

**RK11-D**  
**disk drive controller**  
**engineering drawings**

digital equipment corporation • maynard, massachusetts



## CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

SEQUENCE	SEQUENCE
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BUS CONTROL	D-CS-M7257-0-1
BACK PANEL INTERCONNECTION	D-IC-RK11-D-3
RK11-D FUNCTION FLOWS	D-FD-RK11-D-9
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WIRED ASSEMBLY	C-IA-7009142-0-0
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SOFTWARE LIST	A-SL-RK11-D-7
ETCH/WIRE LIST	K-WL-RK11-D-2

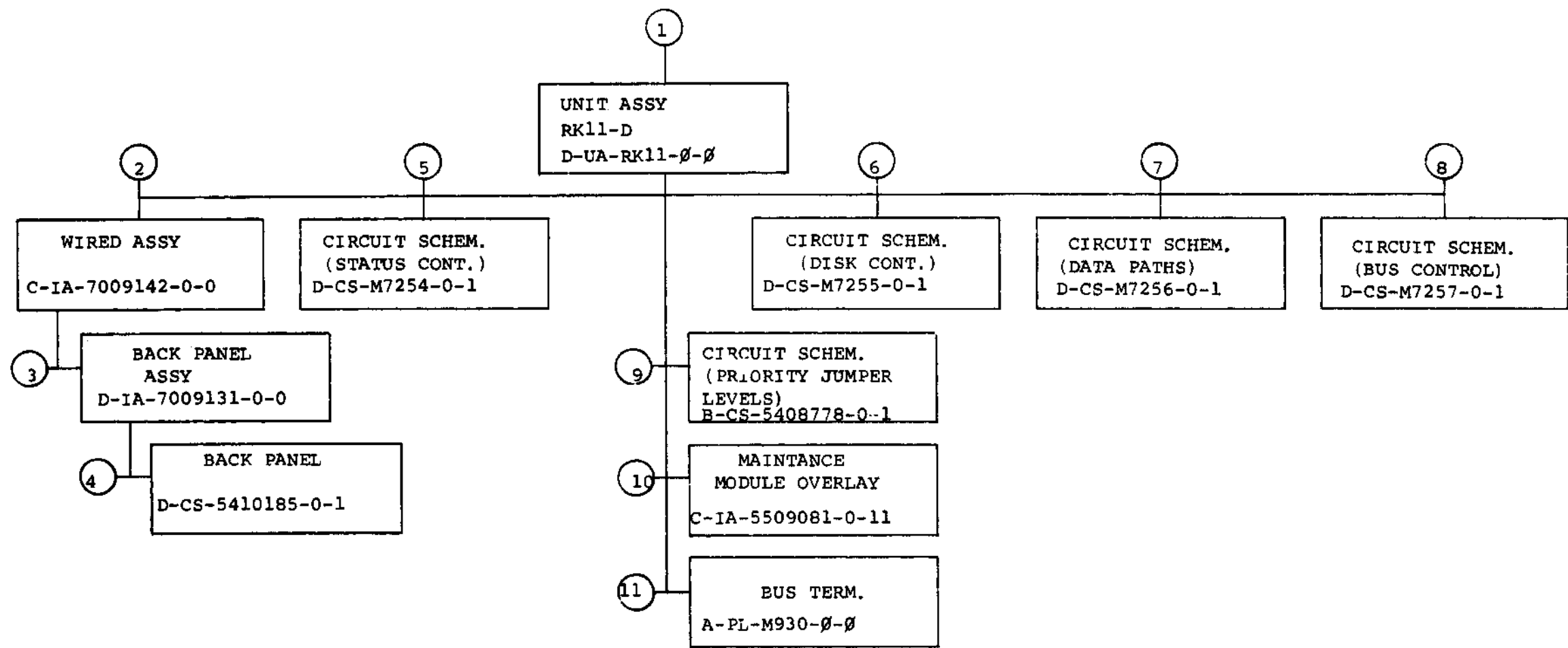
UNIT VARIATIONS		PRINT SET		
VAR	TITLE	1	2	3
RK11-D	DISK CONTROL	X		
RK11-E	DISK CONTROL	X		
RK11-DE	RK11-D, RK05-DE (TALL CAB, 861 115V, 60HZ)	X		
RK11-DF	RK11-D, RK05-DF (TALL CAB, 861, 230V, 60HZ)	X		
RK11-DH	RK11-D, RK05-DH (TALL CAB, 861, 115V, 50 HZ)	X		
RK11-DJ	RK11-D, RK05-DJ (TALL CAB, 861, 230V, 50 HZ)	X		
RK11J DE	RK11-D RK05J DE	X		
RK11J DF	RK11-D RK05J DF	X		
RK11J DH	RK11-D RK05J-DH	X		
RK11J DJ	RK11-D RK05J-DJ	X		
RK11J DK	RK11-D RK05J-DK	X		
RK11J DL	RK11-D RK05J-DL	X		
RK11J DM	RK11-D RK05J-DM	X		
RK11J DN	RK11-D RK05J-DN	X		

NOTE: USE RK11-D OPTION HARNESS 7009559 IN 11/40 SYSTEMS WITH S/N GREATER THAN 6000 AND 11/45 SYSTEMS WITH S/N GREATER THAN 2000. OLDER MACHINES REQUIRE RK11-D POWER HARNESS 7008992.

PDP11/15 AND PDP11/20 SYSTEM AND Ball-ES BOXES USE NO POWER HARNESS OTHER THAN THAT SUPPLIED INTERNAL TO THE BOX. Ball-D BOXES REQUIRE RK11-D POWER HARNESS 7008992.

REVISIONS	CHG. NO.	REV	USED ON OPTION/MODEL	DRN.	DATE	TITLE	SIZE	CODE	NUMBER	REV
		CHG. NO.		CHK'D.	DATE					
		DATE		PROJ ENG.	DATE					
3-74	RK11D-14	K	E. WILSON	12-72						
4-74	RK11D-15	L	GILBERT	12-72						
5-74	RK11D-16	M	T. ORR	12-72						
7-75	RK11D-17	N	R. DOOLEY	12-72						
10-75	RK11D-18	P	R. EULTON	12-72						

SHEET 1 OF 4



TITLE	SHEET	SIZE	CODE	NUMBER	REV
DISK CONTROL	2 of 4	B	DD	RK11-D	P

CUSTOMER PRINT SET		ELECTRICAL					CUSTOMER PRINT SET		ELECTRICAL						
1	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	1	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		1	D-UA-RK11-0-0	C	1	UNIT ASSY (RK11-D)		X		8	D-CS-M7257-0-1	#	6	CIRCUIT SCHEMATIC (BUS CONT.)	
X			D-MU-RK11-D-1	*	1	MODULE UTILIZATION (RK11-D)					K-CO-M7257-0-4		1	X-Y COORDINATE HOLE LOCATION	
X			A-PL-RK11-D-1	*	1	MODULE UTILIZATION (RK11-D) PL					D-AH-M7257-0-5		1	ASSY DRILLING HOLE LOCATION	
			D-IA-7008992-0-0		1	POWER HARNESS (REF)					B-MH-M7257-0-6		1	MODULE ECO HISTORY	
X			D-IC-RK11-D-3	C	4	BACK PANEL INTERCONNECTION									
X			D-IA-7009559-0-0	#	1	OPTION HARNESS									
X		2	C-IA-7009142-0-0	B	1	WIRED ASSY (RK11-D)				9	B-CS-5408778-0-1		1	CIRCUIT SCHEMATIC (PRIORITY JUMPER LEVELS)	
											C-IA-5408778-0-0		1	PRIORITY JUMPER LEVEL #5	
											D-IA-5008777-0-0		1	ETCH BOARD	
								X		10	A-SS-5509081-0-11	#		MAINTENANCE MODULE OVERLAY (RK11-D)	
		3	D-IA-7009131-0-0		1	BACK PANEL								MAINTENANCE MODULE OVERLAY	
X		4	D-CS-5410185-0-1	#	1	CIRCUIT SCHEMATIC (BACKPANEL)		X			D-CC-RK05-0-15	#		RK05 OPTION CONFIGURATION (REF)	
			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									
C			K-WL-RK11-D-2	F	1	ETCH/WIRE LIST (RK11-D)		X		11	A-PL-M930-0-0	#		BUS TERMINATOR	
X		5	D-CS-M7254-0-1	#	6	CIRCUIT SCHEMATIC (STATUS CONT)				12	A-SP-RK11-D-4	A	10	RK11-D ENGINEERING SPECS	
			K-CO-M7254-0-4		1	X-Y COORDINATE HOLE LOCATION					A-SP-RK11-D-5	A	5	RK11-D CHECK OUT PROCEDURE	
			D-AH-M7254-0-5		1	ASSY DRILLING HOLE LOCATION					A-AL-RK11-D-6	*	1	RK11-D ACCESSORY LIST	
			B-MH-M7254-0-6		1	MODULE ECO HISTORY		X			A-PL-RK11-D-7	A	1	RK11-D SOFTWARE LIST	
								X			A-SP-RK11-D-8	A	4	RK11-D ACCEPTANCE PROCEDURE	
X		6	D-CS-M7255-0-1	#	7	CIRCUIT SCHEMATIC (DISK CONT.)		X			D-FD-RK11-D-9	*	5	RK11-D, E FUNCTION FLOWS	
			K-CO-M7255-0-4		1	X-Y COORDINATE HOLE LOCATION					B-DD-RK11-TA			RK11-D, E TESTER	
			D-AH-M7255-0-5		1	ASSY DRILLING HOLE LOCATION					A-SP-RK11-0-2		23	DISK SYSTEM MANUFACTURING PROCEDURES (REF)	
			B-MH-M7255-0-6		1	MODULE ECO HISTORY									
X		7	D-CS-M7256-0-1	#	7	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		MECHANICAL					CUSTOMER PRINT SET		MECHANICAL						
1	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	1	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	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  
C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT  
S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED

# = PRINT OF DOCUMENT IS LATEST REVISION LEVEL

TITLE DISK CONTROL

SHEET 4 OF 4  
SIZE CODE B DD

NUMBER RK11-D

REV P





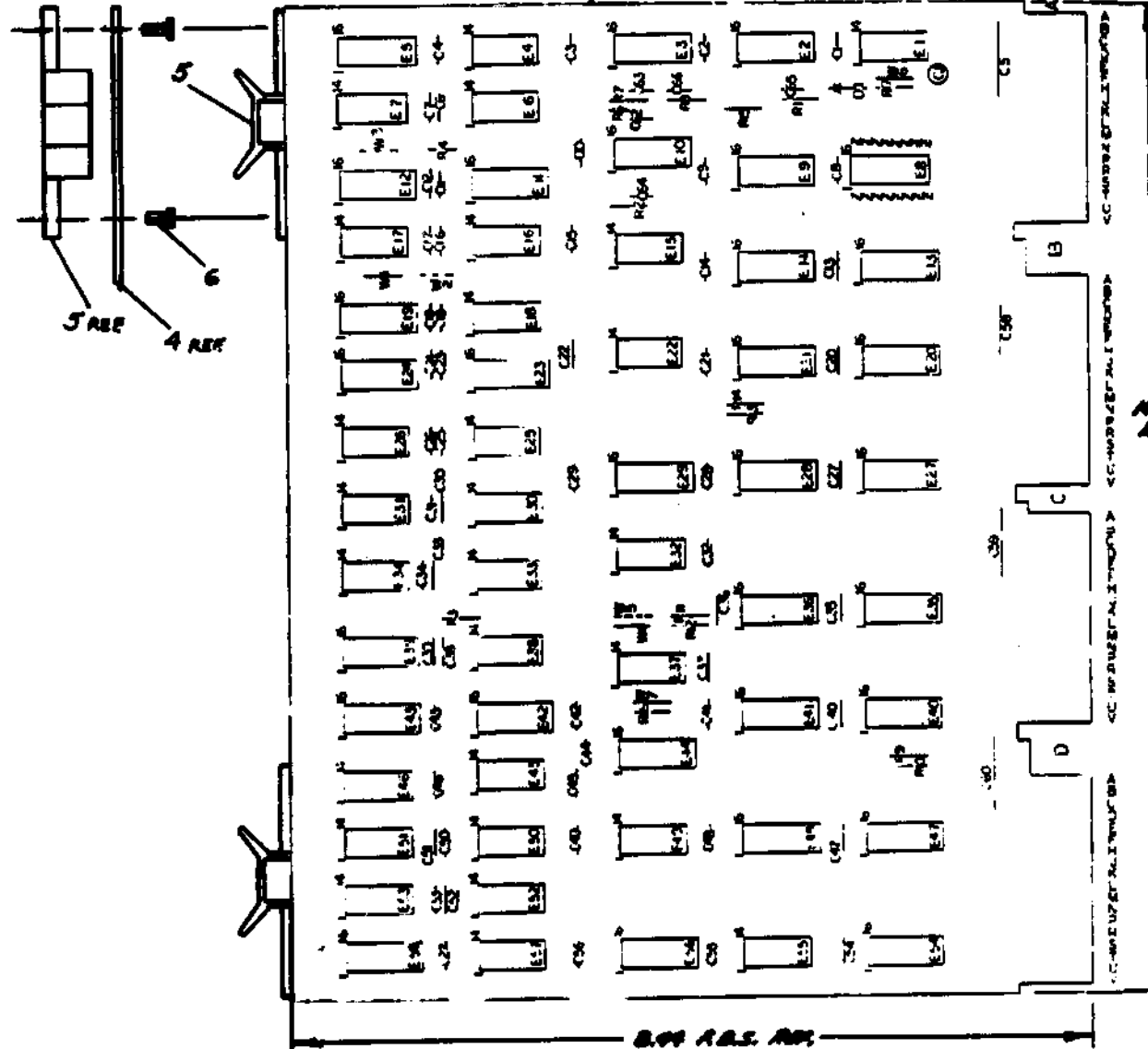


**NOTES:**

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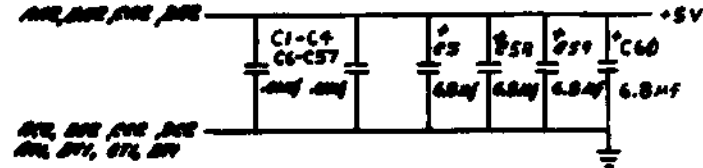
IF NECESSARY USE I.C. DEC 8876 P/N 1910647  
 IC DEC 384 P/N 1909486 OR 5384 P/N 1910394 MAY BE SUBSTITUTED FOR 7384 IN E26. E1 MUST BE A 7384

**PIN NOMENCLATURE MODULE RKII-D**



QTY	REF DESIGNATION	DESCRIPTION	PART NO.
1	Q1	TRANSISTOR DEC 6534B	1503409-01
1	E9	IC SOCKET	1209838
4	W1, W4, W6, W7	ACCOUNTED JUMPER 1-2007-1	5009185
1	E27	J.C. DEC 7426	1903650
2	E23, E41	J.C. DEC 7426	1900801
1	E25	J.C. DEC 8846	1903418
1	E29	J.C. DEC 7426	1900802
2	E17, E52	J.C. DEC 7426	1902552
1	E30	J.C. DEC 7400	1901453
1	E48	J.C. DEC 7414	1903867
5	E21, E22, E28, E29, E40	J.C. DEC 7418	1900918
4	E12, E19, E24, E36	J.C. DEC 7402	1900630
1	E57	J.C. DEC 7426	1902887
2	E67, E37	J.C. DEC 7400	1903801
1	E53	J.C. DEC 7400	1903801
2	E18, E22	J.C. DEC 7407	1900801
2	E1, E26	J.C. DEC 7400	1903801
1	E30	J.C. DEC 8841	1903801
2	E2, E3, E10	J.C. DEC 7418	1900918
2	E9, E12, E44	J.C. DEC 7402	1900630
2	E31, E32	J.C. DEC 7400	1903801
1	E16	J.C. DEC 7410	1900776
2	E10, E34, E49	J.C. DEC 7400	1903801
2	E46, E50	J.C. DEC 7402	1900630
2	W4, W6, W7, W8, W9	J.C. DEC 7426	1903650
1	E11	J.C. DEC 7400	1903801
1	E25	J.C. DEC 7407	1900801
2	E51, E53	J.C. DEC 7400	1903801
1	E45	J.C. DEC 7400	1903801
3	R4, R6, R7	RES. 750 Ω 1/4 W 5%	1901401
2	R3, R11, R12	RES. 330 Ω 1/4 W 5%	190295
3	R1, R18, R16	RES. 1K Ω 1/4 W 5%	1900802
1	R2	RES. 47K Ω 1/4 W 5%	190177
1	R8	RES. 2K Ω 1/4 W 5%	1900802
4	R5, R6, R7, R8	RES. 10 Ω 1/4 W 5%	1900802
1	R17	RES. 470 Ω 1/4 W 5%	1900316
1	D1	DIODE IN748A 3.9V	1100122
2	C62, C63	CAP. 47P 100V 25 A.M.	1900001
1	C65	CAP. 200P 100V 5% A.M.	1900001
1	C64	CAP. 100P 100V 5% A.M.	1900001
1	C66	CAP. 100P 100V 5% A.M.	1900018
36	C1-C4, C6-C57	CAP. 0.1/100V 5% AXIAL	1900640
4	C5, C98, C59, C60	CAP. 0.01/50V 5% AXIAL	1900001
2		DIODE (1N4001-1N4002) STANDARD	1900001
2		DIODE (1N4001-1N4002) SPECIAL	1900001
1		STANDARD OUTPUT BUFFER	1900001
2		MODULE AND MODULE	1900001
2		CONNECTION AND GROUP	1900001
2		X-Y COORDINATE UNIT DRIVER	1900001

I.C. DEC 7413	8	16
I.C. DEC 7416	8	16
I.C. DEC 7384	1	8
I.C. DEC 9018	8	16
I.C. DEC 7496	12	3
J.C. DEC 7426	8	16
J.C. DEC 7400	8	16
J.C. DEC 7407	12	3
J.C. DEC 8846	8	16
IC TYPE	QTY	4 89



**PARTS LIST**

ETCH BOARD REV E

DEC 6534B	NONE
IN748A	IN748A

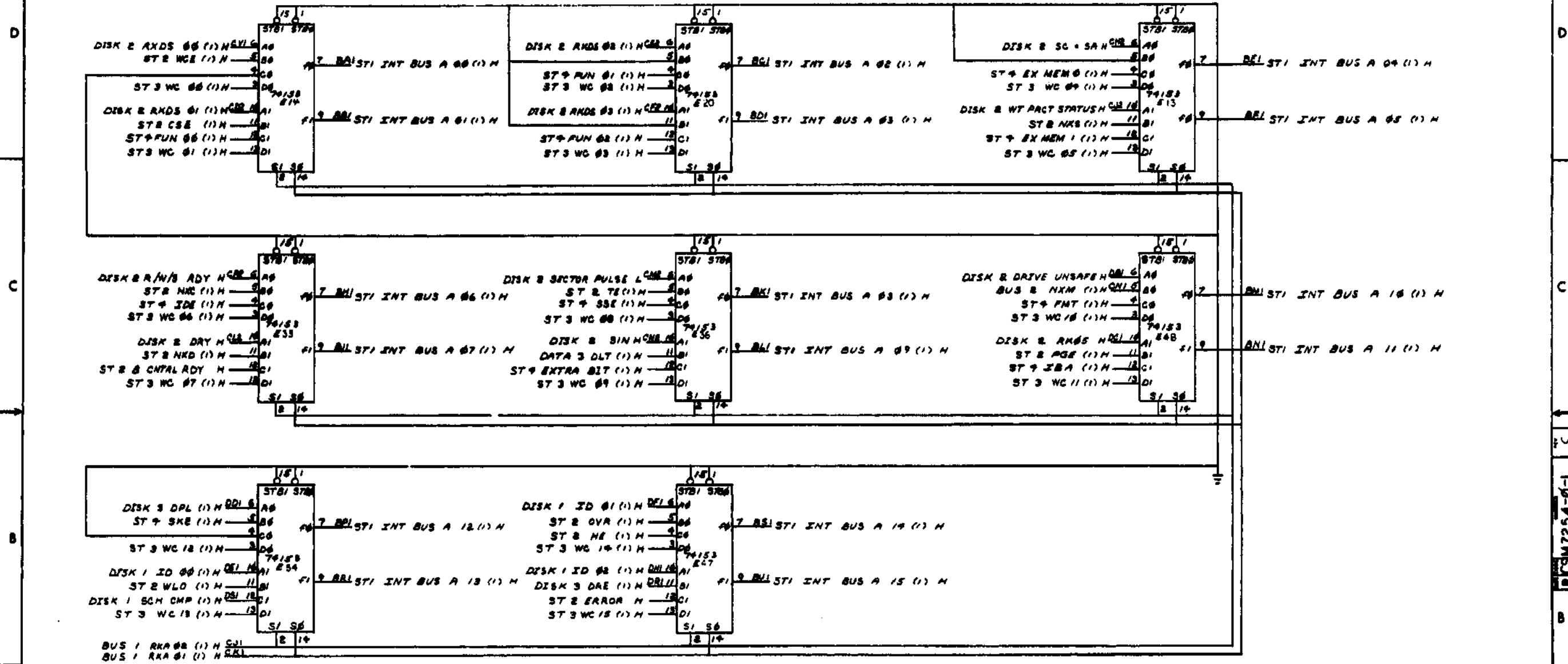
SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.
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STATUS CONTROL RKII-D

DCS M7254-G-1

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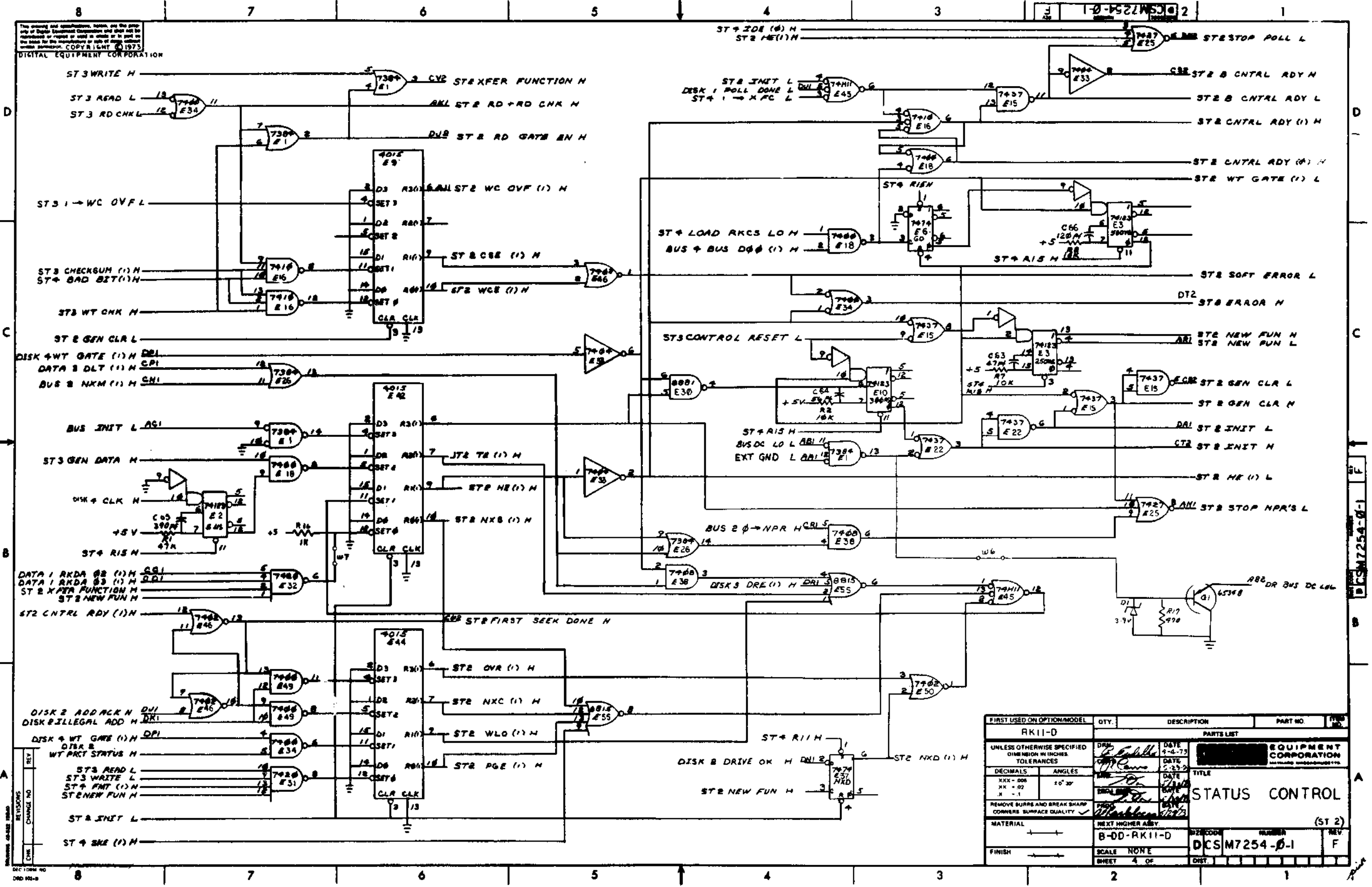
- NOTES:**
1. CUT W3 FOR 16 BIT OPERATION (RK11-D)
  2. CUT W1 FOR 18 BIT OPERATION (RK11-B)  
CUT W2 FOR 16 BIT OPERATION (RK11-D)
  3. CUT W5 FOR NORMAL OPERATION (CHECKS HEADER 16 TIMES BEFORE FLAGGING SEEK ERROR)  
CUT W4 FOR RK11-C COMPATIBILITY (CHECKS HEADER ONCE)

FIRST USED ON OTHER MODEL		QTY.	DESCRIPTION	PART NO.
RK11-D				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		PARTS LIST		
DECIMALS	ANGLES	EQUIPMENT CORPORATION		
.XX - .00	10' 30"	STATUS CONTROL (ST 1)		
.XX - .00		B-DD-RK11-D		
.X - .1		DCSM7254-01		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		FINISH		
MATERIAL		NEXT HIGHER ASY.		
FINISH		SCALE NONE		
		DWT. 5 GP		

REV. 1  
REV. 2  
REV. 3  
REV. 4  
REV. 5  
REV. 6  
REV. 7  
REV. 8  
REV. 9  
REV. 10  
REV. 11  
REV. 12  
REV. 13  
REV. 14  
REV. 15  
REV. 16  
REV. 17  
REV. 18  
REV. 19  
REV. 20  
REV. 21  
REV. 22  
REV. 23  
REV. 24  
REV. 25  
REV. 26  
REV. 27  
REV. 28  
REV. 29  
REV. 30  
REV. 31  
REV. 32  
REV. 33  
REV. 34  
REV. 35  
REV. 36  
REV. 37  
REV. 38  
REV. 39  
REV. 40  
REV. 41  
REV. 42  
REV. 43  
REV. 44  
REV. 45  
REV. 46  
REV. 47  
REV. 48  
REV. 49  
REV. 50

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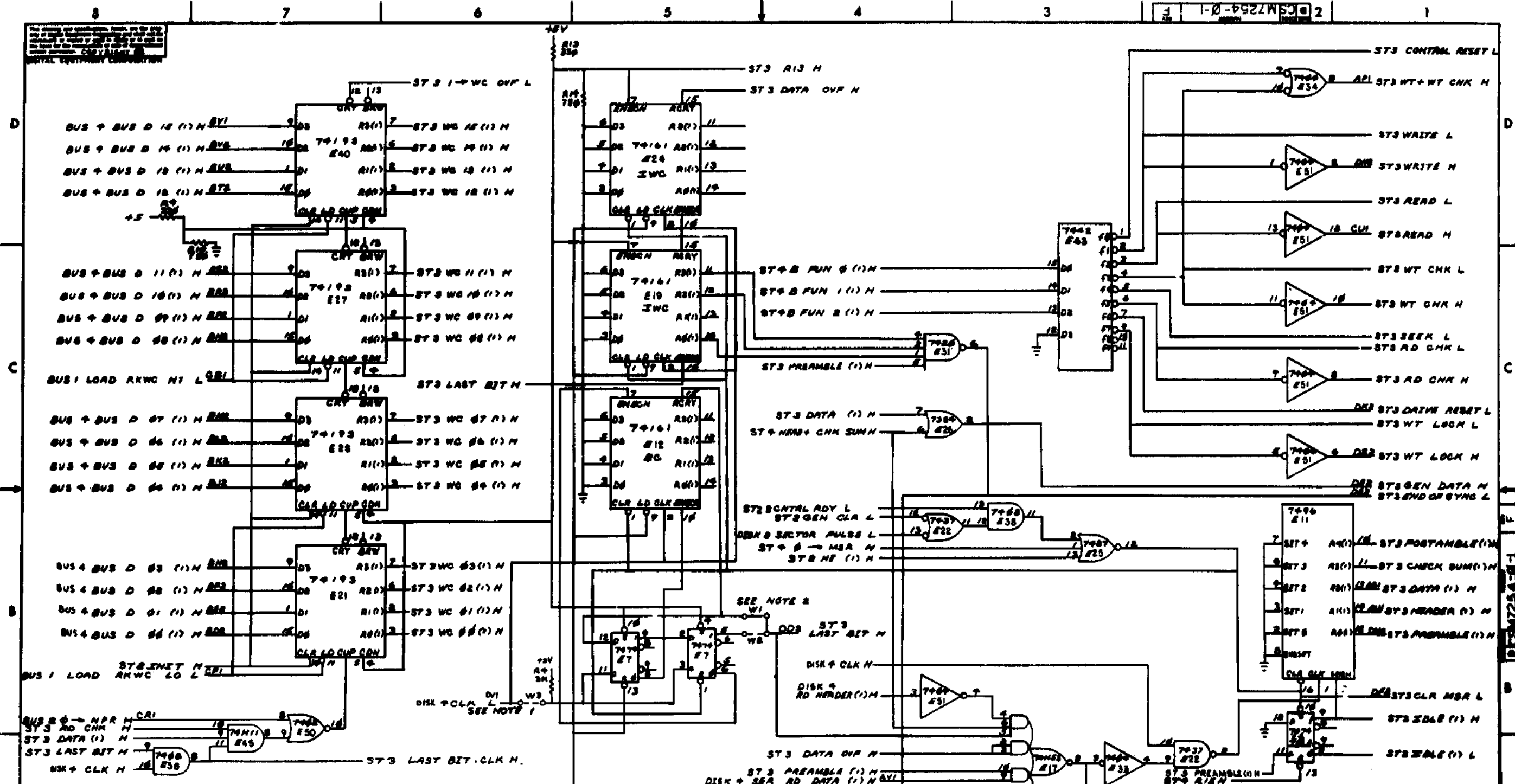
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REVISIONS

REV	CHANGE NO	DESCRIPTION

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	TYPE
RK11-D		STATUS CONTROL		
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DATE 4-4-73	EQUIPMENT CORPORATION		
DECIMALS	DATE 2-23-73	TITLE		
ANGLES	DATE	STATUS CONTROL (ST 2)		
XXX - 006	DATE	NEXT HIGHER ASSY		
XX - 02	DATE	B-00-RK11-D		
X - 1	DATE	DCSM7254-0-1		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL				
FINISH				
SCALE NONE		SHEET 4 OF		
DIST.				



PART NUMBER	QTY.	DESCRIPTION	PART NO.
RK11-D			
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:			
DECIMALS	ANGLES		
FRACTIONS	AS SHOWN		
RESERVE DIMS AND BREAK DIMS CONFORM SURFACE QUALITY			
MATERIAL			
FINISH			
B-00-RK11-D		DCSM7254-1	

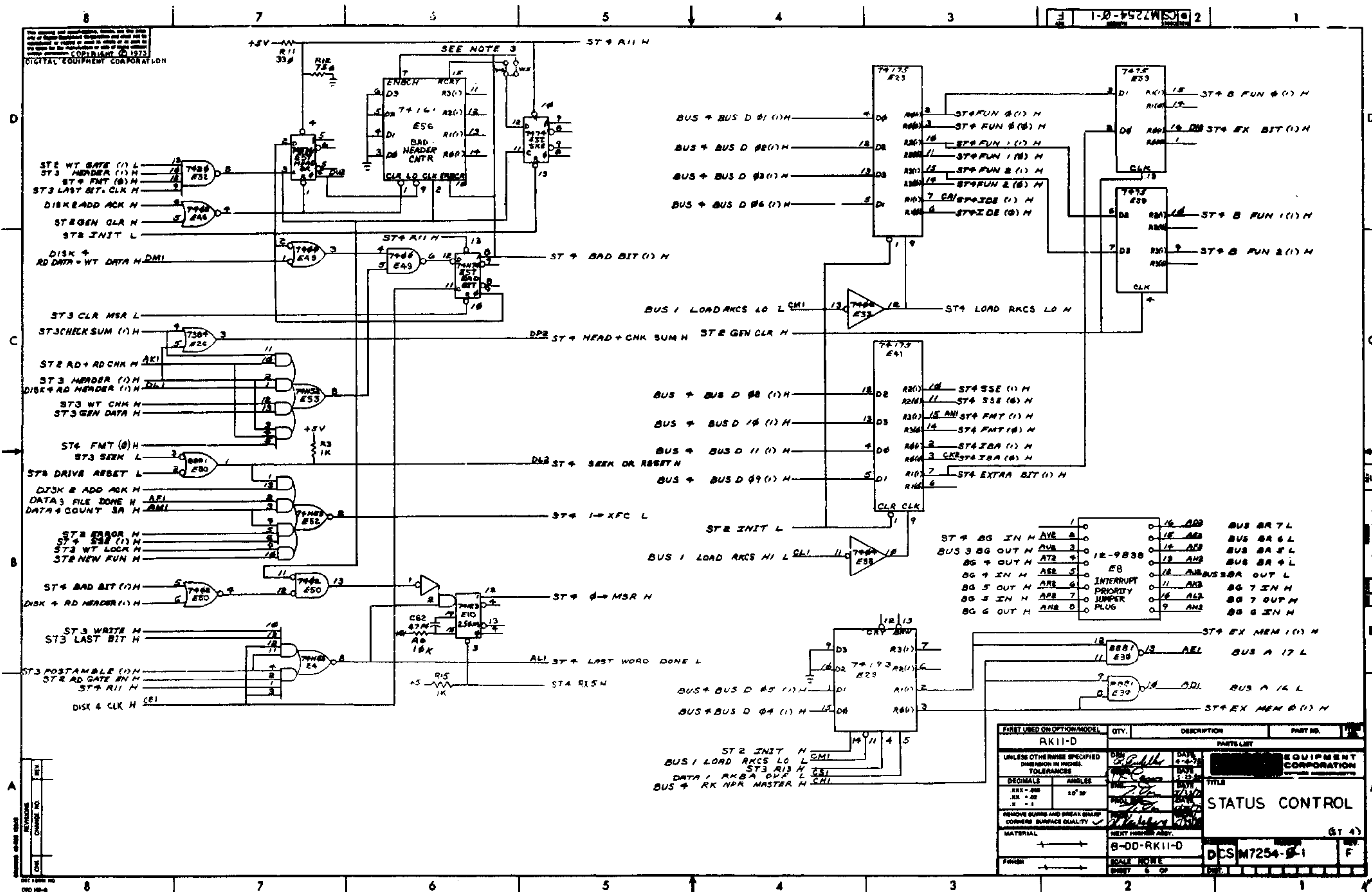
**STATUS CONTROL**

(ST 3)

THE ABOVE PART SPECIFICATIONS APPLY TO THE PARTS LISTED IN THIS DRAWING. THE PARTS LISTED IN THIS DRAWING ARE THE PROPERTY OF THE COMPANY AND ARE NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE COMPANY.

DCS 1 1000 001  
100 100-4

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1	0	16	ADD	BUS BR 7 L
2	0	15	ADD	BUS BR 6 L
3	0	14	ADD	BUS BR 5 L
4	0	13	AND	BUS BR 4 L
5	0	12	AND	BUS BR 3 L
6	0	11	AND	BUS BR 2 L
7	0	10	AND	BUS BR 1 L
8	0	9	AND	BUS BR 0 L
9	0	8	AND	BUS BR 7 L
10	0	7	AND	BUS BR 6 L
11	0	6	AND	BUS BR 5 L
12	0	5	AND	BUS BR 4 L
13	0	4	AND	BUS BR 3 L
14	0	3	AND	BUS BR 2 L
15	0	2	AND	BUS BR 1 L
16	0	1	AND	BUS BR 0 L

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.
16	1	ADD	BUS BR 7 L
15	1	ADD	BUS BR 6 L
14	1	ADD	BUS BR 5 L
13	1	AND	BUS BR 4 L
12	1	AND	BUS BR 3 L
11	1	AND	BUS BR 2 L
10	1	AND	BUS BR 1 L
9	1	AND	BUS BR 0 L

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	TOLERANCES	DECIMALS	ANGLES
XXX - .005	.005	10°	30°
XX - .002	.002		
X - .001	.001		

MATERIAL	8-DD-RK11-D
FINISH	SCALE NONE

TITLE	STATUS CONTROL
DATE	1-1-73
BY	J. J. ...
CHECKED	J. J. ...
APPROVED	J. J. ...
DESIGNED	J. J. ...
DRAWN	J. J. ...
SCALE	NONE
SHEET	6 OF 6

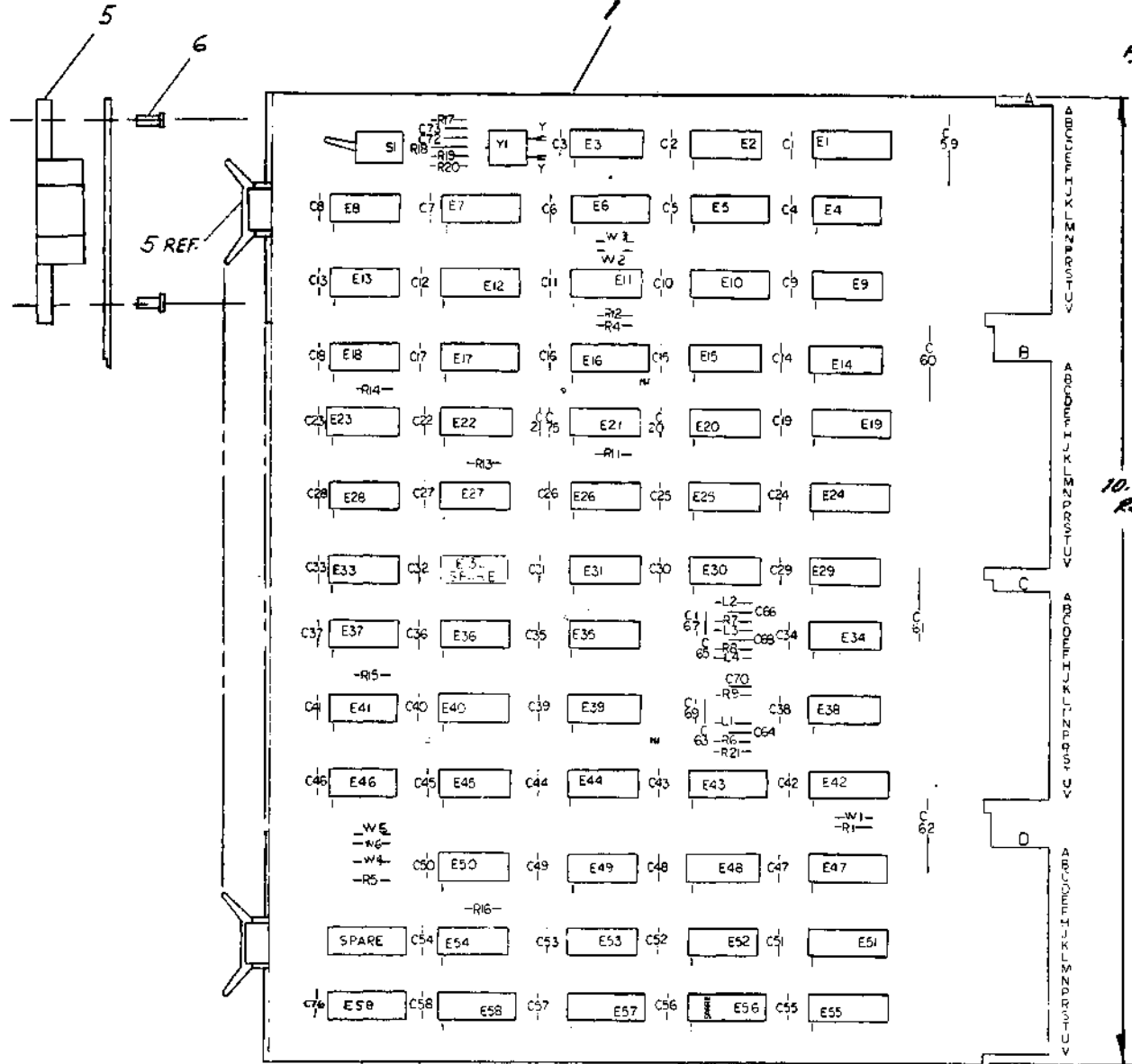
REVISIONS  
REV. 1  
DATE  
BY  
CHK  
CHANGE NO.



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

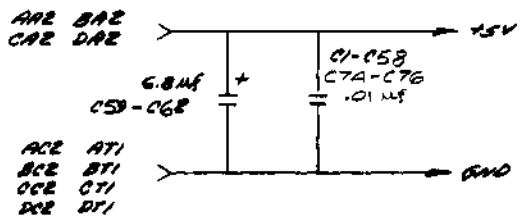
D  
C  
B  
A



I.C. DEC 8640	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 74176	5	12
I.C. DEC 314	1	8
I.C. DEC 74182	11	4
I.C. DEC 74174	8	16
I.C. DEC 74176	5	13
I.C. DEC 74182	8	16
I.C. DEC 74183	8	16
IC TYPE	GND	+ 5V

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

IC PIN LOCATIONS



PIN NOMENCLATURE  
MODULE RK11-D

A C  
B D  
C E  
D F

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
3	W1, W2, W6	INSULATED JUMPER (2007-1)	9009185	53
2		SPLIT LUGS	9006735	52
2		SWAGE LUGS	9007791	51
1	S1	SWITCH TOGGLE SPDT	1210209	50
4	L1-L4	INDUCTOR (10UH, 16SMA, 10%)	1610662	49
1	Y1	CRYSTAL (SEE TABLE 1)		48
10	E11, E16, E22, E27, E41, E48, E49, E52-E59	I.C. DEC 7474	1905547	47
1	E50	I.C. DEC 74104	1909931	46
2	E13, E48	I.C. DEC 7408	1910155	45
1	E59	I.C. DEC 314	1909704	44
1	E55	I.C. DEC 74161	1910650	43
1	E31	I.C. DEC 8815	1909719	42
1	E43	I.C. DEC 74182	1910096	41
1	E7	I.C. DEC 74176	1908585	40
1	E6	I.C. DEC 74174	1910652	39
1	E28	I.C. DEC 74182	1905584	38
1	E18	I.C. DEC 74181	1909068	37
1	E36	I.C. DEC 74180	1909060	36
1	E37	I.C. DEC 74150	1905580	35
1	E34	I.C. DEC 8812	1908118	34
6	E20, E21, E25, E29, E30, E38	I.C. DEC 8640	1911469	33
2	E12, E17	I.C. DEC 74182	1910018	32
2	E42, E47	I.C. DEC 74157	1910655	31
1	E57	I.C. DEC 74151	1909996	30
2	E51, E58	I.C. DEC 74175	1910651	29
1	E3	I.C. DEC 380	1912549	28
5	E2, E4, E9, E14, E15	I.C. DEC 8881	1909705	27
				26
1	E35	I.C. DEC 7420	1905577	25
3	E23, E39, E45	I.C. DEC 7410	1905576	24
3	E8, E40, E44	I.C. DEC 7400	1905575	23
2	E5, E10	I.C. DEC 7496	1910363	22
2	E26, E33	I.C. DEC 7404	1909686	21
7	R1, R4, R12, R13, R15, R16, R21	RES. 1K 1/4W 5%	1300365	20
1	R5	RES. 3K 1/4W 5%	1300482	19
4	R6-R9	RES. 910Ω 1/4W 5%	1305974	18
2	R17, R18	RES. 10K 1/4W 5%	1300979	17
				16
2	R11, R14	RES. 390Ω 1/4W 5%	1300309	15
2	R19, R20	RES. 470Ω 1/4W 5%	1300316	14
3	E1, E14, E24	RES. PACK	1311003-01	13
2	C72, C73	CAP. 0.05μF 100V 20%	1001765	12
4	C63, C65, C67, C69	CAP. 270pF 100V 5% RM	1000082	11
4	C64, C66, C68, C70	CAP. 39pF 100V 5% DM	1000010	10
60	C1-C58, C75, C76	CAP. 0.1μF 100V 20% AXIAL	1001610	9
4	C59-C62	CAP. 6.8μF 35V 10% TWT	1005306	8
				7
8		EYELET (G.S.-P-7) SIMMONS	9006732	6
4		HANDLE FLIP-CHIP MOUNT	9008587-08	5
1		ETCHED CIRCUIT BOARD	5009986	4
RF		PROBING PRO HISTORY	80011785-0-8	3
RF		AST/DRAWING HOLE LOCATION	80011785-0-5	2
RF		X-Y COORDINATE HOLE LOCATION	80011785-0-4	1

FIRST USED ON OPTION MODEL  
**RK11-D**

ETCH BOARD REV F

DATE: 6-10-78  
 DRAWN: [Signature]  
 CHECKED: [Signature]  
 DATE: 7-2-78  
 DATE: 7-17-78  
 DATE: 7-17-78  
 DATE: 7-17-78

TITLE: **DISK CONTROL RK11-D**

SEMICONDUCTOR CONVERSION CHART

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

SCALE: NONE

SHEET 2 OF 2

SIZE CODE: D CS NUMBER: M7255-0-1 REV: J


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- NOTES:**
- 1) INSTALL W1 FOR RK05.
  - 2) CUT W4 FOR RK11-C COMPATIBILITY (NORMAL OPERATION)
  - 3) FOR RK11-D (RK05) CUT JUMPER W8 FOR RK11-E (18 BIT RK05) CUT JUMPER W4.
  - 4) FOR NORMAL OPERATION INSTALL W8 (CHANGES ID BITS ONLY FOR SEARCH COMPLETE INTERRUPT). INSTALL W4 TO CHANGE ID BITS FOR ANY INTERRUPT.
  - 5) INSTALL PROPER CRYSTAL IN SPLIT LUGS AS OUTLINED IN TABLE 1.

**TABLE 1**

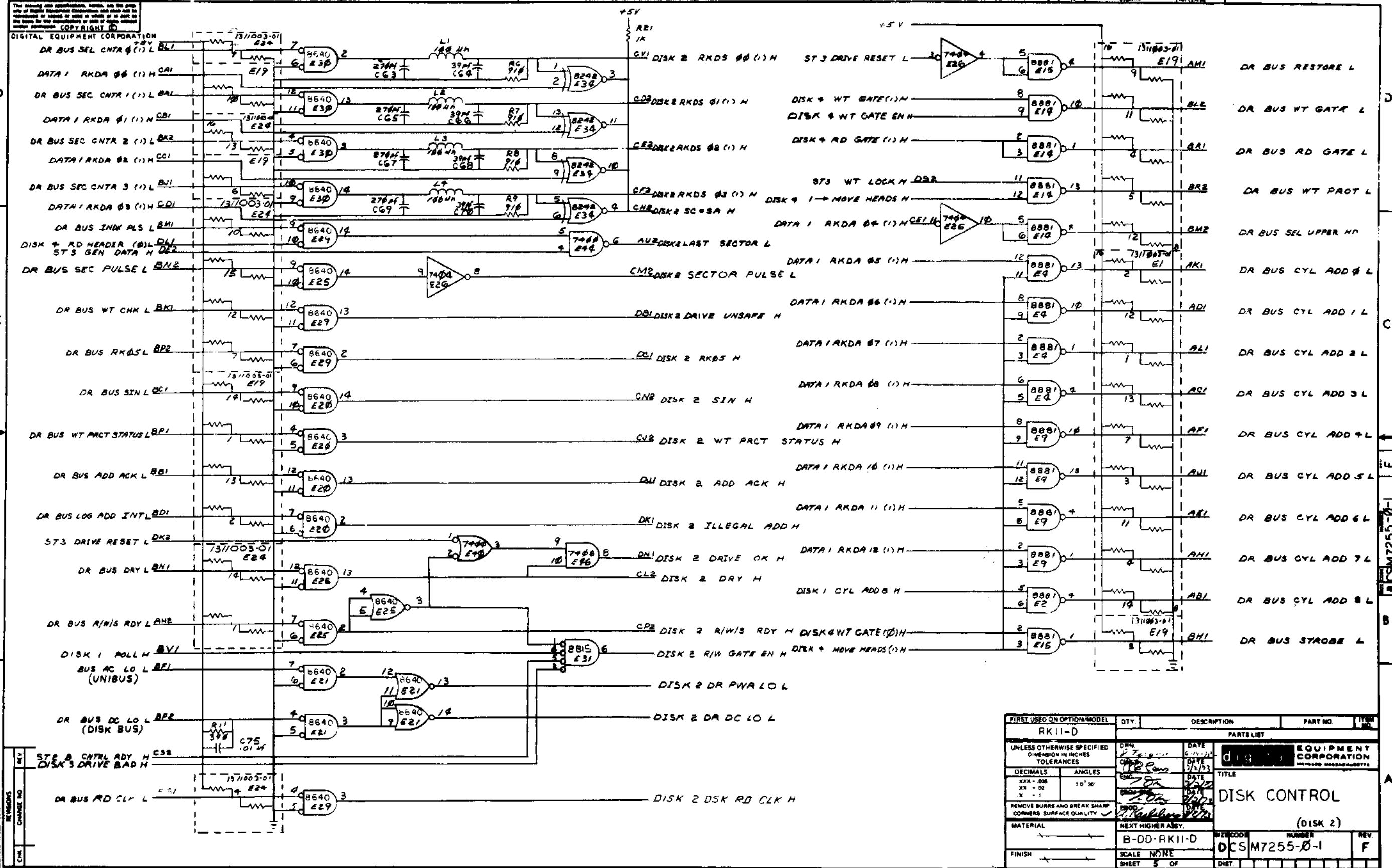
	DISK	BITS/WORD	MHZ	DEC #/N
RK11-D	RK05	18	2.880	18-12694-3
RK11-E	RK05	18	3.292	18-12694-4

REV	CHANGE NO.	REVISIONS

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.		
RK11-D						
PARTS LIST						
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRN. <i>[Signature]</i>	DATE 6-28-73	 <b>DIGITAL EQUIPMENT CORPORATION</b> <small>MADE IN MASSACHUSETTS</small>			
TOLERANCES	CHK'D <i>[Signature]</i>	DATE 7-2-73				
DECIMALS	ENG. <i>[Signature]</i>	DATE 7-17-73				
ANGLES	PROL. ENG. <i>[Signature]</i>	DATE 7-17-73				
.XXX = .005 .XX = .02 .X = .1	10° 30'	PROD. <i>[Signature]</i>	DATE 7-17-73	<b>TITLE</b> DISK CONTROL RK11-D		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY Y						
MATERIAL		NEXT HIGHER ASSY.	B-DD-RK11-D	SIZE CODE	NUMBER	REV.
FINISH		SCALE NONE		DCS	M7255-0-1	D
		SHEET 3 OF		DIST.		

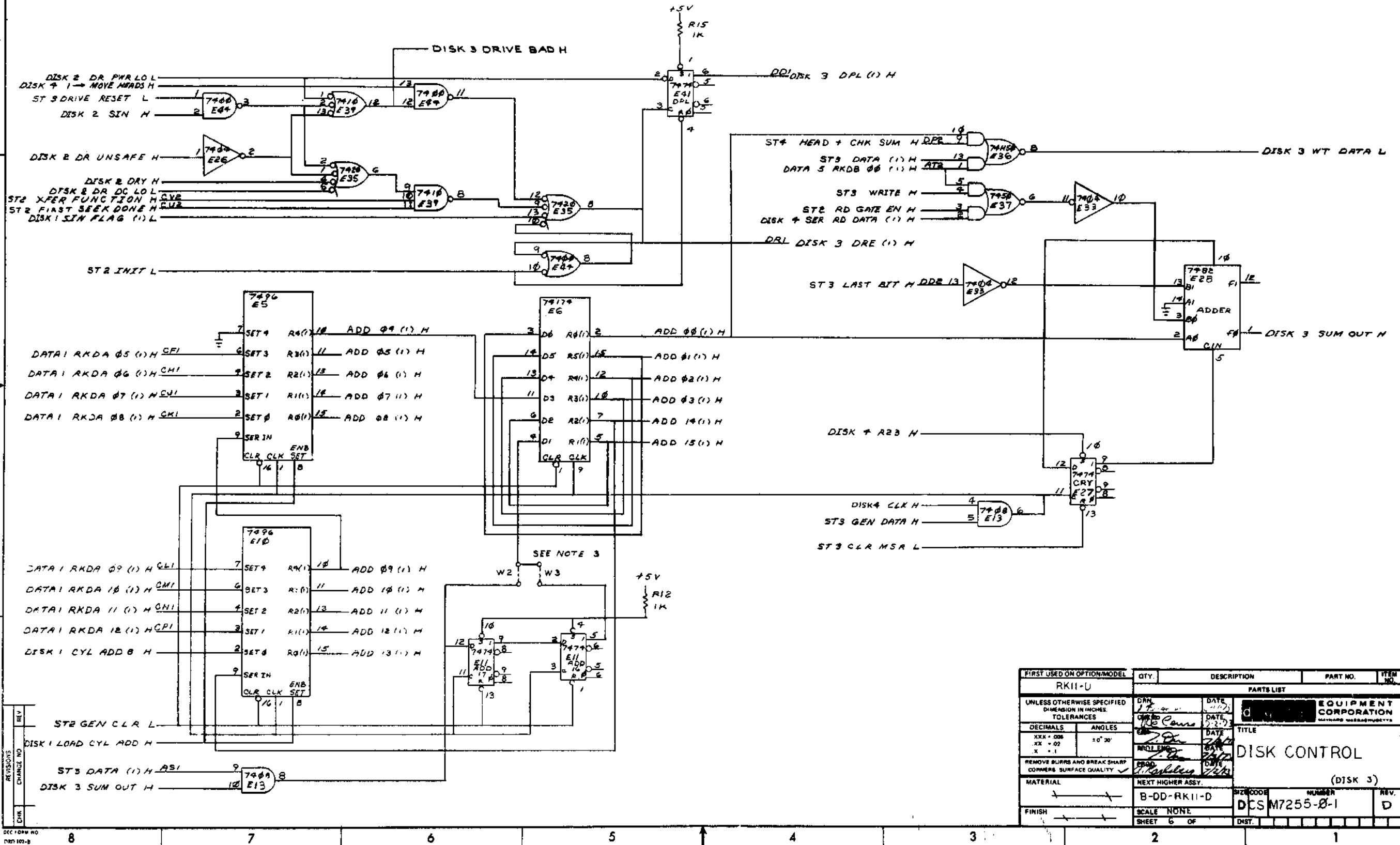






FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
RK11-D				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	DATE	EQUIPMENT CORPORATION	
XXX - .008	10° 30'	DATE	TITLE	
XX - .02		DATE	DISK CONTROL	
X - .1		DATE	(DISK 2)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL	NEXT HIGHER ASSY.	SIZE CODE	NUMBER	REV.
		B-00-RK11-D	DCS M7255-0-1	F
FINISH	SCALE	SHEET	OF	DIST.
	NONE	5		

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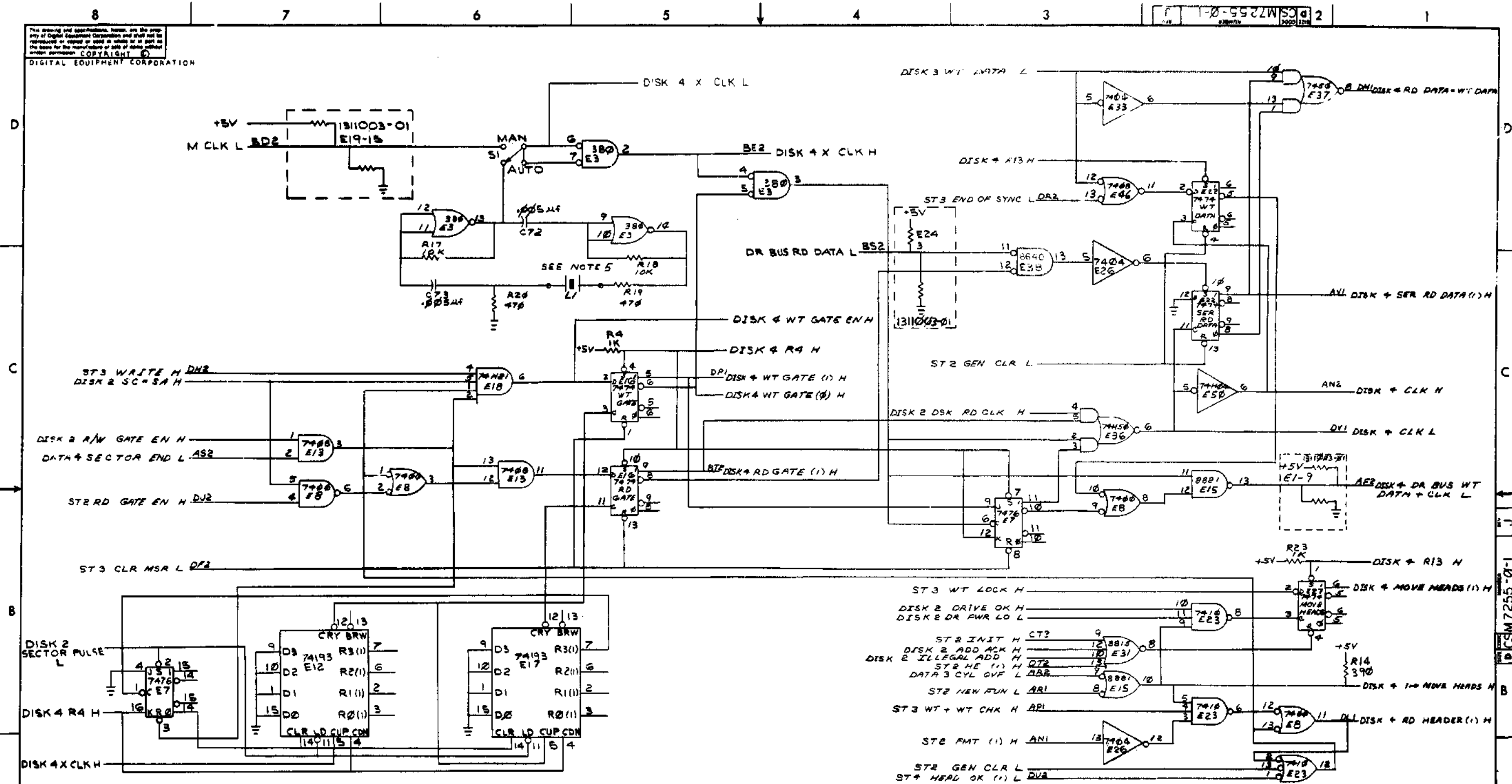


REV. NO. 1338  
 CHG. NO. 1338  
 REVISIONS

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RK11-U				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		DATE	EQUIPMENT CORPORATION	
DECIMALS	ANGLES	DATE	MILWAUKEE WISCONSIN	
XXX + 008	± 0° 30'	DATE	TITLE	
XX + 02		DATE	DISK CONTROL	
X + 1		DATE	(DISK 3)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		PROD. DATE	MATERIAL	
		DATE	NEXT HIGHER ASSY.	
		DATE	B-DD-RK11-D	
		DATE	SCALE NONE	
		DATE	SHEET 6 OF	
		DATE	DST.	
		DATE	DCS M7255-0-1	
		DATE	REV. D	

7106

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REV	DESCRIPTION

FIRST USED ON OPT./UN/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM
RK11-D				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED				
DIMENSION IN INCHES				
TOLERANCES				
DECIMALS	ANGLES	DATE		
.XXX - .008	10° 30'	12-73		
.XX - .02		DATE		
.X - .1		12-73		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL				
NEXT HIGHER ASSY.				
FINISH				
SCALE NONE				
SHEET 7 OF				
B-DD-RK11-D		NUMBER		REV.
DCS M7255-0-1		DCS M7255-0-1		J

**DISK CONTROL**  
(DISK 4)

DCS M7255-0-1

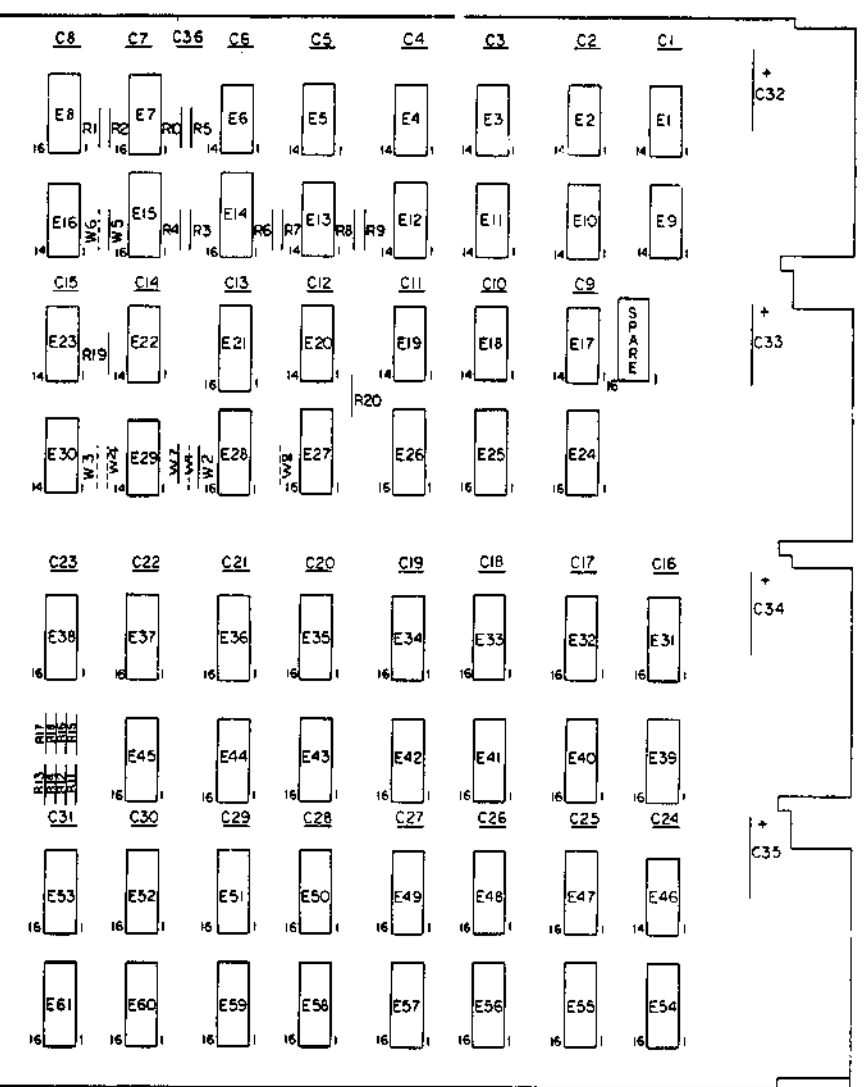
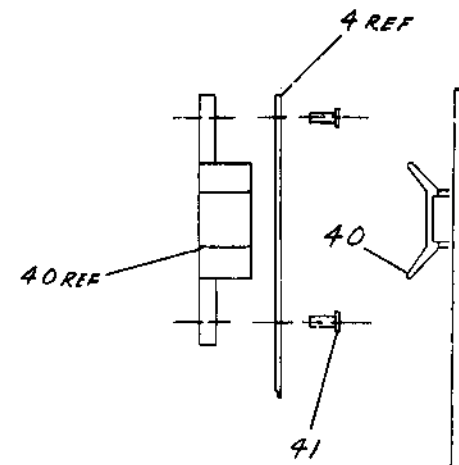


9 7 6 5 4 3 2 1

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NOTES:

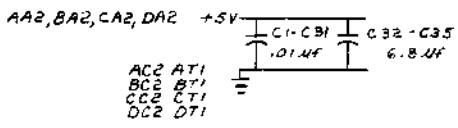
\* DEC 8640'S WERE PHASED IN AS 360 REPLACEMENTS. ANY 360 FAILURES SHOULD BE REPAIRED BY 2640'S



PIN NOMENCLATURE MODULE RK11-D

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	R6	5.6K 1/4 W 5% CC	1301874	1
3	WB, W5, W7	INSULATED JUMPER L-200-1	9009	2
8		EYELET #654-7 E.B. STIMPSON	9006732	41
4		HANDLE FLIP CHIP MARGENTA	9008337-6	40
4	E52, E53, E60, E61	I.C. DEC 79157	1910655	39
8	E48-E51, E56-E59	I.C. DEC 79153	1939937	38
1	E46	I.C. DEC 8281 DC	1909890	37
1	E38	DIP RESISTOR PACK	1311003-02	36
5	E33-E37	I.C. DEC 74170	1910738	35
7	E31, E32, E39, E40, E47, E54, E55	I.C. DEC 74173	1910018	34
1	E30	I.C. DEC 9642	311469	33
10	E24-E28, E31-E35	I.C. DEC 8271	1909615	32
1	E23	I.C. DEC 8881	1909205	31
2	E22, E29	I.C. DEC 7473	1905587	30
1	E21	I.C. DEC 4407	1909867	29
1	E18	I.C. DEC 74421	1909058	28
1	E17	I.C. DEC 7437	1910091	27
1	E13	I.C. DEC 7412	1909955	26
1	E12	I.C. DEC 7400	1905575	25
4	E11, E16, E19, E20	I.C. DEC 7474	1903547	24
1	E10	I.C. DEC 74410	1909057	23
1	E9	I.C. DEC 74455	1909063	22
1	E8	I.C. DEC 74161	1910650	21
3	E7, E14, E15	I.C. DEC 74123	1910436	20
1	E5	I.C. DEC 74474	1909667	19
2	E4, E6	I.C. DEC 74451	1909360	18
1	E3	I.C. DEC 7482	1909004	17
1	E2	I.C. DEC 74484	1909931	16
1	E1	I.C. DEC 7408	1910155	15
4	R15-R18	RES. 680Ω 1/4W 5% CC	1301924	14
4	R17-R19	RES. 330Ω 1/4W 5% CC	1302875	13
1	R10	RES. 20K 1/4W 5% CC	1302391	12
4	R8, R9, R19, R20	RES. 1K 1/4W 5% CC	1300365	11
4	R3-R5, RT	RES. 511K 1/4W 1% MF	1304854	10
1	R2	RES. 390Ω 1/4W 5% CC	1300309	9
1	R1	RES. 180Ω 1/4W 5% CC	1301322	8
1	C36	CAP. 150PF 100V 5% D.M.	1000019	7
4	C32-C35	CAP. 6.8UF 35V 20% TANT	1000067	6
31	C1-C31	CAP. .01UF 100V 20% DISC.	1001610	5
1		ETCHED CIRCUIT BOARD	6009987	4
REF		MODULE ECO HISTORY	B-M-N7256-B-4	3
REF		ASSY/DRILLING HOLE LAYOUT	B-M-N7256-B-5	2
REF		X-Y COORDINATE HOLE LOCATION	R-C-N7256-B-4	1

DEC NO.	QTY	LOCATIONS
DEC 4007	8	16
DEC 7473	11	4
DEC 74170	8	16
DEC 74193	8	16
DEC 74161	8	16
DEC 74157	8	16
DEC 74153	8	16
DEC 8271	8	16
DEC 8640	1	8
IC TYPE	GND	+5V



FIRST USED ON OPTION MODEL RK11-D

CHANGE NO.	REV.	REVISIONS

ETCH BOARD REV D

EQUIPMENT CORPORATION

DATE 2-20-72

SCALE 1" = 1" OF

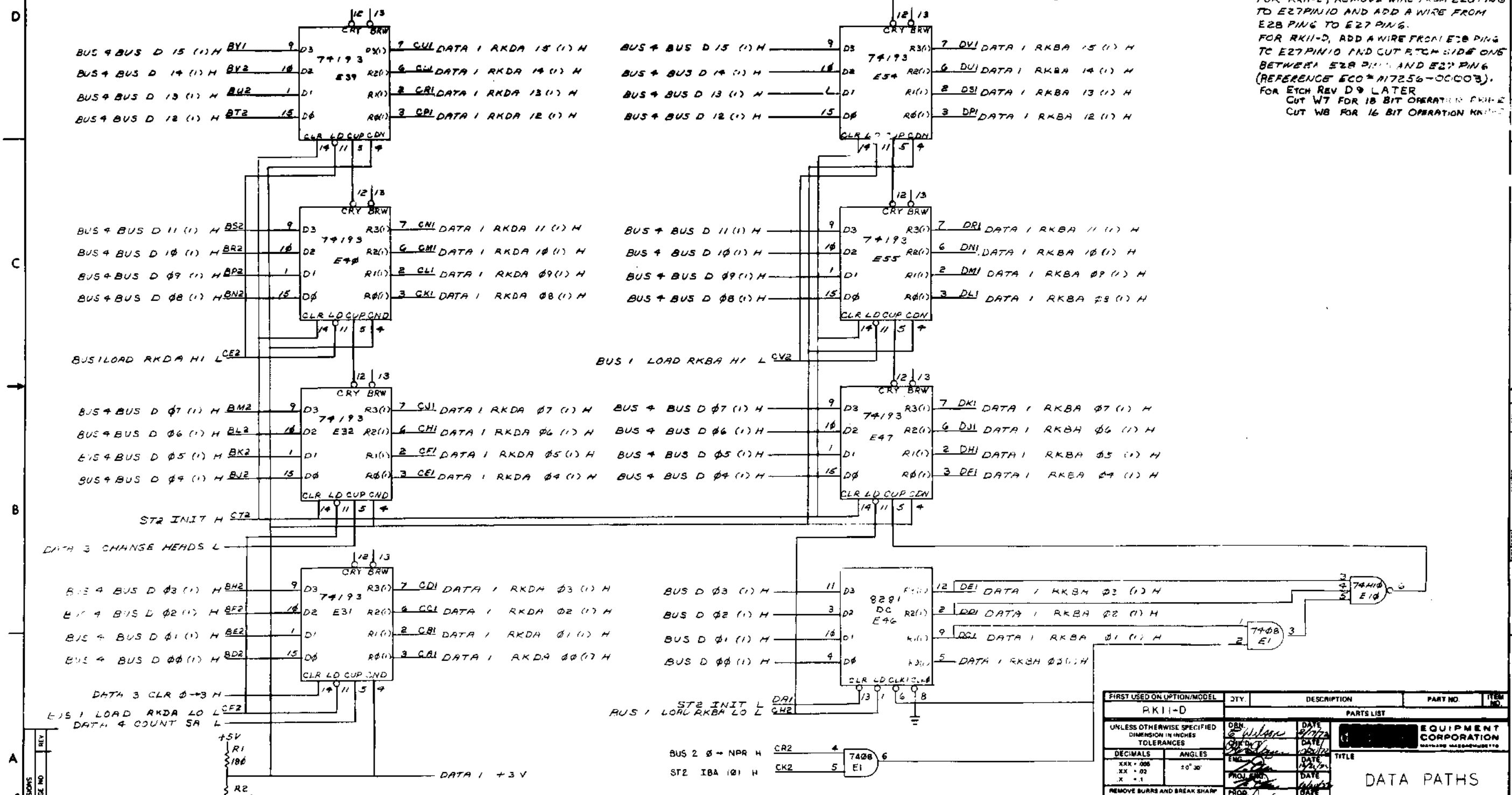
SHEET 2 OF

DCS M7256-B-1

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1-0-992 W SJ 2

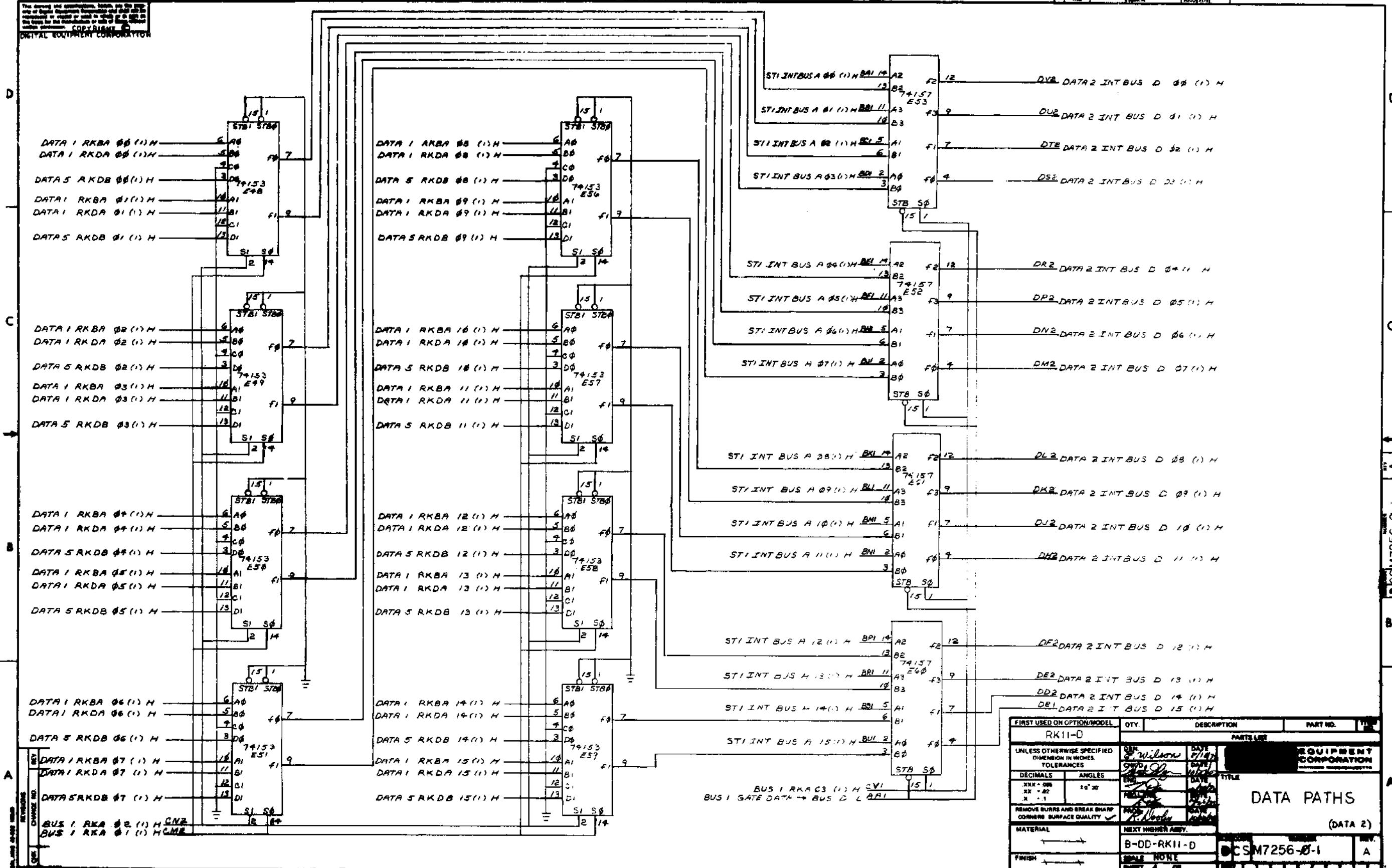
- NOTES:
1. CUT W1 FOR 16 BIT OPERATION (RK11-D)  
CUT W2 FOR 18 BIT OPERATION (RK11-E)
  2. CUT W3+W4 FOR 16 BIT OPERATION
  3. CUT W5 FOR 18 BIT OPERATION  
CUT W6 FOR 16 BIT OPERATION
  4. FOR ETCH REV C & EARLIER  
FOR RK11-E, REMOVE WIRE FROM E28 PING TO E27 PIN 10 AND ADD A WIRE FROM E28 PING TO E27 PIN 6.  
FOR RK11-D, ADD A WIRE FROM E28 PING TO E27 PIN 10 AND CUT ETCH SIDE ONE BETWEEN E28 PING AND E27 PIN 6 (REFERENCE ECO # M7256-00003).  
FOR ETCH REV D & LATER  
CUT W7 FOR 18 BIT OPERATION (RK11-E)  
CUT W8 FOR 16 BIT OPERATION (RK11-D)



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RK11-D				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		DATE	EQUIPMENT CORPORATION	
DECIMALS	ANGLES	DATE	MAYNARD MASSACHUSETTS	
XXX + .006	± 0° 30'	DATE	TITLE	
.XX + .02		DATE	DATA PATHS	
X + .1		DATE	(DATA 1)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL	NEXT HIGHER ASSY.	REV. CODE	NUMBER	REV.
	B-DD-RK11-D	DCS	M7256-0-1	D
FINISH	SCALE NONE	SHEET	3 OF	DIST.

DCS M7256-0-1

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FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.
RK11-D			
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES			
DECIMALS	ANGLES		
.XXX - .000	± 0° 30'		
.XX - .02			
.X - .1			
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY			
MATERIAL	NEXT HIGHER ARMY		
FINISH	B-DD-RK11-D		
		CSM7256-0-1	A

DATA PATHS

(DATA 2)



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ST 3 WT + WT CHK H **API**  
 BUS 2  $\phi$  → NPR H  
 DATA 4 LAST DATA BIT H  
 ST 2 INIT L **DAI**  
 DATA 4 WT DONE H

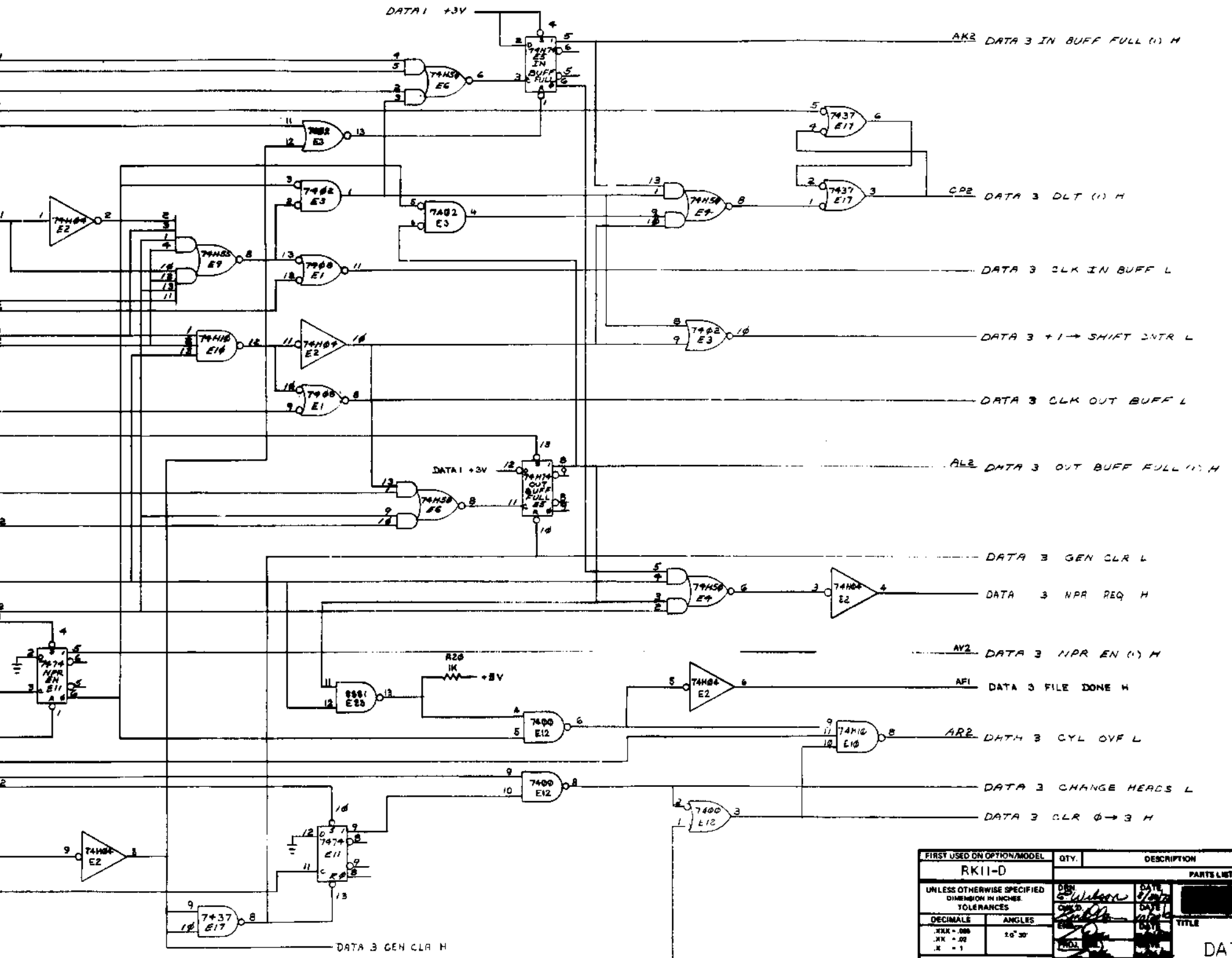
ST 4 FMT (1) H **ANI**  
 ST 3 HEADER (1) H **AUI**  
 BUS 2 DATA STR 2 L **CR2**  
 ST 3 DATA (1) H **AB1**  
 DISK 4 CLK H **IDE**

DATA 4 RD FILE L  
 DATA 4 RD DONE L  
 DATA 4 LAST DATA BIT H  
 BUS 2  $\phi$  → NPR H **CR2**

ST 3 WT + WT CHK H  
 ST 3 READ H **SUB**  
 ST 2 NEW FUN L **ARI**  
 ST 2 WC OVF (1) H **AI1**  
 ST 2 STOP NPRS L **AH1**

DATA 1 RKDA  $\phi$  (1) H  
 DATA 4 COUNT SA H  
 DISK 2 LAST SECTOR L **AU2**

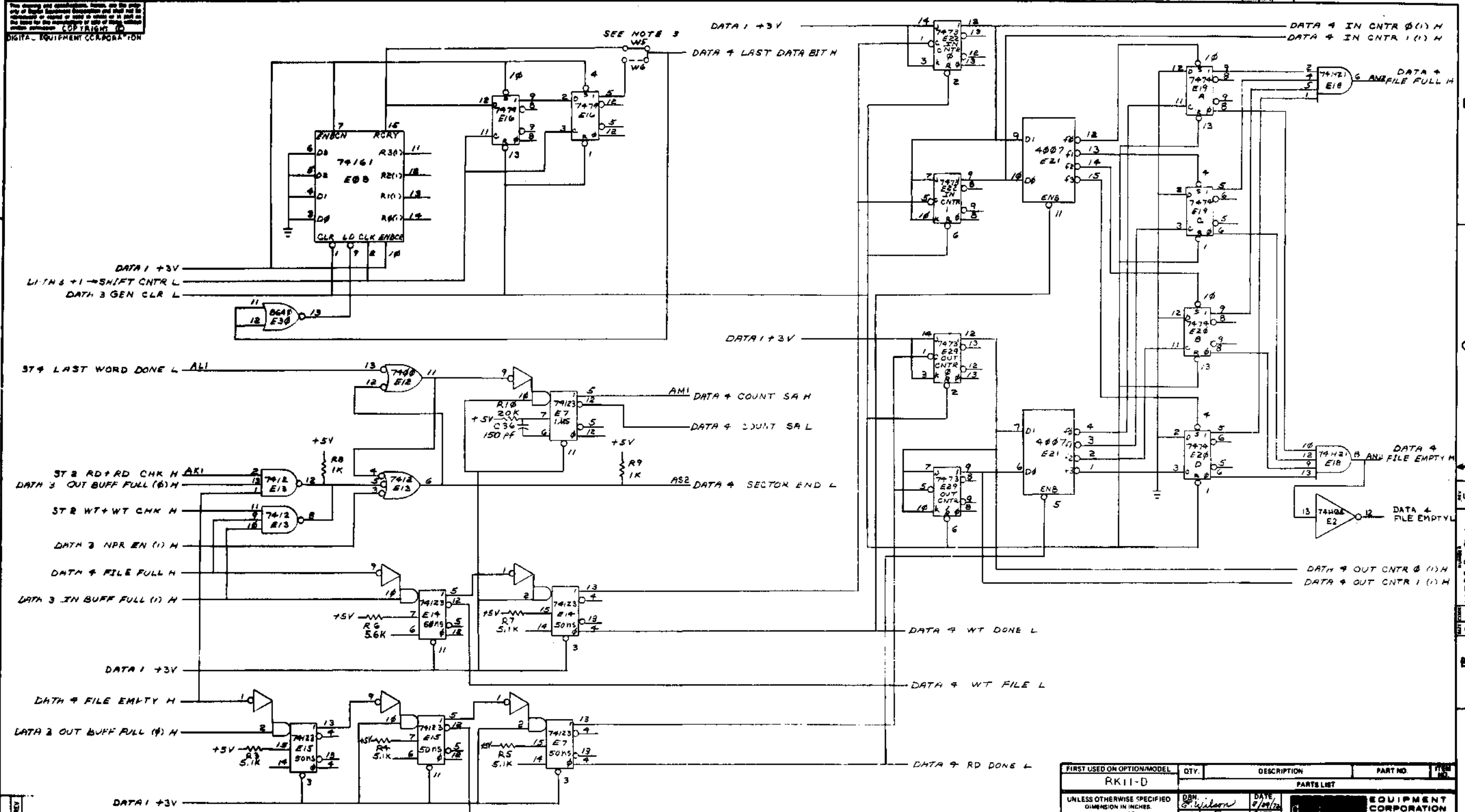
ST 2 GEN CLR L **AP2**  
 DATA 4 COUNT SA L  
 ST 2 INIT L



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.
RK11-D			
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES			
DECIMALS	ANGLES	TITLE	
±.000	±0°30'	DATA PATHS	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY			
MATERIAL	NEXT NUMBER AWAY		
	B-DD-RK11-D		
FINISH	SCALE NONE	CS M7256-0-1	REV. C
	SHEET 9 OF 9		

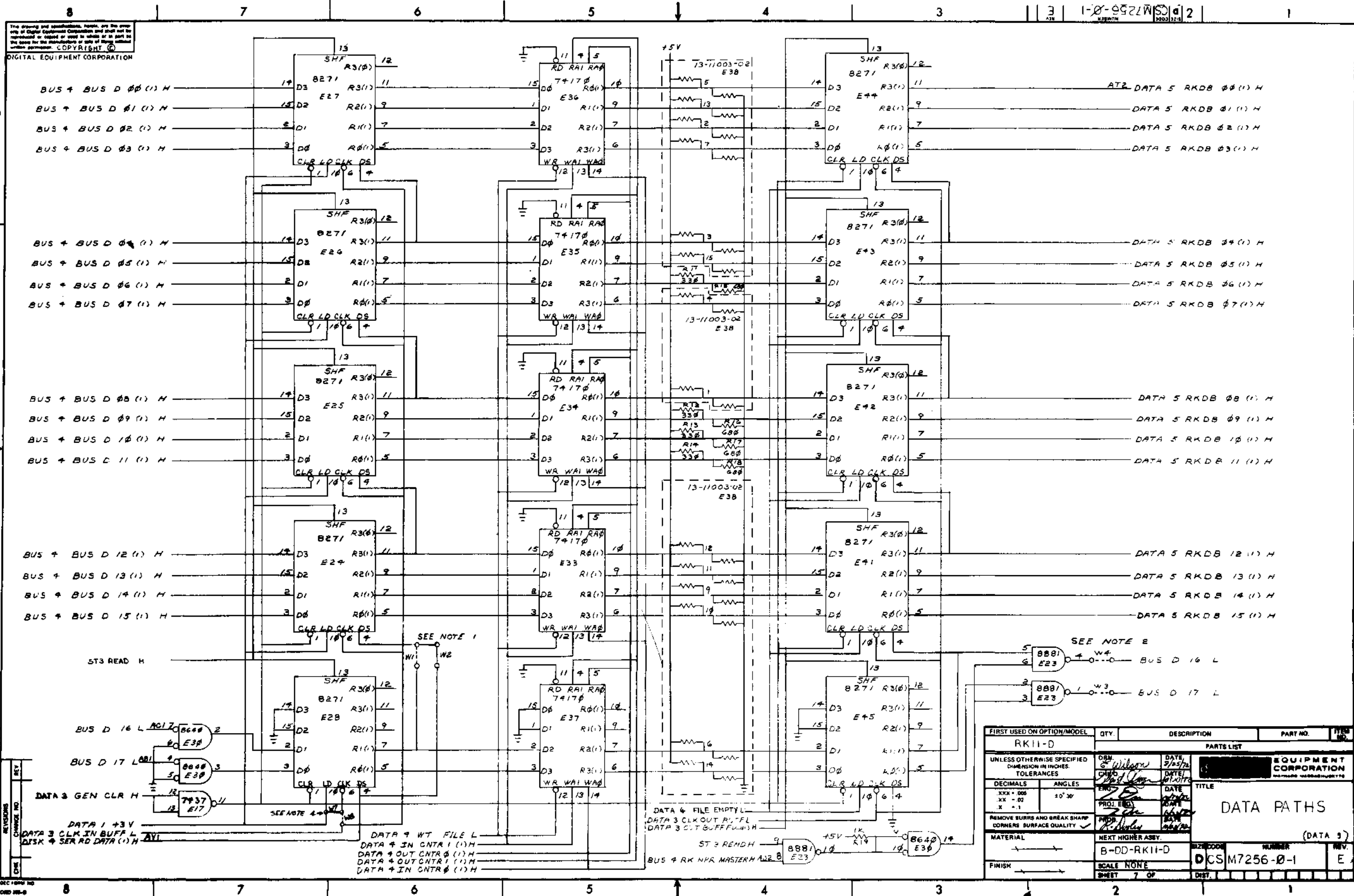
REV. 1  
 CHG. 2  
 CHG. 3  
 CHG. 4  
 CHG. 5  
 CHG. 6  
 CHG. 7  
 CHG. 8  
 CHG. 9  
 CHG. 10  
 CHG. 11  
 CHG. 12  
 CHG. 13  
 CHG. 14  
 CHG. 15  
 CHG. 16  
 CHG. 17  
 CHG. 18  
 CHG. 19  
 CHG. 20

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FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RK11-D		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DATE: 8/29/74	EQUIPMENT CORPORATION		
DECIMALS	DATE: 8/29/74	TITLE		
ANGLES	DATE: 8/29/74	DATA PATHS		
.XXX - .006	DATE: 8/29/74	(DATA 4)		
.X - .02	DATE: 8/29/74			
.X - .1	DATE: 8/29/74			
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	DATE: 8/29/74			
MATERIAL	NEXT HIGHER ASSEMBLY	SIZE CODE	NUMBER	REV.
FINISH	B-DD-RK11-D	CSM7256-01		E
	SCALE NONE			
	SHEET 6 OF			

REV. 1  
CHANGE NO.  
DATE



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RKII-D				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES.				
TOLERANCES		DATE: 3/25/72		
DECIMALS	ANGLES	EQUIPMENT CORPORATION		
XXX - .005	10' 30"	PART NO. 8888888888888888		
XX - .02		TITLE		
X - .1		DATA PATHS		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL		NEXT HIGHER ASSEMBLY		
FINISH		B-DD-RKII-D		
		SCALE NONE		
		SHEET 7 OF		
		DST. 1		
		NUMBER 8888888888888888		
		REV. E		

## PAGE REVISION CONTROL SHEET

SH NO.	PAGE REVISIONS														REMARKS			
	A	B	C	D	E	F	H	J	K	L	M	N	P					
1	A	B	C	D	E	F	H	J	K	L	M	N	P					(BUS 1) (BUS 2) (BUS 3) (BUS 4)
2	A	B	C	C	D	E	E	F	H	J	K	L	M					
3	A	A	B	B	B	B	B	C	C	D	E	E	E					
4	A	A	A	A	A	B	B	B	B	C	C	D	E					
5	A	B	B	C	D	D	D	D	E	F	H	H	H					
6	A	A	A	A	A	A	A	B	B	C	D	D	D					
DATE	ENG.	ETCH REV.	ECO NO.															
		B																
12-16-72	7.8	B	00001															
2-6-73	7.0	B	00002															
5-23-73	7.8	B	00003															
11-13-73	7.8	B	00004															
1/9/74	7.8	B	00005															
3/11/74	7.8	B	646A															
8-6-74	REC	B	00007															
10/14/74	REC	B	00008															
10/29/74	REC	C	00009															
1/16/75	REC	C	00010															
12/1/75	REC	C	00011															
1/4/76	REC	C	00012															
FIRST USED ON OPTION/MODEL																		
RK11-D																		

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DRN.	DATE
CHKD.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE

**digital** EQUIPMENT CORPORATION  
 MAYNARD MASSACHUSETTS

TITLE  
 BUS CONTROL  
 (RK11-D)

NEXT HIGHER ASSY.  
 B-DD-RK11-D  
 SCALE

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

SHEET 1 OF 6      DIST.

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NOTES: 1. R13 AND R20 ARE OPTIONAL COMPONENTS DO NOT INSERT  
2. W1, W3 THRU W8, W19, W22, W23, W25, W26 W28, ARE OPTIONAL JUMPERS. DO NOT INSERT.

\* IF 8641'S ARE NOT AVAILABLE, USE 8938'S, PART NO. 191117-00.

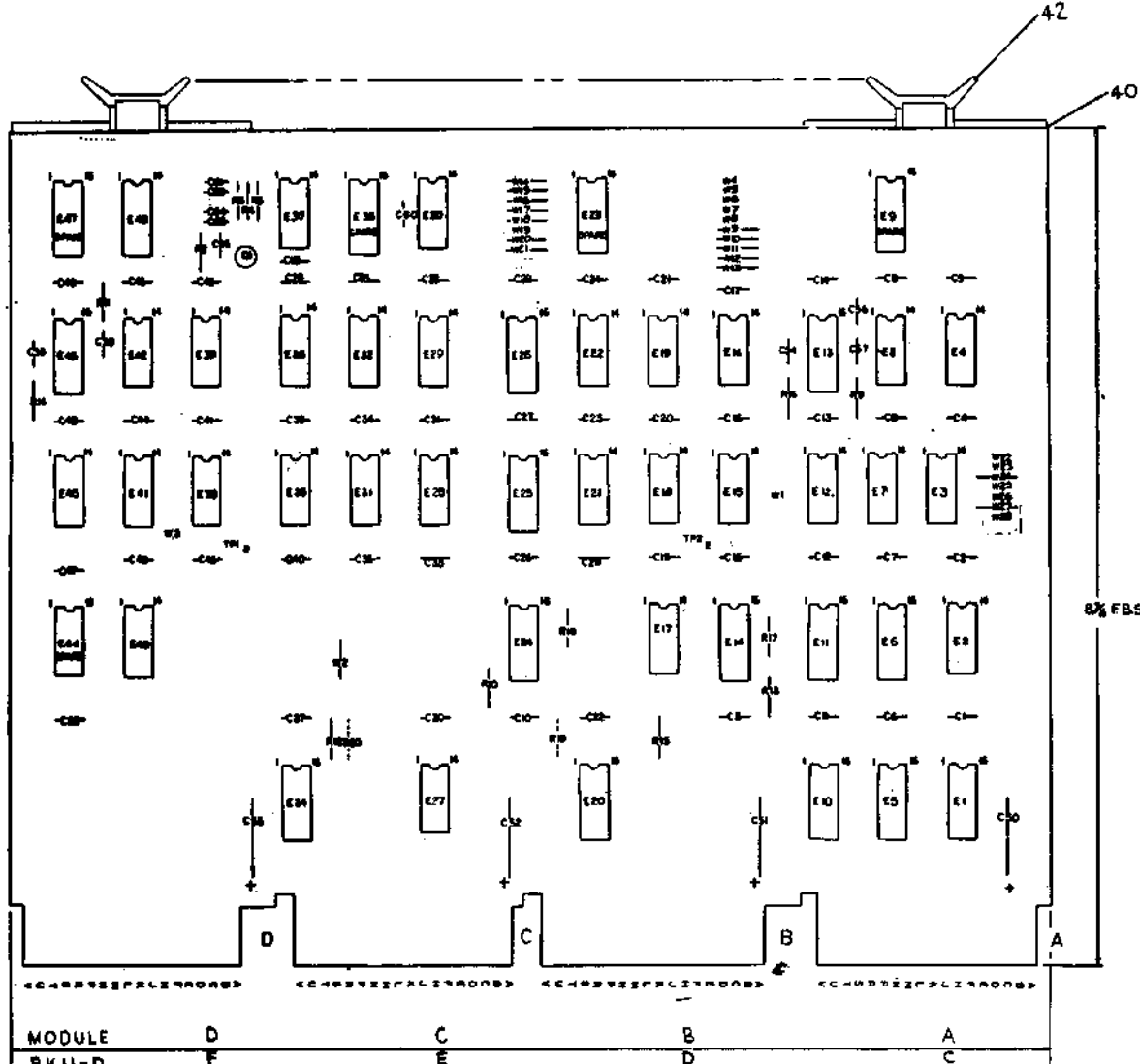
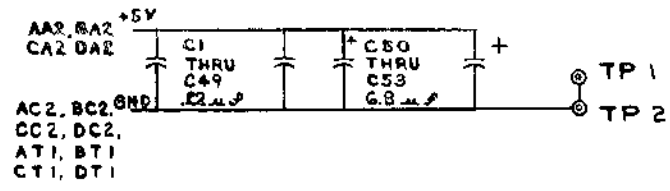


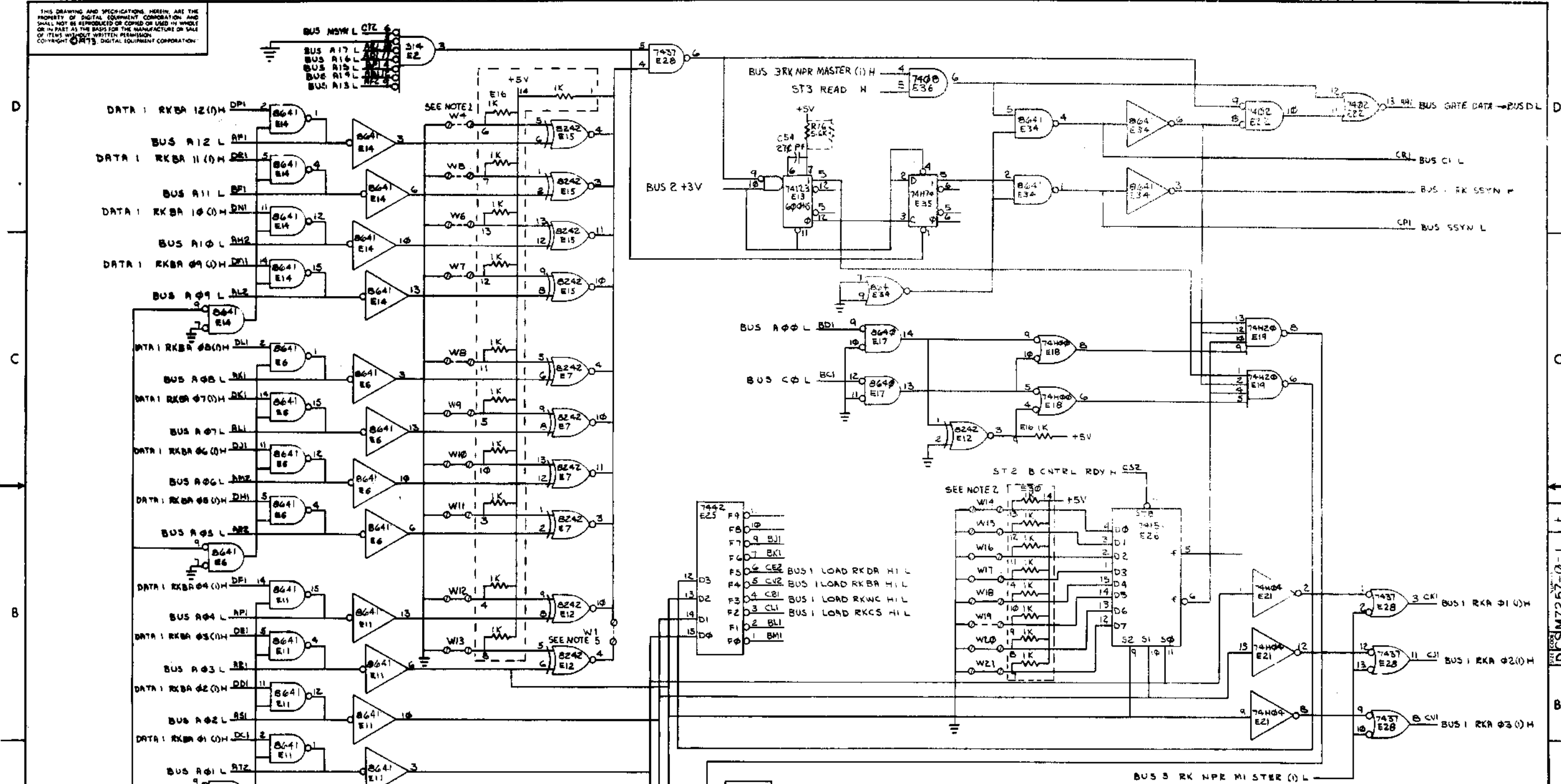
Table with 5 columns: REF, X-Y COORDINATE, HOLE LOC., QTY, DESCRIPTION, PART NO., ITEM NO.

Table with 4 columns: IC TYPE, GND, +5V, IC PIN LOCATIONS

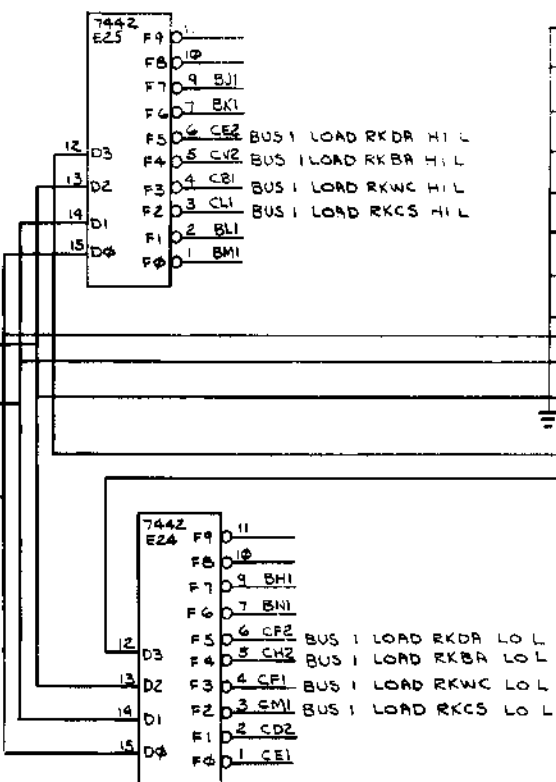


Administrative section including: FIRST USED ON OPTION MODEL (RK11-D), ETCH BOARD REV (C), PARTS LIST, DIGITAL EQUIPMENT CORPORATION logo, TITLE (BUS CONTROL RK11-D), SEMICONDUCTOR CONVERSION CHART, and SHEET 2 OF 6.

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- NOTE:
1. CUT JUMPER FOR ONE. FOR NORMAL RK11 OPERATION CUT JUMPERS W4, W5, W6, W7, W8.
  2. CUT JUMPER TO INHIBIT STROBE IF BUSY. FOR NORMAL RK11 OPERATION CUT JUMPER W19.
  3. FOR NORMAL OPERATION CUT JUMPER W3. IN 11/15 OR 11/20 SYSTEMS WITHOUT KH-11 OPTION CUT JUMPER W2.
  4. CUT JUMPER FOR ZERO. FOR NORMAL RK11 OPERATION CUT JUMPERS W22, W23, W25, W26, W28.
  5. FOR NORMAL OPERATION CUT JUMPER W1. FOR APPLICATIONS REQUIRING 4 ADDRESS RECOGNITION INSTALL W1.



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RK11-D				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES				
TOLERANCES				
DECIMALS	ANGLES			
.XXX ± .005	° 0' 30"			
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY Y				
MATERIAL		NEXT HIGHER ASSY.		
FINISH		B-DD-RK11-D		
		SCALE	BIZCODE	NUMBER
		3 OF 6	DCSM7257-0-1	REV. E

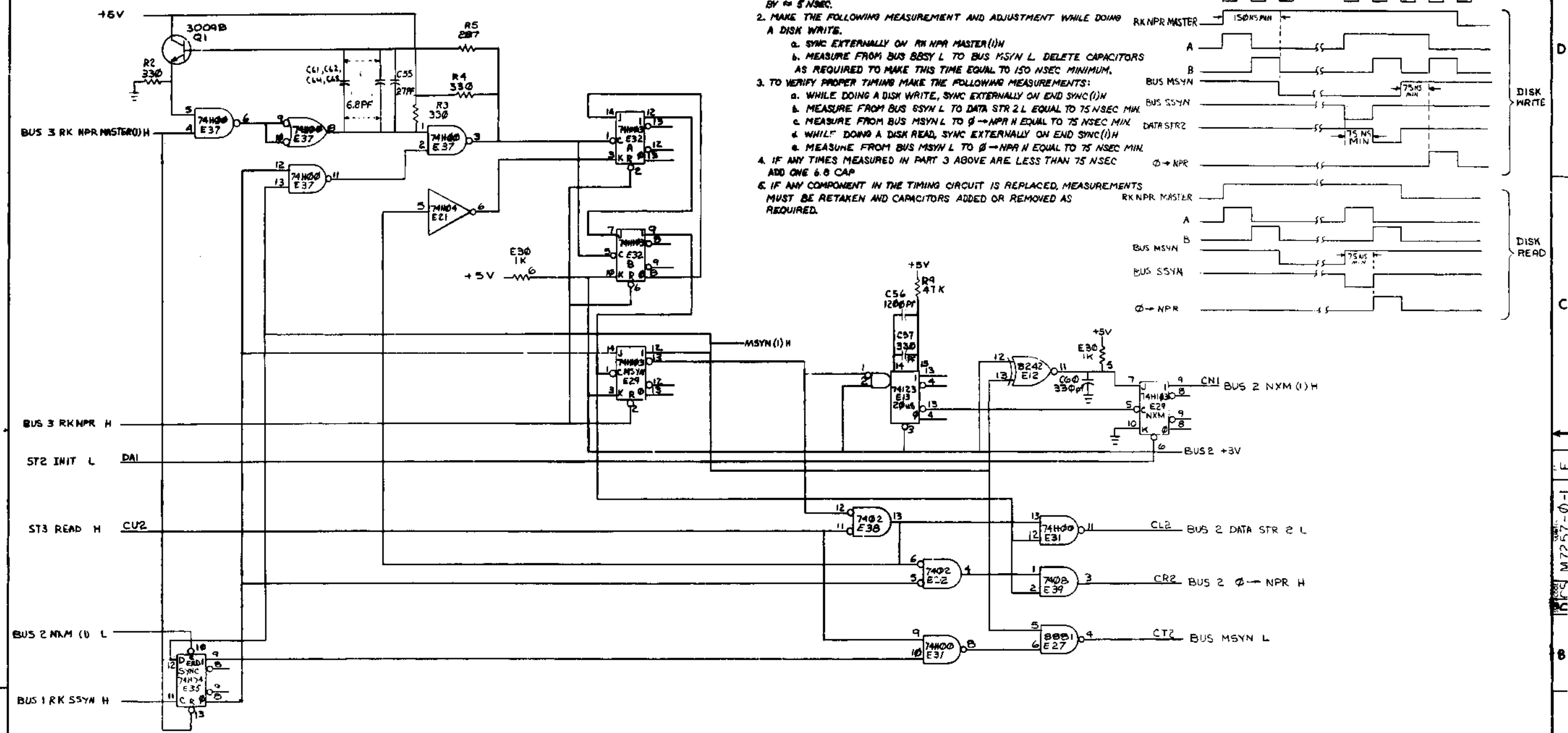
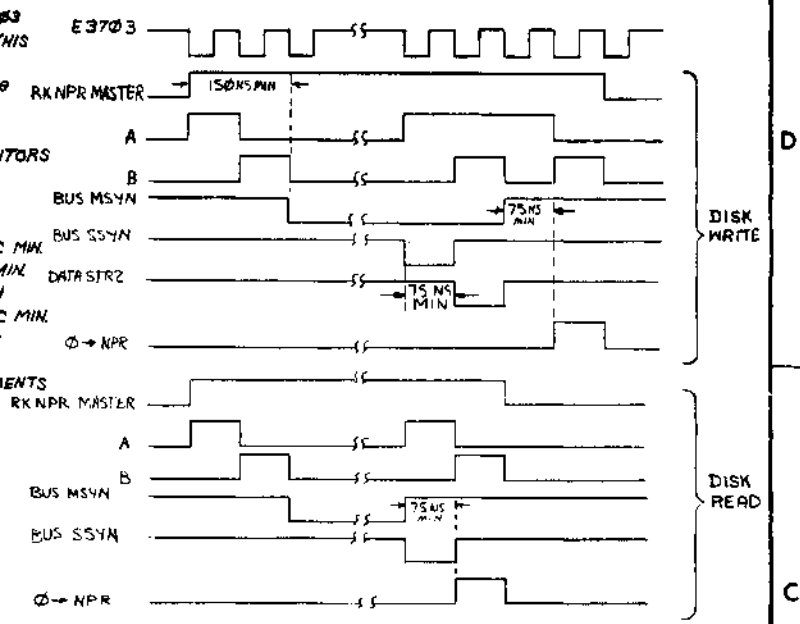


BUS CONTROL (BUS 1)

REVISIONS  
CHANGE NO.  
DATE

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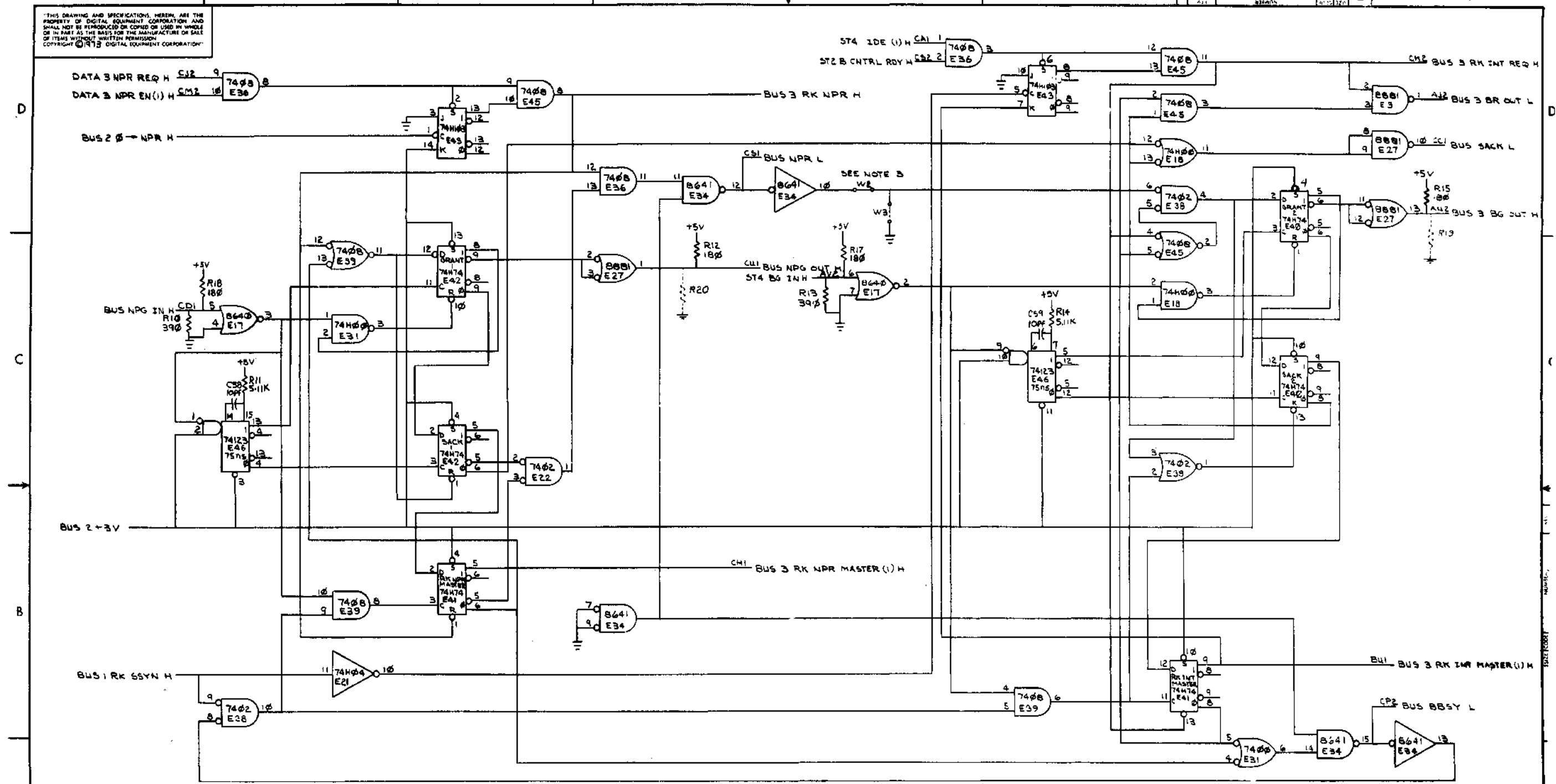
SET UP UNIBUS TIMING AS FOLLOWS:  
 1. TIMING ADJUSTMENTS ARE MADE BY REMOVING CAPACITORS C61 THRU C65 AS REQUIRED. WITH C61 THRU C65 ALL INSTALLED THE OUTPUT AT E37B3 HAS A PERIOD OF  $\approx$  88 NSEC. REMOVAL OF EACH CAP DECREASES THIS BY  $\approx$  5 NSEC.  
 2. MAKE THE FOLLOWING MEASUREMENT AND ADJUSTMENT WHILE DOING A DISK WRITE.  
 A. DISK WRITE.  
 a. SYNC EXTERNALLY ON RK NPR MASTER (1)H  
 b. MEASURE FROM BUS BBSY L TO BUS MSYN L. DELETE CAPACITORS AS REQUIRED TO MAKE THIS TIME EQUAL TO 150 NSEC MINIMUM.  
 3. TO VERIFY PROPER TIMING MAKE THE FOLLOWING MEASUREMENTS:  
 a. WHILE DOING A DISK WRITE, SYNC EXTERNALLY ON END SYNC (1)H  
 b. MEASURE FROM BUS SSYN L TO DATA STR 2 L EQUAL TO 75 NSEC MIN.  
 c. MEASURE FROM BUS MSYN L TO  $\phi$   $\rightarrow$  NPR H EQUAL TO 75 NSEC MIN.  
 d. WHILE DOING A DISK READ, SYNC EXTERNALLY ON END SYNC (1)H  
 e. MEASURE FROM BUS MSYN L TO  $\phi$   $\rightarrow$  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.



REV	DESCRIPTION

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RK11-D				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES				
TOLERANCES				
DECIMALS	ANGLES	DATE		
.xxx = .005	.0' .30'	CHKD	DATE	11/07/73
.xx = .02		ENG	DATE	11/07/73
.x = .1		PROB	DATE	11/07/73
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY V				
MATERIAL	NEXT HIGHER ASBY.			
FINISH	B-DD-RK11-D			
SCALE		SIZE CODE		NUMBER
SHRIT 4 OF 6		CSM7257-0-1		REV. E
BUS CONTROL (BUS 2)				

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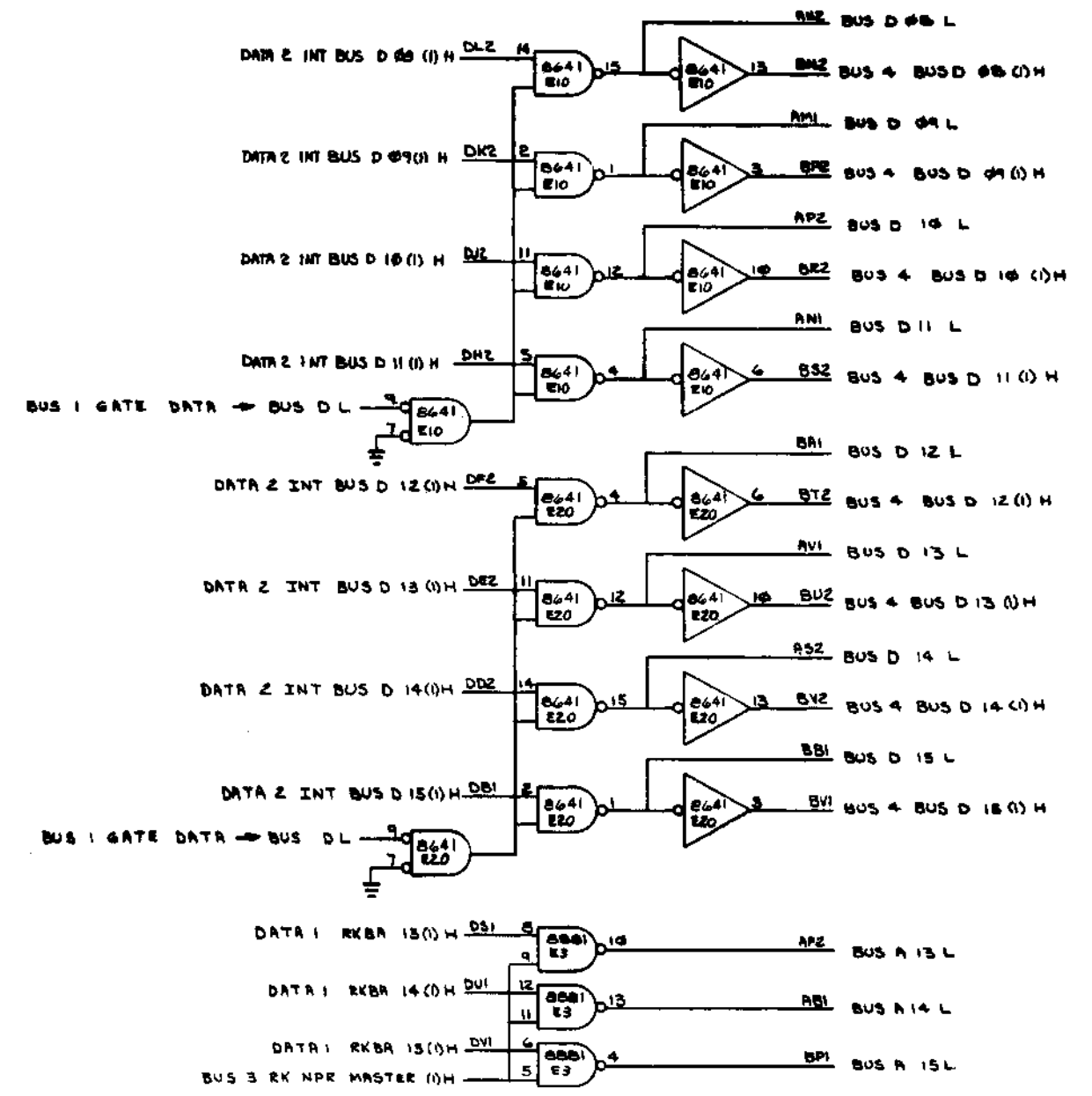
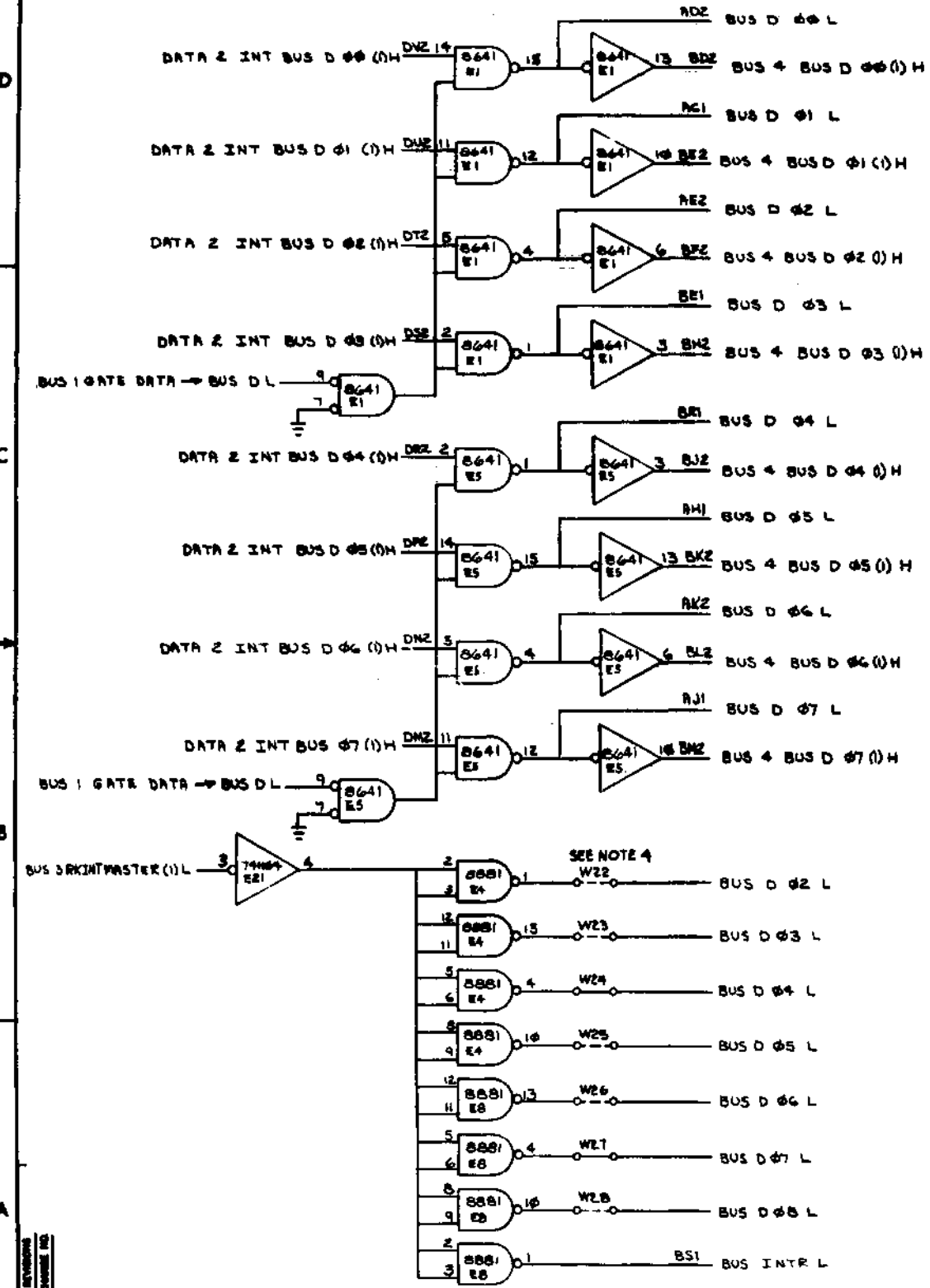


REV.	CHANGE NO.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RK11-D				
UNLESS OTHERWISE SPECIFIED				
DIMENSION IN INCHES		DRN.	DATE	PARTS LIST
TOLERANCES		DATE	DATE	
DECIMALS	ANGLES	END.	DATE	TITLE
.xxx ± .005	± 0° 30'	PROJ. ENG.	DATE	
.xx ± .02		PROD.	DATE	
.x ± .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY F				
MATERIAL		NEXT HIGHER ASSY.		
FINISH		B-DD-RK11-D	SIZE CODE	NUMBER
		SCALE	DCS M7257-0-1	REV.
		SHEET 5 OF 6	DIST.	F



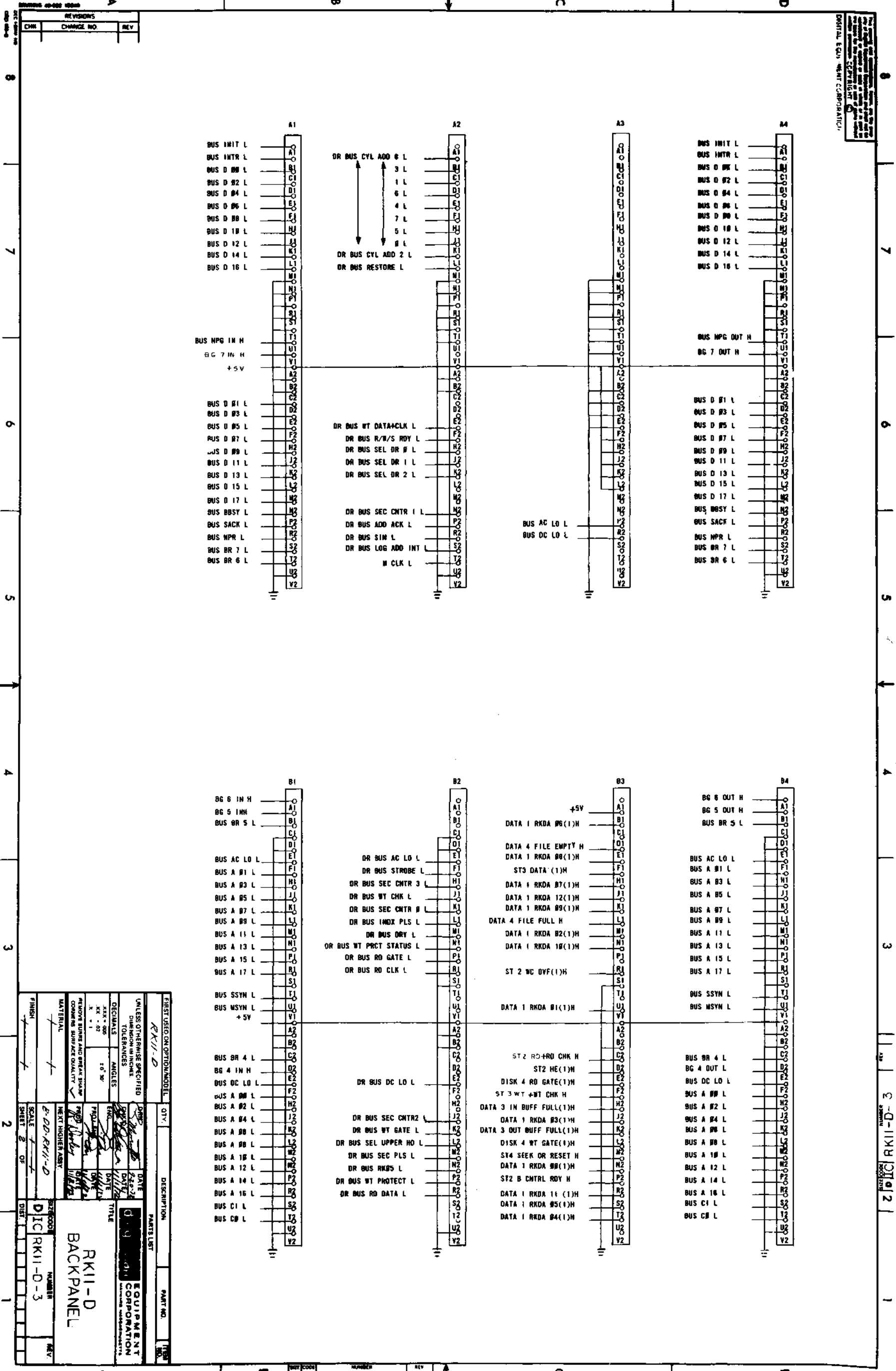
REVISIONS  
 CHANGE NO.  
 DATE



REV	DESCRIPTION	QTY	DESCRIPTION	PART NO.	ITEM NO.
1	RK1-D				
EQUIPMENT CORPORATION TITLE: BUS CONTROL PART NO: B-DD-RK11-D-0 (BUS 4) DCS M7257-0-1 SCALE: 6 OF 6					



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CRKII-D-3

CRKII-D-3

REV	CHANGE NO	REVISED BY	DATE

FIRST USED ON OPTION/MODEL		QTY	DESCRIPTION	PART NO.	UNIT
RKII-D					

UNLESS OTHERWISE SPECIFIED		DIMENSIONS ARE IN INCHES	
TOLERANCES		ANGLES	
DECIMALS	FRACTIONS		
.005	1/32		

DATE		DATE	

DRAWN BY		CHECKED BY	

MATERIAL		FINISH	

SCALE			

PARTS LIST	

RKII-D	
BACKPANEL	

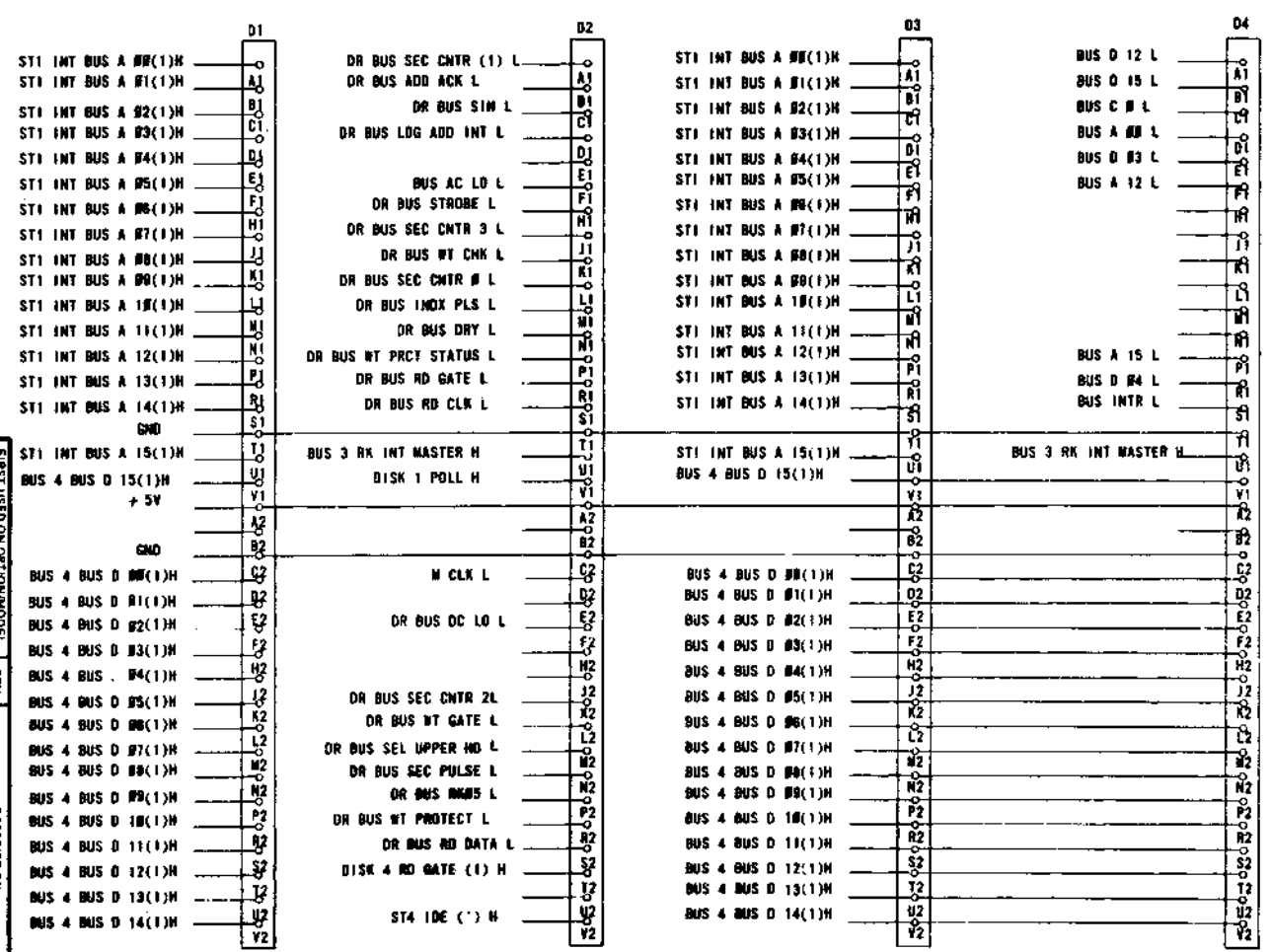
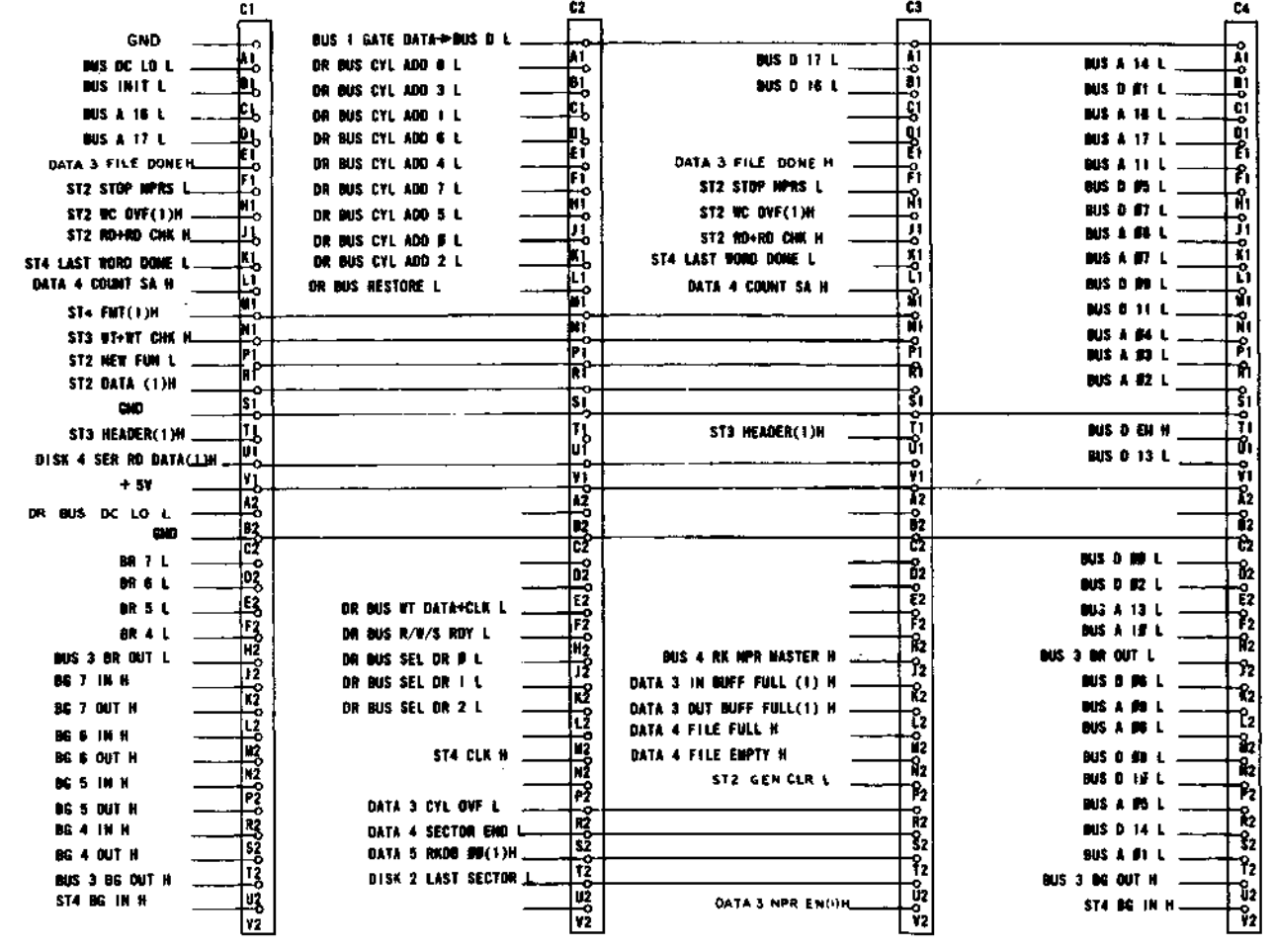
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BRUNING 40-522 1984  
 DED 100-004  
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REVISIONS		
CHK	CHANGE NO	REV

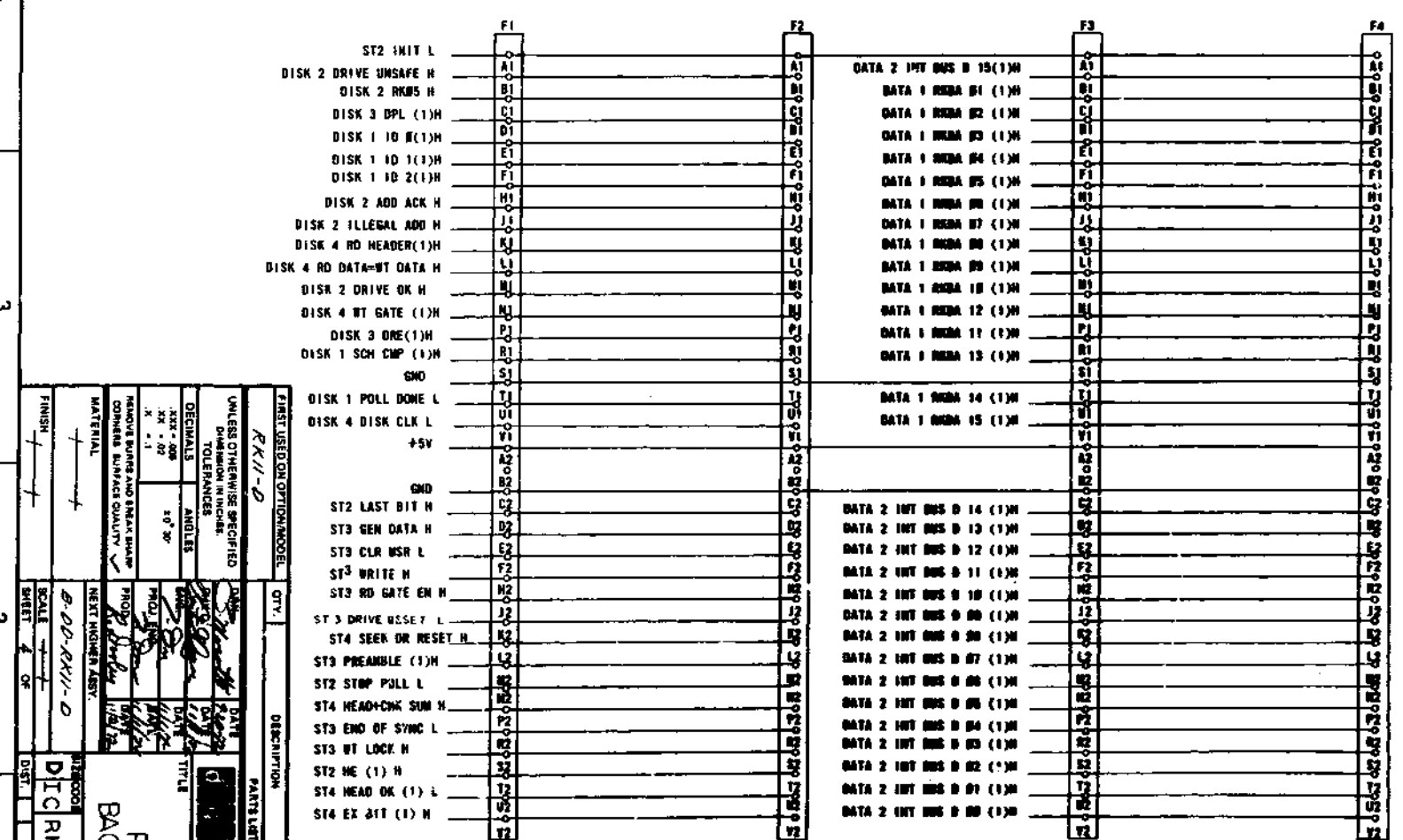
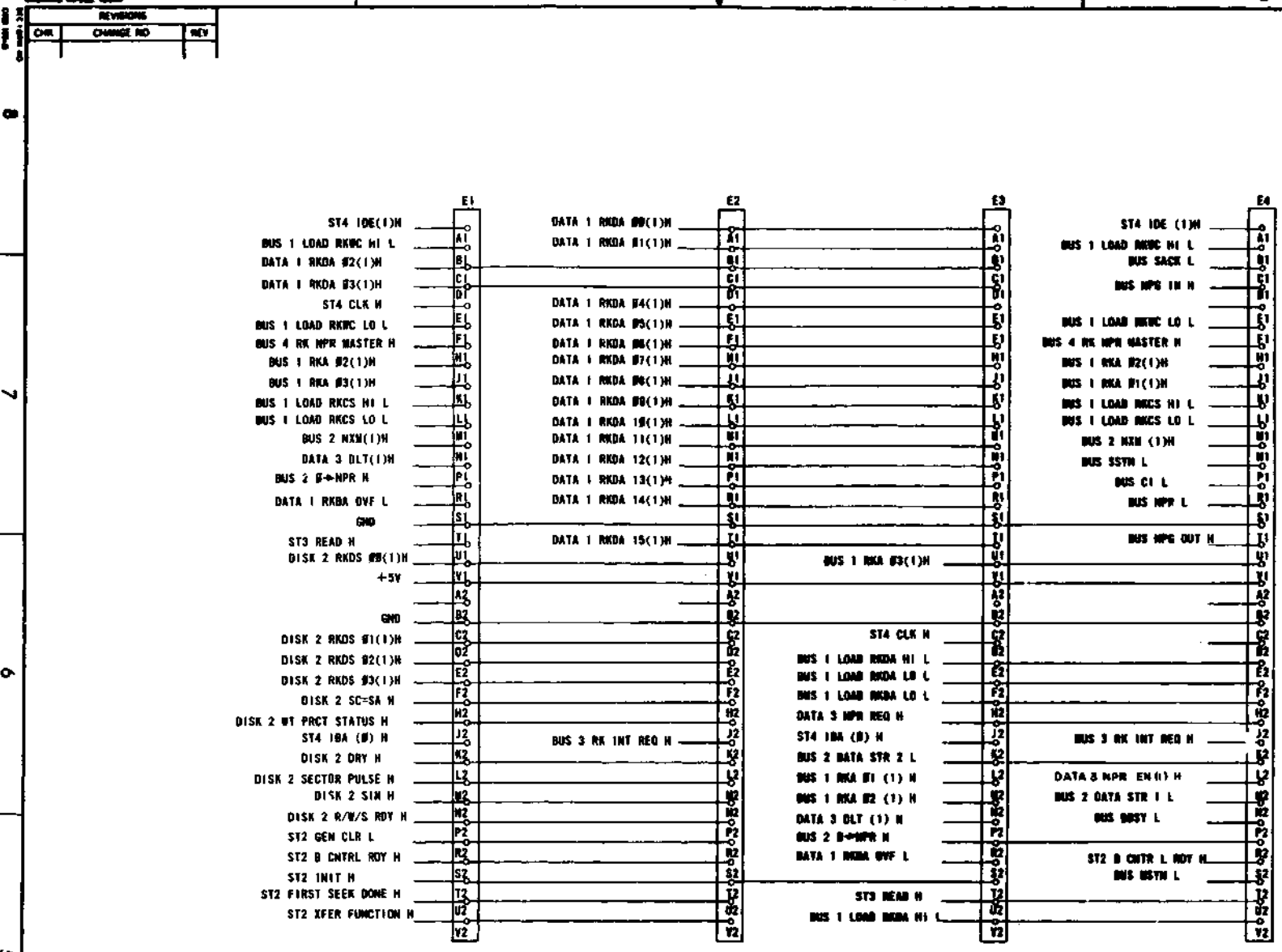
  

UNLESS OTHERWISE SPECIFIED	FINISH	SCALE	DATE
DIMENSIONS	1	3/16"	11/22/82
TOLERANCES			
DECIMALS			
ANGLES			
XXX .000			
X .01			
X .02			
X .05			
X .10			
X .15			
X .20			
REMOVE BURRS AND BREAK SHARP			
COMPLY WITH SURFACE QUALITY			
MATERIAL			
NEXT HIGHER ASSY			
SIZE CODE			
BACKPANEL			
NUMBER			
DICR11-D-3			
REV			
C			

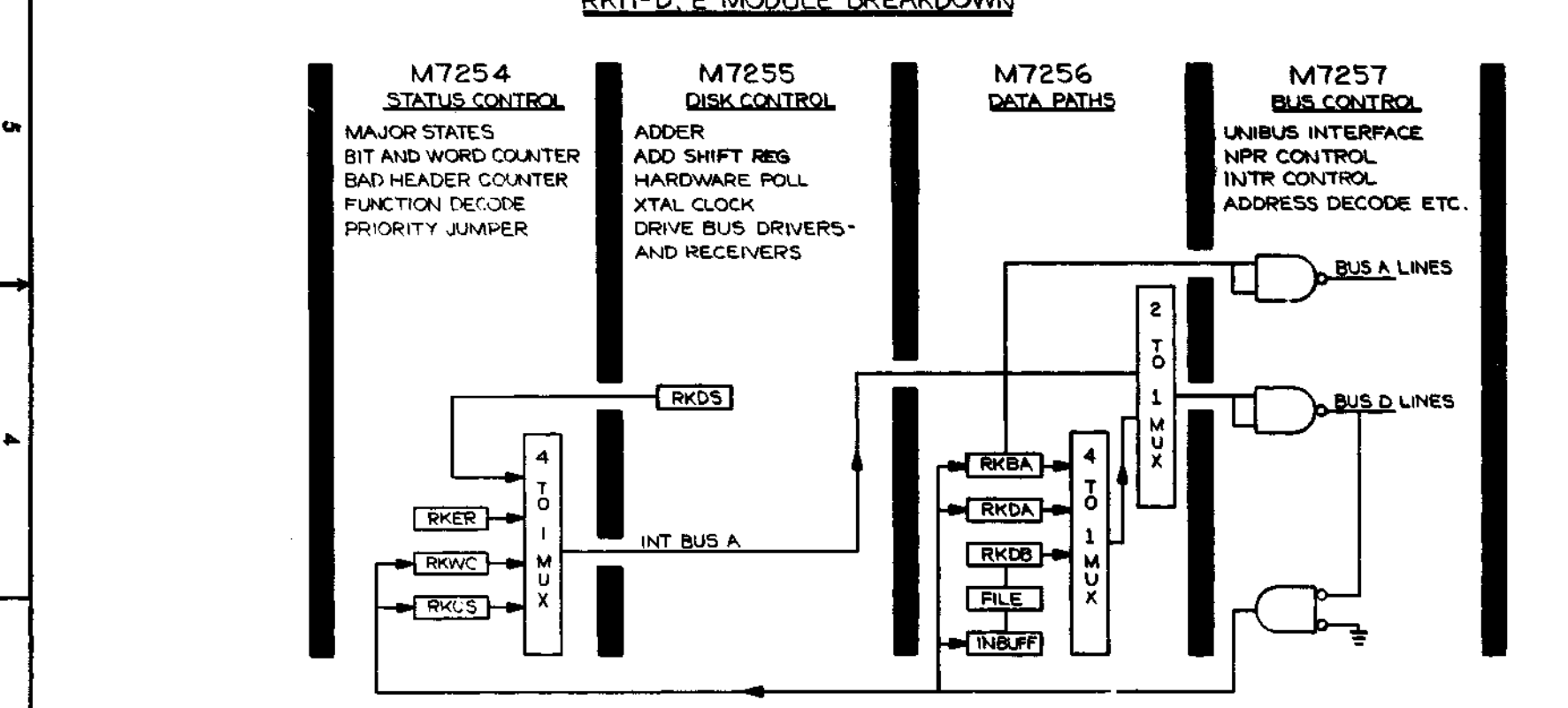
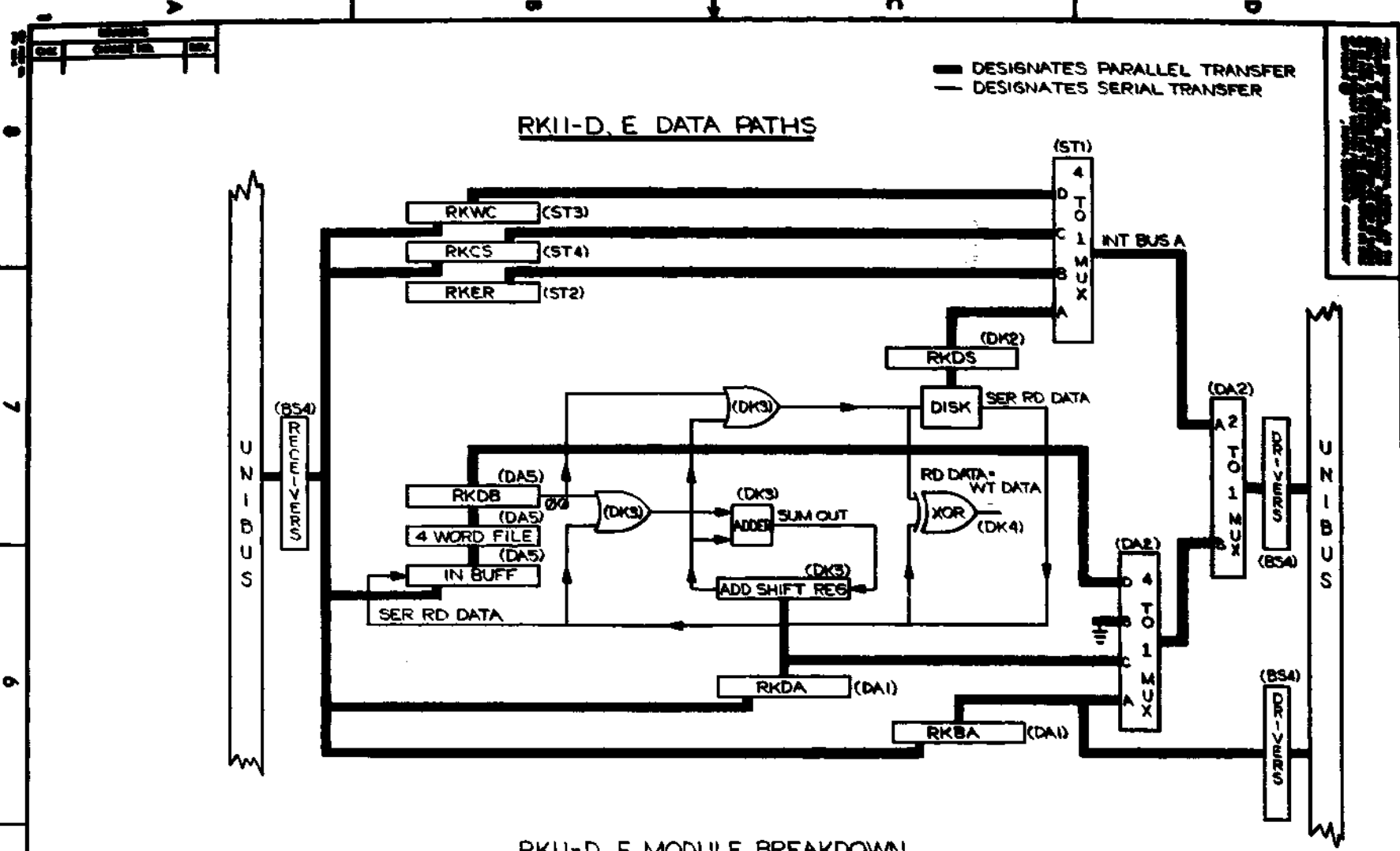


8  
 7  
 6  
 5  
 4  
 3  
 2  
 1

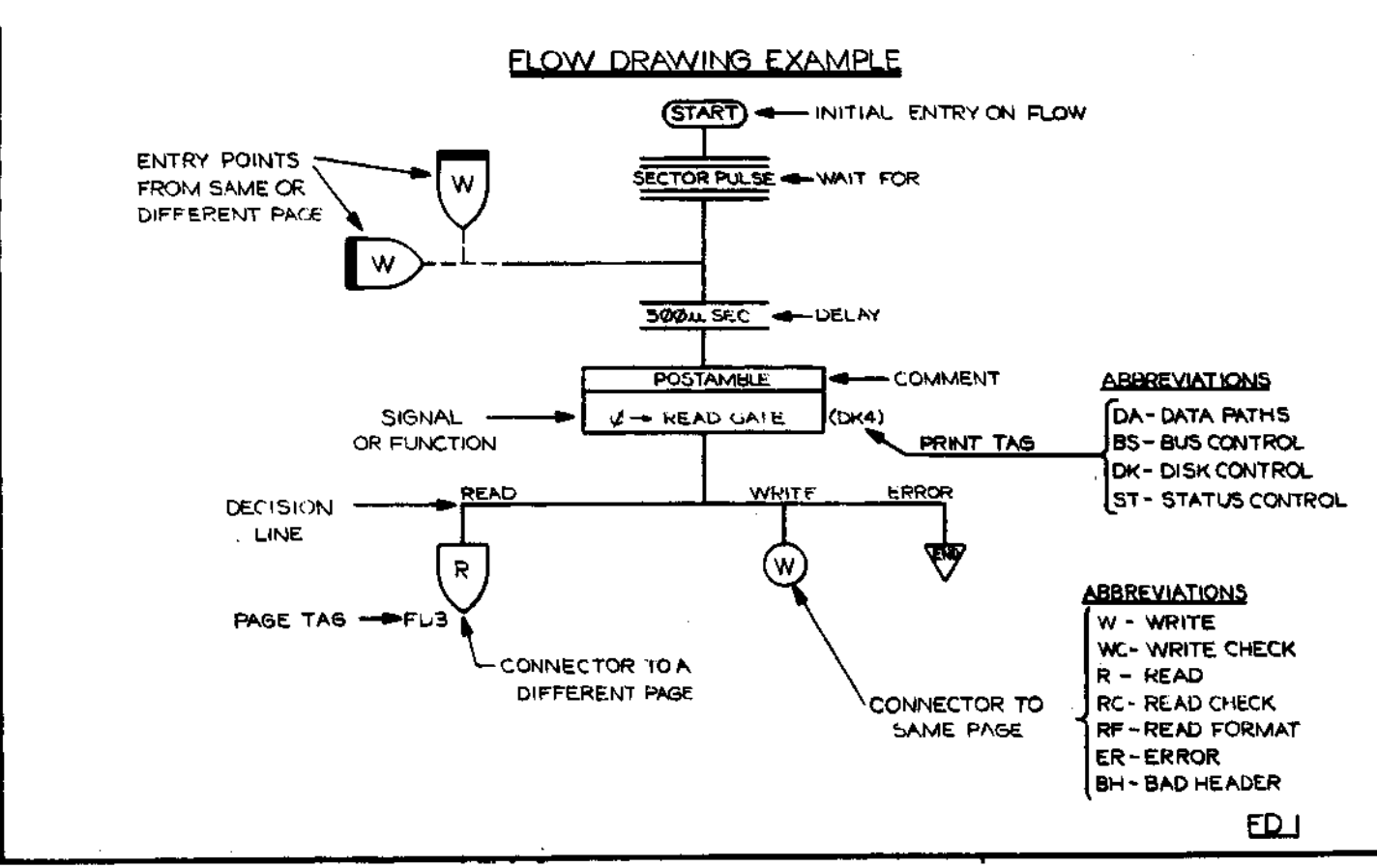
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FIRST USED OR OPTION MODEL		QTY	DESCRIPTION	PART NO.	UNIT						
<p><b>REVISIONS</b></p> <table border="1"> <tr> <th>REV</th> <th>CHANGE NO</th> <th>DATE</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>						REV	CHANGE NO	DATE			
REV	CHANGE NO	DATE									
<p><b>UNLESS OTHERWISE SPECIFIED</b></p> <p>DIMENSIONS IN INCHES</p> <p>TOLERANCES</p> <p>DECIMALS ANGLES</p> <p>FRACTIONS</p> <p>FINISH</p> <p>SCALE</p> <p>SHEET</p> <p>DATE</p>											
<p><b>PAINTS LIST</b></p> <p> </p>											
<p><b>REVISIONS</b></p> <p> </p>											
<p><b>DESCRIPTION</b></p> <p> </p>											
<p><b>DATE</b></p> <p> </p>											
<p><b>BY</b></p> <p> </p>											
<p><b>CHECKED</b></p> <p> </p>											
<p><b>APPROVED</b></p> <p> </p>											
<p><b>PROJECT</b></p> <p> </p>											
<p><b>BACKPANEL</b></p>											
<p><b>NUMBER</b></p> <p> </p>											
<p><b>REV</b></p> <p> </p>											



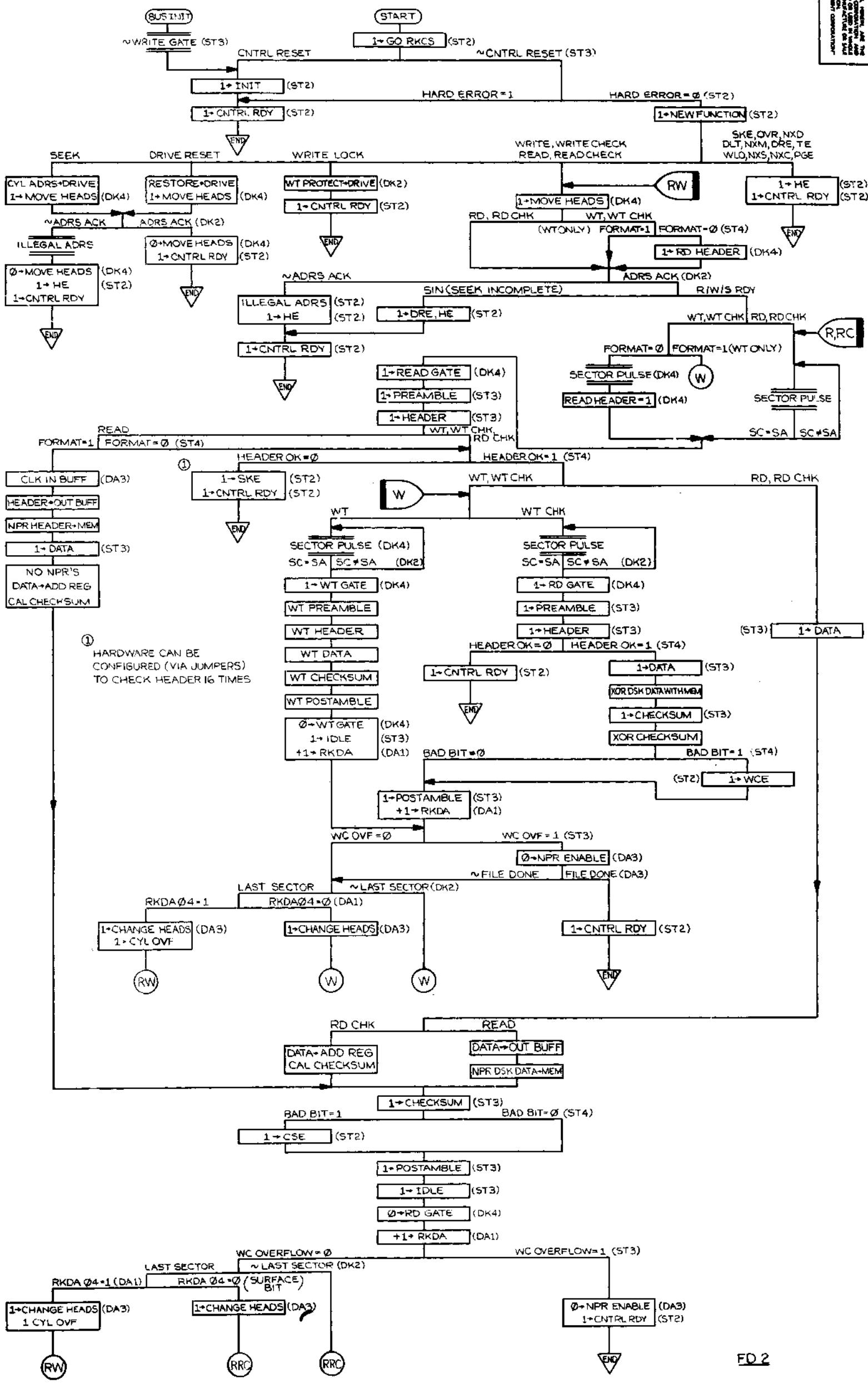
FIRST USED ON CONTROLLER						
<b>RK11-D</b>						
DIMENSIONAL TOLERANCES						
FINISH						
MATERIAL						
SCALE						
SHEET						
PART NO.						
PART LIST						
<b>RK11-D, E</b> <b>FUNCTION FLOWS</b>						
DATE						
DRAWN BY						
CHECKED BY						
APPROVED BY						
TITLE						
SCALE						
SHEET						
PART NO.						



6-U-119A (REV 2)

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GENERAL FLOW DRAWING



① HARDWARE CAN BE CONFIGURED (VIA JUMPERS) TO CHECK HEADER 16 TIMES

REV	DATE	BY	CHK	CHG	NO	REV

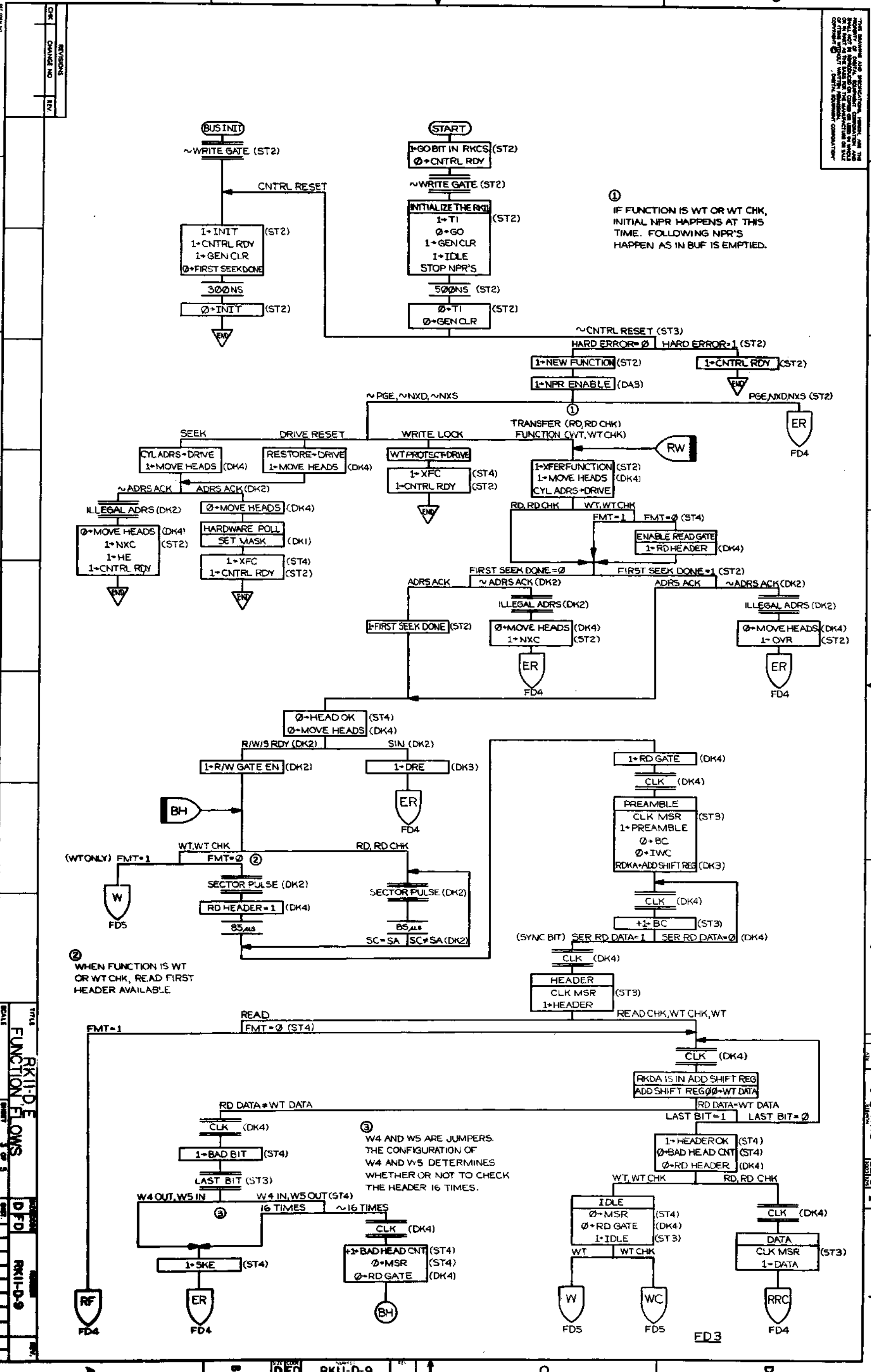
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FUNCTION FLOWS	
SHEET	2 OF 5
SCALE	
DATE	
NUMBER	RK11-D-9
REV.	

REV	DATE	BY	CHK	CHG	NO	REV

TITLE	RK11-D-9
FUNCTION FLOWS	
SHEET	2 OF 5
SCALE	
DATE	
NUMBER	RK11-D-9
REV.	

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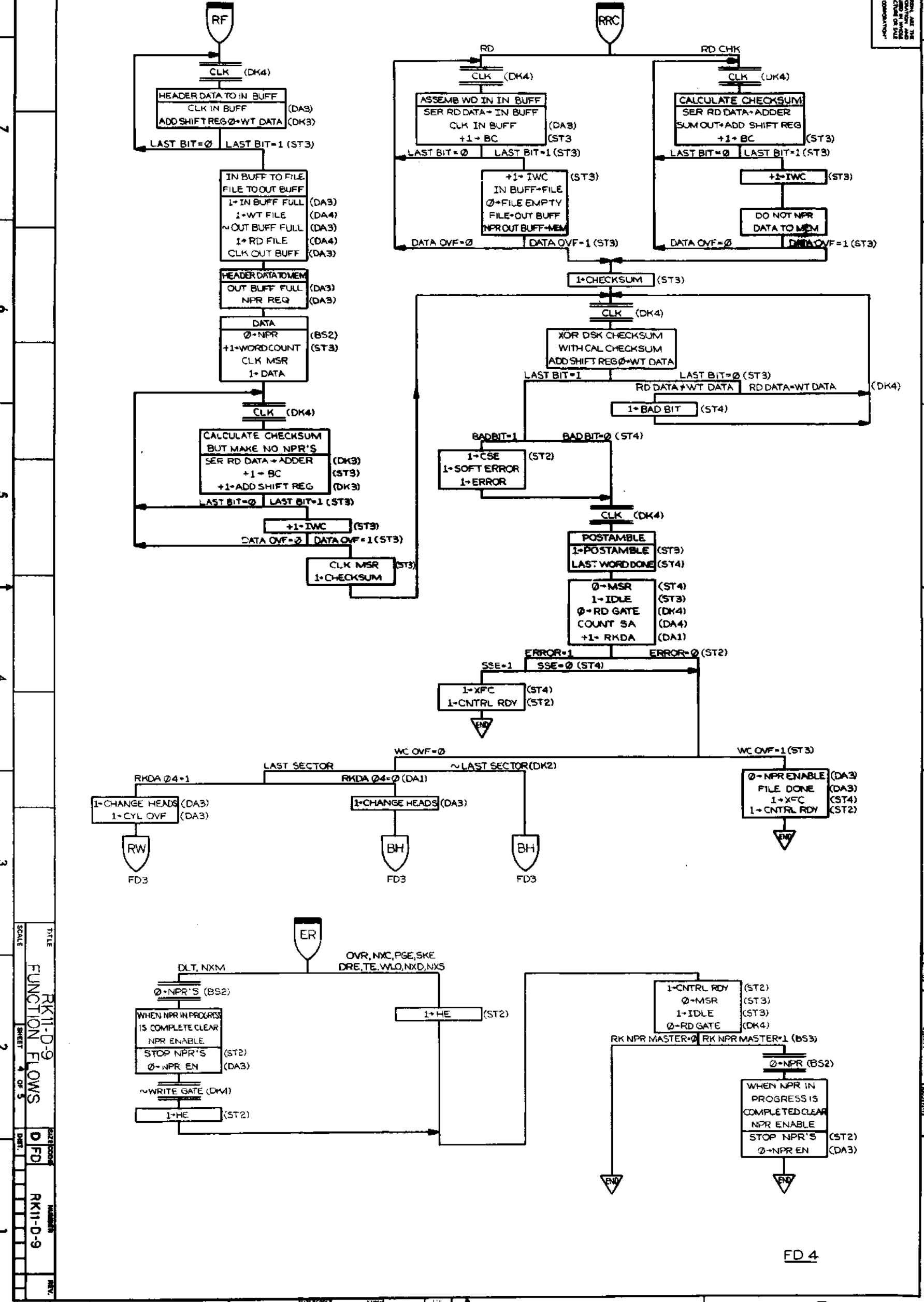
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 FUNCTION FLOWS  
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 CHECKED BY: [blank]  
 DATE: [blank]

6-D-9  
 RK11-D-9  
 DFD



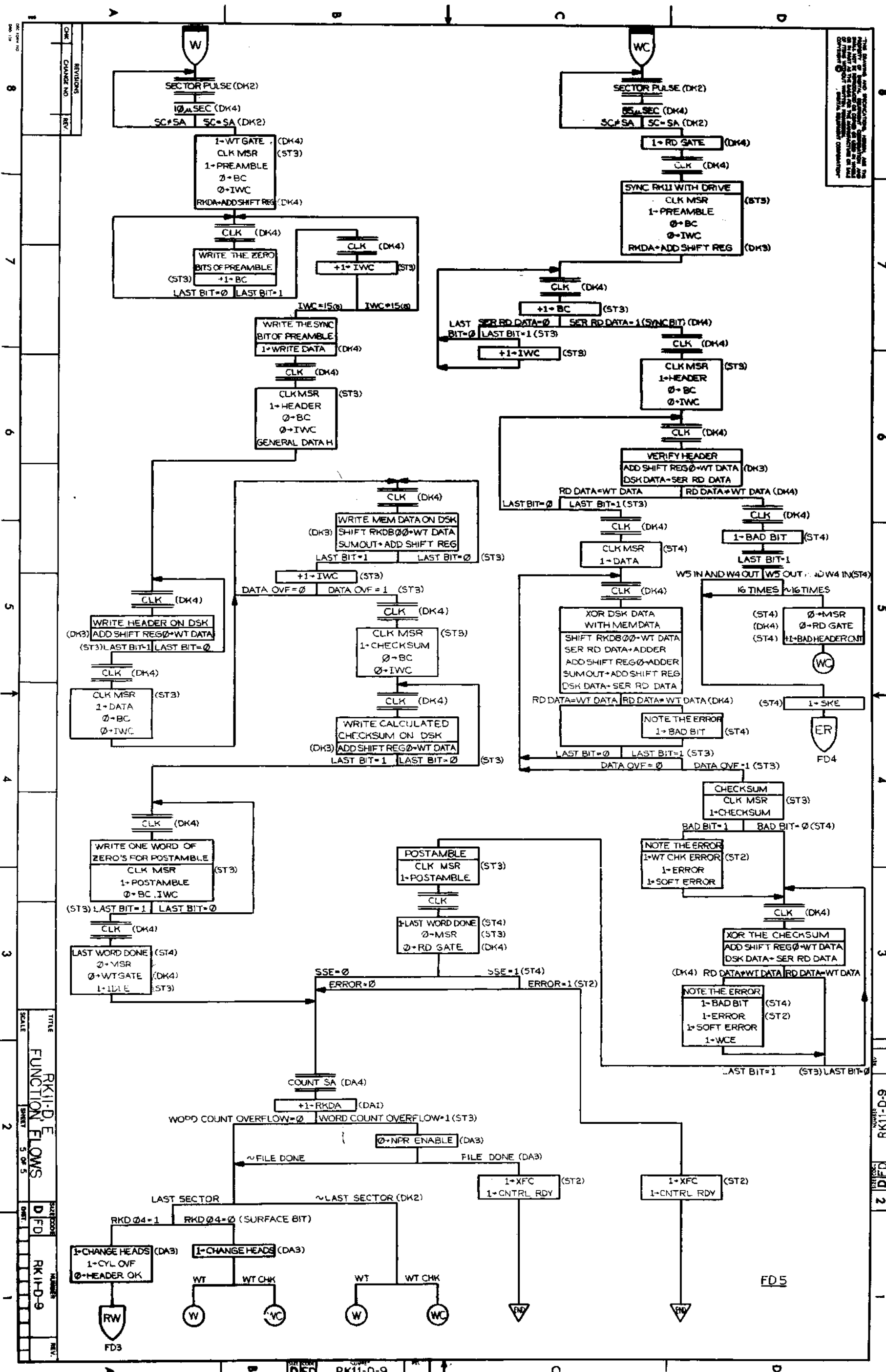
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REV.	CHANGED BY	DATE



TITLE	RK11-D-9
FUNCTION FLOWS	DFD
SCALE	AS SHOWN
SHEET	4 OF 5
PART	
DATE	
REV.	

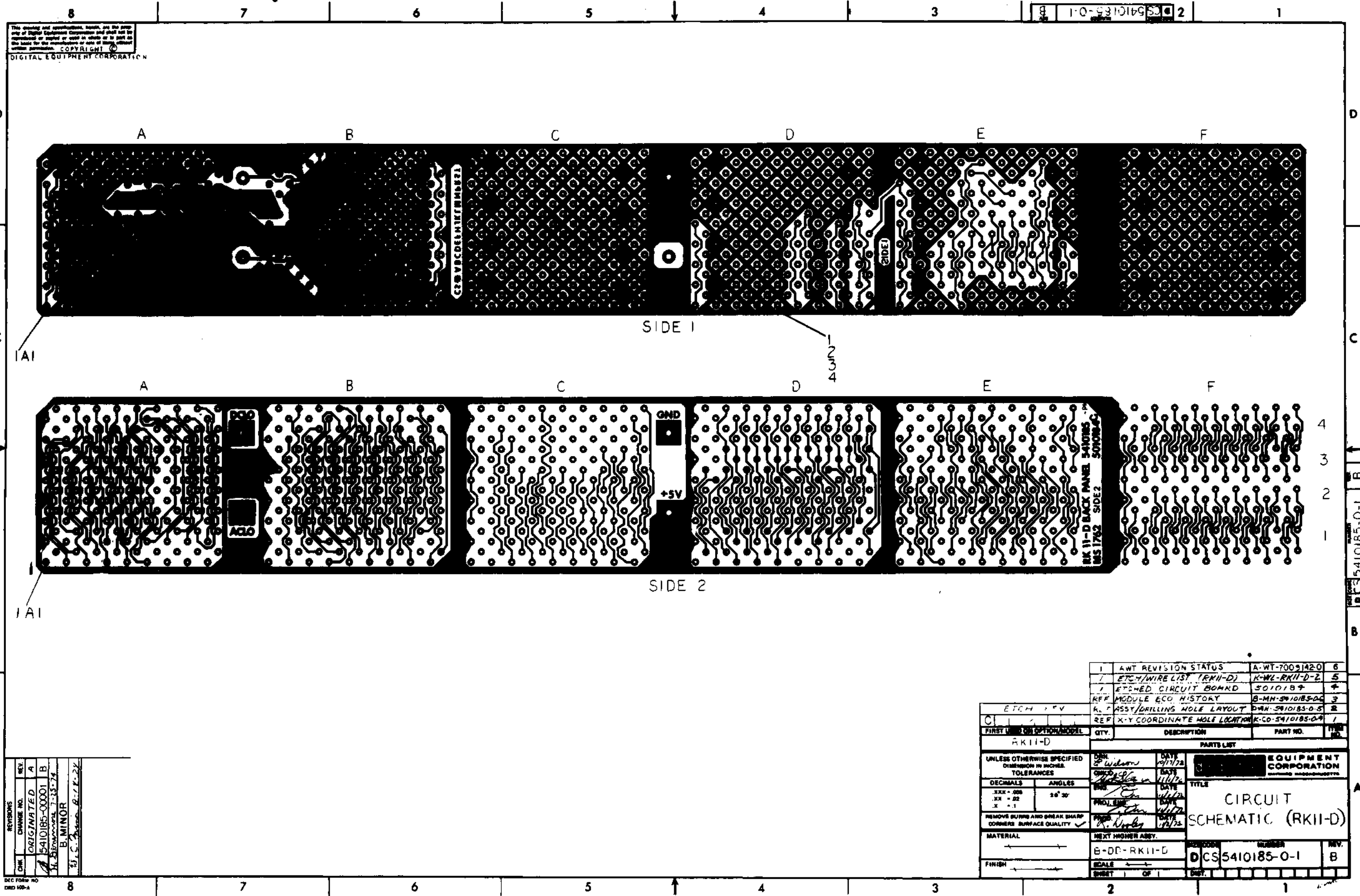
6-01-69  
DFD  
RK11-D-9  
2



TITLE: RK11-D-9  
 FUNCTION: FLOWS  
 SCALE: 5 OF 5  
 SHEET: 5 OF 5  
 NUMBER: RK11-D-9  
 DATE:

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 DATE 11-19-2011 BY 60322 UCBAW/SJS  
 ORIGINAL SOURCE: RK11-D-9

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REV.	CHANGE NO.	DESCRIPTION
A		ORIGINATED
B	5410185-0001	MINOR
C		
D		

REV.	DESCRIPTION	DATE	BY
1	AWT REVISION STATUS	A-WT-70051420	6
1	ETCH/WIRE LIST (RKII-D)	K-WL-RKII-D-2	5
1	ETCHED CIRCUIT BOARD	5010185	4
REF	MODULE ECO HISTORY	B-MH-5410185-0-1	3
R	ASSY/DRILLING HOLE LAYOUT	D-MH-5410185-0-1	2
REF	X-Y COORDINATE HOLE LOCATION	K-CO-5410185-0-1	1

FIRST LETTER	DESCRIPTION	QTY.	PART NO.	REV. NO.
C	RKII-D			

UNLESS OTHERWISE SPECIFIED		TOLERANCES	
DECIMALS	ANGLES		
.XXX - .008	16° 30'		
.XX - .005			
.X - .1			

DATE	BY	DATE	BY
10/1/72	W. Wilson	11/1/72	W. Wilson
11/1/72	W. Wilson	11/1/72	W. Wilson
11/1/72	W. Wilson	11/1/72	W. Wilson
11/1/72	W. Wilson	11/1/72	W. Wilson

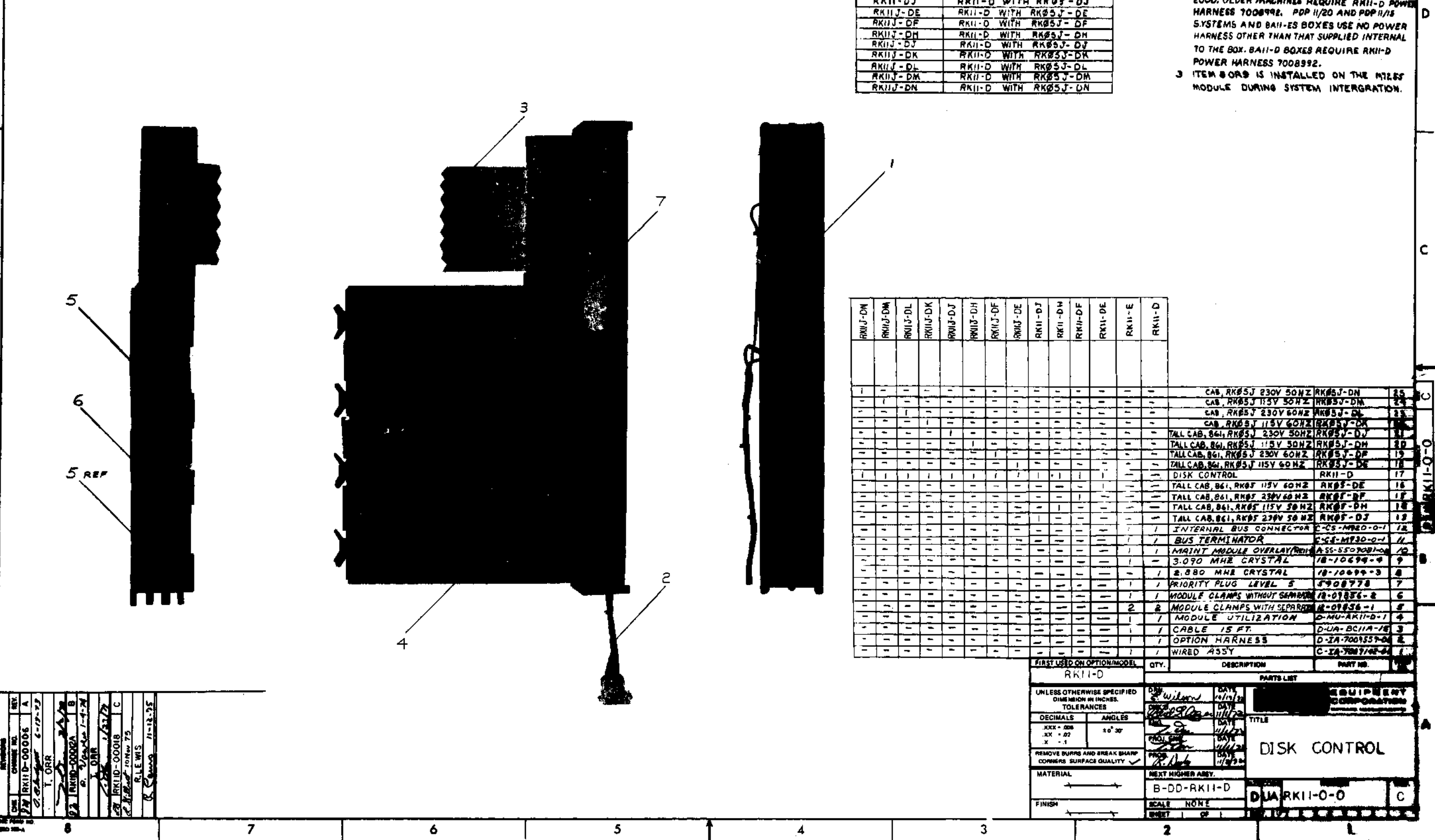
PARTS LIST			
MATERIAL	NEXT HIGHER ASSY.	QUANTITY	REVISION
	B-DD-RKII-D		
FINISH	SCALE	SHEET	OF
		1	1

EQUIPMENT CORPORATION		TITLE	
CIRCUIT SCHEMATIC (RKII-D)		D CS 5410185-0-1	
REV. B		REV. B	

DIGITAL EQUIPMENT CORPORATION  
DSD 100-A

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WIRE TABLE			
ITEM NO	DESCRIPTION	CONNECTION	TO RKII-D
18	VIO	DC L3	
18	YEL	AC L0	
14	BLK	GND	
14	RED	+5V	

LEGEND	
OPTION	VARIATION
RKII-D	DISK CONTROL
RKII-E	DISK CONTROL
RKII-DE	RKII-D WITH RK05-DE
RKII-DF	RKII-D WITH RK05-DF
RKII-DH	RKII-D WITH RK05-DH
RKII-DJ	RKII-D WITH RK05-DJ
RKII-DE	RKII-D WITH RK05J-DE
RKII-DF	RKII-D WITH RK05J-DF
RKII-DH	RKII-D WITH RK05J-DH
RKII-DJ	RKII-D WITH RK05J-DJ
RKII-DK	RKII-D WITH RK05J-DK
RKII-DL	RKII-D WITH RK05J-DL
RKII-DM	RKII-D WITH RK05J-DM
RKII-DN	RKII-D WITH RK05J-DN

**NOTES:**

- ITEM 17 IS MADE UP OF ITEMS 1 THRU 8 AND 10 THRU 12.
- USE RKII-D OPTION HARNESS 7008559 IN 11/40 SYSTEMS WITH S/N GREATER THAN 6000 AND 11/45 SYSTEMS WITH S/N GREATER THAN 2000. OLDER MACHINES REQUIRE RKII-D POWER HARNESS 7008992. POP 11/20 AND POP 11/15 SYSTEMS AND BAI-ES BOXES USE NO POWER HARNESS OTHER THAN THAT SUPPLIED INTERNAL TO THE BOX. BAI-D BOXES REQUIRE RKII-D POWER HARNESS 7008992.
- ITEM 8093 IS INSTALLED ON THE MTEFS MODULE DURING SYSTEM INTEGRATION.

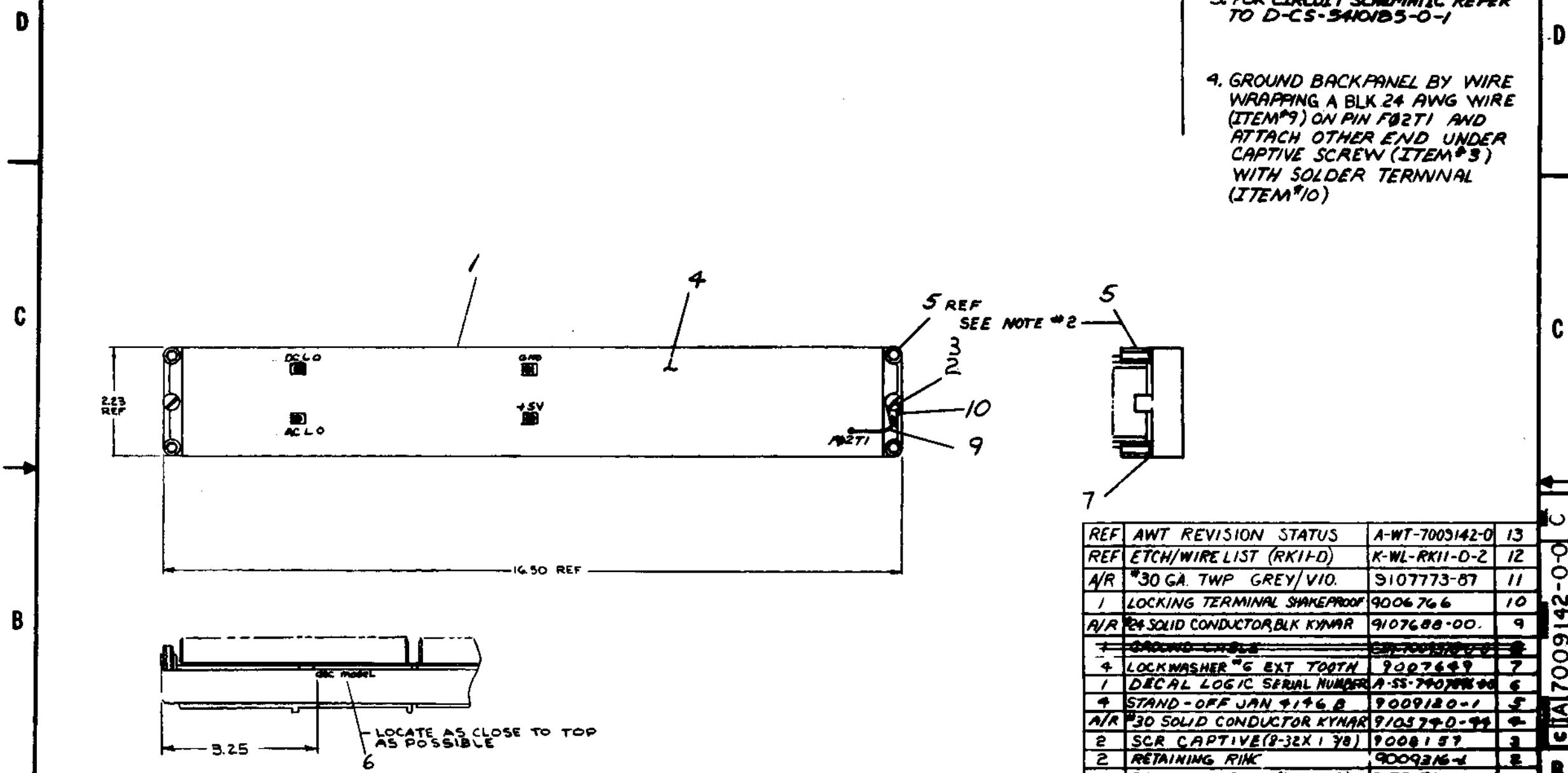
RKII-DN	RKII-DM	RKII-DL	RKII-DK	RKII-DJ	RKII-DH	RKII-DE	RKII-DF	RKII-E	RKII-D		
											CAB, RK05J 230V 50HZ
											RK05J-DN
											15
											CAB, RK05J 115V 50HZ
											RK05J-DM
											16
											CAB, RK05J 230V 60HZ
											RK05J-DL
											17
											CAB, RK05J 115V 60HZ
											RK05J-DK
											18
											TALL CAB, 861, RK05J 230V 50HZ
											RK05J-DJ
											19
											TALL CAB, 861, RK05J 115V 50HZ
											RK05J-DH
											20
											TALL CAB, 861, RK05J 230V 60HZ
											RK05J-DE
											21
											TALL CAB, 861, RK05J 115V 60HZ
											RK05J-DF
											22
											DISK CONTROL
											RKII-D
											17
											TALL CAB, 861, RK05 115V 60HZ
											RK05-DE
											18
											TALL CAB, 861, RK05 230V 60HZ
											RK05-DF
											19
											TALL CAB, 861, RK05 115V 50HZ
											RK05-DH
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											TALL CAB, 861, RK05 230V 50HZ
											RK05-DJ
											21
											INTERNAL BUS CONNECTOR
											C-05-MR20-0-1
											22
											BUS TERMINATOR
											C-6-MT30-0-1
											23
											MAINT MODULE OVERLAY/PRINT
											A-55-5507081-04
											24
											3.090 Mhz CRYSTAL
											18-10699-9
											9
											2.880 Mhz CRYSTAL
											18-10699-3
											8
											PRIORITY PLUG LEVEL 5
											5908778
											7
											MODULE CLAMPS WITHOUT SEPARATE
											18-07836-2
											6
											MODULE CLAMPS WITH SEPARATE
											18-07836-1
											5
											MODULE UTILIZATION
											D-MU-AKII-D-1
											4
											CABLE 15 FT.
											D-UA-BC11A-15
											3
											OPTION HARNESS
											D-2A-7001557-0
											2
											WIRED ASSY
											C-2A-7001745-0
											1

REV. A	DATE	BY	CHKD
1	6-17-73	T. ORR	
2	1-4-74	J. ORR	
3	1-13-77	J. ORR	
4	1-13-77	J. ORR	
5	2-18-75	R. LEWIS	

FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.
RKII-D				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES			
XXX - .006	±0°30'			
XX - .02				
X - .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL		NEXT HIGHER ASSEMBLY		
FINISH		SCALE NONE		
		SHEET 2 OF 1		
		DISK CONTROL		
		DUARKII-O-O		

223 REF

- NOTES:**
1. USE YELLOW WIRE ITEM #4 FOR MACHINE WRAPPED.
  2. INSTALL STAND-OFFS (ITEM #5) BEFORE AWT.
  3. FOR CIRCUIT SCHEMATIC REFER TO D-CS-340105-0-1
  4. GROUND BACKPANEL BY WIRE WRAPPING A BLK 24 AWG WIRE (ITEM #9) ON PIN #271 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 (RK11-D)			K-WL-RK11-D-2	12
A/R	#30 GA. TWP	GREY/VIO.		9107773-87	11
1	LOCKING TERMINAL	SHAKEPROOF		9006766	10
A/R	#24 SOLID CONDUCTOR	BLK KYMAR		9107688-00	9
4	LOCKWASHER #6 EXT TOOTH			9007689	7
1	DECAL LOGIC SERIAL NUMBER			A-SS-790788-00	6
4	STAND-OFF JAN #16 B			9009120-1	5
A/R	#30 SOLID CONDUCTOR	KYNAR		9105790-99	4
2	SCR CAPTIVE (8-32X1.78)			9008157	3
2	RETAINING RING			9009216-1	2
1	BACK PANEL (RK11-D)			D-PA-70091310	1

REV	DATE	BY	CHKD	APP'D
A	11-12-73	R. GARDNER		
B	11-12-73	R. GARDNER		
C	6-4-74	R. GARDNER		
	28 Oct. 76	B. CHINMAN		
	10-29-77	R. GRUDA		

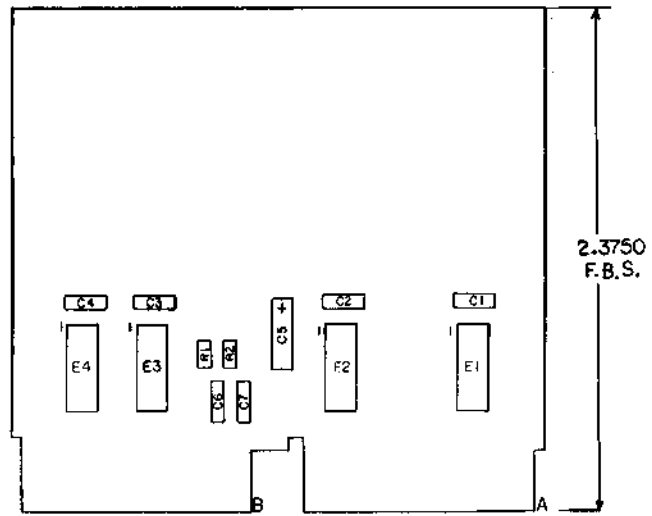
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	REV.															
RK11-D																			
PARTS LIST																			
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		<table border="1"> <tr> <td>DBL</td> <td>DATE</td> <td>9/05/73</td> </tr> <tr> <td>CHKD</td> <td>DATE</td> <td>10/11/73</td> </tr> <tr> <td>ENG.</td> <td>DATE</td> <td>10/11/73</td> </tr> <tr> <td>PROJ. ENG.</td> <td>DATE</td> <td>10/11/73</td> </tr> <tr> <td>PROD.</td> <td>DATE</td> <td>10/11/73</td> </tr> </table>	DBL	DATE	9/05/73	CHKD	DATE	10/11/73	ENG.	DATE	10/11/73	PROJ. ENG.	DATE	10/11/73	PROD.	DATE	10/11/73	<b>EQUIPMENT CORPORATION</b> <small>DEFENSE ELECTRONIC SYSTEMS</small>	
DBL	DATE	9/05/73																	
CHKD	DATE	10/11/73																	
ENG.	DATE	10/11/73																	
PROJ. ENG.	DATE	10/11/73																	
PROD.	DATE	10/11/73																	
<table border="1"> <tr> <td>DECIMALS</td> <td>ANGLES</td> </tr> <tr> <td>.XXX - .005</td> <td>± 0° 30'</td> </tr> <tr> <td>.XX - .02</td> <td></td> </tr> <tr> <td>X - .1</td> <td></td> </tr> </table>	DECIMALS	ANGLES	.XXX - .005	± 0° 30'	.XX - .02		X - .1		<table border="1"> <tr> <td colspan="2">TITLE</td> </tr> <tr> <td colspan="2" style="text-align: center;">WIRED ASS'Y (RK11-D)</td> </tr> </table>		TITLE		WIRED ASS'Y (RK11-D)						
DECIMALS	ANGLES																		
.XXX - .005	± 0° 30'																		
.XX - .02																			
X - .1																			
TITLE																			
WIRED ASS'Y (RK11-D)																			
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	NEXT HIGHER ASSY.																		
MATERIAL	B-DD-RK11-D		<table border="1"> <tr> <td>SIZE CODE</td> <td>NUMBER</td> <td>REV.</td> </tr> <tr> <td>CIA</td> <td>7009142-0-0</td> <td>C</td> </tr> </table>	SIZE CODE	NUMBER	REV.	CIA	7009142-0-0	C										
SIZE CODE	NUMBER	REV.																	
CIA	7009142-0-0	C																	
FINISH	SCALE																		
	SHEET 1 OF 1	DST. (C)																	

CIA 7009142-0-0 C

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NOTES:

REF	X-Y COORDINATE HOLE LOCATION	K-CO-M930-0-4	1	
REF	ASSY/DRILLING HOLE LAYOUT	D-AH-M930-0-5	2	
REF	MODULE ECO HISTORY	B-MH-M930-0-6	3	
1	ETCHED CIRCUIT BOARD	5008690	4	
4	C1 THRU C4	CAP .22 $\mu$ F 50V CER	1010274-01	5
2	C6, C7	CAP 1000 pF 250V 20% DISC	10000243	6
1	C5	CAP 39 $\mu$ F 10V 10% TANT	10000076	7
2	R1, R2	RES 303 $\Omega$ 1/4W 1%	1305125	8
2	E1, E4	28 RES DIVIDER NETWORK	1312628-00	9
2	E2, E3	25 RES DIVIDER NETWORK	1312628-01	10



IC TYPE	QND	+5V

FIRST USED ON OPTION MODEL		PARTS LIST		
M930				
QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

DRN.	DATE
J. CARTER	7-9-75

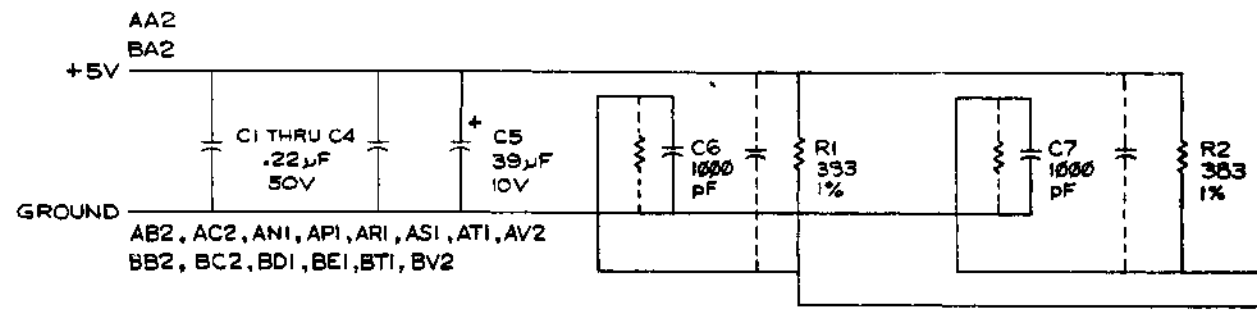
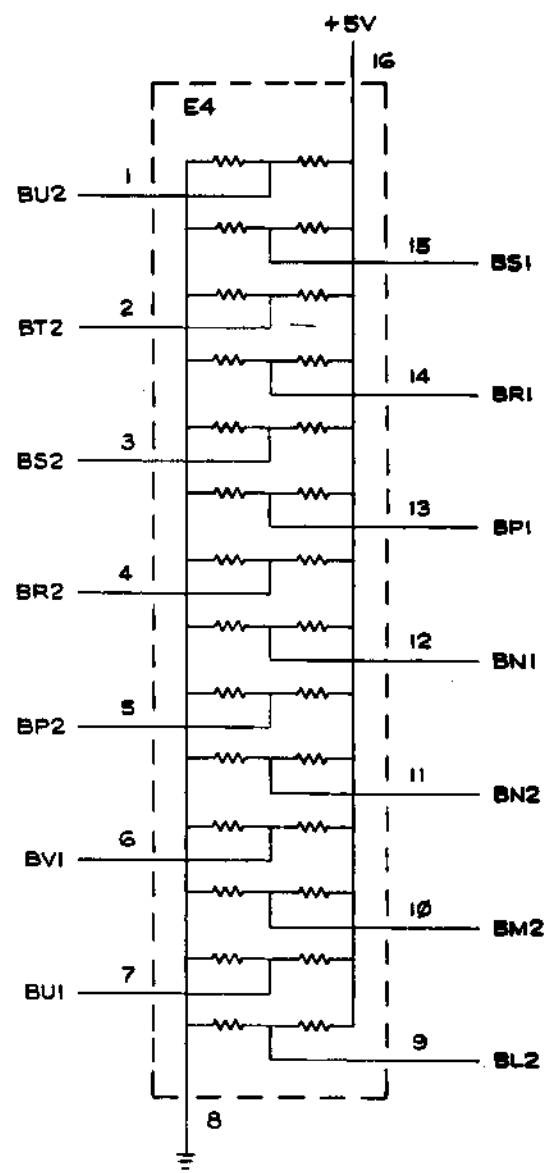
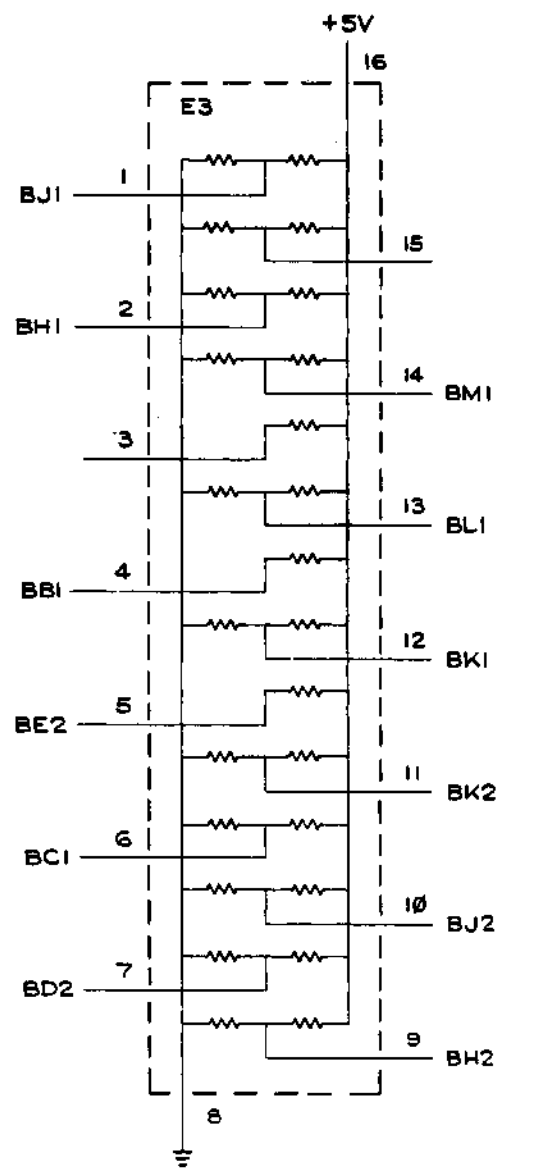
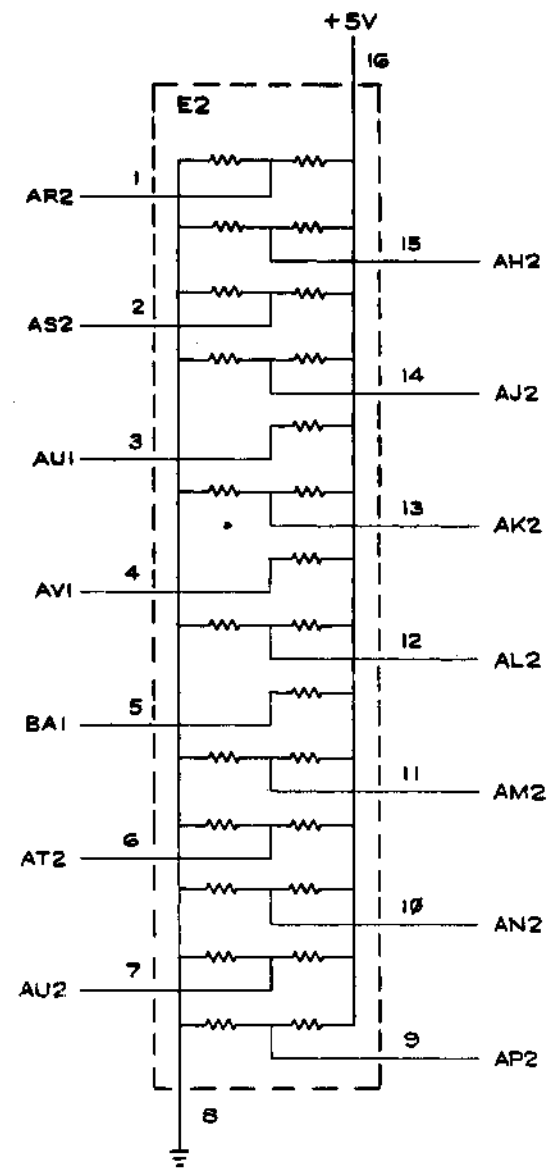
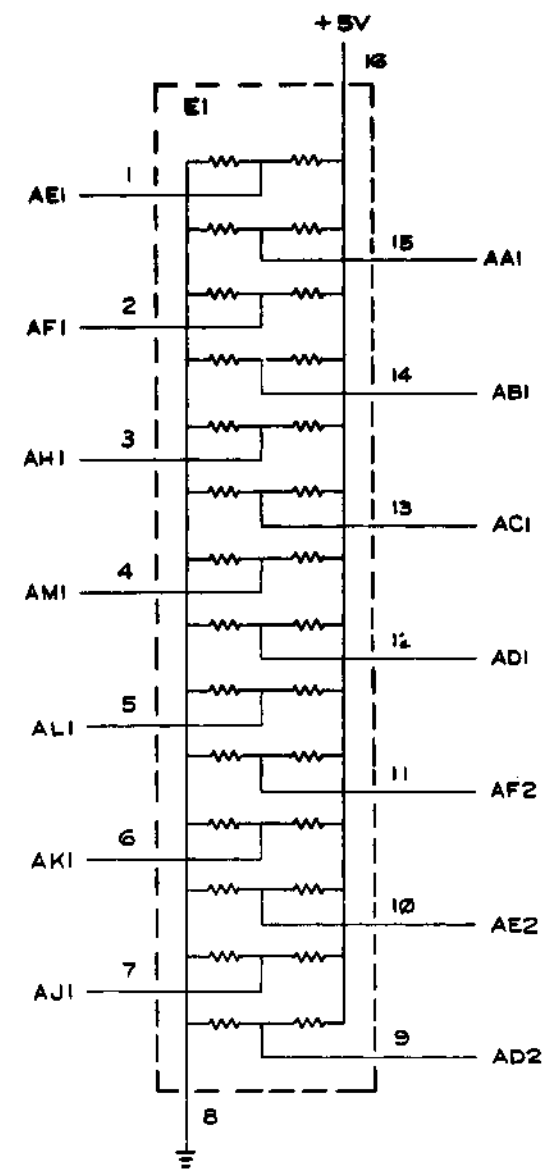
TITLE: BUS TERMINATOR

REV.	NUMBER	REV.
D CS	M930-0-1	E

ORIGINATED	DATE	REV.
K. SARGENT	7-11-75	E

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED

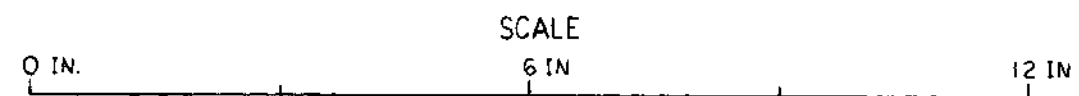
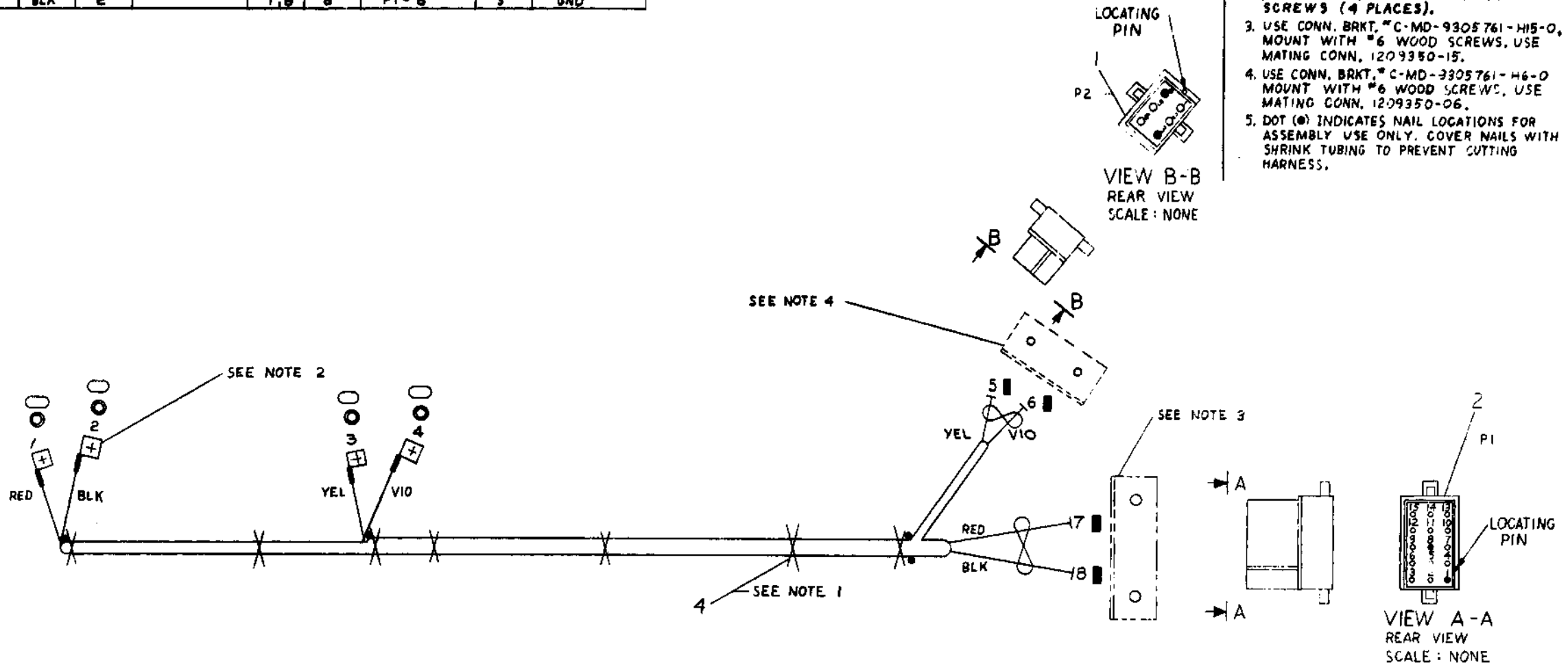
D  
C  
B  
A



REVISIONS		
NO.	CHANGE NO.	BY.

WIRE TABLE										
ITEM NO	DESCRIPTION			FROM			TO			SIGNAL
	AWG	COLOR	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-9305761-H15-0, MOUNT WITH #6 WOOD SCREWS, USE MATING CONN. 1209350-15.
  - USE CONN. BRKT. #C-MD-3305761-H6-0 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.



DO NOT REDUCE  
DO NOT BUILD FROM REDUCED PRINT

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

SYMBOL	DESCRIPTION	PART NO.	QTY.
○	A/R TUBING, SHRINKABLE 3/16 I.D. X 1/8	9107305-02	8
○	4 CONN. SOLDERLESS	9009262-00	7
○	A/R WIRE #18 AWG TWP YEL/VIO	9107430-47	6
○	A/R WIRE #14 AWG TWP BLK/RED	9107440-02	5
Y	A/R WRAP, TIE	9007091	4
■	4 PIN, MALE	1209378-01	3
□	1 HOUSING, CONN. 15 PIN	1209351-15	2
□	1 HOUSING, CONN. 6 PIN	1209351-06	1

FIRST USED ON OPT / VOL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
RK11-D					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES		PARTS LIST			
DECIMALS	ANGLES	DRN	DATE	digital EQUIPMENT CORPORATION	
.XXX - .005	10° 30'	CHK'D	DATE	TITLE	
.XX - .02		ENG	DATE	OPTION HARNESS	
.X - .1		PROJ. ENG.	DATE	RK11-D	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY Y		PROD.	DATE	SIZE CODE	
NEXT HIGHER ASSY.		7-2-68	11/1/73	NUMBER	
MATERIAL		SCALE 1/1		DIA 7009559-0-0	
SEE PARTS LIST		SHEET 1 OF 1		REV.	
FINISH					

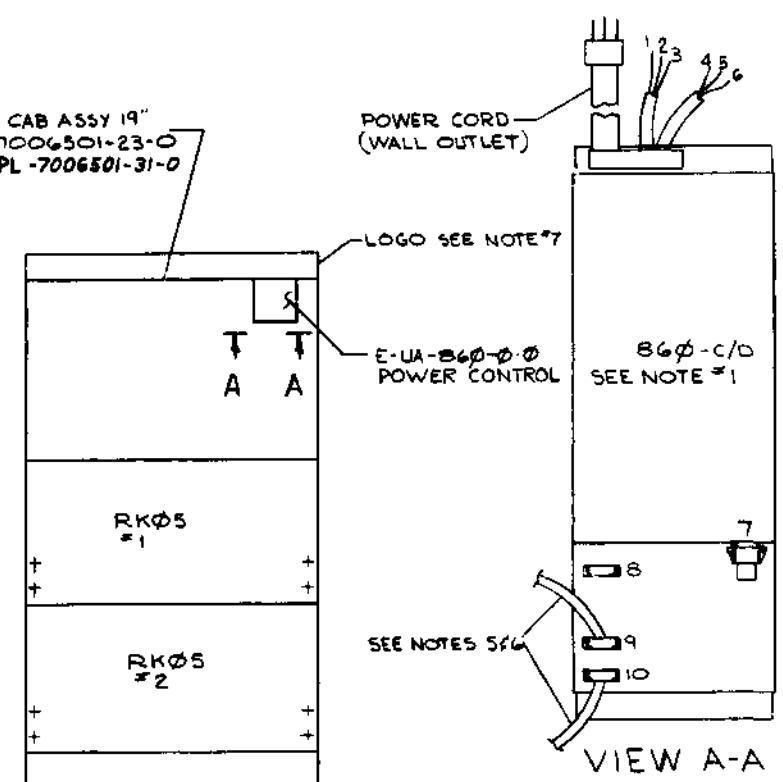
REVISIONS  
CHK CHANGE NO. REV.

DIA 7009559-0-0



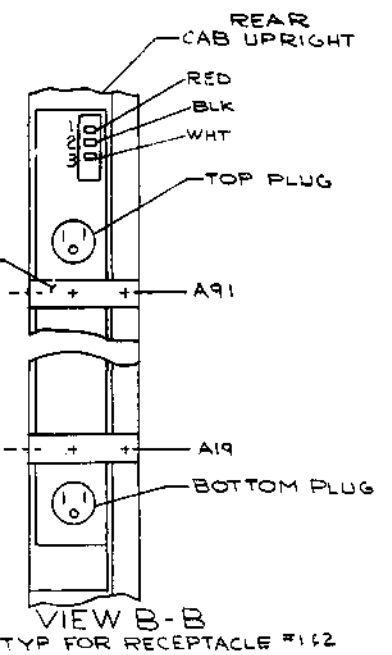
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BASIC CAB ASSY 19"  
C-PL-7006501-23-0  
OR C-PL-7006501-31-0

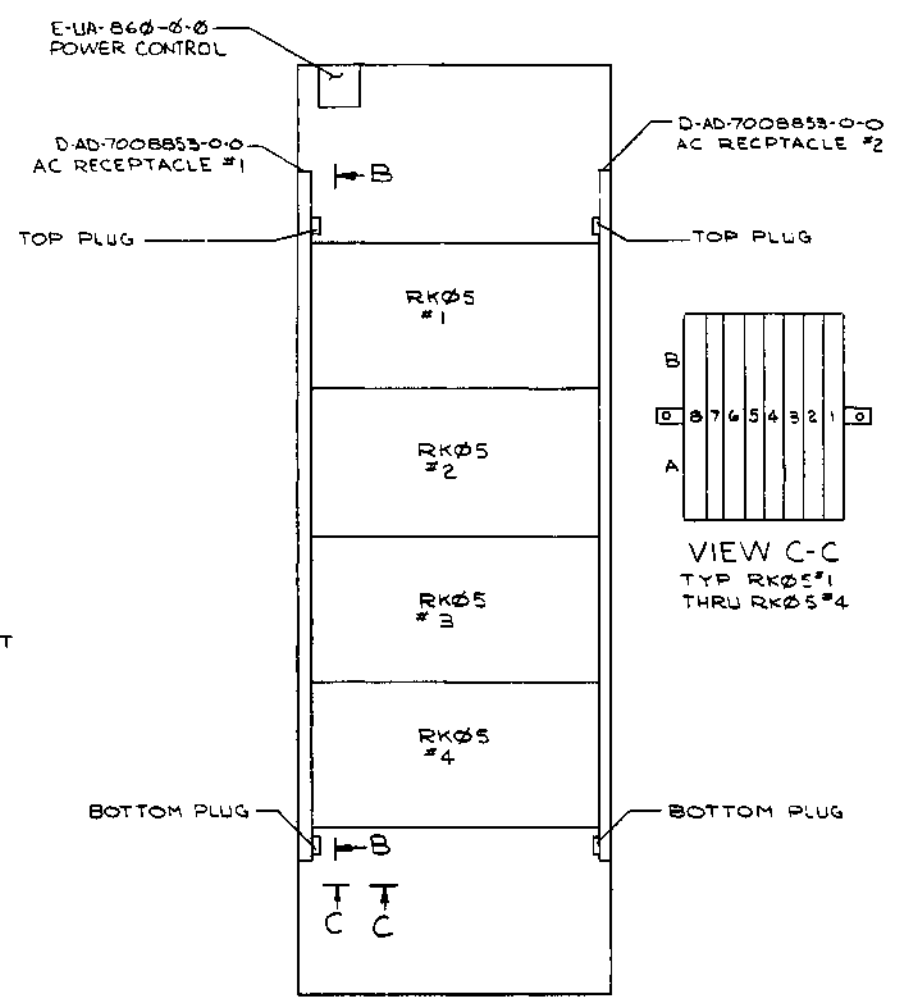


SEE NOTES 5 & 6

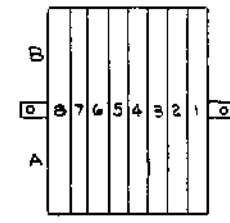
VIEW A-A



VIEW B-B  
TYP FOR RECEPTACLE #1 & 2



REAR VIEW  
CONFIGURATION WITH 860 POWER CONTROL



VIEW C-C  
TYP RK05 #1  
THRU RK05 #4

NOTES:

- 1) TO REWORK 860-A & B TO 860-C & D REFER TO DRAWING E-UA-860-0-0.
- 2) IF LESS THAN 4 DRIVES, THE M338 MODULE IS MOVED TO THE LAST DRIVE ON THE BUS IN THE SLOT NORMALLY OCCUPIED BY THE OUTCOMING BC11A 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 RK05 #5 MAY COME DIRECTLY FROM A DISK CONTROL OR FROM THE SLOT NORMALLY OCCUPIED BY THE M338 IN RK05 #4. (SEE NOTE #2). POWER AND CABLING 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 #7008864 TO POWER CONTROL AND P2 OF 2 CABLE #7008864 TO M720-E/F 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 8, 9 AND 10 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 #7008276 OR ITEMS:
  1. TIMMERMAN NUT #9007786
  2. #10-32 PHL TRUSS #9006074-3
  3. #10 EXTERNA. TROTH #9007851
 WASHER  
 LOCATION OF MOUNTING HOLES TO BE AS FOLLOWS: STARTING FROM BOTTOM OF RACK HOLE NUMBERS FOR FRONT AND REAR LEFT AND RIGHT:
 

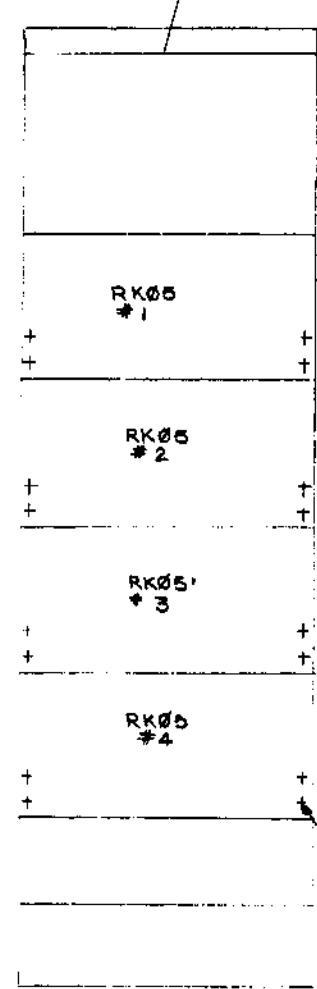
21.24
39.42
57.60
75.78
- 9) USE THE PRE-FOLDED CREASES ON THE DISK BUS CABLE FOR CLAMPING. DO NOT PULL THE CABLE TIGHT AGAINST PRE-FILTER. LEAVE SERVICE LOOP SO THAT HAND CAN FIT BETWEEN THE CABLE AND FILTER.
- 10) RK05'S PLUG INTO SWITCHED AC OUTLETS ONLY.

REV.	CHANGE NO.	DATE	BY	CHKD.
A	RK05-00028	11-30-72	G. SCHNEIDER	
B	RK05-00043	9-14-79	G. SCHNEIDER	

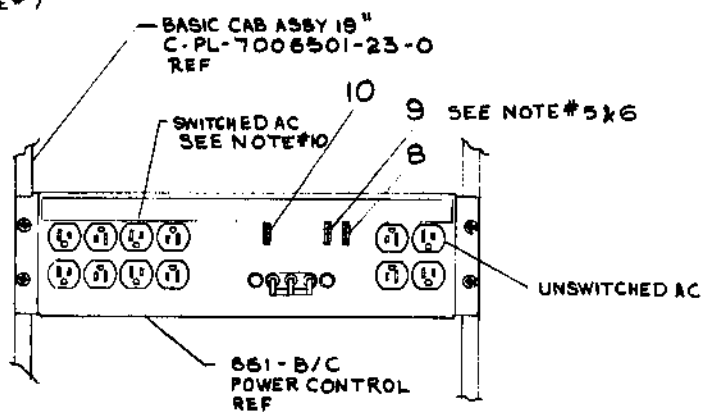
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RK05				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN	DATE		
DECIMALS	CHK'D	DATE		
ANGLES			TITLE <b>RK05</b> OPTION CONFIGURATION	
XX + .005				
XX + .02			NUMBER <b>D00RK05-0-15</b>	
.X + .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD.	DATE	REV. <b>B</b>	
MATERIAL				
FINISH	SCALE	SHEET	DIST.	

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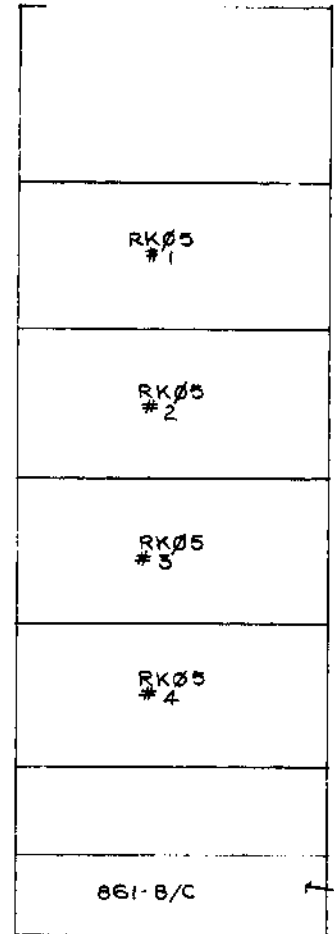
BASIC CABINET ASSY 19"  
C-PL-7006501-23-0  
ORC-PL-7006501-31-0



FRONT VIEW



DETAIL "A"  
NOT TO SCALE



REAR VIEW

**CONFIGURATION WITH 861 POWER CONTROL**

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	TITLE
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRAWN: <i>[Signature]</i> DATE: 7-10-72	DATE: 7-10-72	<b>EQUIPMENT CORPORATION</b> MILITARY MANUFACTURING	
DECIMALS: .006 XX - .02 X - .1	CHK'D: <i>[Signature]</i> DATE: 7-10-72	DATE: 7-10-72		
ANGLES: 30° 30'	ENG: E. SIMMONS DATE: 7-12-72	DATE: 7-12-72	TITLE <b>RK05 OPTION CONFIGURATION</b>	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	PROJ. ENG: E. SIMMONS DATE: 7-12-72	DATE: 7-12-72		
MATERIAL: ---	PROD. A. KARLSBERG DATE: 7-31-72	DATE: 7-31-72	SIZE CODE: <b>D0C RK05-0-15</b> NUMBER: <b>B</b>	
FINISH: ---	NEXT HIGHER ASSY: ---	DATE: ---		
SCALE: ---		SHEET 2 OF 3		

REV.	DATE	BY	CHK

REC FORM NO 1281-100-4

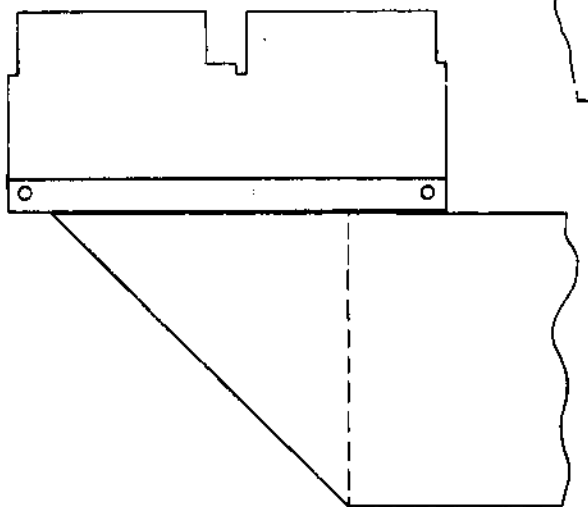
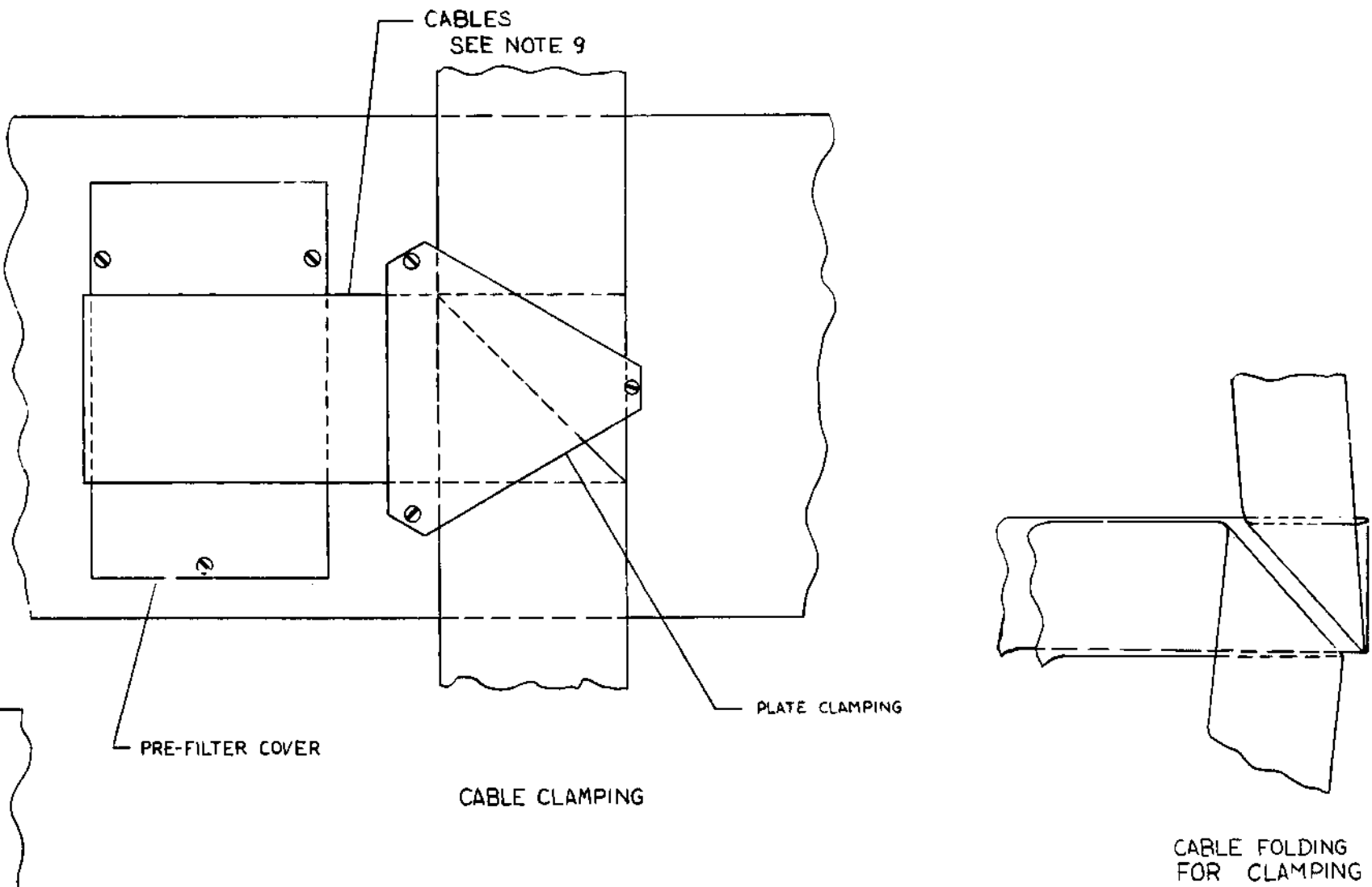
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POWER CORD CONNECTIONS WITH 860 POWER CONTROL	
FROM	TO
RK05 #1	AC RECEPTACLE #1 TOP PLUG
RK05 #2	AC RECEPTACLE #2 TOP PLUG
RK05 #3	AC RECEPTACLE #2 BOTTOM PLUG
RK05 #4	AC RECEPTACLE #1 BOTTOM PLUG

BUS CABLE CONNECTIONS					
FROM		TO		CABLE	REMARKS
DEVICE	LOCATION	DEVICE	LOCATION		
DISK CONTROL	A/R	RK05 #1	AB8	BC11A	LENGTH AVR
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

860 POWER CONNECTIONS				
AWG	COLOR	FROM	TO	REMARKS
10	BLK	860-PT#1	RECP #1-1	
TWP	WHT	860-PT2*	#1-2	
	RED	860-PT3*	#1-3	SEE VIEW B-B
10	BLK	860-PT4*	#2-1	
TWP	WHT	860-PT5*	#2-2	
	RED	860-PT6*	RECP #2-3	

\*(ASTERISK) INDICATES WIRE POINTS ON 860 POWER CONTROL MARKED WITH BRADY MARKERS.



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.
PARTS LIST			
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN CHK'D DATE 7/12/72	DATE 6/21/72	 <b>DIGITAL EQUIPMENT CORPORATION</b> <small>MEMBER INTERNATIONAL BUSINESS MACHINES CORPORATION</small>
DECIMALS ANGLES	DATE 7-12-72	DATE 7-12-72	
.XXX - .005 .XX - .02 .X - .1	10° 30'	DATE 7-12-72	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROG. DATE 7/12/72	DATE 7/12/72	
MATERIAL	NEXT HIGHER ASSY.	SIZE CODE	NUMBER
FINISH	SCALE	SHEET 3 OF 3	DIST. C

TITLE  
**RK05**  
**OPTION CONFIGURATION**

SIZE CODE  
**DOC RK05-0-15**

REV.  
**B**

REV. CHANGE NO.

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RK11-D B2 V2			
OFF	OFF		
A1	U1		
OFF	OFF		
CNTL RDY	HE	DATA	OUT BUFF FULL
SEEK OR RSET	RD OR RDCK	WT OR WTCK	IN BUFF FULL
WC OVF	WT GATE	RD GATE	FILE EMPTY
R1	RKDA 12	RKDA 11	FILE FULL
RKDA 10	RKDA 09	RKDA 08	D1
RKDA 07	RKDA 06	RKDA 05	RKDA 04
RKDA 03	RKDA 02	RKDA 01	RKDA 00

FIRST USED IN UNIT 11100

RN11 D

REVISIONS		
CHK	CHANGE NO.	REV.

SPEC # 1200100-14 (BLHCK)

DRN. #	DATE	 EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
1111	6-2-72	
CHK'D	DATE	TITLE MAINTENANCE MODULE COVER LID (R 511-D)
1111	6-2-72	
ENG	DATE	PROJECT # 1111 DATE 6-2-72
1111	6-2-72	
PROJ. ENR.	DATE	NEXT SIGNATURE ONLY C-MD-5507081-D-11
1111	6-2-72	
SCALE	SIZE CODE	NUMBER 5507081-D-11
11	55	
SHEET	DIST.	REV.
11		

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			LEGEND			QUANTITY/VARIATION																
ACCESSORY LIST			D	DOCUMENT																		
MADE BY <i>[Signature]</i>		CHECKED <i>[Signature]</i>	SECTION	PA	PAPER TAPE ASCII								KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE				
DATE 12/15/72		DATE	ISSUED SECT.	PB	PAPER TAPE BINARY																	
ENG DATE 1/11/73		PROD R. Doolley		PM	PAPER TAPE READ-IN-MODE																	
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION					RK11-D	RK11-E														
1	See variations	Complete print set					1	1														
2	DEC-11-HRKDA-A-D	Manual, RK11-D,E					1	1														
3	LIBKIT-11-RK11-Ø	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-D-6																
SHEET 1 OF 1				DIST.																		

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS <b>PARTS LIST</b>				QUANTITY / VARIATION																	
MADE BY B. VOWLES		CHECKED T. ORR		SECTION		RK11-C	RK11-D	RK11-E													
DATE 10/1/72		DATE 11/1/72																			
ENG T. ORR		PROD R. DOOLEY		ISSUED SECT.																	
DATE 11/1/72		DATE 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 PANDOM 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/RK05 DYNAMIC TEST WRITE UP		1	1	1															
10	MAINDEC-11-DZRKF-PB	RK11/RK05 DYNAMIC TEST BINARY TAPE		1	1	1															
11	MAINDEC-11-DZRKH-A-D	RK11/RK05 PERFORMANCE EXERCISER WRITE UP		1	1	1															
12	MAINDEC-11-DZRKH-PB	RK11/RK05 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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A

REV. NO.		REV.	DESCRIPTION	PART NO.	QTY.	FIRST USED ON OPTION MODEL
8	12-4-72	A	RKIID-00003 Beasley			RKII-D
T. ORR						
8	12/2/74	B	RKIID-00005 B. Blodgett			
T. ORR						
8	9-28-73	C	RKIID-00009 E. Allain			
T. ORR						
8	11-12-73	D	RKIID-00011 J. Charbon			
T. ORR						
8	2-5-74	E	RKIID-00013 J. Manbeck			
T. ORR						
8	4-30-74	F	RKIID-00015 J. Charbon			
T. ORR						



TITLE  
ETCH/WIRE LIST  
(RKII-D)

DRN E. Wilson	DATE 9/2/72
CHK'D. D. Wilson	DATE 11/11/72
ENG. T. Orr	DATE 10/11/72
PROJ. ENG. T. Orr	DATE 10/11/72
PROD. K. Dooly	DATE 11/2/72
NEXT HIGHER ASSEMBLY C-1A-7009142-0-0	
SCALE ---	
SHEET	OF

SIZE	CODE	NUMBER	REV.
K	WL	RKII-D-2	F
DIST.			

RK11D.F  
RUN NAME

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

U DRAW KV PG 1 X Z REMARKS

1-MAY-74  
LENGTH

19:27  
EXCEPTIONS

PAGE 1  
RUN  
NUMBER

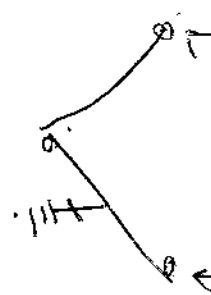
DESCRIPTION	A/P	PIN NAME	ORDER PIN	BAY - ORDER	U	DRAW	KV	PG 1	X	Z	REMARKS	1-MAY-74 LENGTH	19:27 EXCEPTIONS	PAGE 1 RUN NUMBER
+5V		A01A2		1-01 *	H		002			2		P	HAND WIRE	1
+5V		A02A2		1-02 *	H		002			1		P	HAND WIRE	1
+5V		A03A2		1-03 *	H		002			2		P	HAND WIRE	1
+5V		A04A2		1-04 *	H		002			1		P	HAND WIRE	1
+5V		A03H2		1-05 *	H		002			2		P	HAND WIRE	1
+5V		A03J2		1-06 *	H		002			1		P	HAND WIRE	1
+5V		A03K2		1-07 *	H		002			2		P	HAND WIRE	1
+5V		A03L2		1-08 *	H		002			1		P	HAND WIRE	1
+5V		A03M2		1-09 *	H		002			2		P	HAND WIRE	1
+5V		B01A2		1-10 *	H		002			1		P	HAND WIRE	1
+5V		B02A2		1-11 *	H		002			2		P	HAND WIRE	1
+5V		B03H1		1-12 *	H		002			1		P	HAND WIRE	1
+5V		B03A2		1-13 *	H		002			2		P	HAND WIRE	1
+5V		B04A2		1-14 *	H		002			1		P	HAND WIRE	1
+5V		C04A2		1-15 *	H		001			2		P	HAND WIRE	1
+5V		C03A2		1-16 *	H		001			1		P	HAND WIRE	1
+5V		C02A2		1-17 *	H		001			2		P	HAND WIRE	1
+5V		C01A2		1-18 *	H		001			1		P	HAND WIRE	1
+5V		D01A2		1-19 *	H		001			2		P	HAND WIRE	1
+5V		D02A2		1-20 *	H		001			1		P	HAND WIRE	1
+5V		D03A2		1-21 *	H		001			2		P	HAND WIRE	1
+5V		D04A2		1-22 *	H		001			1		P	HAND WIRE	1
+5V		E04A2		1-23 *	H		001			2		P	HAND WIRE	1
+5V		E03A2		1-24 *	H		001			1		P	HAND WIRE	1
+5V		E02A2		1-25 *	H		001			2		P	HAND WIRE	1
+5V		E01A2		1-26 *	H		001			1		P	HAND WIRE	1
+5V		F01A2		1-27 *	H		001			2		P	HAND WIRE	1
+5V		F02A2		1-28 *	H		001			1		P	HAND WIRE	1
+5V		F03A2		1-29 *	H		001			2		P	HAND WIRE	1
+5V		F04A2		1-30 *	H		001					P	H TO WHERE	1
+5V				1									R9-0/b	1
0 TO NPR	H	E01R1		1-01 *	H		001			1		P	HAND WIRE	2
0 TO NPR	H	E03R2		1-02 *	H		001			2		P	HAND WIRE	2
0 TO NPR	H	E04R2		1-03 *	H		001					P	H TO WHERE	2
0 TO NPR				1									6-2/b	2
ADD ACK	H	F01J1		1-01 *	H		001			1		P	HAND WIRE	3
ADD ACK	H	F02J1		1-02 *	H		001					P	H TO WHERE	3
ADD ACK				1									2-6/b	3
B CNTRL RDY	H	B03R2		1-01 *			002			1				4
B CNTRL RDY	H	E04S2		1-02 *	H		001			2		P	HAND WIRE	4
B CNTRL RDY	H	E02S2		1-03 *	H		001			1		P	HAND WIRE	4
B CNTRL RDY	H	E01S2		1-04 *	H		001					P	H TO WHERE	4
B CNTRL RDY				1									16-4/b	4



RR11D.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19:27	PAGE 2		
	A/P	PIN NAME	ORDER PIN	HAY - ORDER	U	DNAM	KV	PG	I	X	Z	REMARKS	LENGTH	EXCEPTIONS	NUM NUMBER
BG 4 IN	H	B01E2		1-01 *											5
BG 4 IN	H	C01E2		1-02 *											5
BG 4 IN				1									6-0/8		5
BG 4 OUT	H	B04E2		1-01 *											6
BG 4 OUT	H	C01T2		1-02 *											6
BG 4 OUT				1									6-6/8		6
BG 5 IN	H	B01B1		1-01 *											7
BG 5 IN	H	C01P2		1-02 *											7
BG 5 IN				1									6-2/8		7
BG 5 OUT	H	B04B1		1-01 *											8
BG 5 OUT	H	C01R2		1-02 *											8
BG 5 OUT				1									7-0/8		8
BG 6 IN	H	B01A1		1-01 *											9
BG 6 IN	H	C01M2		1-02 *											9
BG 6 IN				1									6-2/8		9
BG 6 OUT	H	B04A1		1-01 *											10
BG 6 OUT	H	C01N2		1-02 *											10
BG 6 OUT				1									6-6/8		10
BG 7 IN	H	A01V1		1-01 *											11
BG 7 IN	H	C01K2		1-02 *											11
BG 7 IN				1									6-4/8		11
BG 7 OUT	H	A04V1		1-01 *											12
BG 7 OUT	H	C01L2		1-02 *											12
BG 7 OUT				1									7-2/8		12
BG IN	H	C01V2		1-01 *	H										13
BG IN	H	C04V2		1-02 *	H										13
BG IN				1									3-6/8		13
BG OUT	H	C01U2		1-01 *	H										14
BG OUT	H	C04U2		1-02 *	H										14
BG OUT				1									3-6/8		14
BR OUT	L	C01J2		1-01 *	H										15
BR OUT	L	C04J2		1-02 *	H										15
BR OUT				1									3-6/8		15

RR11D.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19:27	PAGE 3		
	A/P	PIN NAME	ORDER PIN	HAY - ORDER	U	DNAM	KV	PG	I	X	Z	REMARKS	LENGTH	EXCEPTIONS	NUM NUMBER
BUS A00	L	B01H2	B04H2	1-01 *	H										16
BUS A00	L	B04H2		1-02 *									3-4		16
BUS A00	L	D04D1		1-03 *											16
BUS A00				1									11-3/8		16
BUS A01	L	B01H1		1-01 *	H										17
BUS A01	L	B04H1		1-02 *											17
BUS A01	L	C04T2		1-03 *											17
BUS A01				1									10-0/8		17
BUS A02	L	B01J2		1-01 *	H										18
BUS A02	L	B04J2		1-02 *											18
BUS A02	L	C04S1		1-03 *											18
BUS A02				1									9-6/8		18
BUS A03	L	B01J1		1-01 *	H										19
BUS A03	L	B04J1		1-02 *											19
BUS A03	L	C04R1		1-03 *											19
BUS A03				1									9-2/8		19
BUS A04	L	B01K2		1-01 *	H										20
BUS A04	L	B04K2		1-02 *											20
BUS A04	L	C04P1		1-03 *											20
BUS A04				1									9-2/8		20
BUS A05	L	B01K1		1-01 *	H										21
BUS A05	L	B04K1		1-02 *											21
BUS A05	L	C04R2		1-03 *											21
BUS A05				1									9-4/8		21
BUS A06	L	B01L2		1-01 *	H										22
BUS A06	L	B04L2		1-02 *											22
BUS A06	L	C04M2		1-03 *											22
BUS A06				1									8-6/8		22
BUS A07	L	B01L1		1-01 *	H										23
BUS A07	L	B04L1		1-02 *											23
BUS A07	L	C04L1		1-03 *											23
BUS A07				1									8-4/8		23
BUS A08	L	B01M2		1-01 *	H										24
BUS A08	L	B04M2		1-02 *											24
BUS A08	L	C04K1		1-03 *											24
BUS A08				1									8-4/8		24

RK110.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19:27	PAGE 4		
	A/P	PIN NAME	ORDER PIN	RAY - ORDER	U	DRW	KV	PG	I	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
BUS A09	L	B01N1		1-01 *	H		U02				2				25
BUS A09	L	B04N1		1-02 *			U02				1			HAND WIRE TO HERE	25
BUS A09	L	C04L2		1-03 *			U02								25
BUS A09				1									8-6/8		25
BUS A10	L	B01N2		1-01 *	H		U02				2				26
BUS A10	L	B04N2		1-02 *			U02				1			HAND WIRE TO HERE	26
BUS A10	L	C04H2		1-03 *			U01								26
BUS A10				1									8-0/8		26
BUS A11	L	B01N1	B04N1	1-01 *	H		U02				2				27
BUS A11	L	B04N1		1-02 *			U02				1		3-2	HAND WIRE TO HERE	27
BUS A11	L	D04F1		1-03 *			U01								27
BUS A11				1									10-7/8		27
BUS A12	L	B01P2		1-01 *	H		U02				2				28
BUS A12	L	B04P2		1-02 *			U02				1			HAND WIRE TO HERE	28
BUS A12	L	C04F1		1-03 *			U01								28
BUS A12				1									7-6/8		28
BUS A13	L	B01P1		1-01 *	H		U02				2				29
BUS A13	L	B04P1		1-02 *			U02				1			HAND WIRE TO HERE	29
BUS A13	L	C04F2		1-03 *			U01								29
BUS A13				1									8-0/8		29
BUS A14	L	B01R2		1-01 *	H		U02				1				30
BUS A14	L	B04R2		1-02 *			U02				2			HAND WIRE TO HERE	30
BUS A14	L	C04B1		1-03 *			U01								30
BUS A14				1									7-2/8		30
BUS A15	L	B01R1	B04R1	1-01 *	H		U02				2				31
BUS A15	L	B04R1		1-02 *			U02				1		3-5	HAND WIRE TO HERE	31
BUS A15	L	D04P1		1-03 *			U01								31
BUS A15				1									11-5/8		31
BUS A16	L	B01S2	B04S2	1-01 *	H		U02				1				32
BUS A16	L	B04S2	C04D1	1-02 *			U02				2			HAND WIRE TO HERE	32
BUS A16	L	C04D1	C01D1	1-03 *	H		U01				1			HAND WIRE TO HERE	32
BUS A16	L	C01D1		1-04 *			U01								32
BUS A16				1									11-0/8		32
BUS A17	L	B01S1	B04S1	1-01 *	H		U02				1				33
BUS A17	L	B04S1	C04E1	1-02 *			U02				2			HAND WIRE TO HERE	33
BUS A17	L	C04E1	C01E1	1-03 *	H		U01				1			HAND WIRE TO HERE	33
BUS A17	L	C01E1		1-04 *			U01								33
BUS A17				1									11-0/8		33



RK110.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19:27	PAGE 5		
	A/P	PIN NAME	ORDER PIN	RAY - ORDER	U	DRW	KV	PG	I	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
BUS AC L0	L	D02F1		1-01 *	1						1				34
BUS AC L0	L	B01F1		1-02 *	H						2		3-0	HAND WIRE TO HERE	34
BUS AC L0	L	B04F1		1-03 *							1				34
BUS AC L0	L	A03R2		1-04 *											34
BUS AC L0				1									16-1/8		34
BUS BBSY	L	A01P2		1-01 *	H		U02				2				35
BUS BBSY	L	A04P2		1-02 *			U02				1			HAND WIRE TO HERE	35
BUS BBSY	L	E04P2		1-03 *			U01								35
BUS BBSY				1									16-4/8		35
BUS BR 4	L	B04D2		1-01 *	H		U02				2				36
BUS BR 4	L	B01D2		1-02 *			U02				1			HAND WIRE TO HERE	36
BUS BR 4	L	C01H2		1-03 *			U01								36
BUS BR 4				1									9-0/8		36
BUS BR 5	L	B04C1		1-01 *	H		U02				2				37
BUS BR 5	L	B01C1		1-02 *			U02				1			HAND WIRE TO HERE	37
BUS BR 5	L	C01F2		1-03 *			U01								37
BUS BR 5				1									9-2/8		37
BUS BR 6	L	A04U2		1-01 *	H		U02				2				38
BUS BR 6	L	A01U2		1-02 *			U02				1			HAND WIRE TO HERE	38
BUS BR 6	L	C01E2		1-03 *			U01								38
BUS BR 6				1									9-6/8		38
BUS BR 7	L	A04T2		1-01 *	H		U02				2				39
BUS BR 7	L	A01T2		1-02 *			U02				1			HAND WIRE TO HERE	39
BUS BR 7	L	C01U2		1-03 *			U01								39
BUS BR 7				1									9-6/8		39
BUS C0	L	B01U2	B04U2	1-01 *	H		U02				2				40
BUS C0	L	B04U2		1-02 *			U02				1		2-7	HAND WIRE TO HERE	40
BUS C0	L	D04C1		1-03 *			U01								40
BUS C0				1									10-1/8		40
BUS C1	L	B01T2	B04T2	1-01 *	H		U02				2				41
BUS C1	L	B04T2		1-02 *			U02				1		4-7	HAND WIRE TO HERE	41
BUS C1	L	E04R1		1-03 *			U01								41
BUS C1				1									14-1/8		41
BUS D EH	H	C04U1			H		U01							1-PIN RUN	42
BUS D00	L	A01C1		1-01 *	H		U02				2				43
BUS D00	L	A04C1		1-02 *			U02				1			HAND WIRE TO HERE	43
BUS D00	L	C04U2		1-03 *			U01								43
BUS D00				1									11-6/8		43

RRID.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	1977	PAGE 6		
	A/P	PIN NAME	ORDER PIN	BAY - ORDER	U	DNA#	KV	PG	I	X	Z	REMARKS	LENGTH	EXCEPTIONS	NUM NUMBER
BUS D00 (1)	H	D01D2		1-01 *	H						1			HAND WIRE	44
BUS D00 (1)	H	D03D2		1-02 *	H						2			HAND WIRE	44
BUS D00 (1)	H	D04D2		1-03 *	H									H TO WHERE	44
BUS D00 (1)				1									6-0/0		44
BUS D01	L	A01D2		1-01 *	H						2			HAND WIRE	45
BUS D01	L	A04D2		1-02 *							1			TO HERE	45
BUS D01	L	C04C1		1-03 *											45
BUS D01				1									11-4/0		45
BUS D01 (1)	H	D01E2		1-01 *	H						1			HAND WIRE	46
BUS D01 (1)	H	D03E2		1-02 *	H						2			HAND WIRE	46
BUS D01 (1)	H	D04E2		1-03 *	H									H TO WHERE	46
BUS D01 (1)				1									6-0/0		46
BUS D02	L	A01D1		1-01 *	H						2			HAND WIRE	47
BUS D02	L	A04D1		1-02 *							1			TO HERE	47
BUS D02	L	C04E2		1-03 *											47
BUS D02				1									11-4/0		47
BUS D02 (1)	H	D01F2		1-01 *	H						1			HAND WIRE	48
BUS D02 (1)	H	D03F2		1-02 *	H						2			HAND WIRE	48
BUS D02 (1)	H	D04F2		1-03 *	H									H TO WHERE	48
BUS D02 (1)				1									6-0/0		48
BUS D03	L	A01E2		1-01 *	H						2			HAND WIRE	49
BUS D03	L	A04E2		1-02 *							1			TO HERE	49
BUS D03	L	D04E1		1-03 *											49
BUS D03				1									14-2/0		49
BUS D03 (1)	H	D01H2		1-01 *	H						1			HAND WIRE	50
BUS D03 (1)	H	D03H2		1-02 *	H						2			HAND WIRE	50
BUS D03 (1)	H	D04H2		1-03 *	H									H TO WHERE	50
BUS D03 (1)				1									6-0/0		50
BUS D04	L	A01E1		1-01 *	H						2			HAND WIRE	51
BUS D04	L	A04E1		1-02 *							1			TO HERE	51
BUS D04	L	D04R1		1-03 *											51
BUS D04				1									15-2/0		51
BUS D04 (1)	H	D01J2		1-01 *	H						1			HAND WIRE	52
BUS D04 (1)	H	D03J2		1-02 *	H						2			HAND WIRE	52
BUS D04 (1)	H	D04J2		1-03 *	H									H TO WHERE	52
BUS D04 (1)				1									6-0/0		52

RRID.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	1977	PAGE 7		
	A/P	PIN NAME	ORDER PIN	BAY - ORDER	U	DNA#	KV	PG	I	X	Z	REMARKS	LENGTH	EXCEPTIONS	NUM NUMBER
BUS D05	L	A01F2		1-01 *	H						2			HAND WIRE	53
BUS D05	L	A04F2		1-02 *							1			TO HERE	53
BUS D05	L	C04H1		1-03 *											53
BUS D05				1									11-6/0		53
BUS D05 (1)	H	D01K2		1-01 *	H						1			HAND WIRE	54
BUS D05 (1)	H	D03K2		1-02 *	H						2			HAND WIRE	54
BUS D05 (1)	H	D04K2		1-03 *	H									H TO WHERE	54
BUS D05 (1)				1									6-0/0		54
BUS D06	L	A01F1		1-01 *	H						2			HAND WIRE	55
BUS D06	L	A04F1		1-02 *							1			TO HERE	55
BUS D06	L	C04K2		1-03 *											55
BUS D06				1									11-6/0		55
BUS D06 (1)	H	D01L2		1-01 *	H						1			HAND WIRE	56
BUS D06 (1)	H	D03L2		1-02 *	H						2			HAND WIRE	56
BUS D06 (1)	H	D04L2		1-03 *	H									H TO WHERE	56
BUS D06 (1)				1									6-0/0		56
BUS D07	L	A01H2	A04H2	1-01 *	H						2			HAND WIRE	57
BUS D07	L	A04H2		1-02 *							1			TO HERE	57
BUS D07	L	C04J1		1-03 *											57
BUS D07				1									11-7/0		57
BUS D07 (1)	H	D01M2		1-01 *	H						1			HAND WIRE	58
BUS D07 (1)	H	D03M2		1-02 *	H						2			HAND WIRE	58
BUS D07 (1)	H	D04M2		1-03 *	H									H TO WHERE	58
BUS D07 (1)				1									6-0/0		58
BUS D08	L	A01H1		1-01 *	H						2			HAND WIRE	59
BUS D08	L	A04H1		1-02 *							1			TO HERE	59
BUS D08	L	C04N2		1-03 *											59
BUS D08				1									12-2/0		59
BUS D08 (1)	H	D01N2		1-01 *	H						1			HAND WIRE	60
BUS D08 (1)	H	D03N2		1-02 *	H						2			HAND WIRE	60
BUS D08 (1)	H	D04N2		1-03 *	H									H TO WHERE	60
BUS D08 (1)				1									6-0/0		60
BUS D09	L	A01J2		1-01 *	H						2			HAND WIRE	61
BUS D09	L	A04J2		1-02 *							1			TO HERE	61
BUS D09	L	C04M1		1-03 *											61
BUS D09				1									12-0/0		61

RR110.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19827	PAGE 8		
	A/P	PIN NAME	ORDER PIN	BAY - ORDER	U	DNAM	HV	PG	I	X	Z	REMARKS	LENGTH	EXCEPTIONS	NUM NUMBER
BUS D09 (1)	H	D01P2		1-01 *	H		U01				1			HAND WIRE	62
BUS D09 (1)	H	D03P2		1-02 *	H		U01				2			HAND WIRE	62
BUS D09 (1)	H	D04P2		1-03 *	H		U01							H TO WHERE	62
BUS D09 (1)				1									6-0/8		62
BUS D10	L	A01J1		1-01 *	H		U02				2			HAND WIRE	63
BUS D10	L	A04J1		1-02 *			U02				1			TO HERE	63
BUS D10	L	C04P2		1-03 *			U01								63
BUS D10				1									12-0/8		63
BUS D10 (1)	H	D01R2		1-01 *	H		U01				1			HAND WIRE	64
BUS D10 (1)	H	D03R2		1-02 *	H		U01				2			HAND WIRE	64
BUS D10 (1)	H	D04R2		1-03 *	H		U01							H TO WHERE	64
BUS D10 (1)				1									6-0/8		64
BUS D11	L	A01K2	A04K2	1-01 *	H		U02				2			HAND WIR	65
BUS D11	L	A04K2		1-02 *							1		3-7	TO HERE	65
BUS D11	L	C04N1		1-03 *			U01								65
BUS D11				1									12-1/8		65
BUS D11 (1)	H	D01S2		1-01 *	H		U01				1			HAND WIRE	66
BUS D11 (1)	H	D03S2		1-02 *	H		U01				2			HAND WIRE	66
BUS D11 (1)	H	D04S2		1-03 *	H		U01							H TO WHERE	66
BUS D11 (1)				1									6-0/8		66
BUS D12	L	A01K1	A04K1	1-01 *	H		U02				2			HAND WIRE	67
BUS D12	L	A04K1		1-02 *			U02				1		4-5	TO HERE	67
BUS D12	L	D04A1		1-03 *			U01								67
BUS D12				1									13-5/8		67
BUS D12 (1)	H	D01T2		1-01 *	H		U01				1			HAND WIRE	68
BUS D12 (1)	H	D03T2		1-02 *	H		U01				2			HAND WIRE	68
BUS D12 (1)	H	D04T2		1-03 *	H		U01							H TO WHERE	68
BUS D12 (1)				1									6-0/8		68
BUS D13	L	A01L2	A04L2	1-01 *	H		U02				2			HAND WIRE	69
BUS D13	L	A04L2		1-02 *			U02				1		4-2	TO HERE	69
BUS D13	L	C04V1		1-03 *			U01								69
BUS D13				1									12-7/8		69
BUS D13 (1)	H	D01U2		1-01 *	H		U01				1			HAND WIRE	70
BUS D13 (1)	H	D03U2		1-02 *	H		U01				2			HAND WIRE	70
BUS D13 (1)	H	D04U2		1-03 *	H		U01							H TO WHERE	70
BUS D13 (1)				1									6-0/8		70

RR110.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19827	PAGE 9		
	A/P	PIN NAME	ORDER PIN	BAY - ORDER	U	DNAM	HV	PG	I	X	Z	REMARKS	LENGTH	EXCEPTIONS	NUM NUMBER
BUS D14	L	A01L1		1-01 *	H		U02				2			HAND WIRE	71
BUS D14	L	A04L1		1-02 *			U02				1			TO HERE	71
BUS D14	L	C04S2		1-03 *			U01								71
BUS D14				1									12-0/8		71
BUS D14 (1)	H	D01V2		1-01 *	H		U01				1			HAND WIRE	72
BUS D14 (1)	H	D03V2		1-02 *	H		U01				2			HAND WIRE	72
BUS D14 (1)	H	D04V2		1-03 *	H		U01							H TO WHERE	72
BUS D14 (1)				1									6-0/8		72
BUS D15	L	A01M2	A04M2	1-01 *	H		U02				2			HAND WIRE	73
BUS D15	L	A04M2		1-02 *			U02				1		4-5	TO HERE	73
BUS D15	L	D04B1		1-03 *			U01								73
BUS D15				1									13-5/8		73
BUS D15 (1)	H	D01V1		1-01 *	H		U01				1			HAND WIRE	74
BUS D15 (1)	H	D03V1		1-02 *	H		U01				2			HAND WIRE	74
BUS D15 (1)	H	D04V1		1-03 *	H		U01							H TO WHERE	74
BUS D15 (1)				1									6-0/8		74
BUS D16	L	A01M1	A04M1	1-01 *	H		U02				2			HAND WIRE	75
BUS D16	L	A04M1		1-02 *			U02				1			TO HERE	75
BUS D16	L	C03C1		1-03 *											75
BUS D16				1									10-4/8		75
BUS D17	L	A01N2	A04N2	1-01 *	H		U02				2			HAND WIRE	76
BUS D17	L	A04N2		1-02 *			U02				1			TO HERE	76
BUS D17	L	C01B1		1-03 *											76
BUS D17				1									10-4/8		76
BUS DC LD	L	A03S2		1-01 *			U02				1				77
BUS DC LD	L	B04F2		1-02 *							2				77
BUS DC LD	L	B01F2		1-03 *			U02				1				77
BUS DC LD	L	C01B1		1-04 *			U01								77
BUS DC LD				1									12-4/8		77
BUS INIT	L	A04A1		1-01 *	H		U02				2			HAND WIRE	78
BUS INIT	L	A01A1		1-02 *			U02				1			TO HERE	78
BUS INIT	L	C01C1		1-03 *											78
BUS INIT				1									11-4/8		78
BUS INTR	L	A01B1		1-01 *	H		U02				2			HAND WIRE	79
BUS INTR	L	A04B1		1-02 *			U02				1			TO HERE	79
BUS INTR	L	D04S1		1-03 *			U01								79
BUS INTR				1									15-6/8		79

RR11D,P RUN NAME	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DNAM	KV	PG	I	X	Z	REMARKS	1-MAY-74 LENGTH	19127 EXCEPTIONS	PAGE 10 RUN NUMBER
BUS MSYN	L	B01V1		1-01 *	H		002				2			HAND WIRE	80
BUS MSYN	L	B04V1		1-02 *			002				1			TO HERE	80
BUS MSYN	L	E04T2		1-03 *			001				1				80
BUS MSYN				1									13-6/8		80
BUS NPC IN	H	A01U1		1-01 *			002				1				81
BUS NPC IN	H	E04D1		1-02 *			001				1				81
BUS NPC IN				1									13-0/8		81
BUS NPC OUT	H	A04U1		1-01 *	1		002				1		6-3		82
BUS NPC OUT	H	E04U1		1-02 *			001				1				82
BUS NPC OUT				1									13-3/8		82
BUS NPR	L	A01S2		1-01 *	H		002				2			HAND WIRE	83
BUS NPR	L	A04S2		1-02 *			002				1			TO HERE	83
BUS NPR	L	E04S1		1-03 *			001				1				83
BUS NPR				1									16-6/8		83
BUS SACK	L	A01R2		1-01 *	H		002				2			HAND WIRE	84
BUS SACK	L	A04R2		1-02 *			002				1			TO HERE	84
BUS SACK	L	E04C1		1-03 *			001				1				84
BUS SACK				1									15-4/8		84
BUS SSYN	L	B01U1	B04U1	1-01 *	H		002				2			HAND WIRE	85
BUS SSYN	L	B04U1		1-02 *			002				1		4-8	TO HERE	85
BUS SSYN	L	E04P1		1-03 *			001				1				85
BUS SSYN				1									13-5/8		85
CLK	H	C02N2		1-01 *							1				86
CLK	H	E01E1		1-02 *	H		001				2			HAND WIRE	86
CLK	H	E03D2		1-03 *	H		001				1			H TO WHERE	86
CLK				1									10-6/8		86
CLR MSR	L	F01F2		1-01 *	H		001				1			HAND WIRE	87
CLR MSR	L	F02F2		1-02 *	H		001				1			H TO WHERE	87
CLR MSR				1									2-6/8		87
COUNT SA	H	C01M1		1-01 *	H		001				1			HAND WIRE	88
COUNT SA	H	C03M1		1-02 *	H		001				1			H TO WHERE	88
COUNT SA				1									3-2/8		88
CYL OVF	L	C02R2		1-01 *	H		001				1			HAND WIRE	89
CYL OVF	L	C03R2		1-02 *	H		001				1			H TO WHERE	89
CYL OVF				1									2-6/8		89

RR11D,P RUN NAME	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DNAM	KV	PG	I	X	Z	REMARKS	1-MAY-74 LENGTH	19127 EXCEPTIONS	PAGE 11 RUN NUMBER
DATA (1)	H	B03H1		1-01 *			002				1				90
DATA (1)	H	C03S1		1-02 *	H		001				2			HAND WIRE	90
DATA (1)	H	C02S1		1-03 *	H		001				1			HAND WIRE	90
DATA (1)	H	C01S1		1-04 *	H		001				1			H TO WHERE	90
DATA (1)				1									11-2/8		90
DATA STR 1	L	E04N2			H		001				1			1-PIN RUN	91
DATA STR 2	L	E03L2		1-01 *	H		001				1			HAND WIRE	92
DATA STR 2	L	E04L2		1-02 *	H		001				1			H TO WHERE	92
DATA STR 2				1									2-6/8		92
DISK CLK	L	F01V1		1-01 *	H		001				1			HAND WIRE	93
DISK CLK	L	F02V1		1-02 *	H		001				1			H TO WHERE	93
DISK CLK				1									2-6/8		93
DLT (1)	H	F01P1		1-01 *	H		001				1			HAND WIRE	94
DLT (1)	H	E03P2		1-02 *	H		001				1			H TO WHERE	94
DLT (1)				1									3-4/8		94
DPL (1)	H	F01D1		1-01 *	H		001				1			HAND WIRE	95
DPL (1)	H	F02D1		1-02 *	H		001				1			H TO WHERE	95
DPL (1)				1									2-6/8		95
DR BUS ADD ACK	L	A02R2		1-01 *			002				1				96
DR BUS ADD ACK	L	D02M1		1-02 *			001				1				96
DR BUS ADD ACK				1									9-0/8		96
DR BUS CYL ADD 0	L	A02K1		1-01 *			002				1		3-5		97
DR BUS CYL ADD 0	L	C02K1		1-02 *			001				1				97
DR BUS CYL ADD 0				1									7-7/8		97
DR BUS CYL ADD 1	L	A02D1		1-01 *			002				1		3-5		98
DR BUS CYL ADD 1	L	C02D1		1-02 *			001				1				98
DR BUS CYL ADD 1				1									7-7/8		98
DR BUS CYL ADD 2	L	A02L1		1-01 *			002				1		3-5		99
DR BUS CYL ADD 2	L	C02L1		1-02 *			001				1				99
DR BUS CYL ADD 2				1									7-7/8		99
DR BUS CYL ADD 3	L	A02C1		1-01 *			002				1		3-5		100
DR BUS CYL ADD 3	L	C02C1		1-02 *			001				1				100
DR BUS CYL ADD 3				1									1-7/8		100
DR BUS CYL ADD 4	L	A02F1		1-01 *			002				1		3-5		101
DR BUS CYL ADD 4	L	C02F1		1-02 *			001				1				101
DR BUS CYL ADD 4				1									7-7/8		101

RR11D.F RUN NAME	A/P	HND288.V22(22) 11/06/73 PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAM	KV	PG	I	X	Z	REMARKS	1-MAY-74 LENGTH	19127 EXCEPTIONS	PAGE 12 RUN NUMBER
DR BUS CYL ADD 5	L	A02J1		1-01 *							1		3-5		102
DR BUS CYL ADD 5	L	C02J1		1-02 *											102
DR BUS CYL ADD 5				1									7-7/8		102
DR BUS CYL ADD 6	L	A02E1		1-01 *							1		3-5		103
DR BUS CYL ADD 6	L	C02E1		1-02 *											103
DR BUS CYL ADD 6				1									7-7/8		103
DR BUS CYL ADD 7	L	A02H1		1-01 *							1		3-5		104
DR BUS CYL ADD 7	L	C02H1		1-02 *											104
DR BUS CYL ADD 7				1									7-7/8		104
DR BUS CYL ADD 8	L	A02B1		1-01 *							1		3-5		105
DR BUS CYL ADD 8	L	C02B1		1-02 *											105
DR BUS CYL ADD 8				1									7-7/8		105
DR BUS DC LU	L	C01B2		1-01 *	2						2				106
DR BUS DC LU	L	D02F2		1-02 *							1				106
DR BUS DC LU	L	D02F2		1-03 *											106
DR BUS DC LU				1									12-8/8		106
DR BUS DRY	L	B02M1		1-01 *	1						1		3-5		107
DR BUS DRY	L	D02M1		1-02 *											107
DR BUS DRY				1									7-7/8		107
DR BUS INDX PLS	L	B02M1		1-01 *	1						1		3-5		108
DR BUS INDX PLS	L	D02M1		1-02 *											108
DR BUS INDX PLS				1									7-7/8		108
DR BUS LOG ADD INT	L	A02T2		1-01 *							1				109
DR BUS LOG ADD INT	L	D02D1		1-02 *											109
DR BUS LOG ADD INT				1									9-8/8		109
DR BUS R/W/S RDY	L	A02H2		1-01 *							1				110
DR BUS R/W/S RDY	L	C02H2		1-02 *											110
DR BUS R/W/S RDY				1									7-4/8		110
DR BUS RD CLK	L	B02S1		1-01 *	1						1		3-5		111
DR BUS RD CLK	L	D02S1		1-02 *											111
DR BUS RD CLK				1									7-7/8		111
DR BUS RD DATA	L	B02S2		1-01 *							1				112
DR BUS RD DATA	L	D02S2		1-02 *											112
DR BUS RD DATA				1									7-4/8		112

RR11D.F RUN NAME	A/P	HND288.V22(22) 11/06/73 PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAM	KV	PG	I	X	Z	REMARKS	1-MAY-74 LENGTH	19127 EXCEPTIONS	PAGE 13 RUN NUMBER
DR BUS RD GATE	L	B02R1		1-01 *	1						1		3-5		113
DR BUS RD GATE	L	D02R1		1-02 *											113
DR BUS RD GATE				1									7-7/8		113
DR BUS RESTORE	L	A02M1		1-01 *	1						1		3-5		114
DR BUS RESTORE	L	C02M1		1-02 *											114
DR BUS RESTORE				1									7-7/8		114
DR BUS RK05	L	B02P2		1-01 *							1				115
DR BUS RK05	L	D02P2		1-02 *											115
DR BUS RK05				1									7-4/8		115
DR BUS SEC CNTR 0	L	B02L1		1-01 *	1						1		3-5		116
DR BUS SEC CNTR 0	L	D02L1		1-02 *											116
DR BUS SEC CNTR 0				1									7-7/8		116
DR BUS SEC CNTR 1	L	A02P2		1-01 *							1				117
DR BUS SEC CNTR 1	L	D02A1		1-02 *											117
DR BUS SEC CNTR 1				1									9-8/8		117
DR BUS SEC CNTR 2	L	B02K2		1-01 *							1				118
DR BUS SEC CNTR 2	L	D02K2		1-02 *											118
DR BUS SEC CNTR 2				1									7-4/8		118
DR BUS SEC CNTR 3	L	B02J1		1-01 *	1						1		3-5		119
DR BUS SEC CNTR 3	L	D02J1		1-02 *											119
DR BUS SEC CNTR 3				1									7-7/8		119
DR BUS SEC PLS	L	B02N2		1-01 *							1				120
DR BUS SEC PLS	L	D02N2		1-02 *											120
DR BUS SEC PLS				1									7-4/8		120
DR BUS SEL DR 0	L	A02J2		1-01 *							1				121
DR BUS SEL DR 0	L	C02J2		1-02 *											121
DR BUS SEL DR 0				1									7-4/8		121
DR BUS SEL DR 1	L	A02K2		1-01 *							1				122
DR BUS SEL DR 1	L	C02K2		1-02 *											122
DR BUS SEL DR 1				1									7-4/8		122
DR BUS SEL DR 2	L	A02L2		1-01 *							1				123
DR BUS SEL DR 2	L	C02L2		1-02 *											123
DR BUS SEL DR 2				1									7-4/8		123
DR BUS SEL UPPER HD	L	B02M2		1-01 *							1				124
DR BUS SEL UPPER HD	L	D02M2		1-02 *											124
DR BUS SEL UPPER HD				1									7-4/8		124

RKIID.F RUN NAME	A/P	HND288.V22(22) PIN NAME	11/06/73 ORDER PIN	BAY - ORDER	U	DRAW	NY	PG	I	X	Z	REMARKS	1-001-74 LENGTH	19127 EXCEPTIONS	PAGE 14 RUN NUMBER
DR BUS SIN	L	A02S2		1-01 *											125
DR BUS SIN	L	D02C1		1-02 *											125
DR BUS SIN				1									9-0/0		125
DR BUS STROBE	L	B02H1		1-01 *									3-5		126
DR BUS STROBE	L	D02H1		1-02 *											126
DR BUS STROBE				1									7-7/0		126
DR BUS WT CHK	L	B02K1		1-01 *									3-5		127
DR BUS WT CHK	L	D02K1		1-02 *											127
DR BUS WT CHK				1									7-7/0		127
DR BUS WT DATA+CLK	L	A02F2		1-01 *											128
DR BUS WT DATA+CLK	L	C02F2		1-02 *											128
DR BUS WT DATA+CLK				1									7-4/0		128
DR BUS WT GATE	L	B02L2		1-01 *											129
DR BUS WT GATE	L	D02L2		1-02 *											129
DR BUS WT GATE				1									7-4/0		129
DR BUS WT PRCT STATUS	L	B02P1		1-01 *									3-5		130
DR BUS WT PRCT STATUS	L	D02P1		1-02 *											130
DR BUS WT PRCT STATUS				1									7-7/0		130
DR BUS WT PROTECT	L	B02R2		1-01 *											131
DR BUS WT PROTECT	L	D02R2		1-02 *											131
DR BUS WT PROTECT				1									7-4/0		131
DRE (1)	H	F01R1		1-01 *	H									HAND WIRE	132
DRE (1)	H	F02R1		1-02 *	H									H TO WHERE	132
DRE (1)				1									2-6/0		132
DRIVE OK	H	F01N1		1-01 *	H									HAND WIRE	133
DRIVE OK	H	F02N1		1-02 *	H									H TO WHERE	133
DRIVE OK				1									2-6/0		133
DRIVE RESET	L	F01K2		1-01 *	H									HAND WIRE	134
DRIVE RESET	L	F02K2		1-02 *	H									H TO WHERE	134
DRIVE RESET				1									2-6/0		134
DRIVE UNSAFE	H	F01B1		1-01 *	H									HAND WIRE	135
DRIVE UNSAFE	H	F02B1		1-02 *	H									H TO WHERE	135
DRIVE UNSAFE				1									2-6/0		135
DRY	H	E01L2		1-01 *	H									HAND WIRE	136
DRY	H	E02L2		1-02 *	H									H TO WHERE	136
DRY				1									2-6/0		136

RKIID.F RUN NAME	A/P	HND288.V22(22) PIN NAME	11/06/73 ORDER PIN	BAY - ORDER	U	DRAW	NY	PG	I	X	Z	REMARKS	1-001-74 LENGTH	19127 EXCEPTIONS	PAGE 15 RUN NUMBER
END OF SYNC	L	F01R2		1-01 *	H									HAND WIRE	137
END OF SYNC	L	F02R2		1-02 *	H									H TO WHERE	137
END OF SYNC				1									2-6/0		137
EX BIT	H	F01V2		1-01 *	H									HAND WIRE	138
EX BIT	H	F02V2		1-02 *	H									H TO WHERE	138
EX BIT				1									2-6/0		138
FILE DONE	H	C01F1		1-01 *	H									HAND WIRE	139
FILE DONE	H	C03F1		1-02 *	H									H TO WHERE	139
FILE DONE				1									3-2/0		139
FILE EMPTY	H	B03E1		1-01 *											140
FILE EMPTY	H	C03N2		1-02 *											140
FILE EMPTY				1									6-0/0		140
FILE FULL	H	B03M1		1-01 *											141
FILE FULL	H	C03M2		1-02 *											141
FILE FULL				1									5-0/0		141
FIRST SEEK DONE	H	E01U2		1-01 *	H									HAND WIRE	142
FIRST SEEK DONE	H	E02U2		1-02 *	H									H TO WHERE	142
FIRST SEEK DONE				1									2-6/0		142
FMT (1)	H	C01N1		1-01 *	H									HAND WIRE	143
FMT (1)	H	C02N1		1-02 *	H									HAND WIRE	143
FMT (1)	H	C03N1		1-03 *	H									H TO WHERE	143
FMT (1)				1									5-4/0		143
GATE DATA TO BUS D	L	C02A1		1-01 *	H									HAND WIRE	144
GATE DATA TO BUS D	L	C03A1		1-02 *	H									HAND WIRE	144
GATE DATA TO BUS D	L	C04A1		1-03 *	H									H TO WHERE	144
GATE DATA TO BUS D				1									5-4/0		144
GEN CLR	L	E01R2	E02R2	1-01 *	H									HAND WIRE	145
GEN CLR	L	E02R2		1-02 *										TU HERE	145
GEN CLR	L	C03P2		1-03 *											145
GEN CLR				1									10-6/0		145
GEN DATA	H	F01E2		1-01 *	H									HAND WIRE	146
GEN DATA	H	F02E2		1-02 *	H									H TO WHERE	146
GEN DATA				1									2-6/0		146

RK11D.F RUN NAME	HND288.V22(22) 11/06/73				Q	DRAW	KV	PG	1	X	Z	REMARKS	1-MAY-74 LENGTH	19127 EXCEPTIONS	PAGE 16 NUM NUMBER
	A/P	PTN NAME	ORDER PIN	BAY - ORDER											
GND 01		C01A1	C01C2	1-01 * 1						1					147
GND 01		C01C2		1-02 * H	D01					2			HAND WIRE	147	
GND 01		A01B2		1-03 * H		U02				1			HAND WIRE	147	
GND 01		A01C2		1-04 * H		U02				2			HAND WIRE	147	
GND 01		A01N1		1-05 * H		U02				1			HAND WIRE	147	
GND 01		A01P1		1-06 * H		U02				2			HAND WIRE	147	
GND 01		A01R1		1-07 * H		U02				1			HAND WIRE	147	
GND 01		A01S1		1-08 * H		U02				2			HAND WIRE	147	
GND 01		A01T1		1-09 * H		U02				1			HAND WIRE	147	
GND 01		A01V2		1-10 * H		U02				2			HAND WIRE	147	
GND 01		B01B2		1-11 * H		U02				1			HAND WIRE	147	
GND 01		B01C2		1-12 * H		U02				2			HAND WIRE	147	
GND 01		B01D1		1-13 * H		U02				1			HAND WIRE	147	
GND 01		B01E1		1-14 * H		U02				2			HAND WIRE	147	
GND 01		B01T1		1-15 * H		U02				1			HAND WIRE	147	
GND 01		B01V2		1-16 * H		U02				2			HAND WIRE	147	
GND 01		C01T1		1-17 * H		U01				1			HAND WIRE	147	
GND 01		D01C2		1-18 * H		U01				2			HAND WIRE	147	
GND 01		D01T1		1-19 * H		U01				1			HAND WIRE	147	
GND 01		E01C2		1-20 * H		U01				2			HAND WIRE	147	
GND 01		E01T1		1-21 * H		U01				1			HAND WIRE	147	
GND 01		F01C2		1-22 * H		U01				2			HAND WIRE	147	
GND 01		F01T1		1-23 * H		U01				1			H TO WHERE	147	
GND 01				1								73-2/8		147	

GND 02		A02B2		1-01 * H		U02				2			HAND WIRE	148
GND 02		A02C2		1-02 * H		U02				1			HAND WIRE	148
GND 02		A02N1		1-03 * H		U02				2			HAND WIRE	148
GND 02		A02P1		1-04 * H		U02				1			HAND WIRE	148
GND 02		A02R1		1-05 * H		U02				2			HAND WIRE	148
GND 02		A02S1		1-06 * H		U02				1			HAND WIRE	148
GND 02		A02T1		1-07 * H		U02				2			HAND WIRE	148
GND 02		A02V2		1-08 * H		U02				1			HAND WIRE	148
GND 02		A02W1		1-09 * H		U02				2			HAND WIRE	148
GND 02		B02B2		1-10 * H		U02				1			HAND WIRE	148
GND 02		B02C2		1-11 * H		U02				2			HAND WIRE	148
GND 02		B02D1		1-12 * H		U02				1			HAND WIRE	148
GND 02		B02E1		1-13 * H		U02				2			HAND WIRE	148
GND 02		B02T1		1-14 * H		U02				1			HAND WIRE	148
GND 02		B02V2		1-15 * H		U02				2			HAND WIRE	148
GND 02		C02C2		1-16 * H		U01				1			HAND WIRE	148
GND 02		C02T1		1-17 * H		U01				2			HAND WIRE	148
GND 02		D02C2		1-18 * H		U01				1			HAND WIRE	148
GND 02		D02T1		1-19 * H		U01				2			HAND WIRE	148
GND 02		E02C2		1-20 * H		U01				1			HAND WIRE	148
GND 02		E02T1		1-21 * H		U01				2			HAND WIRE	148
GND 02		F02C2		1-22 * H		U01				1			HAND WIRE	148
GND 02		F02T1		1-23 * H		U01				1			H TO WHERE	148
GND 02				1								68-2/8		148

RK11D.F RUN NAME	HND288.V22(22) 11/06/73				Q	DRAW	KV	PG	1	X	Z	REMARKS	1-MAY-74 LENGTH	19127 EXCEPTIONS	PAGE 17 NUM NUMBER
	A/P	PTN NAME	ORDER PIN	BAY - ORDER											
GND 03		A03C2		1-01 * H		U02				1				HAND WIRE	149
GND 03		A03D2		1-02 * H		U02				2			HAND WIRE	149	
GND 03		A03E2		1-03 * H		U02				1			HAND WIRE	149	
GND 03		A03F2		1-04 * H		U02				2			HAND WIRE	149	
GND 03		A03N1		1-05 * H		U02				1			HAND WIRE	149	
GND 03		A03P1		1-06 * H		U02				2			HAND WIRE	149	
GND 03		A03R1		1-07 * H		U02				1			HAND WIRE	149	
GND 03		A03S1		1-08 * H		U02				2			HAND WIRE	149	
GND 03		A03T1		1-09 * H		U02				1			HAND WIRE	149	
GND 03		A03U1		1-10 * H		U02				2			HAND WIRE	149	
GND 03		A03V1		1-11 * H		U02				1			HAND WIRE	149	
GND 03		B04C2		1-12 * H		U02				2			HAND WIRE	149	
GND 03		B03T1		1-13 * H		U02				1			HAND WIRE	149	
GND 03		C03C2		1-14 * H		U01				2			HAND WIRE	149	
GND 03		C03T1		1-15 * H		U01				1			HAND WIRE	149	
GND 03		D03C2		1-16 * H		U01				2			HAND WIRE	149	
GND 03		D03T1		1-17 * H		U01				1			HAND WIRE	149	
GND 03		E03C2		1-18 * H		U01				2			HAND WIRE	149	
GND 03		E03T1		1-19 * H		U01				1			HAND WIRE	149	
GND 03		F03C2		1-20 * H		U01				2			HAND WIRE	149	
GND 03		F03T1		1-21 * H		U01				1			H TO WHERE	149	
GND 03				1								62-4/8		149	

GND 04		A04N2		1-01 * H		U02				1			HAND WIRE	150
GND 04		A04C2		1-02 * H		U02				2			HAND WIRE	150
GND 04		A04N1		1-03 * H		U02				1			HAND WIRE	150
GND 04		A04P1		1-04 * H		U02				2			HAND WIRE	150
GND 04		A04R1		1-05 * H		U02				1			HAND WIRE	150
GND 04		A04S1		1-06 * H		U02				2			HAND WIRE	150
GND 04		A04T1		1-07 * H		U02				1			HAND WIRE	150
GND 04		A04V2		1-08 * H		U02				2			HAND WIRE	150
GND 04		B04B2		1-09 * H		U02				1			HAND WIRE	150
GND 04		B04C2		1-10 * H		U02				2			HAND WIRE	150
GND 04		B04D1		1-11 * H		U02				1			HAND WIRE	150
GND 04		B04E1		1-12 * H		U02				2			HAND WIRE	150
GND 04		B04T1		1-13 * H		U02				1			HAND WIRE	150
GND 04		B04V2		1-14 * H		U02				2			HAND WIRE	150
GND 04		C04C2		1-15 * H		U01				1			HAND WIRE	150
GND 04		C04T1		1-16 * H		U01				2			HAND WIRE	150
GND 04		D04C2		1-17 * H		U01				1			HAND WIRE	150
GND 04		D04T1		1-18 * H		U01				2			HAND WIRE	150
GND 04		E04C2		1-19 * H		U01				1			HAND WIRE	150
GND 04		E04T1		1-20 * H		U01				2			HAND WIRE	150
GND 04		F04C2		1-21 * H		U01				1			HAND WIRE	150
GND 04		F04T1		1-22 * H		U01				1			H TO WHERE	150
GND 04				1								65-0/8		150



RR110.F RUN NAME	A/P	HND288.V22(22) 11/06/73 PIN NAME	ORDER PIN	MAY - ORDER	Q	DRA*	KV	PG	I	X	Z	REMARKS	1-MAY-74 LENGTH	19127 EXCEPTIONS	PAGE 10 RUN NUMBER
HE (1)	H	H03E2		1-01 *			002				1				151
HE (1)	H	F02T2		1-02 *	H		001				2			HAND WIRE	151
HE (1)	H	F01T2		1-03 *	H		001							H TO WHERE	151
HE (1)				1									17-2/8		151
HEAD + CHK SUM	H	F01P2		1-01 *	n		001				1			HAND WIRE	152
HEAD + CHK SUM	H	F02P2		1-02 *	H		001							H TO WHERE	152
HEAD + CHK SUM				1									2-6/8		152
HEAD OK (1)	L	F01U2		1-01 *	H		001				1			HAND WIRE	153
HEAD OK (1)	L	F02U2		1-02 *	n		001							H TO WHERE	153
HEAD OK (1)				1									2-6/8		153
HEADER (1)	H	C01U1		1-01 *	H		001				1			HAND WIRE	154
HEADER (1)	H	C03U1		1-02 *	H		001							H TO WHERE	154
HEADER (1)				1									3-2/8		154
IBA (0)	H	F01K2		1-01 *	H		001				1			HAND WIRE	155
IBA (0)	H	F03K2		1-02 *	H		001							H TO WHERE	155
IBA (0)				1									3-2/8		155
ID 0 (1)	H	F01E1		1-01 *	H		001				1			HAND WIRE	156
ID 0 (1)	H	F02E1		1-02 *	n		001							H TO WHERE	156
ID 0 (1)				1									2-6/8		156
ID 1 (1)	H	F01F1		1-01 *	H		001				1			HAND WIRE	157
ID 1 (1)	H	F02F1		1-02 *	H		001							H TO WHERE	157
ID 1 (1)				1									2-6/8		157
ID 2 (1)	H	F01H1		1-01 *	H		001				1			HAND WIRE	158
ID 2 (1)	H	F02H1		1-02 *	H		001							H TO WHERE	158
ID 2 (1)				1									2-6/8		158
IDE (1)	H	F01A1		1-01 *	H		001				1			HAND WIRE	159
IDE (1)	H	D02V2		1-02 *	H		001				2			HAND WIRE	159
IDE (1)	H	E04A1		1-03 *	H		001							H TO WHERE	159
IDE (1)				1									6-6/8		159
ILLEGAL ADD	H	F01K1		1-01 *	H		001				1			HAND WIRE	160
ILLEGAL ADD	H	F02K1		1-02 *	H		001							H TO WHERE	160
ILLEGAL ADD				1									2-6/8		160
IN BUFF FULL (1)	H	B03J2		1-01 *			002				1				161
IN BUFF FULL (1)	H	C03K2		1-02 *											161
IN BUFF FULL (1)				1									5-0/8		161

RR110.F RUN NAME	A/P	HND288.V22(22) 11/06/73 PIN NAME	ORDER PIN	MAY - ORDER	Q	DRA*	KV	PG	I	X	Z	REMARKS	1-MAY-74 LENGTH	19127 EXCEPTIONS	PAGE 19 RUN NUMBER
INIT	H	F01T2		1-01 *	H		001				2			HAND WIRE	162
INIT	H	F02T2		1-02 *	H		001				1			HAND WIRE	162
INIT	H	F03T2		1-03 *	H		001							H TO WHERE	162
INIT				1									5-4/8		162
INIT	L	F01A1		1-01 *	H		001				2			HAND WIRE	163
INIT	L	F02A1		1-02 *	H		001				1			HAND WIRE	163
INIT	L	F03A1		1-03 *	H		001				2			HAND WIRE	163
INIT	L	F04A1		1-04 *	H		001							H TO WHERE	163
INIT				1									8-2/8		163
INT BUS A00 (1)	H	D01A1		1-01 *	H		001				1			HAND WIRE	164
INT BUS A00 (1)	H	D03A1		1-02 *	H		001							H TO WHERE	164
INT BUS A00 (1)				1									3-2/8		164
INT BUS A01 (1)	H	D01B1		1-01 *	H		001				1			HAND WIRE	165
INT BUS A01 (1)	H	D03B1		1-02 *	H		001							H TO WHERE	165
INT BUS A01 (1)				1									3-2/8		165
INT BUS A02 (1)	H	D01C1		1-01 *	H		001				1			HAND WIRE	166
INT BUS A02 (1)	H	D03C1		1-02 *	H		001							H TO WHERE	166
INT BUS A02 (1)				1									3-2/8		166
INT BUS A03 (1)	H	D01D1		1-01 *	H		001				1			HAND WIRE	167
INT BUS A03 (1)	H	D03D1		1-02 *	H		001							H TO WHERE	167
INT BUS A03 (1)				1									3-2/8		167
INT BUS A04 (1)	H	D01E1		1-01 *	H		001				1			HAND WIRE	168
INT BUS A04 (1)	H	D03E1		1-02 *	H		001							H TO WHERE	168
INT BUS A04 (1)				1									3-2/8		168
INT BUS A05 (1)	H	D01F1		1-01 *	H		001				1			HAND WIRE	169
INT BUS A05 (1)	H	D03F1		1-02 *	H		001							H TO WHERE	169
INT BUS A05 (1)				1									3-2/8		169
INT BUS A06 (1)	H	D01H1		1-01 *	H		001				1			HAND WIRE	170
INT BUS A06 (1)	H	D03H1		1-02 *	H		001							H TO WHERE	170
INT BUS A06 (1)				1									3-2/8		170
INT BUS A07 (1)	H	D01J1		1-01 *	H		001				1			HAND WIRE	171
INT BUS A07 (1)	H	D03J1		1-02 *	H		001							H TO WHERE	171
INT BUS A07 (1)				1									3-2/8		171
INT BUS A08 (1)	H	D01K1		1-01 *	H		001				1			HAND WIRE	172
INT BUS A08 (1)	H	D03K1		1-02 *	H		001							H TO WHERE	172
INT BUS A08 (1)				1									3-2/8		172

RK110.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19:27	PAGE 20		
	A/P	PLN NAME	ORDER PIN	BUY - ORDER	Q	DRAW	KV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
INT BUS A09 (1)	H	D01L1		1-01 * H			001				1			HAND WIRE	173
INT BUS A09 (1)	H	D03L1		1-02 * H			001							H TO WHERE	173
INT BUS A09 (1)				1									3-2/8		173
INT BUS A10 (1)	H	D01M1		1-01 * H			001				1			HAND WIRE	174
INT BUS A10 (1)	H	D03M1		1-02 * H			001							H TO WHERE	174
INT BUS A10 (1)				1									3-2/8		174
INT BUS A11 (1)	H	D01N1		1-01 * H			001				1			HAND WIRE	175
INT BUS A11 (1)	H	D03N1		1-02 * H			001							H TO WHERE	175
INT BUS A11 (1)				1									3-2/8		175
INT BUS A12 (1)	H	D01P1		1-01 * H			001				1			HAND WIRE	176
INT BUS A12 (1)	H	D03P1		1-02 * H			001							H TO WHERE	176
INT BUS A12 (1)				1									3-2/8		176
INT BUS A13 (1)	H	D01R1		1-01 * H			001				1			HAND WIRE	177
INT BUS A13 (1)	H	D03R1		1-02 * H			001							H TO WHERE	177
INT BUS A13 (1)				1									3-2/8		177
INT BUS A14 (1)	H	D01S1		1-01 * H			001				1			HAND WIRE	178
INT BUS A14 (1)	H	D03S1		1-02 * H			001							H TO WHERE	178
INT BUS A14 (1)				1									3-2/8		178
INT BUS A15 (1)	H	D01U1		1-01 * H			001				1			HAND WIRE	179
INT BUS A15 (1)	H	D03U1		1-02 * H			001							H TO WHERE	179
INT BUS A15 (1)				1									3-2/8		179
INT BUS D00 (1)	H	F03V2		1-01 * H			001				1			HAND WIRE	180
INT BUS D00 (1)	H	F04V2		1-02 * H			001							H TO WHERE	180
INT BUS D00 (1)				1									2-6/8		180
INT BUS D01 (1)	H	F03U2		1-01 * H			001				1			HAND WIRE	181
INT BUS D01 (1)	H	F04U2		1-02 * H			001							H TO WHERE	181
INT BUS D01 (1)				1									2-6/8		181
INT BUS D02 (1)	H	F03T2		1-01 * H			001				1			HAND WIRE	182
INT BUS D02 (1)	H	F04T2		1-02 * H			001							H TO WHERE	182
INT BUS D02 (1)				1									2-6/8		182
INT BUS D03 (1)	H	F03S2		1-01 * H			001				1			HAND WIRE	183
INT BUS D03 (1)	H	F04S2		1-02 * H			001							H TO WHERE	183
INT BUS D03 (1)				1									2-6/8		183
INT BUS D04 (1)	H	F03R2		1-01 * H			001				1			HAND WIRE	184
INT BUS D04 (1)	H	F04R2		1-02 * H			001							H TO WHERE	184
INT BUS D04 (1)				1									2-6/8		184

RK110.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19:27	PAGE 21		
	A/P	PLN NAME	ORDER PIN	BUY - ORDER	Q	DRAW	KV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
INT BUS D05 (1)	H	F03P2		1-01 * H			001				1			HAND WIRE	185
INT BUS D05 (1)	H	F04P2		1-02 * H			001							H TO WHERE	185
INT BUS D05 (1)				1									2-6/8		185
INT BUS D06 (1)	H	F03N2		1-01 * H			001				1			HAND WIRE	186
INT BUS D06 (1)	H	F04N2		1-02 * H			001							H TO WHERE	186
INT BUS D06 (1)				1									2-6/8		186
INT BUS D07 (1)	H	F03M2		1-01 * H			001				1			HAND WIRE	187
INT BUS D07 (1)	H	F04M2		1-02 * H			001							H TO WHERE	187
INT BUS D07 (1)				1									2-6/8		187
INT BUS D08 (1)	H	F03L2		1-01 * H			001				1			HAND WIRE	188
INT BUS D08 (1)	H	F04L2		1-02 * H			001							H TO WHERE	188
INT BUS D08 (1)				1									2-6/8		188
INT BUS D09 (1)	H	F03K2		1-01 * H			001				1			HAND WIRE	189
INT BUS D09 (1)	H	F04K2		1-02 * H			001							H TO WHERE	189
INT BUS D09 (1)				1									2-6/8		189
INT BUS D10 (1)	H	F03J2		1-01 * H			001				1			HAND WIRE	190
INT BUS D10 (1)	H	F04J2		1-02 * H			001							H TO WHERE	190
INT BUS D10 (1)				1									2-6/8		190
INT BUS D11 (1)	H	F03H2		1-01 * H			001				1			HAND WIRE	191
INT BUS D11 (1)	H	F04H2		1-02 * H			001							H TO WHERE	191
INT BUS D11 (1)				1									2-6/8		191
INT BUS D12 (1)	H	F03F2		1-01 * H			001				1			HAND WIRE	192
INT BUS D12 (1)	H	F04F2		1-02 * H			001							H TO WHERE	192
INT BUS D12 (1)				1									2-6/8		192
INT BUS D13 (1)	H	F03E2		1-01 * H			001				1			HAND WIRE	193
INT BUS D13 (1)	H	F04E2		1-02 * H			001							H TO WHERE	193
INT BUS D13 (1)				1									2-6/8		193
INT BUS D14 (1)	H	F03D2		1-01 * H			001				1			HAND WIRE	194
INT BUS D14 (1)	H	F04D2		1-02 * H			001							H TO WHERE	194
INT BUS D14 (1)				1									2-6/8		194
INT BUS D15 (1)	H	F03B1		1-01 * H			001				1			HAND WIRE	195
INT BUS D15 (1)	H	F04B1		1-02 * H			001							H TO WHERE	195
INT BUS D15 (1)				1									2-6/8		195
LAST BIT	H	F01D2		1-01 * H			001				1			HAND WIRE	196
LAST BIT	H	F02D2		1-02 * H			001							H TO WHERE	196
LAST BIT				1									2-6/8		196

RR1ID.F RUN NAME	A/P	HND288.V22(22) PIN NAME	11/06/73 ORDER PIN	BAY - ORDER	Q	DRAW	NV	PG	I	X	Z	REMARKS	1-MAY-74 LENGTH	19:27 EXCEPTIONS	PAGE 22 RUN NUMBER
LAST SECTOR	L	C02U2		1-01 *	H			U01			1				197
LAST SECTOR	L	C03U2		1-02 *	H			U01						H TO WHERE	197
LAST SECTOR				1									2-6/8		197
LAST WORD DONE	L	C01L1		1-01 *	H			U01			1				198
LAST WORD DONE	L	C03L1		1-02 *	H			U01						H TO WHERE	198
LAST WORD DONE				1									3-2/8		198
LOAD RKBA HI	L	E03V2		1-01 *	H			U01			1				199
LOAD RKBA HI	L	E04V2		1-02 *	H			U01						H TO WHERE	199
LOAD RKBA HI				1									2-6/8		199
LOAD RKBA LU	L	E03H2		1-01 *	H			U01			1				200
LOAD RKBA LU	L	E04H2		1-02 *	H			U01						H TO WHERE	200
LOAD RKBA LU				1									2-6/8		200
LOAD RKCS HI	L	E01L1		1-01 *	H			U01			1				201
LOAD RKCS HI	L	E04L1		1-02 *	H			U01						H TO WHERE	201
LOAD RKCS HI				1									3-6/8		201
LOAD RKCS LU	L	E01M1		1-01 *	H			U01			1				202
LOAD RKCS LU	L	E04M1		1-02 *	H			U01						H TO WHERE	202
LOAD RKCS LU				1									3-6/8		202
LOAD RKDA HI	L	E03E2		1-01 *	H			U01			1				203
LOAD RKDA HI	L	E04E2		1-02 *	H			U01						H TO WHERE	203
LOAD RKDA HI				1									2-6/8		203
LOAD RKDA LU	L	E03F2		1-01 *	H			U01			1				204
LOAD RKDA LU	L	E04F2		1-02 *	H			U01						H TO WHERE	204
LOAD RKDA LU				1									2-6/8		204
LOAD RKWC HI	L	E01B1		1-01 *	H			U01			1				205
LOAD RKWC HI	L	E04B1		1-02 *	H			U01						H TO WHERE	205
LOAD RKWC HI				1									3-6/8		205
LOAD RKWC LU	L	E01F1		1-01 *	H			U01			1				206
LOAD RKWC LU	L	E04F1		1-02 *	H			U01						H TO WHERE	206
LOAD RKWC LU				1									3-6/8		206
4 CLK	L	A02U2		1-01 *							1				207
4 CLK	L	D02U2		1-02 *											207
4 CLK				1									8-6/8		207

RR1ID.F RUN NAME	A/P	HND288.V22(22) PIN NAME	11/06/73 ORDER PIN	BAY - ORDER	Q	DRAW	NV	PG	I	X	Z	REMARKS	1-MAY-74 LENGTH	19:27 EXCEPTIONS	PAGE 23 RUN NUMBER
NEW FUN	L	C01R1		1-01 *	H			U01			2				208
NEW FUN	L	C02R1		1-02 *	H			U01			1				208
NEW FUN	L	C03R1		1-03 *	H			U01						H TO WHERE	208
NEW FUN				1									5-4/8		208
NPR EN (1)	H	C03V2		1-01 *							1				209
NPR EN (1)	H	E04M2		1-02 *											209
NPR EN (1)				1									7-0/8		209
NPR REQ	H	E03J2		1-01 *	H			U01			1				210
NPR REQ	H	E04J2		1-02 *	H			U01						H TO WHERE	210
NPR REQ				1									2-6/8		210
NXM (1)	H	E01N1		1-01 *	H			U01			1				211
NXM (1)	H	E04N1		1-02 *	H			U01						H TO WHERE	211
NXM (1)				1									3-6/8		211
OUT BUFF FULL (1)	H	B03L2		1-01 *				U02			1				212
OUT BUFF FULL (1)	H	C03L2		1-02 *											212
OUT BUFF FULL (1)				1									4-6/8		212
PULL DONE	L	F01U1		1-01 *	H			U01			1				213
PULL DONE	L	F02U1		1-02 *	H			U01						H TO WHERE	213
PULL DONE				1									2-6/8		213
PREAMBLE (1)	H	F01M2		1-01 *	H			U01			1				214
PREAMBLE (1)	H	F02M2		1-02 *	H			U01						H TO WHERE	214
PREAMBLE (1)				1									2-6/8		214
R/W/S RDY	H	E01P2		1-01 *	H			U01			1				215
R/W/S RDY	H	E02P2		1-02 *	H			U01						H TO WHERE	215
R/W/S RDY				1									2-6/8		215
RD DATA=WT DATA	H	F01M1		1-01 *	H			U01			1				216
RD DATA=WT DATA	H	F02M1		1-02 *	H			U01						H TO WHERE	216
RD DATA=WT DATA				1									2-6/8		216
RD GATE (1)	H	B03F2		1-01 *				U02			1				217
RD GATE (1)	H	D02T2		1-02 *											217
RD GATE (1)				1									9-0/8		217
RD GATE EN	H	F01J2		1-01 *	H			U01			1				218
RD GATE EN	H	F02J2		1-02 *	H			U01						H TO WHERE	218
RD GATE EN				1									2-6/8		218

RKID,F RUN NAME	A/P	PTN NAME	ORDER PIN	RAY - ORDER	Q	DNAM	KV	PG	X	Z	REMARKS	1-MAY-74 LENGTH	19:27 EXCEPTIONS	PAGE 24 RUN NUMBER
RD HEADER (1)	H	F01L1		1-01 *	H								HAND WIRE	219
RD HEADER (1)	H	F02L1		1-02 *	H								H TO WHERE	219
RD HEADER (1)				1								2-6/8		219
RD+RD CHK	H	B03D2		1-01 *										220
RD+RD CHK	H	C03K1		1-02 *	H								HAND WIRE	220
RD+RD CHK	H	C01K1		1-03 *	H								H TO WHERE	220
RD+RD CHK				1								9-0/8		220
READ	H	E01U1		1-01 *	H								HAND WIRE	221
READ	H	E03U2		1-02 *	H								HAND WIRE	221
READ	H	E04U2		1-03 *	H								H TO WHERE	221
READ				1								6-2/8		221
RK INT MASTER	H	D02U1		1-01 *	H								HAND WIRE	222
RK INT MASTER	H	D04U1		1-02 *	H								H TO WHERE	222
RK INT MASTER				1								3-2/8		222
RK INT REQ	H	E02K2		1-01 *	H								HAND WIRE	223
RK INT REQ	H	E04K2		1-02 *	H								H TO WHERE	223
RK INT REQ				1								3-2/8		223
RK NPR MASTER	H	C03J2		1-01 *	H							3-5		224
RK NPR MASTER	H	E04H1		1-02 *	H								HAND WIRE	224
RK NPR MASTER	H	E01H1		1-03 *	H								H TO WHERE	224
RK NPR MASTER				1								11-5/8		224
RK05	H	F01C1		1-01 *	H								HAND WIRE	225
RK05	H	F02C1		1-02 *	H								H TO WHERE	225
RK05				1								2-6/8		225
RKA 01 (1)	H	E01K1		1-01 *	H								HAND WIRE	226
RKA 01 (1)	H	E04K1		1-02 *	H								HAND WIRE	226
RKA 01 (1)	H	E03K2		1-03 *									TO HERE	226
RKA 01 (1)				1								6-4/8		226
RKA 02 (1)	H	E01J1		1-01 *	H								HAND WIRE	227
RKA 02 (1)	H	F04J1		1-02 *	H								HAND WIRE	227
RKA 02 (1)	H	E03N2		1-03 *									TO HERE	227
RKA 02 (1)				1								6-6/8		227
RKA 03 (1)	H	E03V1		1-01 *	H								HAND WIRE	228
RKA 03 (1)	H	E04V1		1-02 *	H								H TO WHERE	228
RKA 03 (1)				1								2-6/8		228

RKID,F RUN NAME	A/P	PTN NAME	ORDER PIN	RAY - ORDER	Q	DNAM	KV	PG	X	Z	REMARKS	1-MAY-74 LENGTH	19:27 EXCEPTIONS	PAGE 25 RUN NUMBER
RKBA 01 (1)	H	F03C1		1-01 *	H								HAND WIRE	229
RKBA 01 (1)	H	F04C1		1-02 *	H								H TO WHERE	229
RKBA 01 (1)				1								2-6/8		229
RKBA 02 (1)	H	F03D1		1-01 *	H								HAND WIRE	230
RKBA 02 (1)	H	F04D1		1-02 *	H								H TO WHERE	230
RKBA 02 (1)				1								2-6/8		230
RKBA 03 (1)	H	F03E1		1-01 *	H								HAND WIRE	231
RKBA 03 (1)	H	F04E1		1-02 *	H								H TO WHERE	231
RKBA 03 (1)				1								2-6/8		231
RKBA 04 (1)	H	F03F1		1-01 *	H								HAND WIRE	232
RKBA 04 (1)	H	F04F1		1-02 *	H								H TO WHERE	232
RKBA 04 (1)				1								2-6/8		232
RKBA 05 (1)	H	F03H1		1-01 *	H								HAND WIRE	233
RKBA 05 (1)	H	F04H1		1-02 *	H								H TO WHERE	233
RKBA 05 (1)				1								2-6/8		233
RKBA 06 (1)	H	F03J1		1-01 *	H								HAND WIRE	234
RKBA 06 (1)	H	F04J1		1-02 *	H								H TO WHERE	234
RKBA 06 (1)				1								2-6/8		234
RKBA 07 (1)	H	F03K1		1-01 *	H								HAND WIRE	235
RKBA 07 (1)	H	F04K1		1-02 *	H								H TO WHERE	235
RKBA 07 (1)				1								2-6/8		235
RKBA 08 (1)	H	F03L1		1-01 *	H								HAND WIRE	236
RKBA 08 (1)	H	F04L1		1-02 *	H								H TO WHERE	236
RKBA 08 (1)				1								2-6/8		236
RKBA 09 (1)	H	F03M1		1-01 *	H								HAND WIRE	237
RKBA 09 (1)	H	F04M1		1-02 *	H								H TO WHERE	237
RKBA 09 (1)				1								2-6/8		237
RKBA 10 (1)	H	F03N1		1-01 *	H								HAND WIRE	238
RKBA 10 (1)	H	F04N1		1-02 *	H								H TO WHERE	238
RKBA 10 (1)				1								2-6/8		238
RKBA 11 (1)	H	F03R1		1-01 *	H								HAND WIRE	239
RKBA 11 (1)	H	F04R1		1-02 *	H								H TO WHERE	239
RKBA 11 (1)				1								2-6/8		239
RKBA 12 (1)	H	F03P1		1-01 *	H								HAND WIRE	240
RKBA 12 (1)	H	F04P1		1-02 *	H								H TO WHERE	240
RKBA 12 (1)				1								2-6/8		240

RK11D.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19127	PAGE 26		
	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAM	KV	PG	I	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
RKBA 13 (1)	H	F0381		1-01 *	H		001				1			HAND WIRE	241
RKBA 13 (1)	H	F0481		1-02 *	H		001							H TO WHERE	241
RKBA 13 (1)				1									2-6/8		241
RKBA 14 (1)	H	F03U1		1-01 *	H		001				1			HAND WIRE	242
RKBA 14 (1)	H	F04U1		1-02 *	H		001							H TO WHERE	242
RKBA 14 (1)				1									2-6/8		242
RKBA 15 (1)	H	F03Y1		1-01 *	H		001				1			HAND WIRE	243
RKBA 15 (1)	H	F04Y1		1-02 *	H		001							H TO WHERE	243
RKBA 15 (1)				1									2-6/8		243
RKBA OVF	L	E01S1		1-01 *	H		001				1			HAND WIRE	244
RKBA OVF	L	E0182		1-02 *	H		001							H TO WHERE	244
RKBA OVF				1									3-4/8		244
RKDA 00 (1)	H	B03P2		1-01 *			002				1				245
RKDA 00 (1)	H	E03A1		1-02 *	H		001				2			HAND WIRE	245
RKDA 00 (1)	H	E02A1		1-03 *	H		001							H TO WHERE	245
RKDA 00 (1)				1									11-4/8		245
RKDA 01 (1)	H	B03V1		1-01 *			002				1				246
RKDA 01 (1)	H	E03R1		1-02 *	H		001				2			HAND WIRE	246
RKDA 01 (1)	H	E02R1		1-03 *	H		001							H TO WHERE	246
RKDA 01 (1)				1									10-6/8		246
RKDA 02 (1)	H	B03N1		1-01 *			002				1				247
RKDA 02 (1)	H	E03C1		1-02 *	H		001				2			HAND WIRE	247
RKDA 02 (1)	H	E02C1		1-03 *	H		001				1			HAND WIRE	247
RKDA 02 (1)	H	E01C1		1-04 *	H		001							H TO WHERE	247
RKDA 02 (1)				1									14-4/8		247
RKDA 03 (1)	H	B03K2		1-01 *			002				1				248
RKDA 03 (1)	H	E03D1		1-02 *	H		001				2			HAND WIRE	248
RKDA 03 (1)	H	E02D1		1-03 *	H		001				1			HAND WIRE	248
RKDA 03 (1)	H	E01D1		1-04 *	H		001							H TO WHERE	248
RKDA 03 (1)				1									15-0/8		248
RKDA 04 (1)	H	B03U2		1-01 *			002				1				249
RKDA 04 (1)	H	E03E1		1-02 *	H		001				2			HAND WIRE	249
RKDA 04 (1)	H	E02E1		1-03 *	H		001							H TO WHERE	249
RKDA 04 (1)				1									11-4/8		249
RKDA 05 (1)	H	B03T2		1-01 *			002				1				250
RKDA 05 (1)	H	E03F1		1-02 *	H		001				2			HAND WIRE	250
RKDA 05 (1)	H	E02F1		1-03 *	H		001							H TO WHERE	250
RKDA 05 (1)				1									11-6/8		250

RK11D.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19127	PAGE 27		
	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAM	KV	PG	I	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
RKDA 06 (1)	H	B03C1		1-01 *			002				1				251
RKDA 06 (1)	H	E03H1		1-02 *	H		002				2			HAND WIRE	251
RKDA 06 (1)	H	E02H1		1-03 *	H		001							H TO WHERE	251
RKDA 06 (1)				1									13-2/8		251
RKDA 07 (1)	H	B03J1		1-01 *			001				1				252
RKDA 07 (1)	H	E03J1		1-02 *	H		001				2			HAND WIRE	252
RKDA 07 (1)	H	E02J1		1-03 *	H		001							H TO WHERE	252
RKDA 07 (1)				1									12-6/8		252
RKDA 08 (1)	H	B03F1		1-01 *			002				1				253
RKDA 08 (1)	H	E03K1		1-02 *	H		001				2			HAND WIRE	253
RKDA 08 (1)	H	E02K1		1-03 *	H		001							H TO WHERE	253
RKDA 08 (1)				1									13-2/8		253
RKDA 09 (1)	H	B03L1		1-01 *			002				1				254
RKDA 09 (1)	H	E03L1		1-02 *	H		001				2			HAND WIRE	254
RKDA 09 (1)	H	E02L1		1-03 *	H		001							H TO WHERE	254
RKDA 09 (1)				1									12-6/8		254
RKDA 10 (1)	H	B03P1		1-01 *			002				1				255
RKDA 10 (1)	H	E03M1		1-02 *	H		001				2			HAND WIRE	255
RKDA 10 (1)	H	E02M1		1-03 *	H		001							H TO WHERE	255
RKDA 10 (1)				1									12-4/8		255
RKDA 11 (1)	H	B03S2		1-01 *			002				1				256
RKDA 11 (1)	H	E03N1		1-02 *	H		001				2			HAND WIRE	256
RKDA 11 (1)	H	E02N1		1-03 *	H		001							H TO WHERE	256
RKDA 11 (1)				1									12-4/8		256
RKDA 12 (1)	H	B03K1		1-01 *			002				1				257
RKDA 12 (1)	H	E03P1		1-02 *	H		001				2			HAND WIRE	257
RKDA 12 (1)	H	E02P1		1-03 *	H		001							H TO WHERE	257
RKDA 12 (1)				1									13-2/8		257
RKDA 13 (1)	H	E02R1		1-01 *	H		001				1			HAND WIRE	258
RKDA 13 (1)	H	E03R1		1-02 *	H		001							H TO WHERE	258
RKDA 13 (1)				1									2-6/8		258
RKDA 14 (1)	H	E02S1		1-01 *	H		001				1			HAND WIRE	259
RKDA 14 (1)	H	E03S1		1-02 *	H		001							H TO WHERE	259
RKDA 14 (1)				1									2-6/8		259
RKDA 15 (1)	H	E02U1		1-01 *	H		001				1			HAND WIRE	260
RKDA 15 (1)	H	E03U1		1-02 *	H		001							H TO WHERE	260
RKDA 15 (1)				1									2-6/8		260

RKIID.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19127	PAGE 28	
	A/P	PTN NAME	ORDER PIN	RAY - ORDER	Q	DRAW	KV	PG	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
RKDB 00 (1)	H	C02T2		1-01 *	H		001			1			HAND WIRE	261
RKDB 00 (1)	H	C03T2		1-02 *	H		001						H TO WHERE	261
RKDB 00 (1)				1								2-6/8		261
RKDS 00 (1)	H	E01V1		1-01 *	H		001			1			HAND WIRE	262
RKDS 00 (1)	H	E02V1		1-02 *	H		001						H TO WHERE	262
RKDS 00 (1)				1								2-6/8		262
RKDS 01 (1)	H	E01D2		1-01 *	H		001			1			HAND WIRE	263
RKDS 01 (1)	H	E02D2		1-02 *	H		001						H TO WHERE	263
RKDS 01 (1)				1								2-6/8		263
RKDS 02 (1)	H	E01E2		1-01 *	H		001			1			HAND WIRE	264
RKDS 02 (1)	H	E02E2		1-02 *	H		001						H TO WHERE	264
RKDS 02 (1)				1								2-6/8		264
RKDS 03 (1)	H	E01F2		1-01 *	H		001			1			HAND WIRE	265
RKDS 03 (1)	H	E02F2		1-02 *	H		001						H TO WHERE	265
RKDS 03 (1)				1								2-6/8		265
SC=SA	H	F01H2		1-01 *	H		001			1			HAND WIRE	266
SC=SA	H	F02H2		1-02 *	H		001						H TO WHERE	266
SC=SA				1								2-6/8		266
SCH CMP (1)	H	F01S1		1-01 *	H		001			1			HAND WIRE	267
SCH CMP (1)	H	F02S1		1-02 *	H		001						H TO WHERE	267
SCH CMP (1)				1								2-6/8		267
SECTOR END	L	C02S2		1-01 *	H		001			1			HAND WIRE	268
SECTOR END	L	C03S2		1-02 *	H		001						H TO WHERE	268
SECTOR END				1								2-6/8		268
SECTOR PULSE	H	E01M2		1-01 *	H		001			1			HAND WIRE	269
SECTOR PULSE	H	E02M2		1-02 *	H		001						H TO WHERE	269
SECTOR PULSE				1								2-6/8		269
SEEK OR RESET	H	F03N2		1-01 *			002			1				270
SEEK OR RESET	H	F02L2		1-02 *	H		001			2			HAND WIRE	270
SEEK OR RESET	H	F01L2		1-03 *	H		001						H TO WHERE	270
SEEK OR RESET				1								15-4/8		270
SER RD DATA (1)	H	C01V1		1-01 *	H		001			2			HAND WIRE	271
SER RD DATA (1)	H	C02V1		1-02 *	H		001			1			HAND WIRE	271
SER RD DATA (1)	H	C03V1		1-03 *	H		001						H TO WHERE	271
SER RD DATA (1)				1								5-4/8		271

RKIID.F RUN NAME	HND288.V22(22) 11/06/73										1-MAY-74	19127	PAGE 29	
	A/P	PTN NAME	ORDER PIN	RAY - ORDER	Q	DRAW	KV	PG	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
SIN	H	F01N2		1-01 *	H		001			1			HAND WIRE	272
SIN	H	F02N2		1-02 *	H		001						H TO WHERE	272
SIN				1								2-6/8		272
STOP NPRS	L	C01R1		1-01 *	H		001			1			HAND WIRE	273
STOP NPRS	L	C03R1		1-02 *	H		001						H TO WHERE	273
STOP NPRS				1								3-2/8		273
STOP PULL	L	F01N2		1-01 *	H		001			1			HAND WIRE	274
STOP PULL	L	F02N2		1-02 *	H		001						H TO WHERE	274
STOP PULL				1								2-6/8		274
WC UVF (1)	H	C03S1		1-01 *			002			1				275
WC UVF (1)	H	C03J1		1-02 *	H		001			2			HAND WIRE	275
WC UVF (1)	H	C01J1		1-03 *	H		001						H TO WHERE	275
WC UVF (1)				1								1-2/8		275
WRITE	H	F01N2		1-01 *	H		001			1			HAND WIRE	276
WRITE	H	F02N2		1-02 *	H		001						H TO WHERE	276
WRITE				1								2-6/8		276
WT GATE (1)	H	C01P2		1-01 *			002			1				277
WT GATE (1)	H	F02P1		1-02 *	H		001			2			HAND WIRE	277
WT GATE (1)	H	F01P1		1-03 *	H		001						H TO WHERE	277
WT GATE (1)				1								16-2/8		277
WT LOCK	H	F01S2		1-01 *	H		001			1			HAND WIRE	278
WT LOCK	H	F02S2		1-02 *	H		001						H TO WHERE	278
WT LOCK				1								2-6/8		278
WT PRCT STATUS	H	E01J2		1-01 *	H		001			1			HAND WIRE	279
WT PRCT STATUS	H	E02J2		1-02 *	H		001						H TO WHERE	279
WT PRCT STATUS				1								2-6/8		279
WT+WT CHK	H	C03H2		1-01 *			002			1				280
WT+WT CHK	H	C03P1		1-02 *	H		001			2			HAND WIRE	280
WT+WT CHK	H	C02P1		1-03 *	H		001			1			HAND WIRE	280
WT+WT CHK	H	C01P1		1-04 *	H		001						H TO WHERE	280
WT+WT CHK				1								11-2/8		280
XFER FUNCTION	H	E01V2		1-01 *	H		001			1			HAND WIRE	281
XFER FUNCTION	H	E02V2		1-02 *	H		001						H TO WHERE	281
XFER FUNCTION				1								2-6/8		281