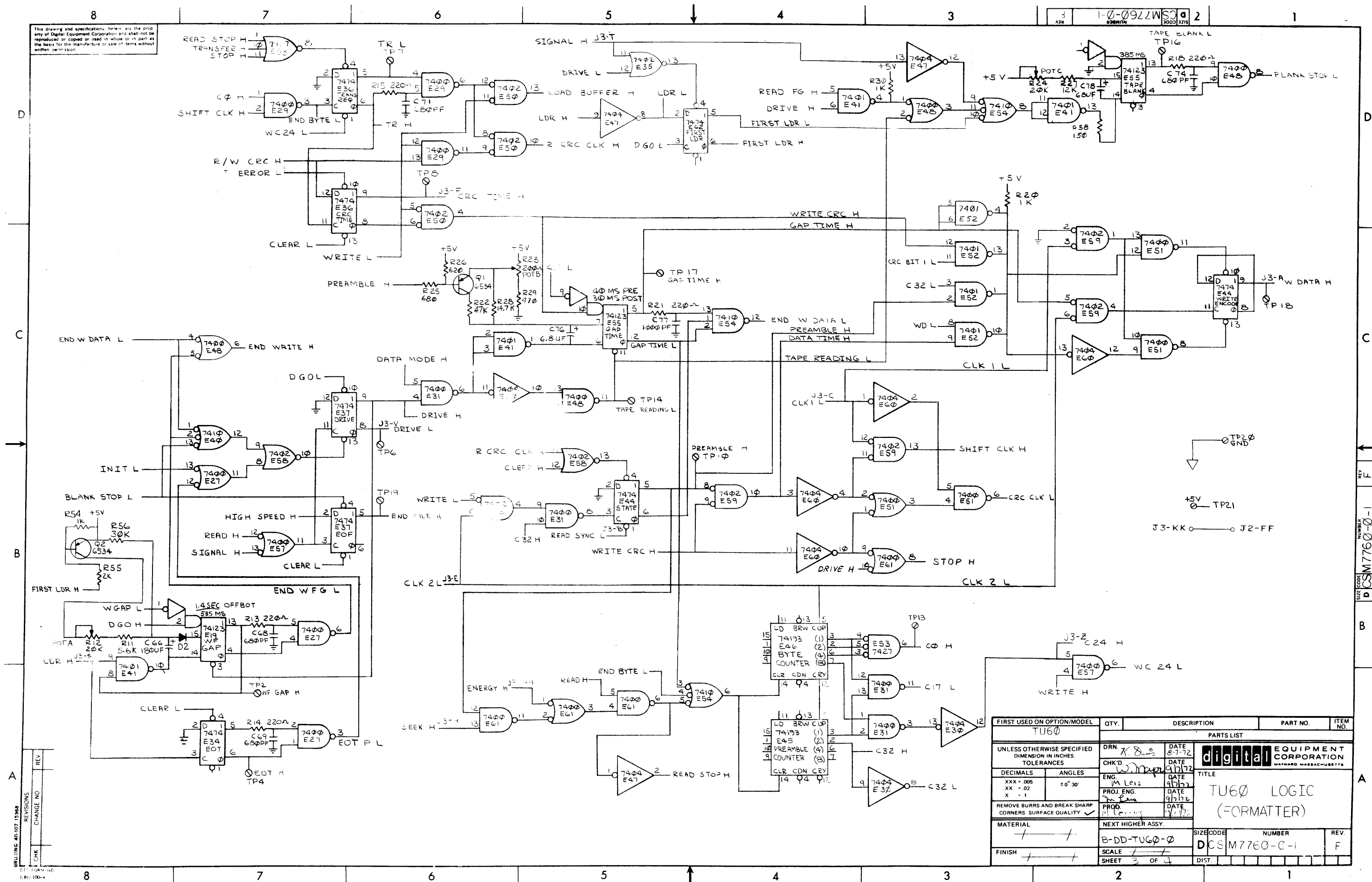
REV	CHG	NO.	DATE	BY
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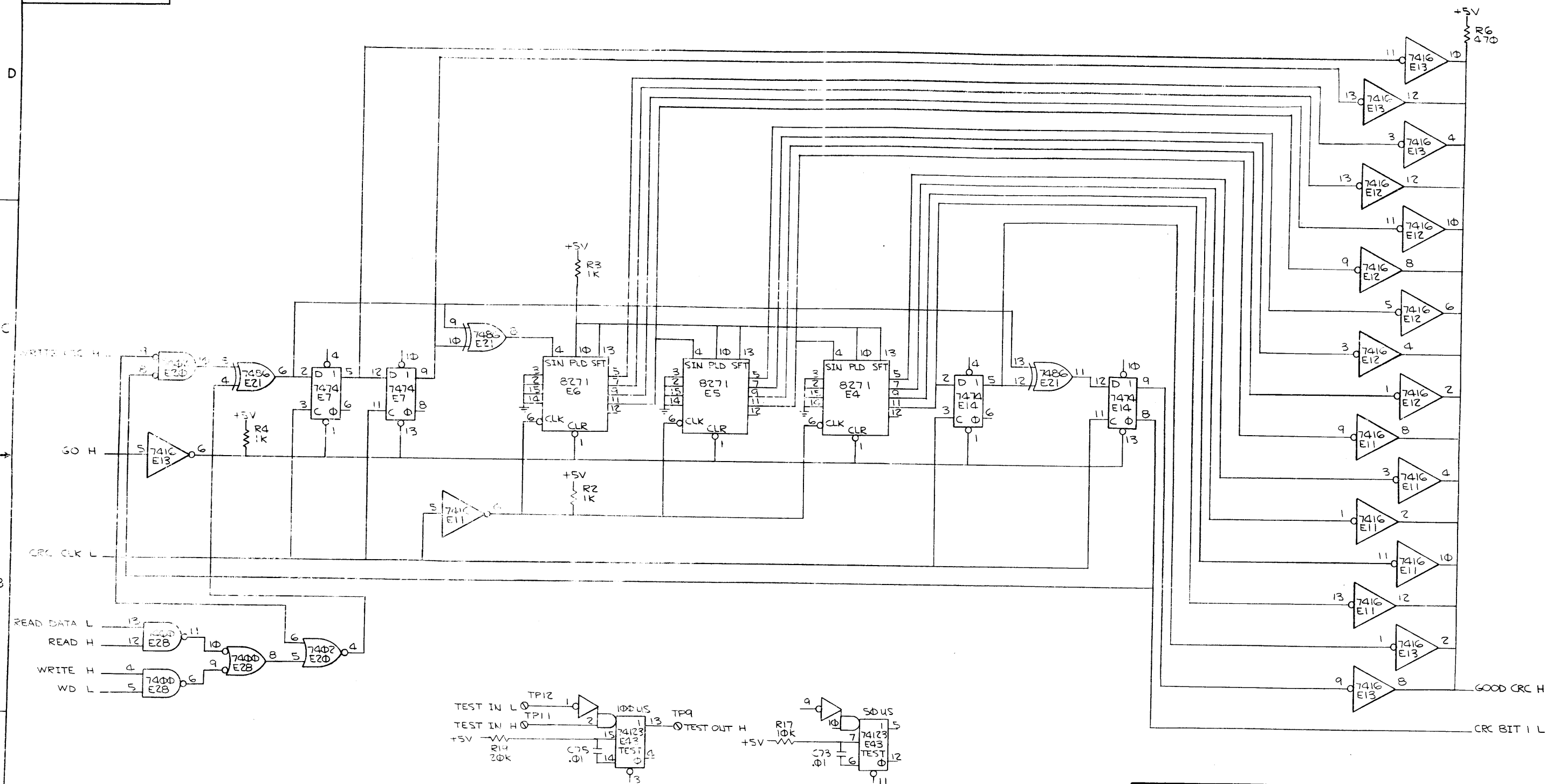


FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.	
TUG0		PARTS LIST			
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN. AGP 1/4-18	DATE 4-5-72	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS		
	CHK'D [Signature]	DATE 4-17-72			
DECIMALS ANGLES	ENG. [Signature]	DATE 1-27-72			
.XXX = .005 .XX = .02 .X = .1	PROJ. ENG. [Signature]	DATE 7-7-72			
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD. [Signature]	DATE 1-27-72			
MATERIAL	NEXT HIGHER ASSY		SIZE CODE	NUMBER	REV
FINISH	SCALE		DCS	M7760-0-1	F

BRUNING 40522 15640
SERIAL NO. 102-B



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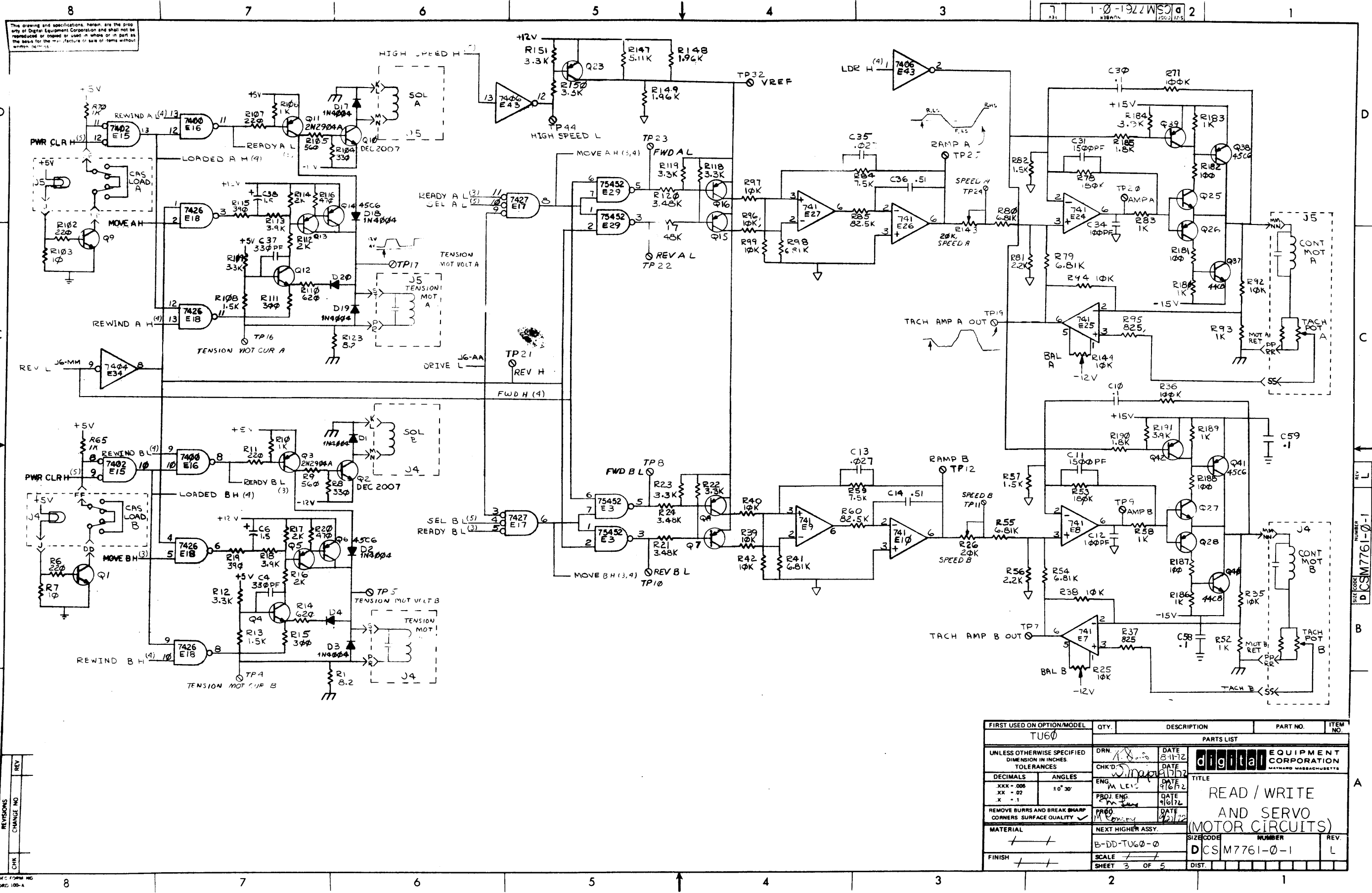


FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU60					
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		DRN. <i>Ch. Plante</i>	DATE <i>5-14-72</i>	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
		CHK'D. <i>W. H. H. H.</i>	DATE <i>5-17-72</i>		
DECIMALS		ENG. <i>M. O. Lewis</i>	DATE <i>7-7-72</i>		
ANGLES		PROJ. ENG. <i>M. J. J.</i>	DATE <i>5-17-72</i>		
.XXX = .005 .XX = .02 .X = .1		PROD. <i>M. J. J.</i>	DATE <i>5-17-72</i>		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓		TITLE TU60 LOGIC (CRC LOGIC)			
MATERIAL <i>— / — / —</i>		NEXT HIGHER ASSY. BDD-FLC0-0		SIZE CODE D CS	NUMBER M7760-0-1
FINISH <i>— / — / —</i>		SCALE <i>— / —</i>		REV F	
		SHEET 4 OF 4		DIST	

BRUNING 40-522 15840

DEC FORM NO
DMD 102-B

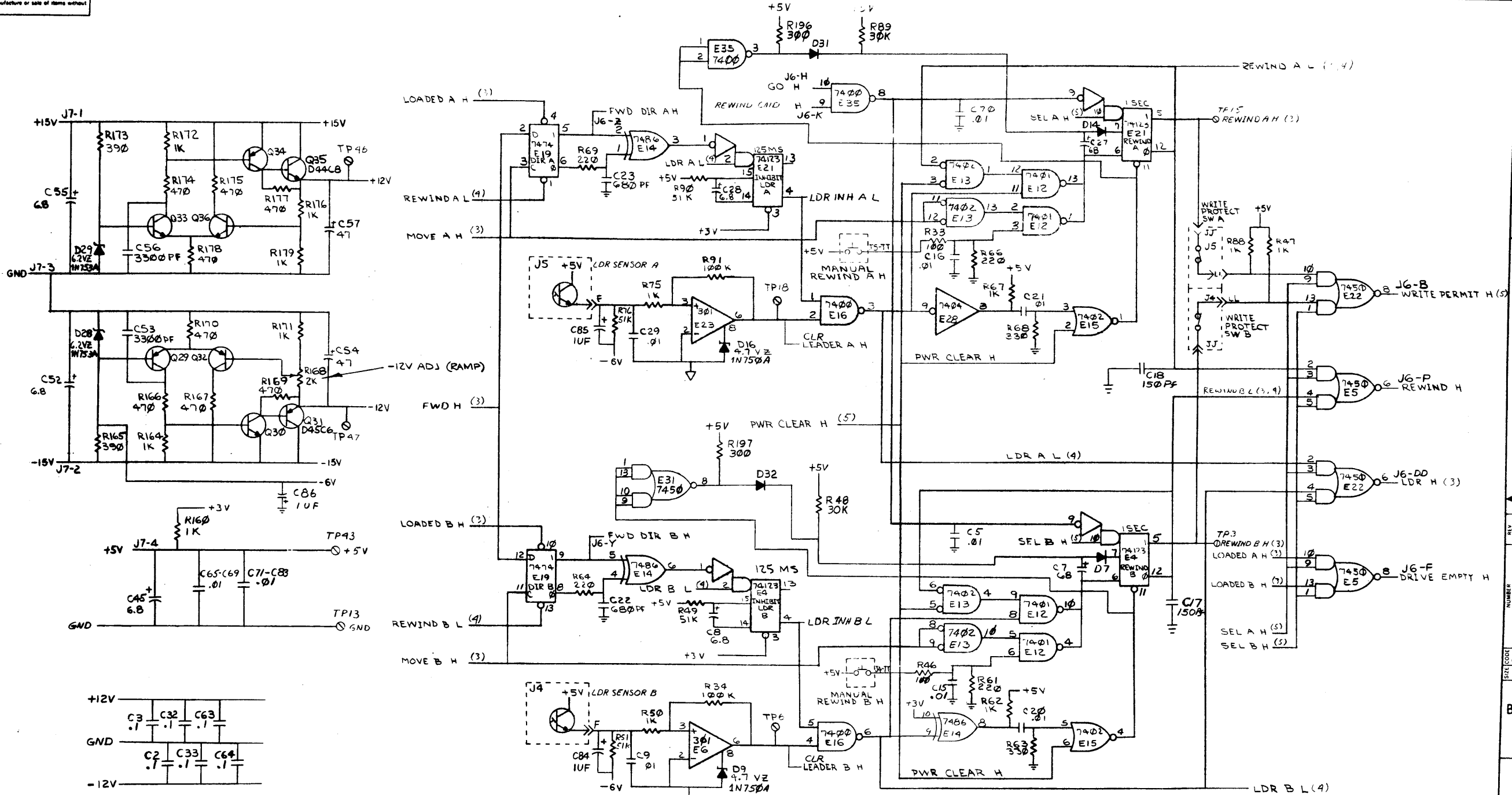
8				7				6				5				4				3				2				1			
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FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TUG0				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS	CHK'D	DATE		
ANGLES	ENG.	DATE		
XX - 006	PROJ. ENG.	DATE		
XX - 02	PROD.	DATE		
XX - 1				
REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY			TITLE	
MATERIAL	NEXT HIGHER ASSY.		NUMBER	
FINISH	SCALE		REV.	
	SHEET 3 OF 5		DIST.	

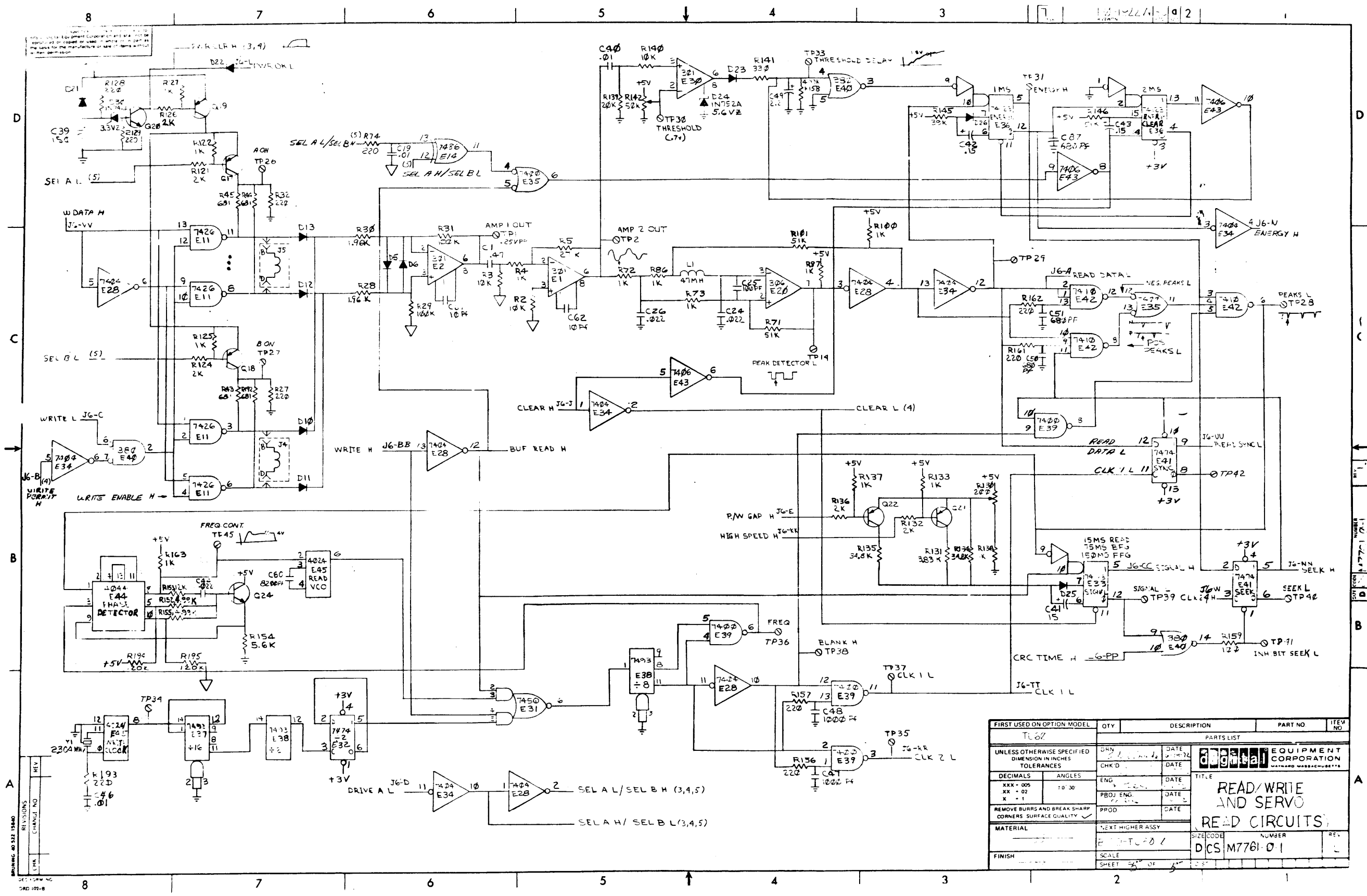
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10-1922WSD 2



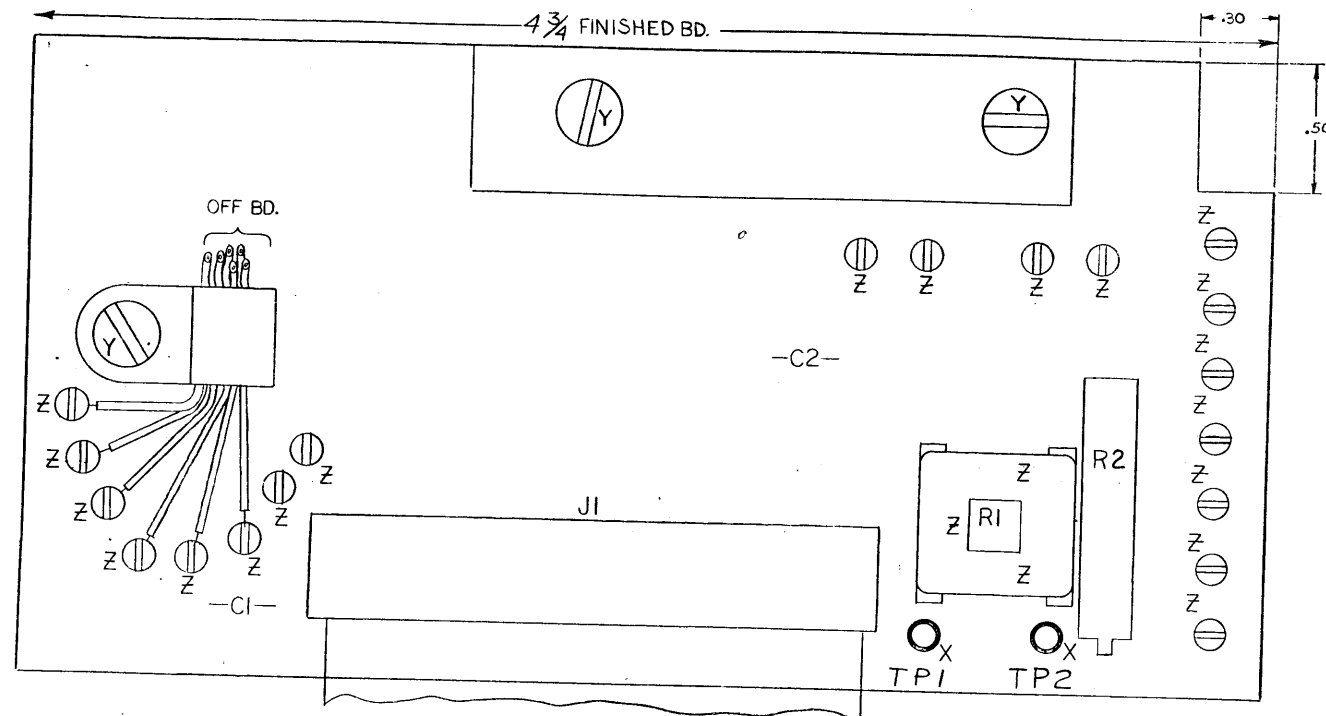
+5V — J4-W, X, J5-W, X, J6-S, T, U, V.
 GND — J4-A, C, E, H, K, L, Y, Z, AA, BB, PP, RR.
 J5-A, C, E, H, K, L, Y, Z, AA, BB, PP, RR.
 J6-EE, FF, HH, JU.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU60				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRAWN <i>W. Mays</i>	DATE 8/1/72	EQUIPMENT CORPORATION MASSACHUSETTS TITLE READ/WRITE AND SERVO (RE WIND/REG)	
DECIMALS	CHK'D <i>W. Mays</i>	DATE 8/1/72		
ANGLES	ENG. M. LEIS	DATE 8/1/72		
XXX = .008	PROJ. ENG. <i>M. Lewis</i>	DATE 8/1/72		
.XX = .02	PROD. <i>M. Lewis</i>	DATE 7/27/72		
.X = .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓				
MATERIAL	NEXT HIGHER ASSY.			
— SS —	B-DD-TU60-0		D CS	M7761-0-1
FINISH	SCALE		DIST	REV.
— SS —	SHEET 4 OF 5			L



FIRST USED ON OPTION MODEL		QTY	DESCRIPTION	PART NO	ITEM NO		
TL 62		PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		CHK'D	DATE	ANALOG EQUIPMENT CORPORATION WATKINS, MASSACHUSETTS			
		CHK'D	DATE				
DECIMALS	ANGLES	ENG	DATE			TITLE READ/WRITE AND SERVO READ CIRCUITS	
XXX - 005 XX - 02 X - 1	10 30	PBOJ, ENG	DATE				
REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY		PROD	DATE				
MATERIAL		NEXT HIGHER ASSY		SIZE/CODE DCS M7761-0-1			
FINISH		SCALE					
		SHEET 56 OF 58					

1. UNLESS OTHERWISE SPECIFIED:
RESISTANCE IS IN OHMS.
CAPACITANCE IS IN PICOFARADS.



ETCH BOARD REV										D																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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6-10 Plover	2-12-73
A. G. Plover	
2-1-74	2-12-73
5410135-00002	D
6-10 Plover	12-15-72
A. G. Plover	
2-1-74	12/27/72
5410135-00001	C
CHK	CHANGE NO.
REV	

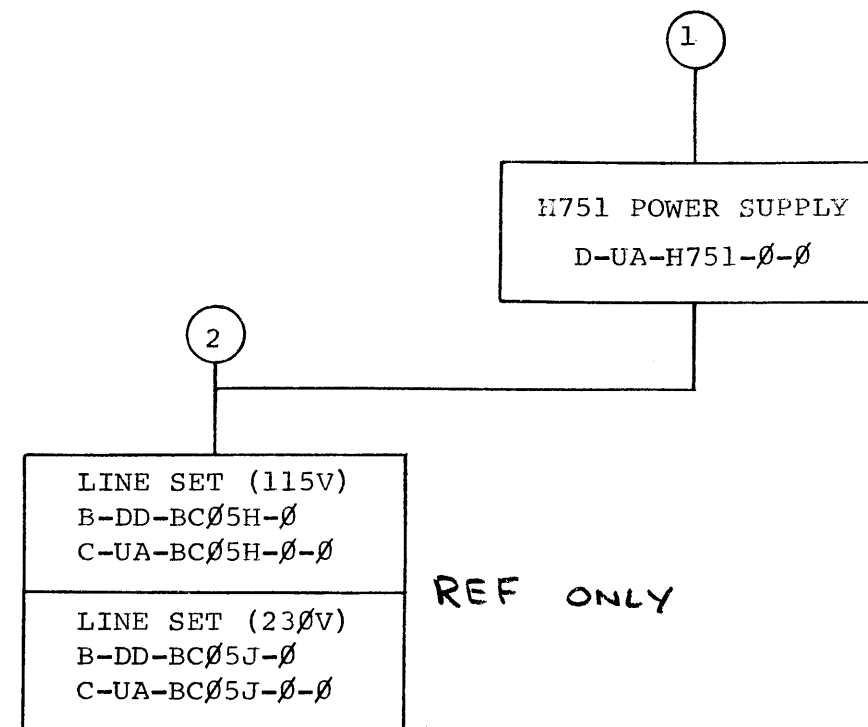
		ETCH BOARD REV		D
DEC NO.	EIA NO.	DEC NO.	EIA NO.	

SEMICONDUCTOR CONVERSION CHART

DRN. <i>12-1</i>	DATE <i>2-2-82</i>	digital EQUIPMENT CORPORATION WATNARD, MASSACHUSETTS TITLE TERMINATOR, CASSETTE DRIVE		
CHKD <i>W. Major</i>	DATE <i>03/17/82</i>			
ENG <i>G. L. Lunde</i>	DATE			
PROJ. ENG <i>m. Szw</i>	DATE <i>10/3</i>			
PROD <i>Cal. O. H. ...</i>	DATE <i>11/5/82</i>			
NEXT HIGHER ASSY				
D-1A 70000410-0		SIZE CODE	NUMBER	REV.
SCALE <i>20</i>		100-100000000		D
SHEET	OF	DIST		

BRUNING 40-522 16699

DEC FORM NO
DRD-135A



TITLE	SHEET 2 OF 3	SIZE	CODE	NUMBER	REV
H751 POWER SUPPLY		B	DD	H751-Ø	D

A

DEC FORM NO.
DRD-135A

NOTE 4

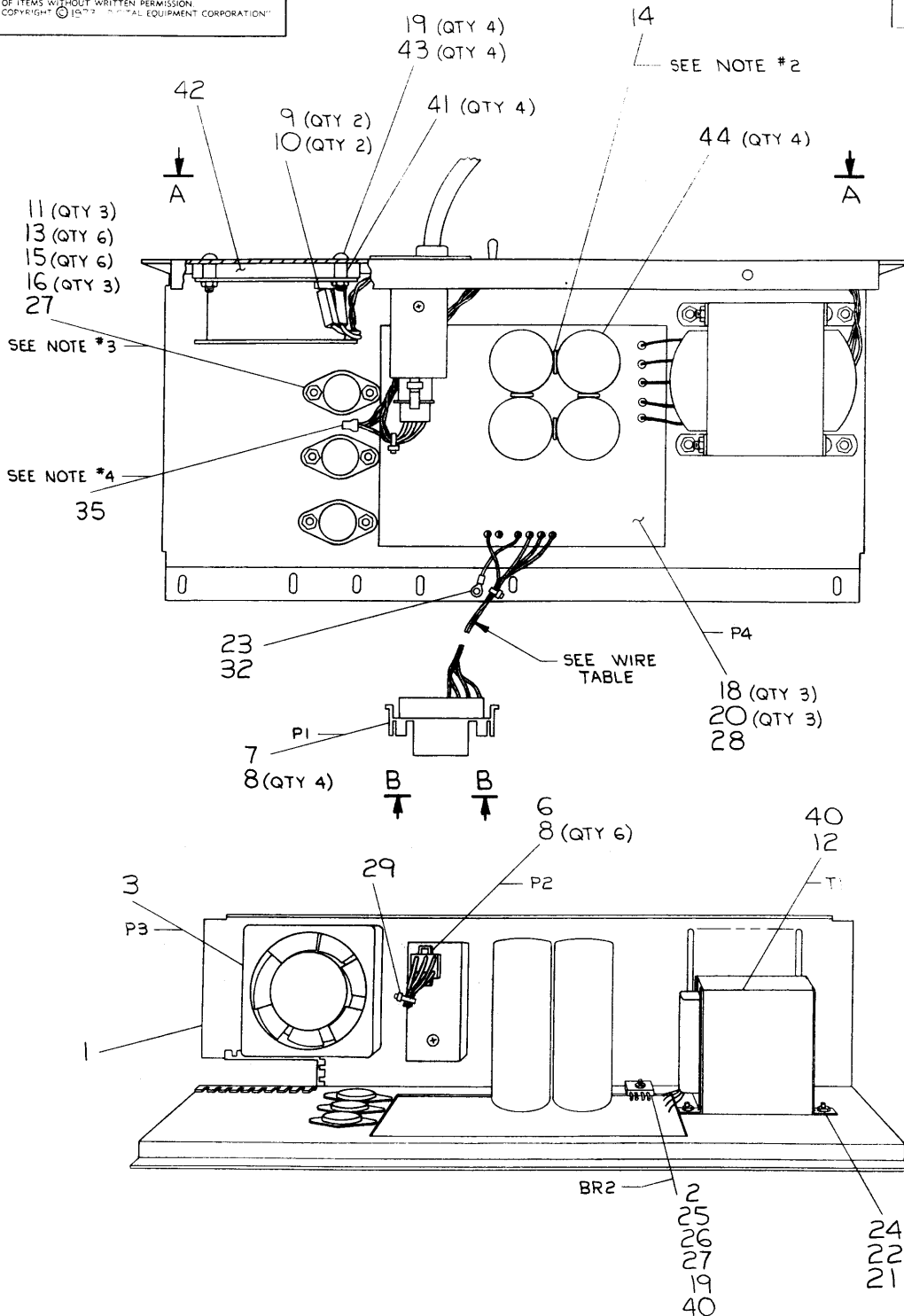
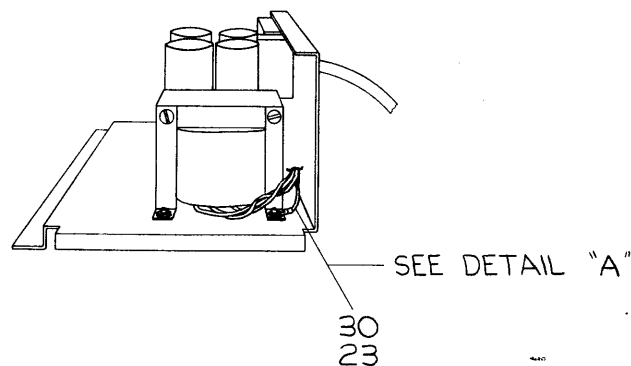
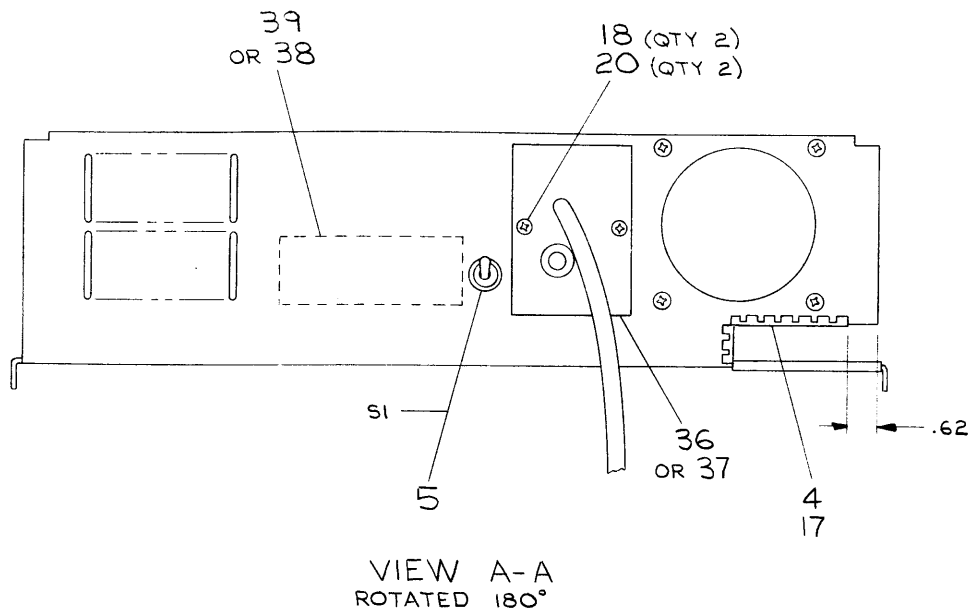
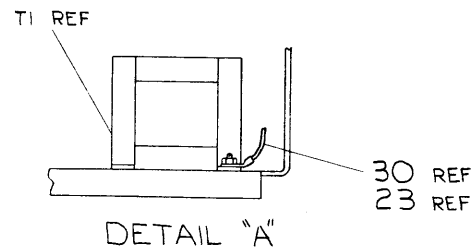
QTY		REF DESIGNATION		PARTS LIST		PART NO.		ITEM NO.	
FIRST USED ON OPTION MODEL H751				PARTS LIST					
ETCH BOARD REV									
DRN. <i>H. Cassette</i> CHK'D <i>W. Major</i> ENG. <i>Harry Hake</i> PROJ. ENG. <i>M. S.</i> PROD. <i>Earl L.</i>				DATE <i>6-17-72</i> DATE <i>10-25-72</i> DATE <i>10-25-72</i> DATE <i>11-11-72</i> DATE <i>1-11-72</i>		digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE CIRCUIT SCHEMATIC H751			
NEXT HIGHER ASSY B-DD-H751-0				SIZE CODE DICS		NUMBER H751-0-1		REV. B	
SCALE <i>1/2"</i>				SHEET <i>1</i> OF <i>1</i>		DIST. <i>G</i>			
SEMICONDUCTOR CONVERSION CHART									

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LEGEND	
H751-A	115 V
H751-B	230 V

NOTES:

1. MOUNT ITEM # 28 (CASSETTE POWER SUPPLY) TO ITEM #1 (CHASSIS) BEFORE MOUNTING ITEMS #2, #11, & #12.
2. USE ITEM #14 (TAPE) BETWEEN EACH OF FOUR LARGE CAPACITORS AS SHOWN.
3. ITEM #27 (COMPOUND) TO BE APPLIED TO BOTH SIDES OF ITEM #16 (WASHER) BEFORE ASSEMBLY.
4. USE CRIMP TOOL #45219 FOR ITEM #35.
5. #'S IN PARENTHESIS INDICATE QUANTITY USED AT THAT LOCATION.



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU6Ø				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRN. F. CARBERRY	DATE 9-25-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TOLERANCES	CHK'D. B. MAJOR	DATE 10-25-72		
DECIMALS	ENG. LARRY NARHI	DATE 10-25-72	TITLE H751 POWER SUPPLY	
.xxx = .005	PROJ. ENG. M. LEIS	DATE 10-25-72		
.xx = .02	PROD. B. DIGREGORIO	DATE 10-26-72		
.x = .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY Y				
MATERIAL	NEXT HIGHER ASSY.			
	B-DD-H751-Ø			
FINISH	SCALE NONE			
	SHEET 1 OF 2			
	DIST.			

REV.	CHANGE NO.	DATE
1	1	9-10-72
2	2	10-25-72
3	3	10-25-72
4	4	10-25-72
5	5	10-25-72
6	6	10-25-72
7	7	10-25-72
8	8	10-25-72
9	9	10-25-72
10	10	10-25-72

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY F. CARBERRY	CHECKED W. MAJOR	SECTION
DATE 9/19/72	DATE 10/6/72	1
ENG Larry Nailing	PROD Bob M. Benson	ISSUED SECT.
DATE 10/26/72	DATE 10/26/72	1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION
1	E-IA-5310191-0-0	CHASSIS, POWER SUPPLY
2	1110208	DIODE ARRAY MDA970-3 (BR2)
3	1210719	FAN, BOXER 115V, 25-35 CUFT
4	9007036	GROMMET, CATERPILLAR
5	1203376	SWITCH, TOGGLE SPST
6	1209351-06	CONNECTOR, MATE-N-LOCK 6 PIN
7	1209340-01	CONNECTOR, MATE-N-LOCK 8 PIN
8	1209378-01	PIN, MATE-N-LOCK
9	1210820-01	MINI-FASTAB, HOUSING #1-480417-0
10	1210820-02	MINI-FASTAB, PIN #60291-1
11	1505819	TRANSISTOR, 2N3055 (Q2, Q3, Q4)
12	1611096	TRANSFORMER, MMC 4565-1/T72105 (T1)
13	9006012-1	SCR. #4-40 x 7/16, PHL PAN HD
14	9007834	TAPE, DOUBLE SIDED, 1/2 INCH
15	9006557	KEP NUT #4
16	9006721	WASHER, INSULATING
17		LOC'TITE, IS-15Ø
18	9006633	LOCK WASHER #6, INT TOOTH
19	9008185	KEP NUT #6
20	9006020-1	SCR, 6-32 x 1/4, PHL PAN HD
21	9006039-1	SCR, 8-32 x 1/2, PHL PAN HD
22	9006666	WASHER, FLAT, #8

TITLE	H751 POWER SUPPLY	ASSY NO.		SIZE
		D-UA-H751-Ø-Ø		A
		SHEET	1 OF 2	
				DIST

[illegible]

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

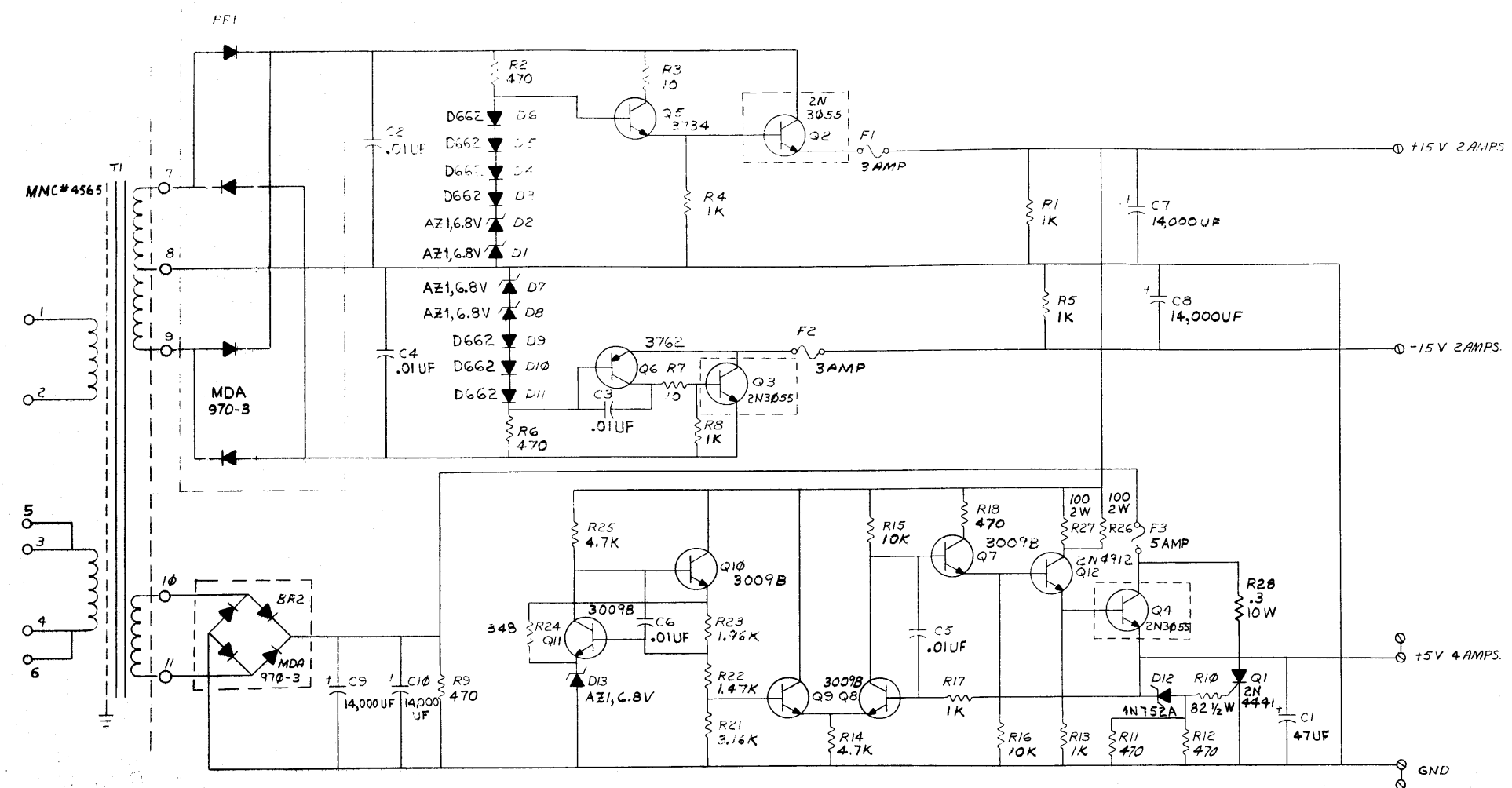
MADE BY	F. CARBERRY	CHECKED W. MAJOR	SECTION
DATE	2/19/72	DATE	10/6/72
ENG	<i>James H. Harker</i>	PROD	<i>Ed. H. Harker</i>
DATE	10/26/72	DATE	10/26/72
			ISSUED SECT.
			1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION
23	9006776	CONN, SOLDERLESS, AMP #31889
24	9006563	KEP NUT, #8
25	9007793-1	SCR, #6-32 x 9/16, PHL PAN HD
26	9006656	WASHER, FLAT, #6
27	9008268	COMPOUND, THERMAL JOINT
28	D-CS-5410131-0-1	CASSETTE POWER SUPPLY
29	9007031	CABLE TIE, PANDUIT, SST 1 M
30	9107360-55	WIRE, #18 AWG STRD, IPVC, GRN
31	9107360-22	WIRE, #18 AWG, STRD, IPVC, RED
32	9107360-00	WIRE, #18 AWG, STRD, IPVC, BLK
33	9107360-33	WIRE, #18 AWG, STRD, IPVC, ORN
34	9107360-66	WIRE, #18 AWG, STRD, IPVC, BLU
35	9009541	SPLICE, CLOSED END AMP #36965
36	C-UA-BCØ5H-Ø-Ø	LINE CORD SET, 115VAC
37	C-UA-BCØ5J-Ø-Ø	LINE CORD SET, 230VAC
38	A-DC-5310297-0-0	H751-A DECAL (115V)
39	A-DC-5310298-0-0	H751-B DECAL (230V)
40	9107278-00	TUBING, BLACK, TFE #18 AWG
41	9007615	1/4 X 1/4 X 6 ROUND FIBER SPACER
42	A-PS-1211343-0-0	FILTER
43	9006025-1	SCR. 6-32 X 5/8 PHL. PAN HD.
44	1011023	CAP, 14000 UF, 20V, (C7, C8, C9, C10)

TITLE	ASSY NO.		SIZE
	D-U/A-I1751- ϕ - ϕ		A
	SHEET 2	OF 2	DIST

QUANTITY VARIATION						REV. ECO NO.
H751-A						
H751-B						
2	2					
4	4					
1	1					
1	1					
A/RA/R						
1	1					
A/RA/R						
A/RA/R						
A/RA/R						
A/RA/R						
A/RA/R						
1	1					
1						
1	1					
	1					
A/RA/R						
4	4					
1	1					
4	4					
4	4					

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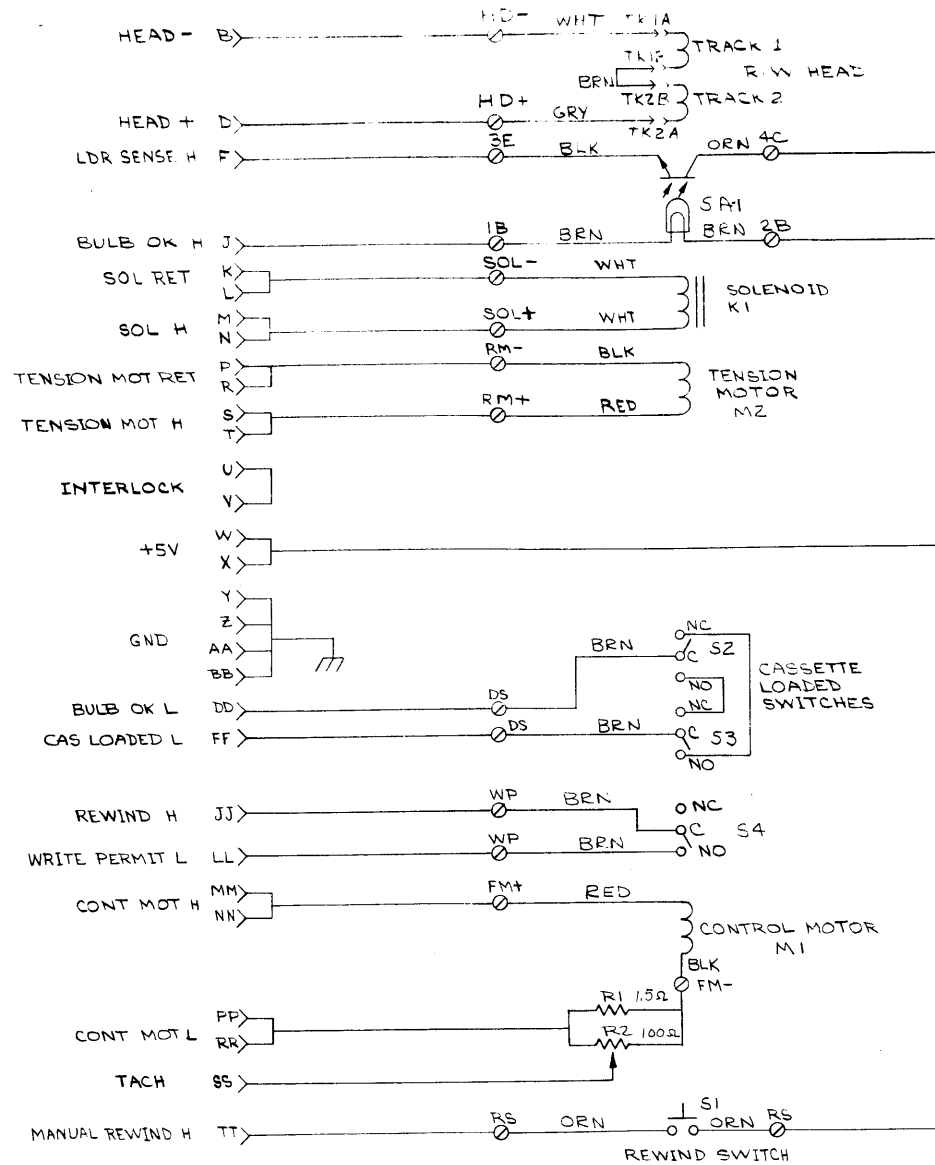


O INDICATES HOLES FOR DIODE BRIDGE
Q2, Q3, Q4, BR2 + T1 ARE MOUNTED ON
CHASSIS HEAT SINK

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
ETCH BOARD REV C				
DRN	DATE	7-26-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D	DATE	7-26-72		
ENG	DATE	7-27-72		
PROJ ENG	DATE	7-27-72		
PROD.	DATE	7-27-72		
NEXT HIGHER ASSY			TITLE CASSETTE POWER SUPPLY	
DEC NO.	EIA NO.	DEC NO.	EIA NO.	REV. E
SEMICONDUCTOR CONVERSION CHART				SCALE
SHEET 2 OF 2				DIST.

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- NOTES:
1. SWITCHES ARE SHOWN WITH "CAS LOADED" AND "WRITE PERMIT" ACTIVATED.
 2. CONNECT WIRE (ITEMS #44 & #45) TO HEAD (ITEM #20) USING CONNECTOR PINS SUPPLIED WITH HEAD (ITEM #20). SEE DETAIL "A".

REV	CHANGE NO	DATE
1	1	10/13/72
2	2	12/21/72
3	3	1/17/73
4	4	1/17/73
5	5	1/17/73
6	6	1/17/73
7	7	1/17/73
8	8	1/17/73
9	9	1/17/73
10	10	1/17/73

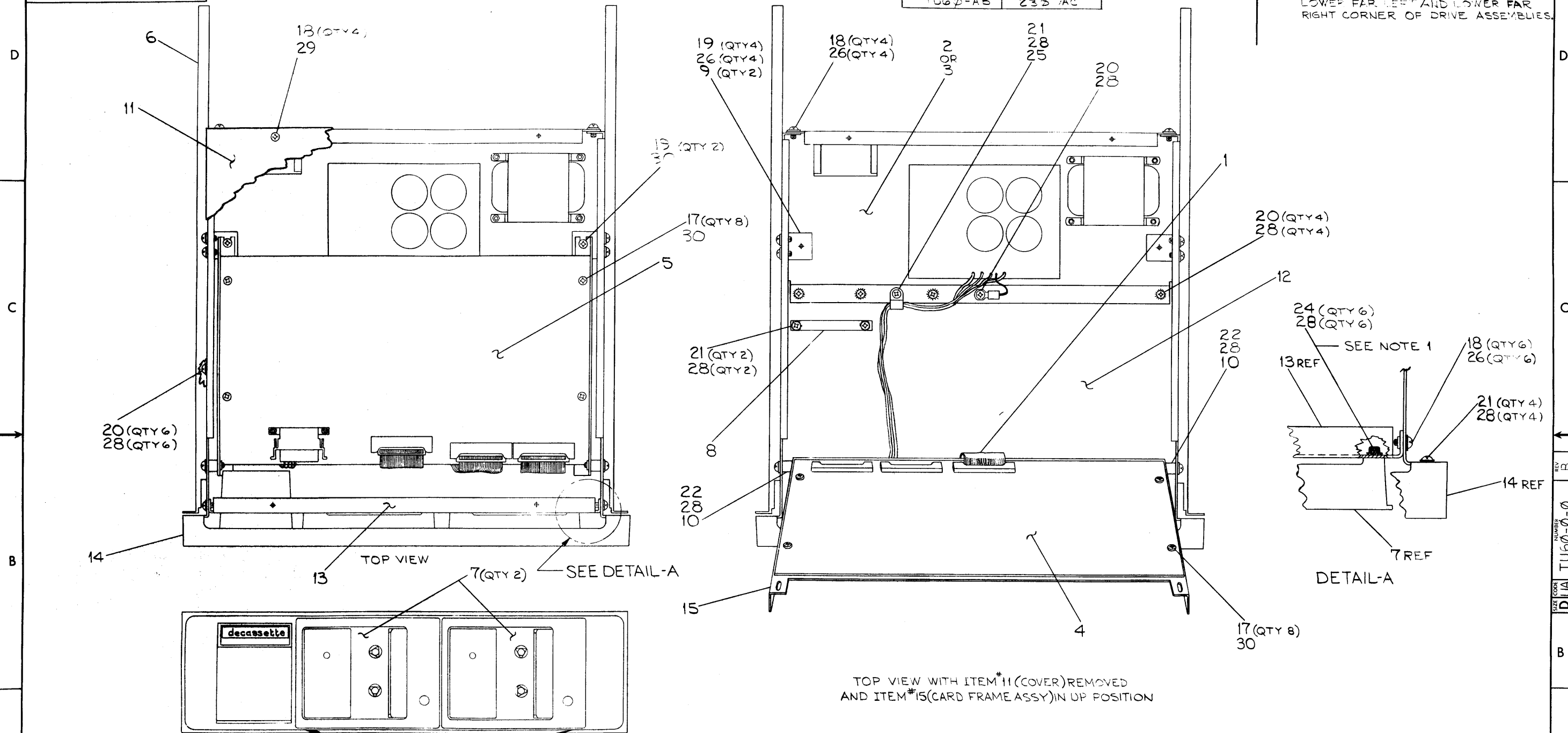
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU60			PARTS LIST	
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN <i>W. Barber</i>	DATE 10/13/72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
	CHK'D <i>W. Barber</i>	DATE 12/21/72		
	ENG. <i>M. S.</i>	DATE 1/17/73		
DECIMALS	ANGLES	PROJ. ENG. <i>A. G.</i>	DATE 12/27/72	TITLE CASSETTE DRIVE WIRING DIAGRAM
.XXX = .005 .XX = .02 .X = .1	±0° 30'	PROD. <i>W. Barber</i>	DATE 1/17/73	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓				
MATERIAL — SS —	NEXT HIGHER ASSY. B-UU-TU60-0		SIZE CODE DWD	NUMBER TU60-0-WD
FINISH — SS —	SCALE 1	SHEET 1	OF 1	DIST. []

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LEGEND	
NUMBER	VARIATION
TU60-AA	115 VAC
TU60-AB	230 VAC

NOTES:

1. DO NOT INSTALL DRIVE MTS SCREWS & WASHERS (ITEMS #24 & #28) AT LOWER FAR LEFT AND LOWER FAR RIGHT CORNER OF DRIVE ASSEMBLIES.



TOP VIEW WITH ITEM #11 (COVER) REMOVED
AND ITEM #15 (CARD FRAME ASSY) IN UP POSITION

REV	CHG	NO	DATE	BY	APP
1		1	1/1/73	W. MAJOR	
2		2	1/1/73	W. MAJOR	
3		3	1/1/73	W. MAJOR	
4		4	1/1/73	W. MAJOR	
5		5	1/1/73	W. MAJOR	
6		6	1/1/73	W. MAJOR	
7		7	1/1/73	W. MAJOR	
8		8	1/1/73	W. MAJOR	
9		9	1/1/73	W. MAJOR	
10		10	1/1/73	W. MAJOR	

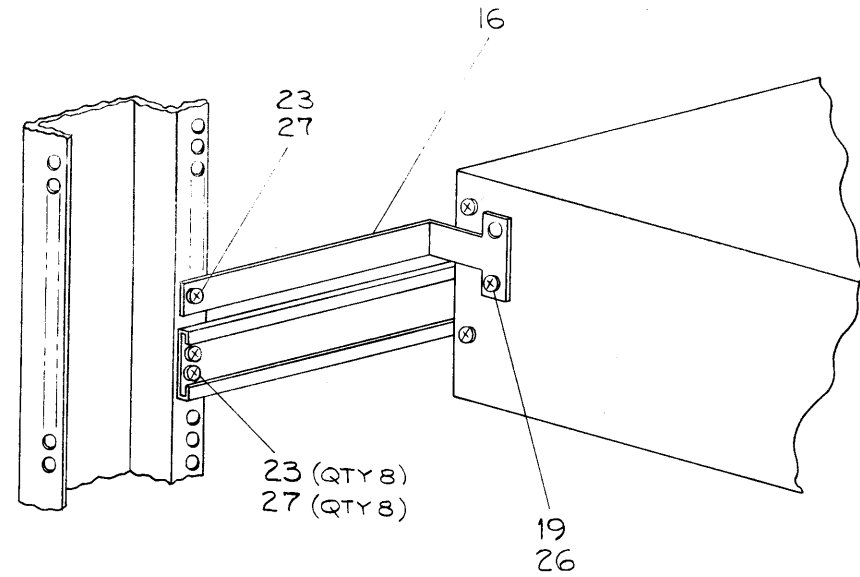
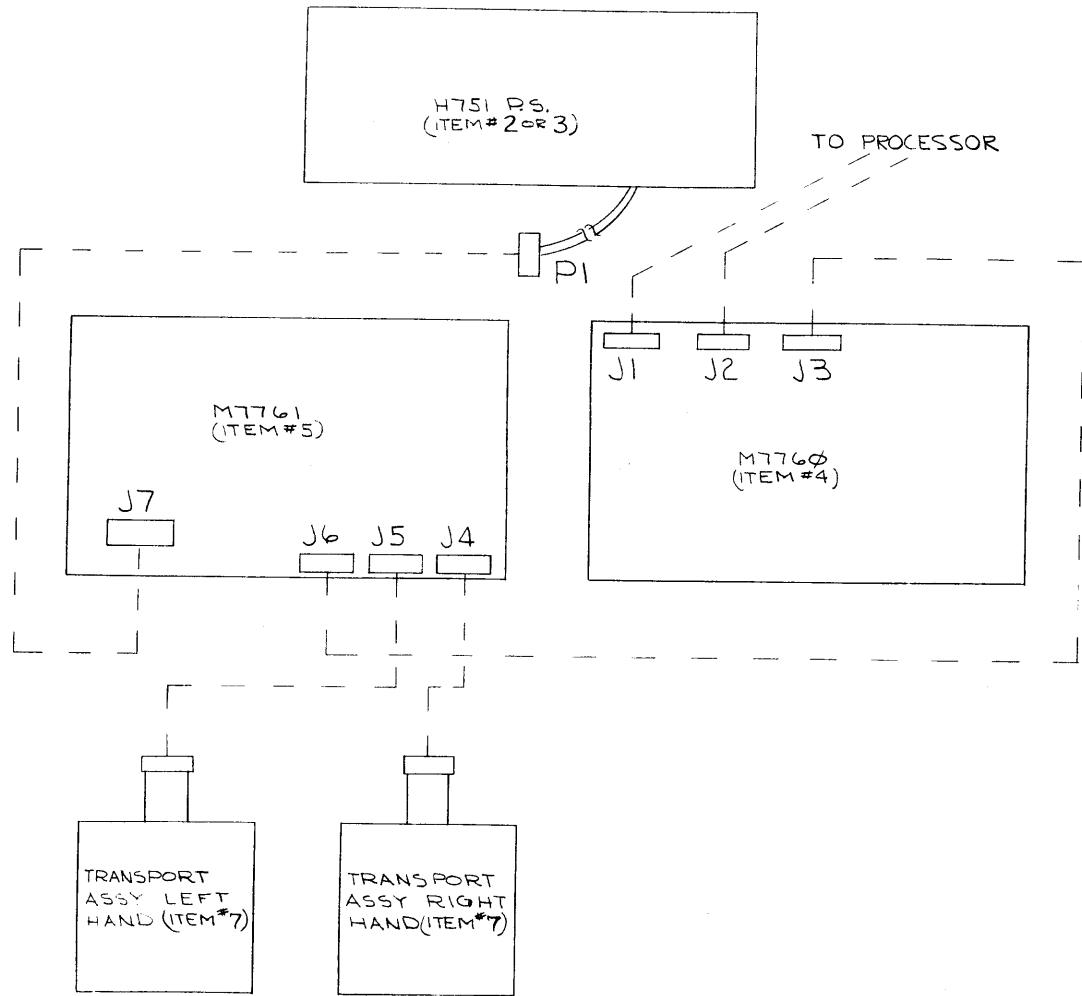
FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU60		PARTS LIST			
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES		DRN. G. FLANDERS	DATE 12/20/72	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
		CHK'D. W. MAJOR	DATE 1/1/73		
TOLERANCES		ENG. M. LEIS	DATE 1/1/73	TITLE TU60 UNIT ASSY	
DECIMALS	ANGLES	PROJ. ENG. M. LEIS	DATE 1/1/73		
.xxx = .005	±0° 30'	PROD. M. LEIS	DATE 1/1/73		
.xx = .02					
.x = .1					
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY V					
MATERIAL		NEXT HIGHER ASSY.		REV.	
+		B-DD-TU60-0		E	
FINISH		SCALE		NUMBER	
+		1		TU60-0-0	
		SHEET 1 OF 2		D UA	
				DIST.	

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ASSY CONNECTIONS			
FROM		TO	
ITEM NO	DESCRIPTION	ITEM NO	DESCRIPTION
2 OR 3	H751 P.S.-PI	5	M7761-J7
7	TRANSPORT ASSY LEFT	5	M7761-J5
7	TRANSPORT ASSY RIGHT	5	M7761-J4

CABLE CONNECTIONS		
ITEM NO	FROM	TO
1	M7761-J6	M7760-J3



LOCATION OF SHIPPING BRACKET (ITEM #16)
WHEN UNIT IS SUPPLIED IN CABINET

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. <i>[Signature]</i>	DATE <i>11/17/72</i>	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS	CHK'D <i>[Signature]</i>	DATE <i>11/17/72</i>	TITLE	
ANGLES	ENG. <i>[Signature]</i>	DATE <i>11/17/72</i>	TU60 UNIT ASSY	
PROJ. ENG. <i>[Signature]</i>	DATE <i>11/17/72</i>	SIZE CODE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD. <i>[Signature]</i>	DATE <i>11/17/72</i>	NUMBER	
MATERIAL	NEXT HIGHER ASSY.	DUA TU60-C-C		
FINISH	SCALE	REV. E		
SHEET 2 OF 2		DIST.		

BRUNING 40-107 15968

REVISIONS	REV
CHANGE NO	
CHK	

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST										QUANTITY / VARIATION									
MADE BY G.Flanders		CHECKED W.Major		SECTION I						TU60-AA		TU60-AB							
DATE 12/20/73		DATE 1/3/73																	
ENG M.Leis		PROD M.Leis		ISSUED SECT. I															
DATE 1/12/73		DATE 1/12/73																	
ITEM NO.		DWG NO. / PART NO.		DESCRIPTION															
1		D-UA-BC05L-0-0		CABLE, JUMPER						1		1							
2		D-UA-H751-A		H751 POWER SUPPLY (115V)						1									
3		D-UA-H751-B		H751 POWER SUPPLY (230V)								1							
4		D-CS-M7760-0-1		TU60 LOGIC						1		1							
5		D-CS-M7761-0-1		READ/WRITE AND SERVO						1		1							
6		D-PS-1209154-0-0		CHASSIS-TRAK (PAIR)						1		1							
7		D-AD-7009014-0-0		TRANSPORT ASSY (TU60)						2		2							
8		C-MD-7409479-0-0		PLATE, PRESSURE						1		1							
9		C-MD-7409904-0-0		BRACKET, SYMMETRICAL						2		2							
10		B-MD-7409933-0-0		BUSHING, PIVOT						2		2							
11		E-MD-7409941-0-0		COVER, CHASSIS						1		1							
12		E-IA-7409943-0-0		CHASSIS (TU60)						1		1							
13		D-IA-7400990-0-0		PLATE, CHASSIS, FRONT (TU60)						1		1							
14		D-IA-7410556-0-0		BEZEL ASSY						1		1							
15		D-IA-7410604-0-0		CARD FRAME ASSY						1		1							
16		C-MD-7410690-0-0		BRACKET, SHIPPING						1		1							
17		9006020-1		SCR, PHL PAN HD#6-32 1/4 LG						16		16							
18		9006020-3		SCR, PHL TRUSS HD#6-32 x 1/4 LG						14		14							
19		9006021-3		SCR, PHL TRUSS HD #6-32 x 5/16 LG						7		7							
20		9006035-3		SCR, PHL TRUSS HD #8-32 x 1/4 LG						11		11							
21		9006037-3		SCR, PHL TRUSS HD #8-32 x 3/8 LG						7		7							
22		9006040-3		SCR, PHL TRUSS HD #8-32 5/8 LG						2		2							
TITLE		TU60 UNIT ASSY		ASSY NO. D-UA-TU60-0-0		SIZE CODE A PL		NUMBER TU60-0-0-0		REV. E		ECO NO. TU60 00012							
		SHEET 1		OF 2		DIST.													

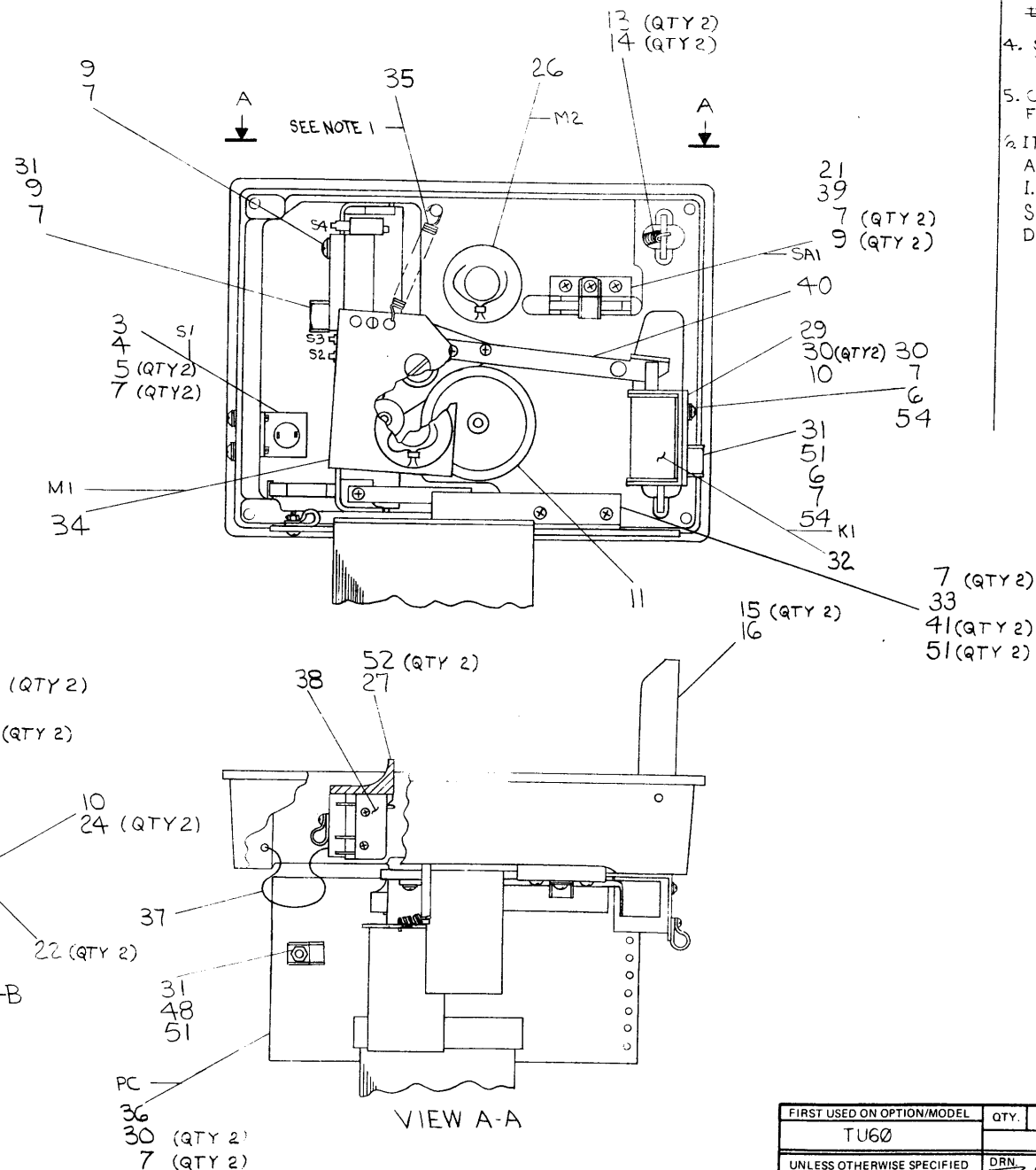
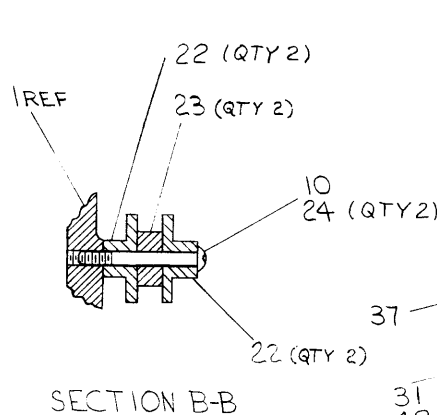
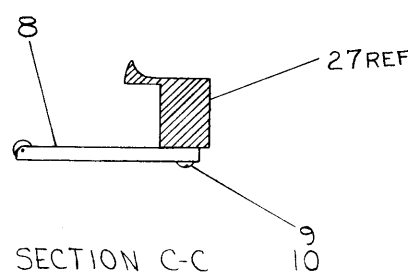
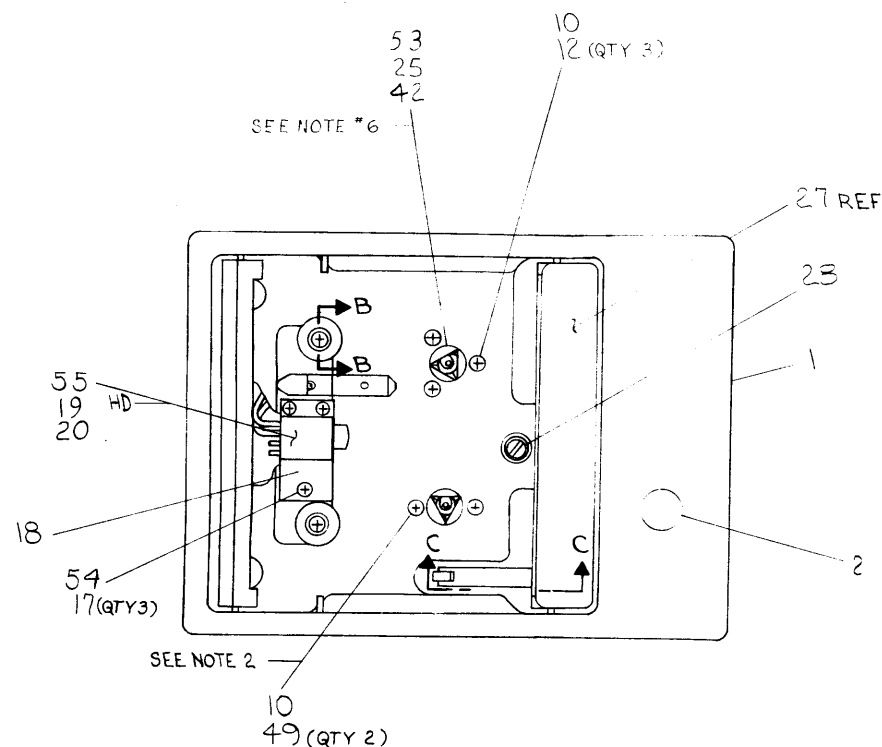
DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST										QUANTITY / VARIATION												
MADE BY G.Flanders		CHECKED W.Major		SECTION I						TU60-AA		TU60-AB										
DATE 12/20/73		DATE 1/3/73																				
ENG M.Leis		PROD M.Leis		ISSUED SECT. I																		
DATE 1/12/73		DATE 1/12/73																				
DWG NO. / PART NO.				DESCRIPTION																		
23 9006071-3				SCR,PHL TRUSS HD #10-32 x 3/8 LG						9		9										
24 9006337-8				SCR,SOCKET HD #8-32 x 3/8 LG						6		6										
25 9007080				CABLE CLAMP 3/16						1		1										
26 9007649				LOCKWASHER #6 EXT TOOTH						15		15										
27 9007786				NUT,#10-32 TINNERMAN						9		9										
28 9008072				LOCKWASHER # 8 EXT TOOTH						26		26										
29				LOCTITE 242						A/PA/R												
30				TORQUE SEAL						A/R		A/R										

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NOTES:

1. SET SPRING TENSION 45/55 GRAMS MEASURED ON ROCKER ASSY LEVER AT POSITION WHERE SOLENOID STRIKES LEVER. TRANSPORT MUST BE IN OPERATING POSITION.
2. TIGHTEN SCR (ITEM #49) TO 6 INCH-POUNDS OF TORQUE.
3. TRIM LEADS OF ITEM #50 (CAP) TO 38 LONG BEFORE SOLDERING TO ITEM #36.
4. SEE DETAILS B, C & D TO LOCATE ITEM #47 (CABLE TIES).
5. CABLE WILL BE LACED SO AS NOT TO INHIBIT FREE MOTION OF LOCK-BAR #27.
6. ITEM #53 TO BE USED BETWEEN MOTOR SHAFT AND I.D. OF COUPLING. APPLY LOCTITE TO I.D. OF COUPLING AND SLIP ON MOTOR SHAFT. BE SURE LOCTITE DOES NOT RUN DOWN MOTOR SHAFT TO MOTOR BEARING.



FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU60					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		PARTS LIST			
DECIMALS	ANGLES	DRN <i>DRN</i>	DATE <i>10/20/72</i>	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
.XXX = .005 .XX = .02 .X = .1	± 0° 30'	CHK'D <i>CHK'D</i>	DATE <i>12/14/72</i>		
		ENG. <i>W. J. Gorman</i>	DATE <i>12-14-72</i>		
		PROJ. ENG.	DATE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓		PROD.	DATE <i>11/17/73</i>	TITLE TRANSPORT ASSY (TU60)	
MATERIAL		NEXT HIGHER ASSY.			
FINISH		D-JA-TU60-0-0		SIZE CODE D AI	NUMBER 7009014-0-0
		SCALE NONE		DIST	REV. C
		SHEET OF 2			

REVISIONS		DATE	BY	CHK	CHANGE NO.	REV
V. DEMPSEY		12-17-72			1	A
V. DEMPSEY		1-17-73			2	B
V. DEMPSEY		4-17-73			3	C
M. LEIS		9-7-73			4	D

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY W. MAJOR
DATE 11/27/72
ENG WY Benson
DATE 1-16-73

CHECKED W. Major
DATE 11/6/73
PROD *WY Benson*
DATE 1/18/73

SECTION 1
ISSUED SECT. 1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	SIZE CODE	ASSY NO. D-AD-7009014-0-0	NUMBER 7009014-0-0	REV. ECO NO. TU60-00012
1	D-IA-7410640-0-0	BASE ASSY	A PL	SHEET 1 OF 3		
2	B-MD-7410518-0-0	BUTTON, REWIND SWITCH			1	
3	1211040	SWITCH, PUSHBUTTON SPST			1	
4	B-MD-7410519-0-0	BRACKET, REWIND SWITCH			1	
5	9006011-1	SCR, PHL HD PAN #4-40 X 3/8			2	
6	9008172	WASHER, FLAT #4 S.S.			2	
7	9006632	WASHER, INT TOOTH #4			1/2	
8	C-IA-7409930-0-0	EJECTOR ASSY			1	
9	9006013-1	SCR, PHL HD PAN #4-40 X 1/2			5	
10		LOCTITE 242			A/R	
11	D-AD-7009146-0-0	SPINDLE ASSEMBLY			1	
12	9009275-2	SCR, PHL HD PAN #4-40 X 3/8			3	
13	9009308	SPRING			2	
14	9006527	ROLL PIN 3/32 X 11/16 LG			2	
15	9006531	ROLL PIN 1/8 X 3/8 LG			2	
16	C-IA-7409924-0-0	COVER, LOWER CASSETTE ASSY			1	
17	9006001-1	SCR, PHL HD PAN #2-56 X 1/4			3	
18	C-MD-7409908-0-0	PLATE, HEAD MOUNT			1	
19	9009276	SCR, PHL HD PAN #2-56 X 1/8			1	
20	1211174	HEAD			1	
21	D-PS-1211289-0-0	SENSOR ASSEMBLY			1	
22	C-MD-7409912-0-0	GUIDE, TAPE			4	
TITLE						
TRANSPORT ASSY (TU60)						
ASSY NO. D-AD-7009014-0-0				SIZE CODE A PL	NUMBER 7009014-0-0	REV. ECO NO. C
SHEET 1 OF 3				DIST.		

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY W. MAJOR
DATE 11/27/72
ENG WY Benson
DATE 1-16-73

CHECKED W. Major
DATE 11/6/73
PROD *WY Benson*
DATE 1/18/73

SECTION 1
ISSUED SECT. 1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	SIZE CODE	ASSY NO. D-AD-7009014-0-0	NUMBER 7009014-0-0	REV. ECO NO. TU60-00012
23	C-MD-7409911-0-0	SPACER, TAPE GUIDE			2	
24	9006015-1	SCR, PHL HD PAN #4-40 X 3/4			2	
25	D-PS-1211279-0-0	COUPLING, CASSETTE DRIVE			1	
26	1211111	MOTOR, CASSETTE			1	
27	D-MD-7409917-0-0	LOCK-BAR, CASSETTE			1	
28	9009277-1	SCR, SLOTTED HD PAN #8-32 X 1/4			1	
29	C-MD-7409928-0-0	BRACKET, SOLENOID			1	
30	9008301-1	SCR, PHL HD PAN #4-40 X 1/4			5	
31	9007079	CLAMP, CABLE 5/16			3	
32	1211189	SOLENOID			1	
33	B-MD-7409929-0-0	BRACKET, TERMINAL BOARD			1	
34	C-AD-7009140-0-0	MOTOR MOUNT ASSY			1	
35	9009279	SPRING			1	
36	D-IA-7009041-0-0	TERMINATOR CABLE ASSY			1	
37	C-MD-7410537-0-0	SPRING, LOCK BAR			1	
38	C-AD-7009141-0-0	SWITCH ASSY			1	
39	B-MD-7410544-0-0	SPACER, E.O.T. BLOCK			1	
40	C-AD-7009148-0-0	LEVER ASSY			1	
41	9006791	SPACER, AL HEX #4 1/8 LG			2	
42	9009274	SCREW, SET #2-56 X 1/8 LG			1	
43	9107636-33	WIRE, #26 AWG IPVC STRD ORN			A/R	
44	9107636-11	WIRE, #26 AWG IPVC STRD BRN			A/R	
TITLE						
TRANSPORT ASSY (TU60)						
ASSY NO. D-AD-7009014-0-0				SIZE CODE A PL	NUMBER 7009014-0-0	REV. ECO NO. C
SHEET 2 OF 3				DIST.		

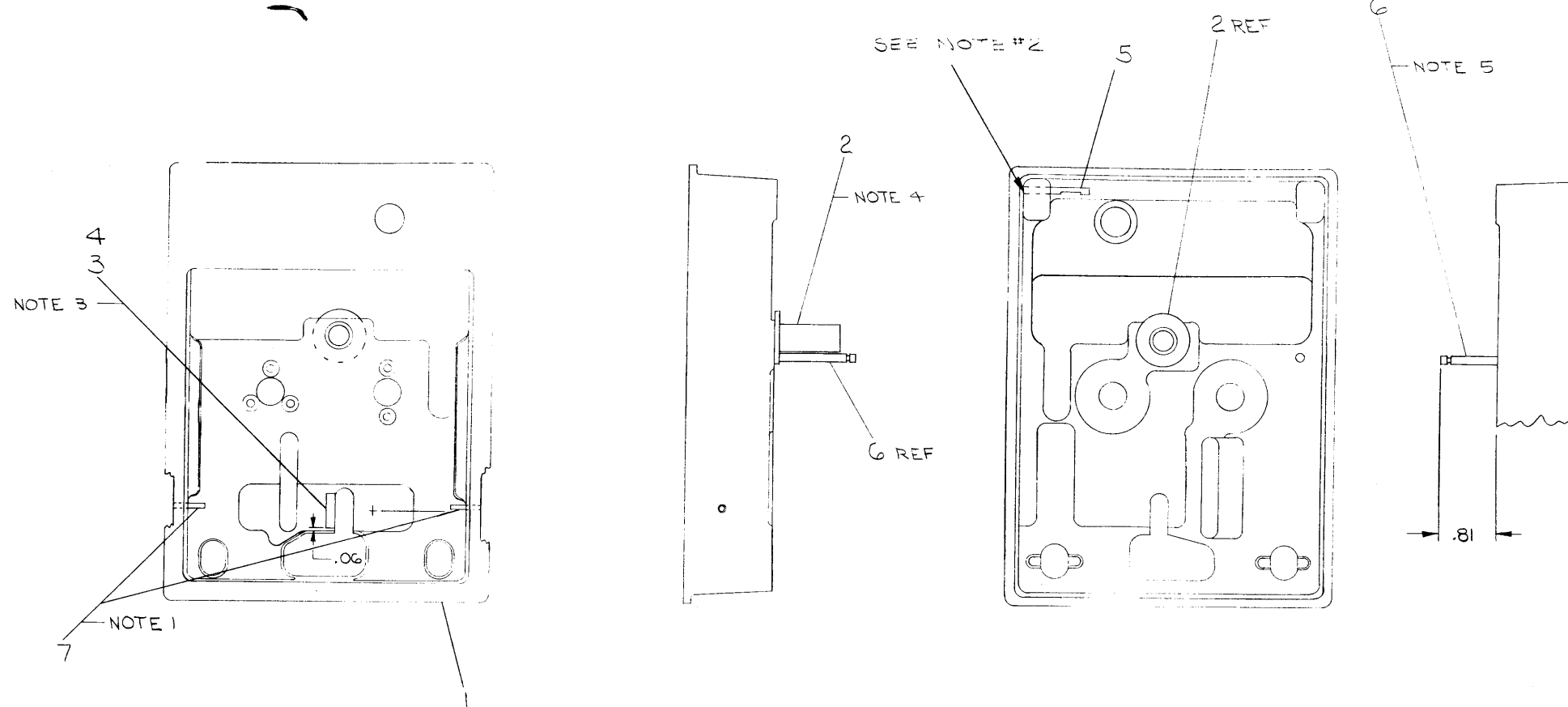
REC FORM DEC 16 (325)-1031-N870

SEA 110

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NOTES:

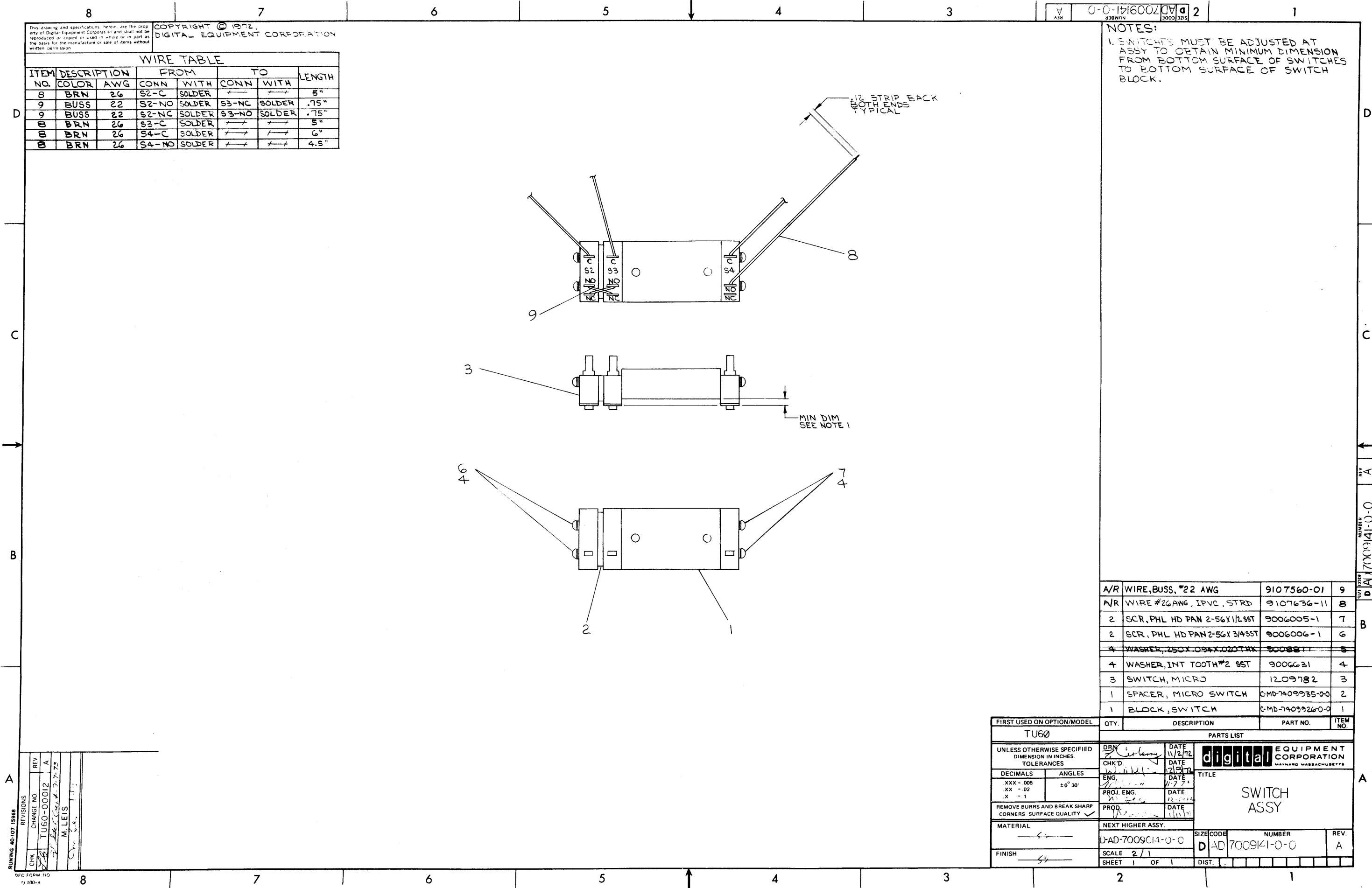
1. ROLL PIN (ITEM#7) TO BE PREPRESSED FLUSH WITH OUTSIDE SURFACE OF BASE AS SHOWN, 2 PLACES.
2. PIN (ITEM#5) TO BE PREPRESSED FLUSH WITH THIS SURFACE AS SHOWN. NOTE POSITION OF CUTOUT ON ITEM#5.
3. WHEN MOUNTING SHIM (ITEM#3) TO BASE (ITEM#1), USE LOCTITE IS-06 (ITEM#4) SPARINGLY TO AVOID BUILDUP BUT ENOUGH TO OBTAIN A GOOD BOND. NOTE LOCATION OF SLOT IN BASE.
4. BUSHING (#2) TO BE PREPRESSED INTO ITEM#1 AS SHOWN.
5. PIN (#6) TO BE PREPRESSED INTO ITEM#1 TO DIMENSION SHOWN.



2	ROLL PIN	9006531	7
1	PIN, SPRING MOTOR BIRS	CMD-7409934-0-0	6
1	PIN, ANCHOR	CMD-7410539-0-0	5
1	LOCTITE IS-06		4
1	SHIM, SKEW	BMD-7410553-0-0	3
1	BUSHING, ROCKER	BMD-7409935-0-0	2
1	BASE, ADJUST TRANS (MACH)	E-MD-7409835-0-0	1

FIRST USED ON OPTION/MODEL TUBO		QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN	DATE	digital EQUIPMENT CORPORATION NATICK, MASSACHUSETTS	
DECIMALS ANGLES		CHK'D	DATE	TITLE	
.XXX = .005 .XX = .02 .X = .1		ENG	DATE	BASE ASSY	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		PROJ. ENG.	DATE		
MATERIAL		PROD.	DATE		
FINISH		NEXT HIGHER ASSY.			
		SCALE	SIZE CODE	NUMBER	REV.
		SHEET	D	7410640-0-0	A

BRUNING 40107 15568	REVISIONS	CHANGE NO.	REV.
CHK	TUBO-00012	A	
MLEIS	977		
BEC FORM NO. 100-A			



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WIRE TABLE

ITEM NO.	DESCRIPTION	AWG	FROM		TO		LENGTH
			CONN	WITH	CONN	WITH	
8	BRN	26	S2-C	SOLDER	S3-NC	SOLDER	5"
9	BUSS	22	S2-NC	SOLDER	S3-NC	SOLDER	.75"
10	BRN	26	S3-C	SOLDER	S4-NC	SOLDER	5"
11	BRN	26	S4-C	SOLDER	S1-NC	SOLDER	6"
12	BRN	26	S1-C	SOLDER	S2-NC	SOLDER	4.5"

NOTES:
1. SWITCHES MUST BE ADJUSTED AT
ASSY TO OBTAIN MINIMUM DIMENSION
FROM BOTTOM SURFACE OF SWITCH
TO BOTTOM SURFACE OF SWITCH
BLOCK.

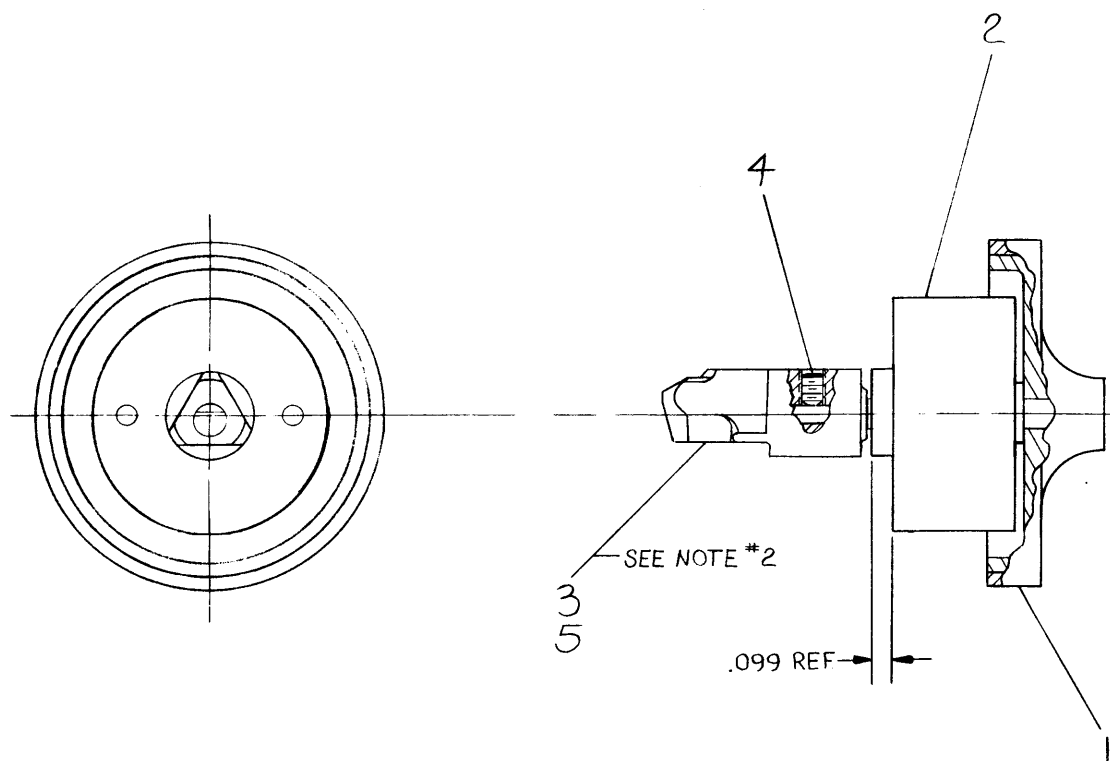
A/R	WIRE, BUSS, #22 AWG	9107560-01	9
A/R	WIRE #26 AWG, IPVC, STRD	9107636-11	8
2	SCR, PHL HD PAN 2-56X 1/2 SST	9006005-1	7
2	SCR, PHL HD PAN 2-56X 3/4 SST	9006006-1	6
4	WASHER, 250X 0.94X 0.020 THK	9008877	5
4	WASHER, INT TOOTH #2 SST	9006631	4
3	SWITCH, MICRO	1209782	3
1	SPACER, MICRO SWITCH	CMD-7409935-00	2
1	BLOCK, SWITCH	CMD-7409926-0-0	1

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TUGO				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS		
DECIMALS	ANGLES	TITLE		
XXX - .005	± 0° 30'	SWITCH ASSY		
XX - .02				
X - .1				
REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY		NEXT HIGHER ASSY.		
MATERIAL		D-AD-7009C14-0-0		
FINISH		SCALE 2/1		
		SHEET 1 OF 1		

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1972

NOTES:

- ITEM #4 TO BE FITTED AGAINST SHOULDER OF SPINDLE.
- LOCTITE TO BE USED BETWEEN SPINDLE SHAFT AND I.D. OF COUPLING. APPLY LOCTITE TO I.D. OF COUPLING AND SLIP ON SPINDLE SHAFT. BE SURE LOCTITE DOES NOT RUN DOWN TO BEARING.



A/R	LOCTITE IS 150		5
1	SCREW, SET, #2-56	9009274	4
1	COUPLING, CASSETTE DRIVE	D-PS-1211279-0-0	3
1	BEARING	C-MD-7410692-0-0	2
1	PULLEY, DRIVE ASSY	C-IA-7409914-0-0	1

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.	
TU60					
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN: <i>W. Benson</i>	DATE: 9/11/72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS ANGLES		CHK'D: <i>W. Benson</i>	DATE: 10/25/72		
.XXX = .005 .XX = .02 .X = .1		ENG: <i>W. Benson</i>	DATE: 12/1/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		PROJ. ENG: <i>W. Benson</i>	DATE: 12/1/72		
MATERIAL		PROJ. <i>W. Benson</i>	DATE: 12/2/72		
FINISH		NEXT HIGHER ASSY.			
		D-AL-7009014-0-0	SIZE CODE	NUMBER	REV.
		SCALE 2/1	C AD	7009146-0-0	B
		SHEET 1 OF 1	DIST.		

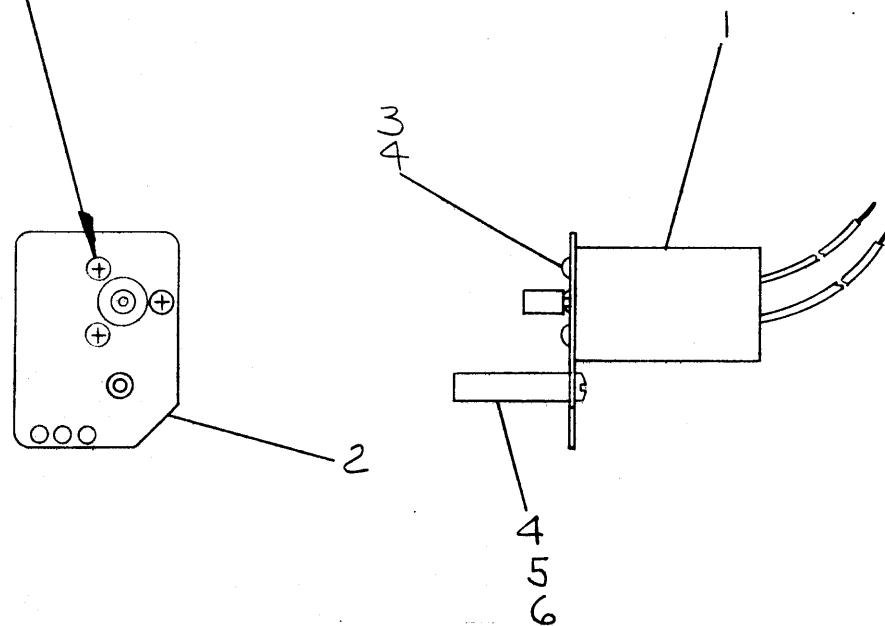
BRUNING 40-107 15968	REVISIONS	CHANGE NO.	REV.
CHK	TU60-00004	A	
DRN	12/12/72		
W. BENSON	12/12/72		
TU60-00007	B		
V. LEMPSEY	3-27-73		

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NOTES:

1. LOCTITE (#4) TO BE APPLIED TO
THREADS OF ITEMS #3 & #5.

SEE NOTE #1



1	PIVOT, MOTOR	GMD-7409915-0-0	6
1	SCR, SLOT HD PAN	9009277	5
A/R	LOCTITE 242		4
3	SCR, PHL PAN HD 4-40-1/4	9008301-1	3
1	MOUNT, MOTOR	GMD-7409910-0-0	2
1	DRIVE MOTOR ASSY	C-IA-7009139-0-0	1

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU60				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS	ANGLES			
.XXX = .005	± 0° 30'			
.XX = .02				
.X = .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL	NEXT HIGHER ASSY.			
FINISH	SCALE 1/1			
SHEET 1 OF 1		DIST. 3		

DRN. <i>K Davis</i>	DATE 9-12-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			
CHK'D <i>W. Major</i>	DATE 11/1/72				
ENG. <i>W. Benson</i>	DATE 11/1/72				
PROJ. ENG. <i>W. Benson</i>	DATE 11/1/72				
DATE 11/1/72					
TITLE MOTOR MOUNT ASSY			SIZE CODE C AD	NUMBER 7009140-0-0	REV. A

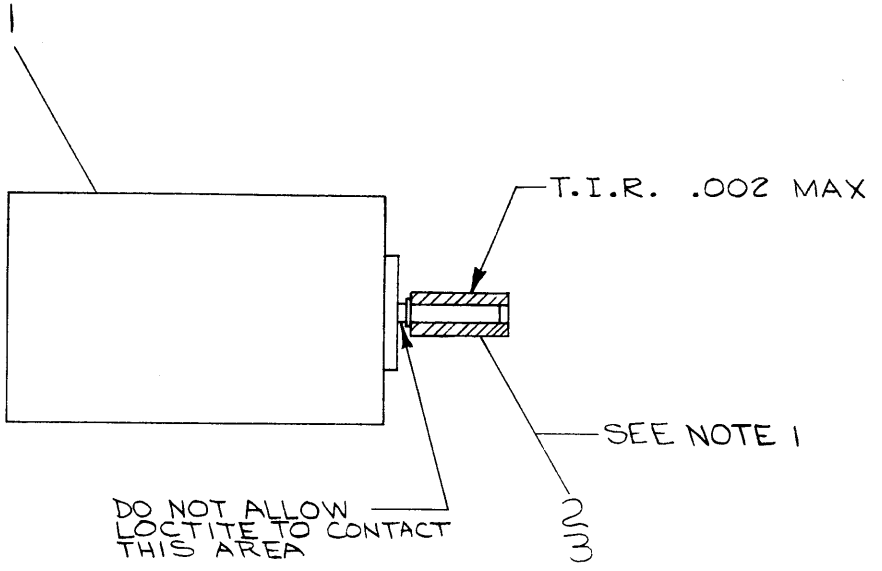
BRUNING 40-107 15968

REVISIONS	REV.	CHANGE NO.	A
CHK	TU60-00012	9-7-73	
	M. LEIS	9/10/73	

DEC FORM NO.
DRC 100-A

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NOTES:
1. SLEEVE (#2) TO BE PRESSED ON MOTOR SHAFT TO BEARING RING. LOCTITE TO BE APPLIED SPECIFICALLY TO INSIDE OF SLEEVE BEFORE ASSEMBLY.



REVISIONS	
CHK	CHANGE NO.
1	TU60-00012
2	10/27/72
3	M L E I S

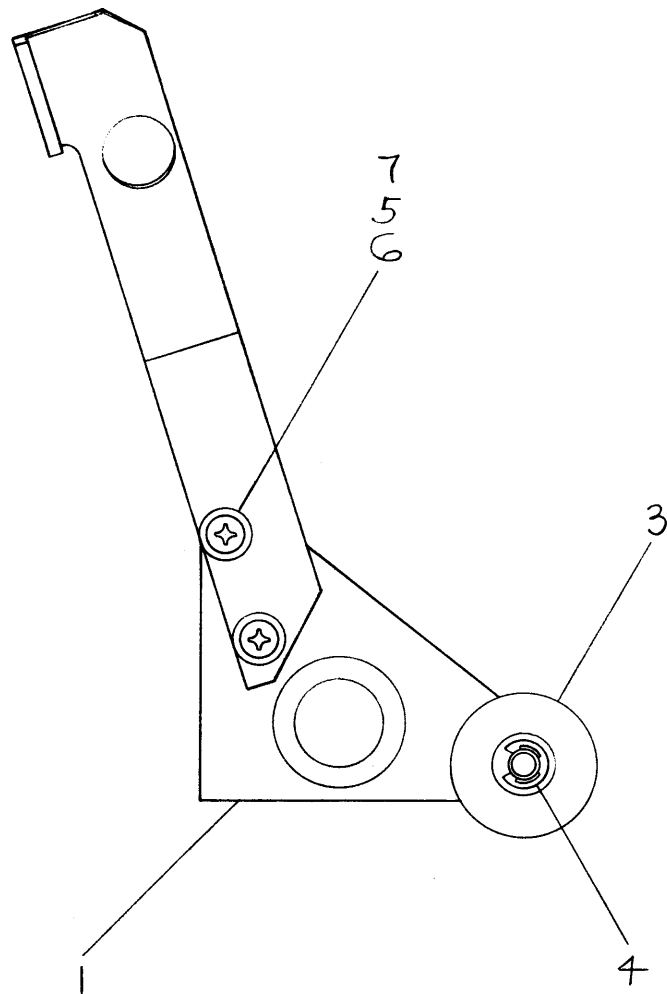
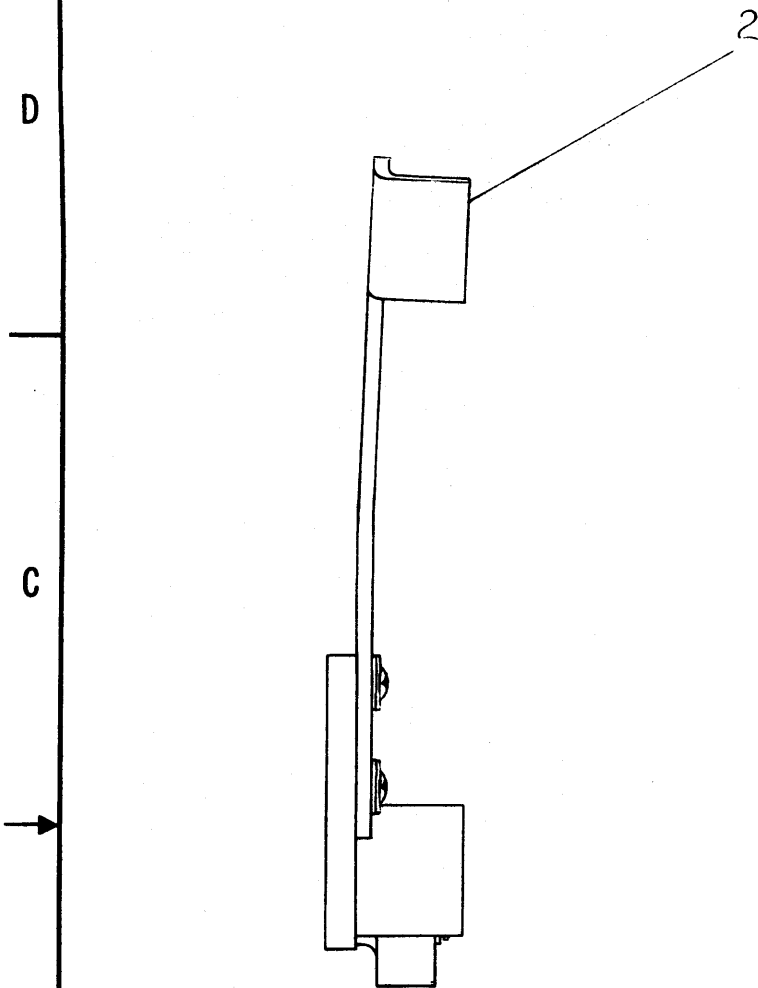
BRUNING 40-107 15968

DEC FORM NO.
DRC 100-A

FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.		
TU60							
PARTS LIST							
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS			
DECIMALS		CHK'D	DATE				
ANGLES		ENG.	DATE				
.XXX = .005		PROJ. ENG.	DATE				
.XX = .02			DATE				
.X = .1			DATE				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY			DATE	TITLE DRIVE-MOTOR ASSY			
MATERIAL		NEXT HIGHER ASSY.					
FINISH		SCALE					
		SHEET 1 OF 1		SIZE CODE	NUMBER		
				C IA	7009139-0-0		
				REV.	A		

REV. A
NUMBER 7009139-0-0
SIZE CODE C IA

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2	WASHER, FLAT #4	9008172	7
2	WASHER, INT TOOTH TYPE, #4	9006632	6
2	SCR, #4-40 X 1/4, PHL PAN HD	9008301-1	5
1	RING, RETAINING	9009273	4
1	ROLLER, IDLER	B-MD-7409932-0-0	3
1	LEVER, ROCKER	C-MD-7409931-0-0	2
1	ROCKER ASSY	C-IA-7409919-0-0	1

FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU60					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		PARTS LIST			
DECIMALS	ANGLES	TITLE			
.XXX = .005	± 0° 30'	LEVER ASSY			
.XX = .02					
.X = .1					
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY					
MATERIAL		NEXT HIGHER ASSY.			
FINISH		SCALE 2/1			
		SHEET 1 OF 1			
		DIST. 1			

BRUNING 40-107 15968	REV.	CHANGE NO.
CHK		

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DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 12-13-72

TITLE TA8 FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	<i>L. Harli</i> 12/13/72	APPD	<i>L. Harli</i> 12/13/72	SIZE	CODE	NUMBER	REV
				A	SP	TA8-0-6	

DEC FORM NO.
DRA 107

SHEET 1 OF 7

ENGINEERING SPECIFICATION

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CONTINUATION SHEET

TITLE TA8 Field Installation and Acceptance Procedure

1.0 HARDWARE

1.1 TA8E DECASSETTE Interface Module (M8331)

1.2 TU60 DECASSETTE, Dual Drive

1.2.1 TA8-AA, TU60-AA Cass., Dual Drive 115VAC
50-60 Hz, Rackmountable

1.2.2 TA8-AB, TU60-AB Cass., Dual Drive 230VAC,
50-60 HZ, Rack Mountable

1.2.3 TA8-BA, TU60-BA Cass., Dual Drive 115VAC
50-60 Hz, Table Top

1.2.4 TA8-BB, TU60-BB Cass., Dual Drive 230VAC
50-60 Hz, Table Top

1.3 Interface Cables

1.3.1 (2) BC08-R-10, Flat Cable (used with TA8-A)

1.3.2 (1) 70-08624, Round Cassette Cable, 20 feet,
(used with TA8-B)

1.4 System Hardware Requirements

1.4.1 ASR Teletype, or equivalent

1.4.2 Programmer Console

1.4.3 A PDP-8E, 8M, or 8F with at least 4K
of Read/Write Memory.

2.0 ACCESSORIES

2.1 Cassette, Maindecs - LIBKIT-8E-TA8E

2.1.1 TA8E Cassette Diagnostic
Maindec-08-DHTAA-A-PB
Maindec-08-DHTAA-A-D

2.1.2 TA8E Data Reliability
Maindec-08-DHTAB-A-PB
Maindec-08-DHTAB-A-D

DEC FORM NO DEC 16-(381)-1022-N370
DRA 108

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SHEET 2 OF 7

ENGINEERING SPECIFICATION		CONTINUATION SHEET			
TITLE TA8 Field Installation and Acceptance Procedure (continued)					
2.0 continued					
2.2 TA8E Maintenance Manual DEC-8E-HR3B-TA8E-D					
2.3 TU60 Maintenance Manual DEC-00-TU60-DA					
2.4 TA8 Print Set B-DD-TA8-E-D B-DD-T60-0-0					
2.5 DECASSETTE Tapes (2) 36-11226					
3.0 TOOLS					
3.1 The following tools are the only ones necessary to install and perform the Acceptance Procedure.					
3.1.1 If the TA8 is rack mounted, some sort of pallet handling equipment is needed to position the system.					
3.1.2 A philips head screw driver.					
3.1.3 A box cutter, if TU60 is in a separate container.					
3.1.4 If TU60 is rack mounted, a 10in adjustable wrench to remove the pallet.					
4.0 UNPACKING AND INSPECTION					
4.1 Rack Mounted					
4.1.1 Place the rack in the final installation location and remove the protective covering.					
4.1.2 Remove the bolts securing the rack to the pallet and raise the leveling legs.					
4.1.3 Carefully roll the rack off the pallet.					
4.1.4 Open the rear door of the rack and remove the shipping brackets from the rear of each TU60. Retain the brackets for possible future shipments.					
4.1.5 Slide the TU60 out from the rack and remove the top cover.					
4.1.6 Inspect the TU60 and, if any, record all damage on the Acceptance Form.					
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ENGINEERING SPECIFICATION		CONTINUATION SHEET			
TITLE TA8 Field Installation and Acceptance Procedure (continued)					
4.0 continued					
4.2 Shipped in a separate container.					
4.2.1 Using a box cutter open the container and remove the foam and corrugated packing pieces.					
4.2.2 Lift the transport out of the carton and remove the plastic shipping bag.					
4.2.3 If the TU60 is to be rack mounted, unpack the chassis slides and install them onto the rack. (Refer to Drawing C-AR-TA8-5-0 for correct configuration). Then install the chassis slide receptacles in both slides in the rack to their stops and insert the transport.					
4.2.4 Remove the top cover and inspect the transport, recording any damage on the Acceptance Form.					
4.3 Both Rack Mounted and Separate Container					
4.3.1 Using the parts list (A-PL-TA8-E-0) and accessory list (A-AL-TA8-E-0) verify that all items are present.					
4.3.2 Inspect the interface (M8331) and control modules (M7760 and M7761) to insure circuit and etch revisions match those on the ECO status sheet.					
4.3.3 Check the interface module (M8331) to insure that the device code is correct. (Normally 670X for the first TA8E-677X for the eight or last TA8E). Refer to drawing D-CS-M8331-0-1 for proper jumper configuration.					
4.3.4 Check power supply line cord assembly to ensure that the transport is configured properly for the input power to be used. Line cord breaker assembly BC05-H is for 115VAC operation and BC05-J is for 230 VAC operation.					
4.3.5 Record any discrepancies on the Acceptance Form.					
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ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE TA8 Field Installation and Acceptance Procedure (continued)

5.0 INSTALLATION

- 5.1 Insure that the power switch on the PDP-8E, 8M, or 8F is turned off and that the power source for the TU60 is dennergized.
- 5.2 Connect the interface cable(s) to the M8331 module. Refer to the TA8E power wiring and cable configuration drawing (C-IC-TA8-E-1) for instructions.
- 5.3 Insert the M8331 module into the Omnibus, refer to recommended omnibus module assignments (A-SP-PDP-8E-0-4) and route the interface cable(s) through the strain relief.
- 5.4 Route the cable(s) through the opening below the fan in the rear of the TU60 and under the strain relief.
- 5.5 Connect the cable(s) to the M7760 module, again referring to the TA8E power wiring and cable configurations drawing (C-IC-TA8-E-1).
- 5.6 Connect the TU60's AC power cord to a source of switched AC power.

6.0 ACCEPTANCE

6.1 Test Procedure

NOTE

Any failures observed (refer to 7.0) while performing this procedure should be corrected before preceding to the next step.

- 6.1.1 Place the TU60's power switch (rear of chassis) in the Off position.
- 6.1.2 Energize the PDP-8E,8M or 8F.
- 6.1.3 Place the TU60's power switch in the ON position, and observe that the two (one on each drive) power ON indicators light.

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ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE TA8 Field Installation and Acceptance Procedure (continued)

6.0 continued

- 6.1.4 Insert a "scratch" cassette into each drive with the tape wound around the lower reel. (Refer to cassette insertion and removal procedure in the TU60 cassette tape transport Maintenance Manual, Chapter 2.) Check that the drive receives the tape without binding.
- 6.1.5 Check that tape does not "creep" from one reel to the other. (To correct refer TU60 Maintenance Manual Chapter 5.)
- 6.1.6 Momentarily depress the rewind pushbutton on each drive and insure that the tape completely rewinds to the BOT clear leader, (about 20 seconds).
- 6.1.7 Momentarily depress the rewind pushbutton on each drive again, and insure that the drive rewinds for cassette about one second, hitting the stops!
- 6.1.8 Perform the following tests, in order, using the loading and operating procedure in the programs document.
 - 6.1.8.1 TA8E Cassette Diagnostic

A. Static Test	-3 Passes per TU60
B. Control Test	-3 Passes per Drive
C. Write Protect	-1 Pass per Drive
D. Data Test	-4 Passes per Drive
 - 6.1.8.2 TA8E Data Reliability Test

A. Format Cassettes	-1 Pass per drive
B. Read Only to EOT Forever	- 1 pass per drive
C. Data Reliability Test	- 6 passes per drive

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ENGINEERING SPECIFICATION

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CONTINUATION SHEET

TITLE

TA8 Field Installation and Acceptance Procedure

7.0 DIAGNOSTIC FAILURE

7.1 Any TA8E/TU60 which while performing acceptance tests haults, generates error printouts, garbles or runs other than as specified in the diagnostic's document, will be classified as a failure and must be repaired. However, errors will be allowed per 7.2 and 7.3.

7.2 One READ error, per drive, while performing steps 6.1.8.1-D to 6.1.8.2-D is acceptable.

7.3 If, while performing step 6.1.8 more than one READ error per drive is observed the testing should be stopped. The head and tape guides should be cleaned using magnetic tape head cleaner. The cassette should be examined for any dirt on the tape surface, and replaced in the drive. Testing should be continued starting with step 6.1.8.1-D.

If any errors occur on the forementioned drive, after the cassette has been replaced the TA8E/TU60 should be repaired or adjusted. (Refer to the maintenance section of the TA8E or TU60 for troubleshooting aids.)

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