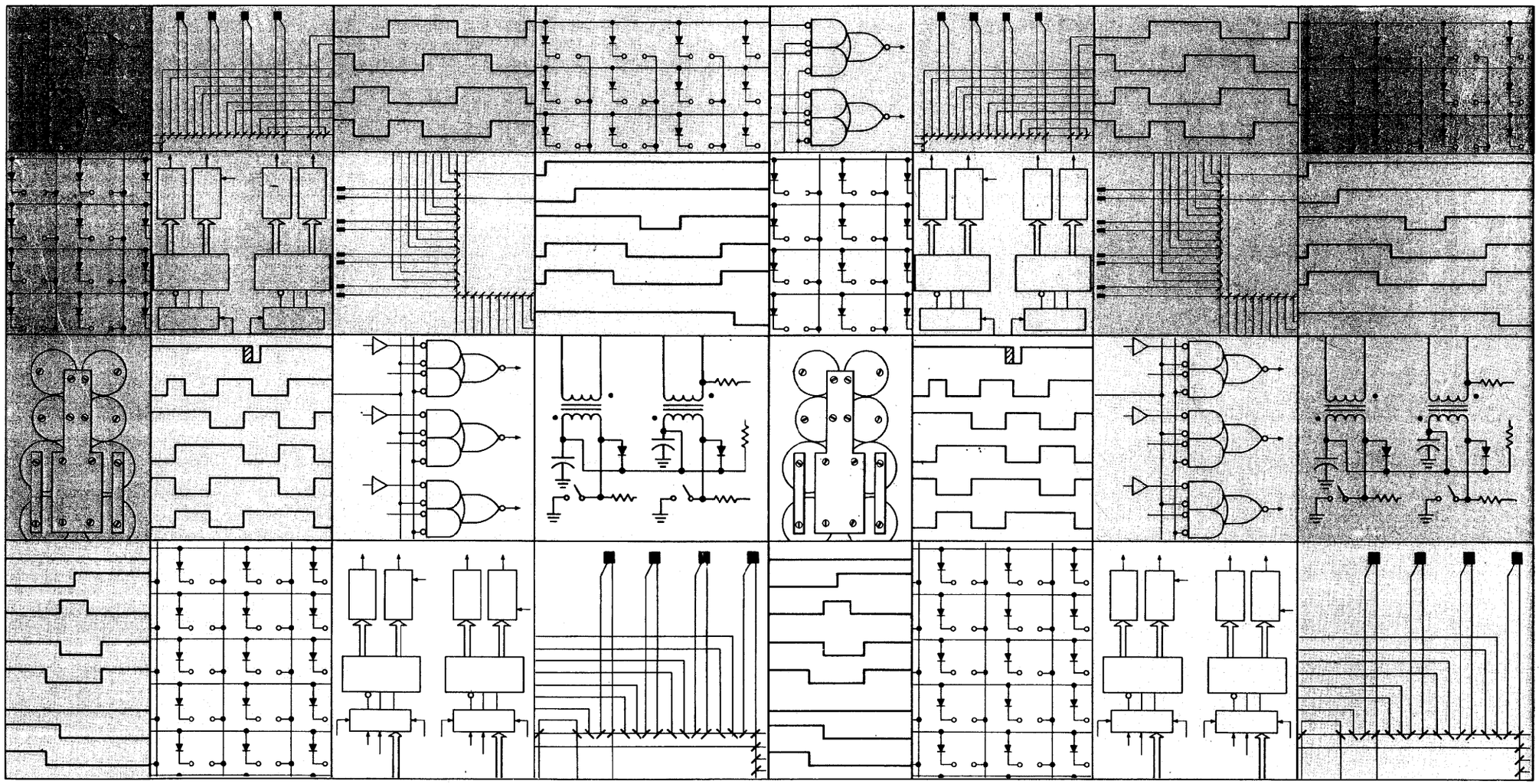
pdp8/e

pdp8/f & pdp8/m



digital

TD8-E
DECtape control
engineering drawings

digital equipment corporation · maynard, massachusetts

The material in this manual is for informational purposes and is subject to change without notice.

MASTER DRAWING LIST

MAINTENANCE MANUALS NO.	TITLE	TD8-E	TD8-EH	TD8-EJ	TD8-EM	TD8-ER
	TD8-E DECTAPE CONTROL	X	X	X	X	X

USED ON OPTIONS

PDP8/E

REVISIONS

REV.	DATE	CHG. NO.	APP'D.
A	12-71	00001	[signature]
B	4-72	00002	[signature]

DRN. K. RUSS	DATE 81871	
CHK'D. [signature]	DATE 8-25-71	
ENG. [signature]	DATE 8/26/71	
PROJ. ENG. [signature]	DATE 8/26/71	
PROD. [signature]	DATE 8-30-71	
FIRST USED ON PDP8/E		
SCALE #		
SHEET 1 OF 2		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE DECTAPE CONTROL

SIZE	CODE	NUMBER	REV.
A	ML	TD8-E	B

DIST.

DRA 131

Dec 16-(325)-1048-N471

PRINT SET TD8-E	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
X	E-CS-M868-Ø-1	REF	3	SIMPLE DECTAPE CONTROL	
X	D-TD-TD8-E-4		4	TD8-E TIMING DIAGRAM	
X	D-IA-7008447-0-0	A	2	TD8-E CONTROL CABLE	
X	A-PL-TD8-E-Ø	A	1	TD8-E PARTS LIST	
X	D-AR-TD8-E-2	A	1	TD8-E CONFIGURATION	
X	D-IC-TD8-E-3	B	2	POWER WIRING	
C	A-ML-TU56-Ø		2	DECTAPE TU56	
C	A-ML-H716-Ø		2	H716 POWER SUPPLY	
-	A-SP-TD8-E-5		9	ENGINEERING SPECIFICATION	
-	A-SP-TD8-E-6	B	3	TD8-E ACCEPTANCE PROCEDURE	
-	A-SP-TD8-E-7		7	CHECKOUT PROCEDURE	
X	D-CS-M960-0-1	REF	1	COMMAND CABLE CONN	
X	D-CS-M961-0-1	REF	1	DATA CABLE CONN	
X	A-AL-TD8-E-8		1	ACCESSORY LIST	

TITLE DECTAPE CONTROL

SHEET	SIZE	CODE	NUMBER	REV.
2 OF 2	A	ML	TD8-E	B

DRA 132

DEC 16-(325)-1048-1-N471

Notes:

[illegible] AND [illegible]ATTING [illegible] NO [illegible]S THE READ INPUTS TO THE 8271 [illegible] FROM THAT SHOWN AT THE OUTPUTS OF THE [illegible]

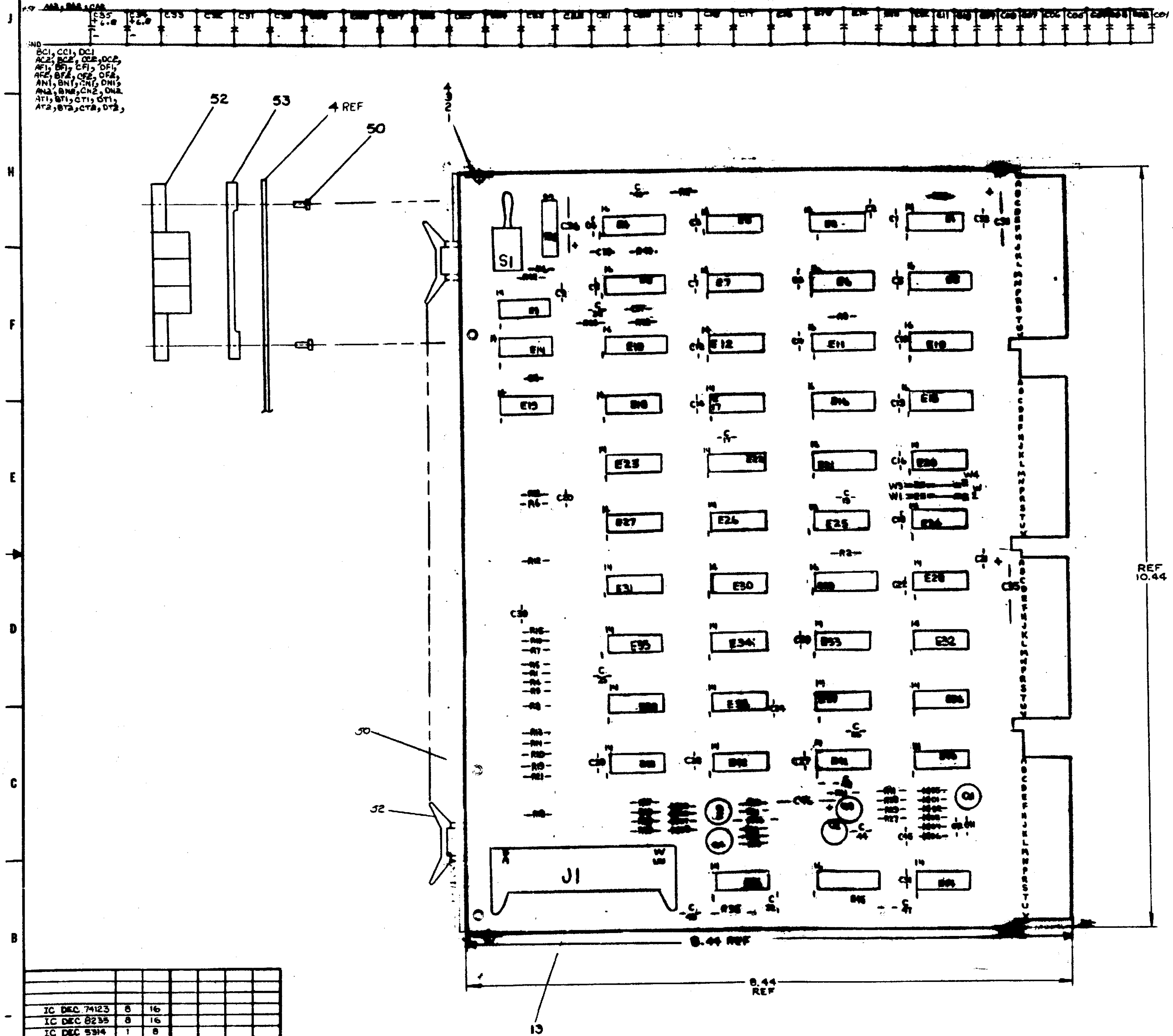
2. [illegible] A DEVICE CODE OF 677X [illegible] JUMPERS [illegible] AND UNIT SELECTIONS [illegible]

[illegible] CODE ([illegible]) UNITS ([illegible]PERS OR W[illegible])
[illegible] ([illegible]) SEL [illegible]
[illegible] ([illegible]) SEL [illegible]
[illegible] ([illegible]) SEL [illegible]
[illegible] (W1–W3) SEL [illegible]

3. [illegible] ARE [illegible]NED. [illegible] OUTPUT IS A "1".

4. [illegible]ED. A LOW DATA INPUT SET THIS TO A "1". THE [illegible] ARE TESTING FOR NOT EQUAL AND LOW [illegible]

5. [illegible] REPLACED BY 6380, 7380, 380.
[illegible] REPLACED BY 6384, 7384, 384.
5314 CAN BE REPLACED BY 6314, 7314, 314.



QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM
A/R	W1, W2, W3, W4	WIRE #22 AWG SOLID BUS	9107560-01	54
4		SPACER (CABLE CLAMP)	1202704	53
4		HANDLE FLIP CHIP-MAGENTA	9008337-06	52
6		SPLIT LUGS M-1033	9006735	51
8		EYELET GS4-11 STIMPSON	9006750	50
2	E8, E4	IC DEC 74123	1910436	49
3	E5, E10, E15	IC DEC 8235	1909935	48
1	E1	IC DEC 74H04	1909931	47
1	E39	IC DEC 7417	1909929	46
2	E42, E18	IC DEC 8242	1909712	45
2	E33, E41	IC DEC 8881	1909705	44
1	E24	IC DEC 5314 SEE NOTE 5	1910391	43
3	E32, E26, E31	IC DEC 7404	1909686	42
5	E6, E11, E16, E21, E29	IC DEC 8271	1909615	41
1	E45	IC DEC 8251	1909594	40
1	E28	IC DEC 5384 SEE NOTE 5	1910394	39
5	E20, E44, E7, E12, E17	IC DEC 5380 SEE NOTE 5	1910392	38
1	E36	IC DEC 7493	1909054	37
1	E13	IC DEC 7475	1909050	36
2	E2, E37	IC DEC 7402	1909004	35
2	E43, E46	IC DEC 7401	1905590	34
1	E40	IC DEC 7430	1905578	33
3	E35, E27, E23	IC DEC 7410	1905576	32
3	E22, E38, E19	IC DEC 7400	1905575	31
5	E3, E30, E34, E9, E14	IC DEC 7474	1905547	30
5	Q1 THRU Q5	TRANSISTOR DEC 6531	1509338	29
2	R24, R43	RES 4.7K 1/4W 5%	1300447	28
1	R26	RES-POT 20K 70PP 3/4W 10%	1309143-11	27
1	R36	RES 562 1/8W 1% MF	1304693	26
1	R35	RES 1.21K 1/8W 1% MF	1302871	25
1	R17	RES 51K 1/4W 5%	1304839	24
5	R1, R4, R5, R18, R7	RES 270 1/4W 5%	1301972	23
1	R6	RES 560 1/4W 5%	1301890	22
1	R11	RES 6.8K 1/4W 5%	1301423	21
1	R23	RES 10K 1/4W 5%	1300479	20
1	R41	RES 3K 1/4W 5%	1300432	19
5	R16, R37, R39, R27, R29	RES 1.5K 1/4W 5%	1300391	18
12	R2, R3, R30 THRU 34 R38, R40, R12, R22, R42	RES 1K 1/4W 5%	1300365	17
10	R10, R15, R8, R9, R13 R20, R19, R21, R28, R14	RES 470 1/4W 5%	1300316	16
1	R25	RES 220 1/4W 5%	1300271	15
1	S1	SWITCH T8001	1210209	14
1	J1	HEADER, RIGHT ANGLE 40 PIN	1209941	13
6	D1, D5, D7, D8, D9, D10	DIODE D664	1100114	12
4	D2, D3, D4, D6	DIODE D662	1100113	11
3	C46, C34, C35	CAP 6.8μF 35V 20% TANT	1000067	10
1	C36	CAP 6.8μF 35V 10% TANT	1005306	9
2	C37, C39	CAP 2700 PF 100V 5% DM	1001637	8
40	C1 THRU C33 C41–C45 C47, C48	CAP .01μF 100V 20% DISC	1001610	7
1	C40	CAP 560PF 100V 5% DM	1000025	6
1	C38	CAP 27 PF 100V 5% DM	1001739	5
1		ETCHED CIRCUIT BOARD	5009688	4
REF		MODULE ECO HISTORY	B-MH-M868-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M868-0-5	2
REF		X-Y COORDINATE HOLE LOCATION	K-CO-M868-0-4	1

PARTS LIST

ETCH BOARD REV H

IC DEC 74123	8	16				
IC DEC 8235	8	16				
IC DEC 5314	1	8				
IC DEC 8271	8	16				
IC DEC 8251	8	16				
IC DEC 5384	1	[illegible]				
IC DEC 5380	1	[illegible]	54	22	[illegible]	[illegible]
IC DEC 7493	10	5	54	[illegible]	[illegible]	[illegible]
IC DEC 7475	12	5	54	[illegible]	[illegible]	[illegible]
IC TYPE	[illegible]	[illegible]	54	[illegible]	[illegible]	[illegible]

IC PIN MARKINGS

D662	1N 645
D664	1N 3606
DEC 6531	MPS6531

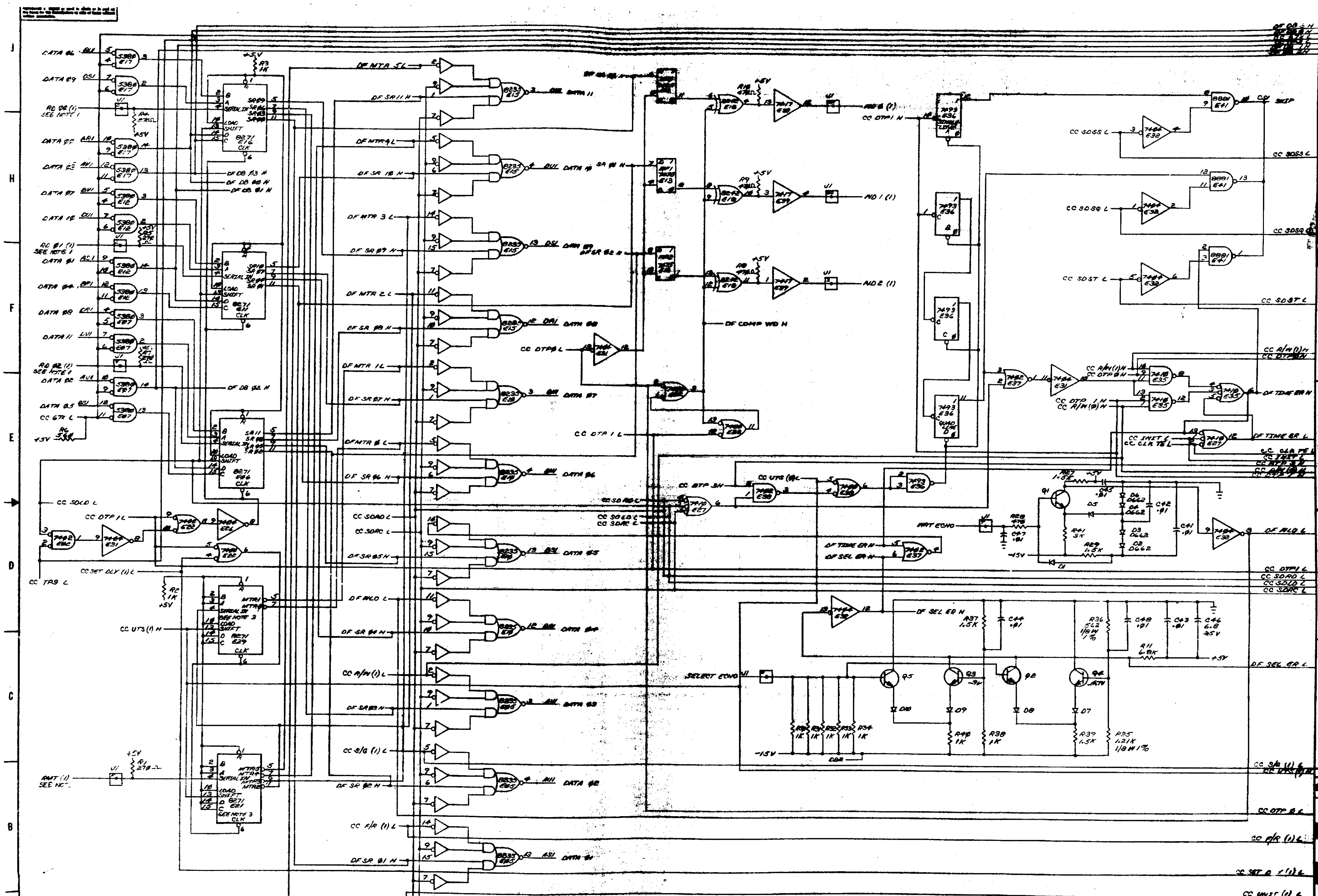
APL-TDB-E-0

[redacted] EQUIPMENT CORPORATION

SIMPLE DECTAPE CONTROL

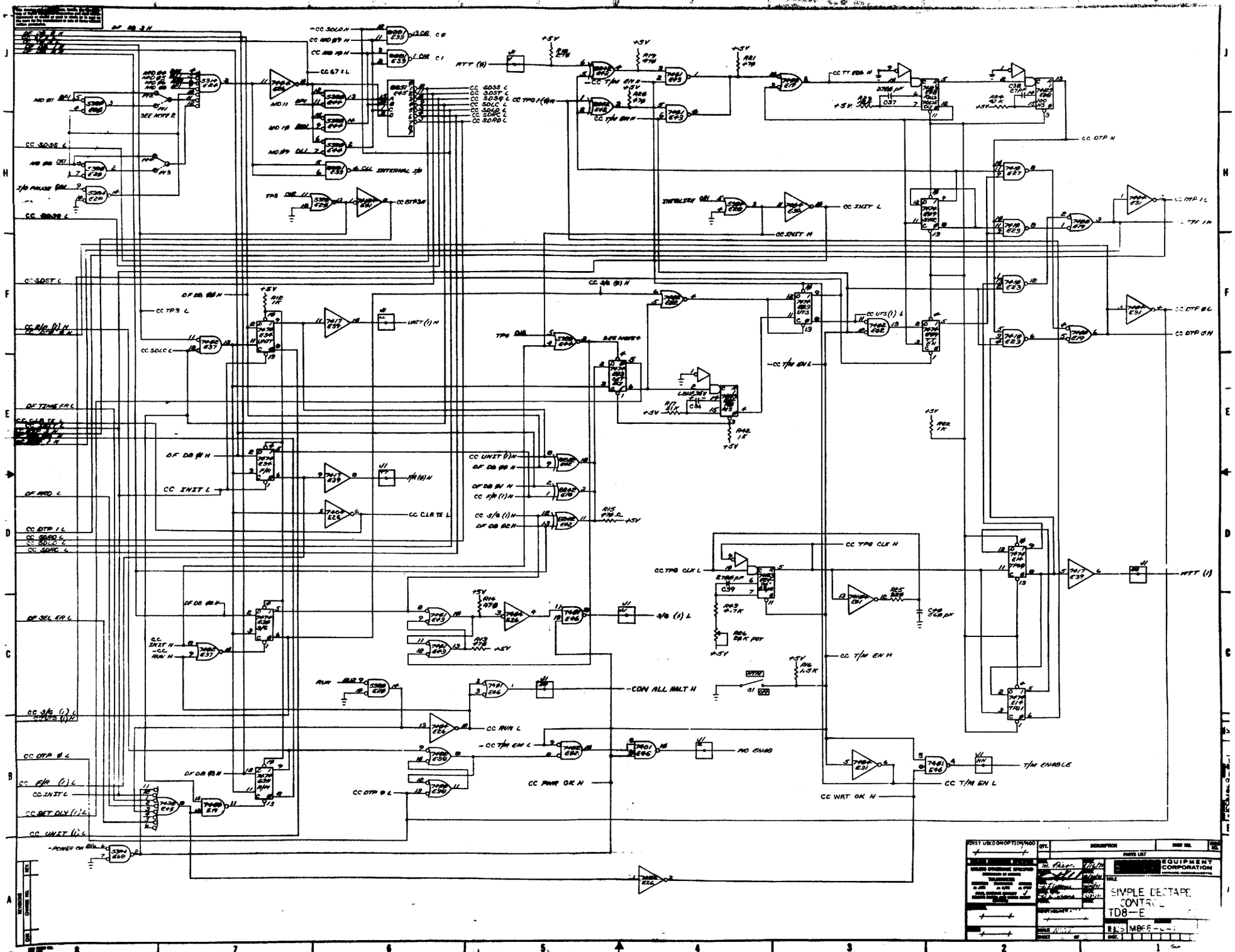
TDE-E

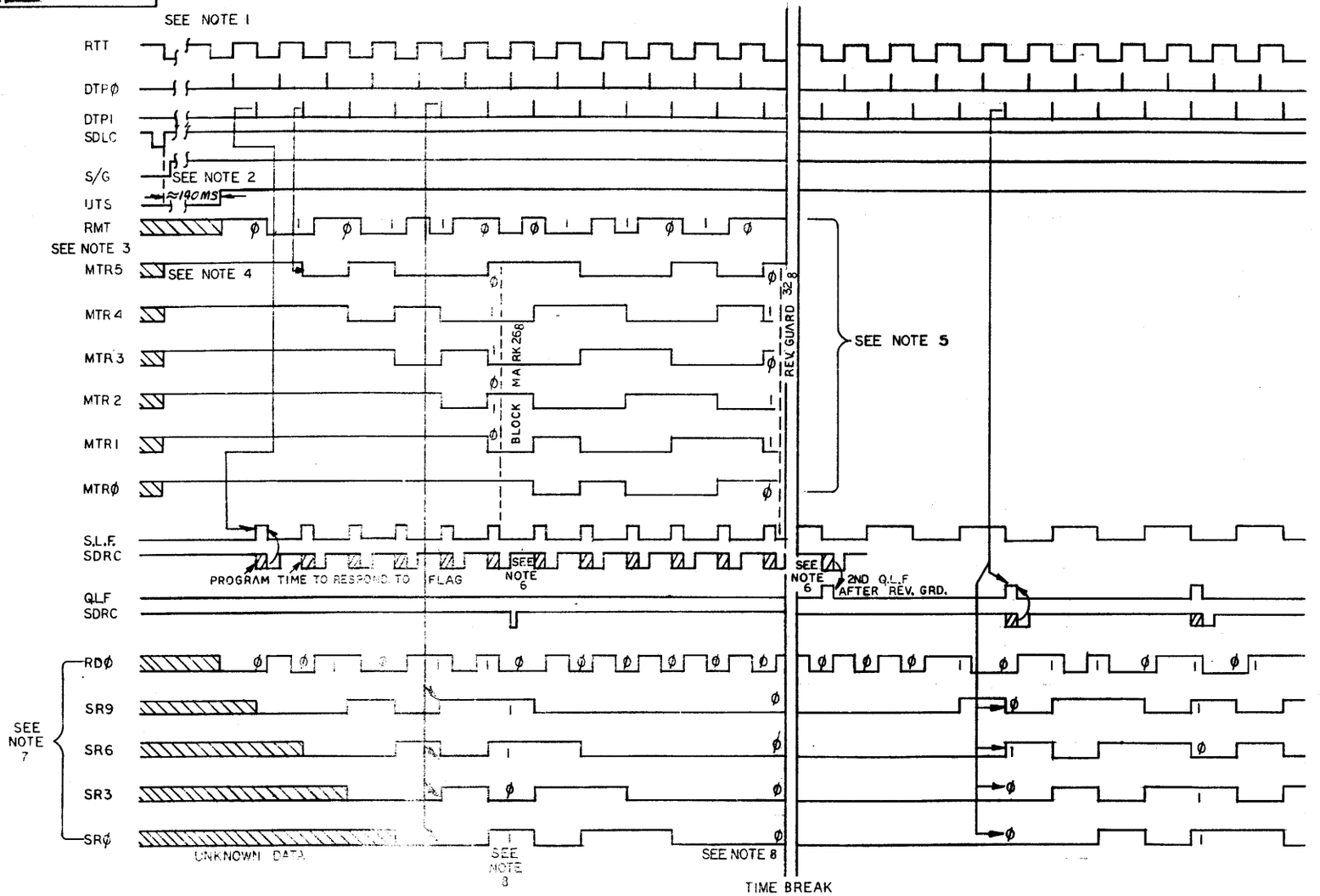
CS M868-0-1



TITLE	SIMPLE DECTAPE CONTROL
	TD8-E DF
	EQUIPMENT CORPORATION
SIZE / CODE / NUMBER	E CS M868-0-1
REV.	K

FIRST USED ON OPTION/MOD


SIMPLE DECTAPE CONTRO
TD8—E
EQUIPMENT CORPORATION



NOTES:

1. THIS TIMING DIAGRAM DOES NOT INDICATE THE ONLY OR CORRECT WAY TO PROGRAM THE TD8-E FOR READ OPERATIONS. ITS PRIMARY FUNCTION IS TO SHOW WHAT HAPPENS IN THE LOGIC BETWEEN VARIOUS PROGRAMMED INSTRUCTIONS.
2. THE GO SIGNAL IS SWITCH ON BY THE COMPUTER TP9, TO ALLOW SETTLING OF THE UNIT SELECT LINES. THE UNIT, DIRECTION, AND READ COMMANDS ARE SET BY THIS SDLC.
3. THE INPUTS TO AND OUTPUTS FROM THE MARK TRACK REG. ARE REDEFINED. '1' IS A LOW LEVEL.
4. ANY TIME THE U.T.S. DELAY IS STARTED, THE M.T.R. IS SET TO ALL '0'S (HIGH OUTPUT.)
5. ONCE THE CORRECT BLOCK AND IT'S REV. GUARD CODES HAVE BEEN FOUND, THE SINGLE LINE FLAGS ARE IGNORED. THE M.T.R. IS NOT LOOKED AT AGAIN UNTIL ANOTHER SEARCH IS STARTED.
6. AT THIS POINT THE COMPLETE MARK TRACK CODE IS IN THE R.C. IF IT IS A BLOCK MARK THEN A SDRD IS ISSUED TO READ THE BLOCK NUMBER SO THE PROGRAM CAN TEST TO SEE IF IT'S THE ONE WANTED.
7. THE OTHER TWO PARELLEL READ LINES WORK IDENTICALLY TO RDØ, SR9, 6, 3, Ø.
8. THE FIRST TWO BITS READ UNDER THE BLOCK MARK ARE LOST AS THE BLOCK NO. IS ONLY UNDER THE LAST FOUR BITS OF THE BLOCK MARK. THE REV. GUARD HAS (Ø) DATA (IN THE FWD DIRECTION).

T = RC

TO READ MARK TRACK AND DATA

2.35
51 / 120.00
102
180
153
270
255
15

51
6.8
408
306
346.8

10-6
10 3
10-3

51

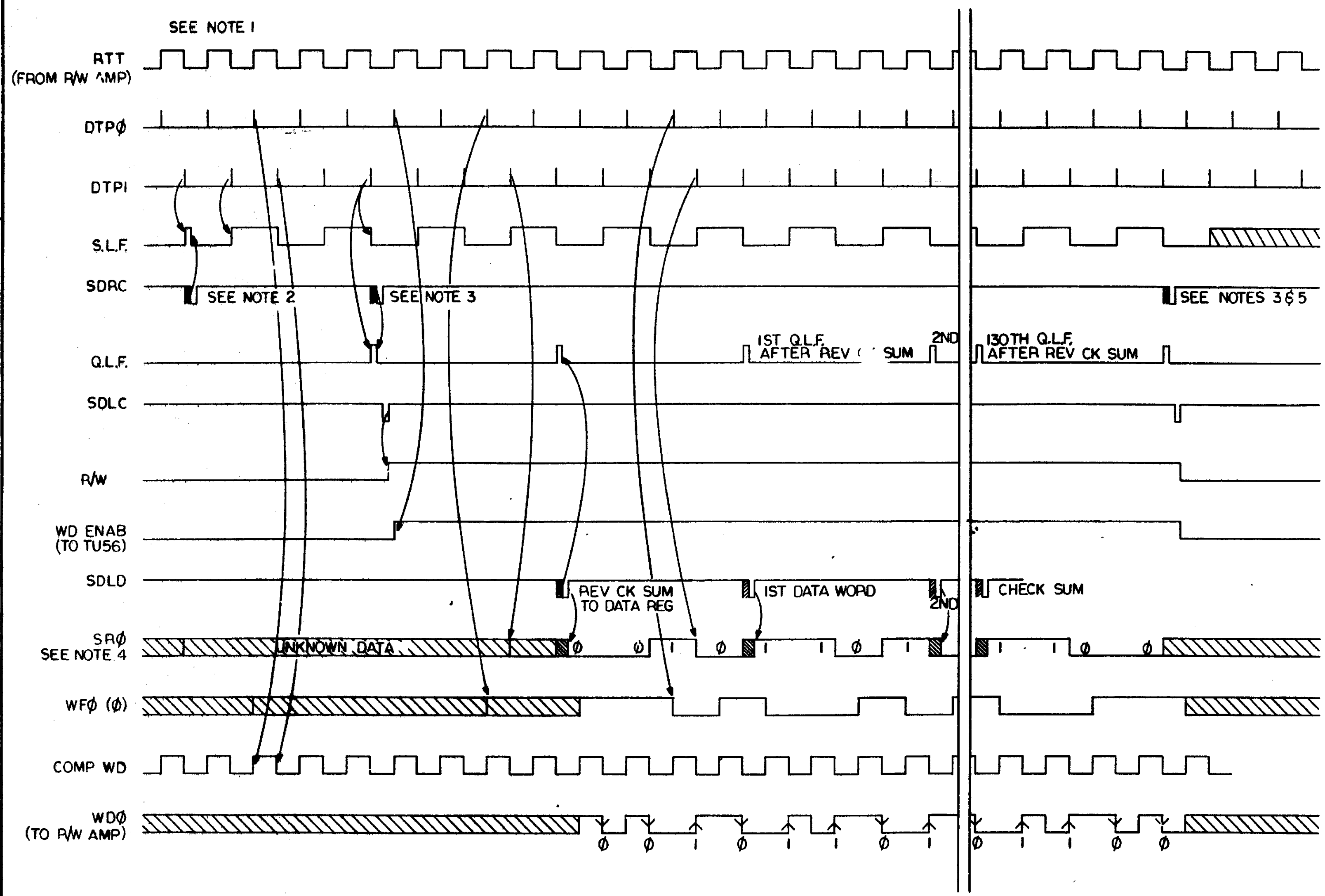
REVISIONS	REV	CHANGE NO.	CHK

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TD8-E		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN.	DATE 11/71	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
DECIMALS	ANGLES	CHK'D.	DATE 2-9-71	
.XXX = .005 .XX = .02 .X = .1	±0° 30'	ENG.	DATE 9/24/71	TITLE TD8-E TIMING DIAGRAM
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓		PROJ. ENG.	DATE 9/24/71	
MATERIAL		PROD. R.K. Dillon	DATE 8-30-71	
FINISH		NEXT HIGHER ASSY. A-ML-TD8-E	SIZE D	CODE TD	NUMBER TD8-E-4	REV.
		SCALE		
		SHEET 1 OF 4	DIST.	

DEC FORM NO ORD 102-B

8 7 6 5 4 3 2 1



WRITE DATA TIMING

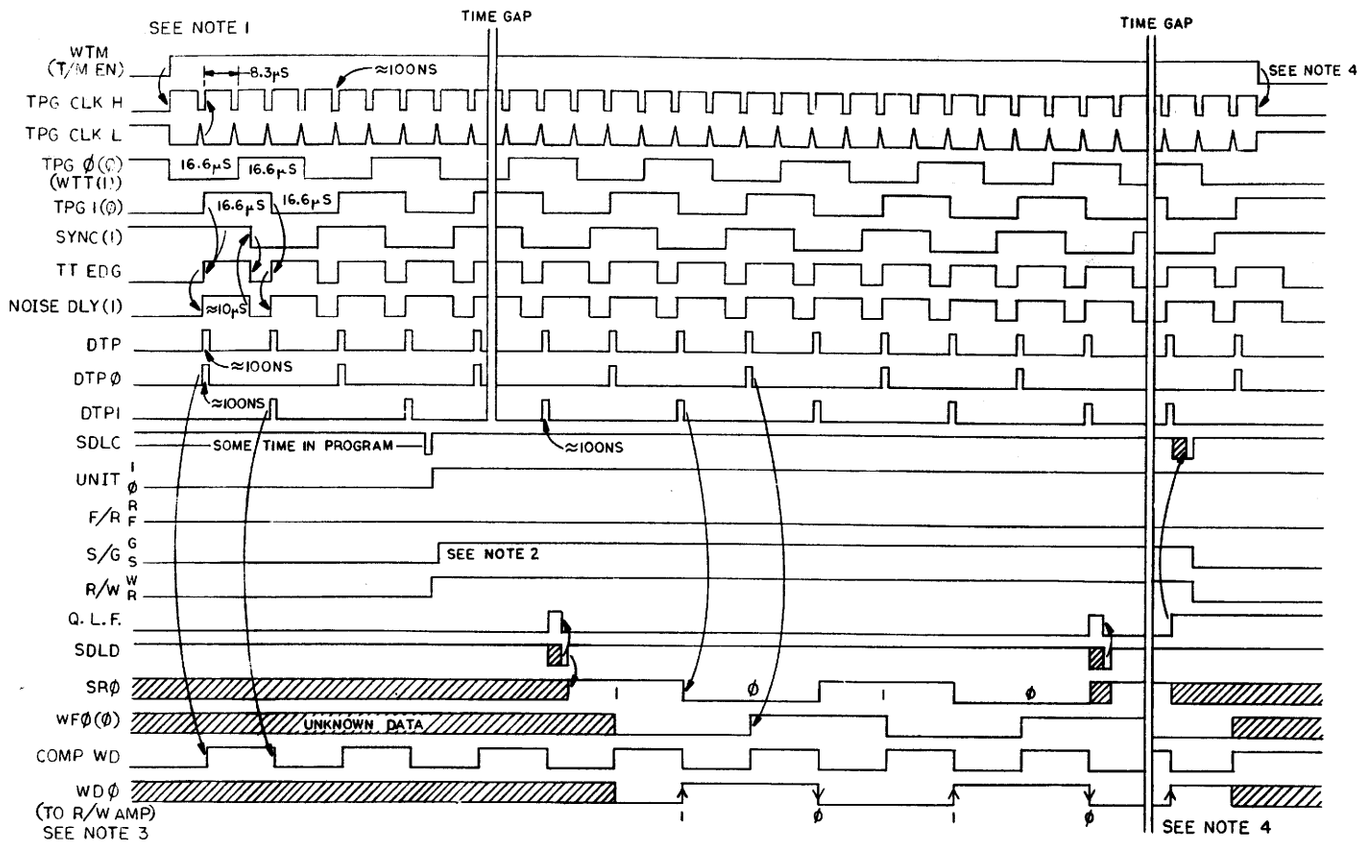
NOTES:

1. THIS TIMING DIAGRAM DOES NOT INDICATE THE ONLY WAY OR A CORRECT WAY TO PROGRAM THE TD8-E FOR READ OR WRITE OPERATIONS. ITS PRIMARY FUNCTION IS TO SHOW WHAT HAPPENS IN THE LOGIC BETWEEN VARIOUS PROGRAMMED INSTRUCTIONS. ▮ INDICATES COMPUTER RESPONSE TIME.
2. AT THIS POINT THE COMMAND REG IS SET FOR THE CORRECT UNIT, FWD. DIR., GO, READ. THE CORRECT BLOCK NO. HAS BEEN FOUND AND AT THIS S.L.F. THE REV. GUARD CODE IS IN THE M.T. REG.
3. THIS SDRC LOADS THE STATUS OF THE COM. REG. INTO THE AC. SO THE WRITE BIT CAN BE PUT IN OR REMOVED WITHOUT CHANGING ANY OTHER COM. REG., CONDITION. THIS ALSO CLRS THE Q.L.F. AS THE SDLC DOES NOT.
4. THE OTHER 2 PARALLEL WRITE BITS WORK IDENTICAL TO SRØ, WFØ, AND WDØ.
5. AT THIS POINT IF ANY COM. REG. FUNCTION OTHER THAN R/W IS CHANGED, THEN U.T.S. WILL GO AWAY AND THE TIME PULSES WILL STOP UNTIL U.T.S. DELAY TIMES OUT AND U.T.S. IS SET.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.
TD8-E		PARTS LIST	
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. Norm Cugen	DATE 11 Aug 71	EQUIPMENT CORPORATION
DECIMALS .XXX = .005 .XX = .02 .X = .1 / ANGLES ±0° 30'	CHK'D. / ENG. / PROJ. ENG. / PROD. R. K.	DATE	TITLE TD8-E TIMING DIAGRAM
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	NEXT HIGHER ASSY. A-ML-TD8-E		SIZE D CODE TD NUMBER TD8-E-4 REV.
MATERIAL	SCALE NONE		
FINISH	SHEET 2 OF 4		DIST.

REVISIONS: CHK / CHANGE NO. / REV.

D TD TD8-E-4



TIMING DIAGRAM FOR WRITTING MARK& TIME TRACKS
(FORMATTING)

NOTES:

1. THIS TIMING DIAGRAM DOES NOT INDICATE THE ONLY WAY OR A CORRECT WAY TO PROGRAM THE TD8-E FOR FORMATTING. ITS PRIMARY FUNCTION IS TO SHOW HOW TIME PULSES ARE GENERATED TO WRITE THE TIME & MARK TRACKS.
2. THE GO SIGNAL IS SWITCHED ON BY COMPUTER TP4 TO ALLOW SETTLING OF THE UNIT SELECT LINES.
3. DURING FORMATTING THE MARK TRACK IS WRITTEN FROM THE BIT Ø LOGIC.
4. AT THIS TIME THE LAST OF THE END ZONE CODES HAVE BEEN WRITTEN. THE PROGRAM STOPS THE TAPE AND THE WTM SWITCH IS SET TO OFF.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TD8-E		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES
DECIMALS .XXX = .005 .XX = .02 .X = .1 ANGLES ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL
FINISH

DRN.	DATE	8-11-71
CHK'D.	DATE	8-11-71
ENGR.	DATE	8/24/71
PROJ. ENG.	DATE	8/24/71
PROD.	DATE	8-30-71
NEXT HIGHER ASSY.		
SCALE	NONE	
SHEET	3 OF 4	

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
TD8-E
TIMING DIAGRAM

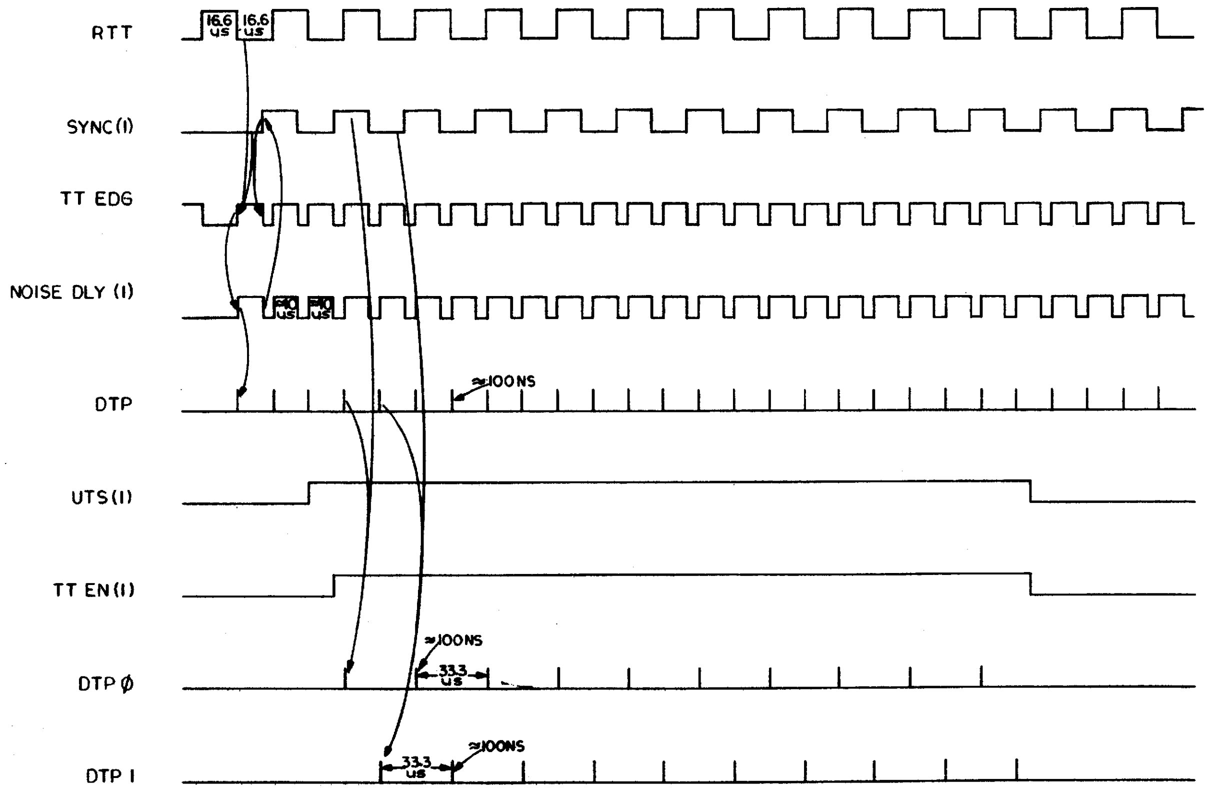
SIZE	CODE	NUMBER	REV.
D	TD	TD8-E-4	

DIST.

REVISIONS | REV. | CHANGE NO. | CHK

DEC FORM NO DRD 102-B

TD8-E-4



GENERATING TIME PULSES FROM RTT

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TD8-E		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES; DECIMALS .XXX = .005 .XX = .02 .X = .1; ANGLES ±0° 30'; REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	DRN. Norm Cogman DATE 11 Aug 71; CHK'D. DATE 8-20-71; ENG. D. J. Adams DATE 8/26/71; PROJ. ENG. D. J. Adams DATE 8/26/71; PROD. R.K. Otto DATE 8-30-71	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS; TITLE TD8-E TIMING DIAGRAM
MATERIAL —	NEXT HIGHER ASSY. A-ML-TD8-E	SIZE D CODE TD NUMBER TD8-E-4 REV.
FINISH —	SCALE NONE SHEET 4 OF 4	DIST.

REVISIONS: CHK | CHANGE NO. | REV.

DEC FORM NO DRD 102-8

D TD TD8-E-4 REV A

LEGEND

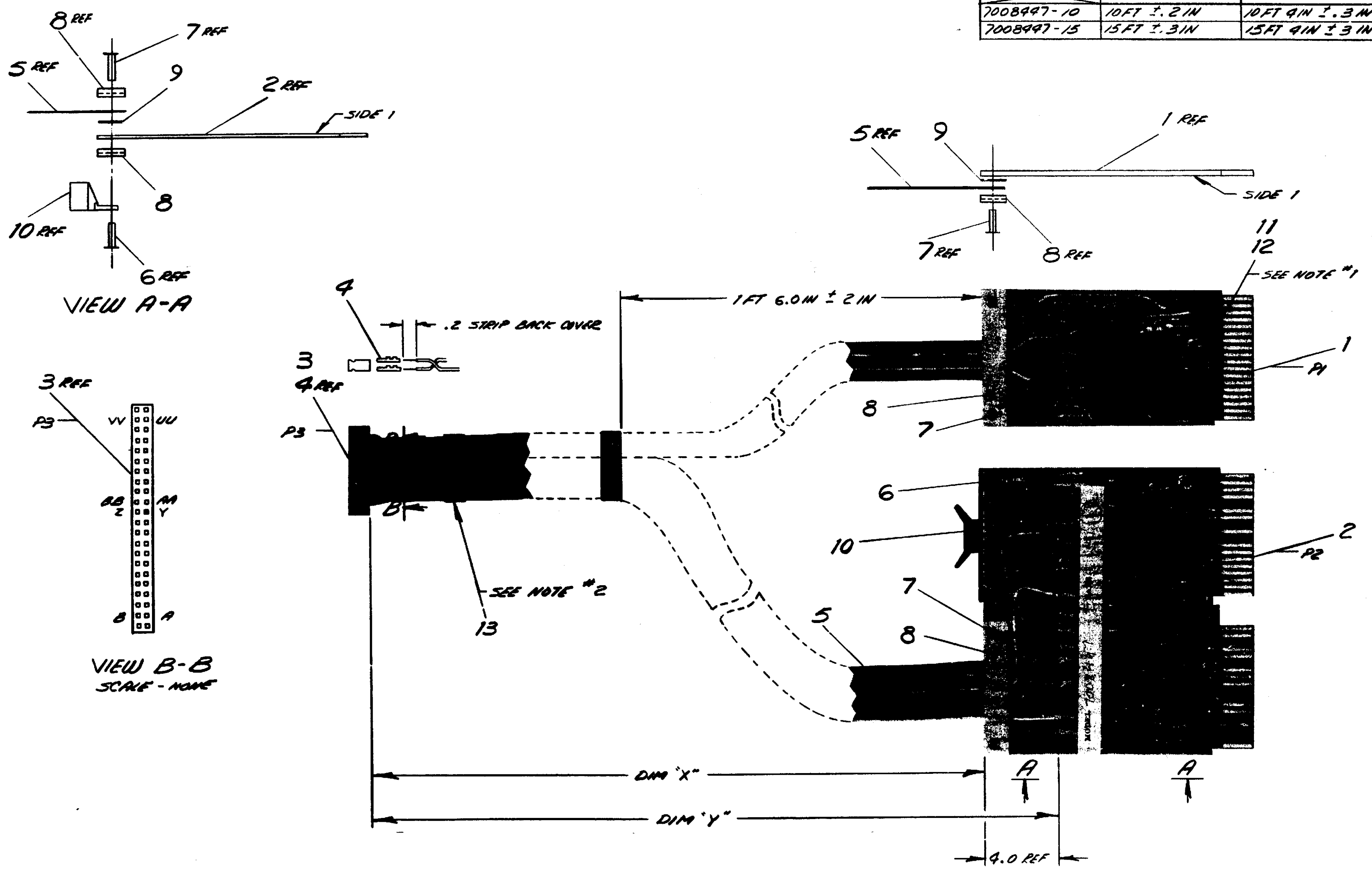
NUMBER	VARIATION	
	DIM "X"	DIM "Y" PRECUT
7008447-10	10 FT ± .2 IN	10 FT 4 IN ± .3 IN
7008447-15	15 FT ± .3 IN	15 FT 4 IN ± 3 IN

NOTES:

1. JUMPERS SHOWN ARE FOR UNITS Ø AND 1 (TD8-E DEVICE CODE 677X) FOR OTHER UNIT SELECTION AND TD8-E DEVICE CODES CHANGE JUMPERS AS FOLLOWS:

DEVICE CODE	SEL JUMPERS
677 X	Ø & 1
676 X	2 & 3
675 X	4 & 5
674 X	6 & 7

2. TAPE BOTH CABLES (ITEM #5) TOGETHER APPROXIMATELY EVERY 8 INCHES, USING BLACK ELECTRICAL TAPE (ITEM #13)



PARTS LIST

QTY.	DESCRIPTION	PART NO.	ITEM NO.
A/R	TAPE 3/4 X .007 THK SCOTCH #33		13
A/R	TUBING THIN WALL TEFLON	9107256-10	12
A/R	BUS WIRE #22 AWG	9107560-01	11
1	HANDLE FLIP CHIP MAGENTA	9008337-6	10
A/R	TAPE .03 THK X .50 W #403E	9007834	9
3	CABLE CLAMP #940	1202704	8
4	EYELET #GS-4-7	9006732	7
2	EYELET #GS-4-9	9006746	6
A/R	CABLE RIBBON 20 COND	9107375	5
34	SOCKET, BERG 48015	1210089-4	4
1	HOUSING, BERG #20383	1210090-0	3
1	CABLE CONNECTOR	M961	2
1	CABLE CONNECTOR	M960	1

REVISIONS		
CHK	CHANGE NO.	REV.
	TC8E-00201	A
		6-6-72
	ADAMS	
		1/13/72

FIRST USED ON OPTION/MODEL: TD8-E

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS	ANGLES
.XXX ± .005 .XX ± .02 .X ± .1	±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL: SEE PARTS LIST

FINISH: —

		DATE
DRN		5-23-71
CHK'D		8-26-71
ENG.		8/26/71
PROJ. ENG.		8/26/71
PROD.	R. K.	8-30-71

NEXT HIGHER ASSY.: A-PL-TD8-E-1

SCALE: 1-1

SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CABLE COMMAND & DATA

SIZE	CODE	NUMBER	REV.
D	IA	7008447-0-0	A

DIST.

D IA 7008447-0-0 A

WIRE TABLE

ITEM NO	DESCRIPTION AWG	DESCRIPTION COLOR	FROM CONNECTION	FROM WITH	TO CONNECTION	TO WITH	REMARKS
5	22	BLK	P1-TM ENABL	SOLDER	P3-NN	#CRIMP	
		BRN	P1-1 GND		P3-MM		
		RED	P1-F/R Ø H		P3-TT		
		ORN	P1-2 GND		P3-SS		
		YEL	P1-SIG Ø H		P3-JJ		
		GRN	P1-3 GND		P3-HH		
		BLU	P1-CON ALL HALT		P3-RR		
		VIO	P1-4 GND		P3-PP		
		GRY	P1-UNIT 1 H		P3-LL		
		WHT	P1-5 GND		P3-KK		
		BLK	P1-SEL ECH		P3-N		
		BRN	P1-6 GND		P3-M		
		RED	P1-WRT [illegible]		P3-T		
		ORN	P1-7 GND		P3-S		
		BLK	P2-1 GND		P3-AA		
		BRN	P2-WTT		P3-BB		
		RED	P2-2 GND		P3-EE		
		ORN	P2-WDØ		P3-FF		
		YEL	P2-3 GND		P3-H		
		GRN	P2-RTT		P3-J		
		BLU	P2-4 GND		P3-E		
		VIO	P2-RMT		P3-F		
		GRY	P2-5 GND		P3-W		
		WHT	P2-WD2		P3-X		
		BLK	P2-6 GND		P3-CC		
		BRN	P2-WD1		P3-DD		
		RED	P2-7 GND		P3-Y		
		ORN	P2-WD ENAB		P3-Z		
		YEL	P2-8 GND		P3-K		
		GRN	P2-RD1		P3-L		
		BLU	P2-9 GND		P3-C		
		VIO	P2-RDØ		P3-D		
		GRY	P2-10 GND		P3-U		
5	22	WHT	P2-RD2	SOLDER	P3-V	#CRIMP	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
708-E		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS .XXX = .005 .XX = .02 .X = .1 — ANGLES ±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —

FINISH —

DRN DATE 8-25-71; CHKD DATE 8-26-71; ENG D. F. Adams DATE 8/26/71; PROJ. ENG. D. F. Adams DATE 8/26/71; PROD. R. K. DATE 8-30-71

NEXT HIGHER ASSY. A-R-708-E-1

SCALE — SHEET 2 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE CABLE COMMAND & DATA

SIZE D CODE IA NUMBER 7008447-0-0 REV. A

DIST.

REVISIONS: CHK | CHANGE NO. | REV.

DEC FORM NO. DRD 100-A

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY K. RUSS DATE 8-19-71	CHECKED J Fleming DATE 8-25-71	SECTION 1
ENG D L Adams DATE 8/26/71	PROD R. K. Russ DATE 8-30-71	ISSUED SECT. 1

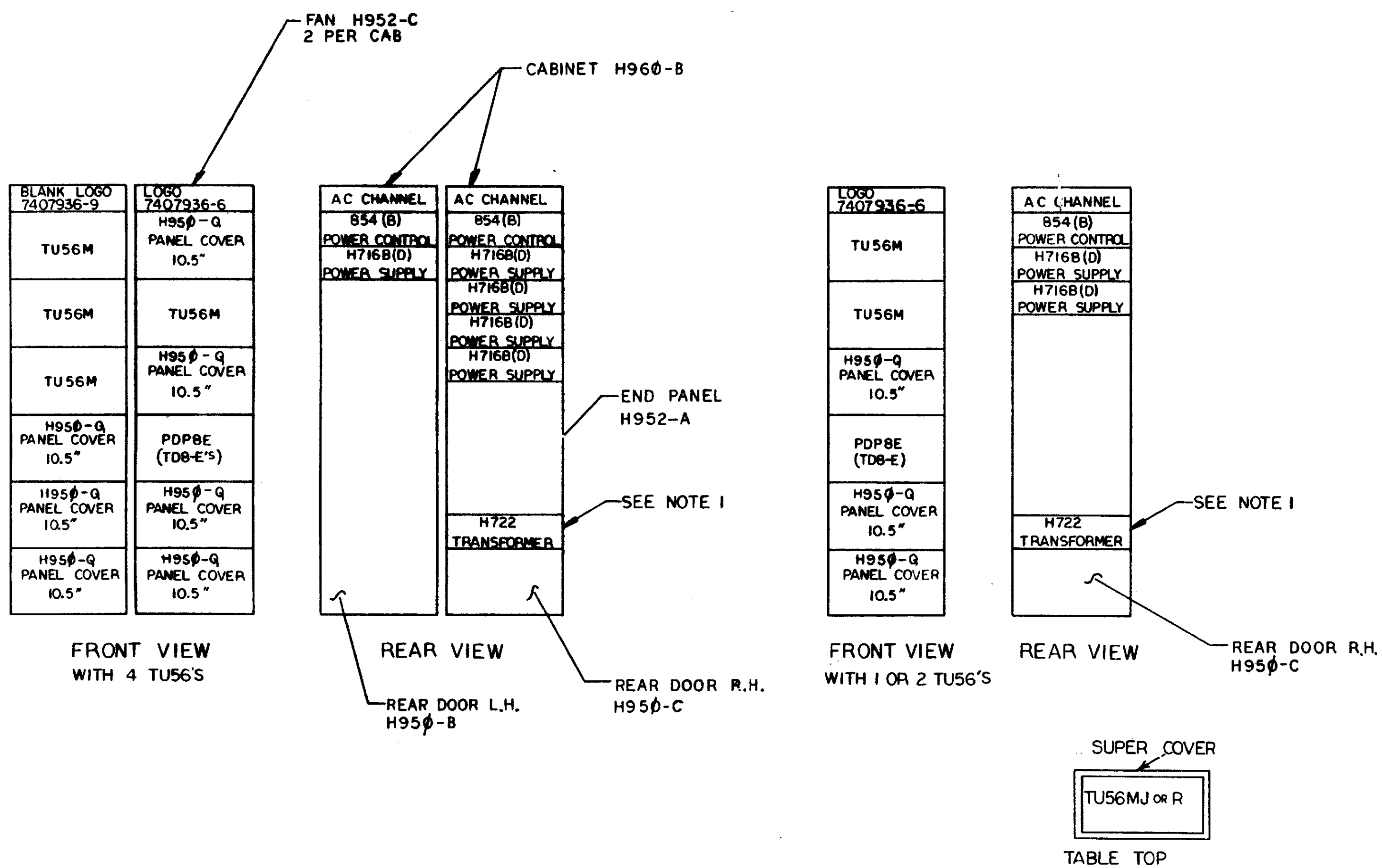
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION											
			TD8-E	TD8-EH	TD8-EJ	TD8-EM	TD8-ER							
1-	E-CS-M868-0-1	SIMPLE DECTAPE CONTROL	1	1	1	1	1							
2	D-IA-7008447-0-0	DECTAPE CONTROL CABLE	1	1	1	1	1							
3	D-UA-TU56-M-Ø	TAPE TRANSPORT TU56-M	-	-	-	1	-							
3	D-UA-TU56-MH-Ø	TAPE TRANSPORT TU56-MH	-	1	-	-	-							
3	D-UA-TU56-MJ-Ø	TAPE TRANSPORT TU56-MJ	-	-	1	-	-							
3	D-UA-TU56-MR-Ø	TAPE TRANSPORT TU56-MR	-	-	-	-	1							
4	D-UA-H716-B-Ø	H716-B POWER SUPPLY	-	*	-	*	-							
4	D-UA-H716-D-Ø	H716-D POWER SUPPLY	-	*	-	*	-							
5	E-AD-7008487-0-0	SUPER COVER	-	-	1	-	1							
*	NOTE: IF SYSTEM IS 110V USE 1 POWER SUPPLY H716-B (ITEM #4)													
	IF SYSTEM IS 220V USE 1 H716-D POWER SUPPLY (ITEM #4)													

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
TD8-E DECTAPE CONTROL	NONE	A	PL	TD8-E-Ø	A	TD8E-00001
	SHEET 1 OF 1	DIST.				

DEC FORM DEC-16 (325) 10-1 N870

NOTES

1 H722 IS USED IN 230V AC SYSTEM TO PRODUCE 115V FOR CABINET.



REVISIONS		
CHK	CHANGE NO.	REV.
	TD8E - 00001	A
	M. Gavin 1-6-72	
	D. ADAMS	
	D.P. Adams 1/13/72	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TD8-E		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS	ANGLES
.XXX = .005 .XX = .02 .X = .1	±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL

FINISH

		DATE
DRN.		15 Jun 71
CHKD.		7-25-71
ENG.	D.P. Adams	9/24/71
PROJ. ENG.	D.P. Adams	9/26/71
PROD.	R.K.	9-30-71

NEXT HIGHER ASSY. A-ML-TD8-E

SCALE NONE

SHEET 1 OF 1

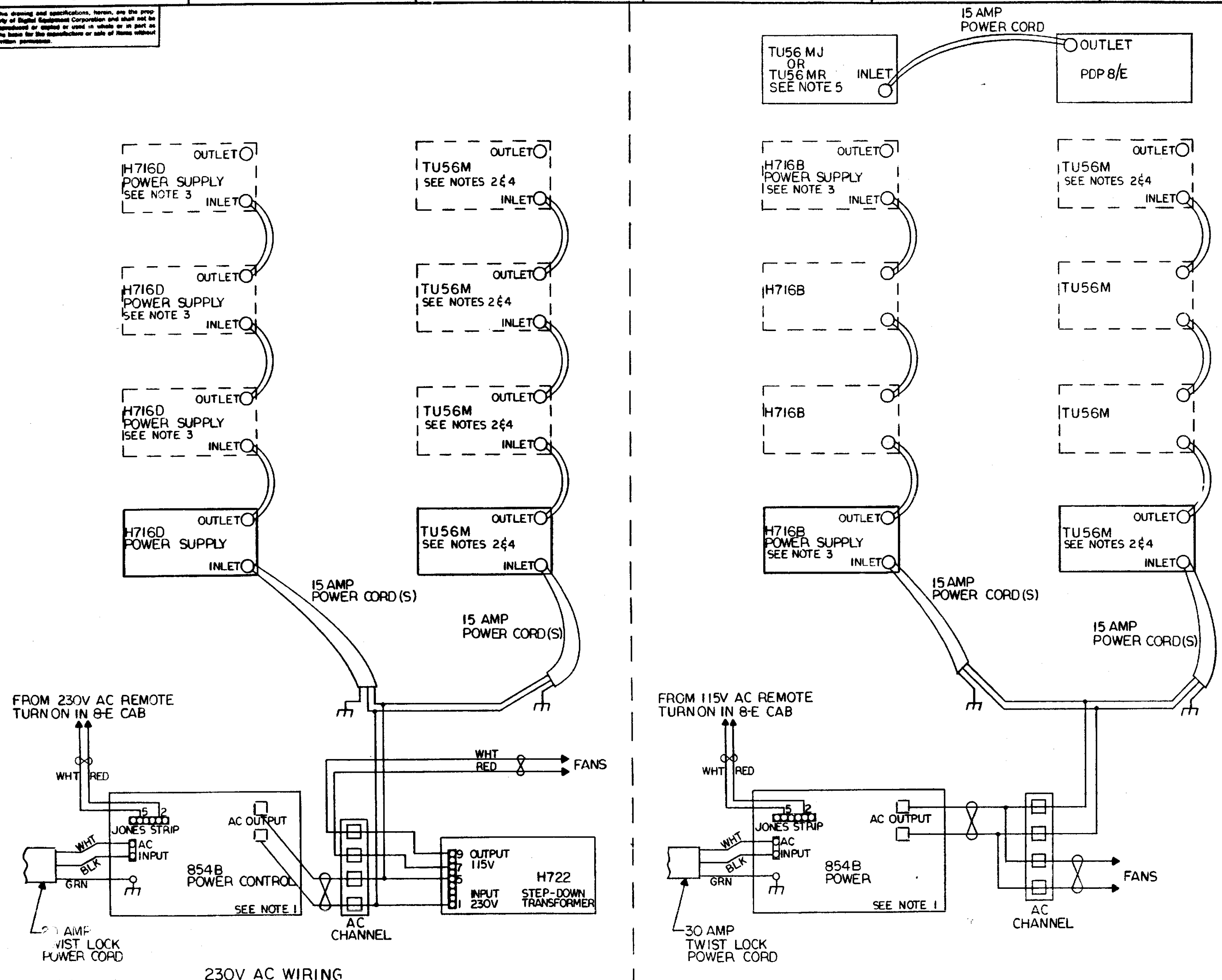
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: TD8-E CONFIGURATION

SIZE	CODE	NUMBER	REV.
D	AR	TD8-E-2	A

DIST.

DEC FORM NO DRD 100-A



NOTES:

1. IF THE H716 AND TU56 ARE MOUNTED IN THE 8-E CAB, THEN USE THE EXISTING 854 POWER CONTROL.
2. UP TO 4 TD8 E'S AND TU56M'S CAN BE CONNECTED TO ONE 8-E.
3. FOR EACH TU56M THERE WILL BE A H716 TO SUPPLY ITS DC POWER. (EXCEPT AS NOTED IN STEP 5.)
4. FOR THE FOLLOWING AC VOLTAGES MAKE THE CORRISPONDING JUMPER CONNECTIONS ON THE TU56 TRANSFORMER.

   117V JUMPER 1-3, 2-4
   230V JUMPER 2-3
5. FOR SMALL DESK TOP SYSTEMS THE POWER CONTROL AND POWER SUPPLY WILL NOT BE USED. THE TU56 WILL GET +5V AND -15V FROM THE PDP-8E OMNIBUS. USE AWG #14 TWISTED PAIRS BETWEEN THE 8E AND TU56.
6. DC WIRING IS THE SAME FOR BOTH H716B AND H716D
7. PLUG CABLE INTO EITHER OF ITS INDICATED LOCATIONS. THE OTHER LOCATION WILL NOT BE USED, AS THE TU56'S ARE NOT SERIALLY CABLED TOGETHER. (BC02 X-3)
8. ALL DC POWER WIRES TO BE #14 AWG STRD TEFLON.
9. M868 PLUGS INTO TU56 AS SHOWN AT LEFT.

REVISIONS		
CHK	CHANGE NO.	REV
	TD8E-00001 ADAMS 1/13/72	A
	TD8E-00002 ADAMS 4/27/72	B

FIRST USED ON OPTION/MODEL: TD8-E

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES — DECIMALS: .XXX = .005, .XX = .02, .X = .1; ANGLES: ±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL — FINISH —

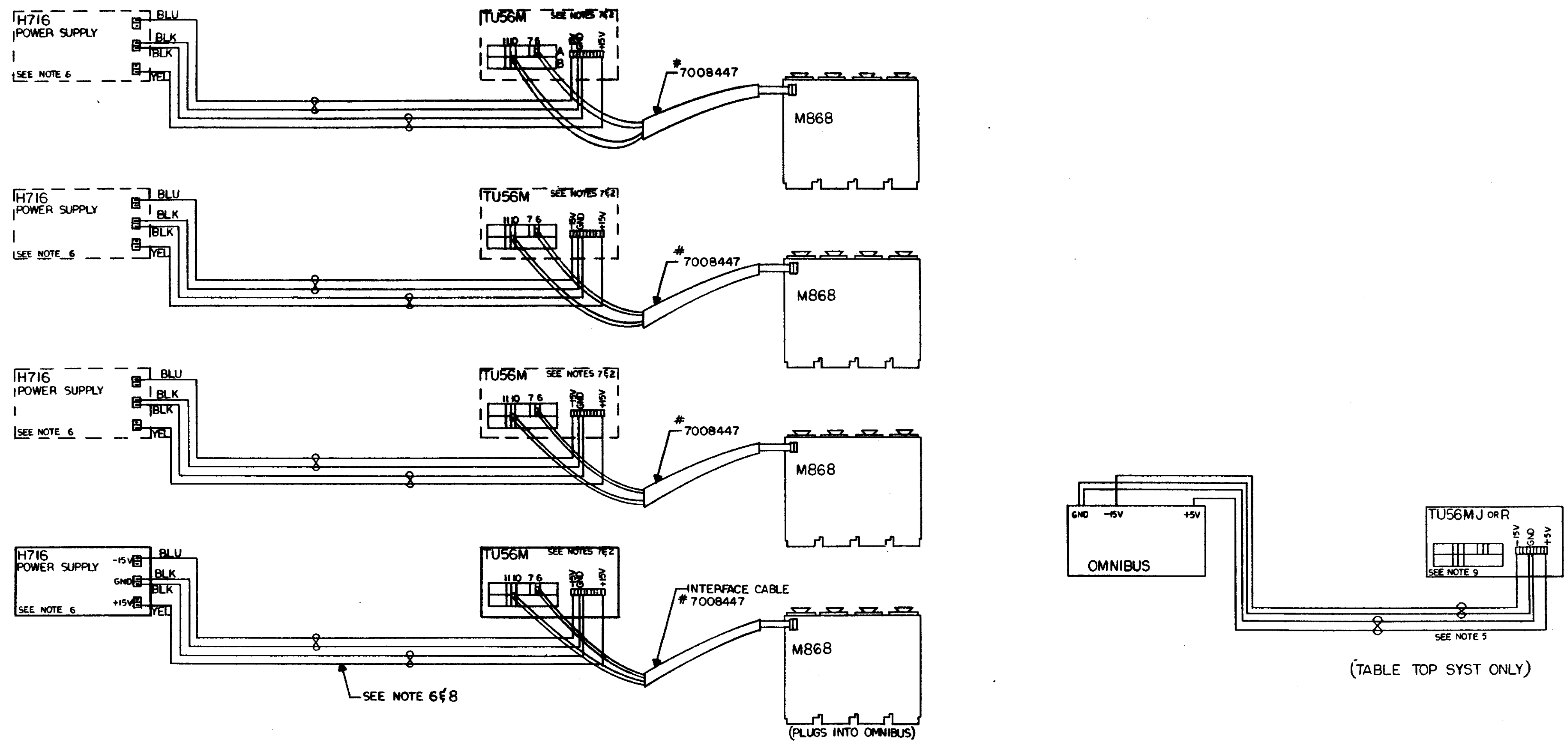
NEXT HIGHER ASSY. A-ML-TD8-E · SCALE NONE · SHEET 1 OF 2

digital EQUIPMENT CORPORATION, MAYNARD MASSACHUSETTS

TITLE: POWER WIRING

SIZE D · CODE IC · NUMBER TD8-E-3 · REV. B

DEC FORM NO DRD 980-A



REVISIONS		
CHK	CHANGE NO.	REV.

FIRST USED ON OPTION/MODEL: TD8-E

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES
DECIMALS: .XXX = .005, .XX = .02, .X = .1 — ANGLES: ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL
FINISH

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

DRN. Norm Cayson — DATE 19 Jul 7_
CHK'D — DATE 8-27-7_
ENG. — DATE
PROJ. ENG. — DATE
PROD. R. K. — DATE 8-30-71
NEXT HIGHER ASSY.
SCALE NONE
SHEET 2 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: POWER WIRING

SIZE D CODE IC NUMBER TD8-E-3 REV. B
DIST.

MASTER DRAWING LIST

MAINTENANCE MANUALS NO.	TITLE	UNIT VARIATIONS TU56	TU56C	TU56-H	TU56-HC	TU56-M	TU56-MC	TU56-MD	TU56-ME	TU56-MJ	TU56-MK
DEC-00-HRTB-D	TU56	X	X	X	X	X	X	X	X	X	X

USED ON OPTIONS							

REVISIONS REV.	DATE	CHG. NO.	APP'D
AF	3/72	TU56-67	H.D.
AH	5/72	TU56-68	H.D.
AJ	5/72	TU56-70	H.D.
AK	6/72	TU56-71	H.D.
AL	8/72	TU56-72	H.D.
AM	7/72	TU56-72	H.D.
AN	3/73	TU56-76	H.D.
AP	4/73	TU56-77	H.D.
	6/73	TU56-78	H.D.

DRN. K. GULICK	DATE 7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. D. HEALY	DATE 8/69	
ENG. VAILLANT	DATE 8/69	TITLE TU56 DECTAPE
PROJ. ENG. LUTTIG	DATE 8/69	
PROD. TOMPKINS	DATE 8/69	
FIRST USED ON TU56		SIZE A / CODE ML / NUMBER TU56-Ø / REV. AP
SCALE NONE		DIST.
SHEET 1 OF 2		

DRA 131

Dec 16-(325)-1048-N471

PRINT SET TU56	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
X	E-UA-TU56-Ø-Ø	N	2	TU56 ASSEMBLY	
X	A-PL-TU56-Ø-Ø	N	3	TU56 ASSEMBLY (PARTS LIST)	
X	D-DI-TU56-Ø-1	P	1	DRAWING INDEX LIST TU56	
X	K-WL-TU56-Ø-2	D	1	TU56 DEC TAPE	
X	D-MU-TU56-Ø-MU	H	1	MODULE UTILIZATION TU56	
X	A-PL-TU56-Ø-MU	H	1	MODULE UTILIZATION TU56 (PARTS LIST)	
X	D-BS-TU56-Ø-TLD	L	2	TRANSPORT LOGIC DIAGRAM	
X	D-AD-7ØØ6321-Ø-Ø	E	1	WIRED ASSY TU56	
X	A-PL-7ØØ6321-Ø	E	1	WIRED ASSY TU56 (PARTS LIST)	
X	A-AL-TU56-Ø-5	E	1	ACCESSORY LIST	
	A-SP-TU56-Ø-3	A	5	TU56 SKEW CHECK & HEAD SHIMMING PROC.	
	A-SP-TU56-Ø-4		6	TU56 CHECKOUT PROCEDURE	
	A-SP-TU56-Ø-6		3	ACCEPTANCE PROCEDURE	
X	B-CS-G859-0-1	#	1	CLOCK REGULATOR	
X	B-CS-G851-0-1	#	1	RELAY	
X	B-CS-G888-0-1	#	1	MANCHESTER READER/WRITER	
X	B-CS-M302-0-1	#	1	ONE SHOT DELAY	
X	B-CS-G847-0-1	#	1	DUAL MOTOR VOLTAGE CONTROL	
X	B-CS-G848-0-1	#	1	MOTOR DRIVER	
X	D-AD-5408500-0-0	#	1	SWITCH CONTROL PANEL (TU56)	
X	A-PL-5408500-0-0	#	1	SWITCH CONTROL PANEL (PARTS LIST)	
X	E-AD-7006320-0-0	#	2	PANEL FRONT ASSY	
X	A-PL-7006320-0-0	#	2	PANEL FRONT ASSY (PARTS LIST)	

TITLE				
TU56 DECTAPE	SHEET 2 OF 2	SIZE A / CODE ML	NUMBER TU56-Ø	REV. AP

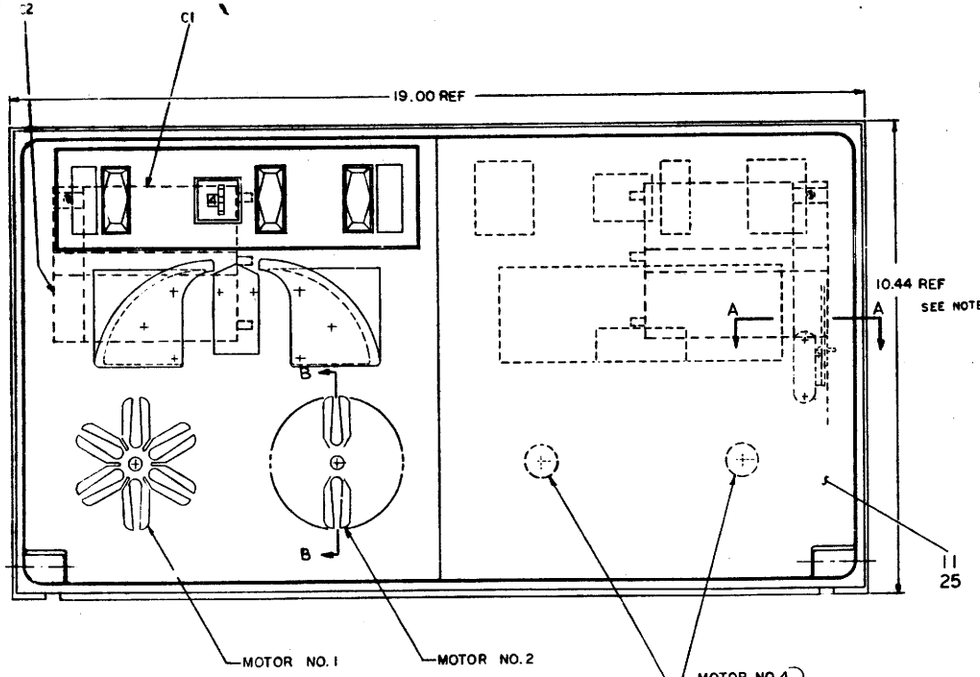
DRA 132

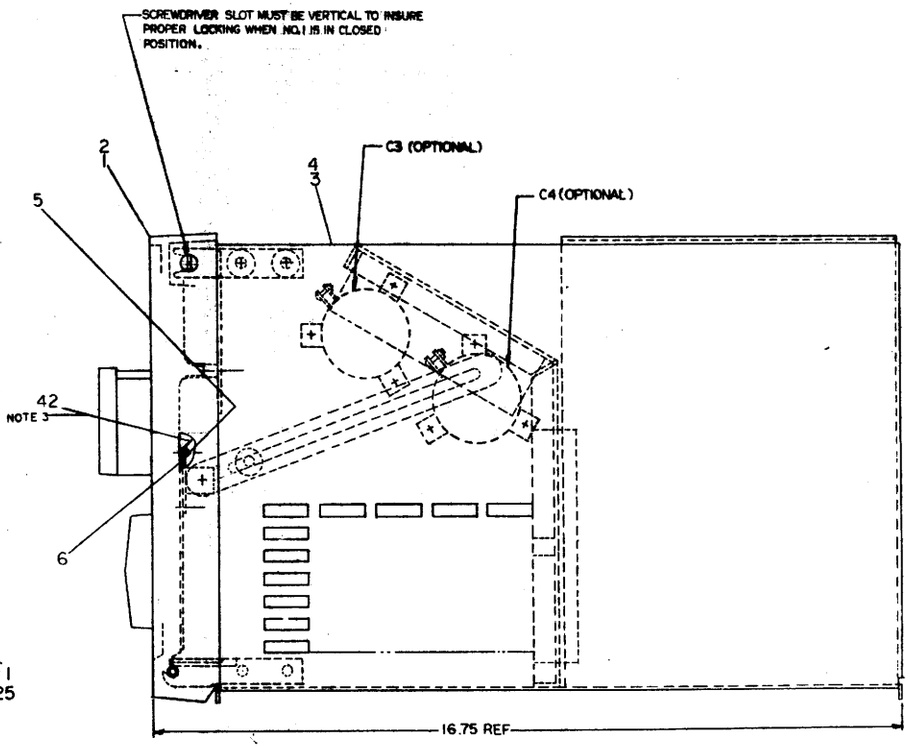
DEC 16-(325)-1048-1-N471

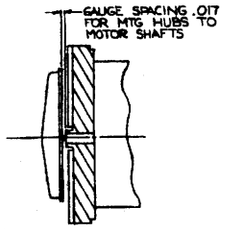
NUMBER	VARIATION
TU56-H	AS SHOWN (1/2 UNIT)
TU56	DOUBLE UNIT
TU56-C	DOUBLE UNIT
TU56-HC	AS SHOWN (1/2 UNIT)
TU56-M	DOUBLE UNIT
TU56-MC	DOUBLE UNIT
TU56-MD	AS SHOWN (1/2 UNIT)
TU56-MH	AS SHOWN (1/2 UNIT)
TU56-MJ	AS SHOWN (1/2 UNIT)
TU56-MR	DOUBLE UNIT

NOTES:

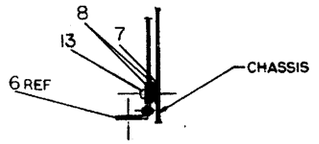
1. FOR DRAWING INDEX LIST REFER TO DRAWING D-DI-TU56-Ø-1
2. ITEMS 36 & 37 ARE TO BE USED FOR MTG OF UNIT ASSY IN H950 CABINET. ITEM 35 TO BE USED FOR MTG IN TUBULAR STYLE CAB.
3. GROUND WIRE WILL BE DRESSED WITH WIRES TO MOTOR #4 AND RUN FROM LUG ON LOGIC MTG BAR TO ITEM 42.







SECTION B-B



SECTION A-A
2 PLACES

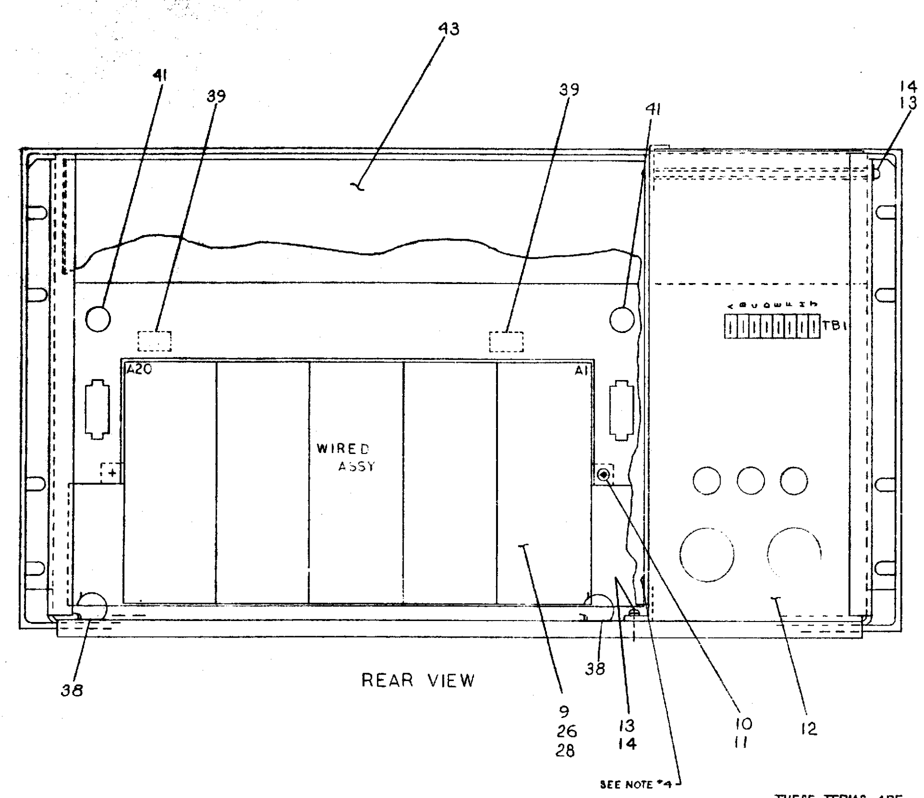
TU56-H

EQUIPMENT CORPORATION

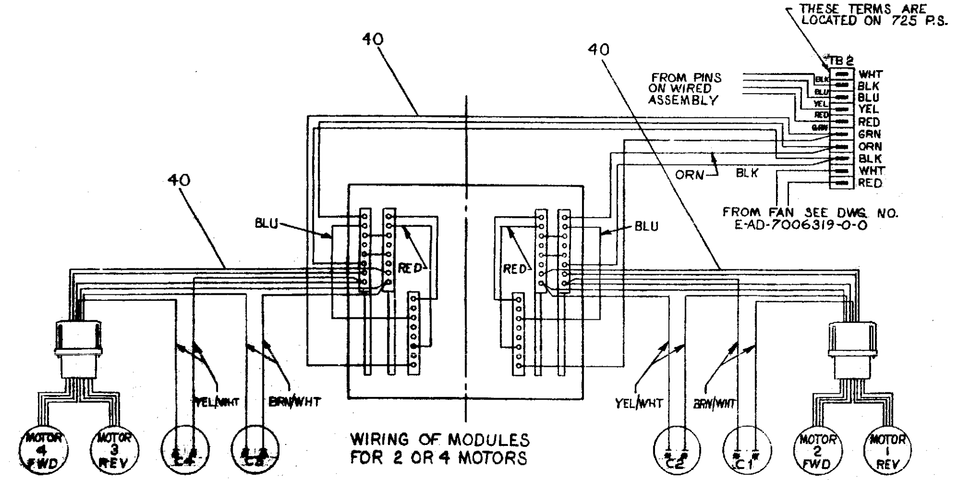
TU56 ASSEMBLY

ML-TU56-H

TU56-Ø-Ø

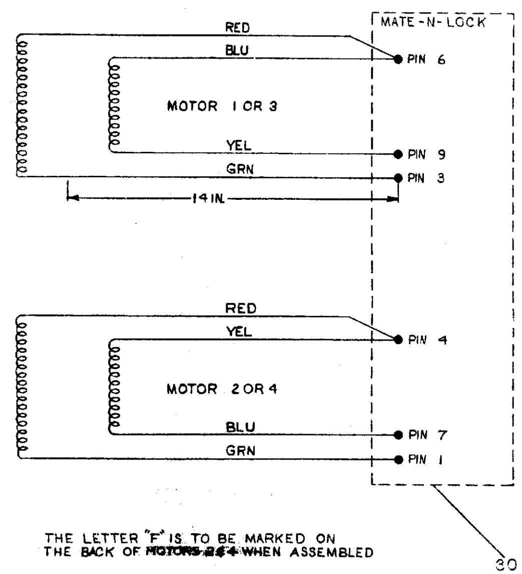


REAR VIEW



WIRING OF MODULES FOR 2 OR 4 MOTORS

MOTOR WIRING DIAGRAM



THE LETTER "F" IS TO BE MARKED ON THE BACK OF ~~MOTORS 2&4~~ WHEN ASSEMBLED

1. MOTORS SUPPLIED WITH WIRES PART NO. 33 TO BE CRIMPED ON WIRE AND INSERTED INTO PART NO. 30 AT ASSEMBLY.
2. *ASTERISK INDICATES WIRES TO BE SOLDERED IN PLACE AT POINT INDICATED
3. ITEM NO. 24 NOT SHOWN-USE WHERE REQ'D.
4. SCREWS (2) HOLD ITEM 43, SHIPPING BRACKET. WHEN BRACKET IS REMOVED AFTER SHIPMENT, REPLACE SCREWS.

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

DRN. GULICK	B-7-69	EQUIPMENT CORPORATION
CHKD. HEALY		TITLE: TU56 ASSEMBLY
VAILLANT		
LUTTIG		
TOMPKINS		
SCALE NONE	SHEET 2 OF 2	E UA TU56-0-0 REV. N

E UA TU56-0-0 N

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY KEN GULICK | CHECKED D. HEALEY | SECTION 1
DATE 8/6/69 | DATE 8/18/69 |
ENG C. VALLIANT | PROD C. TOMPKINS | ISSUED SECT. 1
DATE 8/26/69 | DATE 8/26/69 |

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	TU56-H	TU56	TU56-M	TU56-MR	TU56-BC	TU56-C	TU56-MD	TU56-MC	TU56-MH	TU56-MJ
1	E-AD-7006320-1-0	PANEL FRONT ASSEMBLY	1	-	-	-	1		1		1	1
2	E-AD-7006320-2-0	PANEL FRONT ASSEMBLY	-	1	1	1		1		1	-	-
3	E-AD-7006319-1-0	CHASSIS ASSEMBLY	1	-	-	-	1		1		1	1
4	E-AD-7006319-2-0	CHASSIS ASSEMBLY	-	1	1	1		1		1	-	-
5	9006078-1	SCR PAN 10-32 x 3/8 LG SST	4	4	4	4	4	4	4	4	4	4
6	1209600	LID SUPPORT #43067 CHANDLER & FARQUHAR	2	2	2	2	2	2	2	2	2	2
7	9008135	WASH CURVED #U250-0075 ASSOC SPR	2	2	2	2	2	2	2	2	2	2
8	9008146	WASH FLAT .630.D.X.231.D.X.048 THK SST	4	4	4	4	4	4	4	4	4	4
9	D-AD-7006321-0-0	WIRED ASSY TU56	1	1	1	1	1	1	1	1	1	1
10	9006075-1	SCR PHL HD PAN #10-32 X 3/4 LG SST	2	2	2	2	2	2	2	2	2	2
11	9006565	NUT KEPS #10-32	6	2	2	2	6	2	6	2	6	6
12	D-UA-725-0-0	POWER SUPPLY 725 +	1	1	1	1	1	1	1	1	1	1
13	9006021-1	SCR PHL HD PAN 6-32 X 5/16 LG SST	5	5	5	5	5	5	5	5	5	5
14	9007651	WASH INT TOOTH #6 HOSE	3	3	3	3	3	3	3	3	3	3
15	9007917	CONN SOLDERLESS #50902 AMPLISS	32	64	64	64	32	64	32	64	32	32
16	9007193	CONN SOLDERLESS #3000541B	3	6	6	6	3	6	3	6	3	3
17	9107960-44	WIRE #18 AWG STRD TEFLON [illegible]	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
18	9107960-44	WIRE #18 AWG STRD TEFLON [illegible]	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
19	9107960-66	WIRE #18 AWG STRD TEFLON [illegible]	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
20	9107960-00	WIRE #18 AWG STRD TEFLON [illegible] (BLK)	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
21	9107960-06	WIRE #18 AWG STRD TEFLON [illegible] (BLU)	AR	AR								
22	9107960-22	WIRE #18 AWG STRD TEFLON [illegible] (RED)	AR	AR								

TITLE: TU56 ASSEMBLY | ASSY NO. E-UA-TU56-0-0 | SIZE A | CODE PL | NUMBER TU56-0-0 | REV. N | ECO NO. [illegible]
SHEET 1 OF 3 | DIST.

DEC FORM NO.16-1031
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY KEN GULICK | CHECKED D. HEALEY | SECTION 1
DATE 8/6/71 | DATE 8/19/71 |
ENG C. VALLIANT | PROD E.R. TOMPKINS | ISSUED SECT. 1
DATE 8/26/69 | DATE 8/26/69 |

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	TU56-H	TU56	TU56-M	TU56-MR	TU56-BC	TU56-C	TU56-MD	TU56-MC	TU56-MH	TU56-MJ
23	[illegible]	[illegible]	AR	AR								
24	[illegible]	[illegible]	AR	AR			AR	AR	AR	AR		
25	D-IA-7407534-0-0	COVER PLATE - HALF	1	-	-	-	1		1		1	1
26	C-IA-7405152-1-0	INFO CABLE	1	1	1	1					1	1
27	[illegible]	[illegible]	1	1	1						1	1
28	D-UA-BC[illegible]2K-3-0	CABLE RIBBON M9[illegible]-M9[illegible]	1	1	1	1					1	1
29	[illegible]	[illegible]	1	1			1	1	1	1		
30	1209351-09	MATE-N-LOCK SOCKET HOUSING (9 PIN)	1	2	2	2	1	2	1	2	1	1
31	[illegible]	[illegible]	0	1			1		1			
*	D-IA-7006413-0-0	OPTION CABLE TU56	1	1	1	1				1	1	1
32	[illegible]	[illegible]	1	1			1	1	1	1		
33	1209378	PIN, CONNECTOR	8	16	16	16	8	16	8	16	8	8
34	** C-IA-7408007-0-0	BRACKET, RT. ANGLE SUPPORT	2	2	2	2		2	2	2	2	2
35	*** E-IA-7408009-0-0	SPACER, MTG BRACKET	1	1	1	1		1	1	1	1	1
36	** C-MD-7408322-0-0	SPACER BLOCK	2	2	2	2	2	2	2	2	2	2
37	** C-MD-7408321-0-0	MOUNTING BRACKET	1	1	1	1	1	1	1	1	1	1
38	9008340-0	[illegible]LASH PVC HARNESS CLASP (DK ½-375F)	2	2	2	2	2	2	2	2	2	2
39	9008341-0	[illegible]PVC HARNESS CLASP (DK -188F)	2	2	2	2	2	2	2	2	2	2
40	7006981-0-0	TU56 WIRING HARNESS	1	1	1	1	1	1	1	1	1	1
41	9007016	GROMMET	2	2	2	2	2	2	2	2	2	2
42	9008150	LUG #10 COPPER, TIN PLATED	1	1	1	1	1	1	1	1	1	1
REF	E-AD-7006467-2	TABLE TOP COVER ASSY. (TBCOV KIT)				1						1

TITLE: TU56 ASSEMBLY | ASSY NO. E-UA-TU56-0-0 | SIZE A | CODE PL | NUMBER TU56-0-0 | REV. N | ECO NO. [illegible]
SHEET 2 OF 3 | DIST.

DEC FORM NO.16-1031
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

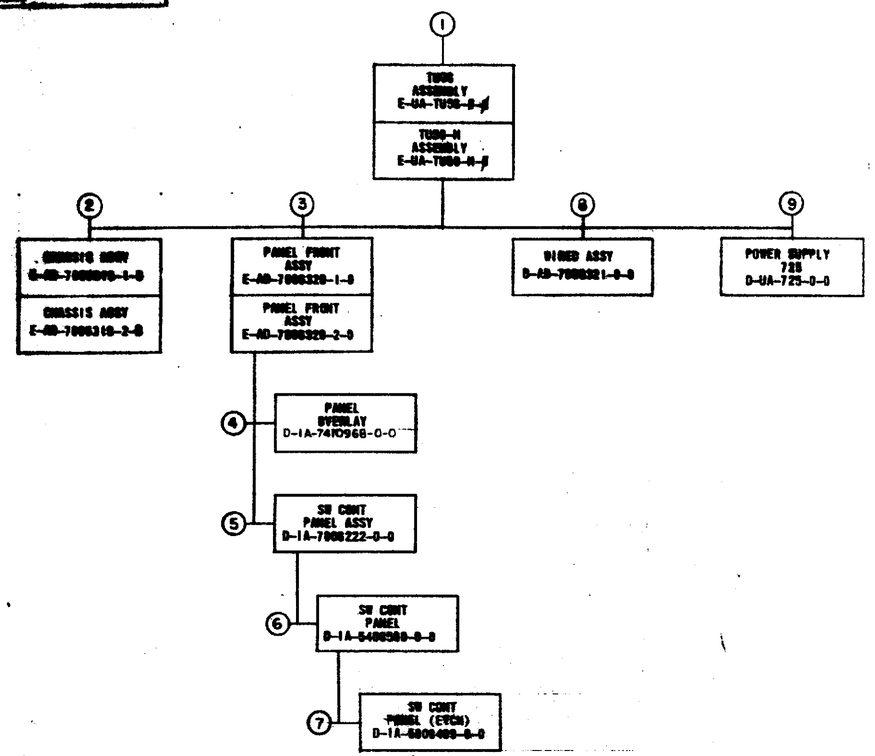
MADE BY KEN GULICK | CHECKED D. HEALEY | SECTION
DATE 8/6/69 | DATE 8/19/69 |
ENG C. VALLIANT | PROD E.R. TOMPKINS | ISSUED SECT.
DATE 8/26/69 | DATE 8/26/69 |

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	TU56-H	TU56	TU56-M	TU56-MR	TU56-BC	TU56-C	TU56-MD	TU56-MC	TU56-MH	TU56-MJ
43	C-IA-7408211-0-0	SHIPPING BRACKET	1	1	1	1	1	1	1	1	1	1
44	1209331	DECTAPE TAKE-UP REEL	1	2	2	2	1	2	1	2	1	1

\+ USE 725-0 POWER SUPPLY FOR 115 VAC OPERATION.
\+ USE 725-A POWER SUPPLY FOR 230 VAC OPERATION.
* IF CABLE ITEM #26 IS NOT USED REPLACE WITH CABLE THAT IS [illegible]
SEE D-MU-TU56-0-MU
** USE THIS PART WHEN MTG UNIT IN CAB H950
*** USE THIS PART WHEN MTG UNIT IN TUBULAR STYLE CABINETS

TITLE: TU56 ASSEMBLY | ASSY NO. E-UA-TU56-0-0 | SIZE A | CODE PL | NUMBER TU56-0-0 | REV. N | ECO NO. [illegible]
SHEET 3 OF 3 | DIST.

DEC FORM NO.16-1031
DRA 110



MECHANICAL

FIND NO.	DESCRIPTION	PART NO.	DEPT USAGE PROD	CUST	F/C
1.	TU56 ASSEMBLY	D-UA-TU56-0-0			
	TU56 ASSEMBLY	A-PL-TU56-0-0			
	CABLE RIBBON H856-H856	D-UA-BC02X-3-0			
	HALF COVER PLADE (TU56-H)	D-IA-7407534-0-0			
	INFO CONN	C-IA-7405152-1-0			
	INTERCONNECTION CABLE TU56	C-IA-7006223-0-0			
	OPTIONAL CABLE TU56	D-IA-7006412-0-0			
	MOUNTING BRACKET	C-MD-7408321-0-0			
	SPACER BLOCK	C-MD-7408322-0-0			
	WIRING HARNESS	E-IA-7006981-0-0			
	PACKAGING INSTRUCTION TU56 CUSTOMER	A-PI-3700022-0-0			
	PACKAGING INSTRUCTION TU56 INTERPLANT	A-PI-3700063-0-0			
	SHIPPING BRACKET	C-IA-7408211-0-0			
	U.L. REQUIREMENTS	A-SP-7665118-0-0			
2.	CHASSIS ASSY (TU56)	E-AD-7006319-1-0			
	CHASSIS ASSY (TU56-H)	E-AD-7006319-2-0			
	SCREEN FAN	C-MD-7404001-0-0			
	CHASSIS ASSY (PL)(TU56)	A-PL-7006319-1-0			
	CHASSIS ASSY (PL)(TU56-H)	A-PL-7006319-2-0			
	CHASSIS	E-IA-7407301-0-0			
	LOCK, PANEL	C-MD-7407300-0-0			
3.	PANEL FRONT ASSY (TU56)	E-AD-7006320-1-0			
	PANEL FRONT ASSY (TU56-H)	E-AD-7006320-2-0			
	PANEL FRONT ASSY (PL)(TU56)	A-PL-7006320-1-0			
	PANEL FRONT ASSY (PL)(TU56-H)	A-PL-7006320-2-0			
	PANEL, MTG	E-MD-7407289-0-0			
	TAPE GUIDE (R.H.)	C-MD-7407283-1-0			
	TAPE GUIDE (L.H.)	C-MD-7407283-2-0			
	COVER PLATE (R.H.)	C-MD-7407282-1-0			
	COVER PLATE (L.H.)	C-MD-7407282-2-0			
	WEAR PLATE (R.H.)	B-MD-7405114-1-0			
	WEAR PLATE (L.H.)	B-MD-7405114-2-0			
	REAR CHECK TAPE GUIDE (L.H.)	C-MD-7405130-1-0			
	REAR CHECK TAPE GUIDE (R.H.)	C-MD-7405130-2-0			
	PIN, LOCK	B-MD-7407480-0-0			
	HUB ASSY 6PT CONTACT	C-IA-7408590-0-0			
	HUB GAUGE	C-IA-7408010-0-0			
	GUARD PLATE	C-MA-7408287-0-0			
4.	PANEL OVERLAY	D-IA-7410968-0-0			
	SILK SCREEN (WHITE)	C-SS-7410968-0-1			
	SILK SCREEN (BLACK)	C-SS-7410968-0-2			
5.	SWITCH CONTROL PANEL ASSY	D-IA-7006222-0-0			
6.	SWITCH CONTROL PANEL	D-IA-5406500-0-0			
7.	SWITCH CONTROL PANEL (ETCH)	D-IA-5006489-0-0			
8.	WIRED ASSY	D-AD-7006321-0-0			
	WIRED ASSY TU56 (PL)	A-PL-7006321-0-0			
	MTG BAR (5 BLOCKS) TU56	C-IA-7406393-0-0			
9.	POWER SUPPLY 725	D-UA-725-0-0			
	POWER SUPPLY 725 (PL)	A-PL-725-0-0			

ELECTRICAL

FIND NO.	DESCRIPTION	PART NO.	DEPT USAGE PROD	CUST	F/C
1.	TU56	A-ML-TU56-0			
	MODULE UTILIZATION (TU56)	B-MU-TU56-0-MU			
	MODULE UTILIZATION (TU56) (PL)	A-PL-TU56-0-MU			
	TRANSPORT LOGIC DIAGRAM	D-BS-TU56-0-TLD			
	TU56 DEC TAPE	K-ML-TU56-0-2			
	ACCESSORY LIST	A-AL-TU56-0-5			
	ACCEPTANCE PROCEDURE	A-SP-TU56-0-6			
2.	CHASSIS ASSY	E-AD-7006319-1-0			
	CHASSIS ASSY	E-AD-7006319-2-0			
3.	FRONT PANEL ASSY	E-AD-7006320-1-0			
	FRONT PANEL ASSY	E-AD-7006320-2-0			
6.	CIRCUIT SCHEMATIC	C-CS-5406500-0-1			
8.	WIRED ASSY TU56	D-AD-7006321-0-0			
	WIRED ASSY TU56	A-PL-7006321-0-0			
9.	CIRCUIT SCHEMATIC 725	C-CS-725-0-0			

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: TU56

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES DECIMALS ±.005 FRACTIONS ±1/64 ANGLES ±0°30'

MATERIAL

A-ML-TU56-0

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: DWG INDEX LIST TU56

SIZE: D CODE: DI NUMBER: TU56-0-1 REV: P

Revisions: TU56-00035 D VALLANT; TU56-00037 E VALLANT; TU56-00060 F LUTTIG; TU56-00052 H LUTTIG; J; TU56-00068 K BERNIER 5/4/72; TU56-00071 L 6-23-72 H. DRAB; TU56-00072 M H. DRAB 8-11-72; TU56-00076 N H. DRAB 4-5-73; TU56-00077 P 4-27-73 H. DRAB 5-1-73

DRWG NO	REV LTR
K-WL-TU56-Ø-2	D

REVISIONS			
REV LTR	ECO NO	DATE	ENG
A	TU56-00005	12-8-69	E.L.
B	TU56-00009	1-30-70	E.L.
C	TU56-00021	4-13-70	E.L.
D	TU56-00026	5-21-70	E.L.

FIRST USED ON OPTION/MODEL	DRAWN	DATE	TITLE
TU56	GULICK	7-8-69	TU56 DEC TAPE
	CHECKED D. Bodin	DATE 8-20-69	FOR TAPE* FILE*
	ENG E. Lutting	DATE 8/25/69	
	PROJ ENG E. Lutting	DATE 8/25/69	
	PROD R R Townsend	DATE 8/26/69	

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

NEXT HIGHER ASSY	SIZE	CODE	DWG.NO.	REV LTR
TU56	K	WL	TU56-Ø-2	D
SCALE NONE	SHEET 1 OF 1	DIST.		

MODULE UTILIZATION

TU56-H (slots 1–11, row A; slots 25–30, row B)

Row A (slots 1–22)

Slot	Module	Usage	Signals
1	G848	MOTOR DRIVE	LEFT FWD
2	G848	MOTOR DRIVE	LEFT REV
3	G858	CLK & REG	L-RESET, OSC1, OSCØ, L RESET, R-RESET, R RESET
4	** M941	LEVEL AMP	L WRT ENAB; STOP, GO, REV REM, FWD REM, ALL HALT, L SEL CODE
5	*** M531	BUS CONV.	R SEL CODE, PWR UP DLY; STOP, GO, REV REM, FWD REM, ALL HALT, L SEL CODE
6	△ M908	CABLE	CON STOP, CON GO, CON REV REM, CON FWD REM, CON ALL HALT, CON PWR UP DLY, T/M EN, WRITE ECHO, SEL ECHO; SEL 1, SEL 2, SEL 3, SEL 4, SEL 5, SEL 6, SEL 7, SEL Ø
7	△ M908	CABLE	CON STOP, CON GO, CON REV REM, CON FWD REM, CON ALL HALT, CON PWR UP DLY, T/M EN, WRITE ECHO, SEL ECHO; SEL 1, SEL 2, SEL 3, SEL 4, SEL 5, SEL 6, SEL 7, SEL Ø
8	M040	SOLEN DRIVE	L DISCON, L SELECT ECHO
9	G851	RELAY	D2(1), D2(G), D2(Ø), D1(1), D1(G), D1(Ø), DØ(1), DØ(G), DØ(Ø), MT(1), MT(G), MT(Ø), TT(1), TT(G), TT(Ø)
10	* W032	CABLE	WTT(1), WTT(Ø), WDØ(1), WDØ(Ø), T M ENAB, TTO(Ø), TTO(1), RTT(Ø), RMT(Ø), RMT(1), MTO(Ø), MTO(1), WD2(1), WD2(Ø), WD1(1), WD1(Ø), D20(Ø), WD ENAB, RD1(Ø), RD1(1), D20(Ø), RDØ(Ø), RDØ(1), D1O(1), D1O(Ø), RD2(Ø), RD2(1), DØO(1), DØO(Ø), RTT(1); TT(Ø), TT(1), TT(G), MT(Ø), MT(1), MT(G), D2(G), D2(1), D2(Ø), D1(G), D1(1), D1(Ø), D1(G), DØ(G), DØ(1), DØ(Ø), GND
11	* W032	CABLE	WTT(1), WTT(Ø), WDØ(1), WDØ(Ø), T M ENAB, TTO(Ø), TTO(1), RTT(Ø), RMT(Ø), RMT(1), MTO(Ø), MTO(1), WD2(1), WD2(Ø), WD1(1), WD1(Ø), D20(Ø), WD ENAB, RD1(Ø), RD1(1), D20(Ø), RDØ(Ø), RDØ(1), D1O(1), D1O(Ø), RD2(Ø), RD2(1), DØO(1), DØO(Ø), RTT(1); TT(Ø), TT(1), TT(G), MT(Ø), MT(1), MT(G), D2(G), D2(1), D2(Ø), D1(G), D1(1), D1(Ø), D1(G), DØ(G), DØ(1), DØ(Ø), GND
12	G851	RELAY	D2(1), D2(G), D2(Ø), D1(1), D1(G), D1(Ø), DØ(1), DØ(G), DØ(Ø), MT(1), MT(G), MT(Ø), TT(1), TT(G), TT(Ø)
13	* G888	RD/WRT AMP	MARK TRACK
14	* G888	RD/WRT AMP	TIMING TRACK
15	M040	SOLEN DRIVE	R DISCON, R SELECT ECHO
16	M117	4 IN NAND	R MØ1, R DIR Ø, -R FWD BRAKE, +3L, +3M; R MOØ, R DIR 1, -R REV BRAKE
17			
18	** M941	LEVEL AMP	R WRT ENAB, R SEL CODE
19	G848	MOTOR DRIVE	RIGHT FWD
20	G848	MOTOR DRIVE	RIGHT REV
21			
22			

Row B (slots 1–22)

Slot	Module	Usage	Signals
1	G848	(extends from row A)	
2	G848	(extends from row A)	
3	G847	DUAL MRV CON	FWD, REV
4	M922	CABLE	L WRT ENAB, L REM, L OFF, L REV LOCAL, L FWD LOCAL, L HOLD, L DISCON; SEL 7, SEL 6, SEL 5, SEL 4, SEL 3, SEL 2, SEL 1, SEL Ø
5	M113	2 IN NAND	L OFF, L FWD, +3A, +3B; L REV, L SELECT, L REMOTE
6	M113	2 IN NAND	L MOØ, R MOØ, R MØ1, R DIR Ø, R DIR 1, +3C, +3D; L MØ1, L DIR 1, L DIR Ø
7	M117	4 IN NAND	L MQ1, L DIR 1, L FWD, +3E, +3F; L MOØ, L DIR Ø, L REV
8	M302	1 SHOT DLY	L BRAKE, R BRAKE
9	G851	(extends from row A)	
10	* W032	(extends from row A)	
11	* W032	(extends from row A)	
12	G851	(extends from row A)	
13	G888	RD/WRT AMP	DATA 1
14	G888	RD/WRT AMP	DATA Ø
15	G888	RD/WRT AMP	DATA 2
16	M113	2 IN NAND	R OFF, FWD, +3L, +3M; REV, R REMOTE, R SELECT
17	M322	CABLE	R WRT ENAB, R REM, R OFF, R REV LOCAL, R FWD LOCAL, R HOLD, R DISCON; SEL 7, SEL 6, SEL 5, SEL 4, SEL 3, SEL 2, SEL 1, SEL Ø
18	G847	DUAL MRV CON	FWD, REV
19	G848	(extends from row A)	
20	G848	(extends from row A)	
21			
22			

Slots 23–44 (rows A and B): no modules assigned.

*G888 READ/WRITE AMPLIFIERS ARE OFFERED AS A CUSTOMER OPT. FOR SPECIAL APPLICATIONS NOT REQUIRING A DECTAPE CONTROL. THE WØ32 CABLE MUST BE REPLACED WITH A M123 CABLE AS PART OF THIS OPTION. A TU56 INCLUDING THIS OPTION IS DESIGNATED A TU56M AND A TU56H INCLUDING THIS OPTION IS DESIGNATED A TU56HM

△ IF CONN. TO ANOTHER TU56 USE CABLE #D-UA-BCØ2X-3-Ø. IF CONN. TO TU55 USE CABLE #D-IA-7006223-0-0

** THE M941 JUMPER MODULES ARE REPLACED WITH W513 LEVEL AMPLIFIER MODULES WHEN THE TU56 IS CONNECTED TO A RELAY DRIVER TYPE CONTROL.

*** G742 JUMPER CARD REPLACES M531 WHEN TU56 IS USED WITH POSITIVE OUTPUT LOGIC CONTROL

IF TU56 IS REQ'D USE ALL MODULES & CABLES SHOWN WITH THE EXCEPTION OF NOTES LISTED ABOVE. IF TU56-H IS REQ'D ONLY MODULES & CABLES IND. BY ARROWS ARE USED

Revisions

CHK	CHANGE NO.	REV
[illegible]	TU56-00009 / E. LUTTIG 2-2-70	A
FV	TU56-00026 / LUTTIG 5/22/70	B
FV	TU56-0002E / LUTTIG 6/1/70	C
[illegible]	TU56-00044 7-27-70 / LUTTIG 10/1/70	D
[illegible]	TU56-00054 3-1-71 / LUTTIG 3/8/71	E
[illegible]	TU56-00067 3-15-72 / H. DRAB 3-20-72	F
PM	TU56-00072 8-8-72 / H. DRAB 8-11-72	H

FIRST USED ON OPTION/MODEL
TU56

DO NOT SCALE DRAWING. UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES: ANGLES ± 0°30'. FINAL SURFACE QUALITY ✓. REMOVE BURRS AND BREAK SHARP CORNERS.

MATERIAL: —
FINISH: —

DRN.	[illegible] — DATE 7-24-69
CHK'D.	[illegible] — DATE 8/19/69
ENG.	[illegible] — DATE [illegible]
PROJ. ENG.	[illegible] — DATE [illegible]
PROD.	[illegible] — DATE [illegible]
NEXT HIGHER ASSY	A-ML-TU56-Ø
SCALE	—
SHEET	1 OF 1

digital EQUIPMENT CORPORATION, MAYNARD MASSACHUSETTS

TITLE: MODULE UTILIZATION

SIZE: D CODE: MU NUMBER: TU56-Ø-MU REV: H

DEC FORM NO. DRD 112

D MU TU56-Ø-MU REV. H

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

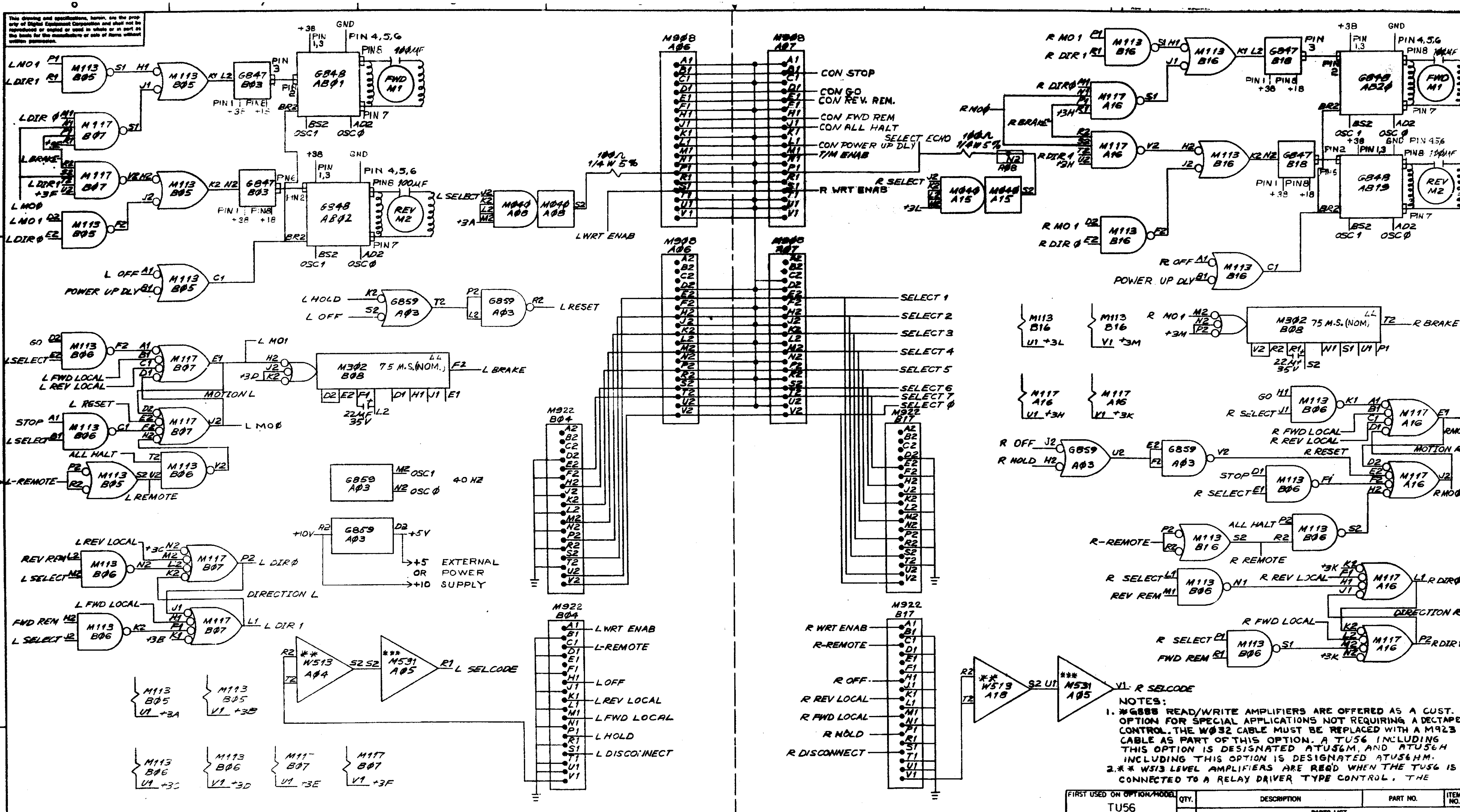
PARTS LIST

MADE BY R. RYTHER	CHECKED D. HEALY	SECTION 1
DATE 7/23/69	DATE 8/6/69	
ENG [signature]	PROD [signature]	ISSUED SECT. 1
DATE 8/26/69	DATE 8/26/69	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION											
			TU56-Ø-MU	TU56-H-MU	TU56-M-MU	TU56-MH-MU	TU56-MR-MU	TU56-MJ-MU	TU56-C-MU	TU56-HC-MU	TU56-MC-MU	TU56-MD-MU		
	G859	CLOCK REGULATOR G859	1	1	1	1	1	1	1	1	1	1		
	W513	LEVEL AMPLIFIER W513*	2	1	2	1	2	1	0	0	0	0		
	~~M5Ø7~~	~~BUS CONVERTER M5Ø7~~	~~2~~	~~2~~										
	M531	NEGATIVE INPUT CONVERTER	1	1	1	1	1	1	0	0	0	0		
	MØ4Ø	SOLENOID DRIVER MØ4Ø	2	1	2	1	2	1	2	1	2	1		
	G851	RELAY G851	2	1	2	1	2	1	2	1	2	1		
	G888	MANCHESTER READER WRITER G888	0	0	5	5	5	5	0	0	5	5		
	M117	6-4 INPUT NAND GATES M117	2	1	2	1	2	1	2	1	2	1		
	M113	10-2 INPUT NAND GATES M113	3	2	3	2	3	2	3	2	3	2		
	M3Ø2	DUAL DELAY MULTIVIBRATOR M3Ø2	1	1	1	1	1	1	1	1	1	1		
	G848	MOTOR DRIVE	4	2	4	2	4	2	4	2	4	2		
	G847	DUAL MOTOR CON	2	1	2	1	2	1	2	1	2	1		
	M941	JUMPER/EXTENDER	2	1	2	1	2	1	2	1	2	1		
	G742	+ LOGIC JUMPER	1	1	1	1	1	1	1	1	1	1		
	* NOTE: SEE	D-MU-TU56-Ø-MU												

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
MODULE UTILIZATION LIST	D-MU-TU56-Ø-MU	A	PL	TU56-Ø-MU	H	TU56-00072
	SHEET 1 OF 1	DIST.				

DEC FORM NO.
DRA 110



NOTES:

1. *G888 READ/WRITE AMPLIFIERS ARE OFFERED AS A CUST. OPTION FOR SPECIAL APPLICATIONS NOT REQUIRING A DECTAPE CONTROL. THE W032 CABLE MUST BE REPLACED WITH A M923 CABLE AS PART OF THIS OPTION. A TU56 INCLUDING THIS OPTION IS DESIGNATED ATU56M, AND ATU56H INCLUDING THIS OPTION IS DESIGNATED ATU56HM.
2. ** W513 LEVEL AMPLIFIERS ARE REQ'D WHEN THE TU56 IS CONNECTED TO A RELAY DRIVER TYPE CONTROL. THE CONT. W513 MODULES ARE REPLACED BY M941 JUMPER MODULES WHEN THE TU56 IS CONNECTED TO ANY OTHER DECTAPE CONTROL.
3. ***G742 JUMPER CARD REPLACES M531 WHEN TU56 IS USED WITH POS OUTPUT LOGIC CONTROL
4. Δ+5V MUST BE SUPPLIED BY EXTERNAL P.S. WHEN G888'S ARE INSTALLED IN TU56
5. ΔΔ ADJUST FOR OPTIMUM BRAKING CHARACTERISTICS. CONSULT MAINTENANCE MANUAL FOR DETAILS.

REV.	CHANGE NO.	CHK
A	TU56-00005	E. LUTTIG 12/4/69
B	TU56-00008	E. LUTTIG 1-27-70
C	TU56-00009	E. LUTTIG 2-2-70
D	TU56-00021	LUTTIG 4-13-70
E	TU56-00026	LUTTIG 5/22/70
F	TU56-00044	LUTTIG 10/1/70
H	TU56-00054	LUTTIG 3/8/71
J	TU56-00057	E-LUTTIG 4/8/71
K	TU56-00070	DRAB 5-25-72
L	TU56-00071	H. DRAB

DEC FORM NO. DRD 102A

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU56		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30' FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN. DATE 7-17-69; CHK'D DATE 3/8/67; ENG. DATE; PROJ. ENG. DATE 9/15/69; PROD.

NEXT HIGHER ASSY A-ML-TU56-Ø

SCALE —

SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE TRANSPORT LOGIC DIAGRAM

SIZE	CODE	NUMBER	REV
D	BS	TU56-Ø-TLD	L

DIST.

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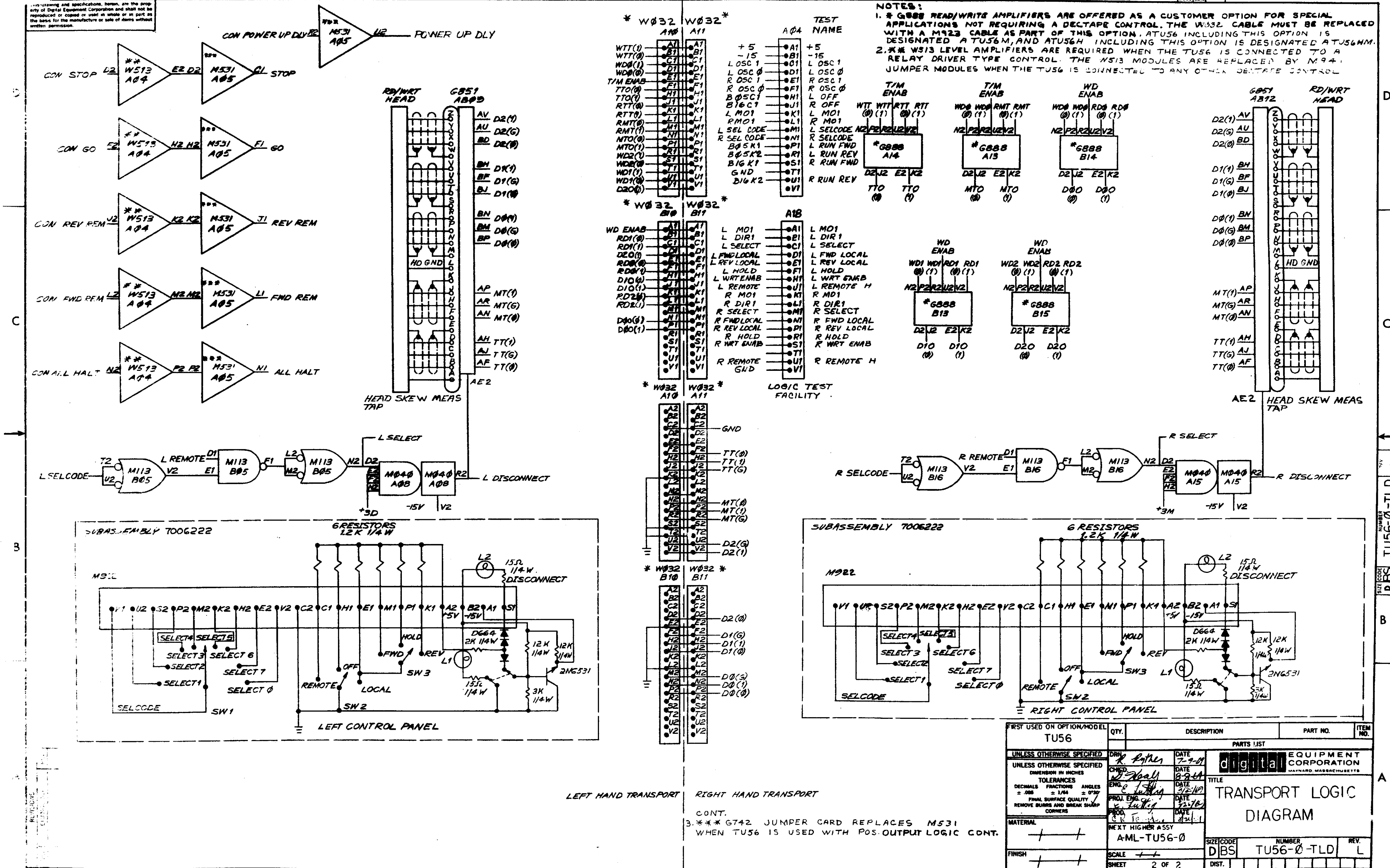


NOTES:

1. * G888 READ/WRITE AMPLIFIERS ARE OFFERED AS A CUSTOMER OPTION FOR SPECIAL APPLICATIONS NOT REQUIRING A DECTAPE CONTROL. THE W032 CABLE MUST BE REPLACED WITH A M923 CABLE AS PART OF THIS OPTION. ATU56 INCLUDING THIS OPTION IS DESIGNATED A TU56M, AND ATU56H INCLUDING THIS OPTION IS DESIGNATED A TU56HM.
2. ** W513 LEVEL AMPLIFIERS ARE REQUIRED WHEN THE TU56 IS CONNECTED TO A RELAY DRIVER TYPE CONTROL. THE W513 MODULES ARE REPLACED BY M941 JUMPER MODULES WHEN THE TU56 IS CONNECTED TO ANY OTHER DECTAPE CONTROL.

CONT.

3. *** G742 JUMPER CARD REPLACES M531 WHEN TU56 IS USED WITH POS. OUTPUT LOGIC CONT.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU56		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —
FINISH —

DRN: R. Ryther DATE 7-9-69
CHKD: D. Healy DATE 8-9-69
ENG.: E. Luthig DATE 3/21/69
PROJ. ENG.: E. Luthig DATE 3/21/69
PROD.: DATE

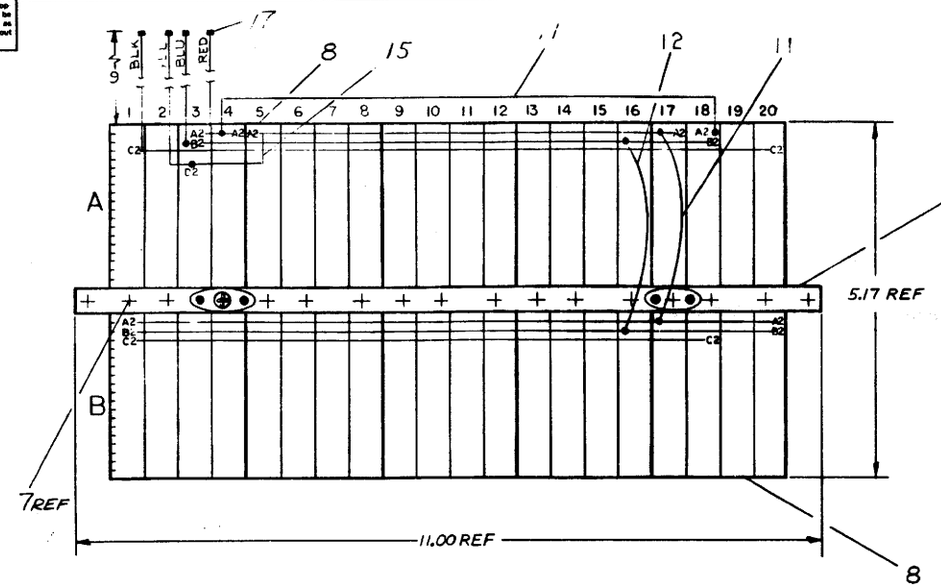
NEXT HIGHER ASSY: A-ML-TU56-Ø
SCALE —
SHEET 2 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: TRANSPORT LOGIC DIAGRAM

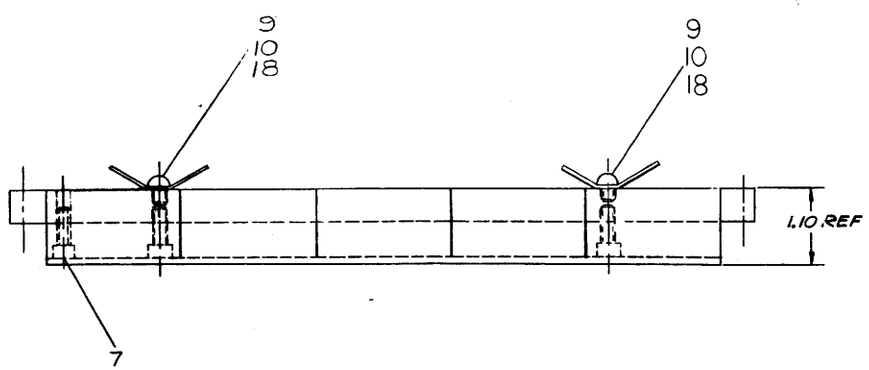
SIZE: D CODE: BS NUMBER: TU56-Ø-TLD REV.: L

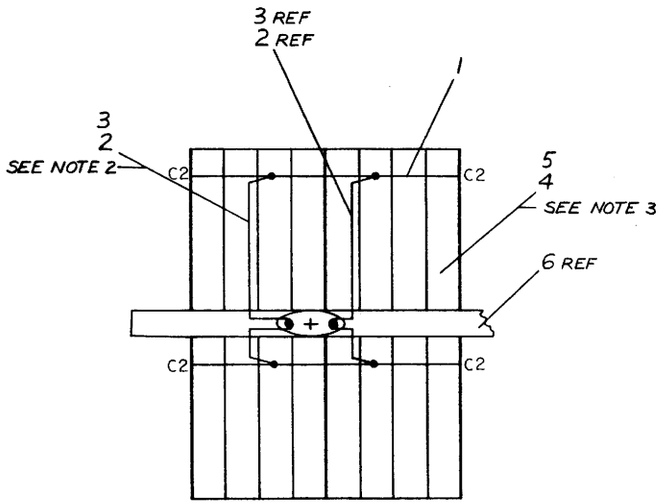
D BS TU56-Ø-TLD



EXTERNAL COMPONENT LIST					
ITEM NO.	COMP	POL	FROM	TO	POL
13	RESISTOR		A08S2	A08P1	
13	RESISTOR		A08N2	A08P1	
14	CAPACITOR	—	B08F1	A08L2	+
14	CAPACITOR	—	B08R1	B08S2	+

NOTES:
1. CONNECTIONS ON ITEMS #1 & #2 TO BE SOLDERED AND LOCATED AT MINIMUM PRACTICAL HEIGHT ABOVE BLOCK
2. CONN BLOCK TO BE GROUNDED TO GND LUG AS SHOWN
3. USE YELLOW WIRE (ITEM #3) FOR MACHINE WRAPPED & BLUE WIRE (ITEM #4) FOR HAND WRAPPED WIRING
4. JUMPER GROUND BUSSING AS SHOWN 1 PLACE





GROUND WIRING DETAIL
SEE NOTE 4

REVISIONS					
CHK	CHANGE NO	REV			
	TU56-00005	A	E. LUTTIG	12/4/69	
	TU56-00013	B	E. LUTTIG	2-20-70	
	TU56-00017	C	E. LUTTIG	3-19-70	
	TU56-00035	D	E. LUTTIG	2-25-71	
	TU56-00062	E	E. LUTTIG	3-8-71	
			LUTTIG	3/12/71	

DEC FORM NO. DRD 100

FIRST USED ON OPTION/MODEL	DO NOT SCALE DRAWING	QTY.	DESCRIPTION	PART NO.	ITEM NO.
TU56	UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES		PARTS LIST		
TOLERANCES DECIMALS .XXX = ± .005 .XX = ± .02 .X = ± .1	TOLERANCES DECIMAL ± ANGULAR ± ANGLES ± 0°30' FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS				
	MATERIAL				
	FINISH				

DRN		DATE 6-17-69
CHK		DATE 8/16/69
ENG		DATE 8/16/69
PROJ. ENG.		DATE 8/16/69
PROD.		DATE 8/16/69

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: WIRED ASSY TU56

NEXT HIGHER ASSY: E-UA-TU56-Ø-Ø

SCALE 1/1 | SHEET 1 OF 1

SIZE D | CODE AD | NUMBER 7006321-0-0 | RF L | DIST.

SIZE D | CODE AD | NUMBER 7006321-0-0 | REV E

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY KEN GULICK	CHECKED D. HEALY	SECTION 1
DATE 6/19/69	DATE 7/23/69	
ENG E. Fielding	PROD C.R. Tamplain	ISSUED SECT. 1
DATE 8/26/69	DATE 8/-6/69	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION 7006321-0
1	1205541	BUS STRIP	A/R
2	9107560-01	22 AWG BUS WIRE	A/R
3	9107265-09	#22 TUBING, TEFLON, WHITE	A/R
4	9105740-44	30 AWG SOLID TEF INS. WIRE, YELLOW	A/R
5	9105740-66	30 AWG SOLID TEF INS. WIRE, BLUE	A/R
6	6-IA-7407393-0-0	MTG BAR (5 BLOCKS) TU56	1
7	9006120	SCR PHL HD SELF-TAPPING 8-32 x 5/8	10
8	1205348	288 PIN CONN BLOCK	5
9	9006775	TERMINAL #2116-08-00 SHAKEPROOF	2
10	9008143	SCR PHL HD SELF-TAPPING 8-32 x 1/4	2
11	9107350-22	22 AWG STRD TEF INS WIRE, RED	A/R
12	9107530-66	22 AWG STRD TEF INS WIRE, BLU	A/R
13	7408016	RESISTOR 100 OHMS 1/4 W 5% CC W/TERMI PTS	2
14	7408015	CAPACITOR 22 MFD 35V S.TANT W/TERMI PTS	2
REF	K-WL-TU56-0-2	WIRE LIST	X
15	9107350-44	22 AWG STRD TEF INS WIRE, YEL	A/R
16	9107350-00	22 AWG STRD TEF INS WIRE, BLK	A/R
17	9007917	CONN. SOLDERLESS #50902 ANKLES	4
18	9006634	WASHER INT #8	2

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
WIRED ASSY TU56	D-AD-7006321-0-0	A	PL	7006321-0-0	E	TU56-00062
	SHEET 1 OF 1	DIST.				

DEC FORM NO.
DBA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

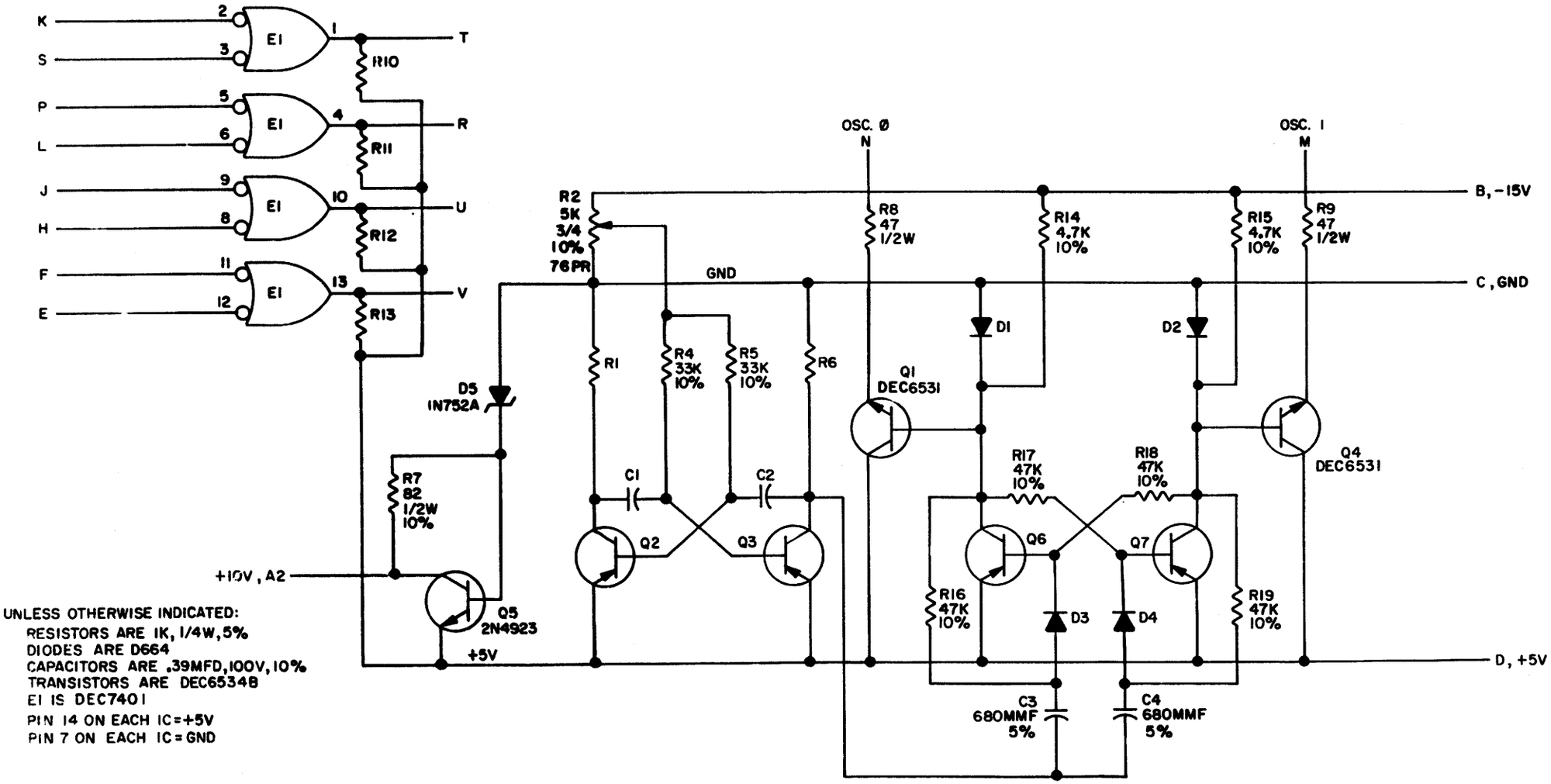
MADE BY J. Ingledue	CHECKED 7/7/72	SECTION
DATE 5/31/72	DATE	
ENG	PROD	ISSUED SECT.
DATE 7/7/72	DATE	

LEGEND

D DOCUMENT
DN DOCUMENT CHANGE NOTICE
PA PAPER TAPE ASCII
PB PAPER TAPE BINARY
PM PAPER TAPE READ-IN-MODE

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION TU56-0, -N, -NR	TU56-H, -NH, -N2	TU56-C, -MC	TU 56-HC, -MD				KIT CHECK BY DATE	INSTALLATION CHECK BY DATE
1	BC02X-03	Select Cable	1	1	ø	ø					
2	74-8321	Mounting Bracket. (H950 Cabinet)	1	1	1	1					
3	74-8322	Spacer Block (H950 Cabinet)	2	2	2	2					
4	TU56-0	Complete Print Set (see A-ML-TU56-0)	1	1	1	1					
5	DEC-00-HRTB-D	Maintenance Manual	1	1	ø	ø					
6	12-9331	Take Up Reel	2	1	2	1					
7	TUC-01	Head Cleaning Kit	1	1	ø	ø					
8	74-5152-1	Head Cable	1	1	ø	ø					
9	G742	Jumper Module (Remove M531 and replace with G742 for PDP-11 add-ons and OEM's)	1	1	1	1					
10	74-5996	Certified DECtape 12 Bit Format	2*	1*	ø	ø					
11	74-5996-1	Certified DECtape 18 Bit Format	2*	1*	ø	ø					
	NOTE: Items 12 thru 14 are for Rack Mountable Field Add-on shipments only.										
12	91-7673-06	AC Line Cord 6'	1	1	ø	ø					
13	90-8851	Mounting Hardware Bag	1	1	1	1					
14	91-7710 and 90-8849	Hook Up Wire	1	1	ø	ø					
*NOTE: Supply Item 10 for PDP-5, 8 Family, and 12; Item 11 for PDP-1,4,6,7,9,10,11, and 15.											
NOTE: When unit is to be connected to a TU55 or a relay driver control, refer to D-MU-TU56-0 for notes. When unit is to be installed on a tubular style cabinet, refer to A-PL-TU56-0-0 for notes.											
15	DEC-TU56-IPB-1	ILLUSTRATED PARTS BREAKDOWN	1	1	1	1					

TITLE DECTape DRIVE UNIT ACCESSORY SHIPPING KIT	ASSY. NO.	SIZE A	CODE AL	NUMBER TU56-0-5	REV. E
	SHEET 1 OF 1	DIST.			ECO NO. TU56-00077



UNLESS OTHERWISE INDICATED:
- RESISTORS ARE 1K, 1/4W, 5%
- DIODES ARE D664
- CAPACITORS ARE .39MFD, 100V, 10%
- TRANSISTORS ARE DEC6534B
- E1 IS DEC7401
- PIN 14 ON EACH IC = +5V
- PIN 7 ON EACH IC = GND

REVISIONS	REV	CHG NO	CHK
	A	00001	
	B	00002	
	C	00003	

DRN. BUTLER	DATE 11-13-69	
CHK'D	DATE 11-17-69	
ENG.	DATE 10/1/69	
PROD.	DATE	

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
D664	IN3606		
DEC6534B	MPS6534B		
DEC6531	MPS6531		
2N4923	SAME		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: CLOCK & REGULATOR G859

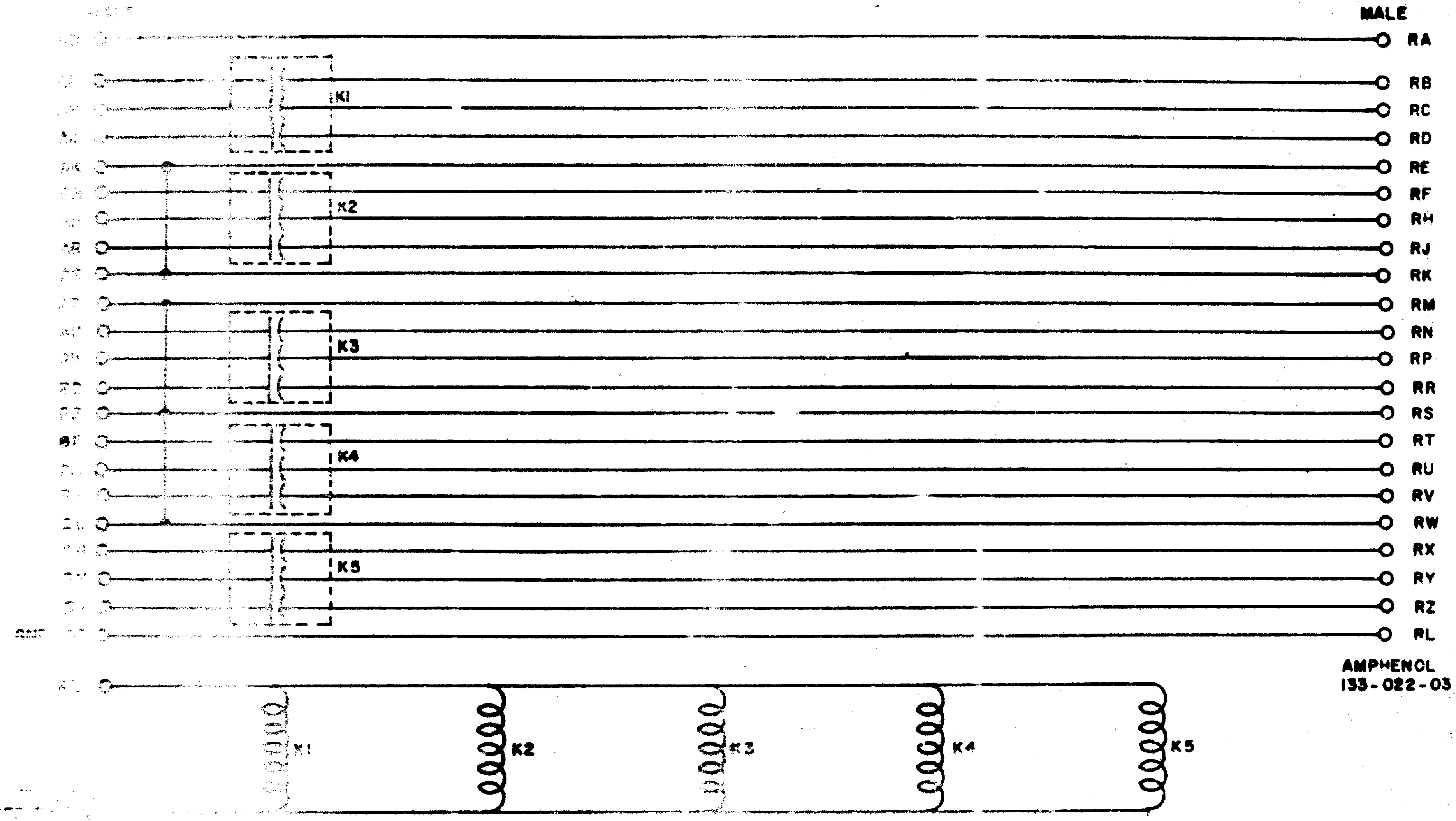
SIZE	CODE	NUMBER	REV
B	CS	G859-0-1	C

PRINTED CIRCUIT REV. A

DEC FORM NO. CRB 107

4 PINK

DIST.



DRN. N.W. PORTER	DATE 1-13-65
CHK'D N. PERRYMAN	DATE 1-25-65
ENG. D. WARDMAN	DATE 1-25-65
PROD.	DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

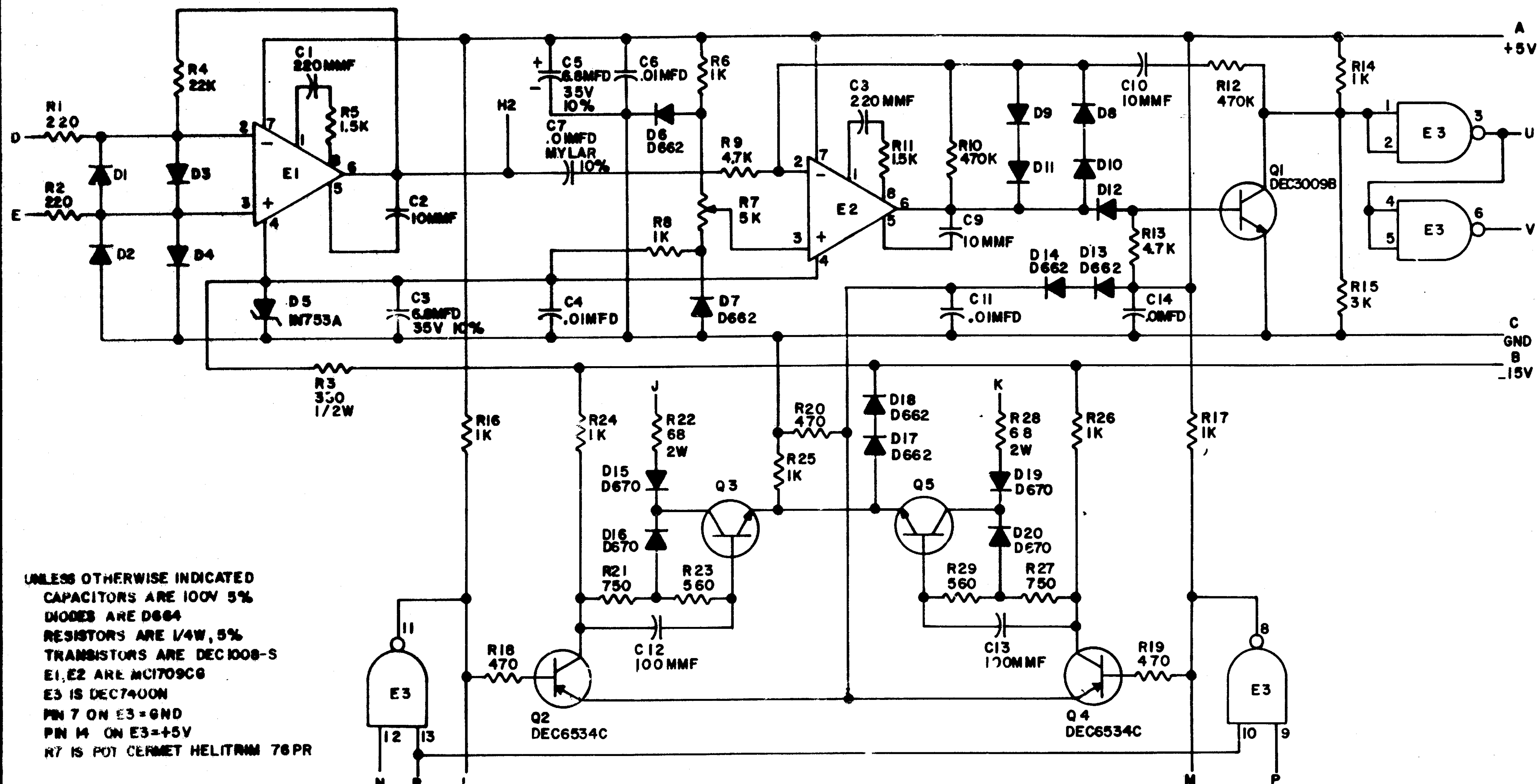
EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE RELAY G851

SIZE	CODE	NUMBER
B	CS	G85-0-1

PRINTED CIRCUIT REV. B

THIS SCHEMATIC IS FURNISHED ONLY FOR TEST AND MAINTENANCE PURPOSES. THE CIRCUITS ARE PROPRIETARY IN NATURE AND SHOULD BE TREATED ACCORDINGLY.



UNLESS OTHERWISE INDICATED
- CAPACITORS ARE 100V 5%
- DIODES ARE D664
- RESISTORS ARE 1/4W, 5%
- TRANSISTORS ARE DEC1008-S
- E1, E2 ARE MC1709CG
- E3 IS DEC7400N
- PIN 7 ON E3 = GND
- PIN 14 ON E3 = +5V
- R7 IS POT CERMET HELITRIM 76PR

REVISIONS

CHG	CHG NO.	REV.
	G888 00001	A

H. DRAB

DRN.	DATE 8-2969
CHK'D	DATE 9/3/69
ENG.	DATE 9/25/69
PROD.	DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
D664	IN3606	DEC1008-S	MM1008
D662	IN643		
D670	SAME		
DEC3009B	2N3009		
DEC6534C			

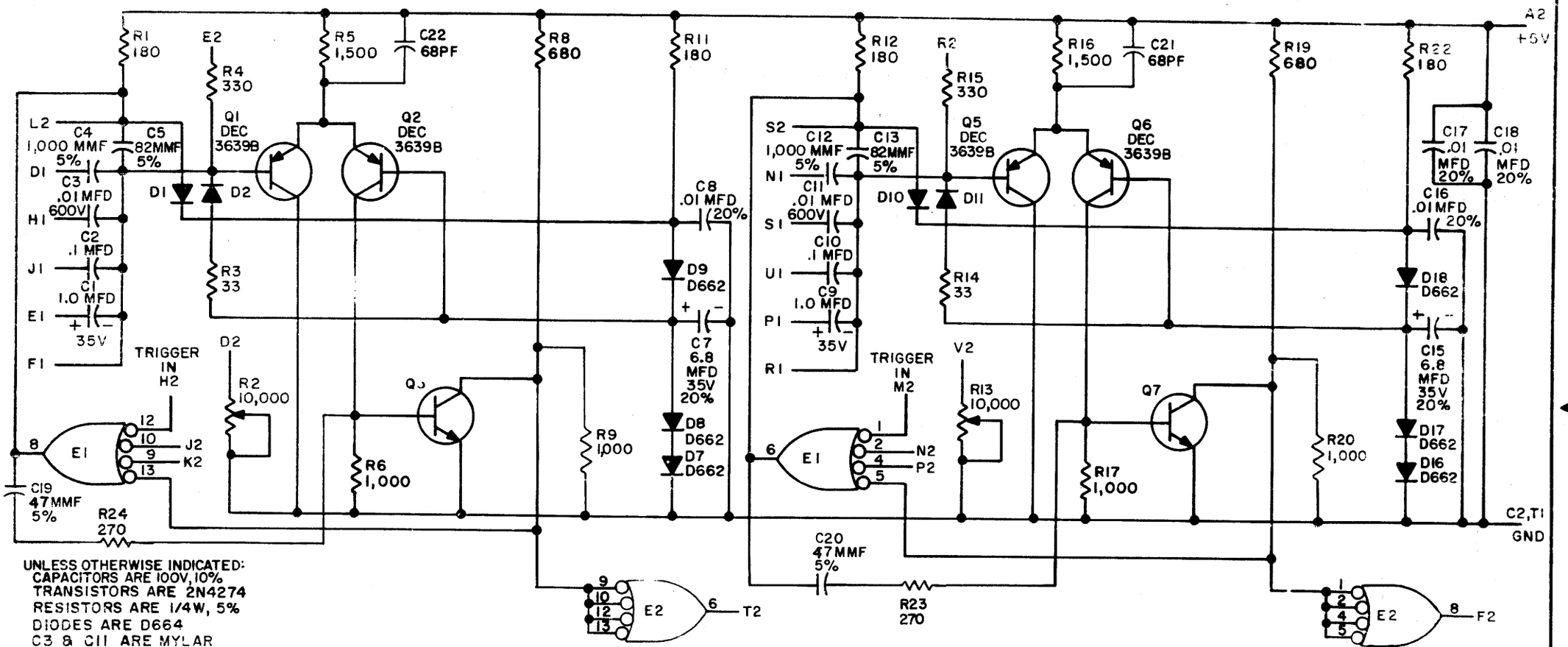
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE MANCHESTER READER/WRITER G888

SIZE	CODE	NUMBER	REV.
B	CS	G888-0-1	B

PRINTED CIRCUIT REV. A

DIST. 324, 434, 435



UNLESS OTHERWISE INDICATED:
CAPACITORS ARE 100V, 10%
TRANSISTORS ARE 2N4274
RESISTORS ARE 1/4W, 5%
DIODES ARE D664
C3 & C11 ARE MYLAR
E1 IS DEC74H40N
PIN 7 ON IC'S = GND
PIN 14 ON IC'S = +5V
R2 & R13 ARE HELITRIM POT #78PR
1.0MFD CAPACITORS ARE TANTALUM
E2 IS DEC74130

PARTS LIST A-PL-M302-0-0

REVISIONS	REV	CHG NO.	CHK
	B	6507	
	C D	6719	
	E	6881	
	F	7077	
	H	00001	
	J	00002	
	K	00003	
	L	00004	

DRN. M. Waller	DATE 6-15-67	
CHK'D	DATE 6/21/67	
ENG. L. White	DATE 6/21/67	
PROD. 1	DATE	

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
2N4274	SAME		
DEC3639B	2N3639		
D662	IN645		
D664	IN3606		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

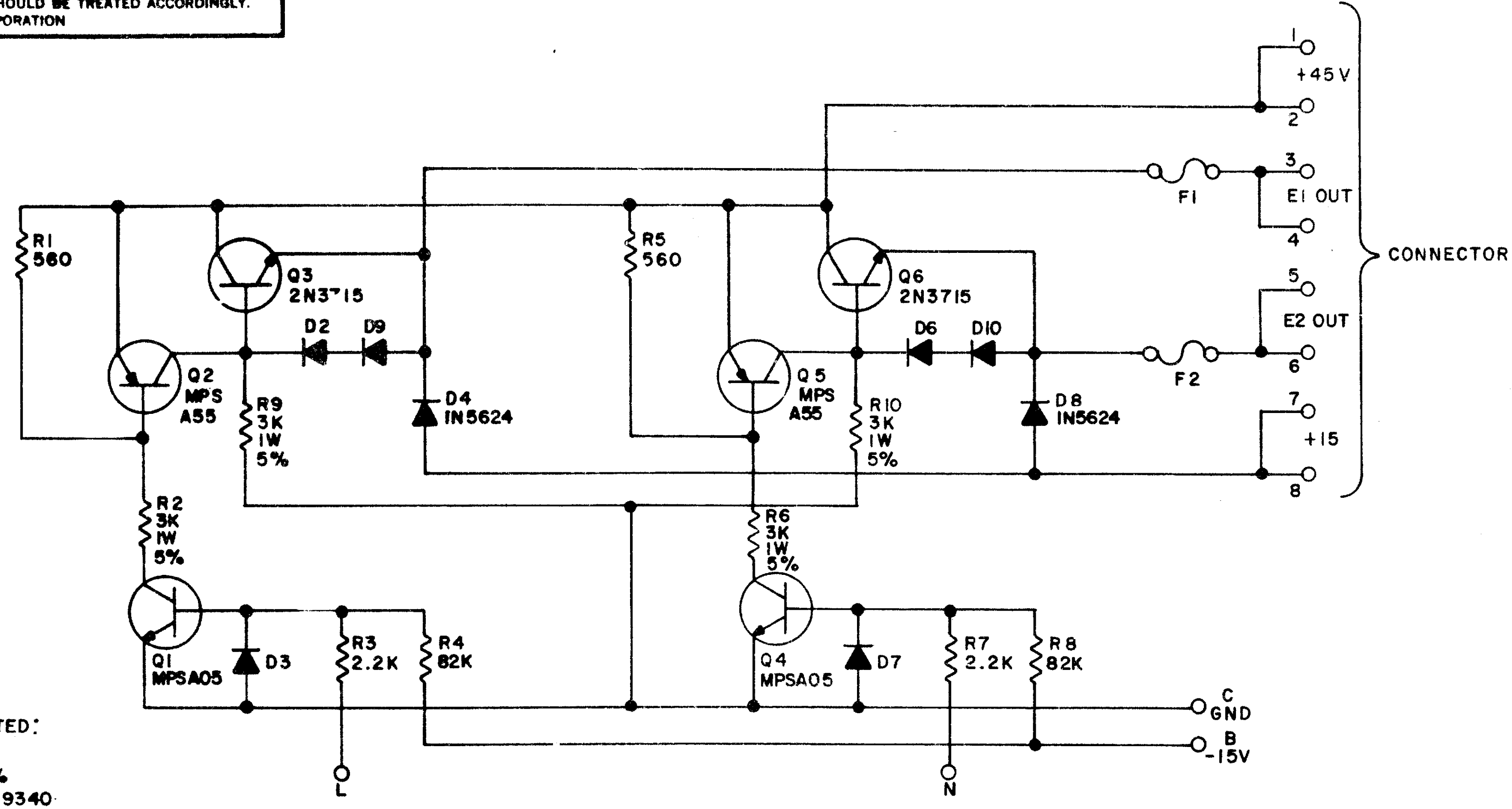
TITLE: ONE SHOT DELAY M302

SIZE	CODE	NUMBER	REV
B	CS	M302-0-1	L

PRINTED CIRCUIT REV. L

DEC FORM NO. DRB 102

DIST. 324 434 435 4



UNLESS OTHERWISE INDICATED:
DIODES ARE D672
RESISTORS ARE 1/4W, 10%
CONNECTOR IS DEC #1209340
CONNECTOR PINS ARE DEC #1209456
F1, F2 ARE 5 AMP

NOTE: Q1,Q2,Q4,Q5 HAVE VARIED PACKAGES DEPENDING ON SOURCE.
SEE DIAGRAM: (C B E) MOTOROLA: MPSA05 MPSA55
BOTTOM VIEW (E B C) GE: GPSA05 GPSA55

REVISIONS

CHK	CHG NO.	REV
	00002	A
	00003	
	00004	B
	00005	
	00006	C
NANCY MORG		
MORGANSTERN		
	00007	D
H. DRAB		

DRN.		DATE 9-9-69
CHK'D		DATE 9/1969
ENG.		DATE 2-17-70
PROD.		DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
D672	IN3653		
MPSA05			
2N3715	NONE		
MPSA55			
IN5624	SAME		

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE DUAL MOTOR VOLTAGE CONTROL G847

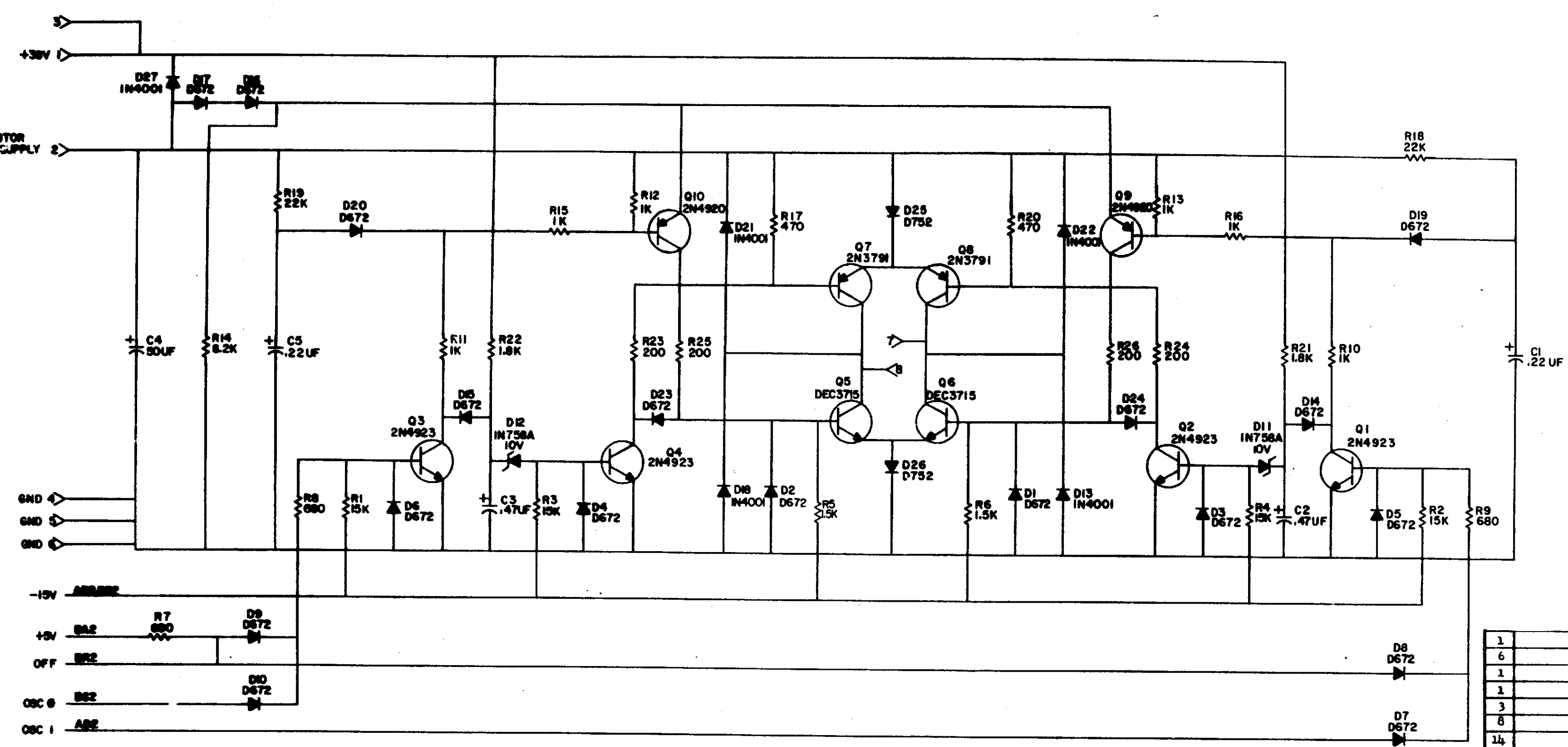
SIZE	CODE	NUMBER	REV
B	CS	G847-0-1	D

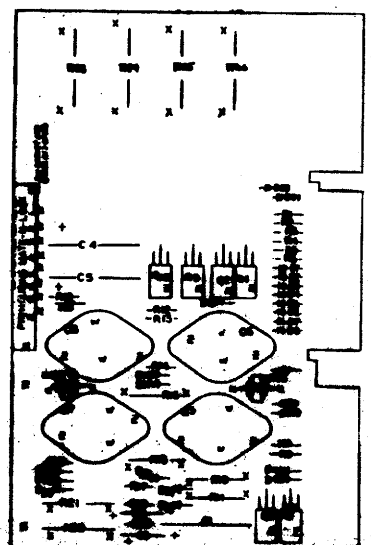
PRINTED CIRCUIT REV. E

DEC FORM NO. DRB 102

5 PINK DIST. 324, 434, 435

SIZE B CODE CS NUMBER G847-0-1 REV. D





1		FIBER SPACER ¼ x ¼ x #6	9007615	35
6		4-40 HEXNUT	9006556	34
1		NYLON HEXNUT #4	9007992	33
1		NYLON SCREW 4-40 x 1/2	9006402-4	32
3		HANDLE EYELET	9006732	31
8		4-40 KEPNUT	9006557	30
14		4-40 x 5/16" SCREW	9006010-4	29
1		HANDLE, FLIP CHIP - GREEN	9008337-01	28
2	Q9, 10	TRANSISTOR 2N4920	1509605	27
4	Q1, 2, 4, 3	TRANSISTOR 2N4923	1509604	26
2	Q7, 8	TRANSISTOR 2N3791	1509581	25
2	Q5, 6	TRANSISTOR DEC 3715	1503068	24
2	R18, 19	RES. 22K ¼W 5%	1301808	23
4	R23, 24, 25, 26	RES. 200 5W 5%	1309639	22
4	R1, 2, 3, 4	RES. 15K ¼W 5%	1300496	21
1	R14	RES. 8.2K ¼W 5%	1303179	20
2	R21, 22	RES. 1.8K 2W 10%	1300402	19
2	R5, 6	RES. 1.5K ¼W 5%	1300391	18
4	R10, 11, 15, 16	RES. 1K 1W 5%	1300368	17
2	R12, 13	RES. 1K ¼W 5%	1300365	16
3	R7, 8, 9	RES. 680 ¼W 5%	1301424	15
2	R17, 20	RES. 470 ¼W 5%	1300316	14
8		PIN, SOCKET	1209456	13
1		PIN HOUSING	1209340	12
2	D11, 12	DIODE ZENER 1N758A 10V, ¼W 5%	1100125	11
2	D25, 26	DIODE D752	1110615	10
18	D1-10, 14-17, 19, 20, 23, 24	DIODE D672	1105275	9
5	D13, 18, 21, 22, 27	DIODE 1N4001	1102942	8
2	C1, 5	CAP. 0.22UF 100V 10% MYLAR	1000037	7
2	C2, 3	CAP. 0.47UF 35V 10% S.TANT	1005965	6
1	C4	CAP. 50UF 50V -10+75% S.TANT	1000080	5
1		ETCHED CIRCUIT BOARD	5008522	4
		MODULE ECO HISTORY	B-MH-G848-0-6	3
		ETCH BOARD, MOTOR CONT	E-IA-5008522-0-0	2
		X-Y COORDINATE HOLE LOCATION	K-CO-G848-0-4	1
QTY.	REF. DESIGNATION	DESCRIPTION	DEC PART NO.	ITEM NO.
		PARTS LIST		

DRN.	DATE
A. RITCEY	2-2-69
CHK'D R. TREMBLAY	12-4-69
ENG. E. LUTTIG	4-3-70
PROD.	

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
2N4920	SAME	D672	1N3653
2N4923	SAME	D752	[illegible]
2N3791	SAME	1N758A 10V	SAME
DEC3715	2N3715	1N4001	SAME

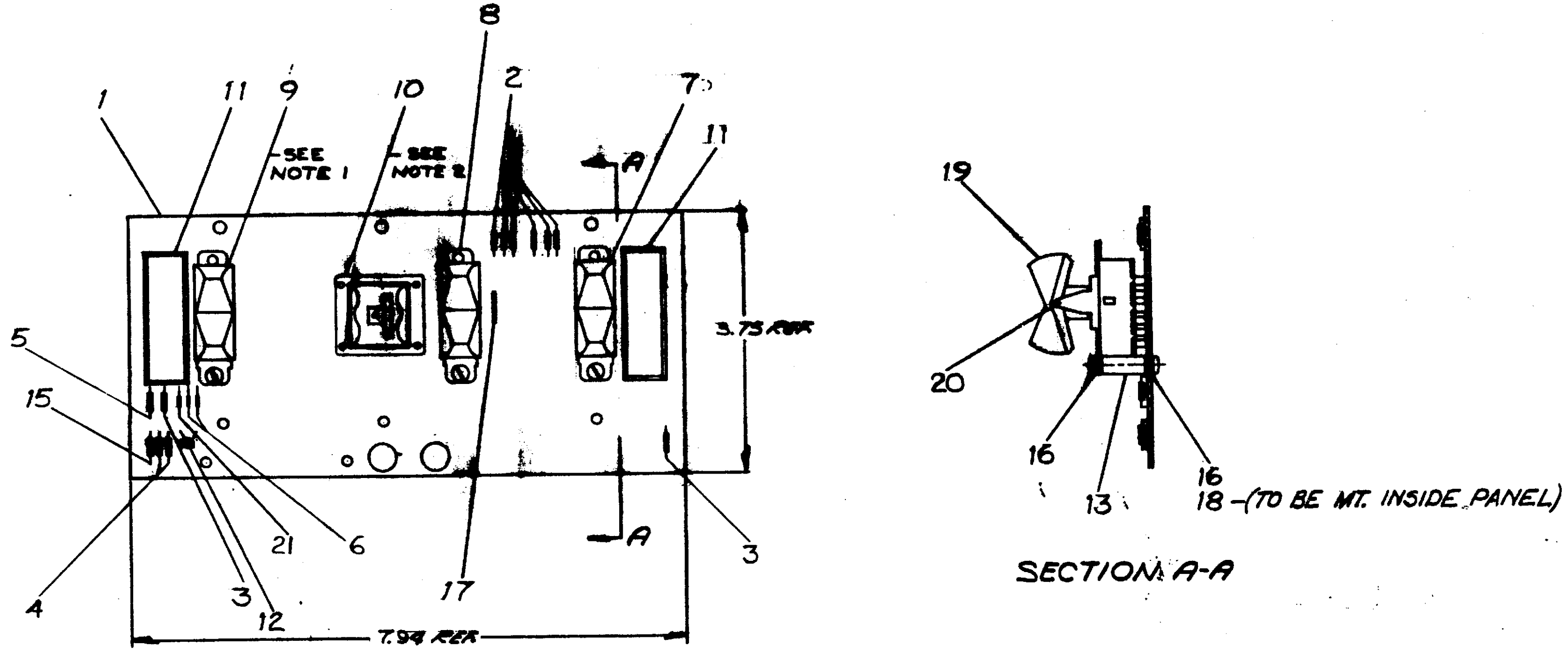
EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: MOTOR CONTROL

SIZE: D | CODE: CS | NUMBER: G848-0-1 | REV: J

PRINTED CIRCUIT REV. M

NOTES:
1. HAND DEGREASE ONLY- DO NOT VAPOR DEGREASE AS IT WILL CAUSE MALFUNCTION IN SWITCHES
2. IN SOLDERING OPERATIONS DO NOT ALLOW FLUX OR CLEANING AGENT TO ENTER SWITCH



SECTION A-A

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: TU56

TOLERANCES
DECIMALS
.XXX = ±.005
.XX = ±.02
.X = ±.1

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES

MATERIAL —
FINISH —

DRN		DATE 6-11-69
CHKD		DATE 8/5/69
ENG		DATE 4/3/70
PROD		DATE
APP		DATE 3R70

NEXT HIGHER ASSY D-IA-7006222-0-0
SCALE —
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: SWITCH CONTROL PANEL (TU56)

SIZE	CODE	NUMBER	REV
D	AD	5408500-0-0	D

DIST. G

REVISIONS

CHK	CHANGE NO.	REV.
	TU56-00020	B
	4-3-70 LUTTIG 4/3/70	
	5408500-00002	C
	11-20-70 LUTTIG 11/24/70	
	5408500/00003	D
	9/24/73 H. DRAB 1/25/73	

D AD 5408500-0-0 D

PARTS LIST

MADE BY	Carol Farrmosa	CHECKED	D Wall	SECTION	P.C. LAYOUT
DATE	October 28, 1969	DATE	1-30-70		
ENG	E. Lusting	PROD	L. Sihenner	ISSUED SECT.	
DATE	3-18-70	DATE	3/25/70		

ITEM NO.	DWG NO./PART NO. CL BASIC VAR.	DESCRIPTION	UNIT COST	UNIT QUANTITY	QUANTITY ISSUED
REF	C-CS-5408500-0-1	CIRCUIT SCHEMATIC			
REF	K-CO-5408500-0-4	X-Y COORDINATE HOLE LOCATION			
REF	D-AH-5408500-0-5	ASSY/DRILLING HOLE LAYOUT			
1	5008499	ETCHED CKT. BD. TU56		1	
2	1300386	RES. 1.2K, ¼W, 10% C.C.		6	
3	1301421	RES. 15Ω ¼W, 10%		2	
4	1300490	RES. 12K, ¼W, 10%		2	
5	1302388	RES. 2K, ¼W, 5%		1	
6	1100114	DIODE D664		2	
7	1209614	SWITCH 3 POS. RS-38-FB PC		1	
8	1209613	SWITCH 3 POS. RS-39-FB PC		1	
9	1209612	SWITCH MINI RS-33-FB PC		1	
10	1209617	SWITCH 8 POS THUMBWHEEL SWITCH		1	
11	1209637	LIGHT		2	
12	1509338	TRANSISTOR ,MPS 6531		1	
13	9008833	SPACER. 3/16 AF x 5/8 LG #4-40 AL		3	
~~14~~	~~9006020~~	~~SCREW, 6-32 x ¼~~		~~6~~	
15	1300432	RES. 3K, ¼W, 5%		1	
16	9006009-4	SCR SLOTTED HD #4-40 x 1/4 LG SST		6	
17	9107560-01	#22 AWG BUS WIRE		1	

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
TU56 CONTROL BOARD	D-AD-5408500-0-0	A	PL	5408500-0-0	D	00002
	SHEET 1 OF 2	DIST.				

DEC FORM NO.16-1027
DRA 123

5 PINK X

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

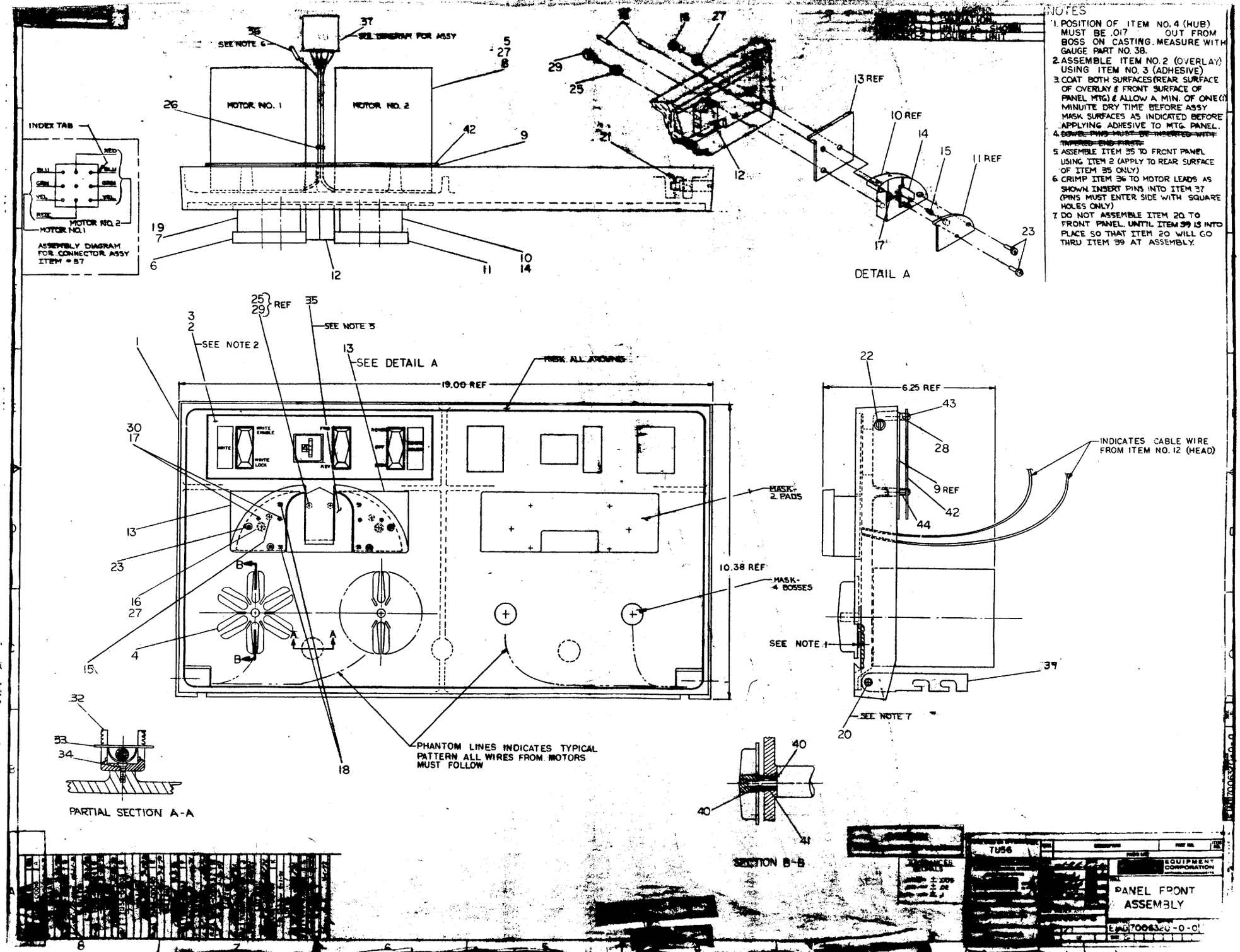
MADE BY	Carol Farrmosa	CHECKED	D. Wall	SECTION	
DATE	Oct. 28, 1969	DATE	1-30-70		
ENG	E. Lusting	PROD	P. Sihenner	ISSUED SECT.	
DATE	3-18-70	DATE	3/25/70		

ITEM NO.	DWG NO./PART NO. CL BASIC VAR.	DESCRIPTION	QTY/VAR	UNIT COST	UNIT QUANTITY	QUANTITY ISSUED
18	9006632	WASHER INT TOOTH #4			3	
19	1209711-01	BUTTON, ROCKER			3	
20	9008842	DOWEL PIN			3	
21	1100121	DIODE. IN748 3.9V 10% 400mw			1	

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
SWITCH CONTROL PANEL (TU56)	D-AD-5408500-0-0	A	PL	5408500-0-0	D	00002
	SHEET 2 OF 2	DIST.				

DEC FORM NO.16-1027
DRA 123

5 X



NOTES

1. POSITION OF ITEM NO. 4 (HUB) MUST BE .017 OUT FROM BOSS ON CASTING. MEASURE WITH GAUGE PART NO. 38.
2. ASSEMBLE ITEM NO. 2 (OVERLAY) USING ITEM NO. 3 (ADHESIVE)
3. COAT BOTH SURFACES (REAR SURFACE OF OVERLAY & FRONT SURFACE OF PANEL MTG.) & ALLOW A MIN. OF ONE (1) MINUITE DRY TIME BEFORE ASSY MASK SURFACES AS INDICATED BEFORE APPLYING ADHESIVE TO MTG. PANEL.
4. ~~DOWEL PINS MUST BE INSERTED WITH TAPERED END FIRST.~~
5. ASSEMBLE ITEM 35 TO FRONT PANEL USING ITEM 2 (APPLY TO REAR SURFACE OF ITEM 35 ONLY)
6. CRIMP ITEM 36 TO MOTOR LEADS AS SHOWN INSERT PINS INTO ITEM 37 (PINS MUST ENTER SIDE WITH SQUARE HOLES ONLY)
7. DO NOT ASSEMBLE ITEM 20 TO FRONT PANEL UNTIL ITEM 39 IS INTO PLACE SO THAT ITEM 20 WILL GO THRU ITEM 39 AT ASSEMBLY.

TUSA

EQUIPMENT CORPORATION

PANEL FRONT ASSEMBLY

Dwg 700630-0-0

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY KEN GULICK	CHECKED D. HEALY	SECTION
DATE 6/5/69	DATE 7/23/69	1
ENG [signature]	PROD C. R. Tompkins	ISSUED SECT.
DATE 8-26-69	DATE 8/26/69	1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION 7006320-1	7006320-2
1	B-MD-7407395-0-0	PANEL MFG (TU56)	1	1
2	D-IA-7410968-0-0	PANEL OVERLAY	1	1
3	900791	ADHESIVE SHOE GRIP SPRAY #77	A/R	A/R
4	[illegible]	SUB ASSY [illegible]	4	4
5	9006341	SCR SOC HD CAP 10 24 X 1/2 BLK PASS.	8	16
6	C-MD-7407282-2-0	COVER PLATE (L.H.)	1	2
7	C-MD-7407283-2-0	TAPE GUIDE (L.H.)	1	2
8	1209602	MOTOR, TORQUE	2	4
9	D-IA-7006222-0-0	SWITCH CONTROL PANEL ASS'Y	1	2
10	C-MD-7407283-1-0	TAPE GUIDE (R.H.)	1	2
11	C-MD-7407282-1-0	COVER PLATE (R.H.)	1	2
12	1209691	HEAD ASSY	1	2
13	C-MD-7405136-0-0	REAR CHECK TAPE GUIDE	2	4
14	B-MD-7405114-1-0	WEAR PLATE (R.H.)	1	2
15	9007104	SPR #649-119N INST SPEC. CO.	2	4
16	9006345	SCR SOC HD CAP #10-32 X 3/8 SST	2	4
~~17~~	~~9008132~~	~~DOWEL PIN 3/32 DIA X 7/16 LG~~	~~4~~	~~8~~
18	9008131	DOWEL PIN 1/8 DIA X 7/8 LG	4	8
19	B-MD-7405114-2-0	WEAR PLATE (L.H.)	1	2
20	9008130	DOWEL PIN 1/4 DIA X 1 1/4	2	2
21	90-07785	GRIP, EXT SER #5555-37 WALDES 3/8"SHAFT	2	2
22	B-MD-7407400-0-0	PIN, LOCK	2	2

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PANEL FRONT, ASSEMBLY	E-AD-7006320-0-0	A	PL	7006320-0-0 ,	[illegible]	TU56-00076
	SHEET 1 OF 2	DIST.	C			

DEC FORM NO.
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY KEN GULICK	CHECKED D. HEALY	SECTION
DATE 6/5/69	DATE 7/25/69	1
ENG [signature]	PROD C. R. Tompkins	ISSUED SECT.
DATE 8-26-69	DATE 8/26/69	1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION 7006320-1	7006320-2
23	9006331	SCR SOC HD CAP 6-32 X 5/8 LG BLK PASS.	4	8
~~24~~	~~C-MD-7405136-1-0~~	~~REAR CHECK TAPE GUIDE L.H.~~	~~1~~	~~2~~
25	9006632	WASH INT TOOTH #4	2	4
26	9007032	TIE WRAP #SST-2-B PANDUIT	A/R	A/R
27	9007651	WASH EXT TOOTH #10 HOLE	10	20
28	9006022-1	SCR, PH HD PAN #6-32 X 3/8 SST	4	8
29	9006014-1	SCR PH HD PAN #4-40 X 5/8 LG SST	2	4
~~30~~	~~9008135~~	~~WALK RING EXT SERIES G 5555-9S~~	~~4~~	~~8~~
~~31~~	~~9008211~~	~~HEX SOC SET SCR #10-32 X 1/4 SST~~	~~4~~	~~8~~
32	90-07772-9	CLAMP, CABLE BASE	1	2
33	90-07772-10	CLAMP, CABLE TOP	1	2
34	90-06037-2	SCREW, FLAT HEAD #8-32 x 3/8 Lg SST	1	2
35	C-IA-7408008-0-0	FILLER PLATE	1	2
36	1209379	PIN, CONNECTOR	8	16
37	1209350-09	HOUSING, CONNECTOR	1	2
38	C-IA-7408010-0-0	GAUGE, HUB	A/R	A/R
39	C-MD-1209830	ARM, PANEL SUPPORT	2	2
40	1209926	BUSHING, OIL IMPREGNATED BRONZE	4	8
41	1209917	SPRING, COMPRESSION	2	4
42	C-MD-7408287-0-0	GUARD PLATE	1	2
43	90-06024-1	SCR, PH HD PAN #6-32 x ½ SST	2	4
44	90-06793	SPACER 3/16AF X 3/16LG #6 HOLE AL	2	4

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PANEL FRONT ASSEMBLY	E-AD-7006320-0-0	A	PL	7006320-0-0	L	TU56-00064
	SHEET 2 OF 2	DIST.	G			

DEC FORM NO.
DRA 110

MASTER DRAWING LIST

MAINTENANCE MANUALS NO.	TITLE	UNIT VARIATIONS H716-Ø	H716-A	H716-B	H716-C	H716-D
H716-Ø	H716 P/S	X	X	X	X	X

USED ON OPTIONS
ADØ1

REVISIONS REV.	DATE	CHG. NO.	APP'D.
A	9/71	00003	PS

DRN.	G FLANDERS	DATE 7-27-71
CHK'D	J.F. Fleming	DATE 8-27-71
ENG.	A. Severo	DATE 8/27/71
PROJ. ENG.	A. Severo	DATE 8/27/71
PROD.	A. Stengel	DATE 8/31/71
FIRST USED ON		
SCALE		
SHEET	1 OF 2	

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: H716 POWER SUPPLY

SIZE	CODE	NUMBER	REV.
A	ML	H716-Ø	A

DIST.

DRA 131

Dec 16-(325)-1048-N471

PRINT SET H716-Ø	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
X	C-CS-3009282-0-0	B	1	H-716 P.S.	
X	D-UA-H716-Ø-Ø		2	POWER SUPPLY H716	
X	A-PL-H716-Ø-Ø		2	POWER SUPPLY H716	
X	A-PS-3009282-0-0	C	7	H716 POWER SUPPLY	
X	A-SP-H716-Ø-1		2	MODIFICATION PROCEDURE FOR H716	

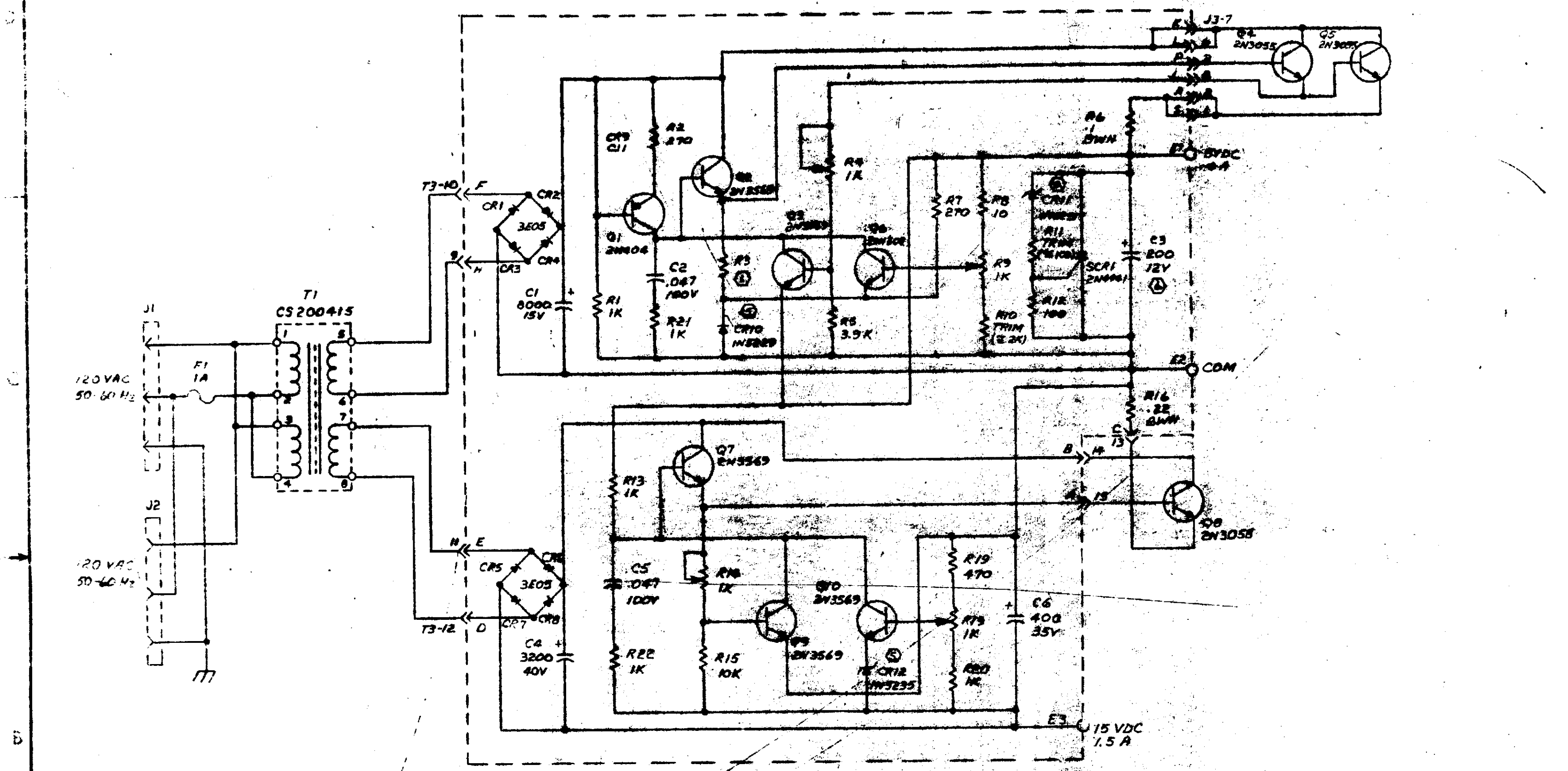
TITLE: H716 POWER SUPPLY

SHEET 2 OF 2

SIZE	CODE	NUMBER	REV.
A	ML	H716-Ø	A

DRA 132

DEC 16 (325) 1048 1 N471



NOTES:

1. R3 IS A TRIM VALUE RESISTOR WITH AN APPROX VALUE OF "OPEN"
2. ALL RESISTANCE VALUES ARE EXPRESS IN OHMS.
3. ALL RESISTORS ARE FIXED COMPOSITION, 1/2 W, ± 10%
4. ALL CAPACITOR VALUES ARE EXPRESSED IN MICROFARADS
5. CR10 MAY BE MOTOROLA NO. SZ13477-2
   CR11 MAY BE MOTOROLA NO. SZ13477-4
   CR12 MAY BE MOTOROLA NO. SZ13477-5
6. CAPACITORS C3 MAY BE TANTALUM 47UF, 6.3V
7. RESISTANCE VALUE FOR R10 & R11 MAY BE CHANGED DURING FINAL TEST.

CONTENTS TAKEN FROM DWG# SC-CS 2004 REV.D

REVISIONS — CHANGE NO. 3009282-000 — REV. C — REDRAWN & REVISED

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS	ANGLES
.XXX = .005 .XX = .02 .X = .1	±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL

FINISH

DRN. M. Towne DATE 3-10-73
CHKD. DATE 3-16-73
ENG. DATE
PROJ. ENG. DATE
PROD. DATE
NEXT HIGHER ASSY.

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE H-716P.S.

SIZE	CODE	NUMBER	REV.
D	CS	3009282-0-0	C

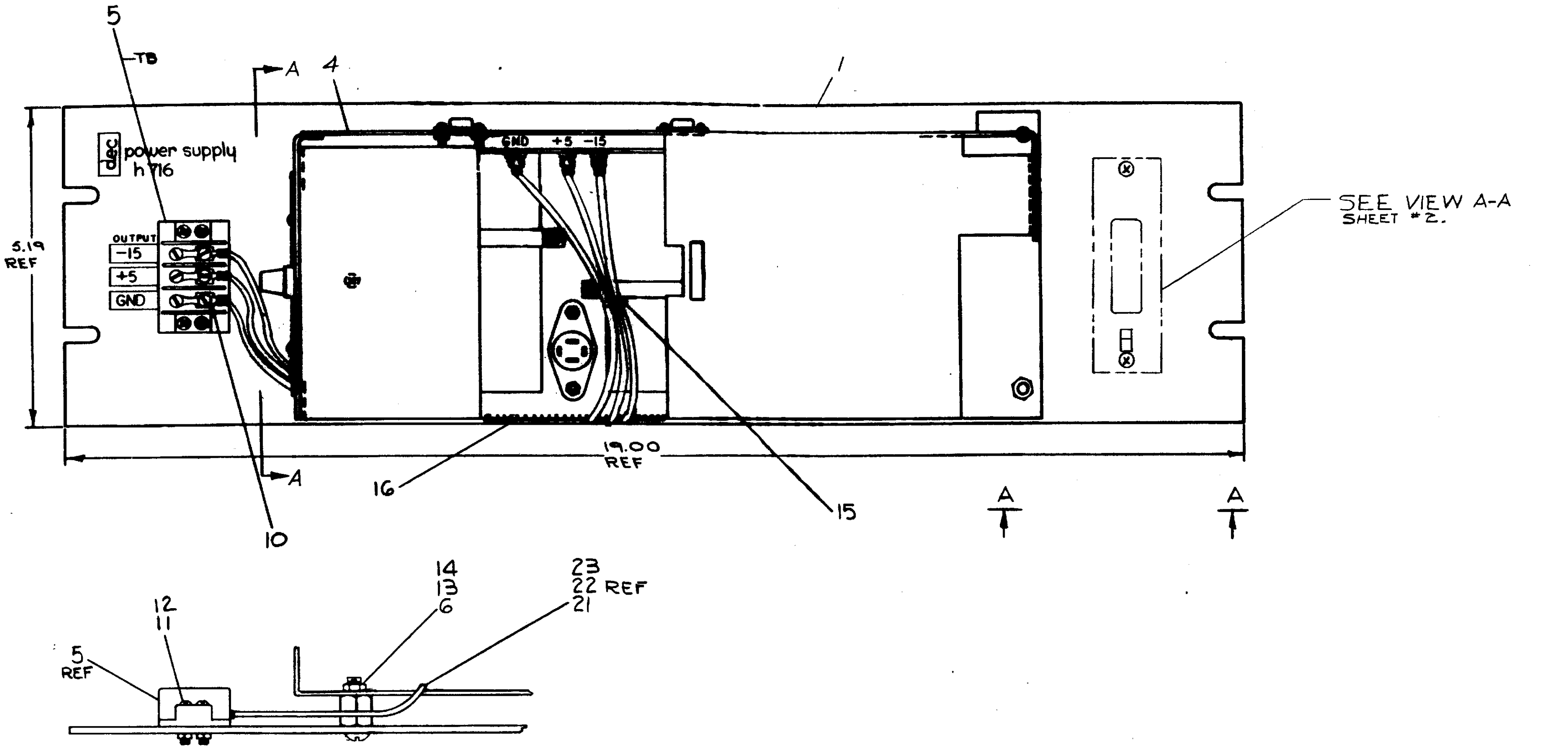
SCALE NONE
SHEET 1 OF 1

D CS 3009282-0-0 C

LEGEND	
NUMBER	VARIATION
H716-Ø	WANLESS P.S WITH 110V RECEPTACLE
H716-A	H716 WITH 23ØV RECEPTACLE
H716-B	19' H716 (115V RECEPTACLE)
H716-C	H716-B WITH OUTPUT RELAY SWITCHED FROM +5V (115V)
H716-D	H716-B WITH 23ØV RECEPTACLE

NOTES:

1. FOR H716-A OR H716-D (230V) REMOVE EXISTING DECAL AND ADD NEW DECAL (ITEM #25).



FIRST USED ON OPTION/MODEL: AD01

[redacted] EQUIPMENT CORPORATION

POWER SUPPLY H716

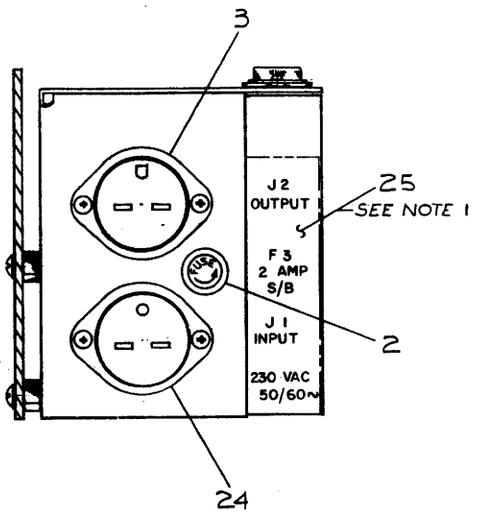
D UA H716-0-0

WIRE TABLE H716-B&D

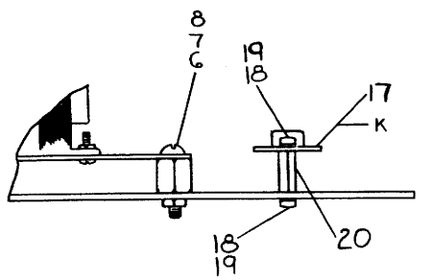
ITEM NO.	DESCRIPTION AWG	DESCRIPTION COLOR	FROM CONNECTION	WITH	TO CONNECTION	WITH
23	18	BLK	PS-GND	9	TB-GND	10
21	18	RED	PS- +5	9	TB- +5	10
22	18	BLU	PS- -15	9	TB- -15	10

WIRE TABLE H716-C

ITEM NO	DESCRIPTION AWG	DESCRIPTION COLOR	FROM CONNECTION	WITH	TO CONNECTION	WITH
23	18	BLK	PS- GND	26	TB- GND	10
23		BLK	PS-GND		K - GND	SOLDER
21		RED	PS- + 5	26	TB- + 5	10
21		RED	PS- + 5		K- + 5	SOLDER
22		BLU	PS- -15	9	K- -15	SOLDER
22	18	BLU	K - -15	9	TB- -15	10



SECTION A-A
SCALE: 1/1



VIEW A-A
FOR H716-C

REVISIONS			
CHK	CHANGE NO		REV

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS	ANGLES
.XXX = .005 .XX = .02 .X = .1	±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL

FINISH

DRN.		DATE 8/19/71
CHK'D		DATE 8/26/71
ENG.		DATE 9/10/71
MGR. ENG.		DATE 9/10/71
PROJ.		DATE 9/13/71
NEXT HIGHER ASSY.		

EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
POWER SUPPLY
H716

SIZE CODE IDENT NO. D UA
NUMBER H716-0-0
REV

SCALE

SHEET 2 OF 2

SIZE CODE IDENT NO. D UA
NUMBER H716-0-0
REV

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY G. FLANDERS	CHECKED J.F. Clancy	SECTION 1
DATE 7-22-71	DATE 8-27-71	
ENG P.V. Sanguinetti	PROD Bert Stringer	ISSUED SECT. 1
DATE 8/27/71	DATE 9/2/71	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION H716-Ø	H716-A	H716-B	H716-C	H716-D
1	D-IA-7408142-0-0	MOUNTING PANEL H716	-	-	1	-	-
1	D-IA-7408142-1-0	MOUNTING PANEL H716	-	-	-	1	-
1	D-IA-7408142-2-0	MOUNTING PANEL H716	-	-	-	-	1
2	9007216	2 AMP S.B. FUSE	-	1	-	-	1
3	9008470	FEMALE A.C. CONN	-	1	1	1	1
4	3009282	H716 POWER SUPPLY	1	1	-	-	1
5	9007631	TERM STRIP #3-541 JONES	-	-	1	1	1
6	9006829	SPACER ½ AF X 3/8 LG #10 HOLE	-	-	3	3	3
7	9006027-1	SCR PHL HD PAN 6-32 X 7/8 LG	-	-	2	2	2
8	9006860	NUT KEPS #6-32	-	-	2	2	2
9	9007917	CONN SLDS ARK. #50902	-	-	3	3	3
10	9007929	CONN SLDS ARK. #50321	-	-	3	3	3
11	9006041-1	SCR PHL HD 8-32 X 3/4 LG	-	-	4	4	4
12	9006563	NUT KEPS 8-32	-	-	4	4	4
13	9006076-1	SCR PH HD 10-32 X 7/8 LG	-	-	1	1	1
14	9006565	NUT KEPS #10-32	-	-	1	1	1
15	9007031	TIE WRAP #SST-1-B	-	-	A/R	A/R	A/R
16	9007622	CATAPILLAR GROMMET	-	-	A/R	A/R	A/R
17	C-IA-5408857-0-0	+15V POWER SEQUENCING BD	-	-	-	1	-
18	9006022-1	SCR PHL HD 6-32 X 3/8 LG	-	-	-	4	-
19	9006633	WASHER INT TOOTH #6	-	-	-	4	-
20	9006857	SPACER ¼ AF X 5/8 LG 6-32	-	-	-	2	-

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
H716 POWER SUPPLY	D-UA-H716-Ø-Ø	A	PL	H716-Ø-Ø		
	SHEET 1 OF 2	DIST. 6				

DEC FORM DEC 16 (325)-1031-N870
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY G. FLANDERS	CHECKED J.F. Clancy	SECTION 1
DATE 7-22-71	DATE 8-27-71	
ENG P.V. Sanguinetti	PROD Bert Stringer	ISSUED SECT. 1
DATE 8/27/71	DATE 9/2/71	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION H716-Ø	H716-A	H716-B	H716-C	H716-D
21	9107360-22	18 AWG WIRE INSULATED RED	-	-	A/R	A/R	A/R
22	9107360-66	18 AWG WIRE INSULATED BLU	-	-	A/R	A/R	A/R
23	9107360-00	18 AWG WIRE INSULATED BLK	-	-	A/R	A/R	A/R
24	9008854	MALE AC CONNECTOR INLET FLG'D	-	1	-	-	1
25	A-DC-5309717-0-0	DECAL, POWER H716 (230V)	-	1	-	-	1
26	9007919	CONN SLDS ARK 50906	-	-	-	2	-

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
H716 POWER SUPPLY	D-UA-H716-Ø-Ø	A	PL	H716-Ø-Ø		
	SHEET 2 OF 2	DIST.				

DEC FORM DEC 16 (325)-1031-N870
DRA 110

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number 30-09282 Rev C

Date 1/6/69

H716 POWER SUPPLY

MECHANICAL

1. Maximum Dimensions 5-1/4 H x 4-1/8 W x 12 D. Must mount on right end of DEC H911 Mounting Panel. See attached sketch.
2. Power input via ARROW HART 5278 (or equivalent) connected with an HUBBELL 5256 (or equivalent) in parallel. Receptacles to be mounted in rear panel.
3. Sheet metal construction to be sufficiently rigid to sustain without damage normal shipping shocks when riveted to an H911 Mounting Panel mounted in DEC standard 19" cabinet.
4. Electrical connections (low voltage) by Faston Amp #42117-2 terminals. SOLDER FASTONS AND FUSE CLIPS TO RIVETS ON BOTH SIDES OF P/C BOARD.

ELECTRICAL

1. Input: 47-63 MS. (Normally supplied wired for 117 V, may be changed by tranformer tap connections.) 105-130 V, 117 V nominal, .210-260 V, 234 V. Nominal.
2. Output 1: +5 volts (adjustable over range of 4.5 to 5.5) 0 - 4 AMPS MAXIMUM. Line-Load-Ripple total regulation ± 3%. Overvoltage protection threshold at 6-6.5 with a response time of 10-50 microseconds. Maximum voltage not to exceed 7 V.
3. Output 2: -15 volts ± 5% at 0 - 1.5 AMP MAXIMUM. Line-Load Ripple total regulation ±5%.
4. Above specifications over temperature 0-55°C ambient.
5. Sheet #7 is AC Protection Bracket.

Revisions

Change No. A: SOLDER OUTPUT LUGS AND FUSE CLIPS TO RIVETS. R. NUNBY 10/23/70

B: AMPHENOL CHANGED TO ARROW HART AND HUBBELL. DIMENSIONS CHANGED.

C: CHANGED DIMENSIONS FOR RECEPTACLES AS SHOWN ON SHEET 6 OF 7.

Eng	Eng
Drawn	QC
CVC	Purch

TITLE: H 716 POWER SUPPLY

Unless other specified use:

Fractions ±	Decimals ±	Angles ±

Sheet 1 of 7 | Scale

Number 30-09282 | Rev C

100-4 63

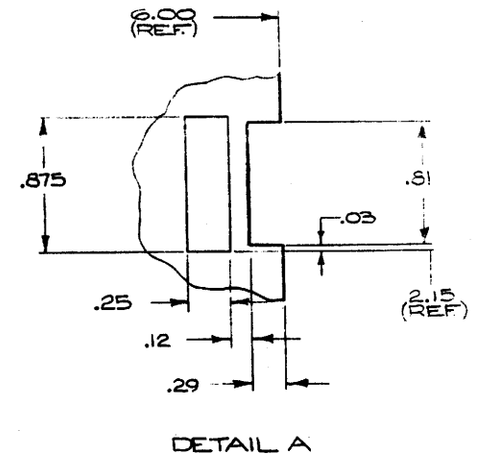
FIRST ISSUED ON: TR02, DM08

D.E.C. PART NO. 30-09282

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number 30-09282 Rev C

Date



DETAIL A

D.E.C. PART NO. 30-09282

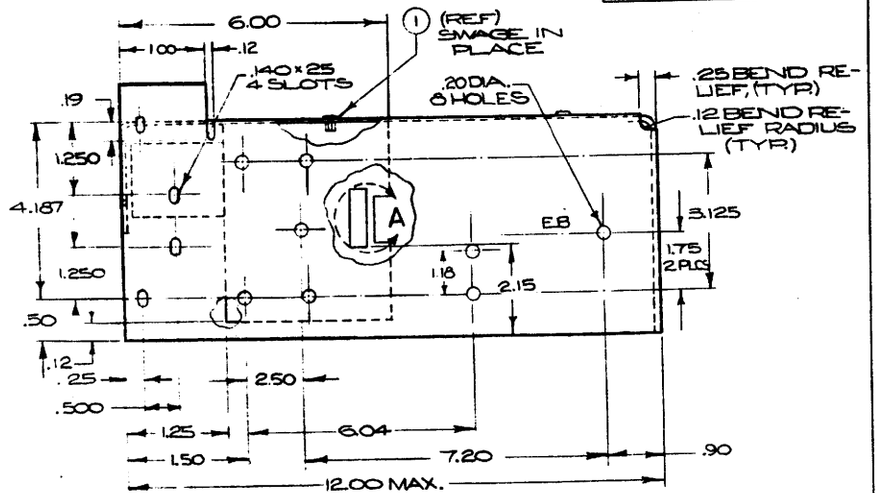
Sheet of | Scale

Number 30-09282 | Rev C

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number 30-09282 Rev C

Date 1/8/69



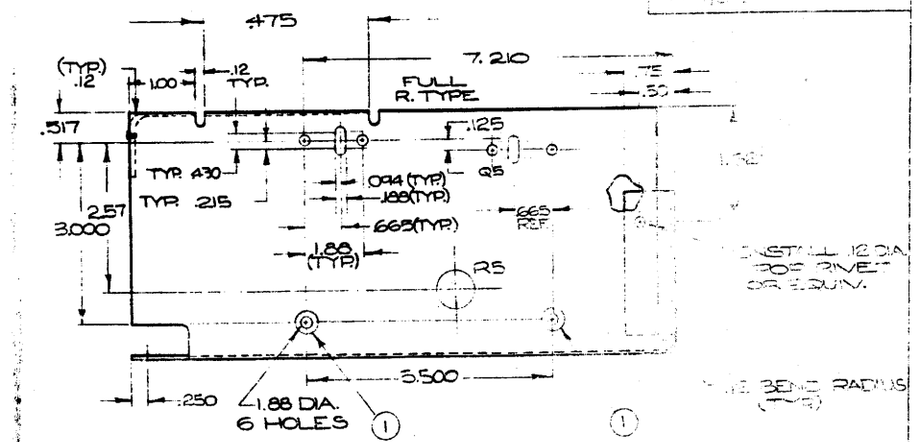
Sheet 2 of 7 | Scale

Number 30-09282 | Rev C

D.E.C. PART NO. 30-09282

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number 30-09282 Rev C



D.E.C. PART NO. 30-09282

Sheet of | Scale

Number 30-09282 | Rev C

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY G. FLANDERS	CHECKED J. Fleming	SECTION 1
DATE 7-22-71	DATE 8-27-71	
ENG P. V. Sargent	PROD Gene Stringer	ISSUED SECT. 1
DATE 8/27/71	DATE 9/2/71	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION H716-Ø	H716-A	H716-B	H716-C	H716-D
1	D-IA-7408142-0-0	MOUNTING PANEL H716	-	-	1	-	-
1	D-IA-7408142-1-0	MOUNTING PANEL H716	-	-	-	1	-
1	D-IA-7408142-2-0	MOUNTING PANEL H716	-	-	-	-	1
2	9007216	2 AMP S.B. FUSE	-	1	-	-	1
3	9008470	FEMALE A.C. CONN	-	1	1	1	1
4	3009282	H716 POWER SUPPLY	1	1	-	-	1
5	9007631	TERM STRIP #3-541 JONES	-	-	1	1	1
6	9006829	SPACER ½ AF X 3/8 LG #10 HOLE	-	-	3	3	3
7	9006027-1	SCR PHL HD PAN 6-32 X 7/8 LG	-	-	2	2	2
8	9006860	NUT KEPS #6-32	-	-	2	2	2
9	9007917	CONN SLDS ARK. #50902	-	-	3	3	3
10	9007929	CONN SLDS ARK. #50321	-	-	3	3	3
11	9006041-1	SCR PHL HD 8-32 X 3/4 LG	-	-	4	4	4
12	9006563	NUT KEPS 8-32	-	-	4	4	4
13	9006076-1	SCR PH HD 10-32 X 7/8 LG	-	-	1	1	1
14	9006565	NUT KEPS #10-32	-	-	1	1	1
15	9007031	TIE WRAP #SST-1-B	-	-	A/R	A/R	A/R
16	9007622	CATAPILLAR GROMMET	-	-	A/R	A/R	A/R
17	C-IA-5408857-0-0	+15V POWER SEQUENCING BD	-	-	-	1	-
18	9006022-1	SCR PHL HD 6-32 X 3/8 LG	-	-	-	4	-
19	9006633	WASHER INT TOOTH #6	-	-	-	4	-
20	9006857	SPACER ¼ AF X 5/8 LG 6-32	-	-	-	2	-

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
H716 POWER SUPPLY	D-UA-H716-Ø-Ø	A	PL	H716-Ø-Ø		
	SHEET 1 OF 2	DIST. 6				

DEC FORM DEC 16 (325)-1031-N870
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY G. FLANDERS	CHECKED J. Fleming	SECTION 1
DATE 7-22-71	DATE 8-27-71	
ENG P. V. Sargent	PROD Gene Stringer	ISSUED SECT. 1
DATE 8/27/71	DATE 9/2/71	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION H716-Ø	H716-A	H716-B	H716-C	H716-D
21	9107360-22	18 AWG WIRE INSULATED RED	-	-	A/R	A/R	A/R
22	9107360-66	18 AWG WIRE INSULATED BLU	-	-	A/R	A/R	A/R
23	9107360-00	18 AWG WIRE INSULATED BLK	-	-	A/R	A/R	A/R
24	9008854	MALE AC CONNECTOR INLET FLG'D	-	1	-	-	1
25	A-DC-5309717-0-0	DECAL, POWER H716 (230V)	-	1	-	-	1
26	9007919	CONN SLDS ARK 50906	-	-	-	2	-

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
H716 POWER SUPPLY	D-UA-H716-Ø-Ø	A	PL	H716-Ø-Ø		
	SHEET 2 OF 2	DIST.				

DEC FORM DEC 16 (325)-1031-N870
DRA 110

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number	Rev
30-09282	c

Date 1/6/69

Revisions

Change No.
A: SOLDER OUTPUT LUGS AND FUSE CLIPS TO RIVETS. R. MUNBY 10/23/70
B: AMPHENOL CHANGED TO ARROW HART AND HUBBELL. DIMENSIONS CHANGED.
C: CHANGED DIMENSIONS FOR RECEPTACLES AS SHOWN ON SHEET 6 OF 7.

H716 POWER SUPPLY

MECHANICAL

1. Maximum Dimensions 5-1/4 H x 4-1/8 W x 12 D. Must mount on right end of DEC H911 Mounting Panel. See attached sketch.
2. Power input via ARROW HART 5278 (or equivalent) connected with an HUBBELL 5256 (or equivalent) in parallel. Receptacles to be mounted in rear panel.
3. Sheet metal construction to be sufficiently rigid to sustain without damage normal shipping shocks when riveted to an H911 Mounting Panel mounted in DEC standard 19" cabinet.
4. Electrical connections (low voltage) by Faston Amp #42117-2 terminals. SOLDER FASTONS AND FUSE CLIPS TO RIVETS ON BOTH SIDES OF P/C BOARD.

ELECTRICAL

1. Input: 47-63 HZ. (Normally supplied wired for 117 V, may be changed by tranformer tap connections.) 105-130 V, 117 V nominal, .210-260 V, 234 V. Nominal.
2. Output 1: +5 volts (adjustable over range of 4.5 to 5.5) 0 - 4 AMPS MAXIMUM. Line-Load-Ripple total regulation ± 3%. Overvoltage protection threshold at 6-6.5 with a response time of 10-50 microseconds. Maximum voltage not to exceed 7 V.
3. Output 2: -15 volts ± 5% at 0 - 1.5 AMP MAXIMUM. Line-Load Ripple total regulation ±5%.
4. Above specifications over temperature 0-55°C ambient.
5. Sheet #7 is AC Protection Bracket.

Eng R Cody	Eng
Drawn	QC
	Purch

TITLE: H 716 POWER SUPPLY

Unless other specified use:

Fractions	Decimals	Angles
±	±	±

Sheet 1 of 2	Scale
Number 30-09282	Rev c

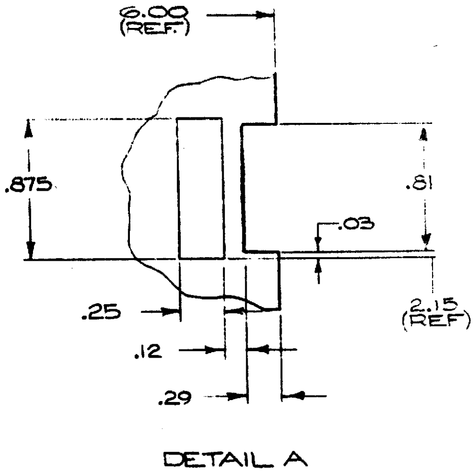
100-4 63

FIRST USED ON: TR02, DW08

D.E.C. PART NO. 30-09282

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number 30-09282



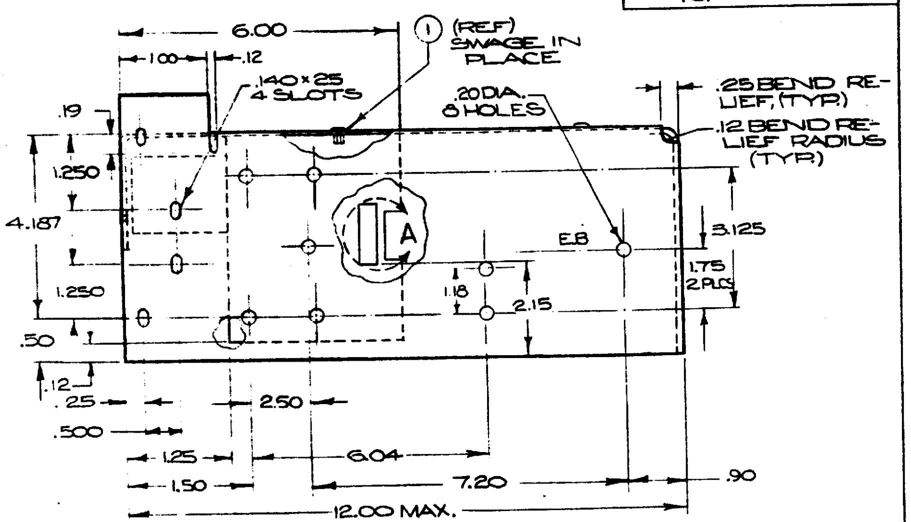
DETAIL A

D.E.C. PART NO. 30-09282

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number	Rev
30-09282	c

Date 1/8/69

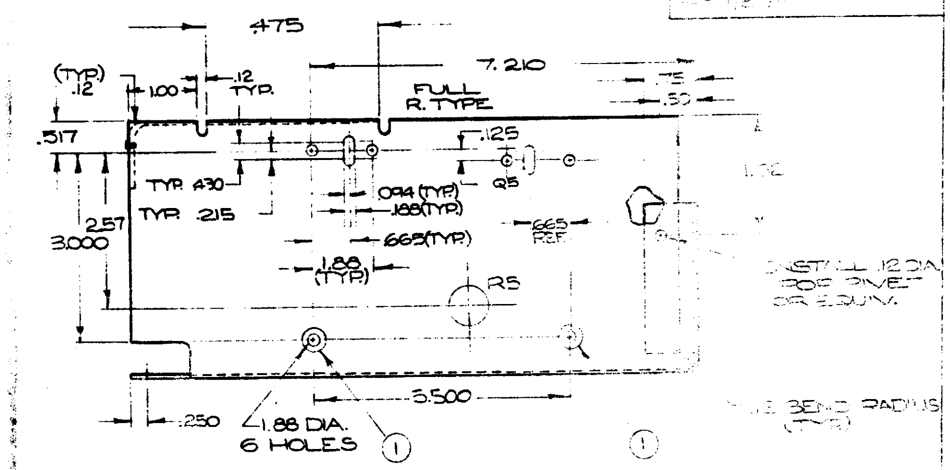


Sheet 2 of 7	Scale
Number 30-09282	Rev c

D.E.C. PART NO. 30-09282

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number 30-09282

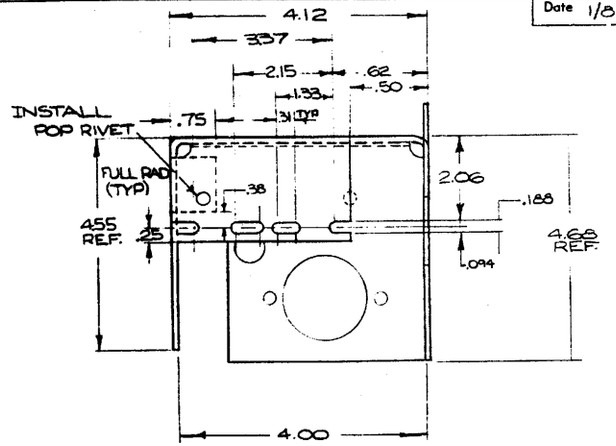


D.E.C. PART NO. 30-09282

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number 30-09282 Rev C

Date 1/8/69



Sheet 5 of 7 | Scale —11—

Number 30-09282 | Rev C

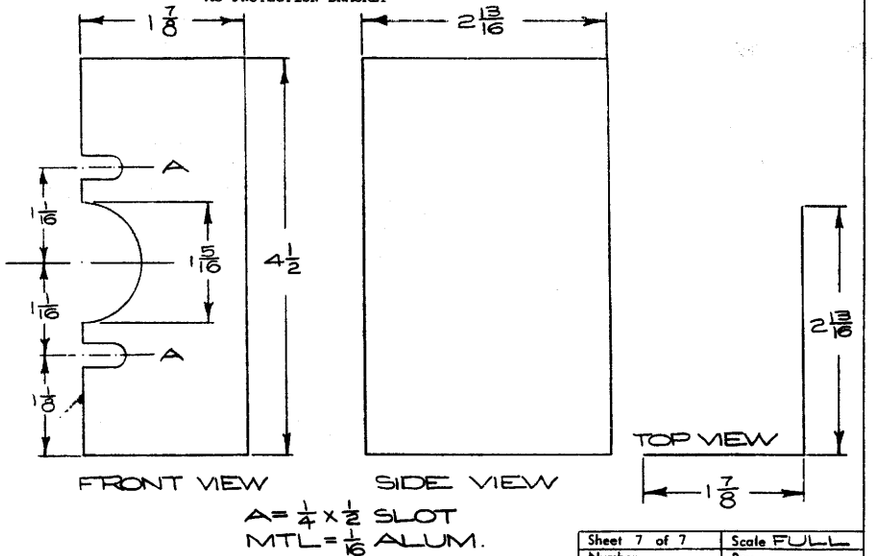
D.E.C. PART NO. 30-09282

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number 30-09282 Rev C

Date 2/6/69

AC PROTECTION BRACKET



A = 1/4 x 1/2 SLOT

MTL = 1/16 ALUM.

Sheet 7 of 7 | Scale FULL

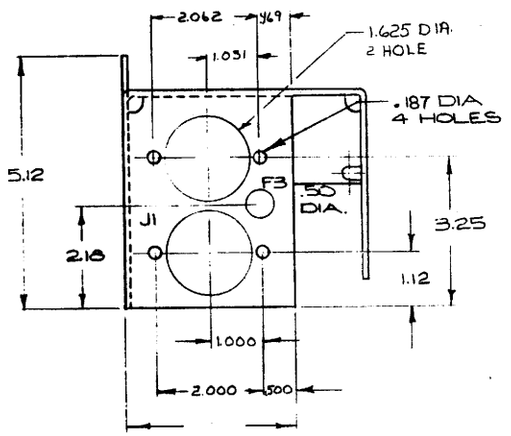
Number 30-09282 | Rev C

D.E.C. PART NO. 30-09282

digital EQUIPMENT CORPORATION **PURCHASE SPECIFICATION**

Number 30-09282 Rev C

Date 1/8/69



Sheet 6 of 7 | Scale —11—

Number 30-09282 | Rev C

D.E.C. PART NO. 30-09282

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

DATE 2/18/71

TITLE Modification Procedure for H716

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	APPD	SIZE	CODE	NUMBER	REV
		A	SP	H716-0-1	

DEC FORM NO. DRA 107A

SHEET 1 OF 2

ENGINEERING SPECIFICATION [redacted] CONTINUATION SHEET

TITLE Modification Procedure for H716

Incorporate the following modifications to change an H716 power supply to an H716-A or an H716-D power supply.

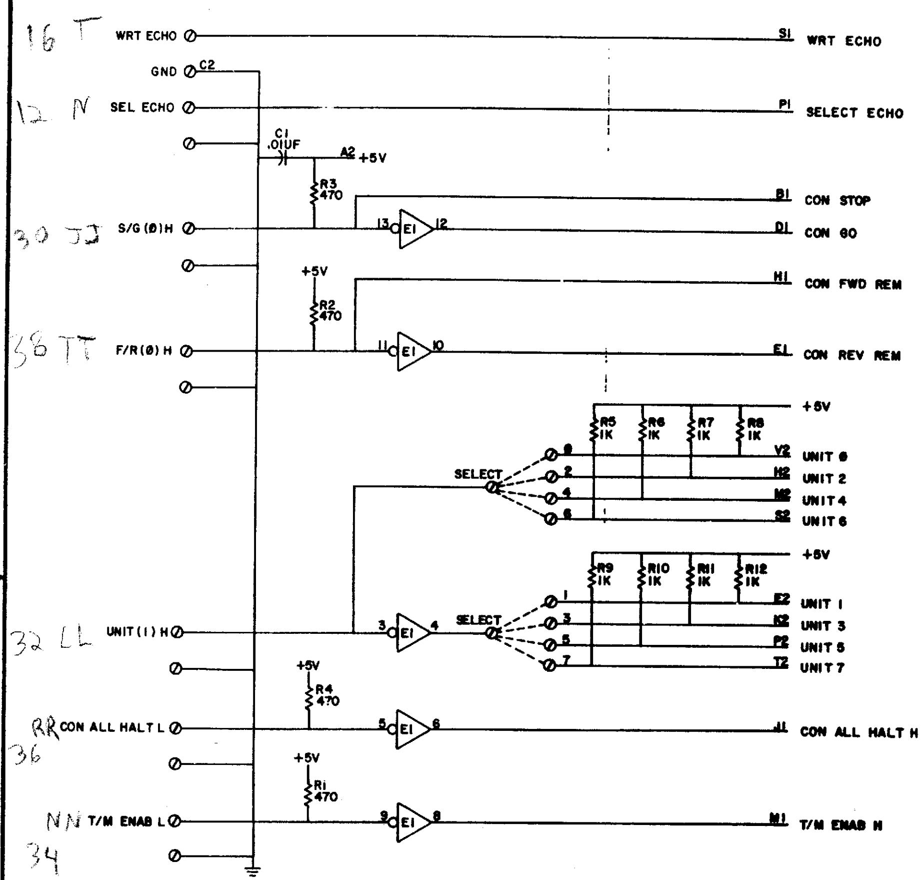
1) Replace the male AC power connector with DEC Part #90-8854
2) Replace the female AC power connector with DEC Part #90-8470
3) Replace the 3 amp S/B AC input fuse with DEC Part #90-7216
4) Replace existing decal with new decal DEC Part # 5309717
5) Change the following jumpers on the transformer:

		From	To
Delete		Terminal 1	Terminal 3
		Terminal 2	Terminal 4
Add	18 AWG	Terminal 2	Terminal 3

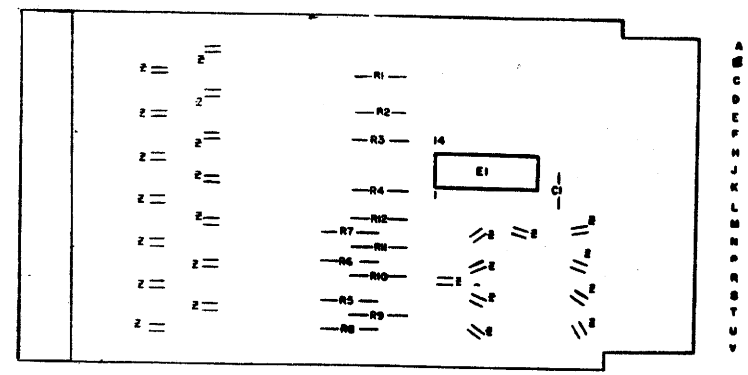
SIZE	CODE	NUMBER	REV
A	SP	H716-0-1	

DEC FORM NO 16-1022 DRA 108

SHEET 2 OF 2



⊘----⊘ INDICATES OPTIONAL JUMPERS



QTY	REF. DESIGNATION	DESCRIPTION	DEC PART NO.	ITEM NO.
7		EYELET, FEED THRU	9006731	10
24		SPLIT LUGS	9006735	9
1	E1	IC DEC 7404N	1909931	8
8	R5-R12	RES. 1K 1/4W 5%	1300365	7
4	R1-R4	RES. 470 1/4W 5%	1300316	6
1	C1	CAP. .01UF 100V 20%	1001610	5
1		ETCHED CIRCUIT BOARD	5009675	4
		MODULE ECO HISTORY	B-MH-M960-0-6	3
		ASSY/DRILLING HOLE LAYOUT	D-AM-M960-0-5	2
		X-Y COORDINATE HOLE LOCATION	K-CO-M960-0-4	1

PARTS LIST

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

DRN S. COOPER DATE 7-28-71

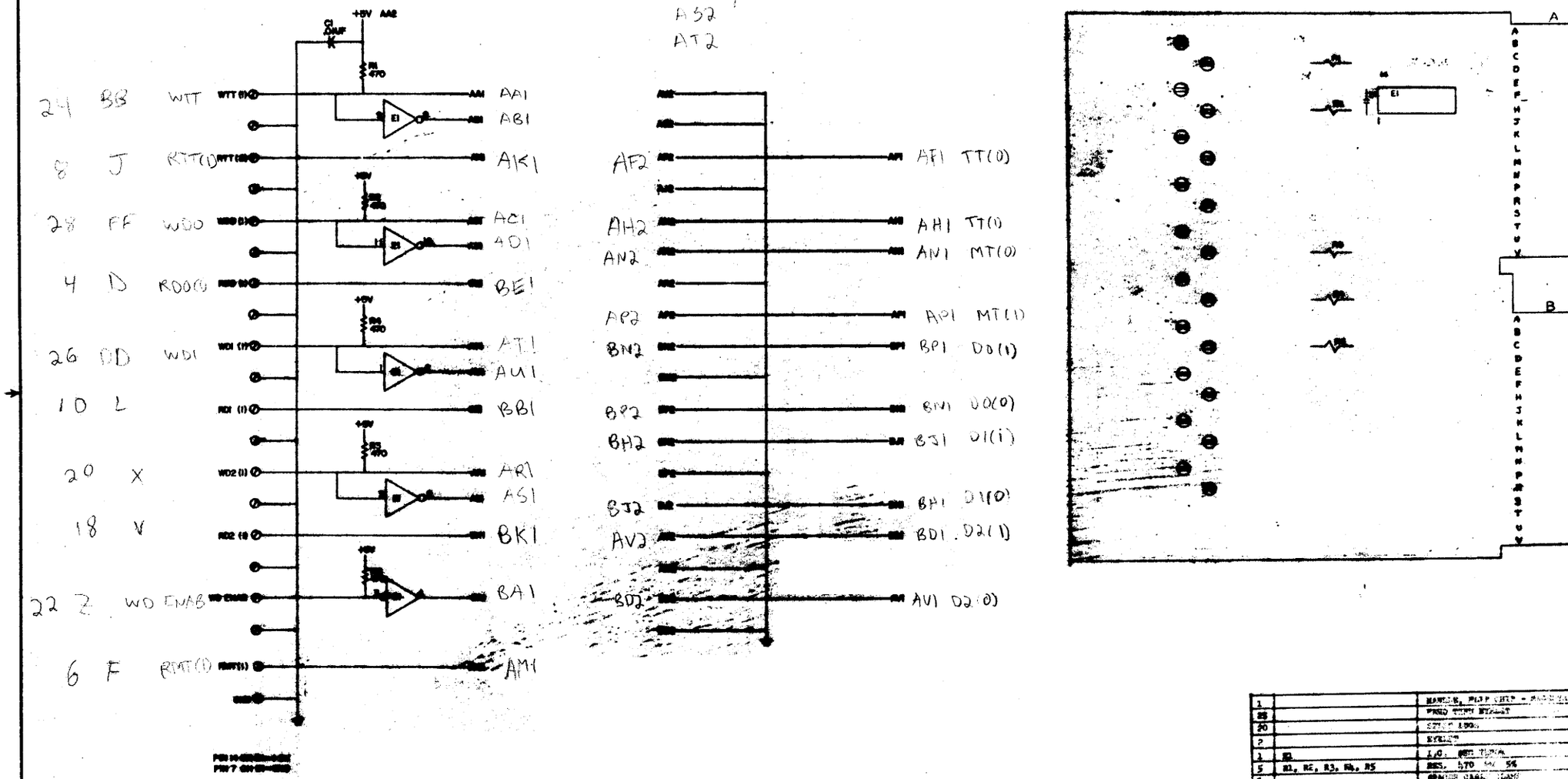
EQUIPMENT CORPORATION

TITLE COMMAND CABLE CONNECTOR

SIZE D CODE CS NUMBER M960-0-1 REV C

PRINTED CIRCUIT REV. D

SIZE	CODE	NUMBER	REV
D	CS	M960-0-1	C



Crossovers
AC2 BE2
AK2 BL2
AS2
AT2

1			
25			
20			
2			
1	J2		
5	R1, R2, R3, R4, R5		
1			
1	C1		
1			

DATA CABLE CONNECTOR

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY J. McCluskey DATE 4/7/72	CHECKED [illegible] DATE 4/7/72	SECTION
ENG [illegible] DATE 4/7/72	PROD [illegible] DATE 4/7/72	ISSUED SECT.

LEGEND

- D DOCUMENT
- DN DOCUMENT CHANGE NOTICE
- PA PAPER TAPE ASCII
- PB PAPER TAPE BINARY
- PM PAPER TAPE READ-IN-MODE

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION TD8-E	TD8-E-H	TD8-E-J	TD8-E-M	TD8-E-R			KIT CHECK BY ____ DATE ____	INSTALLATION CHECK BY ____ DATE ____
1	M868	Simple DecTape Control	1	1	1	1	1				
2	70-08447	DecTape Control Cable	1	1	1	1	1				
3	TU56-MH	Single Tape Transport	0	1	0	0	0				
4	TU56-MJ	Single Tape Transport (Table Top)	0	0	1	0	0				
5	TU56-M	Dual Tape Transport	0	0	0	1	0				
6	TU56-MR	Dual Tape Transport (Table Top)	0	0	0	0	1				
7	A-ML-TU56	TU56 Print Set	0	1	1	1	1				
8	TU56	TU56 Maintenance Manual	0	1	1	1	1				
9	Dec-8E-EUZA-DAND-PB	TD8E Dectape Formatter (Document & Papertape)	1	1	1	1	1				
10	Dec-8E-D3A-DAND-PB	TD8-E Diagnostic	1	1	1	1	1				
11	Dec-8E-UZTA-DAND-PB	Read/Write Subroutine	1	1	1	1	1				
12	A-ML-TD8-E	TD8-E Print Set	1	1	1	1	1				
13	Dec-8-E-HR3B-D-TD8-E	TD8-E Maintenance Manual	1	1	1	1	1				
		Note 1 - When shipping a TD8-E-H also ship 1 certified Dectape and 1 empty reel also 1 cleaning kit, mounting plate and hardware. On note 1 & 2 refer to TU56 accessory list for part NO.									
		Note 2 - When shipping a TD8-E-R ER also ship a certified Dectape and 2 empty reels. Also 1 cleaning kit, mounting plate and hardware.									

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
SIMPLE DECTAPE CONTROL	SHEET 1 OF 2	A	AL	TD8-E-8		
		DIST.				

DEC 16-(325)-1075-N172 DRA 121

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY J. McCluskey DATE 4/7/72	CHECKED [illegible] DATE 4/7/72	SECTION
ENG [illegible] DATE 4/7/72	PROD [illegible] DATE 4/7/72	ISSUED SECT.

LEGEND

- D DOCUMENT
- DN DOCUMENT CHANGE NOTICE
- PA PAPER TAPE ASCII
- PB PAPER TAPE BINARY
- PM PAPER TAPE READ-IN-MODE

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION							KIT CHECK BY ____ DATE ____	INSTALLATION CHECK BY ____ DATE ____
		Note 3 - If system is 110 use 1 H716-B Power supply									
		If system is 220 use 1 H716-D Power supply									

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
SIMPLE DECTAPE CONTROL	SHEET 2 OF 2	A	AL	TD8-E-8		
		DIST.				

DEC 16-(325)-1075-N172 DRA 121

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