

# DRAWING DIRECTORY

"THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1973, DIGITAL EQUIPMENT CORPORATION"

## CUSTOMER PRINT SET INDEX

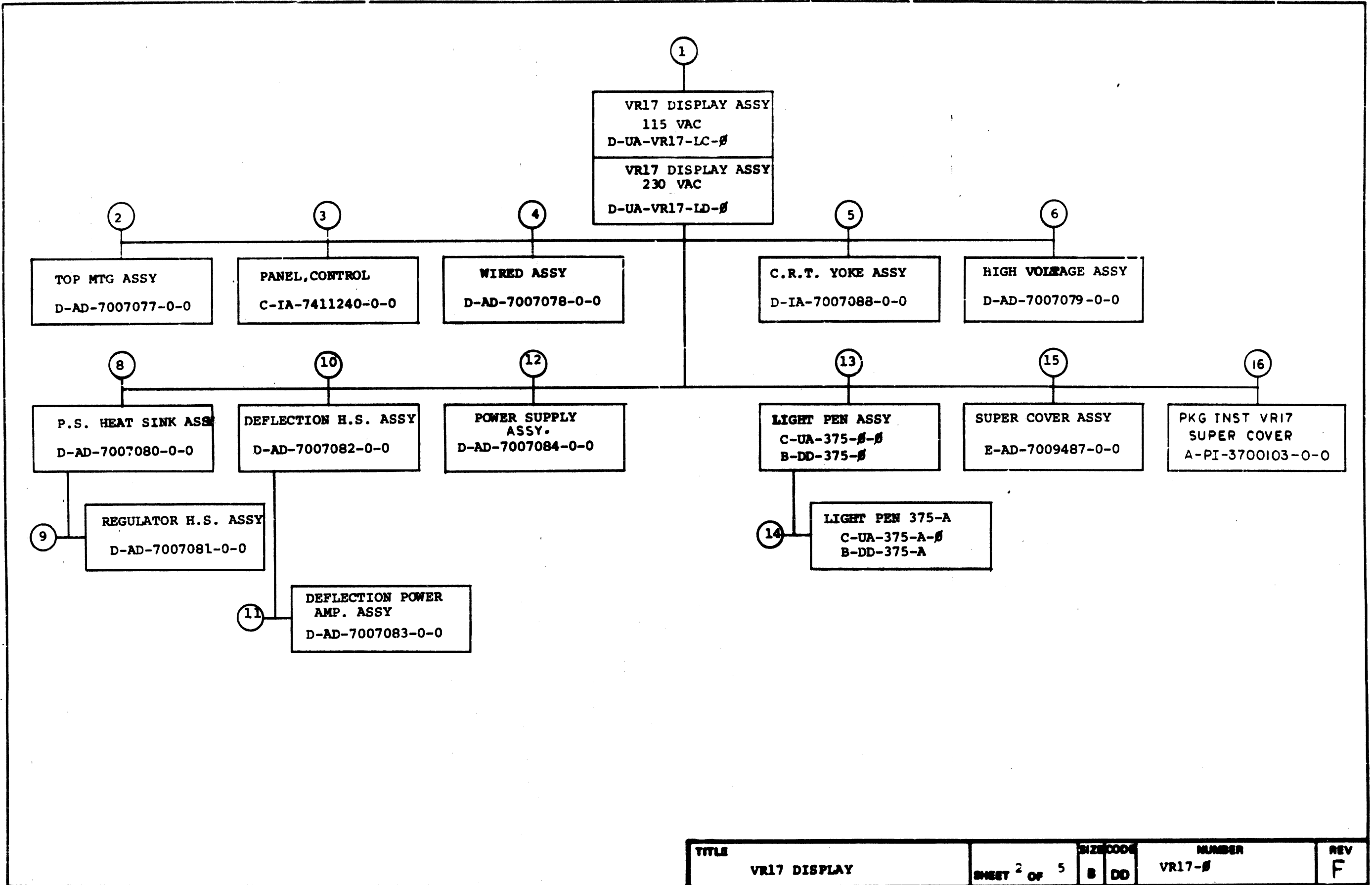
THIS IS PRINT SET     

	SEQUENCE		SEQUENCE
DRAWING DIRECTORY	B-DD-VR17-Ø		MFG SET
ENGINEERING SPECIFICATION	A-SP-VR17-Ø-4	CHECKOUT & ACCEPTANCE PROC.	A-SP-VR14-0-6
BLOCK SCHEMATIC	E-IC-VR14-Ø-1	HIGH VOLTAGE ASSY	D-AD-7007079-Ø-0
MODULE UTILIZATION	C-MU-VR14-Ø-3	HIGH VOLTAGE ASSY (PL)	A-PL-7007079-0-0
MODULE UTILIZATION	A-PL-VR14-Ø-3		
CIRCUIT SCHEMATIC (G836Ø)	D-CS-G836Ø-Ø-1		
CIRCUIT SCHEMATIC (G84Ø)	D-CS-G84Ø-Ø-1	POWER SUPPLY HEAT SINK ASSY	D-AD-7007080-0-0
CIRCUIT SCHEMATIC (A225)	D-CS-A225-Ø-1	POWER SUPPLY HEAT SINK ASSY (PL)	A-PL-7007080-0-0
CIRCUIT SCHEMATIC (W684)	D-CS-W684-Ø-1	REGULATOR HEAT SINK ASSY	D-AD-7007081-0-0
CABLE KEY BD. INTERLOCK	C-IA-7009248-0-0	REGULATOR HEAT SINK ASSY (PL)	A-PL-7007081-0-0
CIRCUIT SCHEMATIC (HEAT SINK)	C-CS-7007080-0-1	DEFLECTION HEAT SINK ASSY	D-AD-7007082-0-0
CIRCUIT SCHEMATIC (DEFLECTION)	C-CS-7007082-0-1	DEFLECTION HEAT SINK ASSY (PL)	A-PL-7007082-0-0
CIRCUIT SCHEMATIC (POWER SUPPLY)	D-CS-7007084-0-1	DEFLECTION POWER AMP ASSY	D-AD-7007083-0-0
VR17 DISPLAY ASSY	D-UA-VR17-Ø-Ø	DEFLECTION POWER AMP ASSY (PL)	A-PL-7007083-0-0
VR17 DISPLAY ASSY (PL)	A-PL-VR17-Ø-Ø	POWER SUPPLY ASSY	D-AD-7007084-0-0
WIRED ASSY	D-AD-7007078-0-0	POWER SUPPLY ASSY (PL)	A-PL-7007084-0-0
WIRED ASSY (PL)	A-PL-7007078-0-0	LIGHT PEN ASSY (375-A)	C-UA-375-A-Ø
		SUPER COVER ASSY	E-AD-7009487-0-0
		POWER SWITCH ASSY	D-IA-7009646-0-0
C.R.T. YOKE ASSY	D-IA-7007088-0-0	PACKAGING INSTRUCTIONS	A-PI-3700103-0-0
LIGHT PEN ASSY	C-UA-375-Ø-Ø	TOP MTG. ASSY	D-AD-7007077-0-0
VR17 ACCESSARY LIST	A-AL-VR17-Ø-6	TOP MTG. ASSY (PL)	A-PL-7007077-0-0

UNIT VARIATIONS		PRINT SET	
VAR	TITLE	VR17-Ø	
VR17-LC	VR17 DISPLAY 115 VAC		
VR17-LD	VR17 DISPLAY 230 VAC		

REV	CHG. NO.	DATE	USED ON OPTION/MODEL	DRN.	DATE	TITLE
A				PHIL REED	9/26/73	VR17 DISPLAY
B				<i>OK Cable</i>	10-19-73	
C				<i>PROJ ENG. H. ...</i>	10/19/73	
D				PROD.	11/19/73	
E				FIELD SERV.	10/19/73	
F						

DRB 106-106-106-106-106-106



TITLE	VR17 DISPLAY	SHEET 2 OF 5	SIZE CODE B DO	NUMBER VR17-Ø	REV F
-------	--------------	--------------	-------------------	------------------	----------

CUSTOMER PRINT SET		ELECTRICAL					CUSTOMER PRINT SET		ELECTRICAL						
VR17-Ø	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	VR17-Ø	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
		1	D-UA-VR17-0-0	F	3	VR17 DISPLAY ASSY				10	D-AD-7007082-0-0		1	DEFLECTION H.S. ASSY	
X			E-IC-VR14-Ø-1	#	1	BLOCK SCHEMATIC		X			A-PL-7007082-0-0		1	DEFLECTION H.S. ASSY (PL)	
X			C-MU-VR14-Ø-3	#	1	MODULE UTILIZATION					C-CS-7007082-0-1	#	1	CIRCUIT SCHEMATIC (DEFLECTION)	
X			A-PL-VR14-Ø-3	#	1	MODULE UTILIZATION (PL)									
X			A-SP-VR17-Ø-4	*		ENGINEERING SPECIFICATION									
	X		A-SP-VR14-0-6	#		CHECKOUT & ACCEPTANCE PROC.									
X			D-CS-A225-Ø-1	#	2	CIRCUIT SCHEMATIC (A225)									
X			D-CS-W684-Ø-1	#	2	CIRCUIT SCHEMATIC (W684)									
X			L-LV-VR17-Ø-6	*	1	VR17 ACCESSARY LIST				12	D-AD-7007084-0-0		2	POWER SUPPLY ASSY	
X			D-CS-G8360-0-1	#	2	CIRCUIT SCHEMATIC (G836Ø)					A-PL-7007084-0-0		3	POWER SUPPLY ASSY (PL)	
								X			D-CS-7007084-0-1	#	2	CIRCUIT SCHEMATIC (P.S.)	
X		4	D-AD-7007078-0-0	#	1	WIRED ASSY									
X			A-PL-7007078-0-0	#	2	WIRED ASSY (PL)				13	C-UA-375-Ø-Ø		1	LIGHT PEN ASSY	
								X			D-CS-G84Ø-Ø-1	#	2	CIRCUIT SCHEMATIC (G84Ø)	
		8	D-AD-7007080-0-0		1	P.S. HEATSINK ASSY									
			A-PL-7007080-0-0		1	P.S. HEATSINK ASSY (PL)									
X			C-CS-7007080-0-1	#	1	CIRCUIT SCHEMATIC (HEATSINK)									

CUSTOMER PRINT SET CODES  
X = PRINT OF DOCUMENT INCLUDED IN PRINT SET  
C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT  
S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED

TITLE: VR17 DISPLAY  
SHEET 3 OF 5  
SIZE CODE: B DD  
NUMBER: VR17-Ø  
REV: F



CUSTOMER PRINT SET		MECHANICAL					CUSTOMER PRINT SET		MECHANICAL						
VR17-Ø	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	
	X	10	D-AD-7007082-0-0	#	1	DEFLECTION HEATSINK ASSY									
	X		A-PL-7007082-0-0	#	1	DEFLECTION HEATSINK ASSY									
									X	16	A-PI-3700103-0-0	2	PKG INST VR17 SUPER COVER		
												2	OUTER CARTON		
												2	INNER CARTON / FOAM		
												2	INNER SLEEVE		
	X	11	D-AD-7007083-0-0	#	1	DEFLECTION POWER AMP ASSY									
	X		A-PL-7007083-0-0	#	2	DEFLECTION POWER AMP (PL)									
	X	12	D-AD-7007084-0-0	#	2	POWER SUPPLY ASSY									
	X		A-PL-7007084-0-0	#	3	POWER SUPPLY ASSY (PL)									
			E-IA-7007147-0-0		1	POWER SUPPLY CABLE HARN.									
			D-IA-7408433-0-0			COVER, CAPACITOR HOLD DOWN									
			E-IA-7408402-0-0			PLATE, SIDE MTG									
			B-MD-7408416-0-0			COVER, PROTECTION									
			C-PS-1211667-0-0			SHIELD COVER									
			D-PS-1211668-0-0			SHIELD TRANSFORMER									
X		13	C-UA-375-Ø-Ø 1209608	#	1	LIGHT PEN ASSY CABLE, SWITCHCRAFT									
	X	14	C-UA-375-A-Ø 5410268	#	1	LIGHT PEN ASSY (375-A) INFRA-RED LIGHT PEN									
		15	E-AD-7009487-0-0	#		SUPER COVER ASSY									
			E-IA-7411239-0-0			EXTRUSION ASSY LOWER CORNER									
			E-IA-7411238-0-0			LOWER EXTRUSION ASSY									
			E-IA-7411232-0-0			COVER, TOP									
			F-IA-7411241-0-0			PANEL, BOTTOM									
			E-MD-7411197-0-0			COVER PANEL, REAR									
			D-PS-1211459-0-0			SHIM, CHASSIS (R.H.)									
			D-PS-1211460-0-0			SHIM, CHASSIS (L.H.)									
			C-MD-7411677-0-0			SHIM, CHASSIS (R.H.) REWORK									
			C-MD-7411678-0-0			SHIM, CHASSIS (L.H.) REWORK									
CUSTOMER PRINT SET CODES	X = PRINT OF DOCUMENT INCLUDED IN PRINT SET C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED						TITLE	VR17 DISPLAY		SIZE CODE	B DD		NUMBER	VR17-Ø	
								SHEET 5 OF 5						REV F	

This drawing and specifications herein are the property of Digital Equipment Corporation and shall not be reproduced, stored in a retrieval system, or used in whole or in part as the basis for the manufacture of parts of systems without written permission.

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS						
						DATE 10-24-73
TITLE VR17 SPECIFICATION						
REVISIONS						
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
H.Lavoie 10/24/73						
ENG	<i>Herve Lavoie</i>	APPD	<i>Herve Lavoie</i>	SIZE	CODE	NUMBER
				A	SP	VR17-β-4
						REV

DEC FORM NO. DEC 16-(301)-1022-N370  
ORA 107A

SHEET 1 OF 6

ENGINEERING SPECIFICATION				CONTINUATION SHEET
TITLE VR17 SPECIFICATION				
<b>GENERAL DESCRIPTION:</b>				
The VR17 is a self-contained CRT display unit requiring only analog position and digital unblanking information. It is designed for use with a digital display controller. The amount of information displayed depends on the specific system; however, 1250 random points can be displayed flicker free at a 40 Hz refresh rate. Viewable area is 90 inches square with an aspect ratio of 3:4. The unit is 10 1/2 inches high, 19 inches wide, 17 inches deep, and weighs about 75 pounds. It is available in either a rack mounted or table top model.				
<b>OPERATOR CONTROLS:</b> (All controls labeled as to function)				
Front Panel:				
Brightness/ON-OFF	Manual brightness control and AC power switch.			
Internal Controls: These controls accessible from the top of the unit through the safety screen.				
Deflection Controls: The following controls are 10 turn pots located on the deflection amplifiers (A225). All inputs have protection against momentary excessive voltage.				
X Gain	Controls horizontal input sensitivity			
Y Gain	Controls vertical input sensitivity			
X Position	Manual Position Control			
Y Position	Manual Position Control			
	SIZE	CODE	NUMBER	REV
	A	SP	VR17-β-4	

DEC FORM NO. DEC 16-(301)-1022-N370  
ORA 108

SHEET 2 OF 6

ENGINEERING SPECIFICATION				CONTINUATION SHEET
TITLE VR17 SPECIFICATION				
NOTE: With deflection inputs grounded, the position controls allow the beam to be positioned anywhere within the usable screen area.				
CRT Controls: These controls are 10 turn pots located on the G836 power supply module. Their purpose is to adjust focus and grid bias voltages. They are adjusted at the factory.				
Focus: Adjusted for best overall focus.				
Brightness Preset: To adjust the range of the front panel brightness control.				
<b>GENERAL ELECTRICAL SPECIFICATION:</b>				
Spot Size: <20 mils inside the usable screen area at a brightness of 25 ft. lamberts. Spot size is measured using shrinking raster technique at a brightness of greater than 30 ft. lamberts.				
Jitter: $\leq +1$ spot diameter (Repeatability is the deviation from the nominal location of any given spot)				
Gain Change: From a fixed point on the screen, less than +0.3% gain change for each +1% line voltage variation.				
Temperature Range: 0 to 50°C operating.				
Relative Humidity: 10 to 90% noncondensing.				
Brightness: <30 ft. lamberts; measured using a shrinking raster technique.				
Linearity: Maximum deviation of any straight line will be <1% of the line length measured perpendicular to a best fit straight line.				
	SIZE	CODE	NUMBER	REV
	A	SP	VR17-β-4	

DEC FORM NO. DEC 16-(301)-1022-N370  
ORA 108

SHEET 3 OF 6

ENGINEERING SPECIFICATION				CONTINUATION SHEET
TITLE VR17 SPECIFICATION				
Deflection Method: Magnetic (70° diagonal deflection angle)				
Focus Method: Electrostatic				
High Voltage: 10.5KV DC nominal (voltage proportional to input line voltage). Supply is self-contained and equipped with a bleeder resistor.				
Shielding: CRT from tip of neck to high voltage receptacle is fully enclosed in a magnetic shield.				
Overload Protection: Unit is protected against fan failure or air blockage by thermal cutout.				
<b>DEFLECTION AMPLIFIER SPECIFICATION</b>				
1. Deflection Amplifiers are DC coupled and are capable of sustaining a worst case AC or DC deflection at environmental extremes.				
2. Input Specification				
a. Inputs are differential				
b. Differential input impedance ... 5K ohms minimum				
c. Input sensitivity ... 200 mv/inch maximum				
d. Common Mode Rejection Ratio ... 40 db				
e. Maximum Operating Input ... +6" (Maximum operating input is the sum of the common mode input and the differential input)				
f. Input offset not to exceed +1/2 peak to peak input signal.				
g. Maximum non-operating input ... +50V				
	SIZE	CODE	NUMBER	REV
	A	SP	VR17-β-4	

DEC FORM NO. DEC 16-(301)-1022-N370  
ORA 108

SHEET 4 OF 6

**ENGINEERING SPECIFICATION**

CONTINUATION SHEET

TITLE VR17 SPECIFICATION

- 3. Full screen deflection and settling time to within  $\pm 1$  spot diameter .....  $\leq 18 \mu s$
- 4. Small signal settling time to within 1/2 spot diameter ...  $\leq 1 \mu s$  for a 0.1 inch deflection.
- 5. Small signal linear slew rate ...  $\geq 0.4$  inch in  $1 \mu s$
- 6. Velocity error coefficient ... 500 ns maximum. (Average ramp delay between input and output)

Z AXIS SPECIFICATION

- 1. Z Input: A negative transition from  $\geq +2.4V$ , but not exceeding  $+8V$ , to  $\leq +0.8V$ , but not less than  $-4V$ , in  $20 ns$  will cause an unblanking pulse at the CRT cathode from approximately  $+60V$  to ground with a duration of  $\geq 200 ns$  at the 50% points. Delay between the 50% point of the negative input transition to the 50% point of the output pulse is less than  $100 ns$ .
- 2. Z Direct: A positive going pulse not exceeding  $35V$ , but at least  $20V$  in height and not exceeding  $10 \mu s$  in duration will unblank the CRT to a viewable intensity. This signal is AC coupled to the CRT grid.
- 3. Channel Select: With the Channel Select Switch in the Channel 1 position, a positive level of greater than  $+2.4V$ , but not  $+8V$  will enable the Z input circuit. A level of less than  $+0.8V$  but not less than  $-4V$  will disable the circuit. With the switch in the Channel 2 position, a positive level will enable the Z circuit; a negative level will disable it. Placing the switch in the Channel 1 and 2 position disables

SIZE	CODE	NUMBER	REV
A	SP	VR17- $\beta$ -4	

**ENGINEERING SPECIFICATION**

CONTINUATION SHEET

TITLE VR17 SPECIFICATION

this input.

POWER SUPPLY SPECIFICATION:

- 1. All power supplies necessary for operation of the unit are self contained.

2. Input Requirements

Voltage:  $100V \pm 10\%$   
 $117V \pm 10\%$   
 $230V \pm 10\%$

Selectable by tap changes.

Frequency:  $50 - 60 Hz$

Power:  $\leq 500$  watts

Current:  $\leq 5$  amperes

Type: Single Phase

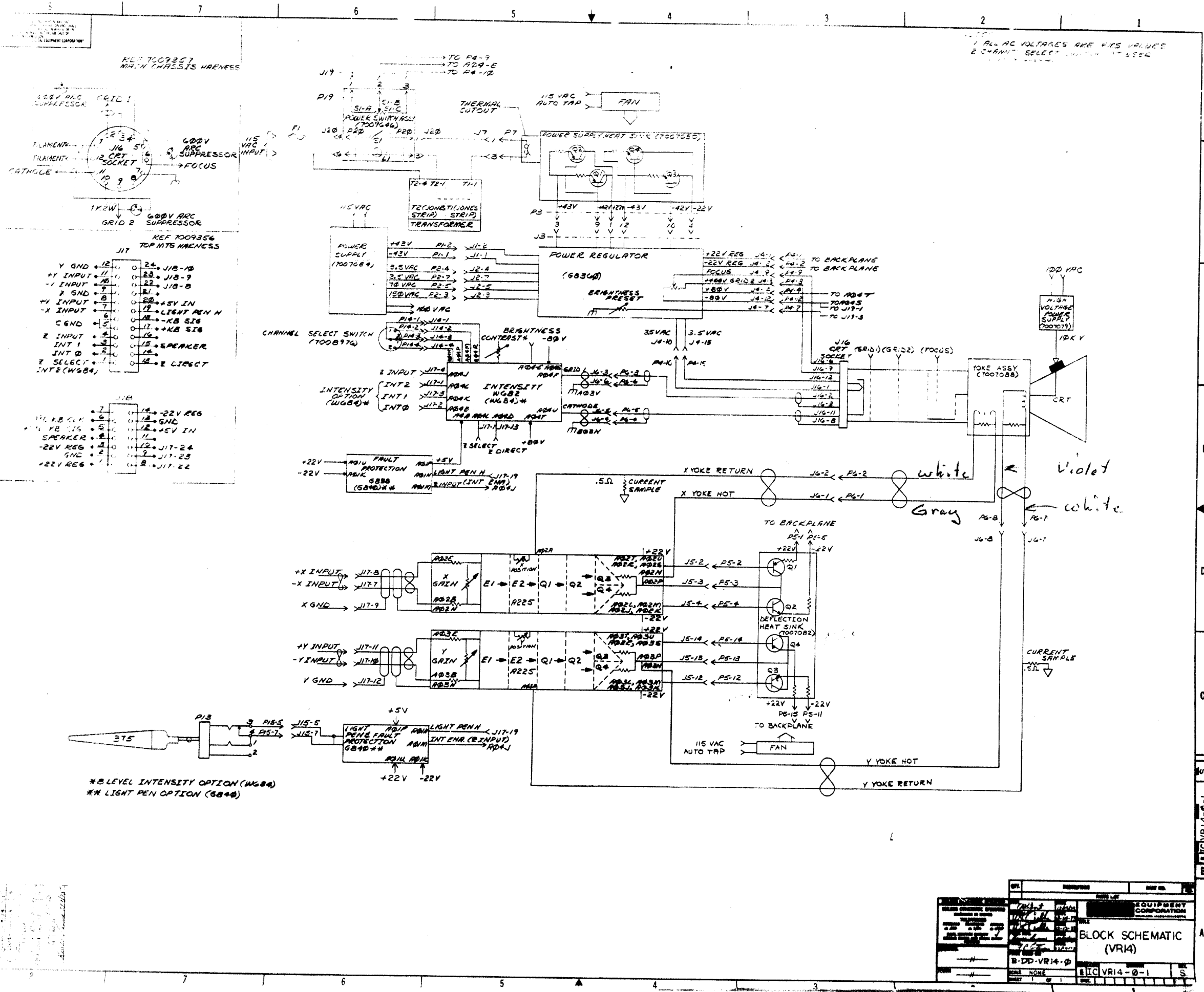
NOTE: Different AC power receptacles are provided on 200 and 230V units.

- 3. Fuses are provided and labeled as to function, type, and rating for the primary circuit and deflection power circuits.
- 4. Thermal Cutout, which operate on the AC primary, are used to prevent damage due to fan failure, air blockage, or excessive ambient temperature.

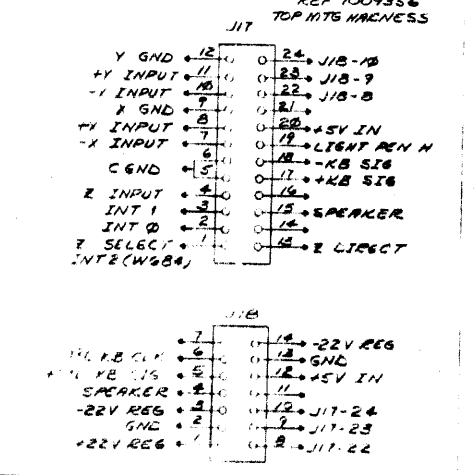
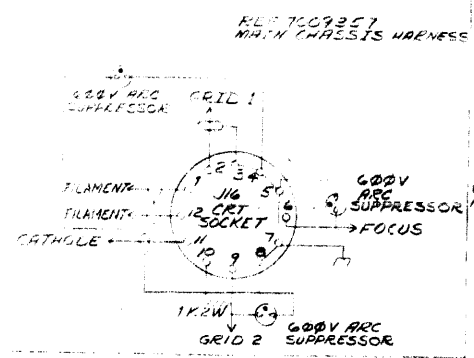
REAR PANEL CONNECTIONS:

All inputs and outputs are available at a 24 pin plug DEC #1209630. Details of plug should refer to print #V

SIZE	CODE	NUMBER	REV
A	SP	VR17- $\beta$ -4	



1. ALL AC VOLTAGES ARE RMS VALUES  
 2. CHANNEL SELECT SWITCH AT USER'S OPTION



\* B LEVEL INTENSITY OPTION (WGB4)  
 \*\* LIGHT PEN OPTION (GB44)

REV	DESCRIPTION	DATE	BY
1	ISSUED FOR CONSTRUCTION	10/1/68	W. J. ...
2	REVISED TO ADD ...	10/1/68	W. J. ...
3	REVISED TO ADD ...	10/1/68	W. J. ...
4	REVISED TO ADD ...	10/1/68	W. J. ...
5	REVISED TO ADD ...	10/1/68	W. J. ...

EQUIPMENT CORPORATION  
 BLOCK SCHEMATIC (VR14)  
 B-DD-VR14-0  
 BIC VR14-0-1

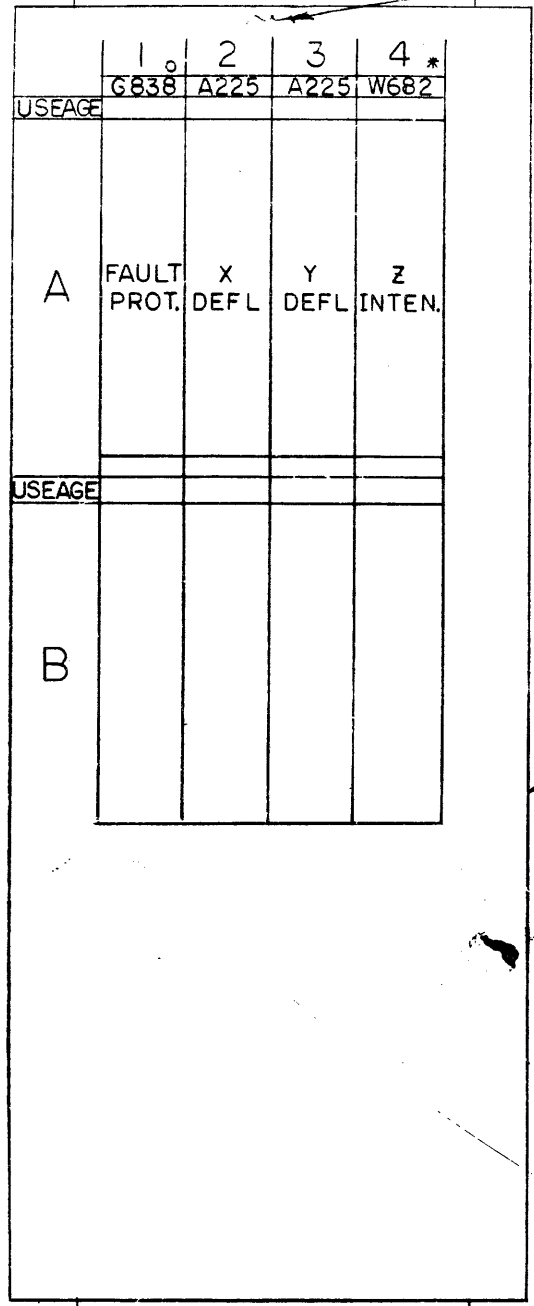


This drawing and specifications, herein, are the property of Digital Equipment Corporation and shall not be reproduced or copied or used in whole or in part as the basis for the manufacture or sale of items without written permission. 1973

SEE NOTE #2

NOTES:

- 1. MODULE INFORMATION SHOWN FROM WIRING SIDE.
- 2. A225' ARE REPLACED WITH A225-YB'S CH VRI4-LC AND LD



SEE NOTE #1

o G840 LIGHT PEN OPTION } (STANDARD ON VRI4 LC, LD)  
 \* W684 8 LEVEL INTENSITY OPTION

CHIK	CHANGE NO.	REV.
	VRI4-00019	A
	<i>Billard 8-10-72</i>	
	A. HISHMAN	
	VRI4-00022	B
	<i>7 June 1-3-73</i>	
	A. FISHMAN	
	VRI4-00030	C
	<i>1-1-73</i>	
	R. Rowles 1-3-74	
	H. LAVOIE	
	<i>14-74 DP</i>	

FIRST USED ON OPTION/MOD	QTY.	DESCRIPTION	PART NO.	ITE/1 NO.
VRI4				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED		DRN <i>D.K. Gable</i>	DATE 9/28/70	<b>digital EQUIPMENT CORPORATION</b> <small>MAYNARD, MASSACHUSETTS</small> <b>TITLE</b> MODULE UTILIZATION (VRI4)
UNLESS OTHERWISE SPECIFIED		CHK'D <i>D.K. Gable</i>	DATE 9/29/70	
DIMENSION IN INCHES		ENG <i>D.K. Gable</i>	DATE 11/6/70	
TOLERANCES		PROJ. ENG. <i>C. Fishman</i>	DATE 11-6-70	
DECIMALS ± .005		PROD. <i>R. Peterson</i>	DATE 11/6/70	
FRACTIONS ± 1/64				
ANGLES ± 0°30'				
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL		NEXT HIGHER ASSY		
+ + +		D-UA-VRI4-0-0		
FINISH		SCALE + + +		
+ + +		SHEET 1 OF 1	SIZE CODE <b>CMU</b>	NUMBER <b>VRI4-0-3</b>
				REV. <b>C</b>

REV. C  
NUMBER VRI4-0-3  
SIZE CODE CMU

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

**QUANTITY VARIATION**

MADE BY	D.K. Crabbe	CHECKED	D.K. Crabbe	SECTION	
DATE	9/28/70	DATE	10/8/70	ISSUED SECT.	1
ENG	D.K. Crabbe	PROD	R. Peterson		
DATE	11/6/70	DATE	11/6/70		

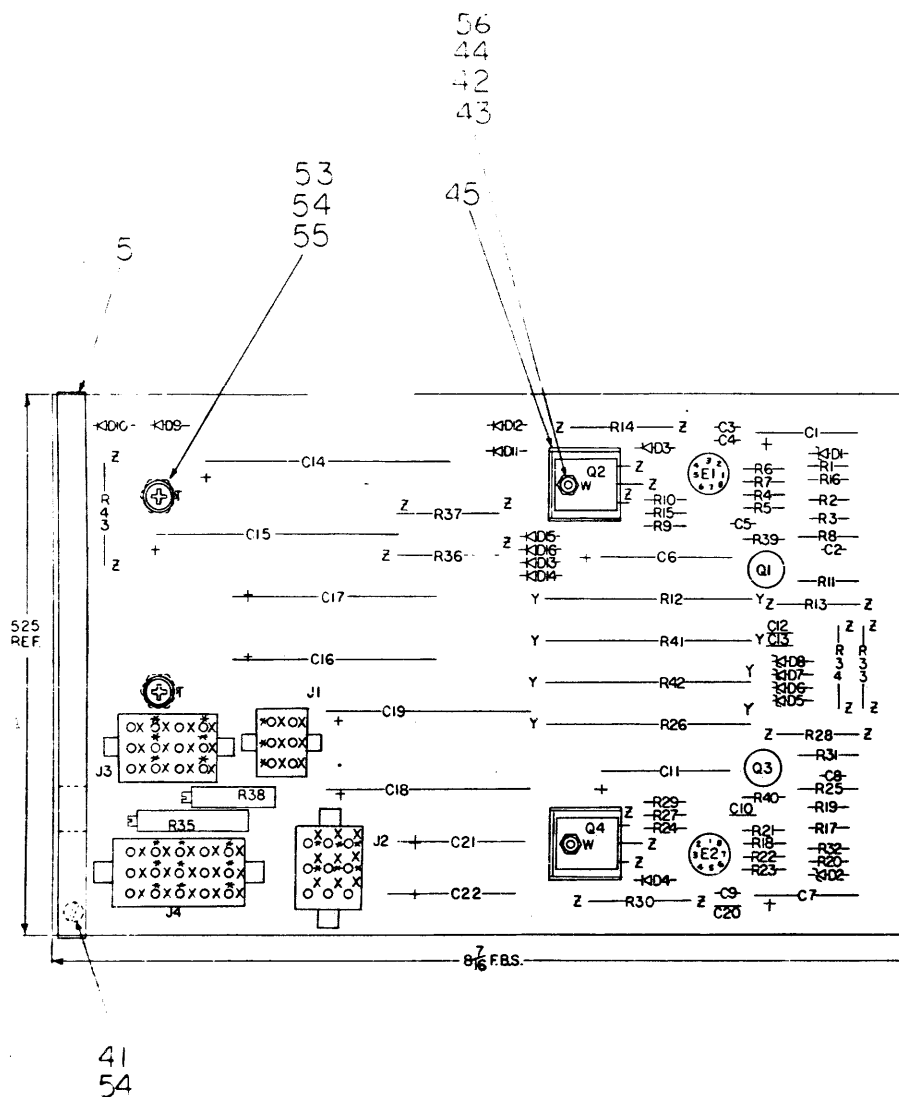
VR14-Ø	VR14-A	VR14-B	VR14-C	VR14-D	VR14-E	VR14-F	VR14-G						
--------	--------	--------	--------	--------	--------	--------	--------	--	--	--	--	--	--

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION
1	A225	Deflection Amplifier
2	W682	Intensity Amplifier
3	G838	Fault Protection
4	G840	LIGHT PEN & FAULT PROTECTION
5	W684	8 LEVEL INTENSITY
6	A225-YB	DEFLECTION AMPLIFIER

2	2	2	2	2	2	-	-						
-	1	1	1	1	1	-	-						
-	1	1	1	1	1	-	-						
A	RA	RA	RA	RA	RA	R	R	1	1				
A	RA	RA	RA	RA	RA	R	R	1	1				
-	-	-	-	-	-	2	2						

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO
MODULE UTILIZATION LIST	A-MU-VR14-Ø-3	A	PL	VR14-Ø-3	C	Ø-30
DEC FORM NO.16-1031 DRA 110	SHEET 1 OF 1	DIST				

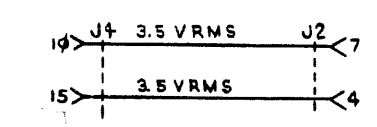
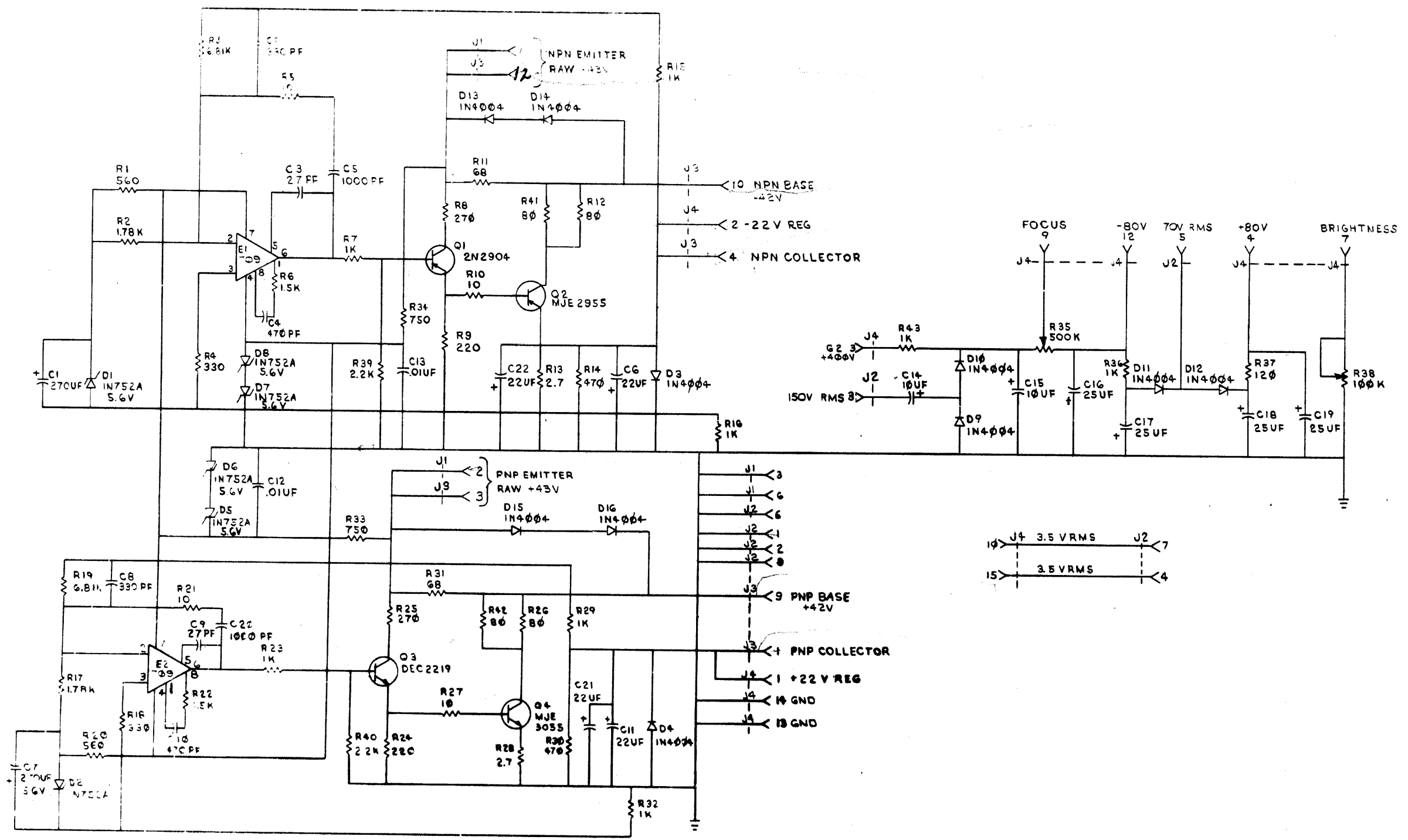
NOTES:



IC TYPE	GND	+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE		
IC PIN LOCATIONS		
8	7	6

ETCHED CIRCUIT BOARD		50 5 2	1
1	KEY COFFER PLATE HOLE LOCATION	X-CO-GR-14	1
2	KEY COFFER PLATE HOLE LAYOUT	D-AH-5832A-5	3
3	MODULE ECN HISTORY	B-MH-53-62-5	4
4	COVER CAPA. TAB	7108415	5
5	RES. 10K 1/4 W 20% 1/4 PR F	1309 47-14	6
6	CAP 3.0UF 100V 20% DM	1000023	7
7	CAP 170PF 100V 5% D. ML	1000024	8
8	CAP 1000PF 100V 5% MICA	1000042	9
9	CAP 22UF 50V 10% 5. TANT	1011318	10
10	CAP 10UF 100V 20% DISC.	1001410-1	11
11	CAP 27PF 100V 5% MICA	1001739	12
12	CAP 220UF 15V 10% 5. TANT	1001856	13
13	CAP 25UF 150V 10% AL. EL.	1009438	14
14	CAP 10UF 450V 5% AL. EL.	1009439	15
15	DIODE 1N75A 5.6V	1102808	16
16	DIODE 1N4004	1105792	17
17	RES. 68 1/2 W 5%	1309435	18
18	RES. 120 2W 5%	1305282	19
19	RES. 10 1/4 W 5%	1301317	20
20	RES. 270 1/2 W 5%	1300285	21
21	RES. 330 1/4 W 5%	1300295	22
22	RES. 220 1/4 W 5%	1300271	23
23	RES. 1K 1/4 W 5%	1300365	24
24	RES. 1K 2W 5%	1301352	25
25	RES. 1.5K 1/4 W 5%	1300391	26
26	RES. 2.2K 1/4 W 5%	1300417	27
27	RES. 1K 2W 5%	1301953	28
28	RES. 560 1/4 W 5%	1301850	29
29	RES. 750 1W 5%	1302385	30
30	RES. 80 10W 1% WW	1310701	31
31	RES. 178K 1/8 W 1% (RN55D-1781F)	1302612	32
32	RES. 6.81K 1/8 W 1% (RN55D-6811F)	1304870	33
33	RES. 507K 1W 10% 78PR PCT	1310179	34
34	RES. 2.7 1W 5%	1310332	35
35	RES. 470 2W 5%	1303062	36
36	TRANSISTOR 2N214	1511742	37
37	TRANSISTOR DEC 2217	1501831	38
38	TRANSISTOR MJE 2955	1510556	39
39	TRANSISTOR MJE 3055	1510555	40
40	SCREW BHM #4-40 X 3/8 LG	9002011-1	41
41	HEX NUT #4-40 SST	9006556	42
42	SCREW PHIL PANHD #4-40 X 3/8 LG	9006011-1	43
43	WASHER INTERNAL TOOTH LOCK #4	9006632	44
44	HEAT SINK (REV. A)	5509718	45
45	C. DEC 709	1909377	46
46	TERMINAL, SOLDER	9008085	47
47	CONN. MATE 1 LK 6 SKT	1209350-04	48
48	CONN. MATE 1 LK 9 SKT	1209350-09	49
49	CONN. MATE 1 LK 12 SKT	1209350-12	50
50	CONN. MATE 1 LK 15 SKT	1209350-15	51
51	FIN SOCKET	1209456-01	52
52	SCREW PHIL PANHD #6-32 X 1/4 LG	9006020-1	53
53	WASHER NYLON #6	9006707	54
54	SPACER #6-32 X 1/2 LG	9006951	55
55	COMPOUND, THERMAL	9008268	56
56	TRANS AD	9008201	57

V-14 REV 16 SEMICONDUCTOR CONVERSION CHART DEC NO.    EIA NO.    DEC NO.    EIA NO.	<b>digital</b> <b>EQUIPMENT CORPORATION</b> <b>VR14 POWER SUPPLY AND REGULATOR</b>	<b>DCS</b> <b>G8360-0-1</b> <b>B</b>
--	--	--



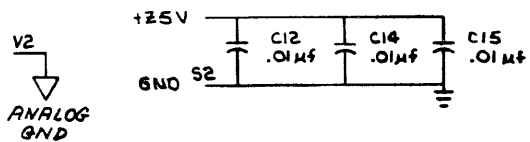
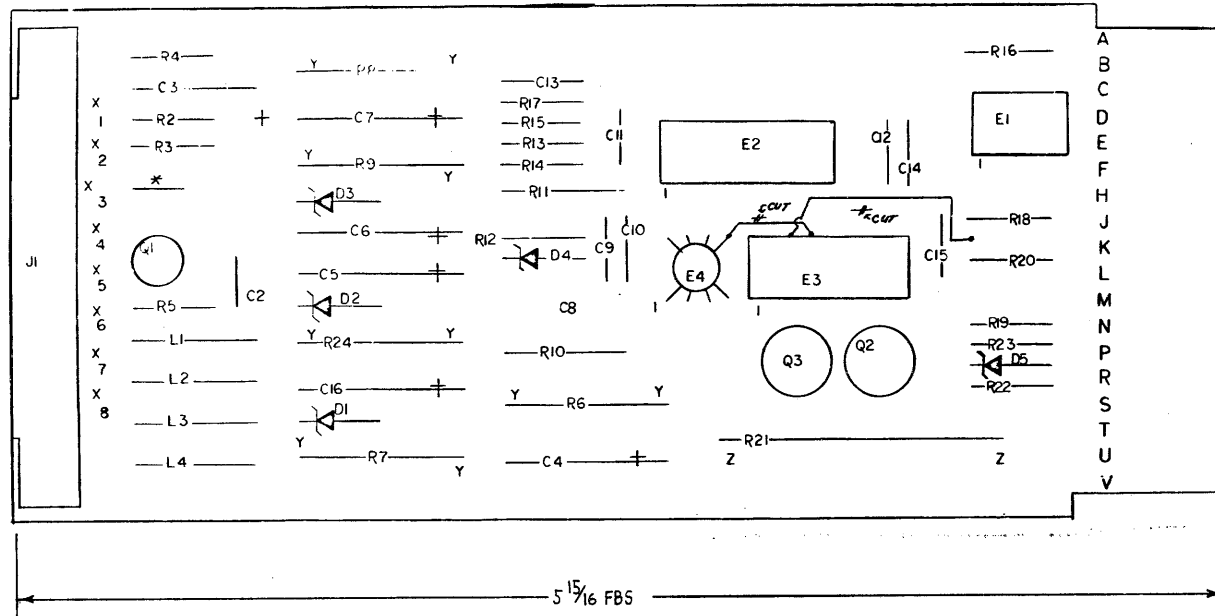
TITLE	VR14 POWER SUPPLY AND REGULATOR	SIZE CODE	DCS	NUMBER	G8360-0-1	REV.	B
SCALE	1:1	SHEET	2	OF	2	DIST	

DCS G8360-0-1 B

This drawing and specifications herein are the property of Digital Equipment Corporation and shall not be reproduced or copied or used in whole or in part as the basis for the manufacture or sale of items without written permission. © NOV 1972

**NOTES:**

1. PLACE ITEM #40 (TERMINAL) ON ITEM #25 (RESISTOR) R21.
2. COMPONENT VALUE SELECTED AT MODULE TEST. VALUES IN THE RANGE OF 56K-120K MAY BE USED TO PRODUCE THRESHOLD VOLTAGE CLOSEST TO 370MV AT PIN2 OF E4. POSSIBLE COMPONENTS ARE:  
 56K 1302395 100K 1302466  
 68K 1301327 120K 1300539  
 82K 1303219



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1		INSULATED JUMPER (1/4")	9009105	41
2		SOLDER TERMINAL #2027-2 CAMB IN	4009095	40
2		EYELET GS4-7 STIM-50N	9006732	39
8		PIN SOCKET #132C-1 MATE IN-LOCK	1209456	38
1		CONV MATN L-6 (6-17) 40-40	1209340-00	37
1	E3	IC DEC 74H04	1909931	36
1	E1	IC 75453	1911036	35
1	E2	IC 9602	1910951	34
1	E4	IC LM306	1909675	33
4	L1,L2,L3,L4	CHOKE 2.200 JH 10% 99 na	1603421	32
1	Q1	TRANS DEC 6534B	1503409-01	31
1	Q3	TRANS 2N2904A	1501913	30
1	Q2	TRANS DEC 2219-3	1501801	29
1	R5	RES 180 5% 1/4 W	1301322	28
1	R14	RES 68K 5% 1/4 W	1301327	27
2	R10,R11	RES 10K 1% 1/8 W MF	1302886	26
1	R21	RES 150 5% 5W V.W	1301998	25
2	R3,R18	RES 2.2K 5% 1/4 W	1300417	24
2	R7,R8	RES 10 5% 1 W	1300171	23
1	R22	RES 10 5% 1/4 W	1301317	22
4	R2,R3,R17,R23	RES 47K 5% 1/4 W	1300447	21
2	R4,R15	RES 1K 5% 1/4 W	1300365	20
1	R12	RES 470 5% 1/4 W	1300316	19
1	R6	RES 100 5% 2W	1302380	18
2	R16,R20	RES 150 5% 1/4 W	1300250	17
2	R9,R24	RES 100 5% 1W	1300232	16
1	R19	RES 100 5% 1/4 W	1300229	15
1	D4	DIODE IN746A 3.6V 5%, 40W	1104862	14
2	D1,D5	DIODE IN4733A 3.1V, 5%, 1W.	1109943	13
2	D2,D3	DIODE IN4744	1105648	12
5	C4,C5,C6,C7,C16	CAP 6.8UF, 10%, 35V TANT	1005306	11
1	C13	CAP .047UF, 20%, 250V MYLAR	1003053	10
1	C3	CAP 1.0UF, 10%, 35V TANT	1001776	9
5	C15,C12,C14,C10,C9	CAP .01UF, 20%, 50V	1001610-00	8
1	C11	CAP 47PF, 5%, 100V DM	1000011	7
1	C8	CAP .02UF 20% .100V DISC	1000004	6
1	C2	CAP 100PF 5% .100V DM	1000016	5
1		ETCHED CIRCUIT BOARD	5010281	4
REF		MODULE ECO HISTORY	B-MH-6840-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-6840-3-5	2
REF		X-Y COORDINATE HOLE LOCATION	K-CO-6840-0-4	1

SEE NOTE 2-\*

IC TYPE	GND	+5V
IC 9602	8	16
IC 75453	4	8
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE		
IC PIN LOCATIONS		

FIRST USED ON OPTION MODEL  
VT40

ETCH BOARD REV C

REV	DATE	BY	DESCRIPTION
1	11/3/72	Chastan	REVISED
2	11/7/72	Chastan	REVISED
3	11/7/72	Chastan	REVISED
4	11/7/72	Chastan	REVISED

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.
DEC 6594B	SAME		
2N2904A	SAME		
DEC 2219-3	SAME		
IN4733A	SAME		
IN746A	SAME		
IN4744	SAME		

SCALE: 1" = 1" OF 2

DATE: 11/3/72

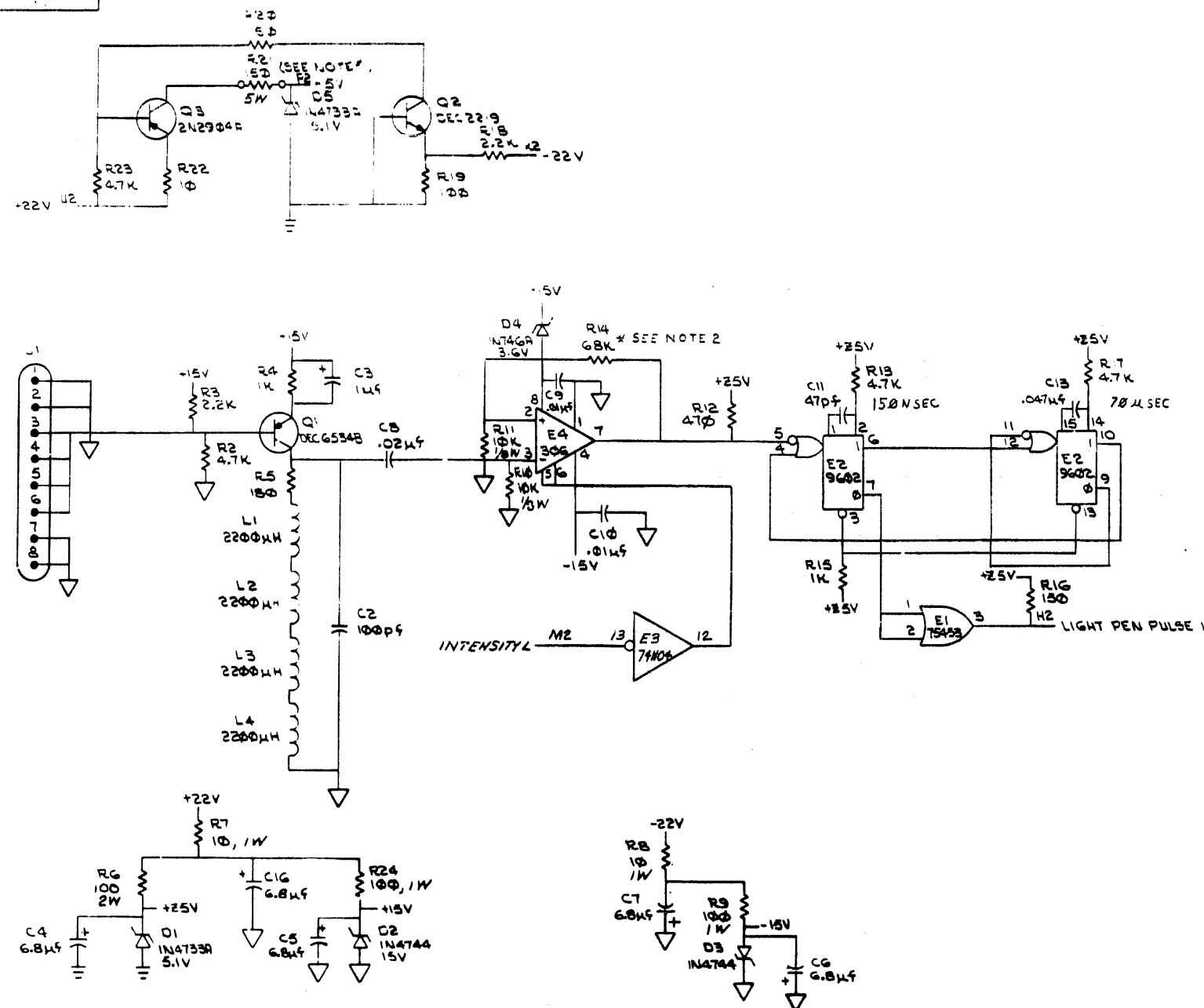
BY: Chastan

TITLE: VT 40 LIGHT PEN AMPLIFIER

DIGITAL EQUIPMENT CORPORATION

SCALE: 1" = 1" OF 2

DIST: 1



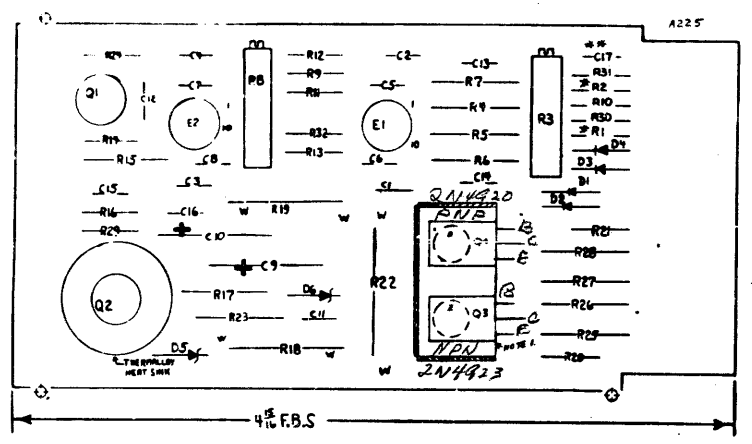
REV. NO. \_\_\_\_\_  
 CHANGE NO. \_\_\_\_\_  
 CHK. \_\_\_\_\_  
 DRD 102-R

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VT40				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRAWN DATE 9-2-72	DATE 11-7-72	<b>EQUIPMENT CORPORATION</b> <small>MAYNARD MASSACHUSETTS</small>	
DECIMALS	CHK'D DATE 11-7-72	DATE 11-7-72		
ANGLES	ENG DATE 11-7-72	DATE 11-7-72	<b>VT40 LIGHT PEN AMPLIFIER</b>	
XXX - 008 XX - 02 X - 1	PROJ. ENG. DATE 11-7-72	DATE 11-7-72		
REMOVES BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD. DATE 11-7-72	DATE 11-7-72	<b>DCS G840-0-1</b>	
MATERIAL	NEXT HIGHER ASSY.			
FINISH	SCALE		<b>REV. C</b>	
	SHEET 2 OF 2			

DCS G840-0-1

Drawing and specifications herein are the property of Digital Equipment Corporation and shall remain the property of the manufacturer in the event of any change without written permission.

- NOTES:**
- UNLESS OTHERWISE INDICATED:  
ALL CAPS ARE 10PF, 100V, 5%  
ALL RESISTORS ARE 1K, 1/4W, 5%  
ALL DIODES ARE D664
  - A225-YA VARIATION - R1 & R2 ARE 3.3K, 1/4W, 5% FOR INPUT SIGNALS LESS THAN 5VP-P
  - SELECT C17 FROM AVAILABLE VALUES (0 TO 100PF) USING VR14 L SUB-ASSY DEFLECTION TEST PROCEDURE 9305731-0-0 FOR -YB VARIATION ONLY



IC TYPE	000	+ BV
DNO AND BY ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE.		
IC PIN LOCATIONS		

A225-YB	A225-YA	A225	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
A/R	-	-	C17	CAP 100 PF, 100V, 5%	1000016	52
2	2	2		GREEN NYLON #4-40 X 3/8 L6	9006401-04	53
2	2	2		HEX NUT, NYLON #4-40	9007992	54
A/R	-	-	C17	CAP 82 PF, 100V, 5%	1000015	55
A/R	-	-	C17	CAP 33 PF, 100V, 5%	1000009	56
A/R	-	-	C17	CAP 47 PF, 100V, 5%	1000011	57
A/R	-	-	C17	CAP 68 PF, 100V, 5%	1000014	58

A225-YB	A225-YA	A225	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
				CIRCUIT SCHEMATIC	B-CS-A225-0-1	1
				X-Y COORDINATE HOLE LOCATION	K-C0-A225-0-4	2
				ASSY/DRILLING HOLE LAYOUT	D-AH-A225-0-3	3
				MODULE ECO HISTORY	B-WH-A225-0-8	4
				ETCHED CIRCUIT BOARD	9000238	5
1	1	1	C7, B, C13-C18	CAP 100PF 100V 5% DM	1000306	8
1	1	1	C12	CAP 100PF 100V 5% DM	1000016	7
1	1	1	C11	CAP 220PF 100V 5% DM	1000021	6
2	2	2	C9, 10	CAP 8.0UF 35V 20% TANT	1000087	9
4	4	4	C1-C4	CAP 31UF 100V 20% DISK	1001810	10
2	2	2	C5, 8	CAP 27PF 100V 5% DM	1001739	11
4	4	4	D1-D4	DIODE D664	1100114	12
2	2	2	D6, D6	DIODE 1N753A	1102421	13
1	1	1		THERMALLOY W2215B	1205141	14
2	2	2	R26, 27	RES 10 1/2W 5% CC	1300168	15
1	1	1	R18	RES 100 1/4W 5% CC	1300229	16
1	1	1	R18	RES 270 1W 10% CC	1300287	17
1	1	1	R13	RES 470 1/4W 5% CC	1300316	18
1	1	1	R22	RES 680 2W 5% CC	1300340	19
4	4	4	R10, 11, 14, 20	RES 1K 1/4W 5% CC	1300385	20
2	2	2	R31, 32	RES 2.2K 1/4W 5% CC	1300417	21
0	2	0	R1, 2	RES 3.3K 1/4W 5%	1300438	22
1	1	1	R9	RES 4.7K 1/4W 5%	1300447	23
1	1	1	R12	RES 10K 1/4W 5%	1300479	24
2	2	2	R20, 21	RES 10 1/4W 5%	1301317	25
4	4	4	R26, R29	RES 47 1/2W 5%	1301896	26
1	1	1	R24	RES 22 1/4W 5%	1301980	27
1	1	1	R30	RES 270 1/4W 5%	1301972	28
1	1	1	R17	RES 75 1/8W 1% MF	1303084	29
2	2	2	R4, 5	RES 1K 1/8W 1% MF	1303114	30
2	2	2	R6, 7	RES 4.84K 1/8W 1% MF	1304950	31
1	1	1	R19	RES 310 1/8W 1% MF	1304963	32
2	2	2	R3, 8	POTENTIOMETER 5K 3/4W 10% PR	1305143-B4	33
1	1	1	B1	TRANS DEC 2218	1501881	34
1	1	1	B2	TRANS 2N4924A	1501813	35
1	1	1	B3	TRANS 2N4823	1500884	36
1	1	1	B4	TRANS 2N4820	1500886	37
2	2	2	E1, 2	I.C. SOTANOLA MC15200	1000440	38
1	1	1		HEAT SINK	7400000	39
1	1	1	R23	RES 56 1/2 W 5%	1303995	40
2	2	2		EYELET	9000732	41
A/R	A/R	A/R		WAKEFIELD THERMAL COMPOUND	9005289	42
1	1	1		HANDLE FLIP CHIP BANDER	9000337-8	43
2	2	2		INSULATING WASHER	9000481	44
1	1	1	R18	RES 200 1W 10%	1300471	45
2	0	2	R1, R2	0.2K 1/4W 5%	1303178	46
A/R	0	0	C17	100PF 100V 5% DM CAP	1000020	48
A/R	-	-	C17	150 PF 100V 5% CAP	1000019	50
A/R	-	-	C17	120 PF 100V 5% CAP	1000018	51

DEC 2219 2N2219  
2N4920 SAME  
D664 IN3606  
IN753 SAME

SEMICONDUCTOR CONVERSION CHART

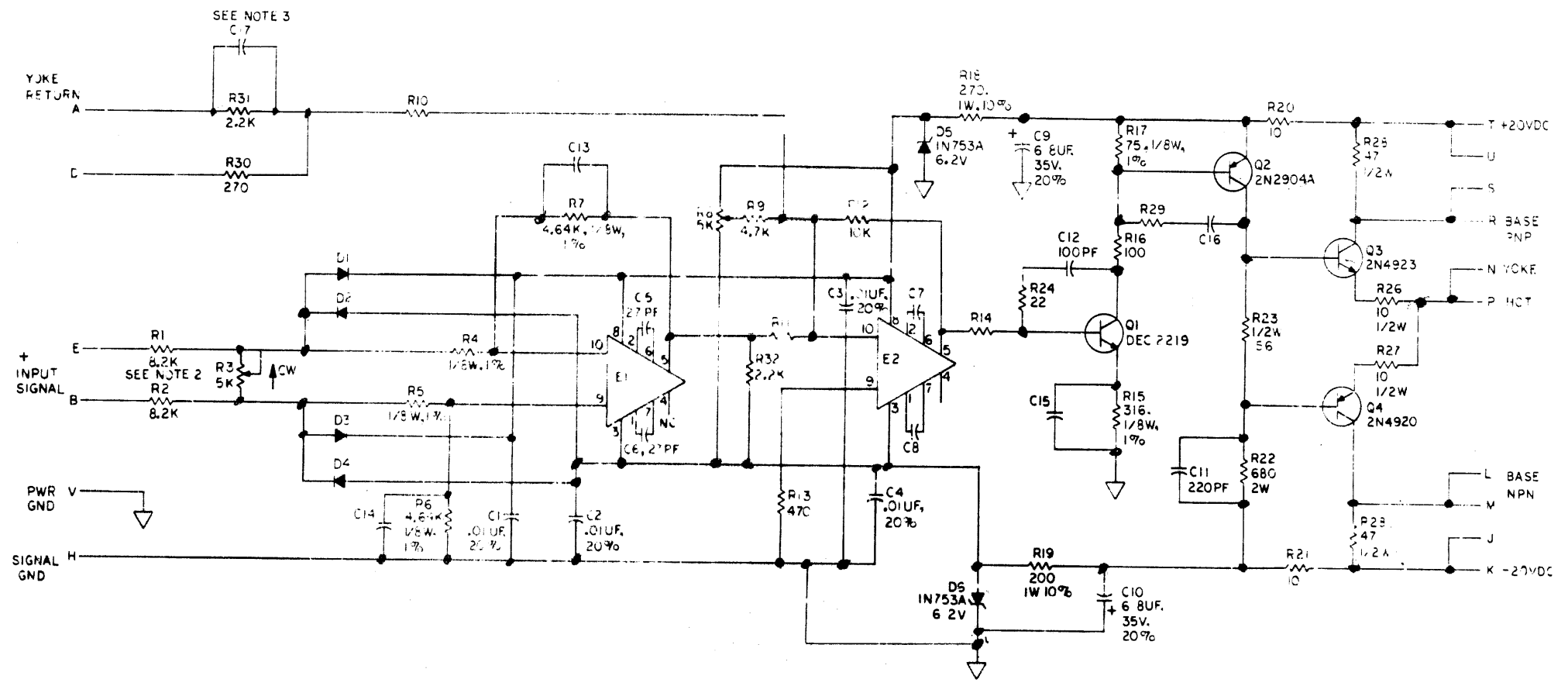
DEC NO.	EIA NO.	DEC NO.	EIA NO.
DEC 2219	2N2219	2N4920	SAME
D664	IN3606	IN753	SAME

REVISIONS

REV	DATE	BY	REVISIONS
1	1/3/73	A. FISHMAN	1. ORIGINAL
2	4/17/73	A. FISHMAN	2. REVISION
3	6/25/73	H. LAVOIE	3. REVISION
4	8/7/73	H. LAVOIE	4. REVISION
5	9/11/73	H. LAVOIE	5. REVISION
6	10/10/73	H. LAVOIE	6. REVISION
7	11/7/73	H. LAVOIE	7. REVISION
8	1/2/74	H. LAVOIE	8. REVISION
9	2/2/74	H. LAVOIE	9. REVISION
10	3/1/74	H. LAVOIE	10. REVISION
11	4/1/74	H. LAVOIE	11. REVISION
12	5/1/74	H. LAVOIE	12. REVISION
13	6/1/74	H. LAVOIE	13. REVISION
14	7/1/74	H. LAVOIE	14. REVISION
15	8/1/74	H. LAVOIE	15. REVISION
16	9/1/74	H. LAVOIE	16. REVISION
17	10/1/74	H. LAVOIE	17. REVISION
18	11/1/74	H. LAVOIE	18. REVISION
19	12/1/74	H. LAVOIE	19. REVISION

DATE: 12/1/70  
BY: D. SMITH  
TITLE: DEFLECTION AMPLIFIER

ALL DIMENSIONS AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION, AND MAY NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ANY EQUIPMENT WITHOUT WRITTEN PERMISSION THROUGH DIGITAL EQUIPMENT CORPORATION.



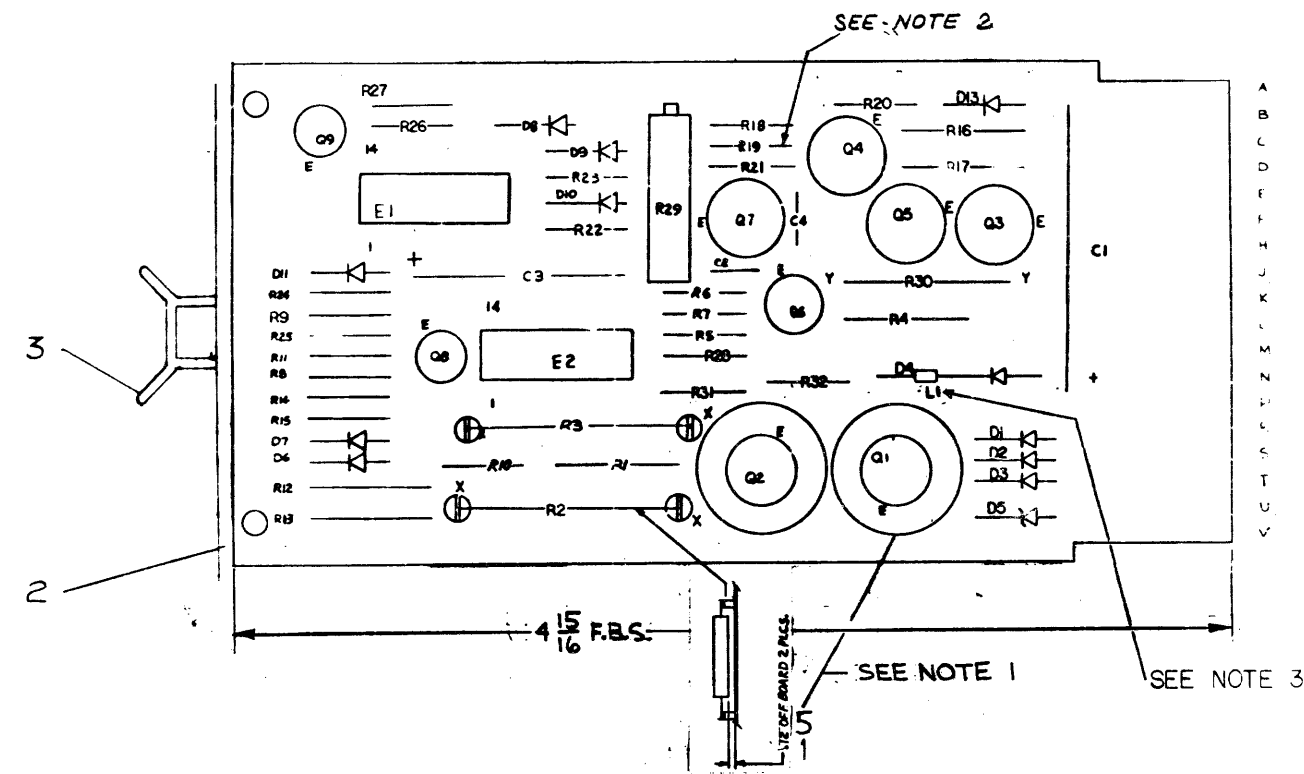
REVISIONS		
CHK	CHANGE NO	REV



This drawing and specifications, herein, are the property of Digital Equipment Corporation and shall not be reproduced or used in whole or in part as the basis for the manufacture or sale of items without written permission.

**NOTES.**

1. APPLY THERMAL JOINT COMPOUND ITEM #1 TO HEATSINK BEFORE ATTACHING TO TRANSISTOR Q 3 & Q2
2. FOR ETCH REV B + C, R19 IS A 20K POT 1/2 W 10% PART #1309150-13
3. ADD FERRITE BEAD (L1) AROUND CATHODE LEAD OF D4



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	R19	RESISTOR, 7K, 1% 1/8W	1304867	18
1	R22	RESISTOR, 5.11K, 1% 1/8W	1304854	19
1	R2	RESISTOR, 10K, 1% 1/8W	1303312	20
1	R23	RESISTOR, 2.51K, 1% 1/8W	1303303	21
1	R18	RESISTOR, 51K, 5% 1/8W	1304858	22
1	R20	RESISTOR, 10K, 5% 1/8W	1300478	23
1	R15	RESISTOR, 1K, 5% 1/8W	1300365	24
7	R7, R8, R10, R11, R24, R25, R26	RESISTOR, 330, 5% 1/8W	1302295	25
3	R6, R9, R13	RESISTOR, 100, 5% 1/8W	1300229	26
1	R14	RESISTOR, 33, 5% 1/8W	1300197	27
1	E1	DIODE, 1N748A	1104860	28
1	D5	DIODE, 1N4757	1103022	29
1	D4	DIODE, 1N3039B	1102910	30
5	D6, D8, D9, D10, D11	DIODE, D664	1100114	31
1	C3	CAPACITOR, 180UF 10% 20V S.TAN1	1004815	32
1	C1	CAPACITOR, 1UF 10% 150V	1000063	33
1	C2	CAPACITOR, .320PF 5% 100V	1030027	34
1	C4	CAPACITOR, 10PF 5% 100V	1000006	35
		ETCH BOARD	5010183	36
		MODULE E.C.C. HISTORY	B-W-1084-B-8	37
		ASSY/DRILLING HOLE LAYOUT	D-AH-1084-B-5	38
		X-Y COORDINATE HOLE LOCATION	K-CD-1084-B-4	39
2	R5, R28	RESISTOR, 270, 5% 1/8W	1301972	40
1	R29	RESISTOR, 20K 3/4 W 10% 76PR	1309143-11	41
1	R30	RESISTOR, 100, 5% 1W	1300232	42
4	D1, D2, D3, D13	DIODE, 1N4004	1105796	43
1	R4	RESISTOR, 1.5K, 1/2W, 5%	1300394	44
1	R32	RESISTOR, 68, 1/4W, 5%	1300219	45
1	L1	BEAD, SHIELDING FERROX	1210294	46

IC TYPE	GND	+5V

REV	DATE	BY	CHKD	DATE	BY
1	11/21/72	H. LAVOIE	H. LAVOIE	11/21/72	H. LAVOIE
2	12/28/72	H. LAVOIE	H. LAVOIE	12/28/72	H. LAVOIE
3	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
4	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
5	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
6	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
7	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
8	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
9	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
10	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
11	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
12	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE

FIRST USED ON OPTION MODE: **GT40**

ETCH BOARD REV H

REVISIONS

REV	DATE	BY	CHKD	DATE	BY
1	11/21/72	H. LAVOIE	H. LAVOIE	11/21/72	H. LAVOIE
2	12/28/72	H. LAVOIE	H. LAVOIE	12/28/72	H. LAVOIE
3	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
4	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
5	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
6	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
7	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
8	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
9	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
10	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
11	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE
12	1/12/73	H. LAVOIE	H. LAVOIE	1/12/73	H. LAVOIE

DEC NO. EIA NO. DEC NO. EIA NO.

SEMICONDUCTOR CONVERSION CHART

Digital Equipment Corporation  
MAYNARD, MASSACHUSETTS

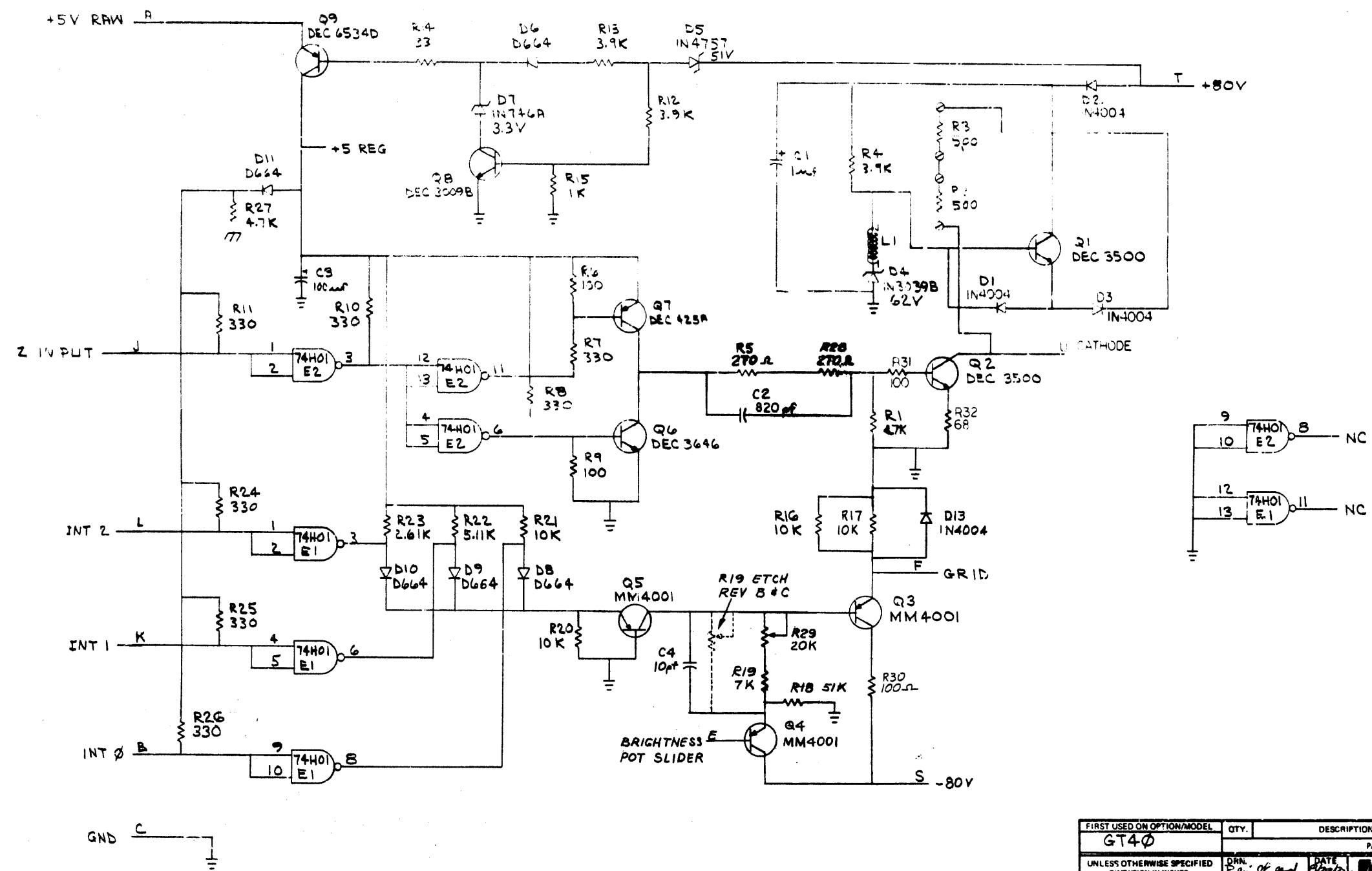
TITLE  
**UNSLANK AMP & 8  
LEV INTEN CONT**

SIZE CODE: DCSW684-0-1

SCALE: SHEET OF 2

REV: H

The drawing and specifications herein are the property of Digital Equipment Corporation and shall not be reproduced, in whole or in part, or used for the manufacture or sale of items without written permission.



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
GT40				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		DATE	EQUIPMENT CORPORATION	
DECIMALS	ANGLES	DATE	TITLE	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE	UNBLANK AMP & 8 LEV INTEN CONT	
MATERIAL		DATE	DCS W684-0-1	
FINISH		DATE	REV. H	
SCALE		SHEET 2 OF 2		

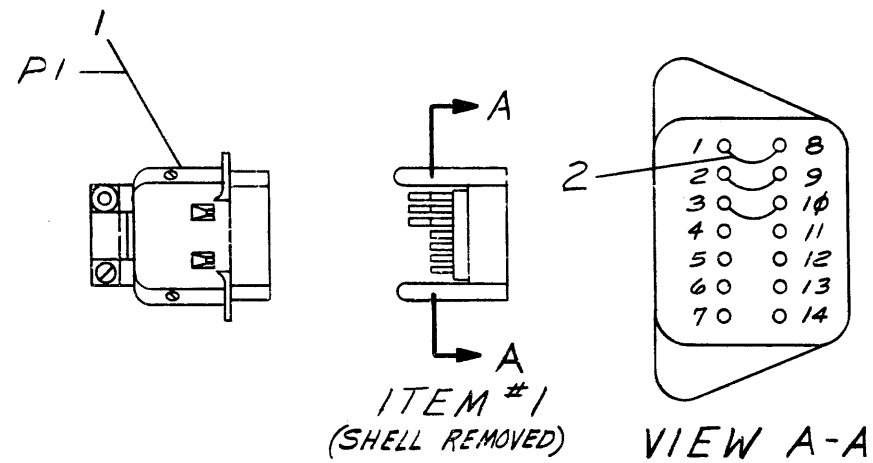
REVISIONS  
CHANGE NO.

DCS W684-0-1 H

This drawing and specifications, herein, are the property of Digital Equipment Corporation and shall not be reproduced or copied or used in whole or in part as the basis for the manufacture or sale of items without written permission. © JAN. 73

### WIRE TABLE

ITEM NO.	DESCRIPTION		FROM		TO	
	AWG	COLOR	CONNECTION	WITH	CONNECTION	WITH
2	24	RED	PI-1	SOL.	PI-8	SOL.
2	24	RED	PI-2	SOL.	PI-9	SOL.
2	24	RED	PI-3	SOL.	PI-10	SOL.



REVISIONS	
CHK	CHANGE NO. REV.
P.M.	7009248-00001 A
	Ernie A. 6-5-73
	D. CRABBE 6-14-73

DEC FORM NO. DRC 10-A

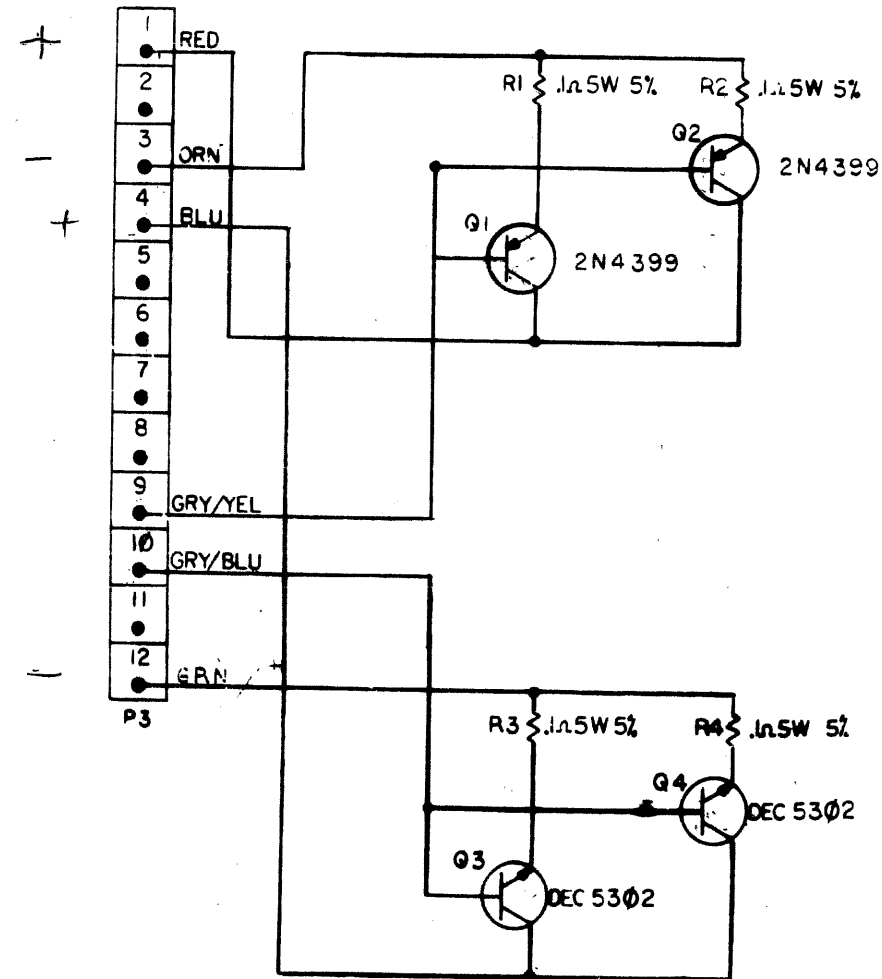
NR WIRE #24AWG. STRD. RED	9107450-22	2
1 CONN. AMP. 57-3014.0	1205713	1

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
GT40				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN. <i>[Signature]</i> DATE 1-22-73	 <b>digital</b> EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS	ANGLES	CHKD. <i>[Signature]</i> DATE 1-25-73		
.XX = .005	±0° 30'	ENG. <i>[Signature]</i> DATE 2-2-73		
.XX = .02		PROG. ENG. <i>[Signature]</i> DATE 2-2-73		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓		PRD. <i>[Signature]</i> DATE 2-8-73	<b>CABLE, KEYBD. INTERLOCK</b>	
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
#	A-PL-GT40-0-0		CIA	7009248-0-0
FINISH	SCALE NONE			REV. A
#	SHEET / OF /		DIST.	

SIZE CODE C I A 7009248-0-0 REV. A  
 NUMBER 7009248-0-0  
 REV. A

This drawing and specifications, herein, are the property of Digital Equipment Corporation and shall not be reproduced or copied or used in whole or in part as the basis for the manufacture or sale of items without written permission. © 1973

D  
C  
B



REF DESIGNATION	DESCRIPTION	PART NO.
P3	AMP I2 CIRCUIT	1209351-12
Q1 Q2	TRANSISTOR 2N4399	1510362
Q3, Q4	TRANSISTOR DEC 5302	1510196
R1 - R4	RESISTOR .1A5W 5%	1305812

REV	BY	DATE	DESCRIPTION
1	A	1/19/71	
2	A	2-10-71	
3	H. LAVOIE	12-12-73	
4	H. LAVOIE	12-27-75	

PCB USED ON OPTION MODEL  
VRI4

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS IN INCHES  
TOLERANCES  
FRACTIONS DECIMALS ANGLES  
±.005 ±.002 ±.010 ±.020 ±.030 ±.050 ±.100  
FUEL SURFACE QUALITY  
REMOVE BURRS AND CHAMFER SHARP CORNERS

**EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS

TITLE  
**POWER SUPPLY HEAT SINK**

DATE: 9/21/70  
DATE: 10/14/70  
DATE: 11/6/70  
DATE: 11/16/70

NEXT HIGHER ASSY  
D-AU-7007080-0-0

SCALE: 1:1

SHEET 1 OF 1

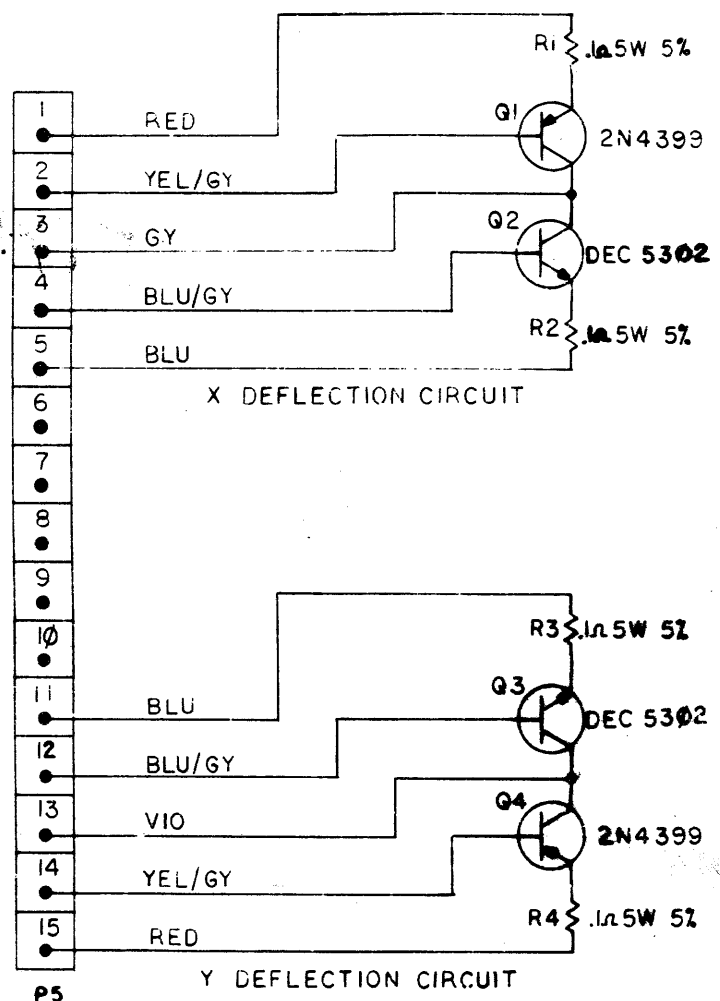
DIST. CODE: CCS 7007080-0-1

TRANSISTOR/DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
DEC 5302	2N 5302		
DEC 3750	2N 3750		

CCS 7007080-0-1 C

This drawing and specifications herein are the property of Digital Equipment Corporation and shall not be reproduced or transmitted in any form or by any means without written permission.



Q2, Q3.	TRANSISTOR DEC 5302	1510196
P5	AMP 15-CIRCUIT	1209351-15
Q1, Q4.	TRANSISTOR 2N4399	1510362
R1-R4	RESISTOR .15W 5%	1305872
REF DESIGNATION	DESCRIPTION	PART NO.

REV.	A
CHANGE NO.	VRI4-00005
DESIGNED BY	A. FISHMAN
DATE	9-2-71
REVISED BY	H. LAYOR
DATE	12-20-73
REVISED BY	D.P.

DEC	EIA	DEC	EIA
DEC 3790	2N 3790		
DEC 5302	2N 5302		

FIRST USED ON OPTION/MODEL  
VRI4

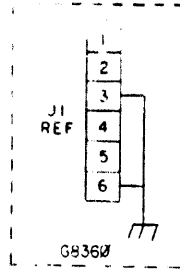
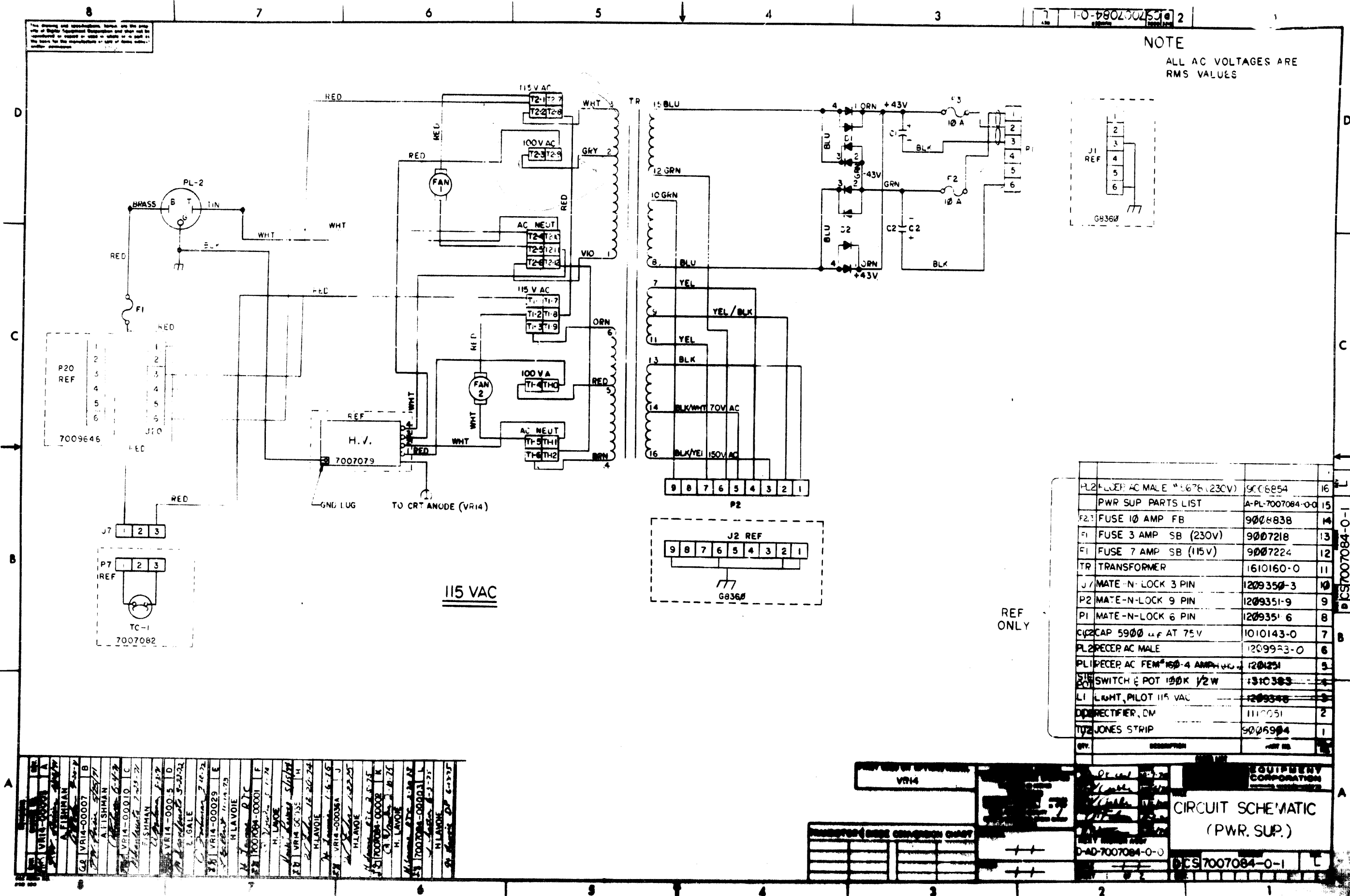
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS IN INCHES  
TOLERANCES  
DIMENSIONAL FINISHES  
SURFACE QUALITY  
MATERIAL

DATE: 11/16/70  
BY: [Signature]  
NEXT WIGMER ASSY  
D-AD7007082-0-0

EQUIPMENT CORPORATION  
DEFLECTION HEAT SINK.  
GCS7007082-0-1

GCS7007082-0-1

NOTE  
ALL AC VOLTAGES ARE  
RMS VALUES



PL2	PLUG AC MALE #1676 (230V)	9006854	16
PWR SUP PARTS LIST A-PL-7007084-0-0			
F2	FUSE 10 AMP FB	9006838	14
F1	FUSE 3 AMP SB (230V)	9007218	13
F1	FUSE 7 AMP SB (115V)	9007224	12
TR	TRANSFORMER	1610160-0	11
J1	MATE-N-LOCK 3 PIN	1209350-3	10
P2	MATE-N-LOCK 9 PIN	1209351-9	9
PI	MATE-N-LOCK 6 PIN	1209351-6	8
C1	CAP 5900 $\mu$ F AT 75V	1010143-0	7
PL2	RECEP AC MALE	1209923-0	6
PL1	RECEP AC FEM #160-4 AMP	1201251	5
S1	SWITCH & POT 100K 1/2W	1310363	4
LI	LAMP, PILOT 115 VAC	1209348	3
DM	RECTIFIER, DM	1110051	2
T2	JONES STRIP	9006904	1
QTY.	DESCRIPTION	AVY NO.	

VR14	VR14-0001	VR14-0002	VR14-0003	VR14-0004	VR14-0005	VR14-0006	VR14-0007	VR14-0008	VR14-0009	VR14-0010	VR14-0011	VR14-0012	VR14-0013	VR14-0014	VR14-0015	VR14-0016	VR14-0017	VR14-0018	VR14-0019	VR14-0020	VR14-0021	VR14-0022	VR14-0023	VR14-0024	VR14-0025	VR14-0026	VR14-0027	VR14-0028	VR14-0029	VR14-0030	VR14-0031	VR14-0032	VR14-0033	VR14-0034	VR14-0035	VR14-0036	VR14-0037	VR14-0038	VR14-0039	VR14-0040	VR14-0041	VR14-0042	VR14-0043	VR14-0044	VR14-0045	VR14-0046	VR14-0047	VR14-0048	VR14-0049	VR14-0050
------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------

REF ONLY

1-0-7807084-0-1

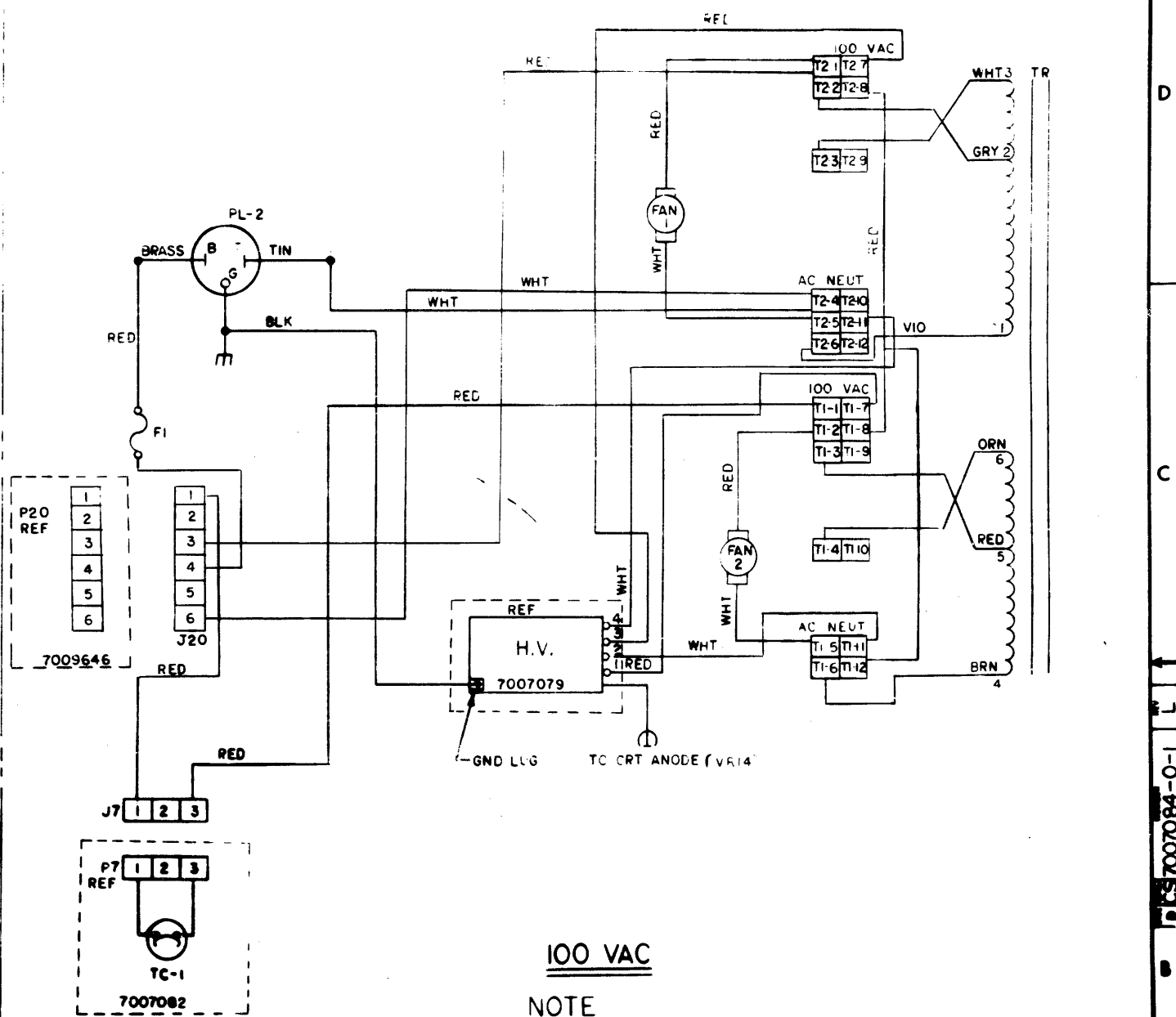
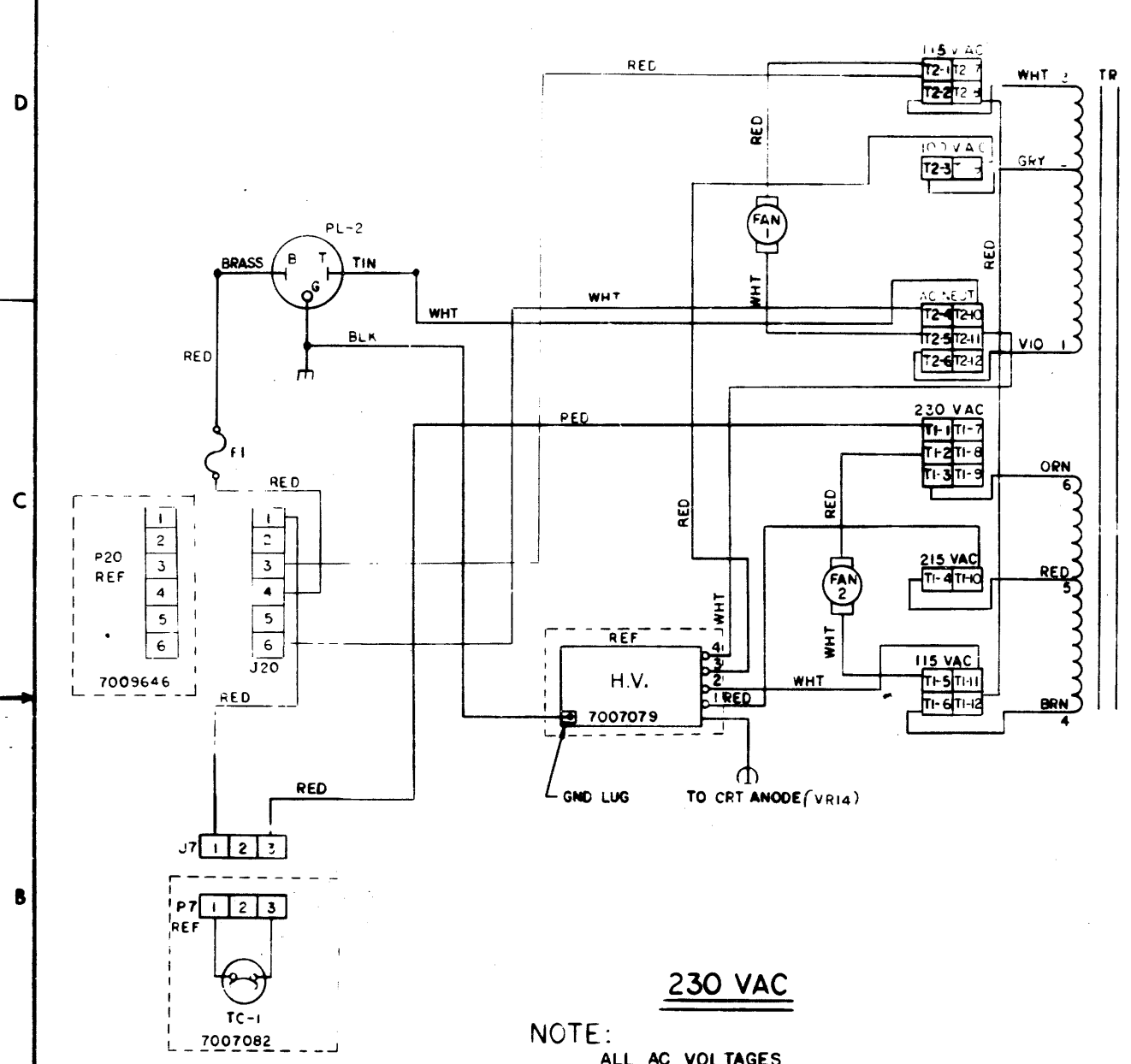
EQUIPMENT CORPORATION

CIRCUIT SCHEMATIC (PWR. SUP.)

D-AD-7007084-0-0

G8368

This drawing is the property of the U.S. Army and is to be controlled in accordance with the provisions of the Arms Control and Disarmament Act of 1968. It is to be controlled in accordance with the provisions of the Arms Control and Disarmament Act of 1968. It is to be controlled in accordance with the provisions of the Arms Control and Disarmament Act of 1968.



**NOTE:**  
230 VAC  
ALL AC VOLTAGES  
ARE RMS VALUES

**NOTE:**  
100 VAC  
ALL AC VOLTAGES  
ARE RMS VALUES

REF ID: VRI4	DESCRIPTION	REV. NO.
<b>CIRCUIT SCHEMATIC (PWR. SUP.)</b>		
D-40-X-7084-0-0		
7007084-0-1		

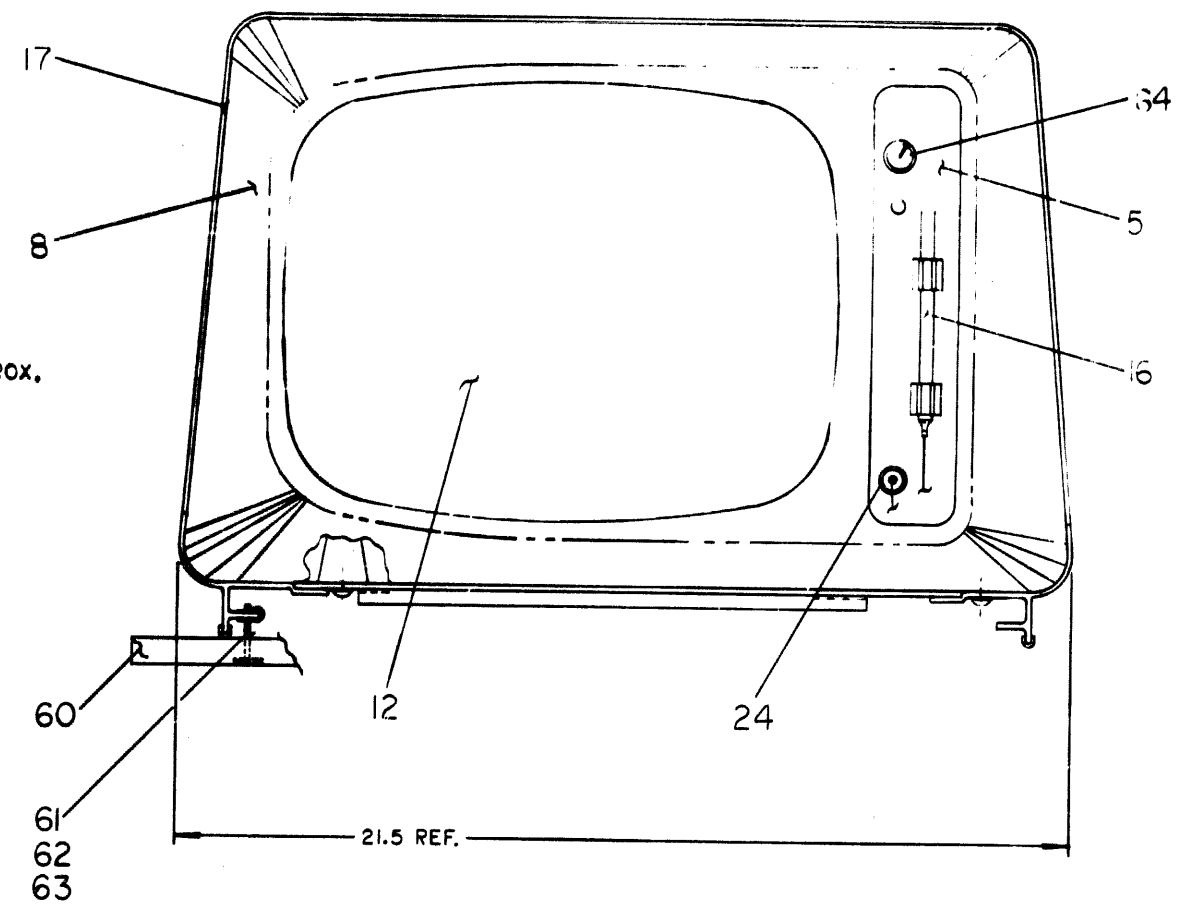
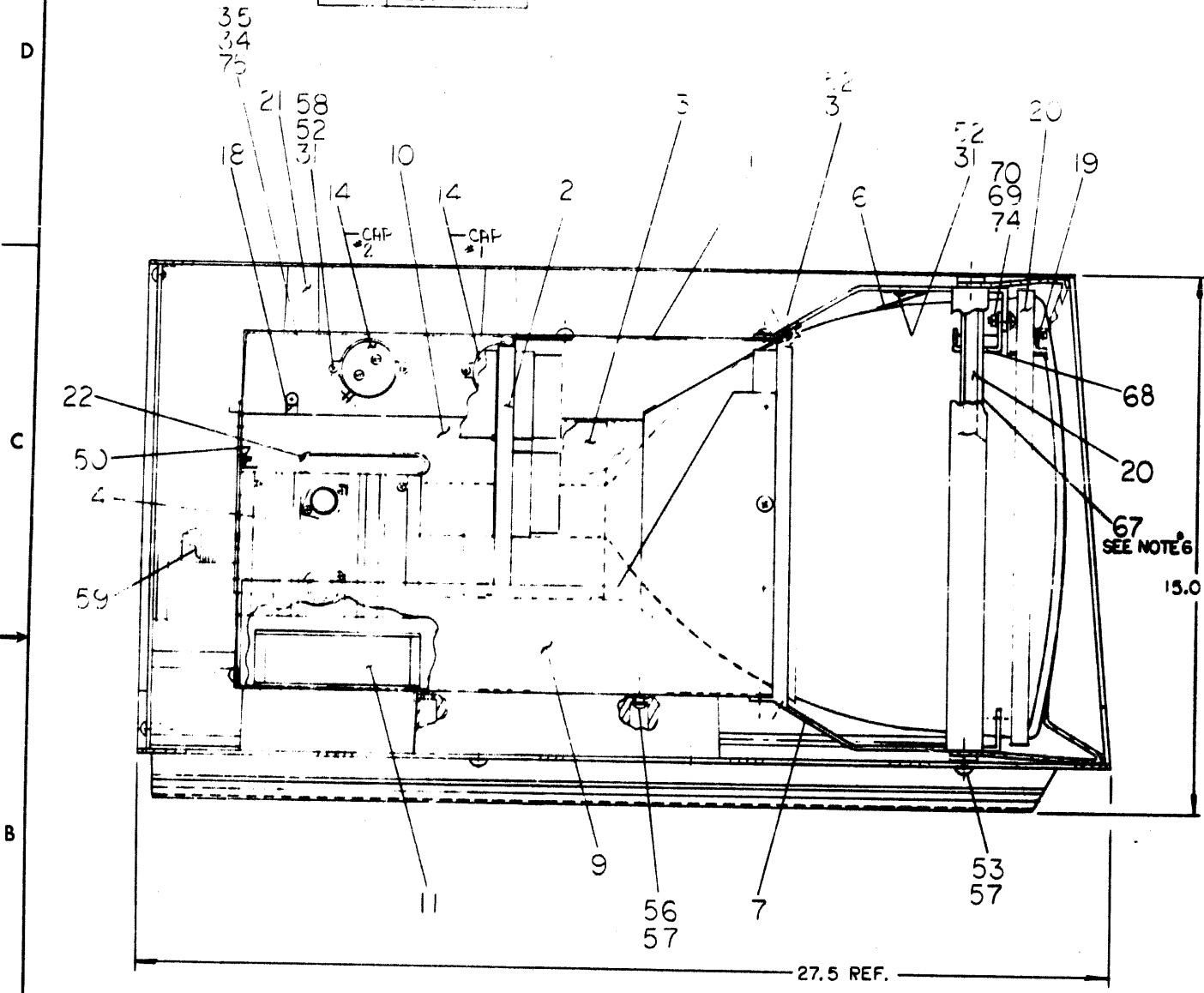
THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1972 DIGITAL EQUIPMENT CORPORATION

LEGEND	
NO.	VARIATION
VR17-LC	115 VAC
VR17-LD	230 VAC

- NOTES:
1. PLACE SHRINKIES, ITEM #36 ON POT-A, POT-B, & POT-C.
  2. G840 LIGHT PEN.
  3. CONNECT BLK WIRE ITEM #47 WITH ITEMS # 48, 49 & 36 FROM TOP BOARD OF CONTROL PANEL TO GND LUG ON HI VOLTAGE SUPPLY.
  - ~~4. ROTATE YOKE (SYNTRONIC) SO THAT POINTS 3 & 4 ARE LOCATED ON TOP.~~
  - ~~5. ADD SPIRAL WRAP, ITEM #23 D/R TO HARNESS. ADD WRAP WHERE HARNESS BENDS UNDER SHIELD.~~

6. RUBBER STRIP WILL BE PLACED IN POSITION UNDER TIGHTENING STRAP AND TUBE CLAMPS. THIS SHOULD ELIMINATE SLIPAGE OF THE TUBE. THERE IS AN ADHESIVE BACKING ON THE RUBBER STRIP SO THERE WILL BE NO NEED TO HOLD IT IN PLACE WHILE ASSEMBLING OTHER PARTS. RUBBER STRIP WILL ONLY BE USED ON SECOND SET OF HOLDING TABS NEAREST THE BACK. FRONT TUBE CLAMPS WILL NOT USE RUBBER STRIP.

7. SHIELD (ITEM #71) TO BE INSTALLED UNDER COVER (ITEM #29)



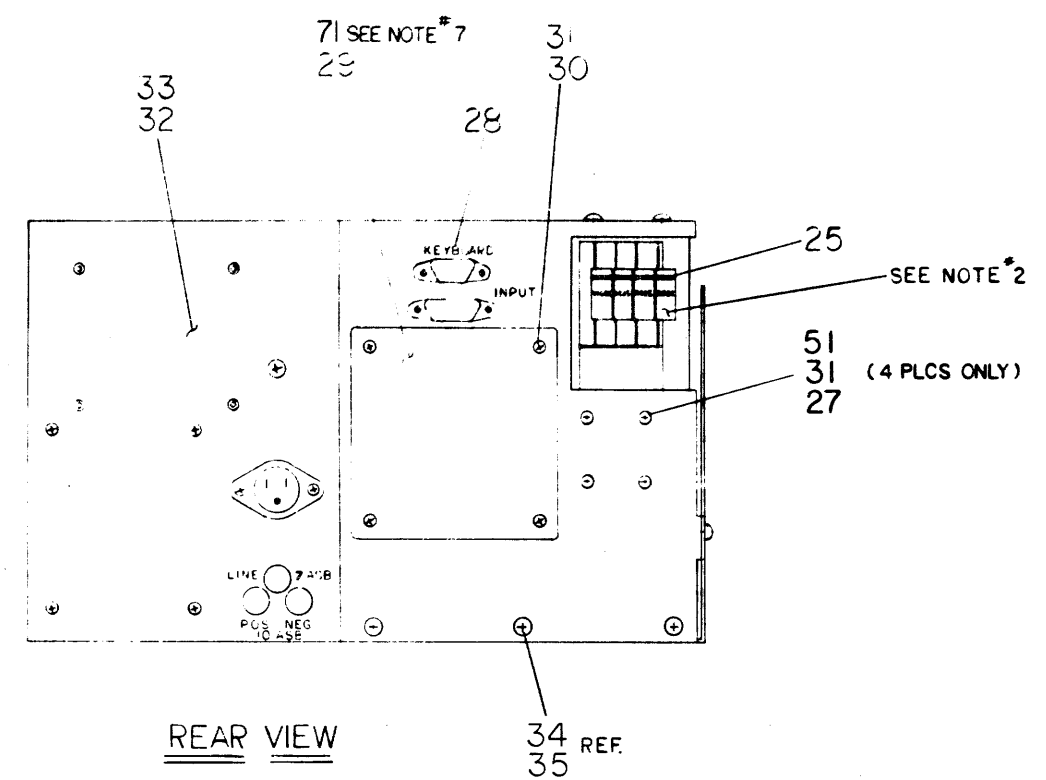
REV	CHANGE NO	DATE	BY	CHK
A	1	1-2-74	LAVOIE	J.B.
B	2	2-16-74	LAVOIE	J.B.
C	3	3-26-74	LAVOIE	J.B.
D	4	5-22-74	LAVOIE	J.B.
E	5	5-22-74	LAVOIE	J.B.
F	6	3-28-75	LAVOIE	J.B.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VR17				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES				
TOLERANCES				
DECIMALS	ANGLES			
.XXX - .005	+0° 30'			
.XX - .00				
.X - .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY 1				
MATERIAL		NEXT HIGHER ASSY.		
SEE PARTS LIST		B-DD-VR17-0		
FINISH		SCALE NONE		
		SHEET OF 3		
		DUA VR17-0-0		REV. F
		DUA VR17-0-0		

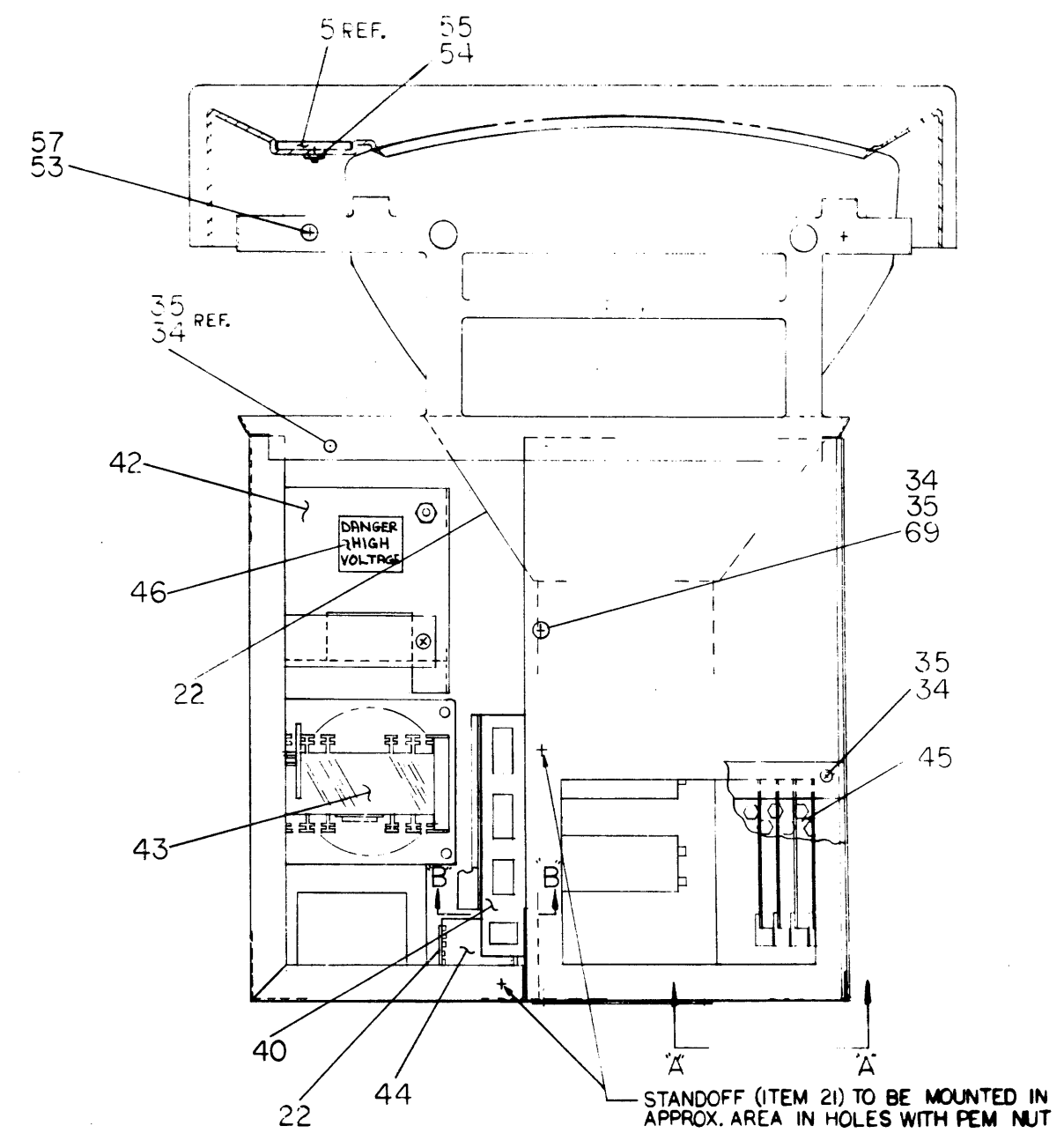
DUA VR17-0-0



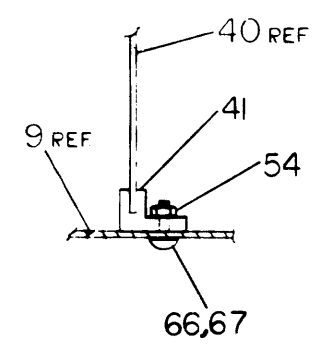
THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION.  
 COPYRIGHT © 1970 DIGITAL EQUIPMENT CORPORATION



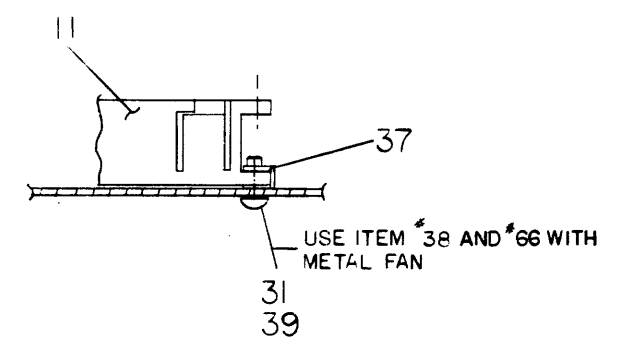
REAR VIEW



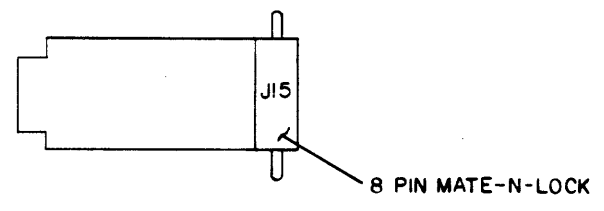
TOP VIEW



SECTION "B-B"



SECTION "A-A"



8 PIN MATE-N-LOCK

REV	CHANGE NO

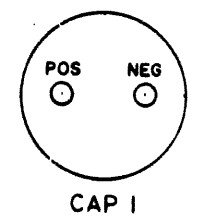
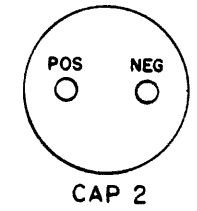
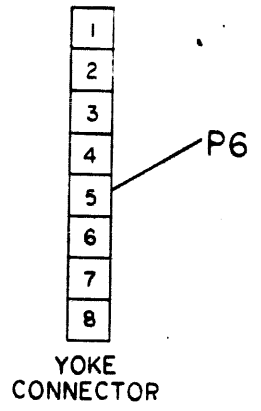
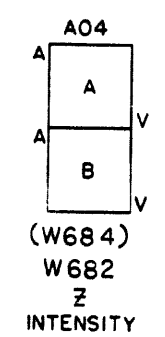
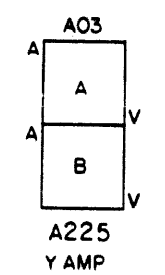
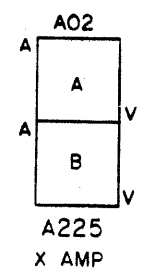
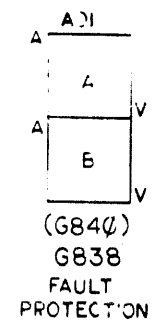
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VR17				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES		DATE	digital EQUIPMENT CORPORATION	
TOLERANCES		DATE	MAYNARD, MASSACHUSETTS	
DECIMALS	ANGLES	DATE	TITLE	
.001 - .006	10° 30'	DATE	VR17	
.008 - .015		DATE	DISPLAY ASSY	
.015 - .030		DATE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY V		DATE		
MATERIAL		DATE		
NEXT HIGHER ASSY.		DATE		
FINISH		DATE		
B-DD-VR17-0		SIZE CODE	NUMBER	REV.
SCALE NONE		DUA	VR17-0-0	F
SHEET 2 OF 3		DIST.		

THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1973 DIGITAL EQUIPMENT CORPORATION

**NOTES:**  
 1. ALL PARTS SHOWN ARE VIEWED FROM WIRING SIDE. P15 PLUGS INTO J15 ON G840.  
 2. CONNECT POINT 41 TO WELDED SCREW IN BETWEEN TOP MTG ASSY. AND C.R.T. SHIELD.

**HARNESS TABLE**

ITEM	COLOR	HARN	MAIN CHASSIS LOC.	
D	WHT/BLU	2	A04D	
	BLK	3	A040	
	WHT/VIO	5	A04L	
	CLEAR	7	A04J	
	RED	8	A02E	
	BLK	9	A02B	
	YEL	10	A02H	
	RED	11	A03E	
	BLK	12	A03B	
	YEL	12	A03H	
	SHIELD	1	A04C	
	WHT/RED	1	A04H	
	GRN	4	A04K	
	C	BRN	14	A01H
		BLU	19	CAP 2 - NEG
PLK		17	CAP 2 - POS	
RED		15	CAP 1 - POS	
BLU		18	CAP 2 - NEG	
BLK		16	CAP 2 - POS	
B		BLK	2	CAP 1 - NEG
		RED	1	CAP 1 - POS
		BLU	3	CAP 2 - NEG
		BLK	4	CAP 2 - POS
	CLEAR	42	P6-3	
	SHIE. D	43	P6-6	
	CLEAR	44	P6-5	
	SHIELD	45	P6-4	
	BLK	41	SEE NOTE 2	



REVISIONS		
CHK	CHANGE NO	REV

DUAVR17-0-0

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			QUANTITY VARIATION			
MADE BY		CHECKED	SECTION	VR17-LC	VR17-LD	
DATE	DATE	DATE	ISSUED SECT.			
ENG	PROD	PROD	ISSUED SECT.			
DATE	DATE	DATE	DATE			
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION				
1	D-AD-7007077-0-0	TOP MTG ASSY	1	1		
2	D-AD-7007078-0-0	WIRED ASSY	1	1		
3	D-IA-7007088-0-0	C.R.T. YOKE ASSY	1	1		
4	D-AD-7007082-0-0	DEFLECTION HEAT SINK ASSY	1	1		
5	C-IA-7411240-0-0	PANEL CONTROL	1	1		
6	C-IA-7408411-0-0	GROUND TUBE	1	1		
7	E-IA-7411320-0-0	FRAME HOLDING	1	1		
8	E-PS-1211492-0-0	MASK VR17 C.R.T.	1	1		
9	D-IA-7408400-0-0	PLATE BOTTOM MTG	1	1		
10	E-PS-1211561-0-0	C.R.T. SHIELD (17")	1	1		
11	1210331	FAN BOXER 5 BLADE	2	2		
12	1211536-07	CATHODE RAY TUBE TYPE 17	1	1		
13	1209376	KNOB ASS-701-2-BLK	1	1		
14	1009434	CAPACITOR 5500 MFD 40 VDC-10 +100%	2	2		
15	7007006-1	BRIDGE	1	1		
16	C-UA-375-8-8	LIGHT PEN ASSY	1	1		
17	E-AD-7009487-0-0	SUPER COVER ASSY	1	1		
18	9007081	CLAMP CABLE 1/4 I.D.	1	1		
19	C-IA-7411301-0-0	CLAMP TUBE	4	4		
20	9009555	WORM GEAR CLAMP	2	2		
21	B-PS-1211458-0-0	STAND OFF	2	2		
22	9007035	GROMMET CATERPILLER	A/R	A/R		
TITLE		ASSY NO	SIZE CODE	NUMBER	REV	ECO NO
DISPLAY ASSY		D-UA-VR17-8-8	A PL	VR17-8-8	F	VR17-2006
SHEET 1 OF 4		DIST				

DEC FORM DFC 16 (325) 1031 NR70  
DRA 110

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			QUANTITY VARIATION			
MADE BY		CHECKED	SECTION	VR17-LC	VR17-LD	
DATE	DATE	DATE	ISSUED SECT.			
ENG	PROD	PROD	ISSUED SECT.			
DATE	DATE	DATE	DATE			
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION				
23	9107342	SPIRAL WRAP 1/20	A/R	A/R		
24	9007866	WASHER SHOULDER 3/8	2	2		
25	1209856-02	MODULE HOLDER CLIP	1	1		
26	9007264-6	YELLOW SCREW 6-32 x 1/4	4	4		
27	9008318	WASHER SHOULDER 3/8 O.D. X.140 I.D.	8	8		
28	7408407	SCOTCHCALS	A/R	A/R		
29	C-MD-7408434-0-0	COVER TUBE END	1	1		
30	9006022-1	SCR PAN HEAD PHL 6-32 x 3/8 SST	4	4		
31	9006633	WASHER LOCK INTERNAL TOOTH #6	27	27		
32	D-AD-7007084-1-0	POWER SUPPLY ASSY (115)	1	-		
33	D-AD-7007084-2-0	POWER SUPPLY ASSY (230)	-	1		
34	9006071-3	SCR PHL TRUSS HD 10-32 x 3/8 SST	50	50		
35	9006635	WASHER LOCK INT TOOTH #10	62	62		
36	9107305-02	SHRINKIES (RED)	A/R	A/R		
37	9008202	CLIP FAN	8	8		
38	9006121	SCR SELF TAPPING 8-32 x 3/8 SST	8	8		
39	9006024-1	SCR PAN HD PHL 6-32 x 1/2 SST	8	8		
40	D-CE-6838-8-1	POWER REGULATOR	1	1		
41	B-MD-7411673-0-0	P. C. GUIDE	1	1		
42	D-AD-7007079-0-0	HIGH VOLTAGE ASSY	1	1		
43	D-AD-7007080-0-0	POWER SUPPLY HEAT SINK ASSY	1	1		
44	C-IA-7408409-0-0	SHIELD SAFETY	1	1		
TITLE		ASSY NO	SIZE CODE	NUMBER	REV	ECO NO
DISPLAY ASSY		D-UA-VR17-8-8	A PL	VR17-8-8	F	
SHEET 2 OF 4		DIST				

DEC FORM DFC 16 (325) 1031 NR70  
DRA 110

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			QUANTITY VARIATION			
MADE BY		CHECKED	SECTION	VR17-LC	VR17-LD	
DATE	DATE	DATE	ISSUED SECT.			
ENG	PROD	PROD	ISSUED SECT.			
DATE	DATE	DATE	DATE			
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION				
45	D-IA-7408408-0-0	SCREEN SAFETY	1	1		
46	3610267	" DANGER HIGH VOLTAGE" STICKER	1	1		
47	9107370-00	WIRE #14 AWG (BLK)	A/R	A/R		
48	9007930-0	CONN #50360-1	1	1		
49	9007925-0	CONN #300H21A-1K	1	1		
50	9006560	NUT KEPS #6-32	3	3		
51	9006021-1	SCR PHL PAN HD 6-32 x 5/16 SST	14	14		
52	9006020-1	SCR PHL PAN HD 6-32 x 1/4 SST	10	10		
53	9006070-3	SCR PHL TRUSS HD 10-32 x 5/16 SST	8	8		
54	9006563	NUT KEPS #8-32	5	5		
55	9006660	WASHER FLAT .375 O.D. X .187 X .035 THK	3	3		
56	9006073-1	SCR PHL PAN HD 10-32 x 1/2 SST	4	4		
57	9007651	WASHER EXT TOOTH #10	10	10		
58	1210428	BRKT CAP 1-7/16 IN. #115058-06	2	2		
59	9107673-25	CORD, POWER 15V 60HZ	1	-		
60	7606777-0-0	SHIPPING CRIC	1	1		
61	9007786	TINNERMAN NIT 10-32	8	8		
62	9006664	WASHER, FLT 437x 218 x 0x2	8	8		
63	9006079-3	SCR PHL TRUSS HD 10-32x1-1/4	8	8		
64	D-IA-7009646-0-0	POWER SWITCH ASSY	1	1		
65	9006071-1	SCR PHL PAN HD #8-32X3/8 SST	2	2		
66	9006634	WASHER INT. TOOTH LOCK #8	10	10		
TITLE		ASSY NO	SIZE CODE	NUMBER	REV	ECO NO
DISPLAY ASSY		D-UA-VR17-8-8	A PL	VR17-8-8	F	
SHEET 3 OF 4		DIST				

DEC FORM DFC 16 (325) 1031 NR70  
DRA 110

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			QUANTITY VARIATION			
MADE BY		CHECKED	SECTION	VR17-LC	VR17-LD	
DATE	DATE	DATE	ISSUED SECT.			
ENG	PROD	PROD	ISSUED SECT.			
DATE	DATE	DATE	DATE			
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION				
67	9009576	RUBBER STRIP 1.00W X .12THK ADH.	1	1		
68	B-MD-7411892-0-0	TAB HOLDING	4	4		
69	9006565	NUT KEPS #10-32	5	5		
70	9006668	WASHER FLAT .625X.200IDX.032 THK	4	4		
71	C-PS-1211669-0-0	SHIELD, TUBE END	1	1		
72	A-PI-3700103-0-0	PACKAGING INSTRUCTIONS VR17	1	1		
73	D-IA-7009898-3-0	CORD, POWER 230V 50 HZ	-	1		
74	9006074-1	SCREW PHL PAN HEAD 10-32 X 5/8	4	4		
75	9007083	CLAMP, CABLE 3/8	1	1		
TITLE		ASSY NO	SIZE CODE	NUMBER	REV	ECO NO
DISPLAY ASSY		D-UA-VR17-0-0	A PL	VR17-0-0	F	
SHEET 4 OF 4		DIST				

DEC FORM DFC 16 (325) 1031 NR70  
DRA 110

This drawing and specifications, herein, is the property of Omega Equipment Corporation and shall not be reproduced, copied or used in whole or in part in any manner without the written permission of Omega Equipment Corporation.

HARNESS TABLE

ITEM	COLOR	HARN	MAIN CHASSIS LOC
37	RED	52	B03V
	BLK	51	B04M
	BLU	54	B04R
	BLK	53	B01N
	BLK	5	B04N
	BLU	6	B03R
	BLK	7	B03N
	BLU	8	B04R
	RED	9	B04V
	BLK	10	B03N
	BLK	11	B04M
	RED	12	B04V
	GRY/GRN	56	A04S
	WHT/GRN	46	A04R
	WHT/BRN	47	A04P
	WHT/YEL	48	A04M
	WHT/ORN	49	A04N
	GRY/BRN	50	A04E
	GRY/ORN	55	A04T

EXTERNAL COMPONENTS TABLE

ITEM	COMP	POL	FROM	TO	POL	REMARKS
8	RES		A04U	A04T		100K *
9	XRES		SEE WIRE TABLE			0.5Ω
9	YRES		SEE WIRE TABLE			0.5Ω
32/30	CAP	-	A01K	A01U	+	20MFD *
36	RES		A04F	A03V		470K *
38	CAP		A04C	A04E		180PF *

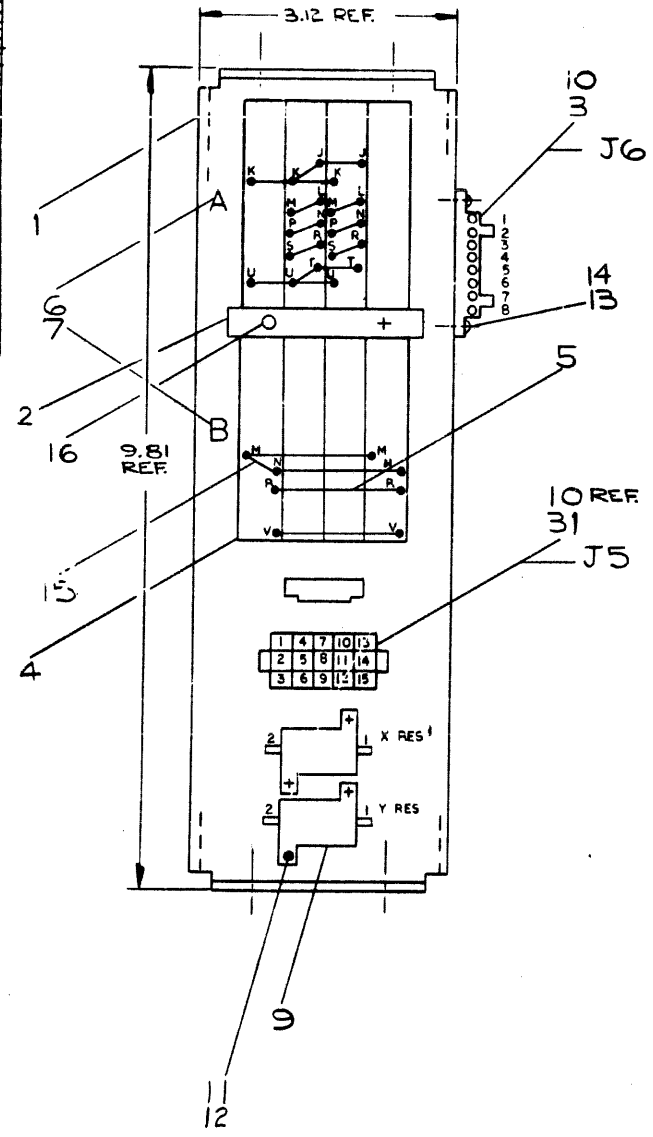
\* TO BE SOLDERED

WIRE TABLE

SIGNAL NAME	ITEM NO	DESCRIPTION	CONNECTION
		ANG COLOR	FROM TO
+20 VDC	5		A02T A03T
+20 VDC			A01U A03U
-20 VDC			A02J A03J
-20 VDC			A01K A03K
GND			B01N B04N
GND			B01M B04M
-20 VDC			B01R B04R
+20 VDC	5		B01V B04V
-20 VDC	15	18 BUS	A02J A02K
+20 VDC			A02T A02U
+X DRIVE			A02S A02R
X YOKE HOT			A02N A02P
-X DRIVE			A02L A02M
+Y DRIVE			A03S A03R
Y YOKE HOT			A03N A03P
-Y DRIVE			A03L A03M
GND	15	BUS	B01N B01M
+20 VDC	17	RED	B02V JS-1
+20 VDC	17	RED	B02V JS-15
+X DRIVE	22	YEL/GRY	A02S JS-2
+Y DRIVE	22	YEL/GRY	A03S JS-14
-X DRIVE	23	BLU/GRY	A02M JS-4
-Y DRIVE	23	BLU/GRY	A03M JS-12
-20 VDC	20	BLU	B02R JS-5
-20 VDC	20	BLU	B02R JS-11
X YOKE HOT	19	GRY	A02P JS-3
Y YOKE HOT	21	VIO	A03P JS-13
X YOKE HOT	19	GRY	A02N J6-1
Y YOKE HOT	21	VIO	A03N J6-8
X YOKE RETURN	18	WHT	J6-2 XRES-2
Y YOKE RETURN	18	WHT	J6-7 YRES-1
GND	24	BLK	X-RES1 A02V
GND	24	BLK	Y-RES2 A03V
GND	24	BLK	A03V B03M
+20 VDC	17	RED	B01V A02U
-20 VDC	20	18 BLU	B01R A02K
<del>GRID 1</del>	<del>25</del>	<del>18 GRN</del>	<del>B04H A04T</del>
X SAMPLE	29	22 WHT	A02A XRES-2
GND	27	4 BLK	A02H XRES-1
X SIG GND	27	BLK	A02H A02V
Y SIG GND	27	BLK	A03H A03V
+5V	28	RED	A07P A04A
GND	27	BLK	A04C B03M
GND	27	BLK	YRES-2 A03H
Y SAMPLE	29	22 WHT	A03A YRES-1
GND	24	18 BLK	A01V B02M
GND	24	18 BLK	A02V B02M
<del>20V DC</del>	<del>35</del>	<del>18 GRY/GRN</del>	<del>A04S A04L</del>
GND	27	22 BLK	A01S A04C
Z INT	29	22 WHT	A01M A04J
CATHODE	26/10	18 YEL	J6-5 A04U
GND	24/10	18 BLK	J6-4 B03N
GRID 1	25/10	18 GRN	J6-3 A04F
GND	24/10	18 BLK	J6-6 A03V

NOTES:

1. TWIST (2 WIRES) = TWIST PER INCH MIN @ 4 TWIST PER INCH MAX.
2. TERMINAL OF ITEM 32 GOES TO A01U
3. CUT LEADS OF ITEM 38 1/2 INCH IN LENGTH.



SEE NOTE #3

SEE NOTE #1

SEE NOTE #1

SEE NOTE #1

SEE NOTE #1

SEE NOTE #1

REV	CHANGE NO	REV
A	VR14-00002	A
B	VR14-00010	B
C	VR14-00014	C
D	VR14-00019	D
E	VR14-00021	E
F	VR14-00022	F
G	VR14-00023	G
H	VR14-00024	H
I	VR14-00025	I
J	VR14-00026	J
K	VR14-00029	K
L	VR14-00030	L
M	VR14-00031	M
N	VR14-00032	N
O	VR14-00033	O
P	VR14-00034	P
Q	VR14-00035	Q
R	VR14-00036	R
S	VR14-00037	S
T	VR14-00038	T
U	VR14-00039	U
V	VR14-00040	V
W	VR14-00041	W
X	VR14-00042	X
Y	VR14-00043	Y
Z	VR14-00044	Z
AA	VR14-00045	AA
AB	VR14-00046	AB
AC	VR14-00047	AC
AD	VR14-00048	AD
AE	VR14-00049	AE
AF	VR14-00050	AF
AG	VR14-00051	AG
AH	VR14-00052	AH
AI	VR14-00053	AI
AJ	VR14-00054	AJ
AK	VR14-00055	AK
AL	VR14-00056	AL
AM	VR14-00057	AM
AN	VR14-00058	AN
AO	VR14-00059	AO
AP	VR14-00060	AP
AQ	VR14-00061	AQ
AR	VR14-00062	AR
AS	VR14-00063	AS
AT	VR14-00064	AT
AU	VR14-00065	AU
AV	VR14-00066	AV
AW	VR14-00067	AW
AX	VR14-00068	AX
AY	VR14-00069	AY
AZ	VR14-00070	AZ
BA	VR14-00071	BA
BB	VR14-00072	BB
BC	VR14-00073	BC
BD	VR14-00074	BD
BE	VR14-00075	BE
BF	VR14-00076	BF
BG	VR14-00077	BG
BH	VR14-00078	BH
BI	VR14-00079	BI
BJ	VR14-00080	BJ
BK	VR14-00081	BK
BL	VR14-00082	BL
BM	VR14-00083	BM
BN	VR14-00084	BN
BO	VR14-00085	BO
BP	VR14-00086	BP
BQ	VR14-00087	BQ
BR	VR14-00088	BR
BS	VR14-00089	BS
BT	VR14-00090	BT
BU	VR14-00091	BU
BV	VR14-00092	BV
BW	VR14-00093	BW
BX	VR14-00094	BX
BY	VR14-00095	BY
BZ	VR14-00096	BZ
CA	VR14-00097	CA
CB	VR14-00098	CB
CC	VR14-00099	CC
CD	VR14-00100	CD

FIRST USED ON OPTION/MODEL VR14

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN DECIMALS

TOLERANCES UNLESS OTHERWISE SPECIFIED

FINISH: FRESH

SCALE: NONE

SHEET 1 OF 1

PARTS LIST

EQUIPMENT CORPORATION

WIRED ASSY (VRI 4)

DIA D 7007078-0-0

DIA D 7007078-0-0

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS <b>PARTS LIST</b>					QUANTITY / VARIATION															
MADE BY J. Cahill		CHECKED D. Crabbe		SECTION																
DATE 10/2/70		DATE 10/2/70		1																
ENG <i>D.K. Crabbe</i>		PROD <i>R. Peterson</i>		ISSUED SECT.																
DATE 11/6/70		DATE 11/6/70		1																
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION																		
1	D-IA-7408422-0-0	FRAME, LOGIC				1														
2	B-MD-7407114-0-0	BAR, MTG				1														
3	1209340-00	8 CIRCUIT MATE-N-LOK SOCKET AMP				1														
4	1202244	144 CONNECTOR BLOCK				1														
5	1202188	VOLTAGE CHAIN				A/R														
6	A-SS-5308753-0-1	LOGIC FRAME DECALS				A/R														
7	A-SS-5308753-0-2	LOGIC FRAME DECALS				A/R														
8	1302466	RESISTOR 100K 1/4W 5%				1														
9	1310180	RESISTOR 0.5Ω 20W 1%				2														
10	1209379-01	CONTACT TERM PIN SOCKET AMP. INC.				18														
11	9006011-1	SCR, PHL HD PAN #4-40 x 3/8 SST				4														
12	9006557	NUT, KEPS #4-40				4														
13	9006021-1	SCR, PHL HD PAN #6-32 x 5/16 SST				2														
14	9006560	NUT, KEPS #6-32				2														
15	9107560-3	#18 AWG SOLID BUSSING				A/R														
16	9006120	POTDRIVE SCR FIL HD 8-32 x 5/8 SST				2														
17	9107360-22	#18 AWG STRD IPVC (RED)				A/R														
18	9107360-99	#18 AWG STRD IPVC (WHITE)				A/R														
19	9107360-88	#18 AWG STRD IPVC (GRAY)				A/R														
20	9107360-66	#18 AWG STRD IPVC (BLUE)				A/R														
21	9107360-77	#18 AWG STRD IPVC (VIO)				A/R														
22	9107410-84	#18 AWG STRD IPVC TRACER (GRAY/YELLOW)				A/R														
TITLE WIRED ASSEMBLY (VR14)					ASSY NO. D-AD-7007078-0-0		SIZE CODE A PL		NUMBER 7007078-0-0			REV K		ECO NO. VR14-00029						
					SHEET 1 OF 2		DIST. G													

DEC FORM NO. 16-1031  
DRA 110

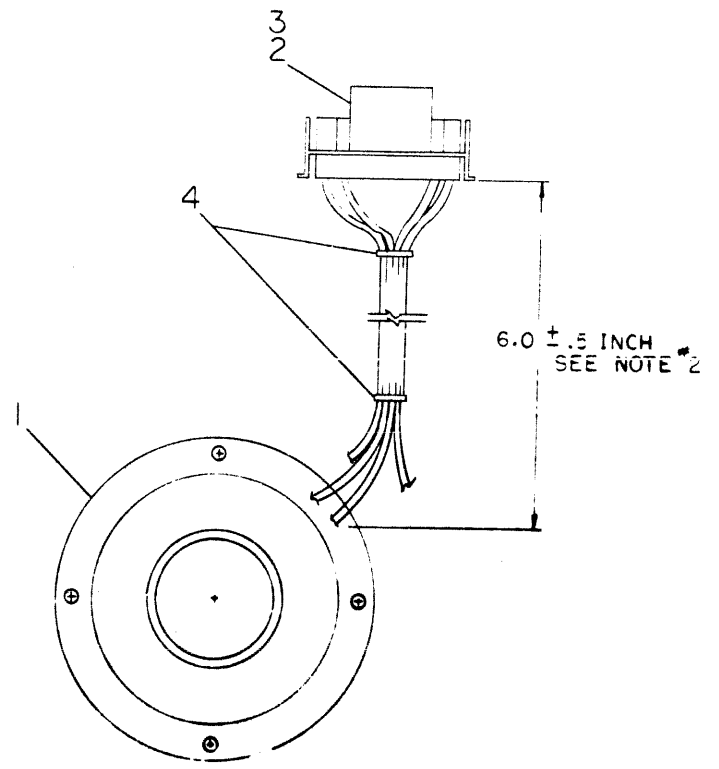
DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS <b>PARTS LIST</b>					QUANTITY / VARIATION															
MADE BY J. Cahill		CHECKED D. Crabbe		SECTION																
DATE 11/3/70		DATE 11/3/70		1																
ENG <i>D.K. Crabbe</i>		PROD <i>R. Peterson</i>		ISSUED SECT.																
DATE 11/6/70		DATE 11/6/70		1																
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION																		
23	9107410-86	#18 AWG STRD IPVC TRACER (GRY/BLU)				A/R														
24	9107360-00	#18 AWG STRD IPVC WIRE (BLACK)				A/R														
<del>25</del>	<del>9107360-88</del>	<del>#18 AWG STRD IPVC WIRE (GREEN)</del>				<del>A/R</del>														
26	9107360-44	#18 AWG STRD IPVC WIRE (YELLOW)				A/R														
27	9107350-00	#22 AWG STRD IPVC WIRE (BLACK)				A/R														
28	9107350-22	#22 AWG STRD IPVC WIRE (RED)				A/R														
29	9107350-99	#22 AWG STRD IPVC WIRE (WHITE)				A/R														
30	9107256-1	#22 TEF TUBING (BLACK)				A/R														
31	1209350-15	CONN PIN HOUSING MATE-N-LOK AMP				1														
32	1010195-0	CAPACITOR 20 mfd 100V 10%				1														
<del>33</del>	<del>9007830</del>	<del>TERM POINT CONNECTORS</del>				<del>6</del>														
<del>34</del>	<del>9107410-89</del>	<del>#22 AWG STRD TEF TRACER (BLK/WHI)</del>				<del>A/R</del>														
<del>35</del>	<del>9107410-88</del>	<del>#18 AWG STRD IPVC TRACER (GRY/GRN)</del>				<del>A/R</del>														
36	1302398	RES. 470K 1/4W 5%				1														
37	J-IA-7009357-0-0	MAIN CHASSIS HARNESS				1														
38	1000020	CAPACITOR 180 PF 100V 5%				1														
TITLE WIRED ASSEMBLY (VR14)					ASSY NO. D-AD-7007078-0-0		SIZE CODE A PL		NUMBER 7007078-0-0			REV K		ECO NO.						
					SHEET 2 OF 2		DIST.													

DEC FORM NO. 16-1031  
DRA 110

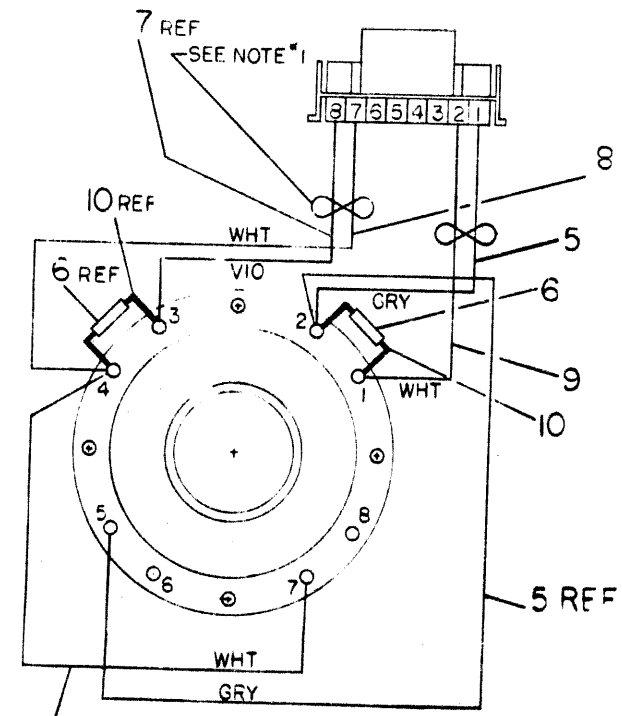
This drawing and specifications herein are the property of Digital Equipment Corporation and shall not be reproduced or copied in whole or in part for the sale or the manufacture or sale of items without a written permission.

C-0-8802002 V1 2  
10023278

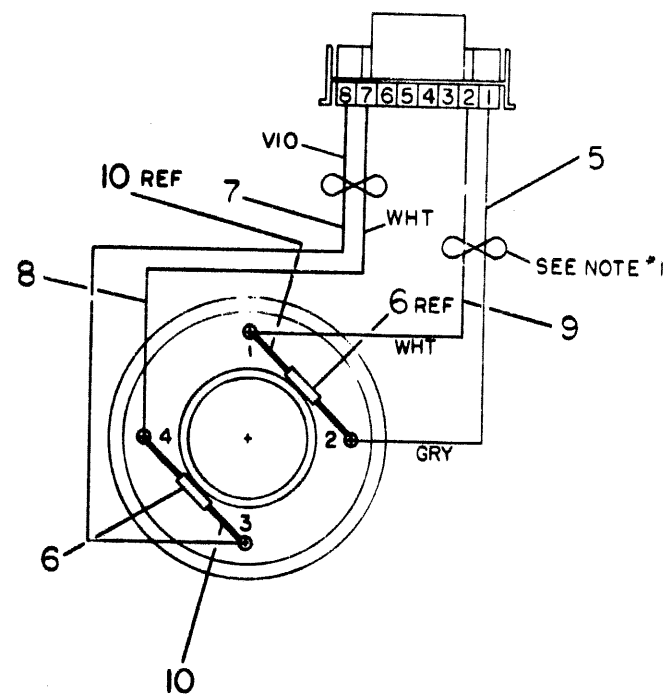
NOTE:  
1. TWIST (2 WIRES) 3 TWISTS PER INCH MIN. & 4 TWISTS PER INCH MAX.  
2. OVERALL LENGTH OF WITH S.O.: .5 INCH



PENN-TRAN OR SYNTRONIC YOKE



WIRING DIAGRAM FOR SYNTRONIC YOKE



WIRING DIAGRAM FOR PENN-TRAN YOKE

QTY.	DESCRIPTION	PART NO.	TEST NO.
	A/R SLEEVING #18 GA. TEF (ON BLK)	9107278-00	10
	A/R WIRE #18 AWG STD TWP (GRY-WHT)	9107430-89	4
	A/R WIRE #18 AWG STD TWP (VIO-WHT)	9107430-79	8
	A/R WIRE #18 AWG STD TEF (VIO)	9107360-77	7
	2 RESISTOR 150Ω, 2.0W, 10%	1300258	6
	A/R WIRE #18 AWG STD TEF (GRY)	9107360-88	5
	2 TIE WRAP #SST-1-B PANDUIT	90C7032	4
	4 CONTACT, TERM. PIN AMPHENOL	1209378-01	3
	1 CIRCUIT, MATE-N-LOK	209340-C1	2
	1 YOKE, PENN-TRAN CORP OR YOKE, SYNTRONIC INSTRUMENT	1209631	1

REV	DATE	BY	CHK	CHANGE NO.
A	11-2-71	A. FISHMAN		VR14-0000A
B	11-2-71	A. FISHMAN		VR14-0001B
C	11-2-71	A. FISHMAN		VR14-0001C
D	11-2-71	A. FISHMAN		VR14-0001D

VR14

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE AS SHOWN

APPROVED: [Signature] DATE: 5-3-71

DESIGNED: [Signature] DATE: 5-4-71

DRAWN: [Signature] DATE: 5-4-71

CHECKED: [Signature] DATE: 5-4-71

PREPARED: [Signature] DATE: 5-4-71

DATE: 5-4-71

SCALE: 1:1

SHEET: 1 OF 1

PARTS LIST

EQUIPMENT CORPORATION

C.R.T. YOKE ASSY

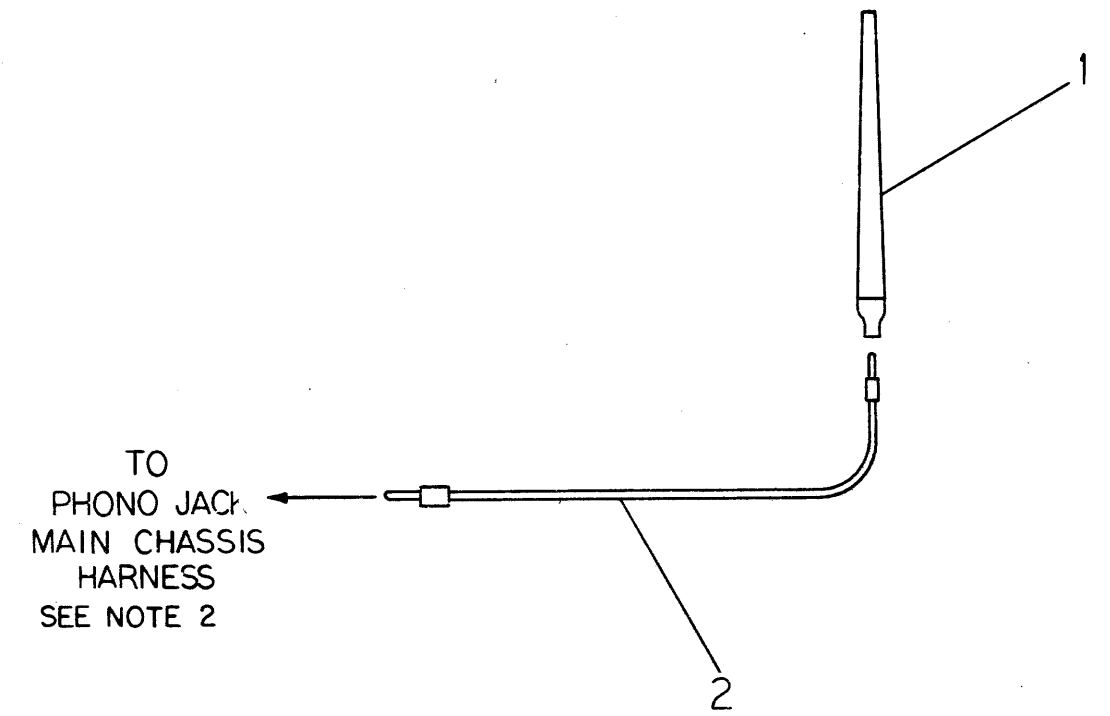
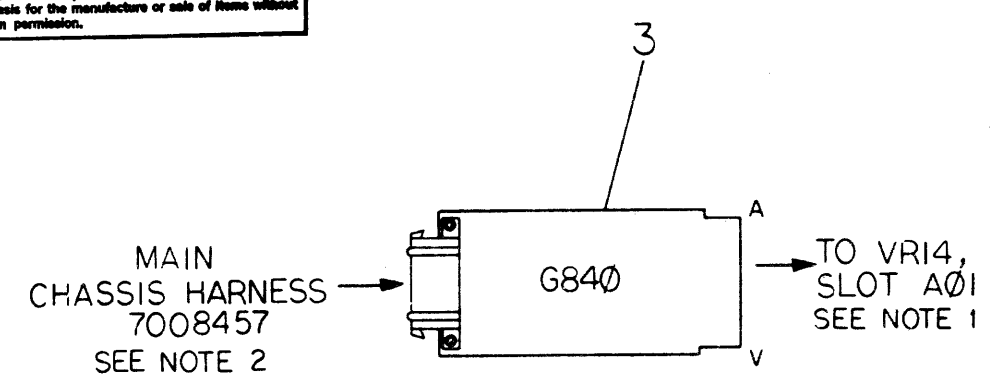
DIA-VR14-0-0

DIA 7007088-C-0

DIA 7007088-0-0

This drawing and specifications, herein, are the property of Digital Equipment Corporation and shall not be reproduced or copied or used in whole or in part as the basis for the manufacture or sale of items without written permission.

NOTES:  
 1. ITEM #3 (L.P. AMPLIFIER) REPLACES THE G838 PHOSPHOR PROTECT MODULE IN SLOT A01 IN THE VRI4.  
 2. MAIN CHASSIS HARNESS SUPPLIED WITH EXISTING HARDWARE.



QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	GT40 LIGHT PEN AMP.	G840	3
1	CABLE, SWITCHCRAFT	120960B	2
1	LIGHT PEN ASSY (375-A)	C-UA-375-A-0	1

FIRST USED ON OPTION/MODEL		QTY.		DESCRIPTION		PART NO.		ITEM NO.	
VRI4									
PARTS LIST									
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				DRN <i>CBM/Cy</i> DATE 10-12-72		<b>digital</b> EQUIPMENT CORPORATION <small>MAYNARD MASSACHUSETTS</small> <b>LIGHT PEN ASS'Y (375)</b>			
DECIMALS		ANGLES		CHK'D <i>De Cella</i> DATE 10-13-72					
.XXX - .005		±0° 30'		ENG. <i>De Cella</i> DATE 10-13-72					
.XX - .02				PROJ. ENG. <i>De Cella</i> DATE 10-13-72					
.X - .1				BROD. <i>De Cella</i> DATE 10-13-72					
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓				NEXT HIGHER ASSY.		SIZE CODE		NUMBER	
MATERIAL				B-DD-375-0		C UA		375-0-0	
FINISH				SCALE NONE		DIST. 6		REV.	
				SHEET OF					

REV.	CHANGE NO.	REVISIONS

REV. NUMBER C UA 375-0-0

DIGITAL EQUIPMENT CORPORATION  
MAYNARD MASSACHUSETTS

ACCESSORY LIST

LEGEND

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

QUANTITY / VARIATION

MADE BY *J. P. ...*  
DATE *1-15-74*  
CHECKED *J. P. ...*  
DATE *1-15-74*  
SECTION *1*  
ENG *Harold ...*  
DATE *1/15/74*  
PROD *Prod ...*  
DATE *1/15/74*  
ISSUED SECT.

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	VR17-IC	VR17-ID	KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE
1	B-DD-VR17-0	VR17 Print Set	1	1						
2	DEC-12-HVCRT-D-D	VR14, VR17 User's Manual	1	1						
3	700924R-0-C	Cable Key, Bd, Interlock	1	1						
		NOTE: ABOVE ITEMS ARE SHIPPED ONLY WHEN VR17 IS SOLD AS A SEPERATE UNIT. (NOT WITH A SYSTEM)								

TITLE VR17 ACCESSORY LIST  
ASSY. NO. D-UA-VR17-0-0  
SHEET 1 OF 1  
SIZE CODE A AL  
NUMBER VR17-0-6  
REV. ECO NO