

**PC8-E  
HSPT reader/punch  
engineering drawings**

digital equipment corporation • maynard, massachusetts

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# MASTER DRAWING LIST

MAINTENANCE MANUALS		UNIT VARIATIONS															
NO.	TITLE	PC04-B	PC04-BA	PC04-BB	PC04-BC	PC04-BI	PC04-BJ	PC04-C	PC04-C2	PC04-D	PC04-PA	PC04-PB	PC04-R	PC04-RL	PC04-CM	PC04-CL	PC04-RB
PC04-0	BASIC PC04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

USED ON OPTIONS	
PR08	PR8L
PP8-B	PP8I
PC0-E	PC0Y
PC8I	PC08
PR8I	PC09
PR8I	

<b>APPROVED</b>	<i>[Signature]</i>	<b>DATE</b>	8/71	<b>CHG. NO.</b>	MISC-86	<b>REV</b>	O R16
			12/71		00053		A
			2/72		00054		B
			4/72		00055		C
			5/72		00056		D
			3/73		00057		E
			9/73		00058		F
			5/74		00059		G
							H

<b>DRN</b>	P. MARCOTT	<b>DATE</b>	6/69	<b>TITLE</b>	PAPER TAPE READER
<b>CHK'D</b>	R. CARVELLI	<b>DATE</b>	6/69	<b>SIZE CODE</b>	A ML
<b>ENG.</b>	G. BECKNER	<b>DATE</b>	6/69	<b>NUMBER</b>	PC04-0
<b>PROJ. ENG.</b>	G. BECKNER	<b>DATE</b>	6/69	<b>REV</b>	H
<b>PROG.</b>	G. BECKNER	<b>DATE</b>	6/69	<b>DRST</b>	
PC04					
SCALE <i>[Handwritten]</i>					
SHEET 1 OF 2					

DRA 131

Dec 16 (325) 1048-N471

PRINT SET	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
X	D-DI-PC04-0-1	Z	2	DRAWING INDEX	
X	D-BS-PC04-0-2	J	3	POWER + CONTROL SCHEMATIC DIAGRAM (REFERENCE)	
X	B-CS-M113-0-1	#	1	10-2 INPUT NAND GATES	
X	B-CS-5408308-0-1	#	1	POWER REGULATOR CIRCUIT SCHEMATIC	
X	B-CS-5408385-0-1	#	1	SCR DRIVER CIRCUIT SCHEMATIC	
X	B-CS-M044-0-1	#	1	SOLENOID DRIVERS	
X	D-CS-M110-0-1	#	1	PUNCH CONTROL M710	
X	B-CS-M040-0-1	#	1	SOLENOID DRIVERS	
X	D-CS-M7050-0-1	#	1	READER CONTROL M7050	
X	D-CS-M715-0-1	#	1	READER CLOCK M715	
X	D-CC-G918-0-1	#	1	PHOTO TRANSISTOR AMPLIFIER G918	
X	E-CS-M840-0-1	#	3	READER PUNCH CONTROL	
X	D-MU-PC04-0-3	D	1	MODULE UTILIZATION	
X	A-PL-PC04-0-3	D	2	MODULE UTILIZATION (PARTS LIST)	
X	B-CS-5408918-0-1	#	1	POWER REGULATOR CIRCUIT SCHEMATIC	
X	A-SP-PC04-0-4	A	7	PC04 ENGINEERING SPECS	
X	B-CS-5408310-0-1	#	1	POWER REGULATOR CIRCUIT SCHEMATIC	
X	D-UA-PC04-0-0	P	4	READER + PUNCH	
X	C-PL-PC04-0-0	P	2	READER + PUNCH (PARTS LIST)	
X	E-AD-7006268-0-0	H	1	WIRED ASSY	
X	A-PL-7006268-0-0	H	1	WIRED ASSY	
X					
X	D-BS-PC04-CL-PNCH		1	PUNCH	
X	D-BS-PC04-CL-RD		1	READER & POWER SUPPLY	
X	K-WL-PC04-0-5	H		WIRE LIST PC04-B, BA, BB, BC, C, CA, P, PA, R, RB	
X	K-WL-PC04-0-6	H		WIRE LIST PC04-BL, BM, PL, PM, RL	
X	K-WL-PC04-0-7	H		WIRE LIST PC04-CL, CM	
X	A-AL-PC04-0-08		1	ACCESSORY LIST	
<b>TITLE</b>					<b>REV</b>
PAPER TAPE READER				<b>SIZE CODE</b>	<b>H</b>
SHEET 2 OF 2			<b>A ML</b>	<b>NUMBER</b>	
			<b>PC04-0</b>		

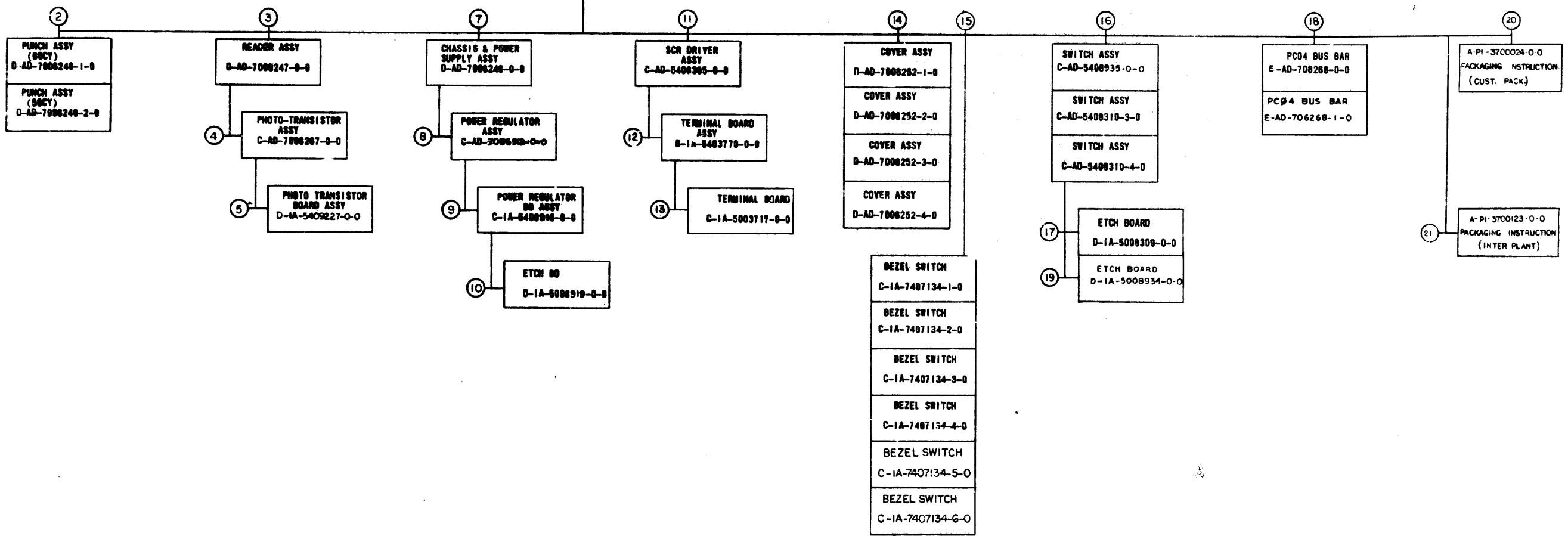
DRA 132

Dec 16 (325) 1048-N471

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**NOTES:**  
 1 THE KEY TO SYMBOLS IN THE FIND NO. COLUMNS IN FIND BLOCK 1 IS:  
 AN "X" MEANS THE ASSY IS USED.  
 A BLANK SPACE MEANS THE ASSY IS NOT USED.  
 A DASH AND NUMBER (-1, -2 ETC) MEANS THE ASSY IS USED AND THAT VARIATION OF THE ASSY HAVING THAT PARTICULAR DASH NUMBER AS PART OF ITS DWG. NUMBER IS USED.  
 EXAMPLE:  
 A PUNCH MODEL FROM FIND COLUMN 14 USES A (-2) OR A D-AD-7006252-2-0 COVER ASSY

MODEL	DESCRIPTION	CY.	COMPOSITION																
			FIND NUMBER																
			2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PC04-B, BE& BL	PUNCH & READER	80	-1	X	X	X		X	X	X									
PC04-BA, BC & BM	PUNCH & READER	50	-2	X	X	X		X	X	X									
PC04-C	PUNCH READER DRIVER	80	-1	X	X	X		X	X	X	X	X	X						
PC04-CA	PUNCH READER DRIVER	50	-2	X	X	X		X	X	X	X	X	X						
PC04-PA & PL	PUNCH	80	-1					X	X	X	X								
PC04-PA & PM	PUNCH	50	-2					X	X	X	X								
PC04-R & RB	READER	X		X	X	X		X	X	X	X								



UNIT ASSY. DWG. NO. D-UA-PC04-0-0

REV.	DATE	BY	CHKD	DESCRIPTION
A	7-17-67	T. Beckner		PC04-00006
B	7-17-67	T. Beckner		PC04-00009
C	10-10-67	T. Beckner		PC04-00011
D	1-6-67	G. Beckner		PC04-00013
E	1-15-70	G. Beckner		TUSS-00014
F	7-21-70	I. Morris		PC04-00022
G	3-19-70	T. Beckner		PC04-00032
H	5-17-70	C. Youse		PC04-00041
I	5-20-70	M. Leis		PC04-00051
J	4-21-70	A. E. Man		PC04-00044
K	5-21-70	C. Youse		PC04-00046
L	5-21-70	C. Youse		PC04-00048
M	5-21-70	C. Youse		PC04-00052
N	5-21-70	C. Youse		PC04-00053
P	5-21-70	C. Youse		PC04-00054
Q	5-21-70	C. Youse		PC04-00055
R	5-21-70	C. Youse		PC04-00056
S	5-21-70	C. Youse		PC04-00057
T	5-21-70	C. Youse		PC04-00058
U	5-21-70	C. Youse		PC04-00059
V	5-21-70	C. Youse		PC04-00060
W	5-21-70	C. Youse		PC04-00061
X	5-21-70	C. Youse		PC04-00062
Y	5-21-70	C. Youse		PC04-00063
Z	5-21-70	C. Youse		PC04-00064

FIRST USED ON OPTION/ MODEL  
PC04

DO NOT SCALE DRAWING  
 UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS IN INCHES  
 TOLERANCES  
 DECIMALS FRACTIONS ANGLES  
 ± .005 ± 1/64 ± 90°  
 FINAL SURFACE QUALITY  
 REMOVE BURRS AND BREAK SHARP CORNERS

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			
DRAWING INDEX LIST, PC04			
SCALE: N		REV: Z	
SHEET: 1 OF 2		DISTRIBUTION: G	

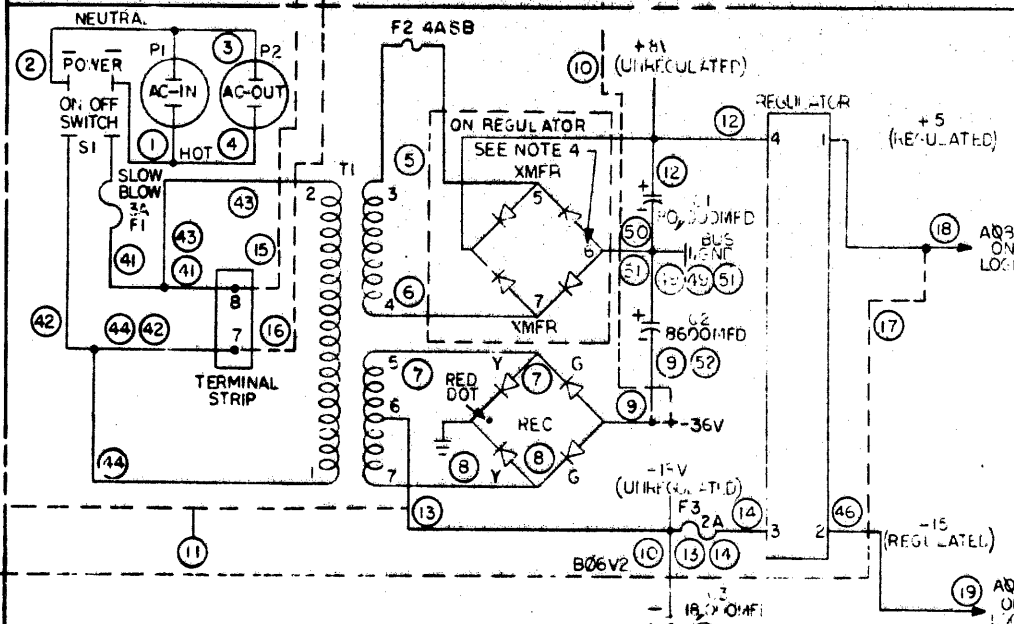
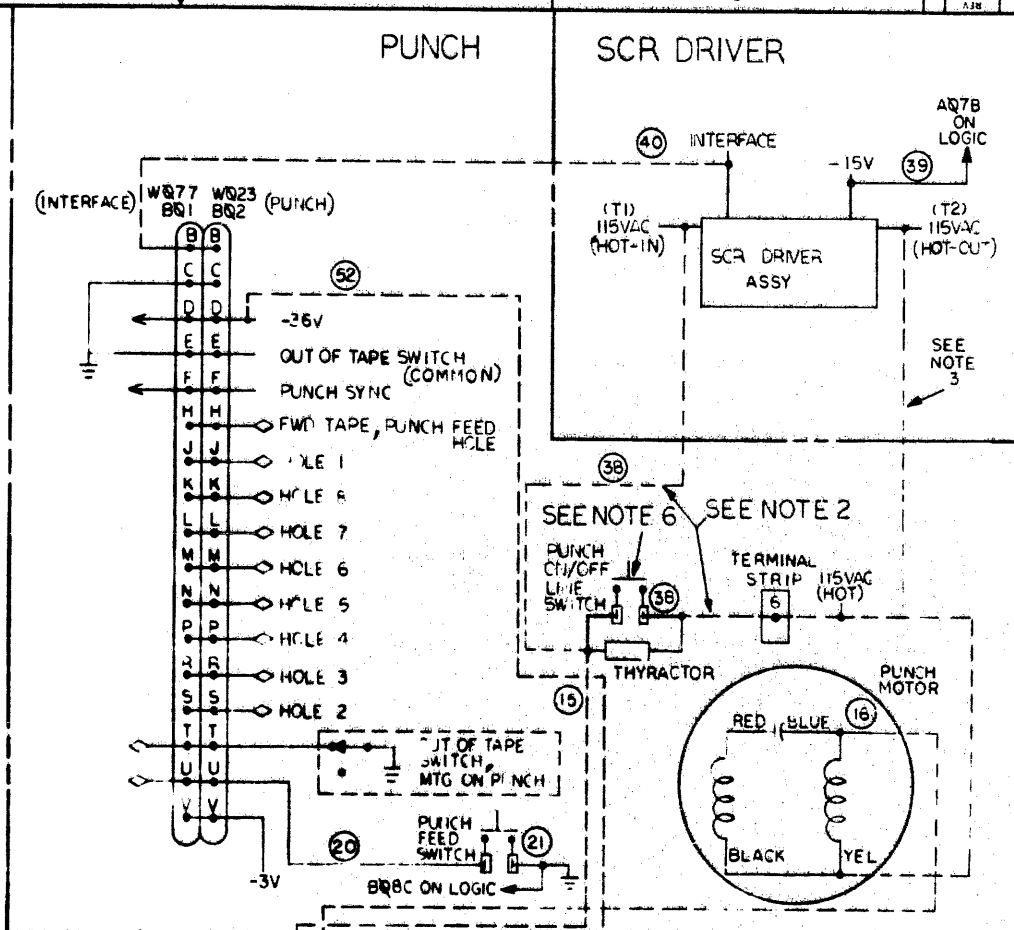
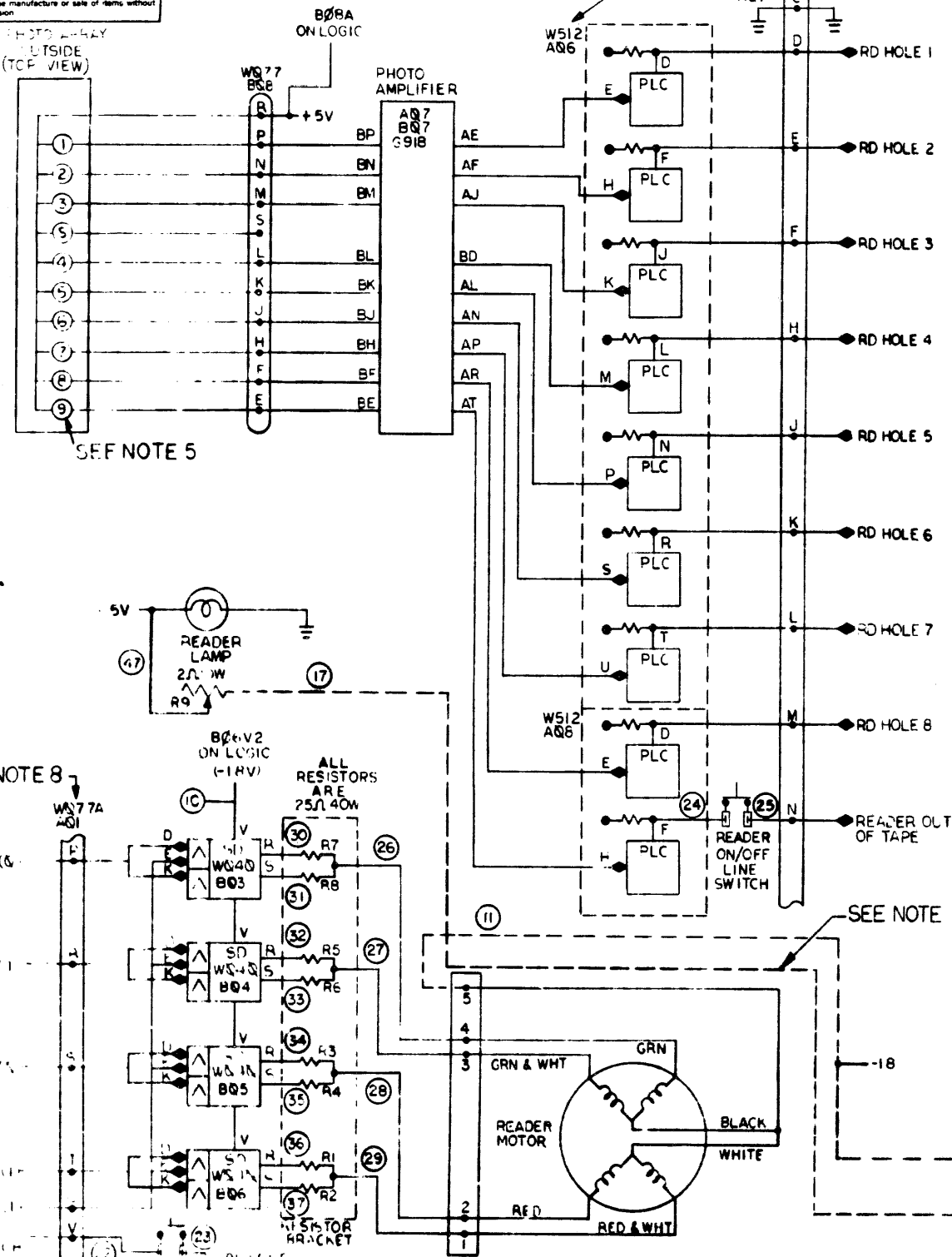
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES  
 DECIMALS FRACTIONS ANGLES  
 FIN. SURFACE QUALITY  
 REMOVE BURRS AND BREAK SHARP CORNERS

MECHANICAL				DEPT USAGE				MECHANICAL				DEPT USAGE				ELECTRICAL				DEPT USAGE																																																			
NO	DESCRIPTION	PART NO	DEPT USAGE	FIND NO	DESCRIPTION	PART NO	DEPT USAGE	FIND NO	DESCRIPTION	PART NO	DEPT USAGE	FIND NO	DESCRIPTION	PART NO	DEPT USAGE	FIND NO	DESCRIPTION	PART NO	DEPT USAGE																																																				
1	PC#4 - READER & PUNCH (PL) CHAD BOX TAPE CONTAINER I/O CABLE ASSY PC#4 PA PUNCH BRKT RESISTOR SCRN MODULE RETAINER HOLD DOWN BAR PACKAGING INSTRUCTIONS PCO HEAD REPLACH PUNCH ASSY (BOCY) PUNCH ASSY (SOCT) PUNCH ASSY (PL) CHAD TUBE PUNCH MTG CHASSIS HINGE BRKT FEED TEST CHUTE TAPE DEPRESSOR PIN PULLY (BOCY) PULLY (SOCT) TORSION SPRING	D-UA-PC04-0-0 A-PL-PC04-B-# B-MD-7405300-0-0 D-MD-7407131-0-0 C-IA-7006281-0-0 D-UA-PC04-PA-B C-MD-7408091-0-0 C-IA-7405642-0-0 C-IA-7408339-0-0 A-PI-3700024-0-0 D-AD-7008248-1-0 D-AD-7008248-2-0 A-PL-7008248-8-0 B-MD-7407388-0-0 D-IA-7407071-0-0 B-MD-7407083-0-0 D-MD-7408088-0-0 D-IA-7408171-0-0 D-SC-1209925-0-0 B-MD-7408172-0-0 B-MD-7408088-1-0 B-MD-7408088-2-0 C-SC-1209924-0-0		4	PHOTO TRANSISTOR ASSY TEST SCHEMATIC TEST PROCEDURE	C-IA-7008267-0-0 D-SS-7406267-T-1 A-SP-7406267-T-1		5	PHOTO TRANSISTOR BD ASSY	D-IA-5409227-0-0		8	CHASSIS & POWER SUPPLY ASSY CHASSIS & POWER SUPPLY (PL) PANEL FRONT BRKT MTG BAR RIGHT HAND BRKT MTG BAR LEFT HAND CHASSIS COVER JONES STRIP HARNESS CONTROL HARNESS I/O 110 VAC HARNESS POWER SUPPLY DECAL (PC#4)	D-AD-7006246-0-0 A-PL-7008246-0-0 D-IA-7407075-0-0 C-IA-7407065-1-0 C-IA-7407065-2-0 E-IA-7407074-0-0 C-MD-5309644-0-0 D-IA-7008311-0-0 D-IA-7326310-0-0 D-IA-7008308-0-0 A-DC-7407476-0-0		7	PWR REGULATOR ASSY PWR REGULATOR (PL) HEATSINK, PWR REGULATOR	C-AD-7008942-0-0 A-PL-7008942-0-0 C-MD-7407066-0-0		9	PWR REGULATOP BOARD ASSY	C-IA-5408918-0-0		10	ETCH BOARD	D-IA-5008919-0-0		11	SCR DRIVER ASSY SCR DRIVER CHASSIS	C-AD-5408385-0-0 C-IA-7407070-0-0		12	TERMINAL BD ASSY	B-IA-5403770-0-0		13	TERMINAL BOARD	C-IA-5003717-0-0		14	COVER ASSEMBLY COVER ASSEMBLY COVER ASSEMBLY COVER ASSEMBLY COVER ASSEMBLY (PL) COVER, PCO (BASIC & COMB.) COVER, PCO (PUNCH) COVER, PCO (READER) BEZEL BEZEL	D-AD-7008252-1-0 D-AD-7008252-2-0 D-AD-7008252-3-0 D-AD-7008252-4-0 A-PL-7008252-0-0 E-SC-1209398-1-0 E-SC-1209398-3-0 E-SC-1209398-5-0 C-MD-7407345-0-0 E-SC-1209225-0-0		15	BEZEL SWITCH SILK SCREEN BEZEL SWITCH SILK SCREEN BEZEL SWITCH SILK SCREEN BEZEL SWITCH SILK SCREEN	C-IA-7407134-1-0 A-SS-7407134-1-1 C-IA-7407134-2-0 A-SS-7407134-2-1 C-IA-7407134-3-0 A-SS-7407134-3-1 C-IA-7407134-4-0 A-SS-7407134-4-1		16	SWITCH ASSY SWITCH ASSY SWITCH ASSY SWITCH ASSY (PL) BAR SPACER SW. BD.	C-AD-5409525-0-0 C-AD-5408310-3-0 C-AD-5408310-4-0 A-PL-5408310-0-0 B-MD-7407175-0-0		17	PCO SWITCH BOARD FLIP CHIP MODULE PR SWITCH BOARD	D-IA-5009309-0-0 D-MD-1402230-0-0 D-IA-5008934-0-0		18	PC#4 BUS BAR MTG. BAR (6 IN.)	E-AD-7006288-0-0 B-IA-7407077-0-0		20	PACKAGING INSTRUCTION OUTER SHIPPING CARTON INNER SHIPPING CARTON BOTTOM PAD FRONT SPACER SIDE SPACER REAR SUPPORT TOP SPACER TORO PAD POLY BAG	A-PI-3700024-0-0 A-PS-9905046-0-0 A-PS-9905047-0-0 A-PS-9905053-0-0 A-PS-9905054-0-0 A-PS-9905055-0-0 A-PS-9905052-0-0 A-PS-9905056-0-0 A-PS-9905044-1-0 A-PS-9905129-7-0		21	PACKAGING IN TRUCTION TAPELESS CARTON SPECIAL DIE CUT ONE PIECE FOLDER LOAD MODUAL BOOK PACK POLY BAG	A-PI-3700023-0-0 A-PS-9905348-00-0 A-PS-9905348-01-0 A-PS-9905348-02-0 A-PS-9905072-0-0 A-PS-9905129-7-0		1	POWER TAPE READER <del>PC#4 PA READER &amp; PUNCH</del> <del>PC#4 C READER &amp; PUNCH &amp; DRIVER</del> <del>PC#4 CA READER &amp; PUNCH &amp; DRIVER</del> <del>PC#4 P PUNCH</del> <del>PC#4 PL PUNCH</del> POWER AND CONTROL SCHEMATIC DIAGRAM MODULE UTILIZATION MODULE UTILIZATION (PL) ENGINEERING SPECS WIRELIST WIRELIST WIRELIST 7 CHASSIS & POWER SUPPLY ASSY 9 POWER REG. RD. ASSY 11 SCR DRIVER ASSY 12 PRINTED CIRCUIT BOARDS 18 BUS BAR (PC#4) BUS BAR (PL)	A-MD-PC04-A <del>A-MD-PC04-B</del> <del>A-MD-PC04-C</del> <del>A-MD-PC04-D</del> <del>A-MD-PC04-E</del> <del>A-MD-PC04-F</del> D-BS-PC04-0-2 M-D-PC04-0-3 D-PL-PC04-0-3 A-MD-PC04-0-4 K-MD-PC04-0-5 K-MD-PC04-0-6 K-MD-PC04-0-7 D-AD-7006246-0-0 B-MD-5408308-0-0 C-AD-7408385-0-0 PC-IA-403770-0-1 E-AD-7005268-0-0 E-AD-7006288-0-0 A-A-7407175-0-0	

UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS IN INCHES  
 DECIMALS FRACTIONS ANGLES  
 FIN. SURFACE QUALITY  
 REMOVE BURRS AND BREAK SHARP CORNERS

QTY	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
UNLESS OTHERWISE SPECIFIED	DATE	digital EQUIPMENT CORPORATION	
UNLESS OTHERWISE SPECIFIED	DATE	DRAWING INDEX	
UNLESS OTHERWISE SPECIFIED	DATE	LIST 0024	
SCALE	2 OF 2	SHEET	

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**NOTES:**

- DOTTED LINES INDICATE POSSIBLE CONNECTIONS BETWEEN POWER SUPPLY, PUNCH, PUNCH AND SCR DRIVER. SEE LEGEND.
- WIRE NO. 38 HAS TWO POSSIBLE ROUTES. DEPENDING ON THE SCR DRIVER OPTION WITH THE OPTION IT GOES TO THE SCR BOARD. WITHOUT THE OPTION IT GOES TO THE TERMINAL STRIP.
- WITH SCR DRIVER THE BLACK-YEL. COMBINATION FROM THE PUNCH MOTOR GOES TO THE SCR BD. WITHOUT DRIVER IT GOES TO THE TERMINAL STRIP.
- THE UNCIRCLED NUMBERS 1 THRU 7 REFER TO CONNECTIONS ON REGULATOR BOARD.
- THIS PHOTO TRANSISTOR USED TO DETECT OUT OF TAPE.
- WITH SCR OPTION SWITCHED AC WILL BE WIRED TO COMMON TERMINAL. THYRACTOR NOT REQD.
- CIRCLED NUMBERS 1 THRU 46 ARE WIRE NUMBERS. SEE TABLE.
- SEE PAGE 2 FOR MODELS BB, BC & RB. SEE PAGE 3 FOR MODELS BL, EM, PL & PM.

WIRE NO.	COLOR	WIRE NO.	COLOR
1	RED	24	WHITE-YELLOW
2	WHITE	25	BROWN
3	WHITE	26	WHITE-BROWN
4	RED	27	WHITE-ORANGE
5	ORANGE	28	WHITE-YELLOW
6	GRAY-BLUE	29	WHITE-VIOLET
7	GRAY-WHITE	30	BROWN
8	YELLOW	31	BROWN
9	BLUE	32	ORANGE
10	GRN	33	ORANGE
11	GRN	34	YELLOW
12	GRAY-VIOLET	35	YELLOW
13	GREEN	36	VIOLET
14	GREEN	37	VIOLET
15	RED	38	RED
16	WHITE	39	WHITE-BLUE
17	GRAY-RED	40	WHITE-GREEN
18	GRAY-RED	41	RED
19	GRAY-YELLOW	42	WHITE
20	WHITE	43	RED
21	BLACK	44	WHITE
22	YELLOW	45	RED
23	WHITE-BLACK	46	GRAY-YELLOW
43 (SU-5)	BLACK		
52	BLUE	47	GRAY-YELLOW

CONNECTIONS	MODEL			
	PC04 B PC04 BA	PC04 C PC04 CA	PC04 D PC04 DA	PC04 E PC04 EA
PWR SUP TO PUNCH				
PWR SUP TO SCR DRV				
PWR SUP TO PUNCH AND SCR DRV				

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			

REV.	BY	DATE	DESCRIPTION
A			
B			
C			
D			
E			
F			
G			
H			
I			
J			

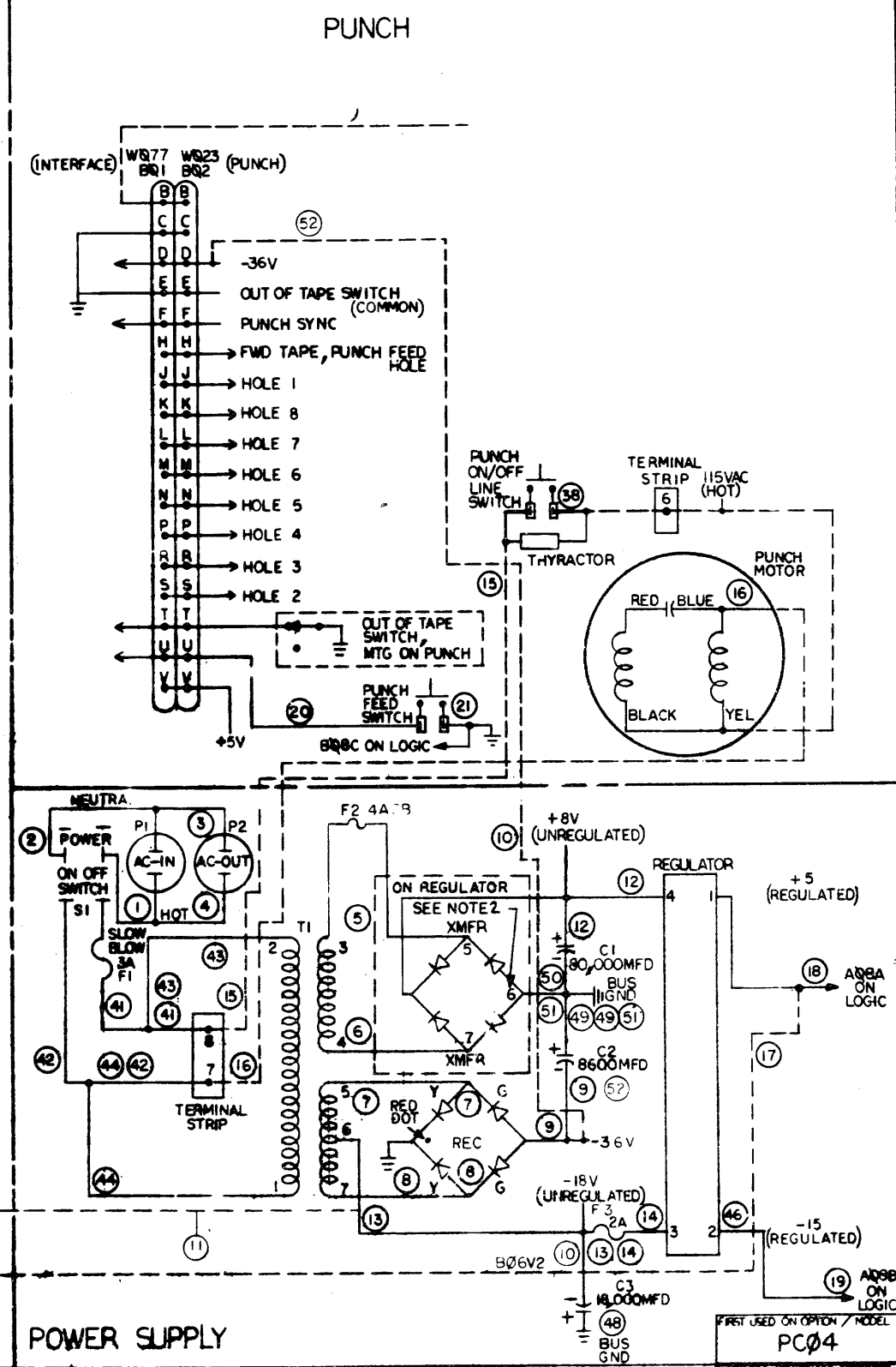
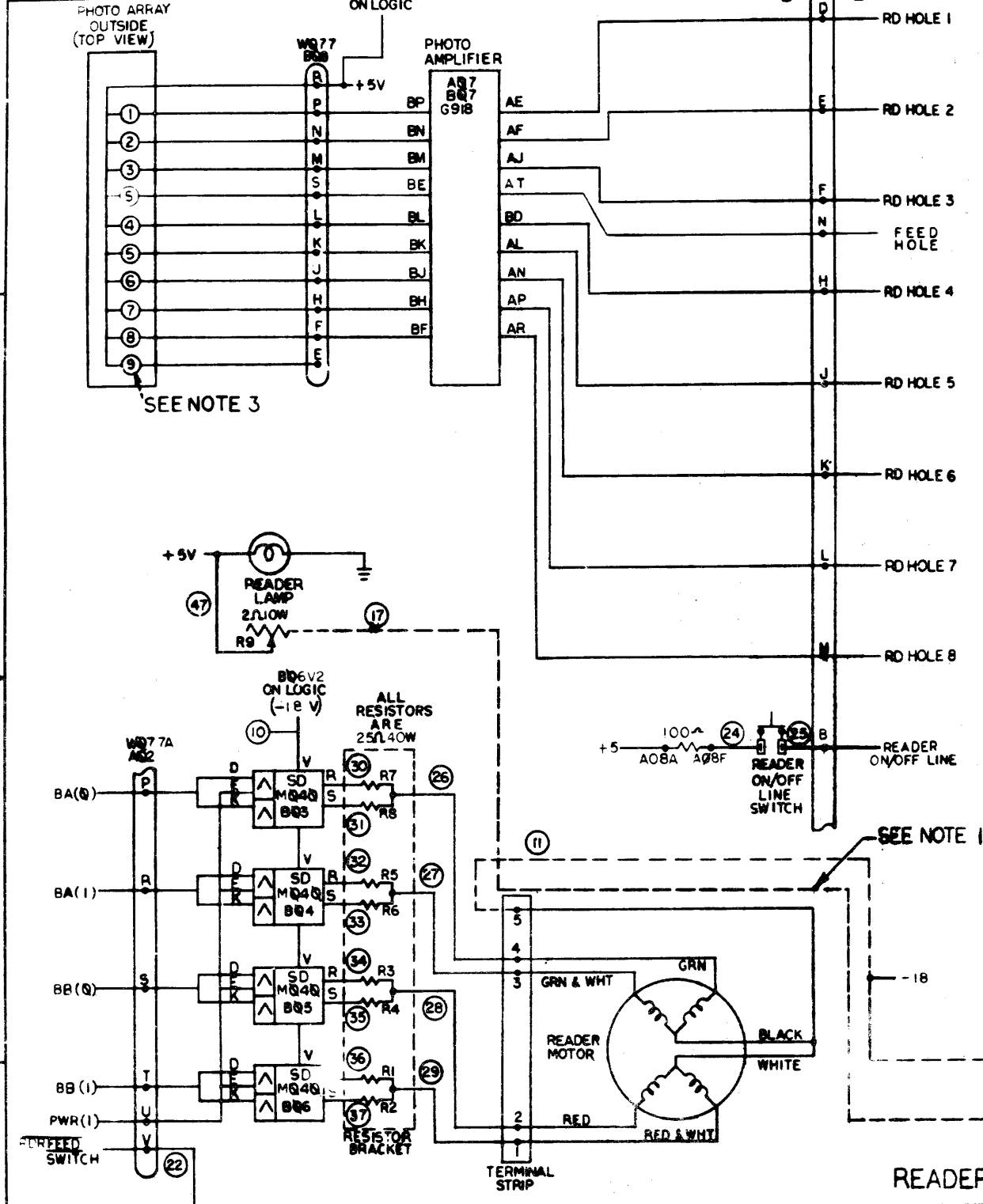
NOTE 9: SEE NOTE 4 ON AD-7006268-0-0 REFERENCE: 7006268-0-0 LOGIC BLOCK

**PC04**  
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES  
TOLERANCES: DECIMALS FRACTIONS ANGLES  
±.005 ±1/32 ±0°30'  
FURNISH TO QUALITY STANDARD REMOVE BURRS AND BREAK SHARP CORNERS

DATE: 1/15/60  
DRAWN BY: C. YOUSE  
CHECKED BY: J. WILLIAMS  
TITLE: POWER AND CONTROL SCHEMATIC DIAGRAM  
SIZE: A-ML-PC04  
SCALE: NONE  
SHEET 1 OF 3



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NOTES:

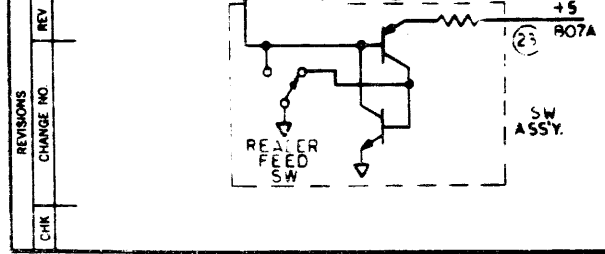
1. DOTTED LINES INDICATE POSSIBLE CONNECTIONS BETWEEN POWER SUPPLY, READER AND PUNCH.
2. THE UNCIRCLED NUMBERS 1 THRU 7 REFER TO CONNECTIONS ON REGULATOR BOARD.
3. THIS PHOTO TRANSISTOR IS NOT USED.
4. CIRCLED NUMBERS 1 THRU 46 ARE WIRE NUMBERS. SEE TABLE.

WIRE TABLE

WIRE NO	COLOR	WIRE NO	COLOR
1	RED	24	WHITE-YELLOW
2	WHITE	25	BROWN
3	WHITE	26	WHITE-BROWN
4	RED	27	WHITE-ORANGE
5	ORANGE	28	WHITE-YELLOW
6	GRAY-BLUE	29	WHITE-VIOLET
7	GRAY-WHITE	30	BROWN
8	YELLOW	31	BROWN
9	BLUE	32	ORANGE
10	GRN	33	ORANGE
11	GRN	34	YELLOW
12	GRAY-VIOLET	35	YELLOW
13	GREEN	36	VIOLET
14	GREEN	37	VIOLET
15	RED	38	RED
16	WHITE		
17	GRAY-RED		
18	GRAY-RED	41	RED
19	GRAY-YELLOW	42	WHITE
20	WHITE	43	RED
21	BLACK	44	WHITE
22	YELLOW		
23	WHITE-BLACK	46	GRAY-YELLOW
48 THRU 51	BLACK	47	GRAY-RED
52	BLUE		

LEGEND

CONN. ACTIONS	MODEL	PC04 P	PC04 R6
PWR SUP TO READER	PC04 BB PC04 BC	PC04 PA	SAME AS PC04-B PC04-BC
PWR SUP TO PUNCH	30 TO PUNCH CABLE B01D 115V (HOT) TO PUNCH SW 115 (NEUTRAL) TO PUNCH MOTOR	SAME AS PC04 BB PC04 BC	



REFERENCE 7006268-0 LOGIC BLOCK

REV	DESCRIPTION	DATE	BY	CHK
1	REVISED	1/10/68	J. J. ...	J. J. ...
2	REVISED	2/10/68	J. J. ...	J. J. ...
3	REVISED	3/10/68	J. J. ...	J. J. ...
4	REVISED	4/10/68	J. J. ...	J. J. ...

PC04

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES

TOLERANCES

DECIMALS FRACTIONS ANGLES

±.005 ±.004 ±.007

FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

QUANTITY

DESCRIPTION

PART NO.

ITEM NO.

PARTS LIST

EQUIPMENT CORPORATION

MADE IN MASSACHUSETTS

TITLE

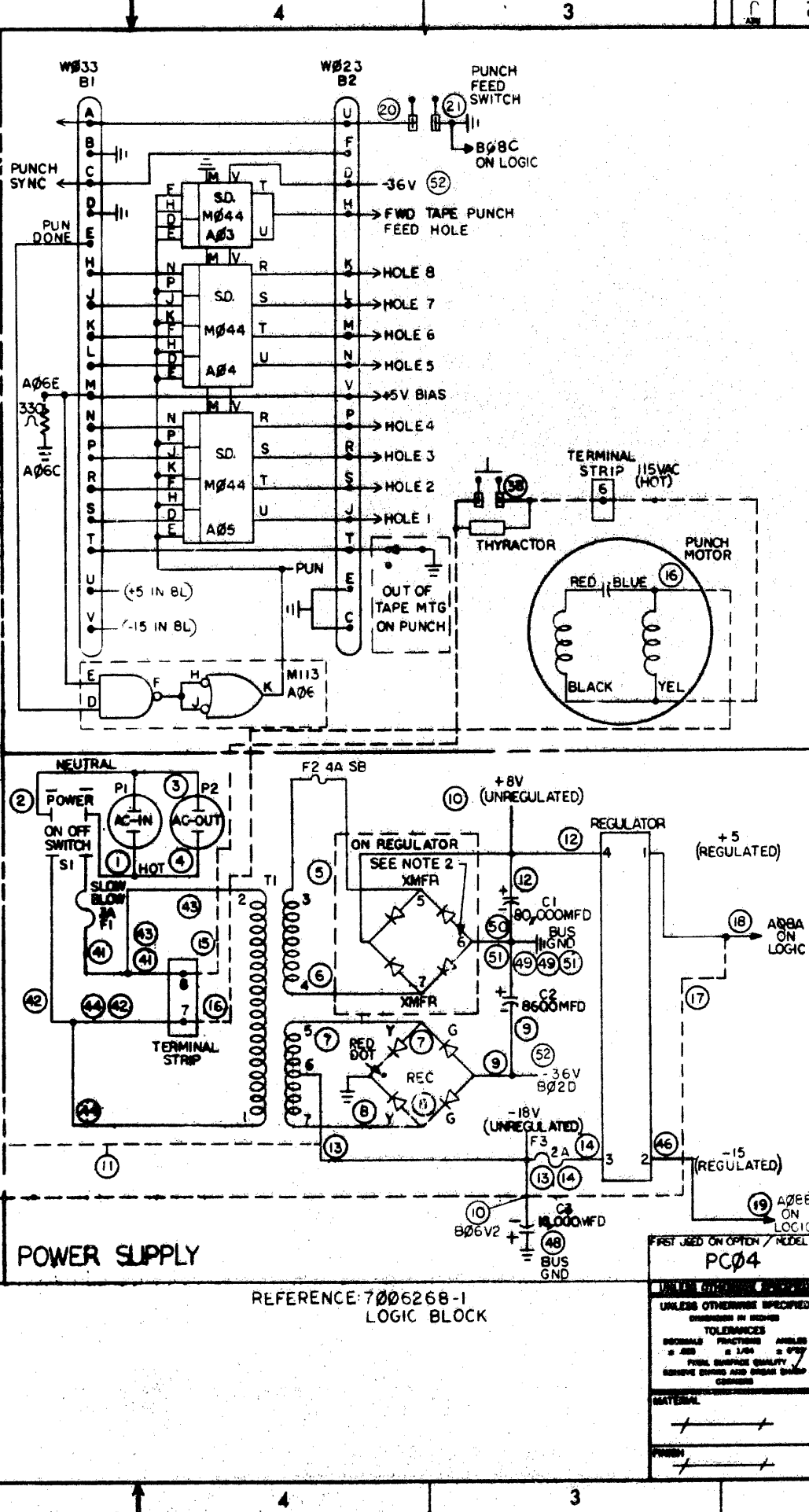
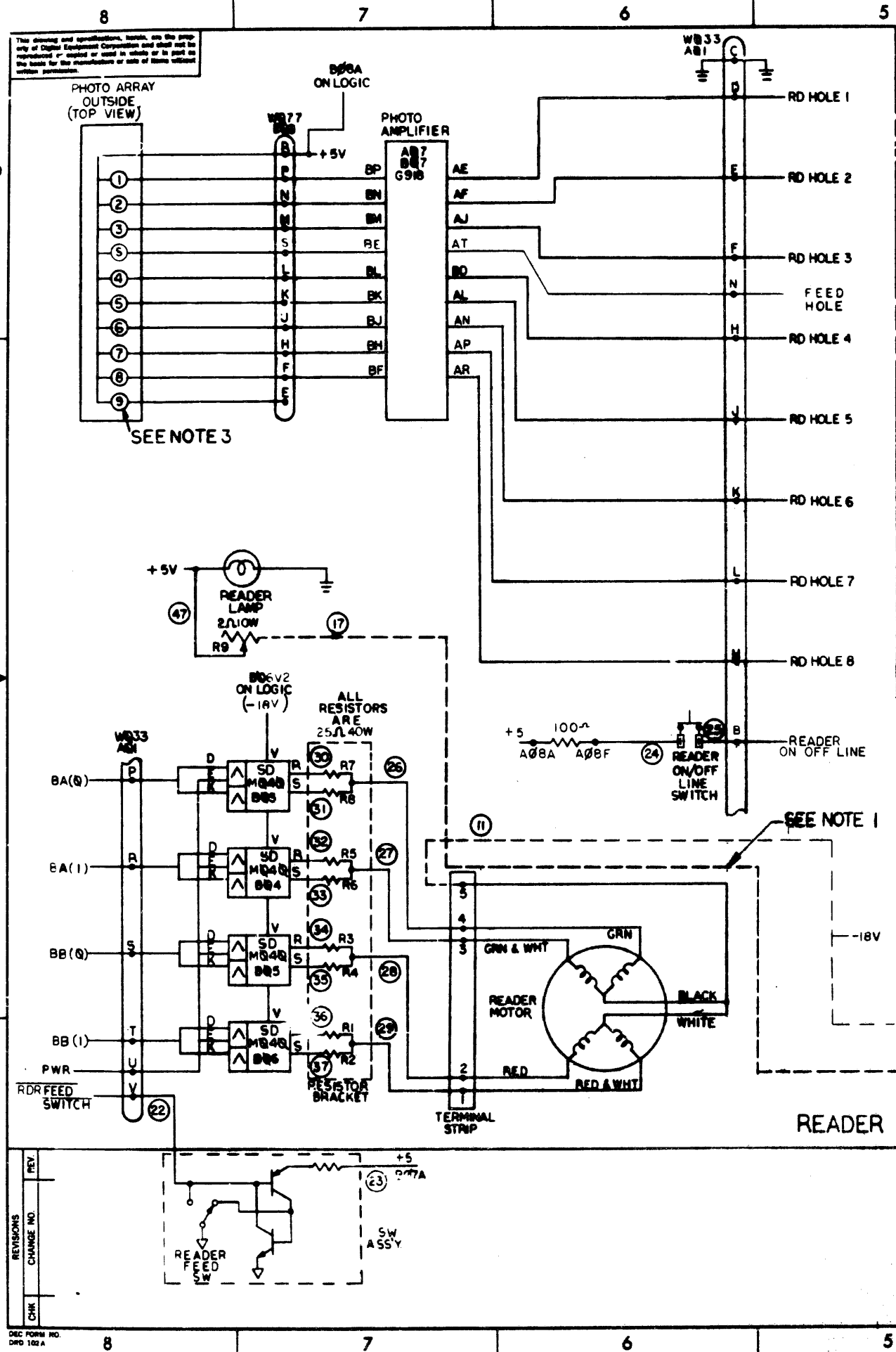
POWER AND CONTROL SCHEMATIC DIAGRAM (81)

SCALE NONE

DIST. DBS PC04-0-2

REV. J

SHEET 2 OF 3



**NOTES:**

1. DOTTED LINES INDICATE POSSIBLE CONNECTIONS BETWEEN POWER SUPPLY, READER AND PUNCH.
2. THE UNCIRCLED NUMBERS 1 THRU 7 REFER TO CONNECTIONS ON REGULATOR BOARD.
3. THIS PHOTO TRANSISTOR IS NOT USED.
4. CIRCLED NUMBERS 1 THRU 46 ARE WIRE NUMBERS. SEE TABLE.

WIRE TABLE			
WIRE NO	COLOR	WIRE NO	COLOR
1	RED	24	WHITE-YELLOW
2	WHITE	25	BROWN
3	WHITE	26	WHITE-BROWN
4	RED	27	WHITE-ORANGE
5	ORANGE	28	WHITE-YELLOW
6	GRAY-BLUE	29	WHITE-VIOLET
7	GRAY-WHITE	30	BROWN
8	YELLOW	31	BROWN
9	BLUE	32	ORANGE
10	GRN	33	ORANGE
11	GRN	34	YELLOW
12	GRAY-VIOLET	35	YELLOW
13	GREEN	36	VIOLET
14	GREEN	37	VIOLET
15	RED	38	RED
16	WHITE	39	
17	GRAY-RED	40	
18	GRAY-RED	41	RED
19	GRAY-YELLOW	42	WHITE
20	WHITE	43	RED
21	BLACK	44	WHITE
22	YELLOW		
23	WHITE-BLACK	46	GRAY-YELLOW
48 THRU 51	BLACK	47	GRAY-RED
52	BLUE		

LEGEND			
CONN. NO.	MODEL	PCQ4 PL	FCQ4 RB
PWR SUP TO READER	PCQ4 3L PCQ4 8M		SAME AS PCQ4-BL PCQ4-BM
PWR SUP TO PUNCH		SAME AS PCQ4 BL PCQ4 BM	

REV.	DESCRIPTION	PART NO.	ITEM NO.
1			

**POWER AND CONTROL SCHEMATIC DIAGRAM (8L, 8E, 8M, 8F)**

REFERENCE: 7006268-1 LOGIC BLOCK

PCQ4

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS IN INCHES  
TOLERANCES  
DIMENSIONAL FINISHES ARE AS SHOWN  
PUNCH SURFACE QUALITY  
CONFORMS TO MIL-STD-883C  
MATERIAL  
FINISH  
PUNCH

QTY. DESCRIPTION PART NO. ITEM NO.

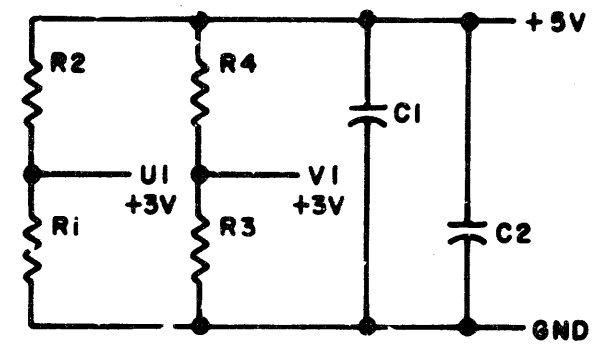
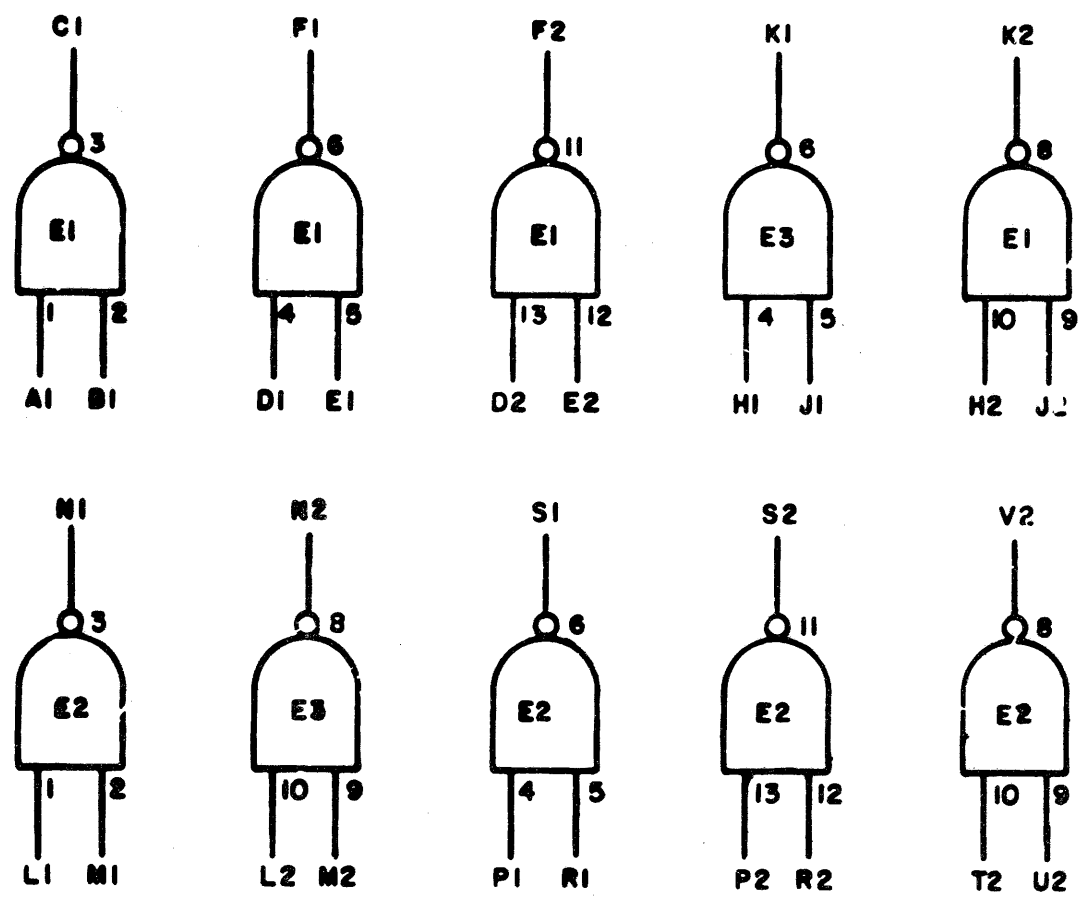
PCQ4

REVISIONS  
CHANGE NO.  
REV.

DEC FORM NO. 102A

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+5V ——— A2  
 NOT USED -15V ——— B2  
 GND ——— C2, T1



NOTES:  
 PIN 7 ON EACH IC - GND  
 PIN 14 ON EACH IC - +5V

E1 THRU E3	INTEGRATED CKT. DEC7400N	1905575
R1 AND R3	RES. 750 1/4W 5% CC	1301401
R2 AND R4	RES. 330 1/4W 10% CC	1300293
C1 AND C2	CAP. .01MFD 100V 20% DISC	1001610
PARTS LIST		A-PL-MI13-0-0
REFERENCE DESIGNATION	DESCRIPTION	PART NO.

REV. A	REV. B	REV. C
0418	0401	0400

DRN	DATE
CHK'D	DATE
ENG	DATE
PROD	DATE

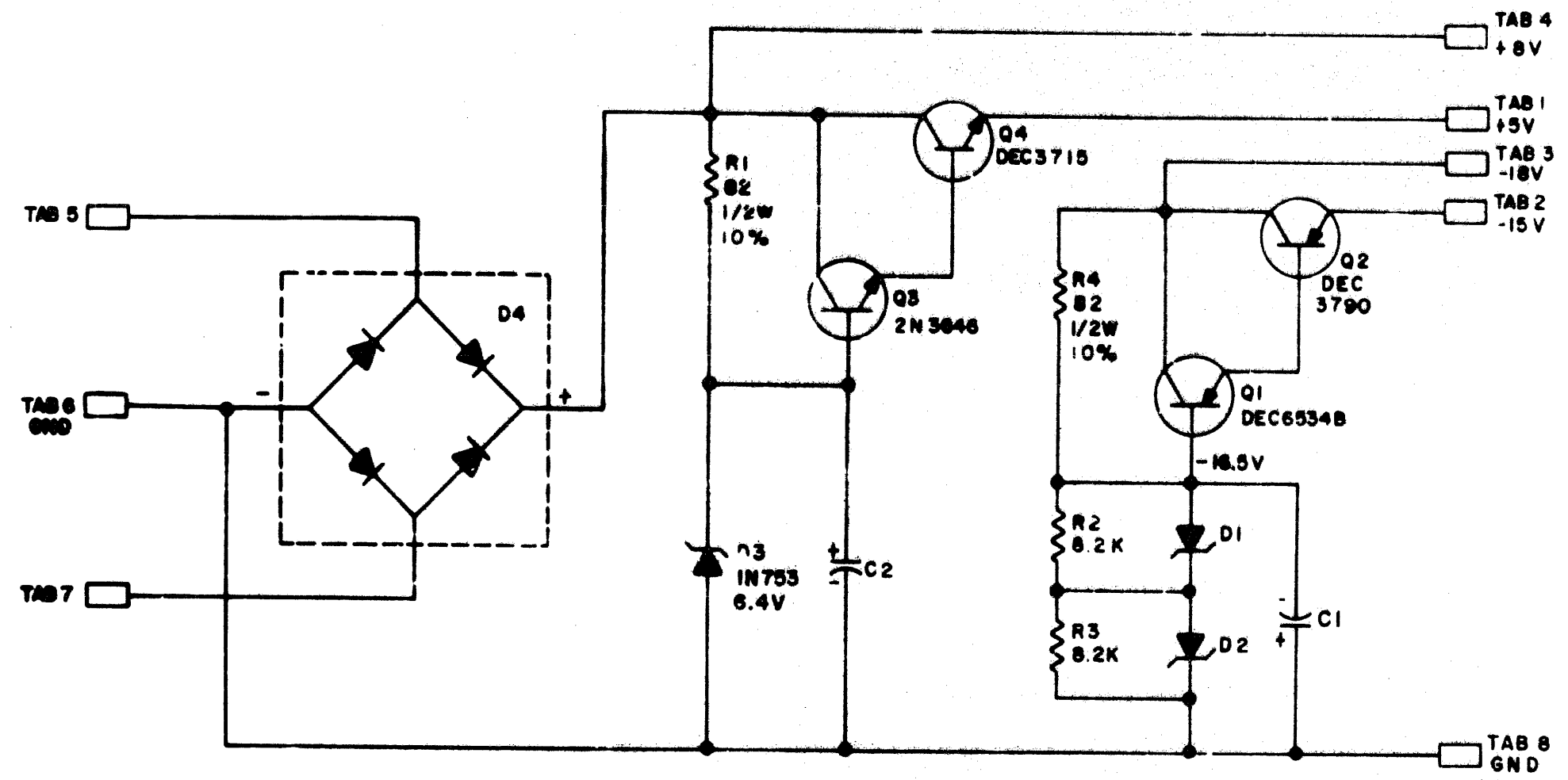
TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	FIA

EQUIPMENT CORPORATION  
 MAYNARD, MASSACHUSETTS

TITLE: 10-2 INPUT NAND GATES MI13.  
 SIZE B CODE CS NUMBER MI13-0-1 REV. C  
 PRINTED CIRCUIT REV D

REV C  
 NUMBER 5408308-0-1  
 SIZE B  
 CODE CS  
 3215

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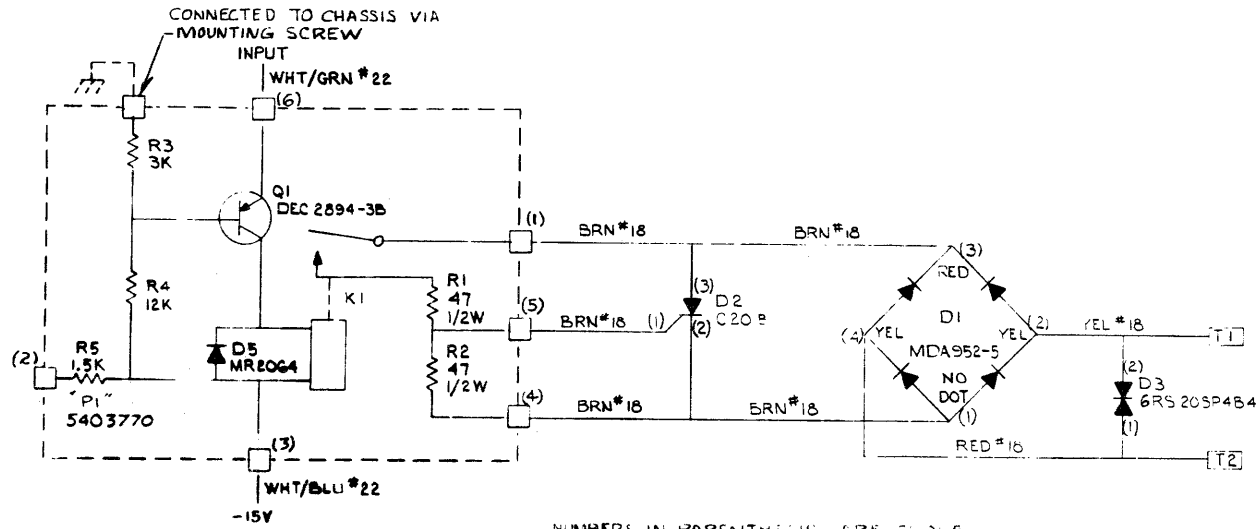


UNLESS OTHERWISE INDICATED:  
 CAPACITORS ARE 0.05MFD 35V 20%  
 DIODES ARE IN756A, 0.2V  
 D4 IS MDA800-3  
 RESISTORS ARE 1/4W 5%  
 TABS ARE AMP 41290

REV	DATE	TRANSISTOR & DIODE CONVERSION CHART		TITLE	
1	10-2-69	DEC	EIA	PCO POWER SUPPLY	
2	10-2-69	DEC	EIA	REGULATOR 5408308	
3	10-2-69	DEC	EIA	SIZE	CODE
4	10-2-69	DEC	EIA	B	CS
5	10-2-69	DEC	EIA	NUMBER	
6	10-2-69	DEC	EIA	5408308-0-1	
7	10-2-69	DEC	EIA	REV	C
8	10-2-69	DEC	EIA	PRINTED CIRCUIT REV	
9	10-2-69	DEC	EIA	D	
10	10-2-69	DEC	EIA		

EQUIPMENT CORPORATION  
 MAYNARD, MASSACHUSETTS

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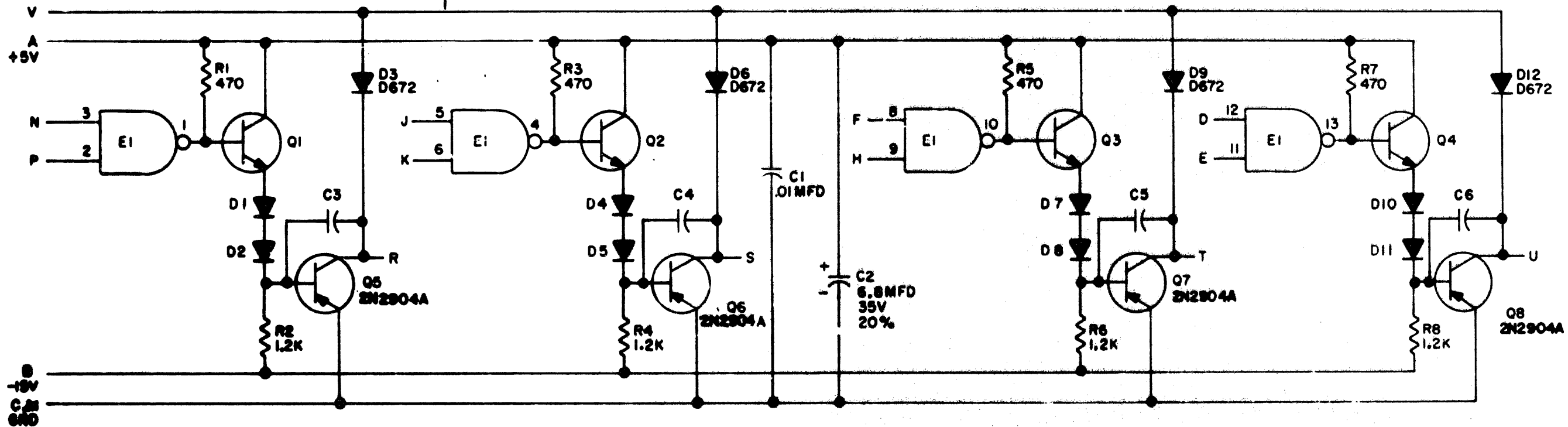


NUMBERS IN PARENTHESES ARE THOSE NOT MARKED ON COMPONENTS AND ARE NOT MARKED ON COMPONENTS.

UNLESS OTHERWISE INDICATED:  
 RESISTORS = 1/4W, 5%  
 T INDICATES MALE AMP FASTON TAB  
 □ ETCH LAND FOR SOLDERING WIRES  
 K1 IS WHEELLOCK 266-2A

QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO
PARTS LIST				
ETCH BOARD REV				
DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
CHK'D	DATE	TITLE SCR DRIVER ASSY		
ENG	DATE			
PROJ. ENG.	DATE			
PROD.	DATE			
NEXT HIGHER ASSY		SIZE CODE	NUMBER	REV.
DEC NO.	EIA NO.	DCS	5408385-0-1	A
SEMICONDUCTOR CONVERSION CHART		SCALE		
CHK	CHANGE NO.	SHEET	OF	

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UNLESS OTHERWISE INDICATED.  
 RESISTORS ARE 1/4W, 10%  
 DIODES ARE D664  
 E1 IS DEC7401N  
 TRANSISTORS ARE DEC3009B  
 PIN 7 ON EACH IC = GND  
 PIN 14 ON EACH IC = +5V  
 CAPACITORS ARE 100pF, 100V, 5%

REV	NO	DATE
C		
B		
A		

DRW. Butler	DATE 6/23/69
CHKD. [Signature]	DATE 7/1/69
ENG. [Signature]	DATE 7/1/69
PROD.	DATE

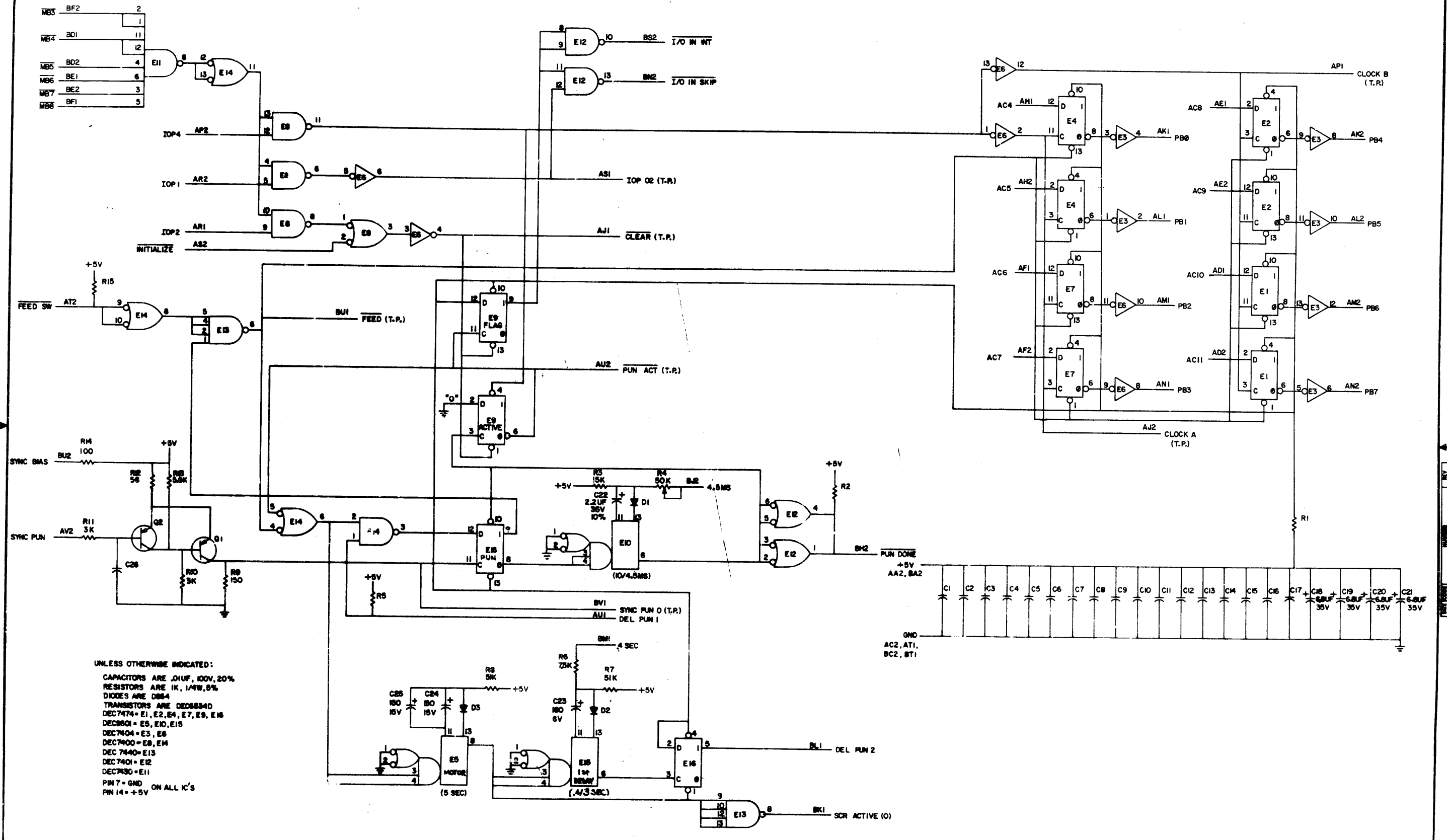
TRANSISTOR & DIODE CONVERSION CHART			
DEC		EIA	
D664	IN3006		
2N2904A	2N2904		
DEC3009B	2N3009		

**DIGITAL EQUIPMENT CORPORATION**  
 MAYNARD, MASSACHUSETTS

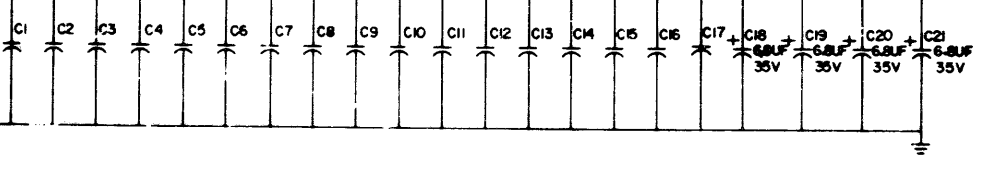
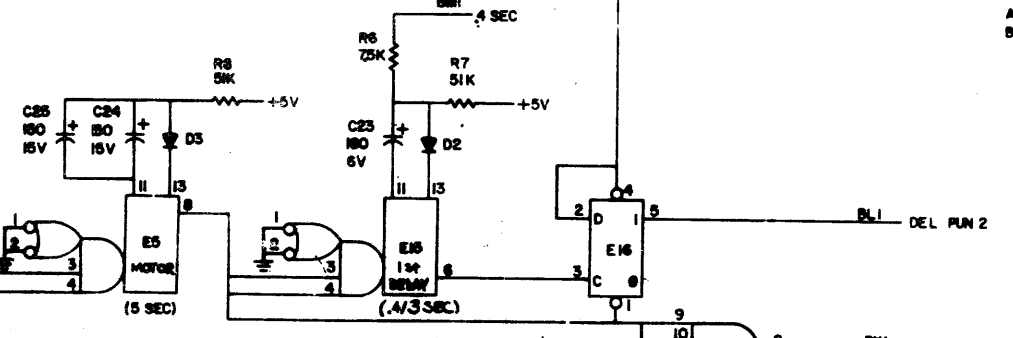
TITLE 4-100MA SOLENOID DRIVER M044			
SIZE B	CODE CS	NUMBER M044-0-1	REV C
PRINTED CIRCUIT REV			

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X 1-0-011W S3 D  
A2M 3003 J15



UNLESS OTHERWISE INDICATED:  
 CAPACITORS ARE .01UF, 100V, 20%  
 RESISTORS ARE 1K, 1/4W, 5%  
 DIODES ARE DBS4  
 TRANSISTORS ARE DEC6834D  
 DEC7474 = E1, E2, E4, E7, E9, E16  
 DEC8801 = E9, E10, E15  
 DEC7404 = E3, E6  
 DEC7400 = E8, E14  
 DEC 7440 = E13  
 DEC7401 = E12  
 DEC7430 = E11  
 PIN 7 = GND ON ALL IC'S  
 PIN 14 = +5V



DEC FORM NO. 100 1/68

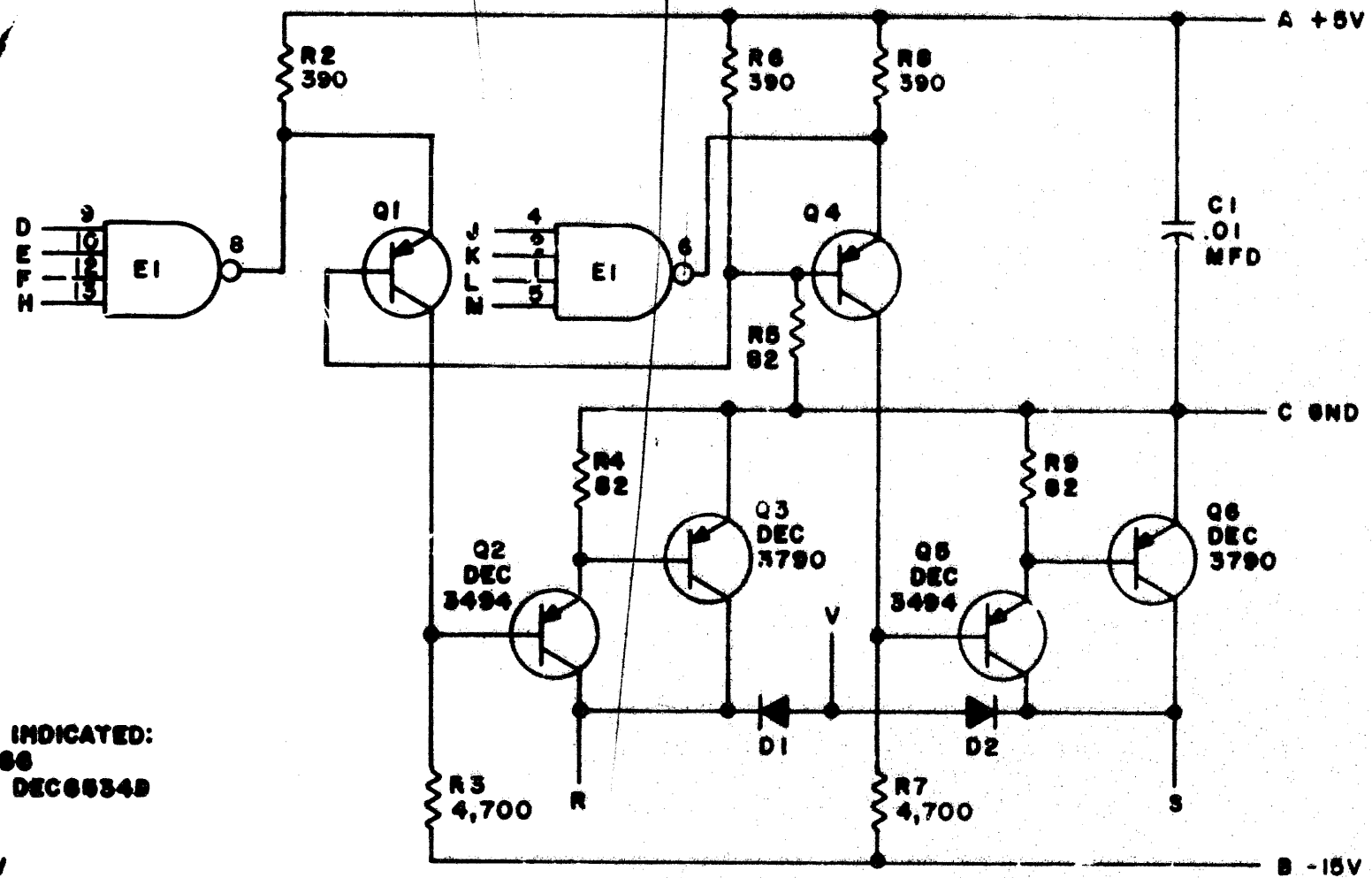
REV	DATE	BY	CHKD
1			

TRANSISTOR & DIODE CONVERSION CHART			
DEC	DAI	DES	DAI

TITLE		PUNCH CONTROL M710	
EQUIPMENT CORPORATION		REV K	
DESIGN	DATE	REV	DATE
D	CS	M710-0-1	
PRINTED CIRCUIT REV.		H	

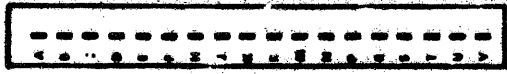
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REV E  
NUMBER M040-0-1  
SIZE CODE B CS  
3215



UNLESS OTHERWISE INDICATED:  
 DIODES ARE MR2066  
 TRANSISTORS ARE DEC3494  
 E1 IS DEC7400N  
 PIN 7 ON IC = GND  
 PIN 14 ON IC = +6V  
 RESISTORS ARE 1/4W, 10%

PARTS LIST A-PL-M040-0-0



REV	E
00001	
00002	

DRN 20. Miller	DATE 5-18-67
CHK'D [Signature]	DATE 7/22/67
PROG [Signature]	DATE [Signature]

TRANSISTOR & DIODE CONVERSION CHART	
DEC	EIA
DEC3494	SAME
DEC3790	2N3790
DEC3494D	MP06534
D882	1N248
MR2066	1N4003

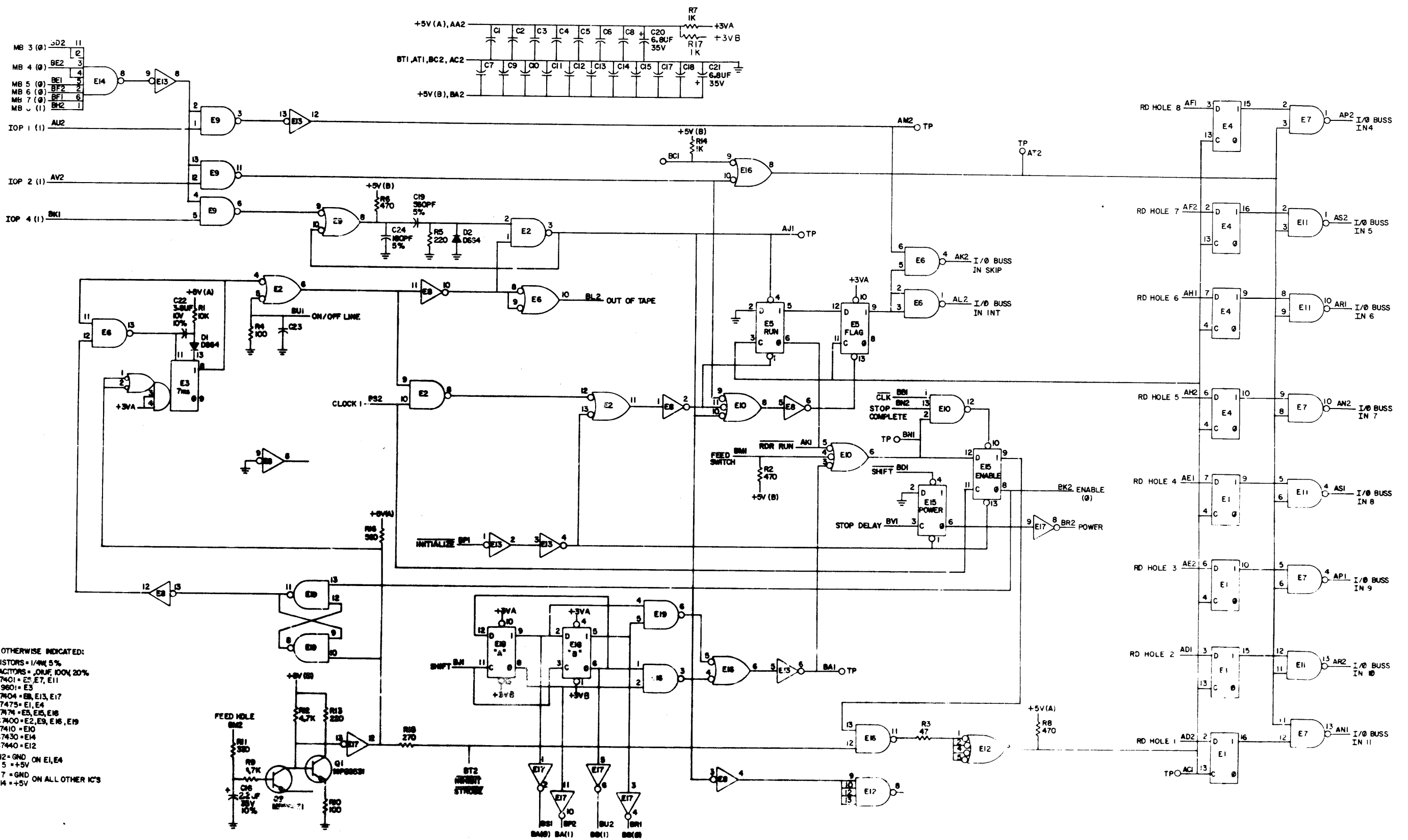
**EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS

TITLE <b>SOLENOID DRIVER M040</b>			
SIZE B	CODE CS	NUMBER M040-0-1	REV E
PRINTED CIRCUIT REV.			E



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Q 1-0-0502 W 30 0  
A 20 0 0002 1/5



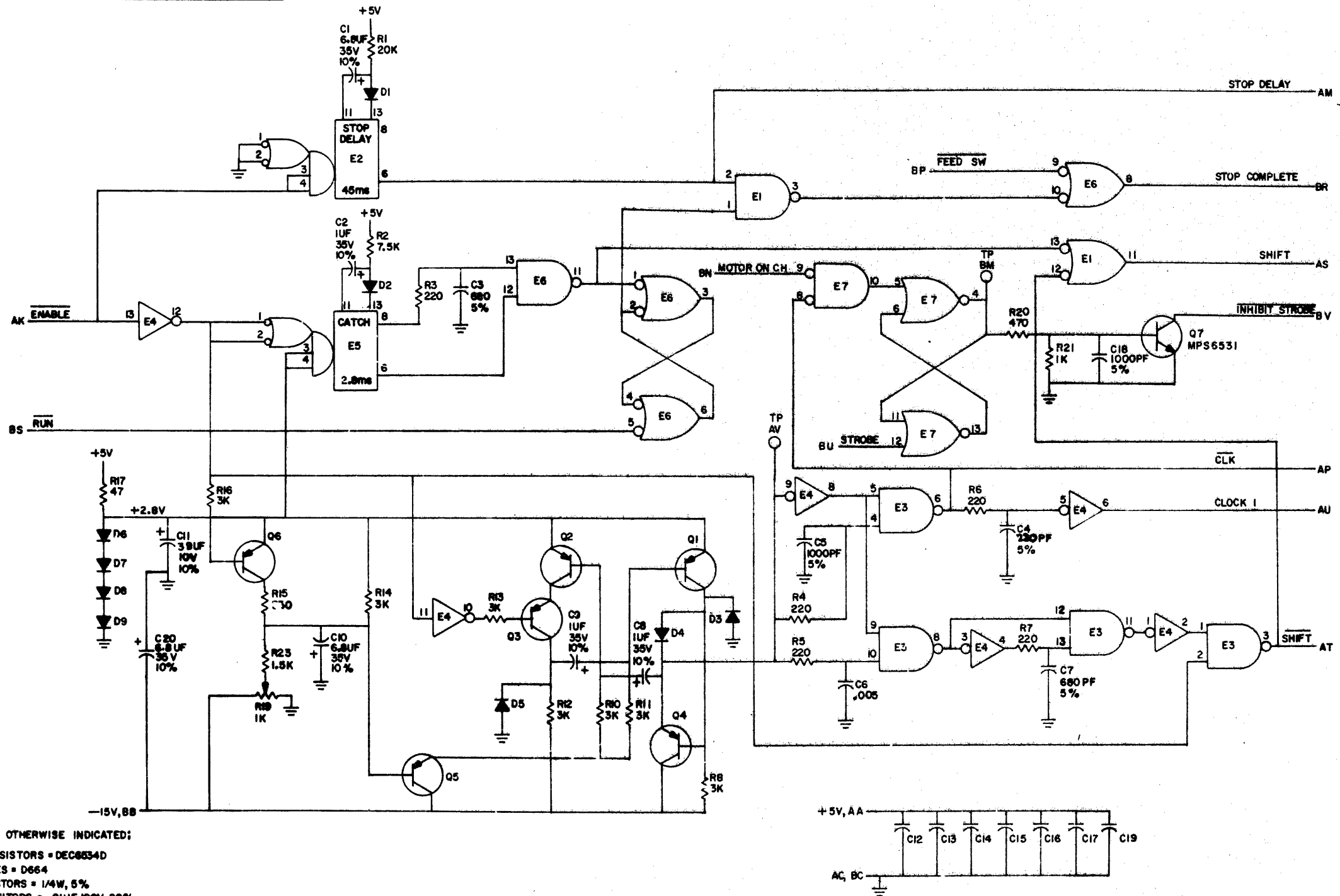
UNLESS OTHERWISE INDICATED:  
 RESISTORS = 1/4W 5%  
 CAPACITORS = .01UF 100V 20%  
 DEC7401 = E5, E7, E11  
 DEC9601 = E3  
 DEC7404 = E8, E13, E17  
 DEC7475 = E1, E4  
 DEC7476 = E5, E15, E16  
 DEC7400 = E2, E9, E16, E19  
 DEC7410 = E10  
 DEC7430 = E14  
 DEC7440 = E12  
 PIN 12 = GND ON E1, E4  
 PIN 5 = +5V  
 PIN 7 = GND ON ALL OTHER IC'S  
 PIN 14 = +5V

DATE	2/2/71
DATE	2-28-71
DATE	3-1-71
DATE	

TRANSISTOR & DIODE CONVERSION CHART			
DEC	SI	DEC	SI
MP9853	MP2853	D654	1N3606

TITLE		READER CONTROL	
SHEET	CODE	NUMBER	REV
D	CS	M7050-0-1	E
EQUIPMENT CORPORATION		PRINTED CIRCUIT REV	

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UNLESS OTHERWISE INDICATED:  
 TRANSISTORS = DEC6834D  
 DIODES = D664  
 RESISTORS = 1/4W, 5%  
 CAPACITORS = .01UF, 100V, 20%  
 E1, E3, E6 = DEC7400  
 E4 = DEC7404  
 E2, E5 = DEC9801  
 PIN 7 = GND  
 PIN 14 = +5V ON ALL IC'S  
 E7 = DEC7402

REV. L  
 NUMBER M715-0-1  
 SIZE CODE C CS

REV.	CHG NO.	REV.	BY	DATE
1	00002	E	K	
2	00006	K		
3	00008	L		
4	00007	L		
5	00008	L		

DRN. M. HALLER	DATE 10/16/67
CHK'D R. SILVERMAN	DATE 11/2/67
ENG. R. G. SOBUE	DATE 11/2/67
PROD.	DATE

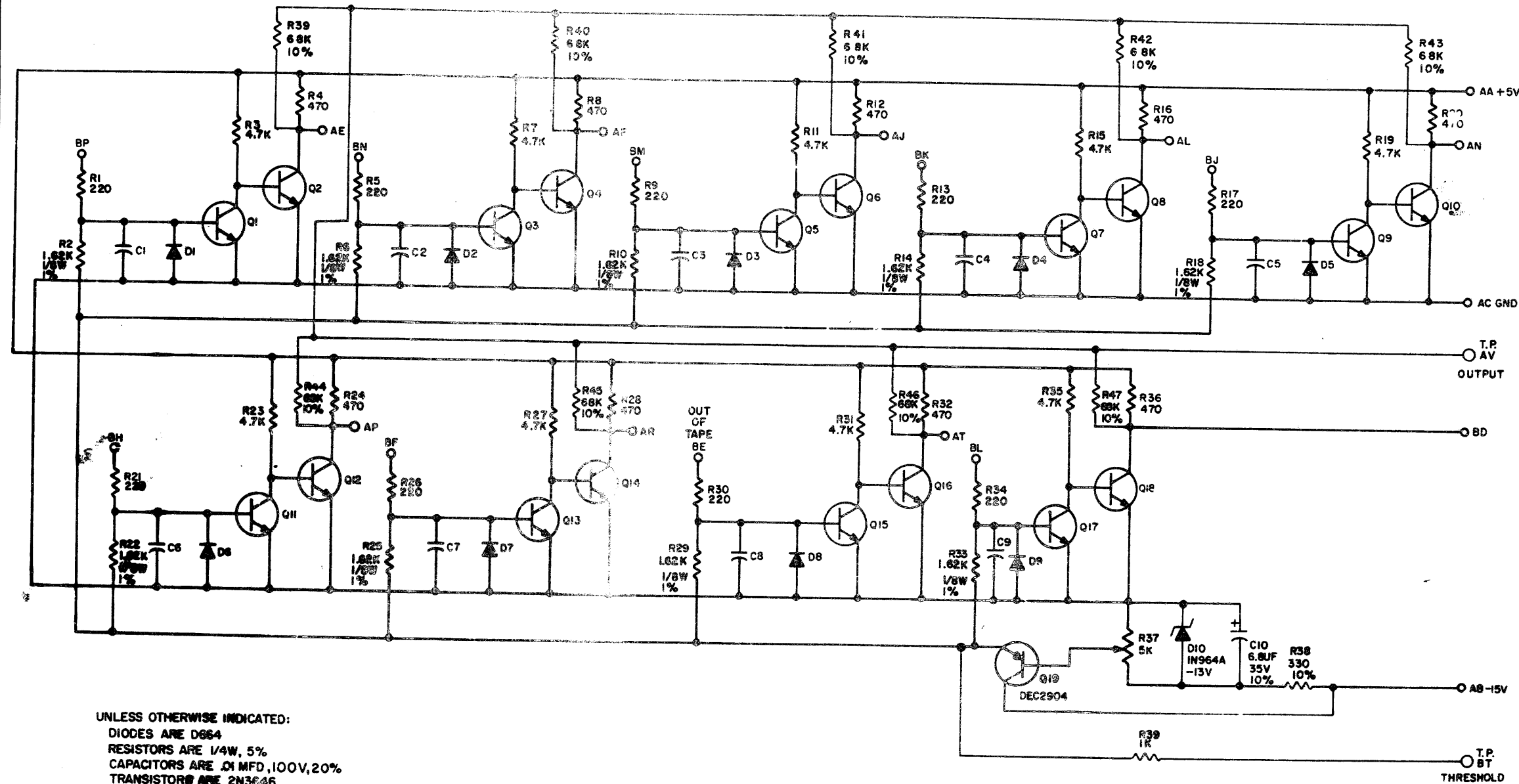
TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA
DEC6834D	MP6834	1N758	SAME
D664	1N2806		
DEC6831	MP6831		

EQUIPMENT CORPORATION		MAYNARD, MASSACHUSETTS	
TITLE		READER CLOCK M715	
SIZE CODE	C CS	NUMBER	M715-0-1
PRINTED CIRCUIT REV.	F	REV.	L

DEC FORM NO. 102

DIST: 314, 434, 435 2  
 4 PINK

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UNLESS OTHERWISE INDICATED:  
 DIODES ARE D664  
 RESISTORS ARE 1/4W, 5%  
 CAPACITORS ARE .01 MFD, 100V, 20%  
 TRANSISTORS ARE 2N3646  
 ○ INDICATES TEST POINT

REV. B  
 NUMBER G918-0-1  
 SIZE CODE C CS

REV. NO.	CHK	CHK NO.	REV.
1		00001	A
2		00002	B

DEC FORM NO. DRC 102

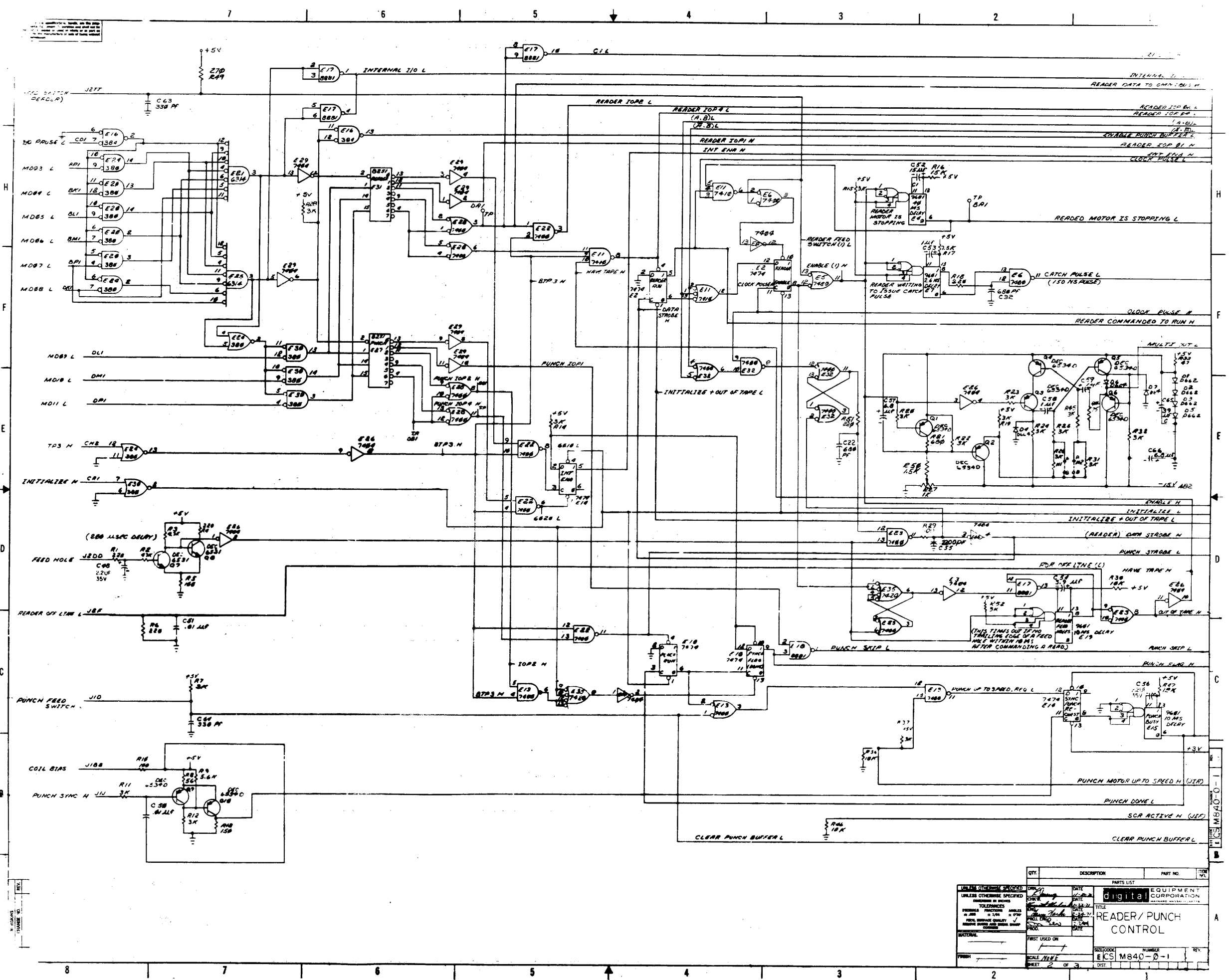
DRN	DATE
REUTLER	4/1/69
CHK'D	DATE
ENG	DATE
PROD	DATE

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA
2N3646	2N3009	IN964A -13V	SAME
D664	1N3806	DEC2904	2N1132



TITLE PHOTO TRANSISTOR AMPLIFIER G918  
 EQUIPMENT CORPORATION  
 MAYNARD, MASSACHUSETTS  
 SIZE C CODE CS NUMBER G918-0-1 REV. B  
 PRINTED CIRCUIT REV. D

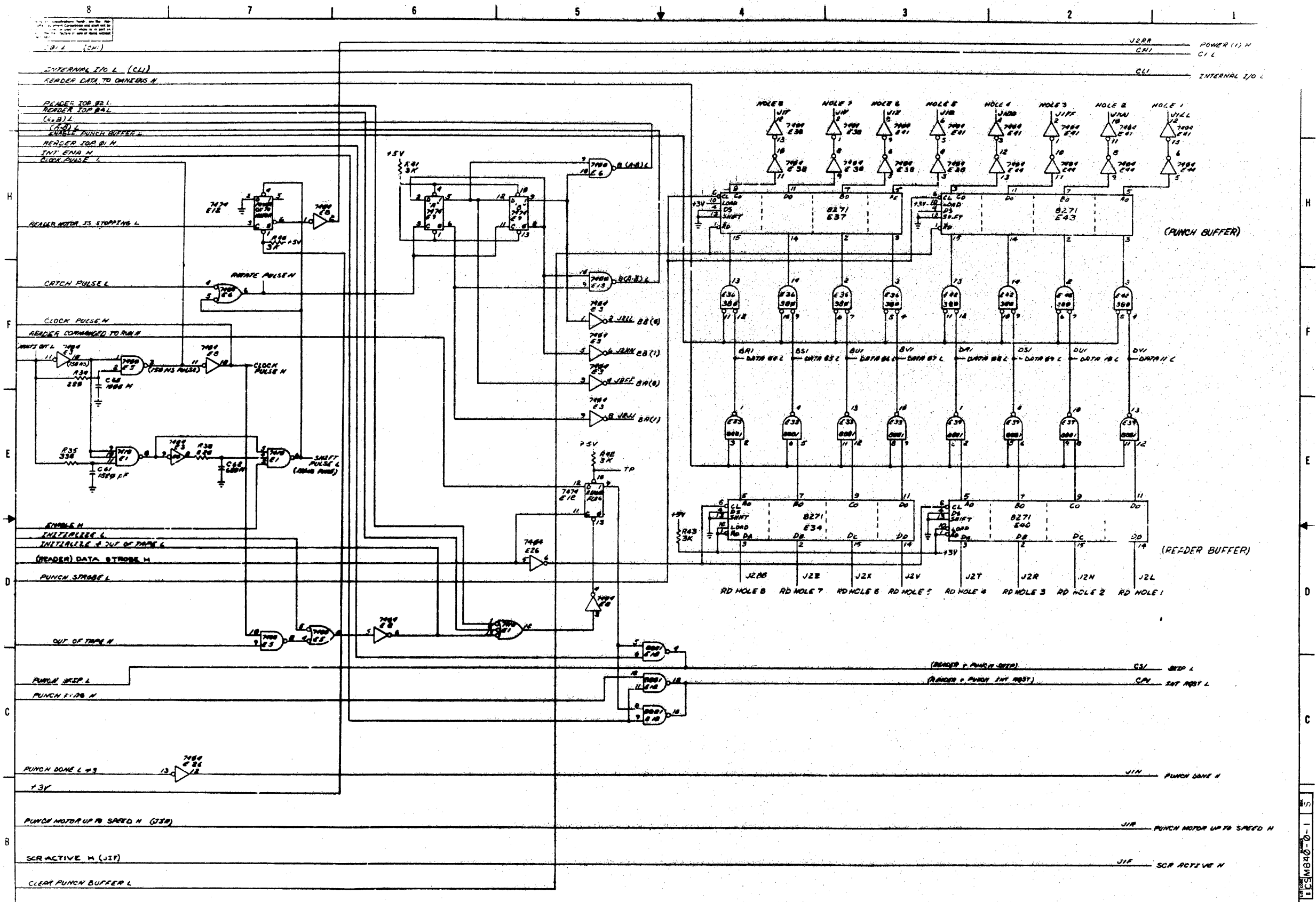




QTY.	DESCRIPTION	PART NO.	REV.
	UNLESS OTHERWISE SPECIFIED		
	TOLERANCES		
	FRACTIONS		
	DECIMALS		
	WIRE GAUGE QUALITY		
	MATERIAL		
	FIRST USED ON		
	SCALE		
	SHEET		

PARTS LIST		EQUIPMENT CORPORATION	
<b>digital</b>			
TITLE: <b>READER/PUNCH CONTROL</b>			
SIZE/SCALE	NUMBER	REV.	
ECS M840-D-1			



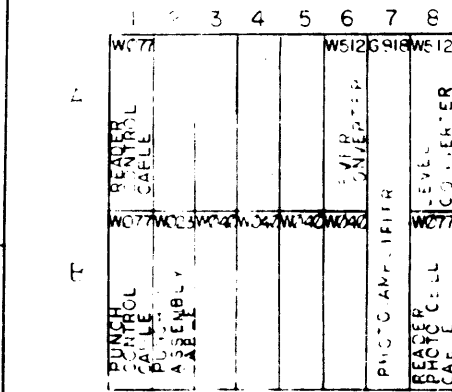
QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	8271 837		
1	8271 843		
1	7400		
1	7404		
1	7401		
1	7402		
1	7403		
1	7404		
1	7405		
1	7406		
1	7407		
1	7408		
1	7409		
1	7410		
1	7411		
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1	7499		
1	7500		

EQUIPMENT CORPORATION  
**READER / PUNCH CONTROL**

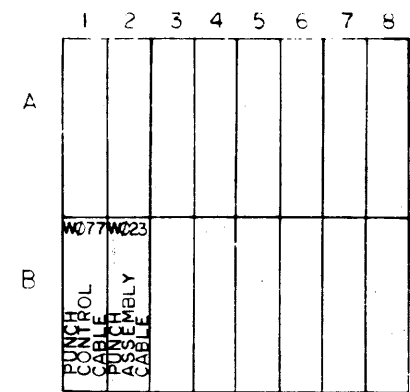
REVISIONS  
 NUMBER  
 ECSI MB40-0-1  
 SHEET 3 OF 3

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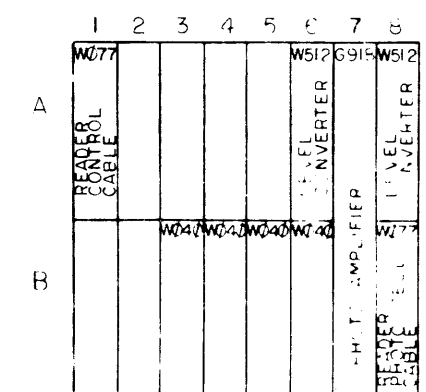
NOTES:  
 1. G918 REVISION MUST BE "B" CIRCUIT SCHEMATIC, ETCHED BOARD OF HIGHER QUALITY.  
 2. SEE SEPARATION.



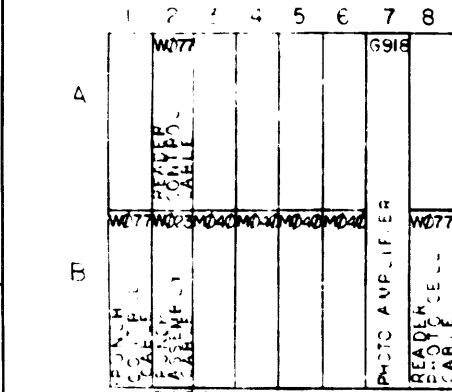
PC04-B-BA-C-CA\*  
 (SEE E-AD-7774-0-2 WITH NOTE 4; PDR, 8/S, 9, K10)



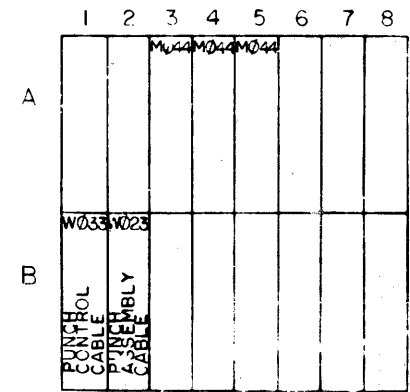
PC04-P-PA\*  
 (SEE E-AD-7006268-0-0 WITH NOTE 4; PDR, 8/S)



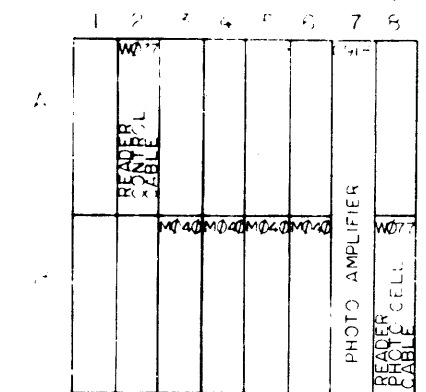
PC04-R  
 (SEE E-AD-7776-0-1-0 WITH NOTE 4; PDR, 8/S)



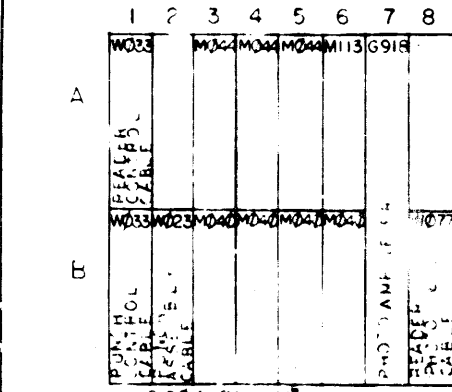
PC04-BH-BC\*  
 (7006268-0; PDR-8/1)



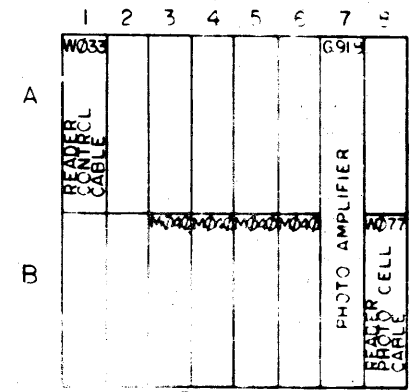
PC04-PL-FM\*  
 (7006268-1; PDR-8/L, 8/E, 8/M, 8/F)



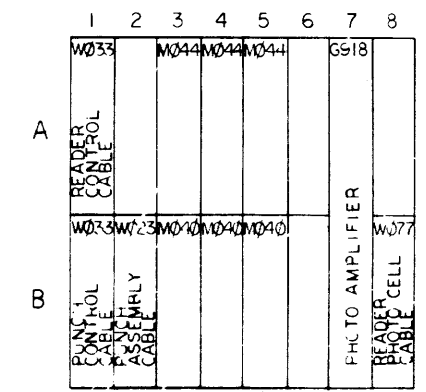
PC04-RF  
 (7006268-0; PDR-8/1)



PC04-BL-FM\*  
 (7006268-1; PDR-8/L, 8/E, 8/M, 8/F)



PC04-RL  
 (7006268-1; PDR-8/L, 8/E, 8/M, 8/F)



PC04-CL-CM\*  
 (7006268-2; K10)

REV	CHARGE NO	REV
1	PC04-00053	C
2	PC04-00055	D
3	PC04-00055	D
4	PC04-00055	D
5	PC04-00055	D
6	PC04-00055	D
7	PC04-00055	D
8	PC04-00055	D

FIRST USED ON OPTION MODEL	QTY	DESCRIPTION	PART NO	ITEM NO
PC04 A				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRN	DATE	DIGITAL EQUIPMENT CORPORATION	
TOLERANCES	CHK'D	DATE	UNIVERSITY MICROFILMS	
DECIMALS	ANGLES	ENG	TITLE	
XXX 006	0 30	GREENBERG	MODULE IDENTIFICATION	
XX 01		PROJ ENG	LIST PC04	
X 1		PROD		
REMOVE BURRS AND BREAK SHARP CORNERS TO REFLECT QUALITY	PROD	DATE		
	MANUFACTURE	6-2-69		
MATERIAL	NEXT HIGHER ASSY	SIZE CODE	NUMBER	REV
	A-M-L-PC04	DMU	PC04-0-3	D
FINISH	SCALE	SHEET	OF	

DIGITAL EQUIPMENT CORPORATION  
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY: MARCOTTE  
DATE: 6/5/69  
ENG: R. Carvelli  
DATE: 6/6/69  
CHECKED: R. Carvelli  
DATE: 6/5/69  
SECTION: 1  
ISSUED SECT.: 1

ITEM NO	DWG NO	PART NO.	DESCRIPTION	PC04-B-0	PC04-BA-0	PC04-C-0	PC04-PA-0	PC04-R-0	PC04-BB-0	PC04-BC-0	PC04-RB-0
1	G918	*	PHOTO AMPLIFIER	1	1	1	-	1	1	1	1
2	M040		NEGATIVE INPUT CONVERTER	1	1	1	-	1	-	-	-
3	M040		SOLENOID DRIVER	4	4	4	-	4	-	-	-
4	M512		POSITIVE LEVEL CONVERTER	2	2	2	-	2	-	-	-
5	M040		SOLENOID DRIVER (+ 8I)	-	-	-	-	-	4	4	4
6	M044		SOLENOID DRIVER (+8L)	-	-	-	-	-	-	-	-
	M113		I0-2 INPUT NAND GATE	-	-	-	-	-	-	-	-

\* NOTE: G918 MUST BE D BOARD REV OR HIGHER

TITLE: MODULE UTILIZATION  
ASSY NO. D-MU-PC04-0-3  
SHEET 1 OF 2  
SIZE CODE: A PL  
NUMBER: EC04-0-3  
REV ECO NO: PC04-00055  
D

DEC FORM NO  
ORA 110

DIGITAL EQUIPMENT CORPORATION  
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY: MARCOTTE  
DATE: 6/5/69  
ENG: R. Carvelli  
DATE: 6/6/69  
CHECKED: R. Carvelli  
DATE: 6/5/69  
SECTION: 1  
ISSUED SECT.: 1

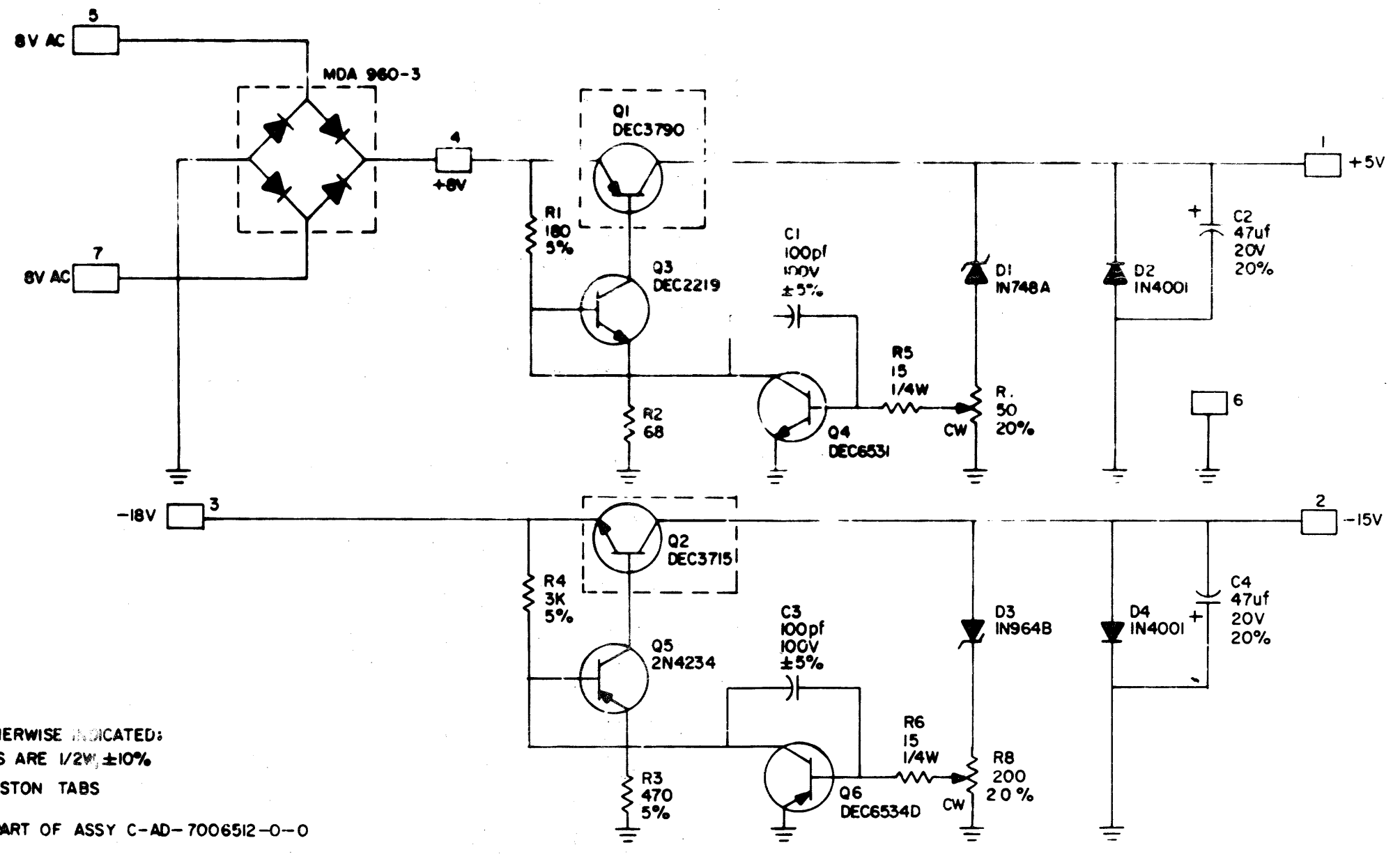
ITEM NO	DWG NO	PART NO.	DESCRIPTION	PC04-B-0	PC04-BA-0	PC04-C-0	PC04-PA-0	PC04-R-0	PC04-BB-0	PC04-BC-0	PC04-RB-0
1	G918	*	PHOTO AMPLIFIER	1	1	1	-	1	1	1	1
2	M040		NEGATIVE INPUT CONVERTER	-	-	-	-	-	-	-	-
3	M040		SOLENOID DRIVER (-)	4	4	4	-	4	-	-	-
4	M512		POSITIVE LEVEL CONVERTER	2	2	2	-	2	-	-	-
5	M040		SOLENOID DRIVER (+)	-	-	-	-	-	4	4	4
6	M044		SOLENOID DRIVER (+ 8L)	3	3	3	-	3	-	-	-
	M113		I0-2 INPUT NAND GATE	1	1	1	-	1	-	-	-

\* NOTE: G918 MUST BE D REV BOARD OR HIGHER

TITLE: MODULE UTILIZATION  
ASSY NO. D-MU-PC04-0-3  
SHEET 2 OF 2  
SIZE CODE: A PL  
NUMBER: EC04-0-3  
REV ECO NO: PC04-00055  
D



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UNLESS OTHERWISE INDICATED:  
 RESISTORS ARE 1/2W, ±10%  
 □ = FASTON TABS  
 □ = PART OF ASSY C-AD-7006512-0-0

REVISIONS CHK'G NO REV	DRN	NAME	MOORE	DATE	7/8/70	TRANSISTOR & DIODE CONVERSION CHART			TITLE			PCO REGULATOR						
	CHK'D			DATE	7/9/70	DEC	EIA		DEC	EIA	REV	B	CS	NUMBER	5408918-0-1	REV	A	
	ENG			DATE	10/12/70	DEC3790-2	2N3790		DEC6531	MP6531								
	PROD			DATE		DEC2219	2N2219		IN748A	SAME								
						DEC3715	2N3715	IN964B	SAME									
						2N4234	2N4234	IN4001	SAME									
						DEC6534D	MP6534											

**DIGITAL EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS

**ENGINEERING SPECIFICATION**

DATE 11/11/69

TITLE		PC#4 Engineering Specification	
REV	DESCRIPTION	CHG NO	DATE
A		0005	3-17-74

General Information:

The PC#4 comes in eight (8) configurations. They are the PC#4P, PL (basic punch), PC#4R, RB (basic reader), PC#4B, BB, BL, (punch and reader), and PC#4C (punch, SCR, and reader). The 50 cycle variations are PC#4PA, PM; PC#4BA, BC, and PC#4CA with no variation in PC#4R and RB. Table 1-1 gives the block schematic references, UML, interface cables, and the applicable computers.

Logic Levels: Negative Logic Systems

Logic 1 is -3.2v to -3.9 volts  
Logic 0 is 0v to -0.3 volts

Logic Levels: Positive Logic Systems

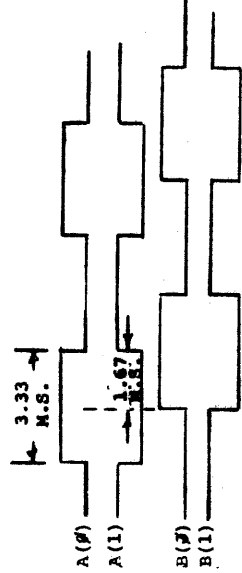
Logic 1 is >+2.4v  
Logic 0 <+0.4v

Reader Signals:

Reference drawing BS-D-PC#4-0-2

(1) A(0), A(1), B(0), and B(1) are the signals used to drive the stepping motors via the four solenoid drivers.

The timing chart and graph for these signals would be:



EM9  
DEC FORM NO  
DRA 108A

APPD BY *John S. Baker*  
REV A  
NUMBER PC#4-0-4  
SIZE CODE A  
SHEET 1 OF 7

**PC04 Engineering Specification**

- (5) The eight data holes also require a 10 msec. level to activate the punches.
- (6) Out-of-tape signal is generated from a micro-switch on the punch. It is at ground when the punch is out-of-tape.
- (7) Punch feed switch is used to manually feed tape through the punch.
- (8) The -3 volt or +5v supply is a bias on the punch sync coil.
- (9) The punch on/off power switch is used in the options not using the SCR driver. It simply supplies 115 volts to the punch motor.

Power Supply

- (1) Regulated +5 volts  $\pm$ .25 volts
- (2) Regulated -15 volts  $\pm$ 1.0 volt
- (3) -36 volts  $\pm$ .4 volts

Power Requirements

Unit will run at 50 or 60 cycles, 115 volts  $\pm$ 10%. 2.5 AMPS run 4 AMPS surge

Reader

- (a) Temperature
  - (1) 55° - 110°F operating, 10° - 150°F non-operating
- (b) Humidity
  - (1) 20% - 95% w/o condensation operating; 5% - 95% w/o condensation non-operating.
- (c) Speed
  - (1) 300 - 310 characters/second full speed.
  - (2) 20 - 26 character/second single character rate.
- (d) Type of tape
  - (1) non-oil (less than 12% transmissivity)
- (e) Taps Life: Acceleration de-accelerate type operation = 30,000 cycles.

DEC FORM NO  
DRA 108A

SIZE CODE A  
REV A  
NUMBER PC04-0-4  
SHEET 3 OF 7

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**PC#4 Engineering Specification**

- (2) Power (1) serves the function of supplying only half current to the stepping motor when the motor is stopped. This signal is 0 volts when the motor is stopped and -3 volts when the motor is active for negative logic systems and >+2.0 volts when motor is active and <+0.8 v when the motor is stopped for positive logic systems.
- (3) The reader feed switch is simply an off line means of moving tape through the reader. A ground level performs this function.
- (4) The reader on/off line switch allows the operator to disable the unit from reading by putting the switch in the off-line position.
- (5) The reader on/off line switch is open whenever the reader is off line, and is >2.4V when the reader is on line.

Data Output Lines:

Negative Systems	Hole	No Hole
Positive Systems	-3 volts	0 volts
	+2.4 volts	0 volts

Punch Signals:

Refer to drawing BS-D-PC#4-0-2

- (1) The interface signal used to turn on the punch motor with an SCR driver option is Gnd when active and open or -3v when inactive.
- (2) The -36 volt is supplied to the solenoid coils on the punch motor and also to the solenoid drivers at the external control.
- (3) Punch sync is the signal generated from the sync timing wheel on the punch. Equally spaced (in time) positive and negative pulses (one each) for each shaft revolution is generated on this line.
- (4) Forward tape and punch feed hole: A ground level for 10 msec.  $\pm$ 10% will punch feed hole and then advance the tape forward in preparation for another cycle for all configurations except PC#4PL and BL when the solenoid drivers are activated by a +2.0v signal.

DEC FORM NO  
DRA 108A

SIZE CODE A  
REV A  
NUMBER PC04-0-4  
SHEET 2 OF 7

**PC#4 Engineering Specification**

- (a) Temperature
  - (1) 55° - 110°F operating; 10° - 150°F non-operating
- (b) Humidity
  - (1) 20% - 95% w/o condensation - operating
  - (2) 5% - 95% w/o condensation - non-operating
- (c) Tension of tape supply
  - (1) Not to exceed 6 ounces
- (d) Speed
  - (1) 50 characters/second  $\pm$ 5%

Margins

+5v is +5v  $\pm$ .5v  
-15v is -15v  $\pm$ 20%  
-30v is -36v  $\pm$ 10%

DEC FORM NO  
DRA 108A

SIZE CODE A  
REV A  
NUMBER PC04-0-4  
SHEET 4 OF 7

CONTINUATION SHEET					
PC#4 Engineering Specification					
CONFIGURATION	REFERENCE BLOCK SCHEMATICS	PUNCH MODULES	INTERFACE CABLES	READER MODULES	APPLICABLE COMPUTERS
PC#4P	D/BS/PC#4-0-2 Page 1 of 3	None	1-W077A	N/A	PDP8; PDP8/S; PDP8/I
PC#4PL	D/BS/PC#4-0-2 Page 3 of 3	3-M044	1-W033A	N/A	PDP8/L; PDP8E
PC#4R	D/BS/PC#4-0-2 Page 1 of 3	N/A	1-W077A	1-G918 4-W040 2-W512	PDP8; PDP8/S
PC#4RB	D/BS/PC#4-0-2 Pages 2 and 3 of 3	N/A	1-W077A	1-G918 4-W040	PDP8/I; PDP8/L PDP8/E
PC#4B	D/BS/PC#4-0-2 Page 1 of 3	None	2-W077A	1-G918 4-W040 2-W512	PDP8; PDP8/S
PC#4BB	D/BS/PC#4-0-2 Page 2 of 3	None	2-W077A	1-G918 4-W040	PDP8/I
PC#4BL	D/BS/PC#4-0-2 Page 3 of 3	3-M044	2-W033C	1-G918 4-W040	PDP8/L PDP8/E
PC#4C	D/BS/PC#4-0-2 Page 1 of 3	None	2-W077A	1-G918 4-W040 2-W512	PDP9; PDP1#

DEC FORM NO DRA 108A

CONTINUATION SHEET					
PC#4 Engineering Specification - Test Procedure for Reader					
<p>B. -15 volts on A#8B and B#8B (<math>\pm 1</math> volts).</p> <p>C. -30 volts on B#6V and B#2D (-32 to -40 volts).</p> <p>3. Shut power off and insert modules for PC#4.</p> <p>4. Apply power and make same check as in 2.</p> <p>5. Put cap. (6.8uf, 10-5306) between pins A#3A (+) and A#3C (-) and between pins B#3C (+) and B#3B (-).</p>					

DEC FORM NO 16-1022  
DRA 108

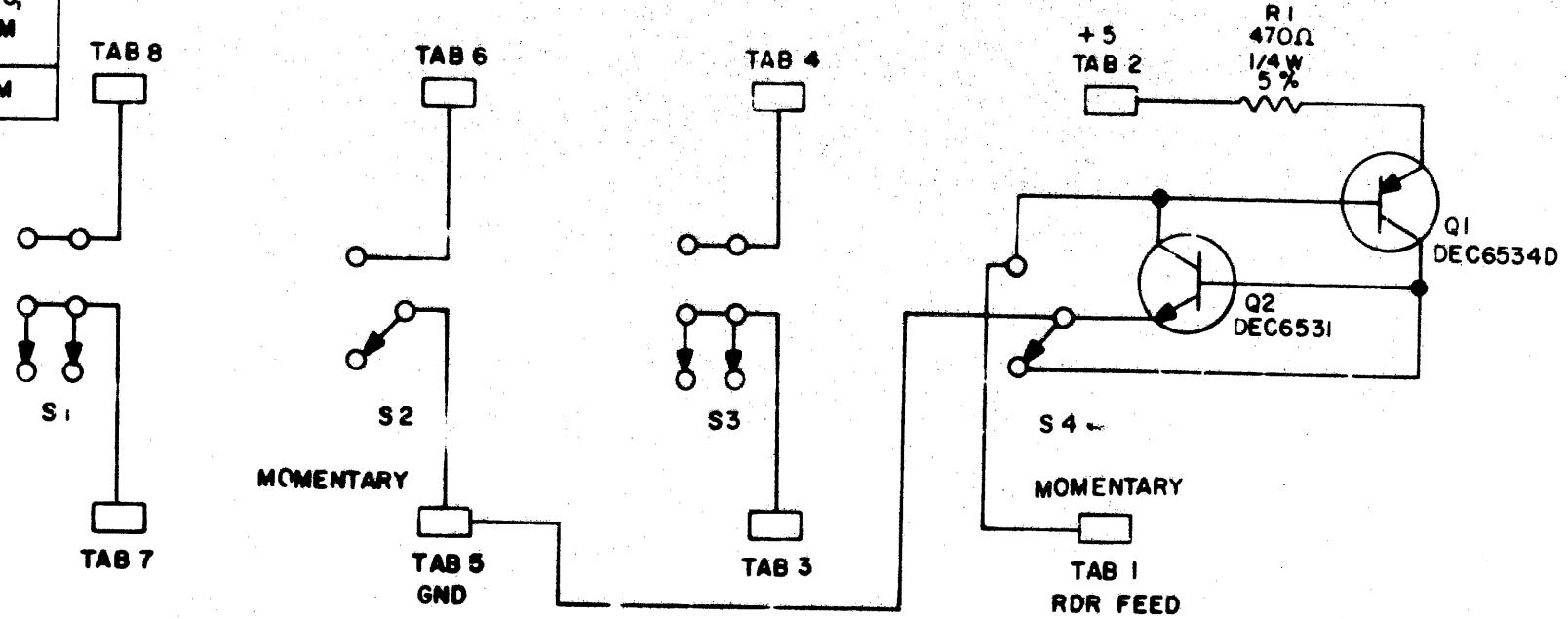
CONTINUATION SHEET					
PC#4 Engineering Specification - Test Procedure for reader					
<p>1. Do not apply power until the following checks are made.</p> <p>a. Logic block empty.</p> <p>b. A#1A, A#2A, A#1B, A#2B, B#1A, and B#2A are bare (no wiring or bussing).</p> <p>c. B#1B and B#2B should be bussed together without any wires on them except for the PC#4C configuration when a white/green wire will be on B#1B.</p> <p>d. Remove reader lamp.</p> <p>e. Check caps for proper polarity in wiring.</p> <p>f. Put ohmmeter on X100 scale and check regulator board tabs 1 thru 5 and 7 for lack of short to ground. Tabs 6 and 8 should indicate a short to ground.</p> <p>g. Check fuses for proper rating. Also, should be slo/b.o.</p> <p>h. Check for continuity between reader lamp ground slot and chassis ground.</p> <p>i. Check the following wires for proper connection.</p>					
Color	Location	Color	Location		
+black (str)	B#6C	*wh/blue	A#7B		
#wh/black (str)	B#7C	*wh/green	B#1B		
#brown (str)	B#2B	#brown (solid)	B#3R, S		
#yellow (str)	A#1V	#orange (solid)	B#4R, S		
#wh/yellow (str)	A#6F	#yellow (solid)	B#5R, S		
+white (str)	B#1U	#violet (solid)	B#6R, S		
grey/red (str)	A#8A	+punch configurations			
grey/yellow (str)	A#6B	*only on PC#4C configurations			
blue (str)	B#6V	#reader configurations			
<p>j. Put reader lamp back in position making sure that the tension on the lamp is sufficient for good contact.</p> <p>2. Apply AC power to the unit and check.</p> <p>a. +5 volts on A#6F and B#8A (+5 volts <math>\pm .25</math> volts).</p>					

DEC FORM NO DRA 108A

CONTINUATION SHEET					
PC#4 Engineering Specification - Test Procedure for Reader					
<p>DEC FORM NO 16-1022 DRA 108</p>					

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PART NUMBER	SWITCHES INSTALLED	USAGE
5408310-1	S2	PC05-P-PA
5408310-3	S2, S3, S4	PC04-C-CA PC05-C-CA
5408310-4	S1, S2, S3, S4	PC04-B-BA BB, BC, BL, BM
5408310-5	S2, S4	PC04-CL-CM



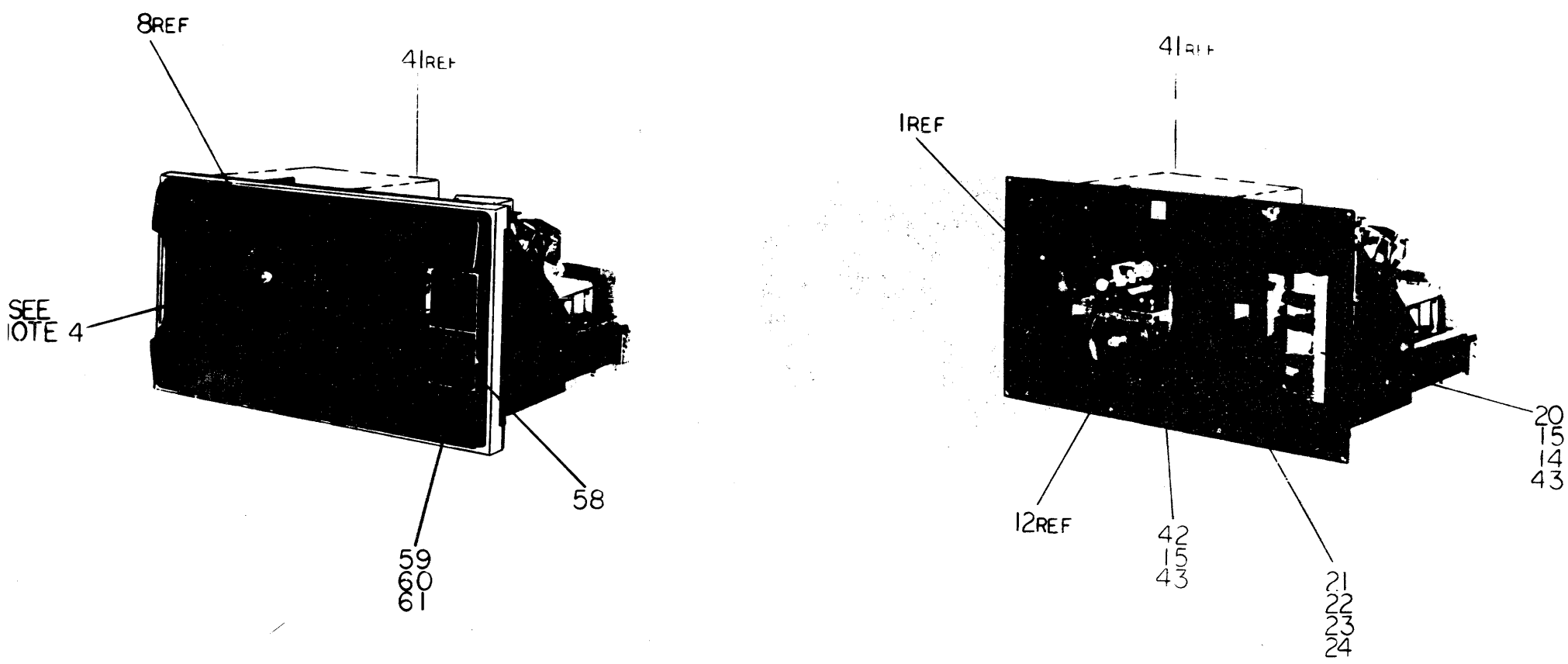
UNLESS OTHERWISE INDICATED:  
 S1, S3 ARE ROCKER # 1205641  
 S2, S4 ARE ROCKER # 1205375  
 TABS ARE FASTON TAB 41290 AMP

REVISIONS CHK CHG NO REV 1 1 1 2 1 1 3 1 1 4 1 1 5 1 1 6 1 1 7 1 1 8 1 1 9 1 1 10 1 1	DGN <i>M. Mansfield</i> DATE 4-1-68	TRANSISTOR & DIODE CONVERSION CHART DEC    EIA    DEC    EIA DEC6531    MP2024 DEC6534D    MP2024				TITLE PCC SWITCH BOARD 5408310 S. F. CODE NUMBER B CS 5408310-0-1 F PRINTED CIRCUIT REV D
	CHM'D <i>M. Mansfield</i> DATE 4-9-68	EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS				
	DTD <i>M. Mansfield</i> DATE 5/12/68					
	PRD <i>M. Mansfield</i> DATE 5/12/68					

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LEGEND	
MODEL	VARIATION
	CY COMPOSITION
PCZ4 B, BB, & BI	60 READER & PUNCH
PCZ4 BA, BC, BM	50 READER & PUNCH
PCZ4 C	50 READER, PUNCH & SCR
PCZ4 CA	50 READER, PUNCH & SCR
PCZ4 P, & PL	60 PUNCH
PCZ4 PA, & PV	50 PUNCH
PCZ4 R & RB	50 READER

- NOTES:
1. WIRING OF SWITCHES VARIES DEPENDING ON UNIT MODEL BEING BUILT. FOR SWITCH CONFIGURATION, FOR WIRING PURPOSES SEE: DETAIL "A" FOR MODEL B, P, & PL & DETAIL "B" FOR MODEL BA, BC, BM & DETAIL "C" FOR MODEL C, CA, & DETAIL "D" FOR MODEL PA, & PV. CY & CO CY HAVE NO EFFECT.
  2. IF THE SCR DRIVER UNIT IS USED, THIS WIRE WILL CONNECT TO SCR DRIVER T1, NOT T5.6. FOR CORRECT WIRING WHEN UNIT IS USED, SEE SCR DRIVER WIRE LIST (SHEET 3).
  3. REMOVE CLAMP FROM CHASSIS, PLACE CABLE IN POSITION, THEN REINSTALL CLAMP IN POSITION OVER CABLE.
  4. COVER ASSY TO BE ATTACHED TO CHASSIS ASSY AFTER ALL OTHER INSTALLATIONS ARE COMPLETE. TO DO SO, READER KNOB MUST BE REMOVED, COVER INSTALLED, THEN KNOB REPLACED ON READER SHAFT.
  5. IN MODELS P AND PA THIS WIRE WILL BE TIED BACK AND WHITE SHRINKABLE TUBING (ITEM 45) REQD.
  6. ON ALL MODELS ALL UNUSED WIRES SHOULD BE CONNECTED TO THEIR APPROPRIATE TABS.
  7. SHALL HOLD DOWN FAR TO BE INSTALLED BEFORE SHIPPING MACHINE.



8	BECKNEY	10/1/67
7	ALLEN	10/1/67
6	ALLEN	10/1/67
5	WILLIAMS	10/1/67
4	WILLIAMS	10/1/67
3	WILLIAMS	10/1/67
2	WILLIAMS	10/1/67
1	WILLIAMS	10/1/67

QTY	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
UNLESS OTHERWISE SPECIFIED		DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
UNLESS OTHERWISE SPECIFIED		TITLE: PCZ4 READER AND PUNCH	
DIMENSIONS IN INCHES		SIZE CODE: DUA	
TOLERANCES		NUMBER: PCZ4-0-0	
DECIMALS FRACTIONS ANGLES		REV.:	
.005 .005 .005		F	
FINISH		SCALE: 1" = 1"	
SHEET 1 OF 1		DST	

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WF  
WG  
WH  
WI  
WJ  
WK  
WL  
WM  
WN  
WO  
WP  
WQ  
WR  
WS  
WT  
WU  
WV  
WW  
WX  
WY  
WZ  
XA  
XB  
XC  
XD  
XE  
XF  
XG  
XH  
XI  
XJ  
XK  
XL  
XM  
XN  
XO  
XP  
XQ  
XR  
XS  
XT  
XU  
XV  
XW  
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XY  
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YA  
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ZL  
ZM  
ZN  
ZO  
ZP  
ZQ  
ZR  
ZS  
ZT  
ZU  
ZV  
ZW  
ZX  
ZY  
ZZ

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SEE NOTE 7

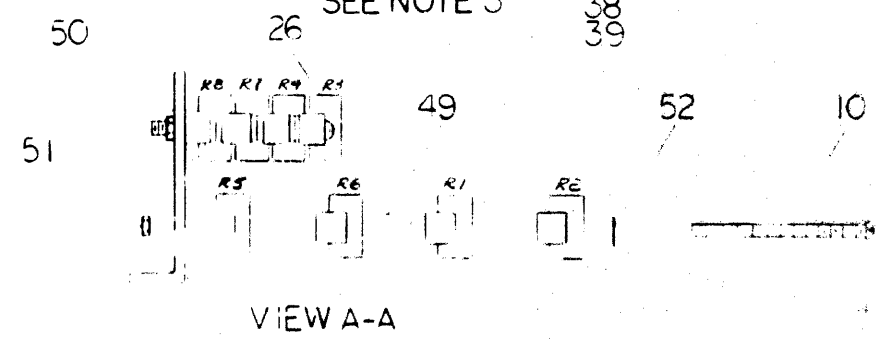
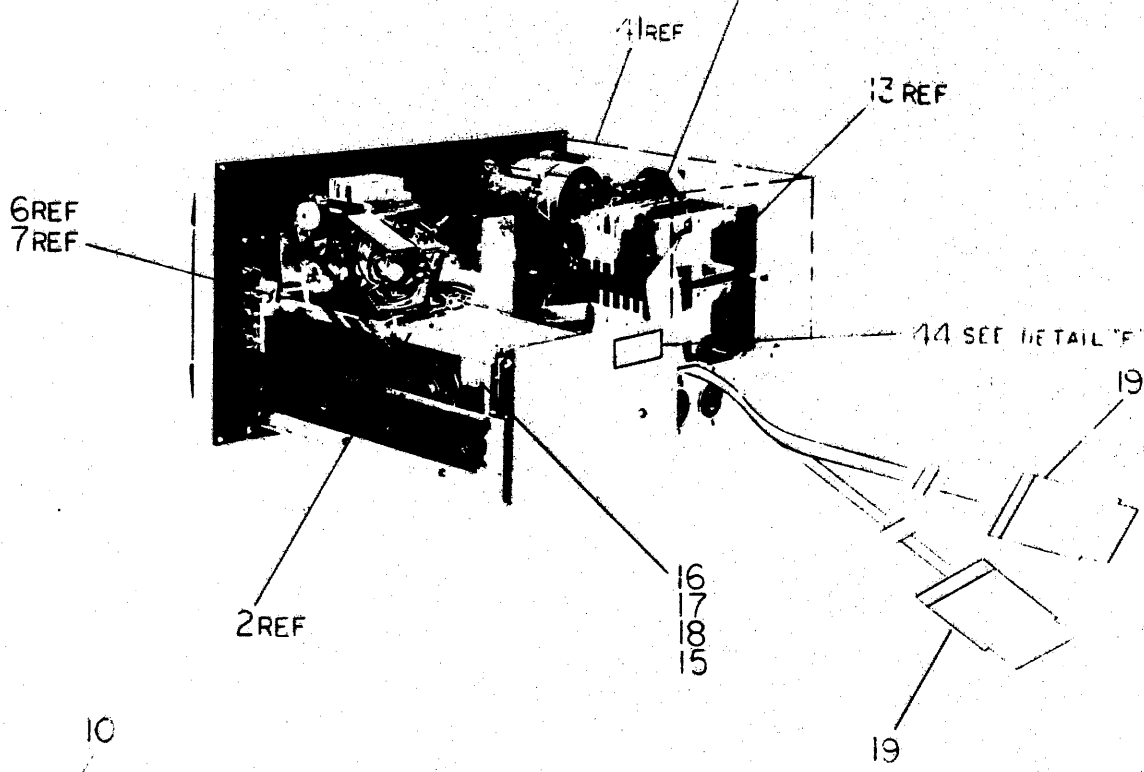
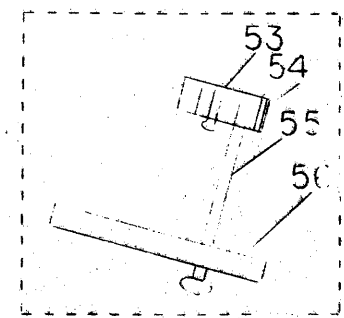
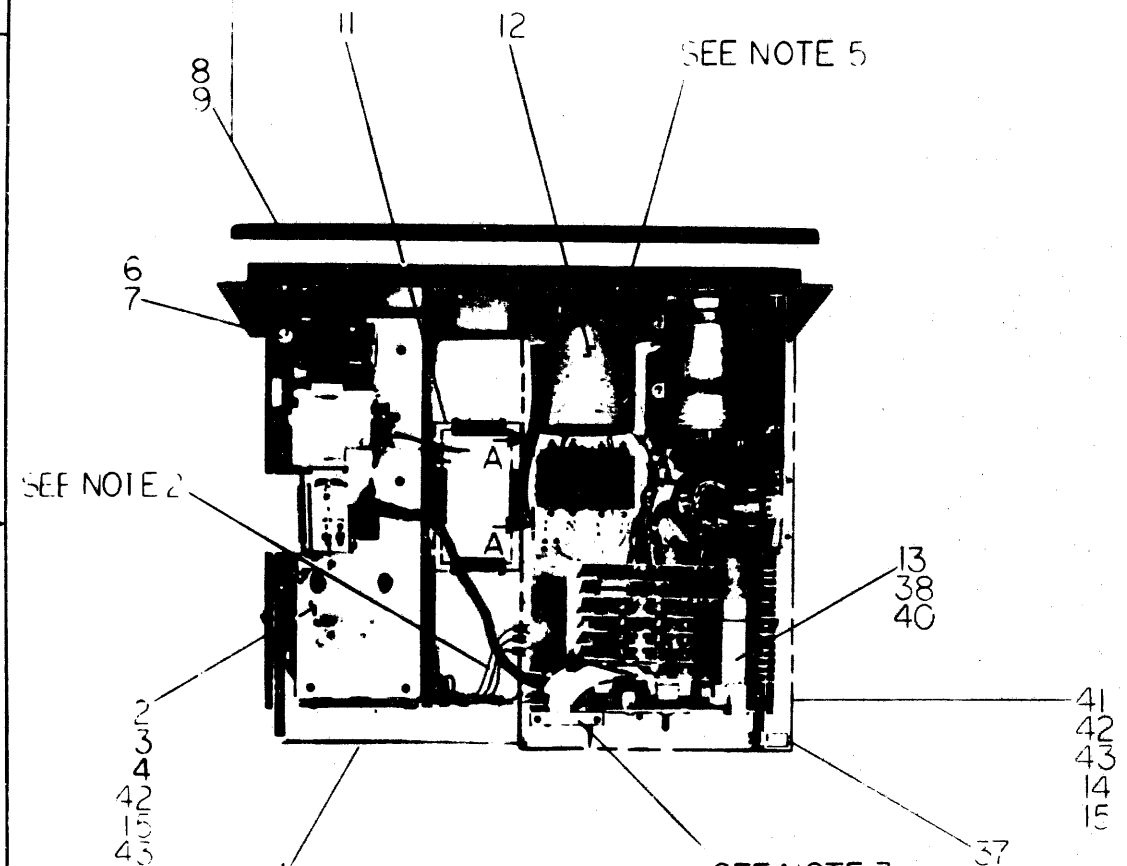
STAMP COMPLETE  
MODIF NO. HERE

DETAIL F

STAMP SERIAL NO. HERE  
(ALL PC04 TYPE UNITS ARE  
SERIALIZED IN A SINGLE  
SEQUENCE)

SEE NOTE 4

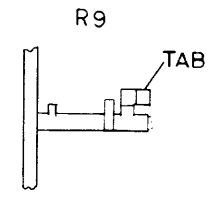
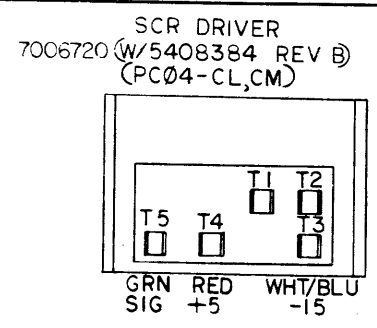
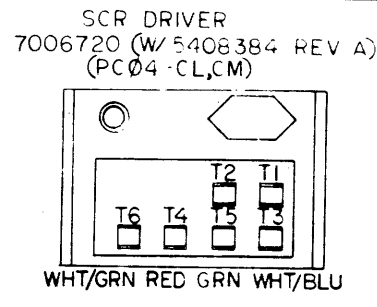
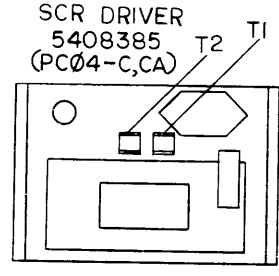
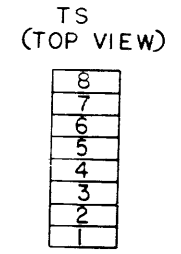
SEE NOTE 5



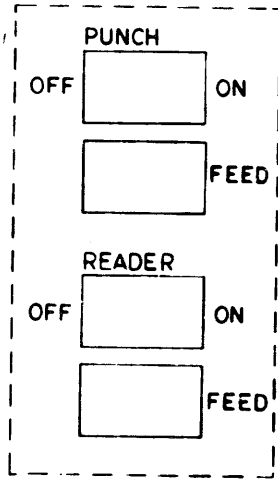
DESIGNER  
CHECKER  
CHANGE NO.  
REV.

QTY	DESCRIPTION	PART NO.
PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES ±.005 ±.004 ±.030 FINISH SURFACE QUALITY REMOVE BURRS AND BEVEL CHAMFER		DATE
CHK'D	DATE	DATE
ENG'D	DATE	DATE
PRG'D	DATE	DATE
MATERIAL		DATE
FINISH		DATE
UNLESS OTHERWISE SPECIFIED		
SCALE		DATE
SHEET		DATE
OF 4		DATE
DIST.		DATE
TITLE		DATE
PC04		DATE
HEADER AND PUNCH		DATE
SIZE CODE		DATE
NUMBER		DATE
DUA-PC04-0-0		DATE
DIST.		DATE

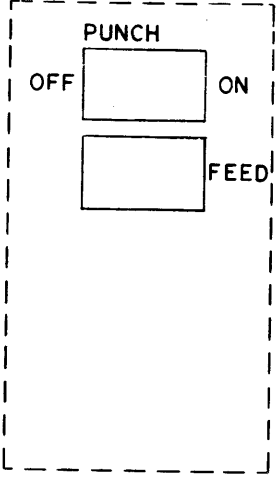
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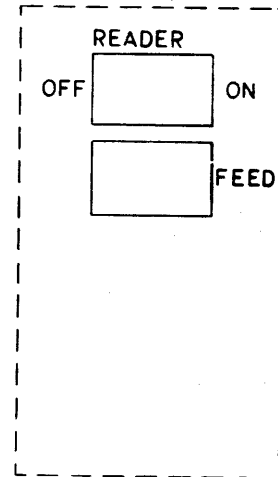
PC04-B,BA,BB,BC,BL,BM  
5408310-4  
DETAIL "A"



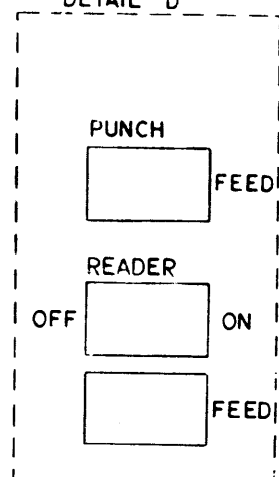
PC04-P,PA,PL,PM  
5408935-0  
DETAIL "B"



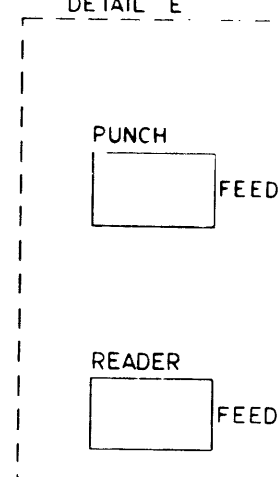
PC04-R,RB,RL  
5408935-0  
DETAIL "C"



PC04-C,CA  
5408310-3  
DETAIL "D"

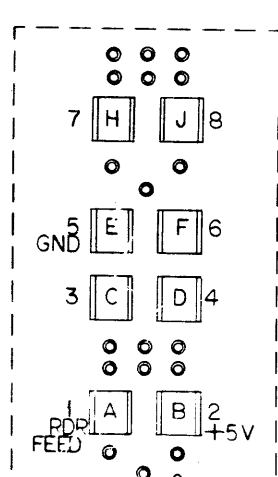
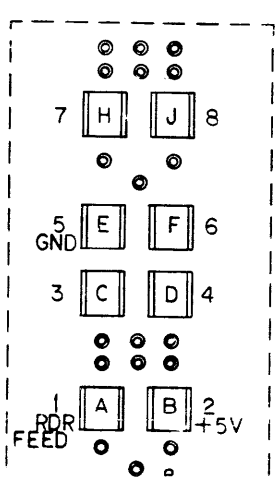
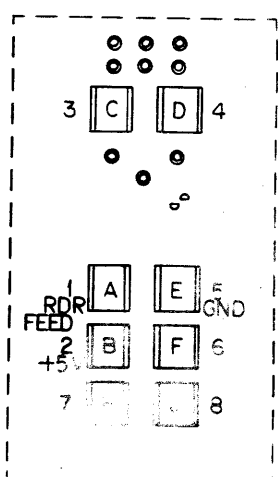
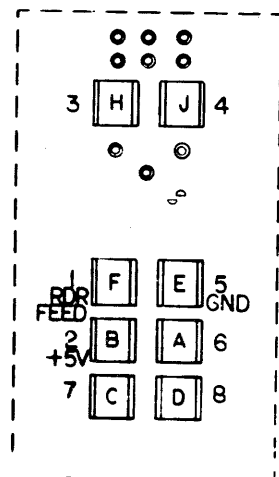
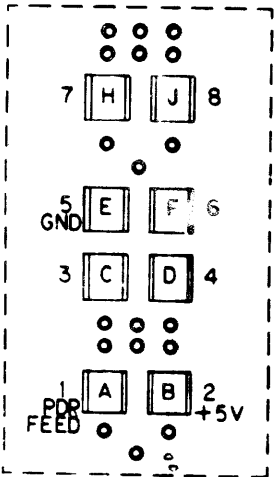


PC04-CL,CM  
5408310-5  
DETAIL "E"



FRONT VIEW

REAR VIEW



REV P  
NUMBER DUA PC04-0-0  
B

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO	ITEM NO
PC04				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN B. HUTNAK	DATE 4-10-69	<b>digital</b> EQUIPMENT CORPORATION MAYFORD, MASSACHUSETTS	
DECIMALS ANGLES	CHK'D R. CARROLL	DATE 6-5-69		
XXX - .006 XX - .02 X - .1	ENG G. BECKNER	DATE 6-6-69	TITLE PC04 READ-RE PUNCH (SW E TERM LOCATIONS)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROJ ENG G. BECKNER	DATE 6-6-69		
MATERIAL	PROD B. ANTONIO	DATE 6-6-69	NEXT HIGHER ASSY	
FINISH				
SCALE 1" = 1"		SIZE CODE NUMBER		REV.
SHEET 3 OF 4		DUA PC04-0-0		F

CONNECTIONS IF NO SCR DRIVER ASSY			
COLOR/AWG	WIRE	CONNECTION	REMARKS
RED #18	*9	TS - 6	
BLK & YEL	PUNCH MOTOR	TS - 6	IF PUNCH PRESENT
RED #18	*7	SW BOARD - "A"	SEE DETAIL "A" OR "B" OR "C"

PUNCH CONNECTIONS			
COLOR	WIRE	CONNECTION	REMARKS
WHT #22	PUNCH CAP	TS - 7	
PLUG PUNCH DATA CABLE (WØ23) INTO SLOT BØ2			

CONNECTIONS IF NO READER			
COLOR/AWG	WIRE	CONNECTION	REMARKS
GRY/RED #18	*7		SLEEVE WITH ITEM #45 & TIE BACK

COMMON CONNECTIONS			
COLOR/AWG	WIRE	CONNECTION	REMARK
BLK #18	*27	GND LUG	LOGIC GND
GRY/YEL #18	*29	AØBB	-15V
BLU #18	*31	BØ2D	-3ØV
BLK #18	*28	GND LUG	LOGIC GND
GRY/RED #18	*30	AØBA	+5V
GRN #18	*32	BØ6V	-18V
YEL #22	*1	SW BOARD - "A"	SEE
WHT/BLK #22	*2	SW BOARD - "B"	DETAILS "A" THRU "E" FOR LOCATION.
WHT/YEL #22	*3	SW BOARD - "C"	
BRN #22	*4	SW BOARD - "D"	
BLK #22	*5	SW BOARD - "E"	
WHT #22	*6	SW BOARD - "F"	
RED #18	*8	SW BOARD - "J"	
YEL #22	*11	AØ1V	
WHT/BLK #22	*12	BØ7A	+5V
WHT/YEL #22	*13	AØBF	
BLK #22	*15	BØ8C	
WHT #22	*16	BØ2U	

CONNECTIONS FOR 54Ø8385 SCR DRIVER ASSY			
COLOR/AWG	WIRE	CONNECTION	REMARKS
RED #18	*9	SCR - T1	
BLK & YEL	PUNCH MOTOR	SCR - T2	
RED #18	*7	SW BOARD - "J"	SEE DETAIL "D"
WHT/BLU #22	SCR LEAD	AØ7B	
WHT/GRN #22	SCR LEAD	BØ1B	

READER CONNECTIONS			
COLOR/AWG	WIRE	CONNECTION	REMARKS
GRY/RED #18	*7	R9 TAB	LAMP RESISTOR
WHT/RED	READER MOTOR	TS - 1	
RED	READER MOTOR	TS - 2	
WHT/GRN	READER MOTOR	TS - 3	
GRN	READER MOTOR	TS - 4	
WHT & BLK	READER MOTOR	TS - 5	
PLUG READER PHOTOCELL CABLE (WØ77) INTO SLOT BØ8			

READER WIRING					
ITEM NO	COLOR/AWG	FROM	USING ITEM NO.	TO	USING ITEM NO.
29	WHT/VIO #22	R1 & R2	-	TS - 1	28
3Ø	WHT/YEL #22	R3 & R4	-	TS - 2	28
31	WHT/ORN #22	R5 & R6	-	TS - 3	28
32	WHT/BRN #22	R7 & R8	-	TS - 4	28
33	VIO #22	R1	-	BØ6R	-
33	VIO #22	R2	-	BØ6S	-
34	YEL #22	R3	-	BØ5R	-
34	YEL #22	R4	-	BØ5S	-
35	ORN #22	R5	-	BØ4R	-
35	ORN #22	R6	-	BØ4S	-
36	BRN #22	R7	-	BØ3R	-
36	BRN #22	R8	-	BØ3S	-

CONNECTION ON 7ØØ6268 - Ø LOGIC BLOCK (PCØ4 - B, -BA, -BB, BC, -C, -CA, -P, -PA, -R -RB)			
COLOR/AWG	WIRE	CONNECTION	
BRN #22	*14	AØ2B	

CONNECTIONS FOR 7ØØ652Ø SCR DRIVER ASSY			
COLOR/AWG	WIRE	CONNECTION	REMARKS
RED #18	*9	SCR T1	
BLK & YEL	PUNCH MOTOR	SCR T2	
RED #18	*7	SW BOARD - "J"	SEE DETAIL "E"
WHT/BLU #22	SCR LEAD	AØ7B	
WHT/GRN #22	SCR LEAD	AØ7C	NOT USED ON 54Ø8385 ASSY
RED #22	SCR LEAD	AØ7A	
GRN #22	SCR LEAD	BØ1F	

WIRING ON PCØ4 - BB, -BC, AND -RB ONLY					
ITEM NO	COLOR/AWG	FROM		TO	
57	GRN #24	AØBH		AØBF	

SEE VIEW "A-A" ON SHEET 2 FOR IDENTIFICATION OF R1 THRU R8					
--	--	--	--	--	--

CONNECTION ON 7ØØ6268 - 1 AND - 2 LOGIC BLOCK (PCØ4 - BL, -BM, -CL, -CM, -PL, -PM, -RL)			
COLOR/AWG	WIRE	CONNECTION	
BRN #22	*14	AØ1B	

NOTE: SEE SHEET 3 FOR TERMINAL IDENTIFICATION DIAGRAMS.

REVISIONS  
CHANGE NO  
REV

FIRST USED ON OPTION/MODEL PCØ4-Ø	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN. B. HUTNAK	DATE 4-10-69	DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
DECIMALS .XXX - .006 .XX - .02 .X - .1	CHK'D R. CARVILLI	DATE 6-5-69	TITLE	
ANGLES ±0° 30'	ENG. GEO. BECKNER	DATE 6-6-69	PCØ4	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	PROJ. ENG. GEO. BECKNER	DATE 6-6-69	READER & PUNCH (WIRING)	
MATERIAL	PROD. B. ANTONUCCIO	DATE 6-6-69	NEXT HIGHER ASSY.	
FINISH	A-ML-PCØ4	SCALE	SIZE CODE DUA	NUMBER PCØ4-Ø-Ø
	SHEET 2 OF 2	DIST.		REV P



ITEM NO.	DWG. NO. / PART NO.	DESCRIPTION	QUANTITY/VARIATION														
			PC04-B, BB	PC04-BA, BC	PC04-BL	PC04-BM	PC04-C	PC04-CA	PC04-CL	PC04-CM	PC04-P	PC04-PA	PC04-PL	PC04-PM	PC04-R, RB	PC04-RL	
1	D-AD-7006246-0-0	CHASSIS AND POWER SUPPLY ASSY	1	1	1	1	1	1	1	1	1	1	1	1	1		
2	D-AD-7006248-1-0	PUNCH ASSY (60 HZ)	1	-	1	-	1	-	1	-	1	-	1	-	-		
2	D-AD-7006248-2-0	PUNCH ASSY (50 HZ)	-	1	-	1	-	1	-	1	-	1	-	-			
3	9006021-1	SCR, PHL PAN HD 6-32 X 5/16 LG SST	6	6	6	6	6	6	6	6	6	6	6	6	6		
4	9006560	NUT, KEPS 6-32 X 5/16 X 5/32	2	2	2	2	2	2	2	2	2	2	2	-	-		
<del>5</del>	<del>9006083-1</del>	<del>SCR, PHL PAN HD 10-32 X 5/16 LG SST</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>-</del>	<del>-</del>		
6	1100106	THYRISTOR CR626SP4B4	1	1	1	-	-	-	-	1	1	1	1	-	-		
7	9107278-3	18 ANG TEF TUBING RED	A/RA	RA/RA	RA/RA	R	-	-	-	-	A/RA	RA/RA	RA/RA	R	-		
8	D-AD-7006252-1-0	COVER ASSY (PUNCH & READER)	1	1	1	1	-	-	-	-	-	-	-	-	-		
8	D-AD-7006252-2-0	COVER ASSY (PUNCH)	-	-	-	-	-	-	-	1	1	1	1	-	-		
8	D-AD-7006252-3-0	COVER ASSY (READER)	-	-	-	-	-	-	-	-	-	-	-	1	1		
8	D-AD-7006252-4-0	COVER ASSY (PUNCH, READER & SCR)	-	-	-	-	1	1	-	-	-	-	-	-	-		
8	D-AD-7006252-6-0	COVER ASSY (READER, PUNCH & SCR)	-	-	-	-	-	-	1	1	-	-	-	-	-		
9	9006042-2	SCR, PHL FLAT HD 6-32 X 1 LG SST	4	4	4	4	4	4	4	4	4	4	4	4	4		
10	9006083-1	SCR, PHL PAN HD 10-32 X 2 1/4 LG SST	4	4	4	4	4	4	4	-	-	-	-	-	4	4	
11	C-MD-745300-0-0	CHAD BOX	1	1	1	1	1	1	1	1	1	1	1	-	-		
12	D-AD-7006247-0-0	READER ASSY	1	1	1	1	1	1	1	1	-	-	-	-	1	1	
13	E-AD-7006268-0-0	WIRED ASSY, PC04	1	-	-	1	1	-	-	-	1	1	-	-	1	-	
13	E-AD-7006268-1-0	WIRED ASSY, PC04	-	-	1	1	-	-	-	-	-	-	-	1	1	-	
13	E-AD-7006268-2-0	WIRED ASSY, PC04	-	-	-	-	-	-	-	1	1	-	-	-	-	-	
14	9006022-1	SCR, PHL PAN HD 6-32 X 3/8 LG SST	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
15	9006033	WASHER, INT TOOTH #6	15	15	15	15	17	17	17	17	11	11	11	11	13	13	
16	C-AD-5408385-0-0	SCR DRIVER ASSY	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
16	C-AD-7006526-0-0	SCR DRIVER ASSY	-	-	-	-	-	-	1	1	-	-	-	-	-	-	
17	9006026-1	SCR, PHL PAN HD 6-32 X 3/4 LG SST	-	-	-	2	2	2	2	-	-	-	-	-	-	-	
18	9006801	HEX SPACER, 1/4" X 3/8 LG #6 HOLE	-	-	-	2	2	2	2	-	-	-	-	-	-	-	
19	C-IA-7006281-0-0	I/O CABLE, PC04 (W033 TO W077)	2	2	-	-	2	2	2	-	1	1	-	-	1	1	
19	D-IA-7407087-1-0	CABLE CONNECTOR M926 TO W033 S	-	-	1	1	-	-	-	-	-	-	-	-	-	-	
19	D-IA-7006145-1-0	CABLE CONN (PUNCH) M926 TO W033	-	-	-	-	-	-	-	-	-	-	-	1	1	-	
19	D-IA-7407087-2-0	CABLE CONNECTOR M926 TO W033 S	-	-	-	-	-	-	1	1	-	-	-	-	-	-	
20	C-AD-5408310-4-0	SWITCH ASSY	1	1	1	1	-	-	-	-	-	-	-	-	-	-	
20	C-AD-5408935-0-0	SWITCH ASSY	-	-	-	-	-	-	-	1	1	1	1	1	1	1	
20	C-AD-5408310-3-0	SWITCH ASSY	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
20	C-AD-5408310-5-0	SWITCH ASSY	-	-	-	-	-	-	1	1	-	-	-	-	-	-	
21	C-MD-7407131-0-0	TAPE CONTAINER	1	1	1	1	1	1	1	1	1	1	1	-	-	-	
22	9006011-2	SCR, PHL FLAT HD 4-40 X 3/8 LG SST	2	2	2	2	2	2	2	2	2	2	2	2	-	-	
23	9006556	NUT, HEX 4-40 X 1/4 X 1/16 SST	2	2	2	2	2	2	2	2	2	2	2	2	-	-	
24	9006632	WASHER, INT TOOTH #4	2	2	2	2	2	2	2	2	2	2	2	2	-	-	
<del>25</del>	<del>9006004</del>	<del>WASHER, INT TOOTH #4</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>-</del>	<del>-</del>	
26	1309896	RES, 25 OHM 1/2% 40 W	8	8	8	8	8	8	8	-	-	-	-	8	8	-	
<del>27</del>	<del>9107400-97</del>	<del>WIRE, 22 AWG STPD TEFLON WBT/VIO TRACER</del>	<del>4</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>-</del>	<del>4</del>	<del>4</del>	<del>-</del>	
28	9007917	SOLDERLESS CONN 18-22 AWG .250 TAB	4	-	-	-	-	-	-	-	-	-	-	4	4	-	
29	9107400-97	WIRE, 22 AWG STPD TEFLON WBT/VIO TRACER	-	-	-	-	-	-	-	-	-	-	-	-	-	A/R A/R	

REV.	CHK	CHANGE NO.	DATE	BY
M		PC04-00053		
		REVISED & REDRAWN		
		AM-3-13-71		
		A-KENT		
		Allen Kent 4/5/72		
		8/17/72		
		PC04-00057		
		Williams 3-13-73		
		A. WILLIAMS		
		Williams 3/27/73		
		PC04-00059		
		G. Williams 5-28-73		
		A. WILLIAMS		
		J.R. Curtis 6/4/74		

FIRST USED ON OPT ION/MODEL  
PC04 (ALL)

UNLESS OTHERWISE SPECIFIED  
DIMENSION IN INCHES

TOLERANCES  
DIMENSIONS: ± .005 (FRACTIONS) ± .005 (DECIMALS)  
ANGLES: ± .030"

FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL: +-----+

FINISH: +-----+

DRN. R. HUTNAK  
CHK'D. R. CARVELLI  
ENG. GEO. BECKNER  
PROJ. ENG. GEO. BECKNER  
PROD. R. ANTONUCCIO

DATE 4-10-69  
DATE 6-5-69  
DATE 6-6-69  
DATE 6-6-69  
DATE 6-6-69

NEXT HIGHER ASSY  
D-UA-PC04-0-0

SCALE: +-----+

SHEET 1 OF 2

digital EQUIPMENT CORPORATION  
MAYNARD, MASSACHUSETTS

TITLE  
PC04 READER AND PUNCH

SIZE CODE: C/PL PC04-0-0  
NUMBER: 0-0  
REV.: P

REV. P  
NUMBER 0-0  
SIZE CODE C/PL PC04-0-0  
A B



LEGEND		
PART #	MODEL USED ON	WIRELIST
7006268-0	PC04-B,BA,BB,BC, C,CA, P,PA, R,RA	K-WL-PC04-0-5
7006268-1	PC04-BL,BLM, PL,PLM, RL	K-WL-PC04-0-6
7006268-2	PC04-CL,CM	K-WL-PC04-0-7

- NOTES:
1. CONNECTIONS ON ITEM 14 TO BE SOLDERED AND LOCATED AT MINIMUM PRACTICAL HEIGHT ABOVE BOARD.
  2. CONNECTOR BLOCKS TO BE SHOWN TO GND LUG AS SHOWN.
  3. USE BLUE WIRE (ITEM 2) FOR HAND WRAPPED WIRING.
  4. DDP/BS/9/KALO  
TO CONVERT 7006268-0 BLOCK BACK TO NEG LOGIC MACHINES, DO FOLLOWING:  
A. REMOVE TRANSISTORS IN READER FEED SWITCH ASSY  
B. WIRE CHANGES  
DELETE - B08S-B07E  
ADD - A02N-A08H  
B08E-B07E  
A02B-A02N  
C. DELETE 100K RESISTOR FROM A08A-A08F

EXTERNAL COMPONENT TABLE					
ITEM	COMP	POL	FROM	TO	REMARKS
10	CAP	+	A03A	A03C	6.8uF
11	CAP	+	B03H	B03C	6.8uF

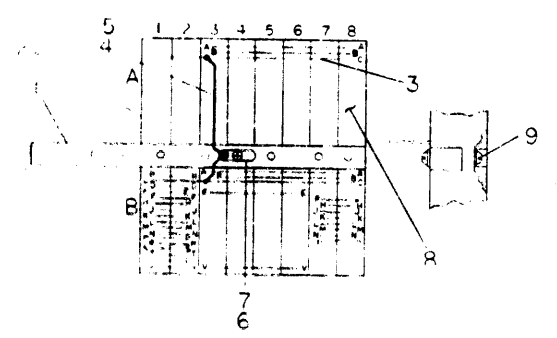
7006268-2

EXTERNAL COMPONENT TABLE					
ITEM	COMP	POL	FROM	TO	REMARKS
10	CAP	+	A03A	A03C	-
10	CAP	-	B03H	B03C	+
12	RES		A08A	A08F	100K
13	RES		A06E	A06C	3.0uF

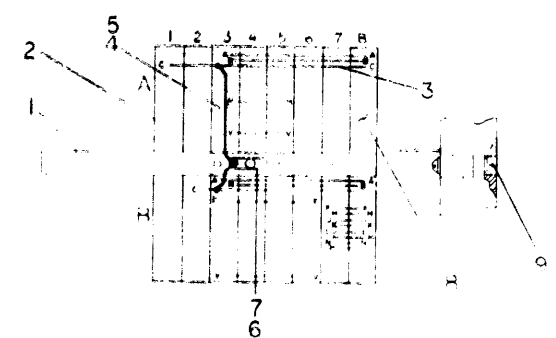
7006268-1

EXTERNAL COMPONENT TABLE					
ITEM	COMP	POL	FROM	TO	REMARKS
10	CAP	+	A03A	A03C	-
10	CAP	-	B03H	B03C	+
12	RES		A08A	A08F	100K

7006268-0



7006268-0  
(B, BA, BI)



7006268-1  
(BL, BLM, PL, PLM, RL)

7006268-0  
(110)

REV	BY	DATE	DESCRIPTION
1	HEMANN	7/1/72	PC04
2	HEMANN	7/1/72	PC04
3	HEMANN	7/1/72	PC04
4	HEMANN	7/1/72	PC04
5	HEMANN	7/1/72	PC04
6	HEMANN	7/1/72	PC04
7	HEMANN	7/1/72	PC04
8	HEMANN	7/1/72	PC04
9	HEMANN	7/1/72	PC04
10	HEMANN	7/1/72	PC04
11	HEMANN	7/1/72	PC04
12	HEMANN	7/1/72	PC04
13	HEMANN	7/1/72	PC04
14	HEMANN	7/1/72	PC04
15	HEMANN	7/1/72	PC04
16	HEMANN	7/1/72	PC04
17	HEMANN	7/1/72	PC04
18	HEMANN	7/1/72	PC04
19	HEMANN	7/1/72	PC04
20	HEMANN	7/1/72	PC04

FIRST USE ON OPTICAL MOD.	QTY	DESCRIPTION	PART NO.
PC04			
UNLESS OTHERWISE SPECIFIED			
TOLERANCES			
CONTOUR IN INCHES			
FRONT			
SCALE			
SHEET			
DATE			
BY			
CHECKED			
APPROVED			
TITLE			
PC04			
WIRED ASSY			
D-UA-PC04-0-0			
NUMBER			
7006268-0-0			
SHEET			
OF			
1			

**DIGITAL EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS  
**PARTS LIST**

MAD BY	ROBERT HUTNAK	CHECKED <i>Carwell</i>	SECTION
DATE	2/20/69	DATE 5/5/69	1
ENG	<i>Section 4/4/67</i>	PROD	ISSUED SECT.
DATE		DATE 5/16/69	1

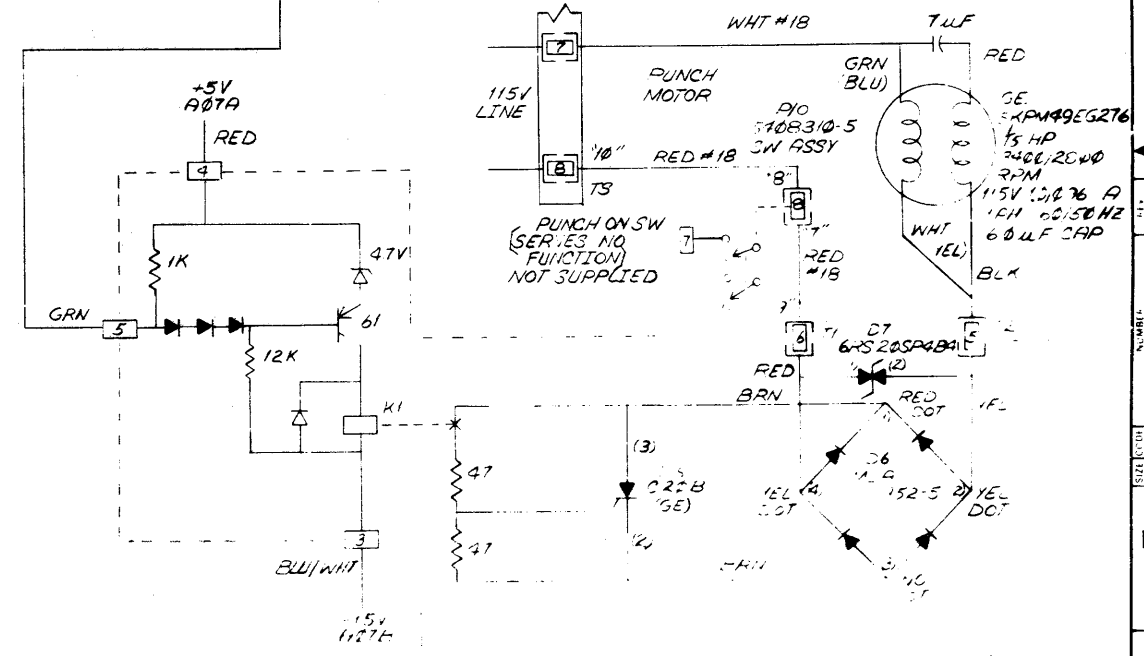
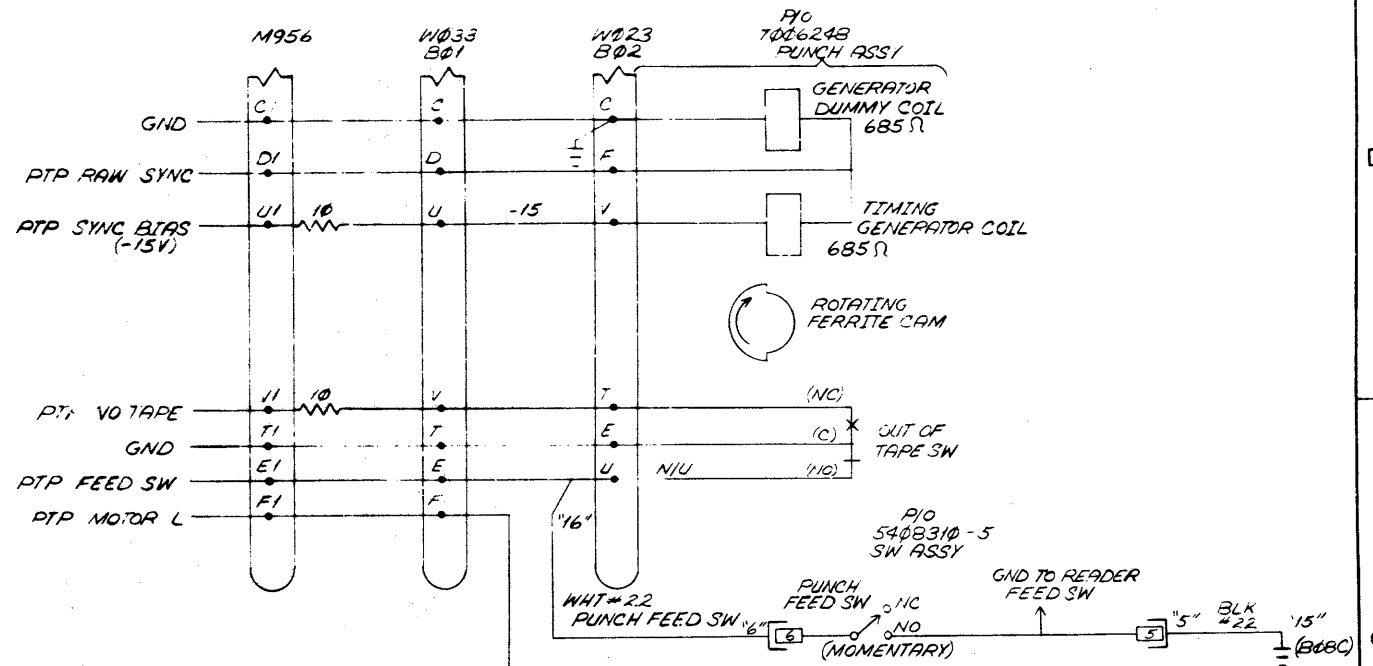
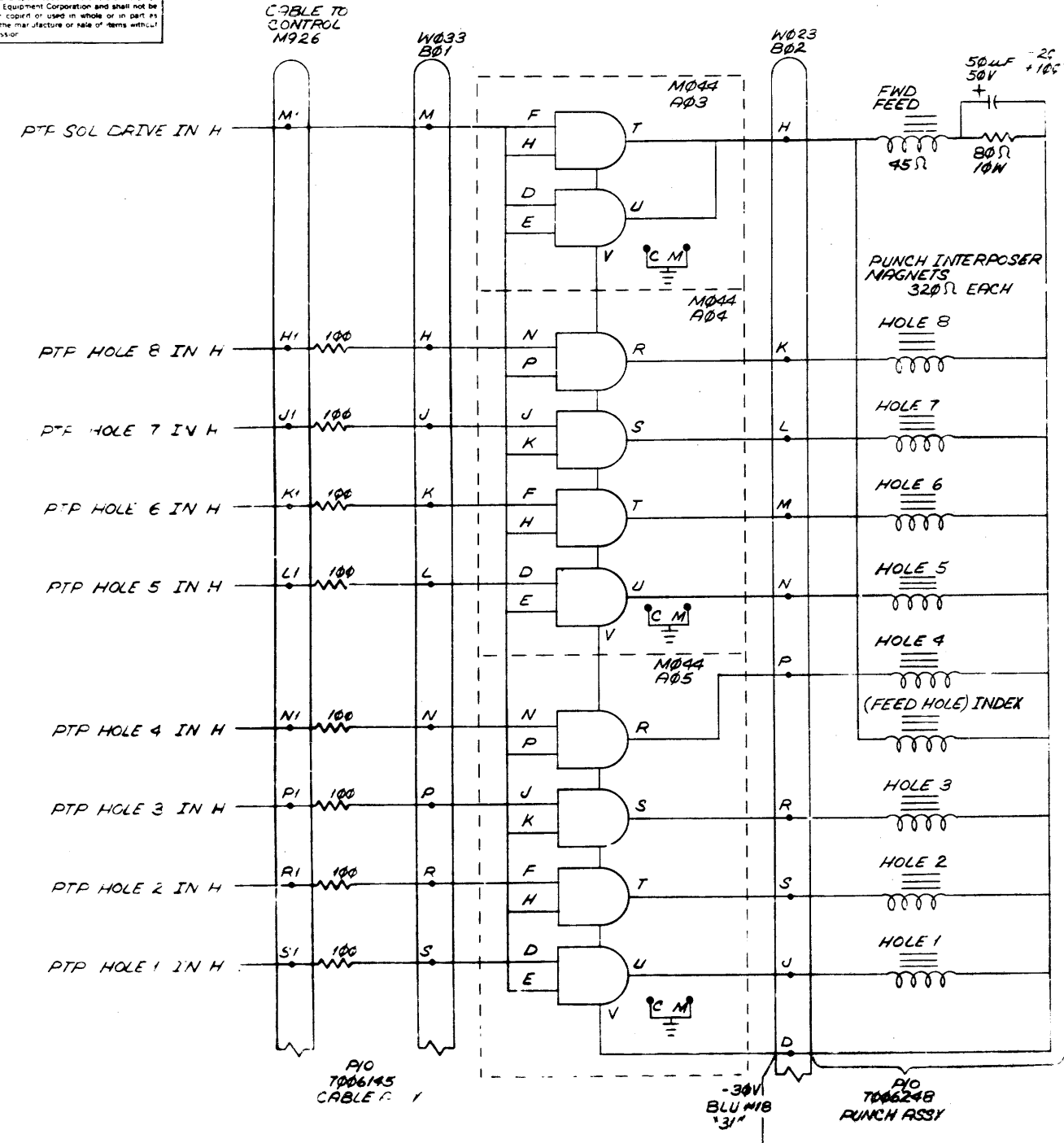
ITEM NO.	WG NO. / PART NO.	DESCRIPTION	
1	-IA-7407077-0-0	MTG BAR 6 IN.	1
2	202244	144 PIN CONN BLOCK WRAPTYPE	2
3	202188	BUS BAR BERG NO. 3584-032	A
4	107560-1	#22 AWG BUS WIRE	A
5	107265	#22 TUBING, TEFLON, WHITE	A
6	007597	TERMINAL SHAKEPROOF #2116-08-00	1
7	006034	SCR PHL PAN HD #8-32 x .19 LG SST	1
8	107470-10	#21 AWG SOLID KYNAR BLUE	A
9	007641	SCR PHL FIL HD #8-32 x 1/2 LG SST	4
10	005306	CAP 6.8 MFD 35V 10%	2
11	<del>000086</del>	<del>CAP 100 MFD 6V 10%</del>	<del>1</del>
12	3-00231	RES 100ohm 1/2W 5%	1
13	300295	RES 330 OHM 1/2W 5%	-
REF	K-WL-PC04-0-5	WIRE LIST	1
REF	K-WL-PC04-0-6	WIRE LIST	-
REF	K-WL-PC04-0-7	WIRE LIST	-

QUANTITY VARIATION											
7006268-1	7006268-2										
1	1										
2	2										

TITLE	PC04 WIRED ASSY	ASSY NO.	E-AD-7006268-0-0	SIZE	A	COD	PL	NUMBER	7006268-0-0	RIV	rd	ECO NO	PC04-00056
		SHEET	1	OF	1	DIST							

DEC 1969  
DRAWING NO.

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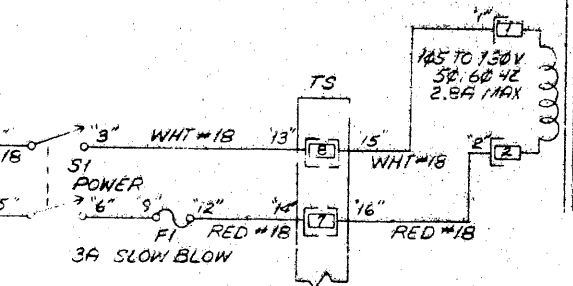
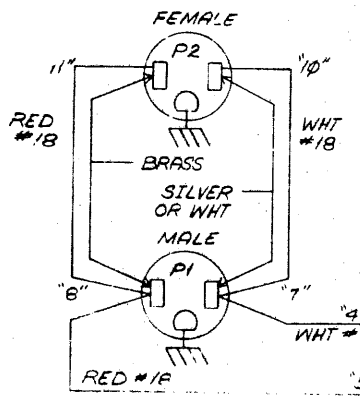
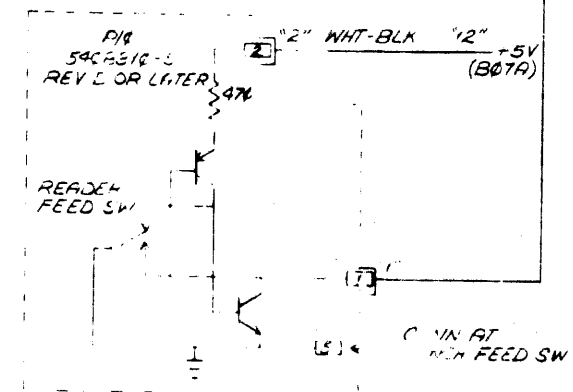
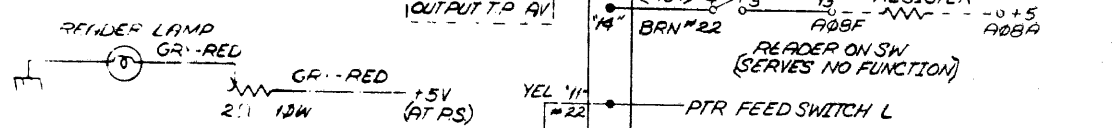
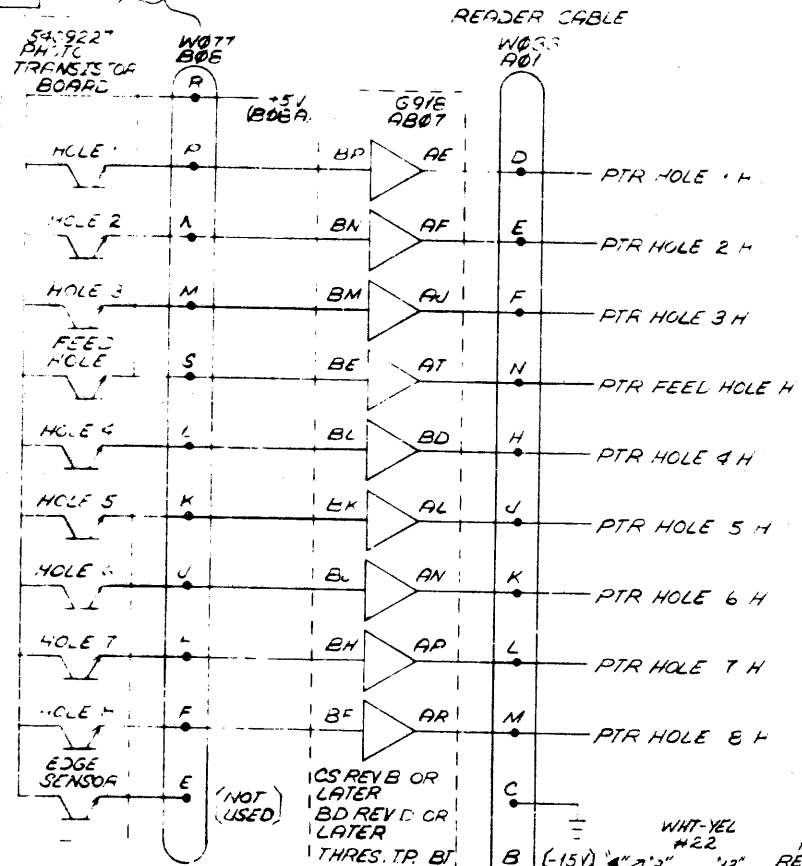


REV	DATE	BY	CHKD

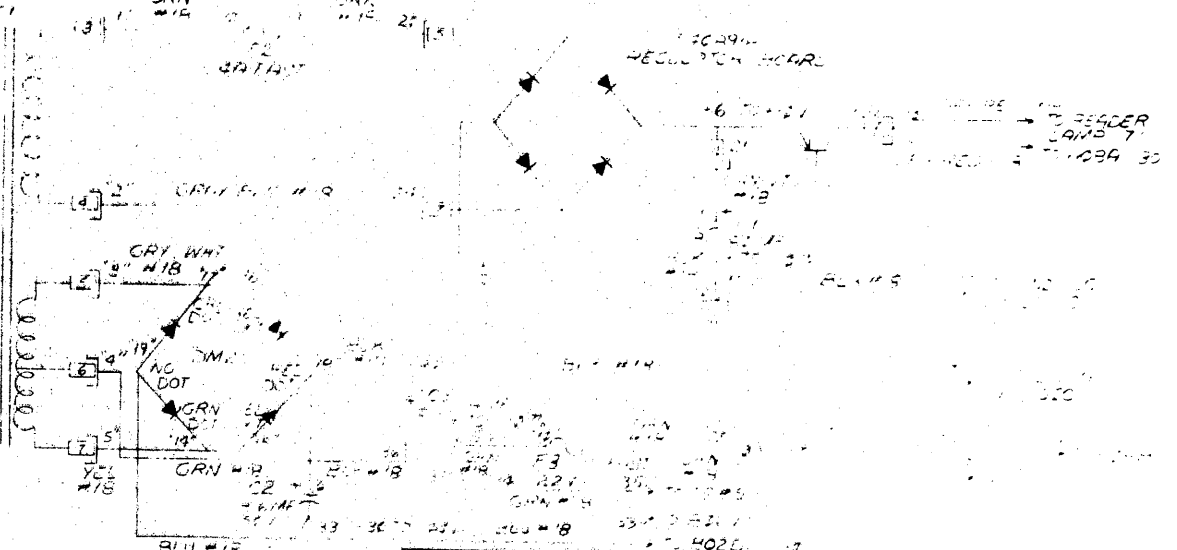
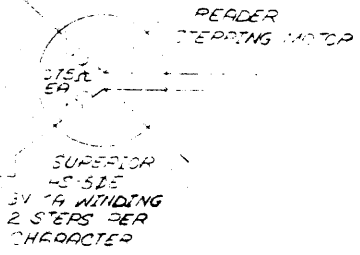
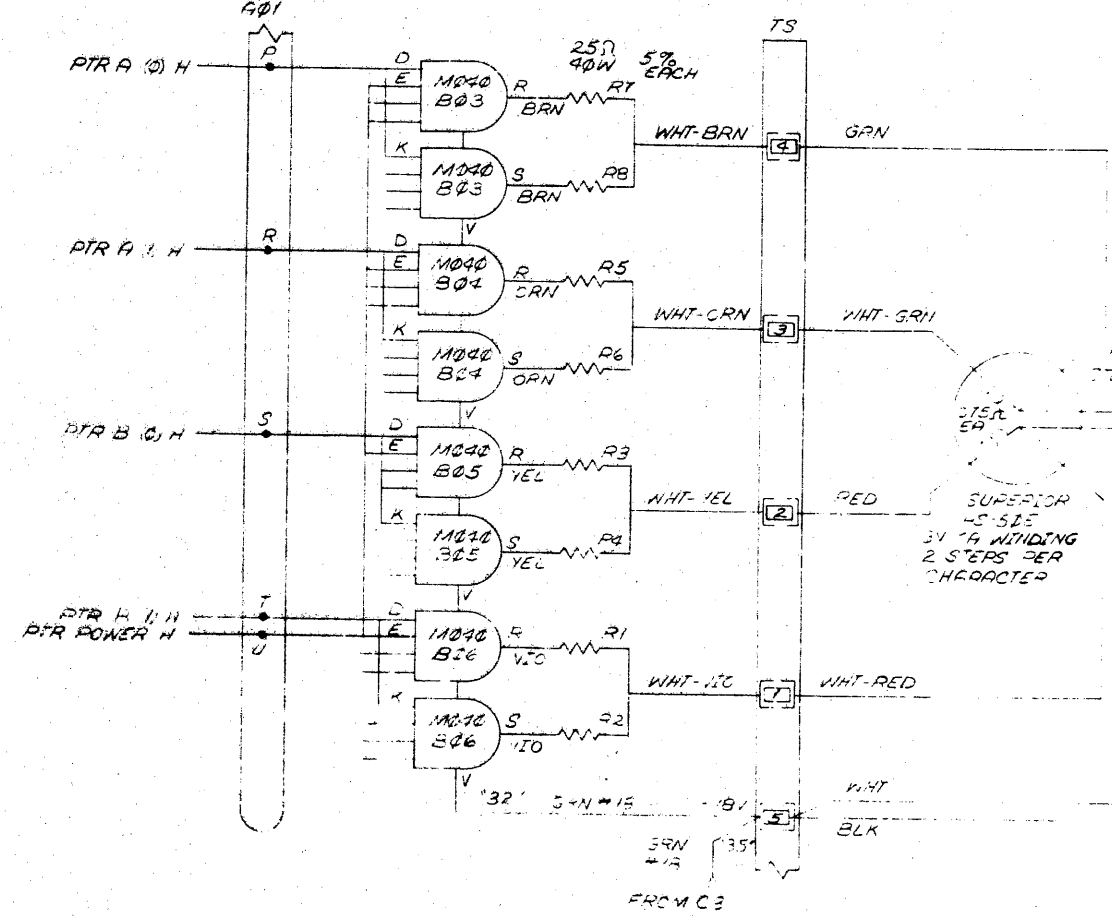
FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO	ITEM NO.
PARTS LIST				
<b>digital</b> EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				
TITLE <b>PUNCH</b>				
PC04-CL-PNCH				
MATERIAL		NEXT HIGHER ASSY	SIZE CODE	NUMBER
FINISH		A-ML-PC04 2	D 3S	PC04-CL-PNCH
SCALE		SHEET 1 OF 1	DIST	REV

1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.  
2. DIMENSIONS IN PARENTHESES ARE TOLERANCES.  
3. DIMENSIONS IN BRACKETS ARE FOR INFORMATION ONLY.  
4. DIMENSIONS IN DASHES ARE FOR INFORMATION ONLY.  
5. DIMENSIONS IN SQUARES ARE FOR INFORMATION ONLY.  
6. DIMENSIONS IN TRIANGLES ARE FOR INFORMATION ONLY.  
7. DIMENSIONS IN CIRCLES ARE FOR INFORMATION ONLY.  
8. DIMENSIONS IN DIAMOND SHAPES ARE FOR INFORMATION ONLY.  
9. DIMENSIONS IN PARALLELOGRAMS ARE FOR INFORMATION ONLY.  
10. DIMENSIONS IN OVALS ARE FOR INFORMATION ONLY.

70C6267 PHOTO TRANSISTOR  
450V REV D OR LATER



READER CABLE  
W033 A01



UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES	DRN	DATE	<b>digital</b> CORPORATION
EXEMPT	CHKD	DATE	
APP'D	ENL	DATE	
REMOVED	PROJ ENG	DATE	
REMOVE ROUNDS AND BREAK SHARP CORNERS TO ALL QUALITY	PROD	DATE	
MATERIAL	NEXT HIGHER ASY		
FINISH	SCALE	SIZE CODE	
	SHEET	OF	

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REV 1  
 NUMBER 5  
 SIZE CODE K WL  
 2

B

B



A

A

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PC04				
PARTS LIST				
DRN	DATE	<b>digital</b> EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE WARELIST PC04 B, B/, BB, BC, C, CA, REPAIR AND RB		
CHK'D	DATE			
ENG	DATE			
PROJ. ENG.	DATE			
PROC.	DATE	SIZE CODE K WL NUMBER PC04-Q-5 REV H		

REVISIONS	CHANGE NO.	REV
ORIGINATED		
PC04 Q005		
DATE		
3/12/72		

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B  
A

REVISIONS	
CHK	CHANGE NO
	ORIGINATED -
	PC04-C7054
	PC04-55 A
	Handwritten 4-19-72
	C. YOUSE
	Handwritten 5-22-72
	PC04-20056 H
	Y. OUSE
	Handwritten 5-22-72

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO
PC04				
PARTS LIST				
DRN.	DATE	<b>digital</b> EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS  TITLE WIRELIST PC04-BL, BM, PL, FM AND RL		
CHK'D	DATE			
ENG	DATE			
PROJ ENG	DATE			
PRCD	DATE			
NEXT HIGHER ASSEMBLY		SIZE	CODE	NUMBER
		K	WL	PC04-05
				REV
				H

REV	H	6	PC04-05	SIZE	K	WL	2
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4

3

1



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REV. 2-0-700-1M K 2

B

B

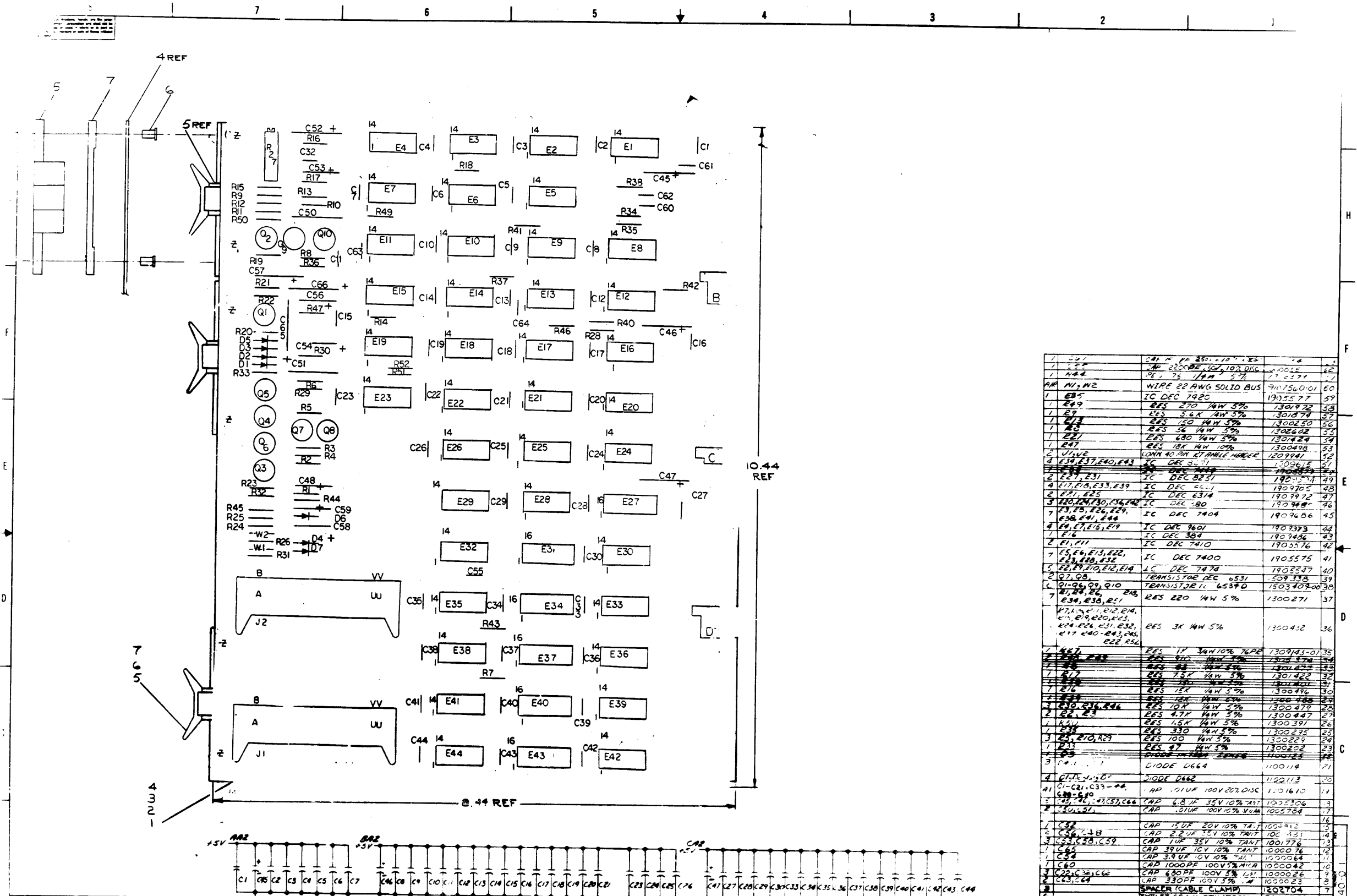
A

A

REV	CHANGE NO.	ORIGINATED	DATE	BY
-		PC04-C-154		

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PC04				
PARTS LIST				
DRN	DATE	<b>digital</b> EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE WIRELIST PC04-CL AND CM		
CHK'D	DATE			
ENG	DATE			
PROJ. ENGR	DATE			
PRGDR	DATE			
NEXT HIGHER ASSEMBLY				
DATE		SIZE CODE	NUMBER	REV
		K WI	04-0-1	





QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	C52	CAP 10UF 20V 10% TAN	1000412	16
1	C53	CAP 10UF 20V 10% TAN	1000412	17
1	C54	CAP 10UF 20V 10% TAN	1000412	18
1	C55	CAP 10UF 20V 10% TAN	1000412	19
1	C56	CAP 10UF 20V 10% TAN	1000412	20
1	C57	CAP 10UF 20V 10% TAN	1000412	21
1	C58	CAP 10UF 20V 10% TAN	1000412	22
1	C59	CAP 10UF 20V 10% TAN	1000412	23
1	C60	CAP 10UF 20V 10% TAN	1000412	24
1	C61	CAP 10UF 20V 10% TAN	1000412	25
1	C62	CAP 10UF 20V 10% TAN	1000412	26
1	C63	CAP 10UF 20V 10% TAN	1000412	27
1	C64	CAP 10UF 20V 10% TAN	1000412	28
1	C65	CAP 10UF 20V 10% TAN	1000412	29
1	C66	CAP 10UF 20V 10% TAN	1000412	30
1	C67	CAP 10UF 20V 10% TAN	1000412	31
1	C68	CAP 10UF 20V 10% TAN	1000412	32
1	C69	CAP 10UF 20V 10% TAN	1000412	33
1	C70	CAP 10UF 20V 10% TAN	1000412	34
1	C71	CAP 10UF 20V 10% TAN	1000412	35
1	C72	CAP 10UF 20V 10% TAN	1000412	36
1	C73	CAP 10UF 20V 10% TAN	1000412	37
1	C74	CAP 10UF 20V 10% TAN	1000412	38
1	C75	CAP 10UF 20V 10% TAN	1000412	39
1	C76	CAP 10UF 20V 10% TAN	1000412	40
1	C77	CAP 10UF 20V 10% TAN	1000412	41
1	C78	CAP 10UF 20V 10% TAN	1000412	42
1	C79	CAP 10UF 20V 10% TAN	1000412	43
1	C80	CAP 10UF 20V 10% TAN	1000412	44
1	C81	CAP 10UF 20V 10% TAN	1000412	45
1	C82	CAP 10UF 20V 10% TAN	1000412	46
1	C83	CAP 10UF 20V 10% TAN	1000412	47
1	C84	CAP 10UF 20V 10% TAN	1000412	48
1	C85	CAP 10UF 20V 10% TAN	1000412	49
1	C86	CAP 10UF 20V 10% TAN	1000412	50
1	C87	CAP 10UF 20V 10% TAN	1000412	51
1	C88	CAP 10UF 20V 10% TAN	1000412	52
1	C89	CAP 10UF 20V 10% TAN	1000412	53
1	C90	CAP 10UF 20V 10% TAN	1000412	54
1	C91	CAP 10UF 20V 10% TAN	1000412	55
1	C92	CAP 10UF 20V 10% TAN	1000412	56
1	C93	CAP 10UF 20V 10% TAN	1000412	57
1	C94	CAP 10UF 20V 10% TAN	1000412	58
1	C95	CAP 10UF 20V 10% TAN	1000412	59
1	C96	CAP 10UF 20V 10% TAN	1000412	60
1	C97	CAP 10UF 20V 10% TAN	1000412	61
1	C98	CAP 10UF 20V 10% TAN	1000412	62
1	C99	CAP 10UF 20V 10% TAN	1000412	63
1	C100	CAP 10UF 20V 10% TAN	1000412	64
1	C101	CAP 10UF 20V 10% TAN	1000412	65
1	C102	CAP 10UF 20V 10% TAN	1000412	66
1	C103	CAP 10UF 20V 10% TAN	1000412	67
1	C104	CAP 10UF 20V 10% TAN	1000412	68
1	C105	CAP 10UF 20V 10% TAN	1000412	69
1	C106	CAP 10UF 20V 10% TAN	1000412	70
1	C107	CAP 10UF 20V 10% TAN	1000412	71
1	C108	CAP 10UF 20V 10% TAN	1000412	72
1	C109	CAP 10UF 20V 10% TAN	1000412	73
1	C110	CAP 10UF 20V 10% TAN	1000412	74
1	C111	CAP 10UF 20V 10% TAN	1000412	75
1	C112	CAP 10UF 20V 10% TAN	1000412	76
1	C113	CAP 10UF 20V 10% TAN	1000412	77
1	C114	CAP 10UF 20V 10% TAN	1000412	78
1	C115	CAP 10UF 20V 10% TAN	1000412	79
1	C116	CAP 10UF 20V 10% TAN	1000412	80
1	C117	CAP 10UF 20V 10% TAN	1000412	81
1	C118	CAP 10UF 20V 10% TAN	1000412	82
1	C119	CAP 10UF 20V 10% TAN	1000412	83
1	C120	CAP 10UF 20V 10% TAN	1000412	84
1	C121	CAP 10UF 20V 10% TAN	1000412	85
1	C122	CAP 10UF 20V 10% TAN	1000412	86
1	C123	CAP 10UF 20V 10% TAN	1000412	87
1	C124	CAP 10UF 20V 10% TAN	1000412	88
1	C125	CAP 10UF 20V 10% TAN	1000412	89
1	C126	CAP 10UF 20V 10% TAN	1000412	90
1	C127	CAP 10UF 20V 10% TAN	1000412	91
1	C128	CAP 10UF 20V 10% TAN	1000412	92
1	C129	CAP 10UF 20V 10% TAN	1000412	93
1	C130	CAP 10UF 20V 10% TAN	1000412	94
1	C131	CAP 10UF 20V 10% TAN	1000412	95
1	C132	CAP 10UF 20V 10% TAN	1000412	96
1	C133	CAP 10UF 20V 10% TAN	1000412	97
1	C134	CAP 10UF 20V 10% TAN	1000412	98
1	C135	CAP 10UF 20V 10% TAN	1000412	99
1	C136	CAP 10UF 20V 10% TAN	1000412	100

ITEM NO	QTY	REP	REV	DATE	BY
1	1	A			
2	1	A			
3	1	A			
4	1	A			
5	1	A			
6	1	A			
7	1	A			
8	1	A			
9	1	A			
10	1	A			

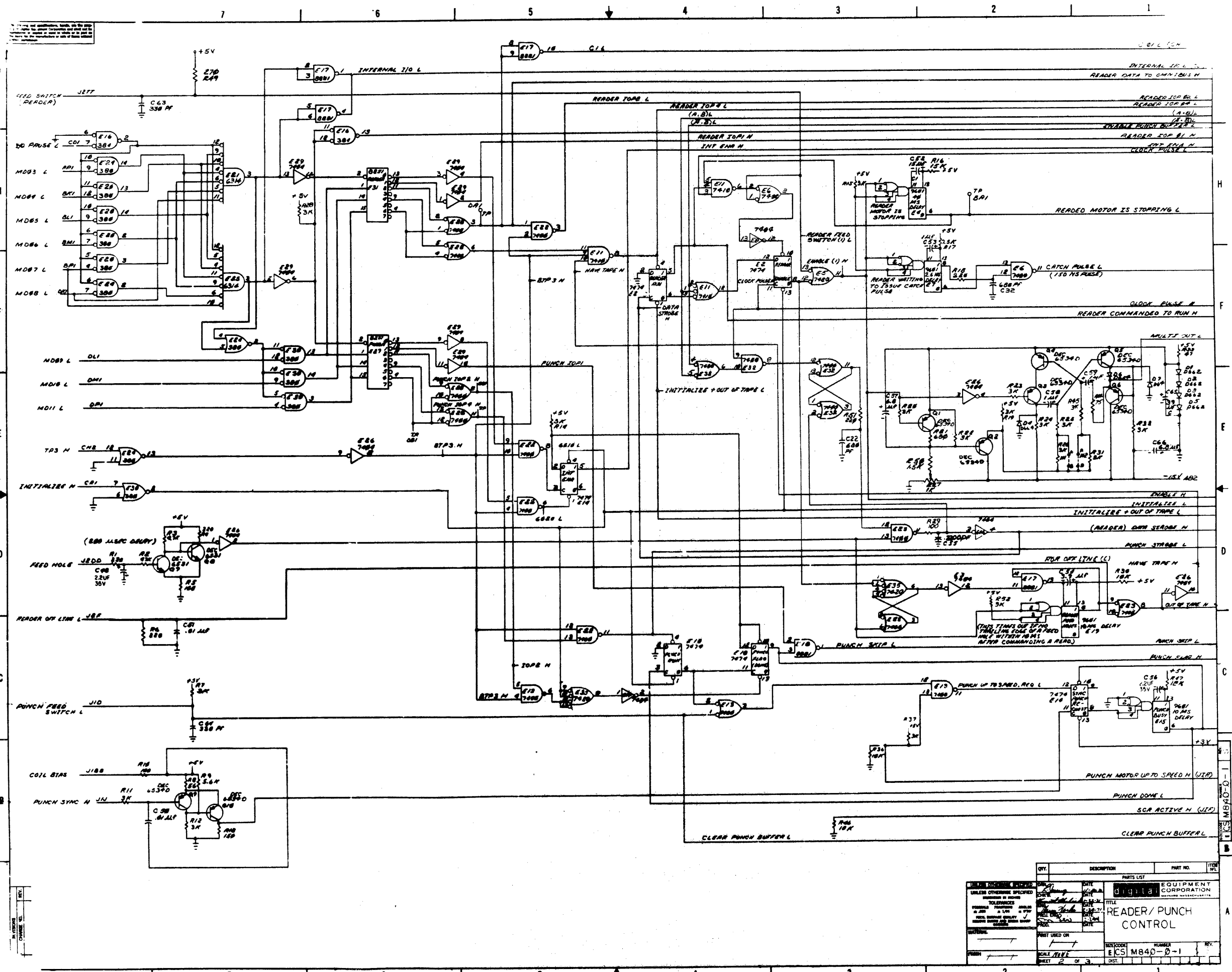
ITEM NO	QTY	REP	REV	DATE	BY
11	1	A			
12	1	A			
13	1	A			
14	1	A			
15	1	A			
16	1	A			
17	1	A			
18	1	A			
19	1	A			
20	1	A			

ITEM NO	QTY	REP	REV	DATE	BY
21	1	A			
22	1	A			
23	1	A			
24	1	A			
25	1	A			
26	1	A			
27	1	A			
28	1	A			
29	1	A			
30	1	A			

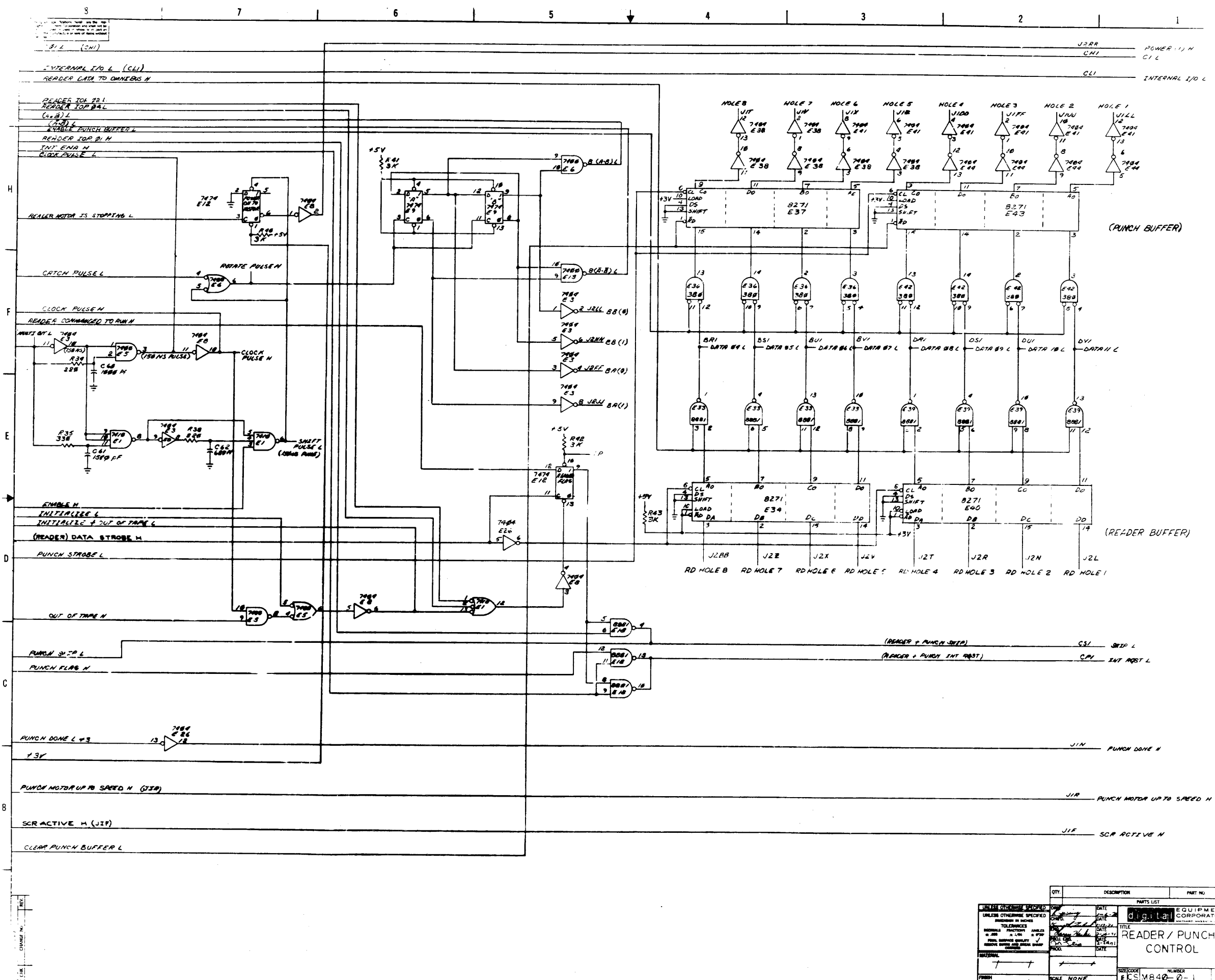
ETCH BOARD REV K

REV	EIA NO.	DEC NO.	EIA NO.	DEC NO.	EIA NO.
1	1	1	1	1	1
2	1	1	1	1	1
3	1	1	1	1	1
4	1	1	1	1	1
5	1	1	1	1	1

EQUIPMENT CORPORATION  
READER/PUNCH CONTROL  
ECS MR40-0-1



QTY	DESCRIPTION	PART NO.	REV.
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FINISHES MATERIALS EQUIPMENT CORPORATION		TITLE <b>READER/PUNCH CONTROL</b>	
DATE 1/18/60		REV. 1	
DRAWN BY R. J. KAY		SCALE AS SHOWN	
CHECKED BY R. J. KAY		SHEET 2 OF 3	
PART USED ON ECS M840-D-1		REV. 1	



UNLESS OTHERWISE SPECIFIED			
QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	8271 (E37)		
1	8273 (E43)		
1	7400		
1	7401		
1	7404		
1	7474		
1	8271 (E39)		
1	8271 (E40)		
1	8271 (E41)		
1	7400		
1	7401		
1	7404		
1	7474		

TITLE		DIGITAL EQUIPMENT CORPORATION	
READER / PUNCH CONTROL			
SCALE NONE	NUMBER	ECSM840-0-1	
SHEET 3 OF 3	REV		

ECSM840-0-1

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### WIRE TABLE

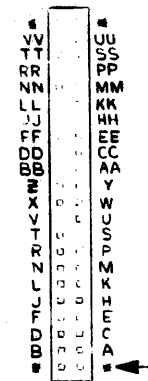
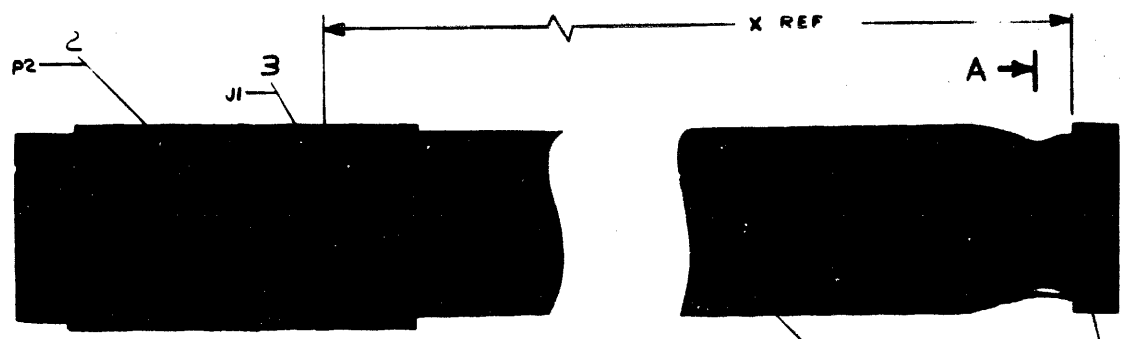
ITEM NO.	DESCRIPTION	FROM CONNECTION	TO CONNECTION	REMARKS
1	30 GREY	PI-D	P2-A2	
		F	B2	
		J	C2	
		L	D2	
		N	E2	
		R	F2	
		T	H2	
		V	J2	
		X	K2	
		Z	L2	
		BB	M2	
		DD	N2	
		FF	P2	
		JJ	R2	
		LL	S2	
		NN	T2	
		RR	U2	

### LEGEND

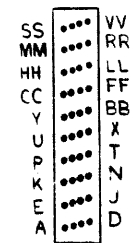
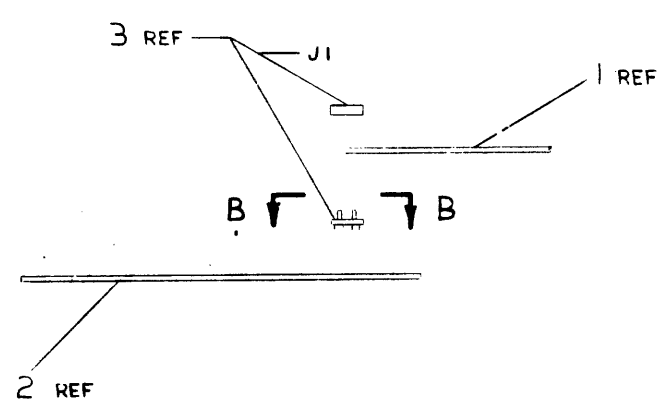
WIRE NO.	TYPE	DIM X
BCØ8K-36	7007036-Ø2	ØFT ± 2IN
BCØ8K-10	7007036-1Ø	1ØFT ± 2IN
ECØ8K-15	7007036-15	15FT ± 3IN
ECØ8K-25	7007036-25	25FT ± 3IN
BCØ8K-5Ø	7007036-5Ø	5ØFT ± 12IN

**NOTES:**

- CONNECTORS FI AND JI ARE TO BE WIRED POINT TO POINT PI-A TO JI -A THRU PI-VV TO JI -VV.
- ASTERISKS INDICATE CAVITIES NOT USE OF DESIGNATED BY LETTERS.
- ALL PI CONNECTIONS NOT LISTED ON THE WIRE TABLE ARE GROUND.



VIEW A-A  
(FOR REFERENCE ONLY)



VIEW B-B  
(JI REF)

ETCH BOARD CONNECTOR	1210073-0
M955 CABLE CONNECTOR	M955
I/O CABLE	SEE LEGEND

QTY.	DESCRIPTION	PART NO.	IT
	PARTS LIST		
	ETCH BOARD CONNECTOR	1210073-0	
	M955 CABLE CONNECTOR	M955	
	I/O CABLE	SEE LEGEND	

FIRST USED ON OPTION/MODEL	PC/E
TOLERANCES	DECIMAL
.XXX	+ .005
.XX	± .02
.X	± .1

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TO BE HOLD TO CLOSEST .015" UNLESS OTHERWISE SPECIFIED  
 MATERIAL: SEE PARTS LIST  
 NEXT HIGHER ASSY: +

REV.	CHG.	NO.	BY	DATE
A	ECØ8K-0001	A	GARDNER	5-11-71
B	BCØ8K-0002	B	GARDNER	5-11-71

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DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS						
ENGINEERING SPECIFICATION			DATE 8/13/70			
PC8-E READER PUNCH CONTROL						
REVISIONS						
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	Larry Narhi	APPD	<i>[Signature]</i>	SIZE	CODE	NUMBER	REV
DEC FORM NO				A	SP	PC8-EA-1	
DRA 107							

SHEET 1 OF 3

CONTINUATION SHEET		
PC8-E READER PUNCH CONTROL		
TITLE		
4.1	Continued - Punch IOT's PCE 6020 Clr Interrupt Enable PSF 6021 Skip if Punch Flag = 1 PCF 6022 Clr Flag PPC 6024 Load Buffer & Punch Character PLS 6026 Clr Flag, Load & Punch	
4.2	There are no maintenance instructions.	
4.3	Data format is parallel for both reader and punch. For the reader 8 bits are loaded from photo-cell into the reader buffer then onto the Data Bus. Then at the appropriate time the data is strobed into AC bits 4 thru 11. AC 11 being the least significant bit. The punch buffer is loaded from Data Bus bits 4 thru 11 then the contents of the punch buffer select or de-select solenoid drivers which punch the data.	
4.4	There are no timing diagrams.	
4.5	There are no operator controls except for one potentiometer that sets the clock circuit for a reader speed of 300 char/sec. This control is used during initial reader adjustment.	
5.	Interface Specifications	
5.1	All bus signals conform to the bus rules of the PDP-8/E. All signals between the reader and punch appear on pins of the 2 connectors that are pin compatible with the PCB/L.	
5.2	The following is a list of reader, punch variations for the 8/E.  PC04-BL Reader Punch, 60 cycle PC04-BM Reader Punch, 50 cycle PC04-PL Punch only, 60 cycle PC04-PM Punch only, 50 cycle PC04-RB Reader only OR PR8-ES 110 CPS Paper Tape Reader, 110V 50/60 cycles	

DEC FORM NO		SIZE	CODE	NUMBER	REV
DRA 108A		A	SP	PC8-EA-1	

SHEET 3 OF 3

CONTINUATION SHEET		
PC8-E READER PUNCH CONTROL		
TITLE		
1.	Overall Description The PC8-E is the reader/punch control for the PDP-8/E computer. The PC8/E is designed to control the reader/punch type PC04.	
2.	General Specification	
2.1	The interface, entirely TTL, is designed around the constraints of the PDP-8/E bus. All connections to the reader/punch is via shielded flex-print connected to edge-type connectors.	
2.2	Punch Done Timing may be either 4.5 milliseconds or 10 milliseconds, jumper selectable on the board. Reader timing may be slowed by removing two jumpers, for use with the PR8-ES Reader.	
2.3	The entire interface is contained on one 8 1/2" by 11" quad board.	
2.4	The temperature limits are 32F to 120F and relative humidity 10% to 90%, non-condensing. The power requirements are: + 5 volts at 1.25 amps. -15 volts at 75 milliamps.	
2.5	The control is completely compatible with all software that is PCB/L oriented.	
3.	Specification of Vendor-Supplied Equipment	
3.1	See applicable purchase specification for board components.	
4.	Programming	
4.1	Reader IOT's RPE 6010 Set interrupt enable for reader and punch RRF 6011 Skip if reader flag = 1 RRB 6012 Read reader buffer, clr flag RFC 6014 Clr flag, fetch character 6016 Same as 12 and 14	
NOTE: Initialize sets program Interrupt Enable Flag		

DEC FORM NO		SIZE	CODE	NUMBER	REV
DRA 107A		A	SP	PC8-EA-1	

SHEET 2 OF 3

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DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				DATE 1/22/71	
ENGINEERING SPECIFICATION					
TITLE PCB-E TEST PROCEDURE					
REVISIONS					
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY

ENG DEC FORM NO. 16-1022 DRA 108	APPD <i>Larry Stebbins</i>	SIZE A	CODE SP	NUMBER PCB-E-2	REV 4
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ENGINEERING SPECIFICATION				CONTINUATION SHEET	
TITLE PCB-E TEST PROCEDURE					
PRG5 - Punch test, random characters	PC04-BM/BL, PC04-PH/PL	PRG6 - Punch verify random characters	PC04-BM/BL, PC04-PH/PL	PRG7 - Combined reader and punch test, special binary count routine	PC04-BM/BL, PC04-PH/PL
PRG13- Reader speed print loop	PC04-RB	4.2 Consult the diagnostic write up for starting addresses and setup procedures.			
4.3 Execution times for the above test are as follows:					
	TEST	RUN TIME			
	PRG0	1 pass			
	PRG13	3 passes			
	PRG1	3 minutes each			
	PRG2-6	10 minutes			
	PRG7	Alternate between variable stall and high speed punch probes			
4.4 After a required sections of PCB diagnostic have been run, do the Teradyne copy routine as follows:					
4.5 Load tape in reader with Teradyne loader and test tape.					
4.5.1 Load in Teradyne loader in binary format.					
4.5.2 Turn punch on.					
4.5.3 Load and start 6101 for test tape					
4.5.4 After test tape has read through and a punch copy has been made.					
4.5.5 Load Marco 8 tape (in binary format)					
4.5.6 Load in punched copy into reader, and turn punch on.					
4.5.7 Load 200 Start 4002 - copies new tape.					
4.5.8 Take new copy load in reader.					
4.5.9 Load 200 Start 2002 prints out on TTY information on tape. Run for ten minutes.					
NOTE: Teradyne Loader tape is on front of test tape.					
4.6 Adjustment failures may occur during testing. All adjustments are preset, but should a minor adjustment be necessary use the new procedure as described in the PC04 manual.					
5.0 HEAT TEST					
5.1 Heat test is to be run after successful completion of all previously indicated tests.					
5.2 Run the combined reader-punch test (PRG7) for 5 minutes with the heat box down, ports closed and heat off. Load per loading procedure step 3.0.					
5.3 Raise the heat switch on the test station panel and once the indicator light goes off, run the combined reader-punch test (PRG7) test for 10 minutes.					
5.4 Turn the heat switch off and open the two ports on the left side of the heat box.					
5.5 Allow 15 minutes for the machine to cool before removing the heat box.					
5.6 Terminate the test once the machine has run for 5 minutes at room temperature.					

DEC FORM NO 16-1022 DRA 108	SIZE A	CODE SP	NUMBER PCB-E-2	REV 4
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ENGINEERING SPECIFICATION				CONTINUATION SHEET	
TITLE PCB-E TEST PROCEDURE					
1.0 EQUIPMENT					
1.1 PDP8/E standard					
1.2 Heat box					
1.3 455 scope and voltage probes					
1.4 Teletype					
1.5 PDB-E paper tape reader					
1.6 Binary loader tape					
1.7 M840 module and following options					
1.7.1 PR8-E - PC04-R and 1 BC08-K cable					
1.7.2 PPR-E - PC04-PH/PL and 1 BC08-K cable					
1.7.3 PCB-E - PC04-BM/BL and 2 BC08-K cables					
1.8 The following test tapes are also required:					
1.8.1 Test PRG0 (zeros) MAINDEC-00-DZ01-PT					
1.8.2 Test PRG2 (binary count) MAINDEC-00-DZ03-PT					
1.8.3 Teradyne copy routine tape					
1.9 box of paper tape					
2.0 TEST STATION SET UP					
2.1 Check paperwork in the envelope making sure it is complete as required by DEC standard # 101.					
2.1.1 Test and inspection record.					
2.1.2 Key sheet and ECO status sheet will contain both CS and etch revision.					
2.1.3 Quality Control inspection report.					
2.1.4 PDP8/E progress report (inserted at this time).					
2.2 Plug the PC04 power cord into the bench outlet.					
2.3 Insert the M840 module in the Omnibus per "Recommended Module Assignment List. (ASP-PDP8-E-0-4)".					
2.4 Insert the BC08-K cables as follows:					
Cable	From	To			
Reader	A1	J2 (M840)			
Punch	B1	J1 (M840)			
NOTE: If a PC04-RB (Reader) or PC04-PH (Punch) are ordered separately, only one BC08K cable is required.					
3.0 LOADING PROCEDURE					
3.1 Deposit Rim Loader (high speed) in PDP8-E per PDP8-E instruction card.					
3.2 Load Binary Loader using starting address of 7756.					
3.3 Load diagnostic MAINDEC-8E-DZCA using starting address of 7777.					
4.0 PCB-E CHECKOUT					
4.1 The following test programs to be run are:					
TEST NO	USED ON				
PRG0 - Basic reader and reader control logic test	PC04-BM/BL, PC04-R				
PRG1 - Basic punch and punch control logic test	PC04-BM/BL, PC04-PH/PL				
PRG2 - Reader test, special binary count pattern	PC04-BM/BL, PC04-R				
PRG3 - Punch test, special binary count pattern	PC04-BM/BL, PC04-PH/PL				
PRG4 - Punch verify, special binary count pattern	PC04-BM/BL, PC04-PH/PL				

DEC FORM NO 16-1022 DRA 108	SIZE A	CODE SP	NUMBER PCB-E-2	REV 4
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ENGINEERING SPECIFICATION				CONTINUATION SHEET	
TITLE PCB-E TEST PROCEDURE					
6.0 FINAL OPERATION AND INSPECTION					
6.1 Disconnect the M840 module from the PDP8-E and the cables from the reader and/or punch.					
6.2 Check that the following paperwork has been completed:					
Envelope					
ECO Status Sheet					
QC Sheet					
8/E Progress Report					

DEC FORM NO 16-1022 DRA 108	SIZE A	CODE SP	NUMBER PCB-E-2	REV 4
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DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS						
ENGINEERING SPECIFICATION						
TITLE PCB-E ACCEPTANCE PROCEDURE (Field)						DATE 5/18/71
REVISIONS						
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG Larry Narhi	APPD Dave Chertkow	SIZE CODE A	NUMBER 7665138-0	REV
DEC FORM NO 16 1022				DNA 107

SHEET 1 OF 3

ENGINEERING SPECIFICATION				CONTINUATION SHEET	
TITLE PCB-E ACCEPTANCE PROCEDURE					
continuous or as specified in the diagnostic write-up will be classified defective and returned to Production for repair.					

DEC FORM NO 16 1022	SIZE CODE A	NUMBER 7665138-0	REV
SHEET 3 OF 3			

ENGINEERING SPECIFICATION				CONTINUATION SHEET	
TITLE PCB-E ACCEPTANCE PROCEDURE (Field)					
1. Check Key Sheet and Construction Requisition to see which of the following is required.					
A. PR8-E					
B. PP8-E					
C. FC8-E					
D. MB4g					
2. Check MB4g module for proper revision (circuit schematic and etch). Also check for date coding.					
3. Make sure MB4g module has been heat tested.					
4. Check G918 module for correct revisions.					
5. Check mechanical workings of reader and punch (nothing is binding).					
6. Insure MB4g is in proper module assignment list along with all other modules.					
7. Load in diagnostic Maindec-8E-D2CA.					
8. A. Run Test 7, fifteen minutes on each speed. Punch blank leader. Load reader with blank leader. Load 2gg. Start ggg7. S.R. 6 varies speed. While running Test 7, move cable connections slightly.					
B. Test 13 reader speed test. Install a loop tape in reader. Load 2gg. Start gg13. Time reader for 30 seconds. Stop reader by putting bit g on a one and then back to a zero. It will type out; it must be over 3gg cps.					
C. Test 14 punch speed test Turn punch on. Load 2gg. Start gg14. After 6g seconds, set bit g to a 1 and then back to g. TTY types out punch speed. Must be over 50 cps.					
10. Module assignment list and physical order of modules must match each other before shipping.					
11. Any PCB-E which while performing Acceptance Test halts, generates error print outs, garble, or run- other than					

DEC FORM NO 16 1022	SIZE CODE A	NUMBER 7665138-0	REV
SHEET 2 OF 3			

**DIGITAL EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS  
**PARTS LIST**

<b>MADE BY</b> DATE Ken. GULICK 3/2/71	<b>CHECKED</b> DATE KEN GULICK 3/2/71	<b>SECTION</b> 1
<b>ENG</b> Larry Nadeau DATE 3-5-71	<b>PROD</b> CR Tompkins DATE 3/7/71	<b>ISSUED SECT.</b> 1

**QUANTITY / VARIATION**

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	PC8-E	PC8-EA	Quantity / Variation												
1	D-UA-PCØ4-Ø-Ø	PCØ4-BL PUNCH AND READER	1	-													
2	D-UA-BCØ8K-Ø-Ø	BCØ8K-6 CABLE ASSEMBLY	2	2													
3	E-CS-M84Ø-Ø-Ø	READER PUNCH	1	1													
4	D-UA-PCØ4-Ø-Ø	PCØ4-BM PUNCH AND READER	-	1													
5	B-MD-74Ø8955-Ø-Ø	BRACKET	1	1													
6	B-MD-74Ø8956-Ø-Ø	CLAMP	1	1													
7	9006557	KEPS NUT #4-40	2	2													
8	9006012-1	SCR JL HD PAN #4-40 X 7/16 LG	2	2													
9	9008864	TAPE DBL COATED PRESS SEN. 3/8	A/R	A/R													

<b>TITLE</b> HIGH SPEED PUNCH AND READER		<b>ASSY NO.</b> NONE	<b>SIZE CODE</b> A PL	<b>NUMBER</b> PC8-E-Ø	<b>REV</b>	<b>ECO NO</b>
<b>SHEET</b> 1 <b>OF</b> 1		<b>DIST.</b>				

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DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS						
ENGINEERING SPECIFICATION						
TITLE PCB-E ACCEPTANCE PROCEDURE (Field)						DATE 5/18/71
REVISIONS						
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG Larry Narhi	APPD Dave Chertkov	SIZE CODE A	NUMBER 7665138-0-0	REV
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DEC FORM NO 16-1022  
DMA 107

SHEET 1 OF 3

ENGINEERING SPECIFICATION				CONTINUATION SHEET	
TITLE PCB-E ACCEPTANCE PROCEDURE					
continuous or as specified in the diagnostic write-up will be classified defective and returned to Production for repair.					

SIZE CODE A	NUMBER 7665138-0-0	REV
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DEC FORM NO 16-1022  
DMA 107

SHEET 3 OF 3

ENGINEERING SPECIFICATION				CONTINUATION SHEET	
TITLE PCB-E ACCEPTANCE PROCEDURE (Field)					
1. Check Key Sheet and Construction Requisition to see which of the following is required.					
A. PR8-E					
B. PP8-E					
C. PCB-E					
D. MB4β					
2. Check MB4β module for proper revision (circuit schematic and etch). Also check for date coding.					
3. Make sure MB4β module has been heat tested.					
4. Check G918 module for correct revisions.					
5. Check mechanical workings of reader and punch (nothing is binding).					
6. Insure MB4β is in proper module assignment list along with all other modules.					
7. Load in diagnostic Maindec-8E-D2CA.					
8. A. Run Test 7, fifteen minutes on each speed. Punch blank leader. Load reader with blank leader. Load 2ββ. Start βββ7. S.R. 6 varies speed. While running Test 7, move cable connections slightly. B. Test 13 reader speed test. Install a loop tape in reader. Load 2ββ. Start ββ13. Time reader for 30 seconds. Stop reader by putting bit β on a one and then back to a zero. It will type out; it must be over 3ββ cps. C. Test 14 punch speed test Turn punch on. Load 2ββ. Start ββ14. After 6β seconds, set bit β to a 1 and then back to β. rrr types out punch speed. Must be over 50 cps.					
10. Module assignment list and physical order of modules must match each other before shipping.					
11. Any PCB-E which while performing Acceptance Test halts, generates error print outs, garble, or run other than					

SIZE CODE A	NUMBER 7665138-0-0	REV
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DEC FORM NO 16-1022  
DMA 107

SHEET 2 OF 3

ENGINEERING SPECIFICATION				CONTINUATION SHEET	
TITLE PCB-E ACCEPTANCE PROCEDURE (Field)					
1. Check Key Sheet and Construction Requisition to see which of the following is required.					
A. PR8-E					
B. PP8-E					
C. PCB-E					
D. MB4β					
2. Check MB4β module for proper revision (circuit schematic and etch). Also check for date coding.					
3. Make sure MB4β module has been heat tested.					
4. Check G918 module for correct revisions.					
5. Check mechanical workings of reader and punch (nothing is binding).					
6. Insure MB4β is in proper module assignment list along with all other modules.					
7. Load in diagnostic Maindec-8E-D2CA.					
8. A. Run Test 7, fifteen minutes on each speed. Punch blank leader. Load reader with blank leader. Load 2ββ. Start βββ7. S.R. 6 varies speed. While running Test 7, move cable connections slightly. B. Test 13 reader speed test. Install a loop tape in reader. Load 2ββ. Start ββ13. Time reader for 30 seconds. Stop reader by putting bit β on a one and then back to a zero. It will type out; it must be over 3ββ cps. C. Test 14 punch speed test Turn punch on. Load 2ββ. Start ββ14. After 6β seconds, set bit β to a 1 and then back to β. rrr types out punch speed. Must be over 50 cps.					
10. Module assignment list and physical order of modules must match each other before shipping.					
11. Any PCB-E which while performing Acceptance Test halts, generates error print outs, garble, or run other than					

SIZE CODE A	NUMBER 7665138-0-0	REV
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DEC FORM NO 16-1022  
DMA 107

SHEET 2 OF 3

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS <b>PARTS LIST</b>					QUANTITY / VARIATION													
MADE BY Ken. GULICK 3/2/71		CHECKED KEN GULICK 3/2/71		SECTION 1														
DATE		DATE		ISSUED SECT.														
ENG Larry Starks		PROD CK Tompkins		1														
DATE 3-5-71		DATE 3/17/71		1														
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION			PC8-E	PC8-EA												
1	D-UA-PC04-0-0	PC04-BL PUNCH AND READER			1	-												
2	D-UA-BC08K-0-0	BC08K-6 CABLE ASSEMBLY			2	2												
3	E-CS-M840-0-1	READER PUNCH			1	1												
4	D-UA-PC04-0-0	PC04-BM PUNCH AND READER			-	1												
5	B-MD-7408955-0-0	BRACKET			1	1												
6	B-MD-7408956-0-0	CLAMP			1	1												
7	9006557	KEPS NUT #4-40			2	2												
8	9006012-1	SCR IL HD PAN #4-40 X 7/16 LG			2	2												
9	9008864	TAPE DBL COATED PRESS SEN. 3/8			A/R	A/R												
TITLE MEDIUM SPEED PUNCH AND READER				ASSY NO. NONE		SIZE CODE <b>A PL</b>		NUMBER PC8-E-0				REV	ECO NO					
				SHEET 1 OF 1		DIST												

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				LEGEND		QUANTITY / VARIATION												
MADE BY J. Mc Cluskey		CHECKED <i>[Signature]</i>		SECTION		D	DOCUMENT											
DATE 4/10/72		DATE 4/15/72				DN	DOCUMENT CHANGE NOTICE											
ENG L. Narhi		PROD <i>[Signature]</i>		ISSUED SECT.		PA	PAPER TAPE ASCII											
DATE 4/10/72		DATE 4/18/72				PB	PAPER TAPE BINARY											
						PM	PAPER TAPE READ-IN-MODE											
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION				PC8-E	PC8-EA	PC8-EF	PC8-EG				KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE
1	PC04-BL	High Speed Reader and Punch 60 HZ				1	0	0	0									
2	PC04-BM	High Speed Reader and Punch 50 HZ				0	1	0	0									
3	PC04-BL-TABLETOP	High Speed Reader And Punch 60 HZ Tabletop				0	0	1	0									
		Version with P.C. Cover																
4	PC04-BM-TABLETOP	High Speed Reader and Punch 50 HZ Tabletop				0	0	0	1									
		Version with P.C. Cover																
5	M840	High Speed Reader and Punch Control					1	1	1									
6	BC08-K	Control Cables				2	2	2	2									
7	LIBKIT-8E-PC9E-01	Maindecs for the High Speed Reader and Punch				1	1	1	1									
8	DEC-00-PC0A-DC1	PC04/PC05 Paper tape Reader Punch Manual				1	1	1	1									
9	ROYAL MC BEE	High Speed Punch Maintenance Manual				1	1	1	1									
<del>10</del>	<del>DEC-00-PC0A-DC1</del>	<del>PC8/E Maintenance Manual</del>				<del>1</del>	<del>1</del>	<del>1</del>	<del>1</del>									
11	A-ML-PC8-E	PC8/E Print set				1	1	1	1									
12	DEC-00-PC04/5-DWG	PC04/PC05 Paper Tape Reader Punch Engineering Drawings				1	1	1	1									
13	36-5103	Box of Fanfold tape				4	4	1	1									
NOTE: THE FOLLOWING ITEMS MUST BE ADDED FOR FIELD ADD-ON'S ONLY																		
14	90-8851	Mounting hardware Bag				1	1	0	0									
15	91-7673-06	AC Line Cord 6 Ft.				1	1	1	1									
TITLE Accessory List For PC8-E				ASSY. NO.		SIZE	CODE	NUMBER			REV	ECO NO						
						A	AL	PC8-E-3			3	PC8-E						
SHEET				OF		DIST.												