

**MM11-E  
core memory  
engineering drawings**

1st Edition March 1971

### MM11-E Core Memory

D-BS-MM11-E-02	1	Magnetics, Logic Diagram
D-BS-MM11-E-03	2	Core Memory Stack (X drive)
D-BS-MM11-E-04	4	Core Memory Sense & Inhibit
D-BS-MM11-E-05	2	Control & Timing
D-MU-MM11-E-06	1	Module Utilization
K-WL-MM11-E-07 (complete)	—	Wire List
D-TD-MM11-E-08	1	Timing & Flow
D-IC-MM11-E-09	1	I/O Connectors
C-CS-G103-0-1	1	Memory Levels and Gates, G103
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B-CS-M109-0-1	1	Device Select Module, M109
B-CS-M1091-0-1	1	Device Select Module, M1091
C-CS-G225-0-1	1	X & Y Current Generator, G225
C-CS-G226-0-1	1	X-Y Decoder Switch, G226
C-CS-G616-0-1	1	Planar Stack Board 1, G616
D-CS-M729-0-1	1	MM11-E Control Logic, M729

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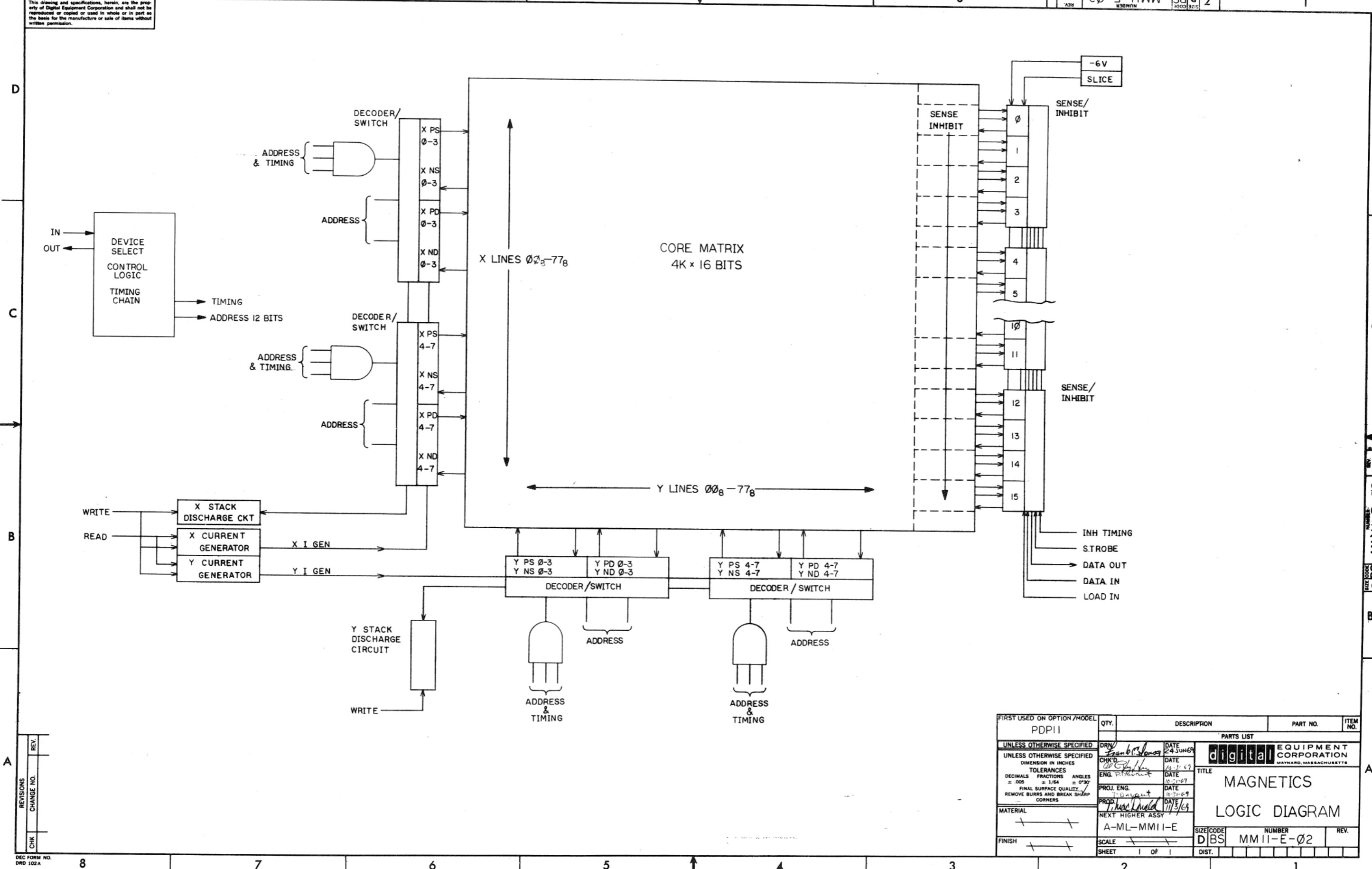
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20-E-02 DBS 2



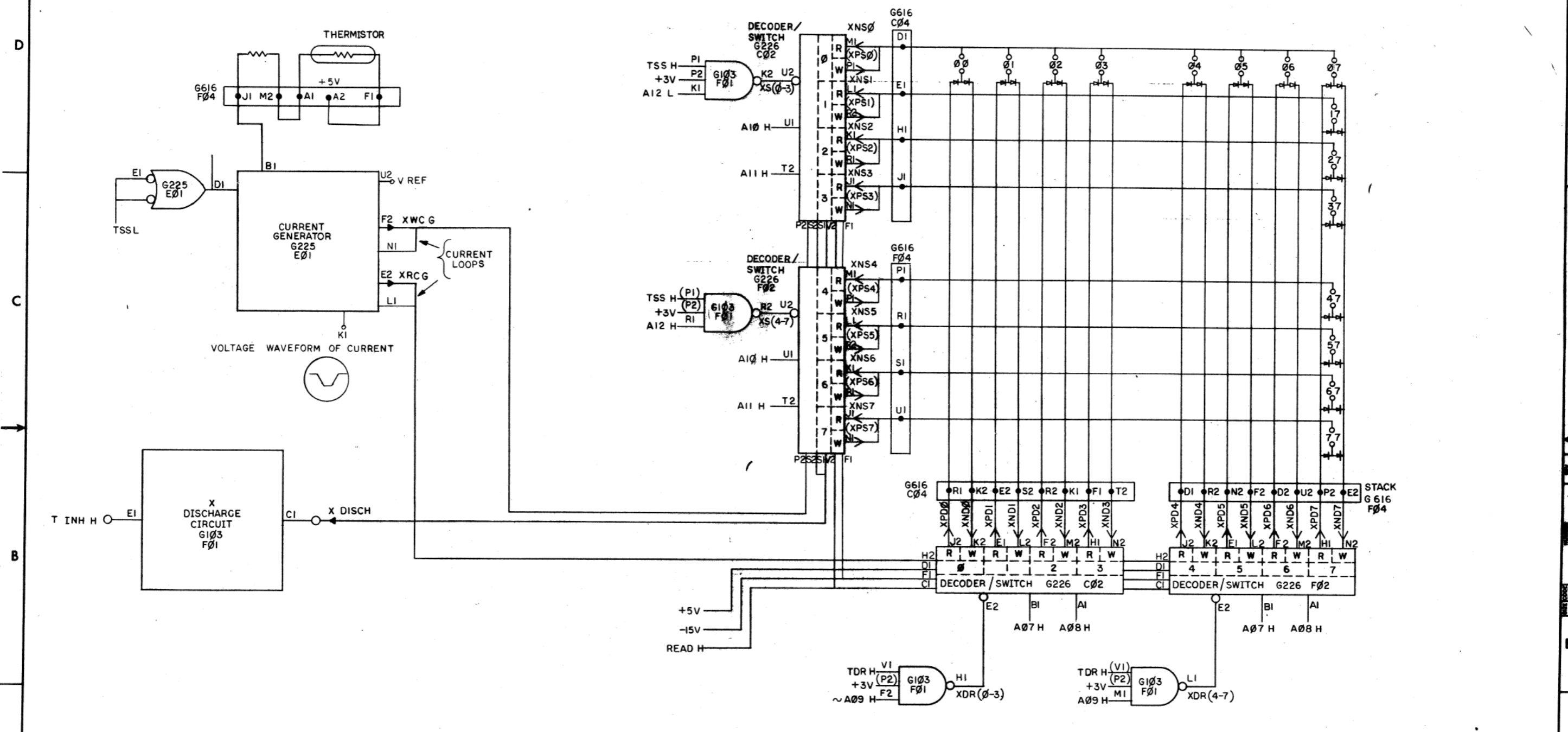
REV.	
CHG.	
CHK.	

FIRST USED ON OPTION / MODEL PDP11	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRY	DATE 24 JUN 69	<b>digital</b> EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE <b>MAGNETICS</b> <b>LOGIC DIAGRAM</b>	
TOLERANCES	CHK'D	DATE 10-31-69		
DECIMALS FRACTIONS ANGLES	ENG. P. [Signature]	DATE 10-31-69		
FINAL SURFACE QUALITY / REMOVE BURRS AND BREAK SHARP CORNERS	PROJ. ENG. [Signature]	DATE 10-31-69		
MATERIAL	PROD. [Signature]	DATE 11/5/69	NEXT HIGHER ASSY	
FINISH	A-ML-MM11-E		SIZE CODE DBS	NUMBER MM11-E-02
SCALE	SHEET 1 OF 1		DIST.	REV.

DEC FORM NO. DWG 102A

DBS MM11-E-02

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REV.	CHANGE NO.	DATE
A	00004	11/27/70

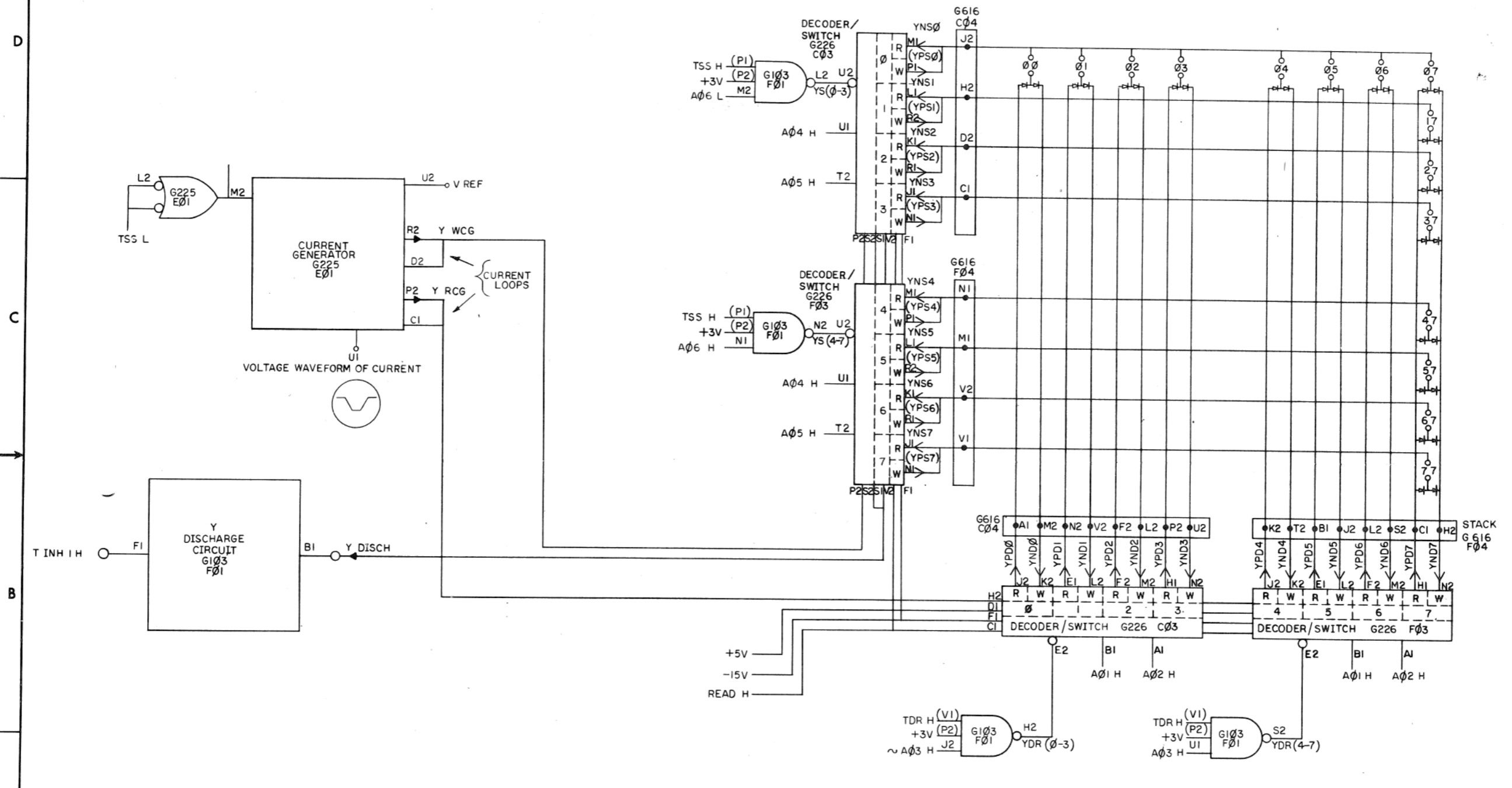
REVISIONS  
 DURANT  
 P. Durand

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
UNLESS OTHERWISE SPECIFIED				
DIMENSION IN INCHES				
TOLERANCES				
DECIMALS	FRACTIONS	ANGLES		
± .008	± 1/64	± 0°30'		
FINAL SURFACE QUALITY				
REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL				
NEXT HIGHER ASSY				
A-ML-MM11-E				
SCALE				
SHEET 1 OF 2				

digital EQUIPMENT CORPORATION MAYFORD, MASSACHUSETTS	
TITLE CORE, MEMORY STACK (X DRIVE)	
SIZE CODE DBS	NUMBER MM11-E-03
REV. A	

DBS MM11-E-03 A

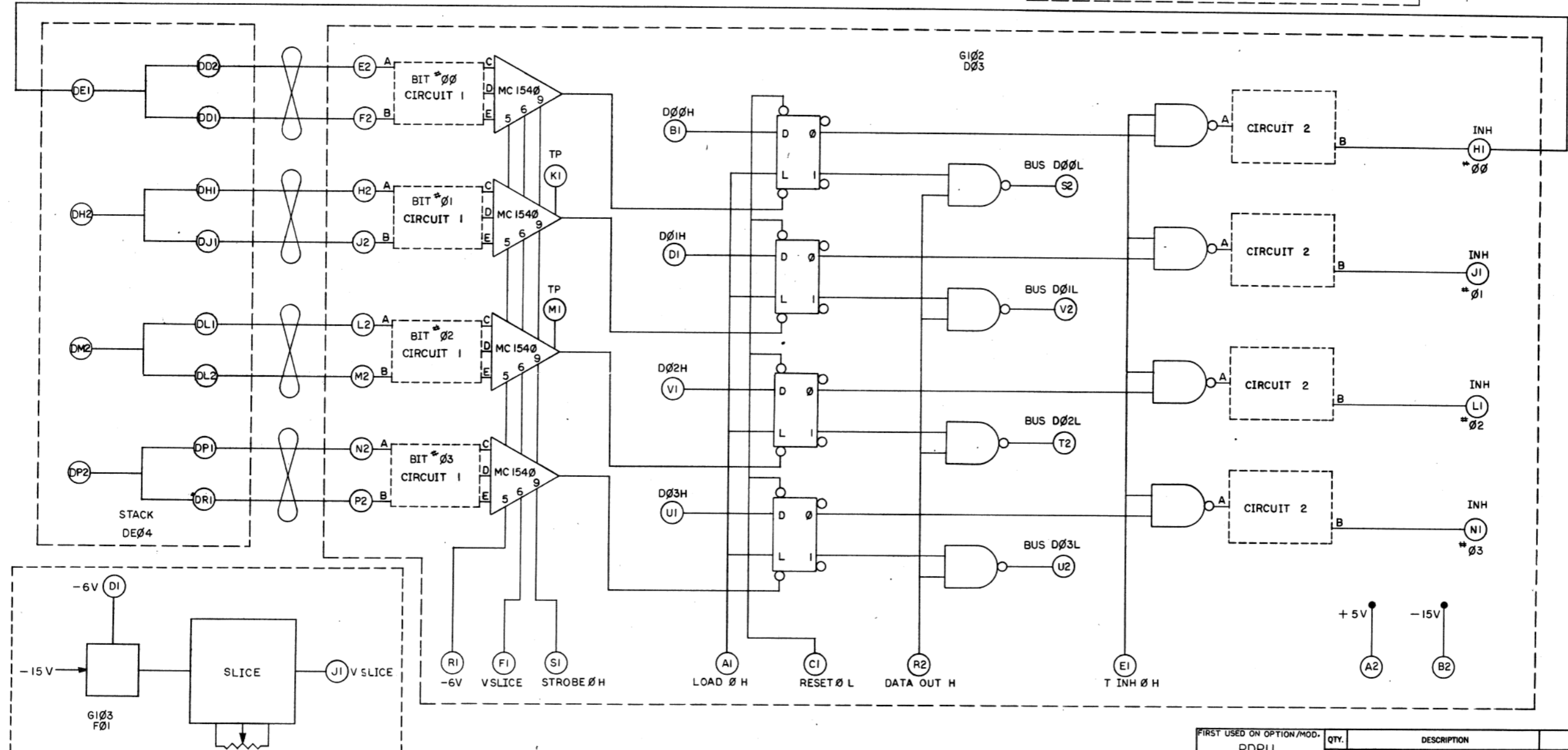
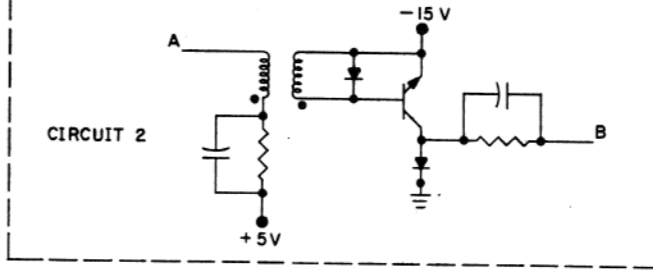
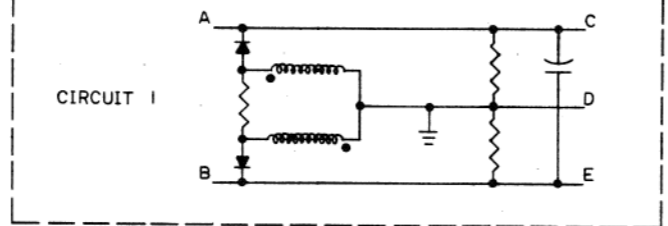
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FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED				
DRW	DATE	digital EQUIPMENT CORPORATION MATHUEN, MASSACHUSETTS		
CHK'D.	DATE	TITLE		
ENG.	DATE	CORE, MEMORY STACK (Y DRIVE)		
PROJ. ENG.	DATE	SIZE/CODE	NUMBER	REV.
PROG.	DATE	D/BS	MM11-E-03	A.
MATERIAL	NEXT HIGHER ASSY	SCALE	SHEET	OF
FINISH		2	2	

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MM11-E-04  
REV. B  
2

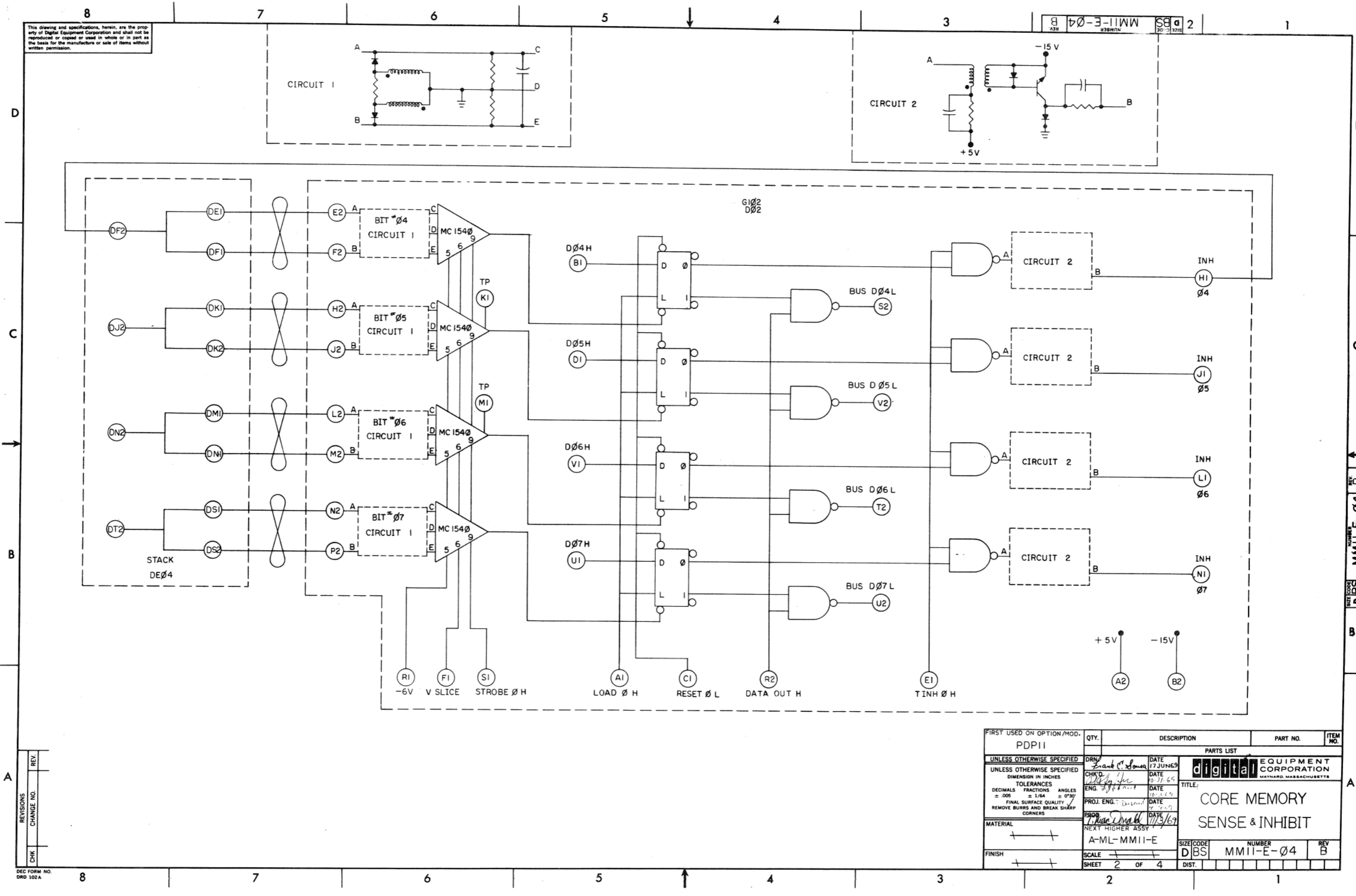


REV.	CHANGE NO.	DATE
1	MM11E-00004	1-26-70
2	T. G. ...	8-10-70
3	P. Durand	8-19-70

FIRST USED ON OPTION/MOD.	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
UNLESS OTHERWISE SPECIFIED				
DIMENSION IN INCHES				
TOLERANCES				
DECIMALS	FRACTIONS	ANGLES		
= .008	= 1/64	= 0°30'		
FINAL SURFACE QUALITY / REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL				
FINISH				
NEXT HIGHER ASSY				
A-ML-MM11-E				
SCALE				
SHEET OF 4				
PARTS LIST				
DRN	DATE	digital EQUIPMENT CORPORATION		
CHKD	DATE	MAYNARD, MASSACHUSETTS		
ENG	DATE	TITLE		
PROJ. ENG.	DATE	CORE MEMORY		
PROD.	DATE	SENSE & INHIBIT		
SIZE CODE				
D BS				
NUMBER				
MM11-E-04				
REV.				
B				

DEC FORM NO. DRD 102A

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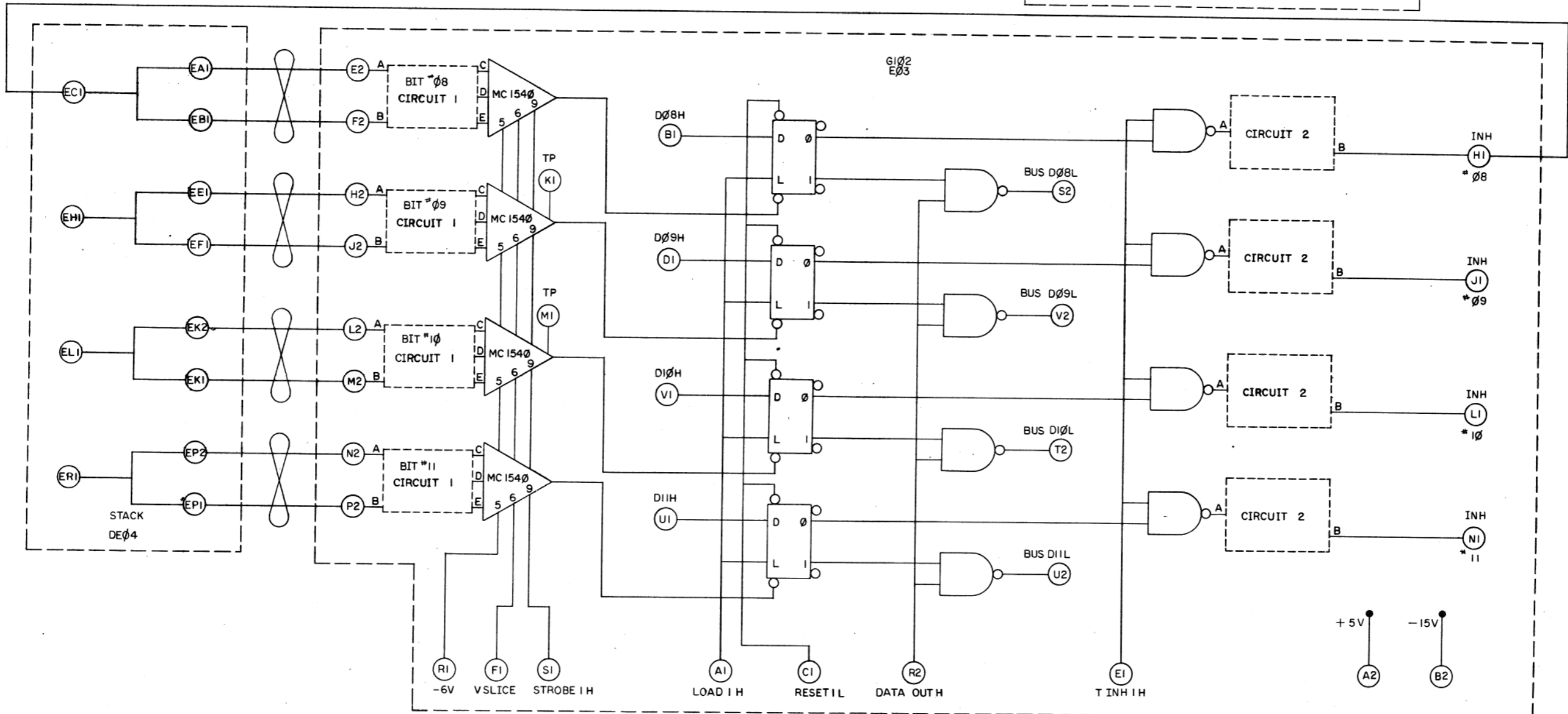
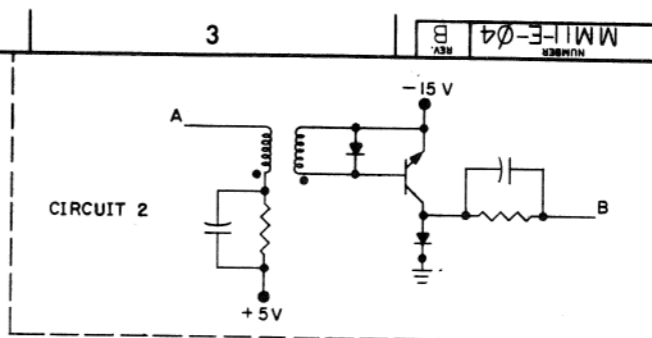
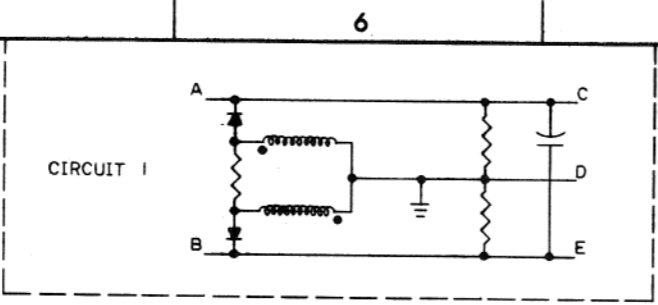
FIRST USED ON OPTION/MOD.	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11				
UNLESS OTHERWISE SPECIFIED				
DRN: Frank C. Brown	DATE: 17 JUN 69	PARTS LIST		
CHK'D: [Signature]	DATE: 10-31-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
ENG: [Signature]	DATE: 10-1-69	TITLE: CORE MEMORY SENSE & INHIBIT		
PROJ. ENG.: [Signature]	DATE: 10-1-69	SIZE CODE: DBS NUMBER: MM11-E-04 REV: B		
PROD: [Signature]	DATE: 11/3/69	SCALE: 2 OF 4 SHEET: 2 OF 4		
MATERIAL: + +	NEXT HIGHER ASSY: A-ML-MM11-E			
FINISH: + +	DIST.:			

REV.	CHANGE NO.

DEC FORM NO. ORD 102A

ITEM NO. MM11-E-04 REV. B

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REVISIONS	REV.
CHANGE NO.	
CHK	

DEC FORM NO. DRP 102A

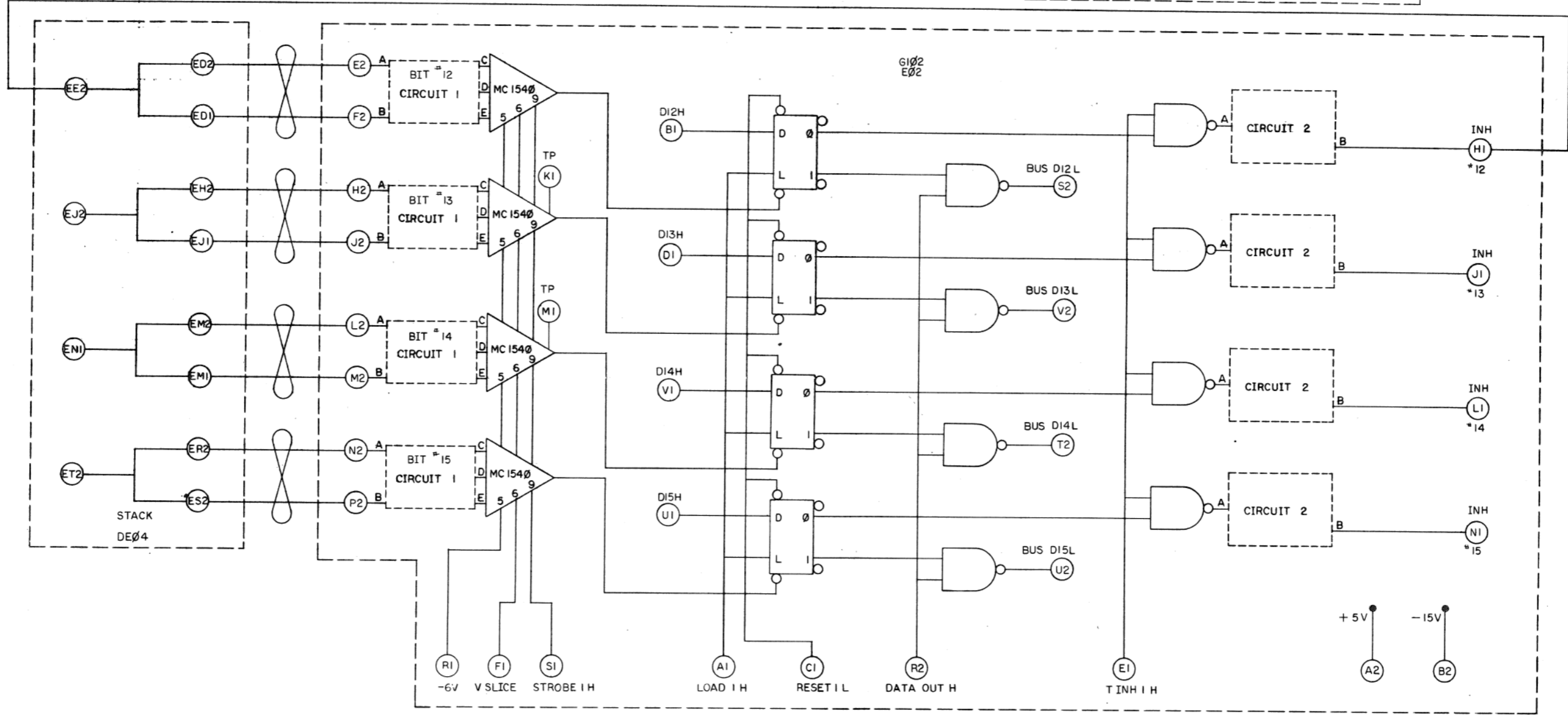
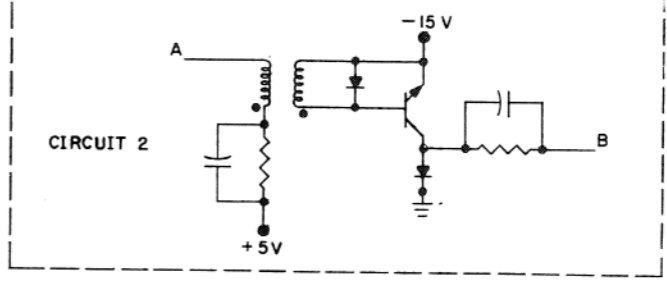
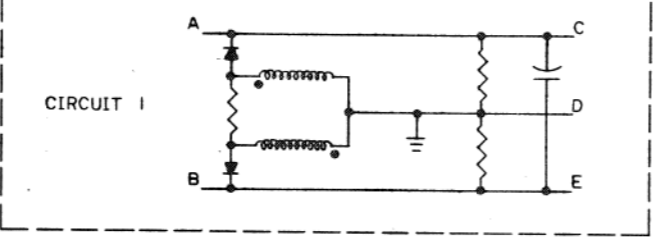
FIRST USED ON OPTION/MOD. PDPII	QTY.	DESCRIPTION	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED	DRY	DATE 17 JUNE 69	PARTS LIST	
UNLESS OTHERWISE SPECIFIED	CHK'D	DATE 10-31-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DIMENSION IN INCHES	ENG. P. D. H. L. T.	DATE 10-21-69	TITLE	
TOLERANCES	PROJ. ENG.	DATE 10-31-69	CORE MEMORY	
DECIMALS FRACTIONS ANGLES	PROJ. ENGR.	DATE 11/3/69	SENSE & INHIBIT	
± .005 ± 1/64 ± 0°30'	PROJ. ENGR.	DATE	SIZE CODE	NUMBER
FINAL SURFACE QUALITY	PROJ. ENGR.	DATE	DBS	MM11-E-04
REMOVE BURRS AND BREAK SHARP CORNERS	PROJ. ENGR.	DATE	SCALE	REV.
MATERIAL	PROJ. ENGR.	DATE	3 OF 4	B
FINISH	PROJ. ENGR.	DATE	SHEET	

MM11-E-04



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MM11-E-04 2



REV.	CHANGE NO.

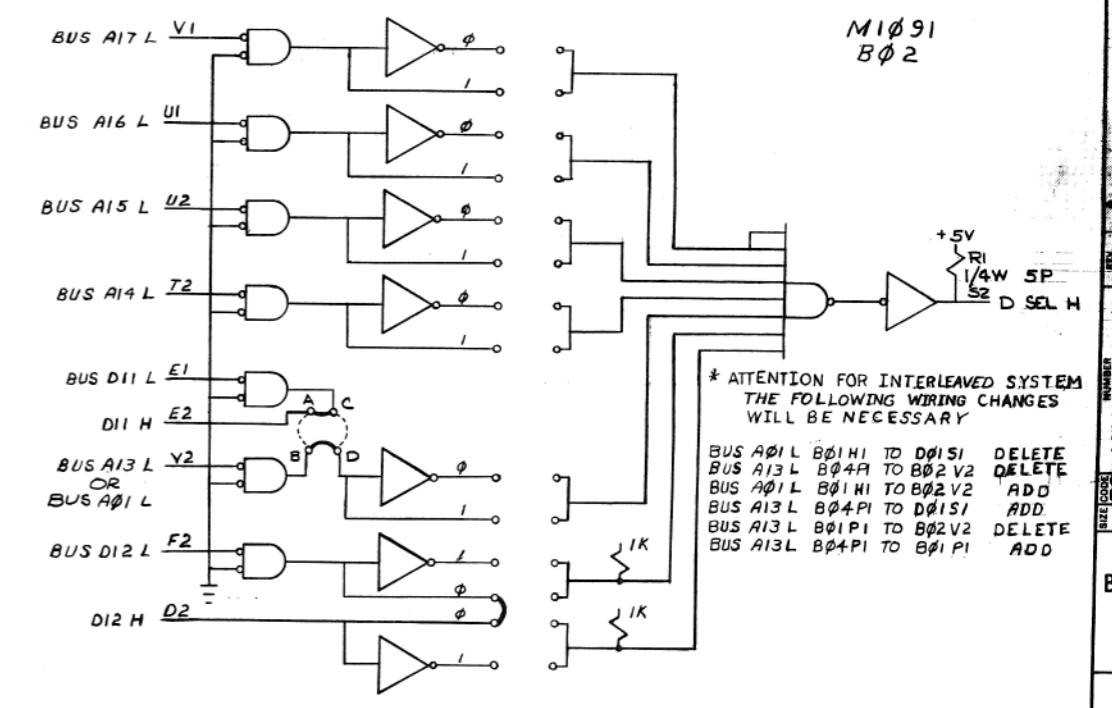
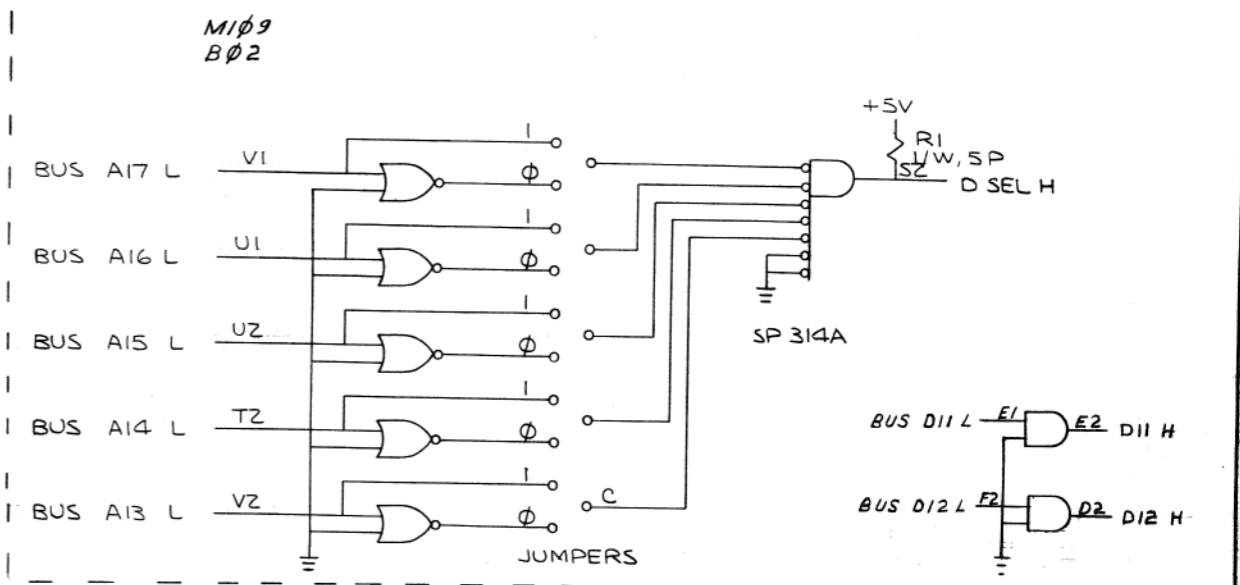
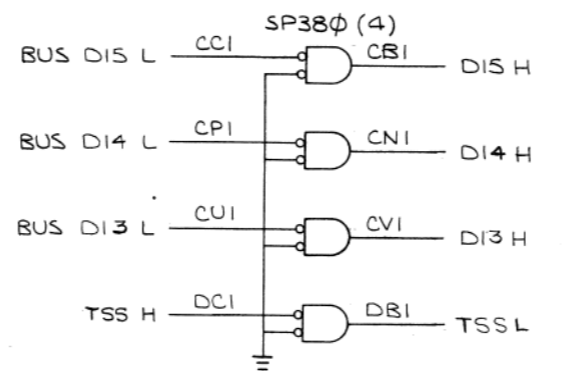
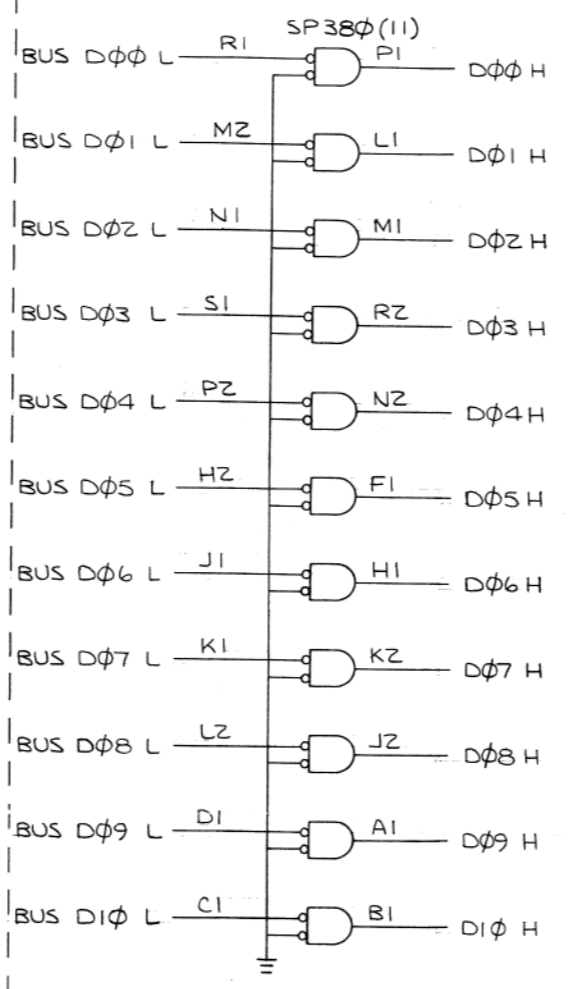
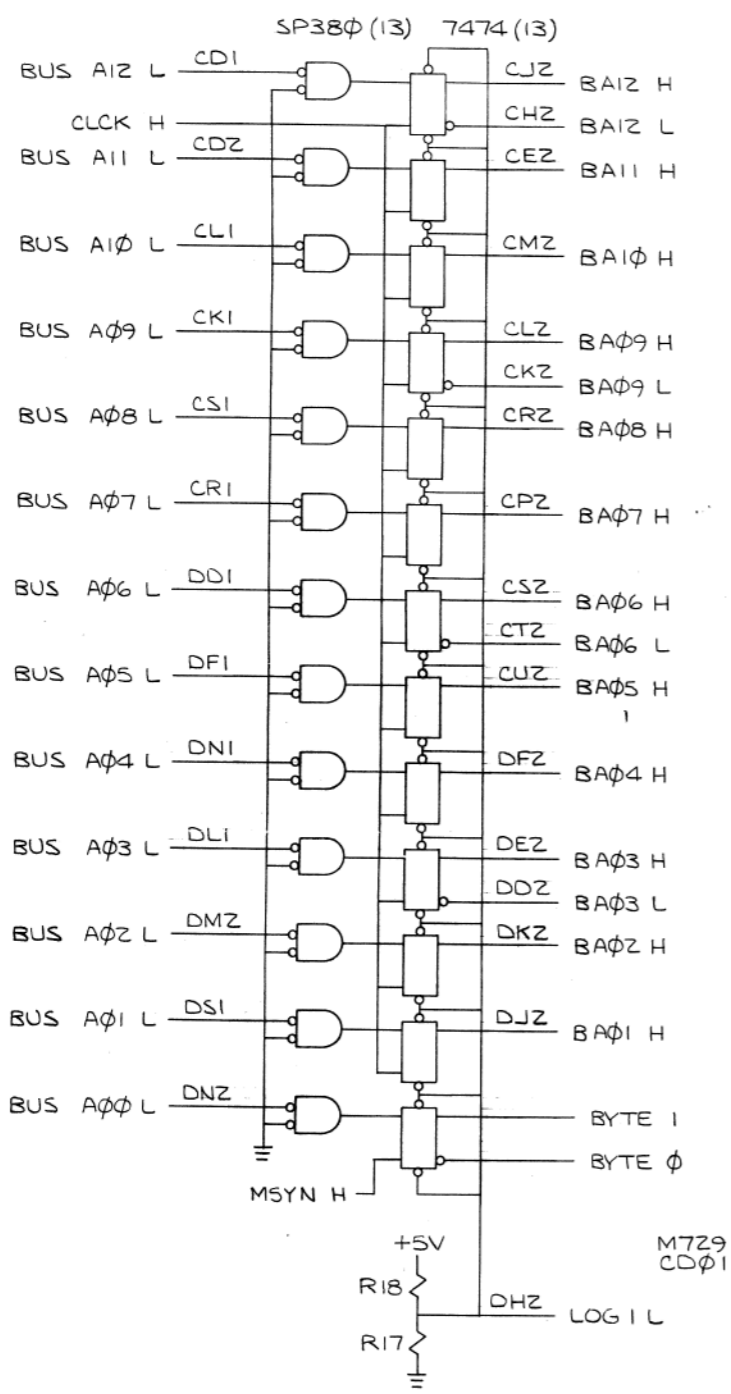
FIRST USED ON OPTION/MOD. PDPII	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DRN/	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
UNLESS OTHERWISE SPECIFIED	CHK'D/	DATE	TITLE	
DIMENSION IN INCHES	ENG. P. /	DATE	CORE MEMORY	
TOLERANCES	PROJ. ENG. /	DATE	SENSE & INHIBIT	
DECIMALS FRACTIONS ANGLES	PBDD /	DATE	SIZE CODE	NUMBER
± .005 ± 1/64 ± 0°30'			D/BS	MM11-E-04
FINAL SURFACE QUALITY			DIST.	REV.
REMOVE BURRS AND BREAK SHARP CORNERS				B
MATERIAL	NEXT HIGHER ASSY			
FINISH	A-ML-MM11-E			
	SCALE			
	SHEET 4 OF 4			

DEC FORM NO. DRD 102A

MM11-E-04 B



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\* ATTENTION FOR INTERLEAVED SYSTEM THE FOLLOWING WIRING CHANGES WILL BE NECESSARY

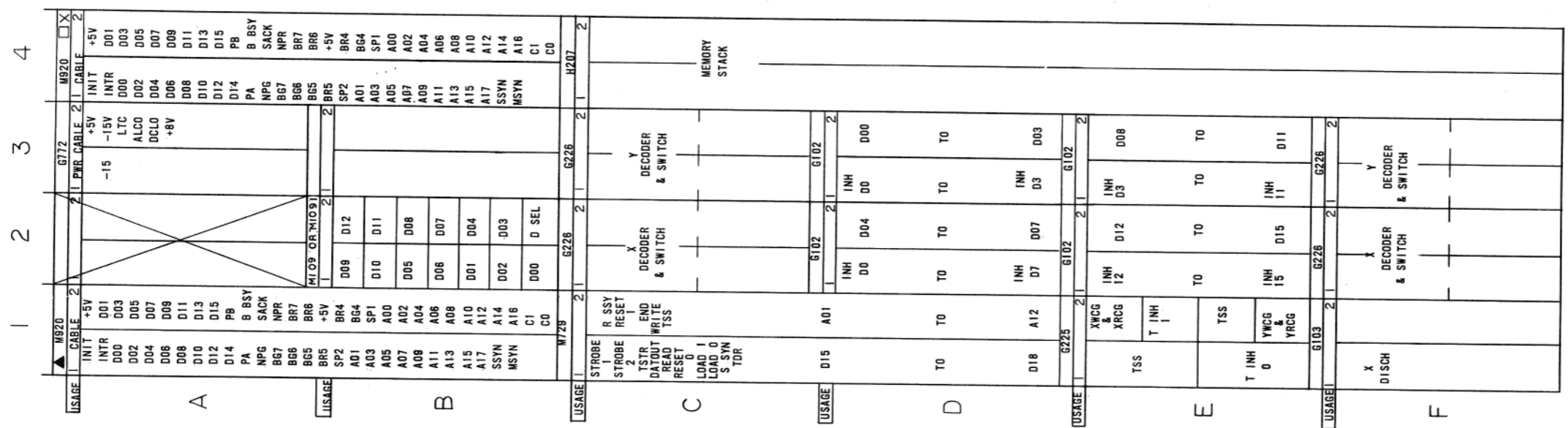
BUS A01 L B01 H1 TO D01 S1 DELETE  
 BUS A13 L B04 A TO B02 V2 DELETE  
 BUS A01 L B01 H1 TO B02 V2 ADD  
 BUS A13 L B04 P1 TO D01 S1 ADD  
 BUS A13 L B01 P1 TO B02 V2 DELETE  
 BUS A13 L B04 P1 TO B01 P1 ADD

NOTE: M109 OR M1091 CAN BE USED BUT NOT BOTH

REVISIONS	REV.
CHANGE NO.	
CHK	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
UNLESS OTHERWISE SPECIFIED	CHK'D.	DATE	TITLE	
DIMENSION IN INCHES	ENG. P. DISCUSS	DATE	CONTROL AND TIMING	
TOLERANCES	PROJ. ENG.	DATE	A-ML-MM11-E	
DECIMALS = .005	P. DISCUSS	DATE	SIZE CODE	
FRACTIONS = 1/64	PROD. <i>Thore Donald</i>	DATE	D BS	
ANGLES = 0°30'	NEXT HIGHER ASSY		NUMBER	
FINAL SURFACE QUALITY			MM11-E-05	
REMOVE BURRS AND BREAK SHARP CORNERS			REV. C	
MATERIAL			SCALE NONE	
			SHEET 2 OF 2	
FINISH			DIST.	

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CHK	CHANGE NO.	REV.
MM11E-0005	A	
REDRAWN & REVISED		
T. DURANT 8-5-70		
DURANT		
MM11E-0010 B		
P. DURANT 5/14/70		
MM11E-0013 C		
W. COATES		
MM11E-0019 D		
DURANT		


FIRST USED ON OPTION/MODEL  
 PDPII

DO NOT SCALE DRAWING  
 UNLESS OTHERWISE SPECIFIED  
 DIMENSION IN INCHES  
 TOLERANCES  
 DECIMALS FRACTIONS ANGLES  
 ± .005 ± 1/64 ± 0°30'  
 FINAL SURFACE QUALITY ✓  
 REMOVE BURRS AND BREAK SHARP CORNERS

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
DRN.	RAIMONDI	DATE 7-21-69	<b>digital</b> EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small>
CHK'D.	PFFYFFER	DATE 10-31-69	
ENG.	DURANT	DATE 10-31-69	
PROJ. ENG.	DURANT	DATE 10-31-69	
PROD.	MAC DONALD	DATE 11-8-69	
NEXT HIGHER ASSY		TITLE	
A-ML-MM11-E		MODULE UTILIZATION	
SCALE	DIMU	NUMBER	REV.
SHEET 1 OF 1	DIST.	MM11-E-06	D

DRWG NO	REV LTR
K-WL-MM11-E-Ø7	D

REVISIONS			
REV LTR	ECO NO	DATE	ENG
A	00002	1-15-70	RWD
B	MM11E-00006	8-23-76	RWD
C	MM11E-00015	9-2-70	RWD
D	MM11E-00017	1-27-71	RWD

DRAWN <i>H. G. Nailand</i>	DATE <i>11/6/69</i>	 <b>digital</b> EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE		WIRE LIST		
CHECKED <i>H. G. Nailand</i>	DATE <i>11/6/69</i>		FOR		TAPE #	FILE *	
ENG <i>P. Duvaux</i>	DATE <i>11/6/69</i>		ASSY NO	SIZE	CODE	DWG. NO.	REV LTR
PROJ. ENG <i>P. Duvaux</i>	DATE <i>11/6/69</i>		A-ML-MM11-E	K	WL	MM11-E-Ø7	D
PROD <i>P. Duvaux</i>	DATE <i>11/6/69</i>	SCALE <i>H</i>	SHEET	OF	DIST.		

MM11E.D  
RUN NAME

HNDWRP:V00 11/6/  
A/P PIN ORDER BAY -  
NAME PIN ORDER

Q DRAW RV PG Y X Z

26-MAR-71  
REMARKS

20:1  
LENGTH

PAGE 1  
EXCEPTIONS

RUN  
NUMBER

MM11E.D RUN NAME	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	20:1 LENGTH	PAGE 1 EXCEPTIONS	RUN NUMBER
B A01	H	C03B1		1-01							2				1
B A01	H	U01J2		1-02							1				1
B A01	H	F03B1		1-03											1
B A01				1									13-4/8		1
B A02	H	C03A1		1-01							2				2
B A02	H	U01K2		1-02							1				2
B A02	H	F03A1		1-03											2
B A02				1									13-4/8		2
B A03	H	U01E2		1-01							1				3
B A03	H	F01Q1		1-02											3
B A03				1									9-2/8		3
B A03	L	U01U2		1-01							1				4
B A03	L	F01J2		1-02											4
B A03				1									8-0/8		4
B A04	H	C03U1		1-01							2				5
B A04	H	U01F2		1-02							1				5
B A04	H	F03Q1		1-03											5
B A04				1									13-2/8		5
B A05	H	C01U2		1-01							2				6
B A05	H	C03F2		1-02							1				6
B A05	H	F03F2		1-03											6
B A05				1									13-6/8		6
B A06	H	C01S2		1-01							1				7
B A06	H	F01M1		1-02											7
B A06				1									10-0/8		7
B A06	L	C01F2		1-01							1				8
B A06	L	F01M2		1-02											8
B A06				1									9-6/8		8
B A07	H	C02B1		1-01							2				9
B A07	H	C01P2		1-02							1				9
B A07	H	F02B1		1-03											9
B A07				1									13-2/8		9
B A08	H	C02A1		1-01							2				10
B A08	H	C01R2		1-02							1				10
B A08	H	F02A1		1-03											10
B A08				1									12-6/8		10

MM11E:0 RUN NAME	HNDWRP:V00 11/67 A/P PIN NAME	ORDER PIN	BAY - ORDER	Q DRAW RV PG Y X Z	26-MAR-71 REMARKS	20:1 LENGTH	PAGE 2 EXCEPTIONS	RUN NUMBER
B A09	H C01L2		1-01					
B A09	H F01M1		1-02					11
B A09			1					11
						10-6/8		11
B A09	L C01K2		1-01					
B A09	L F01F2		1-02					12
B A09			1					12
						10-0/8		12
B A10	H C01M2		1-01					
B A10	H C0201		1-02					13
B A10	H F0201		1-03					13
B A10			1					13
						13-4/8		13
B A11	H C01E2		1-01					
B A11	H C02F2		1-02					14
B A11	H F02F2		1-03					14
B A11			1					14
						14-2/8		14
B A12	H C01J2		1-01					
B A12	H F01R1		1-02					15
B A12			1					15
						11-2/8		15
B A12	L C01H2		1-01					
B A12	L F01K1		1-02					16
B A12			1					16
						10-6/8		16
BUS A00	L B04H2		1-01					
BUS A00	L B01H2		1-02					17
BUS A00	L U01N2		1-03					17
BUS A00			1					17
						12-0/8		17
BUS A01	L B04H1		1-01					
BUS A01	L B01H1		1-02					18
BUS A01	L U01S1		1-03					18
BUS A01			1					18
						12-2/8		18
BUS A02	L B04J2		1-01					
BUS A02	L B01J2		1-02					19
BUS A02	L U01M2		1-03					19
BUS A02			1					19
						11-6/8		19
BUS A03	L B04J1		1-01					
BUS A03	L B01J1		1-02					20
BUS A03	L U01L1		1-03					20
BUS A03			1					20
						11-4/8		20

MM11E.J RUN NAME	HNDWRP.V00 11/6/ A/P PIN ORDER NAME PIN	BAY - ORDER	Q DRAW RV PG Y X Z	26-MAR-71 REMARKS	20:1 LENGTH	PAGE 3 EXCEPTIONS	RUN NUMBER
BUS A04	L B04K2	1-01					21
BUS A04	L B01K2	1-02					21
BUS A04	L U01N1	1-03					21
BUS A04		1			11-6/8		21
BUS A05	L B04K1	1-01					22
BUS A05	L B01K1	1-02					22
BUS A05	L U01F1	1-03					22
BUS A05		1			11-0/8		22
BUS A06	L B04L2	1-01					23
BUS A06	L B01L2	1-02					23
BUS A06	L U0101	1-03					23
BUS A06		1			10-6/8		23
BUS A07	L B04L1	1-01					24
BUS A07	L B01L1	1-02					24
BUS A07	L U01R1	1-03					24
BUS A07		1			9-0/8		24
BUS A08	L B04M2	1-01					25
BUS A08	L B01M2	1-02					25
BUS A08	L U01S1	1-03					25
BUS A08		1			9-2/8		25
BUS A09	L B01M1	1-01					26
BUS A09	L B04M1	1-02					26
BUS A09	L U01K1	1-03					26
BUS A09		1			9-0/8		26
BUS A10	L B01N2	1-01					27
BUS A10	L B04N2	1-02					27
BUS A10	L U01L1	1-03					27
BUS A10		1			9-0/8		27
BUS A11	L B04N1	1-01					28
BUS A11	L B01N1	1-02					28
BUS A11	L U0102	1-03					28
BUS A11		1			7-6/8		28
BUS A12	L B04P2	1-01					29
BUS A12	L B01P2	1-02					29
BUS A12	L U0101	1-03					29
BUS A12		1			7-4/8		29



MM11E, J RUN NAME	HNDWRP, V00 11/6/ A/P PIN ORDER NAME PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	26-MAR-71 REMARKS	20:1 LENGTH	PAGE 4 EXCEPTIONS	RUN NUMBER
BUS A13	L B04P1	1-01							2				30
BUS A13	L B02V2	1-02							1				30
BUS A13	L B01R1	1-03											30
BUS A13		1									6-6/8		30
BUS A14	L B01R2	1-01							2				31
BUS A14	L B02T2	1-02							1				31
BUS A14	L B04R2	1-03											31
BUS A14		1									6-4/8		31
BUS A15	L B01R1	1-01							2				32
BUS A15	L B02J2	1-02							1				32
BUS A15	L B04R1	1-03											32
BUS A15		1									6-6/8		32
BUS A16	L B01S2	1-01							1				33
BUS A16	L B02W1	1-02							2				33
BUS A16	L B04S2	1-03											33
BUS A16		1									6-4/8		33
BUS A17	L B01S1	1-01							2				34
BUS A17	L B02V1	1-02							1				34
BUS A17	L B04S1	1-03											34
BUS A17		1									6-6/8		34
BUS AC LJ	L B01F1	1-01 *							2	R1			35
BUS AC LJ	L B04F1	1-02 *							1	R1			35
BUS AC LJ	L A03R2	1-03 *								I			35
BUS AC LJ		1									8-0/8		35
BUS 36 04	H B01B2	1-01							1				36
BUS 36 04	H B04E2	1-02											36
BUS 36 04		1									3-6/8		36
BUS 36 05	H B01B1	1-01							1				37
BUS 36 05	H B04B1	1-02											37
BUS 36 05		1									3-6/8		37
BUS 36 06	H B01A1	1-01							1				38
BUS 36 06	H B04A1	1-02											38
BUS 36 06		1									3-6/8		38
BUS 36 07	H A01V1	1-01							1				39
BUS 36 07	H A04V1	1-02											39
BUS 36 07		1									3-6/8		39

MM11E, J RUN NAME	A/P	HNDWRP:V00 11/6/ PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	26-MAR-71	20:1 LENGTH	PAGE 5 EXCEPTIONS	RUN NUMBER
BUS BK 04	L	B0102		1-01							1					40
BUS BK 04	L	B0402		1-02												40
BUS BK 04				1										3-6/8		40
BUS BK 05	L	B0101		1-01							1					41
BUS BK 05	L	B0401		1-02												41
BUS BK 05				1										3-6/8		41
BUS BK 06	L	A0102		1-01							1					42
BUS BK 06	L	A0402		1-02												42
BUS BK 06				1										3-6/8		42
BUS BK 07	L	A0102		1-01							1					43
BUS BK 07	L	A0402		1-02												43
BUS BK 07				1										3-6/8		43
BUS BSY	L	A0102		1-01 *							1					44
BUS BSY	L	A0402		1-02 *												44
BUS BSY				1										3-6/8		44
BUS C0	L	B0402		1-01							2					45
BUS C0	L	B0102		1-02							1					45
BUS C0	L	U01K1		1-03												45
BUS C0				1										10-4/8		45
BUS C1	L	B0402		1-01							2					46
BUS C1	L	B0102		1-02							1					46
BUS C1	L	U01R1		1-03												46
BUS C1				1										11-2/8		46
BUS D SEL	H	B0202		1-01							1					47
BUS D SEL	H	C01H1		1-02												47
BUS D SEL				1										4-2/8		47
BUS D00	L	A0401		1-01							1					48
BUS D00	L	A0101		1-02							2					48
BUS D00	L	B02R1		1-03							1					48
BUS D00	L	U0302		1-04												48
BUS D00				1										18-4/8		48
BUS D01	L	A0402		1-01							1					49
BUS D01	L	A0102		1-02							2					49
BUS D01	L	B0202		1-03							1					49
BUS D01	L	U0302		1-04												49
BUS D01				1										18-6/8		49

MM11E.U RUN NAME	A/P	HNDWRP.V00 11/6/ PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS 26-MAR-71	20:1 LENGTH	PAGE 6 EXCEPTIONS	RUN NUMBER
BUS 002	L	A04J1		1-01							1				
BUS 002	L	A01J1		1-02							2				50
BUS 002	L	B02N1		1-03							1				50
BUS 002	L	U03F2		1-04											50
BUS 002				1									18-4/8		50
BUS 003	L	A04E2		1-01							1				51
BUS 003	L	A01E2		1-02							2				51
BUS 003	L	B02P1		1-03							1				51
BUS 003	L	U03W2		1-04											51
BUS 003				1									18-4/8		51
BUS 004	L	A01E1		1-01							1				52
BUS 004	L	A04E1		1-02							2				52
BUS 004	L	B02P2		1-03							1				52
BUS 004	L	U02S2		1-04											52
BUS 004				1									18-0/8		52
BUS 005	L	A04F2		1-01							1				53
BUS 005	L	A01F2		1-02							2				53
BUS 005	L	B02H2		1-03							1				53
BUS 005	L	U02V2		1-04											53
BUS 005				1									18-2/8		53
BUS 006	L	A04F1		1-01							1				54
BUS 006	L	A01F1		1-02							2				54
BUS 006	L	B02J1		1-03							1				54
BUS 006	L	U02F2		1-04											54
BUS 006				1									18-0/8		54
BUS 007	L	A04H2		1-01							1				55
BUS 007	L	A01H2		1-02							2				55
BUS 007	L	B02K1		1-03							1				55
BUS 007	L	U02U2		1-04											55
BUS 007				1									18-0/8		55
BUS 008	L	A01H1		1-01							1				56
BUS 008	L	A04H1		1-02							2				56
BUS 008	L	B02L2		1-03							1				56
BUS 008	L	E03S2		1-04											56
BUS 008				1									20-4/8		56
BUS 009	L	A04J2		1-01							1				57
BUS 009	L	A01J2		1-02							2				57
BUS 009	L	B02U1		1-03							1				57
BUS 009	L	E03V2		1-04											57
BUS 009				1									20-6/8		57

MM11E,0 RUN NAME	HNDWRP:V00 11/6/ A/P PIN ORDER BAY - NAME PIN ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	20:1 LENGTH	PAGE 7 EXCEPTIONS	RUN NUMBER
BUS 010	L A04J1							1				58
BUS 010	L A01J1							2				58
BUS 010	L B02C1							1				58
BUS 010	L E03F2							1				58
BUS 010	1									20-4/8		58
BUS 011	L A04K2							1				59
BUS 011	L A01K2							2				59
BUS 011	L B02E1							1				59
BUS 011	L E03U2							1				59
BUS 011	1									20-4/8		59
BUS 012	H A01K1							1				60
BUS 012	H A04K1							2				60
BUS 012	H B02F2							1				60
BUS 012	H E02S2							1				60
BUS 012	1									20-0/8		60
BUS 013	L A04L2							2				61
BUS 013	L A01L2							1				61
BUS 013	L C01U1							2				61
BUS 013	L E02V2							1				61
BUS 013	1									20-4/8		61
BUS 014	L A04L1							2				62
BUS 014	L A01L1							1				62
BUS 014	L C01P1							2				62
BUS 014	L E02T2							1				62
BUS 014	1									20-0/8		62
BUS 015	L A04M2							1				63
BUS 015	L A01M2							2				63
BUS 015	L C01C1							1				63
BUS 015	L E02U2							1				63
BUS 015	1									20-2/8		63
BUS 00 LJ	L B01F2							1	R1			64
BUS 00 LJ	L B04F2							2	R1			64
BUS 00 LJ	L A03S2							1	I			64
BUS 00 LJ	L C01E1							1	I			64
BUS 00 LJ	1									15-0/8		64
BUS INIT	L A04A1							2				65
BUS INIT	L A01A1							1				65
BUS INIT	L U01H1							1				65
BUS INIT	1									14-6/8		65

MM11E, J RUN NAME	A/P	HNDWRP, V00 11/6/ PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	26-MAR-71	20:1 LENGTH	PAGE 8 EXCEPTIONS	RUN NUMBER
BUS INTR	L	A01B1		1-01												
BUS INTR	L	A04B1		1-02							1					66
BUS INTR				1										3-6/8		66
BUS MSYN	L	B01V1		1-01							2					67
BUS MSYN	L	B04V1		1-02							1					67
BUS MSYN	L	C01N2		1-03												67
BUS MSYN				1										8-4/8		67
BUS VPG	H	A01U1		1-01							1					68
BUS VPG	H	A04U1		1-02												68
BUS VPG				1										3-6/8		68
BUS VPR	L	A01S2		1-01 *												69
BUS VPR	L	A04S2		1-02 *							1	I				69
BUS VPR				1										3-6/8		69
BUS PA	L	A01M1		1-01							1					70
BUS PA	L	A04M1		1-02												70
BUS PA				1										3-6/8		70
BUS PB	L	A01N2		1-01							1					71
BUS PB	L	A04N2		1-02												71
BUS PB				1										3-6/8		71
BUS SACK	L	A01R2		1-01							1					72
BUS SACK	L	A04R2		1-02												72
BUS SACK				1										3-6/8		72
BUS SSYN	L	B04U1		1-01							2					73
BUS SSYN	L	B01U1		1-02							1					73
BUS SSYN	L	U01U1		1-03												73
BUS SSYN				1										11-2/8		73
DATA UJT		U01M1		1-01							1					74
DATA UJT		U02R2		1-02							2					74
DATA UJT		U03R2		1-03							1					74
DATA UJT		E03R2		1-04							2					74
DATA UJT		E02R2		1-05												74
DATA UJT				1										16-0/8		74
U00	H	B02P1		1-01							1					75
U00	H	U03B1		1-02												75
U00				1										6-4/8		75

MM11E,0 RUN NAME	A/P	HNDWRP.V00 11/6/ PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS 26-MAR-71	20:1 LENGTH	PAGE 9 EXCEPTIONS	RUN NUMBER
U01	H	B02L1		1-01							1				
U01	H	U03J1		1-02											76
U01				1									7-0/8		76
U02	H	B02M1		1-01							1				76
U02	H	U03V1		1-02											77
U02				1									8-6/8		77
U03	H	B02R2		1-01							1				77
U03	H	U03U1		1-02											78
U03				1									8-0/8		78
U04	H	B02N2		1-01							1				78
U04	H	U02B1		1-02											79
U04				1									6-4/8		79
U05	H	B02F1		1-01							1				79
U05	H	U02U1		1-02											80
U05				1									7-2/8		80
U06	H	B02H1		1-01							1				80
U06	H	U02V1		1-02											81
U06				1									9-0/8		81
U07	H	B02K2		1-01							1				81
U07	H	U02U1		1-02											82
U07				1									8-6/8		82
U08	H	B02J2		1-01							1				82
U08	H	E03B1		1-02											83
U08				1									9-4/8		83
U09	H	B02A1		1-01							1				83
U09	H	E03U1		1-02											84
U09				1									10-6/8		84
U10	H	B02B1		1-01							1				84
U10	H	E03V1		1-02											85
U10				1									12-2/8		85
U11	H	B02E2		1-01							1				85
U11	H	E03U1		1-02											86
U11				1									11-6/8		86
U12	H	B02J2		1-01							1				86
U12	H	E02B1		1-02											87
U12				1									10-0/8		87

MM11E:J RUN NAME	HNDWRP.V00 11/6/ A/P PIN ORDER NAME PIN	BAY - ORDER	Q DRAW RV PG Y X Z	26-MAR-71 REMARKS	20:1 LENGTH	PAGE 10 EXCEPTIONS	RUN NUMBER
U13	H C01V1	1-01					
U13	H E0201	1-02					88
U13		1					88
					6-0/8		88
U14	H C01N1	1-01					
U14	H E02V1	1-02					89
U14		1					89
					8-4/8		89
U15	H C0101	1-01					
U15	H E0201	1-02					90
U15		1					90
					9-6/8		90
GND 01	A0102	1-01					
GND 01	A0402	1-02					91
GND 01		1					91
					3-6/8		91
GND 02	A0102	1-01					
GND 02	A0402	1-02					92
GND 02		1					92
					3-6/8		92
GND 03	A01N1	1-01					
GND 03	A04N1	1-02					93
GND 03		1					93
					3-6/8		93
GND 04	A01P1	1-01					
GND 04	A04P1	1-02					94
GND 04		1					94
					3-6/8		94
GND 05	A01R1	1-01					
GND 05	A04R1	1-02					95
GND 05		1					95
					3-6/8		95
GND 06	A01S1	1-01					
GND 06	A04S1	1-02					96
GND 06		1					96
					3-6/8		96
GND 07	A01F1	1-01					
GND 07	A04F1	1-02					97
GND 07		1					97
					3-6/8		97
GND 08	A01V2	1-01					
GND 08	A04V2	1-02					98
GND 08		1					98
					3-6/8		98
GND 09	B0102	1-01					
GND 09	B0402	1-02					99
GND 09		1					99
					3-6/8		99

MM11E.D  
RUN NAME

HNDWRP;V00 11/6/

A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	20:1 LENGTH	PAGE 11 EXCEPTIONS	RUN NUMBER
GND 11	B01U1		1-01							1				100
GND 11	B04U1		1-02											100
GND 11			1									3-6/8		100
GND 12	B01E1		1-01							1				102
GND 12	B04E1		1-02											102
GND 12			1									3-6/8		102
GND 14	B01V2		1-01							1				102
GND 14	B04V2		1-02											102
GND 14			1									3-6/8		102
GND 15	A02T1		1-01							1				104
GND 15	B02C2		1-02							2				104
GND 15	B02F1		1-03							1				104
GND 15	U02C2		1-04							2				104
GND 15	U02K2		1-05							1				104
GND 15	U02F1		1-06							2				104
GND 15	E02C2		1-07							1				104
GND 15	E02K2		1-08							2				104
GND 15	E02F1		1-09							1				104
GND 15	F02C2		1-10							2				104
GND 15	F02F1		1-11											104
GND 15			1									36-6/8		104
GND 16	A03F1		1-01							2				104
GND 16	B03C2		1-02							1				104
GND 16	B03F1		1-03							2				104
GND 16	C03C2		1-04							1				104
GND 16	U03C2		1-05							2				104
GND 16	U03K2		1-06							1				104
GND 16	U03F1		1-07							2				104
GND 16	E03C2		1-08							1				104
GND 16	E03K2		1-09							2				104
GND 16	E03F1		1-10							1				104
GND 16	F03C2		1-11							2				104
GND 16	F03F1		1-12											104
GND 16			1									39-0/8		104
GND 20	F04C2		1-01							1				105
GND 20	F04F1		1-02											105
GND 20			1									4-0/8		105
GND 29	E04C2		1-01							1				106
GND 29	E04F1		1-02											106
GND 29			1									4-0/8		106



MM11E, J RUN NAME	HNDWRP, V00 11/6/		BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	26-MAR-71 REMARKS	20:1 LENGTH	PAGE 12 EXCEPTIONS	RUN NUMBER
	A/P	PIN NAME	ORDER PIN											
GND 30		U04C2	1-01							1				107
GND 30		U04F1	1-02											107
GND 30			1									4-0/8		107
INH 00		U03H1	1-01							1				108
INH 00		U04E2	1-02											108
INH 00			1									3-2/8		108
INH 01		U03J1	1-01							1				109
INH 01		U04H2	1-02											109
INH 01			1									3-0/8		109
INH 02		U03L1	1-01							1				110
INH 02		U04M2	1-02											110
INH 02			1									3-0/8		110
INH 03		U03N1	1-01							1				112
INH 03		U04P2	1-02											112
INH 03			1									3-0/8		112
INH 04		U02H1	1-01							1				113
INH 04		U04F2	1-02											113
INH 04			1									3-6/8		113
INH 05		U02J1	1-01							1				114
INH 05		U04J2	1-02											114
INH 05			1									3-4/8		114
INH 06		U02L1	1-01							1				115
INH 06		U04N2	1-02											115
INH 06			1									3-6/8		115
INH 07		U02N1	1-01							1				116
INH 07		U04T2	1-02											116
INH 07			1									3-6/8		116
INH 08		E03H1	1-01							1				116
INH 08		E04C1	1-02											116
INH 08			1									3-0/8		116
INH 09		E03J1	1-01							1				117
INH 09		E04H1	1-02											117
INH 09			1									2-6/8		117
INH 10		E03L1	1-01							1				118
INH 10		E04L1	1-02											118
INH 10			1									2-6/8		118

MM11E.D  
RUN NAME

HNDWRP.V00 11/6/

A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	20:1 LENGTH	PAGE 13 EXCEPTIONS	RUN NUMBER
	E03N1		1-01							1				110
	E04R1		1-02											110
			1									3-0/8		110
	E02H1		1-01							1				120
	E04E2		1-02											120
			1									3-6/8		120
	E02J1		1-01							1				122
	E04J2		1-02											122
			1									3-4/8		122
	E02L1		1-01							1				122
	E04N1		1-02											122
			1									3-4/8		122
	E02N1		1-01							1				124
	E04F2		1-02											124
			1									3-6/8		124
+3V	U03A2		1-01							1				124
+3V	U03J1		1-02							2				124
+3V	U02A2		1-03							1				124
+3V	U02J1		1-04							2				124
+3V	F02J1		1-05							1				124
+3V	F02A2		1-06							2				124
+3V	F03J1		1-07							1				124
+3V	F03A2		1-08											124
+3V			1									27-2/8		124
LOAD 00	U03A1	H	1-01							2				125
LOAD 00	U02A1	H	1-02							1				125
LOAD 00	U01P1	H	1-03											125
LOAD 00			1									6-6/8		125
LOAD 01	U01J1	H	1-01							1				126
LOAD 01	E02A1	H	1-02							2				126
LOAD 01	E03A1	H	1-03											126
LOAD 01			1									7-0/8		126
LUG 1	U01H2		1-01							1				127
LUG 1	F01P2		1-02											127
LUG 1			1									8-2/8		127

MM11E,D  
RUN NAME

HNDWRP;V00 11/6/

26-MAR-71

20:1  
PAGE 14  
EXCEPTIONS

RUN  
NUMBER

A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	20:1 LENGTH	PAGE 14 EXCEPTIONS	RUN NUMBER
READ	H	C02C1	1-01							1				
READ	H	C03C1	1-02							2				120
READ	H	C03V2	1-03							1				120
READ	H	C02V2	1-04							2				120
READ	H	U01A1	1-05							1				120
READ	H	F02C1	1-06							2				120
READ	H	F03C1	1-07							1				120
READ	H	F02V2	1-08							2				120
READ	H	F03V2	1-09							1				120
READ			1									31-2/8		120
RESET 00	L	U01P2	1-01 *							1	R1			120
RESET 00	L	U02C1	1-02 *							2	R1			120
RESET 00	L	U03C1	1-03 *								R1			120
RESET 00			1									6-4/8		120
RESET 01	L	U01E1	1-01 *							1	R1			130
RESET 01	L	E02C1	1-02 *							2	R1			130
RESET 01	L	E03C1	1-03 *								R1			130
RESET 01			1									7-4/8		130
#15V		C03B2	1-01 *							2	R1			132
#15V		C03F1	1-02 *							1	R1			132
#15V		C02F1	1-03 *								R6			132
#15V			1									5-6/8		132
#15V (1)		A03A1	1-01							1				134
#15V (1)		A03B2	1-02											134
#15V (1)			1									2-6/8		134
#15V (2)		A03C1	1-01							1				134
#15V (2)		A03E1	1-02											134
#15V (2)			1									2-4/8		134
#15V (3)		F02B2	1-01 *							2	I			134
#15V (3)		F03F1	1-02 *							1	I			134
#15V (3)		F02F1	1-03 *								I			134
#15V (3)			1									5-6/8		134
#0V		U02R1	1-01							2				135
#0V		U03R1	1-02							1				135
#0V		E03R1	1-03							2				135
#0V		E02R1	1-04							1				135
#0V		F01U1	1-05											135
#0V			1									14-2/8		135

MM11E.D RUN NAME	A/P	HNDWRP.V00 11/6/ PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS 26-MAR-71	20:1 LENGTH	PAGE 15 EXCEPTIONS	RUN NUMBER
STRUBE 00	H	C01F1		1-01							1				130
STRUBE 00	H	U02S1		1-02							2				130
STRUBE 00	H	U03S1		1-03											130
STRUBE 00				1									9-2/8		130
STRUBE 01	H	C01A1		1-01							1				137
STRUBE 01	H	E02S1		1-02							2				137
STRUBE 01	H	E03S1		1-03											137
STRUBE 01				1									12-2/8		137
TUR	H	U01V1		1-01							1				130
TUR	H	F01V1		1-02											130
TUR				1									7-4/8		130
THERM		F04M2		1-01 *					I		1				130
THERM		F04A1		1-02 *					I						130
THERM				1									3-6/8		130
TINH	L	E01F1		1-01							1				140
TINH	L	E01H1		1-02							2				140
TINH	L	E01K2		1-03							1				140
TINH	L	E01J2		1-04							2				140
TINH	L	F01F2		1-05											140
TINH				1									13-6/8		140
TINH 0	H	U03E1		1-01							2				142
TINH 0	H	U02E1		1-02							1				142
TINH 0	H	E01J1		1-03											142
TINH 0				1									8-2/8		142
TINH 1	H	E03E1		1-01							2				142
TINH 1	H	E02E1		1-02							1				142
TINH 1	H	E01H2		1-03							2				142
TINH 1	H	F01F1		1-04							1				142
TINH 1	H	F01E1		1-05											142
TINH 1				1									13-0/8		142
TSS	H	U01C1		1-01 *					R1		2				144
TSS	H	U01V2		1-02 *					R1		1				144
TSS	H	F01P1		1-03 *					R1		2				144
TSS	H	F01V2		1-04 *					I						144
TSS				1									15-0/8		144
TSS	L	U01B1		1-01 *					R1		1				144
TSS	L	E01E1		1-02 *					R1		2				144
TSS	L	E01L2		1-03 *					R1						144
TSS				1									8-4/8		144





MM11E.D RUN NAME	HNDWRP,V00 11/6/ A/P PIN ORDER NAME PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	26-MAR-71 REMARKS	20:1 LENGTH	PAGE 18 EXCEPTIONS	RUN NUMBER
XS (4=7)	F01R2	1-01							1				167
XS (4=7)	F02Q2	1-02											167
XS (4=7)		1									3-0/8		167
XSW0	C02M1	1-01							1				160
XSW0	C02P1	1-02							2				160
XSW0	C04Q1	1-03											160
XSW0		1									6-4/8		160
XSW1	C02L1	1-01 *					R1		2				160
XSW1	C02R2	1-02 *					R1		1				160
XSW1	C04E1	1-03 *					I						160
XSW1		1									6-6/8		160
XSW2	C02K1	1-01							2				170
XSW2	C02R1	1-02							1				170
XSW2	C04H1	1-03											170
XSW2		1									6-4/8		170
XSW3	C02V1	1-01							2				172
XSW3	C02J1	1-02							1				172
XSW3	C04J1	1-03											172
XSW3		1									6-0/8		172
XSW4	F02M1	1-01							1				172
XSW4	F02P1	1-02							2				172
XSW4	F04P1	1-03											172
XSW4		1									5-6/8		172
XSW5	F02L1	1-01							2				174
XSW5	F02R2	1-02							1				174
XSW5	F04R1	1-03											174
XSW5		1									6-0/8		174
XSW6	F02K1	1-01							2				174
XSW6	F02R1	1-02							1				174
XSW6	F04S1	1-03											174
XSW6		1									6-2/8		174
XSW7	F04Q1	1-01 *					R1		1				173
XSW7	F02J1	1-02 *					R1		2				173
XSW7	F02N1	1-03 *					I						173
XSW7		1									6-4/8		173





MM11E, J RUN NAME	HNDWRP, V00 11/6/ A/P PIN ORDER NAME PIN	BAY - ORDER	Q	URAW	RV	PG	Y	X	Z	26-MAR-71 REMARKS	20:1 LENGTH	PAGE 20 EXCEPTIONS	RUN NUMBER
YPDR=0	C03J2	1-01							1				187
YPDR=0	C04A1	1-02											187
YPDR=0		1									3-2/8		187
YPDR=2	C03F2	1-01							1				180
YPDR=2	C04F2	1-02											180
YPDR=2		1									2-6/8		180
YPDR=3	C03H1	1-01							1				189
YPDR=3	C04P2	1-02											189
YPDR=3		1									3-4/8		189
YPDR=4	F03J2	1-01							1				190
YPDR=4	F04K2	1-02											190
YPDR=4		1									2-6/8		190
YPDR=5	F03E1	1-01							1				191
YPDR=5	F04B1	1-02											191
YPDR=5		1									3-2/8		191
YPDR=6	F03F2	1-01							1				192
YPDR=6	F04L2	1-02											192
YPDR=6		1									3-0/8		192
YPDR=7	F03H1	1-01							1				194
YPDR=7	F04C1	1-02											194
YPDR=7		1									3-0/8		194
YPR=1	C03E1	1-01							1				194
YPR=1	C04N2	1-02											194
YPR=1		1									3-4/8		194
YS (3=3)	C03J2	1-01							1				195
YS (3=3)	F01L2	1-02											195
YS (3=3)		1									9-6/8		195
YS (4=7)	F01V2	1-01							1				196
YS (4=7)	F03J2	1-02											196
YS (4=7)		1									3-4/8		196
YSW0	C03M1	1-01							1				197
YSW0	C03P1	1-02							2				197
YSW0	C04J2	1-03											197
YSW0		1									6-0/8		197

MM11E,D  
RUN NAME

HNDWRP,V00 11/6/

26-MAR-71

A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	20:1 LENGTH	PAGE 21 EXCEPTIONS	RUN NUMBER
Y5W1	C03R2		1-01							2				190
Y5W1	C03L1		1-02							1				190
Y5W1	C04H2		1-03											190
Y5W1			1									6-2/8		190
Y5W2	C03R1		1-01							2				190
Y5W2	C03K1		1-02							1				190
Y5W2	C04Q2		1-03											190
Y5W2			1									6-4/8		190
Y5W3	C03N1		1-01							2				200
Y5W3	C03J1		1-02							1				200
Y5W3	C04C1		1-03											200
Y5W3			1									6-0/8		200
Y5W4	F03M1		1-01							1				201
Y5W4	F03P1		1-02							2				201
Y5W4	F04N1		1-03											201
Y5W4			1									5-4/8		201
Y5W5	F03L1		1-01							2				202
Y5W5	F04M1		1-02							1				202
Y5W5	F03R2		1-03											202
Y5W5			1									5-4/8		202
Y5W6	F03K1		1-01							2				204
Y5W6	F03R1		1-02							1				204
Y5W6	F04V2		1-03											204
Y5W6			1									6-2/8		204
Y5W7	F03J1		1-01							2				204
Y5W7	F03N1		1-02							1				204
Y5W7	F04V1		1-03											204
Y5W7			1									6-0/8		204

ERROR LISTING

WIRE WRAP  
RUN NAME

HNDWRP;V00 11/67  
A/P PIN ORDER BAY -  
NAME PIN ORDER

26-MAR-71

Q DRAW RV PG Y X Z

REMARKS

20:1  
LENGTH

PAGE 1  
EXCEPTIONS

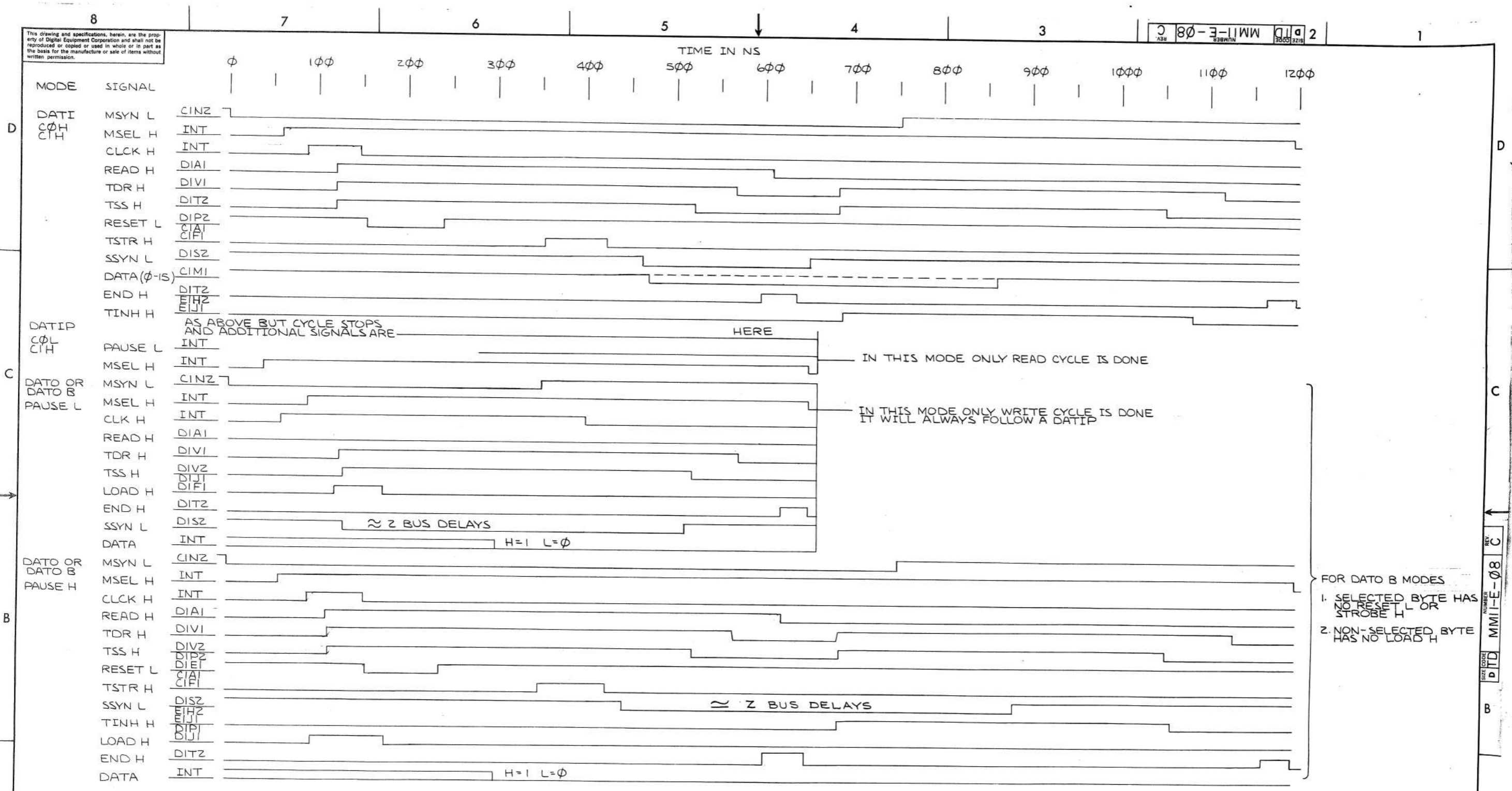
RUN  
NUMBER



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SIZE CODE DTD NUMBER MM11-E-08 REV C

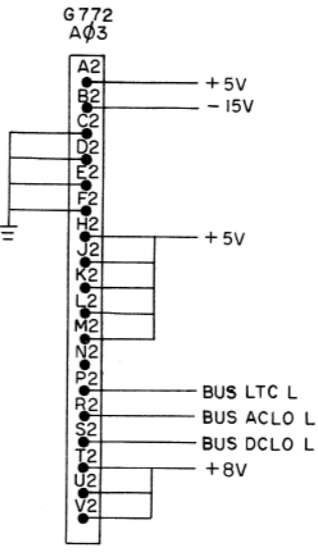
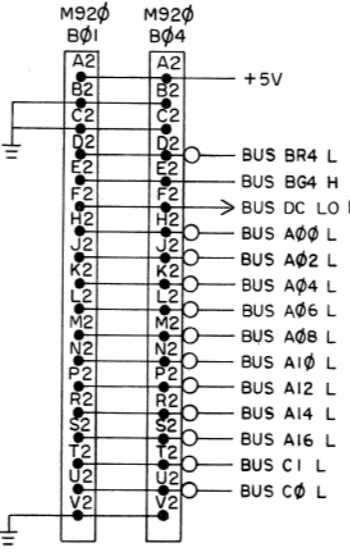
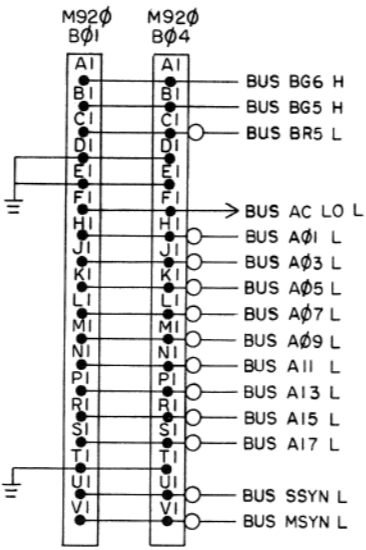
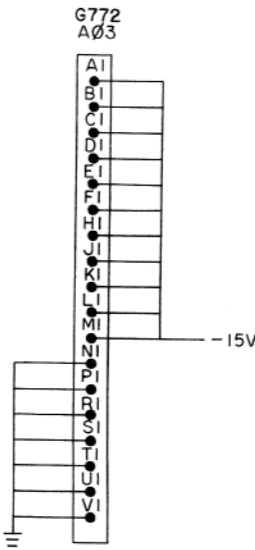
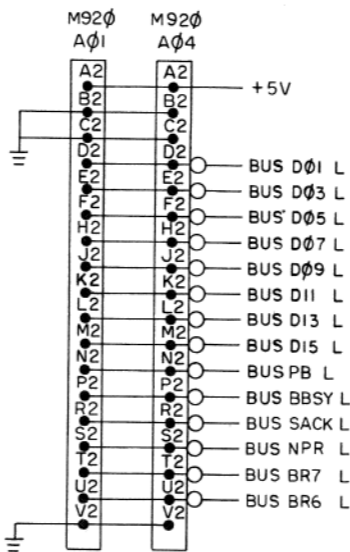
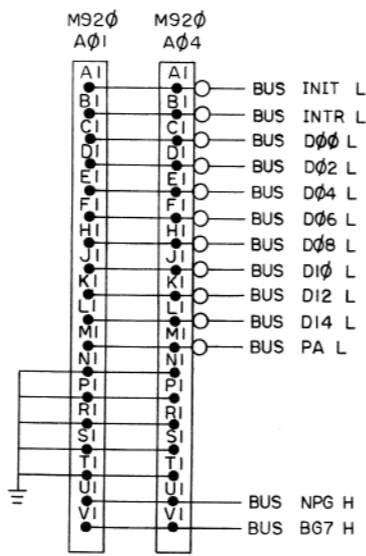


- FOR DATO B MODES
1. SELECTED BYTE HAS NO RESET L OR STROBE H
  2. NON-SELECTED BYTE HAS NO LOAD H

REV.	CHG. NO.	REV.
A	MM11E-00004	1-26-70
B	MM11E-00016	1-27-70
C	MM11E-00017	1-27-70

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
FIRST USED ON OPTION / MODEL PDP11		DRN. DATE 8-27-69 CHK'D. DATE 10-11-69 ENG. DATE 10-31-69 PROJ. ENG. DATE 10-31-69 PROD. DATE 11/3/69	
DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES ±.005 ±.004 ±.030° FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE <b>TIMING &amp; FLOW</b>	
MATERIAL	FINISH	NEXT HIGHER ASSY	SCALE
---	---	A-ML-MM11-E	SCALE NONE
SHEET 1 OF 1		SIZE CODE	NUMBER
		DTD	MM11-E-08
		DIST.	REV. C

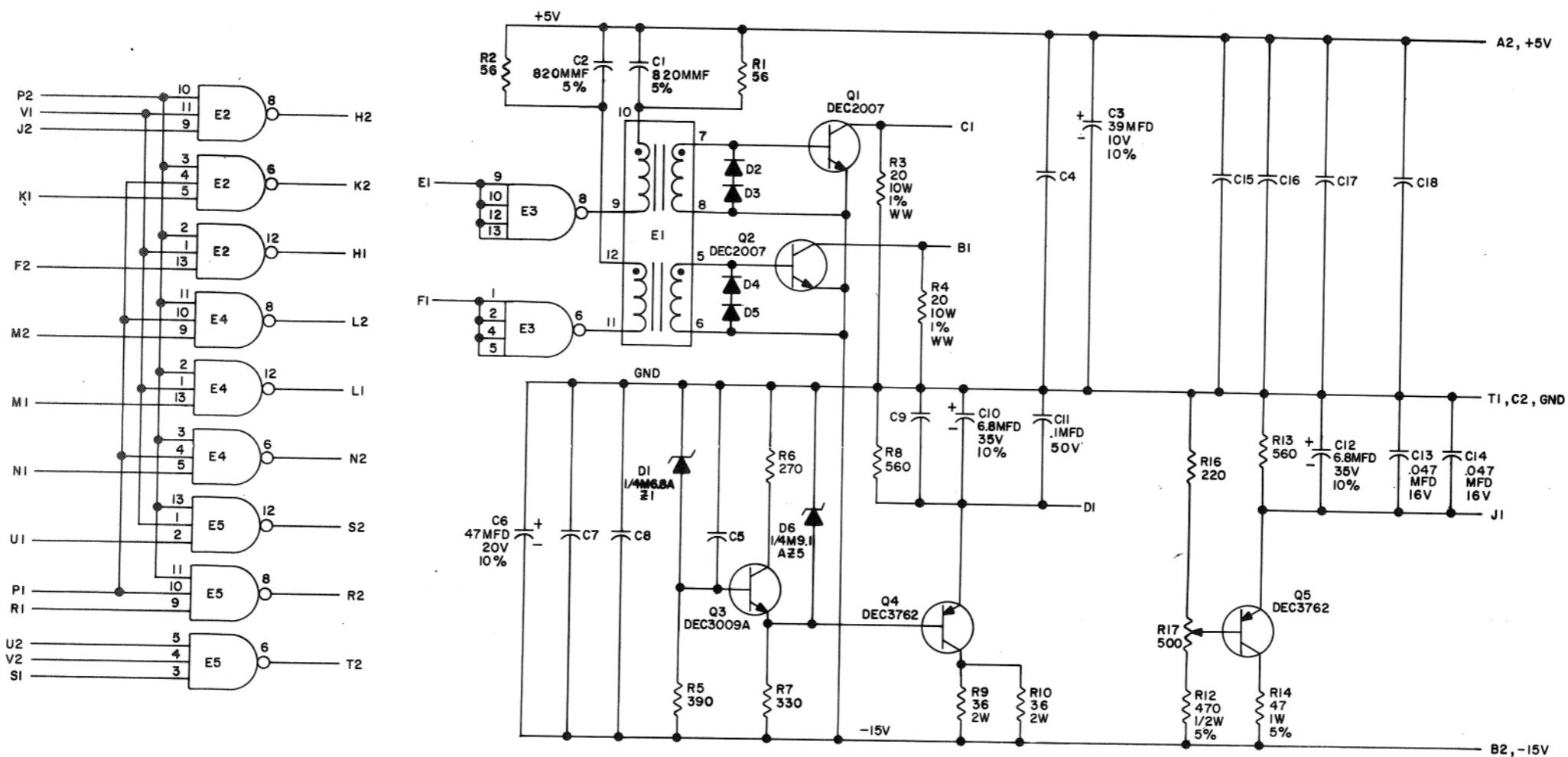
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REVISIONS	CHK	CHANGE NO.	REV.
		MM11E-00015	A
		10/21/69	
		DURANT	
		11/3/69	

FIRST USED ON OPTION/MODE PDPII	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DRN	A. Raina	DATE	5-18-69
UNLESS OTHERWISE SPECIFIED	CHK'D	P. Dwyer	DATE	10-31-69
DIMENSION IN INCHES	ENG.	P. Dwyer	DATE	10-31-69
TOLERANCES	PROJ. ENG.	P. Dwyer	DATE	10-31-69
DECIMALS FRACTIONS ANGLES	PROD.	A. Raina	DATE	11/3/69
± .005 ± 1/64 ± 0°30'				
FINAL SURFACE QUALITY				
REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL	NEXT HIGHER ASSY			
FINISH	A-ML-MM11-E			
	SCALE	NONE	SIZE CODE	DIC
	SHEET	1	OF	1
			NUMBER	MM11-E-09
			REV.	A
			TITLE	I/O CONNECTORS

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UNLESS OTHERWISE INDICATED:  
 RESISTORS ARE 1/4W, 5%  
 CAPACITORS ARE .01 MFD, 100V, 20%  
 PIN 7 ON EACH IC = GND  
 PIN 14 ON EACH IC = +5V  
 E2, E4, E5 ARE DEC74H10  
 E3 IS DEC7440  
 E1 IS TRANSFORMER DEC PART # 1609996-0  
 DIODES ARE D664

SIZE CODE NUMBER  
 C CS G103-0-1 E

REV	CHG	NO.	REV
A	00001		
B	00002		
C	00004		
D	00005		
E	00006		

DRN. BUTLER	DATE 8/29/69
CHKD BY [Signature]	DATE 6-27-69
ENG. [Signature]	DATE 2-2-70
PROD. [Signature]	DATE

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA
D664	IN3606	1/4M9.1A25	NONE
1/4M6.8A21	NONE		
DEC2007	NONE		
DEC3762	NONE		
DEC3009A	2N3009A		

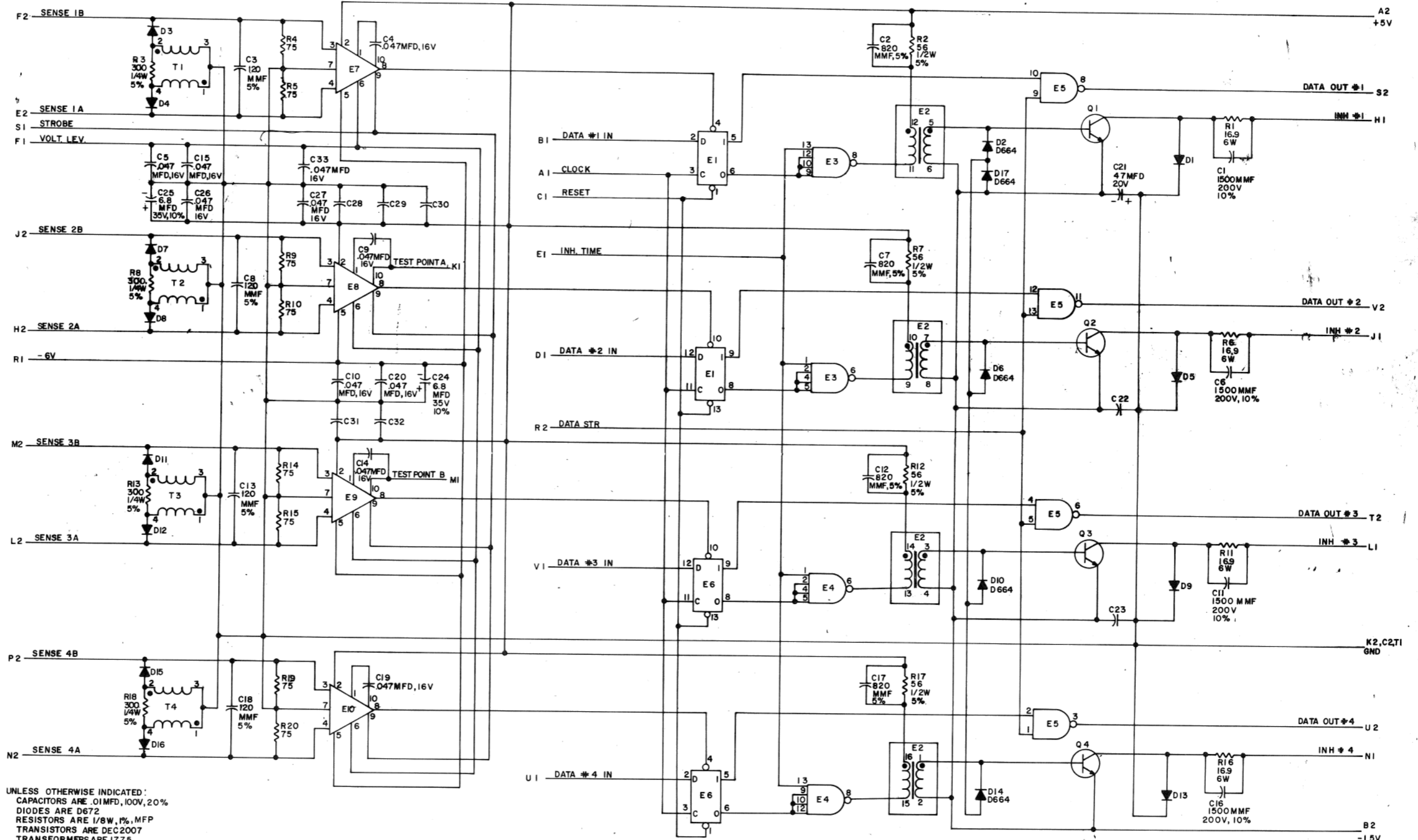
**digital**  
 EQUIPMENT CORPORATION  
 MAYNARD, MASSACHUSETTS

TITLE MEMORY LEVELS & GATES G103		NUMBER G103-0-1	REV E
SIZE C	CODE CS	PRINTED CIRCUIT REV. A	

DEC FORM NO. DRC 102

Dist 3 24 434,435

PINK

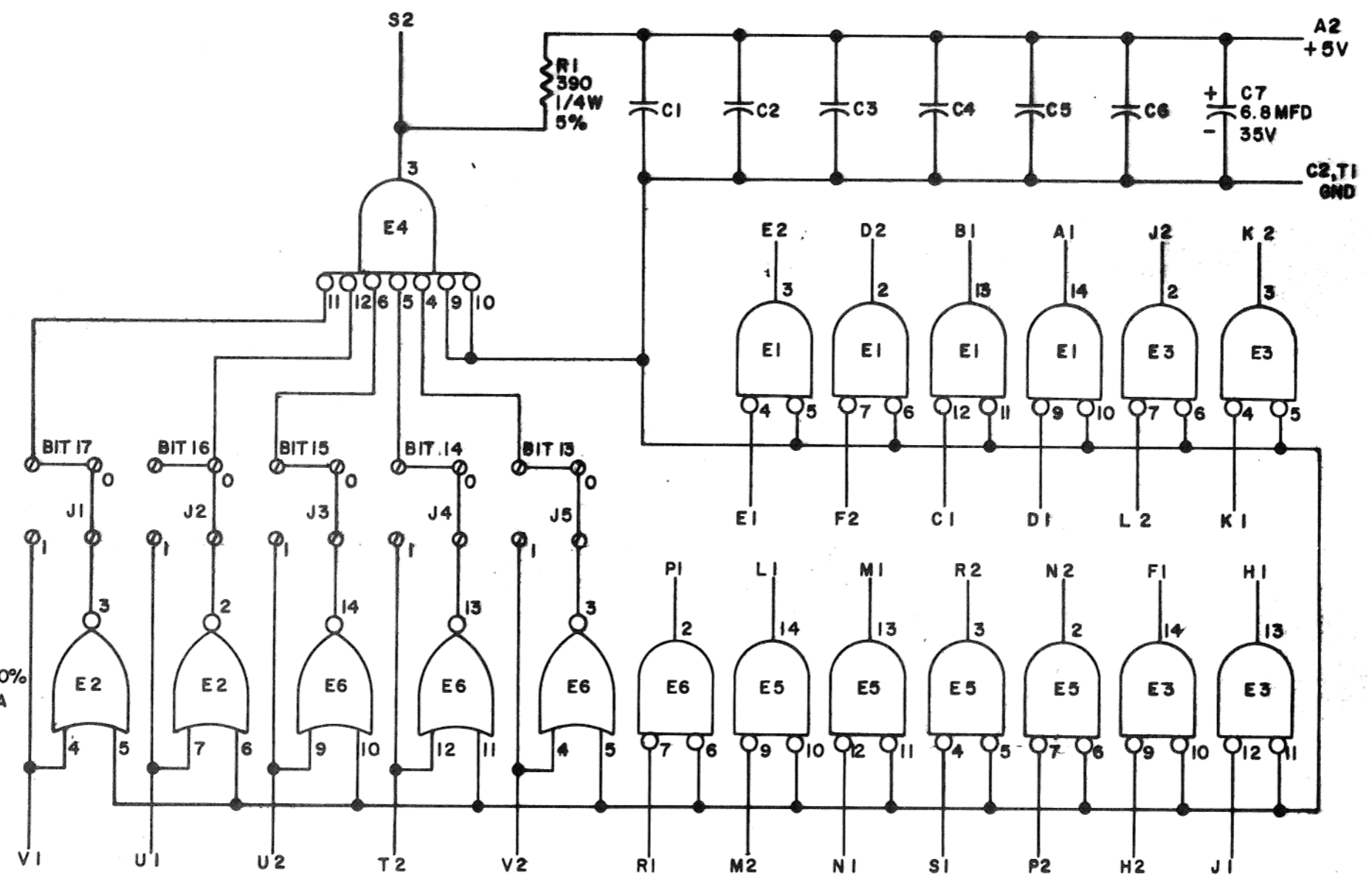


UNLESS OTHERWISE INDICATED:  
 CAPACITORS ARE .01MFD, 100V, 20%  
 DIODES ARE D672  
 RESISTORS ARE 1/8W, 1%, MFP  
 TRANSISTORS ARE DEC2007  
 TRANSFORMERS ARE 17Z5  
 PIN 7 ON E1, E3-E6 = GND  
 PIN 14 ON E1, E3-E6 = +5V  
 E1, E6 - ARE DEC7474  
 E2 IS A DUAL IN LINE PACK XMFR-16-09996-0  
 E3, E4 ARE DEC74H40  
 E5 IS DEC74H011  
 E7-E10 ARE MCI540  
 CAPACITORS C2-C7-C12 AND C17  
 ARE AND MUST BE SINGLE DIP

PARTS LIST				TRANSISTOR & DIODE CONVERSION CHART				EQUIPMENT	
QTY	DESCRIPTION	REF	VAL	QTY	DESCRIPTION	REF	VAL	TYPE	MODEL
1	IC1	E1	DEC7474	1	Q1	Q1	DEC2007	CS	G102-0-1
1	IC2	E2	XMFR-16-09996-0	1	Q2	Q2	DEC2007	CS	G102-0-1
1	IC3	E3	DEC74H40	1	Q3	Q3	DEC2007	CS	G102-0-1
1	IC4	E4	DEC74H40	1	Q4	Q4	DEC2007	CS	G102-0-1
1	IC5	E5	DEC74H011	1	D1	D1	D664	CS	G102-0-1
1	IC6	E6	DEC74H40	1	D2	D2	D664	CS	G102-0-1
1	IC7	E7	MCI540	1	D3	D3	D664	CS	G102-0-1
1	IC8	E8	MCI540	1	D4	D4	D664	CS	G102-0-1
1	IC9	E9	MCI540	1	D5	D5	D664	CS	G102-0-1
1	IC10	E10	MCI540	1	D6	D6	D664	CS	G102-0-1

DISK 324, 434, 435 PINK

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UNLESS OTHERWISE INDICATED  
 CAPACITORS ARE .01MFD, 100V, 20%  
 ALL IC'S EXCEPT E4 ARE SP380A  
 E4 IS SP314A  
 PIN 1 ON EACH IC = GND  
 PIN 8 ON EACH IC = +5V

REVISIONS	CHK	CHG	NO.	REV.

DRN.	DATE
<i>P. Durant</i>	10-31-69
CHK'D	DATE
<i>P. Durant</i>	11/10/69
ENG.	DATE
P. Durant	
PROD.	DATE

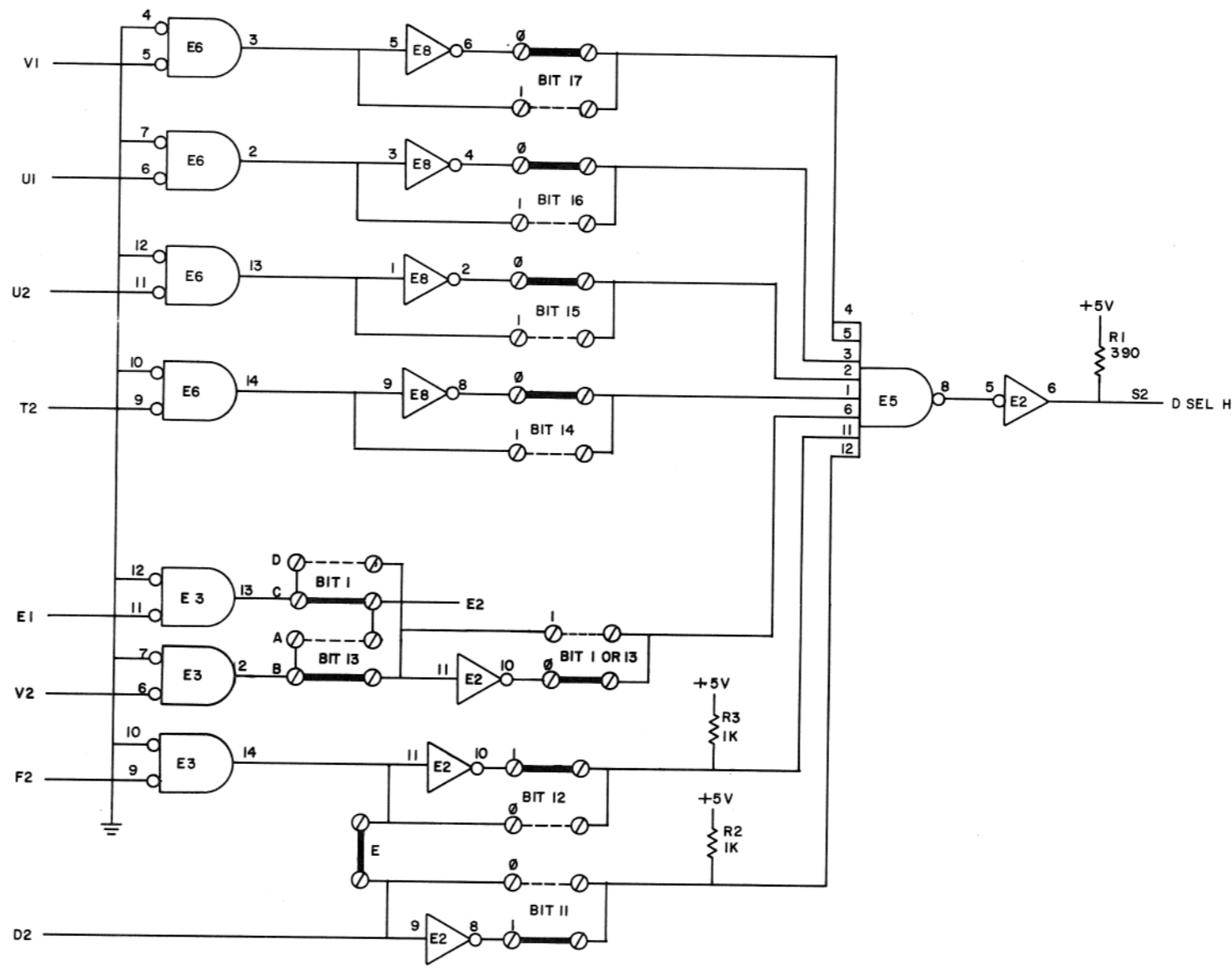
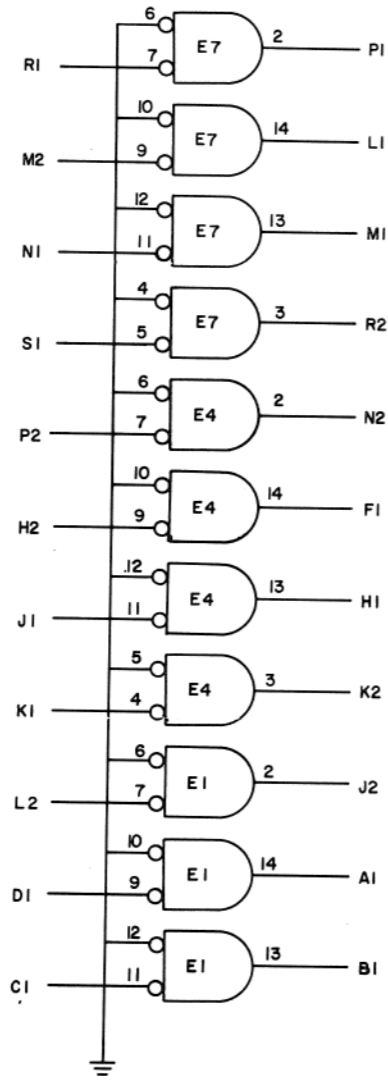
TRANSISTOR & DIODE CONVERSION CHART			
DEC		EIA	

**digital**  
 EQUIPMENT CORPORATION  
 MAYNARD, MASSACHUSETTS

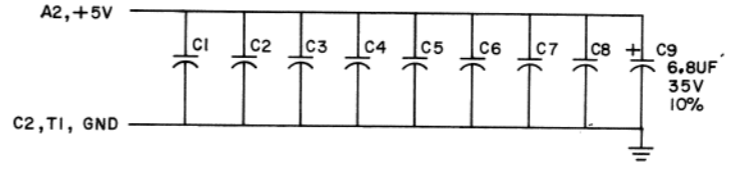
TITLE			
DEVICE SELECT MODULE M109			
SIZE	CODE	NUMBER	REV.
B	CS	M109-0-1	
PRINTED CIRCUIT REV.			A



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UNLESS OTHERWISE INDICATED:  
 RESISTORS ARE 1/4W, 5%  
 CAPACITORS ARE .01UF, 100V, 20%  
 DEC 380 = E1, E3, E4, E6, E7  
 DEC74H04 = E2, E8  
 DEC74H30 = E5  
 PIN 7 = GND ON ALL IC'S  
 PIN 14 = +5V  
 PIN 1 = GND  
 PIN 8 = +5V ON DEC380  
 ⊗ = SPLIT LUGS  
 ○—○ = JUMPERS, INSERTED  
 ○---○ = CUSTOMER OPTION JUMPERS, DO NOT INSERT



REV. NO.	CHK	CHG	NO.	REV.

DRN.	DATE
<i>George Wyatt</i>	1-12-71
CHKD.	DATE
<i>R. Welch</i>	1-12-71
ENG.	DATE
<i>R. Smart</i>	1-14-71
PROD.	DATE

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA

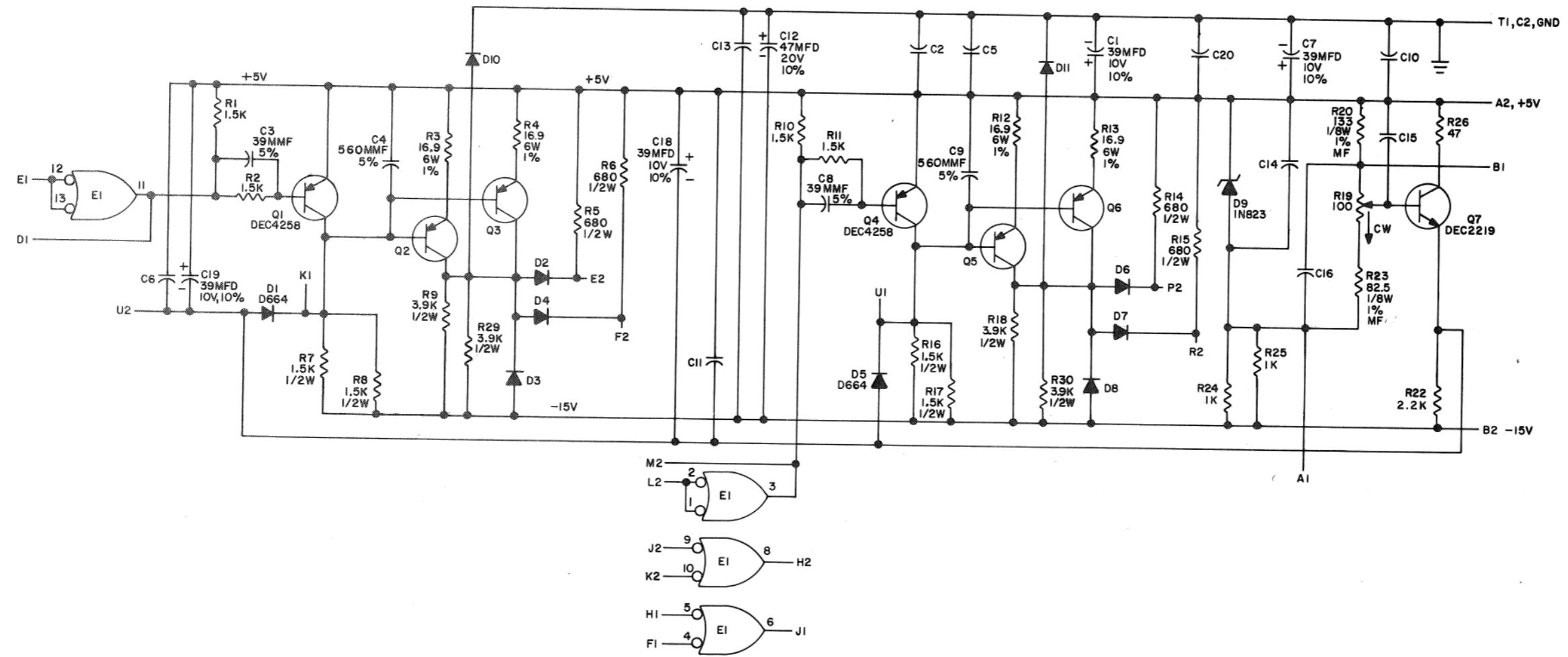
<b>digital</b> EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE		
	MEMORY DEVICE SELECT M1091		
SIZE	CODE	NUMBER	REV.
C	CS	M1091-0-1	
PRINTED CIRCUIT REV.			A

DEC FORM NO. DRC 102

REV. NUMBER M1091-0-1

*Perk Blue*

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UNLESS OTHERWISE INDICATED:  
 PIN 7 ON EACH IC = GND  
 PIN 14 ON EACH IC = +5V  
 DIODES ARE D672  
 TRANSISTORS ARE DEC3762  
 RESISTORS ARE 1/4W, 5%  
 CAPACITORS ARE .01MFD, 100V, 20%  
 EI IS DEC74HOON

REV.	CHK	CHG NO.	REV.
A		00001	
B		00003	
C		00004	
D		00005	
E		00007	

DRN. BUTLER	DATE 8-20-69
CHK'D G. Hunsicker	DATE 9-5-69
ENG. P. Sullivan	DATE 2-2-70
PRD.	DATE

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA
IN756A	SAME	DEC4258	2N4258
D664	IN3606		
D672	IN3653		
DEC2219	2N2219		
DEC3762	2N3762		

**digital**  
 EQUIPMENT CORPORATION  
 MAYNARD, MASSACHUSETTS

TITLE X & Y CURRENT GENERATOR G225		SIZE C	CODE CS	NUMBER G225-0-1	REV. E
PRINTED CIRCUIT REV. D					

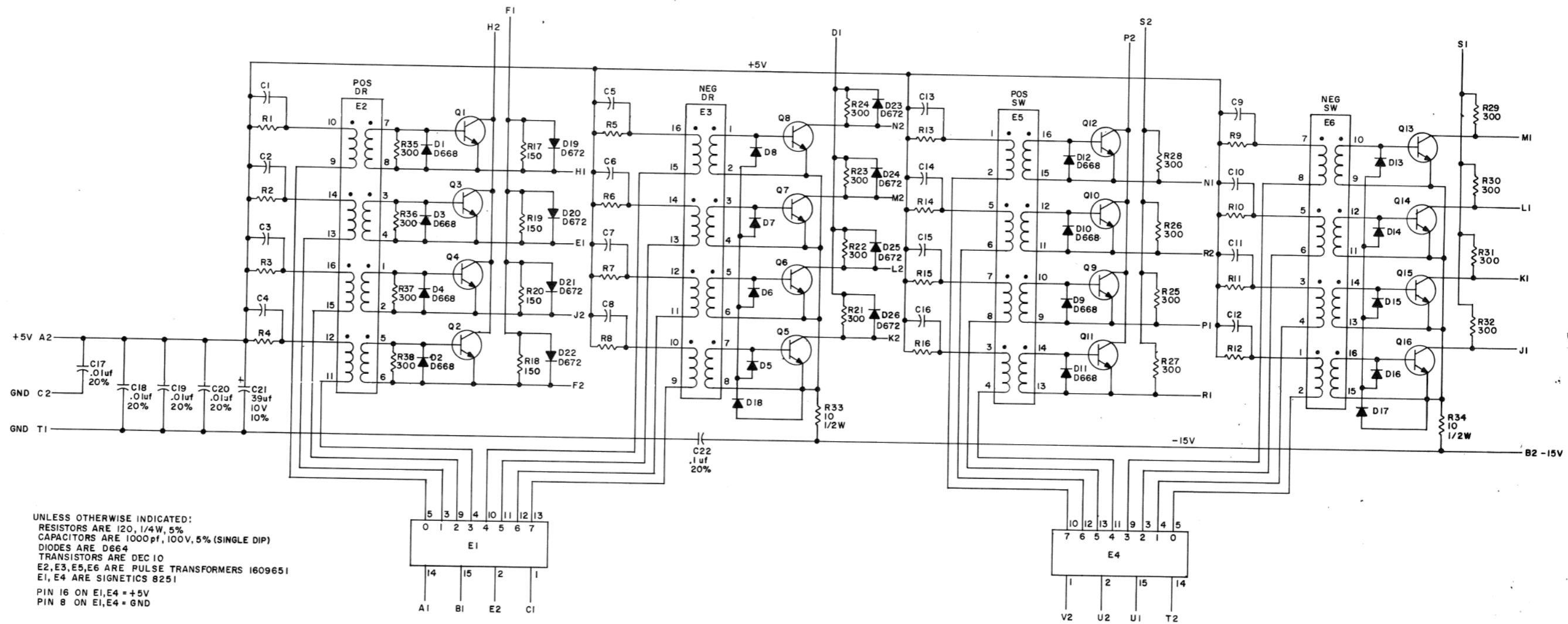
DEC FORM NO. DRC 102

DIST: 324, 434, 435, 357

REV. E  
 NUMBER G225-0-1  
 SIZE CODE C CS

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CS 6226-0-1



UNLESS OTHERWISE INDICATED:  
 RESISTORS ARE 120, 1/4W, 5%  
 CAPACITORS ARE 1000pf, 100V, 5% (SINGLE DIP)  
 DIODES ARE D664  
 TRANSISTORS ARE DEC 10  
 E2, E3, E5, E6 ARE PULSE TRANSFORMERS 1609651  
 E1, E4 ARE SIGNETICS 8251  
 PIN 16 ON E1, E4 = +5V  
 PIN 8 ON E1, E4 = GND

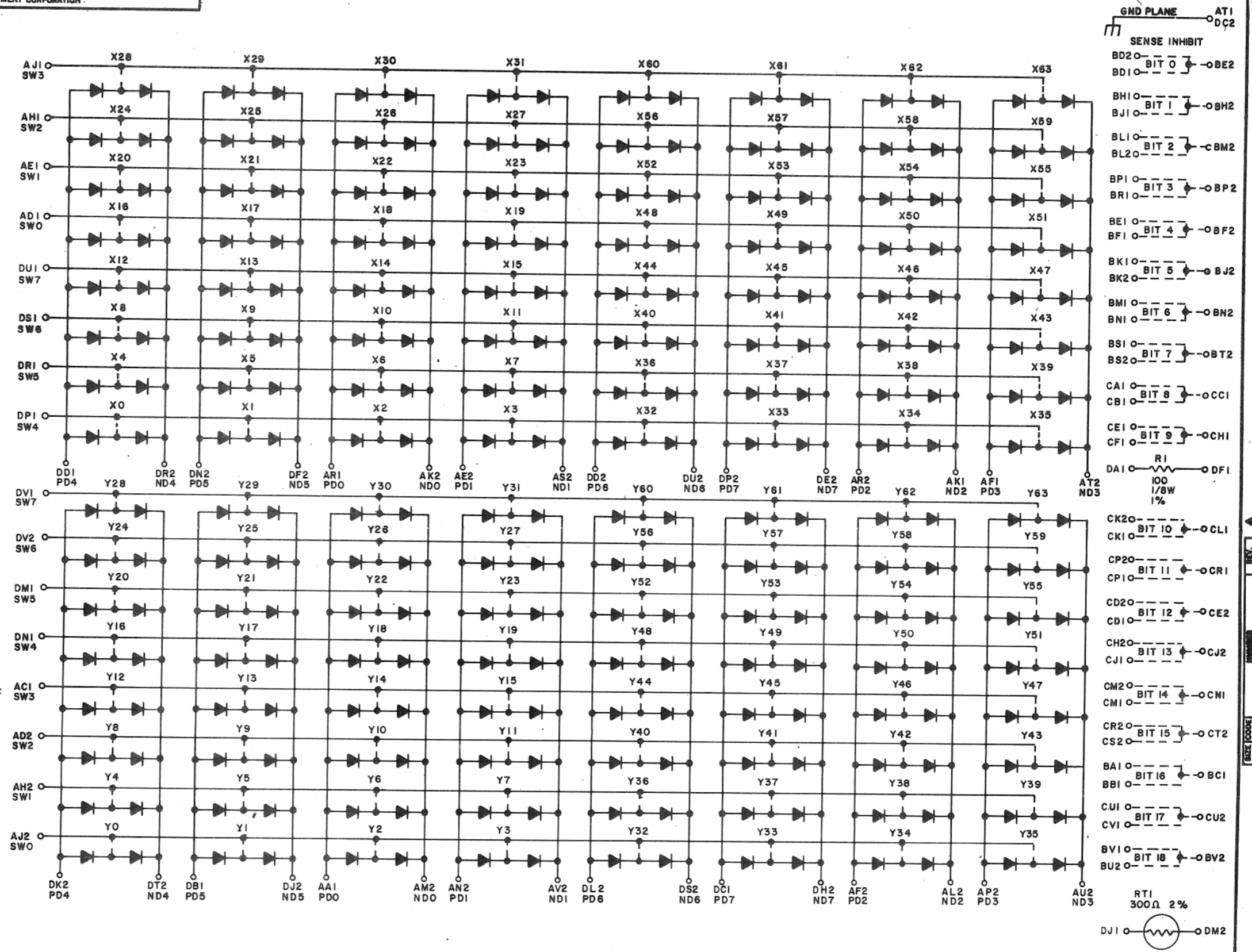
REV	CHG	NO	REV
0000	1	A	
0000	2	B	
0000	3	C	

DRN	DATE	TRANSISTOR & DIODE CONVERSION CHART				TITLE	
BUTLER	8-14-69	DEC	EIA	DEC	EIA	X-Y DECODER SWITCH G226	
CHVD	DATE	D664	IN360B			SIZE	CODE
T.A. NALETTE	9-9-69	DEC10	NONE			D	CS
ENG	DATE					NUMBER	REV
P. SULLIVAN	2-26-70					6226-0-1	C
PROD	DATE					PRINTED CIRCUIT REV.	

DEC FORM NO. 989 118

5 PAK

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UNLESS OTHERWISE INDICATED:  
DIODES ARE D672

REV	CHK	CHG	NO	REV
1	3/24	00001	B	
2	3/24	00002	C	
3	3/24	00005	D	

DRN: M. Haller  
 DATE: 7-30-69  
 CHK'D: G. Young  
 DATE: 8-6-69  
 ENR: R. Durand  
 DATE: 12/19/69  
 PROD. DATE:

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA
D672	IN3656		

**digital** EQUIPMENT CORPORATION  
 MAYNARD, MASSACHUSETTS

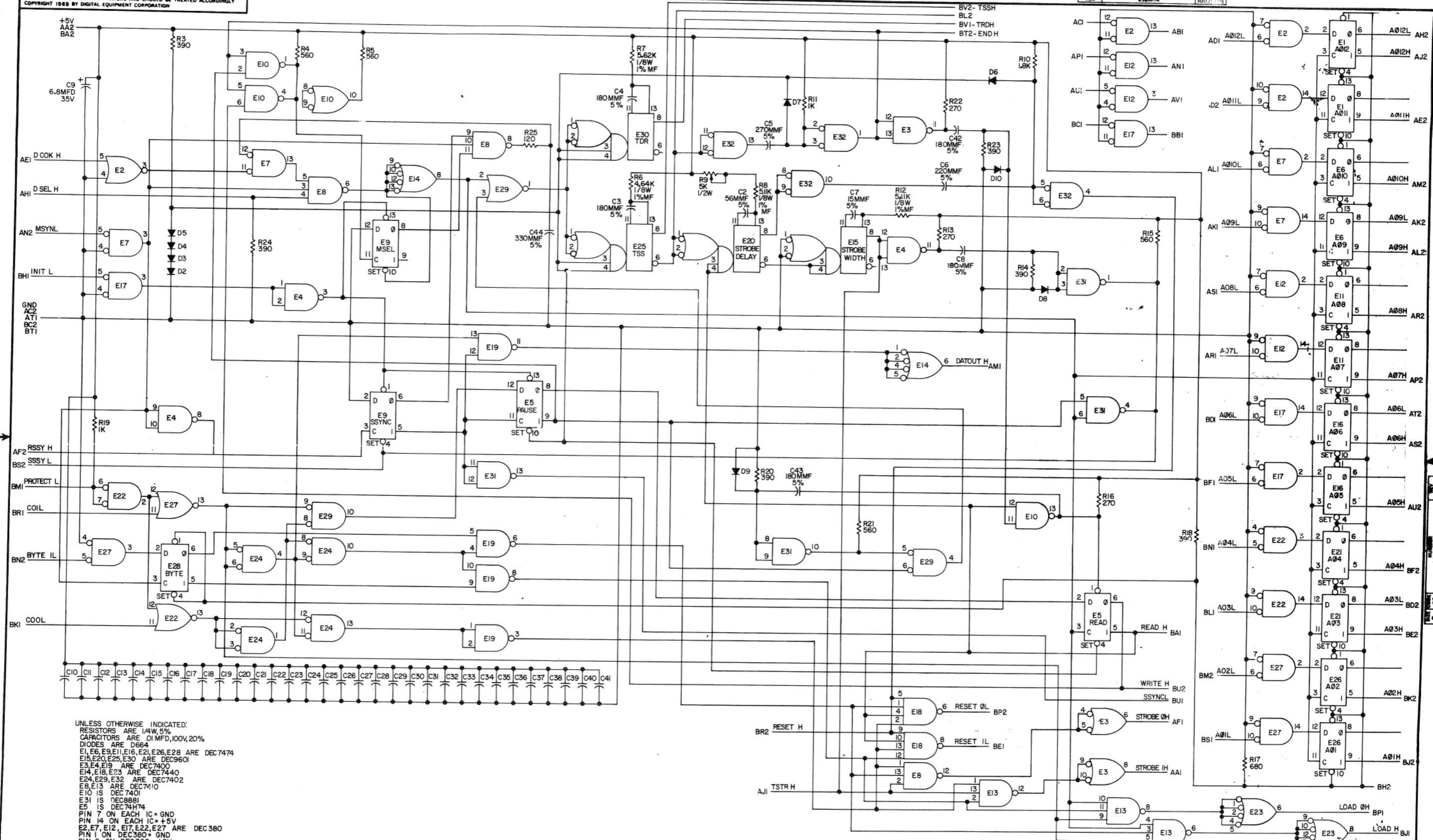
TITLE: PLANAR STACK BOARD I G616  
 SIZE: C CS NUMBER: G616-0-1 REV: D  
 PRINTED CIRCUIT REV. D

DEC FORM NO. DRC 102

D157-324,434,435 ④ PINK

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8 1-0-62JW SC 0  
3001 115



UNLESS OTHERWISE INDICATED:  
RESISTORS ARE 1/4W, 5%  
CAPACITORS ARE .01 MFD, 100V, 20%  
DIODES ARE D664  
E1, E6, E9, E11, E16, E21, E26, E28 ARE DEC7474  
E15, E20, E25, E30 ARE DEC9601  
E3, E4, E19 ARE DEC7400  
E14, E18, E23 ARE DEC7440  
E24, E29, E32 ARE DEC7402  
E8, E13 ARE DEC7410  
E10 IS DEC7401  
E31 IS DEC8881  
E5 IS DEC74H74  
PIN 7 ON EACH IC = GND  
PIN 14 ON EACH IC = +5V  
E2, E7, E12, E17, E22, E27 ARE DEC380  
PIN 1 ON DEC380 = GND  
PIN 8 ON DEC380 = +5V

REV	DATE	BY	CHKD
1	12-10-68	W. J. ...	...
2	1-13-70	...	...
3	1-15-70	...	...

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA
D664	IN3606		

digital		TITLE	
EQUIPMENT CORPORATION		MM1E CONTROL LOGIC M729	
SIZE	CODE	NUMBER	REV.
D	CS	M729-0-1	B
PRINTED CIRCUIT REV. C			

PINK