

**KE11-F floating
instruction set
(FIS) option
engineering drawings**

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

	SEQUENCE		SEQUENCE
DRAWING DIRECTORY		B-DD-KE11-F (SHEET 1 ONLY)	
KE11-F BLOCK DIAGRAM		D-BD-KE11-F-BD	
FIS FLOW DIAGRAM		D-FD-KE11-F-FD	
FIS BOARD		D-CS-M7239-Ø-1	
SOFTWARE LIST		A-SL-KE11-F-SL	
PARTS LIST		A-PL-KE11-F-Ø	

THIS IS PRINT SET [] [] [] [] [] [] [] [] [] [] [] []

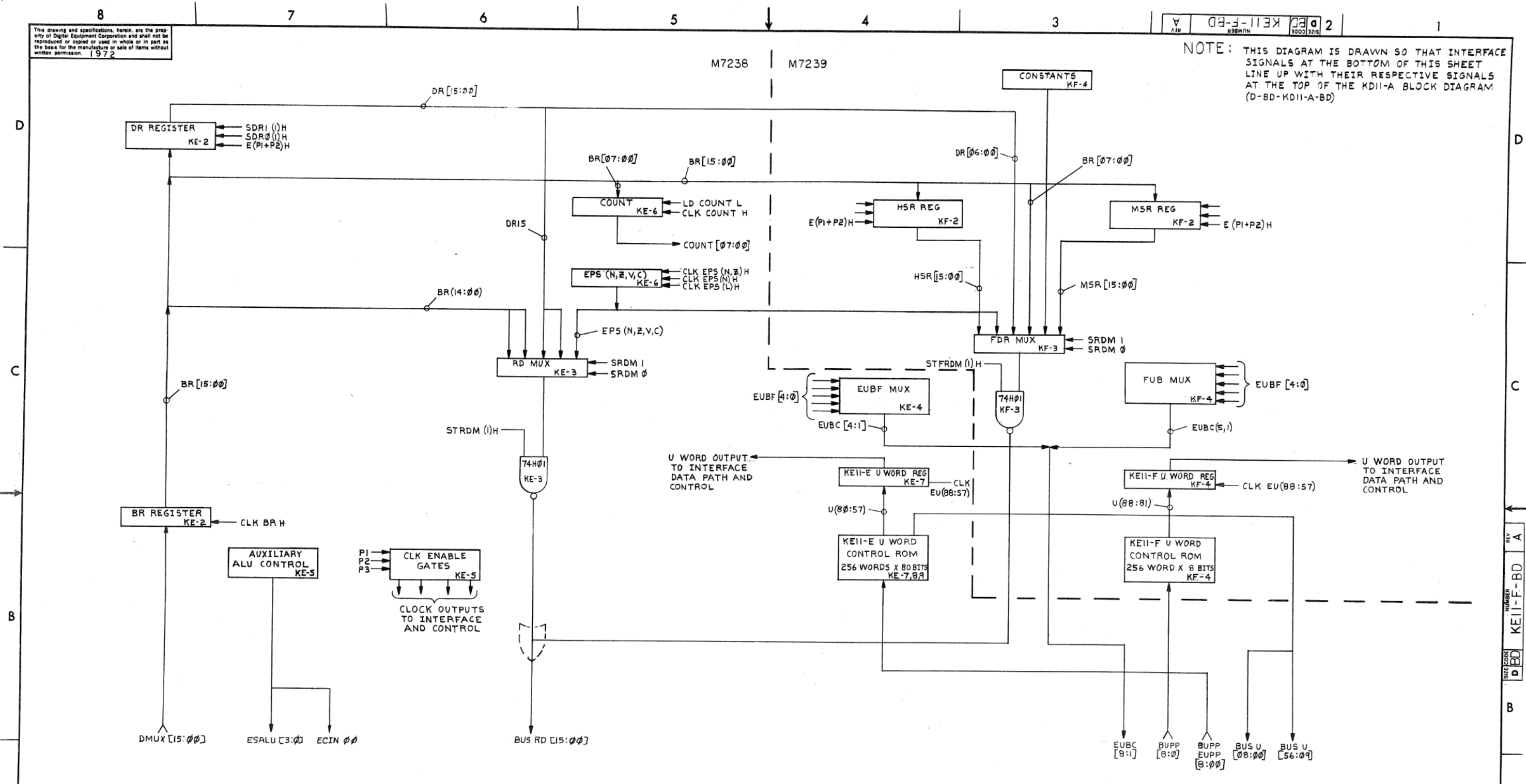
UNIT VARIATIONS		PRINT SET TYPE	
VARIATION	TITLE	KE11-F	
KE11-F	FLOATING INSTRUCTION SET	X	

REVISIONS	DATE	CHG. NO.	REV	USED ON OPTION/MODEL KD11-A	DRN.	DATE	TITLE FLOATING INSTRUCTION SET (FADD, FSUB, FMUL, FDIV)	SIZE B DD	CODE NUMBER KE11-F	REV A
	<i>8/27/72</i>	KE11-F-1	A		<i>9/26/72</i>	<i>9/26/72</i>				
					<i>9/27/72</i>	<i>9/27/72</i>				
					<i>9/27/72</i>	<i>9/27/72</i>				
					<i>9/27/72</i>	<i>9/27/72</i>				
DRB 106				SHEET 1 OF 2		DIST				

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REV A
 D BD KEII-F-BD
 1000 1215 2

NOTE: THIS DIAGRAM IS DRAWN SO THAT INTERFACE SIGNALS AT THE BOTTOM OF THIS SHEET LINE UP WITH THEIR RESPECTIVE SIGNALS AT THE TOP OF THE KDII-A BLOCK DIAGRAM (D-BD-KDII-A-BD)



BRUNING 40-522 15840
 DEC FORM NO DRD 102-B

REV	CHANGE NO	CHK
A	0000	KEII-F
	10-31-72	BUZYSKI
	11/07/72	BUZYSKI

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN <i>R. Rudolph</i>	DATE 5-10-72	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS TITLE KEII-F BLOCK DIAGRAM (U WORD & TABLES)	
DECIMALS	CHK'D <i>Buzyski</i>	DATE 7-21-72		
ANGLES	ENG. <i>Buzyski</i>	DATE 7-21-72		
XXX = .005 .XX = .02 .X = .1	PROV. ENG. <i>Buzyski</i>	DATE 7-21-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROB. <i>Buzyski</i>	DATE 7-21-72		
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE D BD	NUMBER KEII-F-BD
FINISH	SCALE NONE		SHEET 1 OF 2	REV. A

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M7239 KEII-F U WORD [U(88:91)] ← M7239 KEII-E U WORD [U(80:87)]

EXPANSION U WORD

CON		FCI	FUB	MHR			FRD	ERD	SRD		SDR			CVM			NZM		CCC			GPC			CEE	CNT		EUB				CBR
CON1	CON0	FCI BUS	EUBF4	SMSR	SHSRI	SHSR0	STFRDM	STADM	SRDMI	SRDM0	SDRI	SOR0	SCVM2	SCVM1	SCVM0	SNZMI	SNZM0	CLK NZ	CLK V	CLKC	GPC2	GPC1	GPC0	CLK UPPB	LCNT	ECNT	EUBF3	EUBF2	EUBF1	EUBF0	CLK BR	
U88(1)H	U87(1)H	U86(1)H	U85(1)H	U84(1)H	U83(1)H	U82(1)H	U81(1)H	U80(1)H	U79(1)H	U78(1)H	U77(1)H	U76(1)H	U75(1)H	U74(1)H	U73(1)H	U72(1)H	U71(1)H	U70(1)H	U69(1)H	U68(1)H	U67(1)H	U66(1)H	U65(1)H	U64(1)H	U63(1)H	U62(1)H	U61(1)H	U60(1)H	U59(1)H	U58(1)H	U57(1)H	

EUBC (4:1) BUT CHART

EUBF 4	EUBF 3	EUBF 2	EUBF 1	EUBF 0	BUT
L	L	L	L	L	NOOP
L	L	L	L	H	D15
L	L	L	H	L	SDIVD
L	L	L	H	H	BRIS
L	L	H	L	L	D=0
L	L	L	H	L	DRIS
L	L	H	H	L	NOT USED
L	L	H	H	H	DIV QUIT
L	H	L	L	L	COUNT=0
L	H	L	L	H	OVFL+UNFL+STORE
L	H	L	H	L	DR00 * BIS
L	H	L	H	H	BR(05:00)
L	H	H	L	L	ZB * EPS (z)
L	H	H	L	H	FINSTR I
L	H	H	H	L	EINSTR II
L	H	H	H	H	EINSTR I

FUBC BUT CHART EUBC (4:1)

SUB EUBF 4	S2 EUBF 2	S1 EUBF 1	S0 EUBF 0	FN	BUT (FUBC)
H	—	—	—	L	—
L	L	L	L	D0	ARGA
L	L	L	H	D1	MSR0I
L	L	H	L	D2	ZB + EPS (z)
L	L	H	H	D3	COUNT > 30
L	H	L	L	D4	NORMALIZED
L	H	L	H	D5	MSR00
L	H	H	L	D6	—
L	H	H	H	D7	—

CONSTANTS

GPC=6	CON 1	CON 2	CONSTANT (OCTAL)
H	L	L	400
H	L	H	244
H	H	L	6
H	H	H	30
L	L	L	200

GPC CHART

GPC2	GPC1	GPC0	FUNCTION
0	0	0	NOOP
0	0	1	BUT (NORMALIZE) TESTS DR09
0	1	0	ALLOWS ALU CONTROL AS A FUNCTION OF CERTAIN CONDITIONS RATHER THAN DIRECTLY BY THE CONTROL ROM
0	1	1	ENABLES DRIS TO PROVIDE THE CARRY-IN TO THE ALU
1	0	0	ENABLES EPS(C) TO PROVIDE THE CARRY-IN TO THE ALU
1	0	1	ENABLES HSRIS TO PROVIDE LSB SHIFT INPUT TO THE DR
1	1	0	GENERATES CONSTANT 200(8)
1	1	1	USED TO EXECUTE A MICROPROGRAM BRANCH TEST FOR BUS REQUESTS

KEII-E KEII-F ALU FUNCTIONS

ALUM	ALUS 3	ALUS 2	ALUS 1	ALUS 0	ALU f (FUNCTION)
L	L	L	L	L	f = A
L	L	L	H	H	f = MINUS 1 (2'S COMPLEMENT)
L	L	H	H	L	f = A MINUS B MINUS 1
L	H	L	L	H	f = A PLUS B
L	H	H	L	L	f = A PLUS B
H	L	L	L	L	f = A
H	L	L	H	H	f = LOGICAL 0
H	H	L	H	L	f = B
H	H	H	H	L	f = AB

BRUNING 40-522 15840
DEC FORM NO DRD 102-B

REV	NO.	DATE

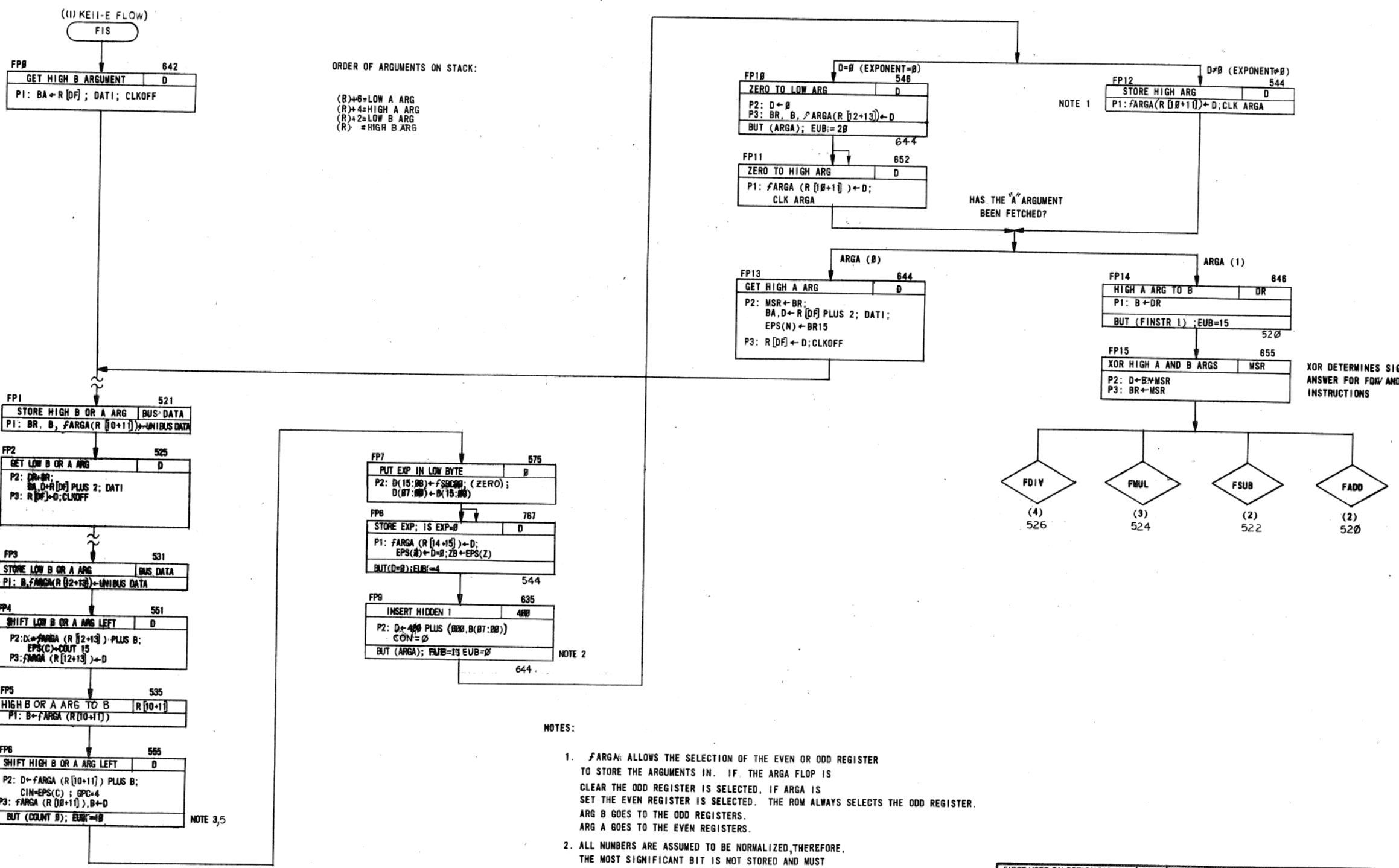
CHK	CHANGE NO.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP 11				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS	ANGLES	PARTS LIST		
.XXX - .005	±0° 30'	DRN	DATE	8-8-72
.XX - .02		CHK'D	DATE	9-21-72
.X - .1		ENG.	DATE	9-21-72
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		PROJ. ENG.	DATE	9-21-72
		PROB'G	DATE	9-21-72
MATERIAL	---	NEXT HIGHER ASSY.		
FINISH	---	B-DD-KEII-F		
SCALE NONE		SIZE CODE	NUMBER	REV.
SHEET 2 OF 2		D BD	KEII-F-BD	A

DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS
KEII-F
BLOCK DIAGRAM
(U WORD & TABLES)

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REV. A
D F D KEII-F-FD
1000 2218



- NOTES:
1. FARGA: ALLOWS THE SELECTION OF THE EVEN OR ODD REGISTER TO STORE THE ARGUMENTS IN. IF THE ARGA FLOP IS CLEAR THE ODD REGISTER IS SELECTED, IF ARGA IS SET THE EVEN REGISTER IS SELECTED. THE ROM ALWAYS SELECTS THE ODD REGISTER. ARG B GOES TO THE ODD REGISTERS. ARG A GOES TO THE EVEN REGISTERS.
 2. ALL NUMBERS ARE ASSUMED TO BE NORMALIZED, THEREFORE, THE MOST SIGNIFICANT BIT IS NOT STORED AND MUST BE INSERTED.
 3. BUT (COUNT=B) IS USED TO CLOCK THE NPR & BUS REQUEST FLAGS AND TO CLEAR THE BBSY FLAG IN THE KD11-A. THIS ALLOWS NPRS TO OCCUR WITHOUT THE KD11-A DOING A BUS DATA CYCLE.
 4. D IN THE DISPLAY IS THE LAST DATA LOADED INTO THE D REGISTER AND MAY NOT BE PERTINENT.
 5. GPC=4 ALLOWS EPS(C) TO PROVIDE THE CARRY IN TO THE CPU ALU.

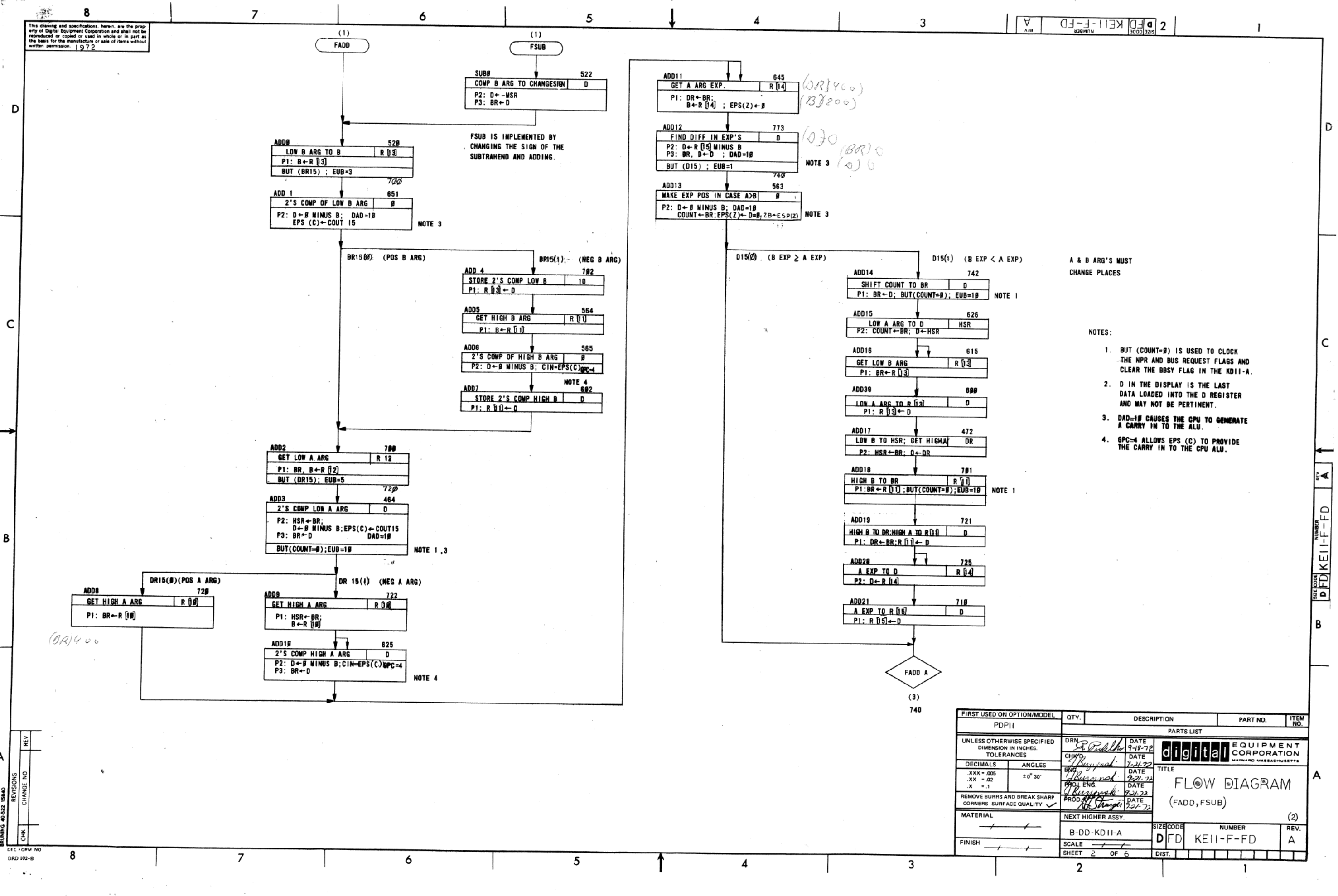
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRM: <i>[Signature]</i>	DATE: 9-18-72	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
DECIMALS .XXX = .005	CHK'D: <i>[Signature]</i>	DATE: 9-21-72	TITLE: FLOW DIAGRAM (FIS ENTRY)	
ANGLES ±0° 30'	ENG: <i>[Signature]</i>	DATE: 9-21-72	REV. A	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD. ENG. <i>[Signature]</i>	DATE: 9-21-72	MATERIAL: NEXT HIGHER ASSY.	
	PROD. <i>[Signature]</i>	DATE: 9-21-72	FINISH: / /	
			SCALE: / /	
			SHEET 1 OF 6	
			D F D KEII-F-FD	

REV.	CHANGE NO.	BY	DATE
1	0001	A	
2			

BUZYNSKI
11/10/72

BRUNING 40-332 18A-0
DEC FORM NO
ORD 102-B

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FSUB IS IMPLEMENTED BY CHANGING THE SIGN OF THE SUBTRAHEND AND ADDING.

A & B ARG'S MUST CHANGE PLACES

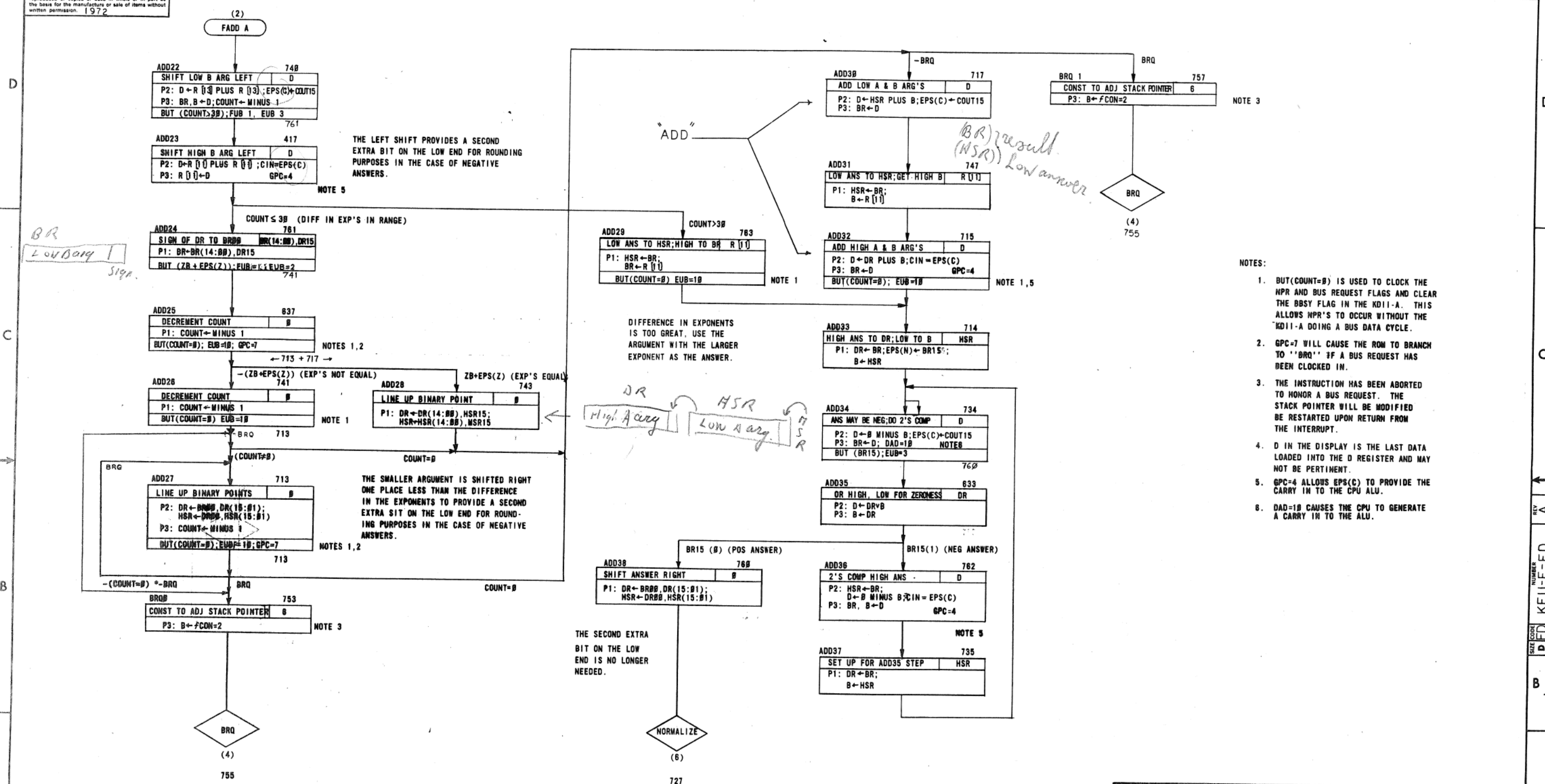
- NOTES:
1. BUT (COUNT=B) IS USED TO CLOCK THE NPR AND BUS REQUEST FLAGS AND CLEAR THE BBSY FLAG IN THE KD11-A.
 2. D IN THE DISPLAY IS THE LAST DATA LOADED INTO THE D REGISTER AND MAY NOT BE PERTINENT.
 3. DAD=1# CAUSES THE CPU TO GENERATE A CARRY IN TO THE ALU.
 4. GPC-4 ALLOWS EPS (C) TO PROVIDE THE CARRY IN TO THE CPU ALU.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS	ANGLES	PARTS LIST		
.XXX = .005	±0° 30'	DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS TITLE FLOW DIAGRAM (FADD, FSUB)
.XX = .02		CHK'D	DATE	
.X = .1		ENG	DATE	
		PROJ. ENG.	DATE	
		PROD. ENGR.	DATE	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL	NEXT HIGHER ASSY.			
FINISH				
	B-DD-KD11-A	SIZE CODE	NUMBER	REV.
	SCALE	DFD	KEII-F-FD	A
	SHEET 2 OF 6	DIST.		

BRUNING 40-332 15840
 DEC 10 PM NO
 DRD 102-B

REV A
 NUMBER
 DFD KEII-F-FD
 B

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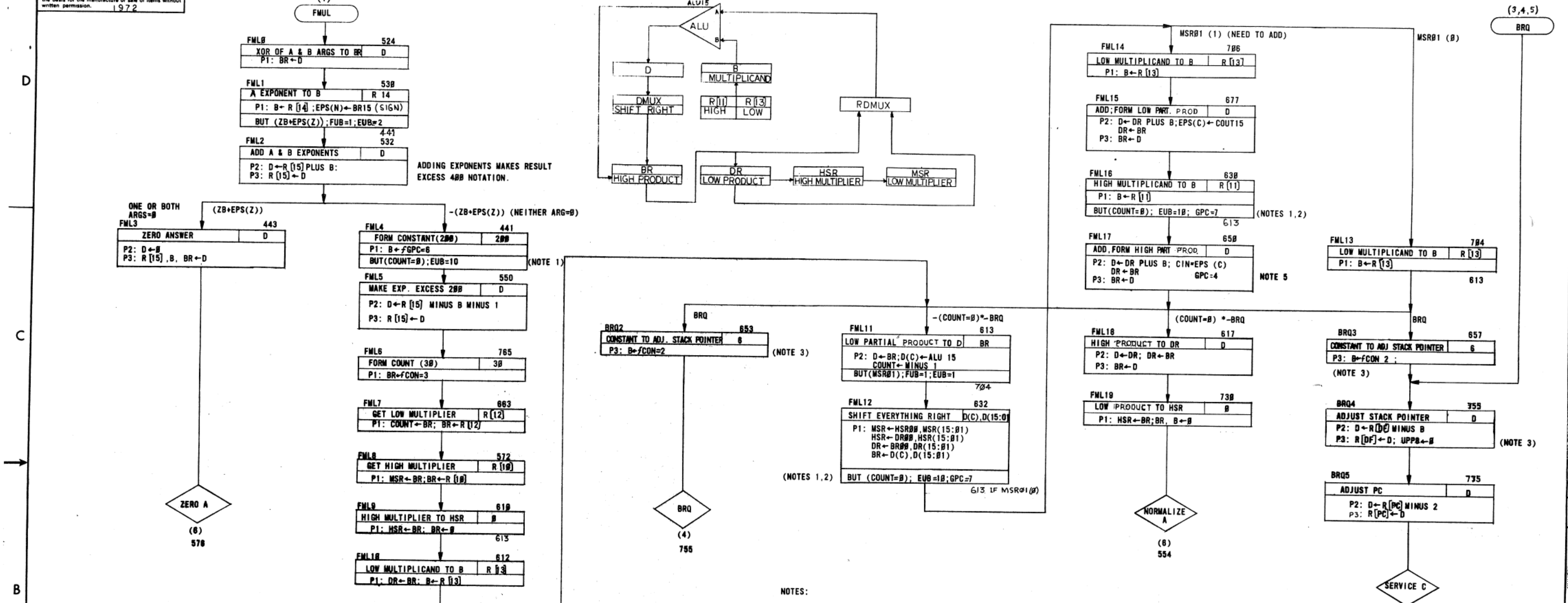


REV	CHANGE NO	DATE

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN <i>R. Rudolph</i> DATE 9-18-72	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
		CHK'D. <i>A. Bussard</i> DATE 9-21-72		
DECIMALS .XXX ± .006	ANGLES ± 0° 30'	ENG. <i>A. Bussard</i> DATE 9-21-72	TITLE FLOW DIAGRAM (FADD, FSUB (CONT))	
.XX ± .02		PROJ. ENG. <i>A. Bussard</i> DATE 9-21-72		
.X ± .1		PROD. <i>A. Bussard</i> DATE 9-21-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY			(3)	
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
	B-DD-KD11-A		D	FD
FINISH	SCALE		REV.	A
	SHEET 3 OF 6			

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1972

SIZE CODE D FD KEII-F-FD 2



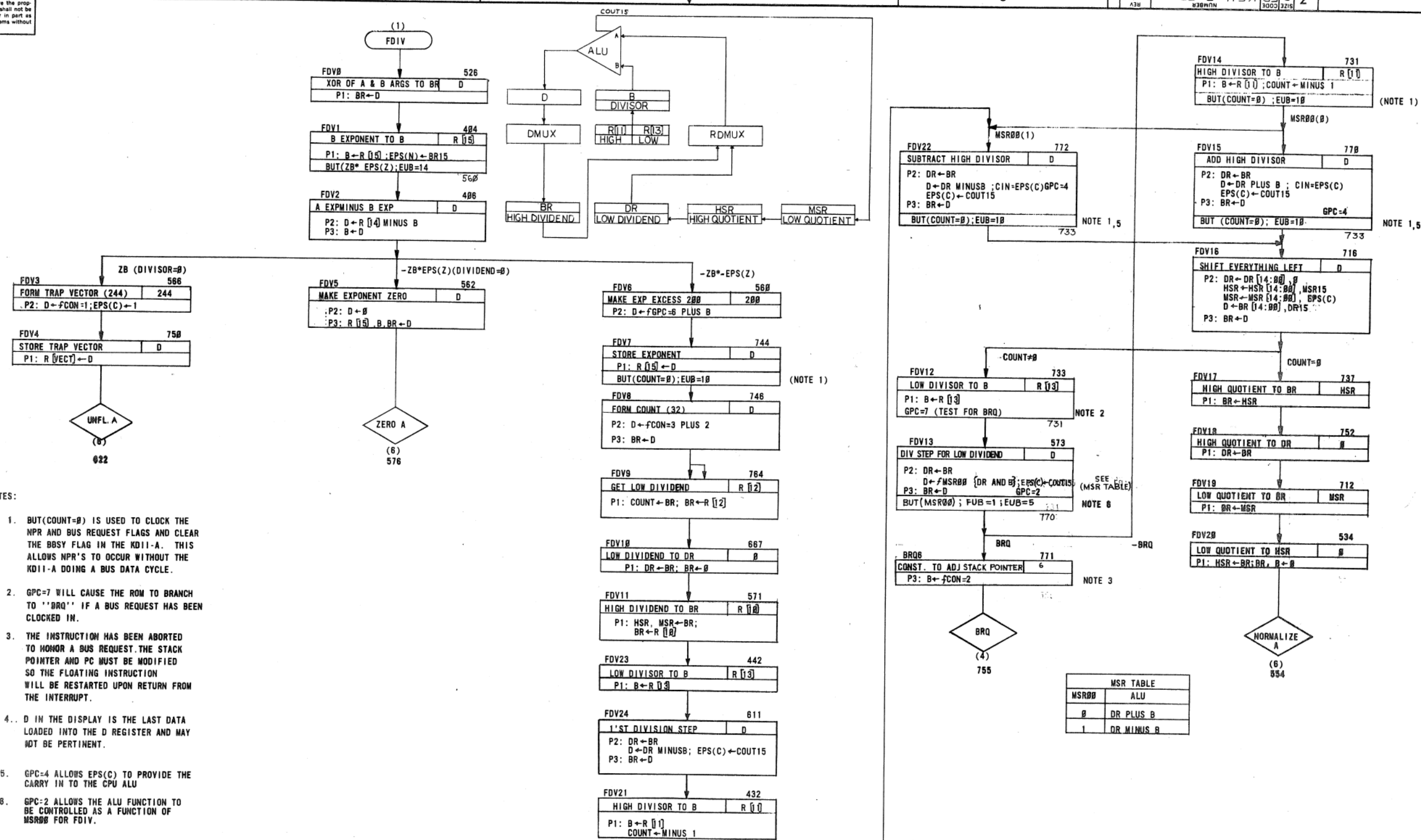
- NOTES:
- BUT(COUNT=B) IS USED TO CLOCK THE NPR AND BUS REQUEST FLAGS AND CLEAR THE BBSY FLAG IN THE KD11-A. THIS ALLOWS NPR'S TO OCCUR WITHOUT THE KD11-A DOING A BUS DATA CYCLE.
 - GPC=7 WILL CAUSE THE ROM TO BRANCH TO 'BRQ' IF A BUS REQUEST HAS BEEN CLOCKED IN.
 - THE INSTRUCTION HAS BEEN ABORTED TO HONOR A BUS REQUEST. THE STACK POINTER AND PC MUST BE MODIFIED SO THE FLOATING INSTRUCTION WILL BE RESTARTED UPON RETURN FROM THE INTERRUPT.
 - D IN THE DISPLAY IS THE LAST DATA LOADED INTO THE D REGISTER AND MAY NOT BE PERTINENT.
 - GPC=4 ALLOWS EPS(C) TO PROVIDE THE CARRY IN TO THE CPU ALU

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS	ANGLES	PARTS LIST		
.XXX = .005	± 0° 30'	DRN	DATE	9-18-72
.XX = .02		CHKD	DATE	7-27-72
.X = .1		ENG.	DATE	7-27-72
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		PROG. ENG.	DATE	7-27-72
		PROD. ENG.	DATE	7-27-72
MATERIAL	NEXT HIGHER ASSY.	TITLE		
FINISH	B-DD-KD11-A	FLOW DIAGRAM (FMUL)		
	SCALE	SIZE CODE	NUMBER	REV.
	SHEET 4 OF 6	D FD	KEII-F-FD	A

BRUNING 40-582 15640
REV. 102-B

REV. A
NUMBER
D FD KEII-F-FD
B

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- NOTES:
- BUT(COUNT=0) IS USED TO CLOCK THE NPR AND BUS REQUEST FLAGS AND CLEAR THE BBSY FLAG IN THE KD11-A. THIS ALLOWS NPR'S TO OCCUR WITHOUT THE KD11-A DOING A BUS DATA CYCLE.
 - GPC=7 WILL CAUSE THE ROM TO BRANCH TO "BRQ" IF A BUS REQUEST HAS BEEN CLOCKED IN.
 - THE INSTRUCTION HAS BEEN ABORTED TO HONOR A BUS REQUEST. THE STACK POINTER AND PC MUST BE MODIFIED SO THE FLOATING INSTRUCTION WILL BE RESTARTED UPON RETURN FROM THE INTERRUPT.
 - D IN THE DISPLAY IS THE LAST DATA LOADED INTO THE D REGISTER AND MAY NOT BE PERTINENT.
 - GPC=4 ALLOWS EPS(C) TO PROVIDE THE CARRY IN TO THE CPU ALU.
 - GPC=2 ALLOWS THE ALU FUNCTION TO BE CONTROLLED AS A FUNCTION OF MSR00 FOR FDIV.

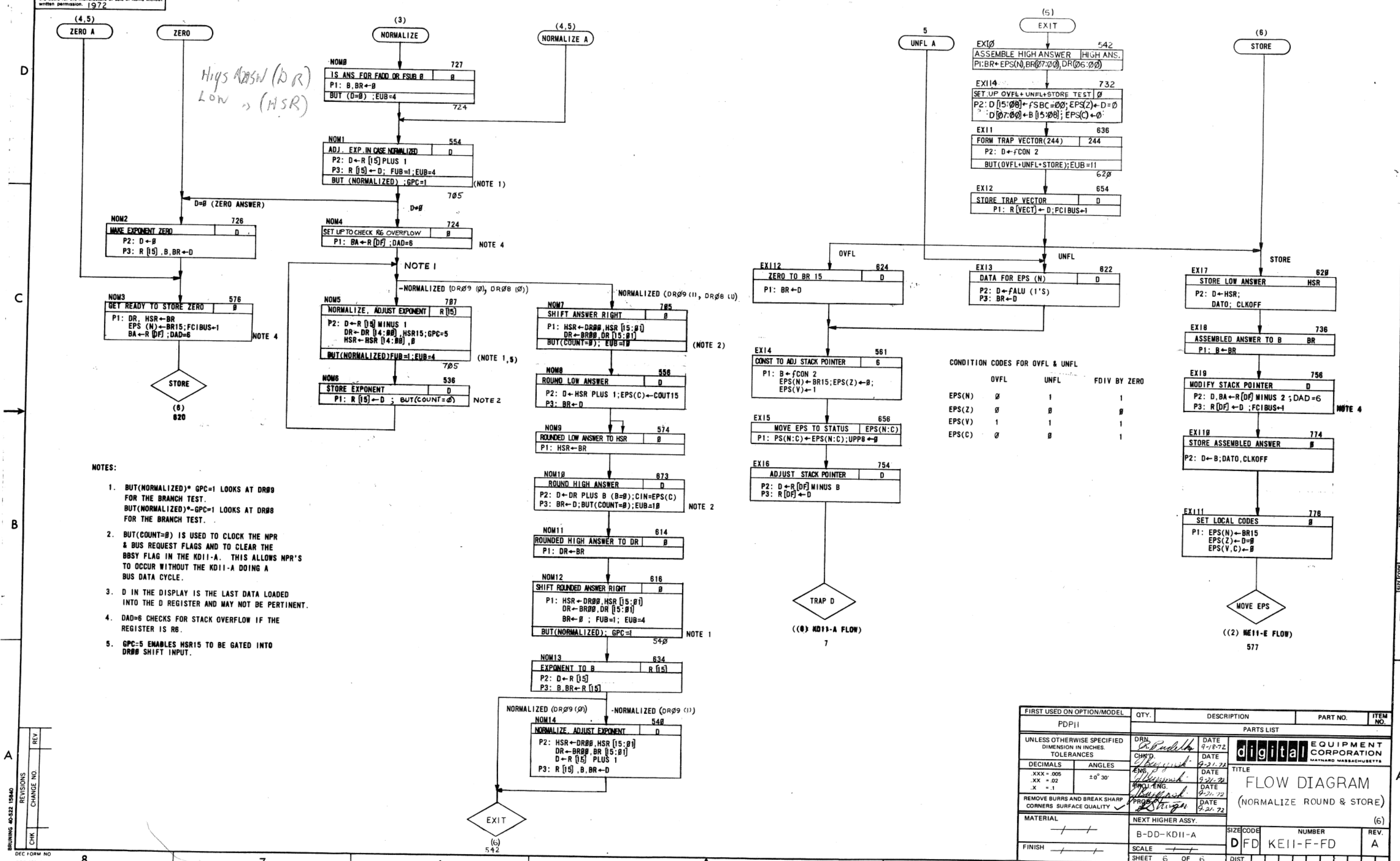
MSR TABLE

MSR00	ALU
B	DR PLUS B
1	DR MINUS B

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN 9-18-72	DATE	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
DECIMALS	CHK'D 9-21-72	DATE	TITLE	
ANGLES	ENG 9-21-72	DATE	FLOW DIAGRAM	
XXX = .005	PROJ. ENG. 9-21-72	DATE	(FDIV)	
XX = .02	PROV. 9-21-72	DATE	(5)	
X = .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL	NEXT HIGHER ASSY.			
FINISH	B-DD-KD11-A	SIZE CODE	NUMBER	REV.
	SCALE	D	FD	KEII-F-FD
	SHEET 5 OF 6	DIST.		A

REVISIONS
 CHANGE NO.
 REV

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BRUNING 40-522 15840
 DEC FORM NO DRD 102-B

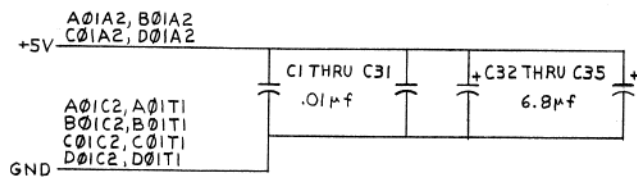
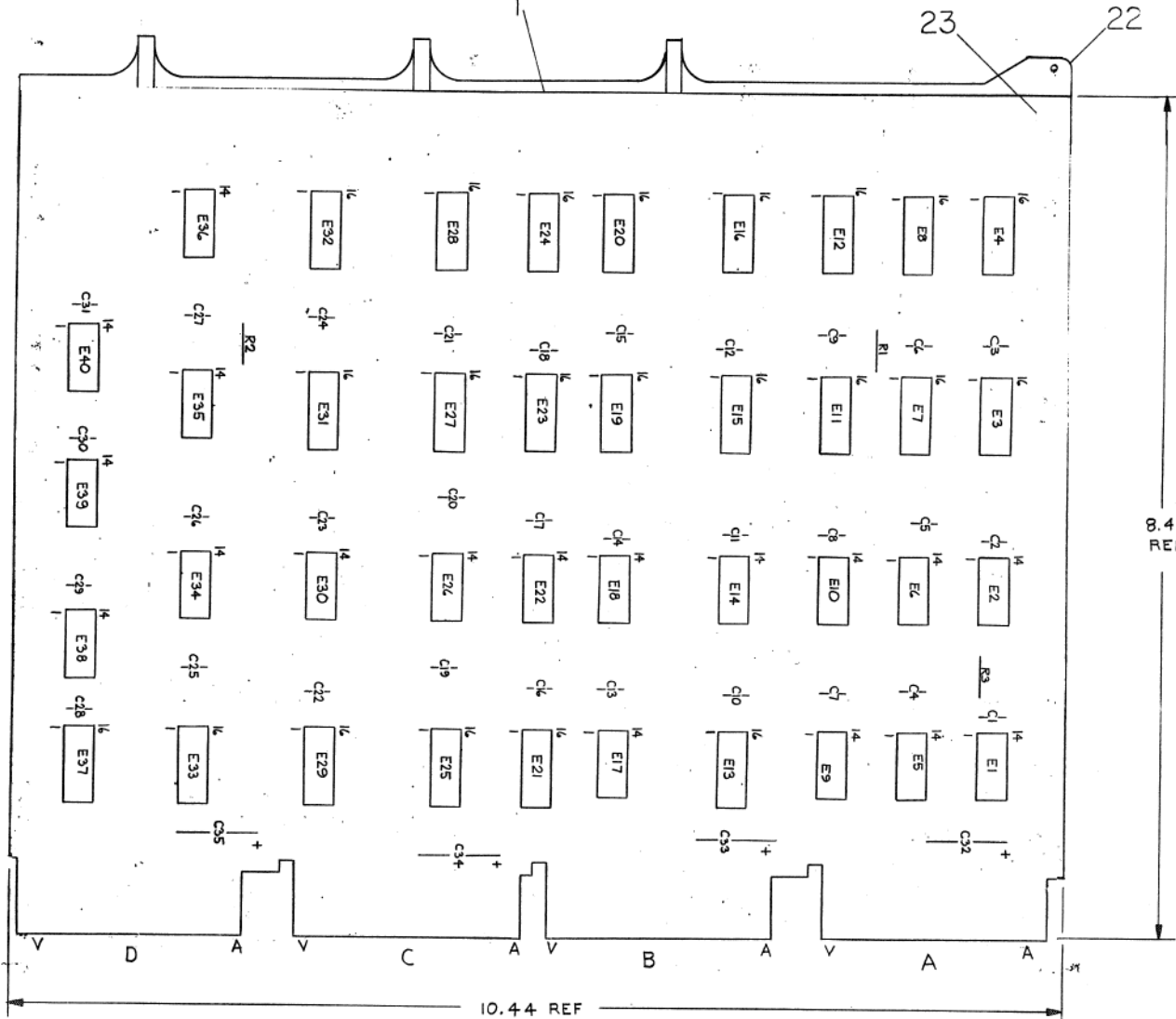
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS	ANGLES	TITLE		
.xxx - .005	± 0° 30'	FLOW DIAGRAM		
.xx = .02		(NORMALIZE ROUND & STORE)		
.x = .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL NEXT HIGHER ASSY.				
FINISH				
SCALE		SIZE CODE	NUMBER	REV.
SHEET 6 OF 6		D	FD KE11-F-FD	A

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NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE KDII-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 (KF-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.

INSTALLATION:
CUT W1, W2, W3 ON M7239 WHEN INSTALLING KEII-F OPTION
PLUG M7239 INTO KDII-A SLOT A-D01.



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
8		EYELET	9006732	23
1		HANDLE	7409871	22
1	E21	I.C. DEC 23B33A2	23B33A2	21
1	E25	I.C. DEC 23B32A2	23B32A2	20
2	E29, E37	I.C. DEC 74175	1910651	19
8	E7, E8, E15, E16, E23, E24, E31, E32	I.C. DEC 74194	1910623	18
1	E30	I.C. DEC 7408	1910155	17
8	E3, E4, E11, E12, E19, E20, E27, E28	I.C. DEC 74153	1909937	16
1	E13	I.C. DEC 74151	1909936	15
2	E6, E34	I.C. DEC 74H04	1909931	14
4	E2, E10, E18, E26	I.C. DEC 74H01-1	1909849	13
2	E14, E40	I.C. DEC 8815	1909713	12
2	E34, E36	I.C. DEC 74H11	1909267	11
1	E9	I.C. DEC 74H50	1909060	10
3	E5, E22, E38	I.C. DEC 74H00	1909056	9
1	E35	I.C. DEC 7402	1909004	8
1	E17	I.C. DEC 74H20	1905635	7
1	E1	I.C. DEC 7474	1905547	6
1	E33	RESISTOR NETWORK	1311003-02	5
3	R1 THRU R3	RES 1K 1/4W ±5%	1300365	4
31	C1 THRU C31	CAP .01µf 100V ±20% DISC	1001610	3
4	C32 THRU C35	CAP 6.8µf 35V ±20% TANT	1000067	2
1		ETCHED CIRCUIT BOARD	5010075	1

FIRST USED ON OPTION MODEL		PARTS LIST	
PDP 11		ETCH BOARD REV B	
DRN	DATE 8-2-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHKD	DATE 8-17-72	TITLE	
DES	DATE 8-17-72	FIS BOARD	
PROG	DATE 8-17-72	NEXT HIGHER ASSY	
PROD	DATE 8-8-72	KEII-F	
SCALE	NONE	SIZE CODE	NUMBER
SHEET	1 OF 1	DICS	M7239-0-1
SEMICONDUCTOR CONVERSION CHART		REV. B	

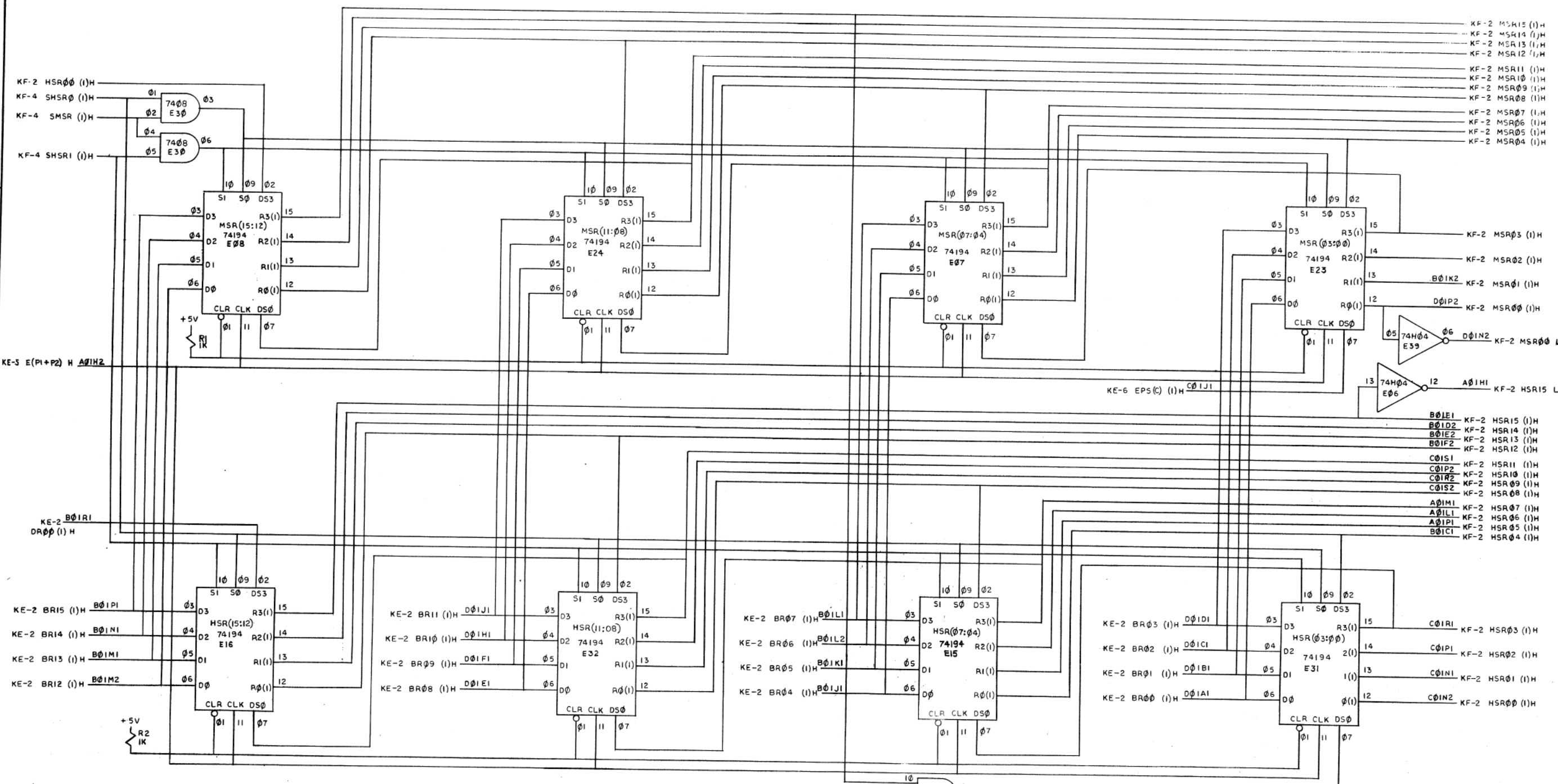
IC TYPE	GND	+5V
1311003-02	8	16
DEC 74194	8	16
DEC 74175	8	16
DEC 74153	8	16
DEC 74151	8	16
IC TYPE	GND	+5V

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

IC PIN LOCATIONS

BRUNING 40-522 16699
DEC FORM NO. DRD 1354

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- KF-2 MSR15 (I)H
- KF-2 MSR14 (I)H
- KF-2 MSR13 (I)H
- KF-2 MSR12 (I)H
- KF-2 MSR11 (I)H
- KF-2 MSR10 (I)H
- KF-2 MSR09 (I)H
- KF-2 MSR08 (I)H
- KF-2 MSR07 (I)H
- KF-2 MSR06 (I)H
- KF-2 MSR05 (I)H
- KF-2 MSR04 (I)H
- KF-2 MSR03 (I)H
- KF-2 MSR02 (I)H
- B0IK2 KF-2 MSR01 (I)H
- D0IP2 KF-2 MSR00 (I)H
- 74H04 E39 D0IN2 KF-2 MSR00 L
- 74H04 E06 A0IH1 KF-2 HSR15 L
- B0IE1 KF-2 HSR15 (I)H
- B0ID2 KF-2 HSR14 (I)H
- B0IE2 KF-2 HSR13 (I)H
- B0IF2 KF-2 HSR12 (I)H
- C0IS1 KF-2 HSR11 (I)H
- C0IP2 KF-2 HSR10 (I)H
- C0IR2 KF-2 HSR09 (I)H
- C0IS2 KF-2 HSR08 (I)H
- A0IM1 KF-2 HSR07 (I)H
- A0IL1 KF-2 HSR06 (I)H
- A0IP1 KF-2 HSR05 (I)H
- B0IC1 KF-2 HSR04 (I)H
- C0IR1 KF-2 HSR03 (I)H
- C0IP1 KF-2 HSR02 (I)H
- C0IN1 KF-2 HSR01 (I)H
- C0IN2 KF-2 HSR00 (I)H

TRUTH TABLE
74194

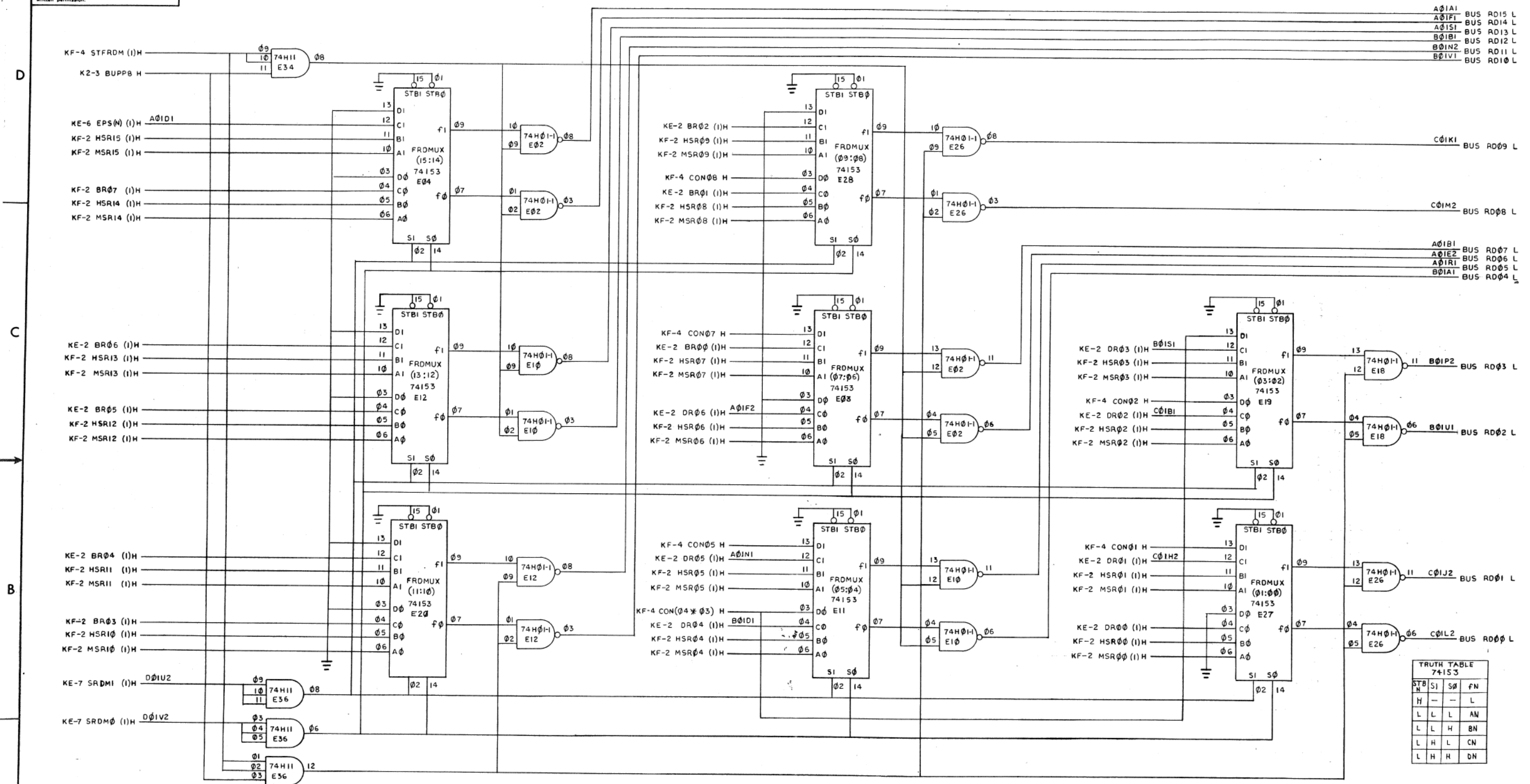
SI	S0	FUNCTION
L	L	NO OP
L	H	SHF RIGHT
H	L	SHF LEFT
H	H	LOAD

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
KD11-A				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	PARTS LIST		
XXX - .005	±0° 30'	DRN	DATE	digital EQUIPMENT CORPORATION <small>MAYNARD MASSACHUSETTS</small>
XX - .02		CHK'D	DATE	
X - .1		ENG	DATE	
		PROJ ENG	DATE	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL		NEXT HIGHER ASSY.		HSR & MSR
FINISH		KE11-F	SIZE CODE	NUMBER
		SCALE	D CS	M7239-0-1
		SHEET 2 OF 12	DIST.	REV. B

BRUNING 40-522 19840
DEC FORM NO
ORD 102-B

REV B
NUMBER M7239-0-1
SIZE CODE D CS

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TRUTH TABLE
74153

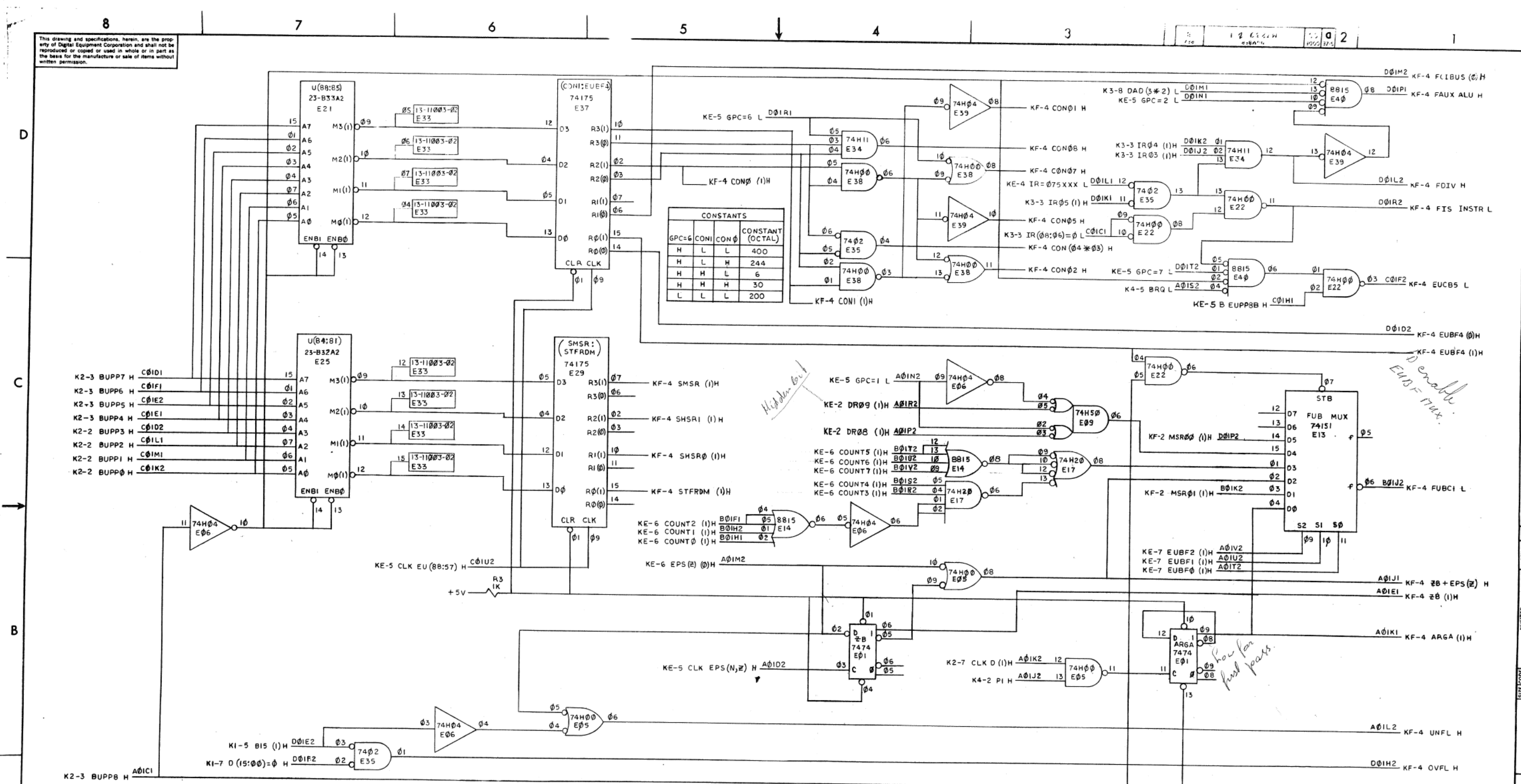
STB	SI	S0	FN
H	-	-	L
L	L	L	AN
L	L	H	BN
L	H	L	CN
L	H	H	DN

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
KD11-A		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN <i>R. R. R.</i> DATE 3-10-72		
DECIMALS	ANGLES	CHK'D <i>[Signature]</i> DATE 8-17-72		
.XXX - .005	± 0° 30'	ENG. <i>[Signature]</i> DATE 8-17-72		
.XX - .02		PBJ/ENG. <i>[Signature]</i> DATE 8/18/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		FROM <i>[Signature]</i> DATE 8-18-72	TITLE FIS	
MATERIAL	NEXT HIGHER ASSY.	FROMUX (15:00)	KF-3	
FINISH	SCALE	SIZE CODE	NUMBER	REV.
	SHEET 3 OF 12	D	M7233-0-1	B

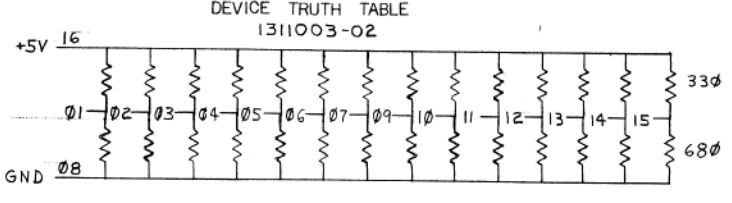
REV. B
M7233-0-1
REV. B

DEC FORM NO. DRD 102-B

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CONSTANTS			
GPC=6	CONI	CON0	CONSTANT (OCTAL)
H	L	L	400
H	L	H	244
H	H	L	6
H	H	H	30
L	L	L	200



FUBC BUT CHART
EUBC (4:1)

STB	S2	S1	S0	FN	BUT (FUBC1)
H	-	-	-	L	-
L	L	L	L	D0	ARGA
L	L	L	H	D1	MSR01
L	L	H	L	D2	ZB+EPS(Z)
L	L	H	H	D3	COUNT > 30
L	H	L	L	D4	NORMALIZED
L	H	L	H	D5	MSR00
L	H	H	L	D6	-
L	H	H	H	D7	-

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
KD11-A				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS	ANGLES	TITLE		
.XXX - .005	±0° 30'	FIS		
.XX - .02		DATE 7/27/72		
.X - .1		DATE 8/1/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL				
NEXT HIGHER ASSY.				
ROM & CONTROL KF-4				
FINISH				
SCALE				
SHEET 3 OF 7				

BRUNING 40-532 15840
DEC FORM NO DRD 102-B

REV B
NUMBER M7239-0-1
SIZE CODE D CS

A

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FLWS	STATE	ADR	CLK	CIR	WR	CB	CD	CBA	BUS	DAD	SPS	ALU	SBC	SBM	SDM	SBA	UBF	SRX	RIF	UPF
E3	MUL7	000	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	10	00	204
E3	MUL19	001	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	133
E3	MUL2	002	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	10	00	015
E3	MUL4	003	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	01	12	075
F5	FDV1	004	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	15	006
E3	MUL16	005	4	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	011
F5	FDV2	006	6	0	0	1	1	0	0	10	0	06	00	00	2	0	00	01	14	160
E3	MUL12	007	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	016
E3	MUL15	010	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	177
E3	MUL18	011	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	11	01	177
E3	MUL14	012	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	177
E3	MUL17	013	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	11	01	177
E3	MUL1	014	4	0	0	0	1	0	0	10	0	06	00	00	0	0	00	00	00	000
E3	MUL3	015	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	10	00	001
E3	MUL13	016	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	11	01	010
F3	ADD23	017	6	0	3	0	1	0	0	00	0	14	00	00	2	0	00	01	11	361
E4	DIV20	020	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	11	01	076
E5	DIV23	021	4	0	0	0	1	0	0	00	0	20	00	00	0	0	00	00	00	071
E4	DIV4	022	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	177
E5	DIV33	023	4	0	0	0	1	0	0	00	0	20	00	00	0	0	00	00	00	070
E4	DIV13	024	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	11	01	147
E5	DIV27	025	4	0	0	0	1	0	0	00	0	11	00	00	0	0	00	00	00	101
E4	DIV7	026	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	10	00	057
E5	DIV31	027	4	0	0	0	1	0	0	10	0	06	00	00	0	0	00	00	00	103
E2	ASH2	030	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	177
E4	DIV16	031	6	0	0	0	1	0	0	14	0	00	00	00	2	0	00	00	00	065
F5	FDV21	032	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	11	372
E4	DIV11	033	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	037
E2	ASH5	034	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	123
E4	DIV19	035	6	0	0	0	1	0	0	14	0	00	00	00	2	0	00	00	00	153
E2	ASH3	036	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	063
E4	DIV12	037	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	177

NOTE:

THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BIT) FIELD IS LISTED FOR CLARITY.

FLWS	STATE	ADR	CON	FC1	FUB	MHR	FRD	ERD	SRD	SDR	CVM	NZM	CCC	GPC	CEE	CNT	EUB	CBR	
E3	MUL7	000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1	
E3	MUL19	001	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	00	1
E3	MUL2	002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	01	1
E3	MUL4	003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	01	1
F5	FDV1	004	0	0	0	0	0	0	0	0	2	4	0	0	0	0	14	0	
E3	MUL16	005	0	0	0	0	0	1	1	0	1	0	1	0	0	0	00	0	
F5	FDV2	006	0	0	0	0	0	0	0	0	0	0	0	6	0	0	00	0	
E3	MUL12	007	0	0	0	0	0	1	1	0	0	0	0	0	0	0	04	0	
E3	MUL15	010	0	0	0	0	0	0	0	0	1	0	1	0	0	0	00	0	
E3	MUL18	011	0	0	0	0	0	0	0	0	3	4	0	0	0	0	00	0	
E3	MUL14	012	0	0	0	0	0	0	0	0	5	0	1	0	0	0	00	0	
E3	MUL17	013	0	0	0	0	0	0	0	0	5	2	5	0	0	0	00	0	
E3	MUL1	014	0	0	0	0	0	0	0	0	5	0	1	0	0	2	00	0	
E3	MUL3	015	0	0	0	0	0	0	0	3	0	0	0	0	0	0	00	0	
E3	MUL13	016	0	0	0	0	0	0	0	0	2	3	6	0	0	0	00	0	
F3	ADD23	017	0	0	0	0	0	0	2	0	0	0	0	4	0	0	00	0	
E4	DIV20	020	0	0	0	0	0	0	0	0	3	4	0	0	0	0	03	0	
E5	DIV23	021	0	0	0	0	0	1	3	0	0	0	0	0	0	0	02	0	
E4	DIV4	022	0	0	0	0	0	0	0	0	1	1	7	0	0	0	00	0	
E5	DIV33	023	0	0	0	0	0	1	3	0	0	0	0	0	0	0	02	0	
E4	DIV13	024	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1	
E5	DIV27	025	0	0	0	0	0	1	3	0	0	0	0	0	0	0	00	0	
E4	DIV7	026	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0	
E5	DIV31	027	0	0	0	0	0	1	3	0	0	0	0	0	0	0	00	0	
E2	ASH2	030	0	0	0	0	0	0	0	0	5	2	7	0	0	0	00	0	
E4	DIV16	031	0	0	0	0	0	1	2	2	0	0	0	0	0	1	00	1	
F5	FDV21	032	0	0	0	0	0	0	1	0	0	0	0	0	0	1	00	0	
E4	DIV11	033	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0	
E2	ASH5	034	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	0	
E4	DIV19	035	0	0	0	0	0	1	2	2	0	0	0	2	0	1	00	1	
E2	ASH3	036	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	0	
E4	DIV12	037	0	0	0	0	0	0	0	0	1	0	2	0	0	0	00	0	

REVISIONS	CHANGE NO.	REV.
CHK		

DRN <i>G. Rudelke</i>		DATE 8-16-72	TITLE FIS BOARD	
CHK'D. <i>[Signature]</i>		DATE 8-17-72	(ADRS 000-037)	
ENG. <i>[Signature]</i>		DATE 8-17-72	SIZE CODE C CS	NUMBER M7239-041
PROJ. ENG. <i>[Signature]</i>		DATE 8-17-72	REV. B	
PROD. <i>[Signature]</i>		DATE 8-17-72		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TITLE FIS BOARD	
(ADRS 000-037)	
SIZE CODE C CS	NUMBER M7239-041
REV. B	

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FLWS	STATE	ADR	CLK	CIR	WR	CB	CD	CBA	BUS	DAD	SPS	ALU	SBC	SBM	SDM	SBA	UBF	SRX	RIF	UPF
E2	ASH9	040	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	11	01	030
F4	FML4	041	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	150
F5	FDV23	042	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	13	211
F4	FML3	043	6	0	3	1	1	0	0	00	0	23	00	00	2	0	00	01	15	176
E2	ASH16	044	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	243
E5	DIV25	045	6	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	053
E2	ASH10	046	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	223
E5	DIV29	047	4	0	0	0	1	0	0	00	0	11	01	17	0	0	00	00	00	104
E5	DIV37	050	4	0	0	0	1	0	0	00	0	20	00	00	0	0	00	00	00	106
E5	DIV40	051	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	054
E5	DIV35	052	4	0	0	0	1	0	0	00	0	11	01	17	0	0	00	00	00	105
E5	DIV26	053	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	10	00	177
E5	DIV41	054	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	037
E4	DIV2	055	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	10	00	231
E5	DIV42	056	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	177
E4	DIV8	057	6	0	0	0	1	0	0	00	0	06	00	00	2	0	00	00	00	060
E4	DIV9	060	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	061
E4	DIV10	061	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	12	031
E4	DIV15	062	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	12	031
E2	ASH4	063	6	0	3	1	1	0	0	00	0	00	00	00	3	0	00	10	00	063
F2	ADD3	064	6	0	0	0	1	0	0	10	0	06	00	00	2	0	00	00	00	320
E4	DIV17	065	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	066
E4	DIV18	066	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	035
E2	ASH14	067	4	0	0	0	1	0	0	00	0	32	00	00	0	0	00	00	00	127
E5	DIV34	070	2	0	0	1	0	0	0	00	0	00	00	00	2	0	00	00	00	050
E5	DIV24	071	2	0	0	1	0	0	0	00	0	00	00	00	2	0	00	00	00	045
F2	ADD17	072	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	301
		073	0	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	000
E5	DIV39	074	6	0	3	0	1	0	0	00	0	11	01	17	2	0	00	10	00	051
E3	MUL5	075	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	110
E4	DIV6	076	6	0	0	0	1	0	0	10	0	06	00	00	2	0	00	00	00	024
E2	ASH13	077	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	11	01	206

NOTE:
THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BIT) FIELD IS LISTED FOR CLARITY.

FLWS	STATE	ADR	CON	FC1	FUB	MHR	FRD	ERD	SRD	SDR	CVM	NZM	CCC	GPC	CEE	CNT	EUB	CBR
E2	ASH9	040	0	0	0	0	0	1	3	0	0	0	0	0	0	0	00	0
F4	FML4	041	0	0	0	0	1	0	3	0	0	0	0	6	0	0	10	0
F5	FDV23	042	0	0	0	0	0	0	1	0	0	0	0	0	0	0	00	0
F4	FML3	043	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
E2	ASH16	044	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	0
E5	DIV25	045	0	0	0	0	0	1	1	0	0	0	0	0	0	0	00	1
E2	ASH10	046	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	0
E5	DIV29	047	0	0	0	0	0	1	3	0	0	0	0	0	0	0	00	0
E5	DIV37	050	0	0	0	0	0	1	1	0	0	0	0	0	0	0	00	0
E5	DIV40	051	0	0	0	0	0	0	0	5	2	7	0	0	0	0	00	0
E5	DIV35	052	0	0	0	0	0	1	3	0	0	0	0	0	0	0	00	0
E5	DIV26	053	0	0	0	0	0	0	0	5	2	7	0	0	0	0	00	0
E5	DIV41	054	0	0	0	0	0	0	0	1	0	2	0	0	0	0	00	0
E4	DIV2	055	0	0	0	0	0	0	0	0	0	0	0	0	0	2	04	1
E5	DIV42	056	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E4	DIV8	057	0	0	0	0	0	0	3	0	0	0	4	0	0	0	00	1
E4	DIV9	060	0	0	0	0	0	0	0	1	1	7	0	0	0	0	03	0
E4	DIV10	061	0	0	0	0	0	2	0	0	0	0	0	0	0	0	00	0
E4	DIV15	062	0	0	0	0	0	2	0	0	0	0	0	0	0	0	00	0
E2	ASH4	063	0	0	0	0	0	0	0	7	0	1	0	0	0	1	10	1
F2	ADD3	064	0	0	0	3	0	0	0	4	0	1	0	0	0	0	10	1
E4	DIV17	065	0	0	0	0	0	0	0	0	0	0	0	0	0	0	07	0
E4	DIV18	066	0	0	0	0	0	2	0	5	0	1	0	0	0	1	00	0
E2	ASH14	067	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E5	DIV34	070	0	0	0	0	0	3	0	0	0	0	0	0	0	0	00	1
E5	DIV24	071	0	0	0	0	0	3	0	0	0	0	0	0	0	0	00	1
F2	ADD17	072	0	0	0	3	0	1	0	0	0	0	0	0	0	0	00	0
		073	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E5	DIV39	074	0	0	0	0	0	0	0	0	0	0	0	0	0	0	01	1
E3	MUL5	075	0	0	0	0	0	0	3	0	0	0	0	0	0	0	00	1
E4	DIV6	076	0	0	0	0	0	0	0	4	0	1	0	0	0	0	10	1
E2	ASH13	077	0	0	0	0	0	0	3	0	0	0	0	0	0	0	00	0

REVISIONS	REV.
CHANGE NO.	
CHK	

DRN.	DATE
<i>R. P. DeLillo</i>	8-16-72
CHK'D.	DATE
<i>J. Cunningham</i>	8-17-72
ENG.	DATE
<i>J. Cunningham</i>	7-17-72
PROD. ENG.	DATE
<i>J. Cunningham</i>	8-17-72
PROD.	DATE
<i>H. Stinson</i>	8-18-72

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TITLE	
FIS BOARD	
(ADRS 040-077)	
SIZE CODE	NUMBER
C.C.S.	M7239-0-1
SHEET 6 OF 12	DIST.
REV.	8

FLWS	STATE	ADR	CLK	CIR	WR	CB	CD	CBA	BUS	DAD	SPS	ALU	SBC	SBM	SDM	SBA	UBF	SRX	RIF	UPF
E1	EI0	100	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	377
E5	DIV28	101	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	11	01	021
E1	EI3	102	2	0	3	1	0	0	0	00	0	00	00	00	2	0	00	01	14	007
E5	DIV32	103	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	11	01	023
E5	DIV30	104	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	11	01	050
E5	DIV36	105	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	11	01	045
E5	DIV38	106	2	0	3	1	0	0	0	00	0	00	00	00	2	0	00	10	00	074
E5	DIV22	107	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	11	01	021
E3	MUL6	110	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	10	00	133
E3	MUL22	111	4	0	0	0	1	0	0	00	0	23	00	00	0	0	00	00	00	113
E3	MUL21	112	4	0	0	0	1	0	0	10	0	06	00	00	0	0	00	00	00	111
E3	MUL23	113	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	11	01	114
E3	MUL27	114	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	10	00	133
E3	MUL25	115	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	141
E3	MUL24	116	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	115
		117	0	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	000
F2	ADD0	120	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	13	251
F1	FP1	121	2	0	3	1	0	0	0	00	0	00	00	00	1	0	00	01	11	125
F2	SUB0	122	6	0	0	0	1	0	0	00	0	20	00	00	2	0	00	00	00	120
E2	ASH6	123	6	0	3	1	1	0	0	00	0	11	00	00	2	0	00	10	00	123
F4	FML0	124	6	0	0	0	0	0	0	00	0	00	00	00	2	0	00	00	00	130
F1	FP2	125	7	0	3	0	1	1	1	00	0	11	02	17	2	0	00	04	00	131
F5	FDV0	126	2	0	0	0	0	0	0	00	0	00	00	00	2	0	00	00	00	004
E2	ASH20	127	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	177
F4	FML1	130	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	14	132
F1	FP3	131	2	0	3	1	0	0	0	00	0	00	00	00	1	0	00	01	13	151
F4	FML2	132	6	0	3	0	1	0	0	00	0	11	00	00	2	0	00	01	15	041
E3	MUL9	133	6	0	0	0	1	0	0	14	0	00	00	00	3	0	00	00	00	133
F5	FDV20	134	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	154
F1	FP5	135	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	11	155
F6	NOM6	136	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	01	15	305
E3	MUL10	137	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	167

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NOTE:
THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BITS) FIELD IS LISTED FOR CLARITY.

FLWS	STATE	ADR	CON	FC1	FUB	MHR	FRD	ERD	SRD	SDR	CVM	NZM	CCC	GPC	CEE	CNT	EUB	CBR
E1	EI0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	1
E5	DIV28	101	0	0	0	0	0	0	3	0	0	0	0	0	0	0	00	1
E1	EI3	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E5	DIV32	103	0	0	0	0	0	0	3	0	0	0	0	0	0	0	00	1
E5	DIV30	104	0	0	0	0	0	0	1	0	0	0	0	0	0	0	00	0
E5	DIV36	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E5	DIV38	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	01	0
E5	DIV22	107	0	0	0	0	0	0	3	0	0	0	0	0	0	0	00	0
E3	MUL6	110	0	0	0	0	0	0	3	0	0	0	0	0	0	1	00	0
E3	MUL22	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	04	0
E3	MUL21	112	0	0	0	0	0	1	1	0	0	0	0	0	0	0	10	0
E3	MUL23	113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E3	MUL27	114	0	0	0	0	0	0	3	0	0	0	0	0	0	1	00	0
E3	MUL25	115	0	0	0	0	0	1	1	0	2	0	2	0	0	0	00	0
E3	MUL24	116	0	0	0	0	0	0	1	1	0	0	0	0	0	0	00	0
		117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F2	ADD0	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03	0
F1	FP1	121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
F2	SUB0	122	0	0	0	0	1	0	0	0	0	0	0	0	0	0	00	1
E2	ASH6	123	0	0	0	0	0	0	0	3	0	3	0	0	1	10	1	
F4	FML0	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
F1	FP2	125	0	0	0	0	0	0	3	0	0	0	0	0	0	0	00	0
F5	FDV0	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
E2	ASH20	127	0	0	0	0	0	0	0	0	2	4	0	0	0	0	00	0
F4	FML1	130	0	0	1	0	0	0	0	0	2	4	0	0	0	02	0	
F1	FP3	131	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0	
F4	FML2	132	0	0	0	0	0	0	3	0	0	0	0	6	0	00	0	
E3	MUL9	133	0	0	0	0	1	3	1	2	0	1	2	0	1	10	1	
F5	FDV20	134	0	0	0	3	0	0	0	0	0	0	0	0	0	00	1	
F1	FP5	135	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0	
F6	NOM6	136	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	
E3	MUL10	137	0	0	0	0	0	1	3	0	0	0	0	0	0	00	0	

REVISIONS	REV.
CHANGE NO.	
CHK	

DRN	<i>P. B. Della</i>	DATE	8-16-72
CHK'D	<i>J. Byrnes</i>	DATE	8-17-72
ENG	<i>J. Byrnes</i>	DATE	8-17-72
PROJ. ENG.	<i>J. Byrnes</i>	DATE	8-17-72
PROD. ENG.	<i>J. Byrnes</i>	DATE	8-18-72

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TITLE	
FIS BOARD	
(ADRS 100-137)	
SIZE CODE	NUMBER
C CS	M7239-0-1
REV.	3
SHEET	7 OF 12
DIST.	

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

FLWS	STATE	ADR	CLK	CIR	WR	CB	CD	CBA	BUS	DAD	SPS	ALU	SBC	SBM	SDM	SBA	UBF	SRX	RIF	UPF
F6	NOM14	140	6	0	3	1	1	0	0	00	0	11	01	17	2	0	00	01	15	142
E3	MUL26	141	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	10	00	177
F6	EXI0	142	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	332
E3	MUL11	143	4	0	0	0	1	0	0	00	0	20	00	00	0	0	00	00	00	005
F1	FP12	144	2	0	3	0	1	0	0	00	0	00	00	00	2	0	00	01	11	244
E1	DST12	145	2	0	3	1	0	0	0	00	0	00	00	00	1	0	00	01	12	275
F1	FP10	146	6	0	3	1	1	0	0	00	0	23	00	00	2	0	00	01	13	252
E4	DIV14	147	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	10	00	062
F4	FML5	150	6	0	3	0	1	0	0	00	0	06	00	00	2	0	00	01	15	365
F1	FP4	151	6	0	3	0	1	0	0	00	0	11	00	00	2	0	00	01	13	135
		152	0	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	000
E4	DIV20	153	6	0	0	0	1	0	0	14	0	00	00	00	2	0	00	00	00	153
F6	NOM1	154	6	0	3	0	1	0	0	00	0	11	01	17	2	0	00	01	15	324
F1	FP6	155	6	0	3	1	1	0	0	00	0	11	00	00	2	0	00	01	11	175
F6	NOM8	156	6	0	0	0	1	0	0	00	0	11	01	17	2	0	00	00	00	174
E5	DIV21	157	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	107
F5	FDV6	160	4	0	0	0	1	0	0	00	0	11	00	00	0	0	00	00	00	344
F6	EXI4	161	6	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	256
F5	FDV5	162	6	0	3	1	1	0	0	00	0	23	00	00	2	0	00	01	15	176
F2	ADD13	163	4	0	0	0	1	0	0	10	0	06	00	00	0	0	00	00	00	340
F2	ADD5	164	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	11	165
F2	ADD6	165	4	0	0	0	1	0	0	00	0	06	00	00	0	0	00	00	00	202
F5	FDV3	166	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	350
E3	MUL20	167	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	10	00	143
E1	DST4	170	3	0	3	0	0	0	1	00	0	00	00	00	2	0	00	04	00	271
F5	FDV11	171	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	01	10	042
F4	FML8	172	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	01	10	210
F5	FDV13	173	6	0	0	0	1	0	0	14	0	00	00	00	2	0	00	00	00	331
F6	NOM9	174	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	273
F1	FP7	175	4	0	0	0	1	0	0	00	0	32	00	16	0	0	00	00	00	367
F6	NOM3	176	2	0	0	0	0	1	0	06	0	00	00	00	1	0	00	04	00	220
F2	ASH15	177	6	0	0	0	0	0	0	00	7	00	00	00	0	0	00	00	00	323

NOTE:

THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BIT) FIELD IS LISTED FOR CLARITY.

FLWS	STATE	ADR	CON	FC1	FUB	MHR	FRD	ERD	SRD	SDR	CVM	NZM	CCC	GPC	CEE	CNT	EUB	CBR
F6	NOM14	140	0	0	0	1	0	0	0	1	0	0	0	0	0	0	00	1
E3	MUL26	141	0	0	0	0	0	0	0	0	1	3	5	0	0	0	00	0
F6	EXI0	142	0	0	0	0	1	0	2	0	0	0	0	0	0	0	00	1
E3	MUL11	143	0	0	0	0	0	1	3	0	2	0	2	0	0	0	04	0
F1	FP12	144	0	0	0	0	0	0	1	0	0	0	0	0	0	0	00	0
E1	DST12	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F1	FP10	146	0	0	1	0	0	0	0	0	0	0	0	0	0	0	00	1
E4	DIV14	147	0	0	0	0	0	0	0	3	0	0	0	0	0	0	00	1
F4	FML5	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F1	FP4	151	0	0	0	0	0	0	0	4	0	1	0	0	0	0	00	0
		152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E4	DIV20	153	0	0	0	0	0	1	2	2	0	0	0	2	0	1	10	1
F6	NOM1	154	0	0	1	0	0	0	0	0	0	0	0	1	0	0	04	0
F1	FP6	155	0	0	0	0	0	0	0	0	0	0	4	0	0	0	10	0
F6	NOM8	156	0	0	0	0	1	0	1	0	4	0	1	0	0	0	00	1
E5	DIV21	157	0	0	0	0	0	1	3	0	0	0	0	0	0	0	12	0
F5	FDV6	160	0	0	0	0	1	0	3	0	0	0	6	0	0	0	00	0
F6	EXI4	161	2	0	0	0	1	0	3	0	1	3	6	0	0	0	00	0
F5	FDV5	162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
F2	ADD13	163	0	0	0	0	0	0	0	0	2	4	0	0	2	00	0	
F2	ADD5	164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F2	ADD6	165	0	0	0	0	0	0	0	0	0	0	4	0	0	0	00	0
F5	FDV3	166	1	0	0	0	1	0	3	0	1	0	1	0	0	0	00	0
E3	MUL20	167	0	0	0	0	0	0	3	0	0	0	0	0	0	0	05	0
E1	DST4	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0
F5	FDV11	171	0	0	0	7	0	0	0	0	0	0	0	0	0	0	00	1
F4	FML8	172	0	0	0	7	0	0	0	0	0	0	0	0	0	0	00	1
F5	FDV13	173	0	0	1	0	0	1	1	3	4	0	1	2	0	0	05	1
F6	NOM9	174	0	0	0	3	0	0	1	0	0	0	0	0	0	0	00	0
F1	FP7	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
F6	NOM3	176	0	1	0	3	0	0	1	3	0	2	4	0	0	0	00	0
F2	ASH15	177	0	0	0	0	0	1	0	0	0	0	0	0	1	0	00	0

REVISIONS	REV.
CHANGE NO.	

DRN <i>A. Rudolph</i>	DATE 8-16-72
CHKD. <i>A. Rudolph</i>	DATE 8-17-72
ENG. <i>A. Rudolph</i>	DATE 8-17-72
PROD. ENG. <i>A. Rudolph</i>	DATE 8-18-72
PROD. ENG. <i>A. Rudolph</i>	DATE 8-18-72

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TITLE FIS BOARD (ADRS 140-177)	
SIZE CODE C CS	NUMBER M7239-0-1
REV. B	

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FLWS	STATE	ADR	CLK	CIR	WR	CB	CD	CBA	BUS	DAD	SPS	ALU	SBC	SBM	SDM	SBA	UBF	SRX	RIF	UPF
F2	ADD39	200	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	01	13	072
E3	MUL0	201	0	0	0	0	1	0	0	00	0	32	12	17	2	0	00	00	00	014
F2	ADD7	202	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	01	11	300
E4	DIV0	203	6	0	0	0	1	0	0	00	0	32	12	17	2	0	00	00	00	303
E3	MUL8	204	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	001
E2	ASH0	205	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	311
E2	ASH19	206	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	11	01	127
E2	ASH7	207	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	11	01	351
F4	FML9	210	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	212
F5	FDV24	211	0	0	0	0	1	0	0	10	0	06	00	00	2	0	00	00	00	032
F4	FML10	212	2	0	0	0	1	0	0	00	0	00	00	00	0	0	00	01	13	213
F4	FML11	213	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	232
F6	NOM11	214	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	216
F2	ADD16	215	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	01	13	200
F6	NOM12	216	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	234
F4	FML18	217	0	0	0	0	1	0	0	00	0	00	00	00	2	0	00	00	00	330
F6	EXI7	220	5	0	0	0	1	0	3	00	0	00	00	00	0	0	00	00	00	336
E1	DST15	221	2	0	3	1	0	0	0	00	0	00	00	00	1	0	00	01	12	241
F6	EXI3	222	6	0	0	0	1	0	2	00	0	03	00	00	2	0	00	00	00	224
E2	ASH11	223	6	0	3	1	1	0	0	00	0	00	00	00	3	0	00	10	00	223
F6	EXI12	224	2	0	0	0	0	0	2	00	0	00	00	00	2	0	00	00	00	161
F2	ADD10	225	6	0	0	0	1	0	0	00	0	06	00	00	2	0	00	00	00	245
F2	ADD15	226	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	215
E2	ASH12	227	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	077
F4	FML16	230	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	11	250
E4	DIV3	231	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	020
F4	FML12	232	2	0	0	0	0	0	0	00	0	00	00	00	3	0	00	00	00	304
F3	ADD35	233	6	0	0	1	1	0	0	00	0	36	00	00	0	0	00	00	00	360
F6	NOM13	234	6	0	0	1	1	0	0	00	0	00	00	00	0	0	00	01	15	140
F1	FP9	235	4	0	0	0	1	0	0	00	0	11	00	14	0	0	00	00	00	144
F6	EXI1	236	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	254
F3	ADD25	237	2	0	0	0	0	0	0	00	0	00	00	00	2	0	00	00	00	341

NOTE:
THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BIT) FIELD IS LISTED FOR CLARITY.

FLWS	STATE	ADR	CON	FC1	FUB	MHR	FRD	ERD	SRD	SDR	CVM	NZM	CCC	GPC	CEE	CNT	EUB	CBR
F2	ADD39	200	0	0	0	0	0	0	1	0	0	0	0	0	0	0	00	0
E3	MUL0	201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03	1
F2	ADD7	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E4	DIV0	203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
E3	MUL8	204	0	0	0	0	0	0	0	3	0	0	0	0	0	0	00	1
E2	ASH0	205	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13	0
E2	ASH19	206	0	0	0	0	0	1	3	0	0	0	0	0	0	0	00	0
E2	ASH7	207	0	0	0	0	0	0	0	2	0	2	0	0	2	13	1	1
F4	FML9	210	0	0	0	3	0	0	0	0	0	0	0	0	0	0	00	1
F5	FDV24	211	0	0	0	0	0	1	1	3	4	0	1	0	0	0	00	1
F4	FML10	212	2	0	0	0	0	0	3	3	0	0	0	0	0	0	00	0
F4	FML11	213	0	0	1	0	0	1	3	0	0	0	0	0	0	1	01	0
F6	NOM11	214	0	0	0	0	0	0	0	3	0	0	0	0	0	0	00	0
F2	ADD16	215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
F6	NOM12	216	0	0	1	1	0	0	0	1	0	0	0	1	0	0	04	1
F4	FML18	217	0	0	0	0	0	1	1	3	0	0	0	0	0	0	00	1
F6	EXI7	220	0	0	0	0	1	0	1	0	0	0	0	0	0	0	00	0
E1	DST15	221	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F6	EXI3	222	2	0	0	0	0	0	3	0	0	0	0	0	0	0	00	1
E2	ASH11	223	0	0	0	0	0	0	1	1	2	0	1	0	0	1	10	1
F6	EXI12	224	2	0	0	0	0	0	3	0	0	0	0	0	0	0	00	1
F2	ADD10	225	0	0	0	0	0	0	0	0	0	0	0	4	0	0	00	1
F2	ADD15	226	0	0	0	0	1	0	1	0	0	0	0	0	0	2	00	0
E2	ASH12	227	0	0	0	0	0	1	1	0	0	0	0	0	0	0	00	0
F4	FML16	230	0	0	0	0	0	0	1	0	0	0	0	7	0	0	10	0
E4	DIV3	231	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F4	FML12	232	0	0	0	5	0	0	0	1	0	0	0	7	0	0	10	1
F3	ADD35	233	0	0	0	0	0	1	1	0	0	0	0	0	0	0	00	0
F6	NOM13	234	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
F1	FP9	235	0	0	1	0	1	0	3	0	0	0	0	0	0	0	00	0
F6	EXI1	236	1	0	0	0	1	0	3	0	0	0	0	0	0	0	11	0
F3	ADD25	237	0	0	0	0	0	0	0	0	0	0	0	7	0	1	10	0

REV.	
CHANGE NO.	
REVISIONS	

DRN	<i>P. P. P.</i>	DATE	8-16-72
CHK'D	<i>A. B.</i>	DATE	8-17-72
APP'D	<i>A. B.</i>	DATE	8-17-72
PROJ. ENGR.	<i>A. B.</i>	DATE	8-17-72
PROJ. MGR.	<i>A. B.</i>	DATE	8-17-72

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TITLE	
FIS BOARD	
(ADRS 200-237)	
SIZE CODE	NUMBER
C CS	M7239-0-1
REV.	B

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

FLWS	STATE	ADR	CLK	CIR	WR	CB	CD	CBA	BUS	DAD	SPS	ALU	SBC	SBM	SDM	SBA	UBF	SRX	RIF	UPF
E1	EI2	240	4	0	0	0	1	0	0	00	0	32	00	17	0	0	00	00	00	102
E1	DST16	241	5	0	0	0	0	1	1	00	0	11	00	00	0	0	00	04	00	265
F1	FP0	242	3	0	0	0	0	1	1	00	0	00	00	00	2	1	00	04	00	121
E2	ASH17	243	6	0	3	1	1	0	0	00	0	11	00	00	2	0	00	10	00	243
F1	FP13	244	7	0	3	0	1	1	1	00	0	11	02	17	2	0	00	04	00	121
F2	ADD11	245	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	14	373
F1	FP14	246	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	255
F2	ASH18	247	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	00	00	077
F4	FML17	250	6	0	0	0	1	0	0	00	0	11	00	00	2	0	00	00	00	213
F2	ADD1	251	4	0	0	0	1	0	0	10	0	06	00	00	0	0	00	00	00	300
F1	FP11	252	2	0	3	0	1	0	0	00	0	00	00	00	2	0	00	01	11	244
F4	BRQ2	253	6	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	355
F6	EXI2	254	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	01	14	220
F1	FP15	255	6	0	0	0	1	0	0	00	0	26	00	00	0	0	00	00	00	120
F6	EXI5	256	6	0	0	0	0	0	0	00	7	00	00	00	0	0	00	00	00	354
F4	BRQ3	257	6	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	355
E1	DST0	260	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	04	00	261
E1	DST1	261	2	0	3	1	0	0	0	00	0	00	00	00	2	0	00	01	12	201
E1	DST10	262	3	0	0	0	0	1	1	00	0	00	00	00	0	1	00	04	00	271
F4	FML7	263	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	01	12	172
E1	DST2	264	4	0	0	0	1	1	0	00	0	11	02	17	0	1	00	04	00	170
E1	DST6	265	2	0	3	1	0	0	0	00	0	00	00	00	1	0	00	01	12	366
E1	DST5	266	7	0	3	0	1	1	1	00	0	11	02	17	2	1	00	04	00	265
F5	FDV10	267	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	171
E1	DST3	270	4	0	0	0	1	1	0	00	0	06	01	17	0	0	00	04	00	170
E1	DST8	271	2	0	3	1	0	0	0	00	0	00	00	00	1	0	00	01	12	201
E1	DST9	272	7	0	0	0	1	1	1	00	0	06	01	17	0	0	00	04	00	265
F6	NOM10	273	6	0	0	0	1	0	0	00	0	11	00	00	2	0	00	00	00	214
E1	DST11	274	7	0	3	0	1	0	1	00	0	11	02	17	2	0	00	01	07	145
E1	DST13	275	5	0	0	0	1	1	1	00	0	11	00	00	0	0	00	04	00	271
E1	DST14	276	7	0	3	0	1	0	1	00	0	11	02	17	2	0	00	01	07	221
F4	FML15	277	6	0	0	0	1	0	0	00	0	11	00	00	2	0	00	00	00	230

NOTE:
THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BIT) FIELD IS LISTED FOR CLARITY.

FLWS	STATE	ADR	CON	FC1	FUB	MHR	FRD	END	SRD	SDR	CVM	NZM	CCC	GPC	CEE	CNT	EUB	CBR
E1	EI2	240	0	0	0	0	0	0	0	0	0	0	0	0	1	0	00	0
E1	DST16	241	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F1	FP0	242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E2	ASH17	243	0	0	0	0	0	0	1	2	3	0	3	3	0	1	10	1
F1	FP13	244	0	0	0	7	0	0	0	0	0	2	4	0	0	0	00	0
F2	ADD11	245	0	0	0	0	0	0	3	0	3	4	0	0	0	0	00	0
F1	FP14	246	0	0	0	0	0	1	1	0	0	0	0	0	0	0	15	0
F2	ASH18	247	0	0	0	0	0	1	1	0	0	0	0	0	0	0	00	0
F4	FML17	250	2	0	0	0	0	1	1	3	0	0	0	4	0	0	00	1
F2	ADD1	251	0	0	0	0	0	0	0	4	0	1	0	0	0	0	00	0
F1	FP11	252	0	0	0	0	0	1	0	0	0	0	0	0	0	0	00	0
F4	BRQ2	253	2	0	0	0	1	0	3	0	0	0	0	0	0	0	00	0
F6	EXI2	254	0	1	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F1	FP15	255	0	0	0	0	1	0	0	0	0	0	0	0	0	0	00	1
F6	EXI5	256	0	0	0	0	1	0	0	0	0	0	0	0	1	0	00	0
F4	BRQ3	257	2	0	0	0	1	0	3	0	0	0	0	0	0	0	00	0
E1	DST0	260	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0
E1	DST1	261	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
E1	DST10	262	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0
F4	FML7	263	0	0	0	0	0	0	0	0	0	0	0	0	0	2	00	1
E1	DST2	264	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E1	DST6	265	3	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E1	DST5	266	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F5	FDV10	267	0	0	0	0	0	0	3	0	0	0	0	0	0	0	00	1
E1	DST3	270	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E1	DST8	271	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
E1	DST9	272	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F6	NOM10	273	0	0	0	0	1	1	0	0	0	4	0	0	0	10	1	1
E1	DST11	274	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E1	DST13	275	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0
E1	DST14	276	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F4	FML15	277	0	0	0	0	0	1	1	3	4	0	1	0	0	0	00	1

REV.	
CHANGE NO.	
REVISIONS	
HK	

DRN.	<i>C. P. ...</i>	DATE	8-16-72
CHKD.	<i>...</i>	DATE	8-17-72
ENG.	<i>...</i>	DATE	8-17-72
PROD. ENG.	<i>...</i>	DATE	8-18-72
PROD.	<i>...</i>	DATE	8-18-72

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TITLE	
FIS BOARD	
(ADRS 240-277)	
SIZE CODE	NUMBER
C CS	M7239-0-1
REV.	B

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FLWS	STATE	ADR	CLK	CIR	WH	CH	CD	CBA	BUS	DAD	SPS	ALU	SBC	SBM	SDM	SBA	UBF	SRX	RIF	UPF
F2	ADD2	300	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	12	064
F2	ADD18	301	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	01	11	321
F2	ADD4	302	6	0	3	0	0	0	0	00	0	00	00	00	2	0	00	01	13	164
E4	DIV1	303	4	0	0	0	1	0	0	00	0	32	00	00	0	0	00	00	00	055
F4	FML13	304	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	13	213
F6	NOM7	305	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	156
F4	FML14	306	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	13	277
F6	NOM5	307	4	0	0	0	1	0	0	00	0	06	00	00	0	0	00	01	15	136
F2	ADD21	310	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	01	15	340
E2	ASH1	311	0	0	0	1	1	0	0	00	0	00	00	00	2	0	00	10	00	030
F5	FDV19	312	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	134
F3	ADD27	313	6	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	313
F3	ADD33	314	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	334
F3	ADD32	315	6	0	0	0	1	0	0	00	0	11	00	00	2	0	00	00	00	314
F5	FDV16	316	6	0	0	0	1	0	0	00	0	00	00	00	2	0	00	00	00	333
F3	ADD30	317	6	0	0	0	1	0	0	00	0	11	00	00	2	0	00	00	00	347
F2	ADD8	320	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	01	10	245
F2	ADD19	321	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	01	11	325
F2	ADD9	322	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	10	225
E2	ASH21	323	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	017
F6	NOM4	324	2	0	0	0	0	1	0	06	0	00	00	00	1	0	00	04	00	305
F2	ADD20	325	4	0	0	0	1	0	0	00	0	00	00	00	0	0	00	01	14	310
F6	NOM2	326	6	0	3	1	1	0	0	00	0	23	00	00	2	0	00	01	15	176
F6	NOM0	327	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	154
F4	FML19	330	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	154
F5	FDV14	331	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	11	370
F6	EXI14	332	4	0	0	0	1	0	0	00	0	32	00	16	0	0	00	00	00	236
F5	FDV12	333	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	13	173
F3	ADD34	334	6	0	0	0	1	0	0	10	0	06	00	00	2	0	00	00	00	233
F3	ADD37	335	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	334
F6	EXI8	336	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	356
F5	FDV17	337	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	352

NOTE:
THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BIT) FIELD IS LISTED FOR CLARITY.

FLWS	STATE	ADR	CON	FC1	FUB	MHR	FRD	ERD	SRD	SDR	CVM	NZM	CCC	GPC	CEE	CNT	EUB	CBR
F2	ADD2	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	05	1
F2	ADD18	301	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1
F2	ADD4	302	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E4	DIV1	303	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F4	FML13	304	2	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F6	NOM7	305	0	0	0	1	0	0	1	1	0	0	0	0	0	0	10	0
F4	FML14	306	0	0	0	0	0	0	1	0	0	0	0	0	0	0	00	0
F6	NOM5	307	0	0	1	2	0	0	0	2	0	0	0	5	0	0	04	0
F2	ADD21	310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
E2	ASH1	311	0	0	0	0	0	0	0	2	0	1	0	0	0	1	00	1
F5	FDV19	312	0	0	0	0	1	0	0	0	0	0	0	0	0	0	00	1
F3	ADD27	313	2	0	0	1	0	0	1	1	0	0	0	7	0	1	10	0
F3	ADD33	314	0	0	0	0	1	0	1	3	0	2	4	0	0	0	00	0
F3	ADD32	315	0	0	0	0	0	1	1	0	0	0	4	0	0	0	10	1
F5	FDV16	316	0	0	0	6	0	1	2	2	0	0	0	0	0	0	00	1
F3	ADD30	317	0	0	0	0	1	0	1	0	4	0	1	0	0	0	00	1
F2	ADD8	320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
F2	ADD19	321	0	0	0	0	0	0	3	0	0	0	0	0	0	0	00	0
F2	ADD9	322	0	0	0	3	0	0	0	0	0	0	0	0	0	0	00	0
E2	ASH21	323	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F6	NOM4	324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F2	ADD20	325	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F6	NOM2	326	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	1
F6	NOM0	327	0	0	0	0	0	0	0	0	0	0	0	0	0	0	04	1
F4	FML19	330	0	0	0	3	0	0	0	0	0	0	0	0	0	0	00	1
F5	FDV14	331	0	0	0	0	0	0	1	0	0	0	0	0	0	1	10	0
F6	EXI14	332	0	0	0	0	0	0	0	5	2	5	0	0	0	0	00	0
F5	FDV12	333	0	0	0	0	0	0	1	0	0	0	7	0	0	0	00	0
F3	ADD34	334	0	0	0	0	0	0	1	0	4	0	1	0	0	0	03	1
F3	ADD37	335	0	0	0	0	1	0	1	3	0	0	0	0	0	0	00	0
F6	EXI8	336	0	0	0	0	0	1	3	0	0	0	0	0	0	0	00	0
F5	FDV17	337	0	0	0	0	1	0	1	0	0	0	0	0	0	0	00	1

REV.	
CHANGE NO.	
CHK	

DRN	R. G. G. G.	DATE	8-16-72
CHKD	E. B. B. B.	DATE	7-17-72
ENG	E. B. B. B.	DATE	7-17-72
PROJ. ENG.	E. B. B. B.	DATE	8/18/72
PROD.	H. S. S. S.	DATE	8/18/72

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TITLE	
FIS BOARD	
(ADRS 300-337)	
SIZE CODE	NUMBER
C CS	M7239-0-1
REV.	B
SHEET 11	OF 12
DIST.	

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FLWS	STATE	ADR	CLK	CIR	WR	CB	CD	CBA	BUS	DAD	SPS	ALU	SBC	SBM	SDM	SBA	UBF	SRX	RIF	UPF
F3	ADD22	340	6	0	0	1	1	0	0	00	0	14	00	00	2	0	00	01	13	017
F3	ADD26	341	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	313
F2	ADD14	342	2	0	0	0	0	0	0	00	0	00	00	00	2	0	00	00	00	226
F3	ADD28	343	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	317
F5	FDV7	344	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	01	15	346
F5	FDV8	345	0	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	000
F3	ADD31	346	6	0	0	0	1	0	0	00	0	11	02	17	2	0	00	00	00	364
F3	ADD31	347	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	01	11	315
F5	FDV4	350	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	01	14	222
E2	ASH8	351	6	0	0	1	1	0	0	00	0	00	00	00	2	0	00	10	00	040
F5	FDV18	352	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	312
F3	BRQ0	353	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	355
F6	EXI6	354	6	0	3	0	1	0	0	10	0	06	00	00	2	0	00	04	00	007
F4	BRQ4	355	6	0	3	0	1	0	0	10	0	06	00	00	2	0	00	04	00	375
F6	EXI9	356	6	0	3	0	1	1	0	06	0	06	01	17	2	0	00	04	00	374
F3	BRQ1	357	2	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	355
F3	ADD38	360	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	327
F3	ADD24	361	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	237
F3	ADD36	362	6	0	0	1	1	0	0	00	0	06	00	00	2	0	00	00	00	335
F3	ADD29	363	2	0	0	0	0	0	0	00	0	00	00	00	2	0	00	00	00	314
F5	FDV9	364	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	01	12	267
F4	FML6	365	6	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	263
E1	DST7	366	3	0	0	0	0	1	1	00	0	00	00	00	0	1	00	01	12	271
F1	FP8	367	2	0	3	0	0	0	0	00	0	00	00	00	2	0	00	01	15	235
F5	FDV15	370	6	0	0	0	1	0	0	00	0	11	00	00	2	0	00	00	00	316
F5	BRQ6	371	6	0	0	1	0	0	0	00	0	00	00	00	0	0	00	00	00	355
F5	FDV22	372	6	0	0	0	1	0	0	00	0	06	00	00	2	0	00	00	00	316
F2	ADD12	373	6	0	0	1	1	0	0	10	0	06	00	00	2	0	00	01	15	163
F6	EXI10	374	5	0	0	0	1	0	1	00	0	32	00	00	0	0	00	00	00	376
F6	BRQ5	375	6	0	3	0	1	0	0	00	0	06	01	17	2	0	00	01	07	017
F6	EXI11	376	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	177
E1	EI1	377	2	0	0	0	0	0	0	00	0	00	00	00	0	0	00	00	00	240

NOTE:
THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BIT) FIELD IS LISTED FOR CLARITY.

FLWS	STATE	ADR	CON	FC1	FUB	MHR	FRD	ERD	SRD	SDR	CVM	NZM	CCC	GPC	CEE	CNT	EUB	CBR
F3	ADD22	340	0	0	1	0	0	0	0	0	4	0	1	0	0	1	03	1
F3	ADD26	341	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	0
F2	ADD14	342	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1
F3	ADD28	343	0	0	0	2	0	0	1	2	0	0	0	5	0	0	00	0
F5	FDV7	344	3	0	0	0	0	0	3	0	0	0	0	0	0	0	10	0
F5	FDV8	345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F5	FDV8	346	3	0	0	0	1	0	3	0	0	0	0	0	0	0	00	1
F3	ADD31	347	0	0	0	3	0	0	1	0	0	0	0	0	0	0	00	0
F5	FDV4	350	0	0	0	0	0	0	1	0	0	0	0	0	0	0	00	0
E2	ASH8	351	0	0	0	0	0	0	3	3	0	0	0	0	0	1	00	1
F5	FDV18	352	0	0	0	0	0	0	0	3	0	0	0	0	0	0	00	0
F3	BRQ0	353	2	0	0	0	1	0	3	0	0	0	0	0	0	0	00	0
F6	EXI6	354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F4	BRQ4	355	0	0	0	0	0	0	0	0	0	0	0	0	1	0	00	0
F6	EXI9	356	0	1	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F3	BRQ1	357	2	0	0	0	1	0	3	0	0	0	0	0	0	0	00	0
F3	ADD38	360	0	0	0	1	0	0	0	1	0	0	0	0	0	0	00	0
F3	ADD24	361	0	0	1	0	0	1	2	0	0	0	0	0	0	0	02	1
F3	ADD36	362	0	0	0	3	0	0	1	0	0	0	0	4	0	0	00	1
F3	ADD29	363	0	0	0	3	0	0	0	0	0	0	0	0	0	0	10	1
F5	FDV9	364	0	0	0	0	0	0	0	0	0	0	0	0	0	2	00	1
F4	FML6	365	3	0	0	0	1	0	3	0	0	0	0	0	0	0	00	1
E1	DST7	366	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0
F1	FP8	367	0	0	0	0	0	0	3	0	0	2	4	0	0	0	04	0
F5	FDV15	370	0	0	0	0	0	1	1	3	4	0	1	4	0	0	10	1
F5	BRQ6	371	2	0	0	0	1	0	3	0	0	0	0	0	0	0	00	0
F5	FDV22	372	0	0	0	0	0	1	1	3	4	0	1	4	0	0	10	1
F2	ADD12	373	0	0	0	0	0	0	0	0	0	0	0	0	0	0	01	1
F6	EXI10	374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F6	BRQ5	375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0
F6	EXI11	376	0	0	0	0	0	0	0	0	5	2	7	0	0	0	00	0
E1	EI1	377	0	0	0	0	0	0	0	0	0	7	0	0	0	0	00	0

REVISIONS	REV.
	CHANGE NO.
CHK	

DRN <i>R. Rudolph</i>	DATE 8-16-72
CHK'D <i>J. Kuzynski</i>	DATE 7-17-72
ENG. <i>J. Kuzynski</i>	DATE 7-17-72
PROJ. ENG. <i>J. Kuzynski</i>	DATE 7-17-72
PROG. <i>J. Kuzynski</i>	DATE 7-17-72

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TITLE FIS BOARD (ADRS 340-377)	
SIZE CODE C CS	NUMBER M7239-0-1
REV. B	
SHEET 12 OF 12	

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			LEGEND		QUANTITY/VARIATION													
SOFTWARE LIST			D	DOCUMENT	KELL-F						KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE		
MADE BY <i>J. F. Dougherty</i>	CHECKED <i>J. F. Dougherty</i>	SECTION	DN	DOCUMENT CHANGE NOTICE														
DATE <i>9/26/72</i>	DATE <i>9/27/72</i>	ISSUED SECT.	PA	PAPER TAPE ASCII														
ENG <i>J. F. Dougherty</i>	PROD <i>J. Stanger</i>		PB	PAPER TAPE BINARY														
DATE <i>9/27/72</i>	DATE <i>9-28-72</i>		PM	PAPER TAPE READ-IN-MODE														
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION																
1	MAINDEC-11-DBKEA-A-D	INSTRUCTION TEST	1															
2	MAINDEC-11-DBKEA-A-PB	INSTRUCTION TEST	1															
3	MAINDEC-11-DBKEB-A-D	INSTRUCTION EXERCISER	1															
4	MAINDEC-11-DBKEB-A-PB	INSTRUCTION EXERCISER	1															
5	MAINDEC-11-DBKEØ-A-D	GTP OVERLAY	1															
6	MAINDEC-11-DBKEØ-A-PB	GTP OVERLAY	1															
TITLE FLOATING INSTRUCTION SET			ASSY. NO. <i>74</i>	SIZE CODE A SL	NUMBER KELL-F-SL				REV.	ECO NO								
			SHEET 1 OF 1	DIST.														

DEC FORM NO.
DRA 120

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST			QUANTITY/VARIATION																					
MADE BY <i>J. F. O'Loughlin</i>		CHECKED <i>J. F. O'Loughlin</i>	SECTION																					
DATE <i>9/26/72</i>		DATE <i>9/27/72</i>																						
ENG <i>J. F. O'Loughlin</i>		PROD <i>J. F. O'Loughlin</i>	ISSUED SECT.																					
DATE <i>9/27/72</i>		DATE <i>9-29-72</i>																						
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION		KEL1-F																				
1	D-CS-M7239-Ø-1	FIS BOARD		1																				
2	D-MU-KD11-A-MU	MODULE UTILIZATION		REF																				
TITLE FLOATING INSTRUCTION SET			ASSY NO. <i>H</i>	SIZE A	CODE PL	NUMBER KEL1-F-Ø		REV.	ECO NO.															
			SHEET 1 OF 1	DIST.																				