

MASTER DRAWING LIST

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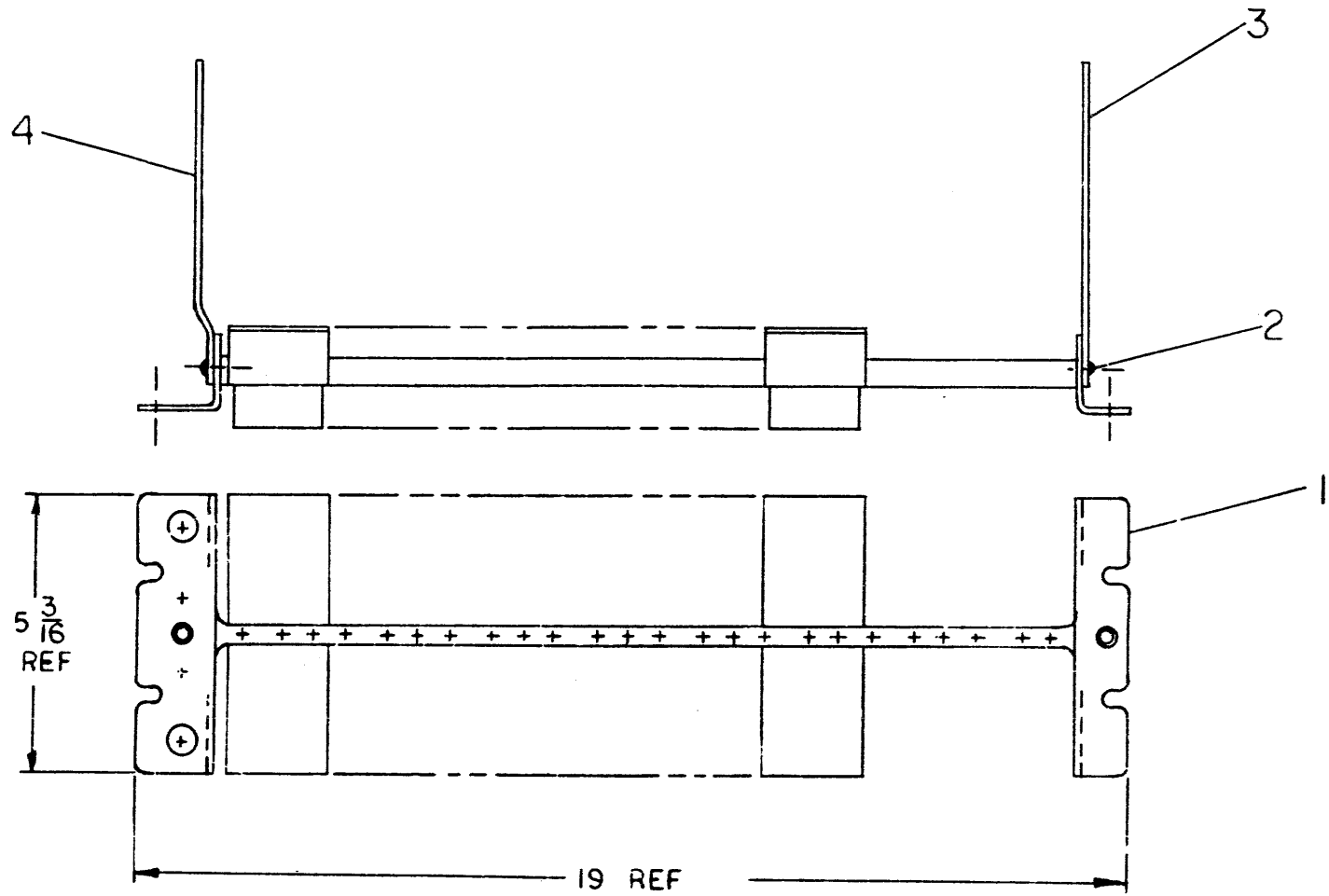
DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE
C-UA-DW08-0-0		1	BUS CONVERSION
A-PL-DW08-0-0		1	BUS CONVERSION, (PL)
C-DI-DW08-0-1	A	1	DRAWING INDEX LIST
D-MU-DW08-A-MU	C	1	MODULE UTILIZATION
A-PL-DW08-A-MU	C	1	MODULE UTILIZATION (PL)
D-BS-DW08-A-NC1	B	1	NEGATIVE CONVERSION 1
D-BS-DW08-A-NC2	B	1	NEGATIVE CONVERSION 2
D-BS-DW08-A-PC1	B	1	POSITIVE CONVERSION 1
D-BS-DW08-A-PC2	B	1	POSITIVE CONVERSION 2
D-IC-DW08-A-NBI		1	NEGATIVE BUS IN & OUT
D-IC-DW08-A-PS	A	1	POSITIVE BUS IN & OUT
C-AD-7005933-0-0		1	WIRED ASSY DW08-A
A-PL-7005933-0-0		1	WIRED ASSY DW08-A (PL)
K-WL-DW08-A-WL	D	1	WIRE LIST-DW08-A
A-SP-DW08-A-2		6	POSITIVE TO NEGATIVE BUS CONVERTER
A-SP-KA8I-0-3	///	8	PROGRAM DESCRIPTION
A-SP-KA8I-0-4	///	5	I/O LEVEL CONVERTER BUS CHECKOUT-PROCEDURE
A-AL-DW08-A-3		1	POSITIVE TO NEGATIVE BUS CONVERTER
C-CS-3009282-0-0		1	H716 POWER SUPPLY

REVISIONS				DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS																								
REV.	DATE	CHG. NO.	APP'D.	HUTNAK	8/12/68																									
A	2/28/69	00001	M.A.	CHK'D.	DATE 10/12/68	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">TITLE</td> <td colspan="2">REV.</td> </tr> <tr> <td colspan="2" style="text-align: center;">BUS CONVERSION (POSITIVE)</td> <td colspan="2" style="text-align: center;">K</td> </tr> <tr> <td>SIZE</td> <td>CODE</td> <td>NUMBER</td> <td>REV.</td> </tr> <tr> <td>A</td> <td>ML</td> <td>DW08-A</td> <td>K</td> </tr> <tr> <td colspan="2">SCALE NONE</td> <td colspan="2">SHEET 1 OF 1</td> </tr> <tr> <td colspan="2">DIST.</td> <td colspan="2" style="text-align: center;">X</td> </tr> </table>	TITLE		REV.		BUS CONVERSION (POSITIVE)		K		SIZE	CODE	NUMBER	REV.	A	ML	DW08-A	K	SCALE NONE		SHEET 1 OF 1		DIST.		X	
TITLE		REV.																												
BUS CONVERSION (POSITIVE)		K																												
SIZE	CODE	NUMBER	REV.																											
A	ML	DW08-A	K																											
SCALE NONE		SHEET 1 OF 1																												
DIST.		X																												
B	3/13/69	00002	M.A.	ENG.	DATE 10/13/68																									
C	3/27/69	00003	M.A.	PROJ. ENG.	DATE 10/13/68																									
D	5/69	KA8I-55	M.A.	PROD.	DATE 10/16/68																									
E	10/69	00004	M.A.	FIRST USED ON																										
F	1/70	MISC 64	M.A.																											
G	5/70	00005	M.A.																											
H	9/70	00006	M.A.																											
J																														
K	9/70	00007	M.A.																											

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NOTES:

1. REFER TO DRAWING INDEX NO. C-DI-DW08-0-1



REV.	
CHANGE NO.	
CHK	

FIRST USED ON OPTION/MODEL PDP-8I	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .008 FRACTIONS ± 1/64 ANGLES ± 0°30'	DRN <i>[Signature]</i>	DATE 3/7/68	 EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS TITLE BUS CONVERSION	
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	CHK'D <i>[Signature]</i>	DATE 10-10-68		
MATERIAL + — +	ENG <i>[Signature]</i>	DATE 10/13/68		
FINISH + — +	PROV. <i>[Signature]</i>	DATE 10/13/68		
	NEXT HIGHER ASSY. A-ML-DW08-B-0		SIZE CODE CJA	NUMBER DW08-0-0
	SCALE NONE		DIST. G	
	SHEET 1 OF 1			

REV.	
NUMBER	DW08-0-0
SIZE CODE	CJA
	B

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

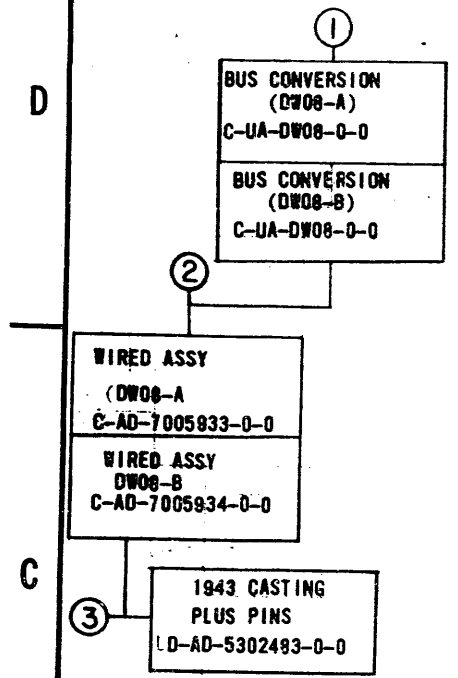
MADE BY R. HUTNAK	CHECKED AL PFYFFER	SECTION 1
DATE 8/8/68	DATE 8/23/68	
ENG J. F. Chouhroum	PROD H. J. J. J.	ISSUED SECT. 1
DATE 10/11/68	DATE 10/16/68	

QUANTITY / VARIATION

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	DW08-A	DW08-B														
1	C-AD-7005933-0-0	WIRED ASSY DW08-A	1															
1	C-AD-7005934-0-0	WIRED ASSY DW08-B		1														
2	90-06509	RIVET, POP, AD43BS USMC	8	8														
3	C-MD-5302486-0-0	PANEL, RIGHT END	1	1														
4	C-MD-5302485-0-0	PANEL, LEFT END	1	1														
5	D-UA-BC08A-0-0	BC08A CABLE (FLEX-PRINT)	A/RA/R															
5	D-UA-BC08B-0-0	BC08B CABLE (COAX)	A/RA/R															
5	D-UA-BC08C-0-0	BC08C CABLE (FLEX-PRINT)	A/RA/R															
5	D-UA-BC08D-0-0	BC08D CABLE (COAX)	A/RA/R															
NOTE: BC08C AND BC08D ARE FOR DIRECT INTERFACE TO PDP 8/I WITH K81. BC08A AND BC08B ARE FOR INTERFACE PDP 8/L AND OTHER POSITIVE BUS OPTIONS.																		

TITLE	ASSY NO.	SIZE CODE	NUMBER	REV.	ECO NO.
BUS CONVERSION	C-UA-DW08-0-0	A PL	DW08-0-0		
	SHEET 1 OF 1	DIST. G			

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MECHANICAL			DEPT USAGE			ELECTRICAL			DEPT USAGE		
FIND NO	DESCRIPTION	PART NO.	PROD	CUST	F/C	FIND NO	DESCRIPTION	PART NO.	PROD	CUST	F/C
1	BUS CONVERSION BUS CONVERSION (PL) PANEL, RIGHT END PANEL, LEFT END	C-UA-DW08-0-0 A-PL-DW08-0-0 C-MD-5302486-0-0 C-MD-5302485-0-0				1	BUS CONVERSION (POSITIVE) MODULE UTILIZATION MODULE UTILIZATION (PL) NEGATIVE CONVERSION 1 NEGATIVE CONVERSION 2 POSITIVE CONVERSION 1 POSITIVE CONVERSION 2 NEGATIVE BUS IN & OUT POSITIVE BUS IN & OUT WIRE LIST, DW08-A ACCESSORY LIST ACCESSORY LIST BUS CONVERSION (NEGATIVE) MODULE UTILIZATION MODULE UTILIZATION (PL) NEGATIVE CONVERSION 1 NEGATIVE CONVERSION 2 POSITIVE CONVERSION 1 POSITIVE CONVERSION 2 NEGATIVE BUS IN & OUT POSITIVE BUS IN & OUT WIRE LIST, DW08-B	A-ML-DW08-A D-MD-DW08-A-MU A-PL-DW08-A-MU D-BS-DW08-A-NC1 D-BS-DW08-A-NC2 D-BS-DW08-A-PC1 D-BS-DW08-A-PC2 D-IC-DW08-A-NB1 D-IC-DW08-A-PS K-WL-DW08-A-WL A-AL-DW08-A-3 A-AL-DW08-B-3 A-ML-DW08-B D-MU-DW08-B-MU A-PL-DW08-B-MU D-BS-DW08-B-NC1 D-BS-DW08-B-NC2 D-BS-DW08-B-PC1 D-BS-DW08-B-PC2 D-IC-DW08-B-NB1 D-IC-DW08-B-PS K-WL-DW08-B-WL			
2	WIRED ASSY, DW08-A WIRED ASSY, DW08-A (PL) WIRED ASSY, DW08-B WIRED ASSY, DW08-B (PL) LOGIC FRAME DECAES	C-AD-7005933-0-0 A-PL-7005933-0-0 C-AD-7005934 A-PL-7005934 A-DC-7406371-0-0									
3	1943 CASTING PLUS PINS 1943 CASTING PLUS PINS (PL) 1943 FRAME CASTING	D-AD-5302483-0-0 A-PL-5302483-0-0 E-MD-1202885-0-0									

REV. A	DATE 4-7-70	BY T. Sullivan
REV. A	DATE 7-5-70	BY M. Brennan
CHK FV	MISC-00064	ARSENAL

ASSY DWG NO. C-UA-DW08-0-0

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

DRN. <i>John J. ...</i>	DATE 9/7/68
CHK'D. <i>...</i>	DATE 12-10-68
ENG. <i>...</i>	DATE 10/11/68
PROJ. ENG. <i>...</i>	DATE 10/11/68
PROD. <i>...</i>	DATE 10/11/68

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

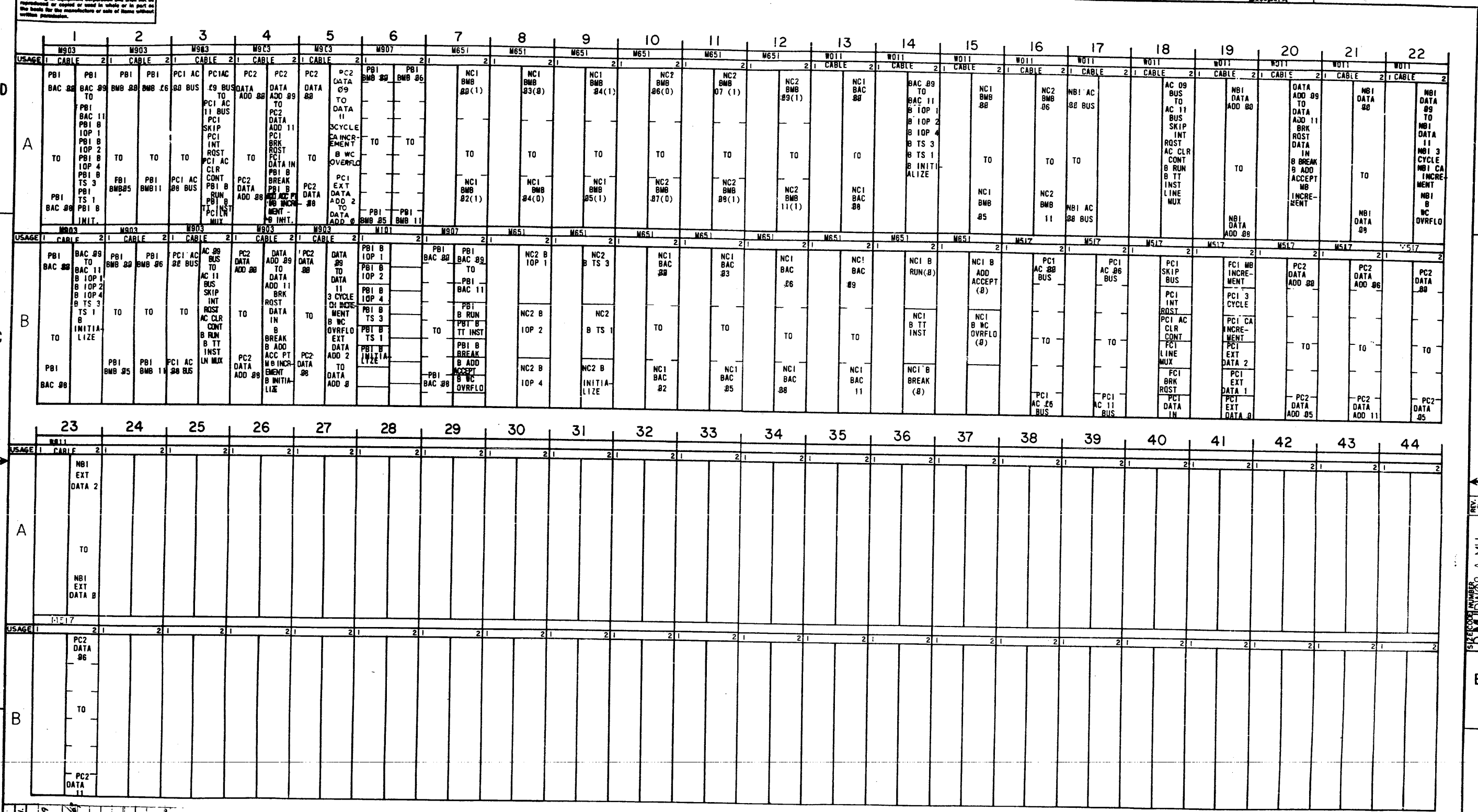
TITLE
DRAWING INDEX LIST

MATERIAL + +
FINISH + +

SCALE NONE
SHEET 1 OF 1

SIZE CODE C
NUMBER DIDW08-0-1
REV. A

REV. A
NUMBER DIDW08-0-1
SIZE CODE C



REVISIONS

REV.	CHG. NO.	DESCRIPTION	DATE
A	DW08A-00004		
B	DW08A-00005		
C	DW08A-00006		

* M517'S WERE PREVIOUSLY M507

FIRST USED ON OPTION / MODEL
 DW08

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED
 DIMENSION IN INCHES

TOLERANCES
 DECIMALS FRACTIONS ANGLES
 .005 .125 .030
 FINAL SURFACE QUALITY /
 REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL
 + +

FINISH
 + +

DATE: 10/27/69
 CHECKED: [Signature]
 ENGR: [Signature]
 PROJ. ENG. [Signature]
 PROD. [Signature]

DATE: 10/27/69
 DATE: 10/27/69
 DATE: 10/27/69

DATE: 10/27/69
 DATE: 10/27/69

DATE: 10/27/69

digital EQUIPMENT CORPORATION
 MAYNARD, MASSACHUSETTS

TITLE
MODULE UTILIZATION

SIZE CODE: A-ML-DW08-A
 NUMBER: DW08-A-MU
 REV: C

SCALE: 1 OF 1
 SHEET: 1 OF 1

DRAWING NUMBER: DW08-A-MU

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

QUANTITY / VARIATION

MADE BY R. HUTNAK
 DATE 8/9/68
 ENG J.F. O'Connell
 DATE 10/13/68

CHECKED *[Signature]*
 DATE 10-13-68
 PROD A. G. [Signature]
 DATE 10/16/68

SECTION 1
 ISSUED SECT. 1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY	UNIT	REVISIONS	DATE	BY
	M101	BUS DATA INTERFACE	1				
	M651	NEGATIVE OUTPUT CONVERTER	14				
	M907	DIODE CLAMP	2				
	M517	BUS CONVERTER	8				

TITLE: MODULE UTILIZATION

ASSY NO.: D-MU-DW08-A-MU

SIZE CODE: A PL

NUMBER: DW08-A-MU

REV.: C

ECO NO.: DW08A-00006

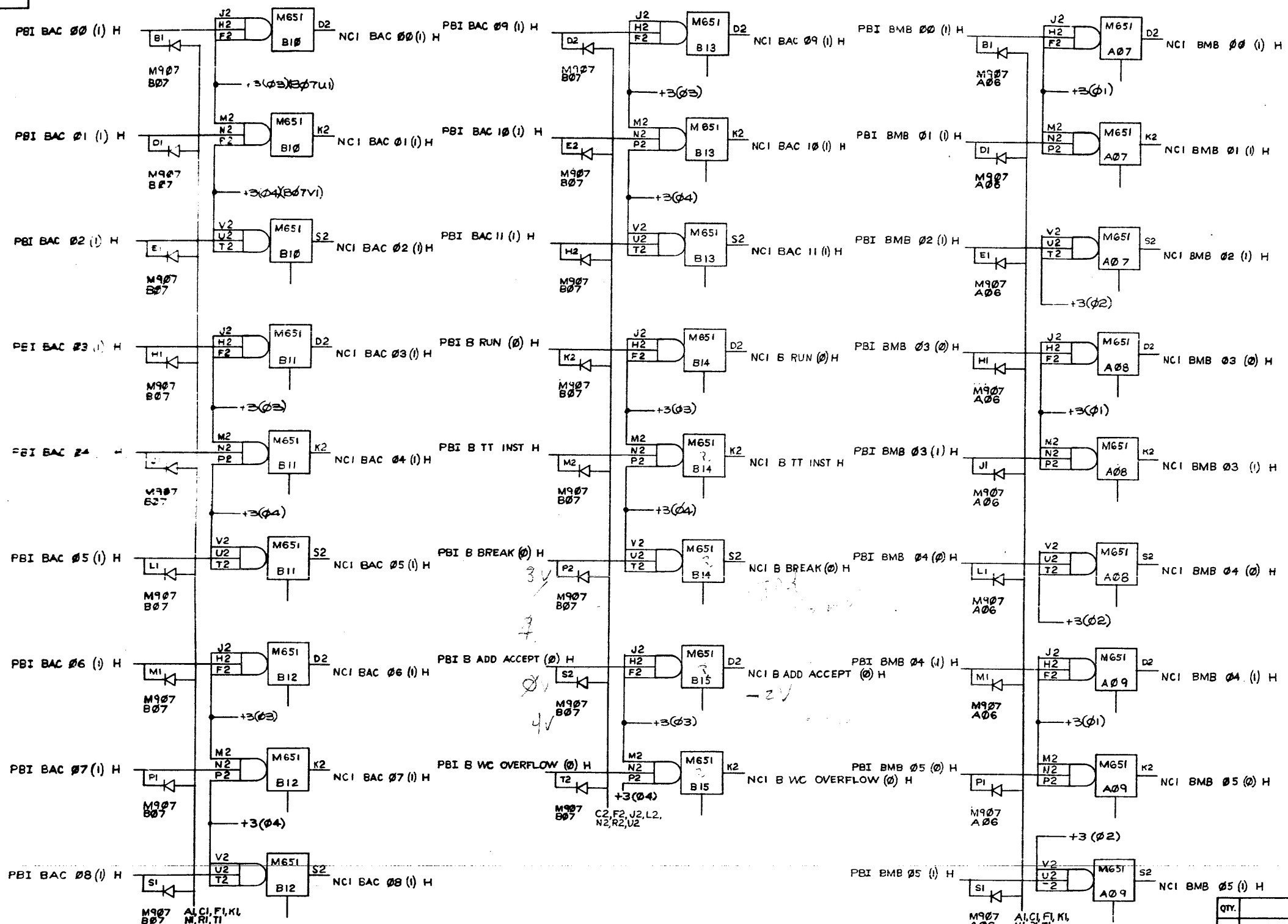
SHEET 1 OF 1

DIST. []

DEC FORM NO. DRA 110

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BSI DW08-A-NCI 2

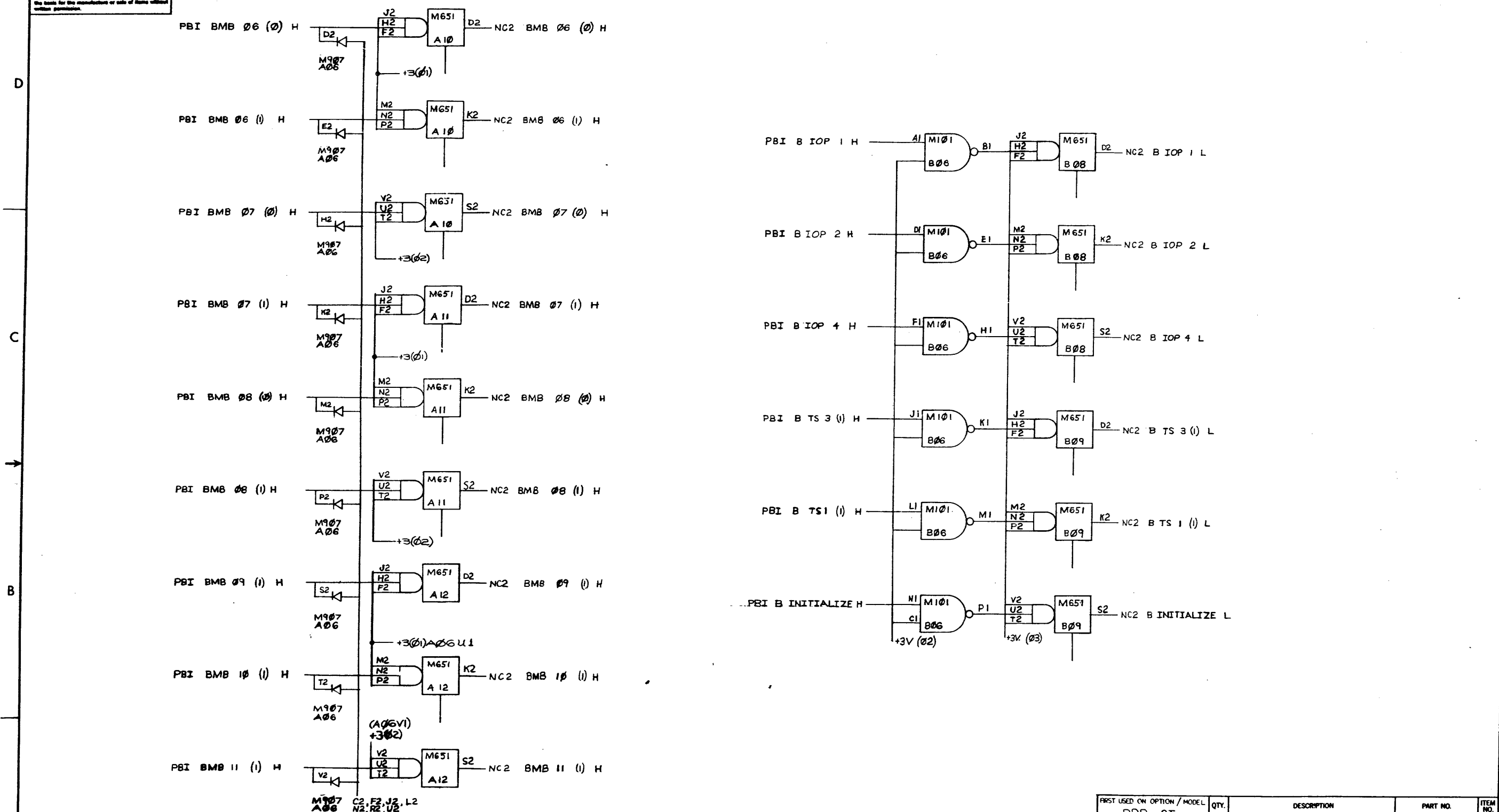


REV.	DATE	BY	CHK.	CHANGE NO.
1	10/10/67	W/OBA	W/OBA	0000
2	10/27/67	W/OBA	W/OBA	0001
3	10/27/67	W/OBA	W/OBA	0002

UNLESS OTHERWISE SPECIFIED
 DIMENSION IN INCHES
 TOLERANCES
 DECIMALS FRACTIONS ANGLES
 ±.005 ±.004 ±.030
 FINAL SURFACE QUALITY
 REMOVE BURRS AND BREAK SHARP CORNERS

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		
	digital EQUIPMENT CORPORATION		
	TITLE NEGATIVE CONVERSION		
	FIRST USED ON OPTION/ MODEL PDP-8I		
	SCALE NONE		
	SHEET 1 OF 1		
	SIZE CODE NUMBER REV DBS DW08-A-NCI E		

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REV. NO.	REV.
CHANGE NO.	
DW08A-0002 A	
DATE	
3/24/69	
ARSENAL	
ARSENAL	
DW08A-0004 B	
DATE	
10/27/69	
ARSENAL	
ARSENAL	

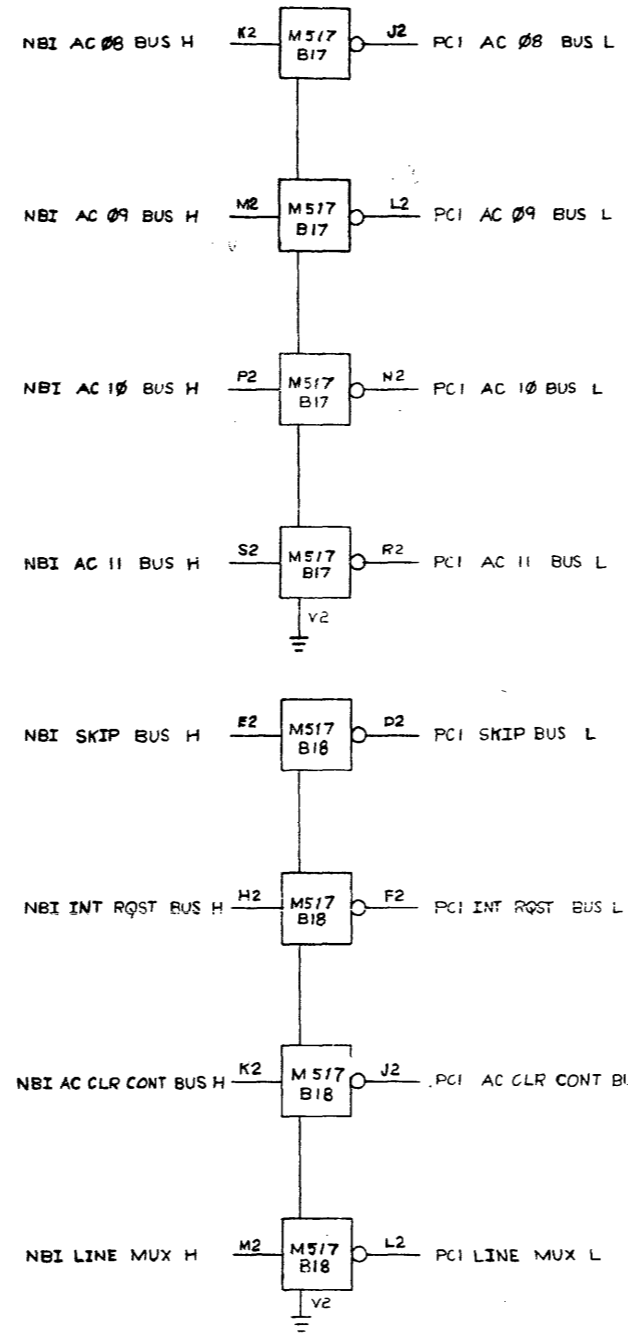
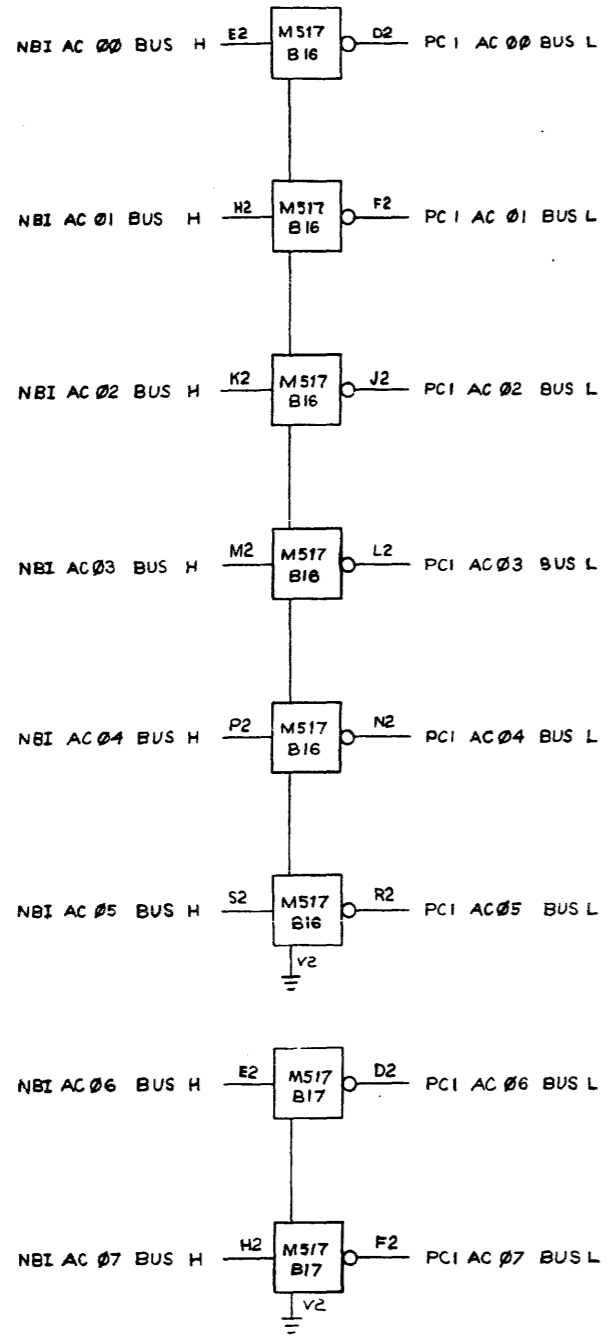
FIRST USED ON OPTION / MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP-8I				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DATE	DATE	digital EQUIPMENT CORPORATION	
UNLESS OTHERWISE SPECIFIED	DATE	DATE	MAYFIELD, MASSACHUSETTS	
DIMENSION IN INCHES	DATE	DATE	TITLE	
TOLERANCES	DATE	DATE	NEGATIVE CONVERSION	
DECIMALS FRACTIONS ANGLES	DATE	DATE	2	
± .005 ± 1/64 ± 0°30'	DATE	DATE	SIZE CODE NUMBER	
FINAL SURFACE QUALITY / REMOVE BURRS AND BREAK SHARP CORNERS	DATE	DATE	D BS DW08-A-NC2 B	
MATERIAL	DATE	DATE	REV.	
FINISH	DATE	DATE	B	
A-ML-DW08-A	DATE	DATE	SHEET 1 OF 1	
SCALE NONE	DATE	DATE	DST.	

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D B S D W 0 8 - A - P C I 2

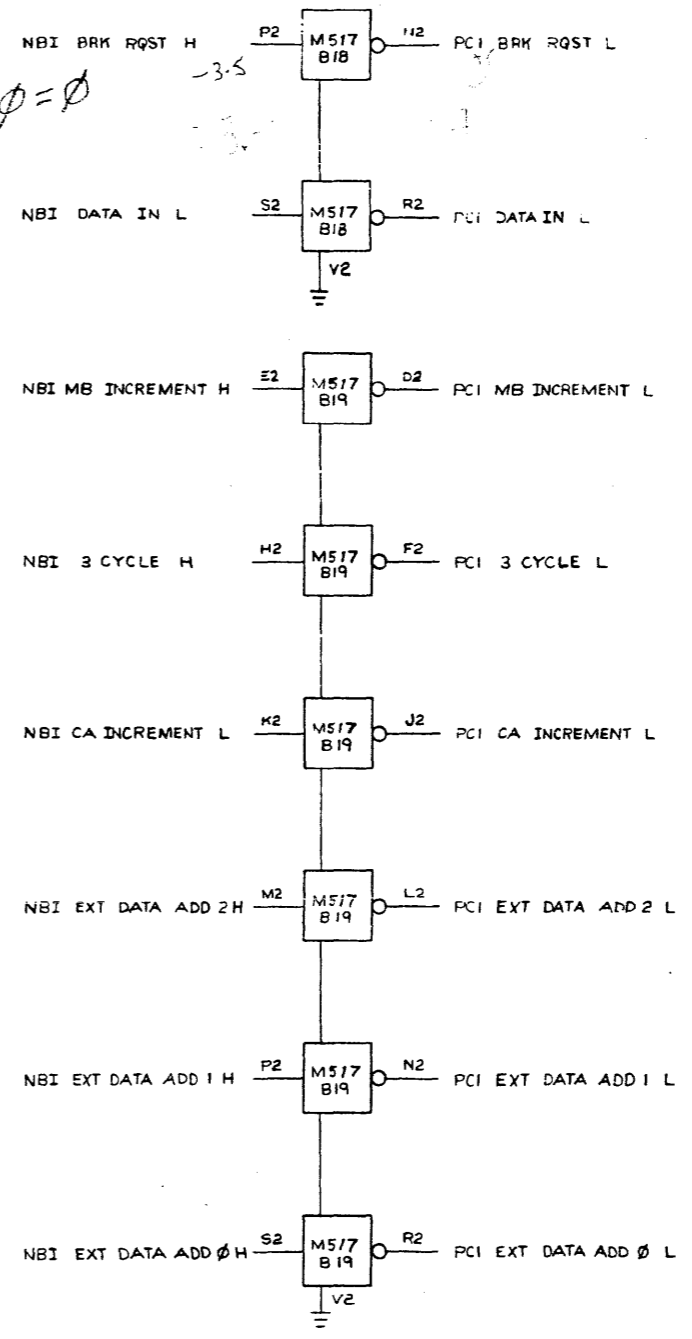
D
C
B
A

D
C
B
A



H=-3

$\phi = \phi$

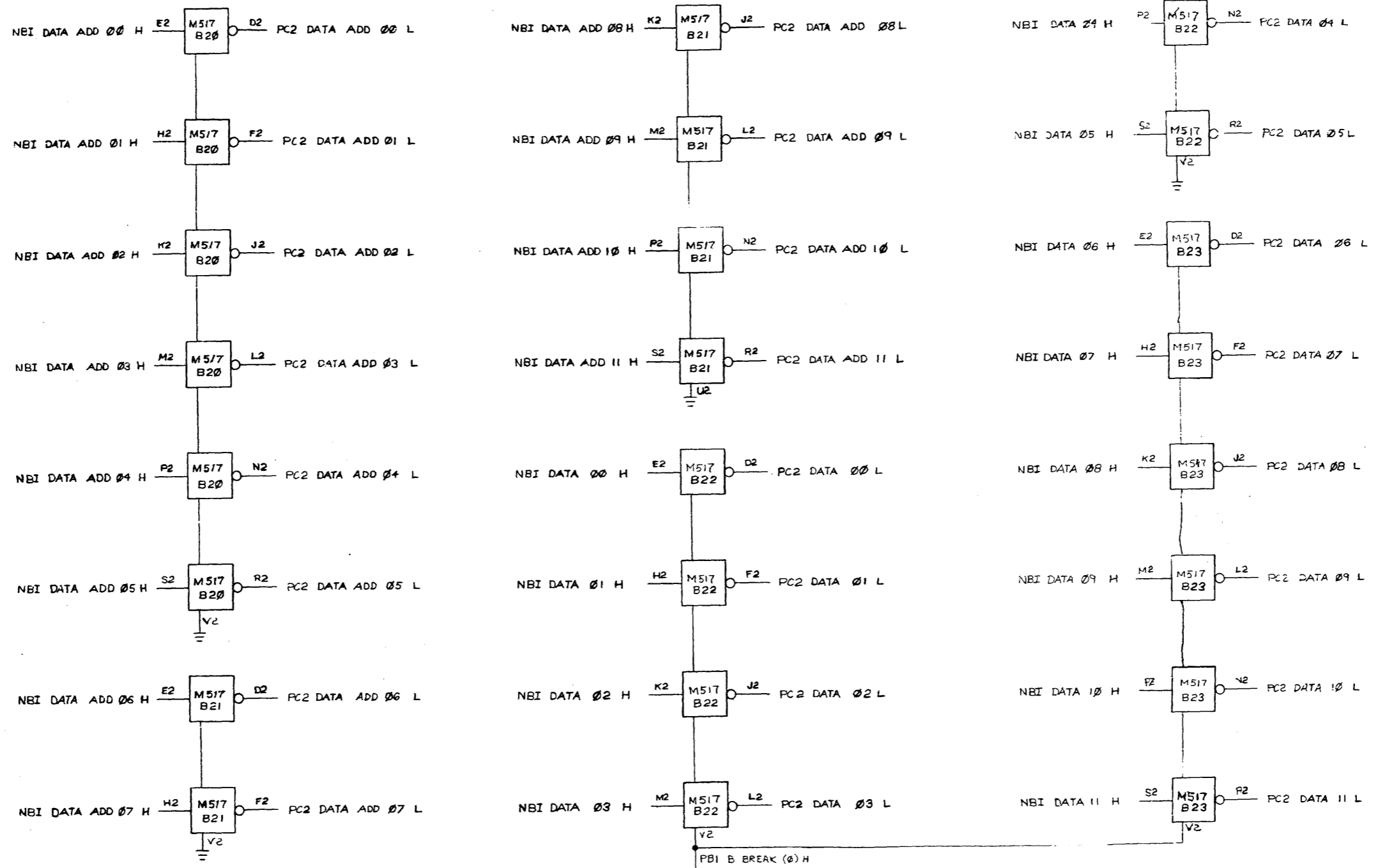


REV.	DATE	BY	CHKD.
1	10/22/68	M. ARSENAULT	
2	11/10/68	M. ARSENAULT	
3	11/10/68	M. ARSENAULT	
4	11/10/68	M. ARSENAULT	
5	11/10/68	M. ARSENAULT	
6	11/10/68	M. ARSENAULT	
7	11/10/68	M. ARSENAULT	
8	11/10/68	M. ARSENAULT	

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP-8I				
UNLESS OTHERWISE SPECIFIED				
DIMENSION IN INCHES				
TOLERANCES				
DECIMALS FRACTIONS ANGLES				
± .008 ± .004 ± .020				
FINAL SURFACE QUALITY				
REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL				
NEXT HIGHER ASSY				
A-ML-DW08-A				
FINISH				
SCALE NONE				
SHEET 1 OF 1				
PARTS LIST			TITLE	
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			POSITIVE CONVERSION I	
SIZE CODE			NUMBER	
D B S D W 0 8 - A - P C I			B	
DIST.			REV	
			B	

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D
 C
 B
 A



REV.	CHANGE NO.	DATE
A	00005	10/10/68
B	00006	10/10/68
C	00007	10/10/68
D	00008	10/10/68

REVISIONS
 DW08A-00005
 M. ARSENAULT
 DW08A-00006
 T. O'NEILL
 ARSENAULT
 DW08A-00007
 T. O'NEILL
 ARSENAULT
 DW08A-00008
 T. O'NEILL
 ARSENAULT

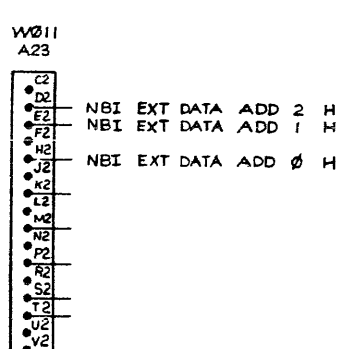
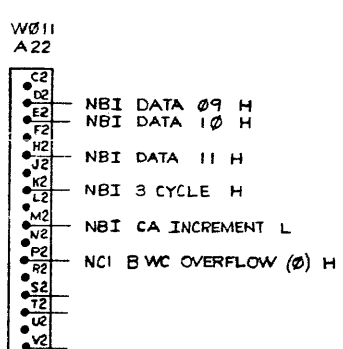
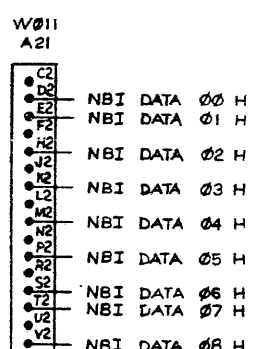
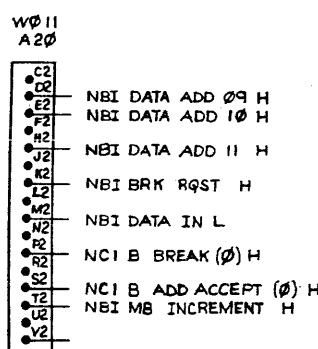
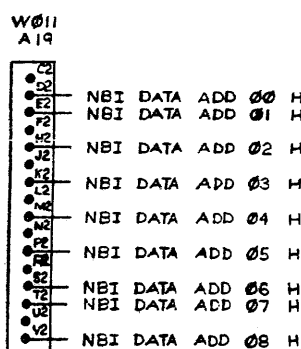
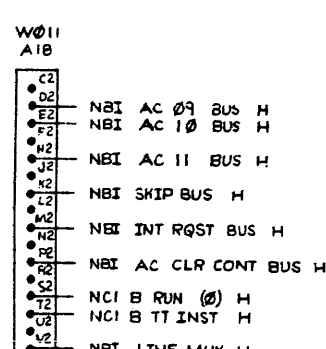
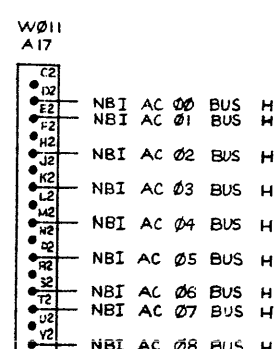
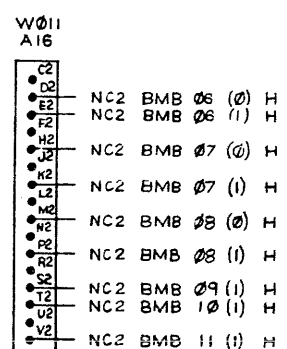
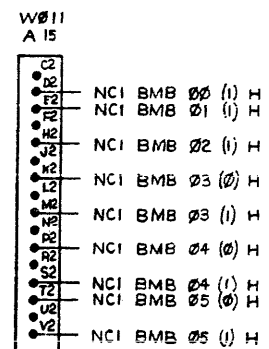
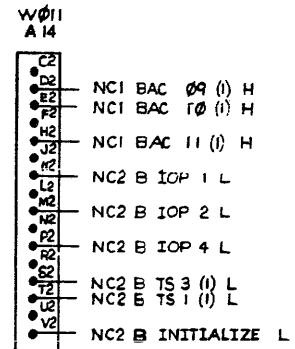
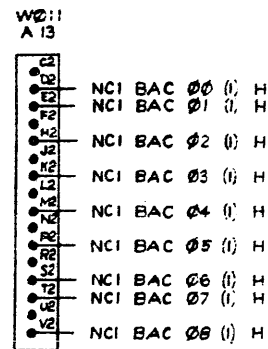
FIRST USED ON OPTION / MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP-8I				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
UNLESS OTHERWISE SPECIFIED	CHKD	DATE	TITLE POSITIVE CONVERSION 2	
TOLERANCES	ENG	DATE	SIZE CODE NUMBER REV. D B S D W 08 - A - P C 2 B	
DECIMALS FRACTIONS ANGLES	PRY	DATE	SCALE NONE	
± .008 ± 1/64 ± 0°30'	PROD	DATE	SHEET 1 OF 1	
FINAL SURFACE QUALITY			DIST.	
REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL	NEXT HIGHER ASSY			
FINISH	A-ML-DW08-A			

REV. B
 NUMBER
 D B S D W 08 - A - P C 2

A

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IBN-A-80W08-2



PINS C,F,J,L,N,R & U ARE GROUNDED ON ALL W011'S

REV.	
CHANGE NO.	
CHK	

FIRST USED ON OPTION/MODEL PDP-8I	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DATE 5/27/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
DIMENSION IN INCHES	DATE 11/14/68	TITLE NEGATIVE BUS IN AND OUT		
TOLERANCES	DATE 11/14/68	SIZE CODE D I C DW08-A-NBI		
DECIMALS FRACTIONS ANGLES	DATE 11/14/68	NUMBER 1		
± .005 ± 1/64 ± 0°30'	DATE 11/14/68	REV.		
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	DATE 11/14/68	SHEET 1 OF 1		
MATERIAL	NEXT HIGHER ASST	SCALE NONE		
FINISH	A-ML-DW08-A	DIST.		

REV. NUMBER
D I C DW08-A-NBI

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	M903 A01	M903 B01
PBI BAC 00 (I) H	A1	A1
PBI BAC 01 (I) H	B1	B1
PBI BAC 02 (I) H	C1	C1
PBI BAC 03 (I) H	D1	D1
PBI BAC 04 (I) H	E1	E1
PBI BAC 05 (I) H	F1	F1
PBI BAC 06 (I) H	G1	G1
PBI BAC 07 (I) H	H1	H1
PBI BAC 08 (I) H	I1	I1
PBI BAC 09 (I) H	J1	J1
PBI BAC 10 (I) H	K1	K1
PBI BAC 11 (I) H	L1	L1
PBI B IOP 1 H	M1	M1
PBI B IOP 2 H	N1	N1
PBI B IOP 4 H	P1	P1
PBI B TS 3 (I) H	R1	R1
PBI B TS 1 (I) H	S1	S1
PBI B INITIALIZE H	T1	T1

	M903 A02	M903 B02
PBI BMB 00 (I) H	A1	A1
PBI BMB 01 (I) H	B1	B1
PBI BMB 02 (I) H	C1	C1
PBI BMB 03 (I) H	D1	D1
PBI BMB 04 (I) H	E1	E1
PBI BMB 05 (I) H	F1	F1
PBI BMB 06 (I) H	G1	G1
PBI BMB 07 (I) H	H1	H1
PBI BMB 08 (I) H	I1	I1
PBI BMB 09 (I) H	J1	J1
PBI BMB 10 (I) H	K1	K1
PBI BMB 11 (I) H	L1	L1

	M903 A03	M903 B03
PCI AC 00 BUS L	A1	A1
PCI AC 01 BUS L	B1	B1
PCI AC 02 BUS L	C1	C1
PCI AC 03 BUS L	D1	D1
PCI AC 04 BUS L	E1	E1
PCI AC 05 BUS L	F1	F1
PCI AC 06 BUS L	G1	G1
PCI AC 07 BUS L	H1	H1
PCI AC 08 BUS L	I1	I1
PCI AC 09 BUS L	J1	J1
PCI AC 10 BUS L	K1	K1
PCI AC 11 BUS L	L1	L1
PCI SKIP BUS L	M1	M1
PCI INT RQST BUS L	N1	N1
PCI AC CLR CONT BUS L	P1	P1
PBI BRUN (0) H	R1	R1
PBI B TT INST H	S1	S1
PCI LINE MUX L	T1	T1

	M903 A04	M903 B04
PC2 DATA ADD 00 L	A1	A1
PC2 DATA ADD 01 L	B1	B1
PC2 DATA ADD 02 L	C1	C1
PC2 DATA ADD 03 L	D1	D1
PC2 DATA ADD 04 L	E1	E1
PC2 DATA ADD 05 L	F1	F1
PC2 DATA ADD 06 L	G1	G1
PC2 DATA ADD 07 L	H1	H1
PC2 DATA ADD 08 L	I1	I1
PC2 DATA ADD 09 L	J1	J1
PC2 DATA ADD 10 L	K1	K1
PC2 DATA ADD 11 L	L1	L1
PCI BRK RQST L	M1	M1
PCI DATA IN L	N1	N1
PBI B BREAK (0) H	P1	P1
PBI B ADD ACC PT (0) H	R1	R1
PCI MB INCREMENT L	S1	S1
PBI B INITIALIZE L	T1	T1

	M903 A05	M903 B05
PC2 DATA 00 L	A1	A1
PC2 DATA 01 L	B1	B1
PC2 DATA 02 L	C1	C1
PC2 DATA 03 L	D1	D1
PC2 DATA 04 L	E1	E1
PC2 DATA 05 L	F1	F1
PC2 DATA 06 L	G1	G1
PC2 DATA 07 L	H1	H1
PC2 DATA 08 L	I1	I1
PC2 DATA 09 L	J1	J1
PC2 DATA 10 L	K1	K1
PC2 DATA 11 L	L1	L1
PCI 3 CYCLE L	M1	M1
PCI CA INCREMENT L	N1	N1
PBI B WC OVERFLOW (0) L	P1	P1
PCI EXT DATA ADD 2 L	R1	R1
PCI EXT DATA ADD 1 L	S1	S1
PCI EXT DATA ADD 0 L	T1	T1

PNDS A1,C1,F1,K1,N1,R1,T1,C2,F2,J2,L2,N2,R2 & U2 ARE GROUNDED ON ALL M903'S

REV. A	DATE 12/10/68
REV. B	DATE 10/13/68
REV. C	DATE 10/13/68
REV. D	DATE 10/13/68
REV. E	DATE 10/13/68
REV. F	DATE 10/13/68
REV. G	DATE 10/13/68
REV. H	DATE 10/13/68
REV. I	DATE 10/13/68
REV. J	DATE 10/13/68
REV. K	DATE 10/13/68
REV. L	DATE 10/13/68
REV. M	DATE 10/13/68
REV. N	DATE 10/13/68
REV. O	DATE 10/13/68
REV. P	DATE 10/13/68
REV. Q	DATE 10/13/68
REV. R	DATE 10/13/68
REV. S	DATE 10/13/68
REV. T	DATE 10/13/68
REV. U	DATE 10/13/68
REV. V	DATE 10/13/68
REV. W	DATE 10/13/68
REV. X	DATE 10/13/68
REV. Y	DATE 10/13/68
REV. Z	DATE 10/13/68

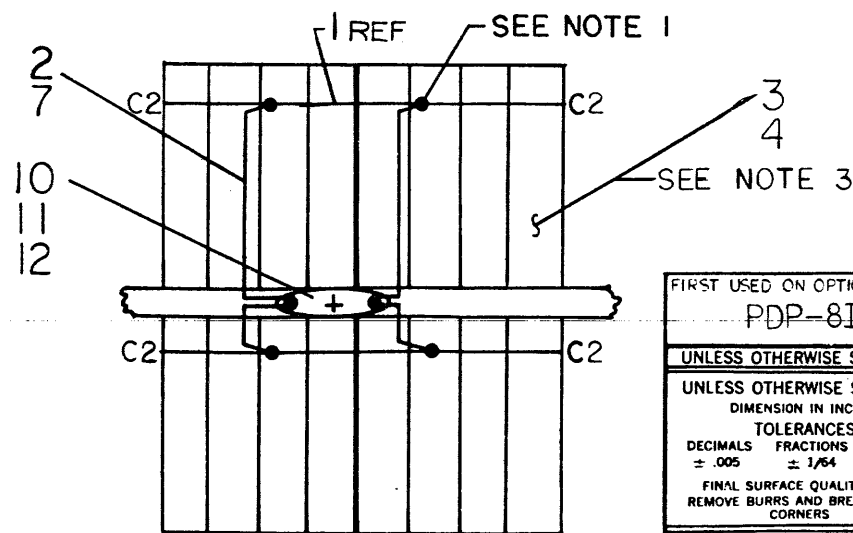
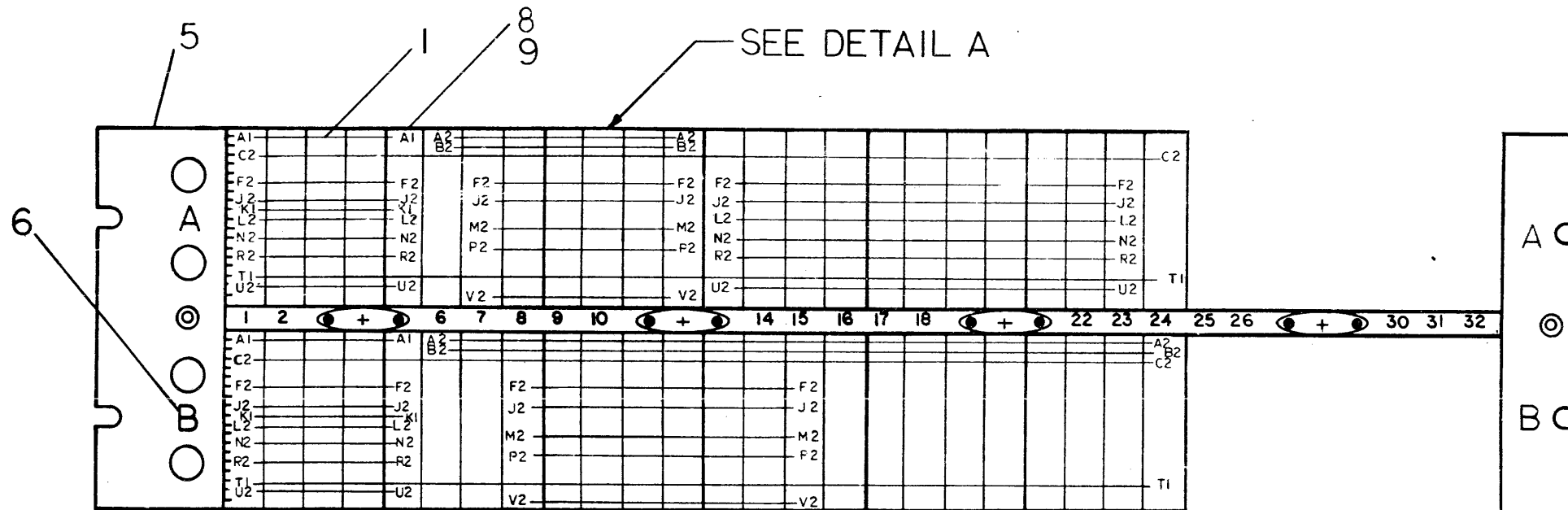
FIRST USED ON OPTION/MODEL PDP-8I	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DATE 12-8-68	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
UNLESS OTHERWISE SPECIFIED	DATE 11/10/68	TITLE POSITIVE BUS IN AND OUT		
DIMENSION IN INCHES	DATE 10/13/68	SIZE CODE DIC DW08-A-PS		
TOLERANCES	DATE 10/13/68	NUMBER A		
DECIMALS ± .005	DATE 10/13/68	REV A		
FRACTIONS ± 1/64	DATE 10/13/68	SCALE NONE		
ANGLES ± 0°30'	DATE 10/13/68	SHEET 1 OF 1		
FINAL SURFACE QUALITY / REMOVE BURRS AND BREAK SHARP CORNERS	DATE 10/13/68	DIST.		
MATERIAL	NEXT HIGHER ASSY	A-ML-DW08-A		
FINISH	SCALE NONE	SHEET 1 OF 1		

REV. A
NUMBER
D I C DW08-A-PS

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NOTES:

1. CONNECTIONS ON ITEMS *1 & *2 TO BE SOLDERED AND LOCATED AT MINIMUM PRACTICAL HEIGHT ABOVE BOARD.
2. ALL CONN BLOCKS TO BE GROUNDED TO GND LUGS AS SHOWN.
3. USE YELLOW WIRE (ITEM *3) FOR MACHINE WRAPPED & BLUE WIRE (ITEM *4) FOR HAND WRAPPED WIRING.



DETAIL A
3 PLACES
SEE NOTE 2

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP-8I				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DRN <i>K. H. H. H.</i>	DATE 3/6/68	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
UNLESS OTHERWISE SPECIFIED	CHKD <i>[Signature]</i>	DATE 10-11-68		
TOLERANCES	ENG <i>[Signature]</i>	DATE 10/11/68		
DECIMALS FRACTIONS ANGLES ± .005 ± 1/64 ± 0°30'	PROJ. ENG <i>[Signature]</i>	DATE 10/11/68		
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	PROD <i>[Signature]</i>	DATE 10/11/68	WIRED ASSY DWØ8-A	
MATERIAL + / +	NEXT HIGHER ASSY C-UA-DWØ8-Ø-Ø			
FINISH + / +	SCALE NONE	SHEET 1 OF 1	SIZE CODE CAD	NUMBER 7005933-0-0
			DIST.	REV.

REV.	
CHANGE NO.	
CHK	

SIZE CODE NUMBER
 CAD7005933-0-0
 B

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY R. HUTNACK	CHECKED AL. PFYFFER	SECTION
DATE 8/9/68	DATE 8/22/68	1
ENG <i>J. Dougherty</i>	PROD <i>A. Godfrey</i>	ISSUED SECT.
DATE 10/11/68	DATE 10/16/68	1

QUANTITY / VARIATION


ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	DW08-A										
1	12-0554I	BUS STRIP	A/R										
2	91-07560-1	#22 AWG WIRE, BUS	A/R										
3	91-05740-5	#30 AWG SOLID INS WIRE YEL	A/R										
4	91-05740-7	#30 AWG SOLID INS WIRE BLU	A/R										
5	D-AD-5302483-0-0	1943 CASTING PLUS PINS	1										
6	A-DC-7406371-0-0	LOGIC FRAME DECALS	A/R										
7	91-07265	TUBING, TEFLON #22 WHITE	A/R										
8	12005348	288 PIN CONN BLOCK TYPE H803	6										
9	90-06039-1	SCR PHL HD FIL #8-32 x 1/2 LG SST	12										
10	90-07597	TERMINAL #2116-08-00 SHAKEPROOF	3										
11	90-06035-1	SCR PHL HD FIL #8-32 x 1/4 LG SST	3										
12	90-06634	WASH INT TOOTH #8	3										

TITLE WIRED ASSY DW08-A	ASSY NO. C-AD-7005933-0-0	SIZE A	CODE PL	NUMBER 7005933-0-0	REV.	ECO NO.
SHEET OF		DIST. G				

DEC FORM NO. DRA 110

DRWG NO	REV LTR
K-WL-DWØ8-A-WL	D

REVISIONS			
REV LTR	ECO NO	DATE	ENG
A	DWØ8A-00001	3/14/69	<i>[Signature]</i>
B	DWØ8A-00002	3/14/69	<i>[Signature]</i>
C	DWØ8A-00003	3-27-69	<i>[Signature]</i>
D	DWØ8A-00005	6-2-70	<i>[Signature]</i>

<table border="1"> <tr> <td>DRAWN</td> <td>DATE</td> </tr> <tr> <td><i>[Signature]</i></td> <td>8/29/68</td> </tr> <tr> <td>CHECKED</td> <td>DATE</td> </tr> <tr> <td><i>[Signature]</i></td> <td>10-12-68</td> </tr> <tr> <td>ENG</td> <td>DATE</td> </tr> <tr> <td><i>[Signature]</i></td> <td>10/13/68</td> </tr> <tr> <td>PROJ ENG</td> <td>DATE</td> </tr> <tr> <td><i>[Signature]</i></td> <td>10/13/68</td> </tr> <tr> <td>PROD</td> <td>DATE</td> </tr> <tr> <td><i>[Signature]</i></td> <td>10/14/68</td> </tr> </table>	DRAWN	DATE	<i>[Signature]</i>	8/29/68	CHECKED	DATE	<i>[Signature]</i>	10-12-68	ENG	DATE	<i>[Signature]</i>	10/13/68	PROJ ENG	DATE	<i>[Signature]</i>	10/13/68	PROD	DATE	<i>[Signature]</i>	10/14/68	 <p>DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS</p>	TITLE WIRE LIST DWØ8-A FOR TAPE* FILE*
DRAWN	DATE																					
<i>[Signature]</i>	8/29/68																					
CHECKED	DATE																					
<i>[Signature]</i>	10-12-68																					
ENG	DATE																					
<i>[Signature]</i>	10/13/68																					
PROJ ENG	DATE																					
<i>[Signature]</i>	10/13/68																					
PROD	DATE																					
<i>[Signature]</i>	10/14/68																					
ASSY NO C-UA-DWØ8-Ø-Ø	SIZE CODE DWG. NO. K WL DWØ8-A-WL	REV LTR D																				
SCALE NONE	SHEET OF	DIST.																				

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DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 9/17/68

TITLE DWØ8A POSITIVE TO NEGATIVE BUS CONVERTER

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	<i>F. J. ...</i>	APPD	<i>F. J. ...</i>	SIZE	CODE	NUMBER	REV
	A	SP	DWØ8-A-2				

ENGINEERING SPECIFICATION



CONTINUATION SHEET

TITLE DWØ8A POSITIVE TO NEGATIVE BUS CONVERTER

Ø.Ø HARDWARE SPECIFICATIONS

Ø.1 Overall Description

A bus conversion unit that accepts the KA8I type Positive Bus and outputs a Negative Bus and a continuation of the Positive Bus. (The name Bus denotes a combination of input (received by the computer) and output (sent by the computer) signals.) The unit is contained on a single mounting panel with 48 module locations and an integral power supply.

1.Ø GENERAL SPECIFICATIONS

1.1 Basic System

Level converters and diode clamps are provided for both positive and negative level signals. The Positive Bus (with TTL logic levels of Ø volts and +3 volts) inputs on five M9Ø3 or M9Ø4 cable connectors at locations AØ1 to AØ5. The Positive Bus outputs on five M9Ø3 or M9Ø4 cable connectors at locations BØ1 to BØ5. Diode clamps of the two M9Ø7 modules provide termination for this option on the output signals within the Positive Bus. The output signals are level converted and drive the Negative Bus through the 14 M65Ø modules. The M65Ø module produces a high level out (Ø volts) for a high level in (+3 volts) and a low level out (-3 volts) for a low level in (Ø volts). Certain timing signals (BIOP1, BIOP2, BIOP4, BTS3(1), BTS1(1) and B-INITIALIZE) are clamped and inverted by the single

ENGINEERING SPECIFICATION



CONTINUATION SHEET

TITLE DW08A POSITIVE TO NEGATIVE BUS CONVERTER

M101 module before level conversion in the M650 modules.

The Negative Bus outputs on eleven W011 or W031 cable connectors at locations A13 to A23.

Input signals within the Negative Bus are connected to an input clamp, difference amplifiers, and level converters within the eight M507 modules. The output of the M507 is an open collector with a reverse diode clamp to ground. The M507 module converts a high level in (0 volts) to a low level out (0 volts) and a low level in (-3 volts) to a high level out (+3 volts); both the Negative and Positive Buses' input signals are active when clamped to ground (0 volt).

Delays occur within the DW08A unit and effect both the input and output signals within the Buses. A maximum propagation delay of 100 nanoseconds exists in the output timing signals (BIOP1, BIOP2, BIOP4, BTS3(1), BTS1(1) and INITIALIZE), a maximum propagation delay of 60 nanoseconds exists for the other output signals. The input signals propagation delay to a ground level in the M507 module is maximum at 70 nanoseconds. This ground level is held on the Positive Bus for a minimum of 100 nanoseconds after removal of the initiating signal on the Negative Bus; this is to accommodate the conflict between the 500 nanoseconds PDP8/I placement of the I/O STROBE signal on the Positive Bus and the utilization of 400 nanosecond pulses

SIZE	CODE	NUMBER	REV
A	SP	DW08-A-2	

ENGINEERING SPECIFICATION



CONTINUATION SHEET

TITLE DW08A POSITIVE TO NEGATIVE BUS CONVERTER

on the Negative Bus. The round trip propagation delay (100 nanoseconds plus 70 nanoseconds) of the timing signals reduces the cable length allowed between the computer and the peripheral. At a rate of 3 microseconds per round trip foot, the cable length reduction for 170 nanoseconds delay is approximately 57 feet; for the KA8I Positive Bus a total of 23 feet of cable is allowed. The existence of a maximum option delay as in the KA8I specification is assumed. (A maximum of 14 feet for flexprint cable is still applicable.) The half transistions of unterminated signals exist upon both Buses with their duration dependent on cable lengths and placement of the DW08A upon the Positive Bus.

- 1.2 Options usual to the PDP8/I Negative Bus are accomodated by this conversion unit on the Positive Bus.
- 1.3 The option is mounted upon a single mounting panel with 48 connectors (6 connector blocks) and an integral power supply. The panel can be mounted in standard 19 inch racks. A cabinet depth of 15 inches is required for the power supply.
- 1.4 The environmental specifications are those of the PDP8/I. The DC logic voltages +5 volts (at 1.0 amperes) and -15 volts (at 1.5 amperes) are provided by the integral power supply, noted in section 2.
- 1.5 General Performance Specifications

SIZE	CODE	NUMBER	REV
A	SP	DW08-A-2	

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE DWØ8A POSITIVE TO NEGATIVE BUS CONVERTER

DWØ8A accepts and outputs a Positive Bus compatible to the KA8I. These signals are converted to a Negative Bus compatible to that usual on the PDP8/I but having a reduced total cable length of 23 feet. The cable lengths on both the Positive and Negative Buses must be included. (The restriction of flexprint to 14 feet is still applicable.) The placement of the DWØ8A on the Positive Bus does not compromise its loading.

2.Ø SPECIFICATION OF VENDOR-SUPPLIED EQUIPMENT

The integral power supply is from Wanlass Electric Company, Model C-148.

AC Inputs: 12Ø or 24Ø V AC $\pm 1\%$, 5Ø to 6Ø HZ, single phase.

Input is connected for 12Ø V AC operation (T1-1 connected to T1-3, T1-2 connected to T1-4).

For 24Ø V AC operation remove the 12Ø V AC connections and connect T1-2 to T1-3.

Input is applied to T1-1 and T1-4.

DC Outputs: (1) +5 V DC, Ø to 3.Ø amperes.
Regulation: $\pm 1.5\%$ maximum, line or load
Ripple: Less than Ø.5% RMS.

(2) -5 V DC, Ø to 1.5 amperes.
Regulation: +5% maximum, line or load
Ripple: Less than 1.5% RMS.

3.Ø PROGRAMMING

No programming considerations exist.

SIZE	CODE	NUMBER	REV
A	SP	DWØ8-A-2	

SHEET 5 OF 6

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE DWØ8A POSITIVE TO NEGATIVE BUS CONVERTER

4.Ø INTERFACE SPECIFICATIONS

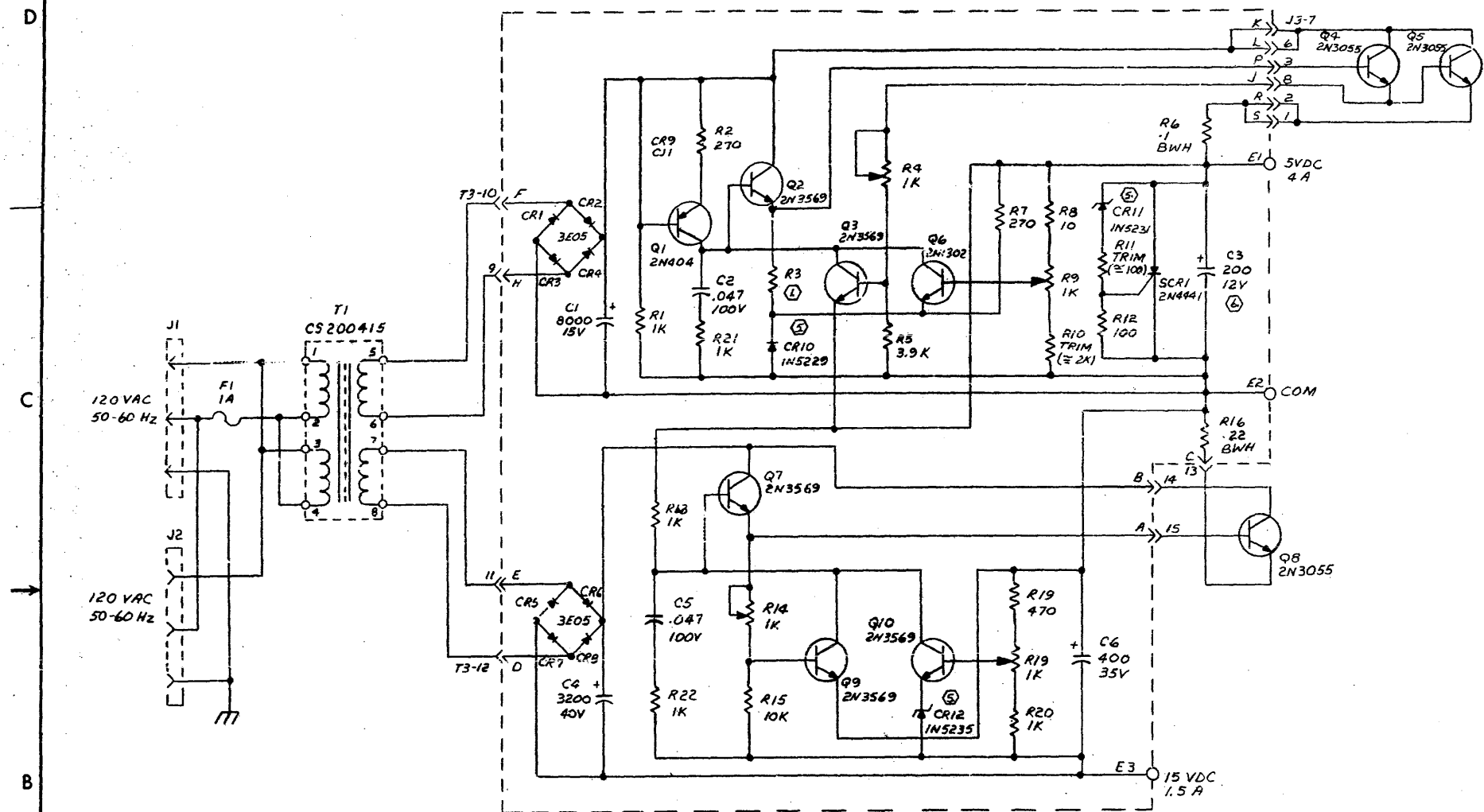
The physical and electrical interfaces are standard to the respective Buses.

SIZE	CODE	NUMBER
A	SP	DWØ8-A-2

SHEET 6 OF 6

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



THE INFORMATION CONTAINED HEREIN IS PROPRIETARY TO THE ARMOUR ELECTRONICS CORPORATION AND IS SUPPLIED AS MAINTENANCE INFORMATION ONLY. THE REPRODUCTION OF THIS PRODUCT IN PART OR IN WHOLE IS STRICTLY PROHIBITED. CONTENTS TAKEN FROM DWG#SC-CS 2004 REV.D

REV.	CHANGE NO.	DATE
C	3009282-0000	
B	3009282-0000	
A	3009282-0000	

REVISIONS
CHK
DRAWN & REVISED

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN. N. Towne	DATE 3-10-72	digital EQUIPMENT CORPORATION WATUONG MASSACHUSETTS	
DECIMALS ANGLES	CHKD. [Signature]	DATE 3-16-72		
.XX = .005 ±0°30'	ENG. [Signature]	DATE 3-17-72	TITLE H-716P.S.	
.XX = .02	PRD. ENG. [Signature]	DATE 3-20-72		
.X = .1	PROD. [Signature]	DATE 3-20-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURF. QUALITY				
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
FINISH	SCALE NONE		DCS 3009282-0-0	REV. C
	SHEET 1 OF 1		DIST. C	

REV. C NUMBER 3009282-0-0

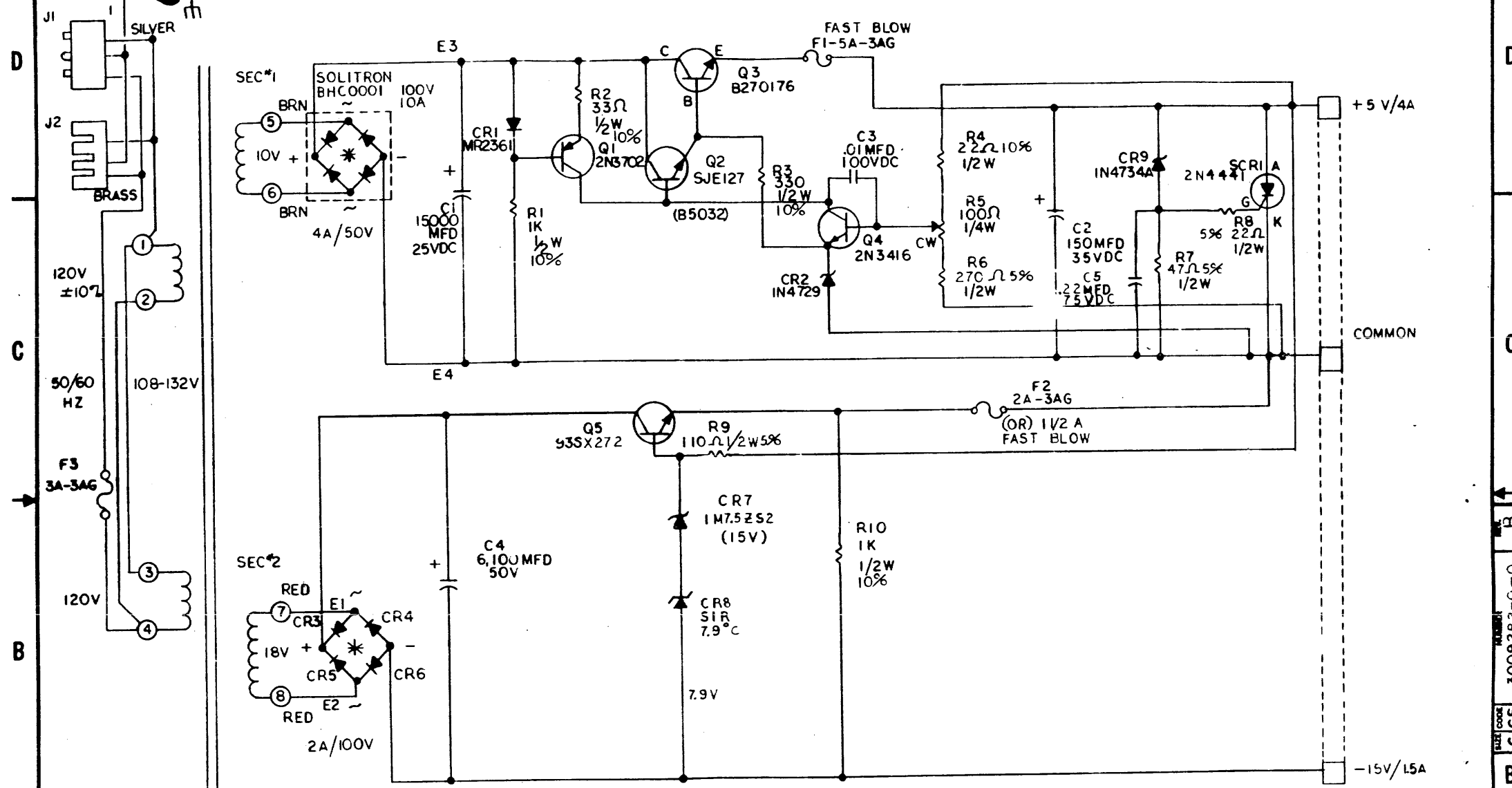
DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				LEGEND		QUANTITY / VARIATION							
ACCESSORY LIST													
MADE BY DATE Dee Moran		CHECKED <u>3/12/70</u> DATE <u>[Signature]</u>		SECTION		D DOCUMENT							
ENG <u>D. White</u> DATE <u>3/12/70</u>		PROD <u>[Signature]</u> DATE <u>3/13/70</u>		ISSUED SECT.		DN DOCUMENT CHANGE NOTICE							
						PA PAPER TAPE ASCII							
						PB PAPER TAPE BINARY							
						PM PAPER TAPE READ-IN-MODE							
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION								KIT CHECK BY DATE		INSTALLATION CHECK BY DATE	
1.	BC08-A-11 BC08C-6	I/O Cables Note: use cable BC08A-11 if used on 8I use cable BC08C-6 if used on 8I				8L							
						5 ea.							
2.	90-08851	Mounting Hardware				1							
3.	91-07673	A/C Cable				1							
4.	DEC-81-HODA-D	Installation Instructions				1							
5.	DW08A-0-0	Prints				1 set							
				No Software with the option									
TITLE Positive to Negative I/O Bus Conversion				ASSY. NO.		SIZE CODE A AL		NUMBER DW08-A-3		REV.		ECO NO	
				SHEET OF		DIST.							

(19)

DEC FORM NO.
DRA 121

1. All dimensions are in inches unless otherwise specified.
 2. All tolerances are as shown unless otherwise specified.
 3. All angles are in degrees unless otherwise specified.
 4. All surfaces are to be finished unless otherwise specified.

R5= POT= +1377019, BD91038
 CR3, CR4, CR5, CR6= 1N5392
 T1= 101748, - 9966936
 * HEAT SINK ADDED TO BRIDGE



T1 SK-820-WM

REV.	CHG.	NO.	DATE	BY
A	H716-00001	1	4-1-70	M. ARSENAULT
B	H716-00002	2	4-1-70	F. WILSON
			5/24/71	K. PIERCE
			5/26/71	H. BARRER

NOTE:
 THIS CIRCUIT SCHEMATIC
 HAS BEEN REDRAWN WITH
 THE PERMISSION OF
 WANLESS ELECTRIC CO.
 SEE WANLESS DRAWING
 NUMBER C-101418, MODEL
 C-148

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
DRN.	Monaco	DATE	9/1/69
CHKD.	John G. White	DATE	4-3-59
ENGR.	John P. Pierce	DATE	8-4-69
PROJ. ENG.	John P. Pierce	DATE	4-4-69
PROD.	John P. Pierce	DATE	4-4-69
MATERIAL		FIRST USED ON	
FINISH		SCALE	
SHEET 1 OF 1		DIST.	
TITLE		EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
SIZE CODE		NUMBER	
CCS		3009282-0-0	
REV.		B	

3009282-0-0
 CCS
 B