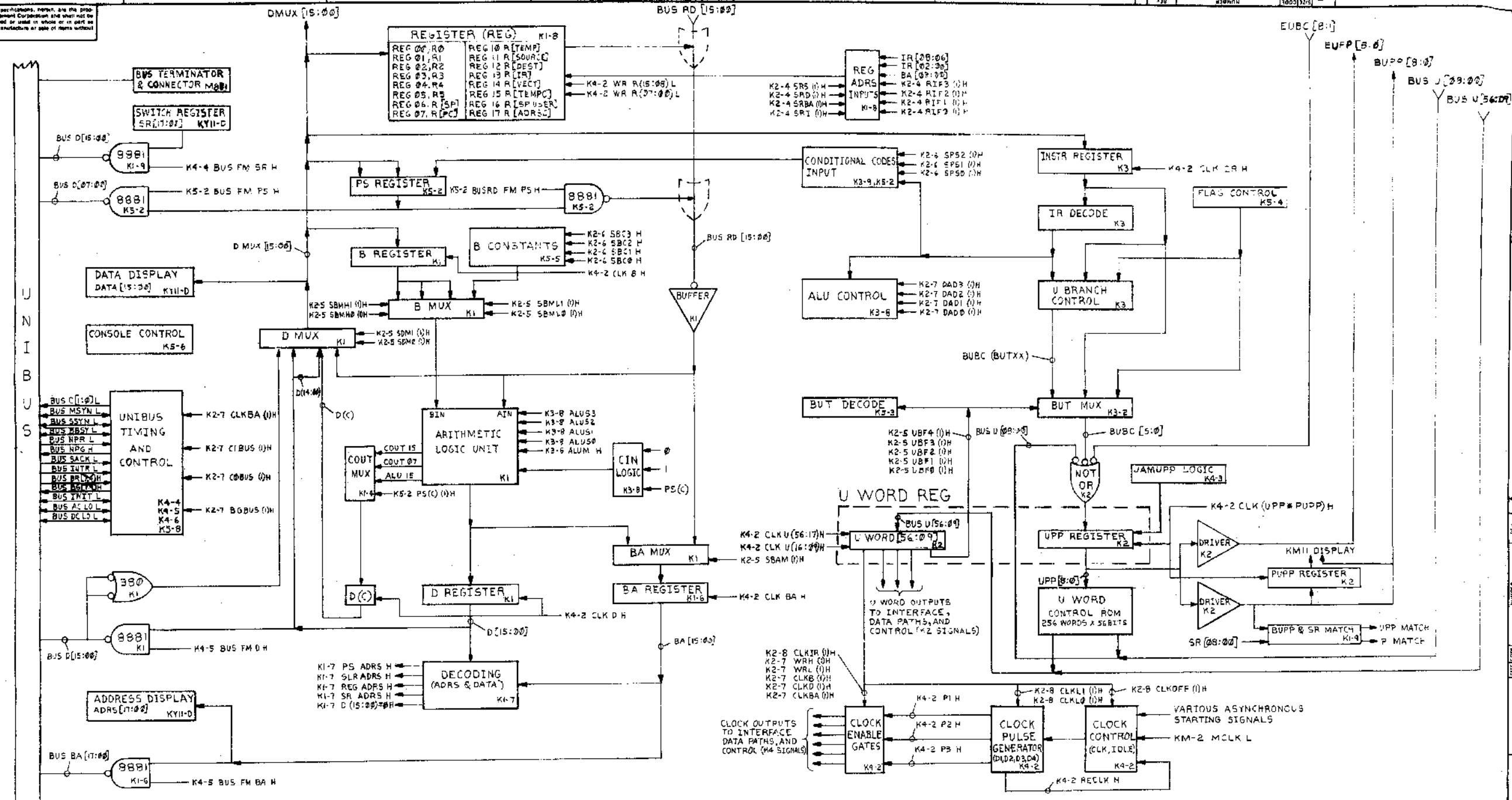


* OPTIONS TO KD11-A PROCESSOR

TITLE	SHEET 2 OF 3	SIZE CODE	NUMBER	RFV
KD11-A PROCESSOR		B DD	KD11-A	N

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INTERFACE

DATA PATHS

MICROCONTROL

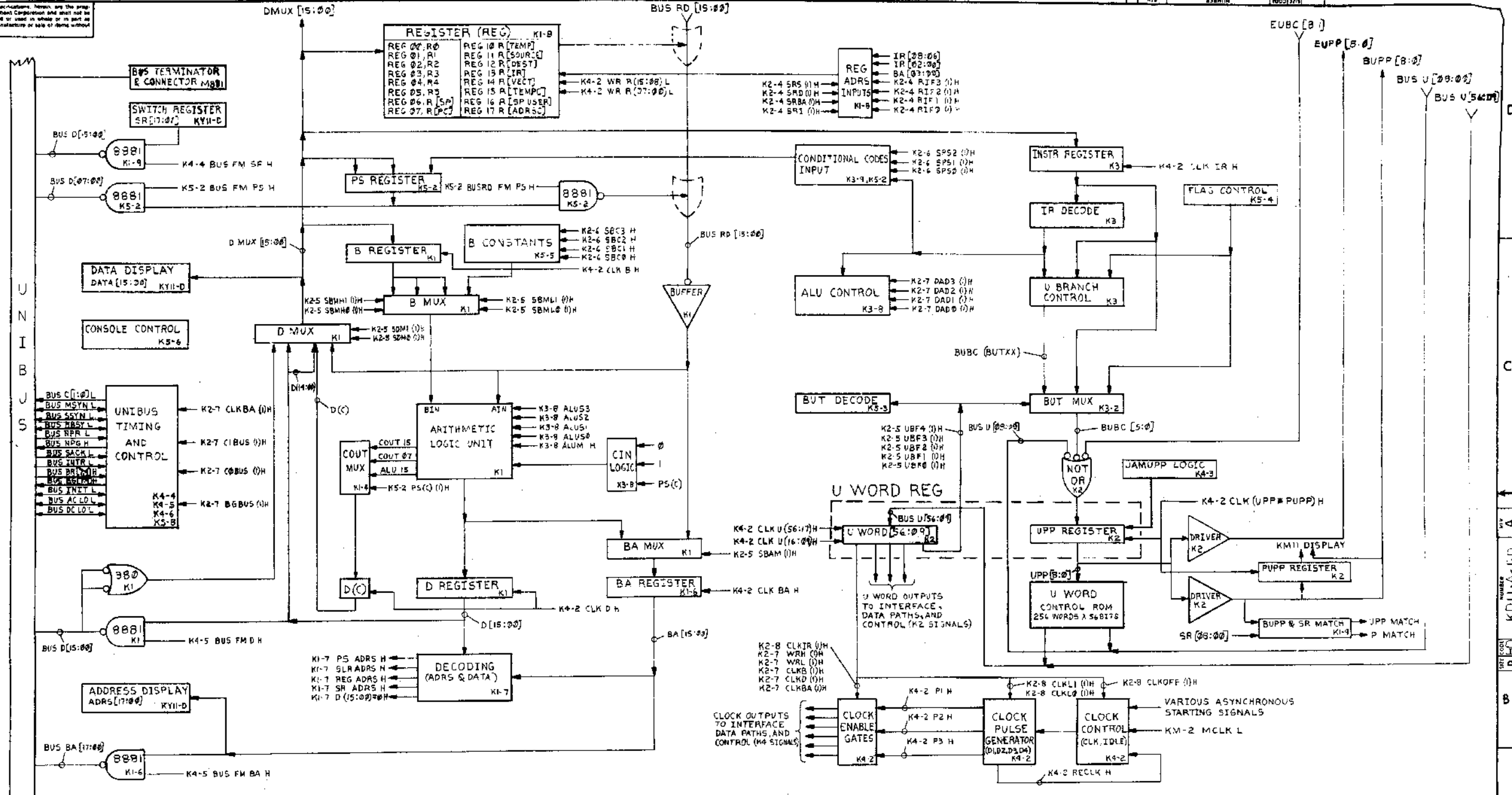
REVISIONS

REV.	DATE	DESCRIPTION
1	7-21-72	DRN
2	7-25-72	CHKD
3	7-25-72	ENG
4	7-25-72	PROJ ENCL
5	7-25-72	PROJ ENCL

DESIGNED BY: J. O'LOUGHLIN
 DRAWN BY: J. O'LOUGHLIN
 CHECKED BY: J. O'LOUGHLIN
 DATE: 2-14-73

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
POPPI				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	PARTS LIST		
XXX - .005	XX - .02	digital EQUIPMENT CORPORATION MILFORD MASSACHUSETTS		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
TITLE: K11-A PROCESSOR (BLOCK DIAGRAM)				
MATERIAL		SCALE: 1:1	SIZE CODE: DBD	NUMBER: K11-A-80
FINISH: ++		RECLY: H	SHEET: OF 2	REV. A

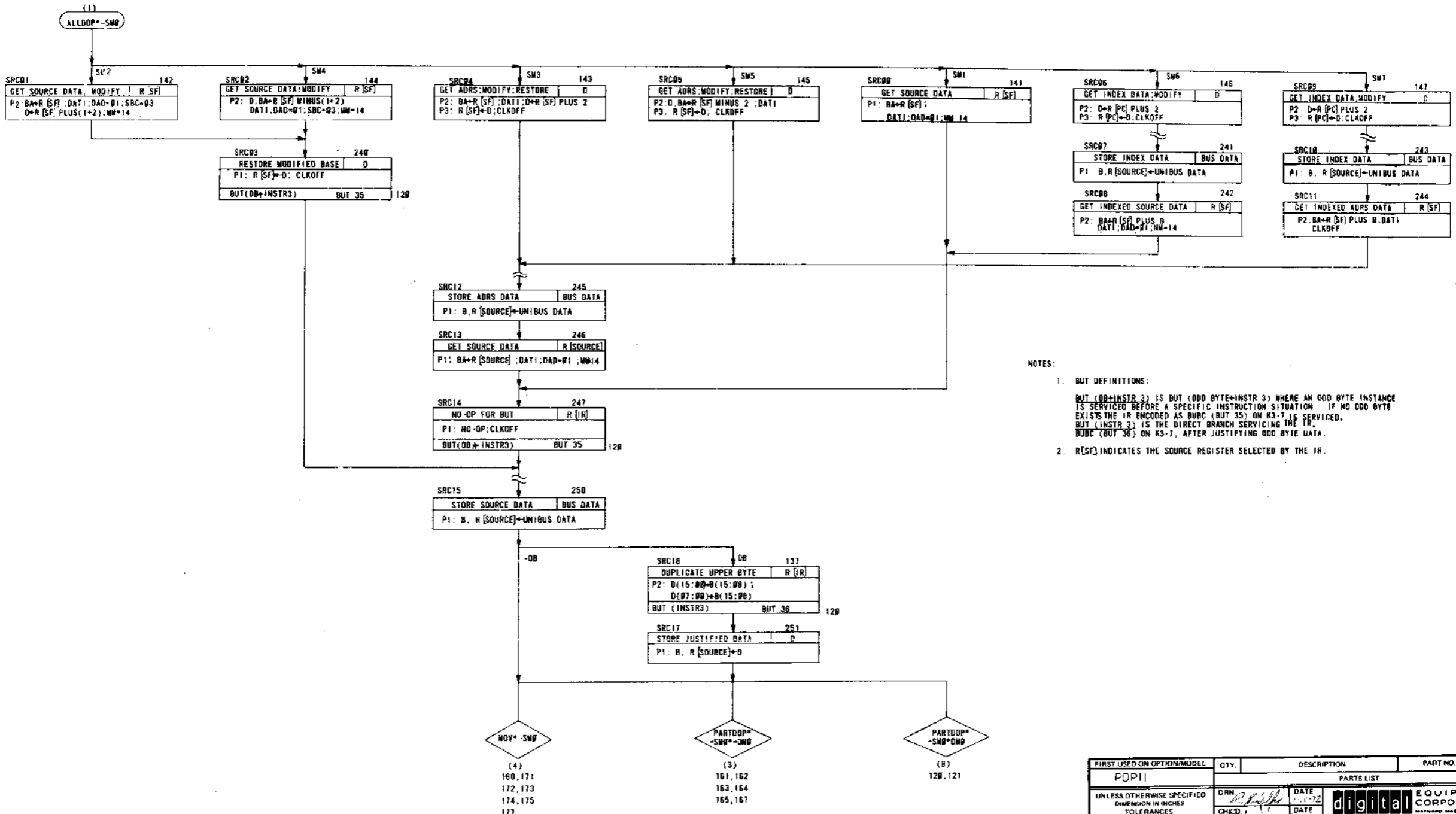
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REV	DATE	BY	CHKD
1	7-21-72		
2	7-25-72		
3	7-25-72		

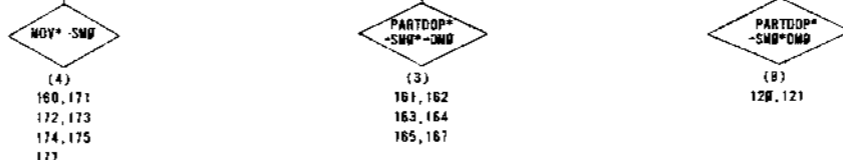
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PIP11		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		digital EQUIPMENT CORPORATION		
DECIMALS	ANGLES	TITLE		
XXX + 005	10° 30'	K11-A PROCESSOR (BLOCK DIAGRAM)		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		MATERIAL		
		FINISH		
NEXT HIGHER ASSY		SCALE	NUMBER	REV.
B-00-K01-A		SCALE	D BD	K11-A-BD
SHEET		OF	DIST	

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NOTES:

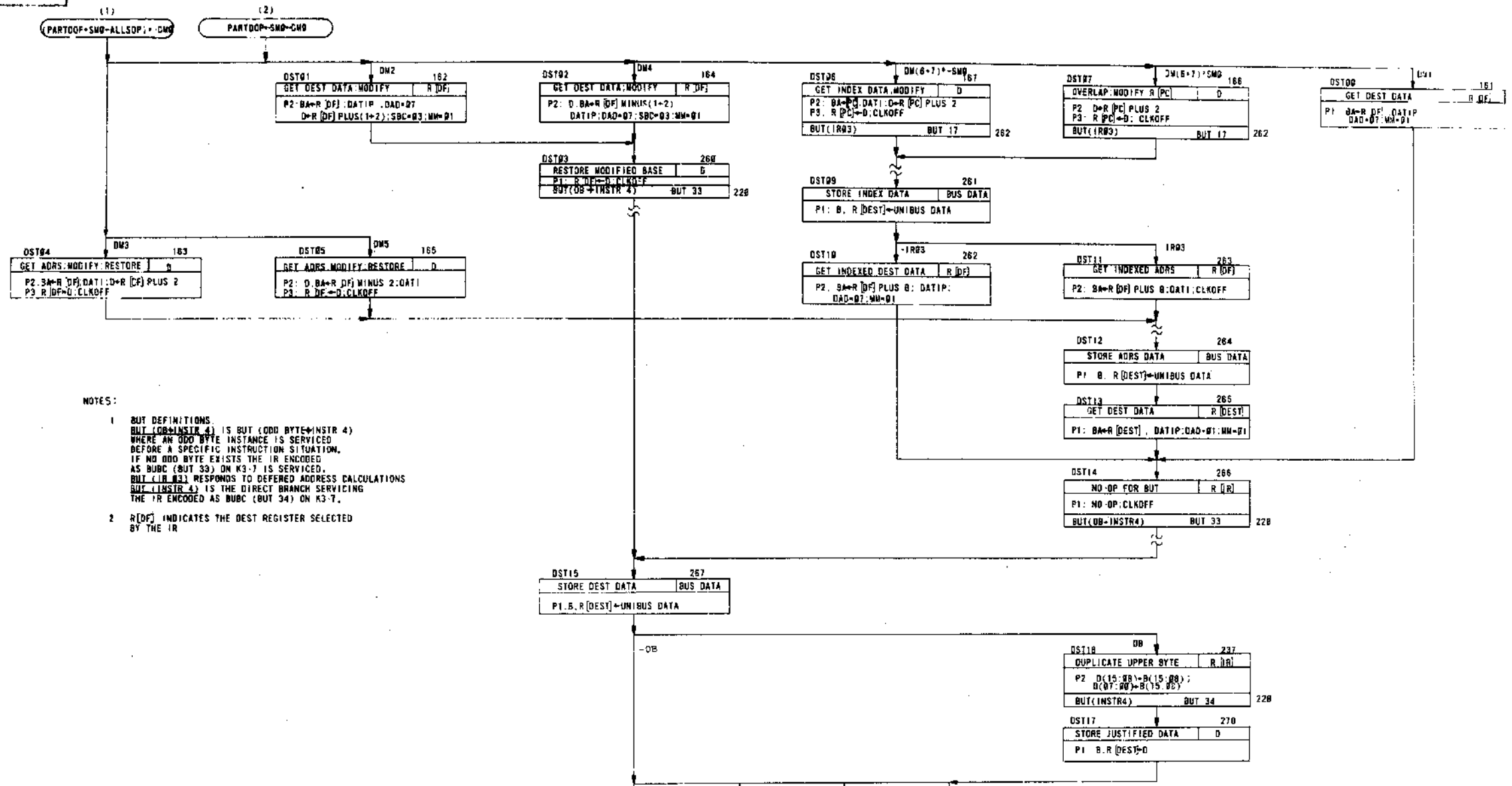
- BUT DEFINITIONS:
 BUT (OB+INSTR 3) IS BUT (ODD BYTE+INSTR 3) WHERE AN ODD BYTE INSTANCE IS SERVICED BEFORE A SPECIFIC INSTRUCTION SITUATION. IF NO ODD BYTE EXISTS THE IR ENCODED AS BUBC (BUT 35) ON K3-7 IS SERVICED. BUT (INSTR 3) IS THE DIRECT BRANCH SERVICING THE TR, BUBC (BUT 36) ON K3-7, AFTER JUSTIFYING ODD BYTE DATA.
- R[SF] INDICATES THE SOURCE REGISTER SELECTED BY THE IR.



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
POP11		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES				
DRN	DATE 11-5-72	 digital EQUIPMENT CORPORATION <small>MAYFORD MASSACHUSETTS</small>		
CHKD	DATE 12-5-72			
ENG	DATE 12-5-72			
PROJ. ENG.	DATE 12-5-72			
TOLERANCES				
DECIMALS	ANGLES	TITLE		
XXX - .005	10° 30'	FLOW DIAGRAM		
XX - .002		(SOURCE)		
.X - .1		NUMBER		
REMOVE BURRS AND BREAK SHARP EDGES TO SMOOTH QUALITY				
MATERIAL		NEXT HIGHER ASSY.	SIZE CODE	REV
		R-DD-KDII-A	D FD	B
FINISH		SCALE	DIST	
		SHEET 2 OF 12		

REV	CHANCE NO.	REVISIONS

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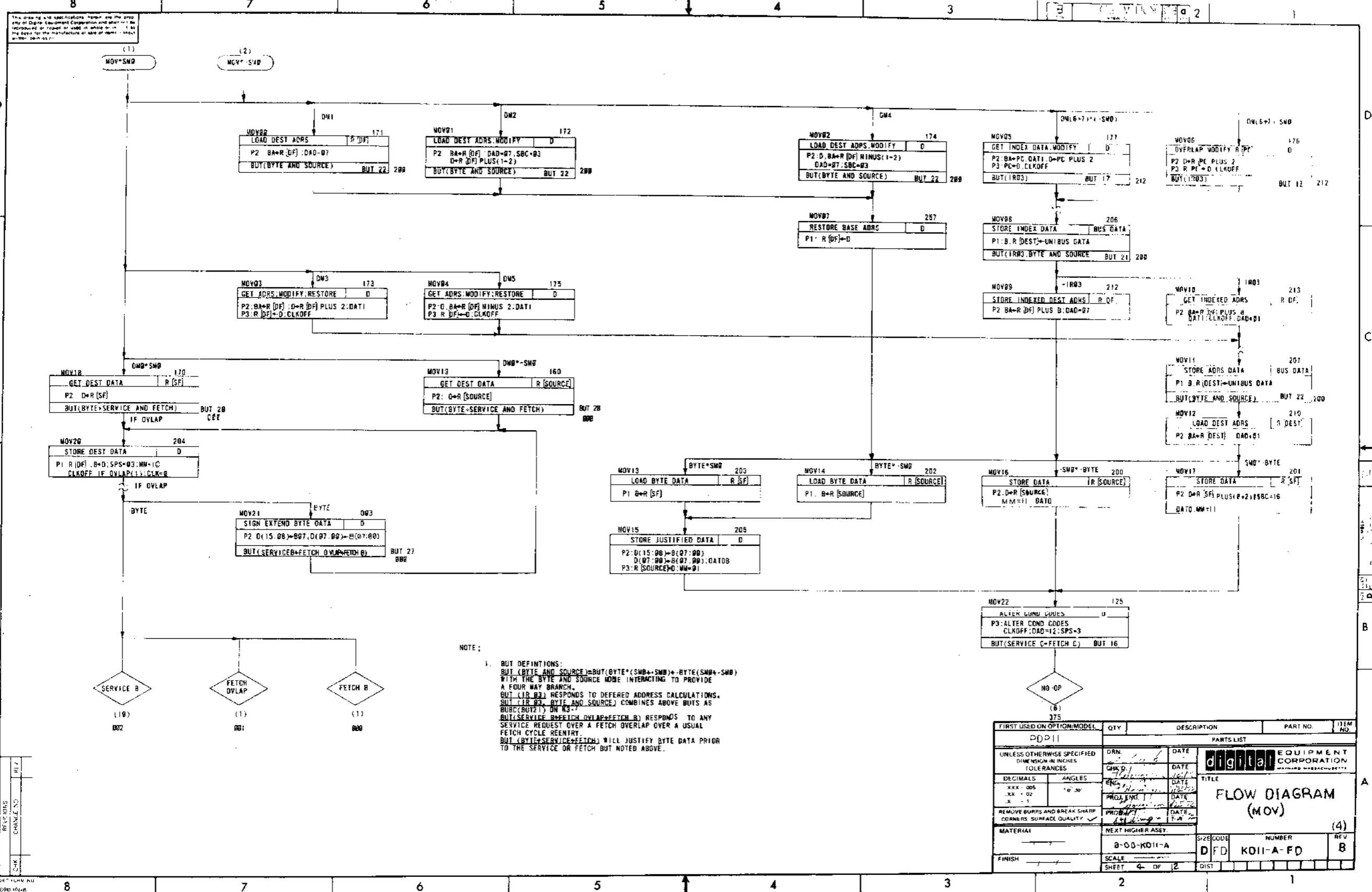


- NOTES:
1. BUT DEFINITIONS:
 BUT (OB+INSTR 4) IS BUT (ODD BYTE+INSTR 4) WHERE AN ODD BYTE INSTANCE IS SERVICED BEFORE A SPECIFIC INSTRUCTION SITUATION. IF NO ODD BYTE EXISTS THE IR ENCODED AS BUBC (BUT 33) ON K3-7 IS SERVICED. BUT (IR 03) RESPONDS TO DEFERRED ADDRESS CALCULATIONS. BUT (INSTR 4) IS THE DIRECT BRANCH SERVICING THE IR ENCODED AS BUBC (BUT 34) ON K3-7.
 2. R[DF] INDICATES THE DEST REGISTER SELECTED BY THE IR

PARTOP -DMO	SOPMORE SWAB)-DMO	SXT)-DMO	ROTSHF(R) -DMO
(8)	(9)	(8)	(9)
224, 225	228, 221	234	232, 233
226, 227	222, 223		
230, 231	236		

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
POP11				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		DRN	DATE	digital EQUIPMENT CORPORATION TITLE FLOW DIAGRAM (DECT) (3)
DECIMALS	ANGLES	CHKD	DATE	
XXX - 005	10 30	ENG	DATE	
XX - 02		PROJ	DATE	
REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY		NEXT HIGHER ASSY		
MATERIAL		KD11-A	SIZE CODE	NUMBER
FINISH			D FD	KD11-A-FD
SCALE		SHEET 3 OF 12		REV B

REV. 5 JVS
 ENG. NO.
 REC.



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REV. NO.	CHG. NO.	BY

NOTE:

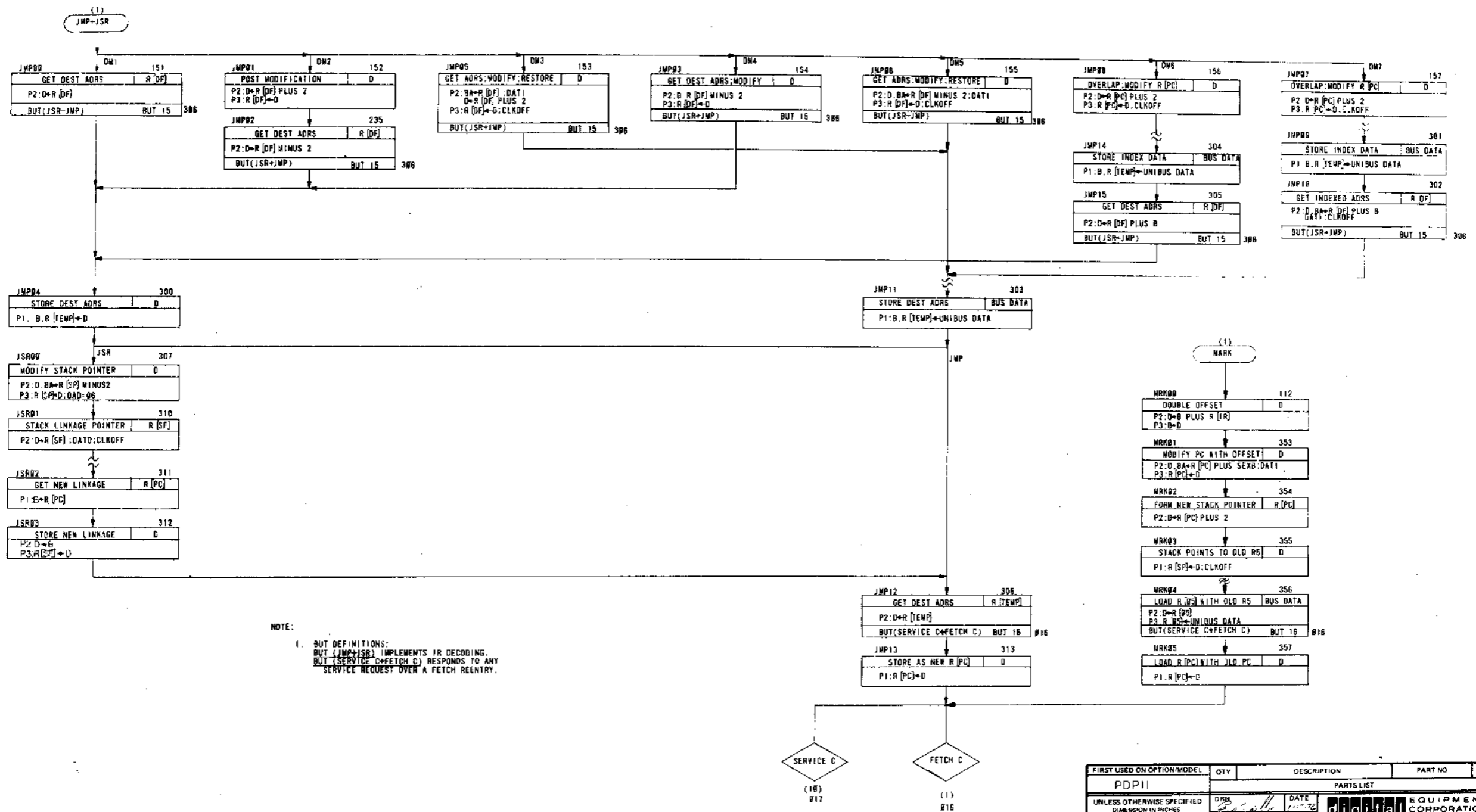
- BUT DEFINITIONS:
 BUT (BYTE AND SOURCE) = BUT (BYTE * (SMB + SMB) + BYTE (SMB + SMB))
 WITH THE BYTE AND SOURCE MODE INTERACTING TO PROVIDE A FOUR WAY BRANCH.
 BUT (IR B3) RESPONDS TO DEFERRED ADDRESS CALCULATIONS.
 BUT (IR B3, BYTE AND SOURCE) COMBINES ABOVE BUTS AS BUT (BUT1) ON R3.
 BUT (SERVICE B/FETCH OVLAP/FETCH B) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH OVERLAP OVER A USUAL FETCH CYCLE REENTRY.
 BUT (BYTE+SERVICE+FETCH) WILL JUSTIFY BYTE DATA PRIOR TO THE SERVICE OR FETCH BUT NOTED ABOVE.

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		DRN: <i>[Handwritten]</i>	DATE: <i>[Handwritten]</i>	 digital EQUIPMENT CORPORATION MAINTENANCE MANUFACTURING
DECIMALS	ANGLES	ENG: <i>[Handwritten]</i>	DATE: <i>[Handwritten]</i>	
.XXX - .005	° 0' 30"	PROJ. ENG: <i>[Handwritten]</i>	DATE: <i>[Handwritten]</i>	
.XX - .02		PROB. <i>[Handwritten]</i>	DATE: <i>[Handwritten]</i>	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		SCALE	SIZE CODE	NUMBER
FINISH		SHEET 4 OF 12	DIST	REV 8

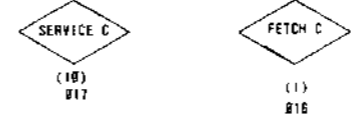
TITLE
FLOW DIAGRAM (MOV)

(4)

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NOTE:
 1. BUT DEFINITIONS:
 BUT (JMP+JSR) IMPLEMENTS IR DECODING.
 BUT (SERVICE C/FETCH C) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH REENTRY.

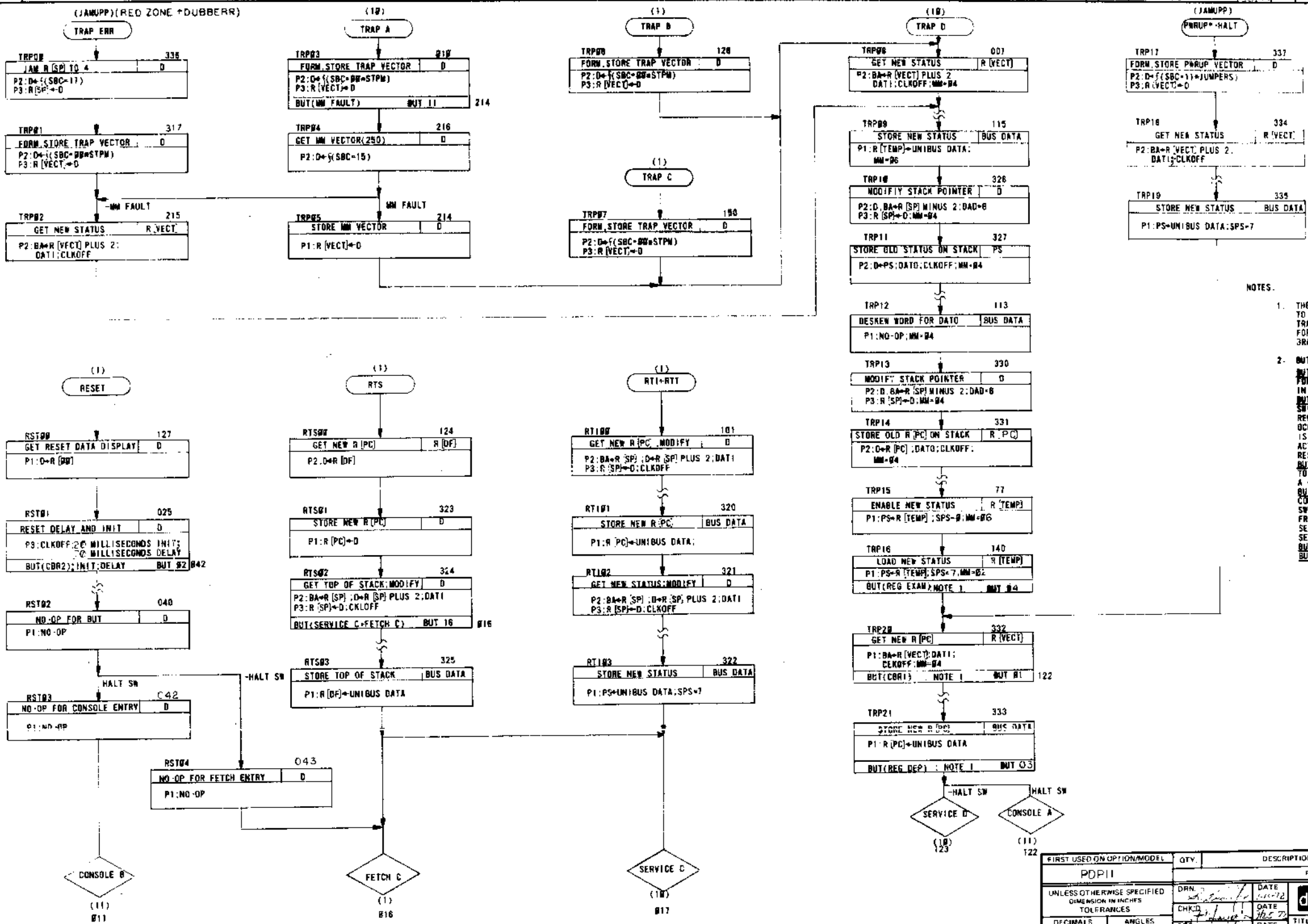


FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PDPI1		PARTS LIST		
UNLESS OTHERWISE SPECIFIED		DATE	digital EQUIPMENT CORPORATION	
DIMENSION IN INCHES		DATE	UNLESS OTHERWISE SPECIFIED	
TOLERANCES		DATE	TITLE	
DECIMALS	ANGLES	DATE	FLOW DIAGRAM	
XXX - .005	10° 30'	DATE	(JMP, JSR, MARK)	
XX - .02		DATE		
X - .1		DATE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE		
MATERIAL		DATE		
NEXT HIGHER ASSY		DATE		
FINISH		DATE		
SCALE		DATE		
SHEET		DATE		
B-3D-K11-A		DATE		
SIZE CODE		DATE		
NUMBER		DATE		
REV		DATE		
D F D		DATE		
K D I I - A - F D		DATE		
REV		DATE		
B		DATE		

REVISED BY: []
 CHECKED BY: []
 DATE: []

REVISED BY: []
 CHECKED BY: []
 DATE: []

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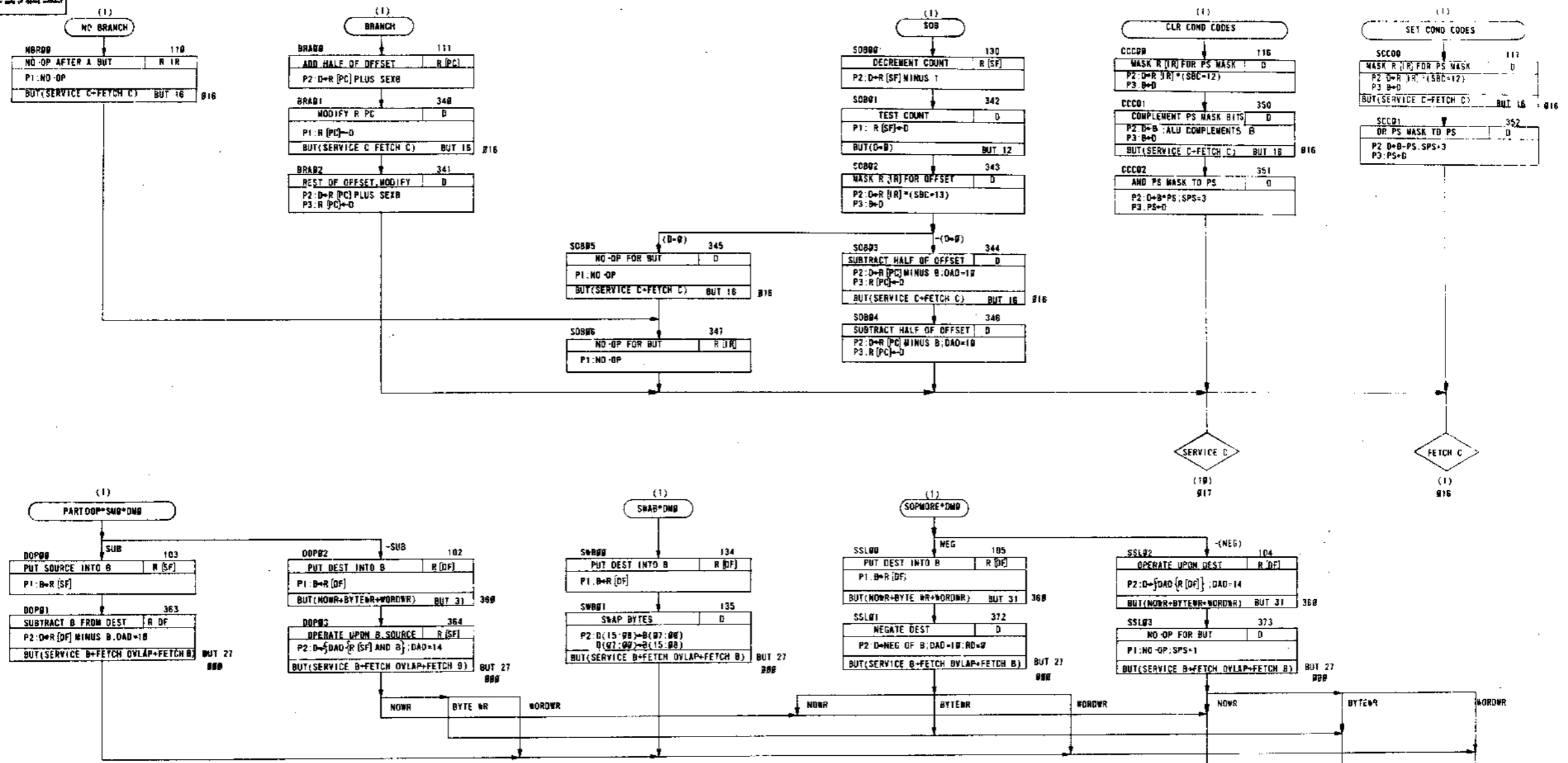
- NOTES.
1. THESE WORKING BUT'S ARE USED TO SEQUENTIALLY CLEAR VARIOUS TRAP REQUEST FLAGS, EXCEPT FOR BUT (CBR1) THEY DO NOT BRANCH THE FLOW.
 2. BUT DEFINITIONS:
 BUT (MM FAULT) IS ACTIVE FOR MEMORY MANAGEMENT FAULTS IN THE RT11-D OPTION.
 BUT (CBR2) BOUNCES THE HALT SWITCH FOR A CONSOLE BUS REQUEST, A RETURN TO FETCH OCCURS IF THE HALT SWITCH IS NOT ACTIVE. THIS WORKING BUT ACTIVATES THE INIT AND RESTART DELAY.
 BUT (SERVICE C+FETCH C) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH REENTRY.
 BUT (CBR1) PROVIDES FOR DIRECT CONSOLE LOOP ENTRY IF THE HALT SWITCH IS ACTIVE. THIS DIFFERS FROM THE USUAL ENTRY INTO SERVICE FROM THE TRAP SEQUENCE SEE NOTE 1 ALSO.
 BUT (REG EXAM) } SEE NOTE 1.
 BUT (REG DEP) }

REVISIONS
 DATE
 BY
 CHECKED BY
 DATE

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	DRN	DATE	
XX + .00	± .00	CHK'D	DATE	
XX + .02		ENG	DATE	
X + .1		DRG	DATE	
REMOVE BLURS AND BREAK SHARP CORNERS SURFACE QUALITY				
NEXT HIGHER ASSY				
MATERIAL		SCALE		REV
FINISH		SHEET		

digital EQUIPMENT CORPORATION
 TITLE: FLOW DIAGRAM TRAPS, PWRUP (RESET, RTI, RTS, RTT)
 SIZE CODE: DFD
 NUMBER: KDII-A-FD
 REV: B
 SHEET: 5 OF 12

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NOTE:
 1. BUT DEFINITIONS:
 BUT (SERVICE C-FETCH C) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH REENTRY
 BUT (D=0) SENSES A ZERO CONTENT OF THE D REGISTER
 BUT (NOWR-BYTEWR-WORDWR) PROVIDES FOR DIFFERENT REGISTER WRITE OPERATION AS A FUNCTION OF IR DECODING.
 BUT (SERVICE B-FETCH OVLAP-FETCH B) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH OVLAP OVER A USUAL FETCH REENTRY

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRM	DATE	digital EQUIPMENT CORPORATION	
DECIMALS	CMCD	DATE	TITLE	
ANGLES	DATE	DATE	FLOW DIAGRAM	
XXX - 005	DATE	DATE	BR. SOB CODES	
XX - 07	DATE	DATE	PART ODP	
X - 1	DATE	DATE	SWAB	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	DATE	DATE	SOPMORE	
MATERIAL	DATE	DATE	DMD (7)	
FINISH	DATE	DATE		
NEXT HIGHER ASSY.		SIZE CODE	NUMBER	REV
B-00-K011-A		DFD	K011-A-FD	B
SCALE		SHEET	OF	
7 OF 12		DIST		

REV. NO. 102-R

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D

C

B

A

(3)
PARTDOP*DMB

OB

SUB

SMW

DOP#4 226
PUT SOURCE INTO B R(SF)
P1: B=R(SF)

DOP#6 365
SUBTRACT B FROM DEST STORE R(DEST)
P2: D=R(DEST) MINUS B:DAD=10
DATO:MM=01

DOP#5 227
PUT SOURCE INTO B R(SOURCE)
P1: B=R(SOURCE)

DOP#7 224
OPERATE UPON B, SOURCE, STORE D
P2: D=DAD(R(SF) AND B);
(DATO+DATOR);DAD=17;MM=01

DOP#8 225
OPERATE UPON B, SOURCE, STORE R(SOURCE)
P2: D=DAD(R(SOURCE) AND B);
(DATO+DATOR);DAD=17;MM=01

DOP#9 230
OPERATE UPON B, SOURCE R(SF)
P2: D=DAD(R(SF) AND B);
DAD=14

DOP#10 231
OPERATE UPON B, SOURCE R(SOURCE)
P2: D=DAD(R(SOURCE) AND B);
DAD=14

DOP#22 254
ALTER CODE PS(C) D
P1: B=D;SPS=1

DOP#21 074
ALTER CODES D
P1: B=D;SPS=3

DOP#11 366
DUPLICATE LOWER BYTE STORE D
P2: D(15:00)=B(07:00);DAD=13
D(07:00)=B(07:00);
DATOR:CLKOFF;MM=01
BUT(SERVICE C=FETCH C) BUT 16

(2)

PARTDOP*SMW*DMB

SUB

DOP#13 121
PUT SOURCE INTO B R(SOURCE)
P1: B=R(SOURCE)

DOP#14 370
SUBTRACT B FROM DEST R(DF)
P2: D=R(DF) MINUS B
BUT(SERVICE B=FETCH OVLAP+FETCH B) BUT 27

SUB

DOP#15 120
PUT DEST INTO B R(DF)
P1: B=R(DF)
BUT(NOWR+BYTEWR+WORDWR)

DOP#16 371
OPERATE UPON B, SOURCE R(SOURCE)
P2: D=DAD(R(SOURCE) AND B);DAD=14
BUT(SERVICE B=FETCH OVLAP+FETCH B) BUT 27

(7)

NOWR

(7)

BYTEWR

(1)

SXT*DMB

SXT#0 132
EXTEND SIGN D
P2: D=ALL PS(N);DAD=14
BUT(SERVICE B=FETCH OVLAP+FETCH B) BUT 27

(7)

WORDWR

(3)

SXT*DMB

SXT#1 234
EXTEND SIGN, STORE D
P2: D=ALL PS(N);DAD=14;
DATO:MM=01

(8)
CODES

(4,9)
NO-OP

DOP#12 367
ALTER CODES, FINISH STORE D
P1: ALTER COND CODES
CLKOFF;DAD=12;SPS=3
BUT(SERVICE C=FETCH C) BUT 16

DOP#17 362
ALTER CODES, NO STORE D
P1: SPS=3;CLKOFF IF OVLAP(1);CLK=0

DOP#18 361
ALTER CODES, BYTE STORE D
P1: R(DF)=D(BYTE);SPS=3
CLKOFF IF OVLAP(1);CLK=0

DOP#19 360
ALTER CODES, WORD STORE B
P1: R(DF)=D(WORD);SPS=3
CLKOFF IF OVLAP(1);CLK=0

DOP#20 375
NO-OP FOR BUT D
P1: NO-OP

SERVICE B (10) 002

FETCH OVLAP (1) 001

FETCH B (1) 000

SERVICE C (10) 017

FETCH C (1) 016

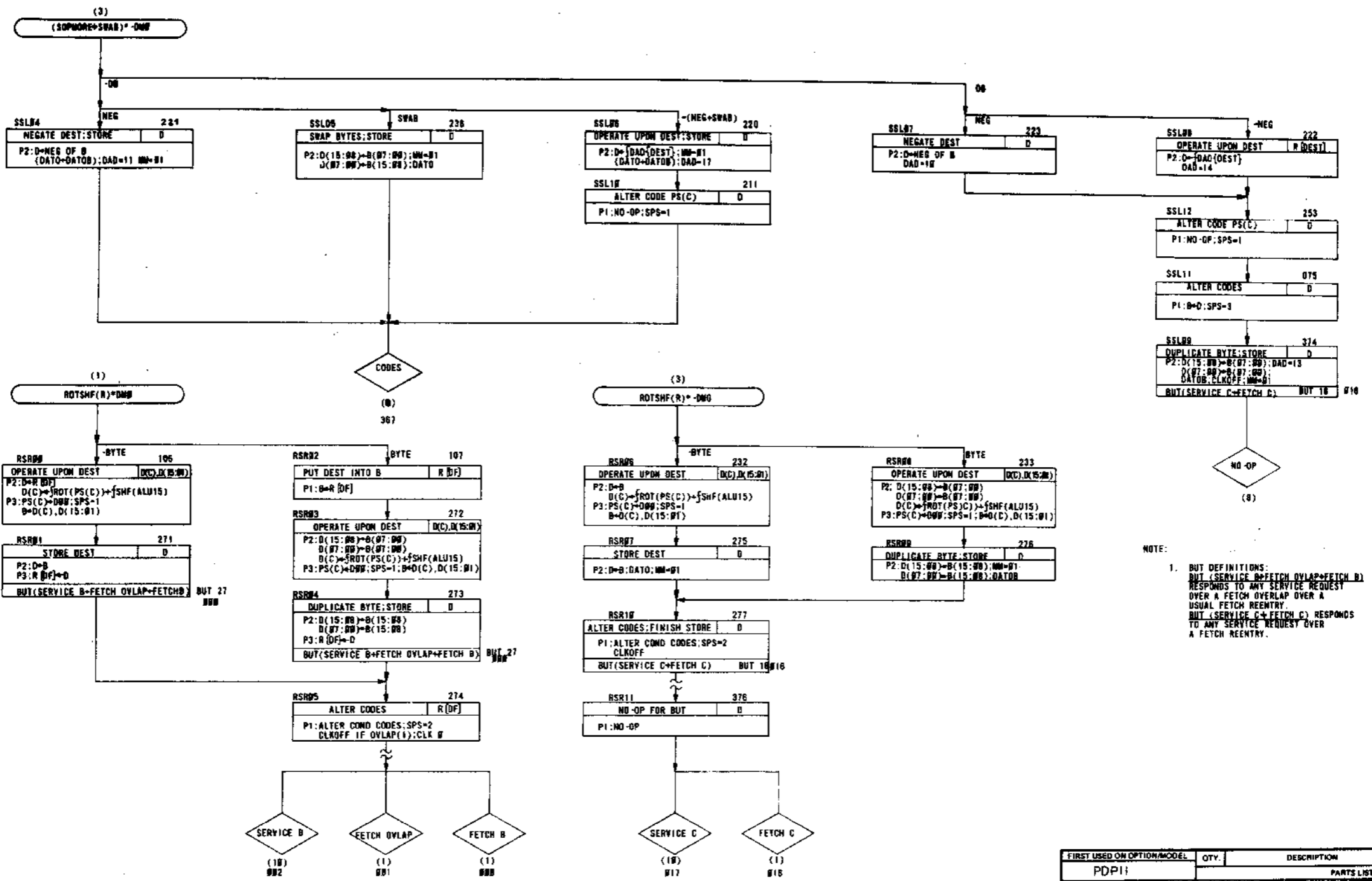
NOTE:

- 1. BUT DEFINITIONS:
BUT (SERVICE C+FETCH C) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH REENTRY.
BUT (SERVICE B+FETCH OVLAP+FETCH B) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH OVLAP OVER A USUAL FETCH REENTRY.
BUT (NOWR+BYTEWR+WORDWR) PROVIDES FOR DIFFERENT REGISTER WRITE OPERATION AS A FUNCTION OF TR DECODING.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
POP11		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS	ANGLES	TITLE		
XXX - .006	±0° 30'	FLOW DIAGRAM (PARTDOP, SXT)		
XX - .02		NEXT HIGHER ASSY.		
X - .1		B-DD-KD11-A		
MATERIAL		SCALE	SIZE CODE	NUMBER
		SHEET 8 OF 12	D	FD
FINISH		DIST.		REV. B

REV.	CHG.	NO.

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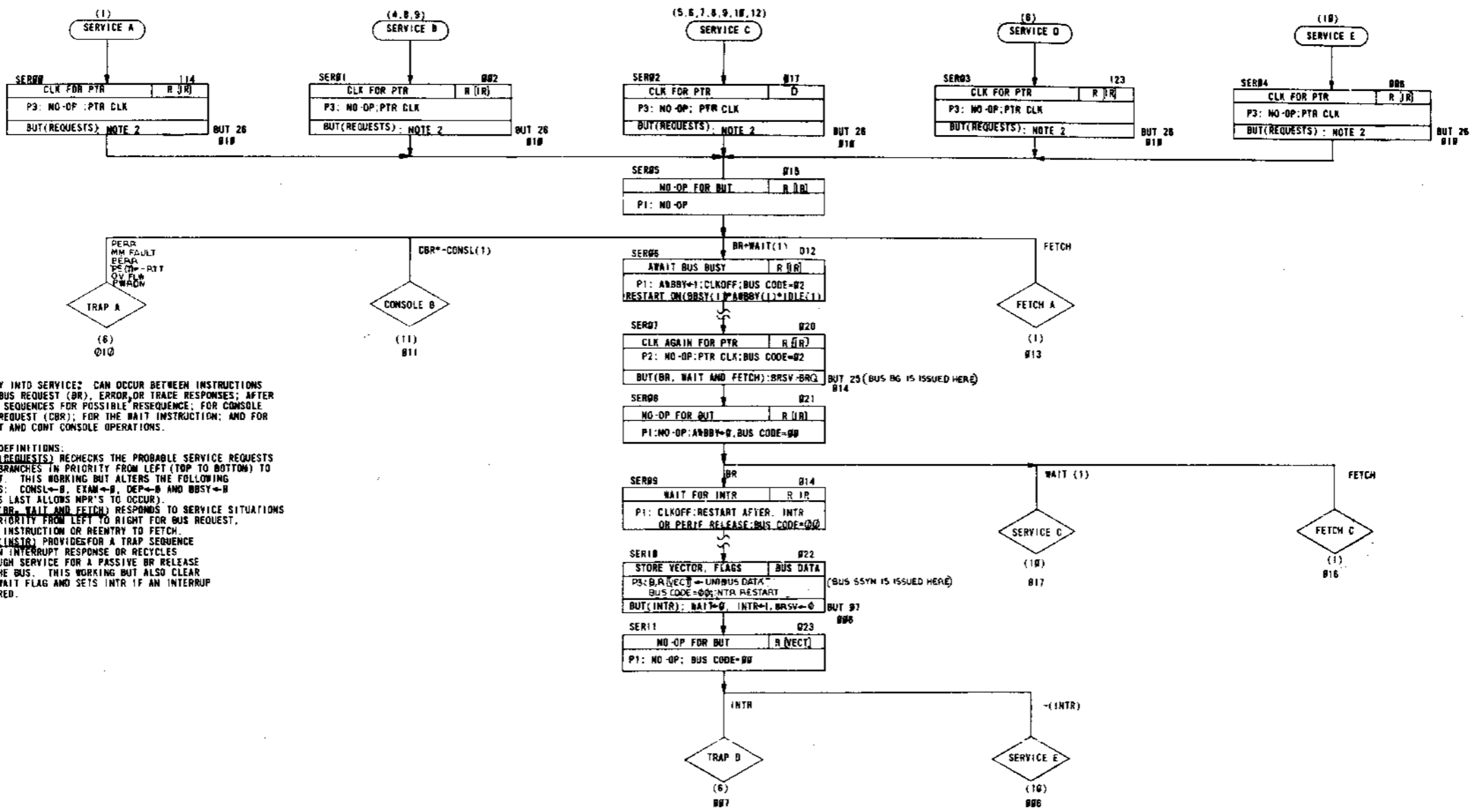


NOTE:
1. BUT DEFINITIONS:
BUT (SERVICE B←FETCH OVLAP←FETCH B) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH OVERLAP OVER A USUAL FETCH REENTRY.
BUT (SERVICE C←FETCH C) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH REENTRY.

REV	NO	CHANG	NO

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DATE 9-15-72	 digital EQUIPMENT CORPORATION TITLE: FLOW DIAGRAM (SOPMORE+SWAB)*-DMO (ROTSHF(R)) (9)		
DIMENSIONS IN INCHES	DATE 30-5-72			
TOLERANCES	DATE 12-27-72			
DECIMALS .XXX = .005	DATE 12-27-72			
ANGLES .XX = .02	DATE 12-27-72	MATERIAL: ++ FINISH: ++		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	DATE 12-27-72	NEXT HIGHER ASSY: B-DD-KDII-A SCALE: 1:1 SHEET: 9 OF 12		
MATERIAL		SIZE CODE	NUMBER	REV.
FINISH		D	FD	B
SCALE		DIST.		
SHEET 9 OF 12				

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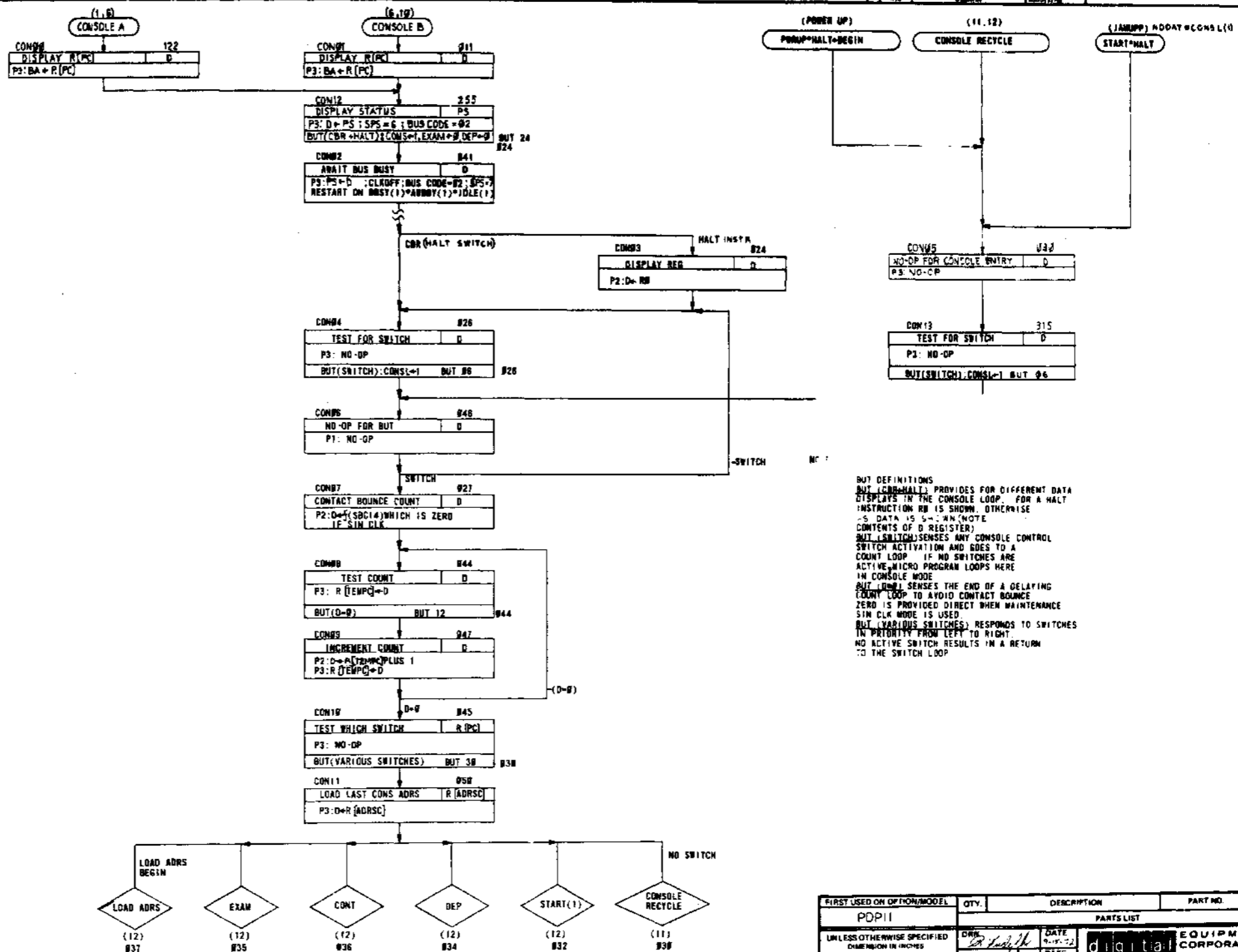


- NOTES:
- ENTRY INTO SERVICES CAN OCCUR BETWEEN INSTRUCTIONS FOR BUS REQUEST (BR), ERROR OR TRACE RESPONSES; AFTER TRAP SEQUENCES FOR POSSIBLE RESEQUENCE; FOR CONSOLE BUS REQUEST (CBR); FOR THE WAIT INSTRUCTION; AND FOR START AND CONT CONSOLE OPERATIONS.
 - BUT DEFINITIONS:
BUT (REQUESTS) RECHECKS THE PROBABLE SERVICE REQUESTS AND BRANCHES IN PRIORITY FROM LEFT (TOP TO BOTTOM) TO RIGHT. THIS WORKING BUT ALTERS THE FOLLOWING FLAGS: CONSL←B, EXAM←B, DEP←B AND BBSY←B (THIS LAST ALLOWS NPR'S TO OCCUR).
BUT (BR, WAIT AND FETCH) RESPONDS TO SERVICE SITUATIONS IN PRIORITY FROM LEFT TO RIGHT FOR BUS REQUEST, WAIT INSTRUCTION OR REENTRY TO FETCH.
BUT (INST) PROVIDES FOR A TRAP SEQUENCE AS AN INTERRUPT RESPONSE OR RECYCLES THROUGH SERVICE FOR A PASSIVE BR RELEASE OF THE BUS. THIS WORKING BUT ALSO CLEAR THE WAIT FLAG AND SETS INTR IF AN INTERRUPT OCCURED.

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES.	DRN	DATE 9-15-72	digital EQUIPMENT CORPORATION <small>MULTIPLE MANUFACTURING</small>	
TOLERANCES	CHKD	DATE 9/27/72		
DECIMALS	DATE 9/27/72	TITLE		
ANGLES	DATE 9/27/72	FLOW DIAGRAM (SERVICE) (10)		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	DATE 9/27/72			
MATERIAL	NEXT HIGHER ARMY.	SIZE CODE	NUMBER	REV.
FINISH	B-00-KDII-A	D	FD	B
	SCALE	SHEET	OF	
	10	OF	12	

REVISED: CHK CHANG: RD REV

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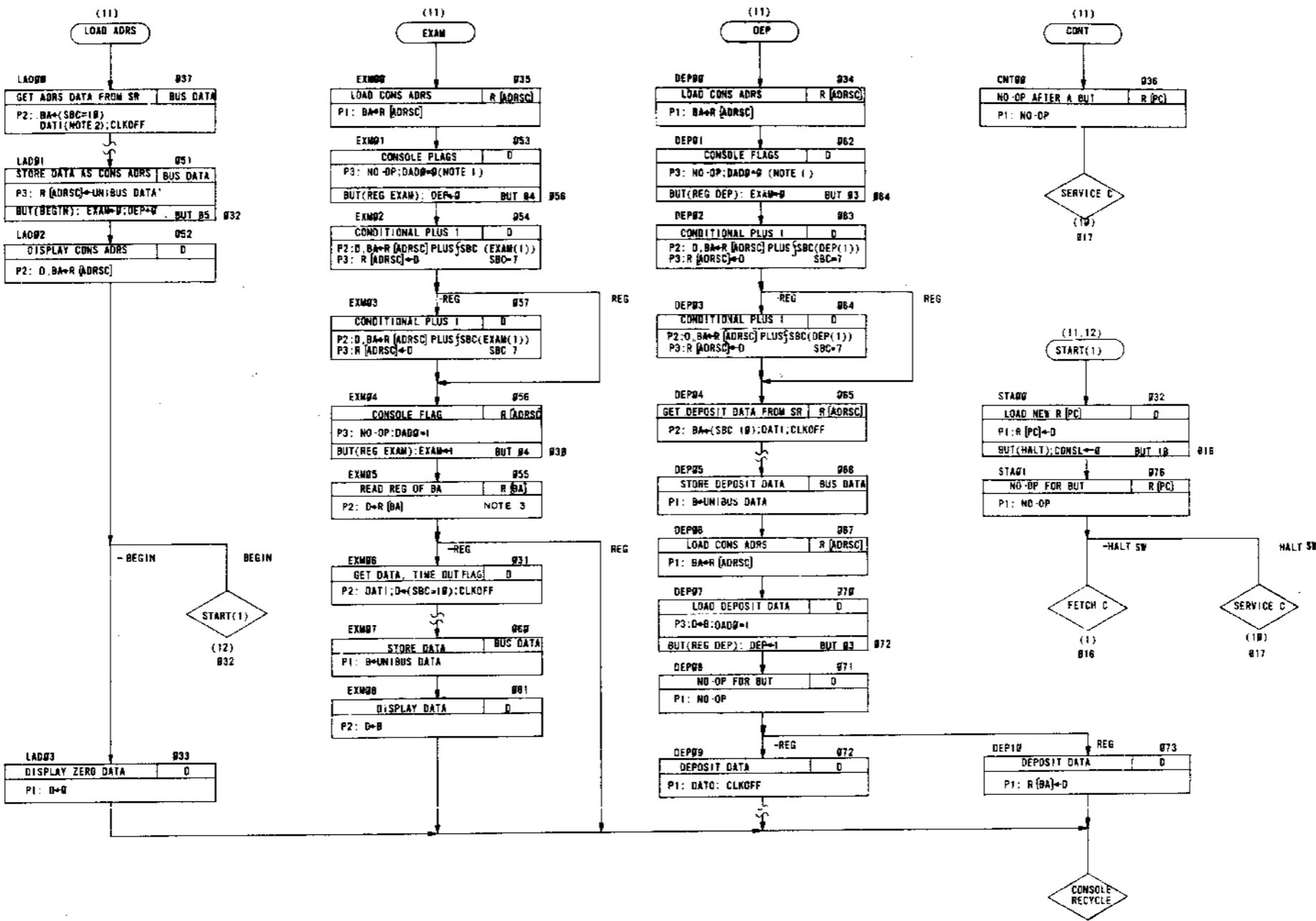


BUT DEFINITIONS
 BUT (CBR+HALT): PROVIDES FOR DIFFERENT DATA DISPLAYS IN THE CONSOLE LOOP. FOR A HALT INSTRUCTION RB IS SHOWN, OTHERWISE -S DATA IS SHOWN (NOTE CONTENTS OF D REGISTER)
 BUT (SWITCH): SENSES ANY CONSOLE CONTROL SWITCH ACTIVATION AND GOES TO A COUNT LOOP IF NO SWITCHES ARE ACTIVE. MICRO PROGRAM LOOPS HERE IN CONSOLE MODE
 BUT (D=0): SENSES THE END OF A DELAYING COUNT LOOP TO AVOID CONTACT BOUNCE ZERO IS PROVIDED DIRECT WHEN MAINTENANCE SIN CLK MODE IS USED
 BUT (VARIOUS SWITCHES): RESPONDS TO SWITCHES IN PRIORITY FROM LEFT TO RIGHT NO ACTIVE SWITCH RESULTS IN A RETURN TO THE SWITCH LOOP

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DATE 9-15-72	DATE 2/25/72	digital EQUIPMENT CORPORATION TITLE FLOW DIAGRAM (CONSOLE LOOP) (11)	
DECIMALS ANGLES	DATE 1/25/72	DATE 2/25/72		
XX - 002 X - 1	DATE 2/25/72	DATE 2/25/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE FINISH	DATE 2/25/72	DATE 2/25/72		
MATERIAL	NEXT HIGHER ASSY	SIZE CODE	NUMBER	REV
FINISH	B-00-KD11-A	DFD	KD11-A-FD	B
	SCALE	SHEET	DIST.	
	11 OF 12			

REV'S/MS
 CHK
 CHNGI: NO
 REV

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- NOTES:
- BUT DEFINITIONS
 BUT (BEGIN) IS A WORKING BUT THAT CLEARS THE EXAM AND DEP FLAGS AND REACTS TO A BEGIN SWITCH BY SEQUENCING A START OPERATION.
 BUT (REG EXAM) RESPONDES TO REG CONSOLE OPERATION FOR PROPER INCREMENTATION AND DATA DISPLAY. THIS WORKING BUT ALSO ORDERS INCREMENTING FLAG.
 BUT (REG DEP) RESPONDES TO REG CONSOLE OPERATION FOR PROPER INCREMENTATION AND DATA STORAGE. THIS WORKING BUT ALSO ORDERS INCREMENTING FLAG.
 BUT (HALT) SENSES THE HALT SWITCH AND EITHER GOES TO FETCH (ENABLE POSITION) OR THROUGH SERVICE TO CONSOLE (HALT POSITION).
 - PROCESSOR RESPONDES TO SR ADDRESS (PROVIDED BY SBC(18) UNLESS BEGIN SWITCH INPUT IS ACTIVE.
 - REGISTER SELECTION AS A FUNCTION OF BA(93=00).

REV	NO
CHK	NO

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PDPII		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES. TOLERANCES	DRM: 9-15-72	DATE	digital EQUIPMENT CORPORATION	
DECIMALS ANGLES	CHK'D: 1/25/72	DATE	TITLE	
XXX - .006 10' 30"	ENG: 2/25/72	DATE	FLOW DIAGRAM (CONSOLE SWITCHES)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PRO: 2/25/72	DATE	REV: (12)	
MATERIAL	NEXT HIGHER ASSY.	SIZE CODE	NUMBER	REV.
FINISH	B-DD-KDII-A	D	FD	B
SCALE	SHEET 12 OF 12	DIST		

DIGITAL EQUIPMENT CORPORATION

MAYNARD, MASSACHUSETTS

PARTS LIST

QUANTITY VARIATION

MADE BY R. PUDELKO	CHECKED <i>JFO Loughlin</i>	SECTION
DATE 9/15/72	DATE 9/27/72	
ENG <i>JFO Loughlin</i>	PROD <i>JFS</i>	ISSUED SECT.
DATE 9/27/72	DATE 9x	

ITEM NO	DWG NO. / PART NO.	DESCRIPTION
1	D-AD-7010230-0-0	WIRED ASSY (KD11-A)
2	D-CS-M7231-0-1	DATA PATHS
3	D-CS-M7232-0-1	U WORD
4	D-CS-M7233-0-1	IR DECODE
5	D-CS-M7234-0-1	TIMING
6	D-CS-M7235-0-1	STATUS
7	D-UA-M981-0-0	INTERNAL UNIBUS ASSY
8	D-MU-KD11-A-MU	MODULE UTILIZATION
9	A-PL-KT11-D-0	MEMORY MANAGEMENT
10	A-PL-KJ11-A-0	STACK LIMIT REGISTER
11	D-UA-KE11-E-0	KE11-E ASSY
12	D-PL-KE11-F-0	KE11-F ASSY
13	A-PL-KW11-L-0	LINE FREQUENCY CLOCK
14	A-PL-KM11-0-0	MAINTENANCE PANEL (W130, W131)
15	A-SS-5509081-0-12	SILK SCREEN (KD11-A)
16	A-SS-5509081-0-13	SILK SCREEN (KT11-D, KE11-E, F)
17	A-PL-KY11-D-0	KY11-D CONSOLE
18	C-CS-M930-0-1	BUS TERMINATOR M930

KD11-A																				
1																				
1																				
1																				
1																				
1																				
1																				
REF																				
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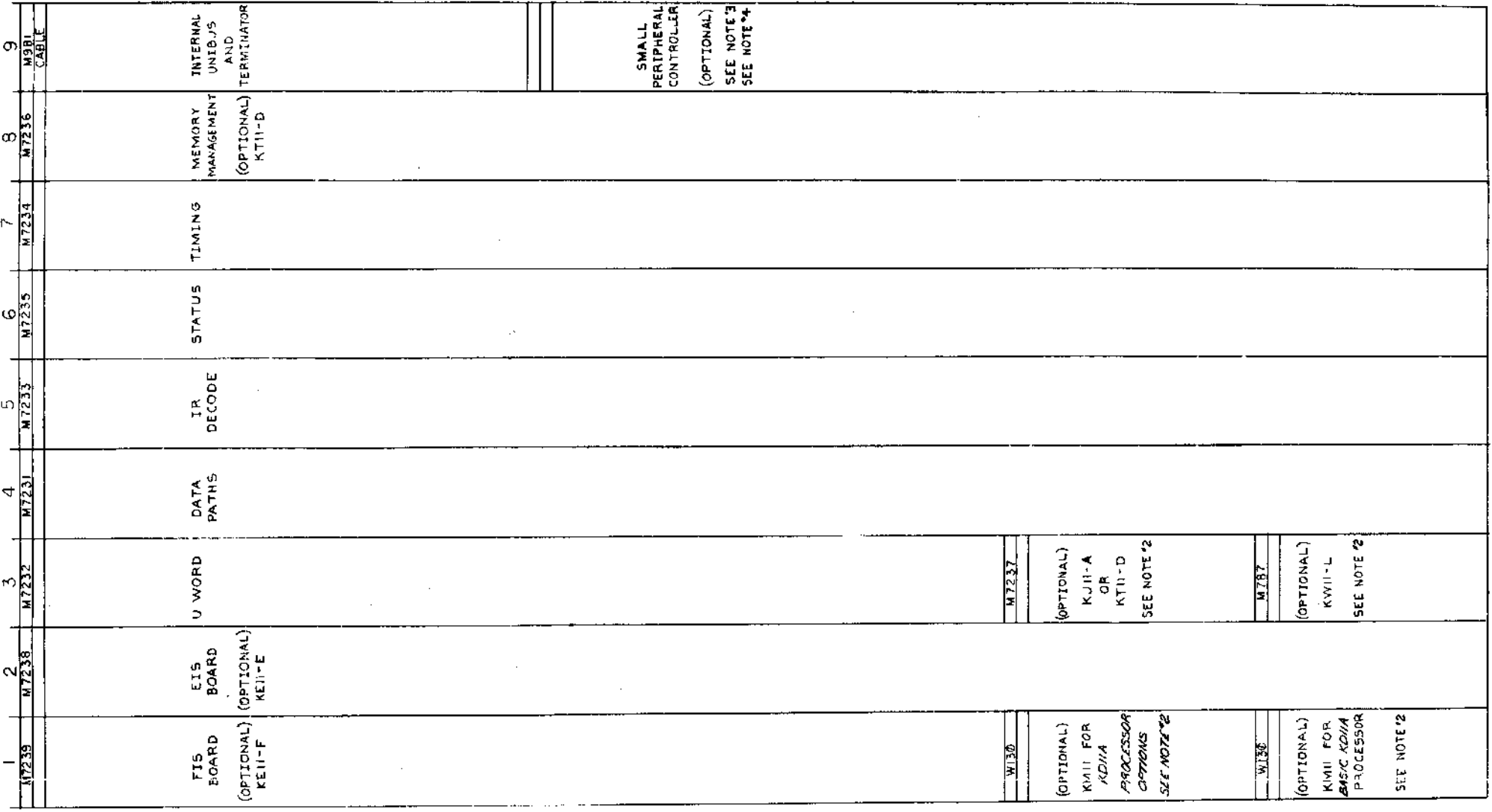
TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO
KD11-A PROCESSOR	<i>H</i>	A	PL	KD11-A-0	A	KD11A-0001
SHEET 1 OF 1		DIST.	G			

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NOTES:

- VIEW OF LOGIC PANEL IS FROM WIRING SIDE.
- PREWIRED MODULE SLOTS FOR NOTED OPTIONS.
- THE SMALL PERIPHERAL CONTROLLER SLOT (SLOT 09, SECTIONS C,D,E AND F) MAY CONTAIN A VARIETY OF PDP11 OPTIONS. THE OPTION USUALLY CONSIST OF A SINGLE QUAD MODULE BOARD (SECTION C,D,E AND F). IT MAY CONSIST OF A DOUBLE HEIGHT CONTROLLER BOARD (SECTIONS C AND D) WITH A M105 ADDRESS SELECTOR MODULE (SECTION E) AND A M782I INTERRUPT CONTROL MODULE (SECTION F).
- IF NO OPTION IS PRESENT IN THE SMALL PERIPHERAL CONTROLLER SLOT, A G727 GRANT CONTINUITY MODULE MUST BE INSERTED INTO SECTION D.

VIEW FROM WIRING SIDE



SMALL PERIPHERAL CONTROLLER (OPTIONAL) SEE NOTE #4

W130 (OPTIONAL) K111 FOR K111A OR K111-D SEE NOTE #2

W130 (OPTIONAL) K111 FOR BASIC K111A PROCESSOR SEE NOTE #2

REV.	CHANGE NO.	DATE
1	00005	2-15-73

FIRST USED ON OPTION/ MODEL PDP 11

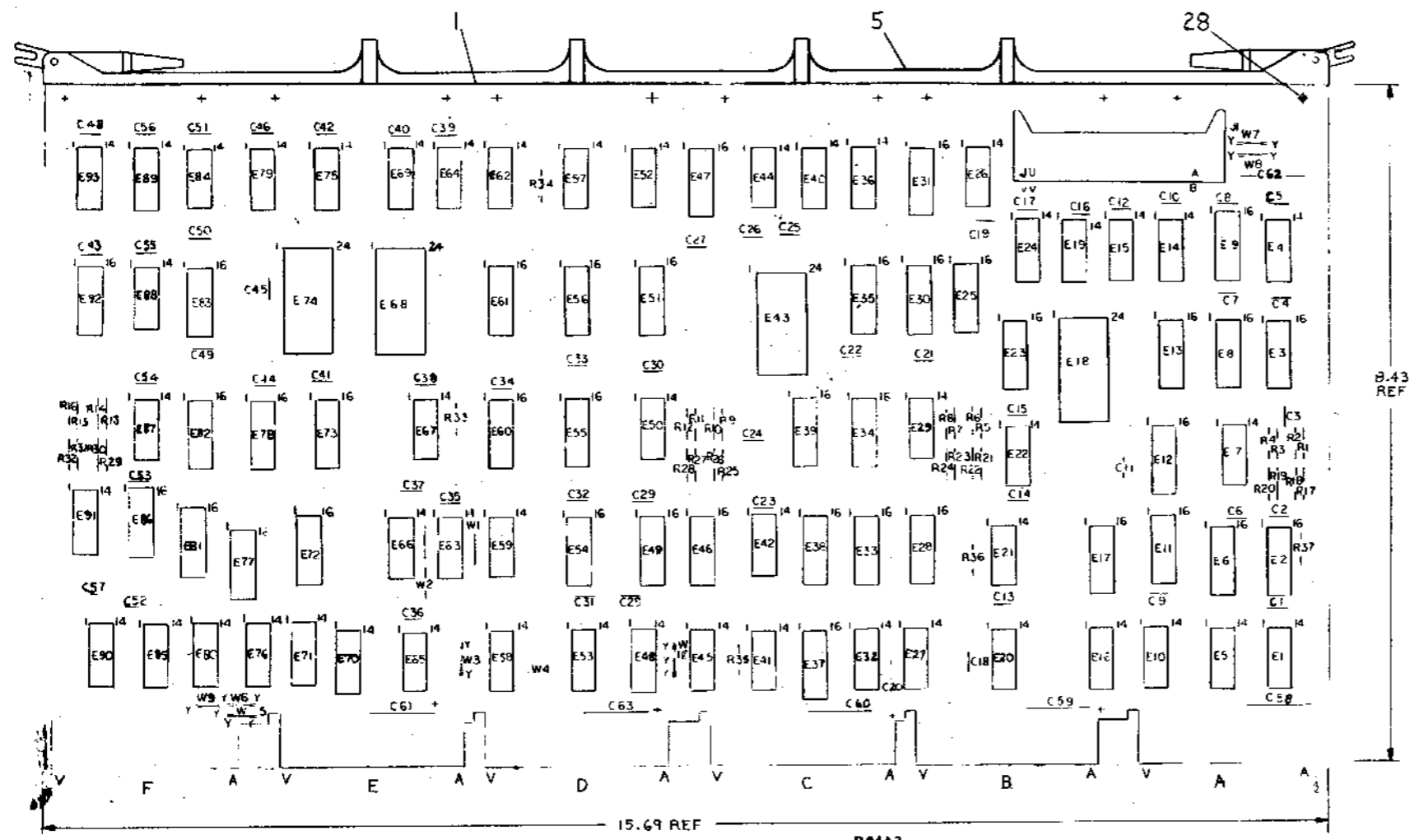
DO NOT SCALE DIMENSIONS UNLESS OTHERWISE SPECIFIED
 DIMENSION IN INCHES
 TOLERANCES DECIMALS FRACTIONS ANGLES
 ± .005 ± .001 ± .001
 SPECIAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP EDGES

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		
	DATE 7-2-72 DRAWN [Signature] CHECKED [Signature] TITLE MODULE UTILIZATION EQUIPMENT CORPORATION SOFTWARE MANUFACTURING		
	NEXT NUMBER ASSY A-PL-KD11-A-0 SCALE NONE SHEET 1 OF 1		
	REV. DIMS	NUMBER KD11-A-MU	REV. A

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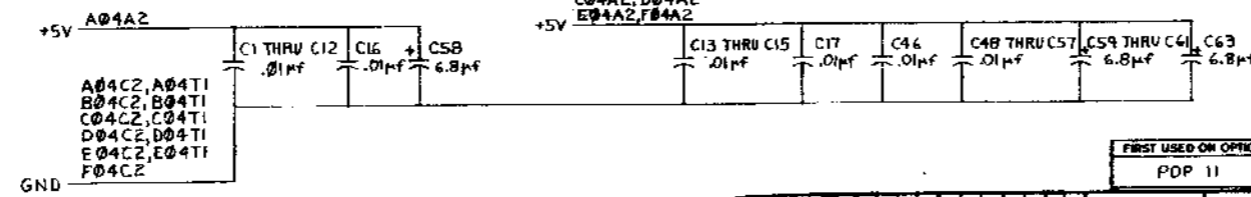
NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE KD11-A PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED. OUTPUT SIGNALS WITH MODULE PINS ARE BROUGHT TO THE RIGHT SIDE OF THE PRINT.
- PROCESSOR SIGNAL PREFIX NOTATION (K2-1 FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- UNLESS OTHERWISE NOTED: RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICOFARRADS.



AR	DESCRIPTION	QTY	PART NO.
15	INSULATED JUMPER	30	9009185
12	SPLIT LUG	29	9006735
12	EYELET	28	9006732
4	E6, E28, E49, E81	27	IC DEC 74157
4	E3, E25, E47, E72	26	IC DEC 3101A
12	E2, E8, E9, E30, E31, E33, E44, E54, E56, E73, E77, E86	25	IC DEC 74174
1	E39	24	IC DEC 74182
4	E18, E43, E68, E74	23	IC DEC 74181
17	E11, E12, E13, E17, E23, E34, E35, E37, E38, E51, E55, E60, E61, E72, E78, E82, E93	22	IC DEC 74153
4	E7, E29, E50, E87	21	IC DEC 74H04
9	E14, E24, E53, E58, E59, E63, E67, E70, E75	20	IC DEC 8815
3	E41, E69, E79	19	IC DEC 8242
13	E1, E10, E15, E19, E32, E40, E44, E45, E57, E64, E88, E89, E91	18	IC DEC 8881
L	E21	17	IC DEC 74H74
8	E4, E14, E26, E34, E52, E62, E84, E93	16	IC DEC 8640
1	E5	15	IC DEC 74H11
1	E71	14	IC DEC 74H60
4	E80, E85, E90, E76	13	IC DEC 74H53
1	E20	12	IC DEC 74H30
2	E27, E66	11	IC DEC 74H10
2	E22, E65	10	IC DEC 74H00
2	E42, E48	9	IC DEC 74H20
16	R17 THRU R32	8	RES 620 1/4W ±5%
16	R1 THRU R16	7	RES 300 1/4W ±5%
5	R33, R34, R35, R36, R37	6	RES 1K 1/4W ±5%
1		5	HANDLE MODULE 12107H-02
1	J1	4	CONN 40 PIN 1209941
6	C58 THRU C63	3	CAP 6.8µF 35V ±10% TANT 1305306
56	C1 THRU C46, C48 THRU C57	2	CAP .01µF 100V ±20% DISC 1001610
1		1	ETCHED CIRCUIT BOARD 5009980

IC TYPE	QTY	LOCATIONS
DEC 74157	8	16
DEC 3101A	8	16
DEC 74174	8	16
DEC 74182	9	16
DEC 74181	12	24
DEC 74153	8	16
DEC 8640	1	8
IC TYPE	GND	+5V



GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE.

SEMICONDUCTOR CONVERSION CHART

POP 11

ETCH BOARD REV D

PARTS LIST

DATE: 7-6-72
 CHECKED: [Signature]
 DRAWN: [Signature]
 TITLE: DATA PATHS

REVISIONS:

REV	DESCRIPTION
1	ORIGINAL
2	CHANGE NO. 1

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

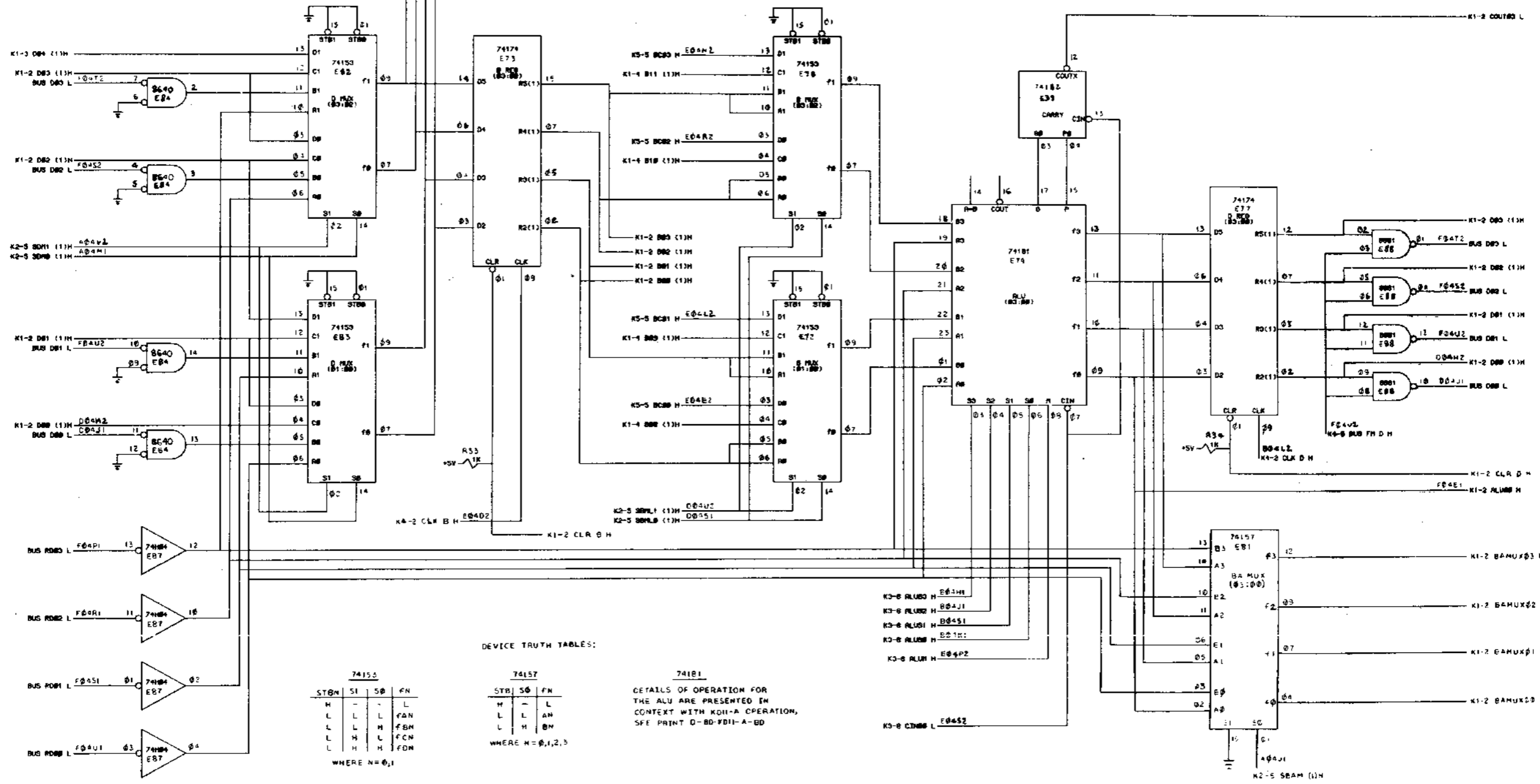
PROJ CODE: DCS M7231-0-1

SHEET 1 OF 9

This drawing and specifications, herein, are the property of Equipment Corporation and shall not be reproduced or copied in whole or in part, nor the tools for the construction of any of them without written permission.

E04J2 K1-2 OVALD8 H
 E04M1 K1-2 OVALD8 H
 E04J2 K1-2 OVALD8 H
 E04L1 K1-2 OVALD8 H

D
C
B
A



DEVICE TRUTH TABLES:

74150

STB	S1	S0	FN
H	-	-	L
L	L	L	FAN
L	L	H	FBN
L	H	L	FCN
L	H	H	FDN

WHERE N=0,1

74157

STB	S0	FN
H	-	L
L	L	AN
L	H	BN

WHERE N=0,1,2,3

74181
 DETAILS OF OPERATION FOR THE ALU ARE PRESENTED IN THE CONTEXT WITH K01-A OPERATION, SEE PRINT D-BD-7D11-A-BD

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FRACTIONS DECIMALS ANGLES ±.005 ±.010 ±.020 FULL DIMENSION QUALITY APPROVED DIMENSIONS AND DIMENSIONAL CONTROL		EQUIPMENT CORPORATION	
		TITLE DATA PATHS DATA PATHS (03:00) K1-2	
PART USED ON PDP-11	SCALE SHEET 2 OF 5	NUMBER W201-0-1	REV. 0

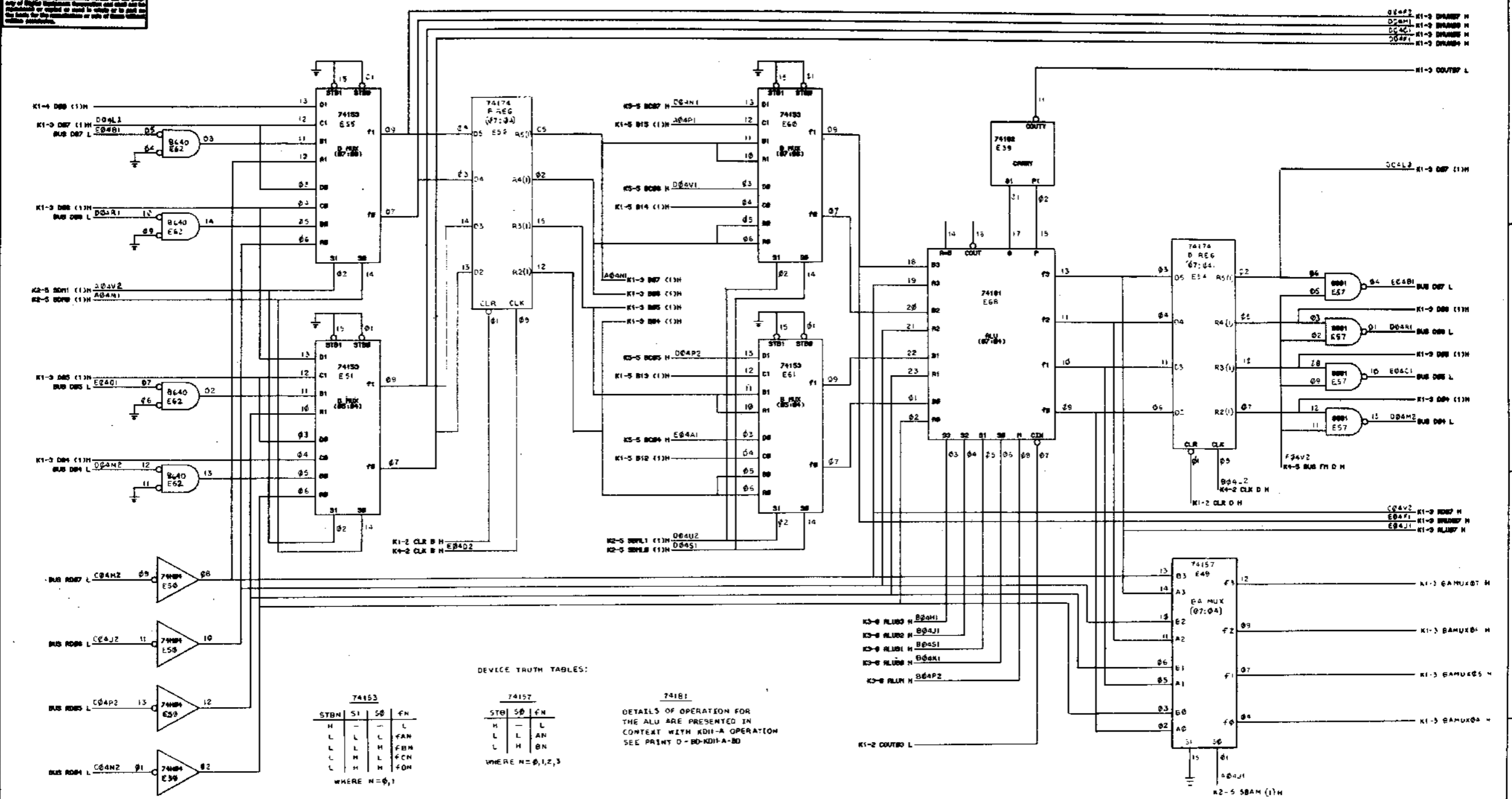
This drawing and construction, based on the principles of digital logic, are intended to be used as a guide only. The manufacturer of the components used in this circuit should be consulted for the latest data sheets and for any changes in pin connections.

D

C

B

A



DEVICE TRUTH TABLES:

74153

STB	S1	S0	FN
H	-	-	L
L	L	L	FAN
L	L	H	FBN
L	H	L	FCN
L	H	H	FCN

WHERE N = 0, 1

74157

ST0	S0	FN
H	-	L
L	L	AN
L	H	BN

WHERE N = 0, 1, 2, 3

74181
 DETAILS OF OPERATION FOR THE ALU ARE PRESENTED IN CONTEXT WITH KDI-A OPERATION SEE PRINT D - 80-KDI-A-80

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FRACTIONS ± .005 DECIMALS ± .010 HOLE DIMENSIONS ± .005 HOLE LOCATIONS ± .010 HOLE DRILLING ± .005 HOLE TAPPING ± .005	DATE: 7-21-72 DRAWN: [Signature] CHECKED: [Signature] APPROVED: [Signature]	EQUIPMENT CORPORATION DATA PATHS DATA PATHS (07-04)
	TITLE: DATA PATHS PART OR ON: PDP-11 SCALE: 1:1 SHEET: 3 OF 5	NUMBER: 1001-0-1 REV: C

This drawing and quantities herein are the property of the Government and shall not be distributed or copied or used in whole or in part in any form for the execution of any of the work under this contract.

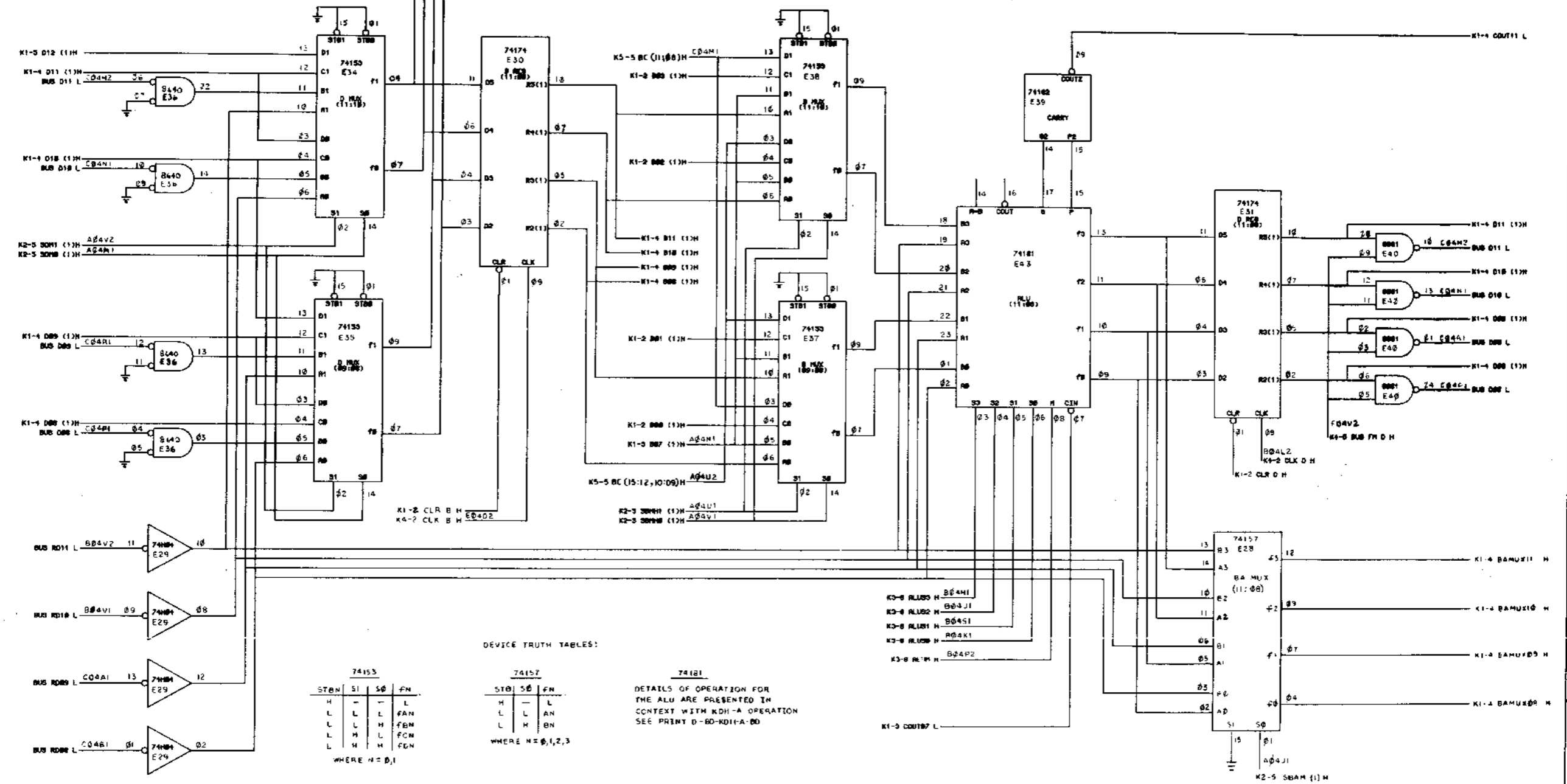
B04V2 K1-4 OUTPUT H
 B04V1 K1-4 OUTPUT H
 B04V0 K1-4 OUTPUT H
 B04V2 K1-4 OUTPUT H

D

C

B

A



DEVICE TRUTH TABLES:

74155			
STB	S1	S0	FN
H	-	-	L
L	L	L	FAN
L	L	H	FBN
L	H	L	FCN
L	H	H	FCN

WHERE N = 0,1

74157		
STB	S0	FN
H	-	L
L	L	AN
L	H	BN

WHERE N = 0,1,2,3

74181
 DETAILS OF OPERATION FOR THE ALU ARE PRESENTED IN CONTEXT WITH KDH-A OPERATION SEE PRINT D-60-KDH-A-00

- K3-8 ALU03 H B04H1
- K3-8 ALU02 H B04J1
- K3-8 ALU01 H B04S1
- K3-8 ALU00 H B04K1
- K3-8 ALU04 H B04P2

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FRACTIONS ±.005 DECIMALS ±.001 HOLE DIMENSIONS ±.002 CHECK DIMENSIONS AGAINST DRAWING DIMENSIONS	DATE 11/17/72 11/17/72 11/17/72	EQUIPMENT CORPORATION WASHINGTON, D.C. 20540
	TITLE DATA PATHS DATA PATHS (11100)	
PART USED OR PMP11	SCALE SHEET 1 OF 9	DRAWN D CHECKED D DATE 11/17/72

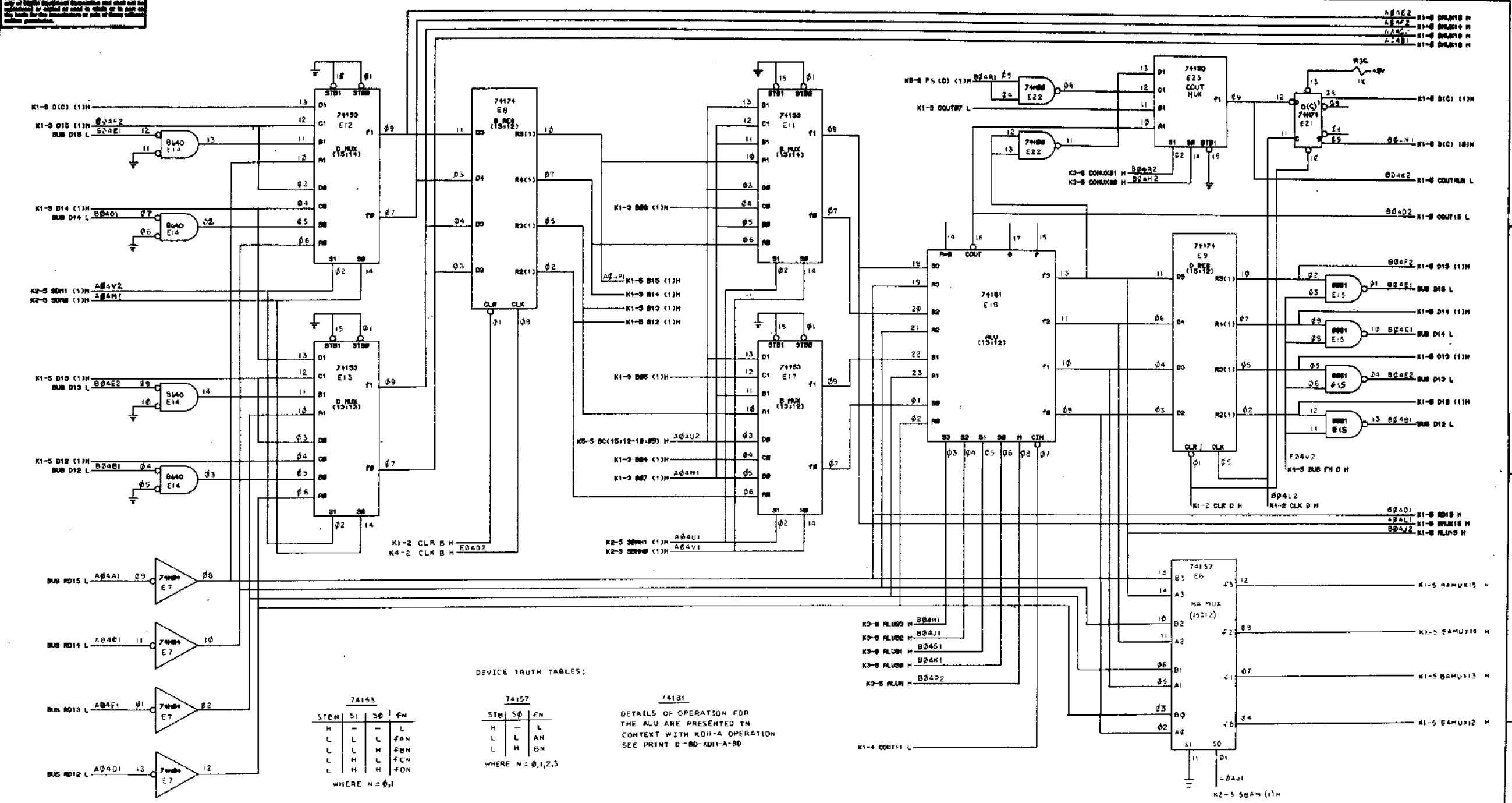
Use drawing and identification marks on the parts of this drawing to identify the parts and their location on the drawing. Do not use the marks for the identification or sale of these items unless authorized by the manufacturer.

D

C

B

A



DEVICE TRUTH TABLES:

74153			
STEN	S1	S0	FN
H	-	-	L
L	L	L	FAN
L	L	H	FBN
L	H	L	FCN
L	H	H	FON

WHERE N = 0,1

74157		
STB	S0	FN
H	-	L
L	L	AN
L	H	BN

WHERE N = 0,1,2,3

74181
 DETAILS OF OPERATION FOR THE ALU ARE PRESENTED IN CONTEXT WITH K011-A OPERATION SEE PRINT D-80-K011-A-8D

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES		DATE: 7/21/72		EQUIPMENT CORPORATION	
TOLERANCES FRACTIONS DECIMALS ANGLES ±.005 ±.005 ±.005		DRAWN: [Signature]		TITLE: DATA PATH	
FURNISH TO: [Blank]		CHECKED: [Signature]		DATA PATH (15-800) K1-S	
MATERIAL: [Blank]		DATE USED ON: [Blank]		SIZE CODE: [Blank]	
FORM: [Blank]		SCALE: [Blank]		NUMBER: 10291-9-1	
SHEET: 5 OF 9		DIST: [Blank]		REV: D	

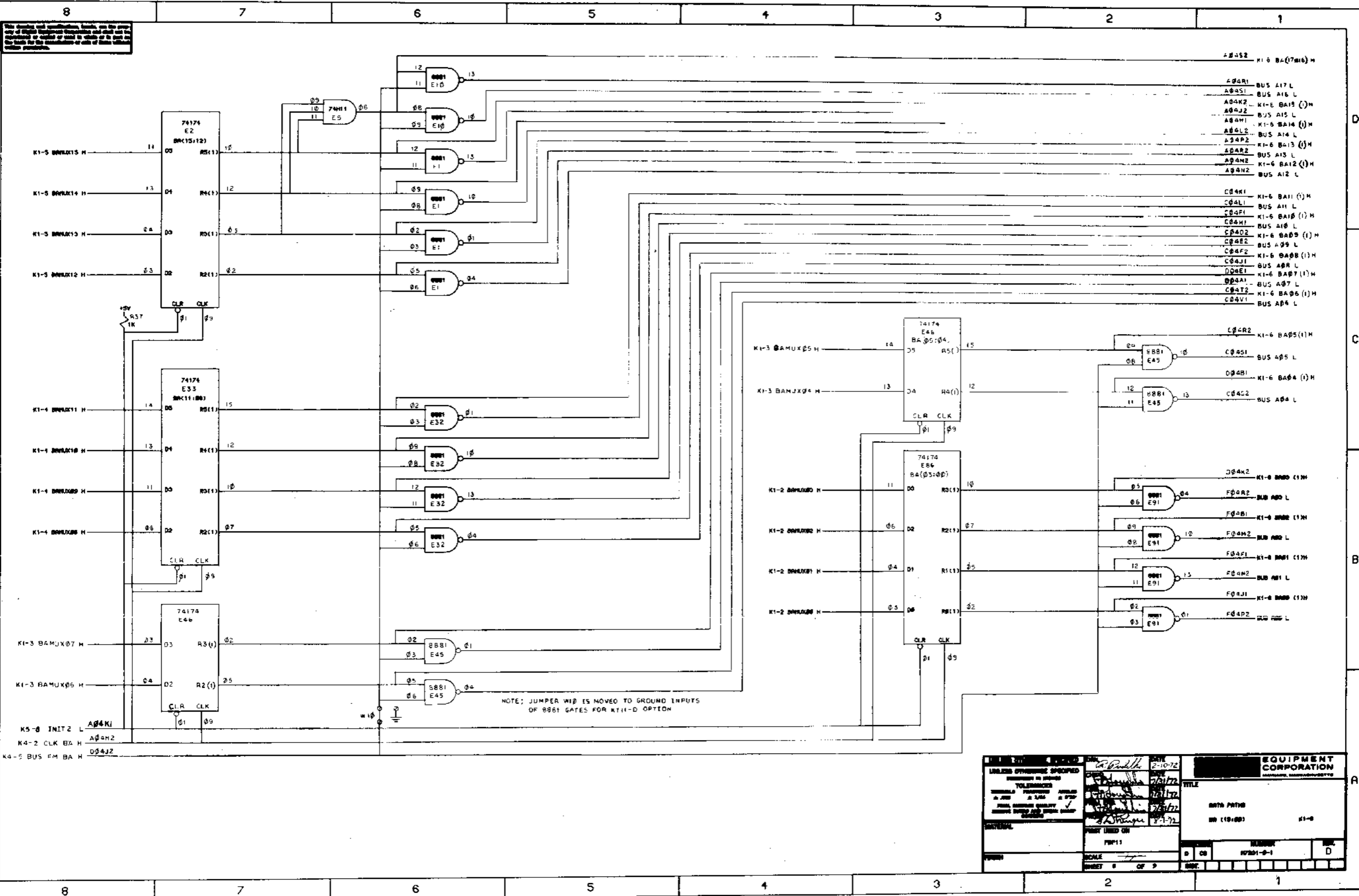
This drawing and specifications comply with the Army and Air Force specifications for components and shall not be substituted or altered or made in violation of the intent of the drawing or specifications or in violation of the intent of the drawing or specifications.

D

C

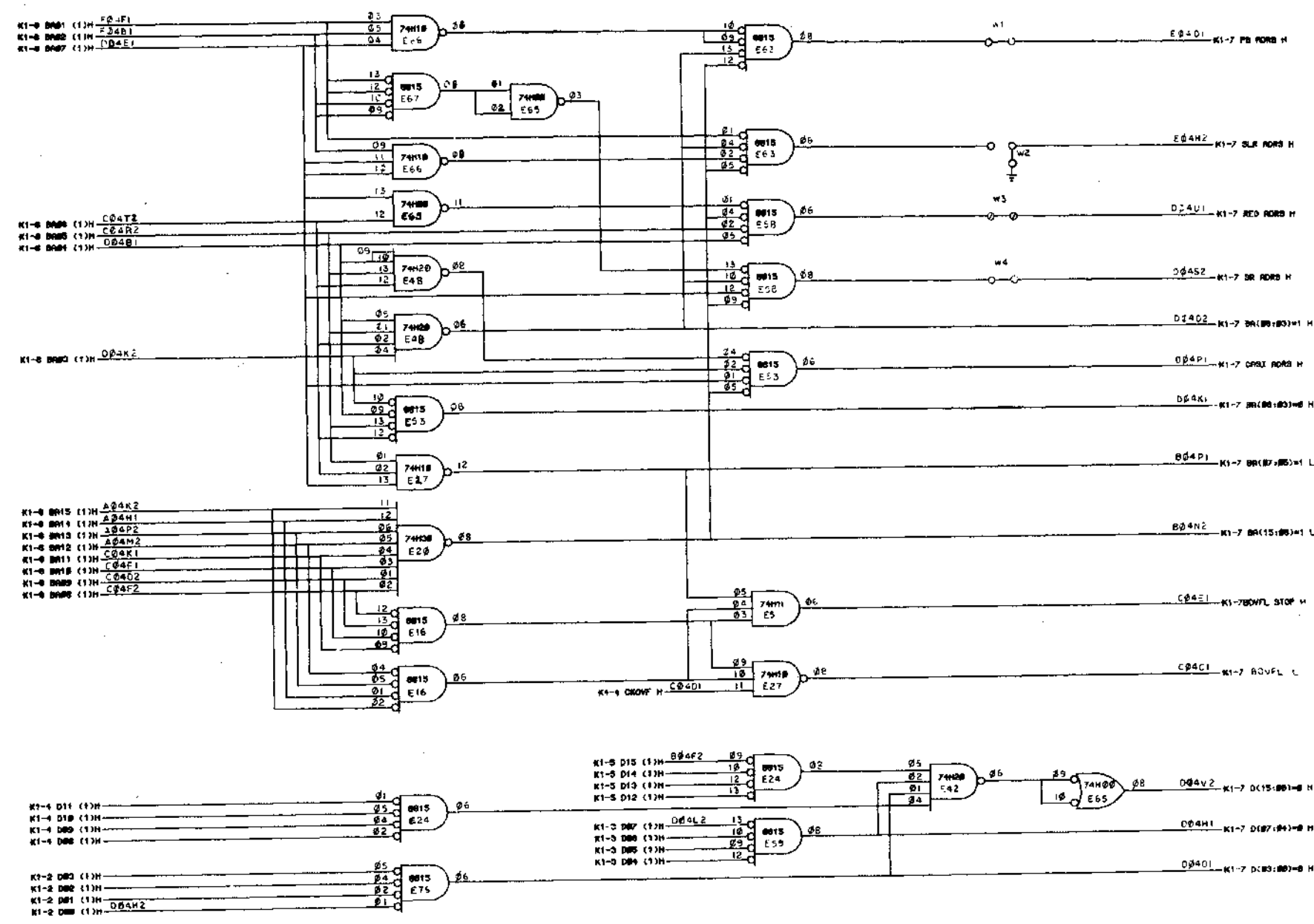
B

A



LISTED SPECIFICATIONS SPECIFIED IN DRAWING TO BE USED UNLESS OTHERWISE SPECIFIED IN THE DRAWING ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED		DATE: 2-10-72 DRAWN: [Signature] CHECKED: [Signature] APPROVED: [Signature]	EQUIPMENT CORPORATION MILWAUKEE, WISCONSIN 53212
TITLE:		PART LISTED ON:	SHEET: 8 OF 9
PART NO:		SCALE:	DRAWN:
DATE:		CHECKED:	APPROVED:

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PROCESSOR ADDRESSES		
NAME	HEX	DEC
PROCESSOR STATUS	PS	777776
STACK LIMIT REGISTER	SLA	777774
GENERAL REGISTERS		
R (ADDR)	REG 17	777717
R (P USE)	REG 16	777716
R (TEMP)	REG 15	777715
R (VECT)	REG 14	777714
R (IR)	REG 13	777713
R (DES)	REG 12	777712
R (SOURCE)	REG 11	777711
R (TEMP)	REG 10	777710
R (P, R7)	REG 07	777707
R (SP, R6)	REG 06	777706
REGISTERS USE IN INSTRUCTIONS FOR POP11		
R5	REG 05	777705
R4	REG 04	777704
R3	REG 03	777703
R2	REG 02	777702
R1	REG 01	777701
R0	REG 00	777700
CONSOLE SWITCH REGISTER	SR	777570

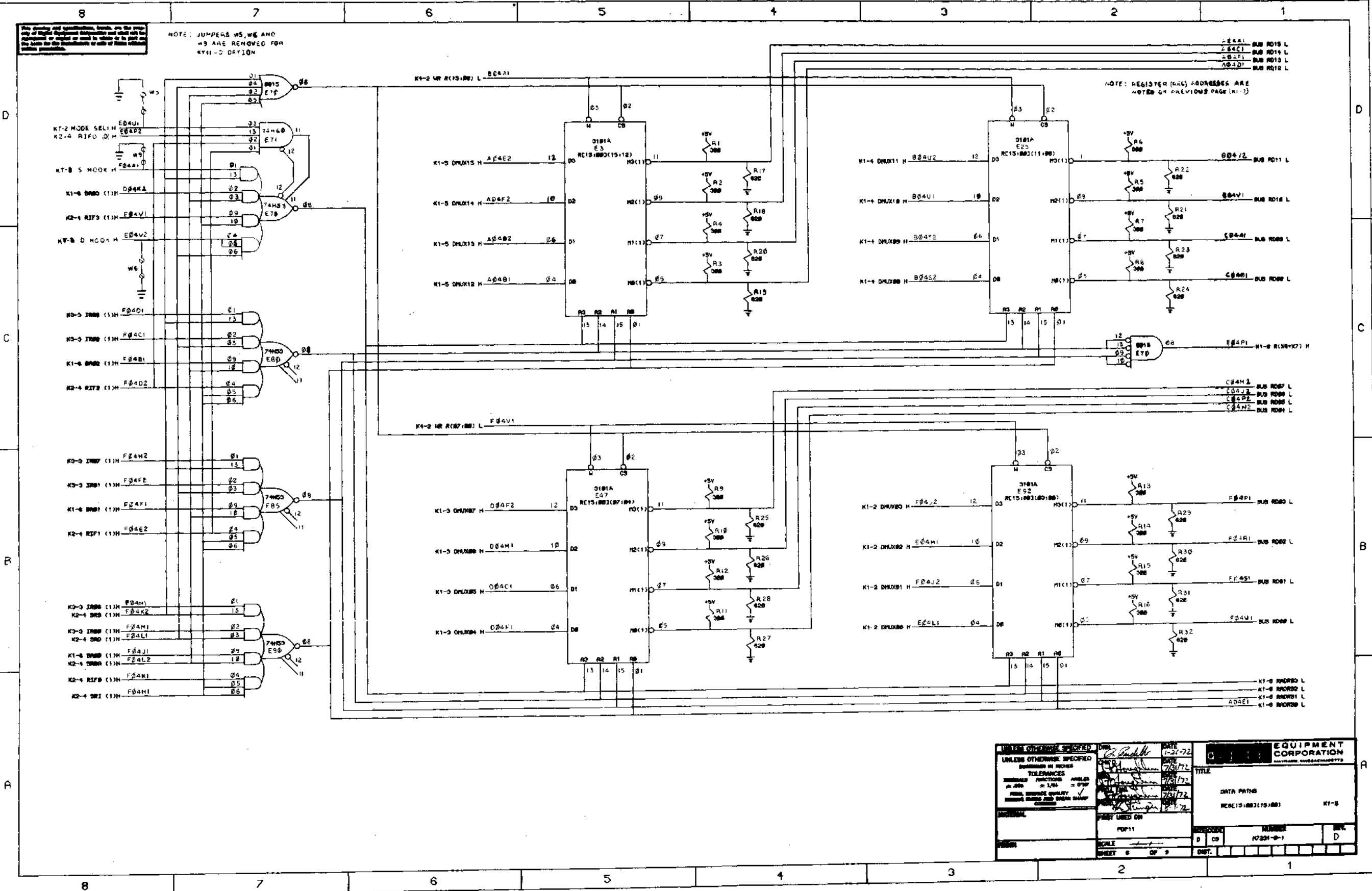
- NOTES:
- JUMPERS W1, W3 AND W4 ARE REMOVED FOR K11-D OPTION.
 - JUMPER W2 IS MOVED TO CONNECT E63 PIN 06 TO E64E2 FOR K11-A OPTION ALONE. JUMPER IS COMPLETELY REMOVED FOR K11-D OPTION.

UNLESS OTHERWISE SPECIFIED	DATE	EQUIPMENT CORPORATION MILFORD, MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES	DATE	
TOLERANCES	DATE	TITLE DATA PATH K1-7
FINISH	DATE	
MATERIAL	DATE	DRAWING NUMBER M2211-0-1
SCALE	DATE	
SHEET 7 OF 9	DATE	REV 0

This drawing and specifications, taken as the primary source of equipment description and shall not be interpreted or modified or used in whole or in part without the approval of the manufacturer or user of the equipment unless specifically provided.

NOTE: JUMPERS W5, W6 AND W9 ARE REMOVED FOR KTY-10 OPTION

NOTE: REGISTER (REG) ADDRESSES ARE NOTED ON PREVIOUS PAGE (KTY-10)



UNLESS OTHERWISE SPECIFIED		DATE: 7-21-72		EQUIPMENT CORPORATION	
UNLESS OTHERWISE SPECIFIED		DATE: 7/21/72		TITLE: DATA PATH	
TELEPHONES		DATE: 7/21/72		REG: RC15:003(15:08) KTY-5	
DIMENSIONS		DATE: 7/21/72		REV: D	
MATERIALS		DATE: 7/21/72		SHEET 6 OF 9	
DRAWING		DATE: 7/21/72		REV: D	
DESIGNED BY: [Signature]		DATE: 7/21/72		REV: D	
CHECKED BY: [Signature]		DATE: 7/21/72		REV: D	
APPROVED BY: [Signature]		DATE: 7/21/72		REV: D	
SCALE: 1:1		SHEET 6 OF 9		REV: D	

See drawing and specifications for the correct use of this drawing. Do not use this drawing for the construction of any other equipment.

NOTE: JUMPERS W7 AND W8 ARE REMOVED FOR KTH-D OPTION

D

C

B

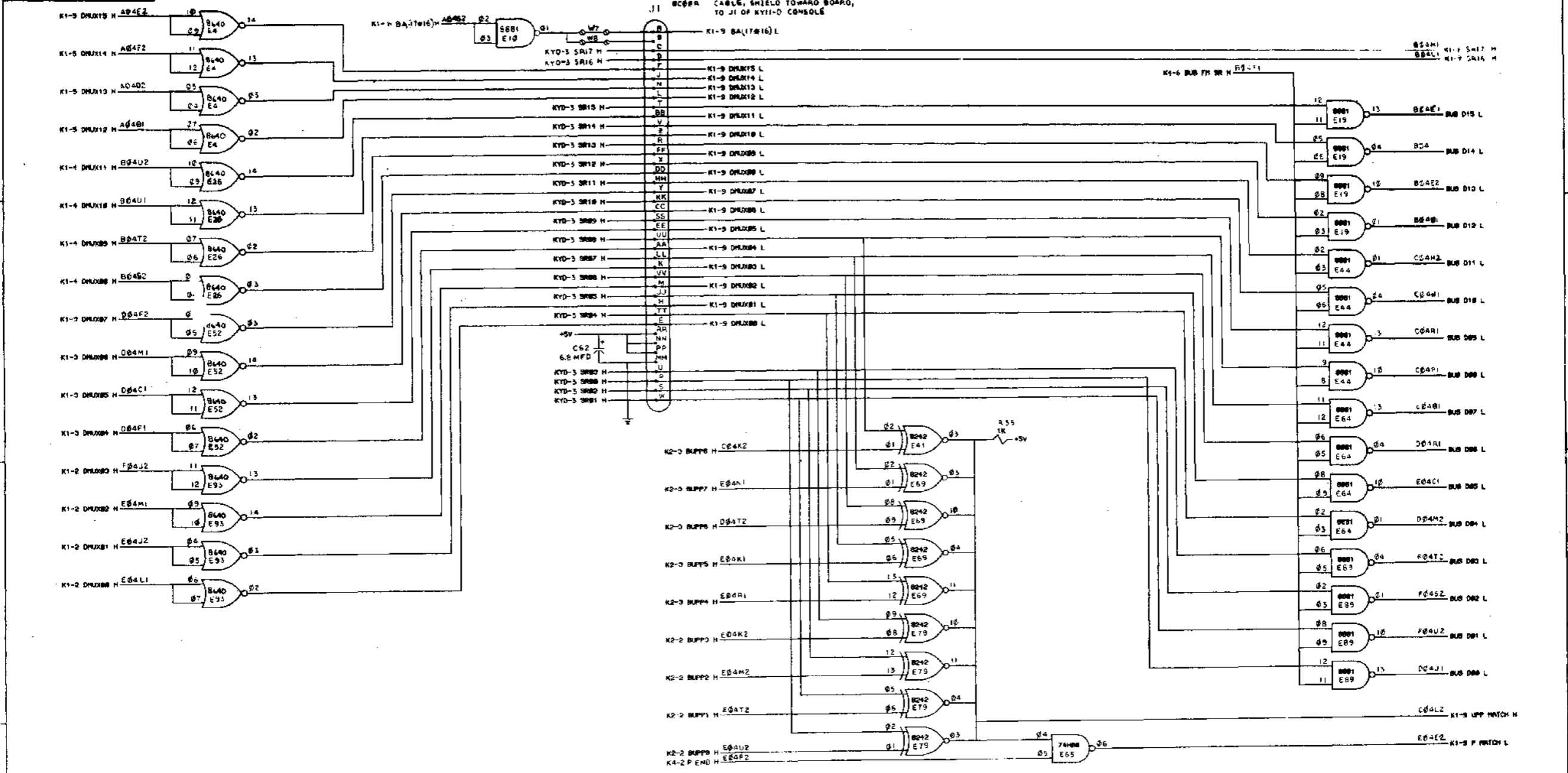
A

D

C

B

A

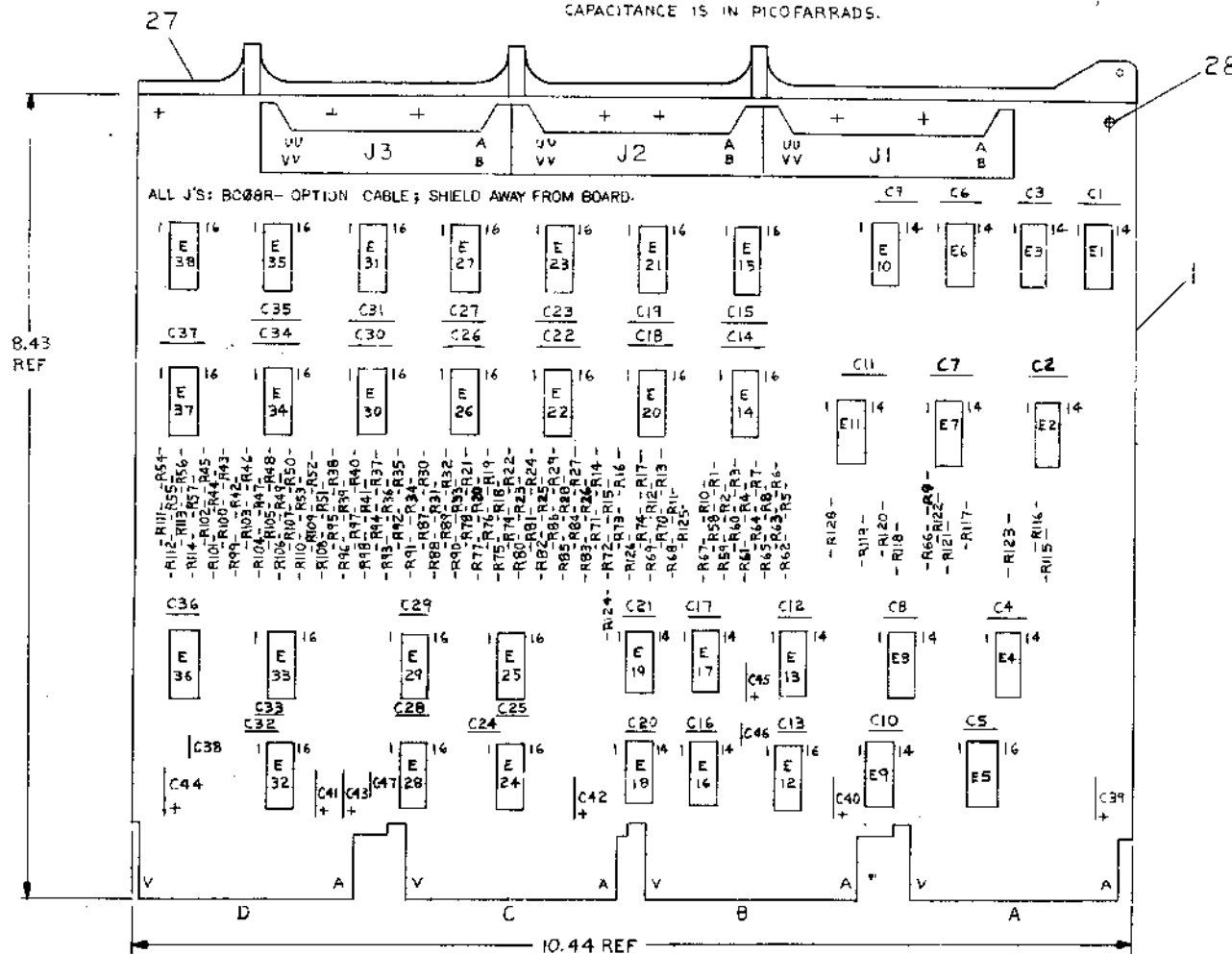


<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES</p> <p>TOLERANCES</p> <p>FRACTIONS DECIMALS ANGLES</p> <p>3/16 1/8 1/16 1/32 1/64</p> <p>90° 45° 30° 15°</p> <p>FORM AND QUALITY TOLERANCES SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED</p>	<p>DATE 2-7-72</p> <p>7/21/72</p> <p>7/21/72</p> <p>7/21/72</p> <p>7/21/72</p>	<p>EQUIPMENT CORPORATION</p> <p>DATA PATHS</p> <p>CONSOLE & PATCH</p> <p>K1-9</p>
<p>FRONT USED ON</p> <p>POP11</p> <p>SCALE</p> <p>SHEET 9 OF 9</p>	<p>UNIT</p> <p>NUMBER</p> <p>10201-0-1</p> <p>REV. D</p>	<p>DATE</p> <p>2-7-72</p> <p>7/21/72</p> <p>7/21/72</p> <p>7/21/72</p>

NOTES:

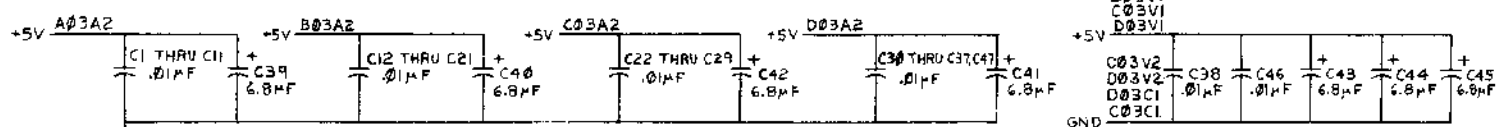
- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE KD11-A PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED. OUTPUT SIGNALS WITH MODULE PINS ARE BROUGHT TO THE RIGHT SIDE OF THE PRINT.

- PROCESSOR SIGNAL PREFIX NOTATION (K2-1 FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A 'BUS' PREFIX REPRESENT A 'WIRED OR' SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- UNLESS OTHERWISE NOTED: RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICOFARRADS.



IC TYPE	GND	+5V
D03C2, D03T1		
C03C2, C03T1		
B03C2, B03T1		
A03C2, A03T1		

IC PIN LOCATIONS		
23B00A2 THRU 23B13A2	8	16
DEC 74174	8	16
DEC 74175	8	16



B	EYELET	9006732	28
1	HANDLE	7409871	27
1	E38	I.C. DEC 23B40A2	23B40A2
1	E34	I.C. DEC 23B12A2	23B12A2
1	E35	I.C. DEC 23B11A2	23B11A2
1	E37	I.C. DEC 23B10A2	23B10A2
1	E31	I.C. DEC 23B35A2	23B35A2
1	E30	I.C. DEC 23B09A2	23B09A2
1	E27	I.C. DEC 23B07A2	23B07A2
1	E22	I.C. DEC 23B06A2	23B06A2
1	E23	I.C. DEC 23B42A2	23B42A2
1	E26	I.C. DEC 23B41A2	23B41A2
1	E21	I.C. DEC 23B03A2	23B03A2
1	E20	I.C. DEC 23B02A2	23B02A2
1	E14	I.C. DEC 23B01A2	23B01A2
1	E15	I.C. DEC 23B00A2	23B00A2
1	E36	I.C. DEC 74175	1910651
8	E5, E12, E24, E25, E28, E29, E32, E33	I.C. DEC 74174	1910652
3	E4, E8, E13	I.C. DEC 74H04	1909931
9	E1, E3, E6, E9, E10, E18, E19, E16, E17	I.C. DEC 74H74	1909667
3	E2, E7, E11	I.C. DEC 74H10	1909057
13	R115 THRU R126, R128	RES 1K 1/4W ±5%	1300365
57	R1 THRU R57	RES 680 1/4W ±5%	1301424
57	R58 THRU R114	RES 390 1/4W ±5%	1300309
3	J1, J2, J3	CONN 40 PIN	1209941
7	C39 THRU C45	CAP 6.8MF 35V ±10% TANT	1005306
40	C1 THRU C38, C46, C47	CAP .01MF 100V ±20% DISC	1001610
1		ETCHED CIRCUIT BOARD	5009981

FIRST USED ON OPTION MODEL		PARTS LIST	
QTY	REF DESIGNATION	DESCRIPTION	PART NO.
	PDP II	ETCH BOARD REV E	

DRN	DATE 6/2/72		
CHKD	DATE 6/16/72		
ENG	DATE 6/16/72		
PRD	DATE 6/16/72		
PRD	DATE 6/16/72		
NEXT HIGHER ASSY		TITLE U WORD	
KD11-A			
DEC NO.	EIA NO.	DEC NO.	EIA NO.
SEMICONDUCTOR CONVERSION CHART			
SCALE	SHEET 1 OF 12		DIST.

DEC FORM NO. 100-1254

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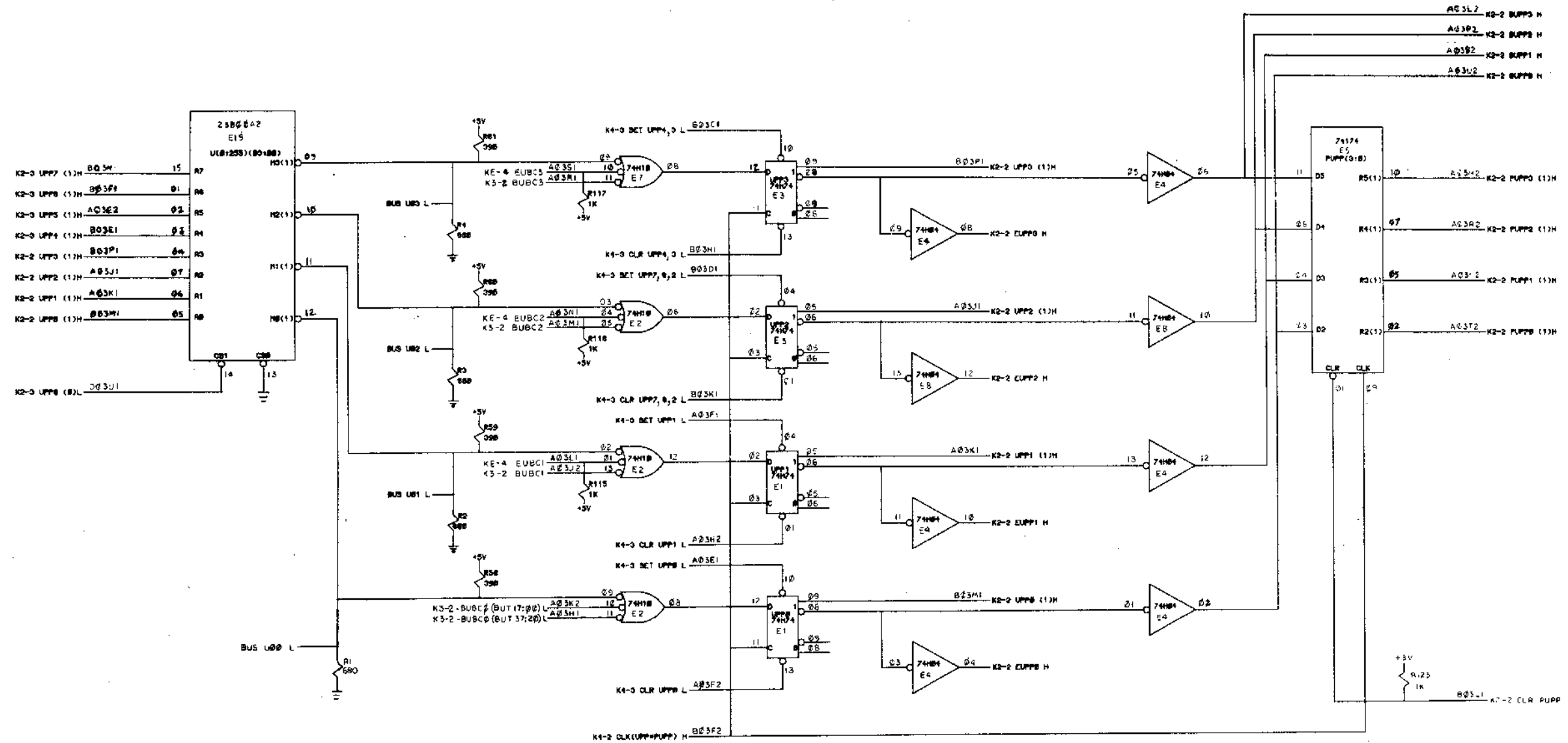
8 7 6 5 4 3 2 1

D

C

B

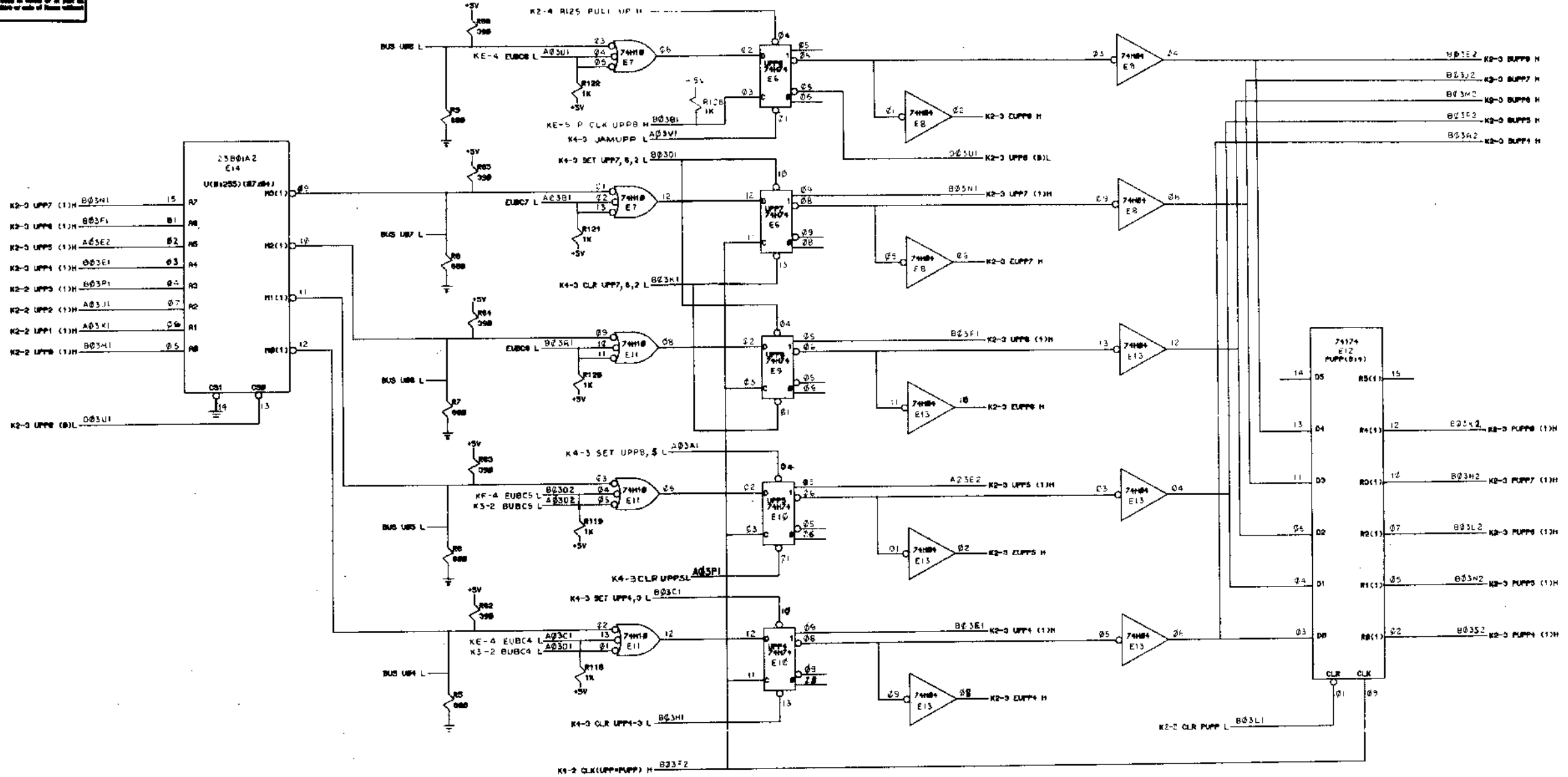
A



UNLESS OTHERWISE SPECIFIED		DATE	DIGITAL EQUIPMENT CORPORATION MAYFIELD, MASSACHUSETTS	
DIMENSIONS IN INCHES		1-27-72	TITLE	
TOLERANCES		DATE	U WORD	
DECIMALS	FRACTIONS	1/16/72	U(80:80) K2-2	
± .001	± .001	DATE	REV.	
FORM SURFACE QUALITY		1/17/72	F	
SHARP EDGES AND CORNERS		DATE	NUMBER	
CORNERS		1/17/72	17230-9-1	
MATERIAL		DATE	SCALE	
FIRST USED ON		1/17/72	SHEET 2 OF 12	
POP-11		DIST.		
SCALE				

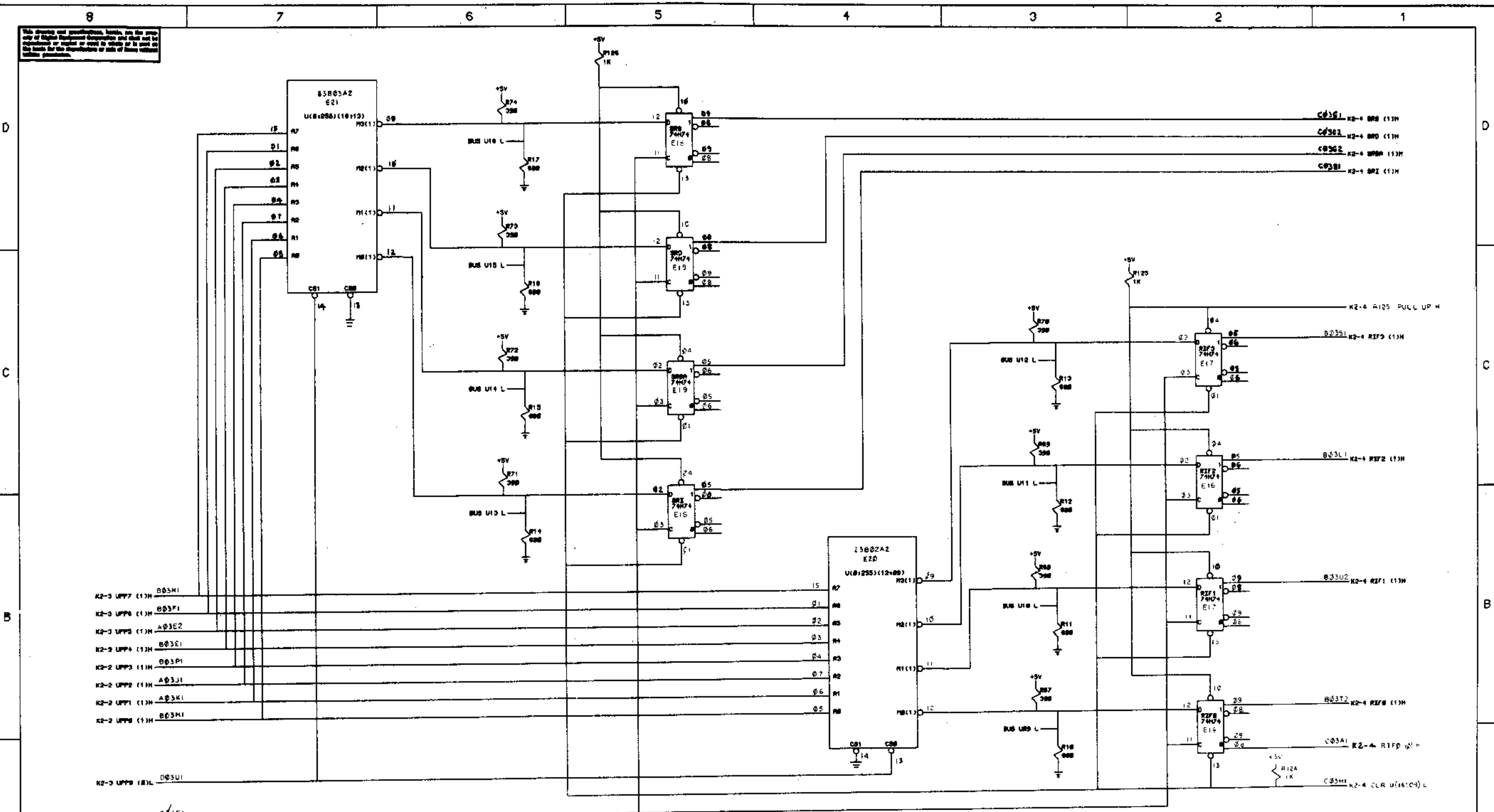
8 7 6 5 4 3 2 1

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UNLESS OTHERWISE SPECIFIED		DATE	EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
UNLESS OTHERWISE SPECIFIED		1-2-72	TITLE	
DIMENSIONS IN INCHES		DATE	U. MORD.	
TOLERANCES		2/1/72	U. B7 (B4) K2-3	
DIMENSIONS IN MILLIMETERS		DATE	NUMBER	
FRACTIONS		2/1/72	17232-B-1	
DECIMALS		DATE	REV. F	
±.005 ±.004 ±.020		2/15/72	SCALE	
FINE SURFACE QUALITY		DATE	SHEET 3 OF 17	
REMOVE BURRS AND BREAK SHARP CORNERS		2/15/72	DWT.	
MATERIAL		FIRST USED ON		
FINISH		PDF11		

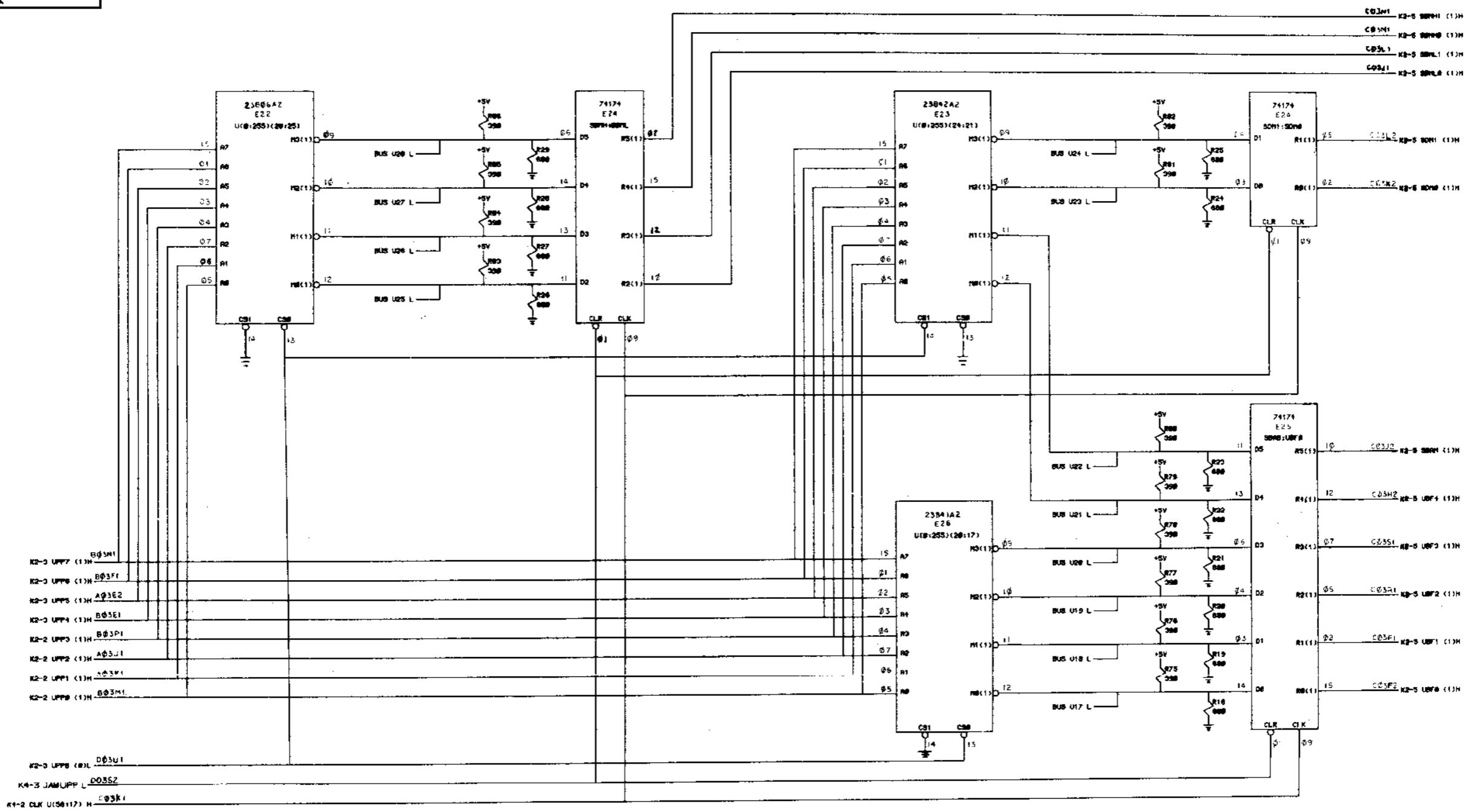
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K4-2 CLK U(10-00) H C05F1

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES DIMENSIONAL FINISHES MATERIAL FINISH		DATE 7/2/72 7/1/72 7/1/72 7/1/72		EQUIPMENT CORPORATION INTERNATIONAL	
PART USED OR POP11		TITLE U 1000 U(10-00)		REV K2-4	
SHEET 4 OF 12		DWT.		REV N7200-0-1	

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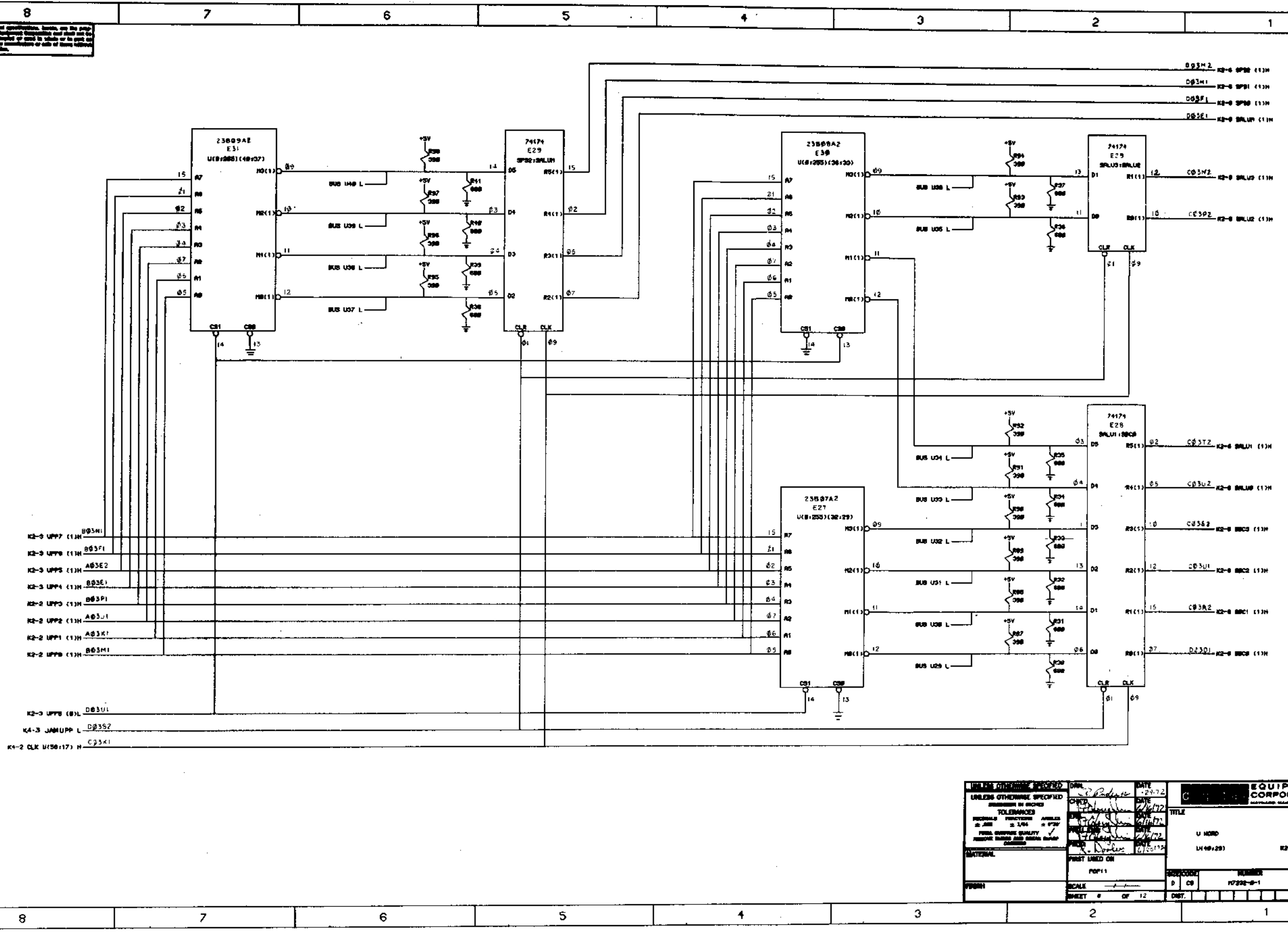


- K2-3 UPP7 (13H) B03N1
- K2-3 UPP6 (13H) B03F1
- K2-3 UPP5 (13H) A03E2
- K2-3 UPP4 (13H) B03E1
- K2-2 UPP3 (13H) B03P1
- K2-2 UPP2 (13H) A03J1
- K2-2 UPP1 (13H) A03M1
- K2-2 UPP0 (13H) B03M1
- K2-3 UPP8 (03L) D03U1
- K4-3 JAM/UPP L D03S2
- K4-2 CLK U03(17) H C03K1

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES DECIMALS FRACTIONS ± .005 ± 1/64 ± 0.002 FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP EDGES	DATE 11-28-72	EQUIPMENT CORPORATION MAYFIELD, MASSACHUSETTS
	DATE 11/17/72	
APPROVAL FIRST USED ON PDF11	DATE 11/17/72	TITLE U 4000 U02(17) K2-5
SCALE SHEET 5 OF 12	REVISION D CS	NUMBER 10200-0-1

See drawing and specifications. Verify the proper size of electrical components and check for compatibility, or design or amend to verify or to print and the basis for the construction of any of them without written permission.

D
C
B
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- K2-3 UPP7 (11H) B03M1
- K2-3 UPP8 (11H) B03F1
- K2-3 UPP5 (11H) A03E2
- K2-3 UPP4 (11H) B03E1
- K2-2 UPP3 (11H) B03P1
- K2-2 UPP2 (11H) A03J1
- K2-2 UPP1 (11H) A03K1
- K2-2 UPP6 (11H) B03M1
- K2-3 UPP8 (8H) D03U1
- K4-3 JAMUPP L D03S2
- K4-2 CLK U(50:17) H C03K1

UNLESS OTHERWISE SPECIFIED UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FRACTIONS DECIMALS ANGLES ±.005 ±.004 ±.010 FINISH SURFACE QUALITY REMOVE BURRS AND SHARP EDGES CARRIED	DATE 24-72	EQUIPMENT CORPORATION 14401 25th St Van Nuys, CA 91411
	TITLE U MCRD 14401(25)	
MATERIAL	FIRST LINED ON PDF11	NUMBER 10300-0-1
SCALE	SHEET # OF 12	REV. F

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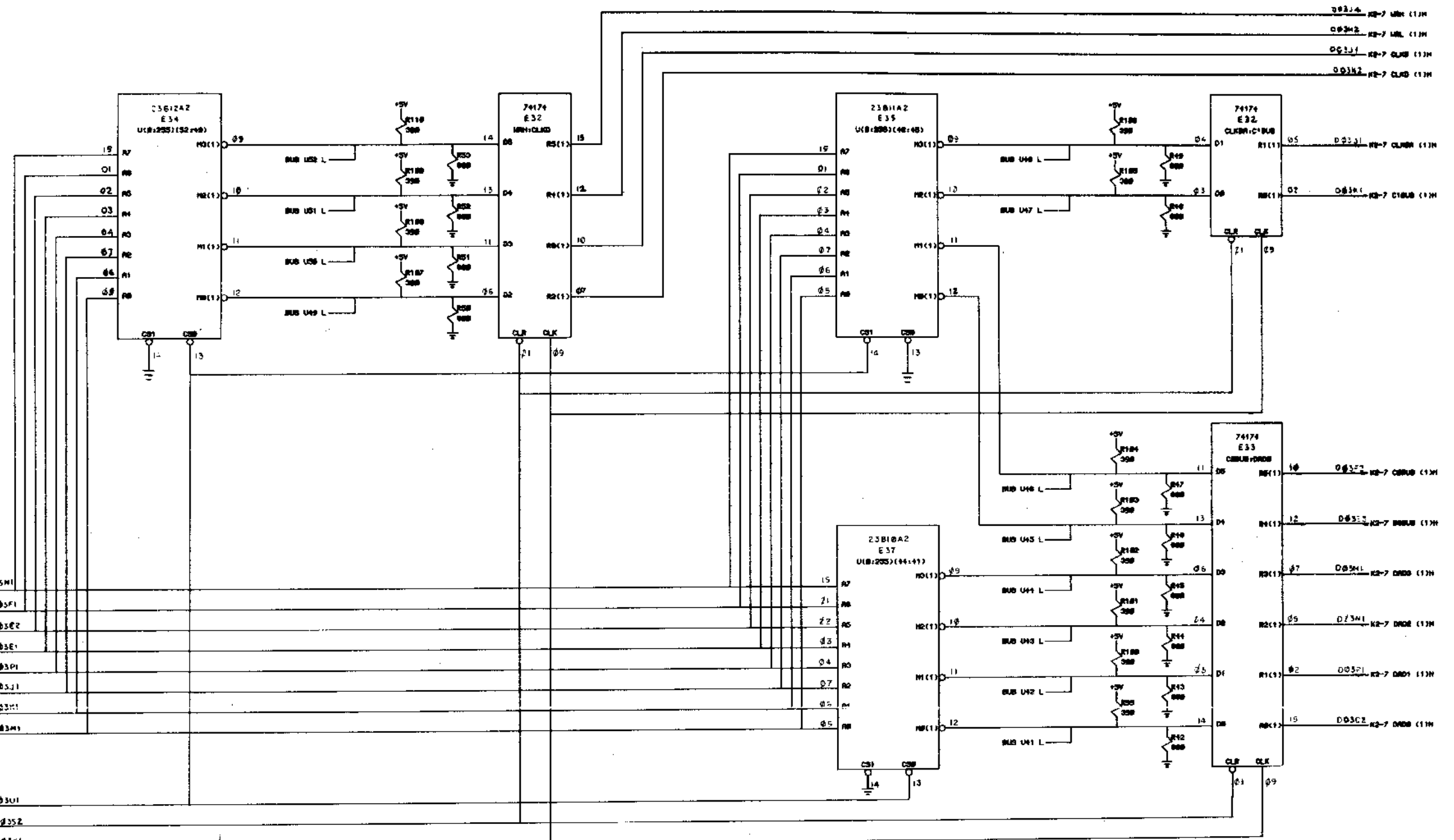
B

A

8 7 6 5 4 3 2 1

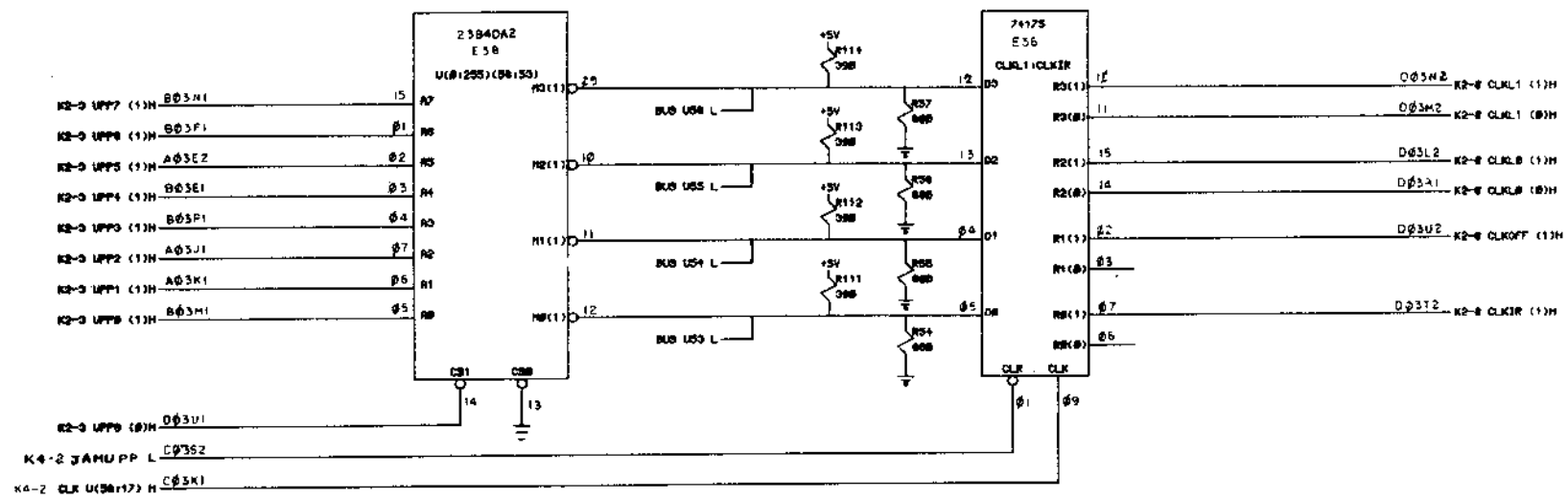
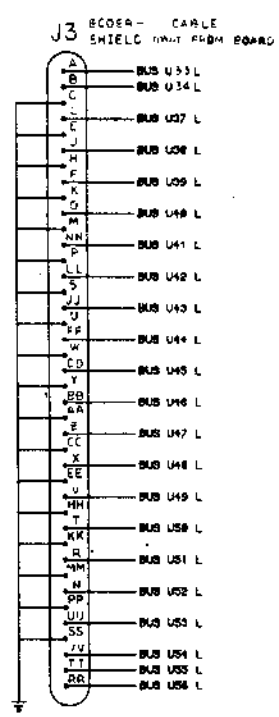
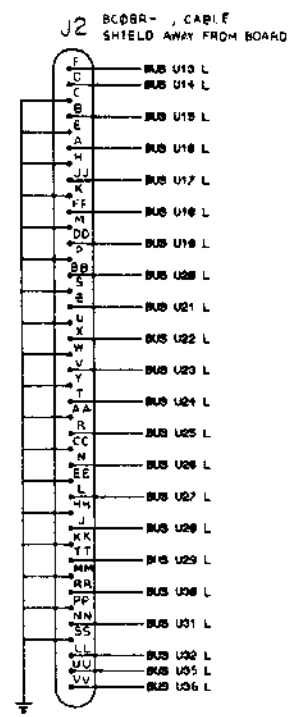
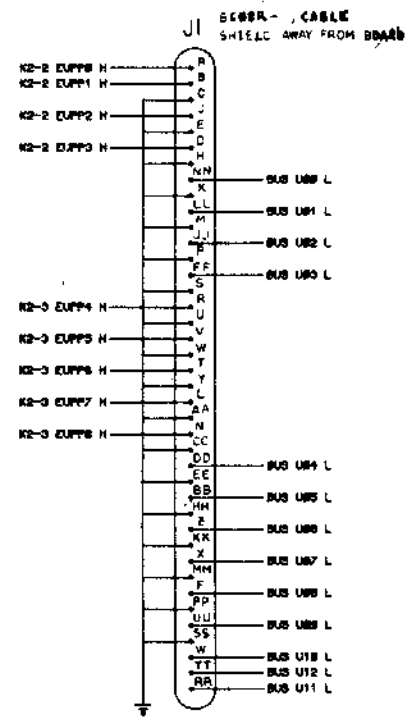
- K2-3 UPP7 (1N) B05M1
- K2-3 UPP8 (1N) B05F1
- K2-3 UPP9 (1N) A05E2
- K2-3 UPP4 (1N) B05E1
- K2-2 UPP0 (1N) B03P1
- K2-2 UPP2 (1N) A05J1
- K2-2 UPP1 (1N) A03M1
- K2-2 UPP6 (1N) B03M1

- K2-3 UPP8 (X) D03U1
- M4-3 JAMUPP L C035Z
- K4-2 CLR UK56(17) N C03K1



UNLESS OTHERWISE SPECIFIED		DATE	11-29-72	EQUIPMENT CORPORATION MAYFIELD, MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED		DATE	11/17/72	
TOLERANCES		TITLE		U 1400 UC02(41) K2-7
DIMENSIONS		SCALE		
MATERIAL		DRAWN		REV. F
FINISH		CHECKED		
APPROVED		DATE		SHEET 7 OF 12
SCALE		REV.		

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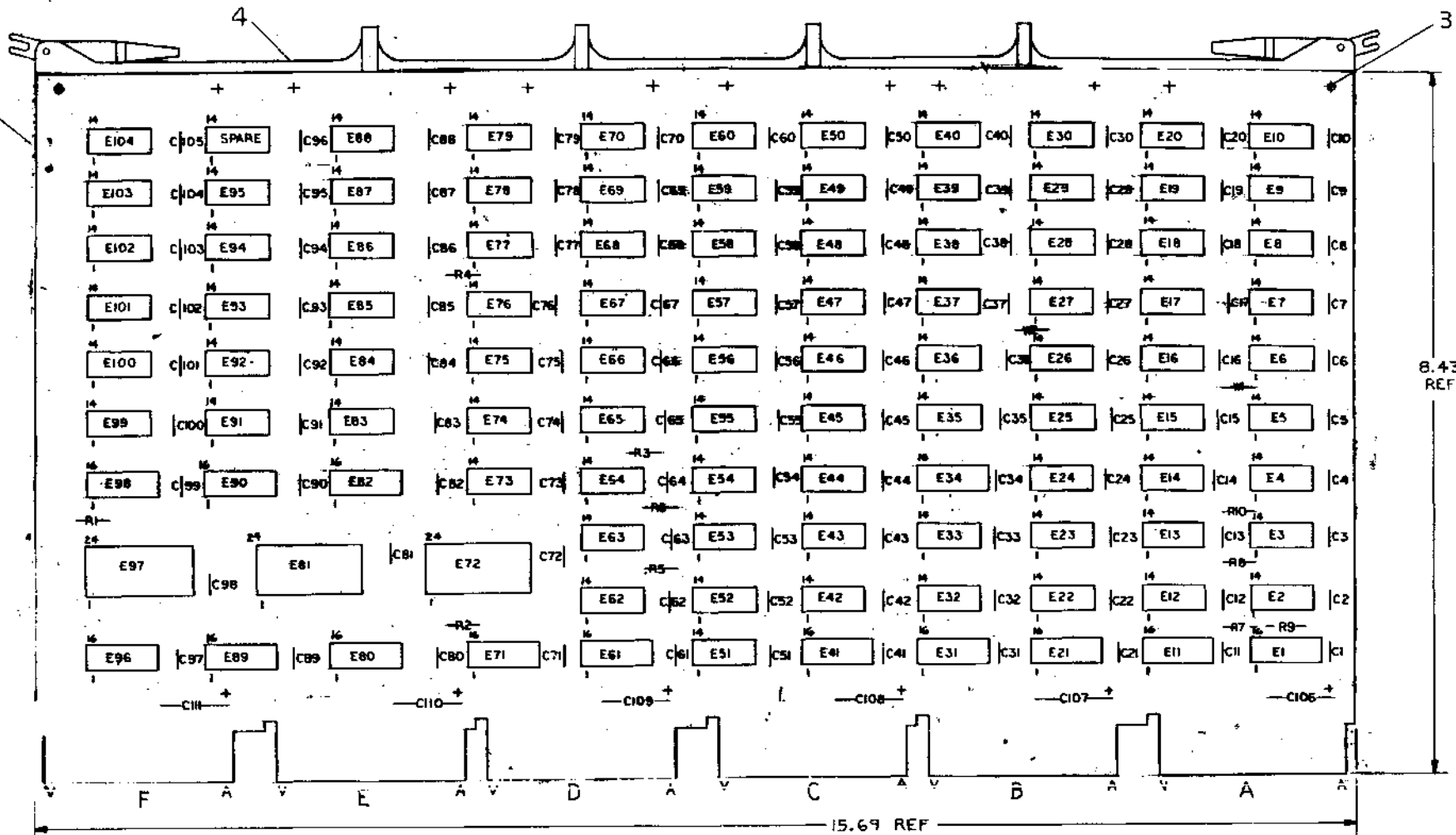
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FRACTIONS DECIMALS ANGLES .125 .005 .125 .010 .005 .005 .005 .005 .005 .005 .005 .005 .005 .005 .005 .005	DATE 2-10-72 DRAWN CHECKED APPROVED	TITLE U MORD U(36150) & CONNECTORS K2-8
	FIRST USED ON PDP11	NUMBER 17200-0-1
	SCALE SHEET 6 OF 12	REV. F
	EQUIPMENT CORPORATION WILMINGTON, MASSACHUSETTS	

NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE KD11-A PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED. OUTPUT SIGNALS WITH MODULE PINS ARE BROUGHT TO THE RIGHT SIDE OF THE PRINT.

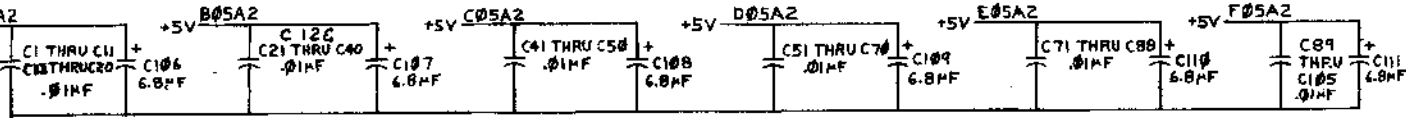
- PROCESSOR SIGNAL PREFIX NOTATION (K2-1 FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.

- UNLESS OTHERWISE NOTED: RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICOFARRADS.



IC TYPE	QTY	LOCATIONS
DEC 74157	8	16
DEC 74175	8	16
DEC 74150	12	24
DEC 74153	8	16
DEC 74151	8	16
DEC 8251	8	16
GND		

A05C2, A05T1
B05C2, B05T1
C05C2, C05T1
D05C2, D05T1
E05C2, E05T1
F05C2, F05T1



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
2	W1, W2	INSULATED JUMPER	9009185	32
12		EYELET	9006732	31
1	E1	I.C. DEC 74157	1910655	30
4	E21, E71, E96, E41	I.C. DEC 74175	1910651	29
3	E81, E47, E72	I.C. DEC 74150	1910153	28
1	E82	I.C. DEC 74151	1909937	27
2	E90, E98	I.C. DEC 74151	1909936	26
11	E5, E8, E29, E33, E37, E45, E62, E75, E86, E92, E95	I.C. DEC 74HC4	1909931	25
6	E11, E31, E34, E61, E80, E89	I.C. DEC 8251	1909594	24
6	E20, E22, E23, E27, E32, E56	I.C. DEC 8815	1909713	23
7	E19, E36, E51, E79, E83, E84, E91	I.C. DEC 74111	1909267	22
1	E26	I.C. DEC 74H61	1909065	21
2	E6, E7	I.C. DEC 74H60	1909064	20
3	E33, E17, E57	I.C. DEC 74H53	1909062	19
5	E9, E28, E52, E53, E54	I.C. DEC 74H52	1909061	18
3	E87, E49, E19	I.C. DEC 74H50	1909060	17
5	E24, E67, E68, E69, E70	I.C. DEC 74H30	1909059	16
4	E12, E13, E38, E102	I.C. DEC 74H21	1909058	15
8	E15, E40, E42, E64, E77, E104, E47, E101	I.C. DEC 74H10	1909057	14
14	E2, E3, E18, E35, E43, E48, E58, E73, E76, E78, E85, E88, E93, E99	I.C. DEC 74H00	1909056	13
7	E9, E10, E16, E44, E60, E100, E103	I.C. DEC 7402	1909004	12
7	E25, E30, E46, E55, E65, E66, E94	I.C. DEC 74H20	1905635	11
1	E50	I.C. DEC 74H40	1905586	10
3	E63, E74, E91	I.C. DEC 7400	1905575	6
10	R1 THRU R10	RES. 1K 1/4W ±5%	1300365	5
1		HANDLE MODULE	1210711-02	4
105	C1 THRU C105	CAP. 0.1µF 100V ±20% DISC	1001610	3
6	C106 THRU C111	CAP. 6.8µF 35V ±20% STANT	1000067	2
1		ETCHED CIRCUIT BOARD	5009982	1

FIRST USED ON OPTION MODEL
PDP 11

PARTS LIST		ETCH BOARD REV		C		D	
DATE	BY	DATE	BY	DATE	BY	DATE	BY
6-13-72	[Signature]						
EQUIPMENT CORPORATION METHUEN, MASSACHUSETTS				TITLE IR DECODE			
NEXT HIGHER ASSY KD11-A				REV. E			
SCALE				SHEET 1 OF 9			
DATE				DWT.			

SEMICONDUCTOR CONVERSION CHART

REV	DATE	BY	DESCRIPTION
1	5-18-72	J. SOFIO	ORIGINAL
2	6-13-72	[Signature]	REVISED
3	6-13-72	[Signature]	REVISED
4	6-13-72	[Signature]	REVISED
5	6-13-72	[Signature]	REVISED
6	6-13-72	[Signature]	REVISED
7	6-13-72	[Signature]	REVISED
8	6-13-72	[Signature]	REVISED
9	6-13-72	[Signature]	REVISED
10	6-13-72	[Signature]	REVISED

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTS ARE STATED ABOVE

IC PIN LOCATIONS

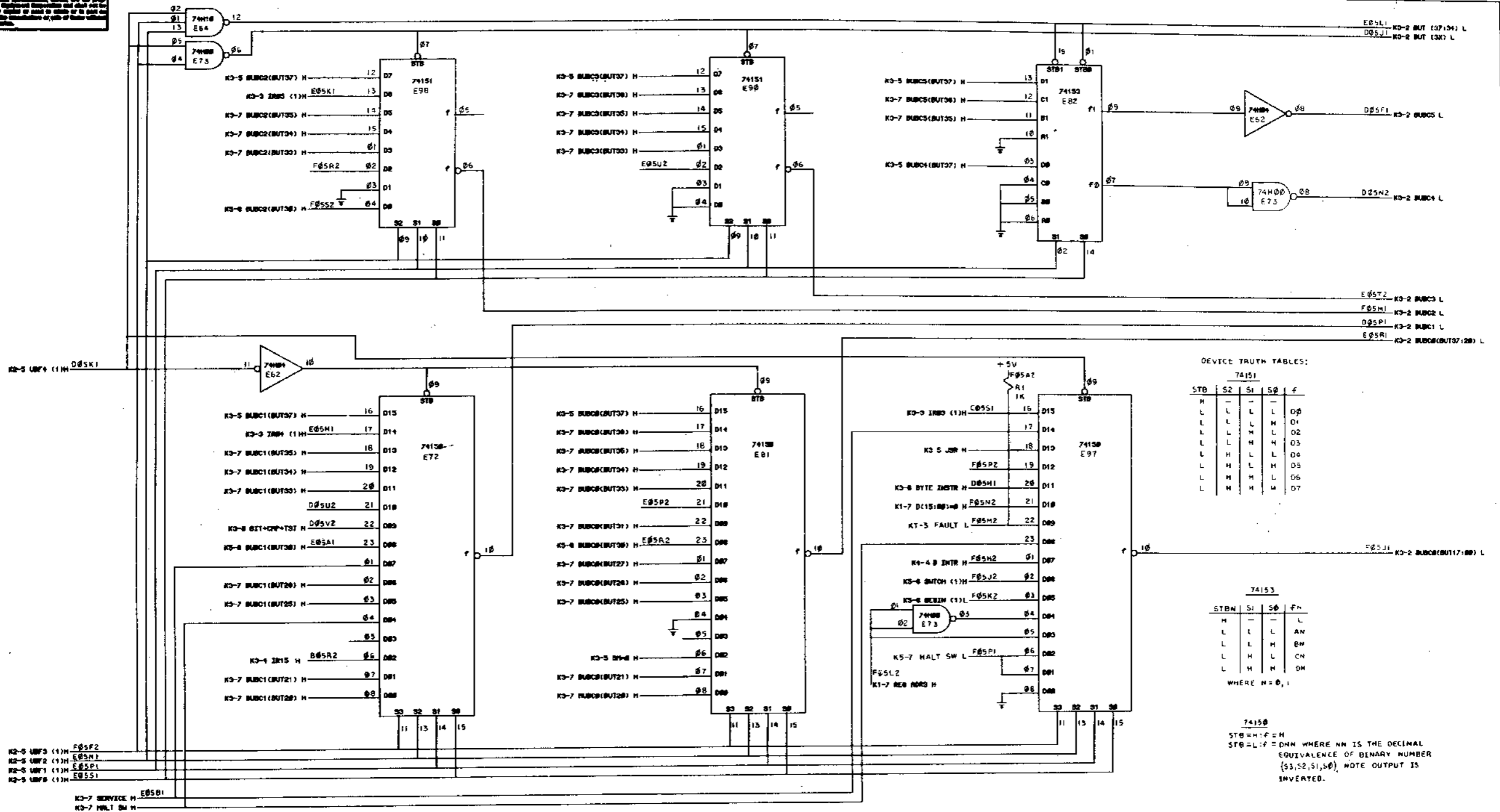
See drawing and specifications, herein, for the proper use of digital equipment components and check out the operation of system or unit or part of it prior to the start for the construction or, parts of them without written permission.

D

C

B

A



DEVICE TRUTH TABLES:

74151

STB	S2	S1	S0	F
H	-	-	-	-
L	L	L	L	D0
L	L	L	H	D1
L	L	H	L	D2
L	L	H	H	D3
L	H	L	L	D4
L	H	L	H	D5
L	H	H	L	D6
L	H	H	H	D7

74153

STB _N	S1	S0	F _N
H	-	-	L
L	L	L	AN
L	L	H	BN
L	H	L	CN
L	H	H	DN

WHERE N = 0, 1

74150
 STB=H: F=H
 STB=L: F=DNM WHERE NN IS THE DECIMAL EQUIVALENCE OF BINARY NUMBER (S2,S1,S0). NOTE OUTPUT IS INVERTED.

K2-5 UBF3 (1)H E05F2
 K2-5 UBF2 (1)H E05M1
 K2-5 UBF1 (1)H E05P1
 K2-5 UBF0 (1)H E05S1

K3-7 SERVICE H E05B1
 K3-7 MULT SW H

PRODUCED BY THE AUTOMATED DRAWING SYSTEM

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FRACTIONS DECIMALS ANGLES HOLE DIA ±.0015 FINN SURFACE QUALITY SEEDED DIMS AND DIMS GROUP DIMENSIONS	DATE 2-2-72	EQUIPMENT CORPORATION MILFORD, MASSACHUSETTS
	TITLE IR DECODE BUT PAK K3-2	
DESIGNED BY CHECKED BY FIRST USED ON PART #	SCALE SHEET 2 OF 3	REVISIONS NUMBER M7233-0-1 E

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D

C

B

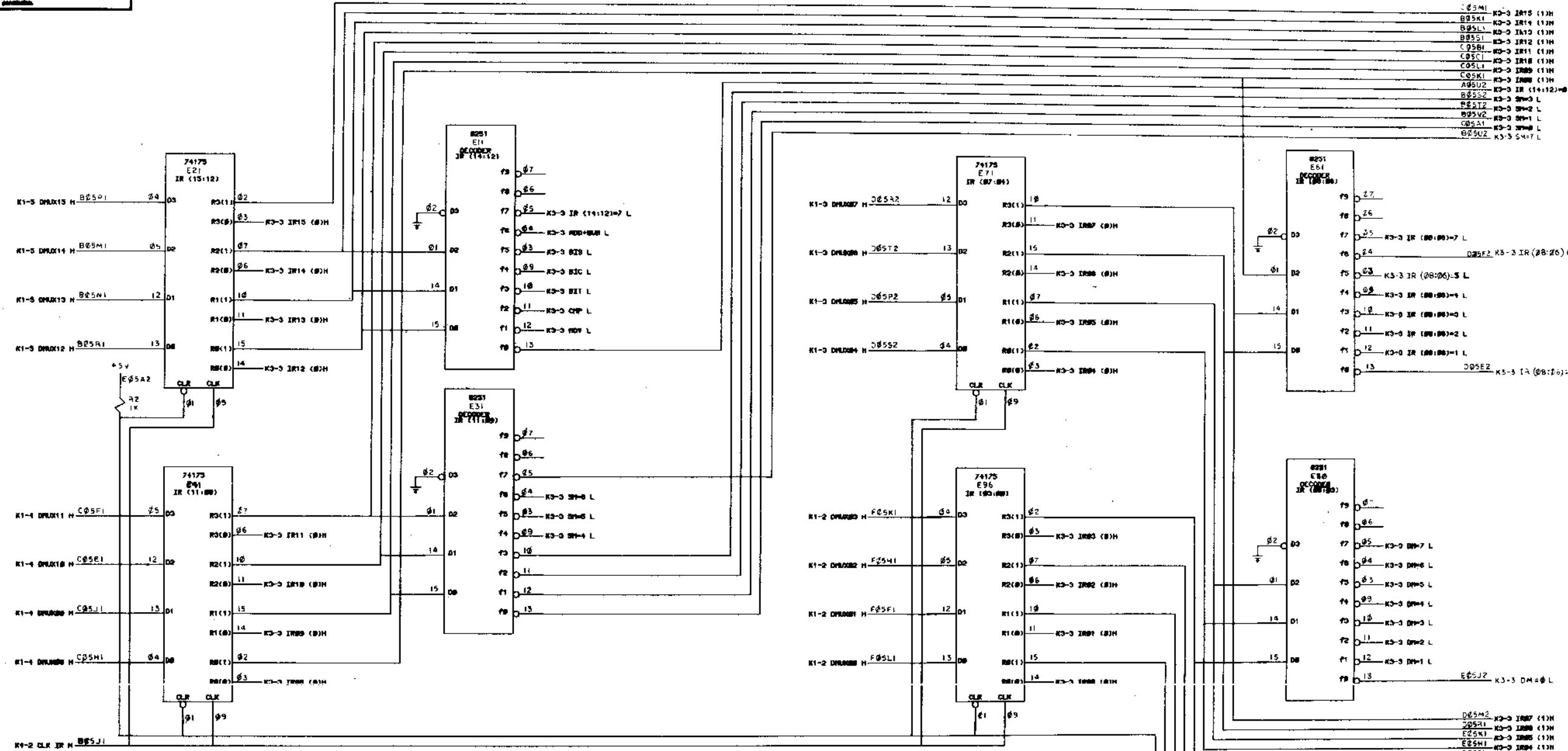
A

D

C

B

A



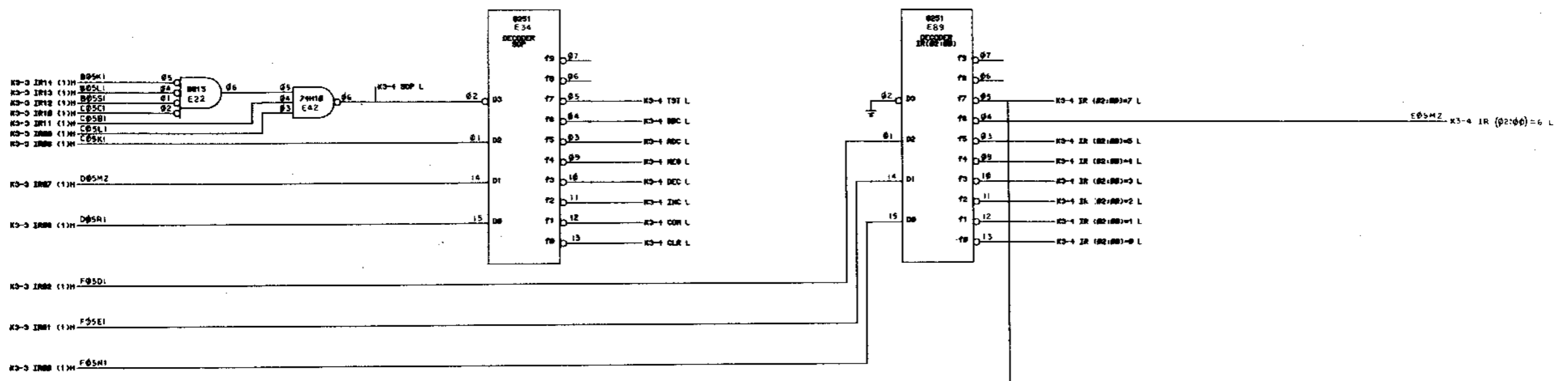
- 05MI K3-3 IR15 (1)H
- 05K1 K3-3 IR14 (1)H
- 05L1 K3-3 IR13 (1)H
- 05S1 K3-3 IR12 (1)H
- 05B1 K3-3 IR11 (1)H
- 05C1 K3-3 IR10 (1)H
- 05D1 K3-3 IR09 (1)H
- 05E1 K3-3 IR08 (1)H
- 05F1 K3-3 IR07 (1)H
- 05G1 K3-3 IR06 (1)H
- 05H1 K3-3 IR05 (1)H
- 05I1 K3-3 IR04 (1)H
- 05J1 K3-3 IR03 (1)H
- 05K1 K3-3 IR02 (1)H
- 05L1 K3-3 IR01 (1)H
- 05M1 K3-3 IR00 (1)H
- 05N1 K3-3 IR00 (1)H
- 05O1 K3-3 IR00 (1)H
- 05P1 K3-3 IR00 (1)H
- 05Q1 K3-3 IR00 (1)H
- 05R1 K3-3 IR00 (1)H
- 05S1 K3-3 IR00 (1)H
- 05T1 K3-3 IR00 (1)H
- 05U1 K3-3 IR00 (1)H
- 05V1 K3-3 IR00 (1)H
- 05W1 K3-3 IR00 (1)H
- 05X1 K3-3 IR00 (1)H
- 05Y1 K3-3 IR00 (1)H
- 05Z1 K3-3 IR00 (1)H

DEVICE TRUTH TABLE:
 8251
 FOR THE DECIMAL EQUIVALENCE, N, OF THE BINARY NUMBER (D3,D2,D1,D0), ONLY OUTPUT FN IS ACTIVE (LOW) FOR 0 ≤ N < 10

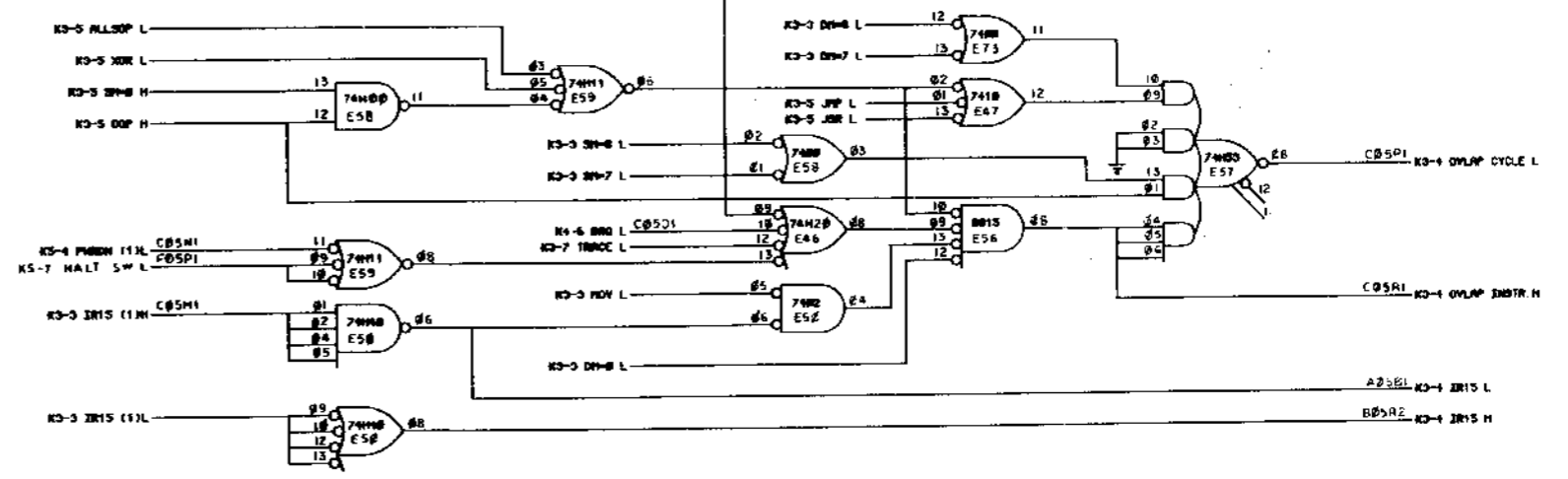
-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FRACTIONS DECIMALS ±.005 ±.005 ±.005 HOLE DRILLING QUALITY UNLESS OTHERWISE SPECIFIED	DATE 3-2-72	EQUIPMENT CORPORATION MILWAUKEE, WISCONSIN 53219
	DESIGNED BY CHECKED BY DRAWN BY DATE 12/1/72	
TITLE IR DECODE IR & DECODE K3-3		REV E
SCALE 1:1		DWG NO. M7235-0-1
SHEET 2 OF 5		DATE 12/1/72

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DEVICE TRUTH TABLE:
8251
 FOR THE DECIMAL EQUIVALENCE, N_2 OF THE BINARY NUMBER (D3, D2, D1, D0), ONLY OUTPUT N IS ACTIVE (LOW) FOR $0 \leq N < 16$



PRODUCED BY THE AUTOMATED DRAFTING SYSTEM

UNLESS OTHERWISE SPECIFIED TOLERANCES FRACTIONS DECIMALS DIMENSIONS HOLE DIA SHAFT DIA WALL THICKNESS FILLET RADIUS CHAMFER SURFACE FINISH MATERIAL	DATE 2-2-72 DATE 1/17/72 DATE 1/17/72 DATE 1/17/72	TITLE IR DECODE IR2 & OVLAP K3-4	EQUIPMENT CORPORATION MILWAUKEE, MASSACHUSETTS
DESIGNED BY CHECKED BY APPROVED BY	DATE 1/17/72 DATE 1/17/72 DATE 1/17/72	REV E	
PROJECT SHEET 4 OF 9	SCALE 1:1	REV E	

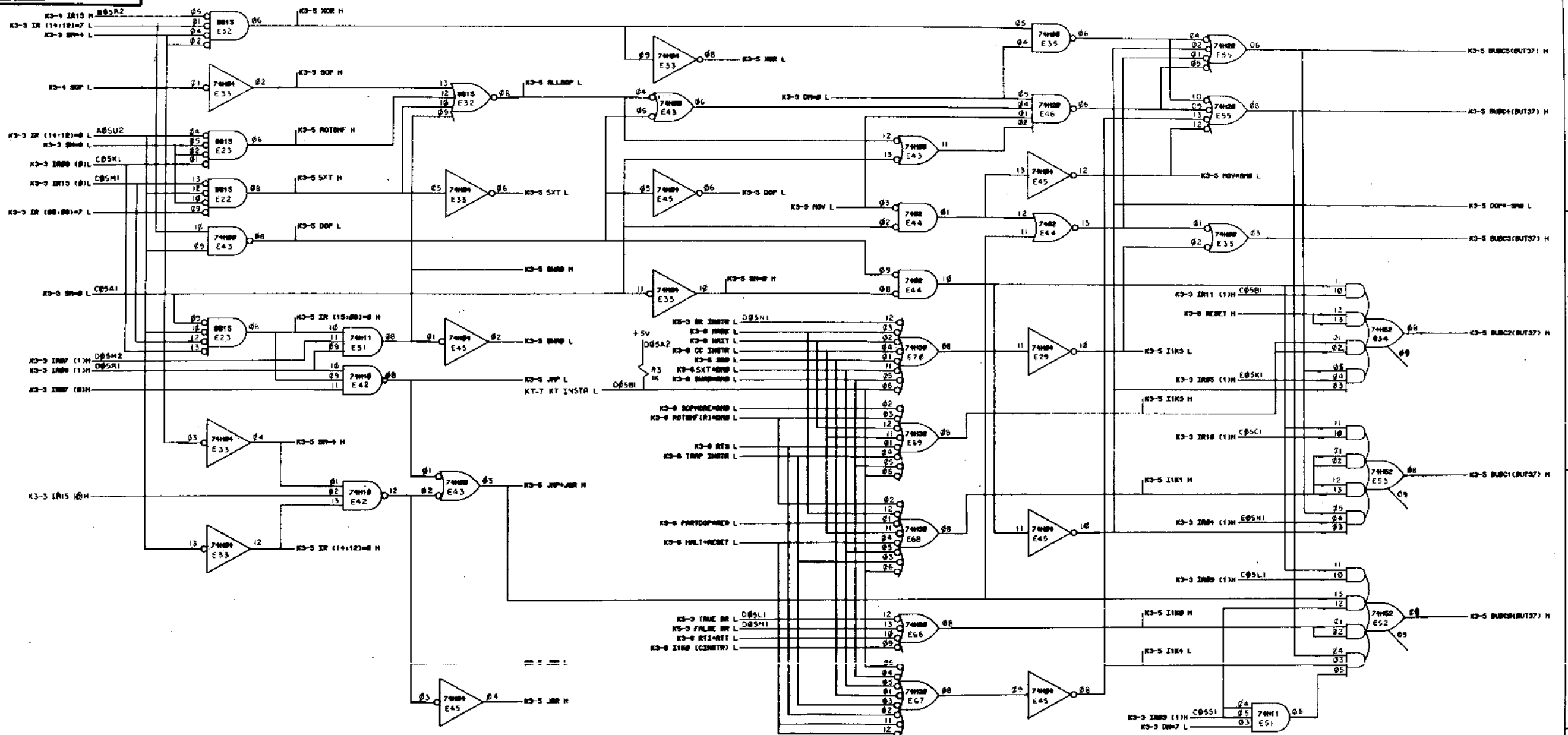
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D

C

B

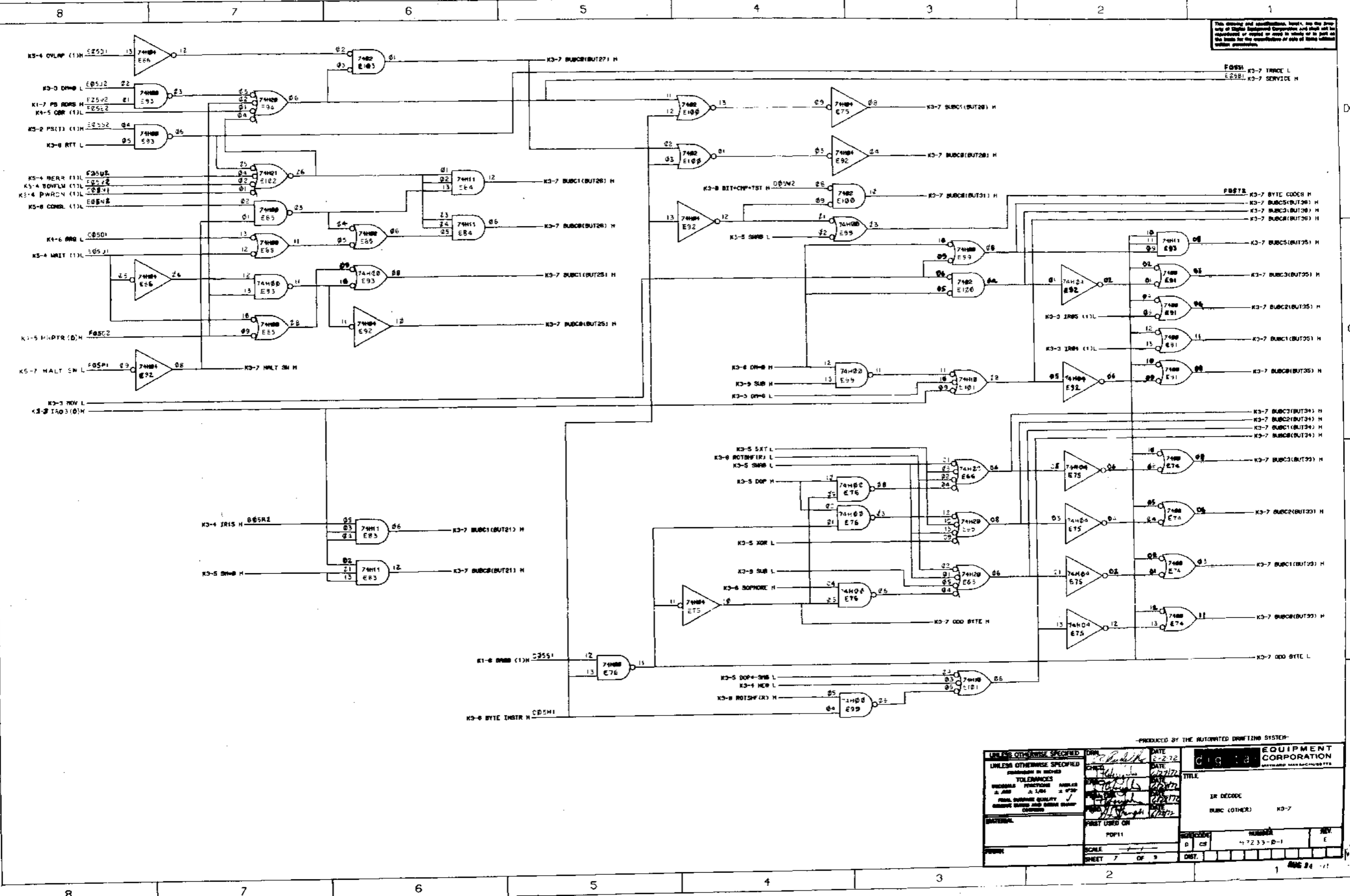
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PRODUCED BY THE AUTOMATED DRAWING SYSTEM

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES FINISHES SURFACE TREATMENT MATERIALS FULL DIMENSIONED UNLESS OTHERWISE SPECIFIED	DATE: 2-2-72 DRAWN: [Signature] CHECKED: [Signature] APPROVED: [Signature]	EQUIPMENT CORPORATION 1000 W. BROADWAY ST. LOUIS, MISSOURI 63102 TEL: (314) 437-1000 TELETYPE: (314) 437-1000
	TITLE: BY: [Signature] DESIGNED BY: [Signature]	
	PART NO.: M72.33-B-1 REV: 1 SHEET 5 OF 9	

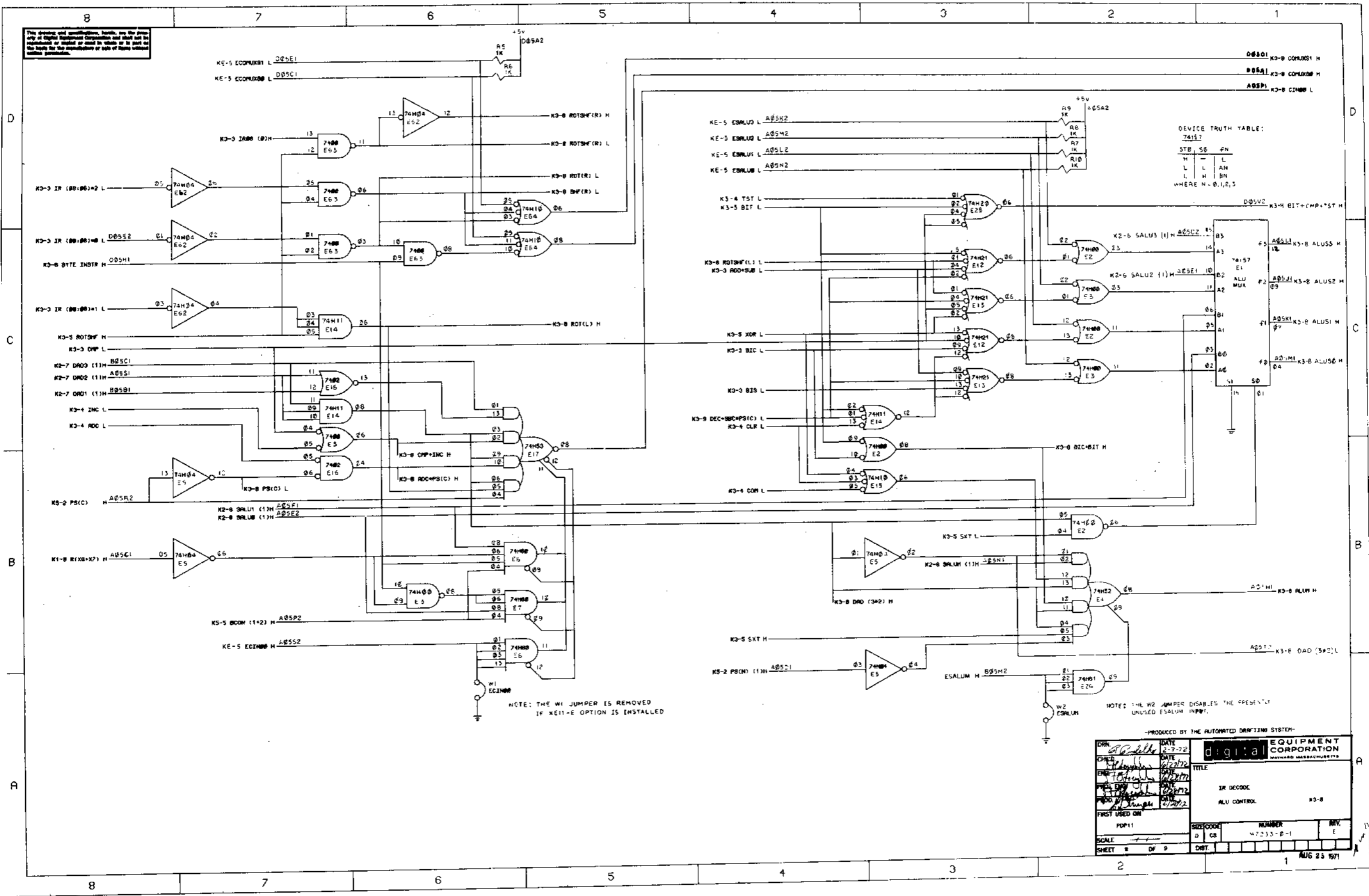
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PRODUCED BY THE AUTOMATED DRAWING SYSTEM

UNLESS OTHERWISE SPECIFIED TOLERANCES DIMENSIONS RESISTORS CAPACITORS PINS	DRAWN DATE CHECKED DATE APPROVED DATE	EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
		TITLE IR DECODE SUBC (OTHER) K3-7	REV. E
MATERIAL	FIRST USED ON POP11	SCALE D CS	NUMBER 4233-D-1
FORM	SHEET 7 OF 9	CHG.	DATE 84-11

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DEVICE TRUTH TABLE:
74157

STB	S0	FN
H	L	L
L	L	AM
L	H	BN

WHERE N = 0, 1, 2, 3

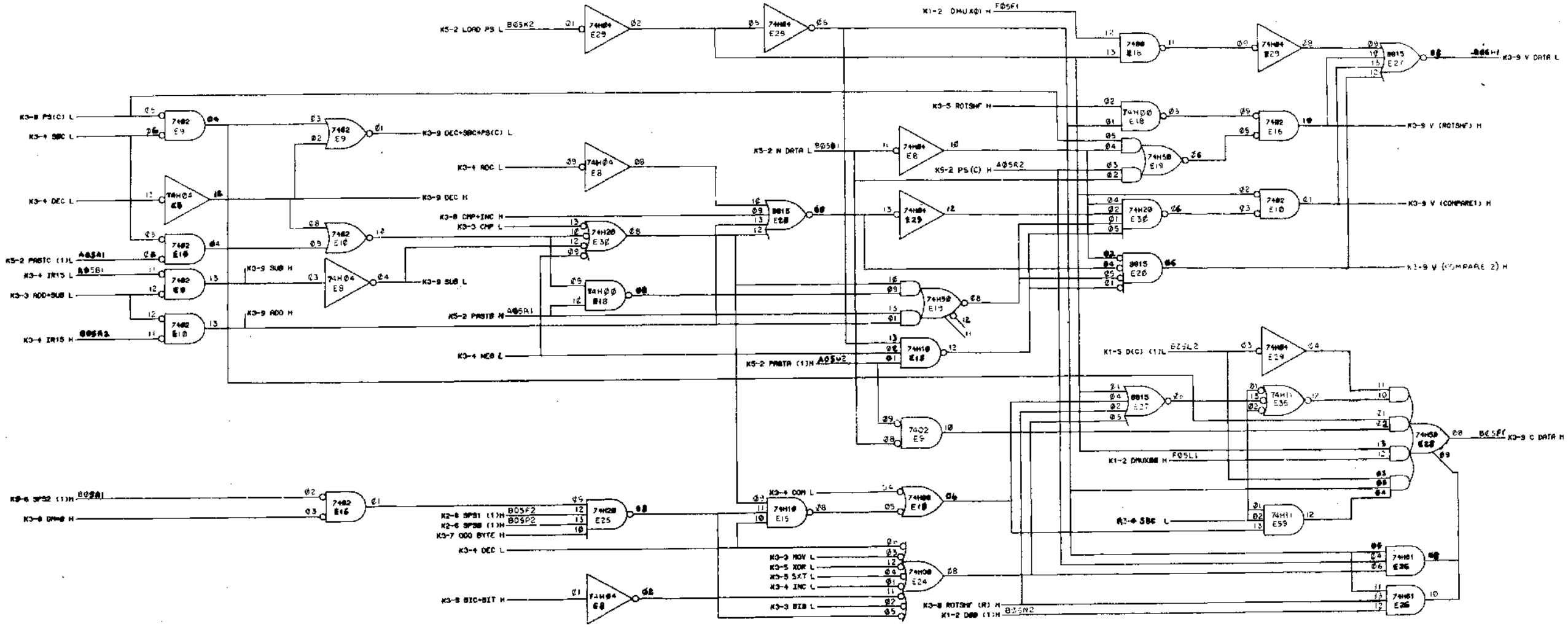
NOTE: THE W1 JUMPER IS REMOVED IF XE11-E OPTION IS INSTALLED

NOTE: THE W2 JUMPER DISABLES THE PRESENTLY UNUSED ESALUM INPUT.

-PRODUCED BY THE AUTOMATED DRAWING SYSTEM-

DRN: <i>[Signature]</i>	DATE: 2-3-72	DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHKD: <i>[Signature]</i>	DATE: 6/27/72	
ENG: <i>[Signature]</i>	DATE: 6/27/72	TITLE: IR DECODE
PRG: <i>[Signature]</i>	DATE: 6/27/72	ALU CONTROL
REV: <i>[Signature]</i>	DATE: 6/27/72	NUMBER: 47233-B-1
FIRST USED ON: POP11	SCALE: 1	REV: E
SHEET 1 OF 9	DATE: 1 AUG 25 1971	

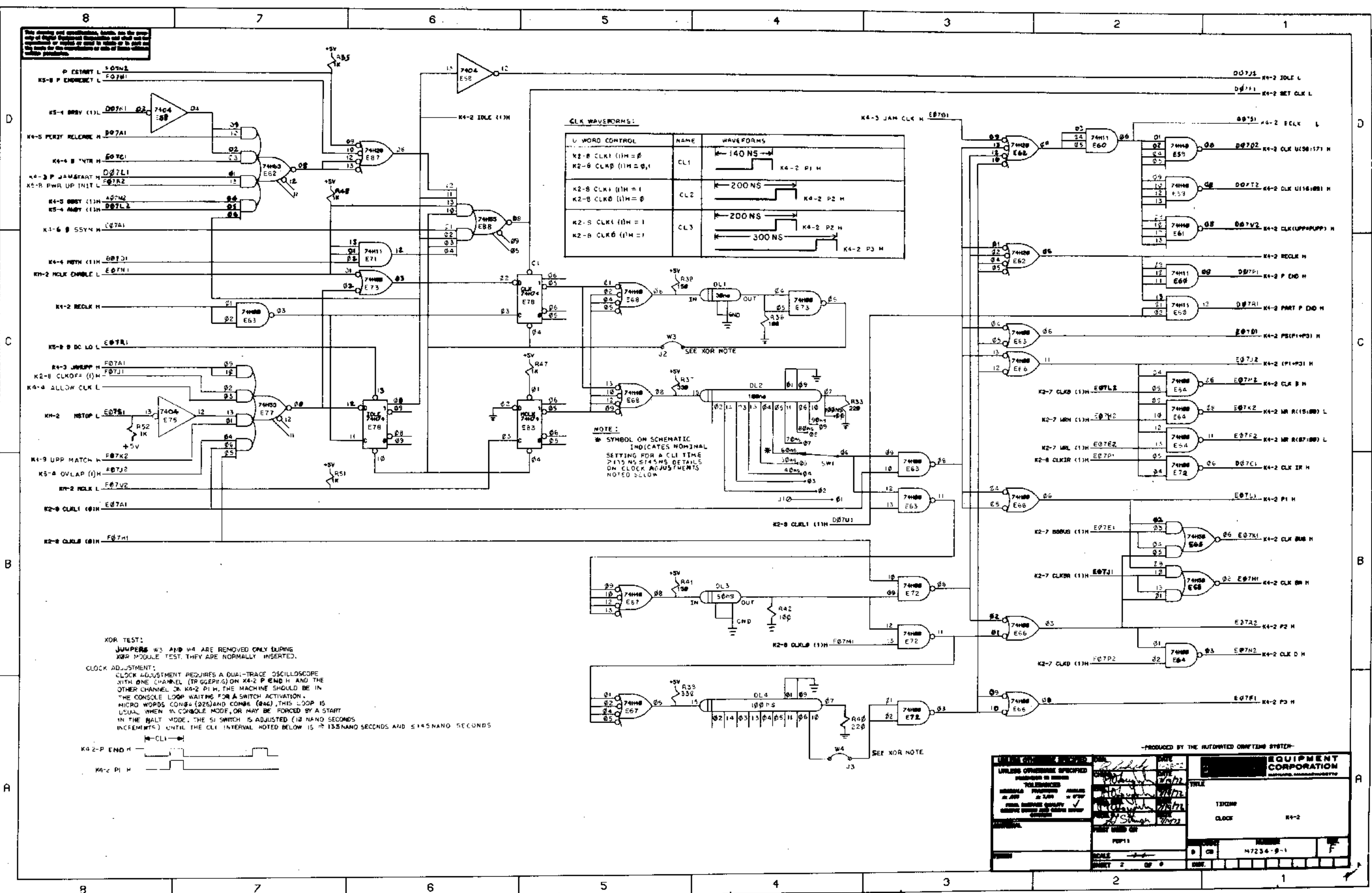
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PRODUCED BY THE AUTOMATED DRAFTING SYSTEM

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FRACTIONS DECIMALS ANGLES ± .005 ± .002 ± .010 SURFACE QUALITY FINISHES AND TREATMENTS AS SHOWN	DATE 2-3-78	EQUIPMENT CORPORATION MILWAUKEE, WISCONSIN 53122
	DATE 2/27/78	
DESIGNED BY R. P. Ball	DATE 2-3-78	PROJECT M7233-0-1
CHECKED BY R. P. Ball	DATE 2-3-78	SCALE 1:1
APPROVED BY R. P. Ball	DATE 2-3-78	SHEET 9 OF 9
DRAWN BY R. P. Ball	DATE 2-3-78	REV. E

See drawing and specification, herein, for the complete description of this equipment and the conditions of use. This equipment is furnished as shown and shall not be modified or altered in any way without the written approval of the manufacturer. The manufacturer shall not be responsible for any damage to the equipment or its contents caused by misuse or by failure to follow the instructions herein.



CLK WAVEFORMS:

V. WORD CONTROL	NAME	WAVEFORMS
K2-B CLK1 (1)H = 0 K2-B CLK0 (1)H = 0,1	CL1	140 NS K4-2 P1 H
K2-B CLK1 (1)H = 1 K2-B CLK0 (1)H = 0	CL2	200 NS K4-2 P2 H
K2-B CLK1 (1)H = 1 K2-B CLK0 (1)H = 1	CL3	200 NS 300 NS K4-2 P3 H

NOTE:
* SYMBOL ON SCHEMATIC INDICATES NOMINAL SETTING FOR A CLI TIME P115 NS. SEE DETAILS ON CLOCK ADJUSTMENTS NOTED BELOW.

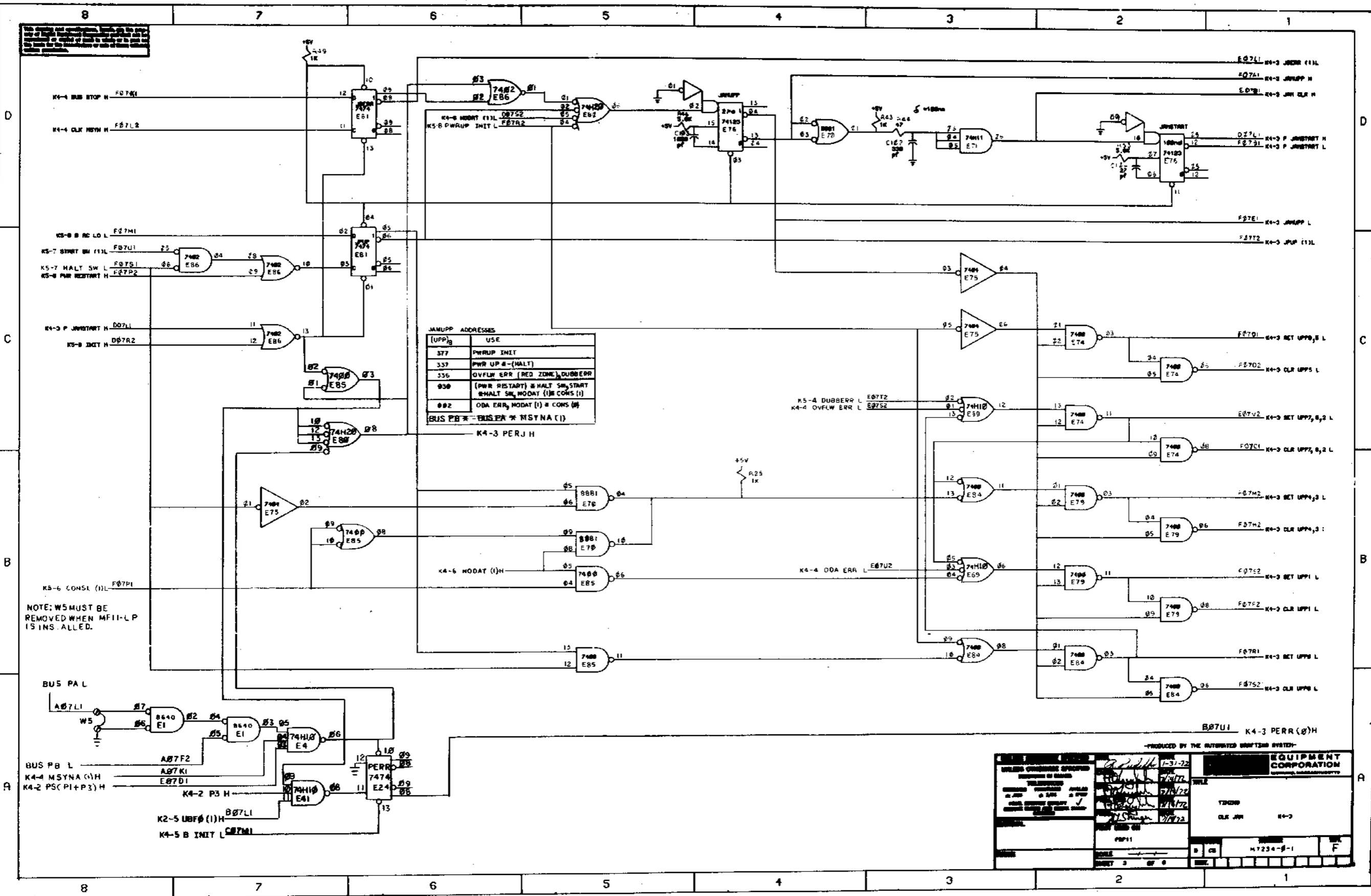
XOR TEST:
JUMPERS W3 AND W4 ARE REMOVED ONLY DURING XOR MODULE TEST. THEY ARE NORMALLY INSERTED.

CLOCK ADJUSTMENT:
CLOCK ADJUSTMENT REQUIRES A DUAL-TRACE OSCILLOSCOPE WITH ONE CHANNEL (TRIGGER) ON K4-2 P END H AND THE OTHER CHANNEL ON K4-2 P1 H. THE MACHINE SHOULD BE IN THE CONSOLE LOOP WAITING FOR A SWITCH ACTIVATION. MICRO WORDS COMB (226) AND COMB (246). THIS LOOP IS USUAL WHEN IN CONSOLE MODE, OR MAY BE FORCED BY A START IN THE HALT MODE. THE S1 SWITCH IS ADJUSTED (10 NANO SECONDS INCREMENTS) UNTIL THE CLI INTERVAL NOTED BELOW IS 135 NANO SECONDS AND 145 NANO SECONDS.



PRODUCED BY THE AUTOMATED DRAFTING SYSTEM

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN MILLIMETERS TOLERANCES HOLE POSITION ± 0.10 HOLE DIA ± 0.05 HOLE DEPTH ± 0.10 HOLE CHAMFER 45°	DATE: 10/22/71 DRAWN: [Signature] CHECKED: [Signature] APPROVED: [Signature]	TITLE: EQUIPMENT CORPORATION N7234-9-1
SCALE: 1:1 SHEET 2 OF 8	REV: 1 DATE: 10/22/71	130000 CLOCK K4-2



JAMUPP ADDRESSES

[UPP] ₁₀	USE
377	PWRUP INIT
337	PWR UP & (HALT)
336	OVFLW ERR (RED ZONE), DUBBER
030	{PWR RESTART} & HALT SW START {HALT SW NODAT (1) & CONS (1)}
002	ODA ERR, NODAT (1) & CONS (0)

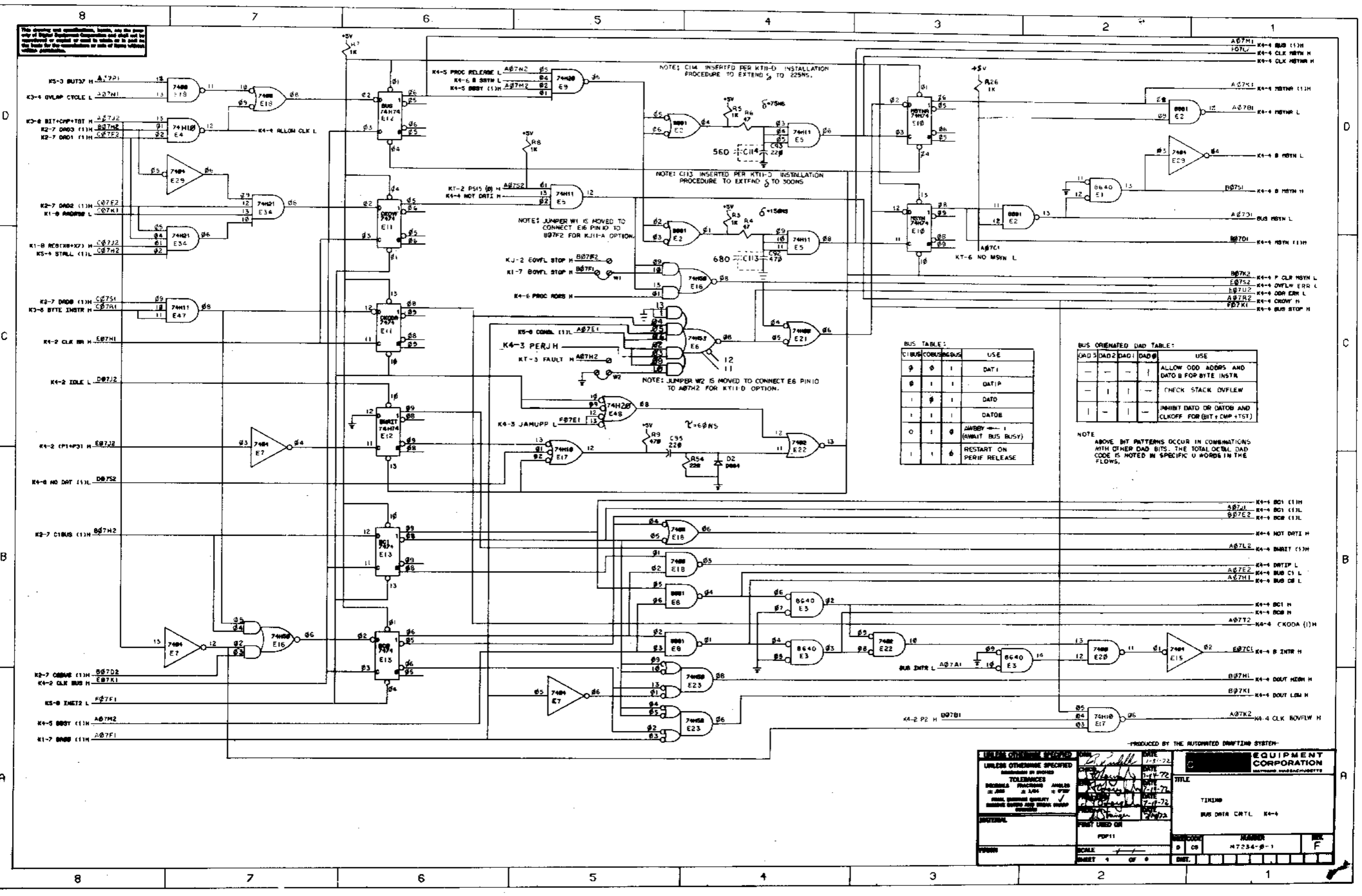
BUS PA * BUS PB * MSYNA (1)
K4-3 PER J H

NOTE: W5 MUST BE REMOVED WHEN MF11-L P IS INS ALLED.

PRODUCED BY THE AUTOMATED DRAWING SYSTEM

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FINISHES SURFACE TREATMENTS COATING REQUIREMENTS SPECIAL REQUIREMENTS	1-31-72 7/1/72 7/1/72 7/1/72 7/1/72	EQUIPMENT CORPORATION AUTOMATIC DRAWING SYSTEM
		TITLE TDR09 CLR JAM K4-3
PART 11	7234-0-1	F
SHEET 2 OF 6		

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NOTE: C14 INSERTED PER KIT-D INSTALLATION PROCEDURE TO EXTEND t_p TO 225NS.

NOTE: C13 INSERTED PER KIT-D INSTALLATION PROCEDURE TO EXTEND t_p TO 300NS.

NOTES JUMPER W1 IS MOVED TO CONNECT E6 PIN10 TO B07F2 FOR KIT-A OPTION.

NOTE: JUMPER W2 IS MOVED TO CONNECT E6 PIN10 TO A07H2 FOR KIT-D OPTION.

CIBUS	C0BUS	B0BUS	USE
0	0	1	DAT1
0	1	1	DATP
1	0	1	DAT0
1	1	1	DAT0B
0	1	0	A07BY ← 1 (AWAIT BUS BUSY)
1	1	0	RESTART ON PERIF RELEASE

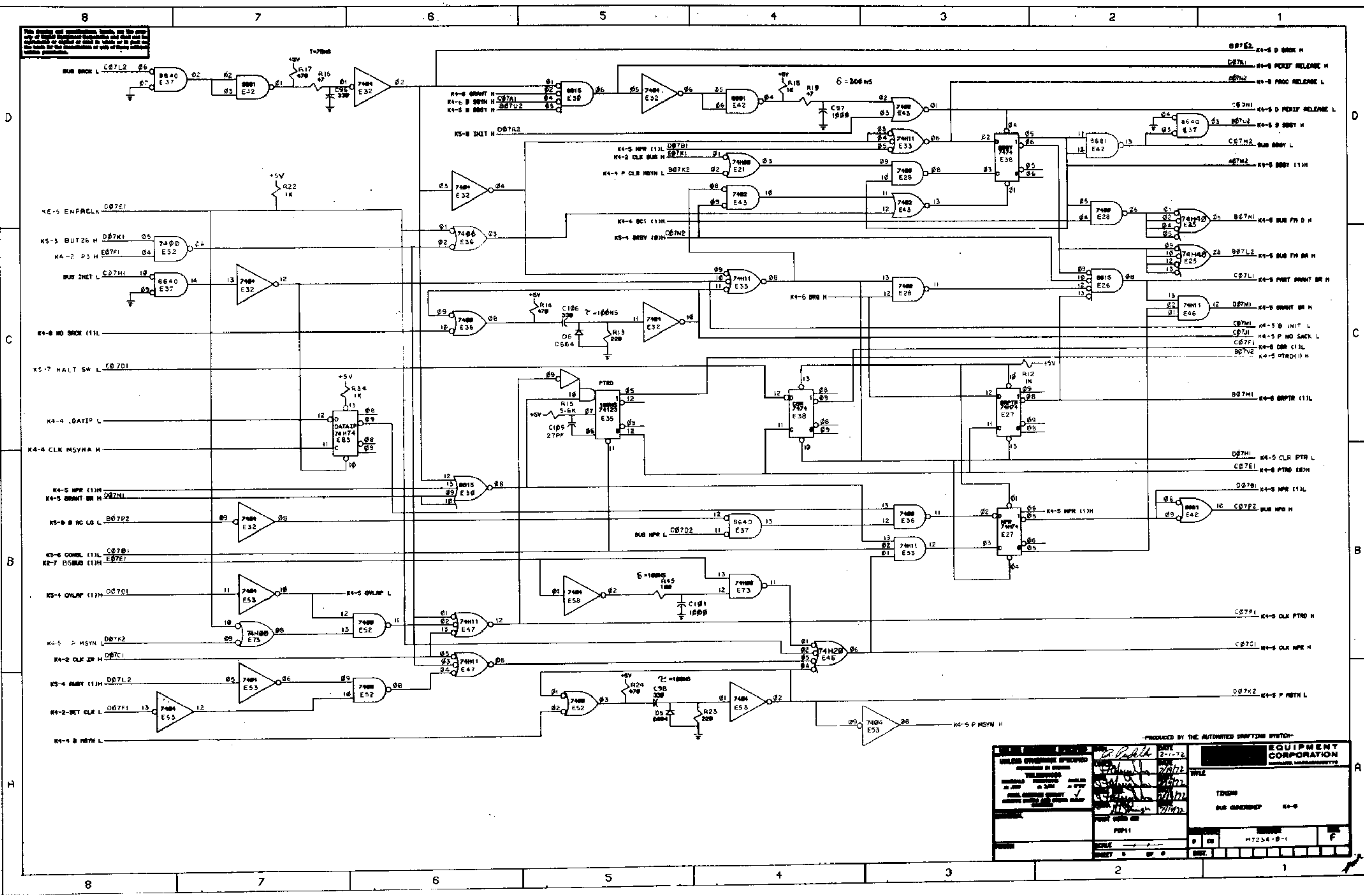
DAD3	DAD2	DAD1	DAD0	USE
-	-	-	1	ALLOW ODD ADDRS AND DAT0 B FOR BYTE INSTR.
-	1	1	-	CHECK STACK OVFLOW
1	-	1	-	INHIBIT DAT0 DR DAT0B AND CLKOFF FOR (BIT+CMP+ST5)

NOTE: ABOVE BIT PATTERNS OCCUR IN COMBINATIONS WITH OTHER DAD BITS. THE TOTAL OCTAL DAD CODE IS NOTED IN SPECIFIC U WORDS IN THE FLOWS.

PRODUCED BY THE AUTOMATED DRAWING SYSTEM

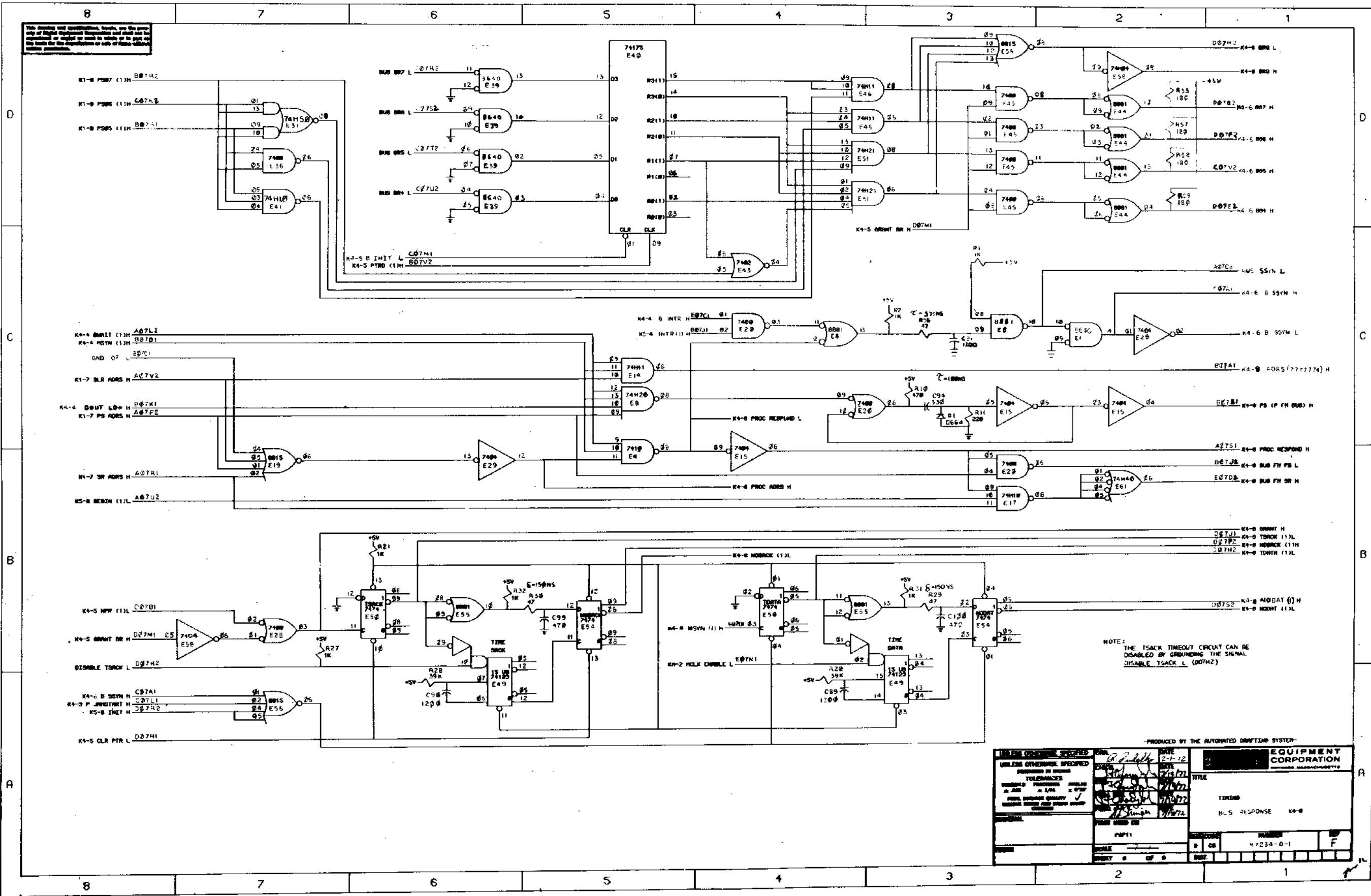
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE SHOWN		DATE: 1-5-72	EQUIPMENT CORPORATION MILFORD, MASSACHUSETTS
DIMENSIONS IN INCHES		DATE: 1-17-72	
DIGITAL EQUIPMENT CORPORATION	DATE: 7-11-71	DATE: 7-11-72	TITLE: BUS DATA CTRL K4-4
DESIGNED BY: J. R. RYAN	DATE: 7-11-71	DATE: 7-11-72	REV. CODE: D CS
CHECKED BY: J. R. RYAN	DATE: 7-11-71	DATE: 7-11-72	REVISION: 47254-B-1
APPROVED BY: J. R. RYAN	DATE: 7-11-71	DATE: 7-11-72	SCALE: 1/8" = 1"
DRAWN BY: J. R. RYAN	DATE: 7-11-71	DATE: 7-11-72	SHEET: 4 OF 8

This drawing and specifications, taken as the basis of any purchase order, shall not be construed as a contract or used in any way to limit the liability of the manufacturer of any of the items shown herein.



UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS DECIMALS .005 .010 .015 .020 .030 .040 .050 .060 .070 .080 .090 .100 .125 .150 .175 .200 .250 .300 .350 .400 .450 .500 .562 .625 .700 .750 .800 .875 .937 .987 ANGLES SHOWN UNLESS OTHERWISE SPECIFIED DIMENSIONS IN DEGREES .5 .75 1.0 1.25 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5 10.0 .125 .150 .175 .200 .250 .300 .350 .400 .450 .500 .562 .625 .700 .750 .800 .875 .937 .987 HOLE DIA. UNLESS OTHERWISE SPECIFIED .005 .010 .015 .020 .030 .040 .050 .060 .070 .080 .090 .100 .125 .150 .175 .200 .250 .300 .350 .400 .450 .500 .562 .625 .700 .750 .800 .875 .937 .987 TYPICAL DIMENSIONS UNLESS OTHERWISE SPECIFIED .005 .010 .015 .020 .030 .040 .050 .060 .070 .080 .090 .100 .125 .150 .175 .200 .250 .300 .350 .400 .450 .500 .562 .625 .700 .750 .800 .875 .937 .987 HOLE DIA. UNLESS OTHERWISE SPECIFIED .005 .010 .015 .020 .030 .040 .050 .060 .070 .080 .090 .100 .125 .150 .175 .200 .250 .300 .350 .400 .450 .500 .562 .625 .700 .750 .800 .875 .937 .987		DATE: 2-11-72 DRAWN: [Signature] CHECKED: [Signature] APPROVED: [Signature] TITLE: [Blank] TENDR: [Blank] BUS. OPERATED: K4-5	EQUIPMENT CORPORATION 17234-B-1 F
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UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES
FRACTIONS DECIMALS ANGLES
FRACTIONS DECIMALS ANGLES
FRACTIONS DECIMALS ANGLES
FRACTIONS DECIMALS ANGLES

DATE: 2-1-72
DRAWN: [Signature]
CHECKED: [Signature]
APPROVED: [Signature]

TITLE: BUS RESPONSE K4-6

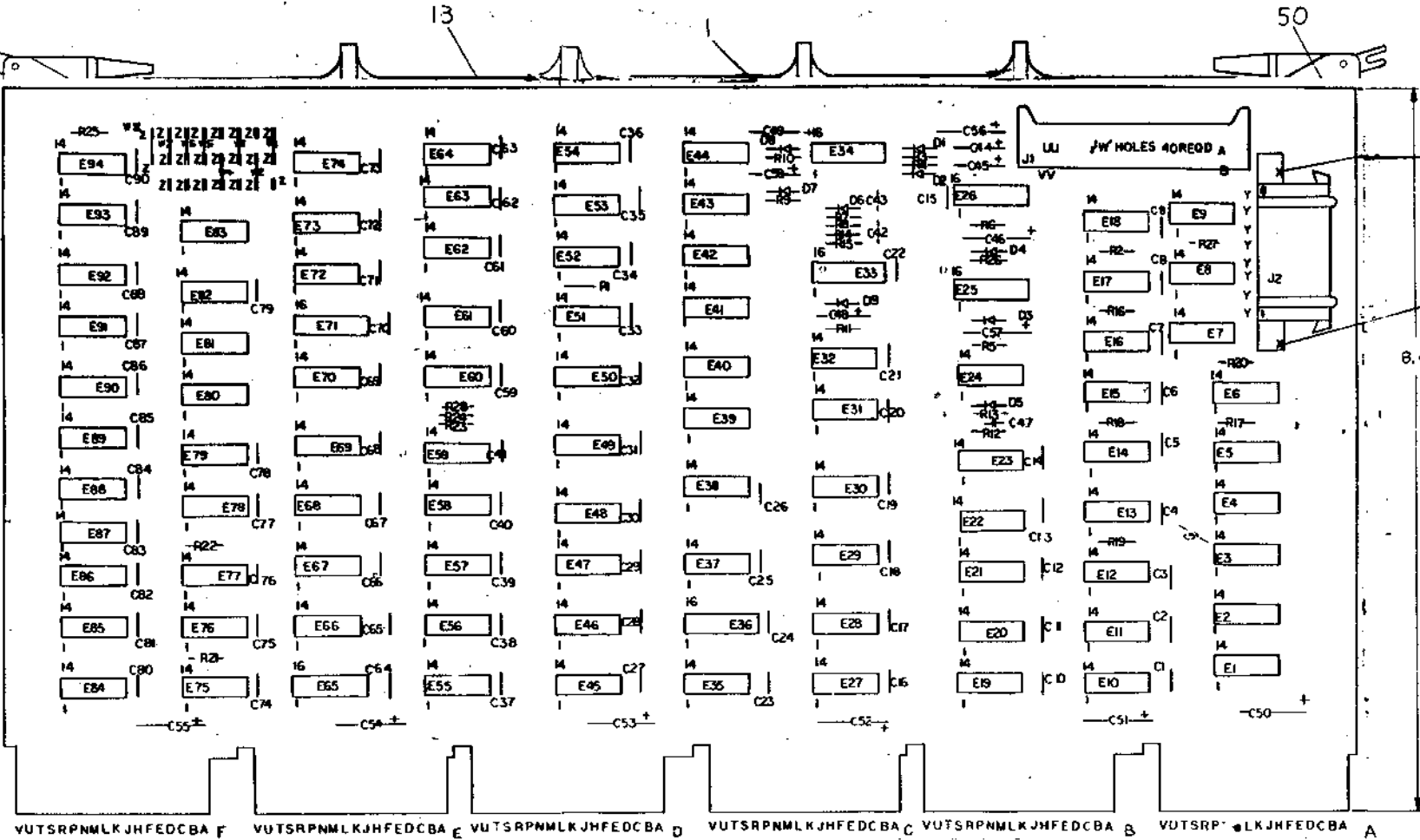
FIGURE: 47234-0-1

PRODUCED BY THE AUTOMATED DRAFTING SYSTEM

NOTES:

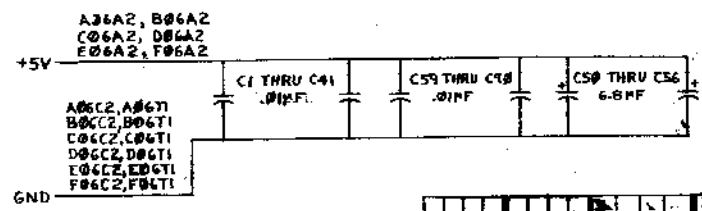
- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE KDI1-A PROCESSOR. MODULE REFERENCE ABOVE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE LETTER.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED. OUTPUT SIGNALS WITH MODULE PINS ARE BROUGHT TO THE RIGHT SIDE OF THE PRINT.

- PROCESSOR SIGNAL PREFIX NOTATION (K2-1, FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE, PRINT, SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- UNLESS OTHERWISE NOTED: RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICOFARRADS.



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	C91	CAP. 270PF 100V 5%	1000012	54
8		INSULATED JUMPER L-2207-1	9007185	53
2		HEX NUT NYLON	9007192	52
23		SPLIT LUG	9006735	51
12		EYELET	9006732	50
2		SHOULDER WASHER FIBER (BLK)	9006493	49
2		SCREW NYLON	9006401-4	48
1	E65	I.C. DEC 74157	1910455	47
4	E25, E26, E33, E34	I.C. DEC 74123	1910426	46
4	E24, E45, E60, E82	I.C. DEC 74H04	1909931	45
5	E13, E37, E58, E70, E81	I.C. DEC 8805	1909773	44
5	E16, E84, E85, E89, E89	I.C. DEC 8881	1909705	43
7	E1 THRU E4, E20, E29, E41	I.C. DEC 7404	1909686	42
1	E52	I.C. DEC 74H74	1909667	41
2	E36, E71	I.C. DEC 8251	1909594	40
1	E15	I.C. DEC 8640	1911469	39
4	E14, E40, E49, E72	I.C. DEC 74H11	1909267	38
1	E55	I.C. DEC 74H61	1909065	37
1	E66	I.C. DEC 74H60	1909064	36
1	E59	I.C. DEC 74H55	1909063	35
2	E91, E92	I.C. DEC 74H53	1909062	34
2	E63, E67	I.C. DEC 74H52	1909061	33
4	E47, E56, E69, E87	I.C. DEC 74H50	1909060	32
1	E22	I.C. DEC 74H21	1909058	31
4	E7, E68, E80, E83	I.C. DEC 74H10	1909057	30
2	E57, E90	I.C. DEC 74H00	1909056	29
7	E5, E27, E28, E35, E39, E49, E54	I.C. DEC 7402	1909004	28
1	E46	I.C. DEC 74H20	1908635	27
3	E17, E18, E86	I.C. DEC 74H40	1905586	26
2	E31, E64	I.C. DEC 7450	1905580	25
2				24
2	E9, E94	I.C. DEC 7430	1905578	23
4	E8, E19, E43, E93	I.C. DEC 7420	1905577	22
3	E38, E51, E53	I.C. DEC 7410	1905576	21
7	E16, E21, E22, E30, E73, E74	I.C. DEC 7400	1905575	20
13	E4, E10, E12, E32, E42, E44, E50, E61, E75 THRU E79	I.C. DEC 7474	1905547	19
4	R3, R4, R5, R6	RES 1/8K 1/4W ±5%	1302465	18
4	R9, R10, R11, R15	RES 12K 1/4W ±5%	1300488	17
16	R12, R14, R16 THRU R28	RES 1K 1/4W ±5%	1300365	16
2	R8, R12	RES 470Ω 1/4W ±5%	1300316	15
2	R7, R13	RES 220Ω 1/4W ±5%	1300271	14
7		HANDLE MODULE	1210711-02	13
8		PINS SOCKET AMP	1209456	12
1	J1	CONN RIGHT ANGLE HEADER	1209441	11
1	J2	CONN PIN HOUSING	1209340	10
9	D1 THRU D4	DIODE DG64	1100114	9
7	C50 THRU C56	CAP 6.8MF 35V ±10% TANT	1005306	8
2	C46, C57	CAP 15MF 20V ±10% TANT	1004812	7
1	C48	CAP 2.2KF 20V ±10% TANT	1002427	6
1	C58	CAP 1MF 35V ±10% TANT	1001776	5
73	C1 THRU C41	CAP 0.1MF 100V ±20% DISC	1001610	4
3	C44, C45, C49	CAP 3.9MF 10V ±10% TANT	1000064	3
7	C42, C43, C47	CAP 680PF 100V ±5% B.M.	1000026	2

IC TYPE	QTY	LOCATIONS
DEC 74157	8	B 16
DEC 74123	8	B 16
DEC 8251	8	B 16
DEC 8640	1	B
IC TYPE	GND	+5V



REV	DESCRIPTION	DATE	BY
1	ORIGINAL	7-25-72	J. ROGERS
2	CHANGED NO. 1	7-25-72	J. ROGERS
3	CHANGED NO. 2	7-25-72	J. ROGERS
4	CHANGED NO. 3	7-25-72	J. ROGERS
5	CHANGED NO. 4	7-25-72	J. ROGERS
6	CHANGED NO. 5	7-25-72	J. ROGERS
7	CHANGED NO. 6	7-25-72	J. ROGERS
8	CHANGED NO. 7	7-25-72	J. ROGERS
9	CHANGED NO. 8	7-25-72	J. ROGERS
10	CHANGED NO. 9	7-25-72	J. ROGERS
11	CHANGED NO. 10	7-25-72	J. ROGERS
12	CHANGED NO. 11	7-25-72	J. ROGERS
13	CHANGED NO. 12	7-25-72	J. ROGERS
14	CHANGED NO. 13	7-25-72	J. ROGERS
15	CHANGED NO. 14	7-25-72	J. ROGERS
16	CHANGED NO. 15	7-25-72	J. ROGERS
17	CHANGED NO. 16	7-25-72	J. ROGERS
18	CHANGED NO. 17	7-25-72	J. ROGERS
19	CHANGED NO. 18	7-25-72	J. ROGERS
20	CHANGED NO. 19	7-25-72	J. ROGERS
21	CHANGED NO. 20	7-25-72	J. ROGERS
22	CHANGED NO. 21	7-25-72	J. ROGERS
23	CHANGED NO. 22	7-25-72	J. ROGERS
24	CHANGED NO. 23	7-25-72	J. ROGERS
25	CHANGED NO. 24	7-25-72	J. ROGERS
26	CHANGED NO. 25	7-25-72	J. ROGERS
27	CHANGED NO. 26	7-25-72	J. ROGERS
28	CHANGED NO. 27	7-25-72	J. ROGERS
29	CHANGED NO. 28	7-25-72	J. ROGERS
30	CHANGED NO. 29	7-25-72	J. ROGERS
31	CHANGED NO. 30	7-25-72	J. ROGERS
32	CHANGED NO. 31	7-25-72	J. ROGERS
33	CHANGED NO. 32	7-25-72	J. ROGERS
34	CHANGED NO. 33	7-25-72	J. ROGERS
35	CHANGED NO. 34	7-25-72	J. ROGERS
36	CHANGED NO. 35	7-25-72	J. ROGERS
37	CHANGED NO. 36	7-25-72	J. ROGERS
38	CHANGED NO. 37	7-25-72	J. ROGERS
39	CHANGED NO. 38	7-25-72	J. ROGERS
40	CHANGED NO. 39	7-25-72	J. ROGERS
41	CHANGED NO. 40	7-25-72	J. ROGERS
42	CHANGED NO. 41	7-25-72	J. ROGERS
43	CHANGED NO. 42	7-25-72	J. ROGERS
44	CHANGED NO. 43	7-25-72	J. ROGERS
45	CHANGED NO. 44	7-25-72	J. ROGERS
46	CHANGED NO. 45	7-25-72	J. ROGERS
47	CHANGED NO. 46	7-25-72	J. ROGERS
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52	CHANGED NO. 51	7-25-72	J. ROGERS
53	CHANGED NO. 52	7-25-72	J. ROGERS
54	CHANGED NO. 53	7-25-72	J. ROGERS
55	CHANGED NO. 54	7-25-72	J. ROGERS
56	CHANGED NO. 55	7-25-72	J. ROGERS
57	CHANGED NO. 56	7-25-72	J. ROGERS
58	CHANGED NO. 57	7-25-72	J. ROGERS
59	CHANGED NO. 58	7-25-72	J. ROGERS
60	CHANGED NO. 59	7-25-72	J. ROGERS
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63	CHANGED NO. 62	7-25-72	J. ROGERS
64	CHANGED NO. 63	7-25-72	J. ROGERS
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68	CHANGED NO. 67	7-25-72	J. ROGERS
69	CHANGED NO. 68	7-25-72	J. ROGERS
70	CHANGED NO. 69	7-25-72	J. ROGERS
71	CHANGED NO. 70	7-25-72	J. ROGERS
72	CHANGED NO. 71	7-25-72	J. ROGERS
73	CHANGED NO. 72	7-25-72	J. ROGERS

FIRST USED ON OPTION MODEL PDP 11

ETCH BOARD REV E

DATE: 7-25-72
 DESIGNED BY: J. ROGERS
 CHECKED BY: J. ROGERS
 DRAWN BY: J. ROGERS
 NEXT HIGHER ASSY: KDI1-A

SCALE: NONE

SHEET 1 OF 2

SEMICONDUCTOR CONVERSION CHART

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

DG64 IN3606

STATUS

QTY REF DESIGNATION DESCRIPTION PART NO. ITEM NO.

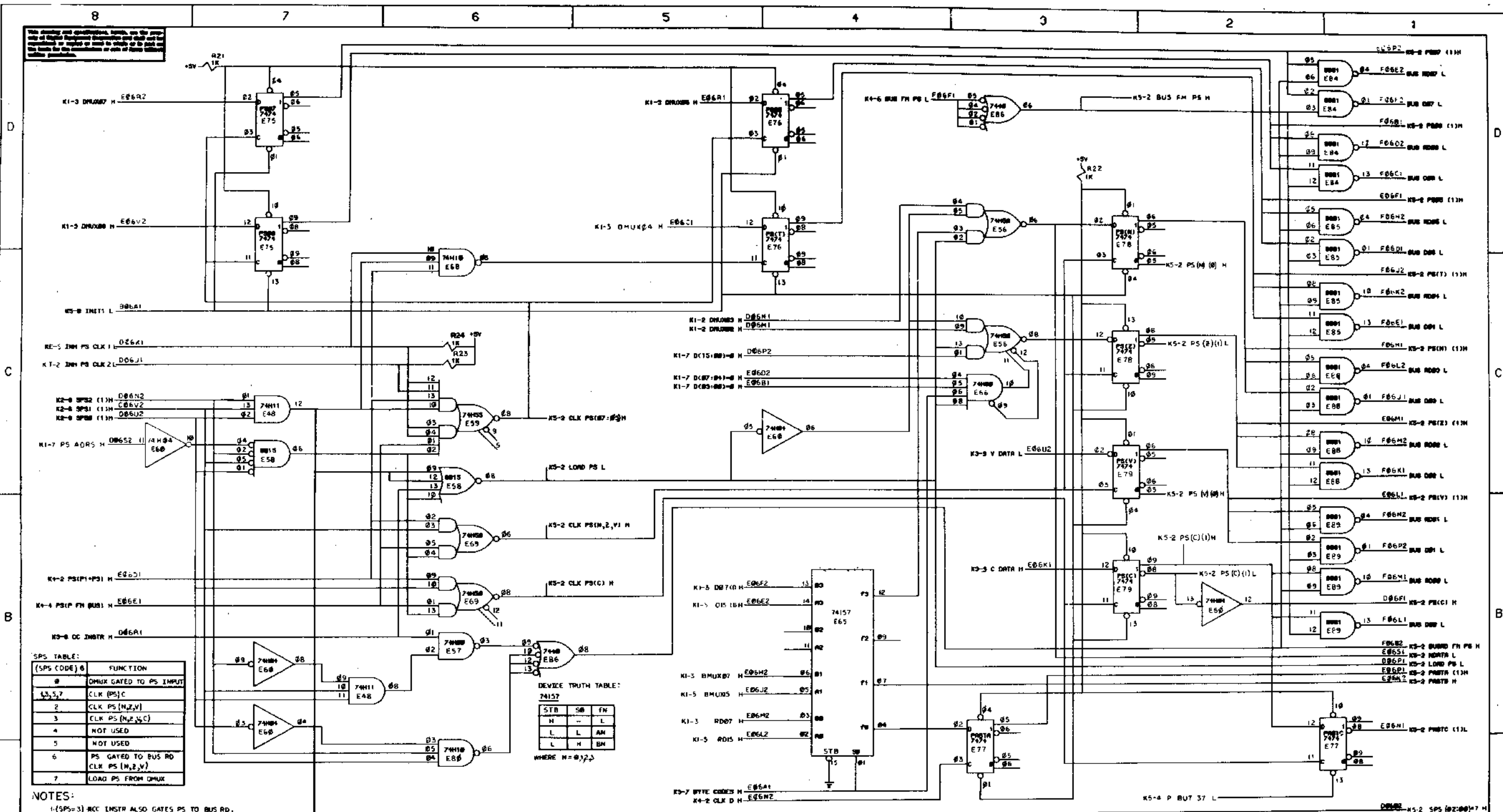
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D

C

B

A



SPS TABLE:

(SPS CODE) 6	FUNCTION
0	DMUX GATED TO PS INPUT
1,3,5,7	CLK (PS)C
2	CLK PS (N,Z,V)
3	CLK PS (N,Z,W,C)
4	NOT USED
5	NOT USED
6	PS GATED TO BUS RD CLK PS (N,Z,V)
7	LOAD PS FROM DMUX

- NOTES:
- (SPS=3) MCC INSTR ALSO GATES PS TO BUS RD.
 - SPS0 BIT ALWAYS ENABLES THE CLK PS(C) SIGNAL.
 - SPS1 BIT ALWAYS ENABLES THE CLK PS(N,Z,V) SIGNAL.

DEVICE TRUTH TABLE:

STB	S0	FN
H	-	L
L	L	AM
L	H	BN

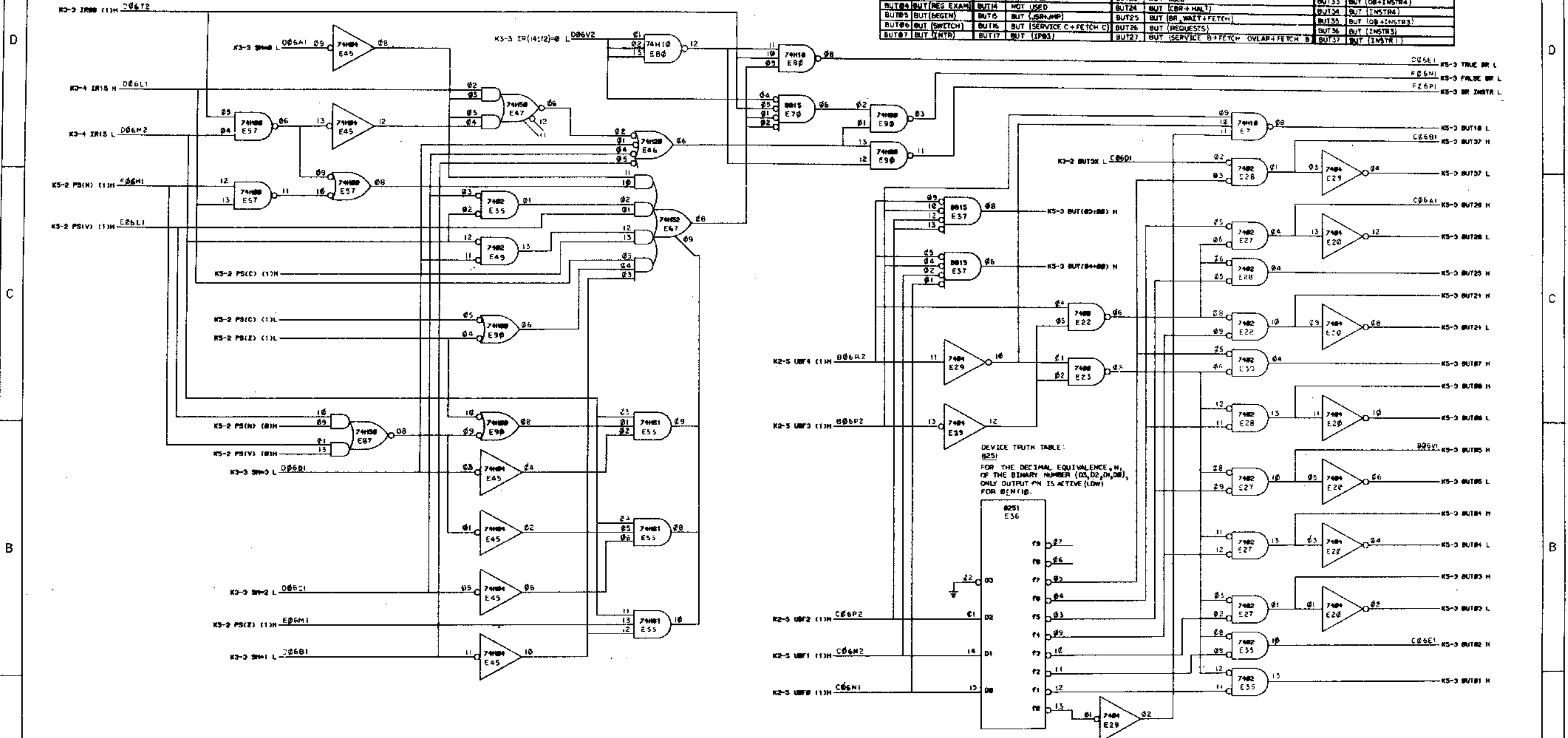
WHERE N=0,1,2,3

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES		EQUIPMENT CORPORATION	
TOLERANCES	DATE 7-4-72	TITLE	
DIMENSIONS FINISHED SURFACES	DESIGNED BY [Signature]	STATUS	
±.005	APPROVED BY [Signature]	PS (07-00) K5-2	
±.010	DATE 7-2-72	NUMBER	
±.015	DESIGNED BY [Signature]	M7235-B-1	
±.030	DATE 7-2-72	REV. M	
±.060	DATE 7-2-72	REV. H	
±.125	DATE 7-2-72	REV. G	
±.250	DATE 7-2-72	REV. F	
±.500	DATE 7-2-72	REV. E	
±1.000	DATE 7-2-72	REV. D	
±2.000	DATE 7-2-72	REV. C	
±4.000	DATE 7-2-72	REV. B	
±8.000	DATE 7-2-72	REV. A	

The design and construction, including the assembly of the instrument chassis, shall not be approved or used in whole or in part as the basis for the construction of any other similar instrument.

BUT TABLE (NUMERICAL/MNEMONIC CORRESPONDENCE):

BUT08	NO OP	BUT10	BUT (HALT)	BUT20	BUT (BYTE + SERVICE + FETCH)	BUT38	BUT (VARIOUS SWITCHES)
BUT01	BUT (CRR)	BUT11	BUT (MM FAULT)	BUT21	BUT (TRBS, BYTE + SOURCE)	BUT31	BUT (NOWR + BYTEWR + WORDWR)
BUT02	BUT (CRR)	BUT12	BUT (D=0)	BUT22	BUT (BYTE + SOURCE)	BUT32	NOT USED
BUT03	BUT (REG EXP)	BUT13	NOT USED	BUT23	NOT USED	BUT33	BUT (O0+INSTR4)
BUT04	BUT (REG EXAM)	BUT14	NOT USED	BUT24	BUT (CRR + HALT)	BUT34	BUT (INSTR8)
BUT05	BUT (BEGIN)	BUT15	BUT (JRN,AMP)	BUT25	BUT (OR, WAIT + FETCH)	BUT35	BUT (OR + INSTR3)
BUT06	BUT (SWITCH)	BUT16	BUT (SERVICE C + FETCH C)	BUT26	BUT (REQUESTS)	BUT36	BUT (INSTR3)
BUT07	BUT (INTR)	BUT17	BUT (IPB3)	BUT27	BUT (SERVICE B + FETCH OVLAP + FETCH B)	BUT37	BUT (INSTR1)



DEVICE TRUTH TABLE:
 B25!
 FOR THE DECIMAL EQUIVALENCE, N,
 OF THE BINARY NUMBER (D5, D4, D3, D2, D1, D0),
 ONLY OUTPUT PN IS ACTIVE (LOW)
 FOR 0 ≤ N < 10.

PRODUCED BY THE AUTOMATED DRAFTING SYSTEM

UNLESS OTHERWISE SPECIFIED UNLESS OTHERWISE SPECIFIED	DATE 3-4-72	EQUIPMENT CORPORATION MILWAUKEE, WISCONSIN 53220
TELEPHONE FAX	SHEET 3 OF 8	TITLE BUT & SWRCH K5-3
STATUS BUT & SWRCH K5-3	REVISION N 7235-0-1	DESIGNER R. P. Gill

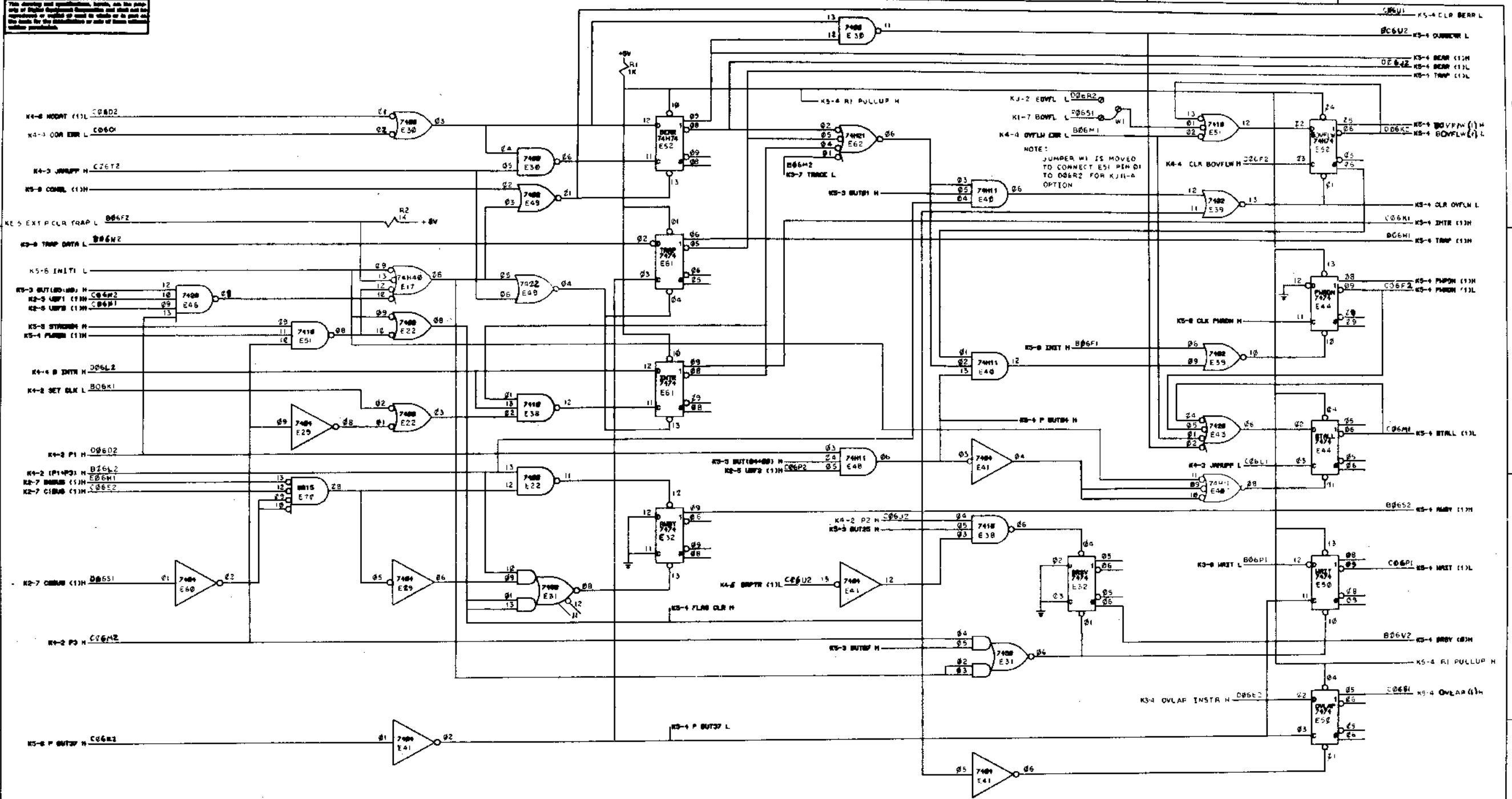
The drawing and specifications herein, with the parts and materials specified, shall constitute the contract for the purchase of the equipment described and shall not be subject to modification or change in price or quantity without the written consent of the manufacturer.

D

C

B

A



NOTE:
JUMPER W1 IS MOVED
TO CONNECT E51 PIN 01
TO 00B22 FOR KJ11-A
OPTION

PRODUCED BY THE AUTOMATED DRAWING SYSTEM

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES DECIMALS TO THREE FRACTIONS IN SIXTEENTHS ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE TO CENTER UNLESS OTHERWISE SPECIFIED	DATE: 2-7-72 DRAWN: [Signature] CHECKED: [Signature] APPROVED: [Signature]	TITLE: [Blank] STATUS: [Blank] PLANT: [Blank]
	EQUIPMENT CORPORATION A DIVISION OF GENERAL ELECTRIC COMPANY	NUMBER: M7235-0-1 REV: H

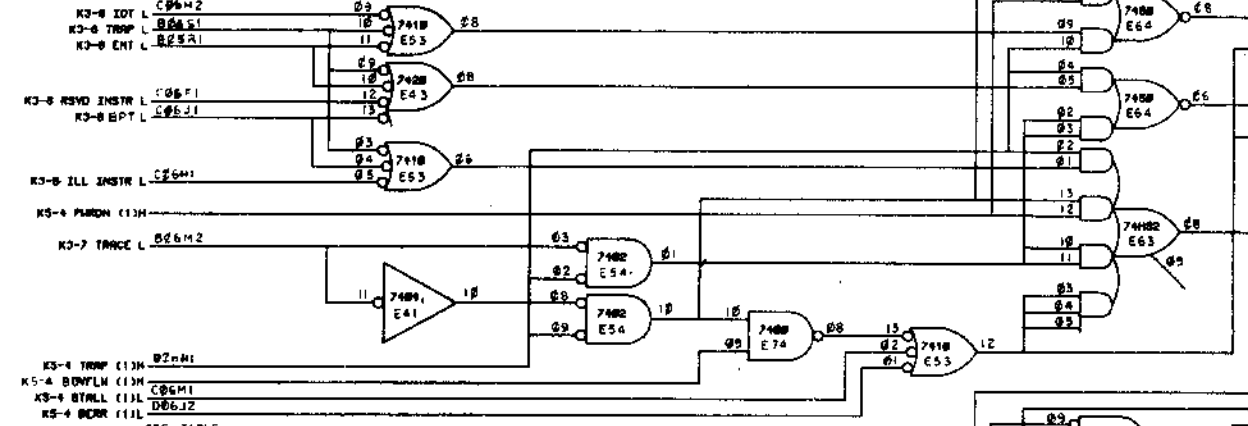
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D

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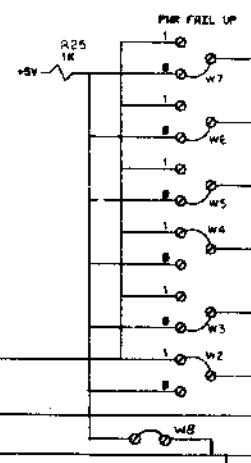
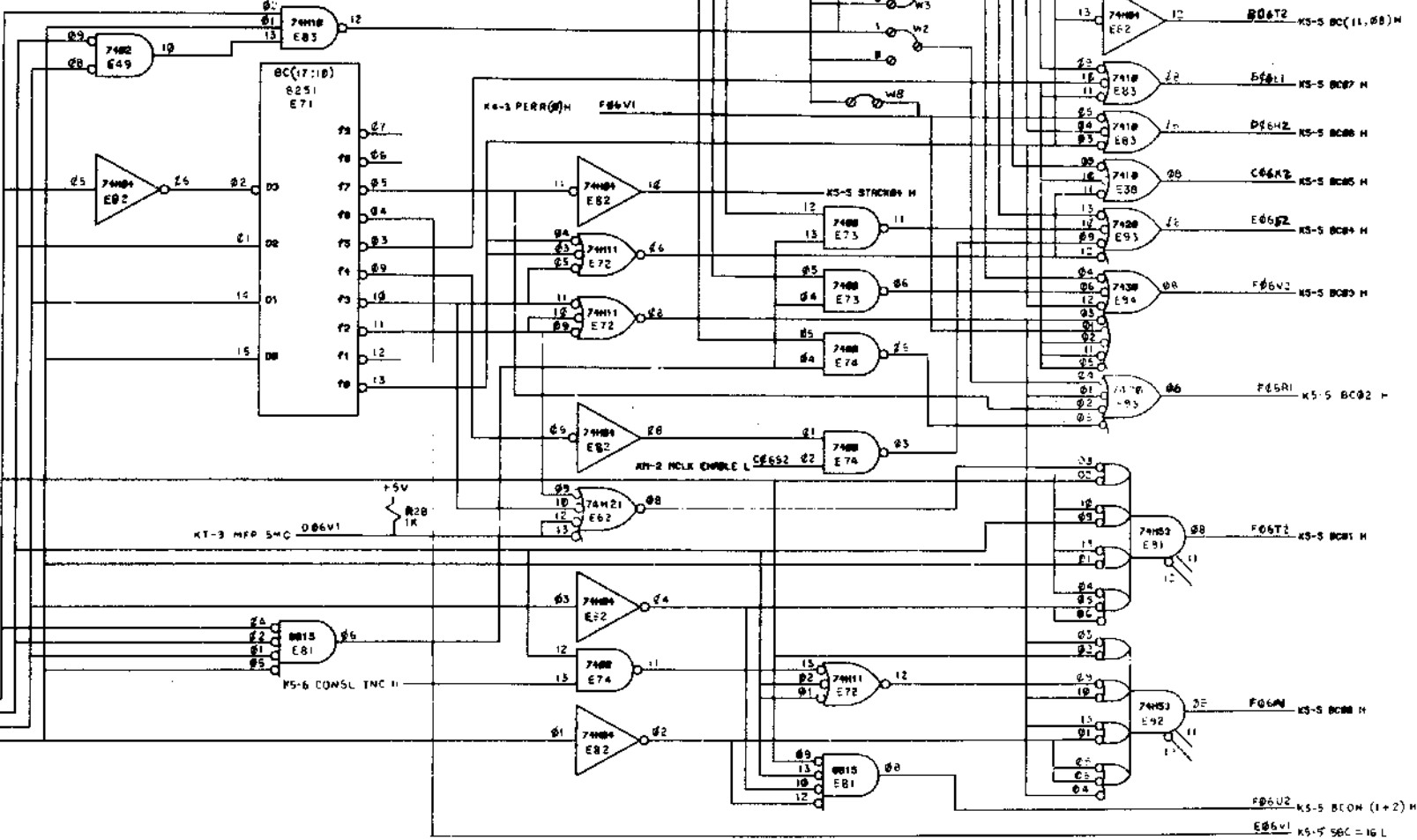
DEVICE TRUTH TABLE:
E251
FOR THE DECIMAL EQUIVALENCE N, OF THE
BINARY NUMBER (D3,D2,D1,D0) ONLY THE
OUTPUT IN IS ACTIVE (LOW) FOR ϕ 5FNK10

(SBC) B	USE	B CONSTANT	NOTES
00	TRAPS	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	T=F(STPM(4:2)), SEE BELOW
01	CONST 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1	GENERAL USE
02	CONST 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GENERAL USE
03	CONST(1+2)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	POSSIBLE CIND ϕ MAKES THIS 2
04	NOT USED	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
05	NOT USED	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
06	NOT USED	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
07	CONS INC	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C IS 1 IF EXAM(1) OR DEP(1) SET
10	SR ADRS	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ALSO DISPLAYED ON A CONS TIME OUT
11	PWR UP	W ₁ W ₂ W ₃ W ₄ W ₅ W ₆ W ₇ W ₈ W ₉ W ₁₀ W ₁₁ W ₁₂ W ₁₃ W ₁₄ W ₁₅ W ₁₆ W ₁₇ W ₁₈ W ₁₉ W ₂₀	PROGRAM ADRS SELECTED BY JUMPER
12	CC MASK	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MASK USED FOR CONDITION CODE INSTRS
13	SOB MASK	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	MASK USE IN SOB INSTR
14	SINCLK	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S ϕ FOR SWITCHCOUNT IF SINCLK
15	MN VECTOR	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	KT VIOLATION TRAP VECTOR
16	MN CONST	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	M=1 IF SMD IN MFP INSTR
17	STACK DR	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PREEMPTIVE STACK POINTER

(STPM) B	USE
4	BUS ERROR TRAPS (BERR+STALL) FOR ODD ADRS AND RES ZONE OVFLO
4	TRAP INSTR (MUTUALLY EXCLUSIVE)
10	ILLEGAL INSTR
14	RESERVED INSTR
20	BPT INSTR
30	IOT INSTR
30	EMT INSTR
30	TRAP INSTR
14	TRACE TRAP (DS(1))
4	OVL (YELLOW ZONE)
24	POWER DOWN (PWRON)

NOTE: PERR(1) CAUSES BERR(1)
PERR(1) * BERR(1) PRODUCES
BC 7114B.

K2-8 SBC3 H F0552
K2-8 SBC2 H C05R1
K2-8 SBC1 H F05R2
K2-8 SBC0 H E06J1



NOTE:
1- CONNECTIONS FOR WT THRU W2 ARE SHOWN FOR BASIC PWR FAIL UP VECTOR ADDRESS OF (24) ON ETCH THE W'S ARE LOCATED UNDER THESE ORIGINAL JUMPER POSITIONS.
2 REMOVE W8 WHEN MFP11-LP 15 INSTALLED.

PRODUCED BY THE AUTOMATED DRAFTING SYSTEM

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FINISHES MATERIALS METHODS OF MANUFACTURE ASSEMBLY INSTRUCTIONS AND OTHER DATA SHOWN ON THIS DRAWING ARE TO BE USED UNLESS OTHERWISE SPECIFIED	DATE: 8-7-72	EQUIPMENT CORPORATION CORPORATION 300 BRIDGE STREET ROSLINDALE, MASSACHUSETTS 02126
	DESIGNED BY: [Signature]	
STATUS: [Blank]	CONSTANTS: K5-5	REV: H
SCALE: [Blank]	SHEET: 5 OF 8	DATE: AUG 27 1972

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D

C

B

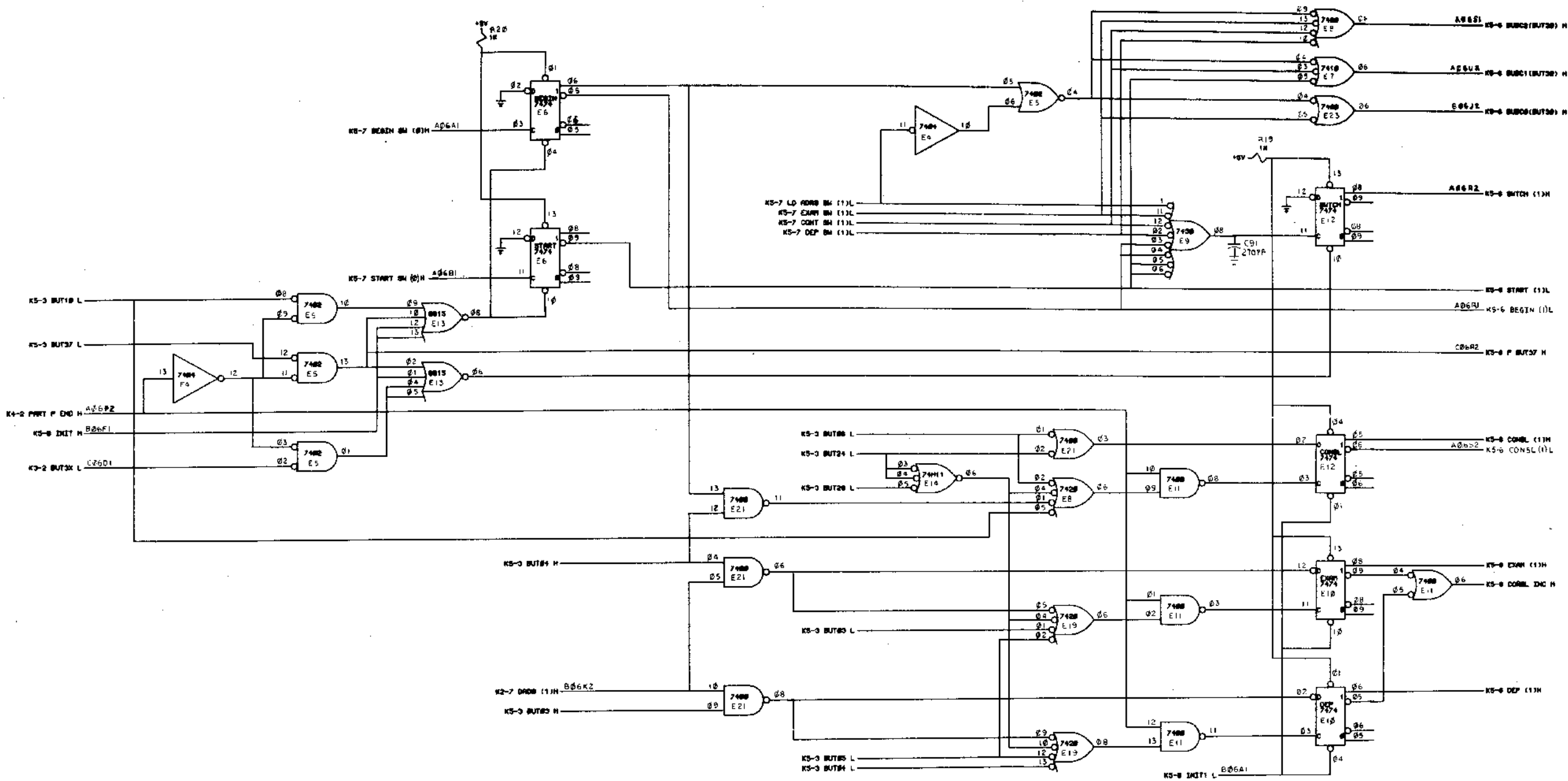
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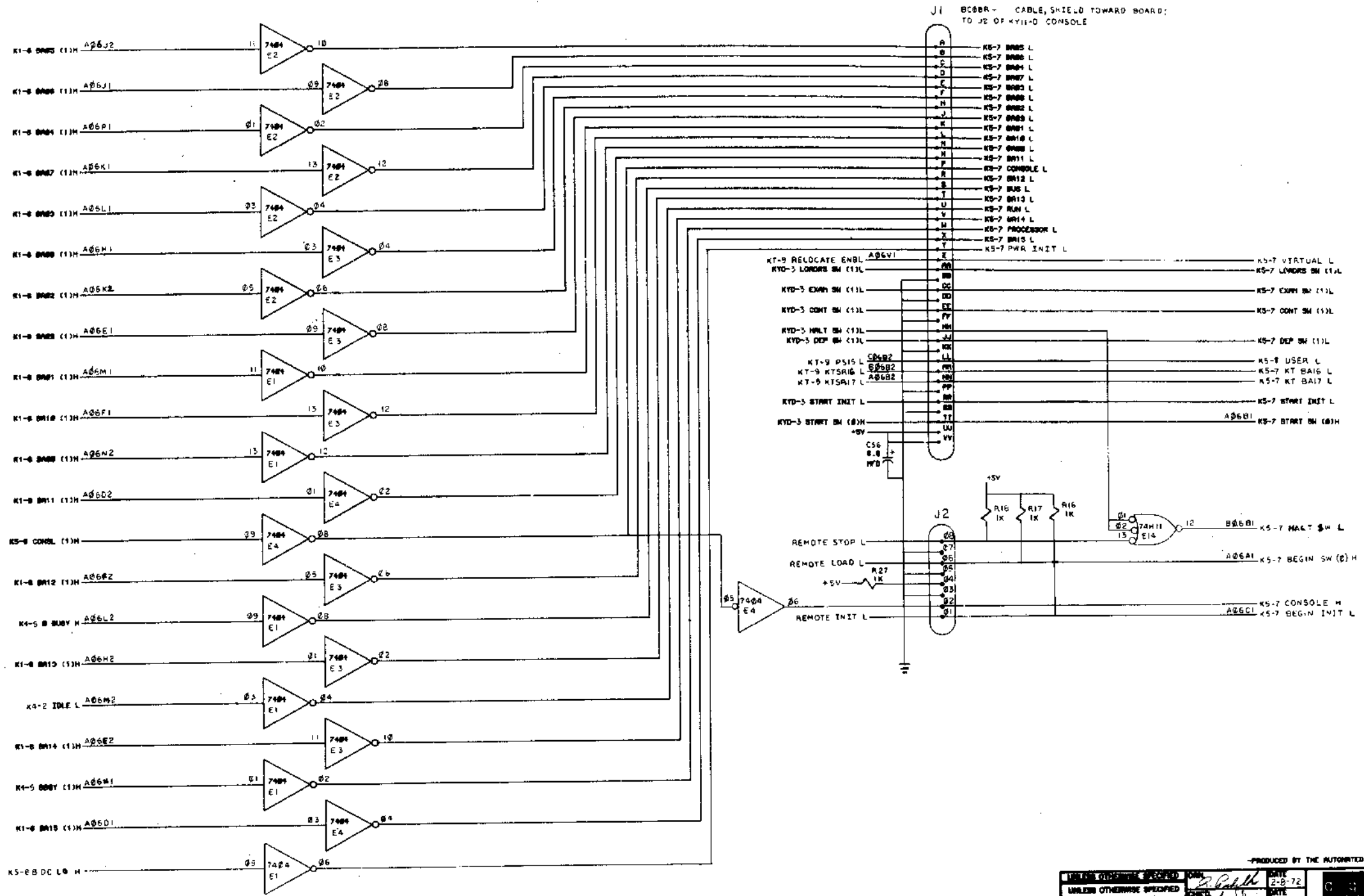
A



PRODUCED BY THE AUTOMATED DRAFTING SYSTEM

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FRACTIONS MILS ± .005 ± .002	DATE 2-8-72 BY 1/2/72	EQUIPMENT CORPORATION A DIVISION OF GENERAL ELECTRIC COMPANY	
TITLE CONSOLE	STATUS CONSOLE	PART NUMBER M 7235-0-1	
SCALE SHEET 5 OF 8	DATE 1/2/72	BY 1/2/72	APP'D BY 1/2/72

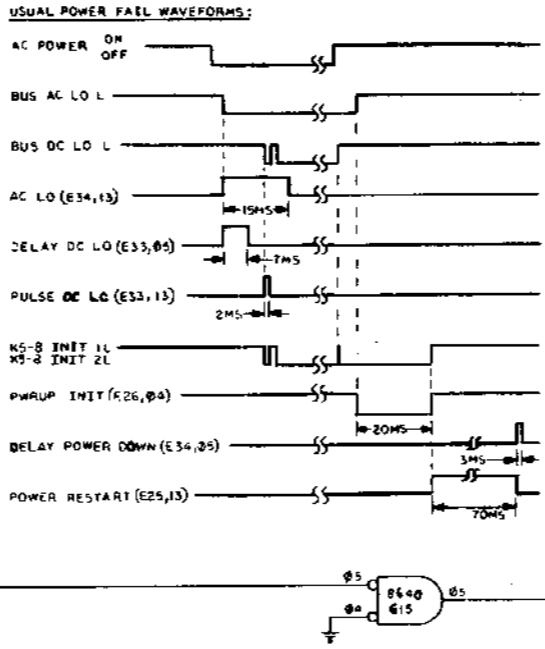
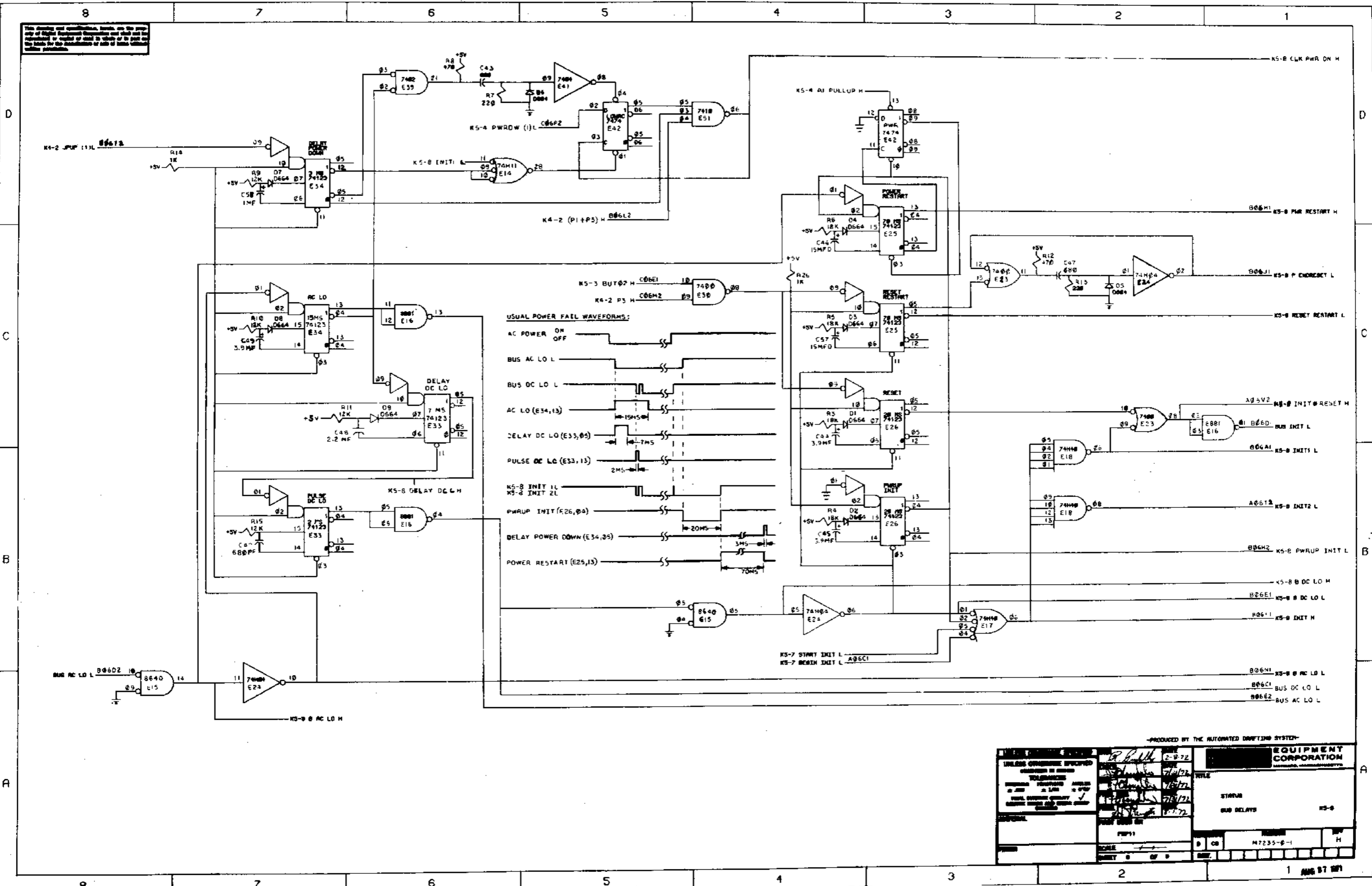
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-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED		DATE	2-8-72	EQUIPMENT CORPORATION MILFORD, MASSACHUSETTS
DIMENSIONS IN INCHES		DATE	2/2/72	
TOLERANCES		DATE	2/2/72	TITLE
DECIMALS FRACTIONS ANGLES		DATE	2/2/72	
± .015 ± .004 ± .030		DATE	2/2/72	STATUS CABLES
FRACTIONS ANGLES		DATE	2/2/72	
FURNISH		DATE	2-7-72	NUMBER M7235-0-1
FIRST USED ON		DATE		
PART		REV.		REV. M
SCALE		REV.		
SHEET 7		OF 8		

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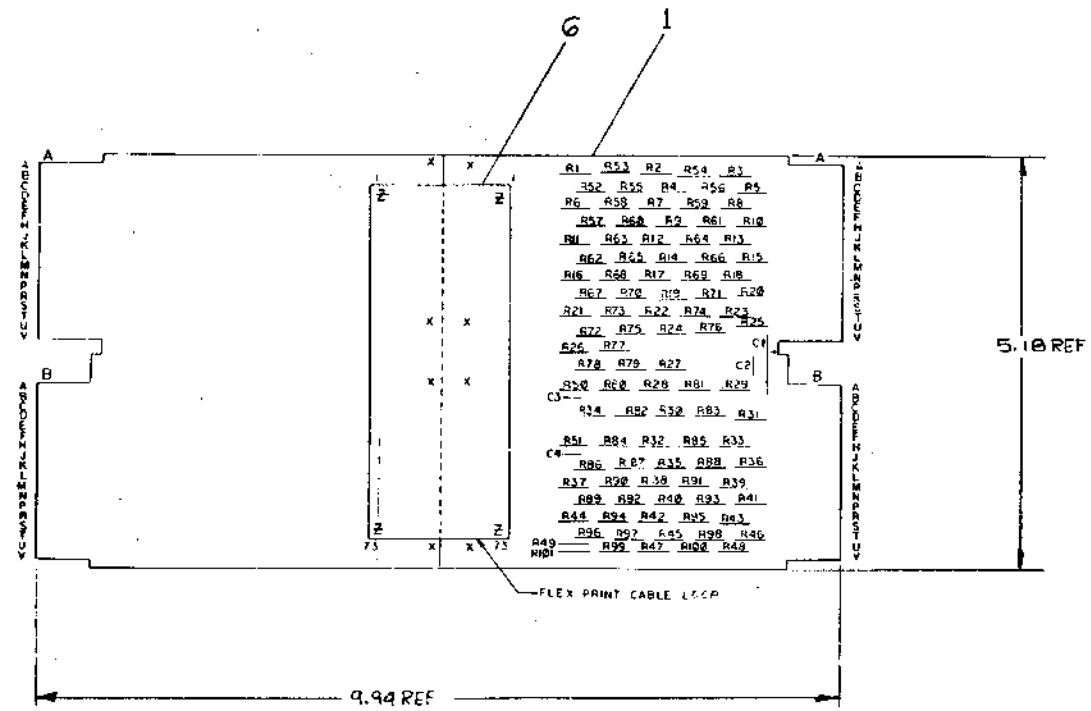


-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES FINISHES SURFACE TREATMENTS MATERIALS SPECIAL NOTES AND OTHER DATA COMMENTS	DATE: 2-9-72 DRAWN: [Signature] CHECKED: [Signature] APPROVED: [Signature]	EQUIPMENT CORPORATION TITLE:
	STATUS: BUS DELAYS: KS-8	PART NO: M7235-6-1 REV: H

1 AUG 87 1971

- NOTES:**
- CONNECTOR MODULE, M9B1 INTERCONNECTS THE KD11-A PROCESSOR WITH A NEXT UNIBUS DEVICE. RESISTIVE TERMINATION OF THE UNIBUS IS ALSO PROVIDED.
 - COMPONENTS ARE LOCATED IN AND POWERED FROM THAT PORTION OF THE MODULE IN THE NEXT DEVICE. GROUND IS CONNECTED BETWEEN THE KD11-A AND THE NEXT DEVICE.
 - SIGNALS ON THE LEFT OF THE CONNECTORS ONLY OUTPUT FROM THE KD11-A. SIGNALS TO THE RIGHT OF THE CONNECTORS ARE RECEIVED AND TRANSMITTED FROM THE KD11-A.



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

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
AR		CABLE FLEXPRINT, 27/16 LG	9105412-5	6
50	R52 THRU R101	RES. 178 1/4W. 1%	1311422	5
51	R1 THRU R51	RES. 383 1/4W 1%	1305125	4
1	C1	CAP. 39 MFD 10V 10%	1000076	3
3	C2, C3, C4	CAP. 100A MMF 1000V 20%	1000043	2
1		ETCHED CIRCUIT BOARD	5009763	1

FIRST USED ON OPTION MODEL
KD11-A

PARTS LIST

ETCH BOARD REV F

SEMICONDUCTOR CONVERSION CHART

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

DATE: 7/1/72

BY: J. O'LOUGHLIN

REVISIONS

NO. 1 ORIGINAL E

NO. 2 CHANGE NO. 1 REV

NO. 3

NO. 4

NO. 5

NO. 6

NO. 7

NO. 8

NO. 9

NO. 10

NO. 11

NO. 12

NO. 13

NO. 14

NO. 15

NO. 16

NO. 17

NO. 18

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NO. 112

NO. 113

NO. 114

NO. 115

NO. 116

NO. 117

NO. 118

NO. 119

NO. 120

EQUIPMENT CORPORATION

TITLE: **INTERNAL UNIBUS AND TERMINATOR**

PROJECT: **D-JA-M9B1-C-0**

SCALE: **1 OF 2**

REV: **J**

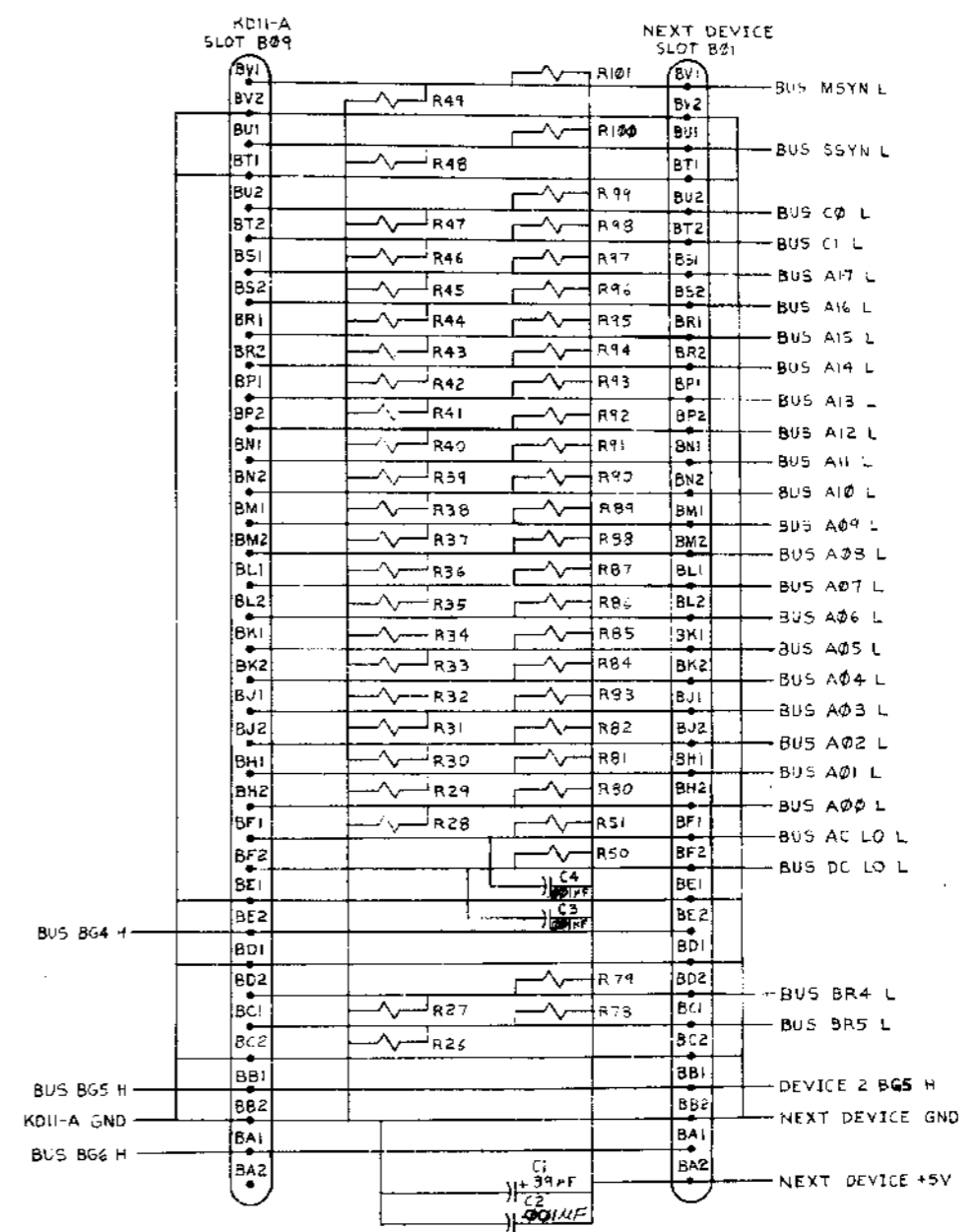
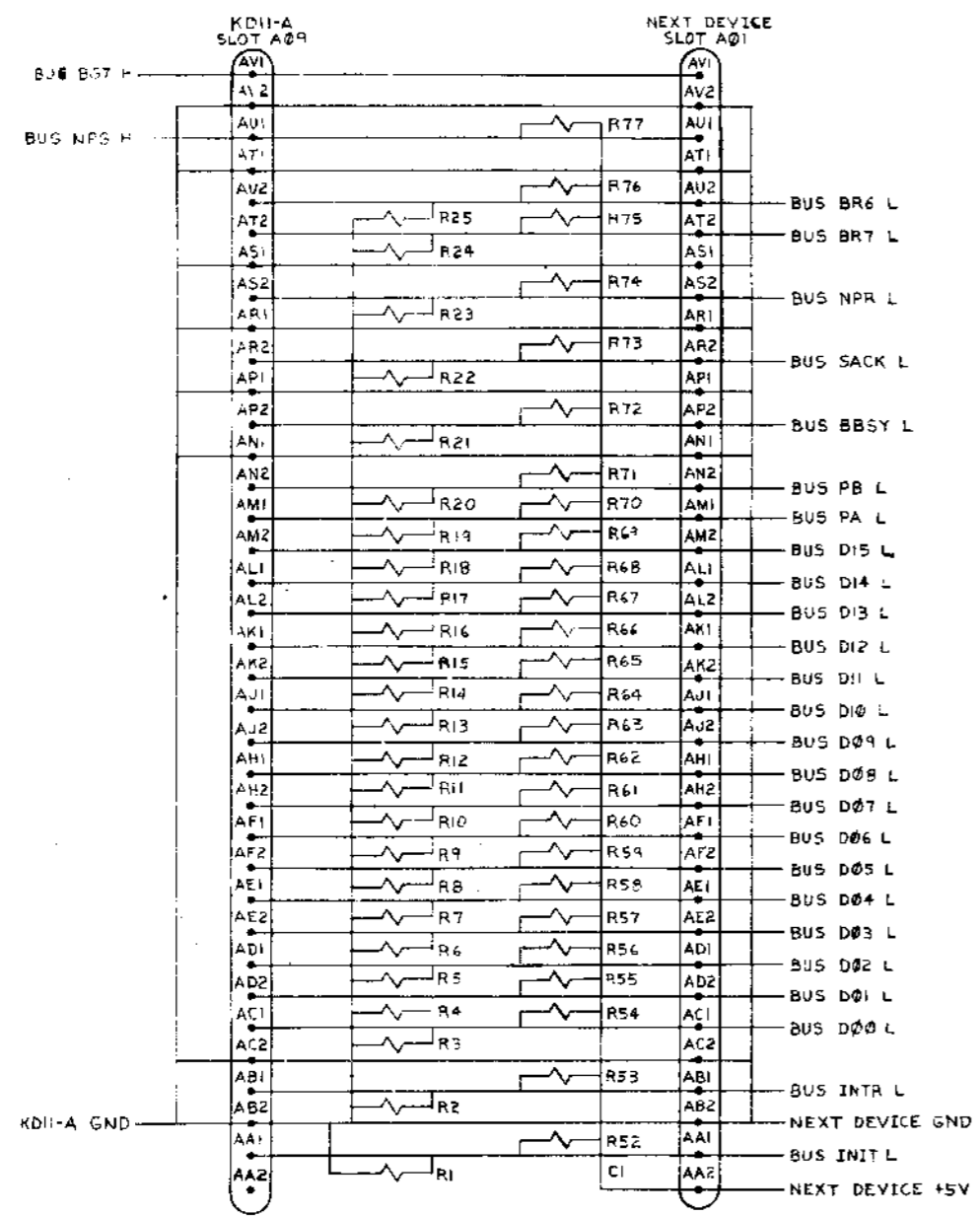
ITEM NO.: **5009763**

DATE: **7/1/72**

BY: **J. O'LOUGHLIN**

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CS 5409764-0-1



NOTE:
RESISTOR VALUES ARE:
R1 THRU R51 ARE 369Ω
R52 THRU R101 ARE 178Ω

REV
CHANGE NO
DATE

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
KDI1-A				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES				
DECIMALS	ANGLES	TITLE		
XXX - .005	10° 30'	INTERNAL UNIBUS AND TERMINATOR		
XX - .02		PARTS LIST		
X - .05		digital EQUIPMENT CORPORATION		
		NORWOOD MASSACHUSETTS		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE		
		DATE		
		DATE		
		DATE		
MATERIAL	NEXT HIGHER ASSY	SIZE/CODE	NUMBER	REV
FINISH	D-UA-M981-0-0	DCS	5409764-0-1	J
	SCALE NONE	DIST.		
	SHEET 2 OF 2			

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WIRE LIST CHARACTERISTICS:

1. SIGNAL NAMES ARE LISTED WITHOUT THEIR PRINT SOURCE PREFIX. THIS AIDS ALPHABETICAL SEARCHES.
2. THE PRINT OR PRINTS UPON WHICH A GIVEN PIN ENTRY APPEARS IS NOTED IN THE "DRAW" COLUMN. MULTIPLE SHEET ENTRIES ARE NOTED WITHOUT COMMA'S WITH THE PRINT DESIGNATORS. FOR EXAMPLE "K4-235", INDICATES ENTRIES ON SHEETS 2,3 and 5 IN THE K4 MODULE PRINTS, NO PRINT SETS HAVE MORE THAN NINE PAGES.
3. THE PRINT PREFIX AND THE ORIGIN OF THE SIGNAL CAN BE DETERMINED BY THE SOURCE NOTATION IN THE "REMARK" COLUMN. THIS SOURCE ENTRY, PRINT PREFIX IS USED BEFORE THE SIGNAL NAME ON ALL DRAWINGS. MULTIPLE SHEET ENTRIES HAVE THE SPECIFIC PRINT NOTED.
4. BUS SIGNALS WHICH OFTEN HAVE MULTIPLE (WIRED OR) SOURCES DO NOT HAVE PRINT PREFIXES. THE USE OF "BUS" IN THE NAME IDENTIFIES THESE SIGNALS, SIGNALS FOR +5V AND GND ALSO HAVE NO PRINT PREFIX.
5. THE WIRE LIST CONTAINS ETCH BACKPANEL CONNECTIONS AS WELL AS WIRE WRAP CONNECTIONS. ETCH IS IDENTIFIED BY AN "H" IN THE "Q" COLUMN AND A "P" IN THE "REMARK" COLUMN. "EXCEPTION" COLUMN NOTATIONS FOR ETCH CONNECTIONS SHOULD BE IGNORED. THE WIRE LIST ALSO CONTAINS TWISTED PAIR CONNECTIONS WHICH ARE IDENTIFIED BY AN "H" IN THE "Q" COLUMN AND "TWP" IN THE "REMARKS" COLUMN.

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP 11		PARTS LIST		
DRN: <i>F. O. ...</i> DATE: 7/31/72 CHK'D: <i>F. O. ...</i> DATE: 7/31/72 ENG: <i>F. O. ...</i> DATE: 7/31/72 PROJ. ENG: <i>F. O. ...</i> DATE: 7/31/72 PRGD. <i>A. ...</i> DATE: 8-2-72		EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
NEXT HIGHER ASSEMBLY		TITLE		
D-AD-7010230-0-0		BACK PLANE (KDII-A PROCESSOR)		
SCALE		SIZE CODE	NUMBER	REV.
SHEET 1 OF 1		K WL	KDII-A-WL	N
		DIST.		

KDIIA,N	WRAPD	VJ35(102)-1	03-JUN-77								27-Oct-77	16117	PAGE 1		
RUN NAME	A/P	PIN NAME	ORDER PTN	BAY - ORDER	Q	DRAW	RV	RG	Y	X	Z	REMARKS	NC LENGTH FLAG	EXCEPTIONS	RUN NUMBER
(P1+P3)	H	B06L2		1-01 *			K5-48				1				1
(P1+P3)	H	D08J1		1-02 *			KT-2				2				1
(P1+P3)	H	E07J2		1-03 *			K4-24					SOURCE (K4-2)			1
(P1+P3)	H			1											1
+15V		C09U1				P								1-PIN RUN	2
+5V		A01A2		1-01 *	P						1				3
+5V		A02A2		1-02 *	P						2				3
+5V		A03A2		1-03 *	P						1				3
+5V		A04A2		1-04 *	P						1				3
+5V		A05A2		1-05 *	P						1				3
+5V		A06A2		1-06 *	P						2				3
+5V		A07A2		1-07 *	P						1				3
+5V		A08A2		1-08 *	P						2				3
+5V		A09A2		1-09 *	P						1				3
+5V		B09A2		1-10 *	P						1		3-2/8		3
+5V		B08A2		1-11 *	P						2				3
+5V		B07A2		1-12 *	P						1				3
+5V		B06A2		1-13 *	P						1				3
+5V		B05A2		1-14 *	P						2				3
+5V		B04A2		1-15 *	P						1				3
+5V		B03A2		1-16 *	P						1				3
+5V		B02A2		1-17 *	P						2				3
+5V		B01A2		1-18 *	P						1				3
+5V		C01A2		1-19 *	P						2				3
+5V		C02A2		1-20 *	P						1				3
+5V		C03V1		1-21 *	P						2		0-5/8		3
+5V		C03A2		1-22 *	P						1		0-5/8		3
+5V		C04A2		1-23 *	P						2				3
+5V		C05A2		1-24 *	P						1				3
+5V		C06A2		1-25 *	P						1				3
+5V		C07A2		1-26 *	P						1				3
+5V		C08A2		1-27 *	P						2				3
+5V		C09A2		1-28 *	P						1				3
+5V		D09A2		1-29 *	P						2		3-2/8		3
+5V		D08A2		1-30 *	P						1				3
+5V		D07A2		1-31 *	P						2				3
+5V		D06A2		1-32 *	P						1				3
+5V		D05A2		1-33 *	P						2				3
+5V		D04A2		1-34 *	P						1				3
+5V		D03A2		1-35 *	P						1				3
+5V		D02A2		1-36 *	P						2				3
+5V		D01A2		1-37 *	P						1				3
+5V		C03V1		1-38 *	P						2		1-5/8		3
+5V		D03V1		1-39 *	P						1		3-2/8		3
+5V		E02A2		1-40 *	P						2		0-5/8		3
+5V		E01R1		1-41 *	P						1		1-1/8		3
+5V		E01A2		1-42 *	P						2		0-1/8		3
+5V		E03A2		1-43 *	P						1		1-4/8		3
+5V		E04A2		1-44 *	P						2				3
+5V		E05A2		1-45 *	P						1				3
+5V		E06A2		1-46 *	P						1				3
+5V		E07A2		1-47 *	P						2				3
+5V		E08A2		1-48 *	P						1				3
+5V		E09A2		1-49 *	P						2				3
											1		3-2/8		1

RD11A,N	WRAPD ,V35(102)=1			03-JUN-77			27-OCT-77			16:17 PAGE 2		RUN NUMBER				
RUN NAME	A/P	PIN NAME	ORDER PIN	BAY * ORDER	Q	DRAW OPT	RV	RG	Y	X	Z		REMARKS	NC	LENGTH	EXCEPTIONS
+5V		F09A2		1-50 *	P									1		3
+5V		F08A2		1-51 *	P									1		3
+5V		F07A2		1-52 *	P									1		3
+5V		F06A2		1-53 *	P									1		3
+5V		F05A2		1-54 *	P									1		3
+5V		F04A2		1-55 *	P									1		3
+5V		F03A2		1-56 *	P									1		3
+5V		F02A2		1-57 *	P									1		3
+5V		F01A2		1-58 *	P									0-1/8		3
+5V		F01B1		1-59 *												3
+5V				1										67-3/8		3
-15V		C09B2		1-01 *	P									3-2/8		4
-15V		D09B2		1-02 *	P									3		4
-15V		E09B2		1-03 *	P									3-2/8		4
-15V		F09B2		1-04 *												4
-15V				1										9-4/8		4
A INTR DONE	H	F09L2		1-01 *			DD							N 1		5
A INTR DONE	H	F09R1		1-02 *			DD									5
A INTR DONE	H			1										1-0/8		5
A MASTER	L	F09D2		1-01 *			DD				2			N 1-6/8		6
A MASTER	L	F09R2		1-02 *			DD				1			N 4-4/8		6
A MASTER	L	F09N1		1-03 *			DD									6
A MASTER	L			1										2-2/8		6
ADRS (777774)	H	B07A1		1-01 *			K4-6				1			N 12-1/8		7
ADRS (777774)	H	B03H1		1-02 *			KJ-2									7
ADRS (777774)	H			1										12-1/8		7
ALU00	H	C02P2		1-01 *			KE-26				1			N 8-1/8		8
ALU00	H	F04F1		1-02 *			K1-2									8
ALU00	H			1										8-1/8		8
ALU07	H	B04J1					K1-3								1-PIN RUN	9
ALU15	H	B04J2					K1-5								1-PIN RUN	10
ALU4	H	A05H1		1-01 *			K3-8				1			N 4-1/8		11
ALU4	H	B04P2		1-02 *			K1-2345									11
ALU4	H			1										4-1/8		11
ALU00	H	A05M1		1-01 *			K3-8				1			N 3-3/8		12
ALU00	H	B04K1		1-02 *			K1-2345									12
ALU00	H			1										3-3/8		12
ALU01	H	A05K1		1-01 *			K3-8				1			N 4-3/8		13
ALU01	H	B04S1		1-02 *			K1-2345									13
ALU01	H			1										4-3/8		13
ALU02	H	A05J1		1-01 *			K3-8				1			N 3-5/8		14
ALU02	H	B04J1		1-02 *			K1-2345									14
ALU02	H			1										3-5/8		14

RD11A,N	WRAPD ,V35(102)=1			03-JUN-77			27-OCT-77			16:17 PAGE 3		RUN NUMBER				
RUN NAME	A/P	PIN NAME	ORDER PIN	BAY * ORDER	Q	DRAW OPT	RV	RG	Y	X	Z		REMARKS	NC	LENGTH	EXCEPTIONS
ALU03	H	A05L1		1-01 *			K3-8				1			N 3-3/8		15
ALU03	H	B04H1		1-02 *			K1-2345									15
ALU03	H			1										3-3/8		15
ARGA (1)	H	A01K1		1-01 *			KE-4				1			N 9-1/8		16
ARGA (1)	H	D02L1		1-02 *			KE-9									16
ARGA (1)	H			1										9-1/8		16
ASH	L	A02P2					KE-4								1-PIN RUN	17
ASHC	L	A02P2					KE-24								1-PIN RUN	18
AWBY (1)	H	A06S2		1-01 *			K5-4				1			N 5-5/8		19
AWBY (1)	H	D07L2		1-02 *			K4-25									19
AWBY (1)	H			1										5-5/8		19
B AC IO	L	B06N1		1-01 *			K5-8				2			N 1-1/8		20
B AC IO	L	B07P2		1-02 *			K4-5				1			N 10-7/8		20
B AC IO	L	F07M1		1-03 *			K4-3									20
B AC IO	L			1										12-0/8		20
B BPSY	H	A06L2		1-01 *			K5-7				1			N 4-3/8		21
B BPSY	H	B07U2		1-02 *			K4-5									21
B BPSY	H			1										4-3/8		21
B DC IO	L	E06E1		1-01 *			K5-8				1			N 9-7/8		22
B DC IO	L	E07R1		1-02 *			K4-2									22
B DC IO	L			1										9-7/8		22
B EUPPBA	H	C02R2					KE-4								1-PIN RUN	23
B EUPPBA	H	D02D2		1-01 *	1						1			N 3-5/8		24
B EUPPBA	H	C01H1		1-02 *			KE-4									24
B EUPPBA	H			1										3-5/8		24
B INIT	L	C08T2		1-01 *			KI-2				2			N 1-5/8		25
B INIT	L	C07M1		1-02 *			K4-6				1			N 7-3/8		25
B INIT	L	E03L1		1-03 *			KJ-2									25
B INIT	L			1										9-0/8		25
B INTR	H	D06L2		1-01 *			K5-4				2			N 2-1/8		26
B INTR	H	E07C1		1-02 *			K4-24				1			N 4-3/8		26
B INTR	H	F05H2		1-03 *			K3-2									26
B INTR	H			1										6-4/8		26
B INTR DONE	H	F09M2		1-01 *			DD				1			N 1		27
B INTR DONE	H	F09S1		1-02 *			DD									27
B INTR DONE	H			1										1-0/8		27
B MASTER	L	F09P2		1-01 *			DD				1			N 0-4/8		28
B MASTER	L	F09S2		1-02 *			DD									28
B MASTER	L			1										0-4/8		28
B MSYN	H	B07S1		1-01 *			K4-4				1			N 12-5/8		29
B MSYN	H	F01E1		1-02 *			KN-2									29
B MSYN	H			1										12-5/8		29

KD11A,N RUN NAME	A/P	WRAPD ,V35(102)-1 03-JUN-77				DRAW	RV	RG	Y	X	Z	REMARKS	27-Oct-77	16117	PAGE 6	RUN NUMBER
		PIN NAME	ORDER PIN	BAY - ORDER	Q								NC	LENGTH	EXCEPTIONS	
BA15 (1)	H	A04K2		1-01 *						2	SOURCE (K1-6)	N	1-5/8		54	
BA15 (1)	H	A06D1		1-02 *						1		N	6-7/8		54	
BA15 (1)	H	C08D2		1-03 *						2		N	8-3/8		54	
BA15 (1)	H	E03E2		1-04 *											54	
BA15 (1)	H			1									16-7/8		54	
BRSY (1)	H	A06N1		1-01 *						1		N	1-1/8		55	
BRSY (1)	H	A07M2		1-02 *							SOURCE (K4-5)		1-1/8		55	
BRSY (1)	H			1											55	
BC(11,08)	H	C04M1		1-01 *						1		N	7-5/8		56	
BC(11,08)	H	E06T2		1-02 *							SOURCE		7-5/8		56	
BC(11,08)	H			1											56	
BC(15:12,10109)	H	A04U2		1-01 *						1		N	5-7/8		57	
BC(15:12,10109)	H	C06L2		1-02 *							SOURCE		5-7/8		57	
BC(15:12,10109)	H			1											57	
BC00	H	E04B2		1-01 *						1		N	3-5/8		58	
BC00	H	F06A1		1-02 *							SOURCE		3-5/8		58	
BC00	H			1											58	
BC00 (0)	H	B07E2		1-01 *						1	SOURCE	N	1-5/8		59	
BC00 (0)	H	B08N1		1-02 *									1-5/8		59	
BC00 (0)	H			1											59	
BC01	H	E04L2		1-01 *						1		N	4-7/8		60	
BC01	H	F06T2		1-02 *							SOURCE		4-7/8		60	
BC01	H			1											60	
BC01 (0)	H	A07J1		1-01 *						2	SOURCE	N	4-5/8		61	
BC01 (0)	H	B08P2		1-02 *						1		N	11-1/8		61	
BC01 (0)	H	E03V2		1-03 *											61	
BC01 (0)	H			1									15-6/8		61	
BC02	H	E04H2		1-01 *						1		N	3-7/8		62	
BC02	H	F06R1		1-02 *							SOURCE		3-7/8		62	
BC02	H			1											62	
BC03	H	E04M2		1-01 *						1		N	4-7/8		63	
BC03	H	F06V2		1-02 *							SOURCE		4-7/8		63	
BC03	H			1											63	
BC04	H	E04A1		1-01 *						1		N	2-7/8		64	
BC04	H	F06S2		1-02 *							SOURCE		2-7/8		64	
BC04	H			1											64	
BC05	H	C06K2		1-01 *						1	SOURCE	N	4-5/8		65	
BC05	H	D04P2		1-02 *									4-5/8		65	
BC05	H			1											65	
BC06	H	D04V1		1-01 *						1		N	2-2/8		66	
BC06	H	D06H2		1-02 *							SOURCE		2-2/8		66	
BC06	H			1											66	

KD11A,N RUN NAME	A/P	WRAPD ,V35(102)-1 03-JUN-77				DRAW	RV	RG	Y	X	Z	REMARKS	27-Oct-77	16117	PAGE 7	RUN NUMBER
		PIN NAME	ORDER PIN	BAY - ORDER	Q								NC	LENGTH	EXCEPTIONS	
BC07	H	B06L1		1-01 *						1	SOURCE	N	6-7/8		67	
BC07	H	D04N1		1-02 *									6-7/8		67	
BC07	H			1											67	
BC04 (1+2)	H	A05P2		1-01 *						1		N	14-5/8		68	
BC04 (1+2)	H	F06U2		1-02 *							SOURCE		14-5/8		68	
BC04 (1+2)	H			1											68	
BEGIN (1)	L	A07U2		1-01 *						2		N	1-2/8		69	
BEGIN (1)	L	A06R1		1-02 *						1	SOURCE	N	13-3/8		69	
BEGIN (1)	L	F05K2		1-03 *											69	
BEGIN (1)	L			1									14-5/8		69	
BEGIN INIT	L	A06C1									SOURCE			1-PIN RUN	70	
BEGIN SW (0)	H	A06A1									SOURCE			1-PIN RUN	71	
BERP (0)	H	D06J2		1-01 *						1	SOURCE	N	7-3/8		72	
BERP (0)	H	F05L2		1-02 *									7-3/8		72	
BERP (0)	H			1											72	
BG BETWEEN	H	F09P1		1-01 *						1		N	2-3/8		73	
BG BETWEEN	H	F09V2		1-02 *							SOURCE		2-3/8		73	
BG BETWEEN	H			1											73	
BG IN	H	D09U2		1-01 *						1	SOURCE	N	3-7/8		74	
BG IN	H	F09B1		1-02 *									3-7/8		74	
BG IN	H			1											74	
BG OUT	H	D09V2		1-01 *						1	SOURCE	N	3-7/8		75	
BG OUT	H	F09A1		1-02 *							SOURCE		3-7/8		75	
BG OUT	H			1											75	
BG4	H	D07E2		1-01 *						1	SOURCE	N	2-1/8		76	
BG4	H	D09S2		1-02 *									2-1/8		76	
BG4	H			1											76	
BG5	H	C07V2		1-01 *						1	SOURCE	N	3-3/8		77	
BG5	H	D09P2		1-02 *									3-3/8		77	
BG5	H			1											77	
BG6	H	D07F2		1-01 *						1	SOURCE	N	8-5/8		78	
BG6	H	F03R2		1-02 *						2		N	1		78	
BG6	H	F03V2		1-03 *						1	SOURCE	N	9-3/8		78	
BG6	H	D09M2		1-04 *											78	
BG6	H			1									19-8/8		78	
BG7	H	D07D2		1-01 *						1	SOURCE	N	1-5/8		79	
BG7	H	D09K2		1-02 *									1-5/8		79	
BG7	H			1											79	
BGBUS (1)	H	D03E2		1-01 *	2					2		N	4-3/8		80	
BGBUS (1)	H	E06M1		1-02 *						1		N	1		80	
BGBUS (1)	H	E07E1		1-03 *											80	
BGBUS (1)	H			1									5-3/8		80	

RD11A,N RUN NAME	A/P	WRAPP ,V35(102)=1 PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV RG Y	X Z	REMARKS	27-Oct-77	16117 NC LENGTH FLAG	PAGE 20 EXCEPTIONS	RUN NUMBER
BUS RD10	L	B01V1		1-01 *			KF-3	2	SOURCE		N 2		197
BUS RD10	L	B04V1		1-02 *			K1-48	1	SOURCE (K1-8)		N 9-5/8		197
BUS RD10	L	E08P1		1-03 *			KT-7	2	SOURCE		N 4-7/8		197
BUS RD10	L	F02U1		1-04 *			KE-3		SOURCE				197
BUS RD10	L			1							16-4/8		197
BUS RD11	L	B01V2		1-01 *			KF-3	2	SOURCE		N 2-5/8		198
BUS RD11	L	B04V2		1-02 *			K1-48	1	SOURCE (K1-8)		N 11-1/8		198
BUS RD11	L	F08H1		1-03 *			KT-7	2	SOURCE		N 4-3/8		198
BUS RD11	L	F02U2		1-04 *			KE-3		SOURCE				198
BUS RD11	L			1							16-1/8		198
BUS RD12	L	A04D1		1-01 *			K1-58	2	SOURCE (K1-8)		N 4-3/8		199
BUS RD12	L	B01P1		1-02 *			KF-3	1	SOURCE		N 12-7/8		199
BUS RD12	L	F02R1		1-03 *			KE-3	2	SOURCE		N 4-4/8		199
BUS RD12	L	E08P1		1-04 *			KT-27		SOURCE (KT-27)				199
BUS RD12	L			1							21-6/8		199
BUS RD13	L	A04F1		1-01 *			K1-58	1	SOURCE (K1-8)		N 2-6/8		200
BUS RD13	L	A01S1		1-02 *			KF-3	2	SOURCE		N 6-4/8		200
BUS RD13	L	C08H2		1-03 *			KT-2	1	SOURCE		N 12-3/8		200
BUS RD13	L	F02S2		1-04 *			KE-3		SOURCE				200
BUS RD13	L			1							21-5/8		200
BUS RD14	L	A01F1		1-01 *			KF-3	2	SOURCE		N 2-1/8		201
BUS RD14	L	A04C1		1-02 *			K1-58	1	SOURCE (K1-8)		N 9-3/8		201
BUS RD14	L	C08R2		1-03 *			KT-2	2	SOURCE		N 11-7/8		201
BUS RD14	L	F02V2		1-04 *			KE-3		SOURCE				201
BUS RD14	L			1							23-3/8		201
BUS RD15	L	A01A1		1-01 *			KF-3	2	SOURCE		N 2		202
BUS RD15	L	A04A1		1-02 *			K1-58	1	SOURCE (K1-8)		N 9-5/8		202
BUS RD15	L	C08S2		1-03 *			KT-2	2	SOURCE		N 11-7/8		202
BUS RD15	L	F02V1		1-04 *			KE-3		SOURCE				202
BUS RD15	L			1							23-4/8		202
BUS REQUEST	L	D09J2		1-01 *			DD	1	SOURCE		N 6-5/8		203
BUS REQUEST	L	F09P1		1-02 *			DD	2	SOURCE		N 1		203
BUS REQUEST	L	F09U2		1-03 *			DD		SOURCE				203
BUS REQUEST	L			1							7-5/8		203
BUS SACK	L	A09R2		1-01 *	H			2	SOURCE TWP		6-1/8		204
BUS SACK	L	C07L2		1-02 *	H		K4-5	1	TWP		10-1/8		204
BUS SACK	L	F09T2		1-03 *	H		DD	2	SOURCE TWP		3-5/8		204
BUS SACK	L	F03S2		1-04 *			KW-2		SOURCE				204
BUS SACK	L			1							19-7/8		204
BUS SSKN	L	A07D2		1-01 *	H		K4-4	2	SOURCE TWP		5-3/8		205
BUS SSKN	L	B09U1		1-02 *	H			1	SOURCE TWP		6-7/8		205
BUS SSKN	L	E08C1		1-03 *	H		KT-6	2	SOURCE TWP		1-3/8		205
BUS SSKN	L	E09J1		1-04 *	H		DD	1	SOURCE TWP		2-5/8		205
BUS SSKN	L	F09C1		1-05 *	H		DD	2	SOURCE TWP		4-1/8		205
BUS SSKN	L	F03N2		1-06 *			KW-2		SOURCE				205
BUS SSKN	L			1							20-3/8		205

RD11A,N RUN NAME	A/P	WRAPP ,V35(102)=1 PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW	RV RG Y	X Z	REMARKS	27-Oct-77	16117 NC LENGTH FLAG	PAGE 21 EXCEPTIONS	RUN NUMBER
BUS STOP	H	F07K1					K4-34		SOURCE (K4-4)			1-PIN RUN	206
BUT (37134)	L	E05L1					K3-2		SOURCE			1-PIN RUN	207
BUT (3X)	L	C06D1		1-01 *			K5-36	1			N 4-1/8		208
BUT (3X)	L	D05J1		1-02 *			K3-2		SOURCE				208
BUT (3X)	L			1							4-1/8		208
BUT 02	H	C06E1					K5-38		SOURCE (K5-3)			1-PIN RUN	209
BUT 05	H	B06V1		1-01 *			K5-3	1	SOURCE		N 2-7/8		210
BUT 05	H	C08N2		1-02 *			KT-9						210
BUT 05	H			1							2-7/8		210
BUT 26	H	C06A1		1-01 *			K5-3	2	SOURCE		N 1-7/8		211
BUT 26	H	C08J1		1-02 *			KT-9	1			N 3-7/8		211
BUT 26	H	D07K1		1-03 *			K4-5						211
BUT 26	H			1							5-6/8		211
BUT 37	H	A07P1		1-01 *			K4-4	1			N 4-5/8		212
BUT 37	H	C06B1		1-02 *			K5-3	2	SOURCE		N 3-1/8		212
BUT 37	H	C02V2		1-03 *			KE-5						212
BUT 37	H			1							7-6/8		212
BYTE CODES	H	E06A1		1-01 *	1		K5-2	1			N 5-1/8		213
BYTE CODES	H	F05T2		1-02 *			K3-7		SOURCE				213
BYTE CODES	H			1							5-1/8		213
BYTE INSTR	H	C07P1		1-01 *			K4-4	1			N 3-3/8		214
BYTE INSTR	H	D05H1		1-02 *			K3-2678		SOURCE (K3-6)				214
BYTE INSTR	H			1							3-3/8		214
C DATA	H	B05P1		1-01 *			K3-9	1	SOURCE		N 8-7/8		215
C DATA	H	E06K1		1-02 *			K5-2						215
C DATA	H			1							8-7/8		215
C08US (1)	H	B07D2		1-01 *			K4-4	1			N 7-7/8		216
C08US (1)	H	D06S1		1-02 *			K5-4	2			N 2		216
C08US (1)	H	D03F2		1-03 *			K2-7		SOURCE				216
C08US (1)	H			1							9-7/8		216
C18US (1)	H	B07H2		1-01 *			K4-4	2			N 3-1/8		217
C18US (1)	H	C06E2		1-02 *			K5-4	1			N 5-3/8		217
C18US (1)	H	D03K1		1-03 *			K2-7		SOURCE				217
C18US (1)	H			1							8-4/8		217
CAS1 ADRS	H	D04P1					K1-7		SOURCE			1-PIN RUN	218
CRR (0)	H	C07F1		1-01 *			K4-5	1	SOURCE		N 9-1/8		219
CRR (0)	H	F05F2		1-02 *			K3-7						219
CRR (0)	H			1							9-1/8		219
CC INSTR	H	B05J2		1-01 *			K3-6	1	SOURCE		N 8-5/8		220
CC INSTR	H	D06R1		1-02 *			K5-2						220
CC INSTR	H			1							6-5/8		220

RD11A.1 RUN NAME	WKAPO 1V35(102)-1 A/P PIN NAME ORDER PIN	03-JUN-77 PAY = 0 DRAW ORDER OPT	RV RG Y RV OPT	X Z	REMARKS	27-Oct-77 16117 NC LENGTH FLAG	PAGE 36 EXCEPTIONS	RUN NUMBER
GPC=7	L AM212	1-01 *	KE-5	1	SOURCE	N 9-7/8		377
GPC=7	L AM1T2	1-02 *	KF-4					377
GPC=7	L	1				9-7/8		377
GPACT HR	H DM7M1		K4-56		SOURCE (K4-5)		1-PIN RUN	378
HAI1 SA	E AM6R1	1-01 *	K5-7	2	SOURCE	N 3-5/8		379
HAI1 SA	I CM7D1	1-02 *	K4-5	1		N 9-7/8		379
HAI1 SA	I E17S1	1-03 *	K4-3	2		N 1-5/8		379
HAI1 SA	I E15P1	1-04 *	K3-247				15-1/8	379
HAI1 SA	I	1						379
HSR00 (1)	H CM1A2	C02S1 1-01 *	KF-2	1	SOURCE	N 0-5/8		380
HSR00 (1)	H CM2S1	1-02 *				0-5/8		380
HSR00 (1)	H	1						380
HSR01 (1)	H CM1P1		KF-2		SOURCE		1-PIN RUN	381
HSR02 (1)	H CM1P1		KF-2		SOURCE		1-PIN RUN	382
HSR03 (1)	H CM1P1		KF-2		SOURCE		1-PIN RUN	383
HSR04 (1)	H CM1P1		KF-2		SOURCE		1-PIN RUN	384
HSR05 (1)	H AM1P1		KF-2		SOURCE		1-PIN RUN	385
HSR06 (1)	H AM1L1		KF-2		SOURCE		1-PIN RUN	386
HSR07 (1)	H AM1P1		KF-2		SOURCE		1-PIN RUN	387
HSR08 (1)	H CM1S2		KF-2		SOURCE		1-PIN RUN	388
HSR09 (1)	H CM1R2		KF-2		SOURCE		1-PIN RUN	389
HSR10 (1)	H CM1P2		KF-2		SOURCE		1-PIN RUN	390
HSR11 (1)	H CM1S1		KF-2		SOURCE		1-PIN RUN	391
HSR12 (1)	H CM1P2		KF-2		SOURCE		1-PIN RUN	392
HSR13 (1)	H CM1P2		KF-2		SOURCE		1-PIN RUN	393
HSR14 (1)	H CM1D2		KF-2		SOURCE		1-PIN RUN	394
HSR15	L AM1P1	1-01 *	KF-2	1	SOURCE	N 5-3/8		395
HSR15	L CM2A1	1-02 *	KF-2			5-3/8		395
HSR15	L	1						395
HSR15 (1)	H CM1E1		KF-2		SOURCE		1-PIN RUN	396
ID01	I CM6R2	1-01 *	K5-7	1		N 0-5/8		397
ID01	I DM7J2	1-02 *	K4-24		SOURCE (K4-2)			397
ID01	I	1				0-5/8		397

RD11A.1 RUN NAME	WKAPO 1V35(102)-1 A/P PIN NAME ORDER PIN	03-JUN-77 PAY = 0 DRAW ORDER OPT	RV RG Y RV OPT	X Z	REMARKS	27-Oct-77 16117 NC LENGTH FLAG	PAGE 37 EXCEPTIONS	RUN NUMBER
ELU INSTR	I CM6R1	1-01 *	K5-5	1		N 9-5/8		398
ELU INSTR	I CM5R1	1-02 *	K3-6		SOURCE			398
ELU INSTR	I	1				9-5/8		398
EN	H CM9R1	1-01 *	DD	1	SOURCE	N 3-4/8		399
EN	H CM9R1	1-02 *	DD		SOURCE			399
EN	H	1				3-4/8		399
ENTR PS CLK 1	L CM2E2	DP6K1 1-01 *	KE-5	2	SOURCE	N 2-5/8		400
ENTR PS CLK 1	I CM6K1	1-02 *		1		N 4-7/8		400
ENTR PS CLK 1	I CMRR2	1-03 *	KT-2			7-4/8		400
ENTR PS CLK 1	I	1						400
ENTR PS CLK 2	I CMRR2	DP6J1 1-01 *	KT-2	1	SOURCE	N 3-7/8		401
ENTR PS CLK 2	I CM6J1	1-02 *				3-7/8		401
ENTR PS CLK 2	I	1						401
ENT1	H CM6R1	1-01 *	K5-668	1	SOURCE (K5-8)	N 7-3/8		402
ENT1	H DM7R2	1-02 *	K4-35			7-3/8		402
ENT1	H	1						402
ENTRPSR	H AM6R2		K5-8		SOURCE		1-PIN RUN	403
ENTR1	I CM6A1		K5-246R		SOURCE (K5-8)		1-PIN RUN	404
ENTR2	I AM4R1	4M6T2 1-01 *	K4-3	2		N 2-3/8		405
ENTR2	I AM6T2	1-02 *	K5-8	1	SOURCE	N 12-5/8		405
ENTR2	I E17E1	1-03 *	K4-4					405
ENTR2	I	1				15-0/8		405
ENTR (1)	H CM7J1	1-01 *	K4-4	1		N 3-5/8		406
ENTR (1)	H CM6R1	1-02 *	K5-4		SOURCE			406
ENTR (1)	H	1				3-5/8		406
ENTR A	H CM9R1	1-01 *	DD	1	SOURCE	N 6-3/8		407
ENTR A	H CM9R1	1-02 *	DD					407
ENTR A	H	1				6-3/8		407
ENTR B	H CM9J1	1-01 *	DD	1	SOURCE	N 8-5/8		408
ENTR B	H CM9R2	1-02 *	DD					408
ENTR B	H	1				8-5/8		408
ENTR FKA A	H CM9R1	1-01 *	DD	1	SOURCE	N 6-5/8		409
ENTR FKA B	H CM9R1	1-02 *	DD					409
ENTR FKA B	H	1				6-5/8		409
ENTR FKA C	H CM9R1	1-01 *	DD	1	SOURCE	N 8-1/8		410
ENTR FKA D	H CM9R2	1-02 *	DD					410
ENTR FKA D	H	1				8-1/8		410
LOT	I CM6R2	1-01 *	K5-5	1		N 3-7/8		411
LOT	L CM5K2	1-02 *	K3-6		SOURCE			411
LOT	I	1				3-7/8		411

KRIIA, R RUN NAME	A/P	WRAPP JV35(102)		R3-JUN-77		X	Z	REMARKS	27-Oct-77	16:17 NC LENGTH FLAG	PAGE 40 EXCEPTIONS	RUN NUMBER
		FIN NAME	ORDER PIN	RAY = ORDER	Q DRAW OPT							
IRB 75XXX IRB 75XXX IRB 75XXX	L L L	AW2U2 UM1T1		1-01 * 1-02 * 1				KE-4 KF-4		N 8-1/8 8-1/8		435 435 435
JAB CTA	H	E07R1						K4-23			1-PIN RUN	436
JAHHP JAHHP JAHHP	H H H	C06T2 E07A1		1-01 * 1-02 * 1				K5-4 K4-23		N 6-5/8 6-5/8		437 437 437
JAHPP JAHPP JAHPP JAHPP JAHPP	L L L L L	C43S2 A03V1 C06L1 E07R1	A03V1	1-01 * 1-02 * 1-03 * 1-04 * 1	1			K2-5678 K2-3 K5-4 K4-3		N 8-1/8 8-1/8 8-1/8		438 438 438 438 438
JAPR (0)	H	E07L1						K4-3			1-PIN RUN	439
JPH (0) JPH (0) JPH (0)	H H H	E06T2 E07T2		1-01 * 1-02 * 1				K5-8 K4-3		N 11-3/8 11-3/8		440 440 440
KT INSP KT INSP KT INSP	L L L	E05R1 E08R1		1-01 * 1-02 * 1				K3-5 KI-7		N 5-5/8 5-5/8		441 441 441
KTSR14 KTSR14 KTSR14	L L L	E06R2 C08K1		1-01 * 1-02 * 1				K5-7 KI-9		N 4-3/8 4-3/8		442 442 442
KTSR17 KTSR17 KTSR17	L L L	A06P2 C08L2		1-01 * 1-02 * 1				K5-7 KI-9		N 7-5/8 7-5/8		443 443 443
LOAD PS LOAD PS LOAD PS	L L L	E05A2 D06R1		1-01 * 1-02 * 1				K3-9 K5-2		N 6-3/8 6-3/8		444 444 444
LTC LTC LTC	L L L	E03R1 C09R1	C09R1	1-01 * 1-02 * 1	1			KW-2 DD		N 12-5/8 12-5/8		445 445 445
MCL MCL MCL	L L L	E01R1 E07V2		1-01 * 1-02 * 1	1			KM-2 K4-2		N 3-7/8 3-7/8		446 446 446
MCL ENABLE MCL ENABLE MCL ENABLE MCL ENABLE	L L L L	C06S2 E07R1 E01V2	E07R1	1-01 * 1-02 * 1-03 * 1				K5-5 K4-26 KM-2		N 5-5/8 5-5/8		447 447 447 447
MFR SW MFR SW MFR SW	L L L	D06V1 E08C1		1-01 * 1-02 * 1				K5-5 KI-9		N 3-1/8 3-1/8		448 448 448

KRIIA, R RUN NAME	A/P	WRAPP JV35(102)		R3-JUN-77		X	Z	REMARKS	27-Oct-77	16:17 NC LENGTH FLAG	PAGE 41 EXCEPTIONS	RUN NUMBER
		FIN NAME	ORDER PIN	RAY = ORDER	Q DRAW OPT							
MFR (1)	H	E08R2						KI-7			1-PIN RUN	449
MGR SE11 MGR SE11 MGR SE11	H H H	E14R1 E08A1		1-01 * 1-02 * 1	1			K1-8 KI-2		N 3-2/8 3-2/8		450 450 450
MSR MSR MSR	L L L	A12L2 D01R2		1-01 * 1-02 * 1				KF-5 KF-2		N 9-1/8 9-1/8		451 451 451
MSR (1) MSR (1) MSR (1) MSR (1)	H H H H	A12P2 D01P2 E01R2		1-01 * 1-02 * 1-03 * 1				K6-5 KF-2 KM-2		N 9-7/8 2-2/8		452 452 452 452
MSR (1) MSR (1) MSR (1)	H H H	E11R2 E11R2		1-01 * 1-02 * 1				KF-24 KM-2		N 8-1/8 8-1/8		453 453 453
MSR (1) MSR (1) MSR (1) MSR (1)	H H H H	E07R1 E08P2 E08R2		1-01 * 1-02 * 1-03 * 1				K4-246 KI-2 KI-256		N 9-7/8 8-1/8		454 454 454 454
MSR (1)	H	A07R1						K4-4			1-PIN RUN	455
MSR (1)	H	A07R1						K4-4			1-PIN RUN	456
MTR (1)	H	E08R2						KI-7			1-PIN RUN	457
MU	L	C02R1						YE-245			1-PIN RUN	458
N DATA N DATA N DATA	L L L	E05R1 E06S1		1-01 * 1-02 * 1				K3-9 K5-2		N 9-7/8 9-7/8		459 459 459
NO STOP NO STOP NO STOP	L L L	E07S1 E01P2		1-01 * 1-02 * 1				K4-2 KM-2		N 4-1/8 4-1/8		460 460 460
NO SYM NO SYM NO SYM	L L L	A07C1 D08R2		1-01 * 1-02 * 1				K4-4 KI-6		N 10-5/8 10-5/8		461 461 461
NOIT (0) NOIT (0) NOIT (0)	H H H	C06R2 D07S2		1-01 * 1-02 * 1				K5-4 K6-346		N 4-7/8 4-7/8		462 462 462
NOBAC (1)	H	D07R2						K4-6			1-PIN RUN	463
NPR (0)	H	E07R1						K4-56			1-PIN RUN	464
ODA ERF ODA ERF ODA ERF	L L L	C06C1 E07R2		1-01 * 1-02 * 1				K5-4 K4-34		N 8-1/8 8-1/8		465 465 465

K0114.4 RUN NAME	A/P	KAPD V35(102)-1 03-JUN-77			Q	DRAW	PV HG Y	X Z	REMARKS	27-Oct-77	PAGE 44		RUN NUMBER
		FIN	ORDER	PIN							RAY - ORDER	NO	
PR408	H	A08M1							KT-4		N 10-1/8	495	
PR408	H	E08D2							KT-6		N 5-3/8	495	
PR408	H	E01S2							KM-2			495	
PR408	H										15-4/8	495	
PR409	H	A08M2							KT-4		N 9-3/8	496	
PR409	H	E08V2							KT-6		N 6-1/8	496	
PR409	H	E01F1							KM-2			496	
PR409	H										15-4/8	496	
PR410	H	B08P1							KT-4		N 12-5/8	497	
PR410	H	E01T1							KM-2			497	
PR410	H										12-5/8	497	
PR411	H	A08V2							KT-4		N 8-3/8	498	
PR411	H	E08M2							KT-6		N 5-1/8	498	
PR411	H	E01F1							KM-2			498	
PR411	H										13-4/8	498	
PR412	H	A08T2							KT-4		N 13-5/8	499	
PR412	H	E01J1							KM-2			499	
PR412	H										13-5/8	499	
PR413	H	A08U2							KT-4		N 12-7/8	500	
PR413	H	E01C1							KM-2			500	
PR413	H										12-7/8	500	
PR414	H	B08S1							KT-4		N 11-3/8	501	
PR414	H	E01T2							KM-2			501	
PR414	H										11-3/8	501	
PR415	H	C08A1							KT-4		N 9-7/8	502	
PR415	H	E01K2							KM-2			502	
PR415	H										9-7/8	502	
PR416	H	B08M2							KT-4		N 11-1/8	503	
PR416	H	E01M1							KM-2			503	
PR416	H										11-1/8	503	
PR417	H	B08S2							KT-4		N 12-1/8	504	
PR417	H	E01V1							KM-2			504	
PR417	H										12-1/8	504	
PR418 RELEASE	H	D07A1							K4-25		1-PIN RUN	505	
PR418 (A)	H	B07U1							K4-3		N 11-3/8	506	
PR418 (B)	H	E06V1							V5-5			506	
PR418 (C)	H										11-3/8	506	
PR419 INSTA	H	E05M1							V3-6		N 4-7/8	507	
PR419 INSTA	H	E05P1							KT-7			507	
PR419 INSTA	H										4-7/8	507	
PR420 RELEASE	H	A07N2							K4-45		1-PIN RUN	508	

K0114.4 RUN NAME	A/P	KAPD V35(102)-1 03-JUN-77			Q	DRAW	PV HG Y	X Z	REMARKS	27-Oct-77	PAGE 45		RUN NUMBER
		FIN	ORDER	PIN							RAY - ORDER	NO	
PS001 RESECT	H	A07S1							K4-6		1-PIN RUN	509	
PS002	H	A07E2							K4-6		N 9-1/8	510	
PS002	H	E06E2							K5-2		N 2	510	
PS002	H	E04L1							V1-7		N 2-7/8	510	
PS002	H	E08F2							KT-6		N 2-5/8	510	
PS002	H	E05V2							K3-7			510	
PS002	H										16-5/8	510	
PS(C)	H	A05P2							K3-89		N 3-7/8	511	
PS(C)	H	E07H1							K1-5		N 5-5/8	511	
PS(C)	H	E06P1							K5-2		N 8-7/8	511	
PS(C)	H	E01P2							KM-2			511	
PS(C)	H										16-3/8	511	
PS(C) (1)	H	A05D1							K3-8		N 14-3/8	512	
PS(C) (1)	H	E06H1							K5-23		N 2-7/8	512	
PS(C) (1)	H	E01I2							KM-2			512	
PS(C) (1)	H										17-2/8	512	
PS(C) (1) (1)	H	E07E1							K4-6		N 8-5/8	513	
PS(C) (1) (1)	H	E06F1							K5-2			513	
PS(C) (1) (1)	H										8-5/8	513	
PS(C) (1) (1)	H	E07D1							K4-2		N 1	514	
PS(C) (1) (1)	H	E06D1							K5-2		N 2-2/8	514	
PS(C) (1) (1)	H	E08S2							KT-29			514	
PS(C) (1) (1)	H										3-2/8	514	
PS(C) (1) (1)	H	E05S2							K3-7		N 2-7/8	515	
PS(C) (1) (1)	H	E06J2							K5-2		N 3	515	
PS(C) (1) (1)	H	E01J2							KM-2			515	
PS(C) (1) (1)	H										5-7/8	515	
PS(C) (1) (1)	H	E06I1							K5-23		N 3-6/8	516	
PS(C) (1) (1)	H	E07F2							KM-2			516	
PS(C) (1) (1)	H										3-5/8	516	
PS(C) (1) (1)	H	E06M1							K5-23		N 3-7/8	517	
PS(C) (1) (1)	H	E01H1							KM-2			517	
PS(C) (1) (1)	H										3-7/8	517	
PS05 (1)	H	E07E1							K4-6		N 7-5/8	518	
PS05 (1)	H	E06E1							K5-2			518	
PS05 (1)	H										7-5/8	518	
PS06 (1)	H	C07K2							K4-6		N 8-1/8	519	
PS06 (1)	H	E06P1							K5-2			519	
PS06 (1)	H										8-1/8	519	
PS07 (1)	H	E07D2							K4-6		N 8-5/8	520	
PS07 (1)	H	E06P2							K5-2			520	
PS07 (1)	H										8-5/8	520	
PS12 (1)	H	C08U1							KT-2		1-PIN RUN	521	

KRI1A.M RUN NAME	WHAED JV35(102)-1 03-JUN-77				27-Oct-77	16117	PAGE 52		RUN	
A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q DRAW	RV RG Y	X Z	REMARKS	NC LENGTH FLAG	EXCEPTIONS	NUMBER
STALL (0)	H	C06P1	1-01 *		K5-4	2	SOURCE	N 1-3/8		606
STALL (0)	H	C07P2	1-02 *		K4-4	1		N 3-3/8		606
STALL (0)	H	D08F1	1-03 *		KI-3			4-6/8		606
STALL (2)	H		1							606
START SA (0)	H	A06P1	1-01 *		K5-7	1	SOURCE	N 15-7/8		607
START SW (0)	H	F07U1	1-02 *		K4-3			15-7/8		607
START SW (0)	H		1							607
SWICH (1)	H	A06R2	1-01 *		K5-6	1	SOURCE	N 13-3/8		608
SWICH (1)	H	F05J2	1-02 *		K3-2			13-3/8		608
SWICH (1)	H		1							608
T14 (1)	H	D08A1			KI-2		SOURCE		1-PIN RUN	609
T15 (1)	H	D06F1			KI-2		SOURCE		1-PIN RUN	610
IDATA (0)	H	D07N2			K4-6		SOURCE		1-PIN RUN	611
IPACE	L	B06P2	1-01 *		K5-45	1	SOURCE	N 12-1/8		612
IPACE	L	F05S1	1-02 *		K3-7			12-1/8		612
IPACE	L		1							612
IRAF	L	B06S1	1-01 *		K5-5	1	SOURCE	N 7-3/8		613
IRAF	L	F05E1	1-02 *		K3-6			7-3/8		613
IRAF	L		1							613
IRAF (1)	H	D06P1	1-01 *		K5-4	1	SOURCE	N 7-5/8		614
IRAF (1)	H	F01D1	1-02 *		KM-2			7-5/8		614
IRAF (1)	H		1							614
IRAFS DATA	L	B06M2	1-01 *		K5-4	1	SOURCE	N 5-5/8		615
IRAFS DATA	L	D05H2	1-02 *		K3-6			5-5/8		615
IRAFS DATA	L		1							615
IRAFS RR	L	D05L1	1-01 *		K3-5	1	SOURCE	N 1-2/8		616
IRAFS RR	L	D06F1	1-02 *		K5-3			1-2/8		616
IRAFS RR	L		1							616
ISACK (0)	H	D07J1			K4-6		SOURCE		1-PIN RUN	617
IRF1 (1)	H	C03P2	1-01 *		K2-5	2	SOURCE	N 2-2/8		618
IRF1 (1)	H	C06P1	1-02 *		K5-34	1		N 6-5/8		618
IRF1 (1)	H	F05S1	1-03 *		K3-2	2		N 9-7/8		618
IRF1 (1)	H	D07L1	1-04 *		K4-3			18-6/8		618
IRF1 (1)	H		1							618
IRF2 (1)	H	C03P1	1-01 *		K2-5	2	SOURCE	N 2-3/8		619
IRF2 (1)	H	C06P2	1-02 *		K5-34	1		N 6-5/8		619
IRF2 (1)	H	F05P1	1-03 *		K3-2			9-0/8		619
IRF2 (1)	H		1							619
IRF2 (1)	H	C03R1	1-01 *		K2-5	2	SOURCE	N 2-1/8		620
IRF2 (1)	H	C06P2	1-02 *		K5-34	1		N 6-1/8		620
IRF2 (1)	H	F05N1	1-03 *		K3-2			8-2/8		620
IRF2 (1)	H		1							620

KRI1A.M RUN NAME	WHAED JV35(102)-1 03-JUN-77				27-Oct-77	16117	PAGE 53		RUN	
A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q DRAW	RV RG Y	X Z	REMARKS	NC LENGTH FLAG	EXCEPTIONS	NUMBER
IRF3 (1)	H	F06P2	1-01 *		K5/3	2	SOURCE	N 4-7/8		621
IRF3 (1)	H	C03S1	1-02 *		K2-5	1		N 8-5/8		621
IRF3 (1)	H	F05F2	1-03 *		K3-2			13-4/8		621
IRF3 (1)	H		1							621
IRF4 (1)	H	B06P2	1-01 *		K5-3	2	SOURCE	N 2-6/8		622
IRF4 (1)	H	C03R2	1-02 *		K2-5	1		N 4-1/8		622
IRF4 (1)	H	C05K1	1-03 *		K3-2			6-7/8		622
IRF4 (1)	H		1							622
IRF5 (1)	H	A01L2	1-01 *		KF-4	1	SOURCE	N 3-7/8		623
IRF5 (1)	H	B02M2	1-02 *		KE-4	2		N 7-7/8		623
IRF5 (1)	H	F01F2	1-03 *		KM-2			11-6/8		623
IRF5 (1)	H		1							623
UPP MATCH	H	C04I2	1-01 *		KI-9	1	SOURCE	N 9-5/8		624
UPP MATCH	H	F07A2	1-02 *		K4-2			9-5/8		624
UPP MATCH	H		1							624
V DATA	L	B05H1	1-01 *		K3-9	1	SOURCE	N 10-1/8		625
V DATA	L	F06U2	1-02 *		K5-2			10-1/8		625
V DATA	L		1							625
WAIT	L	B05F1	1-01 *		K3-6	1	SOURCE	N 1-7/8		626
WAIT	L	B06P1	1-02 *		K5-4			1-7/8		626
WAIT	L		1							626
WAIT (0)	H	C06P1	1-01 *		K5-4	1	SOURCE	N 5-3/8		627
WAIT (0)	H	F05J1	1-02 *		K3-7			5-3/8		627
WAIT (0)	H		1							627
WR F(15100)	L	F07F2	1-01 *		K4-2	1	SOURCE	N 6-3/8		628
WR F(15100)	L	F04V1	1-02 *		K1-8			6-3/8		628
WR F(15100)	L		1							628
WR F(15100)	L	B04A1	1-01 *		K1-8	1	SOURCE	N 10-7/8		629
WR F(15100)	L	B07K2	1-02 *		K4-2			10-7/8		629
WR F(15100)	L		1							629
WRH (1)	H	D03I2	1-01 *		K2-7	1	SOURCE	N 3-7/8		630
WRH (1)	H	E07H2	1-02 *		K4-2			3-7/8		630
WRH (1)	H		1							630
WRI (1)	H	D03H2	1-01 *		Y2-7	1	SOURCE	N 3-4/8		631
WRI (1)	H	E07F2	1-02 *		K4-2			3-4/8		631
WRI (1)	H		1							631
ZR (1)	H	A01F1	1-01 *		KF-4	1	SOURCE	N 1-3/8		632
ZR (1)	H	A02P1	1-02 *		KE-4			1-3/8		632
ZR (1)	H		1							632
ZR+FPS(Z)	H	A01J1	1-01 *		KF-4	1	SOURCE	N 3-7/8		633
ZR+FPS(Z)	H	B02K2	1-02 *		KE-4			3-7/8		633
ZR+FPS(Z)	H		1							633

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DRAWING NUMBER	INT REL	AUTOMATIC WIRE TESTER (AWT) REVISION STATUS											
	H	J	K	L	M	N	P						
K-WL-KD11-A-WL	H	J	J	K	L	M	N						
D-AD-7010230-0-0		*	*	A	B	B	C						
C-CS-5410904-0-1	B	B	C	C	C	C	C						

REV P
NUMBER 7010230-0
SIZE CODE A WT

REVISIONS		REV.
CHK	CHANGE NO.	
-	KD11A-00011	J
ORIGINATED		
-	5410904-1	K
	KD11A-00012	L
K.P.	KD11A-00013	M
A.T.	KD11A-00014	N
B.C.	KD11A-00015	P

DRN <i>E. RENO</i>	DATE 8-29-74	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. <i>R. Gilbert</i>	DATE 8-29-74	
ENG. <i>J. E.</i>	DATE 9-5-74	TITLE
PROJ. ENG. <i>L. ...</i>	DATE 9-5-74	KD11-A
PROD. <i>J. ...</i>	DATE 9-5-74	
FIRST USED ON KD11-A		AWT REVISION STATUS
SCALE —	SIZE CODE A WT	NUMBER 7010230-0
SHEET 1 OF 1	DIST.	REV. P

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PARTS REFERENCE

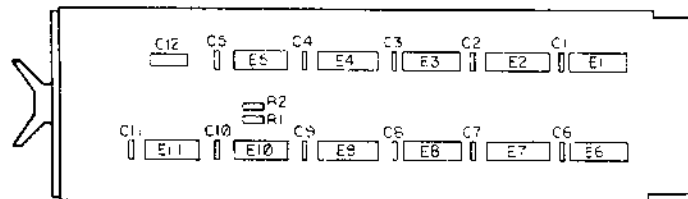
ITEM NO.	DRAWING REFERENCE	DESCRIPTION	PART NUMBER	QUANTITY
1	E1, E6	DEC 5384	IC 1910384	2
2	E2	DEC 74175	IC 1910851	2
3	E3	DEC 74175	IC 1910851	2
4	E4	DEC 74175	IC 1910851	2
5	E5	DEC 74175	IC 1910851	2
6	E7, E8	DEC 74175	IC 1910851	2
7	E9	DEC 74175	IC 1910851	2
8	E10	DEC 74175	IC 1910851	2
9	E11	DEC 74175	IC 1910851	2
10	E12	DEC 74175	IC 1910851	2
11	C1	HRU C17		1
12	C2	1.0 MFD 50V 20%	CAP 1001510	1
13	C3	5.6 MFD 35V 20%	CAP 10009E1	1
14	R1, R2	1K 1/4W 1/2	RES 1300365	2
		STACK LIMIT REGISTER	APL-M7237-0-0	

NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER, AND CONVERTING THE FIRST LETTER ACCORDING TO THE PIN NOMENCLATURE CHART AT RIGHT.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED; MULTIPLE NOTATIONS OF THE SAME SIGNALS WITHIN A MODULE HAVE THE PIN NOTED ON EACH. AN INPUT SIGNAL IS NOTED ONLY ONCE PER SHEET UNLESS SEPERATE PINS ARE USED; MULTIPLE INPUTS ARE CONNECTED. MODULE OUTPUT SIGNALS ARE BROUGHT TO THE EXTREME RIGHT OF EACH SHEET.
- K J I I SIGNAL SOURCE NOTATION (K I-2, FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE FROM THE PROCESSOR. FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THESE SIGNALS CAN EXIST.
- UNLESS OTHERWISE SPECIFIED: RESISTANCE IS IN OHMS.
- DETAILS ON COMPONENTS ARE NOTED IN THE PARTS REFERENCE; PLACEMENT IS NOTED IN THE COMPONENT PLACEMENT DIAGRAM. CAPACITORS WITHOUT NOTED VALUES ARE 0.01 MFD.
- GND AND +5V ARE USUALLY PIN 7 AND PIN 14, RESPECTIVELY. EXCEPTIONS ARE:

IC TYPE	GND	+5V
DEC 5384	PIN 1	PIN 8
DEC 74175	PIN 8	PIN 16

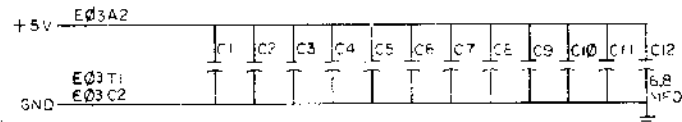
COMPONENT PLACEMENT



PIN NOMENCLATURE

MODULE PROCESSOR

A E03

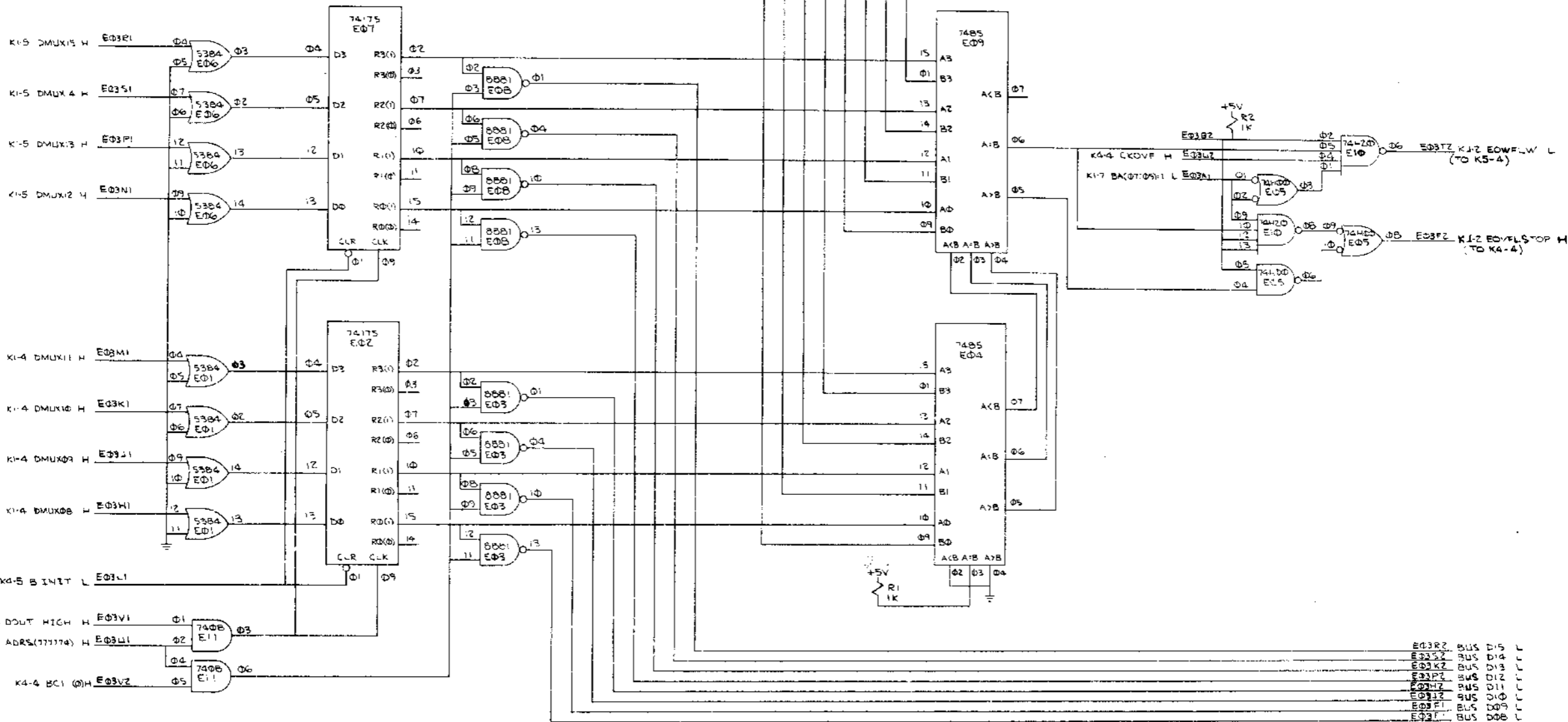


REV	CHANGE NO.	DATE	BY
B	1	3-15-74	JL ROGERS

FIRST USED OR OPTION / MODEL PDP 1V35	QTY	DESCRIPTION	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES	DATE 3/22/72	DATE 3/1/72	DIGITAL EQUIPMENT CORPORATION	
TOLERANCES DECIMAL FRACTIONS ANGLES - 0.00 ± 1/64 ± 0.30 FIML SURFACE QUALITY / REMOVE BLINDS AND BREAK SHARP CORNERS	DATE 3-25-72	DATE 5-23-72	TITLE STACK LIMIT REGISTER	
MATERIAL FINISH	DATE 5/14/72	DATE	NUMBER M7237	
NEXT HIGHER ASSY A ML-KJ11 A	DATE	DATE	REV B	
SCALE	DATE	DATE	DIFS M7237-0-1	
SHEET 1 OF 2	DIST.		1	

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- K1-6 BA15 (0)H E03E2
- K1-6 BA14 (0)H E03L2
- K1-6 BA13 (0)H E03M2
- K1-6 BA12 (0)H E03N2
- K1-6 BA11 (0)H E03D2
- K1-6 BA10 (0)H E03B1
- K1-6 BA09 (0)H E03C1
- K1-6 BA08 (0)H E03D1



- E03E2 BUS D15 L
- E03L2 BUS D14 L
- E03M2 BUS D13 L
- E03N2 BUS D12 L
- E03D2 BUS D11 L
- E03B1 BUS D10 L
- E03C1 BUS D09 L
- E03D1 BUS D08 L

REV	
CHG	
CHK	
REVISIONS	
CHANGE NO	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO	ITEM NO.
PDP 11/35				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	TITLE		
XXX + .00	10° 30'	STACK LIMIT REGISTER		
XX - .02		M7237 KJ-2		
X - .1		A-ML-KJ11-4		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL				
FINISH				
NEXT HIGHER ASSY				
SCALE				
SHEET 2 OF 2				
DIGITAL EQUIPMENT CORPORATION		M7237-0-1 B		

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

SOFTWARE 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 <i>J. F. Dougherty</i>	CHECKED <i>J. F. Dougherty</i>	SECTION
DATE <i>9/26/72</i>	DATE <i>9/27/72</i>	
ENG <i>J. F. Dougherty</i>	PROD <i>J. F. Dougherty</i>	ISSUED SECT.
DATE <i>9/27/72</i>	DATE <i>7-20-72</i>	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION							KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE
			KJ11-A												
1	MAINDEC-11-DCKBF-A-D	STACK LIMIT TEST	1												
2	MAINDEC-11-DCKBF-A-PB	STACK LIMIT TEST	1												

TITLE STACK LIMIT REGISTER	ASSY. NO. <i>44</i>	SIZE CODE A SL	NUMBER KJ11-A-SL	REV.	ECO NO
	SHEET 1 OF 1	DIST.			

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

--	--	--	--	--	--

SEQUENCE	SEQUENCE
TIMING DIAGRAM	D-TD-KW11-L-02
LINE FREQUENCY CLOCK	D-BS-KW11-L-01
LINE CLOCK	D-CS-M787-0-1
LINE FREQUENCY CLOCK	A-PI-KW11-L-0
SOFTWARE LIST	A-SL-KW11-L-20

MFG PRINTS
TEST PROCEDURE A-SP-KW11-L-03

VARIATION	TITLE	PRINT SET TYPE				
		KW11-L				
KW11-L	LINE FREQUENCY CLOCK	X				

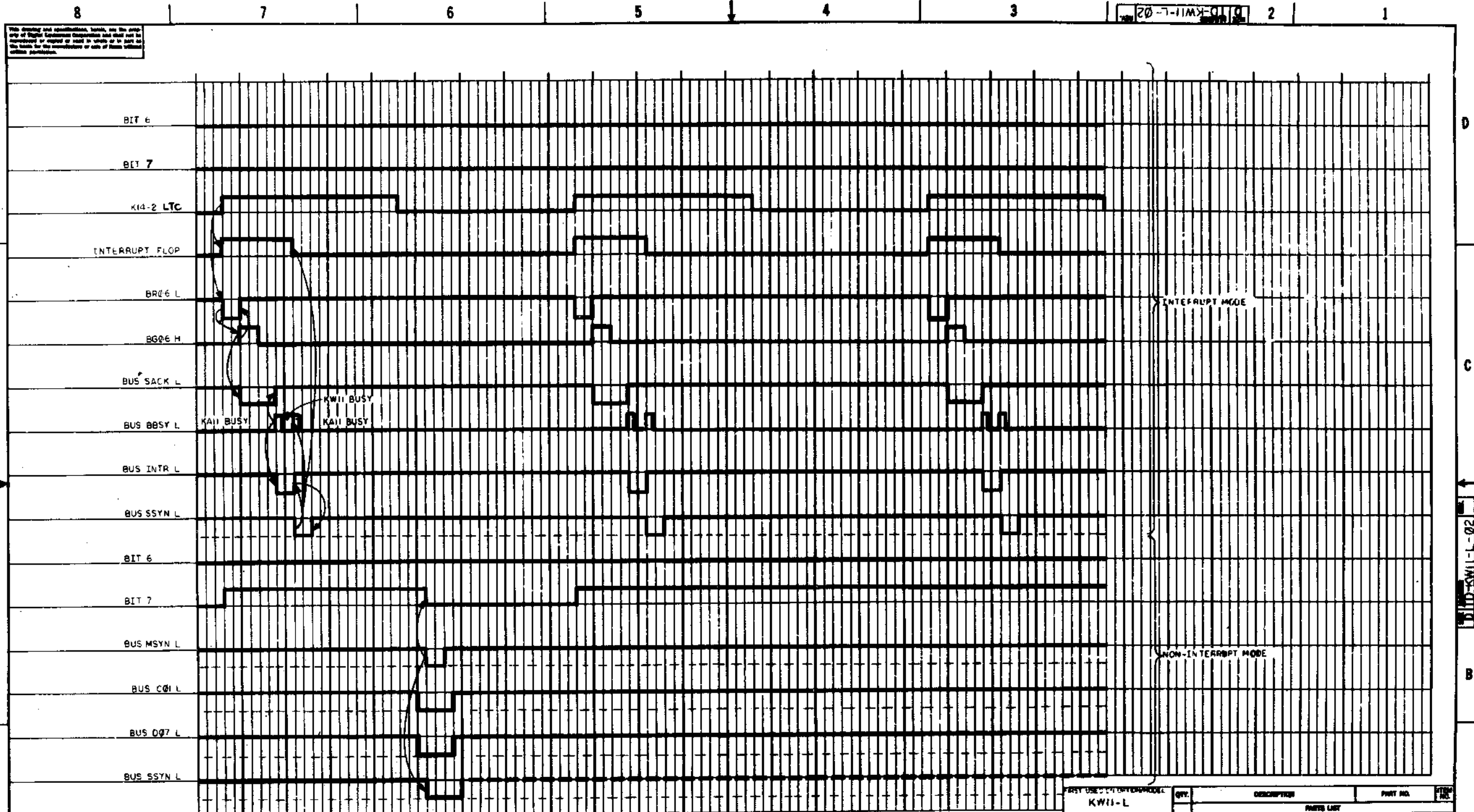
REV	CHG. NO.	DATE

USED ON OPTION/MODEL	DRN <i>S. Brennan</i> DATE <i>2-14-72</i>	TITLE LINE FREQUENCY CLOCK (KW11-L)	NUMBER KW11-L-0	REV *
	CHKD. <i>M. S. ...</i> DATE <i>6-15-72</i>			
	PROVEN. <i>M. S. ...</i> DATE <i>6-14-72</i>			
	FIELD SERV. <i>M. S. ...</i> DATE <i>6-14-72</i>			
SHEET <i>1</i> OF <i>2</i>	SIZE CODE B DD	DIST		

CUSTOMER PRINT SET					CUSTOMER PRINT SET									
KW11-L	DEPT SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.	DEPT SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X	X		D-BS-KW11-L-01	A	2	LINE FREQUENCY INTERNAL CLOCK								
X	X		A-SP-KW11-L-03	*	3	TEST PROCEDURE								
X	X		D-CS-M787-0-1	#	2	LINE CLOCK								
X	X		A-PL-KW11-L-0	*	1	LINE FREQUENCY CLOCK								
X	X		A SL KW11 L 28	*	1	SOFTWARE LIST								

TITLE	SIZE	CODE	NUMBER	REV
LINE FREQUENCY CLOCK (KW11-L)	B	DD	KW11-L-0	*

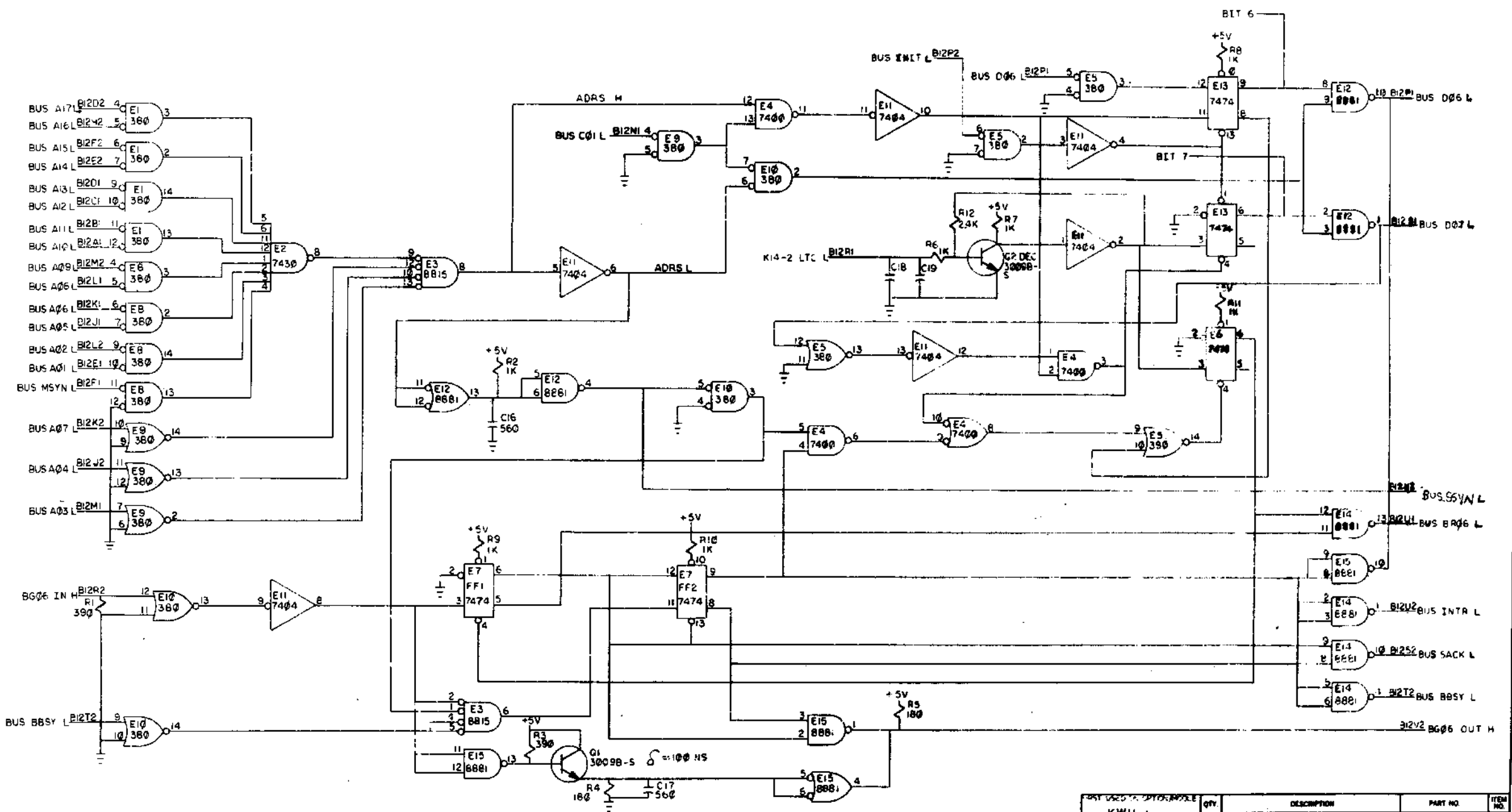
SHEET 2 OF 2



REV.	
REVISIONS	
DATE	
CHANGE NO.	
CHK	

PART USED OR IDENTIFIED		QTY.	DESCRIPTION	PART NO.	ITEM NO.
KWI-L					
DATE OF ISSUE					
ISSUED BY					
CHECKED BY					
APPROVED BY					
DATE					
SCALE					
SHEET 1 OF 1					
PARTS LIST			EQUIPMENT CORPORATION		
TITLE			TIMING DIAGRAM (KWI-L)		
DRAWN BY			D TD		
CHECKED BY			KWI-L-02		
DATE					

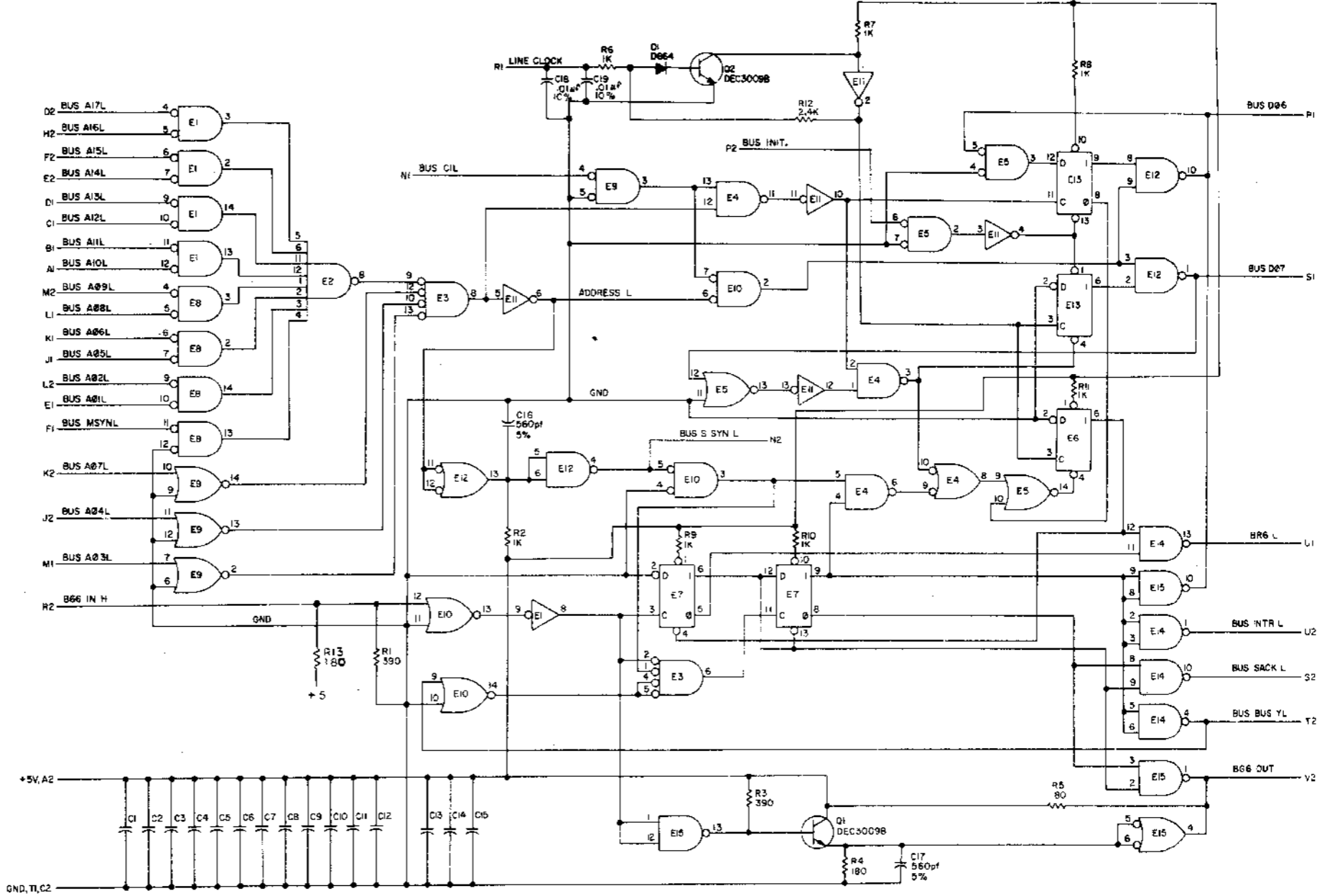
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REV	
CHG	
CHG	
CHG	
CHG	
CHG	

QTY	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		
	EQUIPMENT CORPORATION		
	UNIVERSITY MICROFILMS		
	TITLE		
	LINE FREQUENCY INTERVAL CLOCK		
	DRAWN BY		
	CHECKED BY		
	DATE		
	SCALE		
	SHEET 2 OF 2		

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UNLESS OTHERWISE INDICATED:
RESISTORS ARE 1/4W, 5%
CAPACITORS ARE .01uF, 100V, 20%
DEC640 = E1, E5, E8, E10, E9
DEC7430 = E2
DEC8815 = E3
DEC7400 = E4
DEC7404 = E11
DEC8881 = E12, E14
DEC7474 = E6, E7, E13

PIN 1 = GND ON E1, E8, E9, E10, E5
PIN 8 = +5V
PIN 7 = GND ON E2, E3, E4, E11, E12, E14, E13, E7, E6, E6
PIN 14 = +5V

NOTES
1 DEC 6640 REPLACES THE
OBSOLETE DEC 360

DATE: 1-2-70 BY: [Signature] CHECKED: [Signature]		TRANSISTOR & DIODE CONVERSION CHART DEC: [] 2N: [] 2N: [] 1N: []		TITLE: LINE TIME CLOCK INTERRUPT M787 PART: D CODE: CS M787-0-1 PRINTED CIRCUIT SET: []	
---	--	--	--	--	--

M0746 12

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W130 PARTS REFERENCE

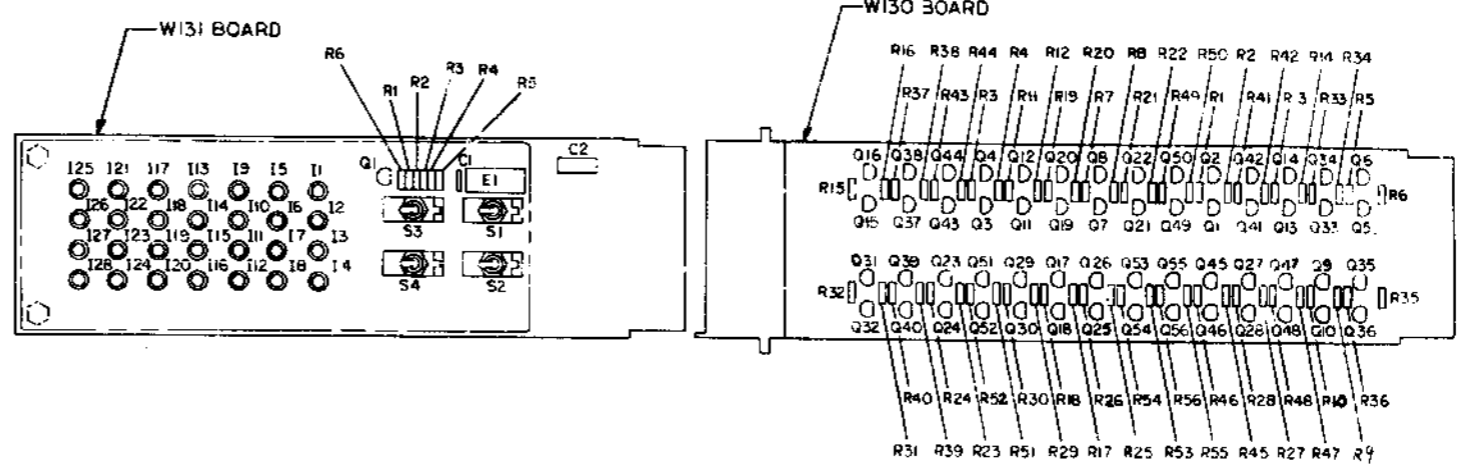
ITEM NO	DRAWING REFERENCE	DESCRIPTION	PART NUMBER	QUANTITY
1	R1 R3 R5 R7 R9 R11 R13 R15 R17 R19 R21 R23 R25 R27 R29 R31 R33 R35 R37 R39 R41 R43	15K, 1/4W, 5% RES.	1300496	28
2	R2 R4 R6 R8 R10 R12 R14 R16 R18 R20 R22 R24 R26 R28 R30 R32 R34 R36 R38 R40 R42 R44 R46 R48 R50 R52 R54 R56	470, 1/4W, 5% RES.	1300316	28
3	Q1-Q5	DEC 3009B TRANSISTOR	1503100	5
4	P1	M007 BLOCK, CONNECTOR	1209123	1

W131 PARTS REFERENCE

ITEM NO	DRAWING REFERENCE	DESCRIPTION	PART NUMBER	QUANTITY
1	F1	DEC 7400N IC	1905575	1
2	C1	.01 MFD, 100V, 20% DC CAP.	1801610	1
3	C2	6.8 MFD, 35V, 20% ST. CAP.	1200067	1
4	R1 R2 R3 R4 R5	3K, 1/4W, 5% RES.	1300432	5
5	R6	330, 1/4W, 5% RES.	1300295	1
6	Q1	DEC 3009B TRANSISTOR	1503100	1
7	I1-I29	LAMP, HUDSON, BLUE #2309G	1209219	28
8	S1-S4	SWITCH, TOGGLE, SPST, 6AT-12	1201165	4

- NOTES:
- THE KM11 IS A TWO MODULE (W130, W131) OPTION TO THE KM11 TO AID MAINTENANCE. THIS PREVIOUS OPTION IS INSTALLED BY INSERTING THE W130 MODULE INTO LOCATION B02 AND INSERTING THE W131 MODULE INTO THE W130. NOTE THAT THE SWITCHES AND LIGHTS FACE TOWARD AND EXTEND BELOW THE CONSOLE. THE BOTTOM COVER MUST BE REMOVED WITH THE CHASSIS EXTERNAL TO THE CABINET.
 - LABELS FOR THE INTERNAL MACHINE STATES LAMPS ARE NOTED ON THE W131 ETCH BOARD. SWITCHES PROVIDE A MANUAL CLOCK AND BUS RESPONSE AND ARE ACTIVE WHEN THE TOGGLE IS TOWARD THE NAME. NORMAL MACHINE OPERATION REQUIRES THAT ALL SWITCHES BE IN THE OFF POSITION.
 - "M CLK ENABLE" AND "M CLK" PROVIDE A MANUAL CLOCK FOR THE KM11. "M CLK ENABLE" IS ACTIVATED WHILE THE PROCESSOR IS HALTED. EACH TOGGLE OF "M CLK" THEN STEPS THE PROCESSOR THROUGH THE SMALLEST PROCESSOR CLOCK INTERVALS, THE R/W STATES, THE NEXT HIGHEST CLOCK INTERVAL (S CLK) IS PROVIDED BY FOUR TOGGLES (2 COMPLETE SWITCH CYCLES) AND INDICATED BY THE R/W2 LAMP. R/W2 IS THE LAST (OR REST) R/W STATE IN A "S CLK" INTERVAL, NORMAL OPERATION IS RESUMED WHEN "M CLK" AND THEN "M CLK ENABLE" ARE RETURNED TO OFF.
 - "NO TIME OUT" AND "SSYN" PROVIDE A MANUAL BUS RESPONSE TO THE PROCESSOR. IT IS USED WHEN OTHER DEVICES ARE NOT AVAILABLE. "NO TIME OUT" IS ACTIVATED, WHILE THE PROCESSOR IS HALTED, TO ELIMINATE AN ERROR TRAP ON MANUAL "SSYN". AT THE APPROPRIATE TIMES IN A BUS TRANSFER "SSYN" IS ACTIVATED AND DEACTIVATED.

COMPONENT PLACEMENT



REV.	CHG.	NO.

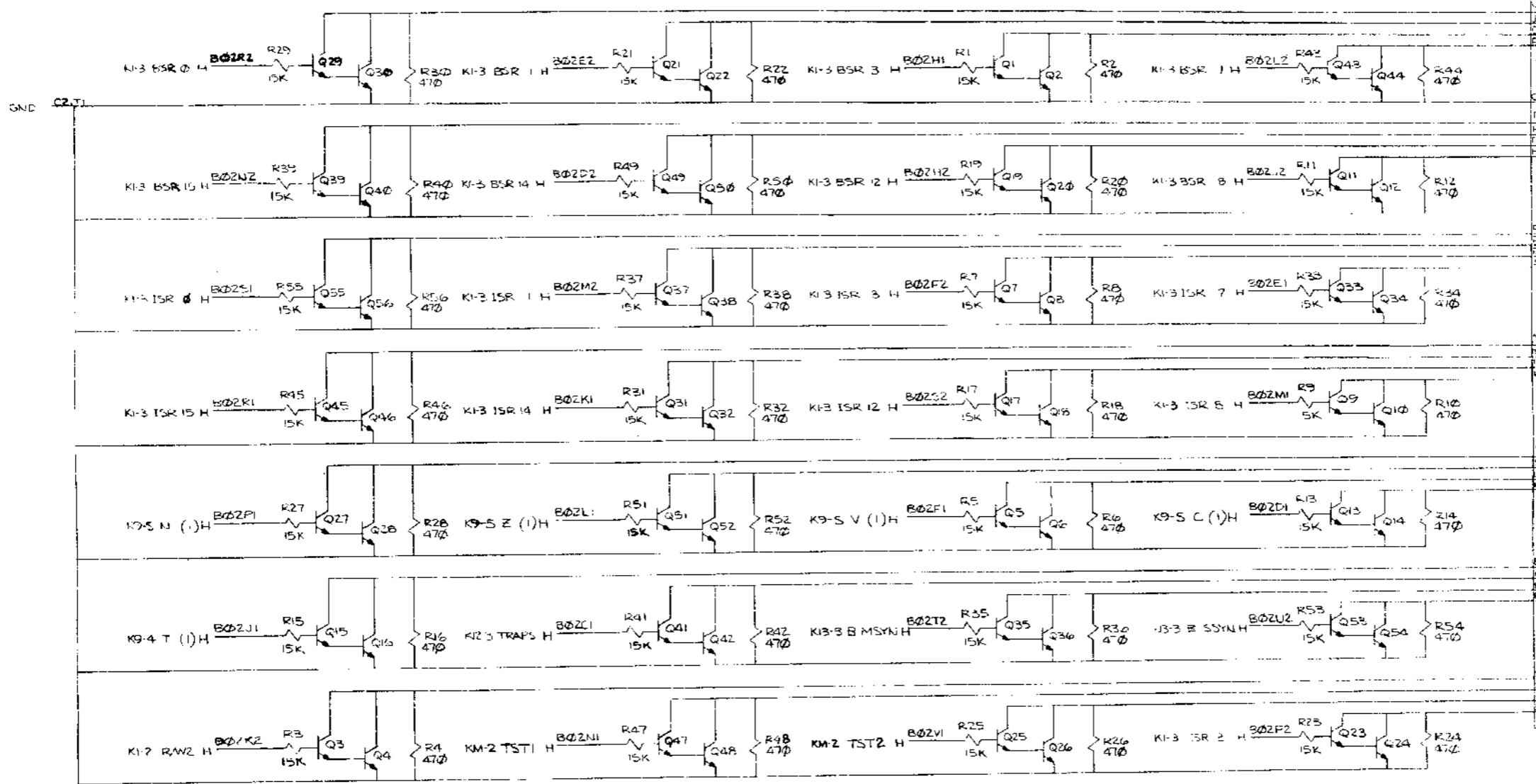
QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
MAINTENANCE BOARD (182) KM-1			
FIRST USED ON OPTION / MODEL		DATE	
POP11		5/17/70	
DO NOT SCALE DRAWING		DATE	
UNLESS OTHERWISE SPECIFIED		5/17/70	
DIMENSIONS IN DECIMALS		DATE	
TOLERANCES		5/17/70	
FRACTIONS DECIMALS ANGLES		DATE	
± .010 ± .005 ± .002		5/17/70	
FINISH SURFACE QUALITY		DATE	
REMOVE BURRS AND BREAK SHARP CORNERS		5/17/70	
MATERIAL		NEXT HIGHER ASSY	
+		A-ML-KM11-Ø	
FINISH		SCALE	
+		1/1	
		SHEET 1 OF 3	

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CONNECTOR AT REAR OF MODULE TO EXTEND MAINTENANCE BOARD 2, W131 (KM-3).

+5V B02A2
 +8V B02B1
 KM-3 M CLK ENABLE L
 KM-3 M CLK L
 KM-2 TIME OUT (1) H B02B2
 BUS SSYN L
 +5V B02V2
 +8V B02V1
 KM-2 M CLK ENABLE L
 B02U1 KM-2 M CLK L
 B02A1 KM-2 TIME OUT (1) H
 B02A1 BUS SSYN L

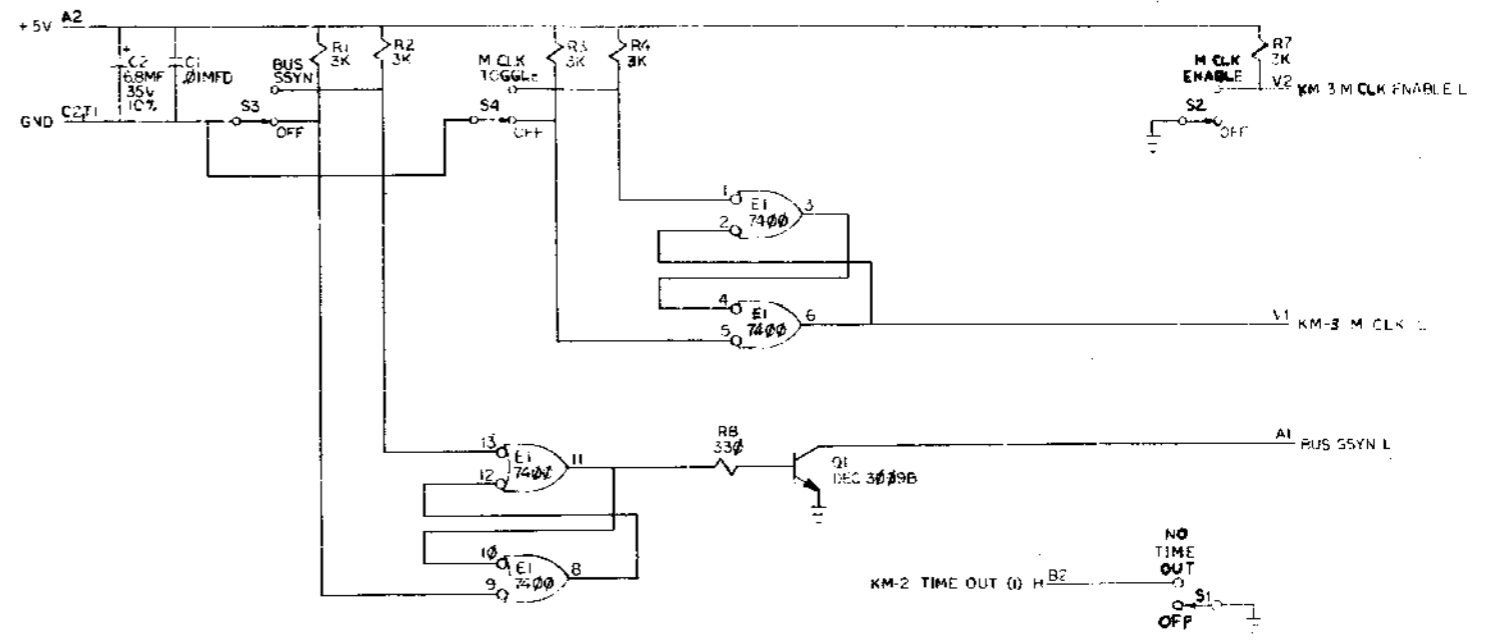
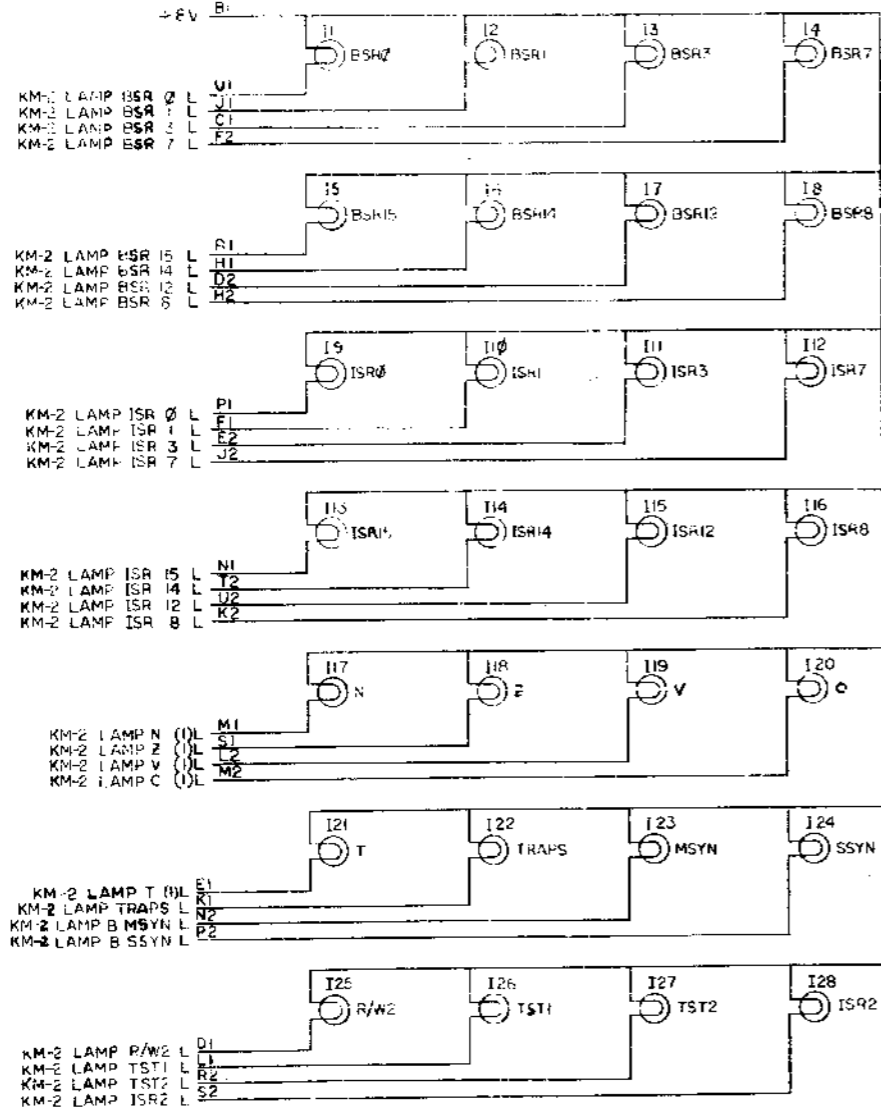
KM-2 LAMP BSR 0 L
 KM-2 LAMP BSR 1 L
 KM-2 LAMP BSR 3 L
 KM-2 LAMP BSR 7 L
 GND
 KM-2 LAMP BSR 15 L
 KM-2 LAMP BSR 14 L
 KM-2 LAMP BSR 12 L
 KM-2 LAMP BSR 8 L
 KM-2 LAMP ISR 0 L
 KM-2 LAMP ISR 1 L
 KM-2 LAMP ISR 3 L
 KM-2 LAMP ISR 7 L
 KM-2 LAMP ISR 13 L
 KM-2 LAMP ISR 14 L
 KM-2 LAMP ISR 12 L
 KM-2 LAMP ISR 8 L
 KM-2 LAMP L (1) L
 KM-2 LAMP Z (1) L
 KM-2 LAMP V (1) L
 KM-2 LAMP Z (1) L
 KM-2 LAMP T (1) L
 KM-2 LAMP TRAPS L
 KM-2 LAMP B MSYN L
 KM-2 LAMP B SSYN L
 KM-2 LAMP R/W 2 L
 KM-2 LAMP TST 1 L
 KM-2 LAMP TST 2 L
 KM-2 LAMP TST 2 L



REV	
CHANGE NO	
DATE	

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO	ITEM NO
POPH				
UNLESS OTHERWISE SPECIFIED: DRN 12-18-69 DATE 5/15/70				
UNLESS OTHERWISE SPECIFIED: DIMENSION IN INCHES DATE 5/15/70				
TOLERANCES: DECIMALS FRACTIONS AND 15 DATE 5/15/70				
± .005 ± .004 ± .030 DATE 5/15/70				
FINAL SURFACE QUOTE / REMOVE BLINDS AND BREAK SHARP CORNERS DATE 5/15/70				
MATERIAL: NEXT HIGHER ASSY				
FINISH: SCALE NONE				
SHEET 2 OF 3				
PARTS LIST				
digital CORPORATION				
TITLE: MAINTENANCE BOARD (1)				
SIZE CODE: W130 NUMBER: KM-2				
SCALE: DB3 KM11 0MB				
DIST				

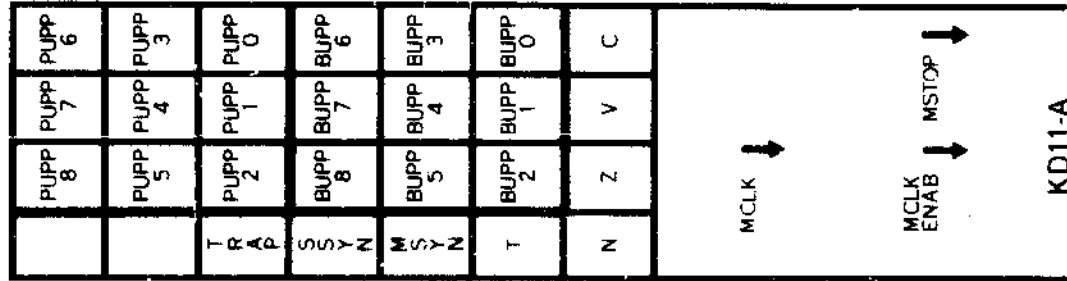
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REV	CHANGE NO	REVISIONS

FIRST USED ON OPTION/MODEL PDP-11	QTY.	DESCRIPTION	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED				
DRN	DATE	PARTS LIST		
CHKD	DATE	digital EQUIPMENT CORPORATION		
ENG	DATE	TITLE		
PROJ ENG	DATE	MAINTENANCE BOARD(2)		
MATERIAL	NEXT HIGHER ASSEMBLY	W131	NUMBER	REV
FINISH	SCALE NONE	DBS	KM11-OMB	
SHEET 3 OF 3		DST.		

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FIRST USED ON OPT / MOD
KD11A

REVISIONS	REV.	
	CHANGE NO.	
CHK		

SPEC # 9200100-94 (BLACK)

DRN <i>D. Mattson</i>	DATE <i>6-9-72</i>	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
CHK'D. <i>BW</i>	DATE <i>7/7/72</i>	TITLE	
ENG. <i>L.E. Frigo</i>	DATE <i>7/7/72</i>	MAINT MODULE OVERLAY (KD11-A)	
PROL ENG <i>A. Chouhan</i>	DATE <i>7-7-72</i>		
PROD <i>A. Stinger</i>	DATE <i>7/31/72</i>		
NEXT HIGHER ASSY <i>C.MD-5509081-0-0</i>		SIZE	CODE
SCALE		NUMBER	
SHEET		REV.	
OF		5509081-0-12	
DIST.			

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KE11-E,F				KT11-D			
KT11-D KE11-E,F	EPS (N)	MSR 01	EXP OVFL	ROM D	ROM C	ROM B	ROM A
	EPS (Z)	MSR 00	EXP UNFL	PBA 08	PBA 11	PBA 14	PBA 17
	EPS (V)	DRO9	ECN 00	PBA 07	PBA 10	PBA 13	PBA 16
	EPS (C)	DRO0	B 15	PBA 06	PBA 09	PBA 12	PBA 15

First used on opt/mod
KT11-D
KE11-E,F

REVISIONS	REV.	
	CHANGE NO.	
CHK		

SPEC #

9200101-94 (BLACK)

DRN. <i>J. Duran</i>	DATE 7-12-72	 DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. <i>BN</i>	DATE 7-12-72	
ENG. <i>F. Blough</i>	DATE 7/25/72	
PROJ. ENGR. <i>R. Duran</i>	DATE 7/25/72	
PROD. <i>J. Stanger</i>	DATE 7/31/72	
NEXT HIGHER ASSY:		TITLE
C-MD-5509081-0-0		Maint. module OVERLAY (KT11-D KE11-E,F)
SCALE	SIZE CODE A SS	NUMBER 5509081-043
SHEET OF	DIST. G	REV.

