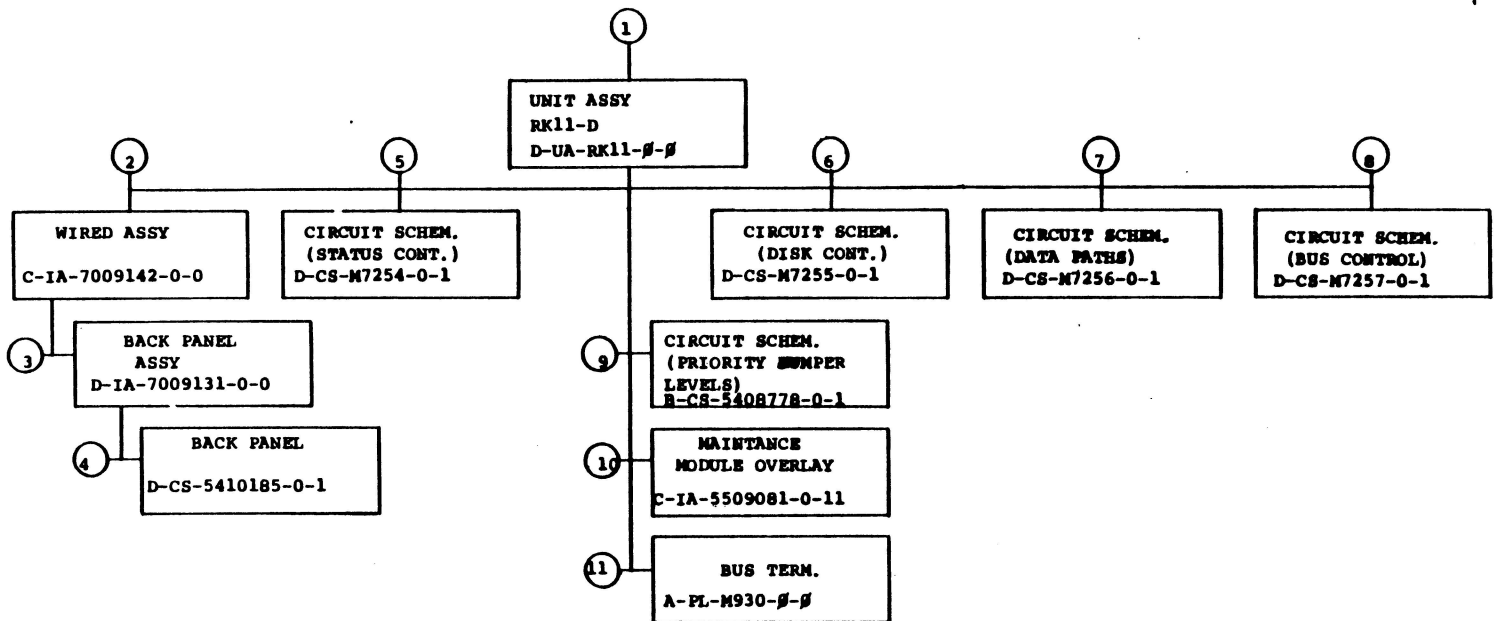


RK11-D
disk drive controller
engineering drawings

digital equipment corporation • maynard, massachusetts



TITLE	DISK CONTROL	SHEET 2 of 4	SIZE CODE 8 DD	NUMBER RK11-D	REV R
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CUSTOMER PRINT SET				MECHANICAL					CUSTOMER PRINT SET				MECHANICAL				
1	MPG. SET	FIG. NO.	REV	NO OF SHEETS	DESCRIPTION	OPTION NO./FILE DATE	1	MPG. SET	FIG. NO.	REV	NO OF SHEETS	DESCRIPTION	OPTION NO./FILE DATE				
		1	D-UA-RK11-0-0	C	1	UNIT ASSY (RK11-D)			8	D-CS-M7257-0-1	#	5	CIRCUIT SCHEMATIC (BUS CONTROL)				
										K-CO-M7257-0-4		1	X-Y COORDINATE HOLE LOCATION				
										D-AH-M7257-0-5		1	ASSY DRILLING HOLE LOCATION				
										B-MH-M7257-0-6		1	MODULE ECO HISTORY				
		2	C-IA-7009142-0-0	B	1	WIRED ASSY (RK11-D)											
		3	D-IA-7009131-0-0	#	1	BACKPANEL											
			E-SC-1209583-0-1		1	CASTING, THREE BLOCK											
			A-SS-7407846-0-0		1	DECAL LOGIC SERIAL NUMBER											
		4	D-CS-5410185-0-1	#	1	CIRCUIT SCHEMATIC (BACKPANEL)											
			K-CO-5410185-0-4		1	X-Y COORDINATE HOLE LOCATION											
			E-AH-5410185-0-5		1	ASSY DRILLING HOLE LOCATION											
			B-MH-5410185-0-6		1	MODULE ECO HISTORY											
		5	D-CS-M7254-0-1	#	5	CIRCUIT SCHEMATIC (STATUS CONT.)											
			K-CO-M7254-0-4		1	X-Y COORDINATE HOLE LOCATION											
			D-AH-M7254-0-5		1	ASSY DRILLING HOLE LOCATION											
			B-MH-M7254-0-6		1	MODULE ECO HISTORY											
		6	D-CS-M7255-0-1	#	6	CIRCUIT SCHEMATIC (DISK CONT.)											
			K-CO-M7255-0-4		1	X-Y COORDINATE HOLE LOCATION											
			D-AH-M7255-0-5		1	ASSY DRILLING HOLE LOCATION											
			B-MH-M7255-0-6		1	MODULE ECO HISTORY											
		7	D-CS-M7256-0-1	#	6	CIRCUIT SCHEMATIC (DATA PATHS)											
			K-CO-M7256-0-4		1	X-Y COORDINATE HOLE LOCATION											
			D-AH-M7256-0-5		1	ASSY DRILLING HOLE LOCATION											
			B-MH-M7256-0-6		1	MODULE ECO HISTORY											
CUSTOMER PRINT SET CODES	X = PRINT OF DOCUMENT INCLUDED IN PRINT SET					# = PRINT OF DOCUMENT'S LATEST REVISION LEVEL			TITLE	DISK CONTROL		SHEET CODE	NUMBER		REV		
	C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT											B DD	RK11-D		R1		
	S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED									SHEET 4 OF 4							

NOTE
 FOR PROPER OPERATION OF RK11-D1E
 THE AK85 DRIVE MUST HAVE AN M7786
 REV J OR LATER AND HAVE A
 BACK PANEL OF REV. A OR LATER.
 FOR RK11-E THE AK85 MUST ALSO
 HAVE A G188 REV. K OR LATER.

1	UNIBUS DISK CABLE IN M284 INTERNAL CONNECTOR CABLE	A	M284
2	UNIBUS DISK CABLE OUT M286 INTERNAL CONNECTOR CABLE	A	M286
3	POWER CORN.	B	M738 K.M.I.A. MAINTENANCE (OPTIONAL)
4	STATUS DISK CONTROL CONTR.	C	M7254
	DISK DATA PATHS CONTROL	C	M7255
	BUS CONTROL	C	M7257

EXTENSION
 CHANGES
 SEE

FIRST USED ON DRYDRUM/MODEL
 RK11-D

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN INCHES
 TOLERANCES
 FRACTIONS
 DECIMALS
 ANGLES
 SURF FINISH
 MATERIAL
 FINISH
 PARTS

QTY.	DESCRIPTION	PART NO.	REV.
	MODULE UTILIZATION		
EQUIPMENT CORPORATION			
B-DD-RK11-D			
SCALE: NONE			
DMURK11-D-1			
SHEET 1 OF 1			

PAGE REVISION CONTROL SHEET

SH NO.	PAGE REVISIONS										REMARKS
	A	B	C	D	E	F	G	H	I	J	
1	C	D	E	D	E	D	E	D	E	D	(ST 1) (ST 2) (ST 3) (ST 4) ETCH REV. "D" NOT TO BE USED.
2	B	B	B	C	B	C	B	C	B	C	
3	B	B	B	C	B	C	B	C	B	C	
4	B	B	B	C	B	C	B	C	B	C	
5	B	B	B	C	B	C	B	C	B	C	
6	B	B	B	C	B	C	B	C	B	C	
7	B	B	B	C	B	C	B	C	B	C	
8	B	B	B	C	B	C	B	C	B	C	
9	B	B	B	C	B	C	B	C	B	C	
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11	B	B	B	C	B	C	B	C	B	C	
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18	B	B	B	C	B	C	B	C	B	C	
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73	B	B	B	C	B	C	B	C	B	C	
74	B	B	B	C	B	C	B	C	B	C	
75	B	B	B	C	B	C	B	C	B	C	
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83	B	B	B	C	B	C	B	C	B	C	
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95	B	B	B	C	B	C	B	C	B	C	
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97	B	B	B	C	B	C	B	C	B	C	
98	B	B	B	C	B	C	B	C	B	C	
99	B	B	B	C	B	C	B	C	B	C	
100	B	B	B	C	B	C	B	C	B	C	

FIRST USED ON OPTION/MODEL
RK11-D



TITLE
STATUS CONTROL
(RK11-D)

SIZE CODE
B CS
NUMBER
M 7254-0-1
REV.
J

DATE 4/22/74
DATE 4/22/74
DATE 4/22/74
DATE 4/22/74
DATE 4/22/74

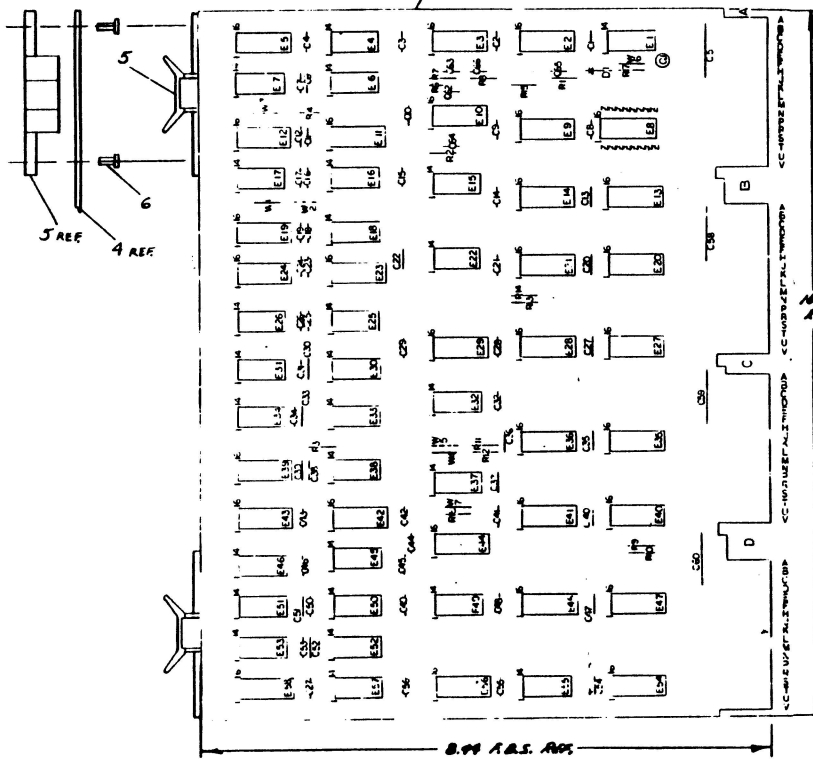
NEXT HIGHER ASSY.
B-DD - RK11-D
SCALE
SHEET 1 OF 6

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NOTES:
 DIGITAL EQUIPMENT CORPORATION

NOTES:

* IF NECESSARY USE I.C. DEC 8875 P/N 191047
 * IC DEC 384 P/N 1809486 OR 5384 P/N 1910394 MAY BE SUBSTITUTED FOR 7384 IN E26. E1 MUST BE A 7384



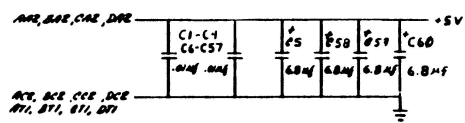
PIN NOMENCLATURE
 MODULE RK11-D

QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO
1	Q1	TRANSISTOR DEC 6534B	1523409-01	50
1	E8	IC SOCKET	1809838	49
4	W1W4,W6,W7	RESISTOR ARRAY (200)-1	5009185	48
1	E39	I.C. DEC 7425	1803050	47
1	E23, E41	I.C. DEC 7425	1810651	46
1	E55	I.C. DEC 8815	1809713	45
1	E9	I.C. DEC 74N35	1809063	44
1	E17, E52	I.C. DEC 74N33	1809062	43
1	E38	I.C. DEC 7408	1810155	42
1	E45	I.C. DEC 74N11	1809567	41
5	E21, E27, E28, E29, E40	I.C. DEC 74N38	1810016	40
1	E12, E19, E24, E56	I.C. DEC 74N61	1810650	39
1	E57	I.C. DEC 74N78	1809667	38
1	E6, E7, E37	I.C. DEC 7478	1803597	37
1	E53	I.C. DEC 74N52	1809061	36
1	E15, E22	I.C. DEC 74N57	1810081	35
1	E1, E26	I.C. DEC 74N59	1809329	34
1	E30	I.C. DEC 88B1	1809445	33
1	E2, E3, E10	I.C. DEC 74N29	1810636	32
1	E9, E19, E44	I.C. DEC 6416	1810087	31
1	E31, E32	I.C. DEC 7400	1803377	30
1	E16	I.C. DEC 7400	1805276	29
1	E18, E34, E49	I.C. DEC 7400	1805225	28
1	E46, E50	I.C. DEC 7402	1809009	27
1	E13, E14, E25, E28, E31, E32, E33, E34, E35, E36, E37, E38, E39, E40, E41, E42, E43, E44, E45, E46, E47, E48, E49, E50, E51, E52, E53, E54, E55, E56	I.C. DEC 74N53	1809937	26
1	E11	I.C. DEC 74N36	1810263	25
1	E25	I.C. DEC 74N2	1810878	24
1	E51, E33	I.C. DEC 7409	1803686	23
1	E43	I.C. DEC 74N2	1810096	22
1	R10, R12, R14	RES. 750 Ω 1/4 W 5%	1801401	21
1	R9, R11, R13	RES. 330 Ω 1/4 W 5%	1802215	20
1	R1, R15, R16	RES. 1 K Ω 1/4 W 5%	1803265	19
1	R1	RES. 47 Ω 1/4 W 5%	1802177	18
1	R4	RES. 3K Ω 1/4 W 5%	1809982	16
4	R2, R6, R7, R8	RES. 1K Ω 1/4 W 5%	1800739	15
1	R17	RES. 470 Ω 1/4 W 5%	1803316	14
1	D1	DIODE IN748A 3.9V	1100122	13
2	C62, C63	CAP. 40PF 100V 5% D.M.	1000017	12
1	C65	CAP. 870 PF 100V 5% D.M.	1007881	11
1	C68	CAP. 30PF 100V 5% D.M.	1000018	10
1	C66	CAP. 120PF 100V 5% D.M.	1000018	9
26	C1-C4, C6-C57	CAP. 0.01 100V 5% TRIAL	1001610	8
4	C5, C58, C59, C60	CAP. 0.01 5V, 5% TRIT	1001806	7
1	B	SOCKET (S-P-7) STANDARD	9006232	6
1	W	MODULE (FOR Q1) MOUNTING	9008337-08	5
1	I	STRIPBOARD CIRCUIT BOARD	5007385	4
1	REF	MODULE 600 MOUNTING	8700-1129-0-6	3
1	REF	RESISTOR/INDUCTOR VALUE LIST	8700-1129-0-5	2
1	REF	X-Y COORDINATE VALUE LOCATION	8700-1129-0-4	1

I.C. DEC 74175	8	16
I.C. DEC 74161	8	16
I.C. DEC 7384	1	8
I.C. DEC 4015	8	16
I.C. DEC 7496	12	5
I.C. DEC 74100	8	16
I.C. DEC 74183	8	16
I.C. DEC 74183	8	16
I.C. DEC 7425	18	5
I.C. DEC 7402	8	16
I.C. DEC 7408	8	16
IC TYPE	GND	+5V

GND AND BY ARE USUALLY P/N 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS



FIRST USED ON OPTION MODEL
 RK11-D

ETCH BOARD REV **E**

DATE: 11/23/67
 DRAWN: [Signature]
 CHECKED: [Signature]
 APPROVED: [Signature]

SEMICONDUCTOR CONVERSION CHART

DEC NO	EIA NO.	DEC NO	EIA NO.
DEC 6534B	NONE	IN748A	IN748A
IN748A	NONE	B-DG-RK11-D	NONE

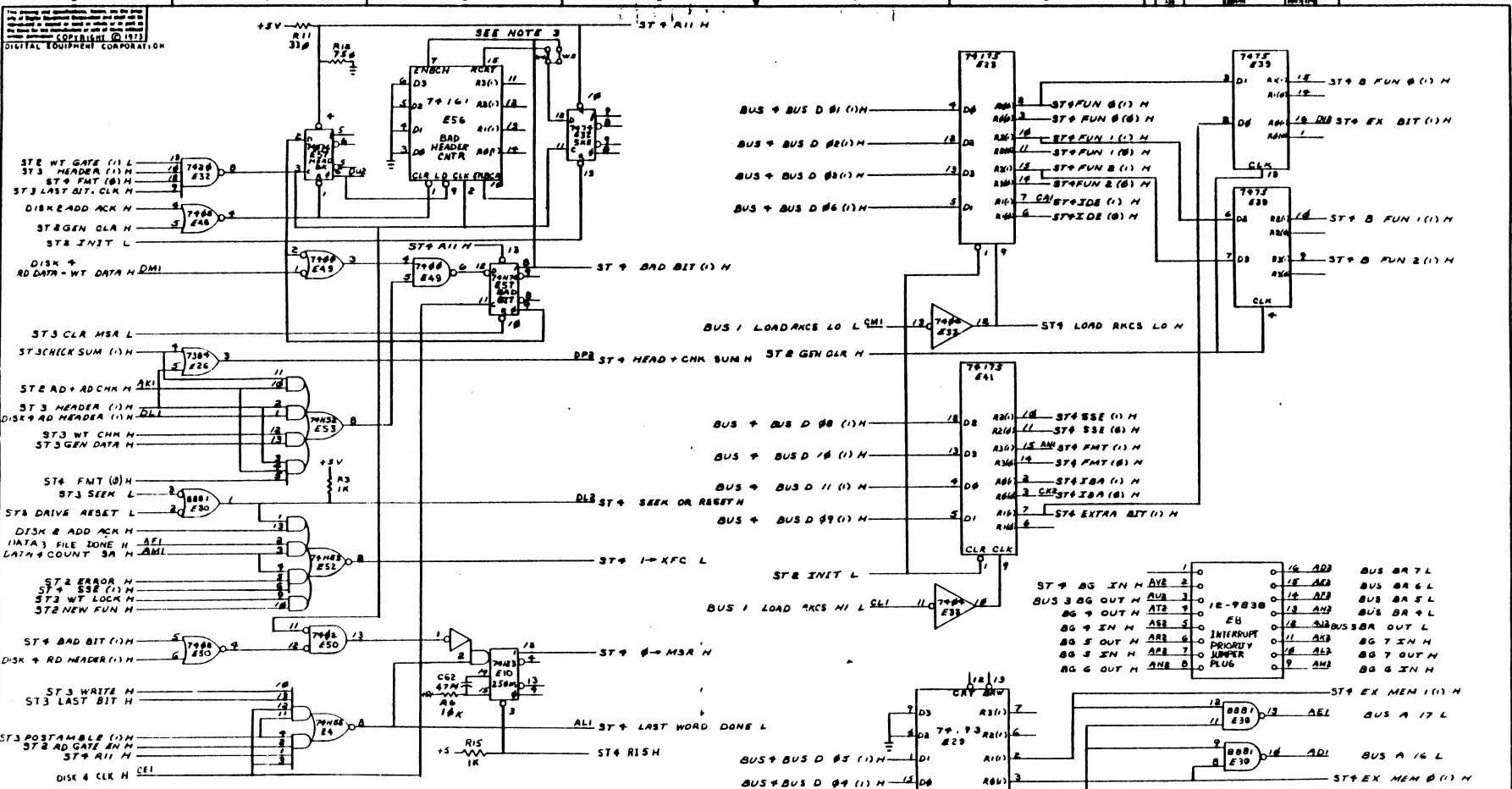
SEMI-CONDUCTOR CONVERSION CHART

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 CHECKED: [Signature]
 APPROVED: [Signature]

STATUS CONTROL
 RK11-D

DATE: 11/23/67
 DRAWN: [Signature]
 CHECKED: [Signature]
 APPROVED: [Signature]

DCS M7254-B-1

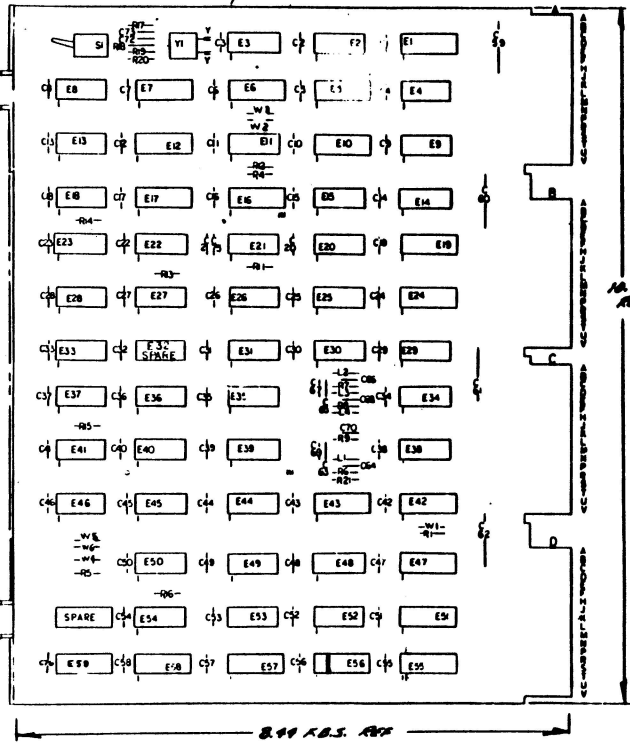
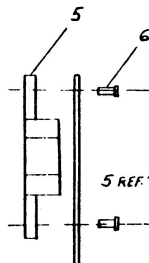


REV	
1	
2	
3	
4	
5	
6	
7	
8	

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO	ITEM NO
RK11-D				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES				
TOLERANCES	DECIMALS	ANGLES	TITLE	
±.005	±.01	±.01	STATUS CONTROL	
REMOVES BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY				
MATERIAL NEXT HIGHER ASSY				
FINISH B-DD-RK11-D				
SCALE NONE				
SHEET 6 OF 6				
REVISION			NUMBER	REV
DES M7254-0-1			1	F

1-0-5521W S 2

NOTES:
 1. IF 8640'S (ITEM#33) ARE NOT AVAILABLE, USE 11380'S PART NO. 19-11113



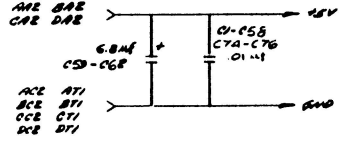
PIN NOMENCLATURE MODULE RKII-D

QTY	REF DESIGNATION	DESCRIPTION	PART NO
54	50	AWG GREEN	910574D-55

QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO
3	W1, W2, W6	INSULATED JUMPER (2007)	9003185	53
2		SPLIT LUGS	9008735	52
2		SWAGE LUGS	9007791	51
1	S1	SWITCH TOGGLE SPDT	1210209	50
4	L1-L4	INDUCTOR 100UH ±5% M 10%	1610662	49
1	Y1	CRYSTAL (SEE TABLE)		48
10	E11, E16, E22, E27, E41, E45, E49, E52-55	I.C. DEC 7479	1905547	47
1	E50	I.C. DEC 74H08	1909731	46
2	E13, E16	I.C. DEC 7408	1910155	45
1	E8, 9	I.C. DEC 314	1909700	44
1	E25	I.C. DEC 74161	1910450	43
1	E31	I.C. DEC 8815	1903718	42
1	E43	I.C. DEC 7402	1910006	41
1	E7	I.C. DEC 7476	1905585	40
1	E6	I.C. DEC 74179	1910652	39
1	E30	I.C. DEC 7482	1905589	38
1	E18	I.C. DEC 74H81	1905058	37
1	E36	I.C. DEC 74H50	1909060	36
1	E37	I.C. DEC 74L50	1905580	35
1	E28	I.C. DEC 8892	1908118	34
6	R1, R2, R15, R19, R30, R38	RES. 1/4W 5%	1911453	33
2	R7, R17	I.C. DEC 74123	1910118	32
2	E22, E47	I.C. DEC 74L57	1910654	31
1	E27	I.C. DEC 74151	1908226	30
2	E21, E38	I.C. DEC 74175	1910651	29
1	E5	I.C. DEC 380	1905419	28
5	E2, E4, E9, E14, E15	I.C. DEC 88B1	1909705	27
1	E35	I.C. DEC 7420	1905577	26
3	E23, E39, E45	I.C. DEC 7410	1905576	25
3	E8, E9, E44	I.C. DEC 7400	1905575	24
2	E5, E10	I.C. DEC 7496	1910363	23
2	E26, E33	I.C. DEC 7404	1909286	22
7	R3, R4, R12, R13, R18, R16, R21	RES. 1/4W 5%	1300365	21
1	R5	RES. 3K 1/4W 5%	1300432	19
4	R6-R9	RES. 10K 1/4W 5%	1305379	18
2	R12, R18	RES. 10K 1/4W 5%	1300473	17
2	R11, R4	RES. 390Ω 1/4W 5%	1300309	15
2	R19, R20	RES. 470Ω 1/4W 5%	1300316	14
3	E1, E19, E24	RES. PACK	1311003-01	13
2	C72, C73	CAP. 0.05µF 100V 20%	1001725	12
4	C63, C65, C67, C69	CAP. 820PF 100V 5% D/W	1000082	11
4	C64, C66, C68, C70	CAP. 39PF 100V 5% D/W	1000010	10
60	C1-C6B, C75, C76	CAP. FILM 100V 20% AXIAL	100J610	9
4	C59-C62	CAP. 6.8µF 35V 10% TANT	1005306	8
7				7
8		SOLEY (GS-P-7) STANDARD	3008732	6
4		HANDLE FLIP-CHIP MOUNTING	300837-08	5
1		ETCHED CIRCUIT BOARD	3005926	4
20		MATERIAL FOR MILITARY	3004781-0-8	3
20		AUTODIFFUSION MOUNT CONTACT	3004781-0-8	2
20		X-Y COORDINATE MOUNT CONTACT	3004781-0-8	1

I.C. DEC	1	8
I.C. DEC 380	1	8
I.C. DEC 74173	8	16
I.C. DEC 74175	8	16
I.C. DEC 74161	8	16
I.C. DEC 74151	8	16
I.C. DEC 74157	8	16
I.C. DEC 7486	5	12
I.C. DEC 314	1	8
I.C. DEC 7482	1	8
I.C. DEC 74179	8	16
I.C. DEC 7476	5	13
I.C. DEC 7402	8	16
I.C. DEC 74123	8	16

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPT WHERE STATED ABOVE
 IC PIN LOCATIONS



FIRST USED ON OPTION MODEL			PARTS LIST		
CHANGED BY	DATE	REVISION	QTY	REF DESIGNATION	DESCRIPTION
RKII-D					
ETCH BOARD REV			F		
DISK CONTROL RKII-D					
NEXT HIGHER ASSY			B-DD-HK11-D		
SEMICONDUCTOR CONVERSION CHART			D/C S M7255-0-1		

DIGITAL EQUIPMENT CORPORATION		PART NO		ITEM NO	
DISK CONTROL		RKII-D			
DEC NO	EIA NO	DEC NO	EIA NO	QTY	SCALE
				2	1/4" x 7"
				7	

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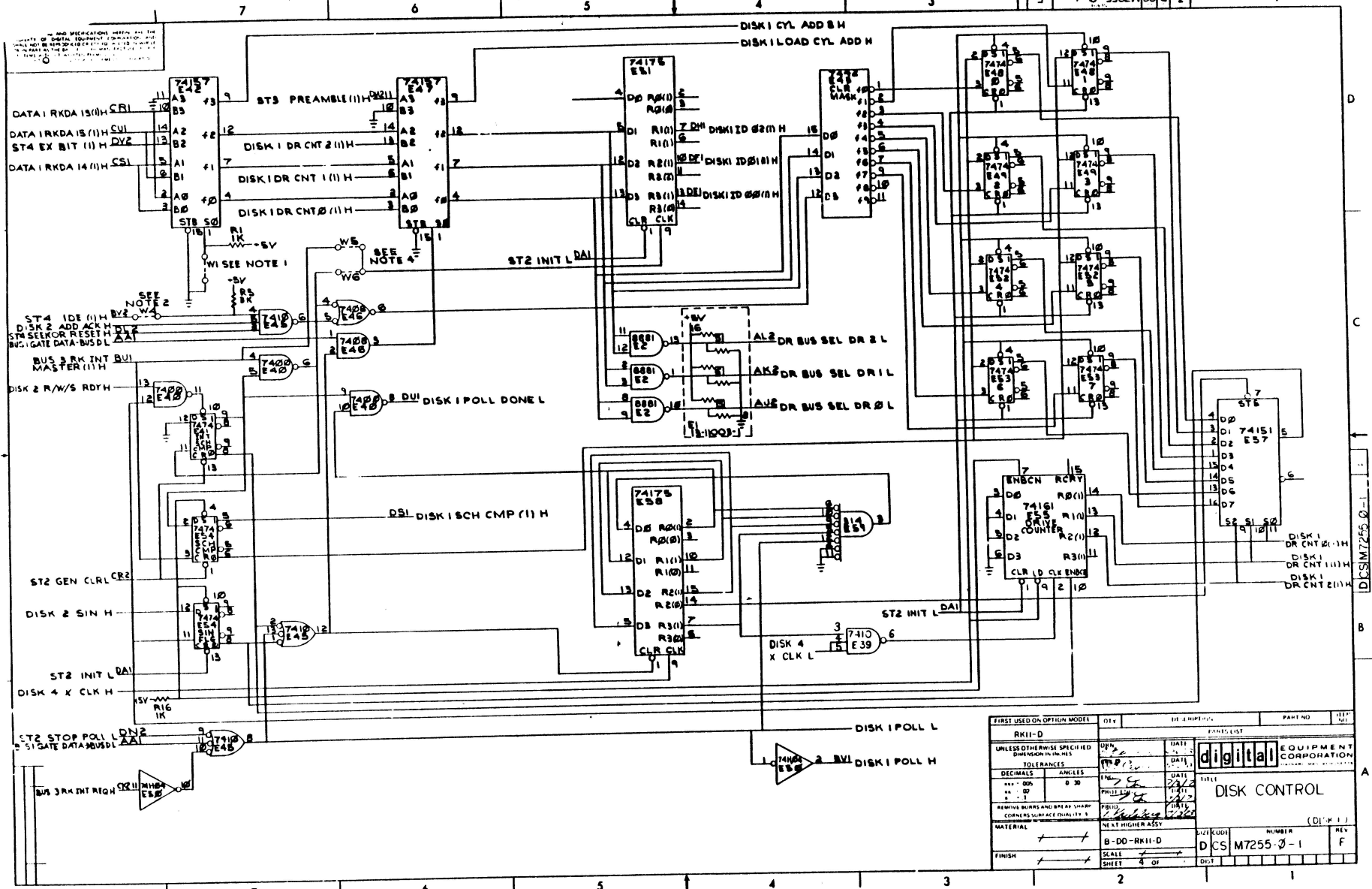
NOTES:

- 1) INSTALL W1 FOR RK05.
- 2) CUT W4 FOR RKII-C COMPATIBILITY (NORMAL OPERATION)
- 3) FOR RKII-D (RK05) CUT JUMPER W3 FOR RKII-C (IS BIT RK05) CUT JUMPER W2.
- 4) FOR NORMAL OPERATION INSTALL W5 (CHANGES 10 BITS ONLY FOR SEARCH COMPLETE INTERRUPT). INSTALL W5 TO CHANGE TO BITS FOR ANY INTERRUPT.
- 5) INSTALL PROPER CRYSTAL IN SPLIT LOSS AS OUTLINED IN TABLE I.

TABLE I				
	DISK	MIN/MAX	KHZ	DEC P/N
RKII-D	RK05	16	1.8880	16-10694-3
RKII-E	RK05	18	1.8990	16-10694-4

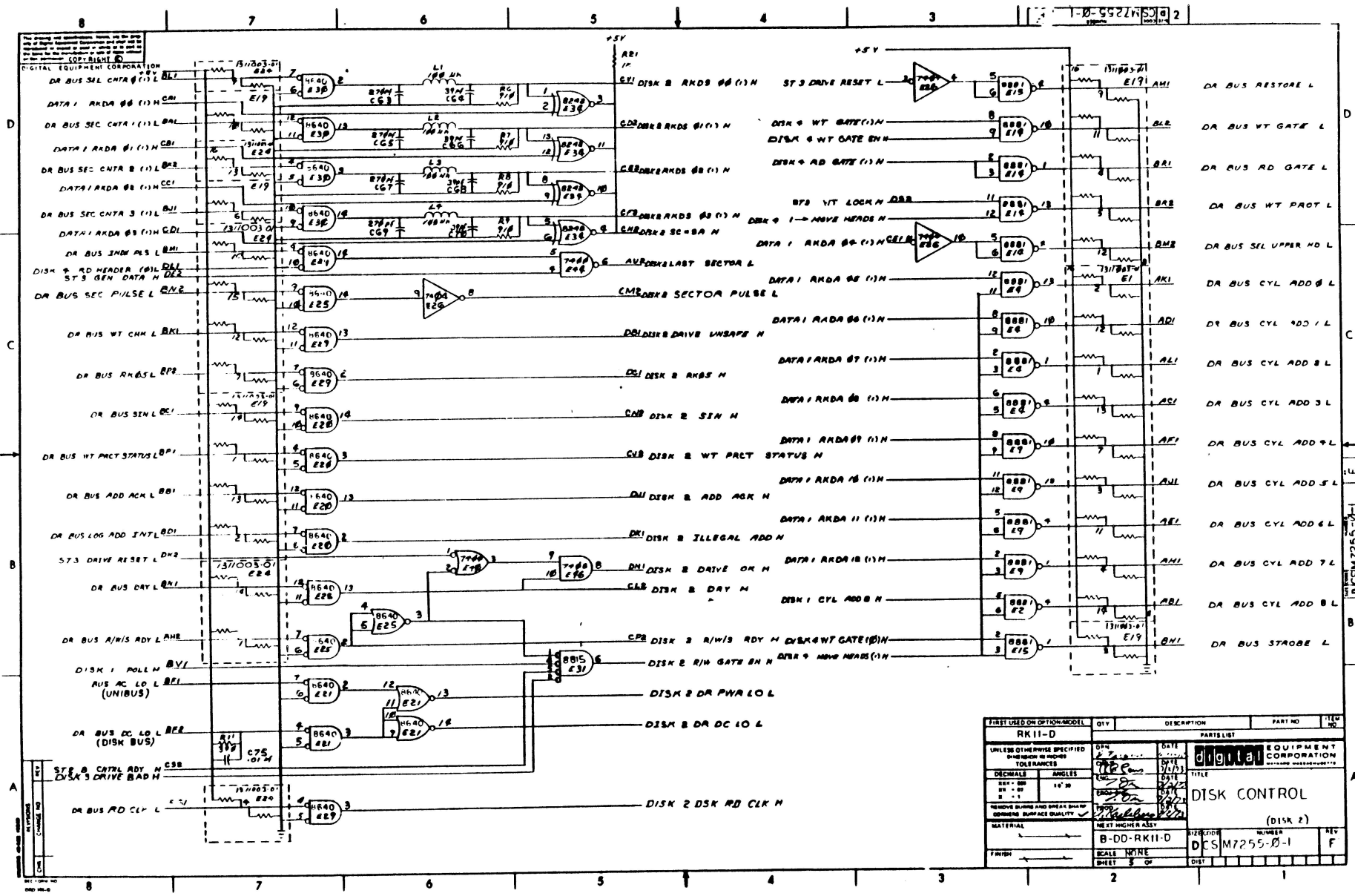
REV
 CHANNEL NO
 DATE

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	REV. NO.
RKII-D				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES				
TOLERANCES		DATE	PARTS LIST	
DECIMALS	ANGLES	DATE	DIGITAL EQUIPMENT CORPORATION	
± .005	± .005	DATE	TITLE	
± .01	± .01	DATE	DISK CONTROL	
± .02	± .02	DATE	RKII-D	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY #	FINISH	DATE	MATERIAL	
	BEST HIGHER ASSY.	DATE	B-DD-RKII D	
	SCALE NONE	DATE	D/C S M7255-0-1	
	SHEET 3 OF	DATE	REV D	



FIRST USED OR OPTION MODEL	DATE	REV	BY	CHKD	APP'D	DATE	REV	BY	CHKD	APP'D	DATE	REV	BY	CHKD	APP'D	DATE	REV	BY	CHKD	APP'D	DATE	REV	
RR11-D																							
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES		TOLERANCES		DECIMALS		ANGLES		FINISH		MATERIAL		FINISH		SCALE		SHEET		OF		DISK CONTROL		REV F	
MATERIAL		B-DD-RK11-D		SCALE		4 OF		DISK CONTROL		REV F		DISK CONTROL		REV F		DISK CONTROL		REV F		DISK CONTROL		REV F	

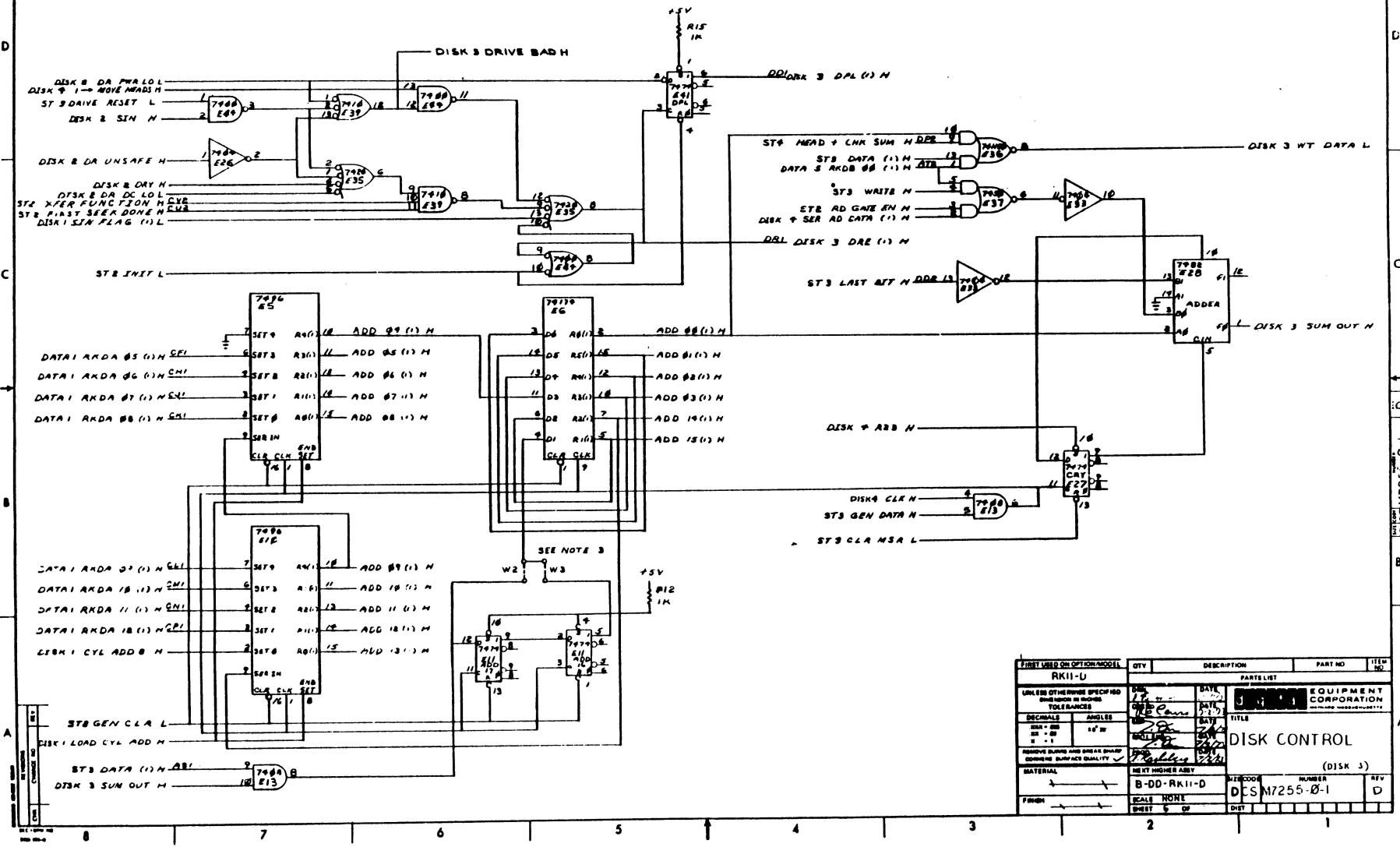
DCS M7255-0-1



FIRST USED ON OPTION MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
RK11-D				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED		DIGITAL EQUIPMENT CORPORATION		
DIMENSIONS IN INCHES		TOLERANCES		
DECIMALS	ANGLES	TITLE		
0.005	10° 30'	DISK CONTROL		
REMOVE BURRS AND BREAK SHARP CORNERS TO FINISH QUALITY		DISK 2		
MATERIAL	NET WEIGHT	SIZE/FORM	NUMBER	REV.
FINISH	B-DD-RK11-D	DCS	M7255-0-1	F
SCALE		SHEET 5 OF		

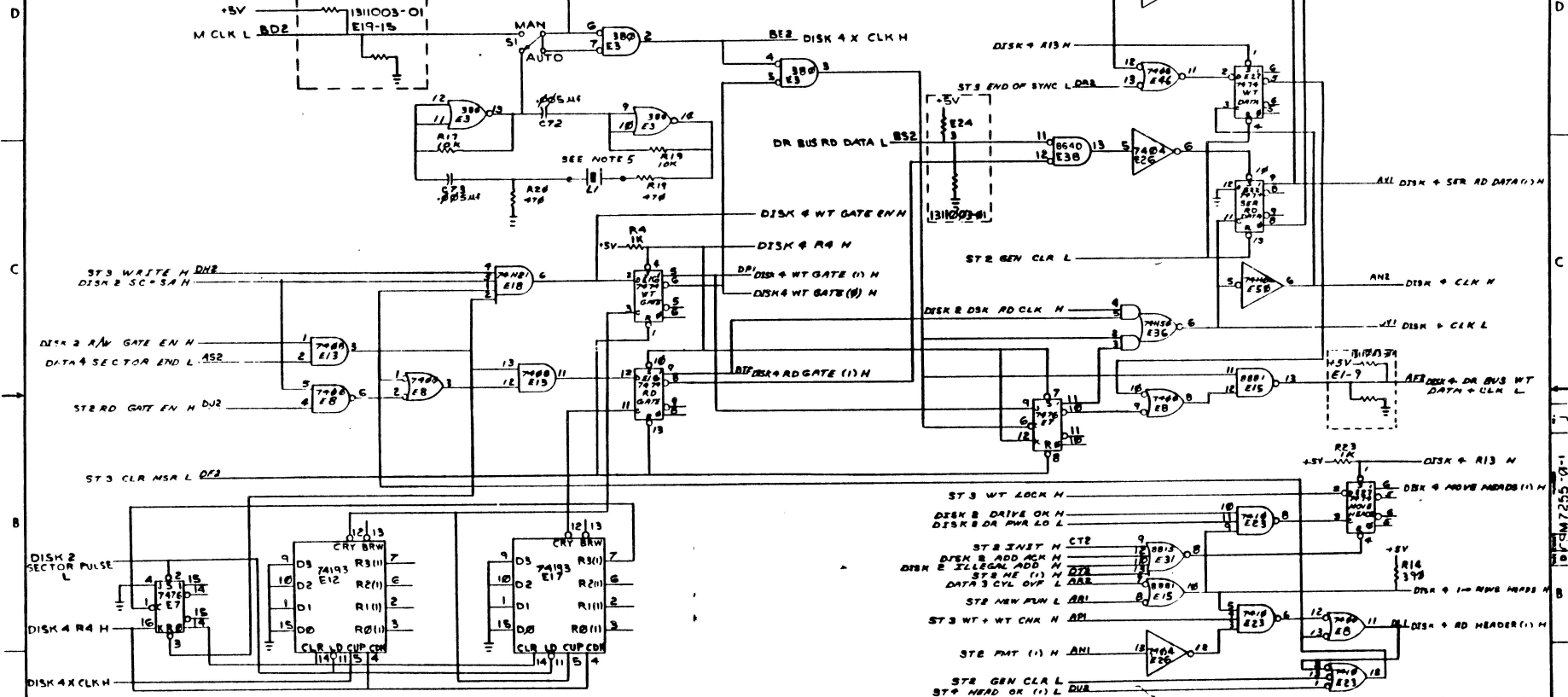
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DIGITAL EQUIPMENT CORPORATION



FIRST USED ON OPTION MODEL		QTY	DESCRIPTION	PART NO.	ITEM NO.
<p>RK11-U</p> <p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES</p> <p>DECIMALS ANGLES</p> <p>DISK + 0.00 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60 0.65 0.70 0.75 0.80 0.85 0.90 0.95 1.00 1.50 2.00 3.00 4.00 5.00 6.00 8.00 10.00</p> <p>REMOVE BURRS AND BREAK SHARP EDGES SURFACE QUALITY</p> <p>MATERIAL</p> <p>FINISH</p>					
<p>DISK 3</p> <p>DISK CONTROL</p> <p>(DISK 3)</p> <p>REV. 10-68 100-204-1</p>					
PARTS LIST					
B-DD-RK11-D		NUMBER			
DES		M7255-0-1			
SCALE NONE		REV			
SHEET 6 OF 10		D			

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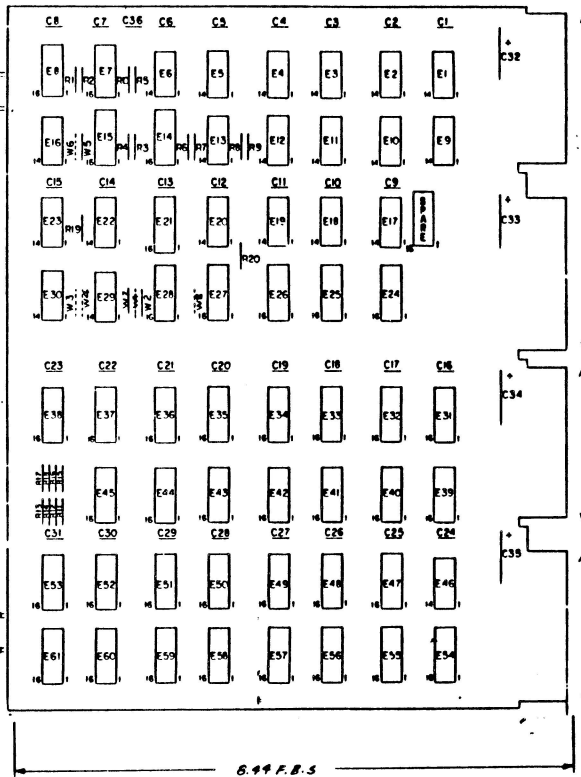
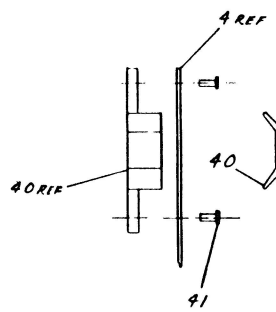
REVISIONS

REV	DATE	BY	DESCRIPTION

FIRST USED ON OPT. MODEL	QTY	DESCRIPTION	PART NO	TEST
RK11-D		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES		DATE	EQUIPMENT CORPORATION	
DECIMALS	FRACTIONS	CHKD	TITLE	
			DISK CONTROL	
REMOVE BURRS AND BREAK SHARP EDGES TO IMPROVE SURFACE QUALITY		DESIGNED BY	(DISK 4)	
MATERIAL	HEAT TREATMENT	DRAWN BY	PROOF	REV
			B-00-RK11-D	J
FINISH	SCALE	SHEET	M7255-0-1	
	NONE	7 OF		

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NOTES:

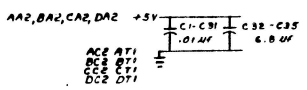


* DEC 6640'S WERE FINISHED IN A S 34. REF. CEM 11
 ANY 3-D FAILURES SHOULD BE RESOLVED BY 254C

PIN NOMENCLATURE
 MODULE ARTI-D

QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO
1	R6	5.6K 1/4 W 5% CC	1301874	41
3	WR, WS, WT	INSULATED JUMPER L-2307	2. 07	42
8	EYELET #58-7 ER-711130N		1000832	43
4		HANDLE, FLIP CHIP MOUNTING	1000832-5	44
4	E52, E53, E60, E61	I.C. DEC 74157	1700653	45
8	E48 - E51, E56 - E57	I.C. DEC 74153	1700937	46
1	E46	I.C. DEC B271	1700980	47
1	E38	DIP RESISTOR PACK DC	1700980	48
5	E33 - E37	I.C. DEC 74120	1700980	49
7	E31, E32, E39, E40, E41, E54, E55	I.C. DEC 74113	1700980	50
1	E30	I.C. DEC 74113	1700980	51
10	E24 - E28, E29 - E32	I.C. DEC B881	1700980	52
2	E22, E27	I.C. DEC 74123	1700980	53
1	E21	I.C. DEC 4427	1700980	54
1	E18	I.C. DEC 7440	1700980	55
1	E17	I.C. DEC 7437	1700980	56
1	E13	I.C. DEC 7412	1700980	57
1	E12	I.C. DEC 7400	1700980	58
4	E10, E16, E19, E20	I.C. DEC 7412	1700980	59
1	E10	I.C. DEC 7412	1700980	60
1	E7	I.C. DEC 74155	1700980	61
1	E6	I.C. DEC 74164	1700980	62
3	E7, E14, E15	I.C. DEC 74123	1700980	63
1	E5	I.C. DEC 74123	1700980	64
2	E3, E6	I.C. DEC 74123	1700980	65
1	E3	I.C. DEC 7402	1700980	66
1	E2	I.C. DEC 74123	1700980	67
1	E1	I.C. DEC 7408	1700980	68
4	R15 - R18	RES. 680Ω 1/4W 5% CC	1301874	69
4	R11 - R14	RES. 330Ω 1/4W 5% CC	1300984	70
1	R10	RES. 20K 1/4W 5% CC	1300984	71
4	R3, R4, R19, R20	RES. 1K 1/4W 5% CC	1300984	72
4	R3 - R5, R7	RES. 5.1K 1/4W 5% CC	1300984	73
1	R2	RES. 370Ω 1/4W 5% CC	1301302	74
1	R1	RES. 100Ω 1/4W 5% CC	1301302	75
1	C36	CAP. 150PF 105V 5% D.M.	1000019	76
4	C32 - C35	CAP. 5.6UF 35V 20% TANT	1000019	77
31	C1 - C31	CAP. 100V 25% TANT	1000019	78
1		ETCHED CIRCUIT BOARD	321178	79
1		MODULE ECO HISTORY	0.000000	80
1		ASSY/DRILLING HOLE LAYOUT	0.000000	81
1		X-Y COORDINATE HOLE LOCATION	0.000000	82

DEC	QTY	REV
DEC 6647	8	16
DEC 7473	11	4
DEC 74170	8	16
DEC 74173	8	16
DEC 74161	8	16
DEC 74157	8	16
DEC 74153	8	16
DEC B271	8	16
DEC 6648	1	8
IC TYPE	QND	4 3V



FIRST USED ON OPTION MODEL: RR11-D

ETCH BOARD REV: D

PARTS LIST

DATE: 10/20/74

DESIGNED BY: [Signature]

PROF'D BY: [Signature]

PROD. BY: [Signature]

MEET HIGHER ASSY: [Signature]

SCALE: 1:1

SHEET 2 OF 2

SEMICONDUCTOR CONVERSION CHART

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

DATE: 10/20/74

REV: E

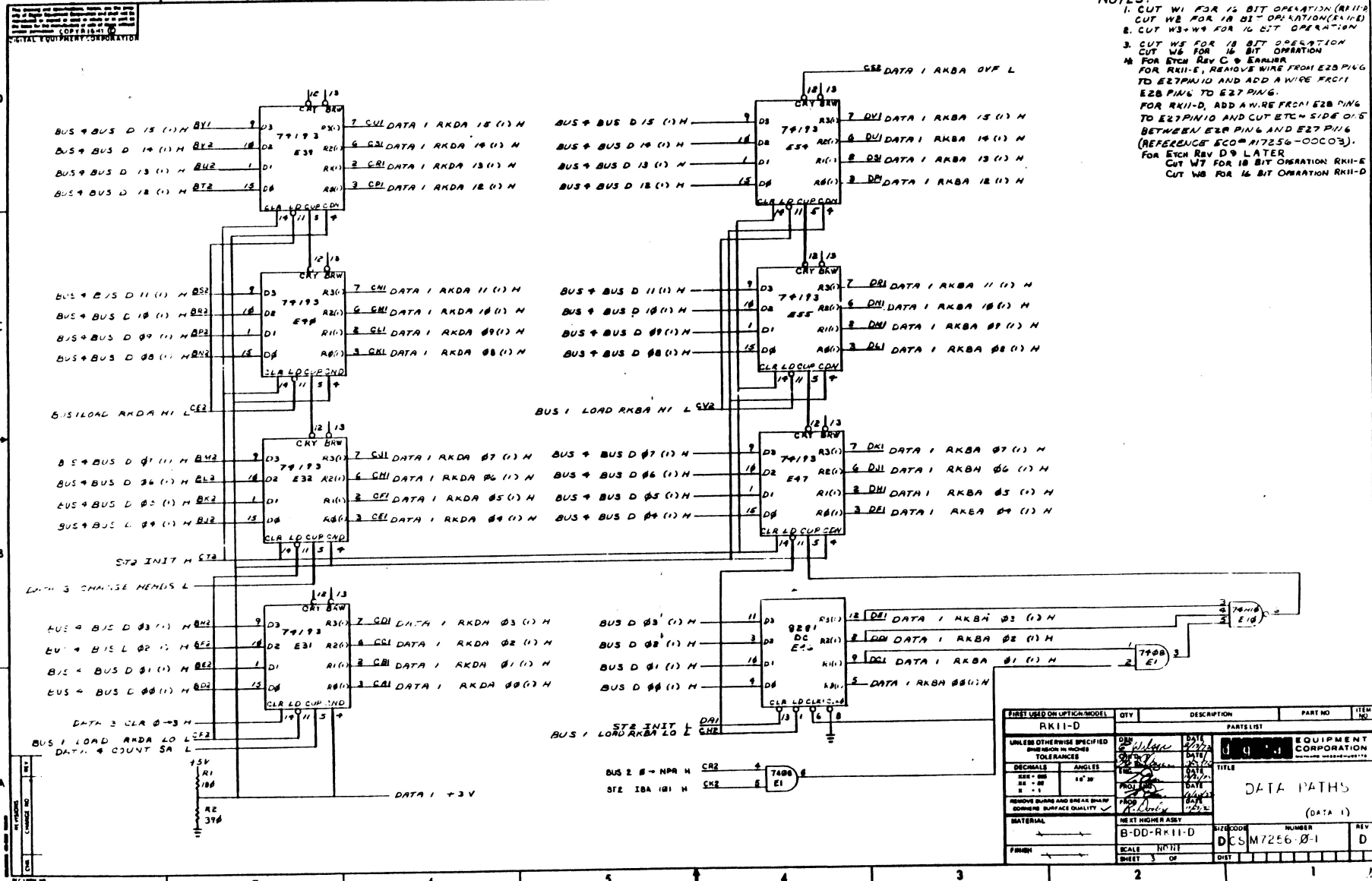
NUMBER: M7256-0-1

REV: E

DATE: 10/20/74

REV: E

- NOTES:**
- CUT W1 FOR 1/2 BIT OPERATION (R11-D)
CUT W2 FOR 1/2 BIT OPERATION (R11-D)
 - CUT W3-W4 FOR 1/2 BIT OPERATION
 - CUT W5 FOR 1/2 BIT OPERATION
CUT W6 FOR 1/2 BIT OPERATION
 - FOR EACH REV C & EARLIER
FOR R11-E, REMOVE WIRE FROM E27 PIN 6
TO E27 PIN 10 AND ADD A WIRE FROM
E27 PIN 6 TO E27 PIN 6.
FOR R11-D, ADD A WIRE FROM E27 PIN 6
TO E27 PIN 10 AND CUT EACH SIDE OF S
BETWEEN E27 PIN 6 AND E27 PIN 6
(REFERENCE ECO #17256-00003).
FOR EACH REV D & LATER
CUT W7 FOR 1/2 BIT OPERATION R11-E
CUT W8 FOR 1/2 BIT OPERATION R11-D



FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO	ITEM NO
AK11-D				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES				
DECIMALS	ANGLES	TITLE		
SEE - SEE	16° 30'	DATE		
1/16"	1/16"	DATE		
1/32"	1/32"	DATE		
REMOVE BURRS AND BREAK SHARP EDGES TO IMPROVE SURFACE QUALITY				
MATERIAL				
NEXT HIGHER ASST				
B-DD-AK11-D				
SCALE 1/16" = 1"				
SHEET 3 OF 3				
SIZE CODE		NUMBER		REV
DCS M7256-0-1		01		D

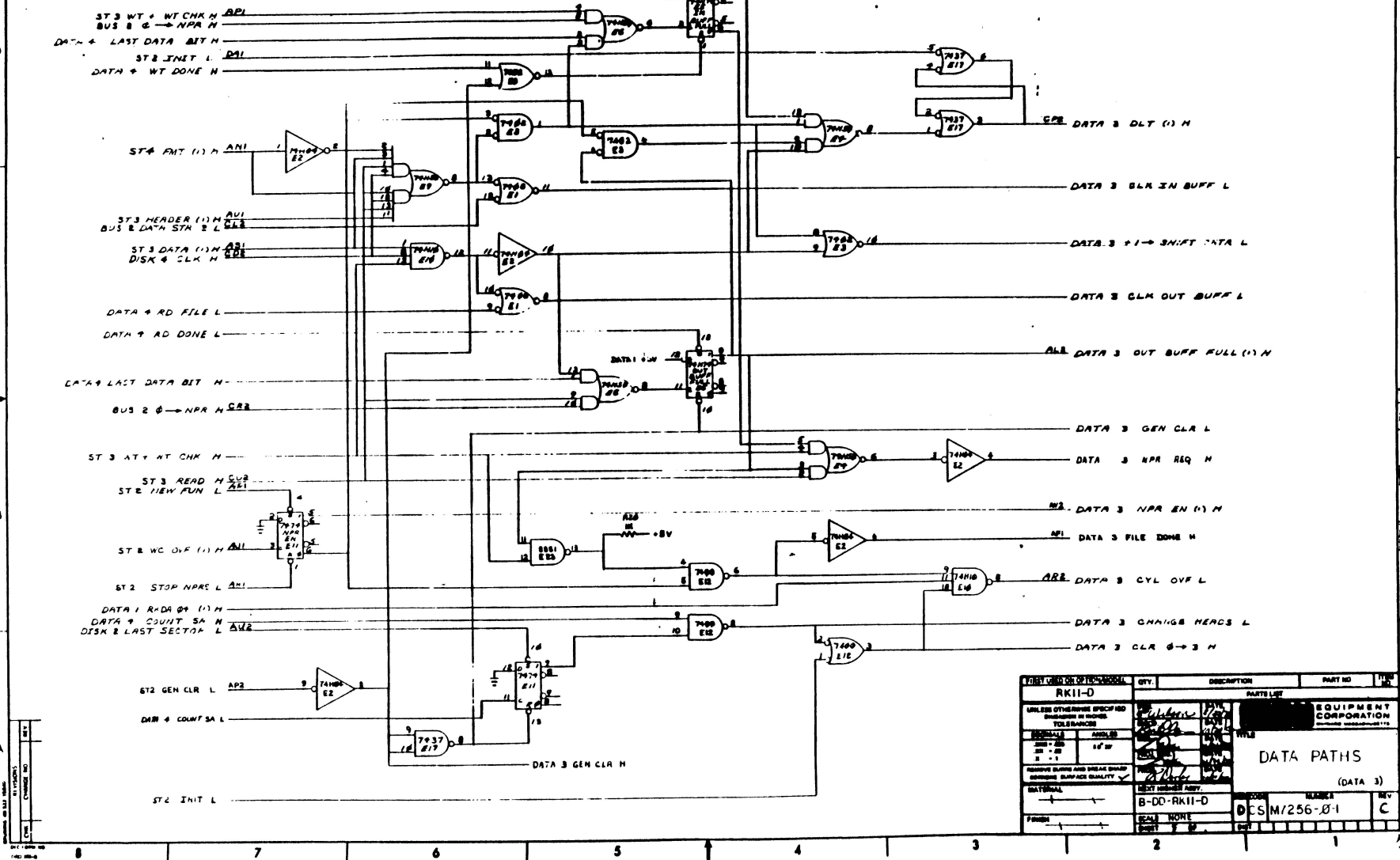
DATA PATHS
(DATA 1)

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1-0-9524MSJ12-0-1

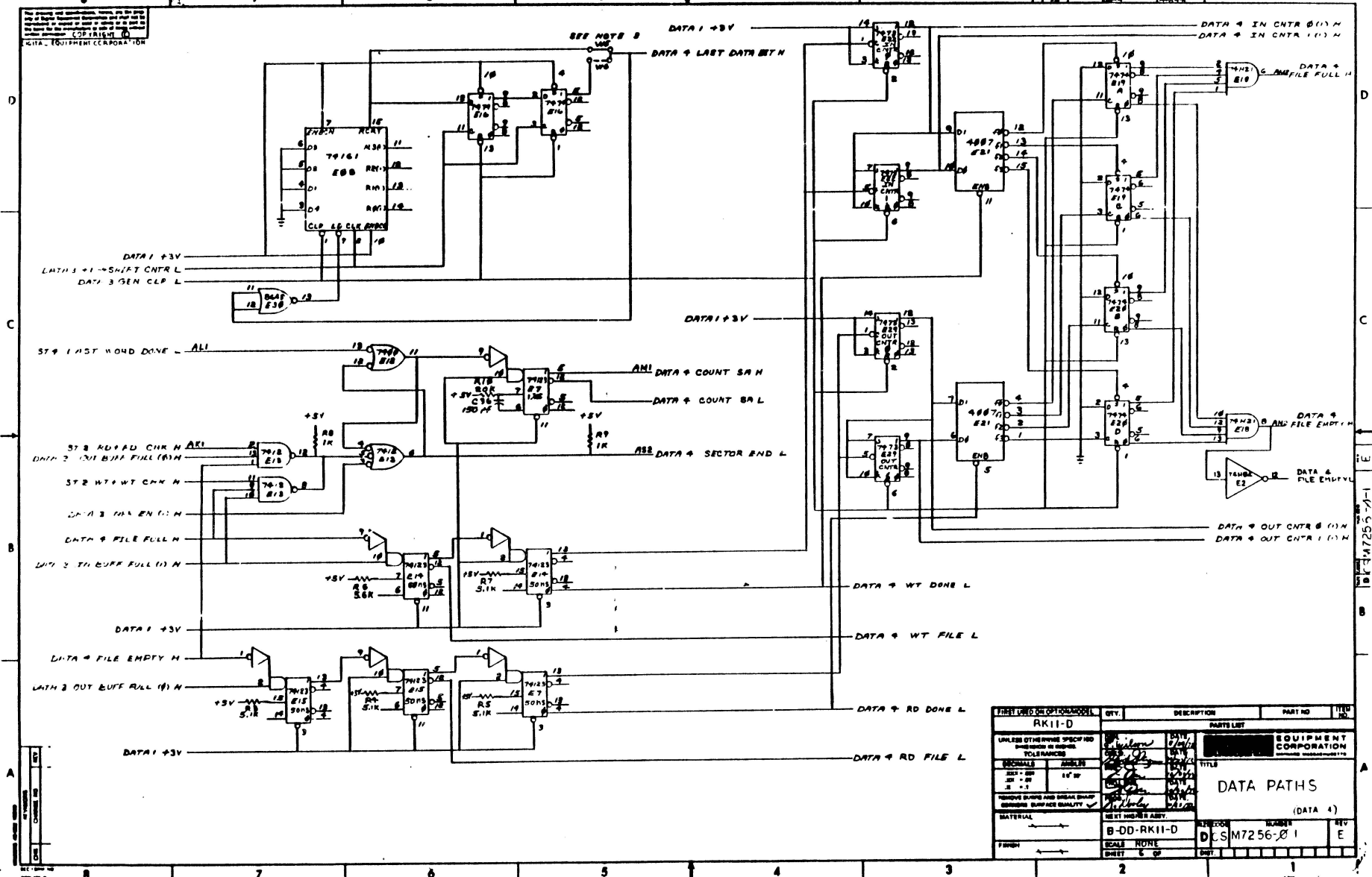
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DATA PATHS (DATA 3)



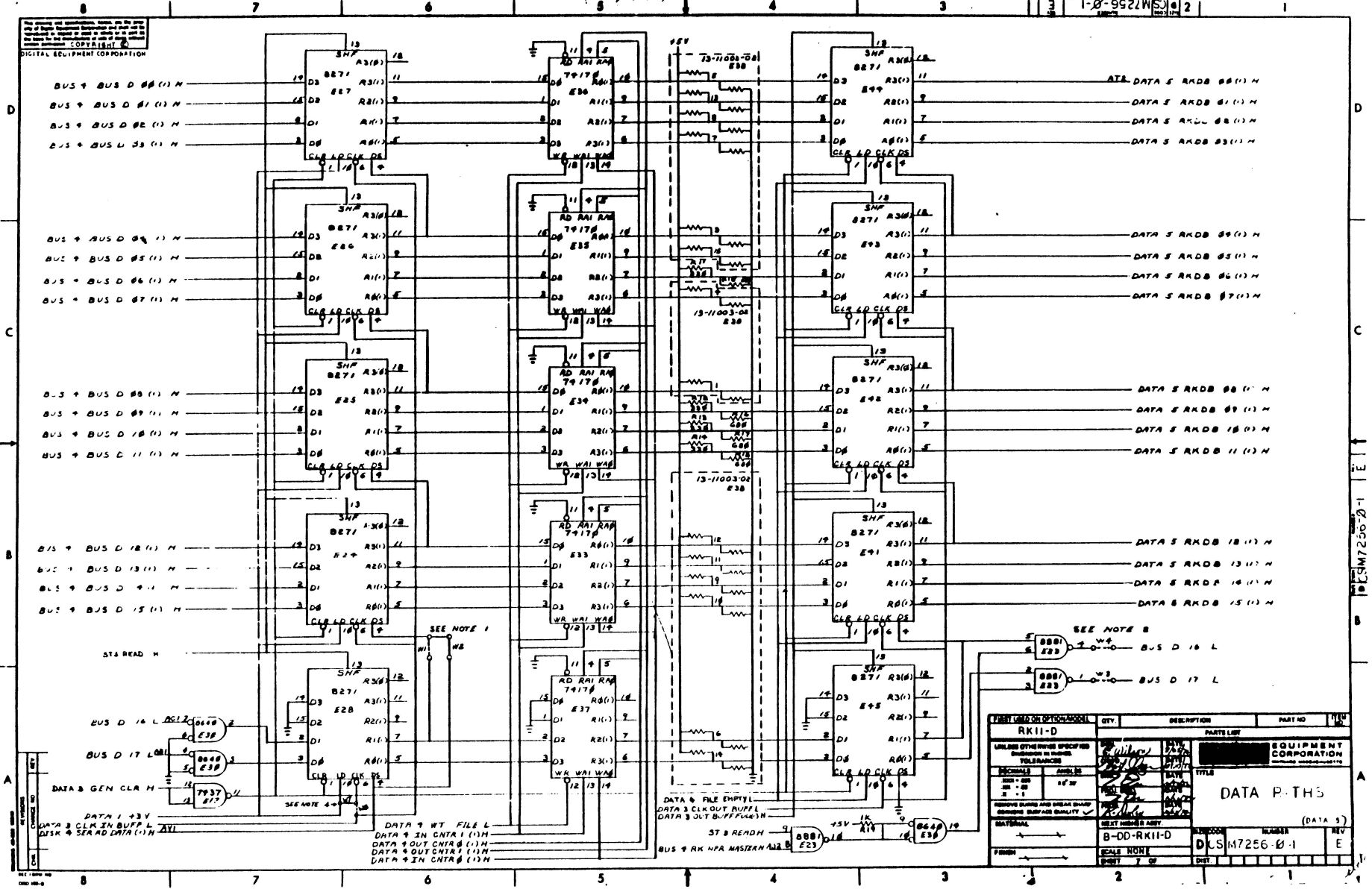
PARTS LIST		QTY.	DESCRIPTION	PART NO.	REV.
RKII-D					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.					
TOLERANCES					
FINISH	AS BUILT				
FORM	SCALE	NONE			
DRAWN BY			CHECKED BY		
DESIGNED BY			TESTED BY		
MATERIAL			BEST METHOD ASST.		
PART NO.			B-DD-RKII-D		
REV.			M/256-01		
DATE			C		

DATA PATHS
 EQUIPMENT CORPORATION



PART NO.	QTY.	DESCRIPTION	PART NO.	UNIT NO.
RKII-D				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES				
TOLERANCES				
FINISH	200 ± .005	200 ± .005	EQUIPMENT CORPORATION	
DRILLING	.0015	.0015	TITLE	
PLATING	100 ± .005	100 ± .005	DATA PATHS	
REMOVE BURRS AND BREAK SHARP	100 ± .005	100 ± .005	(DATA 4)	
GRINDING SURFACE QUALITY	100 ± .005	100 ± .005	B-DD-RKII-D	
MATERIAL	100 ± .005	100 ± .005	SCALE NONE	
NEUTRAL HARDENING	100 ± .005	100 ± .005	D.E.S.M7256-01	
FINISH	100 ± .005	100 ± .005	SHEET 6 OF 1	

Part of a larger drawing. This drawing shows the connections between the equipment shown here and the equipment shown on the other drawings in this set. It is not to be used for manufacturing purposes. COPYRIGHT © 1964 DIGITAL EQUIPMENT CORPORATION



PART LIST OR OPTIONAL MODEL		QTY.	DESCRIPTION	PART NO.	REV.
RKII-D					
UNLESS OTHERWISE SPECIFIED TOLERANCES					
FRACTIONS	DECIMALS				
1/16 - 3/16	.0150 - .0300				
1/32 - 1/8	.0075 - .1250				
1/16 - 1/4	.0625 - .2500				
REMOVE BURRS AND BREAK SHARP EDGES SURFACE FINISH					
MATERIAL					
NEXT ITEM IS A		REV. NO.		NUMBER	
B-DD-RKII-D		D		CSM7256-0-1	
FINISH		SCALE		REV.	
7 OF		NON		E	
PART		DWT.		REV.	

CSM7256-0-1

PAGE REVISION CONTROL SHEET

SH NO.	PAGE REVISIONS																								REMARKS			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X		Y	Z	
1	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P												(BUS 1) (BUS 2) (BUS 3) (BUS 4)
2	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P												
3	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B												
4	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A												
5	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B												
6	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A												

DATE	ENG.	REV.	ECO NO.
12-15-72		B	0001
2-6-73		B	0002
5-23-73		B	0003
11-13-73		B	0004
1/7/74		B	0005
2/17/74		B	66A
8-6-74		B	0007
10/24/74		B	0008
10/29/74		C	0009
9/16/75		C	0010
12/1/75		C	0011
1/26/76		C	0012

DATE	ENG.	REV.	ECO NO.
1/26/76		C	0012

DATE	ENG.	REV.	ECO NO.
1/26/76		C	0012

DATE	ENG.	REV.	ECO NO.
1/26/76		C	0012

DATE	ENG.	REV.	ECO NO.
1/26/76		C	0012

digital
EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
BUS CONTROL
(RK11-D)

FIRST USED ON OPTION/MODEL
RK11-D

SIZE CODE	NUMBER	REV.
B CS	M7257-0-1	P

DATE 12/1/75
DATE 12/1/75
DATE 9/16/75
DATE 12/1/75
DATE 12/1/75

ENG. [Signature]
PROJ. ENG. [Signature]
PROD. [Signature]

NEXT HIGHER ASSY.
B-DD-RK11-D
SCALE [Signature]
SHEET 1 OF 6

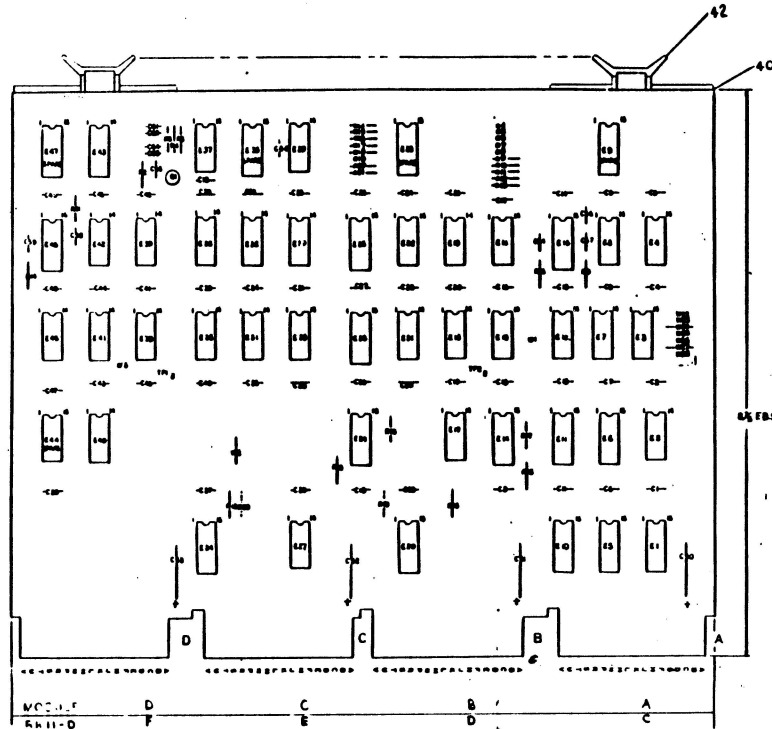
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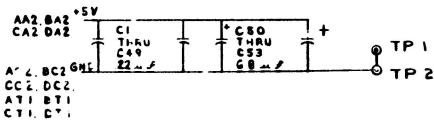
NOTES: W2'S AND R20 ARE OPTIONAL COMPONENTS
DO NOT INSERT

W1, W3 THRU W8, W19, W22, W23, W25, W26
W28, ARE OPTIONAL JUMPERS DO NOT INSERT.

IF 8.541'S ARE NOT AVAILABLE, USE
4.53A'S, PART NO. 191117-00.



PCB NOMENCLATURE
RK11-D



IC	DEC	REV	QTY	LOC
IC	DEC	0-40	1	B
IC	DEC	74H103	11	4
IC	DEC	314	1	A
IC	DEC	744	1	14
IC	DEC	74123	8	17
IC	DEC	74151	8	18
IC TYPE		GND	+5V	
GND AND +5V ARE USUALLY FOR T AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE.				
IC PIN LOCATIONS				

REF	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF			XY-COORDINATE HOLE LOC. ASSY/DRILLING HOLE LAYOUT	KC 47157-04	1
REF			MODULE ECO HISTORY	B-MH-M7257-06	2
REF			ETCHED CIRCUIT BOARD	5009990	3
1	2	CS8, CS9	CAP10 MMF 100V 5%	1000006	4
1	1	CS4	CAP 270 MMF 100V 5%	1000022	5
2	2	CS7, C 60	CAP 330 MMF 100V 5%	1000023	6
1	1	CS6	CAP 1200 MMF 100V 5%	1002424	7
49	1	C1 THRU C49	CAP 22 MF 50V 20%	1010274	8
4	4	CS0 THRU CS3	CAP 6.8 MFD 35V 10% TANT	1005306	9
4	4	C61, C62, C64, C65	CAP 6.8 MMF 100V 5%	1000005	10
1	1	CS5	CAP 27 MMF 100V 5%	1001739	11
1	1	Q1	TRANS DEC 3009B	1503100	12
3	3	R2, R3, R4	RES 330 1/4 W 5%	1300195	13
2	2	R10, R13	RES 390 1/4 W 5%	1300309	14
1	1	R5	RES 287 1/8 W 1%	1303129	15
4	4	R12, R15, R17, R18	RES 180 1/4 W 5%	1301322	16
1	1	R16	RES 56K 1/4 W 5%	1301874	17
1	1	R9	RES 47K 1/4 W 5%	1302177	18
2	2	R11, R14	RES 51K 1/8 W 1%	1304855	19
					20
					21
2	2	E1C, E30	RES. 1K RESISTOR PACK	1300005-01	22
1	1	E19	IC 74H20	1905635	23
2	2	E22, E38	IC 7402	1909004	24
3	3	E18, E31, E37	IC 74H00	1909056	25
4	4	E40, E41, E42, E35	IC 74H74	1909667	26
1	1	E2	IC 314	1909704	27
4	4	E3, E4, E6, E27	IC 8088	1909705	28
3	3	E7, E12, E15	IC 8242	1909712	29
1	1	E21	IC 74H04	1909931	30
1	1	E26	IC 74151	1909936	31
2	2	E24, E25	IC 7442	1910046	32
1	1	E28	IC 7437	1910091	33
3	3	E36, E39, E45	IC 7408	1910155	34
3	3	E29, E32, E43	IC 74H03	1910409	35
2	2	E13, E46	IC 74123	1910436	36
1	1	E17	IC 8641	1911452	37
3	3	E15, E16, E19, E21, E23, E24, E25, E26, E27, E28, E29, E30, E31, E32, E33, E34, E35, E36, E37, E38, E39, E40, E41, E42, E43, E44, E45, E46, E47, E48, E49, E50, E51, E52, E53, E54, E55, E56, E57, E58, E59, E60, E61, E62, E63, E64, E65, E66, E67, E68, E69, E70, E71, E72, E73, E74, E75, E76, E77, E78, E79, E80, E81, E82, E83, E84, E85, E86, E87, E88, E89, E90, E91, E92, E93, E94, E95, E96, E97, E98, E99, E100	IC 8641	1911579	38
1R	1R	W2, W9 THRU W18, W20, W21, W24, W27	INSULATED JUMPER	9009185	39
8	8		EYELET	9006732	40
2	2	TP1, TP2	SOLDER TERMINALS	9007791	41
4	4		HANDLE (FLIP CHIP) MAGENTA	9008337-06	42

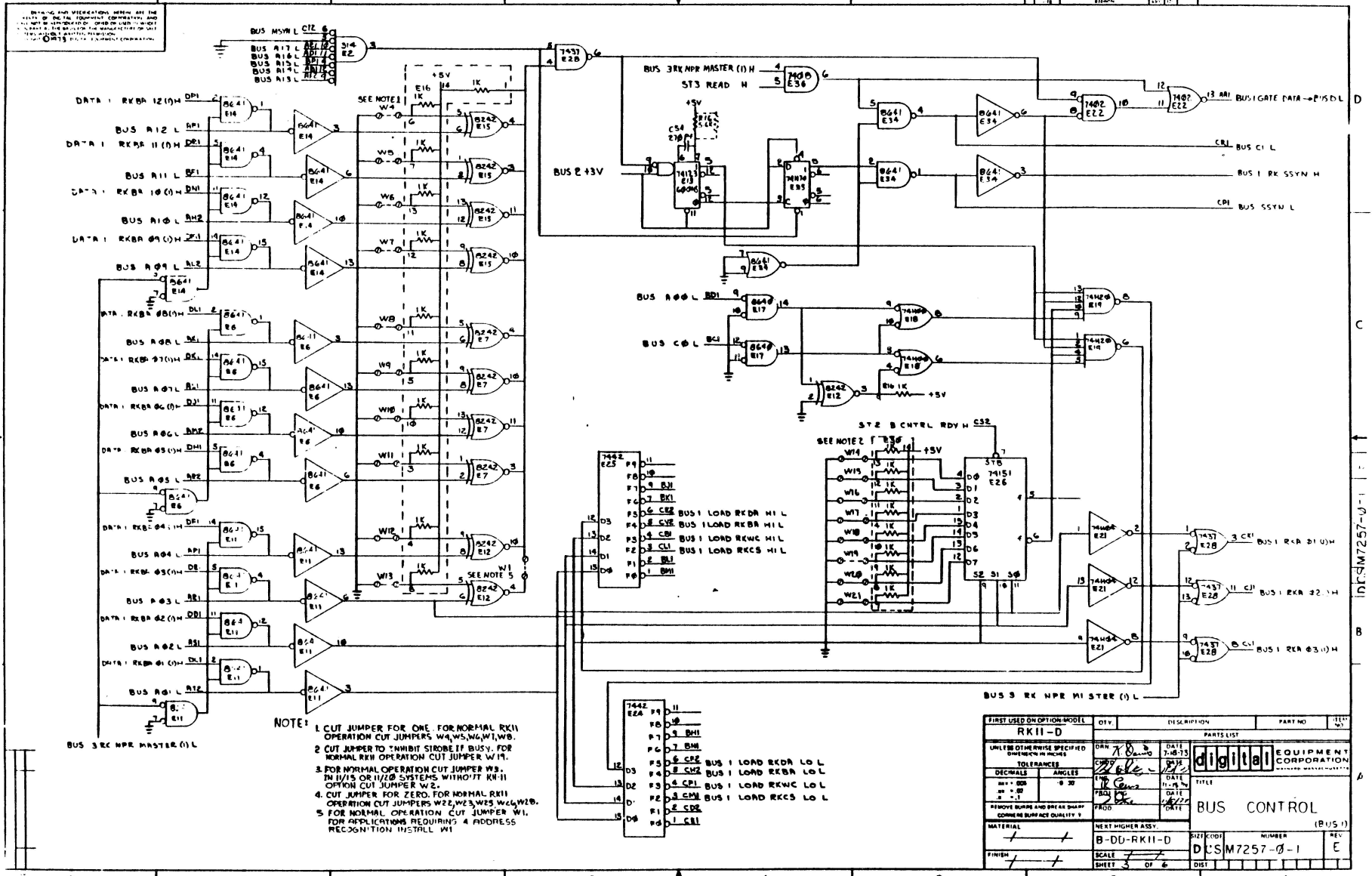
REV	DATE	DESCRIPTION
1	10/24/74	INITIAL RELEASE
2	11/17/74	REVISED FOR PRODUCTION
3	12/12/74	REVISED FOR PRODUCTION
4	12/12/74	REVISED FOR PRODUCTION
5	12/12/74	REVISED FOR PRODUCTION
6	12/12/74	REVISED FOR PRODUCTION
7	12/12/74	REVISED FOR PRODUCTION
8	12/12/74	REVISED FOR PRODUCTION
9	12/12/74	REVISED FOR PRODUCTION
10	12/12/74	REVISED FOR PRODUCTION
11	12/12/74	REVISED FOR PRODUCTION
12	12/12/74	REVISED FOR PRODUCTION
13	12/12/74	REVISED FOR PRODUCTION
14	12/12/74	REVISED FOR PRODUCTION
15	12/12/74	REVISED FOR PRODUCTION
16	12/12/74	REVISED FOR PRODUCTION
17	12/12/74	REVISED FOR PRODUCTION
18	12/12/74	REVISED FOR PRODUCTION
19	12/12/74	REVISED FOR PRODUCTION
20	12/12/74	REVISED FOR PRODUCTION
21	12/12/74	REVISED FOR PRODUCTION
22	12/12/74	REVISED FOR PRODUCTION
23	12/12/74	REVISED FOR PRODUCTION
24	12/12/74	REVISED FOR PRODUCTION
25	12/12/74	REVISED FOR PRODUCTION
26	12/12/74	REVISED FOR PRODUCTION
27	12/12/74	REVISED FOR PRODUCTION
28	12/12/74	REVISED FOR PRODUCTION
29	12/12/74	REVISED FOR PRODUCTION
30	12/12/74	REVISED FOR PRODUCTION
31	12/12/74	REVISED FOR PRODUCTION
32	12/12/74	REVISED FOR PRODUCTION
33	12/12/74	REVISED FOR PRODUCTION
34	12/12/74	REVISED FOR PRODUCTION
35	12/12/74	REVISED FOR PRODUCTION
36	12/12/74	REVISED FOR PRODUCTION
37	12/12/74	REVISED FOR PRODUCTION
38	12/12/74	REVISED FOR PRODUCTION
39	12/12/74	REVISED FOR PRODUCTION
40	12/12/74	REVISED FOR PRODUCTION
41	12/12/74	REVISED FOR PRODUCTION
42	12/12/74	REVISED FOR PRODUCTION

digital EQUIPMENT CORPORATION

TITLE: **BUS CONTROL RK11-D**

SIZE CODE: **DCS** NUMBER: **M7257-0-1** REV: **M**

SCALE: **NONE** SHEET: **2** OF **6**

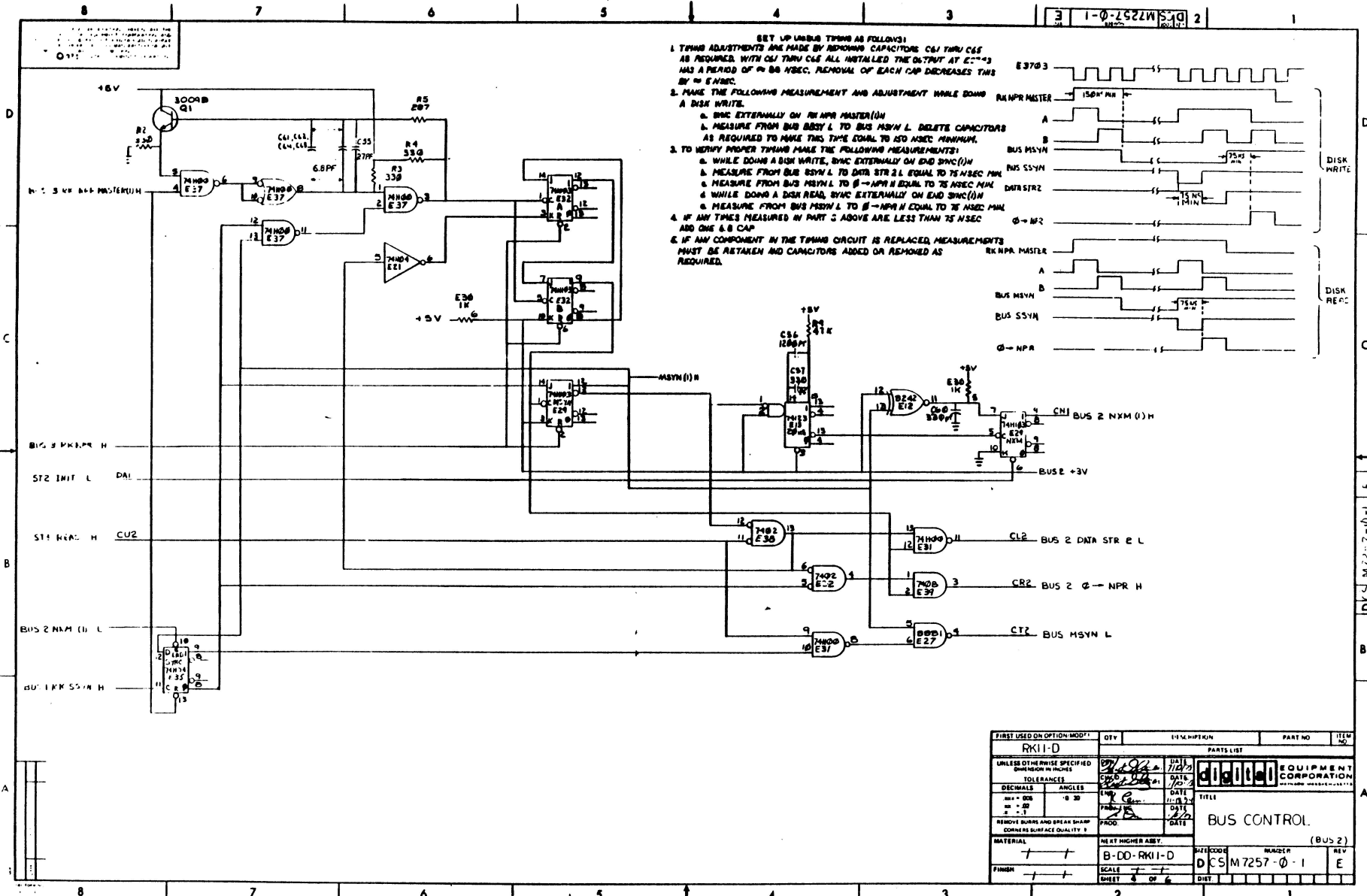


WARNING: FOR VARIATIONS, REFER TO THE LIST OF DIGITAL EQUIPMENT CORPORATION. THE LIST OF DIGITAL EQUIPMENT CORPORATION IS AVAILABLE FROM THE BUREAU OF SUPPLIES, 4600 RIFLEMAN DRIVE, FORT BELLEVILLE, ILLINOIS 62239.

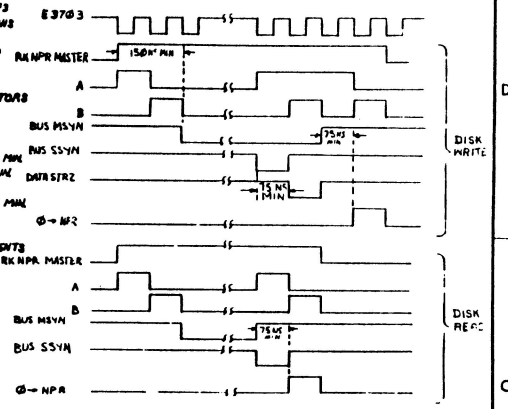
NOTE 1: CUT JUMPER FOR ONE FOR NORMAL RKN1 OPERATION CUT JUMPERS W4, W5, W6, W7, W8.
 2: CUT JUMPER TO INHIBIT SIROBET BUSY FOR NORMAL RKN OPERATION CUT JUMPER W1.
 3: FOR NORMAL OPERATION CUT JUMPER W3, IN H/5 OR I/10 SYSTEMS WITHOUT RKN-11 OPTION CUT JUMPER W2.
 4: CUT JUMPER FOR ZERO FOR NORMAL RKN1 OPERATION CUT JUMPERS W2, W3, W5, W6, W8.
 5: FOR NORMAL OPERATION CUT JUMPER W1 FOR APPLICATIONS REQUIRING A ADDRESS RECOGNITION INSTALL W1

7442 E25 P9 11
 P8 10
 P7 9 BH
 P6 7 BM
 P5 6 C2E BUS 1 LOAD RKA LO L
 P4 5 C2E BUS 1 LOAD RKA HI L
 P3 4 C1 BUS 1 LOAD RKC LO L
 P2 3 C1 BUS 1 LOAD RKC HI L
 P1 2 BH
 P0 1 BH

FIRST USED OR OPTION MODEL	QTY	DESCRIPTION	PART NO	REV
RK 11-D				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES				
TOLERANCES	DRN	DATE	PARTS LIST	
DECIMALS	ANGLES	7-28-75	digital EQUIPMENT CORPORATION	
± .005	± .30	DATE	TITLE	
± .01		DATE	BUS CONTROL (BUS 1)	
± .02		DATE	REV	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY 9	PROD	DATE	DSM7257-0-1	
MATERIAL	NEXT HIGHER ASSY	SCALE	SHEET 3 OF 6	
FINISH	B-DU-RK11-D	SCALE	DIST	

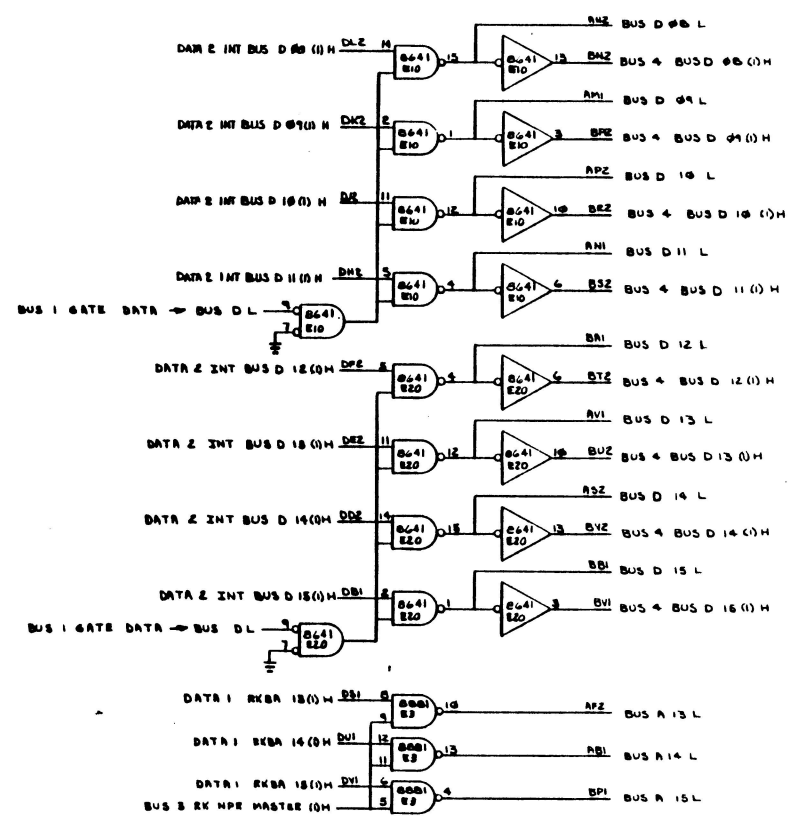
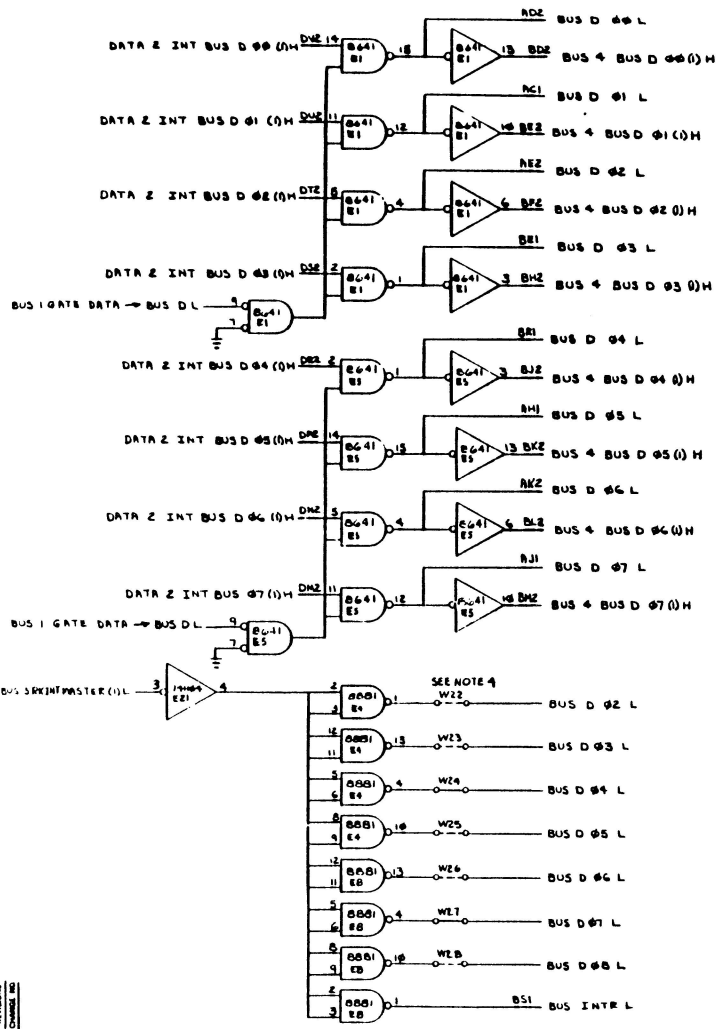


SET UP LAMBDA TUNING AS FOLLOWS:
 1. TIMING ADJUSTMENTS ARE MADE BY REMOVING CAPACITORS C61 THRU C65 AS REQUIRED. WITH C61 THRU C65 ALL INSTALLED THE OUTPUT AT E37-03 HAS A PERIOD OF 0.80 USEC. REMOVAL OF EACH CAP DECREASES TIME BY 0.5 USEC.
 2. MAKE THE FOLLOWING MEASUREMENT AND ADJUSTMENT WHILE DOING A DISK WRITE.
 a. SYNC EXTERNALLY ON RKNPR MASTER (0) H
 b. MEASURE FROM BUS BS2Y L TO BUS MSYN L. DELETE CAPACITORS AS REQUIRED TO MAKE THIS TIME EQUAL TO 450 NSEC MINIMUM.
 3. TO VERIFY MASTER TIMING MAKE THE FOLLOWING MEASUREMENTS:
 a. WHILE DOING A DISK WRITE, SYNC EXTERNALLY ON END SYNC (0) H
 b. MEASURE FROM BUS SSYN L TO DATA STR 2 L EQUAL TO 75 NSEC MIN
 c. MEASURE FROM BUS MSYN L TO Q-NPR H EQUAL TO 75 NSEC MIN
 d. WHILE DOING A DISK READ, SYNC EXTERNALLY ON END SYNC (0) H
 e. MEASURE FROM BUS MSYN L TO Q-NPR H EQUAL TO 75 NSEC MIN
 4. IF ANY TIMES MEASURED IN PART 3 ABOVE ARE LESS THAN 75 NSEC ADD ONE 6.8 CAP
 5. IF ANY COMPONENT IN THE TIMING CIRCUIT IS REPLACED MEASUREMENTS MUST BE RETAKEN AND CAPACITORS ADDED OR REMOVED AS REQUIRED.



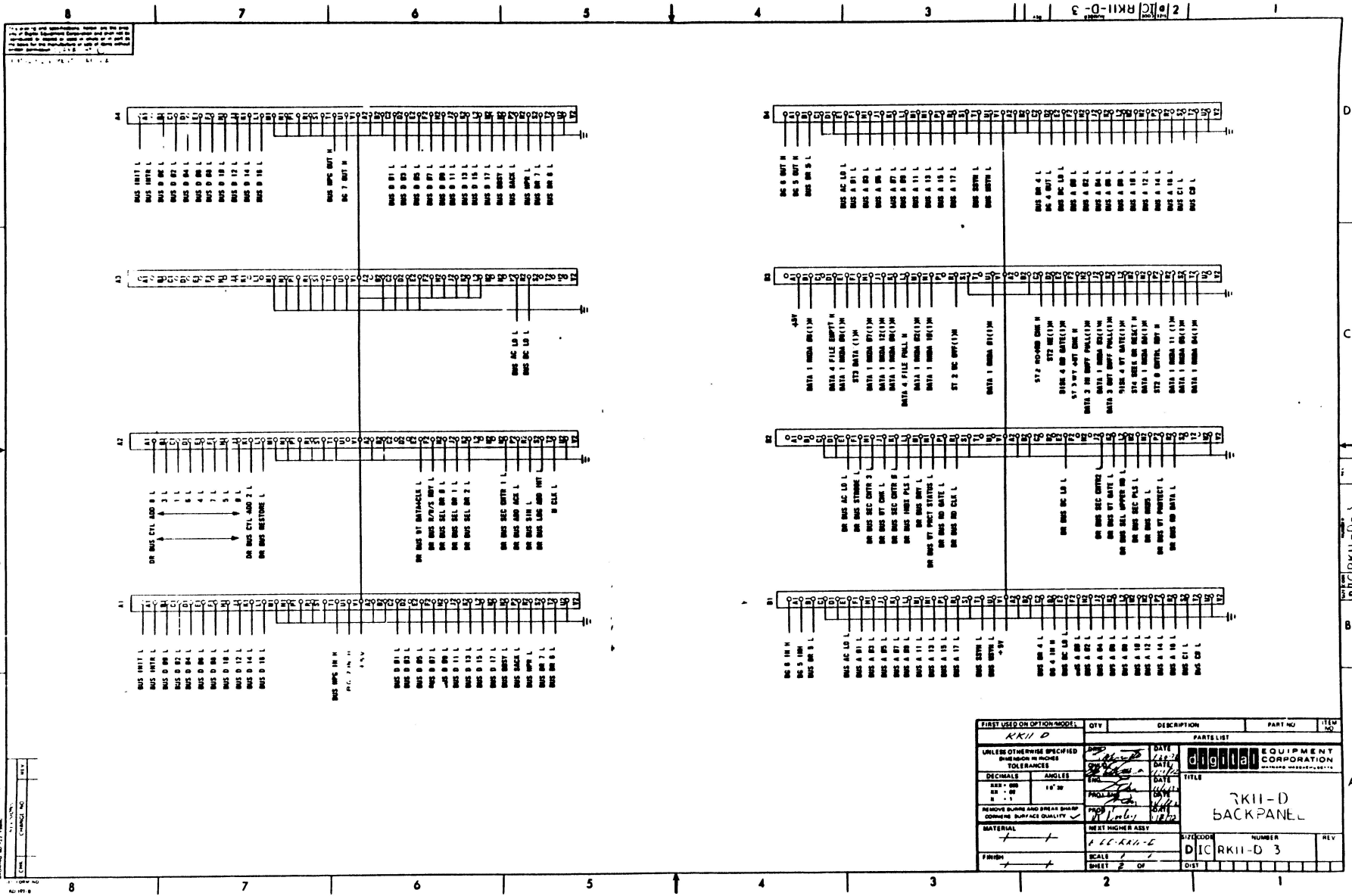
FIRST USED ON OPTION MOD#1		QTY	ITEM NUMBER	PART NO	ITEM NO
RKII-D					
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES					
TOLERANCES					
DECIMALS	ANGLES	EQUIPMENT CORPORATION			
±.005	±0.30				
±.01	±0.005	TITLE BUS CONTROL (BUS 2)			
±.02	±0.01				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY B					
MATERIAL		NEXT HIGHER ASSEMBLY		DWG CODE	NUMBER
FINISH		B-DD-RKII-D		DCSM7257-0-1	REV E
		SCALE		SHEET	REV
				6 OF 6	

1. The drawing shall conform to the drawing standards of the Department of Defense, and shall be prepared in accordance with the drawing standards of the Department of Defense, and shall be prepared in accordance with the drawing standards of the Department of Defense.



QUANTITY	DESCRIPTION	PART NO.	ITEM NO.
1	RK11-D		
EQUIPMENT CORPORATION			
BUS CONTROL			
B-DD RK11-D-0			
DKS M7257-0-1			
REV D			

1-0-7522 W52 2

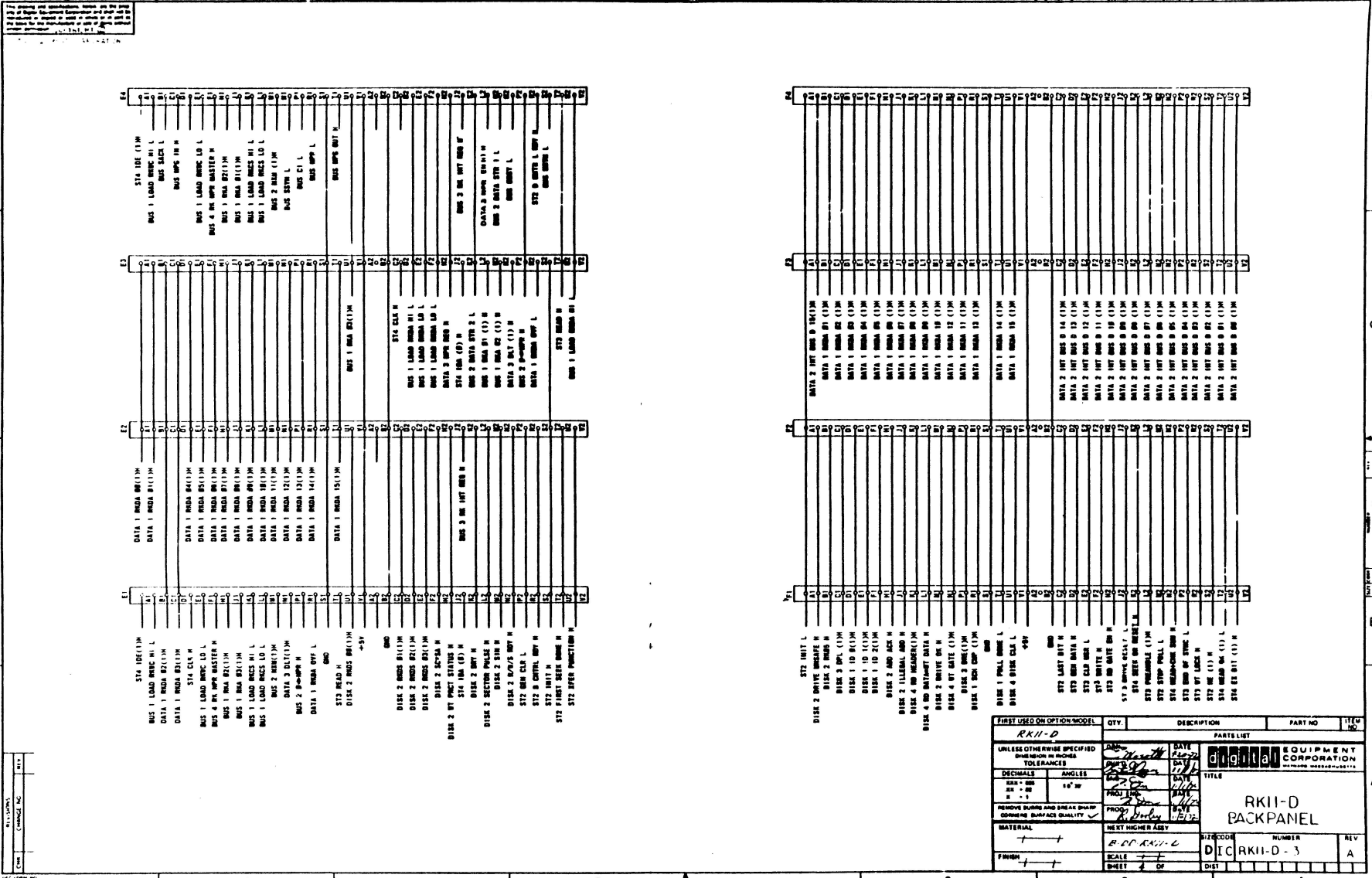


1. All dimensions are in inches unless otherwise specified.
 2. All dimensions are to be taken from the datum points indicated.
 3. All dimensions are to be taken from the datum points indicated.
 4. All dimensions are to be taken from the datum points indicated.

DATE: 11/12/54
 DRAWN: [Signature]
 CHECKED: [Signature]
 APPROVED: [Signature]

FIRST USED ON OPTION MODEL:	QTY	DESCRIPTION	PART NO.	ITEM NO.
RKII-D				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES		DATE: 11/12/54	PARTS LIST	
DECIMALS	ANGLES	DATE: 11/12/54	 DECCA EQUIPMENT CORPORATION	
± .005	± .005	DATE: 11/12/54		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE: 11/12/54	RKII-D BACKPANEL	
MATERIAL		DATE: 11/12/54		
FINISH		DATE: 11/12/54	SIZE: 10.000 NUMBER: D I C RKII-D 3 SHEET: 2 OF 2	

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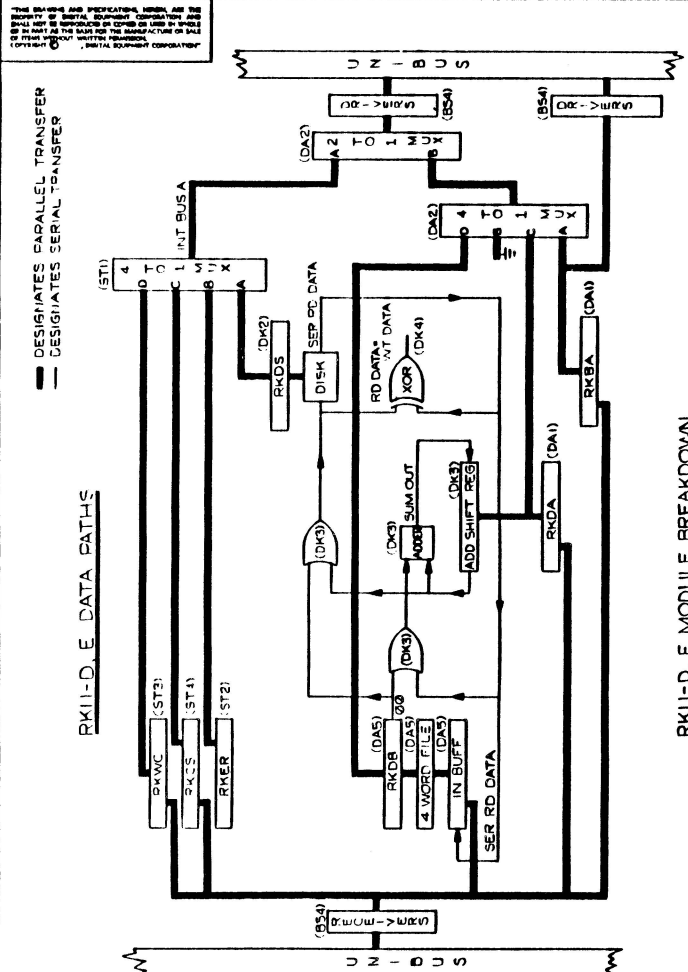
FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RKII-D				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES				
DECIMALS	ANGLES	DATE	EQUIPMENT CORPORATION	
FRAC. 1/16	16° 30'	DATE	CORPORATION	
REMOVE BURRS AND BREAK SHARP EDGES TO SURFACE QUALITY				
MATERIAL		TITLE		
+ +		RKII-D BACK PANEL		
FINISH		SIZE CODE	NUMBER	REV
+ +		DI	RKII-D - 3	A
SHEET 2 OF		DIST		

REVISIONS
 1. CHANGE
 2. CHANGE
 3. CHANGE

REV	
CHG	
DATE	
BY	
DESCRIPTION	

RK11-D, E DATA PATHS

— DESIGNATES PARALLEL TRANSFER
 - - - DESIGNATES SERIAL TRANSFER



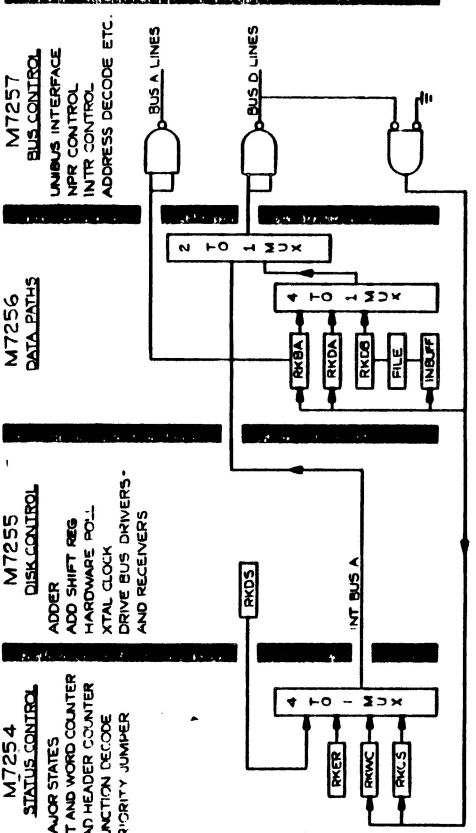
RK11-D, E MODULE BREAKDOWN

M7254
STATUS CONTROL
 MAJOR STATES
 BIT AND WORD COUNTER
 BAD HEADER COUNTER
 FUNCTION DECODE
 PRIORITY JUMPER

M7255
DISK CONTROL
 ADDER
 ADD SHIFT REG
 HARDWARE POLL
 XTAL CLOCK
 DRIVE BUS DRIVERS
 AND RECEIVERS

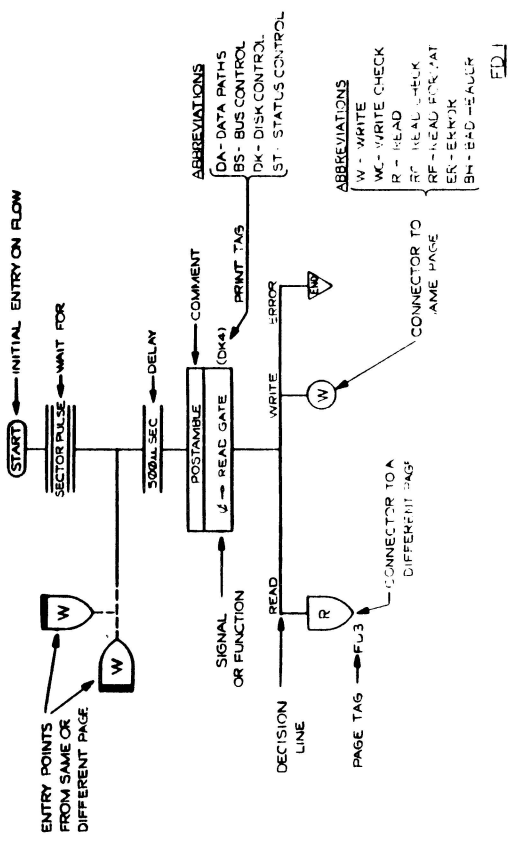
M7256
DATA PATHS

M7257
BUS CONTROL
 UNIBUS INTERFACE
 INTR CONTROL
 ADDRESS DECODE ETC.



PART LIST		QTY.	DESCRIPTION	PART NO.	REV.
RK11-D					
DIMENSIONAL TOLERANCE		DRG.	DATE		
DRAWING AND BILL OF MATERIALS		DATE	DATE		
DESIGN AND CHECKED		DATE	DATE		
DESIGN BY		DATE	DATE		
DESIGN CHECKED		DATE	DATE		
DESIGN APPROVED		DATE	DATE		
MATERIAL		FINISH	SCALE	DIST.	NUMBER
B-DD-RK11-D		1 OF 5	D	FD	RK11-D-9
SHEET		1 OF 5			

FLOW DRAWING EXAMPLE

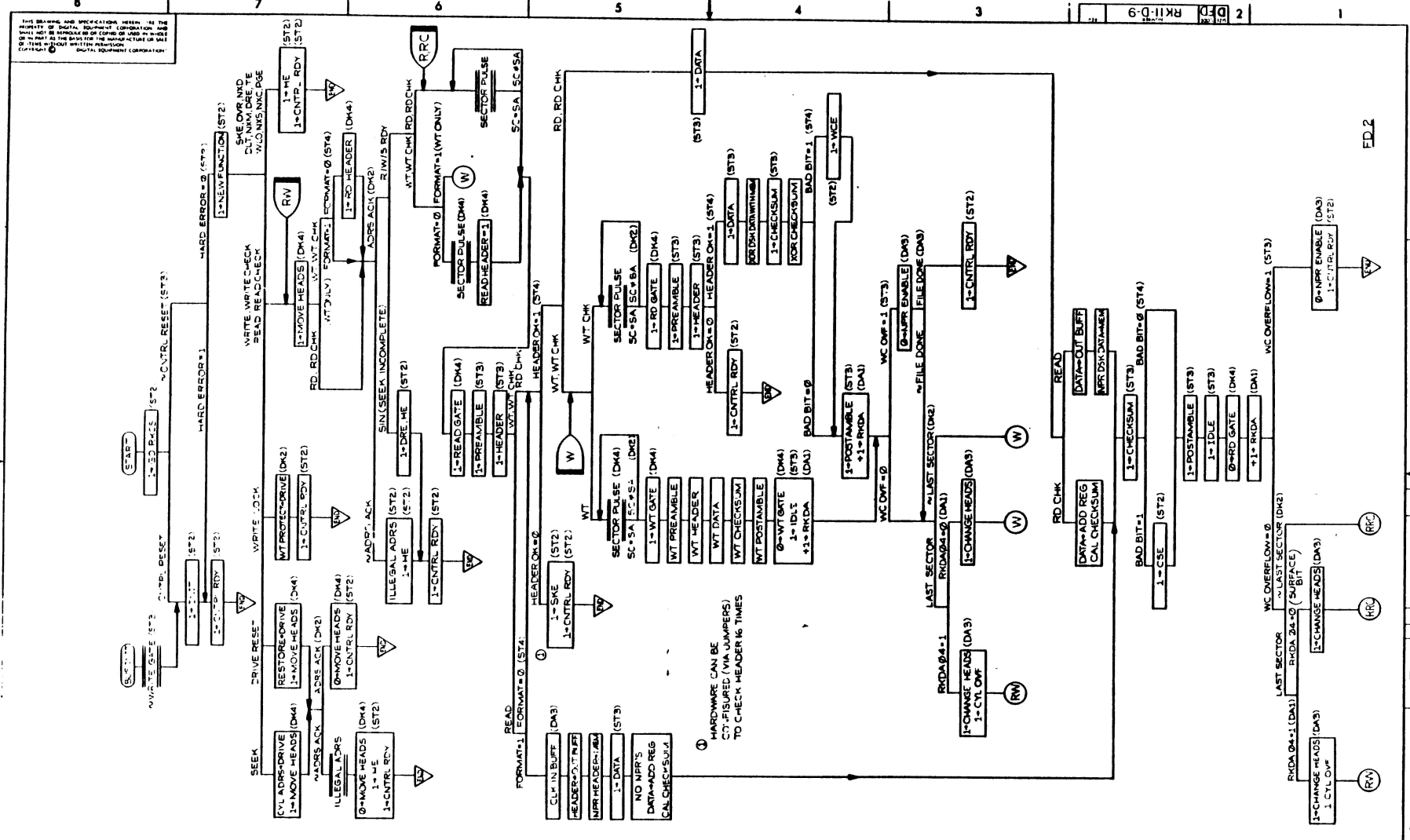


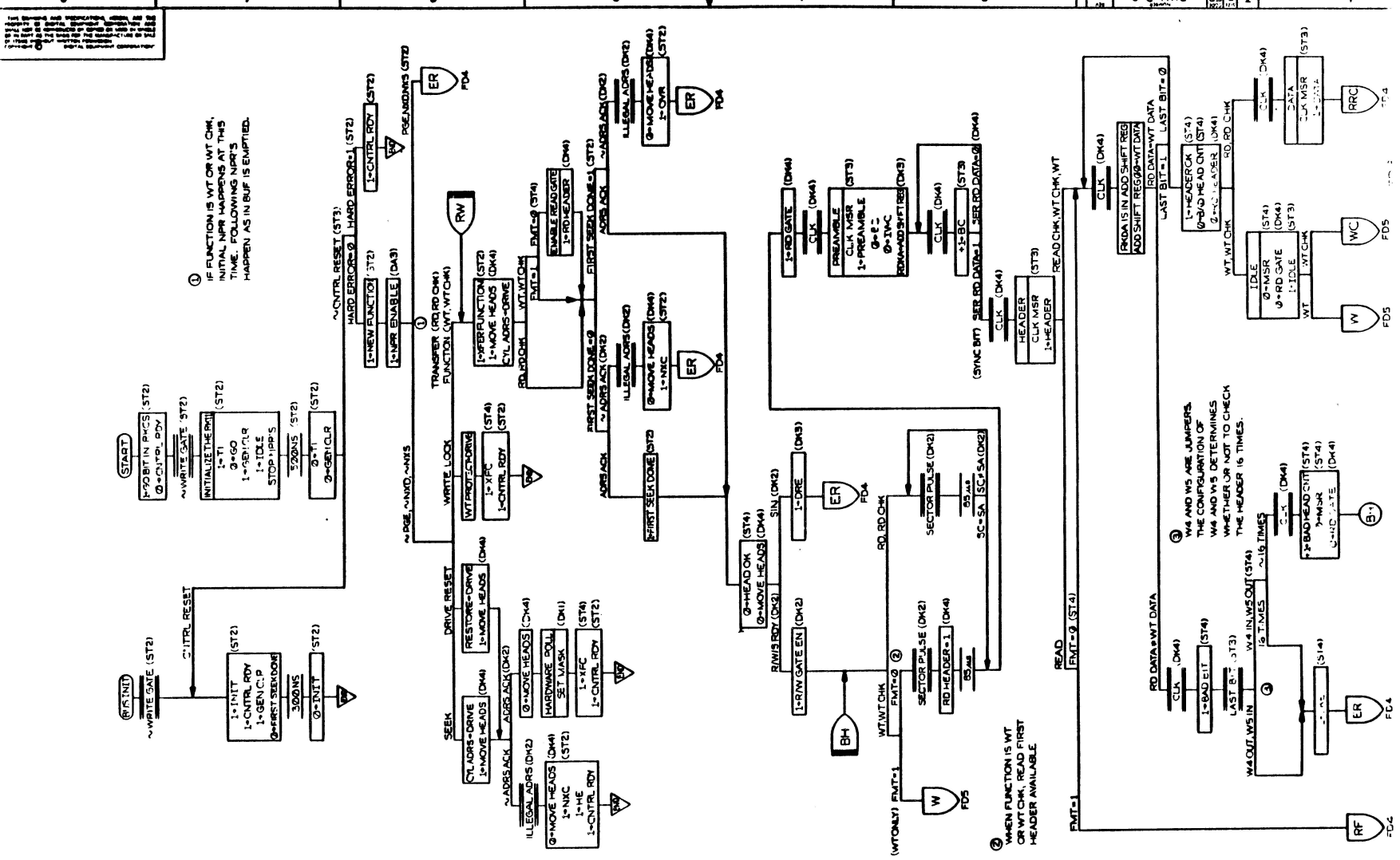
RK11-D, E FUNCTION FLOWS

SCALE	D	FD	NUMBER	RK11-D-9
SHEET	1	OF 5	DIST.	

REV	NO	DATE	DESCRIPTION
1	1		INITIAL ISSUE

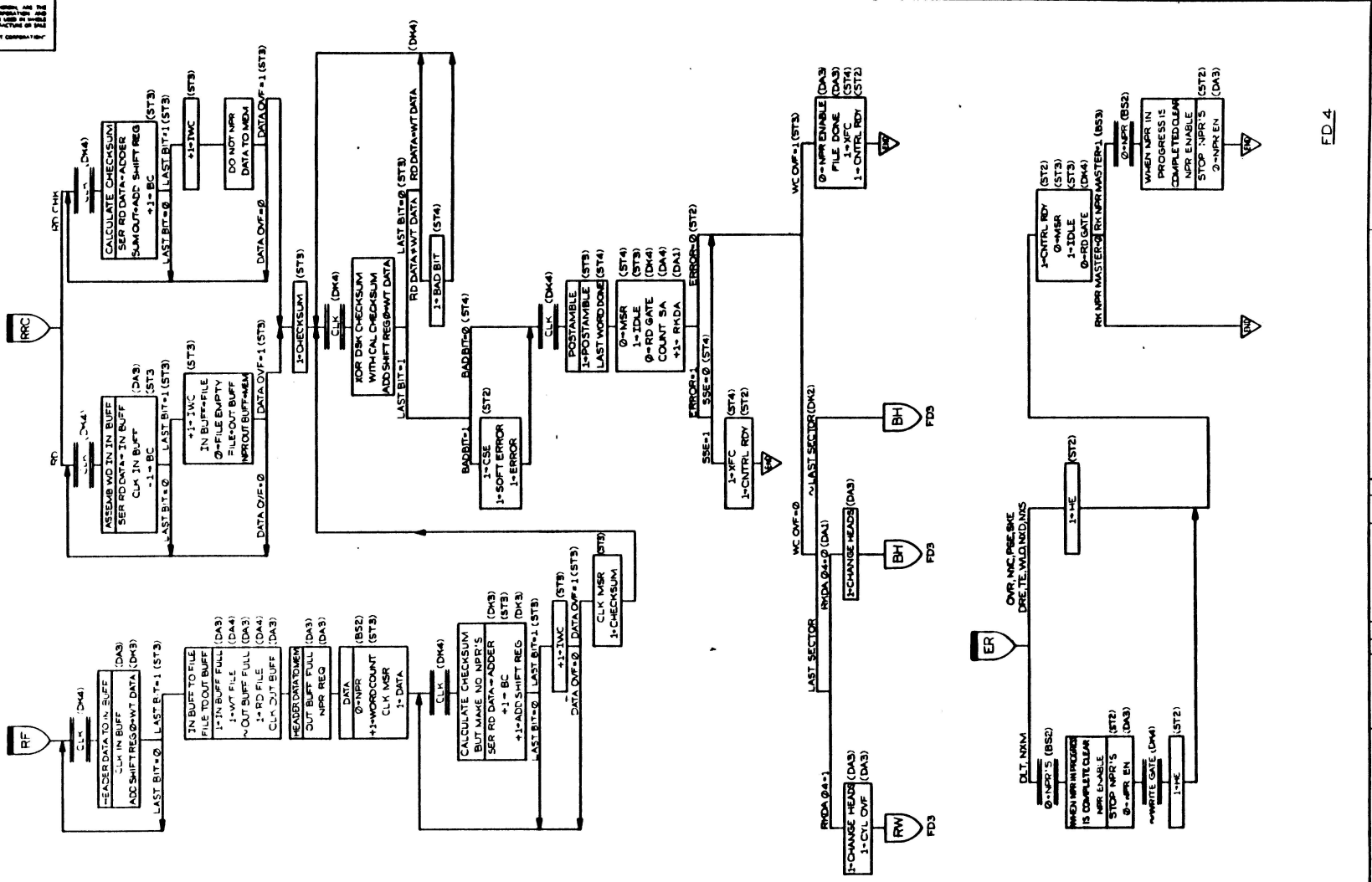
FUNCTION FLOW OF A W-Z



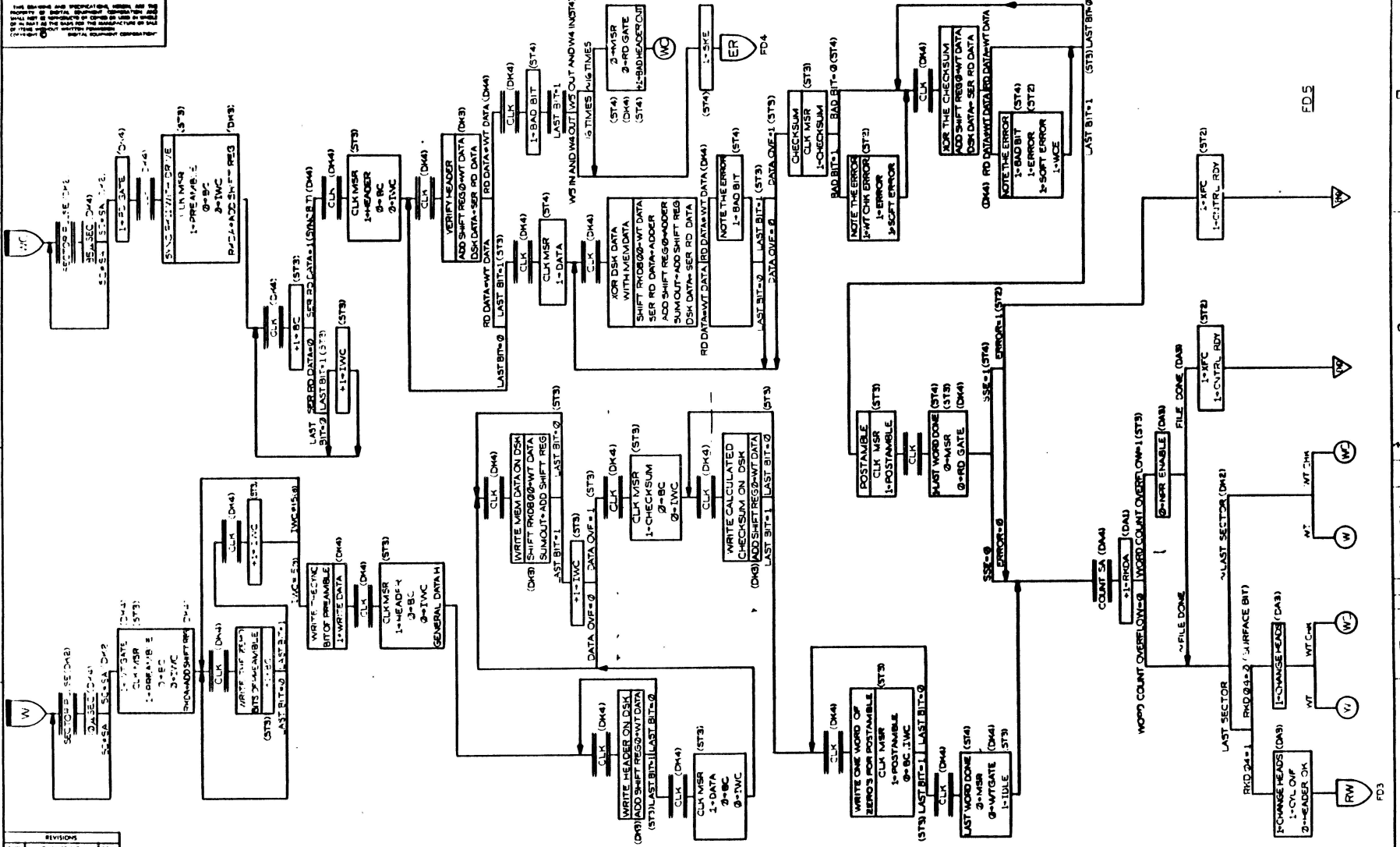


REV	CHG NO	REV

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TITLE	RK11-D-9	SIZE CODE	D/FD	NUMBER	REV
SCALE	4 OF 5	DIST		RK11-D-9	

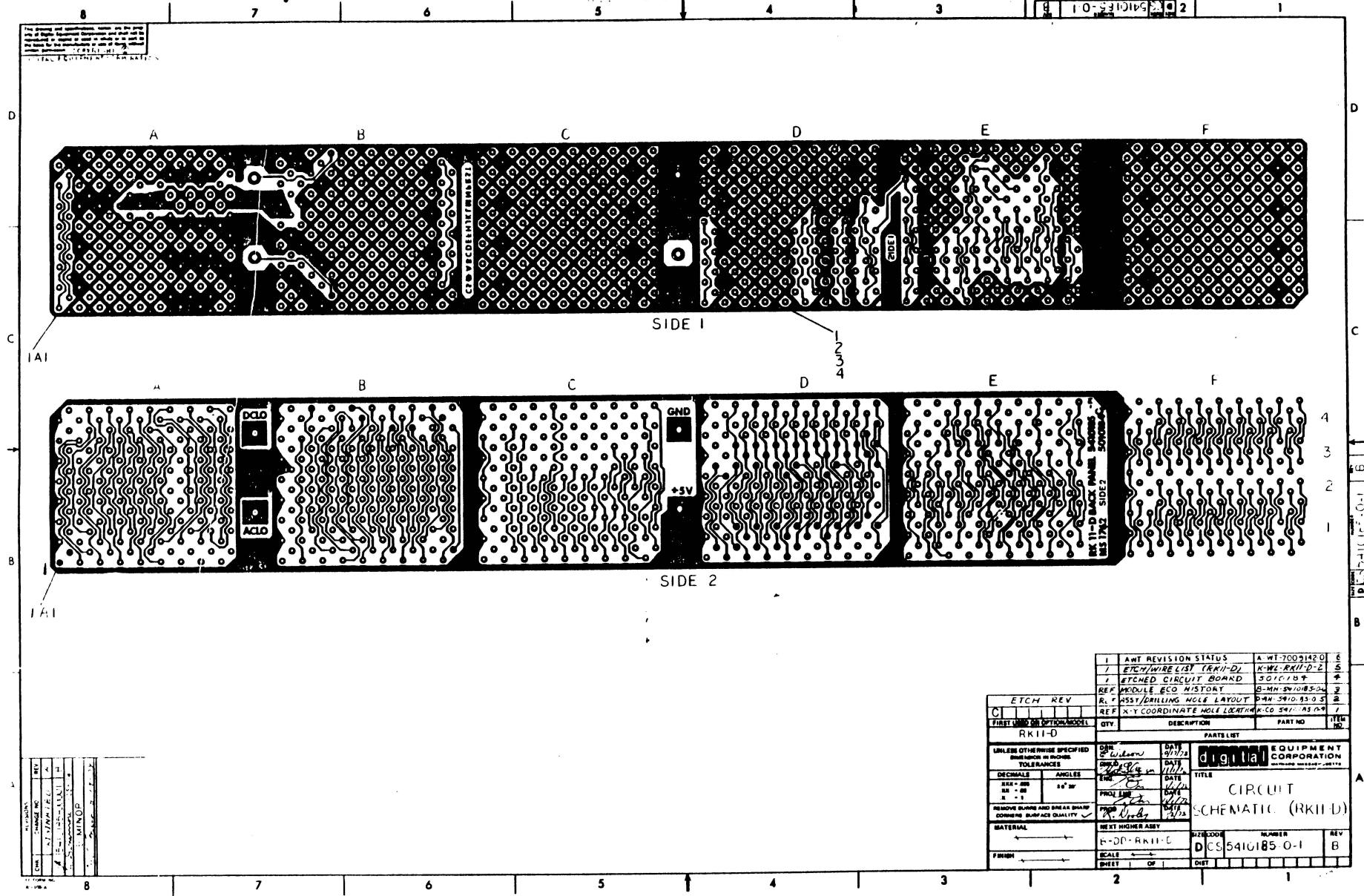


REV	CHANGE	NO	DATE

8 7 6 5 4 3 2 1
 D FD RK11-D-9
 DIST

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10-510185-01



REV	DATE	BY	CHKD
1	12/17/73	TEC	
2	1/10/74	TEC	
3	1/10/74	TEC	
4	1/10/74	TEC	
5	1/10/74	TEC	
6	1/10/74	TEC	
7	1/10/74	TEC	
8	1/10/74	TEC	

ETCH REV		PARTS LIST	
C			
FIRST LIND OR OPTION MODEL	QTY	DESCRIPTION	PART NO
RKII-D			
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES		DATE	
DECIMALS	ANGLES	DATE	DATE
SIZE - .005	14° MIN	DATE	DATE
DR - .005		DATE	DATE
R - .01		DATE	DATE
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE	DATE
MATERIAL	NEXT HIGHER ASSY	SIZE	NUMBER
FINISH		SCALE	REV
		SHEET	OF
		DIST	

1	AMT REVISION STATUS	A-WI-7009142-0	6
1	ETCH/WIRE LIST (EX-11-D)	K-WL-RKII-D-2	5
1	ETCHED CIRCUIT BOARD	5010185-0	4
REF	MODULE ECO HISTORY	B-MH-5W1085-04	3
R	ASST/DRILLING HOLE LAYOUT	D-MH-3910-85-0-5	2
REF	X-Y COORDINATE HOLE LOCATION	K-CO-3910-85-0-9	1

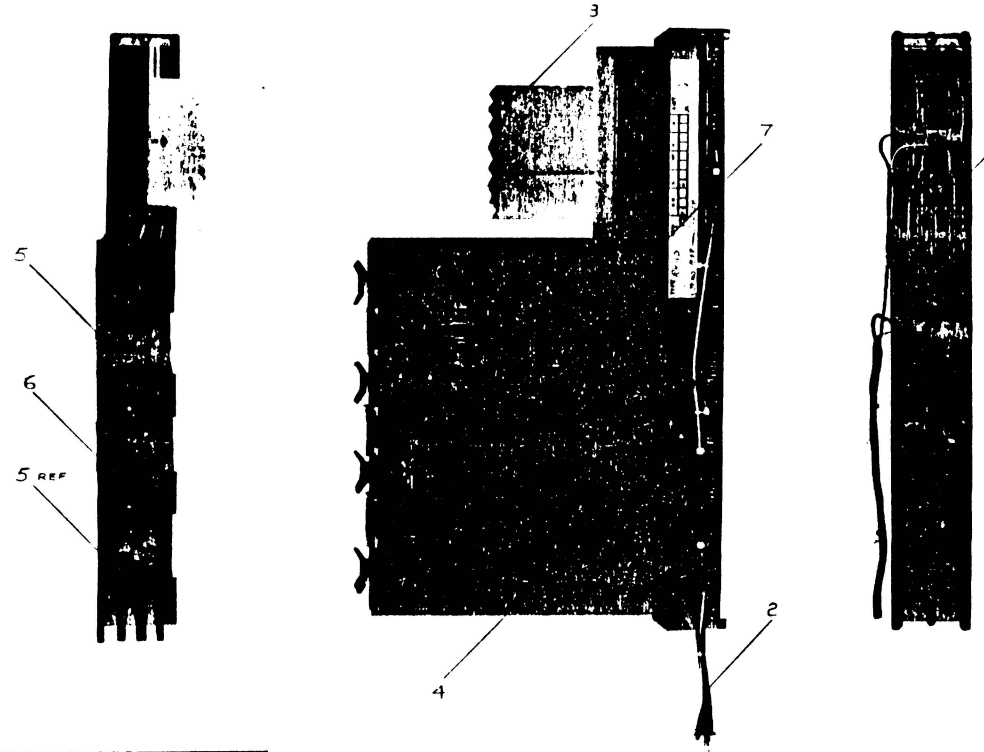
digital EQUIPMENT CORPORATION	
TITLE	
CIRCUIT	
SCHEMATIC (RKII-D)	
DCS 5410185-0-1	B

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WIRE TABLE			
ITEM NO	DESCRIPTION	COLOR	CONNECTION TO RK11-D
2	18	VIO	DC LS
	18	YEL	AC LO
	17	BLK	GND
	17	RED	+5V

LEGEND	
OPTION	VARIATION
RK11-B	DISK CONTROL
RK11-E	DISK CONTROL
RK11-DE	RK11-D WITH RK85-DE
RK11-DF	RK11-D WITH RK85-DF
RK11-DH	RK11-D WITH RK85-DH
RK11-DJ	RK11-D WITH RK85-DJ
RK11-DE	RK11-D WITH RK85J-DE
RK11-DF	RK11-D WITH RK85J-DF
RK11-DH	RK11-D WITH RK85J-DH
RK11-DJ	RK11-D WITH RK85J-DJ
RK11-DK	RK11-D WITH RK85J-DK
RK11-DL	RK11-D WITH RK85J-DL
RK11-DM	RK11-D WITH RK85J-DM

NOTES:
 1. ITEM 17 IS MADE UP OF ITEMS 1 THRU 8 AND 10 THRU 12.
 2. USE RK11-D OPTION HARNESS 700895 IN 1/40 SYSTEMS WITH 5/16 GREATER THAN 6 AND 1/45 SYSTEMS WITH 3/16 GREATER THAN 2000. OLDER MACHINES REQUIRE RK11-D OR HARNESS 700899. POP 1/20 AND POP 1/15 SYSTEMS AND RK11-ES BOXES USE NO POWER HARNESS OTHER THAN SUPPLIED INTERN TO THE BOX. RK11-D BOXES REQUIRE RK11-D POWER HARNESS 700892.
 3. ITEM 8 OR 9 IS INSTALLED ON THE 1025 MODULE DURING SYSTEM INTERGRATION.



RK11-DN	RK11-DM	RK11-DL	RK11-DK	RK11-DJ	RK11-DH	RK11-DF	RK11-DE	RK11-DI	RK11-DG	RK11-DC	RK11-DB	RK11-DA	RK11-D	
													CAB. RK85J 230V 50HZ	RK85J-DN
													CAB. RK85J 115V 50HZ	RK85J-DM
													CAB. RK85J 230V 60HZ	RK85J-DL
													CAB. RK85J 115V 60HZ	RK85J-DM
													TALL CAB. 861. RK85J 230V 50HZ	RK85J-DJ
													TALL CAB. 861. RK85J 115V 50HZ	RK85J-DH
													TALL CAB. 861. RK85J 230V 60HZ	RK85J-DF
													TALL CAB. 861. RK85J 115V 60HZ	RK85J-DE
													DISK CONTROL	RK11-D
													TALL CAB. 861. RK85 115V 50HZ	RK85-DE
													TALL CAB. 861. RK85 230V 50HZ	RK85-DF
													TALL CAB. 861. RK85 115V 50HZ	RK85-DH
													TALL CAB. 861. RK85 230V 50HZ	RK85-DJ
													INTERNAL BUS CONNECTOR	C-5-M820-D1
													BUS TERMINATOR	C-5-M820-D1
													MAINT MODULE OVERLAY	ASS-350914-A
													3.070 MHz CRYSTAL	18-02499-9
													2.880 MHz CRYSTAL	18-02499-9
													PRIORITY PLUG LEVEL 5	5908978
													MODULE CLAMPS WITHOUT SURIMON	18-01856-0
													MODULE CLAMPS WITH SURIMON	18-01856-1
													MODULE UTILIZATION	D-M-RK11-D-1
													CABLE 15 FT	DJA-ECH1A-15
													OPTION HARNESS	D-1A-700131-04
													WIRED ASSY	C-1A-700142-04

REV	DATE	DESCRIPTION
1	11/17/77	INITIAL
2	11/17/77	REVISION
3	11/17/77	REVISION
4	11/17/77	REVISION
5	11/17/77	REVISION
6	11/17/77	REVISION
7	11/17/77	REVISION
8	11/17/77	REVISION

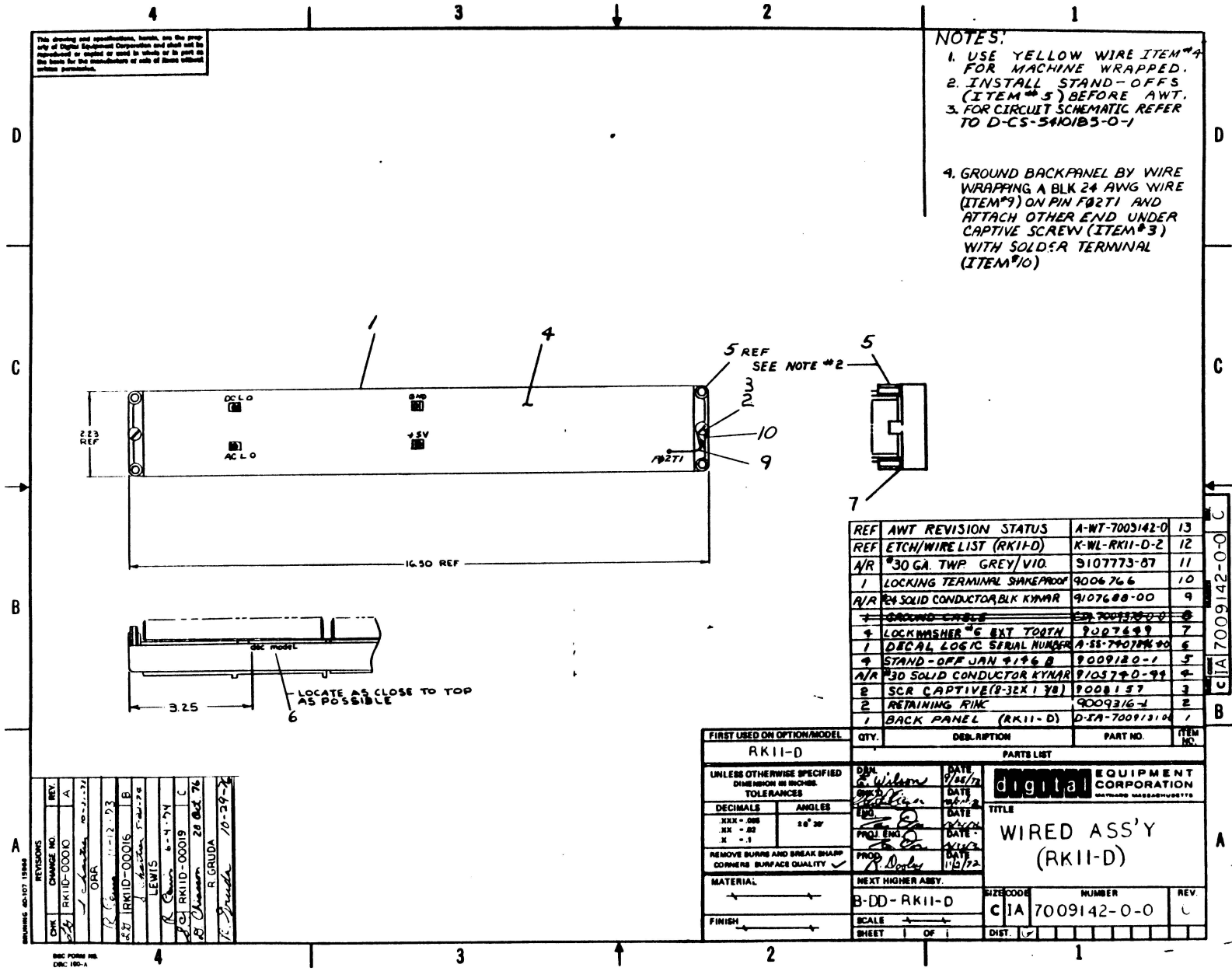
FIRST USED ON OPTION MODEL		QTY	DESCRIPTION	PART NO.
RK11-D				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES				
DECIMALS	FRACTIONS			
1/16	1/16			
1/32	1/32			
3/16	3/16			
1/2	1/2			
3/4	3/4			
1	1			
REMOVE BURRS AND BREAK SHARP EDGES TO IMPROVE SURFACE QUALITY				
MATERIAL		NEXT HIGHER ASSY		
FINISH		SCALE		
		B-DD-RK11-D		
		DJA-RK11-0-0		
		SHEET OF 1		

DISK CONTROL

REV 8

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- NOTES:**
1. USE YELLOW WIRE ITEM #9 FOR MACHINE WRAPPED.
 2. INSTALL STAND-OFFS (ITEM #5) BEFORE AWT.
 3. FOR CIRCUIT SCHEMATIC REFER TO D-CS-54101B5-0-1
 4. GROUND BACKPANEL BY WIRE WRAPPING A BLK 24 AWG WIRE (ITEM #9) ON PIN F02T1 AND ATTACH OTHER END UNDER CAPTIVE SCREW (ITEM #3) WITH SOLDER TERMINAL (ITEM #10)



REF	AWT REVISION STATUS	A-WT-7009142-0	13
REF	ETCH/WIRE LIST (RKII-D)	K-WL-RKII-D-2	12
A/R	#30 GA. TWP. GREY/VID.	910773-07	11
1	LOCKING TERMINAL SHAKEPROOF	9006766	10
A/R	#30 SOLID CONDUCTOR BLK KYMAR	9107688-00	9
7	GROUND CABLE	90070320-0	8
4	LOCK WASHER #5 EXT TOOTH	9007649	7
1	DECAL LOGIC SERIAL NUMBER	A-SS-790799-00	6
4	STAND-OFF JAN #196 B	9009120-1	5
A/R	#30 SOLID CONDUCTOR KYMAR	9105740-99	4
2	SCR CAPTIVE (#3EX1 Y8)	9008157	3
2	RETAINING RING	9009316-1	2
1	BACK PANEL (RKII-D)	D-PA-7009131-04	1

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RKII-D				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	TITLE		
.XXX - .005	16° 30'	WIRED ASS'Y (RKII-D)		
.XX - .02		DATE		
.X - .1		DATE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE		
MATERIAL	NEXT HIGHER ASSY.	SIZE CODE	NUMBER	REV
	B-DD-RKII-D	CIA	7009142-0-0	
FINISH	SCALE	DIST		
	SHEET 1 OF 1			

REVISIONS

REV.	CHANGE NO.	DATE	BY
A	RKII-D-00010	10-21-74	R. Lewis
B	IRKII-D-00016	11-12-73	R. Lewis
C	RKII-D-00019	6-4-74	R. Lewis
28	82-76		R. Lewis
10-29-74			R. Lewis

DEC FORM NO. 100-A

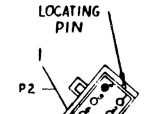
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WIRES TABLE

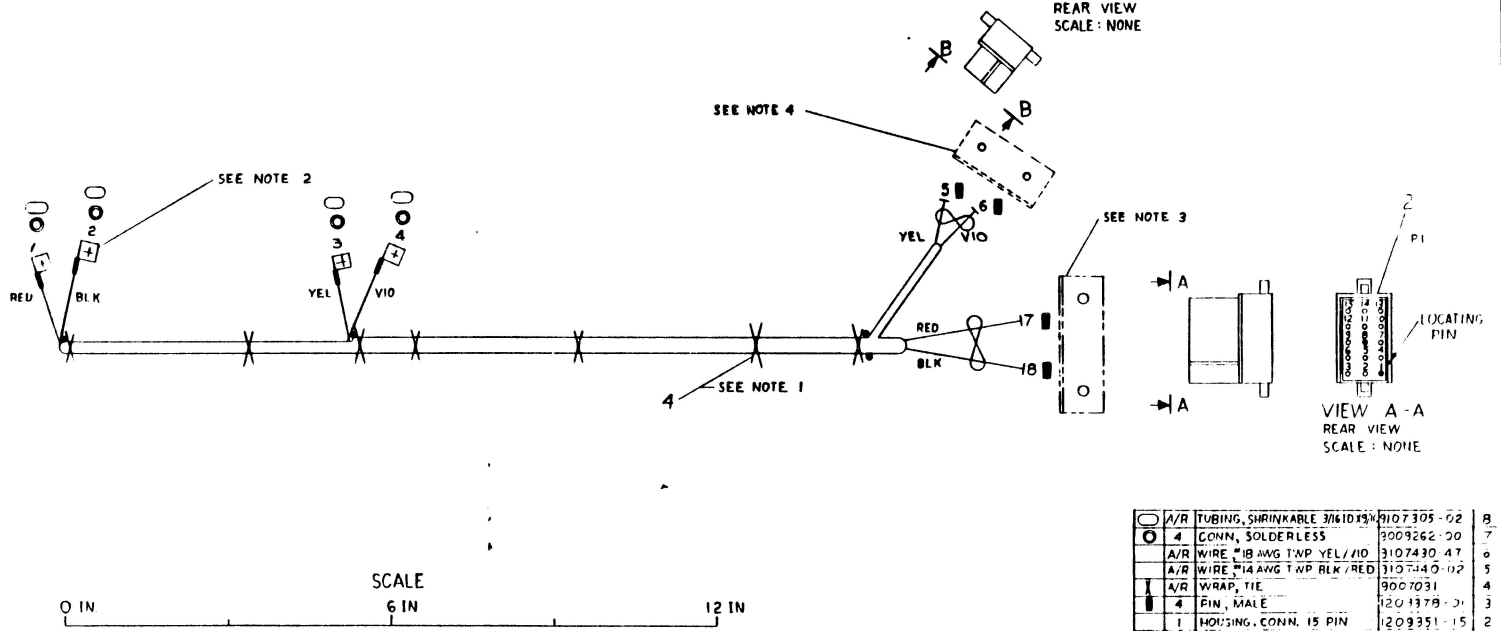
ITEM NO	DESCRIPTION	AWG	COLOR	FROM			TO			SIGNAL
				POINT	CONNECTION	TERM	POINT	CONNECTION	TERM	
6	#18	YEL	3		7,8	5	P2-4	3	AC LO	
TWP	#18	VIO	4		7,8	6	P2-3	3	DC LO	
5	#14	RED	1		7,8	7	P1-1	3	+5	
TWP	#14	BLK	2		7,8	8	P1-8	3	GND	

NOTES

- USE TIE WRAPS (X) ITEM #4 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY, AND AT EVERY BREAKOUT POINT.
- ATTACH MALE FASTON DEC (9008219-0) WITH #4 WOOD SCREWS (4 PLACES).
- USE CONN. BRKT. #C-MD-3305761-145-0, MOUNT WITH #6 WOOD SCREWS. USE MATING CONN. 1209350-15.
- USE CONN. BRKT. #C-MD-3305761-146-0 MOUNT WITH #6 WOOD SCREWS. USE MATING CONN. 1209350-06.
- DOT (•) INDICATES NAIL LOCATIONS FOR ASSEMBLY USE ONLY. COVER NAILS WITH SHRINK TUBING TO PREVENT CUTTING HARNESS.



VIEW B-B
REAR VIEW
SCALE: NONE



SCALE
0 IN 6 IN 12 IN

DO NOT REDUCE
DO NOT BUILD FROM REDUCED PRINT

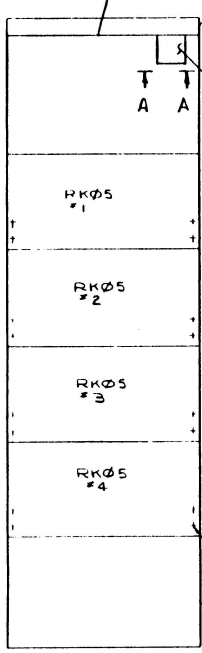
CAUTION—DRAWING SIZE AND SCALE REDUCED FOR MICROFILM NOT TO BE USED FOR PRODUCTION

QTY	DESCRIPTION	PART NO.	REV.
4	TUBING, SHRINKABLE 3/16 ID 1/8	3107305-02	8
4	CONN, SOLDERLESS	3009262-00	7
A/R	WIRE #18 AWG TWP YEL/VIO	3107430-47	6
A/R	WIRE #14 AWG TWP BLK/RED	3107440-02	5
A/R	WRAP, TIE	9007031	4
4	FIN, MALE	1201378-01	3
1	HOUSING, CONN, 15 PIN	1209351-15	2
1	HOUSING, CONN, 6 PIN	1209351-06	1

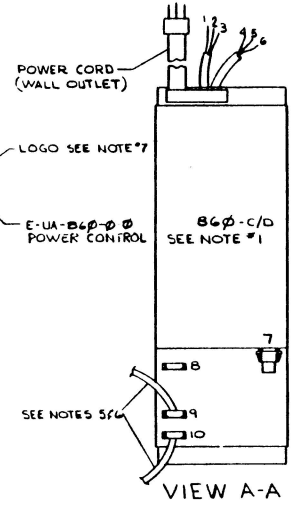
FIRST USED ON OPT./MCO		QTY	DESCRIPTION	PART NO.	REV.
RK11-D					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES		DATE	PARTS LIST		
DESIGN	DATE	DATE	digital EQUIPMENT CORPORATION		
CHK'D	DATE	DATE	TITLE		
DECIMALS	ANGLES	DATE	OPTION HARNESS		
1/16"	10° 30'	DATE	RK11-D		
1/32"		DATE	MATERIAL		
1/64"		DATE	NEXT HIGHER ASSY		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY IF	DATE	DATE	SEE PARTS LIST		
	DATE	DATE	SCALE 1/1		
	DATE	DATE	SHEET 1 OF 1		
	DATE	DATE	DIA 7009559-0-0		
	DATE	DATE	REV.		

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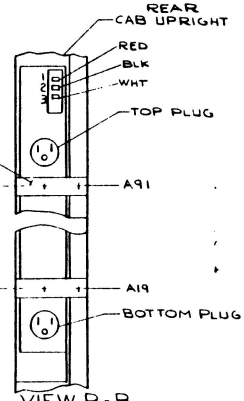
BASIC CAB ASSY 19
C-PL-7006501-23-0
OR C-PL-7006501-31-0



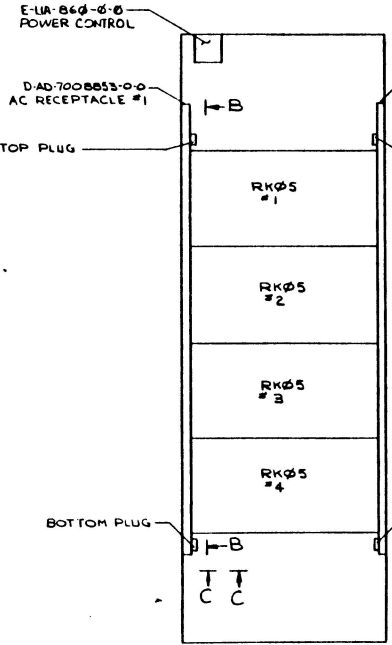
FRONT VIEW



VIEW A-A



VIEW B-B
TYP FOR RECEPTACLE #142



REAR VIEW

CONFIGURATION WITH 860 POWER CONTROL

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO	ITEM NO.
RK05				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES				
DECIMALS	ANGLES	DATE	PARTS LIST	
±.000	±.000	DATE	DIGITAL CORPORATION	
±.005	±.005	DATE	TITLE	
±.010	±.010	DATE	RK05	
±.015	±.015	DATE	OPTION CONFIGURATION	
±.020	±.020	DATE	TION	
MATERIAL	NEXT HIGHER ASSY	DATE	SHEET CODE	NUMBER
FINISH	13-DD-RK05-0	DATE	DLC	PK05-0-15
SCALE		DATE	DIST	REV
SHEET 1 OF 3				B

NOTES:

- 1) TO REMOVE BBS A & B TO BBS C & D REFER TO DRAWING E-UA-860-B-0
- 2) IF LESS THAN 4 DRIVES, THE W93B MODULE IS MOVED TO THE LAST DRIVE ON THE BUS IN THE SLOT NORMALLY OCCUPIED BY THE OUTGOING BCTIA CABLE
- 3) IF MORE THAN 4 DRIVES, EACH WILL BE CONFIGURED SIMILARLY IN A SECOND CAB
- 4) AS REQUIRED BY CONTROLLER, THE INCOMING CABLE TO BBS #5 MAY COME DIRECTLY FROM A DISK CONTROL OR FROM THE SLOT NORMALLY OCCUPIED BY THE W93B IN BBS #4 (SEE NOTE #2). POWER AND CABLEING INFORMATION ALSO APPLY TO CAB #2
- 5) IN A SYSTEM USING PDP-11/15, 11/20, OR PDP-8 PROCESSORS AND IF 860 OR 861 POWER CONTROL IS FIRST IN THE CHAIN OF POWER CONTROLS, CONNECT P1 OF CABLE #700864 TO POWER CONTROL AND P2 OF 2 CABLE #700864 TO W93B #7 IN THE PROCESSOR. DO NOT USE ANY OTHER JUMPER PLUG IN THE PROCESSOR POWER SUPPLY. IN ALL OTHER SITUATIONS USE CABLE #7008288 FOR INTERCONNECTIONS
- 6) PLUGS B & D ARE WIRED IN PARALLEL. USE ANY PLUGS AS REQUIRED. NO JUMPER PLUG IS REQUIRED ON THE 860 OR 861 POWER CONTROL
- 7) USE BLANK LOGO COLOR TO COINCIDE WITH PRODUCT LINE
- 8) TO MOUNT CHASSIS SLIDES ON RACK USE MOUNTING HARDWARE KIT #7008278 OR ITEMS:
 1. TOWERMOUNT KIT #8001188
 2. #10-32 PHL TRUSS #800674-3
 3. #10-32 SCR 5/8 LG
 4. #10 EXTERNAL TOOTH #8007851 WASHER
 LOCATION OF MOUNTING HOLES TO BE AS FOLLOWS STARTING FROM BOTTOM OF RACK HOLE NUMBERS FOR FRONT AND REAR, LEFT AND RIGHT:

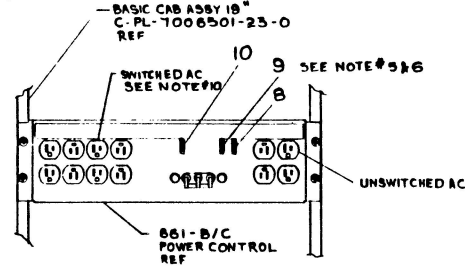
21.34
29.42
37.50
45.58
- 9) USE THE PRE-FOLDED CREASES ON THE DISK BUS CABLE FOR CLAMPING. DO NOT PULL THE CABLE TIGHT AGAINST PRE-FILTER. LEAVE SERVICE LOOP SO THAT HAND CAN FIT BETWEEN THE CABLE AND FILTER.
- 10) BBS 5 PLUG INTO SWITCHED AC OUTLETS ONLY

REVISION	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			
6			
7			
8			

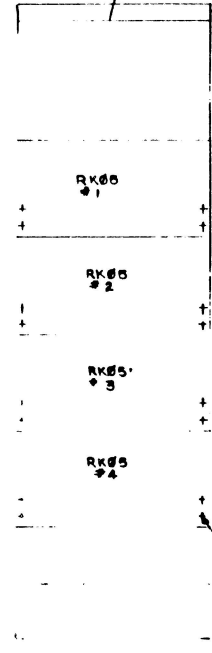
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BASIC CABINET ASSY 18"
C-PL-7006501-23-0
CRC-PL-7006501-31-0

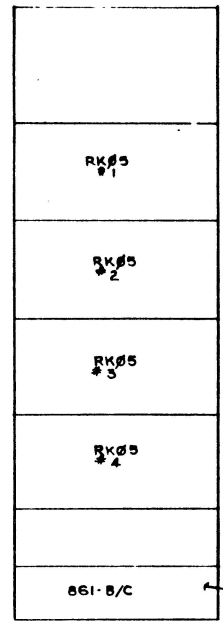
LOGO SEE NOTE #7



DETAIL "A"
NOT TO SCALE



FRONT VIEW



REAR VIEW

--SEE NOTE #8

E-UA-861-B-C
POWER CONTROL
SEE DETAIL A

CONFIGURATION WITH 861 POWER CONTROL

PART USED OR OPTION CODE	QTY	DESCRIPTION	PART NO	REQ NO
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES	DATE 7-10-72	BY <i>[Signature]</i>	DATE 7-10-72	TITLE
DECIMALS ANGLES	DATE 7-10-72	BY E. SIMMONS	DATE 7-10-72	RK05
1/16" - .001 1/4" - .015	DATE 7-10-72	BY E. SIMMONS	DATE 7-10-72	OPTION CONFIGURATION
REMOVE BURRS AND BREAK SHARP EDGES SURFACE QUALITY	DATE 7-10-72	BY A. KARLSEN	DATE 7-10-72	
MATERIAL	NEXT HIGHER ASSY	REV	NO	REV
FINISH	SCALE	D 00	RK05 - 0-15	B
	SHEET 5 OF 5	DIST		

8
7
6
5
4
3
2
1

8
7
6
5
4
3
2
1

A

POWER CORD CONNECTIONS WITH B60 POWER CONTROL

FROM	TO
RK05 #1	AC RECEPTACLE #1 TOP PLUG
RK05 #2	AC RECEPTACLE #2 TOP PLUG
RK05 #3	AC RECEPTACLE #2 BOTTOM PLUG
RK05 #4	AC RECEPTACLE #1 BOTTOM PLUG

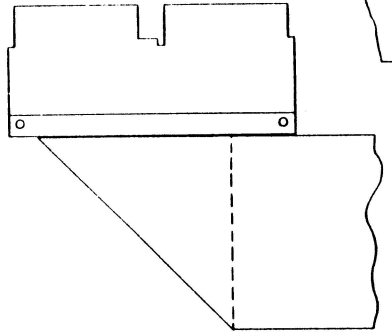
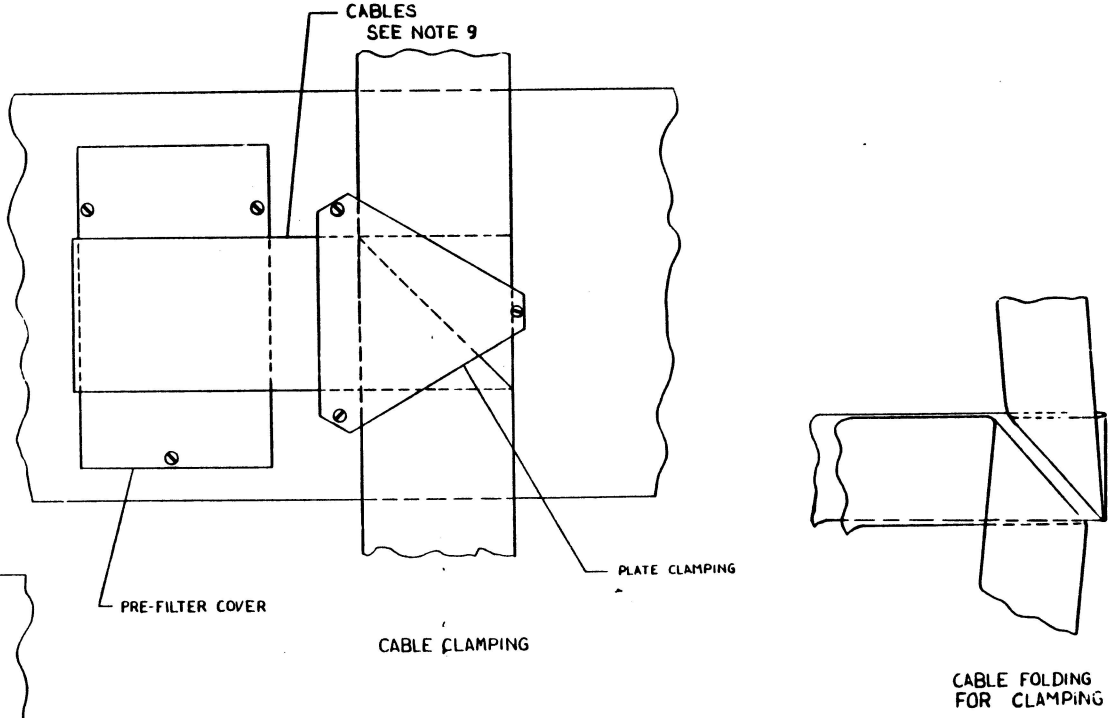
BUS CABLE CONNECTIONS

FROM		TO		CABLE	REMARKS
DEVICE	LOCATION	DEVICE	LOCATION		
DISK CONTROL	A/R	RK05 #1	AB8	BC11A	LENGTH A/R
RK05 #1	AB7	RK05 #2	AB7	BC11A-6	
RK05 #2	AB8	RK05 #3	AB8	BC11A-6	
RK05 #3	AB7	RK05 #4	AB7	BC11A-6	
RK05 #4	AB8	—	—	M930	MODULE

B60 POWER CONNECTIONS

AWG	COLOR	FROM	TO	REMARKS
10	BLK	B60-PT28	RECP #1-1	
10	WHT	B60-PT28	#1-2	
10	RED	B60-PT28	#1-3	SEE VIEW B-B
10	BLK	B60-PT43	#2-1	
10	WHT	B60-PT43	#2-2	
10	RED	B60-PT43	RECP #2-3	

(FACTOR 5) INDICATES WIRE POINTS ON B60 POWER CONTROL MARKED WITH BRADY MARKERS.



FIRST USED ON OPTION MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED SEE UNDER IN BOMBS TO JEANCS		DATE	EQUIPMENT CORPORATION	
DECIMALS	ANGLES	DATE	TITLE	
1/16" OR GREATER	1/4" OR GREATER	DATE	RK05	
		DATE	OPTION CONFIGURATION	
		DATE	TION	
MATERIAL	NEXT HIGHER ASSY	SIZE CODE	NUMBER	REV
FINISH	SCALE	DOC	RK05-0-15	B
	SHEET			

REV
CHANGE NO.


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RK11-D v2	OFF	OFF	OFF	CNTL RDY	HE	DATA	OUT BUFF FULL
	AI	UI		SEEK CR	RD CR	WT CR	IN BUFF FULL
				CR RSET	RCKMTCK		
	OFF	OFF		WC OVF	WT GATE	RD GATE	FILE EMPTY
				R1	RKDA 12	RKDA 11	FILE FULL
					RKDA 10	RKDA 09	01
					RKDA 07	RKDA 06	RKDA 04
					RKDA 03	RKDA 02	RKDA 01
							RKDA 00

FIRST #350 ON OPT / MOD
RK11-D

REVISIONS	REV.	
	CHANGE NO.	
	CHK	

SPEC # 9200100-74 (BLACK)

DRN. <i>J. Mattson</i>	DATE <i>6/2/72</i>	 EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D <i>[Signature]</i>	DATE <i>6/2/72</i>	
ENGR. <i>[Signature]</i>	DATE <i>6/2/72</i>	TITLE
PROJ. ENGR. <i>[Signature]</i>	DATE <i>6/2/72</i>	MAINTENANCE MODULE
PROD. <i>D. J. Martin</i>	DATE <i>6/6/72</i>	OVERLAY (RK11-D)
NEXT HIGHER #559		NUMBER
C-MD-5509081-0-0		SIZE CODE
SCALE		A 55 5509081-0-11
SHEET	OF	DIST.

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS ACCESSORY LIST			LEGEND D DOCUMENT DN DOCUMENT CHANGE NOTICE PA PAPER TAPE ASCII PB PAPER TAPE BINARY PM PAPER TAPE READ-IN-MODE		QUANTITY/VARIATION						
MADE BY <i>[Signature]</i> DATE 12/15/72	CHECKED <i>[Signature]</i> DATE	SECTION	PA	PB	PM						
ENG <i>[Signature]</i> DATE 1/1/73	PROD <i>R. Dowling</i> DATE 12/13/72	ISSUED SECT.									
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	RK11-D	RK11-E						KIT CHECK BY DATE	INSTALLATION CHECK BY DATE
1	See variations	Complete print set	1	1							
2	DEC-11-HRKDA-A D	Manual, RK11-D,E	1	1							
3	LIBKIT-11-RK11-0	Sealed software kit	1	1							
4	MAINDEC-11-DZQGA-B-D	GTP write-up (Field add-on only)	1	1							
5	MAINDEC-11-DZQGA-B-PB	GTP binary tape (Field add-on only)	1	1							
6	M920	UNIBUS jumper	1	1							
7	BC11-A-15	15 foot UNIBUS cable	1	1							
8	A-SS-5509081-11	Transparent overlay to KM11-A									
TITLE			ASSY. NO.		SIZE CODE	NUMBER		REV.	ECO NO		
MOVING HEAD DISK CONTROL RK11-D,E					A AL	RK11-0-6					
SHEET 1 OF 1			DIST.								


DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				QUANTITY / VARIATION														
PARTS LIST				RK11-C	RK11-D	RK11-E												
MADE BY	DATE	ENG	DATE															CHECKED
3. VOWLES	10/11/72	T. ORR	11/1/72	T. ORR	11/1/72	A. DOOLEY	12/13/72											
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION																
1	MAINDEC-11-DZRKA-D	RK11 DISK STATIC TEST - WRITE UP		1	1	1												
2	MAINDEC-11-DZRKA-PB	RK11 STATIC TEST BINARY TAPE		1	1	1												
3	MAINDEC-11-DZRKB-D	RK11 DATA TEST WRITE UP		1	1	1												
4	MAINDEC-11-DZRKB-PB	RK11 DATA TEST BINARY TAPE		1	1	1												
5	MAINDEC-11-DZRKC-A-D	RK11 RANDOM EXERCISOR WRITE UP		1	1	1												
6	MAINDEC-11-DZRKC-A-PB	RK11 RANDOM EXERCISOR BINARY TAPE		1	1	1												
7	MAINDEC-11-DZRKD-A-D	BASIC LOGIC TEST WRITE UP		1	1	1												
8	MAINDEC-11-DZRKD-PB	BASIC LOGIC TEST BINARY TAPE		1	1	1												
9	MAINDEC-11-DZRKF-A-D	RK11/RKØ5 DYNAMIC TEST WRITE UP		1	1	1												
10	MAINDEC-11-DZRKF-PB	RK11/RKØ5 DYNAMIC TEST BINARY TAPE		1	1	1												
11	MAINDEC-11-DZRKH-A-D	RK11/RKØ5 PERFORMANCE EXERCISER WRITE UP		1	1	1												
12	MAINDEC-11-DZRKH-PB	RK11/RKØ5 PERFORMANCE EXERCISER BINARY TAPE		1	1	1												
13	MAINDEC-11-DZRKI-A-D	UTILITY PACKAGE WRITE UP		1	1	1												
14	MAINDEC-11-DZRKI-PB	UTILITY PACKAGE BINARY TAPE		1	1	1												
TITLE MOVING HEAD DISK CONTROL RK11-D,E				ASSY NO.		SIZE CODE A PL		NUMBER RK11-D-7				REV. A		ECO NO. RK11-D-00017				
SHEET OF				DIST.														



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4 3 2 1

REV. NO.	CHANGE NO.	DESCRIPTION
A	RKIID-00003	Beasley 12-4-72
B	RKIID-00005	T. Orr 12/2/72
C	RKIID-00009	T. Orr 12/6/72
D	RKIID-00011	E. Alliman 9-26-73
E	RKIID-00013	T. Orr 9-28-73
F	RKIID-00015	T. Orr 11-12-73
		T. Orr 1/24/74
		T. Orr 2-5-74
		T. Orr 3/1/74
		T. Orr 4-30-74
		T. Orr 5/1/74

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RKIID				
PARTS LIST				
DRN E. Wilson	DATE 9/27/72	 DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
CHKD. R. Woolley	DATE 10/11/72			
ENG. Tom Orr	DATE 10/11/72			
PROJ. ENG. Tom Orr	DATE 10/11/72			
PROD. R. Woolley	DATE 11/2/72	TITLE ETCH/WIRE LIST (RKIID)		
NEXT HIGHER ASSEMBLY C-1A-70091 42-0-0		SIZE CODE K WL	NUMBER RKIID-D-2	REV. F
SCALE 1:1		DIST.		
SHEET	OF			

DEC FORM NO DRB 109

4 3 2 1

RK1ID.F
RUN NAME

HND288.V22(22) 11/06/73
A/P PIN ORDER HAY -
NAME PIN ORDER

U DNAM MV PG 1 A Z

REMARKS

1-MAY-74
LENGTH

1912/
EXCEPTIONS

PAGE 1
RUN
NUMBER

RUN NAME	A/P	PIN NAME	ORDER PIN	HAY - ORDER	U	DNAM	MV	PG 1	A	Z	REMARKS	1-MAY-74 LENGTH	1912/ EXCEPTIONS	PAGE 1 RUN NUMBER
+5V		A01A2		1-01 * H			U02			2			HAND WIRE	1
+5V		A02A2		1-02 * H			U02			1			HAND WIRE	1
+5V		A03A2		1-03 * H			U02			2			HAND WIRE	1
+5V		A04A2		1-04 * H			U02			1			HAND WIRE	1
+5V		A05H2		1-05 * H			U02			2			HAND WIRE	1
+5V		A03J2		1-06 * H			U02			1			HAND WIRE	1
+5V		A03K2		1-07 * H			U02			2			HAND WIRE	1
+5V		A03L2		1-08 * H			U02			1			HAND WIRE	1
+5V		A03M2		1-09 * H			U02			2			HAND WIRE	1
+5V		H01A2		1-10 * H			U02			1			HAND WIRE	1
+5V		H02A2		1-11 * H			U02			2			HAND WIRE	1
+5V		H03H1		1-12 * H			U02			1			HAND WIRE	1
+5V		H03A2		1-13 * H			U02			2			HAND WIRE	1
+5V		H04A2		1-14 * H			U02			1			HAND WIRE	1
+5V		C04A2		1-15 * H			U01			2			HAND WIRE	1
+5V		C03A2		1-16 * H			U01			1			HAND WIRE	1
+5V		C02A2		1-17 * H			U01			2			HAND WIRE	1
+5V		C01A2		1-18 * H			U01			1			HAND WIRE	1
+5V		D01A2		1-19 * H			U01			2			HAND WIRE	1
+5V		D02A2		1-20 * H			U01			1			HAND WIRE	1
+5V		D03A2		1-21 * H			U01			2			HAND WIRE	1
+5V		D04A2		1-22 * H			U01			1			HAND WIRE	1
+5V		E04A2		1-23 * H			U01			2			HAND WIRE	1
+5V		E03A2		1-24 * H			U01			1			HAND WIRE	1
+5V		E02A2		1-25 * H			U01			2			HAND WIRE	1
+5V		E01A2		1-26 * H			U01			1			HAND WIRE	1
+5V		F01A2		1-27 * H			U01			2			HAND WIRE	1
+5V		F02A2		1-28 * H			U01			1			HAND WIRE	1
+5V		F03A2		1-29 * H			U01			2			HAND WIRE	1
+5V		F04A2		1-30 * H			U01						H TU WHERE	1
+5V												89-0/8		1
0 TU WPR	H	E01R1		1-01 * H			U01			1			HAND WIRE	2
0 TU WPR	H	E01R2		1-02 * H			U01			2			HAND WIRE	2
0 TU WPR	H	E04R2		1-03 * H			U01						H TU WHERE	2
0 TU WPR												6-2/8		2
ADD ACK	H	F01J1		1-01 * H			U01			1			HAND WIRE	3
ADD ACK	H	F02J1		1-02 * H			U01						H TU WHERE	3
ADD ACK												2-6/8		3
B CNTRL ROY	H	H01R2		1-01 * H			U02			1				4
B CNTRL ROY	H	H04S2		1-02 * H			U01			2			HAND WIRE	4
B CNTRL ROY	H	H02S2		1-03 * H			U01			1			HAND WIRE	4
B CNTRL ROY	H	H01S2		1-04 * H			U01						H TU WHERE	4
B CNTRL ROY												10-4/8		4

RELID-F RUN NAME	APP PIN	NAME	ORDER PIN	DATE 11/06/73	UNIT MAY	DRAM KV	PG I	A	Z	REMARKS	1912/ EXCEPTIONS	PAGE 2 NUM NUMBER
BC 4 IN	H	R01K2	1-01 *		H	U02		1				5
BC 4 IN	H	C01S2	1-02 *			U01						5
BC 4 IN												
BC 4 UNIT	H	R04K2	1-01 *		H	U02		F				6
BC 4 UNIT	H	C01T2	1-02 *			U01						6
BC 4 UNIT												
BC 5 IN	H	R01M1	1-01 *		H	U02		1				/
BC 5 IN	H	C01P2	1-02 *			U01						/
BC 5 IN												
BC 5 UNIT	H	R04M1	1-01 *		H	U02		1				8
BC 5 UNIT	H	C01K2	1-02 *			U01						8
BC 5 UNIT												
BC 6 IN	H	R01A1	1-01 *		H	U02		1				9
BC 6 IN	H	C01M2	1-02 *			U01						9
BC 6 IN												
BC 6 UNIT	H	R04A1	1-01 *		H	U02		1				10
BC 6 UNIT	H	C01M2	1-02 *			U01						10
BC 6 UNIT												
BC 7 IN	H	A01V1	1-01 *		H	U02		1				11
BC 7 IN	H	C01K2	1-02 *			U01						11
BC 7 IN												
BC 7 UNIT	H	A04V1	1-01 *		H	U02		1				12
BC 7 UNIT	H	C01L2	1-02 *			U01						12
BC 7 UNIT												
BC 8 IN	H	C01V2	1-01 *		H	U01		1				13
BC 8 IN	H	C04V2	1-02 *			U01						13
BC 8 IN												
BC 9 UNIT	H	C01U2	1-01 *		H	U01		1				14
BC 9 UNIT	H	C04U2	1-02 *			U01						14
BC 9 UNIT												
RR UNIT	L	C01J2	1-01 *		H	U01		1				15
RR UNIT	L	C04J2	1-02 *			U01						15
RR UNIT												

RECORDS CORPORATION

RELID-F RUN NAME	APP PIN	NAME	ORDER PIN	DATE 11/06/73	UNIT MAY	DRAM KV	PG I	X	Z	REMARKS	1912/ EXCEPTIONS	PAGE 3 NUM NUMBER
BUS A00	L	R01K2	1-01 *		H	U02		2				16
BUS A00	L	R04K2	1-02 *			U02		1				16
BUS A00	L	D04D1	1-03 *			U01						16
BUS A00												
BUS A01	L	R01M1	1-01 *		H	U02		2				17
BUS A01	L	R04M1	1-02 *			U02		1				17
BUS A01	L	C04T2	1-03 *			U01						17
BUS A01												
BUS A02	L	R01J2	1-01 *		H	U02		2				18
BUS A02	L	R04J2	1-02 *			U02		1				18
BUS A02	L	C04S1	1-03 *			U01						18
BUS A02												
BUS A03	L	R01J1	1-01 *		H	U02		2				19
BUS A03	L	R04J1	1-02 *			U02		1				19
BUS A03	L	C04H1	1-03 *			U01						19
BUS A03												
BUS A04	L	R01K2	1-01 *		H	U02		2				20
BUS A04	L	R04K2	1-02 *			U02		1				20
BUS A04	L	C04P1	1-03 *			U01						20
BUS A04												
BUS A05	L	R01K1	1-01 *		H	U02		2				21
BUS A05	L	R04K1	1-02 *			U02		1				21
BUS A05	L	C04R2	1-03 *			U01						21
BUS A05												
BUS A06	L	R01L2	1-01 *		H	U02		2				22
BUS A06	L	R04L2	1-02 *			U02		1				22
BUS A06	L	C04M2	1-03 *			U01						22
BUS A06												
BUS A07	L	R01L1	1-01 *		H	U02		2				23
BUS A07	L	R04L1	1-02 *			U02		1				23
BUS A07	L	C04L1	1-03 *			U01						23
BUS A07												
BUS A08	L	R01M2	1-01 *		H	U02		2				24
BUS A08	L	R04M2	1-02 *			U02		1				24
BUS A08	L	C04M1	1-03 *			U01						24
BUS A08												

RECORDS CORPORATION

RR11D.F RUN NAME	11/06/73 DATE	RR11D.F ORDER PIN	UNIT ORDER	UNAP RV	PG I	A	Z	REMARKS	1-MAY-74 LENGTH	19127 EXCEPTIONS	PAGE 6 NUM NUMBER
BUS 000 (1)	H	D0102	1-01 * H	U01			1			HAND WIRE	44
BUS 000 (1)	H	D0102	1-02 * H	U01			2			H TU WERE	44
BUS 000 (1)	H	D0402	1-03 * H	U01					6-0/8		44
BUS 000 (1)	L	A0102	1-01 * H	U02			4			HAND WIRE	45
BUS 001	L	A0402	1-02 * H	U02			1		11-4/8	TU WERE	45
BUS 001	L	C0401	1-03 * H	U01							45
BUS 001 (1)	H	D0102	1-01 * H	U01			1			HAND WIRE	46
BUS 001 (1)	H	D0102	1-02 * H	U01			2			H TU WERE	46
BUS 001 (1)	H	D0402	1-03 * H	U01					6-0/8		46
BUS 001 (1)	L	A0101	1-01 * H	U02			2			HAND WIRE	47
BUS 002	L	A0401	1-02 * H	U02			1		11-4/8	TU WERE	47
BUS 002	L	C0402	1-03 * H	U01							47
BUS 002 (1)	H	D0102	1-01 * H	U01			1			HAND WIRE	48
BUS 002 (1)	H	D0102	1-02 * H	U01			2			H TU WERE	48
BUS 002 (1)	H	D0402	1-03 * H	U01					6-0/8		48
BUS 002 (1)	L	A0102	1-01 * H	U02			2			HAND WIRE	49
BUS 001	L	A0402	1-02 * H	U02			1		14-2/8	TU WERE	49
BUS 001	L	D0401	1-03 * H	U01							49
BUS 001	L	D0102	1-01 * H	U01			1			HAND WIRE	50
BUS 001 (1)	H	D0102	1-02 * H	U01			2			H TU WERE	50
BUS 001 (1)	H	D0402	1-03 * H	U01					6-0/8		50
BUS 001 (1)	L	A0101	1-01 * H	U02			2			HAND WIRE	51
BUS 004	L	A0401	1-02 * H	U02			1		15-2/8	TU WERE	51
BUS 004	L	D0401	1-03 * H	U01							51
BUS 004 (1)	H	D0102	1-01 * H	U01			1			HAND WIRE	52
BUS 004 (1)	H	D0102	1-02 * H	U01			2			H TU WERE	52
BUS 004 (1)	H	D0402	1-03 * H	U01					6-0/8		52

RR11D.F
RUN NAME

RR11D.F RUN NAME	11/06/73 DATE	RR11D.F ORDER PIN	UNIT ORDER	UNAP RV	PG I	A	Z	REMARKS	1-MAY-74 LENGTH	19127 EXCEPTIONS	PAGE 7 NUM NUMBER
BUS 005	L	A0102	1-01 * H	U02			2			HAND WIRE	53
BUS 005	L	A0402	1-02 * H	U02			1			TU WERE	53
BUS 005	L	C0401	1-03 * H	U01					11-5/8		53
BUS 005 (1)	H	D0102	1-01 * H	U01			1			HAND WIRE	54
BUS 005 (1)	H	D0102	1-02 * H	U01			2			H TU WERE	54
BUS 005 (1)	H	D0402	1-03 * H	U01					6-0/8		54
BUS 005 (1)	L	A0101	1-01 * H	U02			2			HAND WIRE	55
BUS 006	L	A0401	1-02 * H	U02			1		11-6/8	TU WERE	55
BUS 006	L	C0402	1-03 * H	U01							55
BUS 006 (1)	H	D0102	1-01 * H	U01			1			HAND WIRE	56
BUS 006 (1)	H	D0102	1-02 * H	U01			2			H TU WERE	56
BUS 006 (1)	H	D0402	1-03 * H	U01					6-0/8		56
BUS 006 (1)	L	A0102	1-01 * H	U02			2			HAND WIRE	57
BUS 007	L	A0402	1-02 * H	U02			1		11-7/8	TU WERE	57
BUS 007	L	C0401	1-03 * H	U01							57
BUS 007 (1)	H	D0102	1-01 * H	U01			1			HAND WIRE	58
BUS 007 (1)	H	D0102	1-02 * H	U01			2			H TU WERE	58
BUS 007 (1)	H	D0402	1-03 * H	U01					6-0/8		58
BUS 007 (1)	L	A0101	1-01 * H	U02			2			HAND WIRE	59
BUS 008	L	A0401	1-02 * H	U02			1		12-2/8	TU WERE	59
BUS 008	L	C0402	1-03 * H	U01							59
BUS 008 (1)	H	D0102	1-01 * H	U01			1			HAND WIRE	60
BUS 008 (1)	H	D0102	1-02 * H	U01			2			H TU WERE	60
BUS 008 (1)	H	D0402	1-03 * H	U01					6-0/8		60
BUS 008 (1)	L	A0102	1-01 * H	U02			2			HAND WIRE	61
BUS 009	L	A0402	1-02 * H	U02			1		12-0/8	TU WERE	61
BUS 009	L	C0401	1-03 * H	U01							61

RR11D.F
RUN NAME

RAILU.F. RUR NAME	A/P NAME	PLN ORDER	ORDEN PIN	DATE ORDER	ITEM NO	QTY QTY	UNIT UNIT	PRICE PRICE	TAX TAX	AMOUNT AMOUNT	DATE DATE	LENGTH LENGTH	EXCEPTIONS EXCEPTIONS	1927 PAGE TO
BUS MSYN	L	R01V1		1-01	H		U02		2		11-7/8	HAND WIRE TU HEHE	90	
BUS MSYN	L	R04V1		1-02	H		U01		1				90	
BUS MSYN	L	R04V2		1-03	H		U01						90	
BUS APC 14	H	A01U1		1-01	H		U02		1				91	
BUS APC 14	H	R04U1		1-02	H		U01						91	
BUS APC GUF	H	A04U1		1-01	H		U02		1		0-3		92	
BUS APC GUF	H	R04U1		1-02	H		U01				13-3/8		92	
BUS MPH	L	A01S2		1-01	H		U02		4			HAND WIRE TU HEHE	93	
BUS MPH	L	R04S2		1-02	H		U01		1				93	
BUS MPH	L	R04S1		1-03	H		U01						93	
BUS SACK	L	A01R2		1-01	H		U02		4			HAND WIRE TU HEHE	94	
BUS SACK	L	R04R2		1-02	H		U01		1		15-4/8		94	
BUS SACK	L	R04C1		1-03	H		U01						94	
BUS SBYV	L	R01U1	R04U1	1-01	H		U02		4			HAND WIRE TU HEHE	95	
BUS SBYV	L	R04U1		1-02	H		U01		1		4-5		95	
BUS SBYV	L	R04P1		1-03	H		U01				13-5/8		95	
CLK	H	C02W2		1-01	H		U01		1				96	
CLK	H	R01E1		1-02	H		U01		2			HAND WIRE H TU HEHE	96	
CLK	H	R03D2		1-03	H		U01						96	
CLK													96	
CLR NSR	L	F01F2		1-01	H		U01		1			HAND WIRE H TU HEHE	97	
CLR ISH	L	F02F2		1-02	H		U01						97	
CLR MSH													97	
COUNT SA	H	C01M1		1-01	H		U01		1			HAND WIRE H TU HEHE	98	
COUNT SA	H	C03M1		1-02	H		U01						98	
CUINT SA	L	C02R2		1-01	H		U01		1			HAND WIRE H TU HEHE	99	
CYL UVF	L	C03R2		1-02	H		U01						99	

RAILU.F. RUR NAME	A/P NAME	PLN ORDER	ORDEN PIN	DATE ORDER	ITEM NO	QTY QTY	UNIT UNIT	PRICE PRICE	TAX TAX	AMOUNT AMOUNT	DATE DATE	LENGTH LENGTH	EXCEPTIONS EXCEPTIONS	1927 PAGE 11
DATA (1)	H	R03M1		1-01	H		U02		1				HAND WIRE	90
DATA (1)	H	C03S1		1-02	H		U01		2				HAND WIRE	90
DATA (1)	H	C03S1		1-03	H		U01		1				HAND WIRE	90
DATA (1)	H	C03S1		1-04	H		U01					11-2/8	H TU HEHE	90
DATA STR 1	L	R04R2		1-01	H		U01						1-PIN HUR	91
DATA STR 2	L	R03U2		1-01	H		U01		1				HAND WIRE	92
DATA STR 2	L	R04U2		1-02	H		U01					2-5/8	H TU HEHE	92
DISK CIA	L	F01V1		1-01	H		U01		1				HAND WIRE	93
DISK CIA	L	F02V1		1-02	H		U01						H TU HEHE	93
DET (1)	H	F01P1		1-01	H		U01		1				HAND WIRE	94
DET (1)	H	R03P2		1-02	H		U01					3-4/8	H TU HEHE	94
DET (1)	H	F01D1		1-01	H		U01		1				HAND WIRE	95
DET (1)	H	F02D1		1-02	H		U01					2-5/8	H TU HEHE	95
DPU (1)	L	A02R2		1-01	H		U02		1					96
DPU (1)	L	R02R1		1-02	H		U01					9-0/8		96
DR BUS ADD ACK	L	A02K1		1-01	H		U02		1					97
DR BUS ADD ACK	L	C02K1		1-02	H		U01					7-7/8		97
DR BUS CYL ADD 0	L	A02U1		1-01	H		U02		1					98
DR BUS CYL ADD 1	L	C02U1		1-02	H		U01					7-1/8		98
DR BUS CYL ADD 2	L	A02L1		1-01	H		U02		1					99
DR BUS CYL ADD 2	L	C02L1		1-02	H		U01							99
DR BUS CYL ADD 1	L	A02C1		1-01	H		U02		1					100
DR BUS CYL ADD 1	L	C02C1		1-02	H		U01							100
DR BUS CYL ADD 4	L	A02F1		1-01	H		U02		1					101
DR BUS CYL ADD 4	L	C02F1		1-02	H		U01							101

AK110-F	HW288-V22(22) 11/06/73	19127	19127	19127	PAGE 12			
RUN NAME	A/P PIN NAME	UNDEK ORDER	HAY -	U UNAB MV PG 1	1 2 MEMARKS	LENGTH	EXCEPTIUMS	RUN NUMBER
DK BUS CYL ADD 5	L A02J1		1-01 *		1	3-5		104
DK BUS CYL ADD 5	L C02J1		1-07 *	U02				104
DK BUS CYL ADD 5	L C02J1			U01		7-7/8		104
DK BUS CYL ADD 5	L A02F1		1-01 *	U02				104
DK BUS CYL ADD 5	L C02F1		1-02 *	U01				104
DK BUS CYL ADD 5	L A02H1		1-01 *	U02				104
DK BUS CYL ADD 5	L C02H1		1-07 *	U01				104
DK BUS CYL ADD 5	L A02R1		1-01 *	U02				104
DK BUS CYL ADD 5	L C02R1		1-02 *	U01				104
DK BUS DC LU	L C01R2		1-01 *	2				104
DK BUS DC LU	L H02F2		1-02 *	1		12-0/8		104
DK BUS DC LU	L D02F2		1-03 *	U01				104
DK BUS DRY	L H02M1		1-01 *	1		3-5		104
DK BUS DRY	L D02M1		1-07 *	U01				104
DK BUS INDX PLUS	L H02M1		1-01 *	1		7-7/8		104
DK BUS INDX PLUS	L D02M1		1-02 *	U01				104
DK BUS LOG ADD INT	L A02T2		1-01 *	1				104
DK BUS LOG ADD INT	L D02D1		1-02 *	U01				104
DK BUS N/A/S MDY	L A02H2		1-01 *	1		9-0/8		109
DK BUS N/A/S MDY	L C02H2		1-02 *	U01				109
DK BUS ND CLK	L B02S1		1-01 *	1		7-4/8		110
DK BUS ND CLK	L D02S1		1-02 *	U01				110
DK BUS ND DATA	L B02S2		1-01 *	1		3-5		111
DK BUS ND DATA	L D02S2		1-02 *	U01				111
DK BUS RD DATA	L B02S2		1-01 *	1		7-7/8		111
DK BUS RD DATA	L D02S2		1-02 *	U01				112

AK110-F	HW288-V22(22) 11/06/73	19127	19127	19127	PAGE 13			
RUN NAME	A/P PIN NAME	UNDEK ORDER	HAY -	U UNAB MV PG 1	1 2 MEMARKS	LENGTH	EXCEPTIUMS	RUN NUMBER
DK BUS ND GATE	L R02R1		1-01 *		1	3-5		113
DK BUS RD GATE	L D02R1		1-02 *	U02				113
DK BUS RD GATE	L D02R1			U01		7-7/8		113
DK BUS W/STUNE	L A02M1		1-01 *	1				114
DK BUS W/STUNE	L C02M1		1-02 *	U01				114
DK BUS W/STUNE	L B02P2		1-01 *	1		7-7/8		114
DK BUS W/STUNE	L D02P2		1-02 *	U01				115
DK BUS MK05	L B02L1		1-01 *	1		7-4/8		115
DK BUS MK05	L D02L1		1-02 *	U01				115
DK BUS SEC CTR 0	L A02P2		1-01 *	1		3-5		116
DK BUS SEC CTR 0	L D02P2		1-02 *	U01				116
DK BUS SEC CTR 1	L A02P2		1-01 *	1		7-7/8		117
DK BUS SEC CTR 1	L D02P2		1-02 *	U01				117
DK BUS SEC CTR 2	L B02K2		1-01 *	1		9-0/8		118
DK BUS SEC CTR 2	L D02K2		1-02 *	U01				118
DK BUS SEC CTR 2	L B02K2		1-01 *	1		7-4/8		118
DK BUS SEC CTR 2	L D02K2		1-02 *	U01				119
DK BUS SEC CTR 3	L R02J1		1-01 *	1		3-5		119
DK BUS SEC CTR 3	L D02J1		1-02 *	U01				119
DK BUS SEC PLUS	L H02H2		1-01 *	1		7-4/8		120
DK BUS SEC PLUS	L D02H2		1-02 *	U01				120
DK BUS SEL DR 0	L A02J2		1-01 *	1		7-4/8		121
DK BUS SEL DR 0	L C02J2		1-02 *	U01				121
DK BUS SEL DR 0	L A02K2		1-01 *	1		7-4/8		121
DK BUS SEL DR 0	L C02K2		1-02 *	U01				121
DK BUS SEL DR 1	L A02L2		1-01 *	1		7-4/8		122
DK BUS SEL DR 1	L C02L2		1-02 *	U01				122
DK BUS SEL DR 2	L A02M2		1-01 *	1		7-4/8		123
DK BUS SEL DR 2	L D02M2		1-02 *	U01				123
DK BUS SEL UPPER MD	L B02M2		1-01 *	1		7-4/8		124
DK BUS SEL UPPER MD	L D02M2		1-02 *	U01				124

RAID-F RUN NAME	APP	PIN	ORDER	DATE	TIME	U	DNAME	RV	PG	I	A	Z	REMARKS	1-RAI-14 LENGTH	1987 EXCEPTIONS	PAGE 14 NUM NUMBER
DR BUS SIM	L	A02S7		1-01 *			U02						1			125
DR BUS SIR	L	U02C1		1-02 *									1	9-0/8		125
DR BUS SIM	L	A02H1		1-01 *			U01						1			126
DR BUS STRONG	L	U02H1		1-02 *									1	1-1/8		126
DR BUS STRONG	L	B02K1		1-01 *			U02						1			127
DR BUS AT CRK	L	U02K1		1-07 *									1	1-7/8		127
DR BUS AT CRK	L	A02F2		1-01 *			U02						1			128
DR BUS WT DATA CLR	L	C02F2		1-07 *									1	1-4/8		128
DR BUS WT DATA CLR	L	H02L2		1-01 *			U02						1			129
DR BUS WT GATE	L	H02L2		1-02 *									1	1-4/8		129
DR BUS WT GATE	L	R02P1		1-01 *			U02						1			130
DR BUS WT PRCT STATUS	L	U02P1		1-02 *									1	1-7/8		130
DR BUS WT PRCT STATUS	L	R02R2		1-01 *			U02						1			131
DR BUS WT PROTECT	L	U02R2		1-02 *									1	1-4/8		131
DR BUS WT PROTECT	L	F01R1		1-01 *	H		U01						1		HARD WIRE H TO WIRE	132
DRE (1)	H	F02R1		1-02 *	H								1	2-6/8		132
DRE (1)	H	F01R1		1-01 *	H		U01						1			133
DRIVE OK	H	F02R1		1-02 *	H								1			133
DRIVE IN	H	F02R1		1-02 *	H								1	2-6/8		133
DRIVE IN	H	F01R2		1-01 *	H		U01						1			134
DRIVE RESET	L	F02R2		1-02 *	H								1	2-6/8		134
DRIVE RESET	L	F02R2		1-02 *	H								1			135
DRIVE UNSAFE	H	F01R1		1-01 *	H		U01						1			135
DRIVE UNSAFE	H	F02R1		1-02 *	H								1	2-6/8		135
DRIVE UNSAFE	H	F01R2		1-01 *	H		U01						1			136
DRIVE UNSAFE	H	F02R2		1-02 *	H								1	2-6/8		136
DRY	H	F01R2		1-01 *	H		U01						1			136
DRY	H	F02R2		1-02 *	H								1	2-6/8		136
DRY	H	F01R2		1-01 *	H		U01						1			136
DRY	H	F02R2		1-02 *	H								1	2-6/8		136

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RAID-F RUN NAME	APP	PIN	ORDER	DATE	TIME	U	DNAME	RV	PG	I	A	Z	REMARKS	1-RAI-14 LENGTH	1987 EXCEPTIONS	PAGE 15 NUM NUMBER
END OF SYNC	L	F01R2		1-01 *	H		U01						1			137
END OF SYNC	L	F02R2		1-02 *	H								1	2-6/8		137
END OF SYNC	L	F01R2		1-01 *	H		U01						1			138
EX BIT	H	F02R2		1-02 *	H								1	2-6/8		138
EX BIT	H	F01R2		1-01 *	H		U01						1			139
EX BIT	H	F02R2		1-02 *	H								1	3-2/8		139
FILE DUNE	H	C01F1		1-01 *	H								1			140
FILE DUNE	H	C03F1		1-02 *	H								1			140
FILE EMPTY	H	B03R1		1-01 *			U02						1			140
FILE EMPTY	H	C03R2		1-02 *									1	6-0/8		140
FILE FULL	H	B03R1		1-01 *			U02						1			141
FILE FULL	H	C03R2		1-02 *									1	5-0/8		141
FILE FULL	H	B01U2		1-01 *	H		U01						1			142
FILE FULL	H	F02U2		1-02 *	H								1	2-6/8		142
FIRST SEEK DUNE	H	C01R1		1-01 *	H		U01						1			143
FIRST SEEK DUNE	H	C02R1		1-02 *	H								1			143
FIRST SEEK DUNE	H	C03R1		1-03 *	H								1	5-4/8		143
FIRST SEEK DUNE	H	C04R1		1-04 *	H								1			144
FIRST SEEK DUNE	H	C04R1		1-05 *	H								1	5-4/8		144
GATE DATA TO BUS U	L	C02A1		1-01 *	H		U01						1			145
GATE DATA TO BUS U	L	C03A1		1-02 *	H								1			145
GATE DATA TO BUS U	L	C04A1		1-03 *	H								1	10-6/8		145
GATE DATA TO BUS U	L	C04A1		1-04 *	H								1			145
GEN CLR	L	L01R2		1-01 *	H		U01						1			146
GEN CLR	L	R02R2		1-02 *									1			146
GEN CLR	L	C03R2		1-03 *									1			146
GEN CLR	L	F01R2		1-01 *	H		U01						1			146
GEN CLR	L	F02R2		1-02 *	H								1	2-6/8		146

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EXCEPTIONS

RUN NUMBER

RMK104.F

RUN NAME

A/P	PIN	ORDER	MAT -	U	DNAM	NY	PG	I	A	Z	MT-RANKS	1-041-74	1912/	PAGE 16
NAME	PIN	ORDER	NAME		NAME	NO	NO					LENGTH	EXCEPTIONS	RUN NUMBER
GND 01	CO1A1	J-01	H	1	001								HAND WIRE	147
GND 01	CO1C2	J-02	H	1	001								HAND WIRE	147
GND 01	A01Z	J-04	H	1	002								HAND WIRE	147
GND 01	A01C7	J-04	H	1	002								HAND WIRE	147
GND 01	A01K1	J-05	H	1	002								HAND WIRE	147
GND 01	A01K1	J-07	H	1	002								HAND WIRE	147
GND 01	A01S1	J-08	H	1	002								HAND WIRE	147
GND 01	A01S1	J-09	H	1	002								HAND WIRE	147
GND 01	A01V2	J-10	H	1	002								HAND WIRE	147
GND 01	B01C2	J-11	H	1	002								HAND WIRE	147
GND 01	B01E1	J-12	H	1	002								HAND WIRE	147
GND 01	B01E1	J-14	H	1	002								HAND WIRE	147
GND 01	B01V2	J-16	H	1	002								HAND WIRE	147
GND 01	CO1T1	J-17	H	1	001								HAND WIRE	147
GND 01	DO1T1	J-18	H	1	001								HAND WIRE	147
GND 01	EO1C2	J-19	H	1	001								HAND WIRE	147
GND 01	EO1T1	J-20	H	1	001								HAND WIRE	147
GND 01	FO1C2	J-22	H	1	001								HAND WIRE	147
GND 01	FO1T1	J-23	H	1	001								H TU WHERL	147
GND 01												73-2/4		
GND 02	A02B2	J-01	H	2	002								HAND WIRE	148
GND 02	A02C2	J-02	H	2	002								HAND WIRE	148
GND 02	A02M1	J-03	H	2	002								HAND WIRE	148
GND 02	A02P1	J-04	H	2	002								HAND WIRE	148
GND 02	A02R1	J-05	H	2	002								HAND WIRE	148
GND 02	A02S1	J-06	H	2	002								HAND WIRE	148
GND 02	A02T1	J-07	H	2	002								HAND WIRE	148
GND 02	A02V2	J-08	H	2	002								HAND WIRE	148
GND 02	A02U1	J-09	H	2	002								HAND WIRE	148
GND 02	A02B2	J-10	H	2	002								HAND WIRE	148
GND 02	B02C2	J-11	H	2	002								HAND WIRE	148
GND 02	B02D1	J-12	H	2	002								HAND WIRE	148
GND 02	B02E1	J-13	H	2	002								HAND WIRE	148
GND 02	B02T1	J-14	H	2	002								HAND WIRE	148
GND 02	C02V2	J-15	H	2	002								HAND WIRE	148
GND 02	C02C2	J-16	H	2	001								HAND WIRE	148
GND 02	C02T1	J-17	H	2	001								HAND WIRE	148
GND 02	D02C2	J-18	H	2	001								HAND WIRE	148
GND 02	D02T1	J-19	H	2	001								HAND WIRE	148
GND 02	E02C2	J-20	H	2	001								HAND WIRE	148
GND 02	E02T1	J-21	H	2	001								HAND WIRE	148
GND 02	F02C2	J-22	H	2	001								HAND WIRE	148
GND 02	F02T1	J-23	H	2	001								H TU WHERL	148
GND 02												68-2/4		

RMK104.F

RUN NAME

HMZ88.V22(22).11/06/73

PAGE 17

1-041-74

EXCEPTIONS

RUN NUMBER

A/P	PIN	ORDER	MAT -	U	DNAM	NY	PG	I	A	Z	MT-RANKS	1-041-74	1912/	PAGE 17
NAME	PIN	ORDER	NAME		NAME	NO	NO					LENGTH	EXCEPTIONS	RUN NUMBER
GND 03	A03C2	J-01	H	1	002								HAND WIRE	149
GND 03	A03D2	J-02	H	1	002								HAND WIRE	149
GND 03	A03E2	J-03	H	1	002								HAND WIRE	149
GND 03	A03F2	J-05	H	1	002								HAND WIRE	149
GND 03	A03H1	J-06	H	1	002								HAND WIRE	149
GND 03	A03F1	J-07	H	1	002								HAND WIRE	149
GND 03	A03E1	J-08	H	1	002								HAND WIRE	149
GND 03	A03T1	J-09	H	1	002								HAND WIRE	149
GND 03	A03U1	J-10	H	1	002								HAND WIRE	149
GND 03	A03V1	J-11	H	1	002								HAND WIRE	149
GND 03	B03C2	J-12	H	1	002								HAND WIRE	149
GND 03	B03T1	J-13	H	1	001								HAND WIRE	149
GND 03	C03C2	J-14	H	1	001								HAND WIRE	149
GND 03	C03T1	J-15	H	1	001								HAND WIRE	149
GND 03	D03C2	J-16	H	1	001								HAND WIRE	149
GND 03	D03T1	J-17	H	1	001								HAND WIRE	149
GND 03	E03C2	J-18	H	1	001								HAND WIRE	149
GND 03	E03T1	J-19	H	1	001								HAND WIRE	149
GND 03	F03C2	J-20	H	1	001								HAND WIRE	149
GND 03	F03T1	J-21	H	1	001								H TU WHERL	149
GND 03												62-4/4		
GND 04	A04H2	J-01	H	1	002								HAND WIRE	150
GND 04	A04C2	J-02	H	1	002								HAND WIRE	150
GND 04	A04M1	J-03	H	1	002								HAND WIRE	150
GND 04	A04P1	J-04	H	1	002								HAND WIRE	150
GND 04	A04K1	J-05	H	1	002								HAND WIRE	150
GND 04	A04S1	J-06	H	1	002								HAND WIRE	150
GND 04	A04T1	J-07	H	1	002								HAND WIRE	150
GND 04	A04V2	J-08	H	1	002								HAND WIRE	150
GND 04	B04B2	J-09	H	1	002								HAND WIRE	150
GND 04	B04C2	J-10	H	1	002								HAND WIRE	150
GND 04	B04U1	J-11	H	1	002								HAND WIRE	150
GND 04	B04E1	J-12	H	1	002								HAND WIRE	150
GND 04	B04T1	J-13	H	1	002								HAND WIRE	150
GND 04	B04V2	J-14	H	1	002								HAND WIRE	150
GND 04	C04C2	J-15	H	1	001								HAND WIRE	150
GND 04	C04T1	J-16	H	1	001								HAND WIRE	150
GND 04	D04C2	J-17	H	1	001								HAND WIRE	150
GND 04	D04T1	J-18	H	1	001								HAND WIRE	150
GND 04	E04C2	J-19	H	1	001								HAND WIRE	150
GND 04	F04T1	J-20	H	1	001								HAND WIRE	150
GND 04	F04C2	J-21	H	1	001								H TU WHERL	150
GND 04	F04T1	J-22	H	1	001								H TU WHERL	150
GND 04												65-0/6		

RR1104-F	NUM NAME	HW288-V22(22) 11/06/73	AP/ PIN NAME	ORDER PIN	DAY	ORDER	DRAM	RV	PG	A	REMARKS	1-MAI-74	1927	PAGE 19
NUM NAME												LENGTH	EXCEPTIONS	NUM
ME (1)			H	H01B2		1-01 * H		U01		1				151
ME (1)			H	F01T2		1-02 * H		U01		2			HARD WIRE H TU WHEMR	151
ME (1)			H	F01T2		1-03 * H		U01				1-2/8		151
HEAD + CHK SUM			H	F01P2		1-01 * H		U01		1				154
HEAD + CHK SUM			H	F02P2		1-02 * H		U01				2-6/8		154
HEAD OK (1)			L	F01U2		1-01 * H		U01		1				153
HEAD OK (1)			L	F02U2		1-02 * H		U01				2-6/8		153
HEADER (1)			H	C01U1		1-01 * H		U01		1				154
HEADER (1)			H	C03U1		1-02 * H		U01				3-2/8		154
ISA (0)			H	F01K2		1-01 * H		U01		1				155
ISA (0)			H	F03K2		1-02 * H		U01				3-2/8		155
ID 0 (1)			H	F01K1		1-01 * H		U01		1				156
ID 0 (1)			H	F04K1		1-02 * H		U01				2-6/8		156
ID 0 (1)			H	F01K1		1-01 * H		U01		1				157
ID 1 (1)			H	F02F1		1-02 * H		U01				2-6/8		157
ID 2 (1)			H	F01M1		1-01 * H		U01		1				158
ID 2 (1)			H	F02M1		1-02 * H		U01				2-6/8		158
IDK (1)			H	F01A1		1-01 * H		U01		1				159
IDK (1)			H	H02V2		1-02 * H		U01		2				159
IDK (1)			H	K04A1		1-03 * H		U01				6-6/8		159
IDK (1)			H	F01K1		1-01 * H		U01		1				160
INTERNAL ADD			H	F02K1		1-02 * H		U01				2-6/8		160
INTERNAL ADD			H	R03J2		1-01 * H		U02		1				161
INTERNAL ADD			H	C03K2		1-02 * H						5-0/8		161

COMPARISON

RR1104-F	NUM NAME	HW288-V22(22) 11/06/73	AP/ PIN NAME	ORDER PIN	DAY	ORDER	DRAM	RV	PG	A	REMARKS	1-MAI-74	1927	PAGE 19
NUM NAME												LENGTH	EXCEPTIONS	NUMBER
INIT			H	F01T2		1-01 * H		U01		2				162
INIT			H	F02T2		1-02 * H		U01		1				162
INIT			H	F03T2		1-03 * H		U01				5-4/8		162
INIT			L	F01A1		1-01 * H		U01		2				163
INIT			L	F02A1		1-02 * H		U01		1				163
INIT			L	F03A1		1-03 * H		U01		2				163
INIT			L	F04A1		1-04 * H		U01				6-2/8		163
INIT			H	D01A1		1-01 * H		U01		1				164
INIT			H	D03A1		1-02 * H		U01				3-2/8		164
INIT			H	D01M1		1-01 * H		U01		1				165
INIT			H	D03M1		1-02 * H		U01				3-2/8		165
INIT			H	D01C1		1-01 * H		U01		1				166
INIT			H	D03C1		1-02 * H		U01				3-2/8		166
INIT			H	D01U1		1-01 * H		U01		1				167
INIT			H	D03U1		1-02 * H		U01				3-2/8		167
INIT			H	D01K1		1-01 * H		U01		1				168
INIT			H	D03K1		1-02 * H		U01				3-2/8		168
INIT			H	D01F1		1-01 * H		U01		1				169
INIT			H	D03F1		1-02 * H		U01				3-2/8		169
INIT			H	D01H1		1-01 * H		U01		1				170
INIT			H	D03H1		1-02 * H		U01				3-2/8		170
INIT			H	D01J1		1-01 * H		U01		1				171
INIT			H	D03J1		1-02 * H		U01				3-2/8		171
INIT			H	D01K1		1-01 * H		U01		1				172
INIT			H	D03K1		1-02 * H		U01				3-2/8		172

COMPARISON

RELID-F	APP	PIN	NAME	GROUP	DATE	TIME	UNAM	RV	PG	A	Z	REMARKS	1-001-74	1977	PAGE 22
RUN NAME				ORDER		ORDER							DATE/TM	EXCEPTIONS	KUM
				PIN		PIN									NUMBER
LAST SKCTUM	L		C02U2		1-01	H	U01			1			HARD WIRE	197	
LAST SECTUR	L		C03U2		1-02	H	U01			1			H TU WHEBR	197	
LAST SECTUM	L												2-06/8		
LAST ATRD DUNE	L		C01L1		1-01	H	U01			1			HARD WIRE	198	
LAST ATRD DUNE	L		C04U1		1-02	H	U01			1			H TU WHEBR	198	
LAST ATRD DUNE	L												3-02/8		
LOAD MRBA HI	L		F03V2		1-01	H	U01			1			HARD WIRE	199	
LOAD MRBA HI	L		E04V2		1-02	H	U01			1			H TU WHEBR	199	
LOAD MRBA HI	L												2-06/8		
LOAD MRBA LU	L		E03H2		1-01	H	U01			1			HARD WIRE	200	
LOAD MRBA LU	L		F04H2		1-02	H	U01			1			H TU WHEBR	200	
LOAD MRBA LU	L												2-06/8		
LOAD MKCS HI	L		F03H1		1-01	H	U01			1			HARD WIRE	201	
LOAD MKCS HI	L		E04H1		1-02	H	U01			1			H TU WHEBR	201	
LOAD MKCS HI	L												3-06/8		
LOAD MKCS LU	L		F03H1		1-01	H	U01			1			HARD WIRE	202	
LOAD MKCS LU	L		E04H1		1-02	H	U01			1			H TU WHEBR	202	
LOAD MKCS LU	L												3-06/8		
LOAD MRDA HI	L		F04K2		1-01	H	U01			1			HARD WIRE	203	
LOAD MRDA HI	L		F04K2		1-02	H	U01			1			H TU WHEBR	203	
LOAD MRDA HI	L												2-06/8		
LOAD MRDA LU	L		F03F2		1-01	H	U01			1			HARD WIRE	204	
LOAD MRDA LU	L		E04F2		1-02	H	U01			1			H TU WHEBR	204	
LOAD MRDA LU	L												2-06/8		
LOAD MRWC HI	L		F03H1		1-01	H	U01			1			HARD WIRE	205	
LOAD MRWC HI	L		F04H1		1-02	H	U01			1			H TU WHEBR	205	
LOAD MRWC HI	L												3-06/8		
LOAD MRWC LU	L		F03H1		1-01	H	U01			1			HARD WIRE	206	
LOAD MRWC LU	L		E04H1		1-02	H	U01			1			H TU WHEBR	206	
LOAD MRWC LU	L												3-06/8		
* CIA	L		A02U2		1-01	H	U01			1					207
* CIA	L		D02U2		1-02	H	U01			1					207
* CIA	L												8-06/8		

CONFIDENTIAL

RELID-F	APP	PIN	NAME	GROUP	DATE	TIME	UNAM	RV	PG	A	Z	REMARKS	1-001-74	1977	PAGE 23
RUN NAME				ORDER		ORDER							DATE/TM	EXCEPTIONS	KUM
				PIN		PIN									NUMBER
NEW FUN	L		C01R1		1-01	H	U01			2			HARD WIRE	208	
NEW FUN	L		C02R1		1-02	H	U01			1			HARD WIRE	208	
NEW FUN	L		C03R1		1-03	H	U01						H TU WHEBR	208	
NEW FUN	L												5-04/8		
RPR FN (1)	H		C03V2		1-01	H	U01			1					209
RPR FN (1)	H		E04H2		1-02	H	U01								209
RPR FN (1)	H												7-06/8		
RPR MEU	H		E03J2		1-01	H	U01			1			HARD WIRE	210	
RPR MEU	H		E04J2		1-02	H	U01			1			H TU WHEBR	210	
RPR MEU	H												2-06/8		
REM (1)	H		E03H1		1-01	H	U01			1			HARD WIRE	211	
REM (1)	H		F04H1		1-02	H	U01			1			H TU WHEBR	211	
REM (1)	H												3-06/8		
OUT HUFF FULL (1)	H		H03L2		1-01	H	U02			1					212
OUT HUFF FULL (1)	H		C03L2		1-02	H	U02								212
OUT HUFF FULL (1)	H												6-06/8		
PULL NONE	L		F01U1		1-01	H	U01			1			HARD WIRE	213	
PULL NONE	L		F02U1		1-02	H	U01			1			H TU WHEBR	213	
PULL NONE	L												2-06/8		
PRGRMHL (1)	H		F03H2		1-01	H	U01			1			HARD WIRE	214	
PRGRMHL (1)	H		F03H2		1-02	H	U01			1			H TU WHEBR	214	
PRGRMHL (1)	H												2-06/8		
R/H/S RUT	H		F01U2		1-01	H	U01			1			HARD WIRE	215	
R/H/S RUT	H		E02U2		1-02	H	U01			1			H TU WHEBR	215	
R/H/S RUT	H												2-06/8		
RD DATASRT JATA	H		F01M1		1-01	H	U01			1			HARD WIRE	216	
RD DATASRT JATA	H		F02M1		1-02	H	U01			1			H TU WHEBR	216	
RD DATASRT JATA	H												3-06/8		
RD GATE (1)	H		E03H2		1-01	H	U02			1					217
RD GATE (1)	H		H02T2		1-02	H	U02								217
RD GATE (1)	H												9-06/8		
RD GATE FW	H		F01U2		1-01	H	U01			1			HARD WIRE	218	
RD GATE FW	H		F02U2		1-02	H	U01			1			H TU WHEBR	218	
RD GATE FW	H												2-06/8		

RELID.F RUN NAME	HRDZHM-V22(72)	11/06/73	DATE	TIME	UNIT	MARKS	1-DATE	19127	PAGE 26
A/P	PIN	UNDEK	PIN	UNDEK	MARKS	MARKS	LENGTH	EXCEPTIONS	RUN NUMBER
H	F04S1	1-01	H	U01	1			HARD WIRE	241
H	F04S1	1-02	H	U01	1		2-6/8	H TU WIRE	241
H	F04U1	1-01	H	U01	1			HARD WIRE	242
H	F04U1	1-02	H	U01	1		2-6/8	H TU WIRE	242
H	F04V1	1-01	H	U01	1			HARD WIRE	243
H	F04V1	1-02	H	U01	1		2-6/8	H TU WIRE	243
L	F04S1	1-01	H	U01	1			HARD WIRE	244
L	F04S2	1-02	H	U01	1		3-4/8	H TU WIRE	244
H	F04P2	1-01	H	U02	1			HARD WIRE	245
H	F04S1	1-02	H	U01	2			HARD WIRE	245
H	F04S1	1-03	H	U01	1		11-6/8	H TU WIRE	245
H	F04V1	1-01	H	U02	1			HARD WIRE	246
H	F04H1	1-02	H	U01	2			HARD WIRE	246
H	F04H1	1-03	H	U01	1		10-6/8	H TU WIRE	246
H	F04M1	1-01	H	U02	1			HARD WIRE	247
H	F04C1	1-02	H	U01	2			HARD WIRE	247
H	F04C1	1-03	H	U01	1			HARD WIRE	247
H	F04C1	1-04	H	U01	1		14-4/8	H TU WIRE	247
H	F04K2	1-01	H	U02	1			HARD WIRE	248
H	F04M1	1-02	H	U01	2			HARD WIRE	248
H	F04N1	1-03	H	U01	1			HARD WIRE	248
H	F04U1	1-04	H	U01	1		15-0/8	H TU WIRE	248
H	F04J2	1-01	H	U02	1			HARD WIRE	249
H	F04K1	1-02	H	U01	2			HARD WIRE	249
H	F04K1	1-03	H	U01	1			HARD WIRE	249
H	F04K1	1-04	H	U01	1		11-4/8	H TU WIRE	249
H	F04J2	1-01	H	U02	1			HARD WIRE	250
H	F04P1	1-02	H	U01	2			HARD WIRE	250
H	F04P1	1-03	H	U01	1			HARD WIRE	250
H	F04U1	1-04	H	U01	1		11-6/8	H TU WIRE	250

RELID.F RUN NAME	HRDZHM-V22(72)	11/06/73	DATE	TIME	UNIT	MARKS	1-DATE	19127	PAGE 27
A/P	PIN	UNDEK	PIN	UNDEK	MARKS	MARKS	LENGTH	EXCEPTIONS	RUN NUMBER
H	F04C1	1-01	H	U02	1			HARD WIRE	251
H	F04M1	1-02	H	U02	2			H TU WIRE	251
H	F04H1	1-03	H	U01	1		13-2/8	H TU WIRE	251
H	F04J1	1-01	H	U01	1			HARD WIRE	252
H	F04J1	1-02	H	U01	2			HARD WIRE	252
H	F04J1	1-03	H	U01	1		12-6/8	H TU WIRE	252
H	F04V1	1-01	H	U02	1			HARD WIRE	253
H	F04K1	1-02	H	U01	2			HARD WIRE	253
H	F04K1	1-03	H	U01	1		13-2/8	H TU WIRE	253
H	F04H1	1-01	H	U02	1			HARD WIRE	254
H	F04J1	1-02	H	U01	2			HARD WIRE	254
H	F04J1	1-03	H	U01	1		12-6/8	H TU WIRE	254
H	F04P1	1-01	H	U02	1			HARD WIRE	255
H	F04M1	1-02	H	U01	2			HARD WIRE	255
H	F04M1	1-03	H	U01	1		12-4/8	H TU WIRE	255
H	F04S2	1-01	H	U02	1			HARD WIRE	256
H	F04M1	1-02	H	U01	2			HARD WIRE	256
H	F04M1	1-03	H	U01	1		12-4/8	H TU WIRE	256
H	F04K1	1-01	H	U02	1			HARD WIRE	257
H	F04P1	1-02	H	U01	2			HARD WIRE	257
H	F04P1	1-03	H	U01	1		13-2/8	H TU WIRE	257
H	F04H1	1-01	H	U01	1			HARD WIRE	258
H	F04M1	1-02	H	U01	1		2-6/8	H TU WIRE	258
H	F04S1	1-01	H	U01	1			HARD WIRE	259
H	F04S1	1-02	H	U01	1		2-6/8	H TU WIRE	259
H	F04U1	1-01	H	U01	1			HARD WIRE	260
H	F04U1	1-02	H	U01	1		2-6/8	H TU WIRE	260

