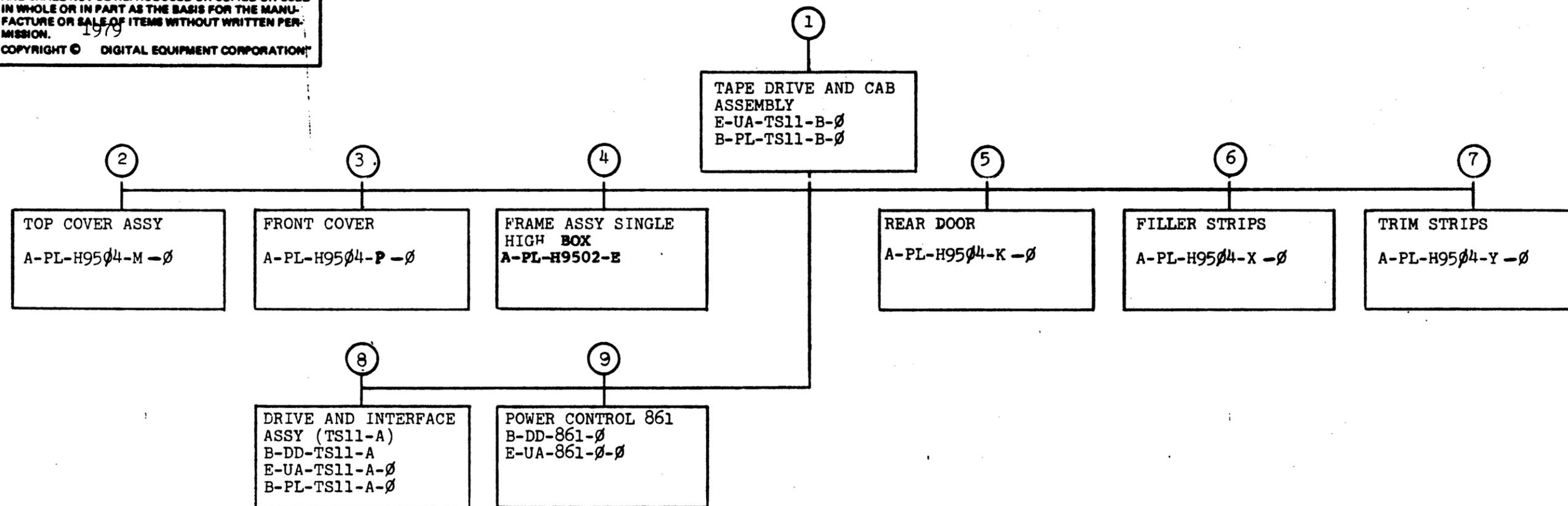
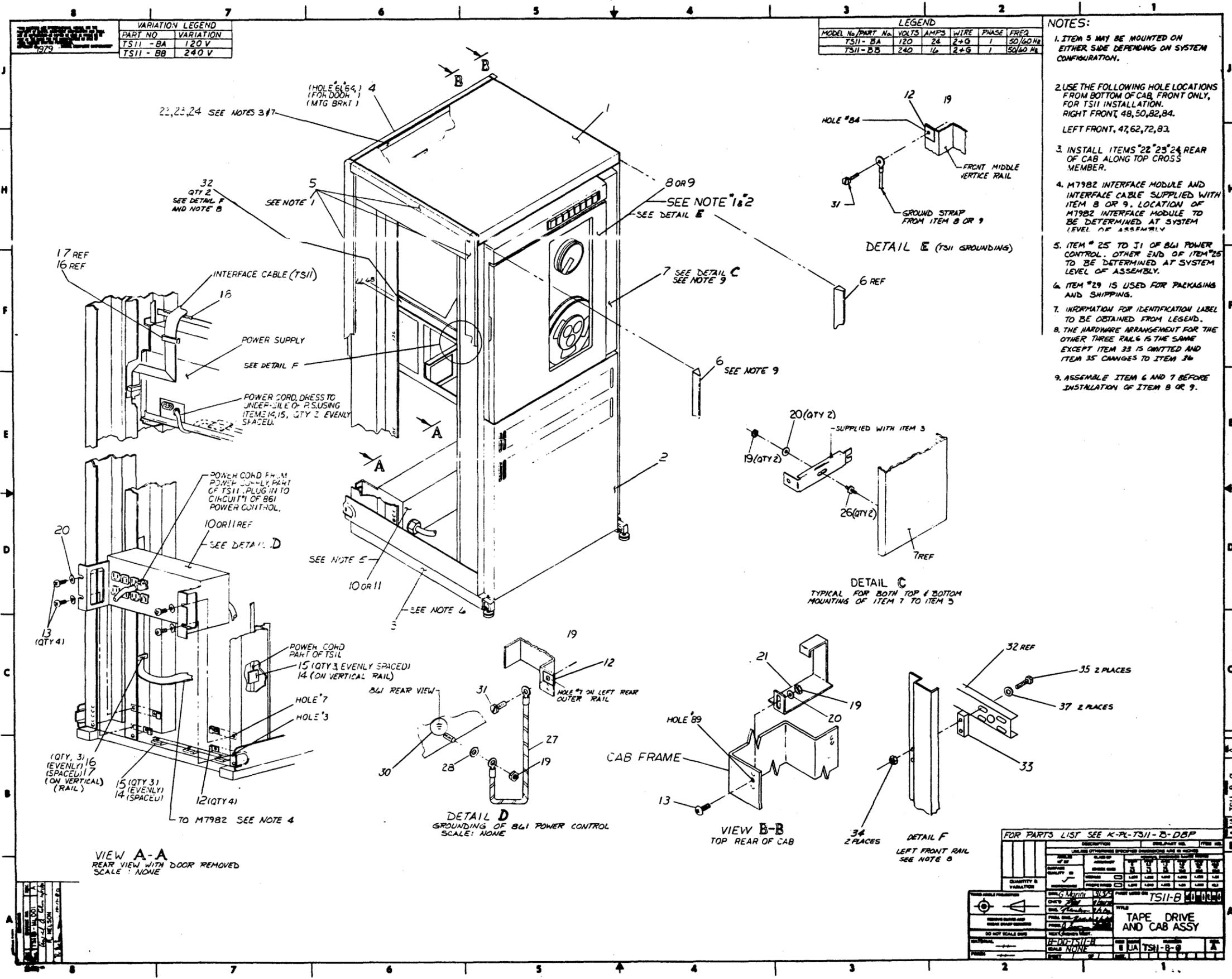




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1979
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TITLE TAPE DRIVE AND CAB ASSEMBLY (TS11-B)	SHEET 2 OF 3	SIZE CODE B DD	NUMBER TS11-B	REV A
---	--------------	-------------------	------------------	----------



CONTINUED BY PREVIOUS SHEET

DATE: 1981 11 13

SHEET A1 OF A2

LINE ITEM DOCUMENT NUMBER PART NUMBER DESCRIPTION QUANTITY PER VARIATION

10	A-SP-370034D-0-0		3612680-00	DECAL, GROUND SIGN PER 366	1
11	A-SP-370034D-0-0		3700340-01	WASHER, LOCK, EXTERNAL TOOTH #10	1
12	A-SP-370034D-0-0		9007200-00	RETAINER, U-NUT, 10-32	1
13	A-SP-370034D-0-0		9007200-00	SCREW, TRUS, PHIL, SEMS10-32X 1/2	1
14	A-SP-370034D-0-0		9007200-00	TIE CABLE BUND, DIA 0-1-3/4"-101	1
15	A-SP-370034D-0-0		9008254-00	MOUNT, CABLE TIE, ADHESIVE BRCKE	1
16	A-SP-370034D-0-0		1215843-00	CLIP FLAT CABLE W/ADHESIVE BK	1
17	A-SP-370034D-0-0		1213716-02	SPACER, FORM FOR FLAT WIRE CABLE	1
18	A-SP-370034D-0-0		9009718-02	GROMMET, EXTRUDED 2-3/4 LONG	1
19	A-SP-370034D-0-0		9006565-00	NUT, KEP 10-32X 3/8 AF	1
20	A-SP-370034D-0-0		9006664-00	WASHER, FLAT, .437 OD X .218 ID	1
21	A-SP-370034D-0-0		7422939-00	BRKT, TOP COVER	1
22	A-SP-370034D-0-0		7416197-01	DECAL	1
23	A-SP-370034D-0-0		3613211-00	DECAL, CLEAR PREPRINTED CSA 1-1/4	1
24	A-SP-370034D-0-0		3615189-00	LABEL, SERIAL TAG FOR TYPEWRITER	1
25	A-SP-370034D-0-0		7008298-8F	CABLE ASSY PDP-11	1
26	A-SP-370034D-0-0		7415711-00	PIN PILOT	1
27	A-SP-370034D-0-0		1213756-15	GROUND STRAP	1
28	A-SP-370034D-0-0		9007651-00	WASHER, LOCK, EXTERNAL TOOTH #10	1
29	A-SP-370034D-0-0		3700340-01	PKG CABINET TU77 MAGTAPE	1
30	A-SP-370034D-0-0		3612680-00	DECAL, GROUND SIGN PER 366	1

REVISION HISTORY

ENG#	ECO NUMBER	REV	SECTION	DESCRIPTION	DATE	BY
1	TS-18-MLO01	A	SECTION A OF A	SECTION, VARIATION INDEX:CHK'D: [H] BR, BB	20-OCT-80	G. MARINI

DESIGN INFORMATION

DES. ENG.:	R. U. NELSON	DATE:	20-OCT-80
RESP. ENG.:	R. U. NELSON	DATE:	20-OCT-80
MFG. ENG.:	JOHN SOUZA	DATE:	20-OCT-80
ASSEMBLY NUMBER:	E-UR-TS11-B-0	TOP DOCUMENT NUMBER:	TS11-B-09P
FILE NAME:	Z1821A.PLS	EDIT #	4

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DIGITAL
PARTS LIST
TAPE DRIVE AND CAS ASSEMBLY

DOCUMENT NUMBER
REV
A

QUOTED BY EST. 01111

F A B I S L I S T

SHEET 02 OF 02

LINE ITEM DOCUMENT NUMBER

PART NUMBER

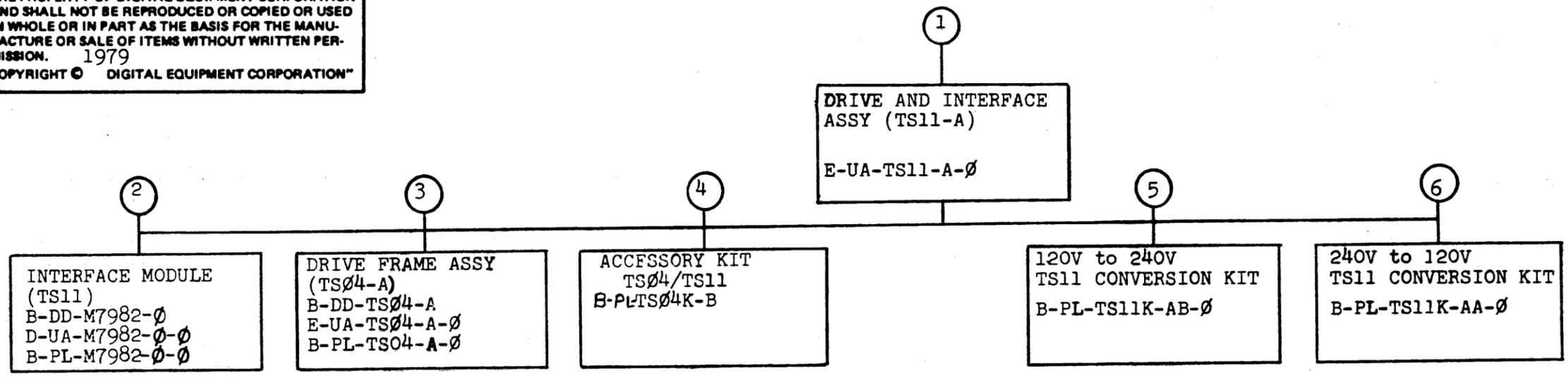
DESCRIPTION

QUANTITY PER VARIATION
EQ BR

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION
01	0-MD-742059-0-0	9010156-00	SCREW, HEX, SLOT, 3/8X10-32X .50	1
02	0-MD-742059-0-0	742059-00	FRAME, SUPPART	1
03	0-MD-742059-0-0	742059-00	SPACER	1
04	0-MD-742059-0-0	9008203-00	NUT, KEP	1
05	0-MD-742059-0-0	9008203-00	SCREW, HEX	1
06	0-MD-742059-0-0	9008203-00	SCREW, HEX	1
07	0-MD-742059-0-0	9007792-00	WASHER, FLAT 1/4, .625 O.D. X .2	1

D I G I T A L TITLE TAPE DRIVE AND CAB ASSEMBLY SECTION A OF A
 SIZE: CODE: DOCUMENT NUMBER REV
 K PL TS11-B-DBP A

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DIGITAL EQUIPMENT CORPORATION PARTS LIST				QUANTITY / VARIATION										NOTES: INSTALL CABLE (ITEM #3) TO CONN- J4MB FOUND ON MOTHER BD (PART OF TS04-A) AND TO CONN FOUND ON M7982-0 INTERFACE MODULE (ITEM #4)		
MADE BY G. Marini DATE 3-12-79		CHECKED <i>Thomley</i> DATE 7/18/79														
ENG <i>M. Cucin</i> DATE 7/19/79		PROD <i>T. Wright</i> DATE 7/18/79														
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	TS11-AA (120V)	TS11-AB (240V)											REF DESIGNATION
1	E-UA-TS04-A-0	TS04-AA	DRIVE AND FRAME ASSY	1	---											
2	E-UA-TS04-A-0	TS04-AB	DRIVE AND FRAME ASSY	---	1											
3	D-IA-7014094-0-0	7014094-ME	CABLE 25' (INTERFACE CABLE)	1	1											
4	E-UA-M7982-0-0	M7982-0	INTERFACE MODULE (TS11)	1	1											
5	B-PL-TS11K-AA-0	TS11K-AA	240V to 120V TS11 CONVERSION KIT	---	REF											
6	B-PL-TS11K-AB-0	TS11K-AB	120V to 240V TS11 CONVERSION KIT	REF	---											
7	B-PL-TS04K-B-0	TS04K-B	ACCESSORY KIT TS04/TS11	1	1											
8	A-PS-3612063-0-0	3612063-00	TAG..UL (RECOGNIZED)	1	1											
9	A-PS-3613210-0-0	3613210-00	LABEL (IDENTIFICATION)	1	1											
10	A-PS-3616410-0-0	3616410-00	DIGITAL TS-11 LOGO	1	1											

E.C.O. NO.
ML001

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TITLE **DRIVE AND INTERFACE ASSY (TS11-A)**

ASSY NO. NEXT HIGHER ASSY
B-DD-TS11-A

SIZE
B

CODE
PL

NUMBER
TS11-A-0

REV.
A

SHEET 1 OF 1

INSERTION PARTS LIST DATA BASE REV

L1

7

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D 0-0-2862W M D 2

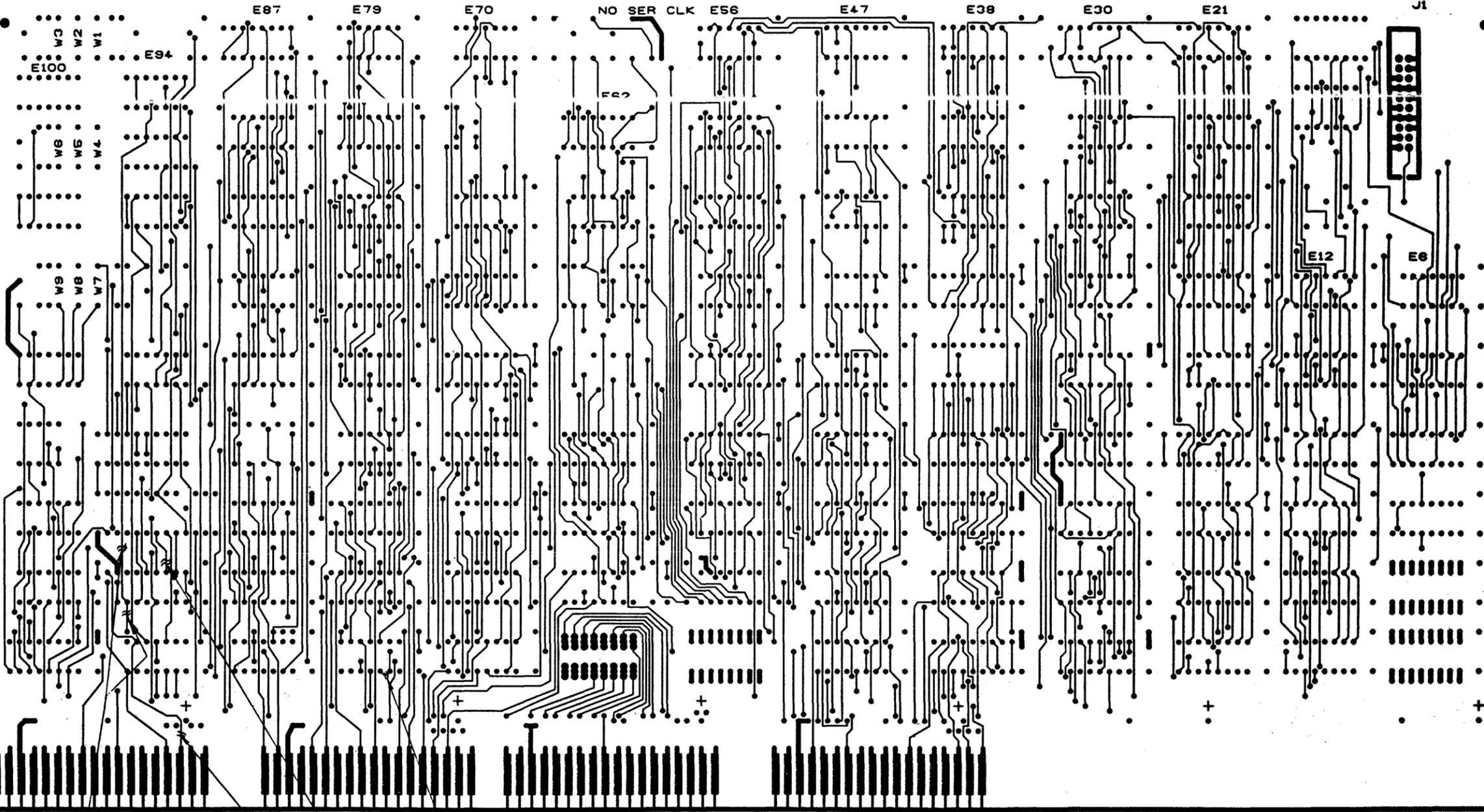
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M7982 60121740-P2 LAYER 1

CS*ABCDEFGHIJKLMNPRS

SIDE 1

digital
J1



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TITLE UNIBUS TO SERIAL BUS CONTROLLER		SIZE CODE D UA	NUMBER M7982-0-0	REV D
DATE 2/1	SHEET 2 OF 6	DIST		

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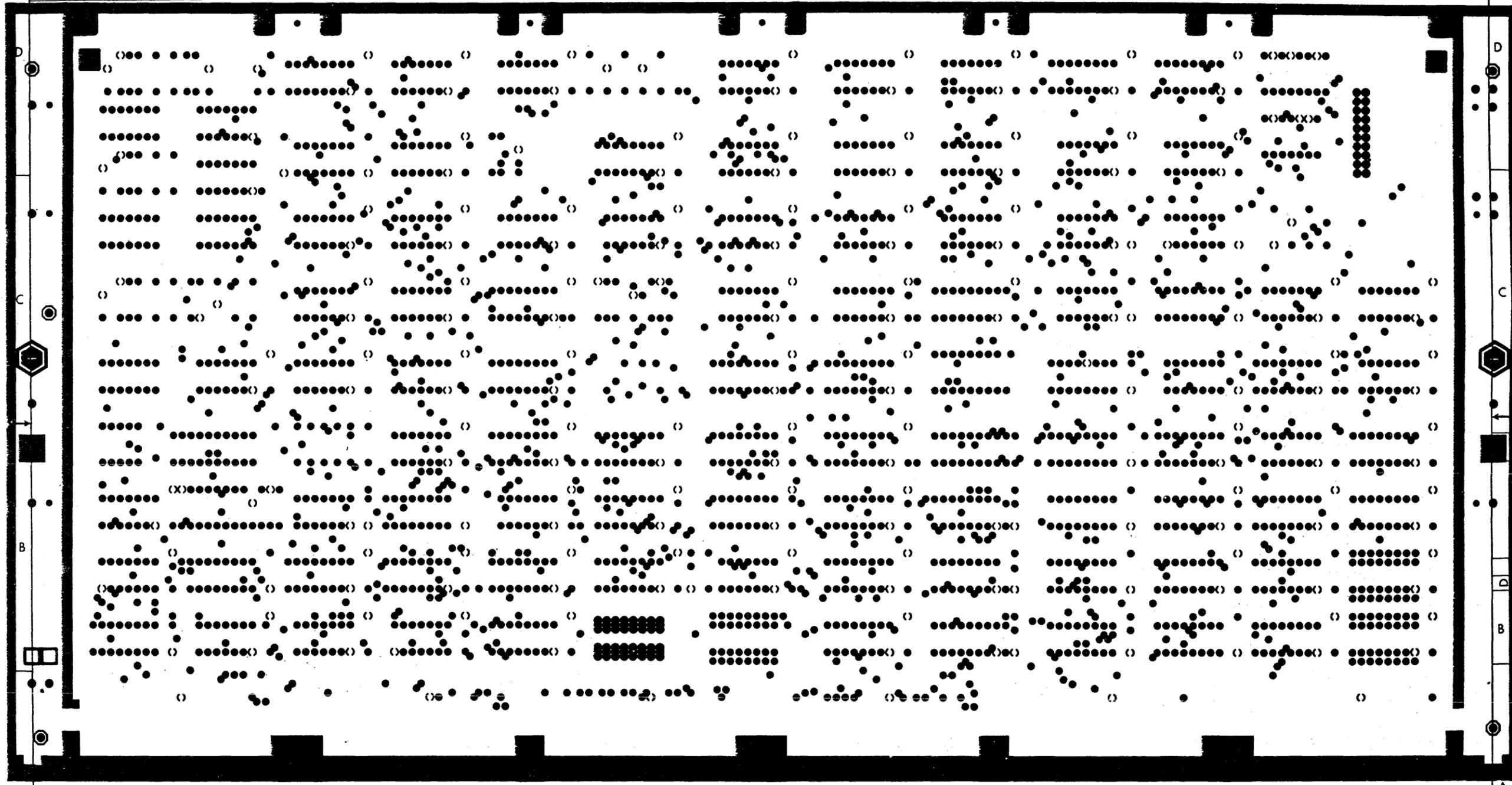
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D 0-0-2862W M 2

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M7982 5012174D-P LAYER 2

01978



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TITLE	UNIBUS TO SERIAL BUS CONTROLLER	SIZE CODE	D UA	NUMBER	M7982-0-0	REV	D
SCALE	2/1	SHEET	3 OF 6	DIST			

8 7 6 5 4 3 2 1

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D UA M7982-0-0 2

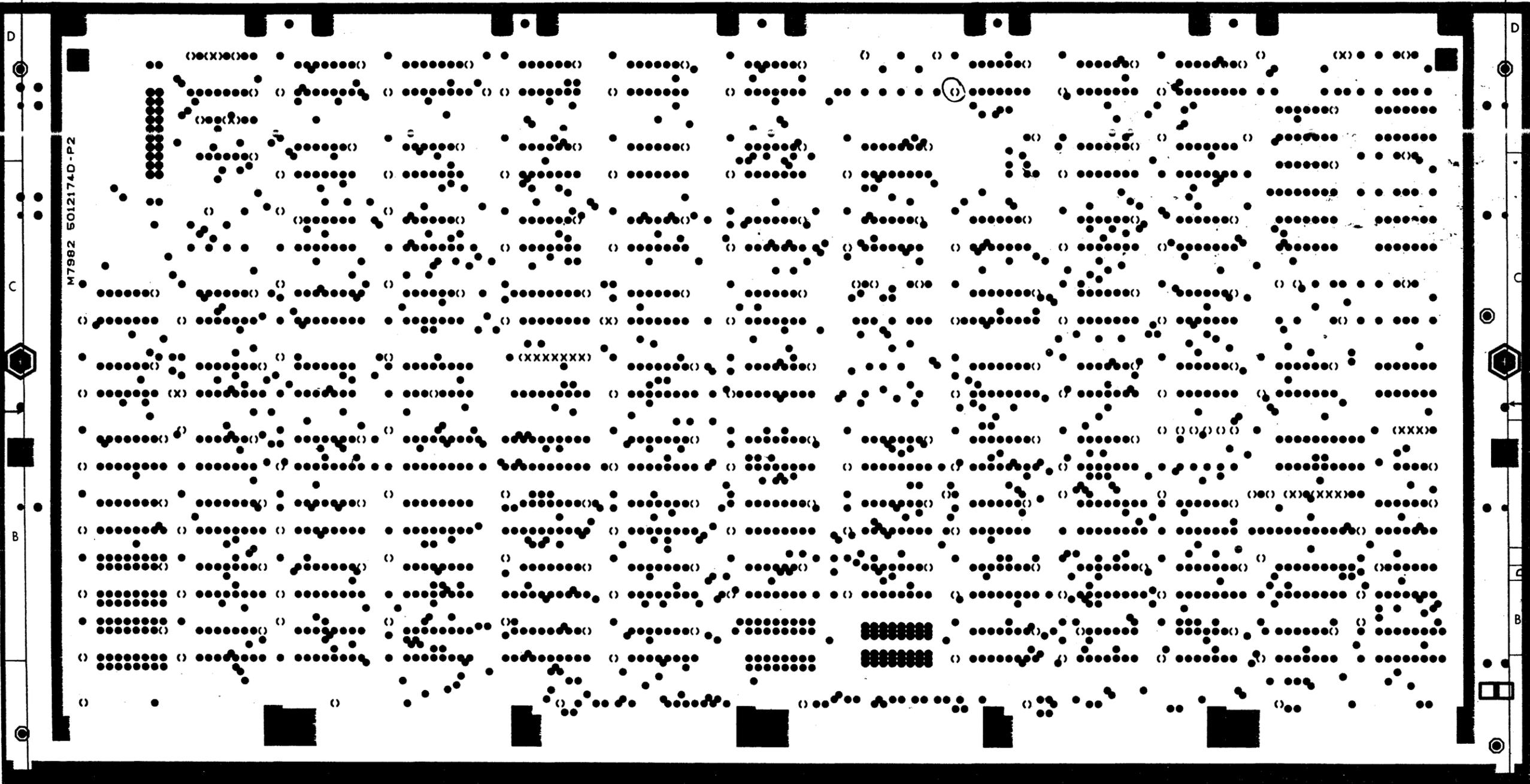
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E R34AJ

01978

M7982 5012174D-P2



UNIBUS TO SERIAL BUS CONTROLLER				D UA M7982-0-0		D	
2/1	4	6					

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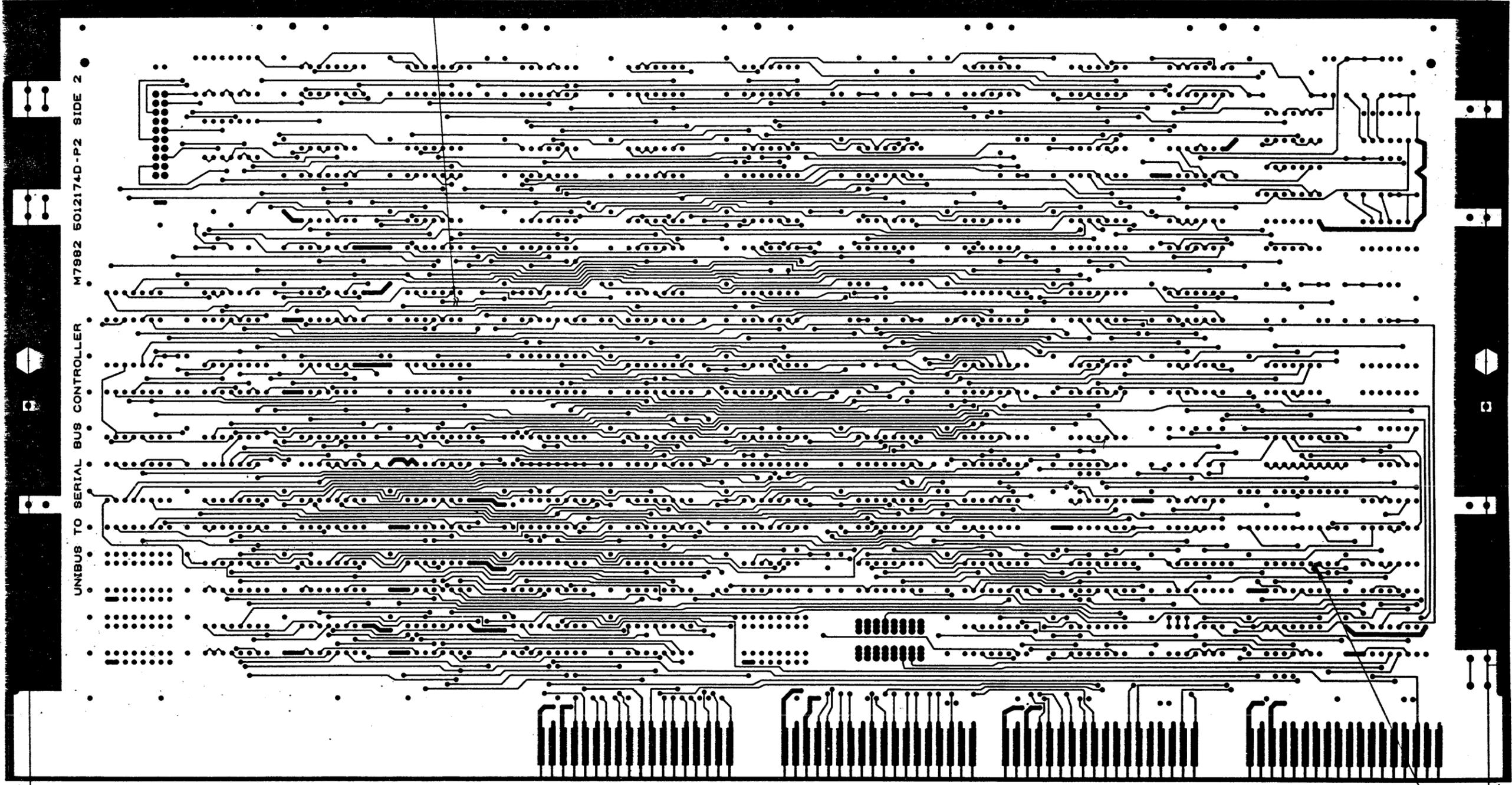
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FIRST RELEASE

ETCH CUTS, SIDE 1:

- Ø-1. CUT ETCH AWAY FROM E89-2 (BOTH SIDES).
- Ø-2. CUT ETCH AWAY FROM E89-11.

ETCH CUTS, SIDE 2:

- Ø-3. CUT ETCH AWAY FROM E89-14.

WIRE ADDS, SIDE 1:

- Ø-4. ADD WIRE FROM E48-1 TO E39-8.
- Ø-5. ADD WIRE FROM E48-8 TO E39-16.
- Ø-6. ADD WIRE FROM E48-3 TO E8Ø-8.
- Ø-7. ADD WIRE FROM E48-4 TO CA1.
- Ø-8. ADD WIRE FROM E48-5 TO E7Ø-8.
- Ø-9. ADD WIRE FROM E89-12 TO E8Ø-9.
- Ø-10. ADD WIRE FROM E8Ø-1Ø TO R39 (BOTTOM).
- Ø-11. ADD WIRE FROM PTH BELOW E89-2 TO E93-12.
- Ø-12. ADD WIRE FROM E89-2 TO E89-8.
- Ø-13. ADD WIRE FROM E89-14 TO E89-12.

ECO *2

ETCH CUTS, SIDE 1:

- 2-1 CUT ETCH BETWEEN E71-5 AND E71-6.
- 2-2 CUT ETCH AWAY FROM FCI.

ETCH CUTS, SIDE 2:

- 2-3 CUT ETCH FROM E27-12 TO GROUND. CUT AT FEEDTHROUGH NEAREST PIN 12. (ETCH FROM PIN 12 TO FEEDTHROUGH RUNS UNDER CHIP.)

WIRE ADDS SIDE 1

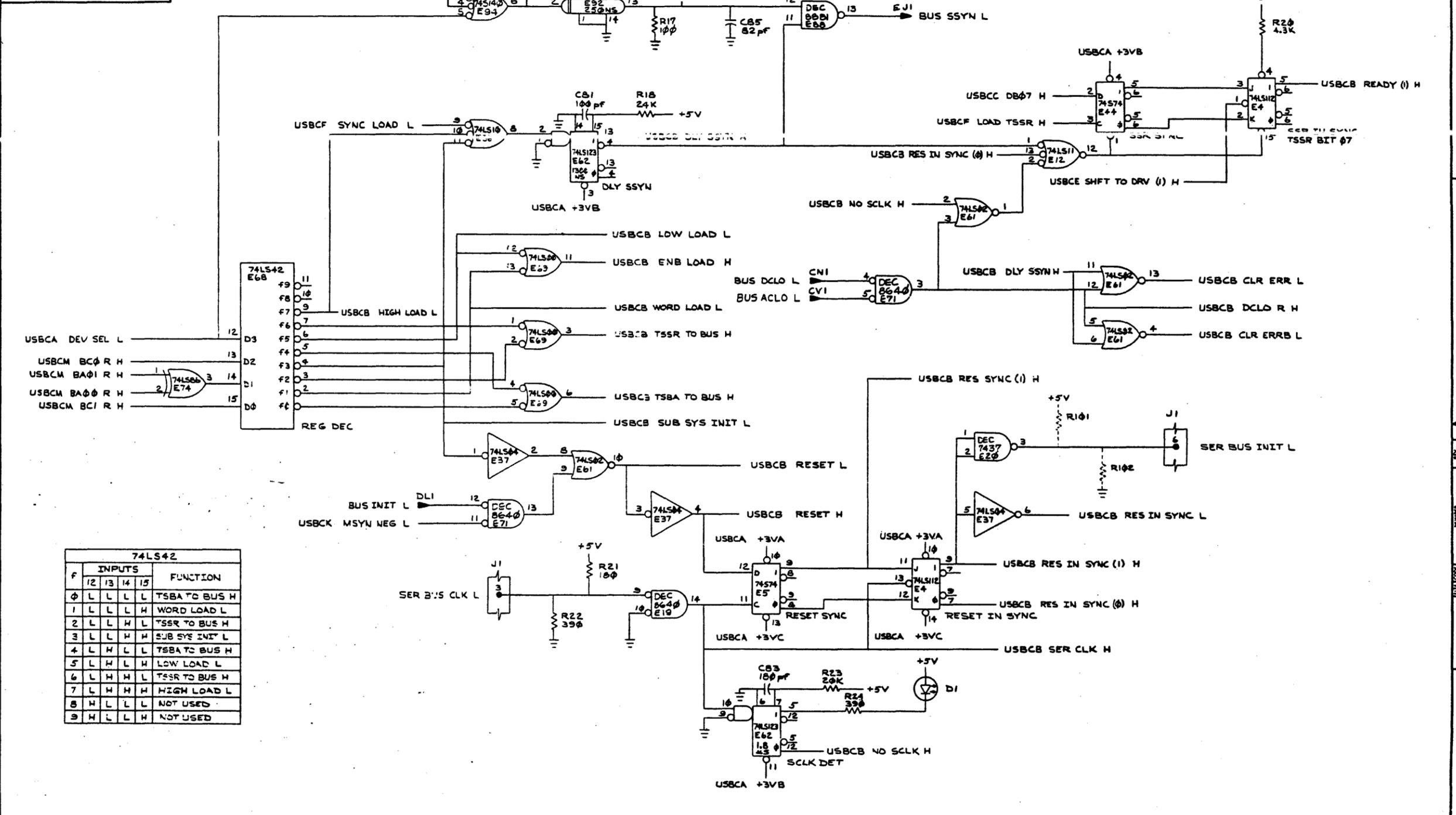
- 2-4 ADD WIRE FROM E71-5 TO CV1.
- 2-5 ADD WIRE FROM E27-12 TO E61-5.
- 2-6 ADD WIRE FROM E88-13 TO EJ1.

D
C
B
A

D
C
B
A

REVISIONS		
CHK	CHANGE NO.	REV.

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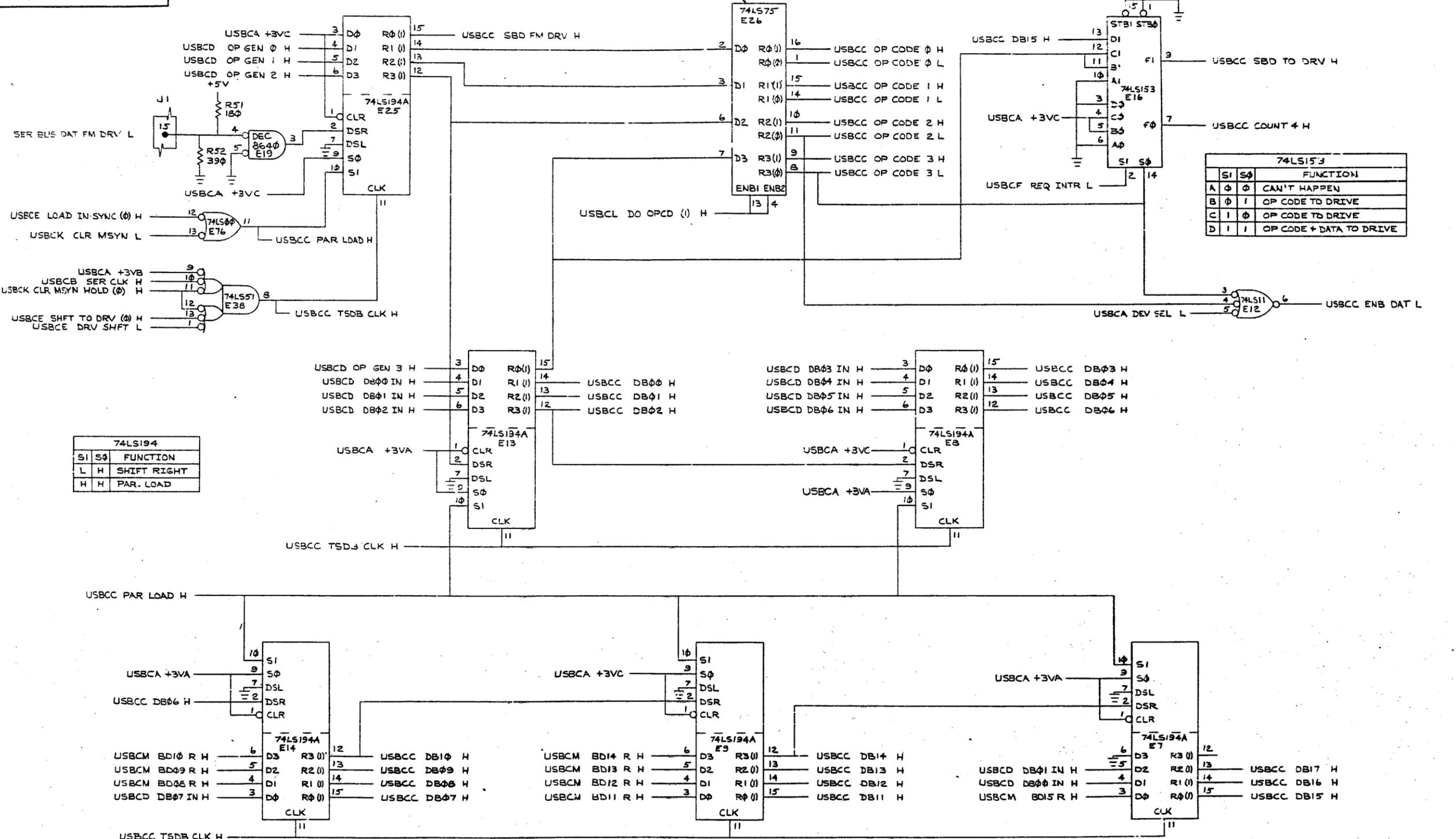


74LS42		
F	INPUTS	FUNCTION
φ	L L L L	TSBA TO BUS H
1	L L L H	WORD LOAD L
2	L L H L	TSSR TO BUS H
3	L L H H	SUB SYS INIT L
4	L H L L	TSBA TO BUS H
5	L H L H	LOW LOAD L
6	L H H L	TSSR TO BUS H
7	L H H H	HIGH LOAD L
8	H L L L	NOT USED
9	H L L H	NOT USED

REVISIONS		
CHK	CHANGE NO.	REV.

ADDRESS DECODE, INIT, SER CLK, RDY, SSYN SPC SLOT

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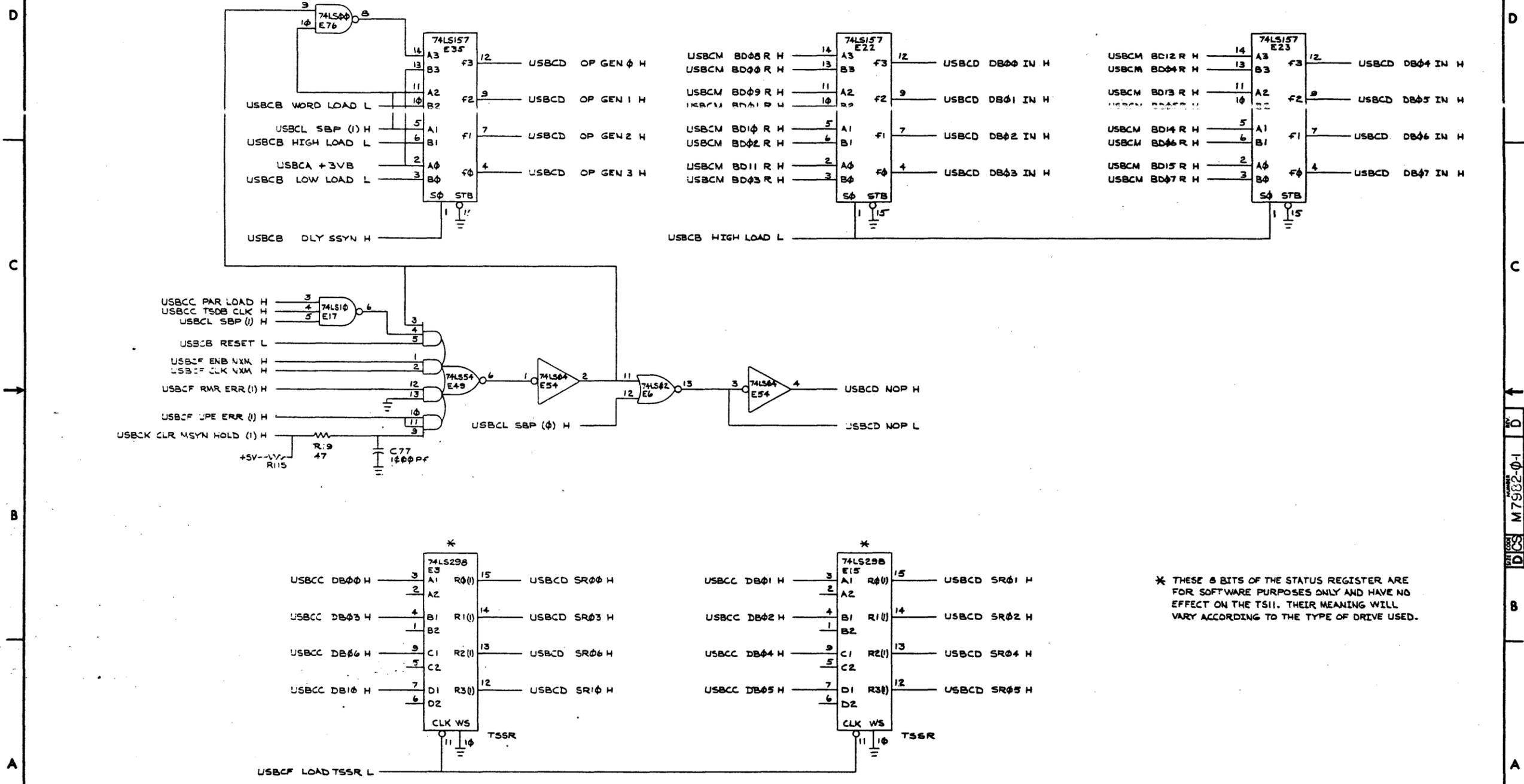


74LS194		
SI	Sφ	FUNCTION
L	H	SHIFT RIGHT
H	H	PAR. LOAD

74LS153		
SI	Sφ	FUNCTION
A	φ	CAN'T HAPPEN
B	φ	OP CODE TO DRIVE
C	1	OP CODE TO DRIVE
D	1	OP CODE + DATA TO DRIVE

REVISIONS		
CHK	CHANGE NO.	REV.

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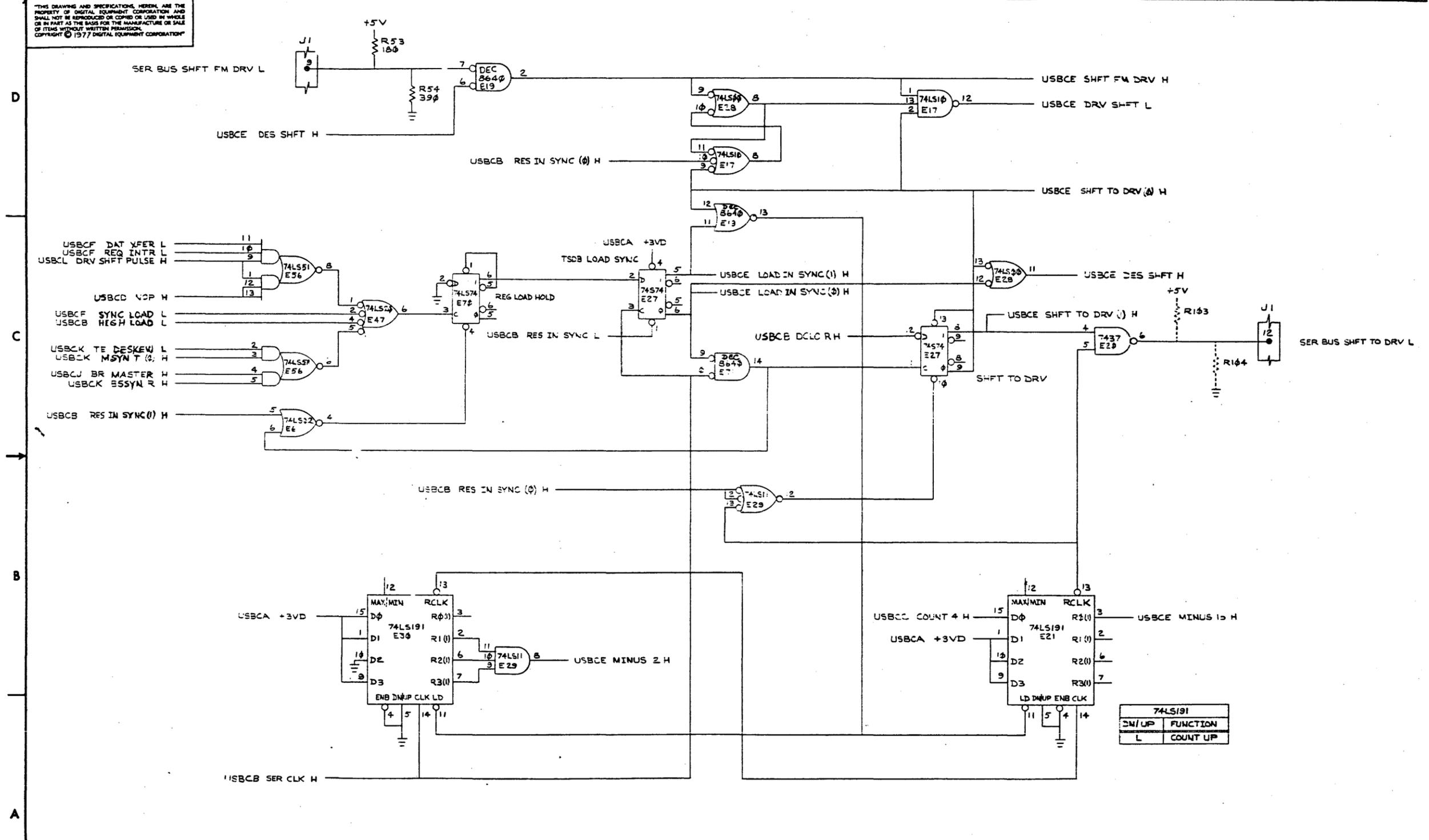
* THESE 6 BITS OF THE STATUS REGISTER ARE FOR SOFTWARE PURPOSES ONLY AND HAVE NO EFFECT ON THE TS11. THEIR MEANING WILL VARY ACCORDING TO THE TYPE OF DRIVE USED.

OP CODE GEN, TSDB MUX, TSSR <φφ:φ6,1φ> SPC SLOT

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	UNIBUS TO SERIAL BUS CONTROLLER (USBCD)	SIZE/DOC	DCS	NUMBER	M7982-0-1	REV.	D
SCALE		SHEET	4 OF 12	DIST.			

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REVISIONS		
CHK	CHANGE NO.	REV.

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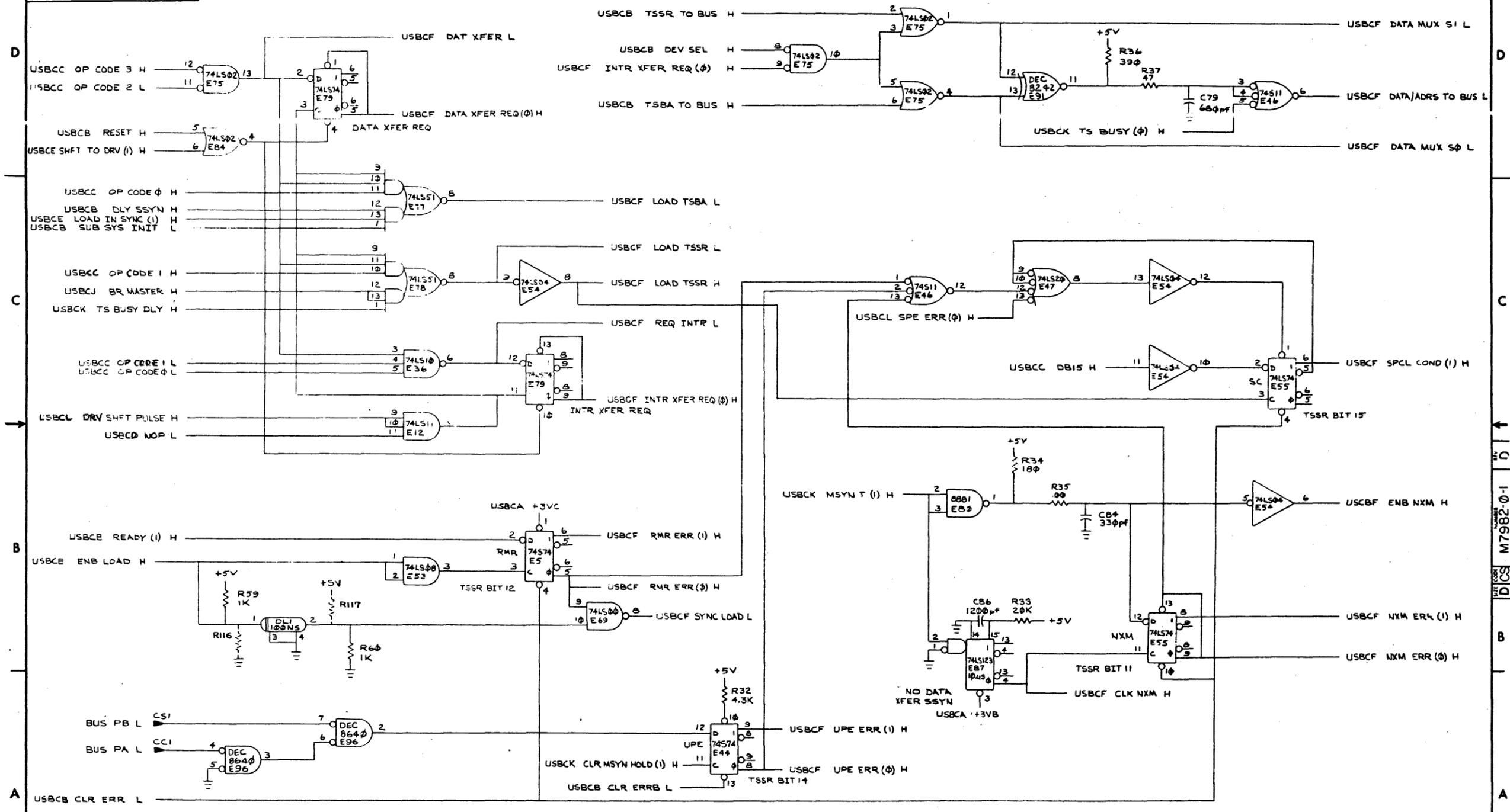
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1-0-2862W

2

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REVISIONS		
CHK	CHANGE NO.	REV.

UNIBUS TRANSFER REQUEST & ERRORS SPC SLOT

TITLE	UNIBUS TO SERIAL	SIZE CODE	NUMBER	REV.
BUS CONTROLLER (USBCF)	D CS	M7982-0-1	D	
SCALE	SHEET	6 OF 12	DIST.	

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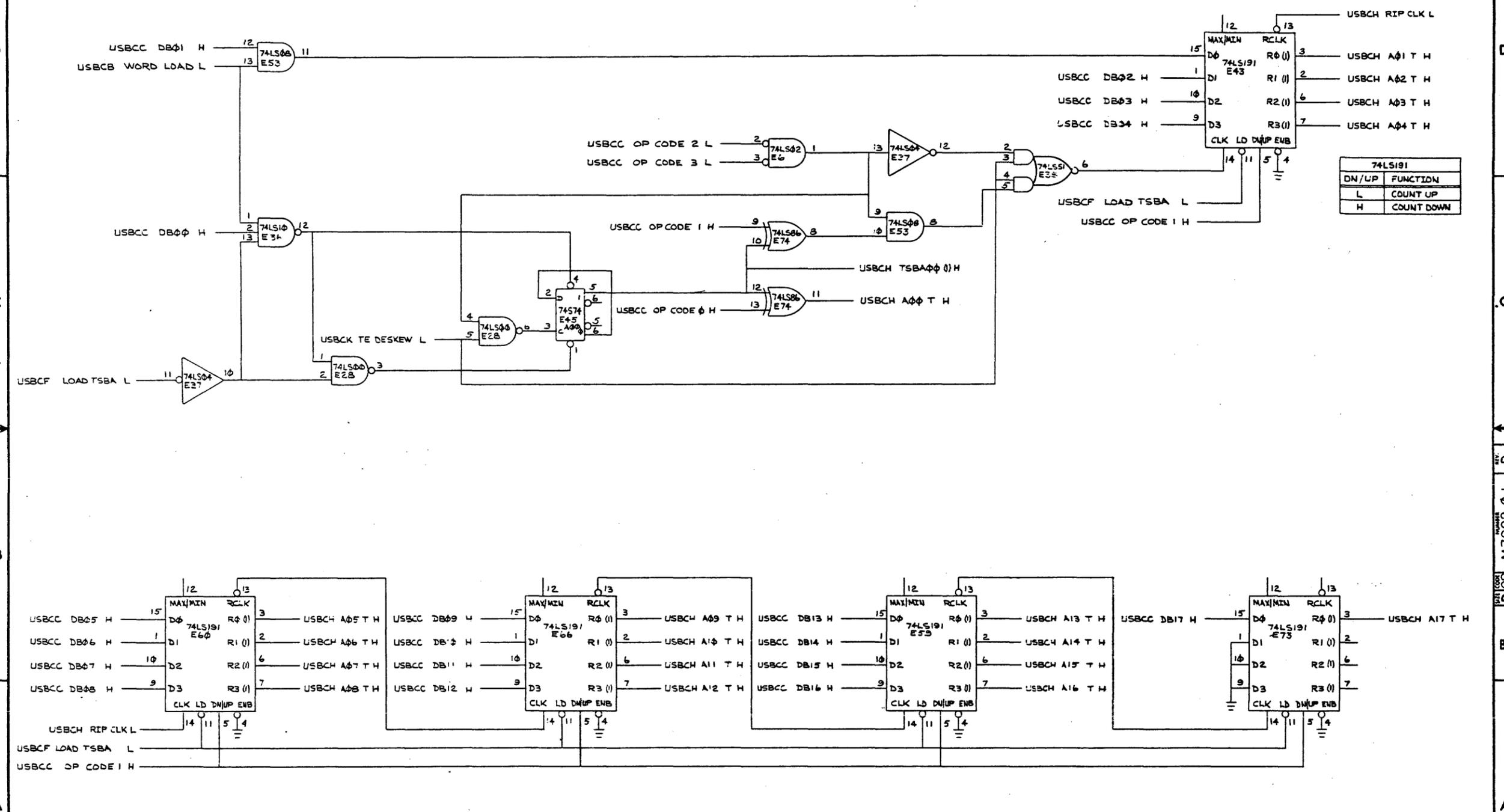
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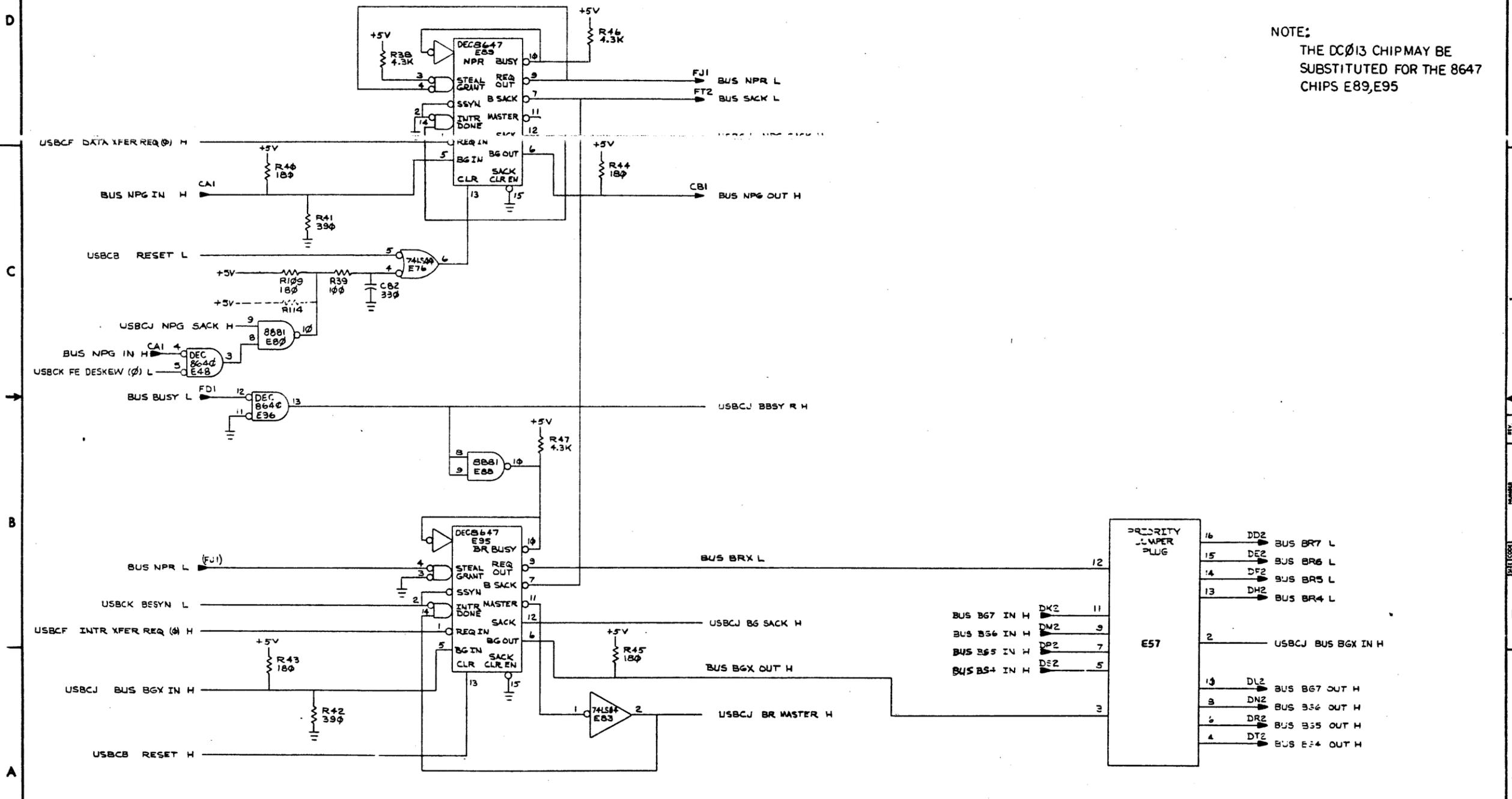


REVISIONS		
CHK	CHANGE NO.	REV.

ADDRESS REG. (TSBA)		SPC SLOT	
TITLE	UNITBUS TO SERIAL BUS CONTROLLER (USBCH)	SIZE CODE	NUMBER
		D CS	M7982-0-1
SCALE	SHEET 7 OF 12	DIST.	

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NOTE:
THE DC013 CHIP MAY BE
SUBSTITUTED FOR THE 8647
CHIPS E89,E95



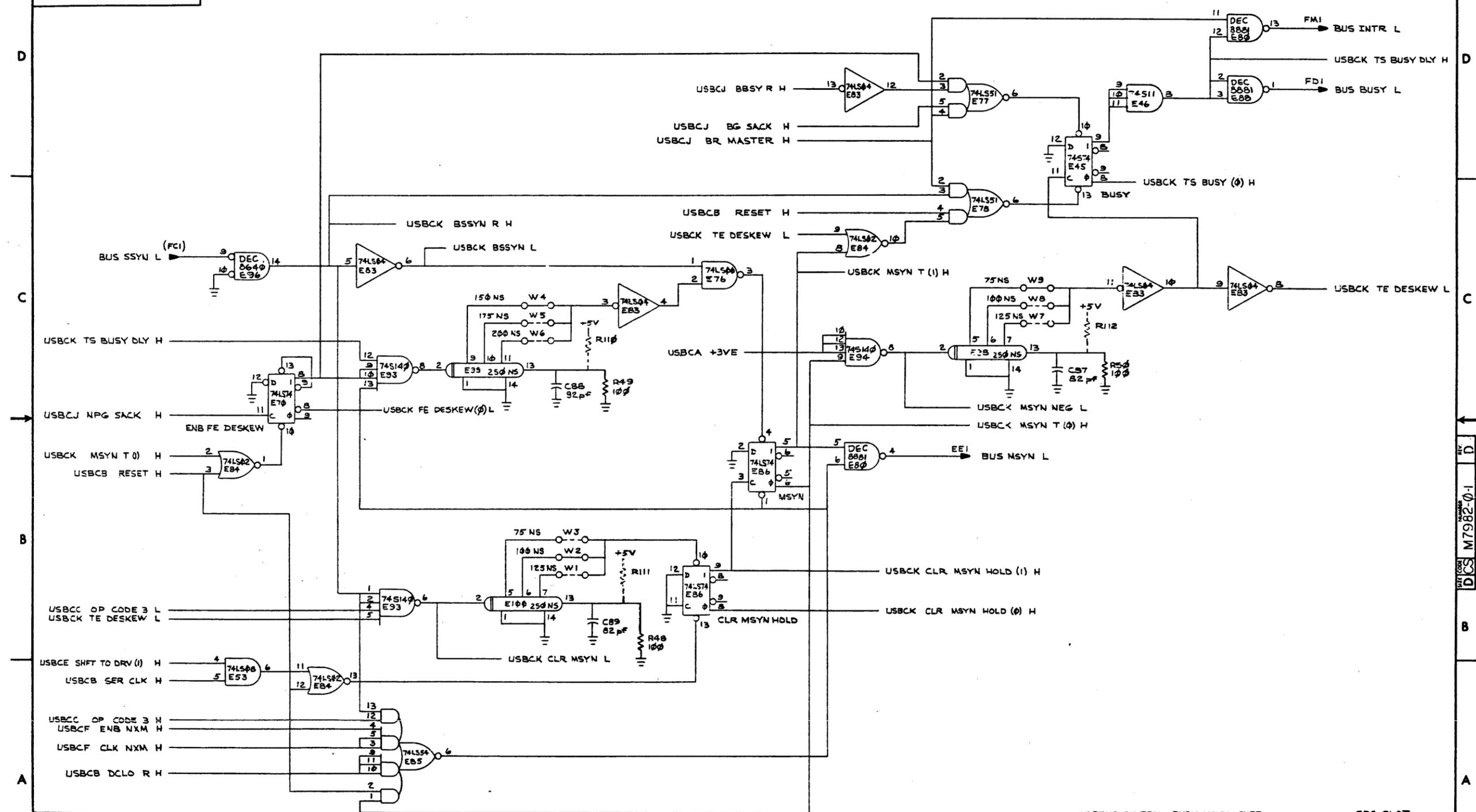
REVISIONS		
CHK	CHANGE NO.	REV.

UNIBUS CONTROL, SACK, GRANTS, REQUESTS SPC SLOT

TITLE	UNIBUS TO SERIAL BUS CONTROLLER (USBCJ)	SIZE CODE	DCS	NUMBER	M7982-0-1	REV.	D
SCALE	+	SHEET	8 OF 12	DIST.			

DCS M7982-0-1

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REVISIONS			UNIBUS CONTROL, BUSY, MSYN, INTR		SPC SLOT	
CHK	CHANGE NO.	REV.	TITLE	SIZE CODE	NUMBER	REV.
			UNIBUS TO SERIAL BUS CONTROLLER (USBCK)	D CS	M7982-0-1	D
			SCALE	SHEET	9 OF 12	DIST.

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
1	1	D-CS-M7982-0-1		CIRCUIT SCHEMATIC			REF
2	2	D-UA-M7982-0-0		UNIT ASSEMBLY			REF
3	3	B-DD-M7982-0-0		DWG DIRECTORY			REF
4	4	D-MD-5012174-0-0	5012174-00	M7982			1
5	5		1000006-00	10.0 MMF 100V 5%200PPM MICA			2
6	6		1000015-00	82.0 MMF 100V 5%200PPM MICA			4
7	7		1000016-00	100.0 MMF 100V 5%200PPM MICA			1
8	8		1000020-00	180.0 MMF 100V 5%200PPM MICA			2
9	9		1000023-00	330.0 MMF 100V 5%200PPM MICA			2
10	10		1000026-00	580.0 MMF 100V 5%200PPM MICA			1
11	11		1000042-00	1000.0 MMF 100V 5%200PPM MICA			1
12	12		1001610-00	.01 MFD 50V +80-20% Z5U CER			89
13	13		1002424-00	1200.0 MMF 100V 5%200PPM MICA			1
14	14		1005306-00	6.8MFD 35V 10% S.TANT			6
15	15		1110864-00	LED 2MCD310MA			1
16	16	USED FOR E57.	1209838-00	SKT IC 16PIN DIP GOLD PLATE			1
17	17		1209941-03	HEADER RT ANGLE LEFT L			1
18	18		1209941-04	HEADER RT ANGLE RIGHT			1
19	19		1209941-06	HEADER.100 20POS RT ANGLE			1
20	20		1210711-02	/REPLACED BY 12-16988-02			1
21	21		1211164-06	SW DIP 1P 1A 10POS			2
22	22		1300202-00	47.0 .25 W 5.0 % CC			2
23	23		1300229-00	100.0 .25 W 5.0 % CC			6
24	24		1300309-00	390.0 .25 W 5.0 % CC			7
25	25		1300365-00	1.0 K .25 W 5.0 % CC			7
26	26		1301322-00	180.0 .25 W 5.0 % CC			9
27	27		1301890-00	560.0 .25 W 5.0 % CC			1
28	28		1302389-00	4.30 K .25 W 5.0 % CC			24
29	29		1302391-00	20.0 K .25 W 5.0 % CC		CONT	2

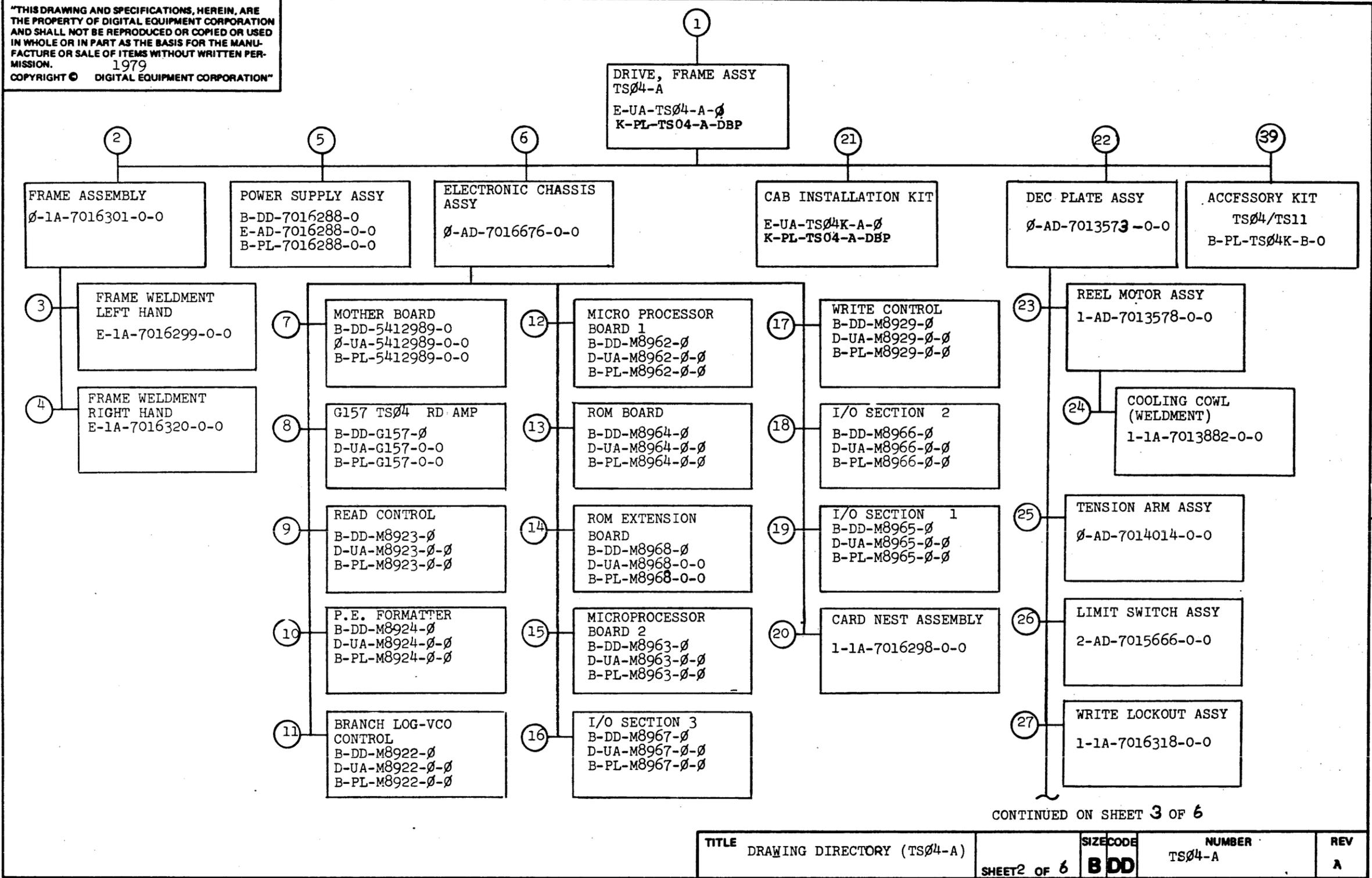
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ENG:	ECO NUMBER	REV	SECTION A OF A			PARTS LIST	
---	INIT	C	SECTION VARIATION INDEX	CHK'D: C.CAMPBELL	DATE: 06-DEC-77	UNIBUS SERIAL BUS CONTROLLER	
PK	M7982-MLO02	D	[A] 00				
			[B]	DES.ENG: R. BOUCHER	DATE: 17-JUL-78	DOCUMENT NUMBER	
			[C]				
			[D]	RESP.ENG.: R. BOUCHER	DATE: 17-JUL-78	SIZE! CODE! NUMBER REV	
			[E]				
			[F]	MFG.ENG.: P. BARTON	DATE: 17-JUL-78	K	PL M7982-0-DBP D
			[G]				
			[H]	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	FILE NAME:	EDIT #
			[I]	D-UA-M7982-0-0	TS11	Z10790.PLS	20
			[J]				
			[K]				
			[L]				
			[M]				
			[N]				

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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
30	30		1303178-00	620.0 .25 W 5.0 % CC	1		R58
31	31		1312930-00	5.10 K .25 W 5.0 % CC	1		R56
32	32		1609559-00	DELAY= 100NS OTAPS D10100	1		DL1
33	33		1611243-00	DELAY=25-250NS, 10TAPS RCL#L-183	4		E98, E99, E100, E92
34	34		1909705-00	DEC 8881 NAND GATE-QUAD 2IN 0	2		E80, E88
35	35		1909712-00	DEC 8242 COMPARATOR-4BIT N,	3		E97, E82, E91
36	36		1910091-00	DEC 7437 AND GATE-QUAD 2IN, BU	1		E20
37	37		1910537-00	74511 AND GATE-TRIPLE 3INP	1		E45
38	38		1910546-00	745140 NAND GATE-DUAL 4INPU	2		E93, E94
39	39		1910544-00	74574 FF-D DUAL EDGE TRIGG	4		E5, E27, E45, E44
40	40		1911469-00	DEC 8640 RECEIVER, BUS, QUAD, U	4		E19, E48, E71, E96
41	41		1911579-00	8641 TRANSCEIVER, BUS, QUA	9		E31, E32, E39, E40, E58, E63, E64, E72, E81
						CONT	E89, E95
42	42		1912083-00	/REPLACED BY 19-14438-00	2		E26
43	43		1912649-00	LS75 LATCH 4BIT, BISTABLE	1		E7-E9, E13, E14, E25
44	44		1912696-00	LS194A SHIFT REG., 4BIT BI-D	6		E28, E69, E76
45	45		1912799-00	LS00 NAND-GATE-QUAD 2IN, P	3		E6, E61, E75, E84
46	46		1912801-00	LS02 NOR-GATE-QUAD 2IN	4		E37, E54, E93
47	47		1912803-00	74LS04 INVERTER GATE, HEX	3		E53
48	48		1912805-00	LS08 AND GATE-QUAD 2IN, PO	1		E17, E36
49	49		1912807-00	LS10 NAND GATE-TRIPLE 3IN	2		E12, E29
50	50		1912808-00	LS11 AND GATE-TRIPLE 3IN	2		E47
51	51		1912810-00	LS20 NAND GATE-DUAL 4IN	1		E65
52	52		1912815-00	LS30 NAND GATE-SINGLE 8IN	1		E68
53	53		1912819-00	LS42 DECODER, BCD-DECIMAL	1		E38, E56, E77, E78
54	54		1912820-00	LS51 A-0-1 GATE 2-WIDE 2I	4		E85, E49
55	55		1912821-00	LS54 A-0-1 GATE, 3-2-2-3IN	2		E10, E55, E70, E79, E86
56	56		1912824-00	LS74 FF-D DUAL EDGE TRIGG	5		E74
57	57		1912829-00	LS86 X-OR GATE-QUAD 2IN	1		E4, E11, E18
58	58		1912834-00	LS112 FF-JK DUAL EDGE TRIG	3		E62, E97
59	59		1912837-00	LS123 ONE SHOT-DUAL, RETRIG	2		E16, E67, E52, E50, E51, E33, E42, E24, E41
60	60		1912845-00	LS153 MUX 1 OF 4 (DUAL)	9		E22, E23, E35
						CONT	E3, E15
61	61		1912847-00	LS157 MUX 1 OF 2 (QUAD)	3		E21, E30, E73, E59, E60, E43, E66
62	62		1912867-00	LS298 MUX 1 OF 4, 2IN W/S	2		E57
63	63		1913939-00	LS191 COUNTER, SYNCHR. UP/D	7		
64	64		5408778-00	PLUG PRIORITY	1		
65	65		9000024-01	EYELET, ROLL FLANGE .1210DX .192	12		
66	66		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	3		W2, W4, W9
67	67		9105740-55	WIRE(WRAP)30AWG UL1423	A/R		
68	68		1304837-00	24.0 K .25 W 5.0 % CC	1		R18

D	I	G	I	T	A	L	TITLE	UNIBUS SERIAL BUS CONTROLLER	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
										K	PL	M7982-0-DBP	D

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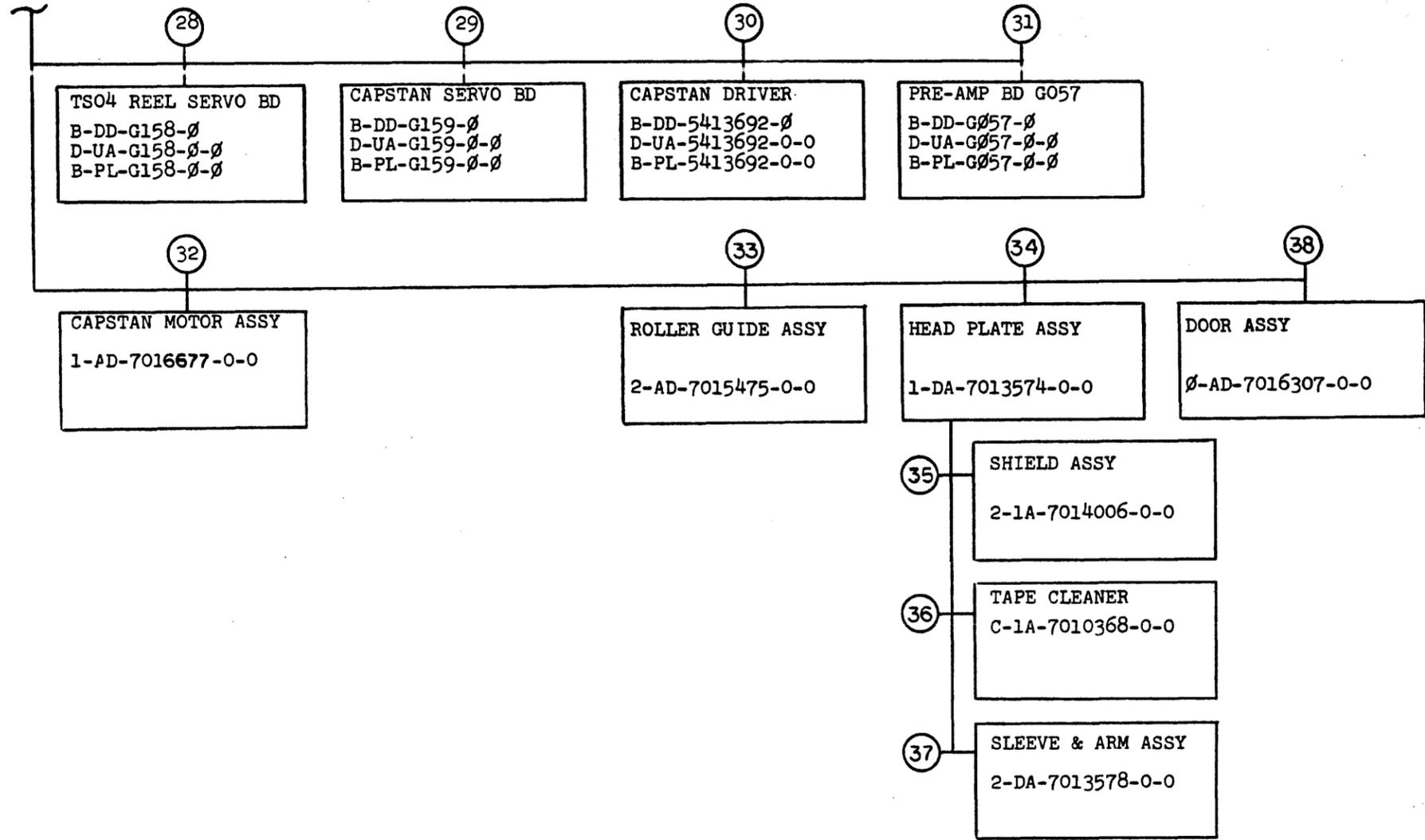


CONTINUED ON SHEET 3 OF 6

TITLE	DRAWING DIRECTORY (TS04-A)	SIZE	CODE	NUMBER	REV
		SHEET 2 OF 6	B DD	TS04-A	A

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FROM SHEET 2 OF 7



TITLE	SIZE CODE	NUMBER	REV
DRAWING DIRECTORY	B DD	TS04-A	A
SHEET 3 OF 6			

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE	FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	E-UA-TS04-A-0	DRIVE, FRAME ASSY (TS04-A)	E/M	9	B-DD-M8923-0	DRAWING DIRECTORY	--
	K-PL-TS04-A-DBP	PARTS LIST	E/M		D-UA-M8923-0-0	READ CONTROL	E/M
	B-TC-TS04-A-01	TABLE OF CONTENTS (TS04-A)	---		B-PL-M8923-0-0	READ CONTROL (PL)	E/M
	2-1A-7422626-0-0	STRAP GROUND	M				
	EKOTSII-UG	USER GUIDE	REF				
	EKOTSII-TM	TECH MANUAL	REF	10	B-DD-M8924-0	DRAWING DIRECTORY	--
	EKOTSII-SY	POCKET SERVICE GUIDE	REF		D-UA-M8924-0-0	P.E. FORMATTER	E/M
				B-PL-M8924-0-0	P.E. FORMATTER (PL)	E/M	
2	0-1A-7016301-0-0	FRAME ASSY	M	11	B-DD-M8922-0	DRAWING DIRECTORY	--
	1-MD-7422062-0-0	SPACER FRONT	M		D-UA-M8922-0-0	BRANCH LOG-VCO CONTROL	E/M
	1-MD-7422061-0-0	BRACE, CENTER	M		B-PL-M8922-0-0	BRANCH LOG-BCO CONTROL (PL)	E/M
	1-MD-7422060-0-0	SUPPORT, POWER SUPPLY	M				
	1-MD-7422064-0-0	SPACER, REAR	M	12	B-DD-M8962-0	DRAWING DIRECTORY	--
	E-1A-7422058-0-0	SPACER, MIDDLE	M		D-UA-M8962-0-0	MICROPROCESSOR BOARD 1	E/M
					B-PL-M8962-0-0	MICROPROCESSOR BOARD 1 (PL)	E/M
3	E-1A-7016299-0-0	FRAME WELDMENT LEFT HAND	M	13	B-DD-M8964-0	DRAWING DIRECTORY	--
	1-MD-7422067-0-0	SUPPORT L.H.	M		D-UA-M8964-0-0	ROM BOARD	E/M
	1-MD-7422084-0-0	FRAME SIDE L.H.	M		B-PL-M8964-0-0	ROM BOARD (PL)	E/M
4	E-1A-7016320-0-0	FRAME WELDMENT RIGHT HAND	M	14	B-DD-M8968-0	DRAWING DIRECTORY	--
	1-MD-7422066-0-0	SUPPORT R.H.	M		D-UA-M8968-0-0	ROM EXTENSION BOARD	E/M
	1-MD-7422084-0-0	FRAME SIDE R.H.	M		B-PL-M8968-0-0	ROM EXTENSION BOARD (PL)	E/M
5	B-DD-7016288-0	DRAWING DIRECTORY POWER SUPPLY ASSY	---	15	B-DD-M8963-0	DRAWING DIRECTORY	--
	E-AD-7016288-0-0	POWER SUPPLY ASSY	E/M		D-UA-M8963-0-0	MICROPROCESSOR BOARD 2	E/M
	B-PL-7016288-0-0	POWER SUPPLY ASSY (PL)	E/M		B-PL-M8963-0-0	MICROPROCESSOR BOARD 2 (PL)	E/M
6	0-1A-7016676-0-0	ELECTRONIC CHASSIS ASSY	E/M	16	B-DD-M8967-0	DRAWING DIRECTORY	--
	2-MD-7419785-0-0	ANGLE MOTHER BD	M		D-UA-M8967-0-0	I/O SECTION 3	E/M
	2-MD-7419784-0-0	INSULATOR CARD GUIDE	M		B-PL-M8967-0-0	I/O SECTION 3 (PL)	E/M
	2-MD-7418050-0-0	BAR RETAINER	M	17	B-DD-M8929-0	DRAWING DIRECTORY	--
	1-1A-7016285-0-0	CABLE, FAN LOGIC	E/M		D-UA-M8929-0-0	WRITE CONTROL	E/M
				B-PL-M8929-0-0	WRITE CONTROL (PL)	E/M	
7	B-DD-5412989-0	DRAWING DIRECTORY	---				
	0-UA-5412989-0-0	MOTHER BOARD	E/M				
	B-PL-5412989-0-0	MOTHER BOARD (PL)	E/M				
8	B-DD-G157-0	DRAWING DIRECTORY	---				
	0-UA-G157-0-0	G157 TS04 RD AMP	E/M				
	B-PL-G157-0-0	G157 TS04 RD AMP (PL)	E/M				

TYPE: E ELECTRICAL
M MECHANICAL
E/M ELECTRO/MECHANICAL

digital

TITLE
DRAWING DIRECTORY TS04-A

SHEET 4 OF 6

SIZE CODE
B DD

NUMBER
TS04-A

REV
A

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE	FIND NO.	DRAWING NO.	DESCRIPTION	TYPE								
18	B-DD-M8966-0	DRAWING DIRECTORY	---		A-PS-1214813-0-0	COVER HEAD RIGHT	M								
	D-UA-M8966-0-0	I/O SECTION 2	E/M		A-PS-1214812-0-0	COVER HEAD LEFT	M								
	B-PL-M8966-0-0	I/O SECTION 2 (PL)	E/M		A-PS-1215655-0-0	SWITCH INTERLOCK	M								
					A-PS-1214815-0-0	COVER HUB	M								
19	B-DD-M8965-0	DRAWING DIRECTORY	---		A/1-PS-1214816-0-0	RING CENTER	M								
	D-UA-M8965-0-0	I/O SECTION 1	E/M		A-PS-1214946-0-0	RING RUBBER	M								
	B-PL-M8965-0-0	I/O SECTION 1 (PL)	E/M		D-PS-1213119-0-0	HUB QUICK RELEASE	M								
					A-PS-1214843-0-0	LATCH	M								
20	1-1A-7016298-0-0	CARD NEST ASSY	M		A-PS-1215235-0-0	LID SUPPORT	M								
	1-1A-7422065-0-0	SUPPORT CARD GUIDE	M		2-MD-7422583-0-0	INSULATOR G057	M								
	1-1A-7422081-0-0	PANEL CHASSIS	M		A-PS-1214955-0-0	HINGE DEC PLATE	M								
	1-MD-7422063-0-0	BRACKET FAN	M		2-MD-7418032-0-0	INSULATOR G158	M								
					A-PS-1214609-0-0	LATCH GRIP	M								
21	E-UA-TS04K-A-0	CAB INSTALLATION KIT	M		1-IA-7014149-0-0	CABLE WRITE HEAD	E/M								
	K-PL-TS04-A-0BP	PARTS LIST	M		1-IA-7013582-0-0	CABLE READ HEAD	E/M								
					1-IA-7016284-0-0	CABLE POWER R/W	E/M								
					1-IA-7016259-0-0	HARNESS C/P	E/M								
					2-IA-7016528-0-0	CABLE INTERCONNECT	E/M								
					D-IA-7013577-0-0	HARNESS DRIVE	E/M								
					1-IA-7016258-0-0	HARNESS W/L/L	E/M								
					1-IA-7014186-0-0	CABLE ASSY/FOLDED	E/M								
					A-PS-1215031-0-0	LID SUPPORT D/S	M								
22	0-AD-7013573-0-0	DECK PLATE ASSY	E/M		1-IA-7013581-0-0	CABLE ASSY FOLDED	E/M								
	0-MD-7417657-0-0	DECK PLATE	M		1-IA-7014136-0-0	TRANSDUCER AND CONNECTOR ASSY	E/M								
	2-MD-7418013-0-0	SPACER MOTOR MTG	M		2-MD-7418507-0-0	BRACKET INTERLOCK	M								
	2-MD-7418016-0-0	PLATE CABLE	M												
	2-MD-7418008-0-0	BLOCK TRANSDUCER	M												
	2-MD-7418048-0-0	BLOCK BASE	M												
	2-MD-7418049-0-0	BLOCK SPRING ADJ	M												
	2-MD-7418012-0-0	PIN RAMP	M												
	1-MD-7418009-0-0	BRACKET GUSSET L.H.	M	23	1-AD-7013578-0-0	REEL MOTOR ASSY	E/M								
	1-IA-7418004-0-0	BRACKET GUSSET R.H.	M		A-PS-1214528-0-0	REEL MOTOR	E/M								
	1-IA-7418022-0-0	BLOCK HINGE	M		A/C-PS-1214606-0-0	BRAKE MOTOR	E/M								
	1-MD-7418014-0-0	HOLDER PRE-AMP	M		1-IA-7014362-0-0	HARNESS CAPACITOR FAN	E/M								
	1-MD-7418015-0-0	COVER PRE-AMP	M												
	2-MD-7417985-0-0	BLOCK CAPSTAN ADJ	M												
	2-MD-7418036-0-0	STOP RUBBER	M	24	1-1A-7013882-0-0	COOLING COWL WELDMENT	M								
	2-MD-7422071-0-0	SPACER	M		2-MD-7418506-0-0	SLEEVE COWL	M								
	2-MD-7421766-0-0	COVER G158	M		2-1A-7418505-0-0	FLANGE COWL	M								
	2-MD-7418010-0-0	CAPSTAN	M		2-MD-7418006-0-0	BRACKET COWLMTG	M								
	2-MD-7418021-0-0	CLAMP CAPSTAN	M												
	0-MD-7418878-0-0	HUB INNER	M												
	D-MD-7417902-0-0	FLANGE	M	25	0-AD-7014014-0-0	TENSION ARM ASSY	E/M								
	2-MD-7418507-0-0	BRACKET SWITCH	M		2-MD-7417982-0-0	SHAFT PIVOT	M								
	1-MD-7422508-0-0	BRACKET DOOR STAY	M		2-MD-7417989-0-0	ARM TENSION	M								
	D-DA-7418005-0-0	BEZEL	M		2-MD-7417983-0-0	HOUSING TENSION ARM	M								
	A-PS-1214839-0-0	CLIP TUBULAR	M		A/C-PS-1216060-0-0	ROLLER ASSY	M								
TYPE: E ELECTRICAL M MECHANICAL E/M ELECTRO/MECHANICAL						TITLE DRAWING DIRECTORY TS04		SHEET 5 OF 6		SIZE CODE B DD		NUMBER TS04-A		REV A	

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE	FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
25	A-PS-121416A-0-0	BEARING	M	34	2-MD-7418265-0-0	GUIDE, TAPE PIN	M
26	2-AD-7015666-0-0	LIMIT SWITCH ASSY	E/M		A/C-PS-1216060-0-0	ROLLER ASSY	M
	2-MD-7418035-0-0	BRACKET SWITCH	M		A-PS-1209877-0-0	WASHER CERAMIC	M
	2-MD-7418035-0-0	SWITCH REWORK	E/M		2-MD-7417900-0-0	WASHER CLAMP	M
					2-MD-7420621-0-0	WASHER	M
					2-IA-7016662-0-0	EOT/BOT ASSY	M
27	1-IA-7016318-0-0	WRITE LOCKOUT ASSY	E/M		B-MD-7422992-0-0	SHAFT BUFFER	M
	2-IA-7422069-0-0	BRACKET W.L.O.	M		B-MD-7422993-0-0	WASHER	M
	2-MD-7422070-0-0	ARM W.L.O.	M				
	A-PS-1214548-0-0	SOLENOID	E/M	35	2-IA-7014006-0-0	SHIELD ASSY	M
	2-IA-7016317-0-0	HARNESS WRITE LOCK	E/M		2-MD-7418667-0-0	SHIELD MAGNETIC FLUX	M
	2-MD-7422082-0-0	HOLDER ARM	M		2-MD-7418666-0-0	HOLDER	M
					2-MD-7422487-0-0	SHIELD COPPER	M
					A-PS-1614497-0-0	FIRRITE	M
28	B-DD-G158-Ø	DRAWING DIRECTORY	---	36	C-IA-7010368-0-0	TAPE CLEANER	M
	D-UA-G158-Ø-Ø	TSØ4 REEL SERVO BD	E/M		C-MD-7414126-0-0	SUPPORT SCRAPER	M
	B-PL-G158-Ø-Ø	TSØ4 REEL SERVO BD (PL)	E/M		C-MD-7414127-0-0	SCRAPER, TAPE	M
29	B-DD-G159-Ø	DRAWING DIRECTORY	---				
	D-UA-G159-Ø-Ø	CAPSTAN SERVO BD	E/M	37	2-DA-7013578-0-0	SLEEVE ARM ASSY	M
	B-PL-G159-Ø-Ø	CAPSTAN SERVO BD (PL)	E/M		2-MD-7420619-0-0	ARM DAMPER	M
					A-PS-1215236-0-0	SLEEVE BEARING	M
30	B-DD-5413692-0	DRAWING DIRECTORY	---	38	2-AD-7016307-0-0	DOOR ASSY	M
	D-UA-5413692-0-0	CAPSTAN DRIVER	E/M		Ø-MD-7418027-0-0	DOOR	M
	B-PL-5413692-0-0	CAPSTAN DRIVER (PL)	E/M		2-MD-7419698-0-0	WINDOW	M
					2-IA-7419911-0-0	BRACKET LATCH	M
31	B-DD-GØ57-Ø	DRAWING DIRECTORY	---		A-PS-1214956-0-0	HINGE	M
	D-UA-GØ57-Ø-Ø	PRE-AMP BOARD	E/M		A-PS-1214838-0-0	CLIP	M
	B-PL-GØ57-Ø-Ø	PRE-AMP BOARD (PL)	E/M				
32	1-AD-7016677-0-0	CAPSTAN MOTOR ASSY	E/M	39	B-PL-TSØ4K-B-0	ACCESSORY KIT TSØ4/TS11	---
	1-PS-1214529-0-0	MOTOR CAPSTAN	M				
	2-MD-7417984-0-0	PLATE CAPSTAN MOTOR	M				
33	2-AD-7015475-0-0	ROLLER GUIDE ASSY	M				
	A/C-PS-1216060-0-0	ROLLER ASSY	M				
	2-MD-7418011-0-0	CLAMP ROLLER GUIDE	M				
	1-MD-7418520-0-0	BASE ROLLER GUIDE	M				
34	1-DA-7013574-0-0	HEAD PLATE ASSY	E/M				
	D-MD-7418034-0-0	HEAD PLATE	M				
	A-SP-7412561-0-0	HEAD, MAG, 9TRK	---				
	B-MD-7418000-0-0	BLOCK AZIMUTH ADJ	M				
	2-MD-1218010-0-0	SPRING GUIDE	M				

TYPE: E ELECTRICAL
M MECHANICAL
E/M ELECTRO/MECHANICAL

digital

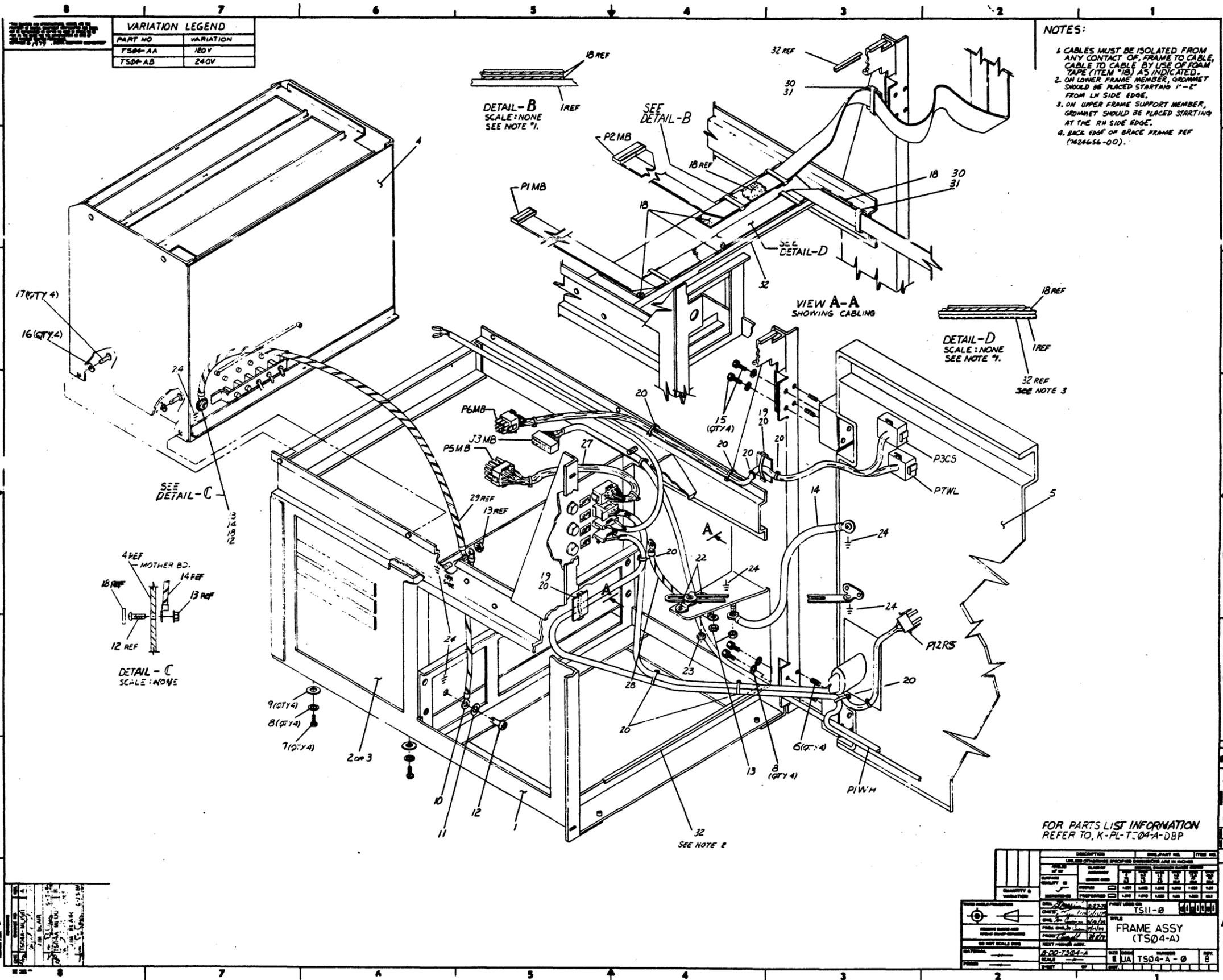
TITLE
DRAWING DIRECTORY

SHEET 6 OF 6

SIZE CODE
B DD

NUMBER
TSØ4-A

REV
A



VARIATION LEGEND	
PART NO	VARIATION
TS04-AA	180V
TS04-AB	240V

- NOTES:**
1. CABLES MUST BE ISOLATED FROM ANY CONTACT OF FRAME TO CABLE, CABLE TO CABLE BY USE OF FOAM TAPE (ITEM #18) AS INDICATED.
 2. ON LOWER FRAME MEMBER, GROMMET SHOULD BE PLACED STARTING 1"-2" FROM LH SIDE EDGE.
 3. ON UPPER FRAME SUPPORT MEMBER, GROMMET SHOULD BE PLACED STARTING AT THE RH SIDE EDGE.
 4. BACK EDGE OF BRACE FRAME REF (#24656-00).

VIEW A-A
SHOWING CABLING

DETAIL-B
SCALE: NONE
SEE NOTE 1.

DETAIL-D
SCALE: NONE
SEE NOTE 3.

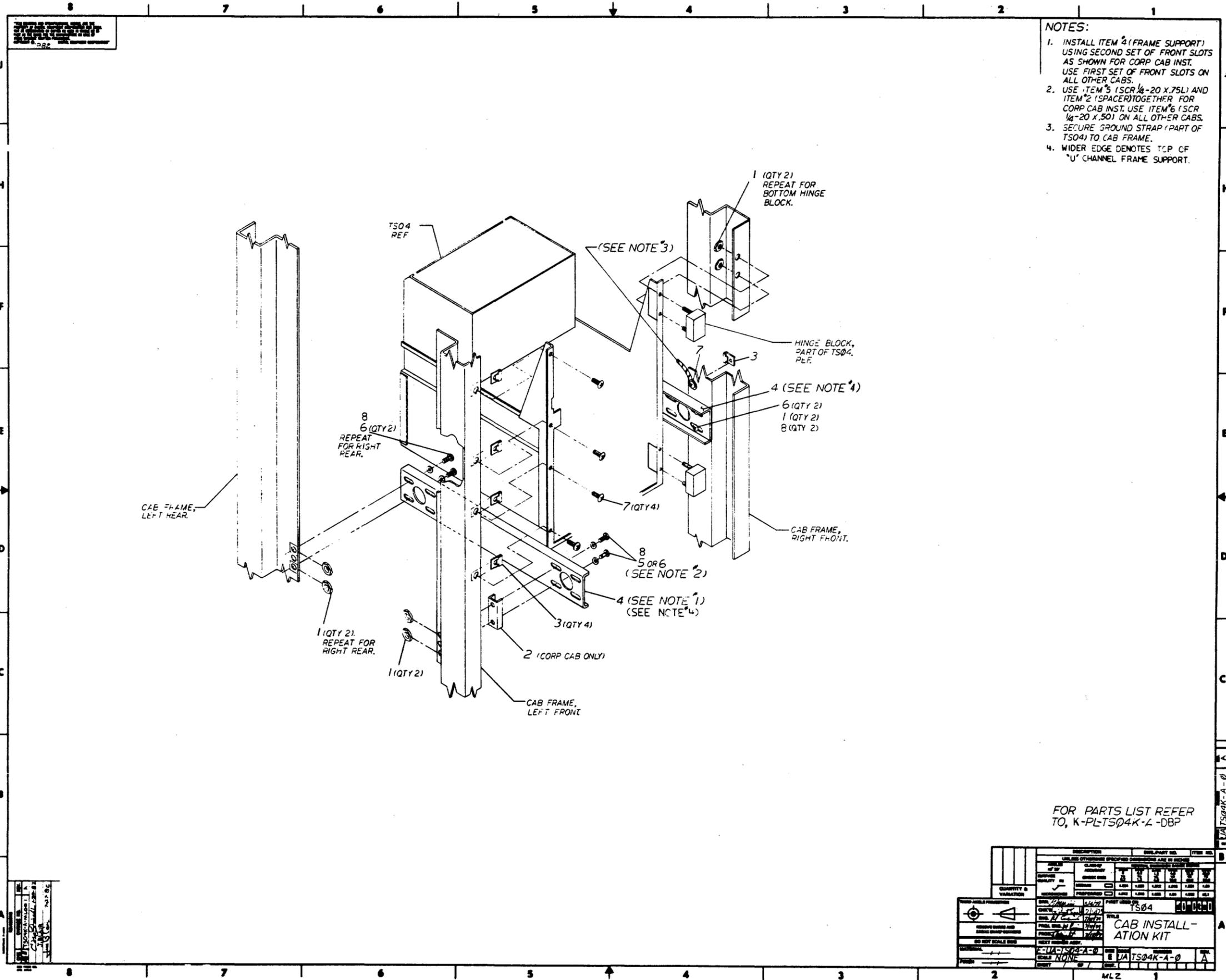
DETAIL-C
SCALE: NONE

FOR PARTS LIST INFORMATION
REFER TO, K-PL-TS04A-DBP

REVISIONS		DATE	BY	CHKD	APP'D
1	INITIAL DESIGN	10/23/70	W. J. ...	...	...
2	REVISED FOR ...	...	...	...	...
3	...	...	...	...	...
4	...	...	...	...	...
5	...	...	...	...	...
6	...	...	...	...	...
7	...	...	...	...	...
8	...	...	...	...	...
9	...	...	...	...	...
10	...	...	...	...	...

QUANTITY	1
DESCRIPTION	FRAME ASSY (TS04-A)
DATE	10/23/70
BY	W. J. ...
CHKD	...
APP'D	...
REV	1
REV	2
REV	3
REV	4
REV	5
REV	6
REV	7
REV	8
REV	9
REV	10

TS04-A-0
 1. INITIAL DESIGN
 2. REVISED FOR ...
 3. ...
 4. ...
 5. ...
 6. ...
 7. ...
 8. ...
 9. ...
 10. ...



- NOTES:**
- INSTALL ITEM 4 (FRAME SUPPORT) USING SECOND SET OF FRONT SLOTS AS SHOWN FOR CORP CAB INST. USE FIRST SET OF FRONT SLOTS ON ALL OTHER CABS.
 - USE ITEM 5 (SCR 1/4-20 X.75L) AND ITEM 2 (SPACER) TOGETHER FOR CORP CAB INST. USE ITEM 6 (SCR 1/4-20 X.50) ON ALL OTHER CABS.
 - SECURE GROUND STRAP (PART OF TS04) TO CAB FRAME.
 - WIDER EDGE DENOTES TOP OF "U" CHANNEL FRAME SUPPORT.

FOR PARTS LIST REFER TO, K-PL-TS04K-A-DBP

QUANTITY & VARIATION	DESCRIPTION	UNIT PART NO.	ITEM NO.
1	TS04	TS04	1
1	CAB INSTALLATION KIT		1
1	K-DA-TS04-A-0		1
1	DA-TS04K-A-0		1

TS04
K-DA-TS04-A-0
DA-TS04K-A-0

DIGITAL EQUIPMENT CORPORATION PARTS LIST				QUANTITY / VARIATION										NOTES:				
MADE BY G. Marini DATE 2/27/79		CHECKED Robert Tremblay DATE 7/18/79		SECTION														
ENG M. Cucina DATE 7/19/79		PROD T. Wright DATE 7/18/79		ISSUED SECTION														
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	TS11K-AB (240V)														REF DESIGNATION
1	D-AD-7016287-0-0	7016287-01	A.C. INPUT ASSY (240V)	1														
2	D-1A-1700083-0	17-00083-17	POWER CORD ASSY (240V)	1														
3		9107253-0	TUBING SHRINK	A/R														
4	A-PS-3613210-0-0	3613210-00	LABEL (IDENTIFICATION)	1														
5		9905136-00	BOX	1														
6		9906200-01	PACKING BUBBLE PACK	A/R														
7		9009357-00	2" MASKING TAPE	A/R														

E.C.O. NO.
ML001
ML002

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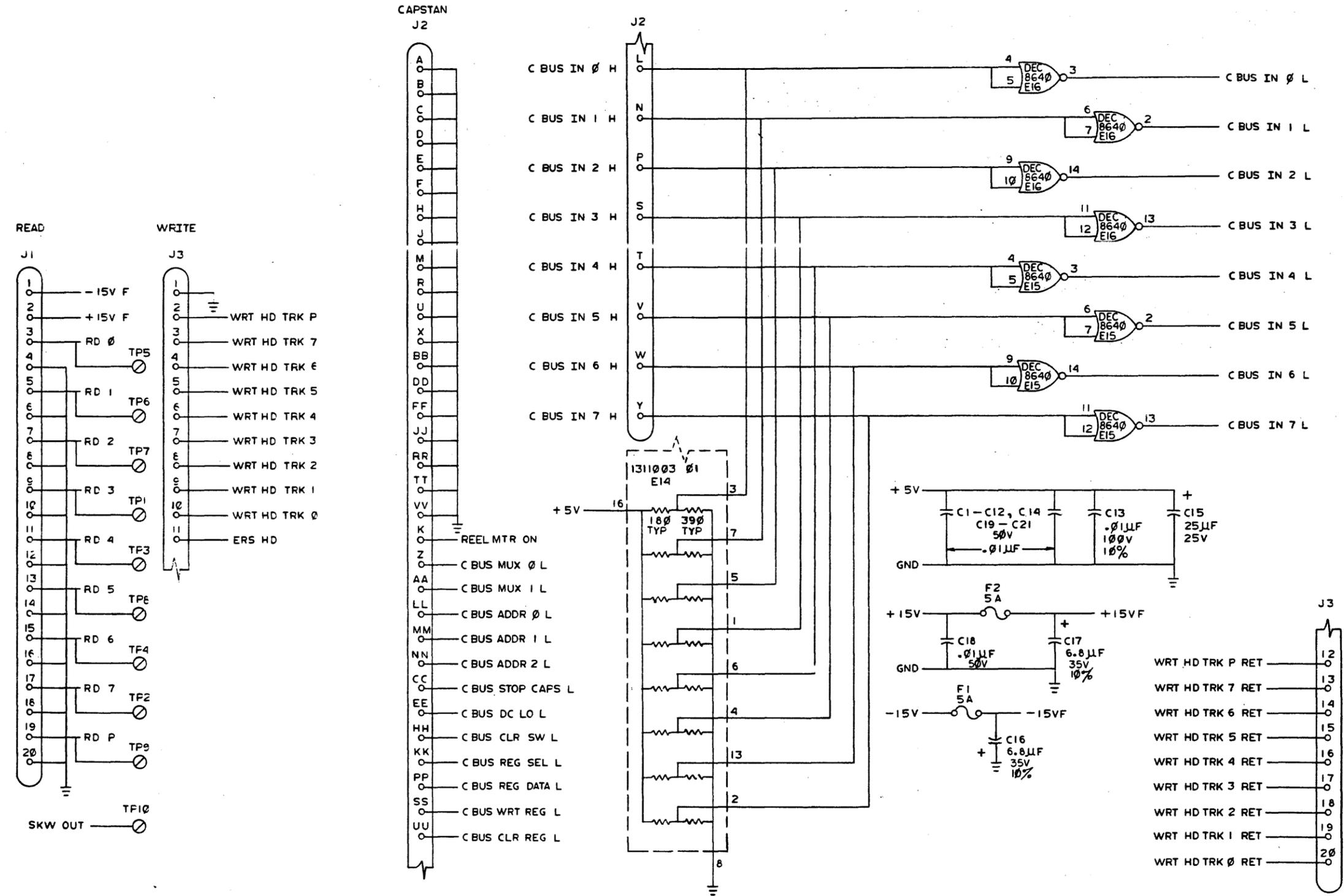
TITLE
120V to 240V TS11 CONVERSION KIT

ASSY NO.
NONE
SHEET 1 OF 1

SIZE B
CODE PL
NUMBER TS11K-AB-0
INSERTION PARTS LIST DATA BASE REV

REV.
B

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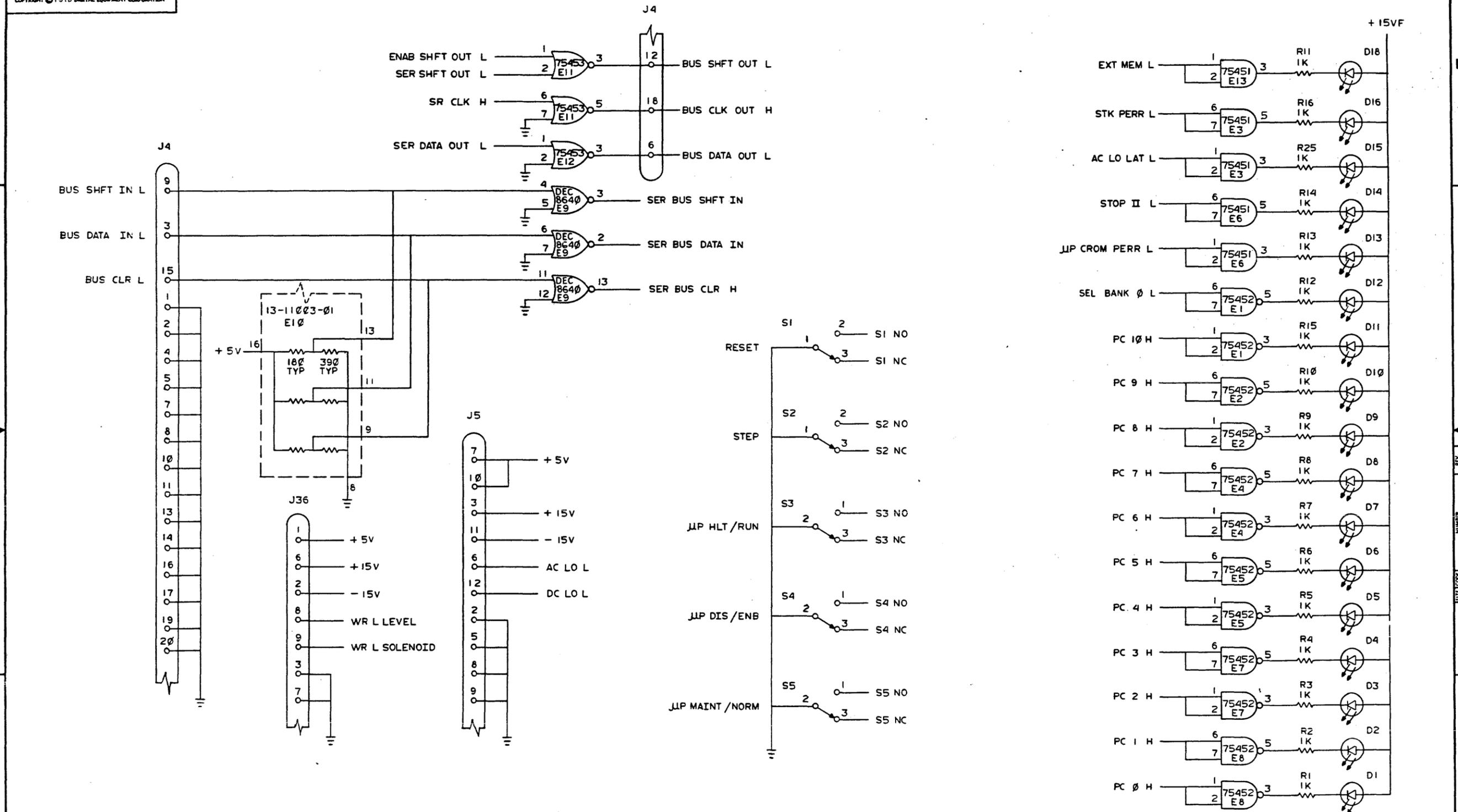


REV.	REV.
5412989-ML001 E	5412989-ML002 F
J. ROLLINS	R. NUTE
4/17/77	4/17/77

DRN. J. D. Dangel 11/7/78	FIRST USED ON	TS11
CHK'D P. Bosman 2 Jan 77	TITLE	MOTHER BOARD
ENG. J. Rollins 1 Feb 77		TS04
PROJ. ENG. J. D. Dangel 1 Feb 77		
PROD. P. Bosman 1 Feb 77		
NEXT HIGHER ASSY.		
B-DD-5412989-0	SIZE	CODE
SCALE NONE	D	CS 5412989-0-1
SHEET 1 OF 8	DIST.	

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REV. F
D CS 5412989-0-1

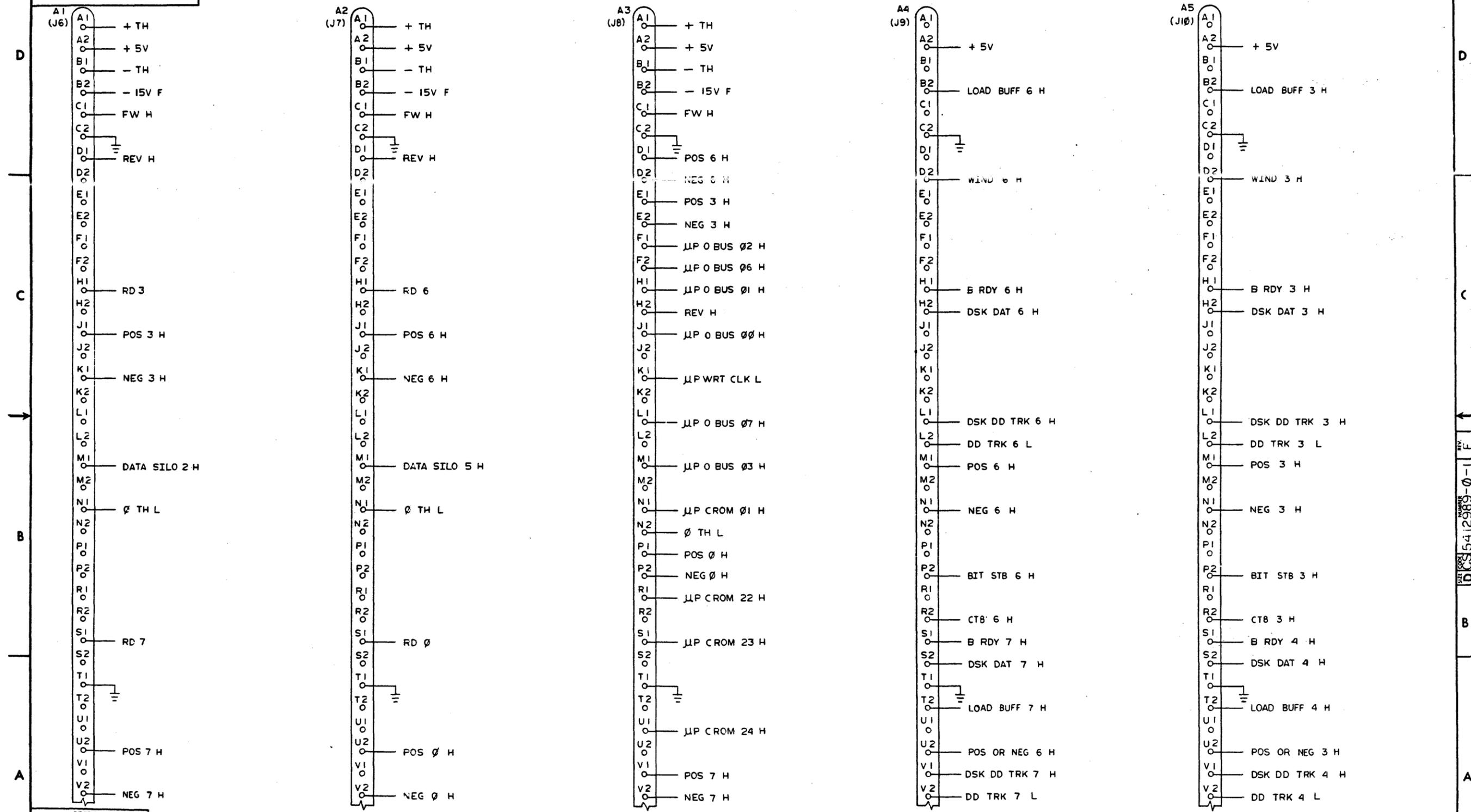


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE MOTHER BOARD
TS04
SCALE NONE SHEET 2 OF 8 DIST. 1

REV. F
D CS 5412989-0-1

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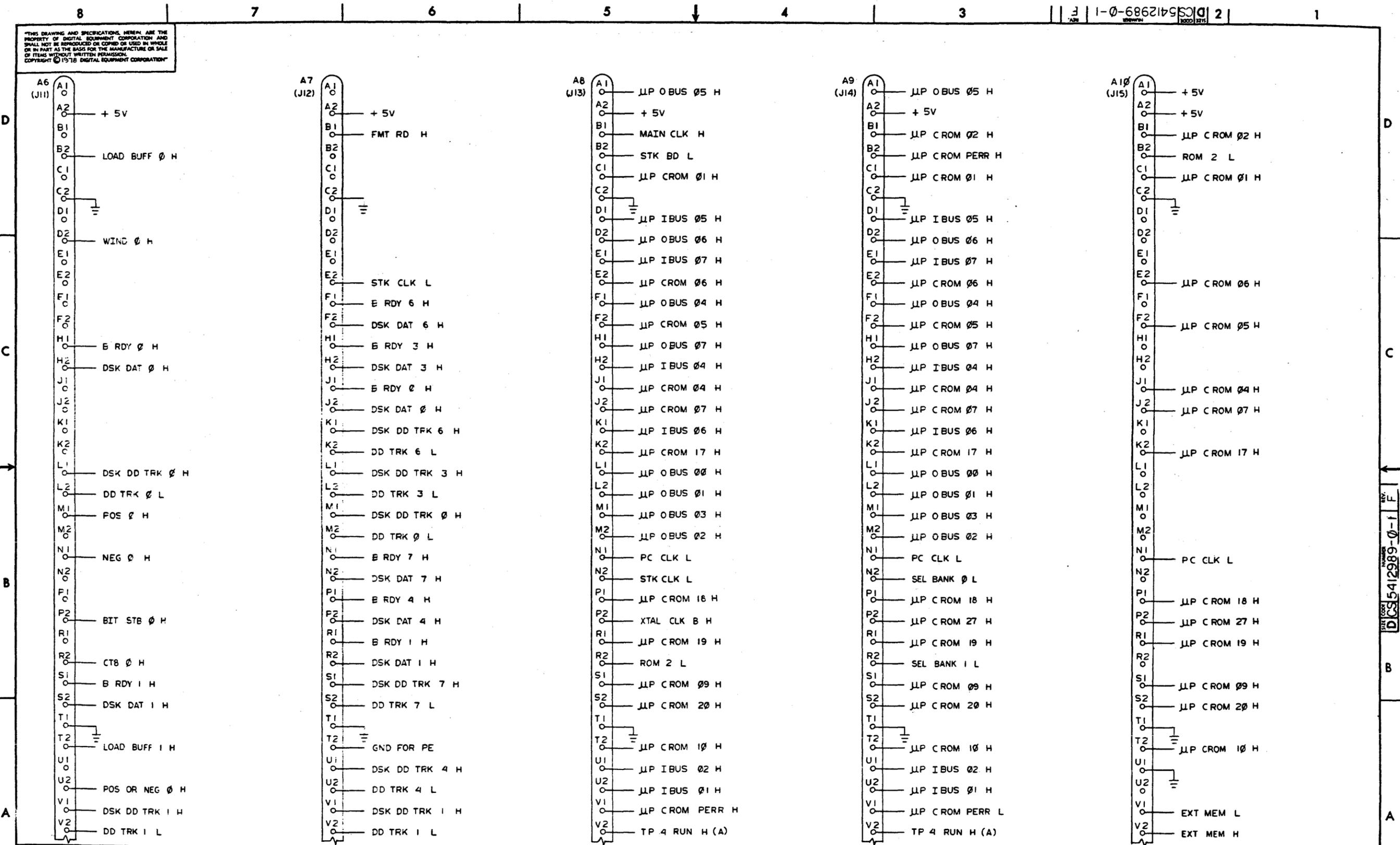


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	MOTHER BOARD TSØ4	SIZE CODE	D CS	NUMBER	5412989-0-1	REV.	F
SCALE	NONE	SHEET	3	OF	8	DIST.	

DCS 5412989-0-1 F

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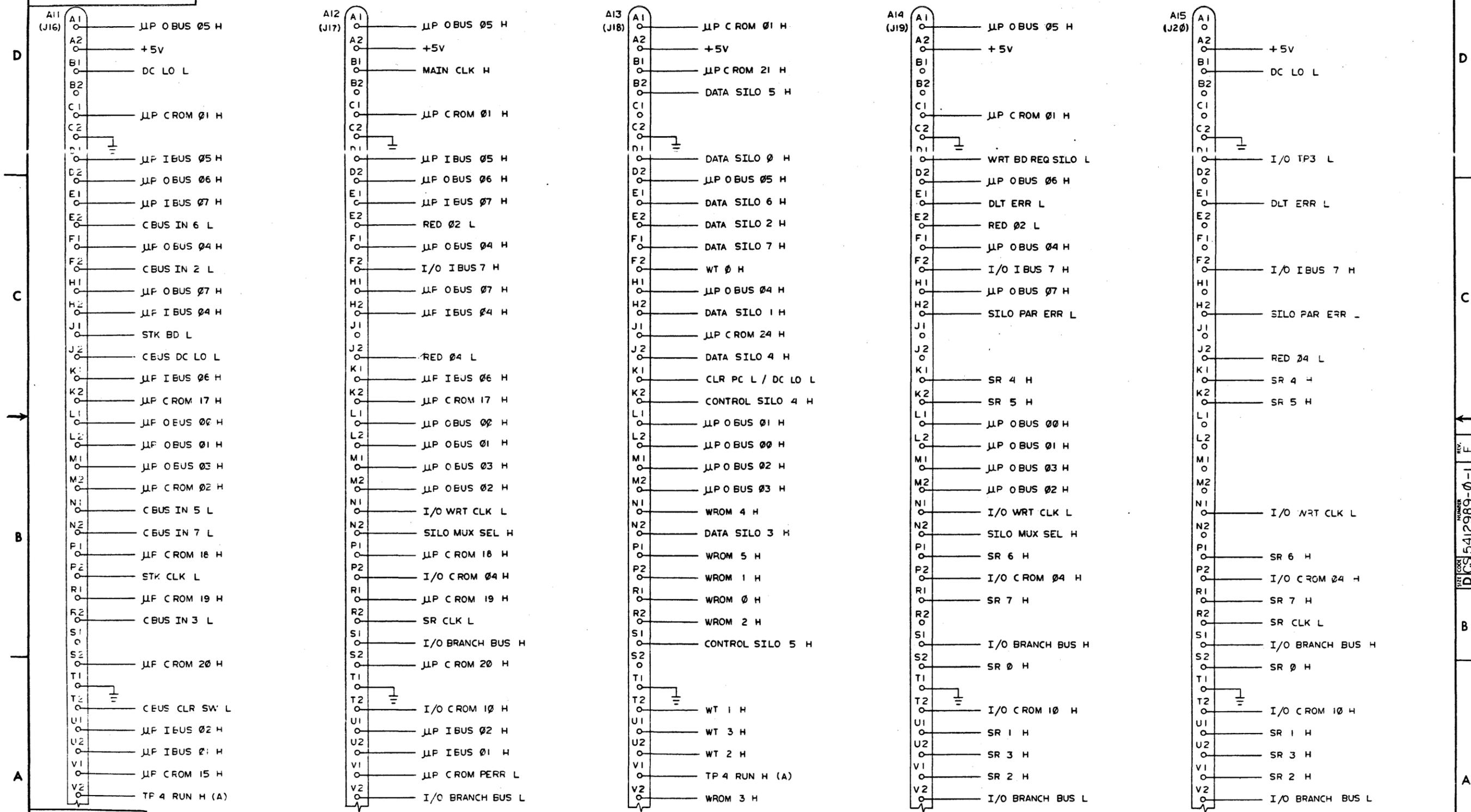


REVISIONS		
CHK	CHANGE NO.	REV.

8	7	6	5	4	3	2	1	
TITLE MOTHER BOARD TS04							SIZE CODE DCS 5412989-0-1	NUMBER F
SCALE NONE							SHEET 4 OF 8	DIST.

REV. 1 F
DCS 5412989-0-1

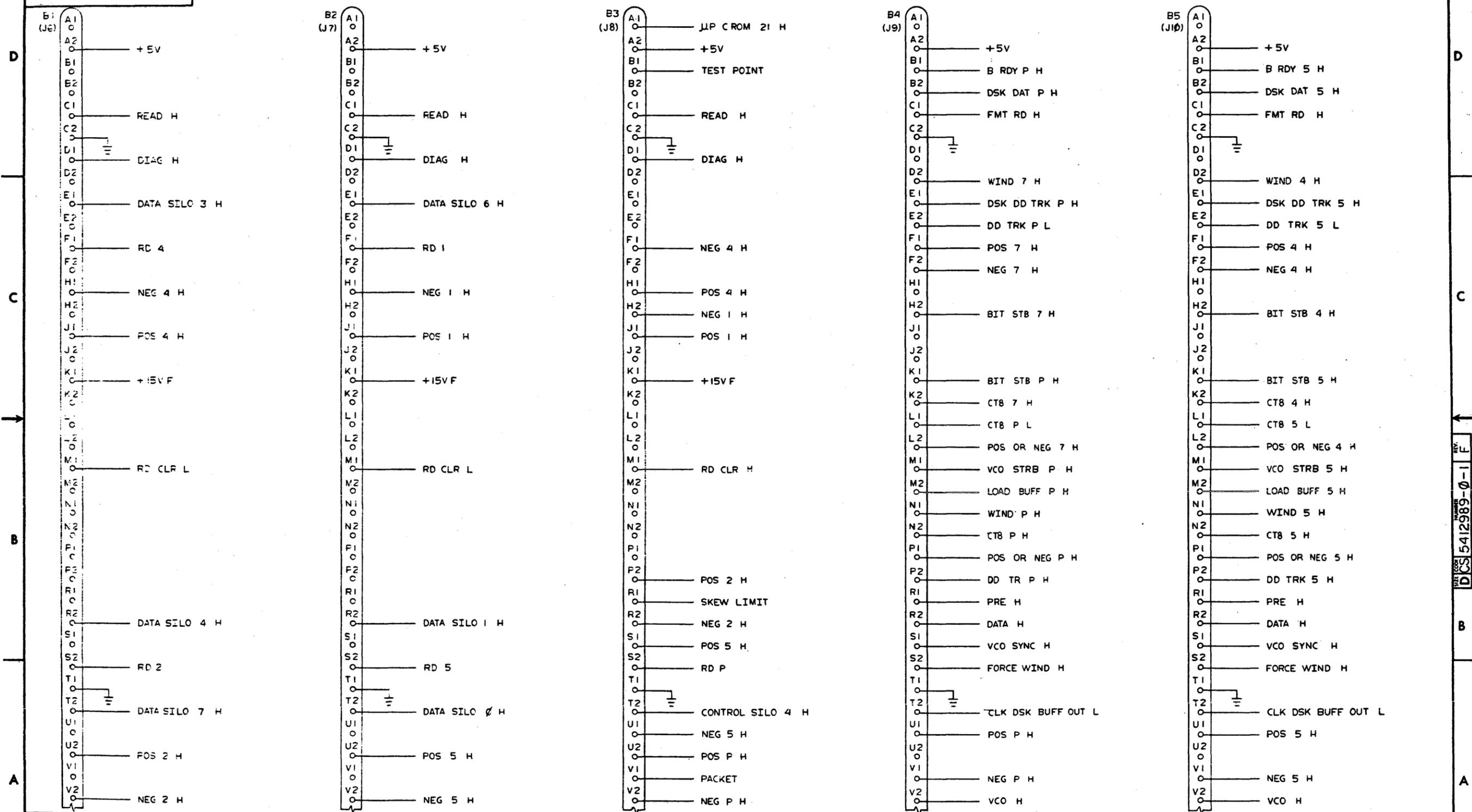
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REVISIONS		
CHK	CHANGE NO.	REV.

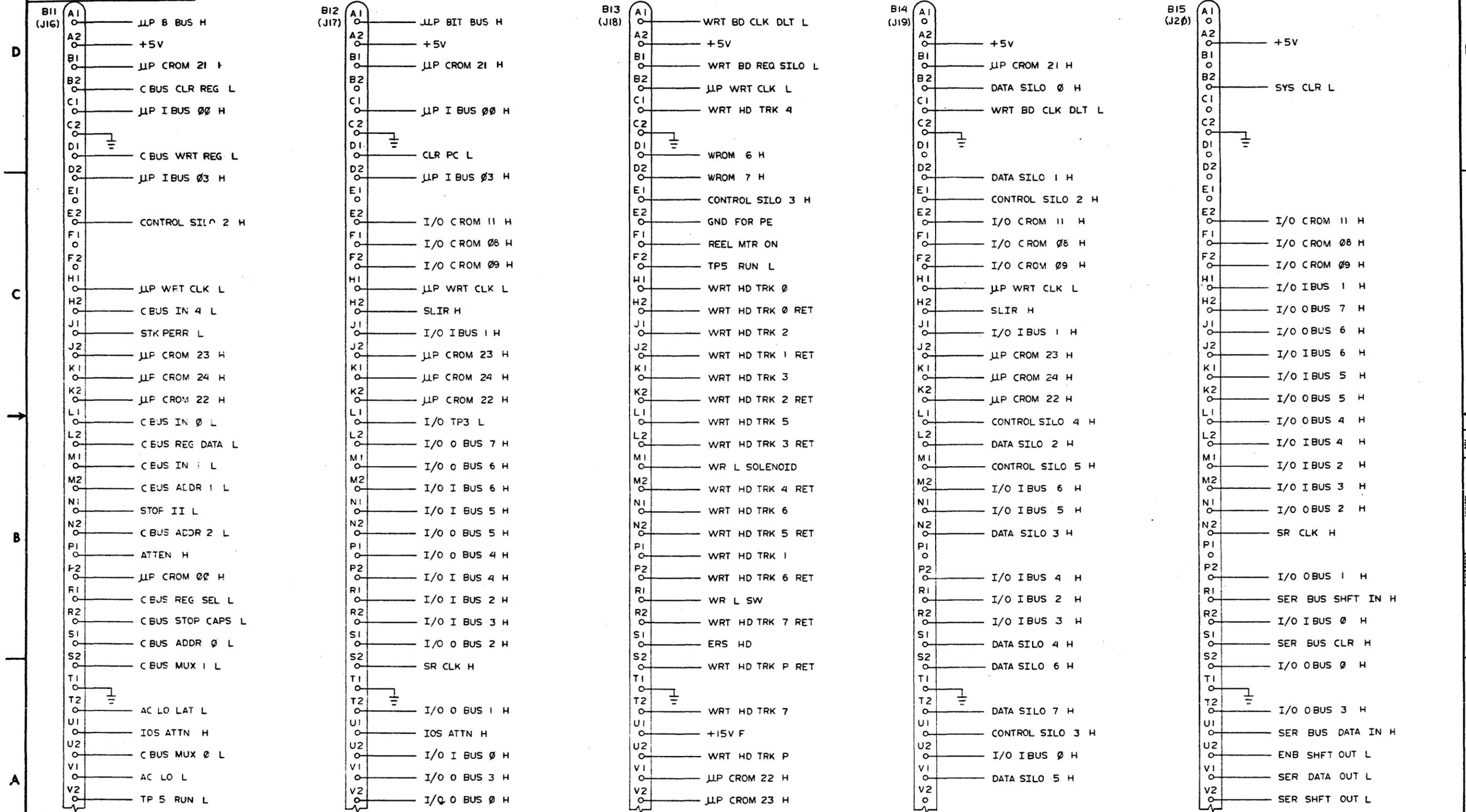
REV. CONTROL NUMBER DCS 5412989-0-1 F

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REVISIONS		
CHK	CHANGE NO.	REV.

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REVISIONS		
CHK	CHANGE NO.	REV.

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1		5012988-00	TS04 LOGIC BACKPLANE	1	
2	2		1000075-00	25 MFD 25V 6% 30D AL EL	1	C15
3	3		1001610-00	.01 MFD 50V +80-20% ZSUCER	17	C1-C12,C14,C18-C20,C21
4	4		1005306-00	6.8MFD 35V 10% S.TANT	2	C16,C17
5	5		1005784-00	.01 MFD 100V 10% 663UV MYLR	1	C13
6	6		1110324-00	LED 1MCD@10MA FIV=3	17	D1-D16,D18
7	7		1209590-00	SW,TOC 1P 5A ON/NONE/ON	3	S3-S5
8	8		1209941-02	HEADER 100 40POS RT ANGLE	1	J2
9	9	USED ON J1,J2,J4.	1209941-03	HEADER RT ANGLE LEFT L	3	
10	10	USED ON J1,J2,J4.	1209941-04	HEADER RT ANGLE,RIGHT	3	
11	11		1209941-06	HEADER,100 20POS RT ANGLE	2	J1,J4
12	12		1205747-00	FUSE, SUB-MINI, 5.000A, 125V, A	2	F1,F2
13	13		1211079-00	SW,PB 1P 1A	2	S1,S2
14	14		1211425-00	CONN,CARD 72PIN SLOTTED DOUBLE	15	J6-J20
15	15		1212297-02	MATE-N-LOK 9PIN UNIV HEADER	1	J36
16	16		1212297-06	MATE-N-LOK 12PIN UNIV HEADER	1	J5
17	17		1213335-00	HEADER 20POS RT ANGLE FOR 12	1	J3
18	18		1300365-00	1.0 K .25 W 5.0 % CC	17	R1-R16,R25
19	19		1311003-01	R NETWORK 14-180 14-390 16PIN	2	E10,E14
20	20		1910406-00	75451 DRIVER,PERIPH,DUAL,	3	E3,E6,E13
21	21		1910645-00	75452 DRIVER,PERIPH,DUAL,	6	E1,E2,E4,E5,E7,E8
22	22		1911036-00	75453 DRIVER,PERIPH,DUAL,	2	E11,E12
23	23		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	3	E9,E15,E16
24	24		7418023-00	BRACKET SWITCH	1	
25	25		9006735-00	EYELET, FUNNEL FLANGE, .059 OD X	14	
26	26	USED ON S1-S5.	9008437-00	*** THIS ITEM IS NOT USED ***	-	
27	27		9006021-01	SCREW,PAN,PHIL 6-32X 5/16 SS	2	
28	28		9006709-00	*** THIS ITEM IS NOT USED ***	-	
29	29		9006560-00	NUT,KEP , 6-32 X5/16AF	2	
30	30	SEE NOTE.	1210695-00	WASHER MOUNT LIGHT EMIT DIODE	17	

REVISION HISTORY		BASIC PART NO: 5412989		DRN:	S. TUTTLE	DATE:	7-27-78	DIGITAL			
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	P. BOSSMAN	DATE:	10-23-78	TITLE PARTS LIST			
---	INIT	D	SECTION VARIATION INDEX	CHK'D:	P. BOSSMAN	DATE:	10-23-78	MOTHER BOARD TS04			
J.R.	5412989-ML001	E	[A] 00	DES.ENG:	J. ROLLINS	DATE:	10-23-78	DOCUMENT NUMBER			
RN	5412989-ML002	F	[B]	RESP.ENG.:	J. ROLLINS	DATE:	10-23-78	SIZE	CODE	NUMBER	REV
			[C]	MFG.ENG.:	P. BARTON	DATE:	10-23-778	K	PL	5412989-0-DBP	F
			[D]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:		EDIT #	
			[E]	E-UA-5412989-0-0		TS04		Z0301F.PLS		14	

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AUTOMATED BY PRTLST.2E(2)

PARTS LIST

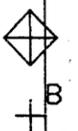
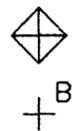
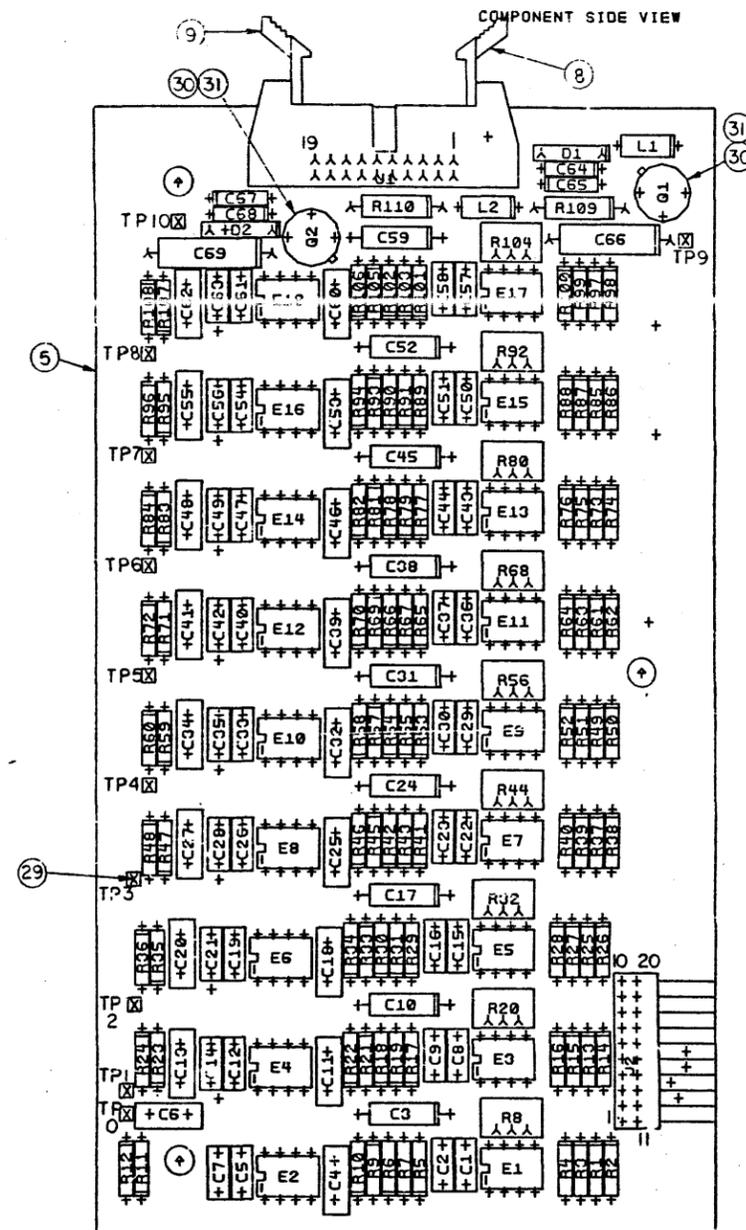
SHEET A2 OF A2

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
31	31	9107370-00	WIRE,STRND,14AWG,IPVC UL1534	00	A/R

32 NOTE: ITEM #30 USED UNDER D1-D16,D18.

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							MOTHER BOARD TS04		K	PL	5412989-0-DBP	F

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NOTES:
 1. NO GR TEST REQUIRED.
 2. SPECIAL TESTER G057 REQUIRED.

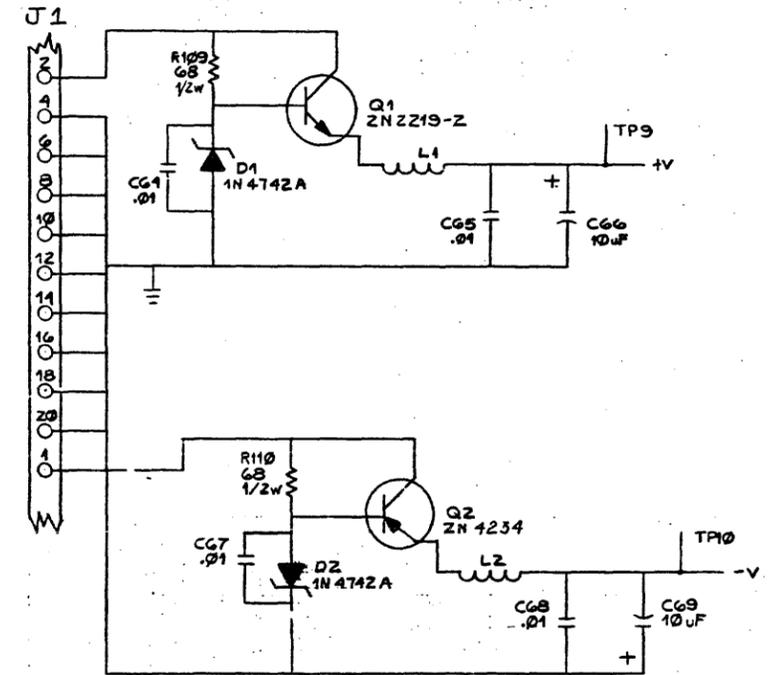
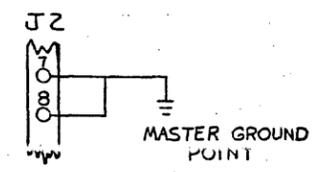
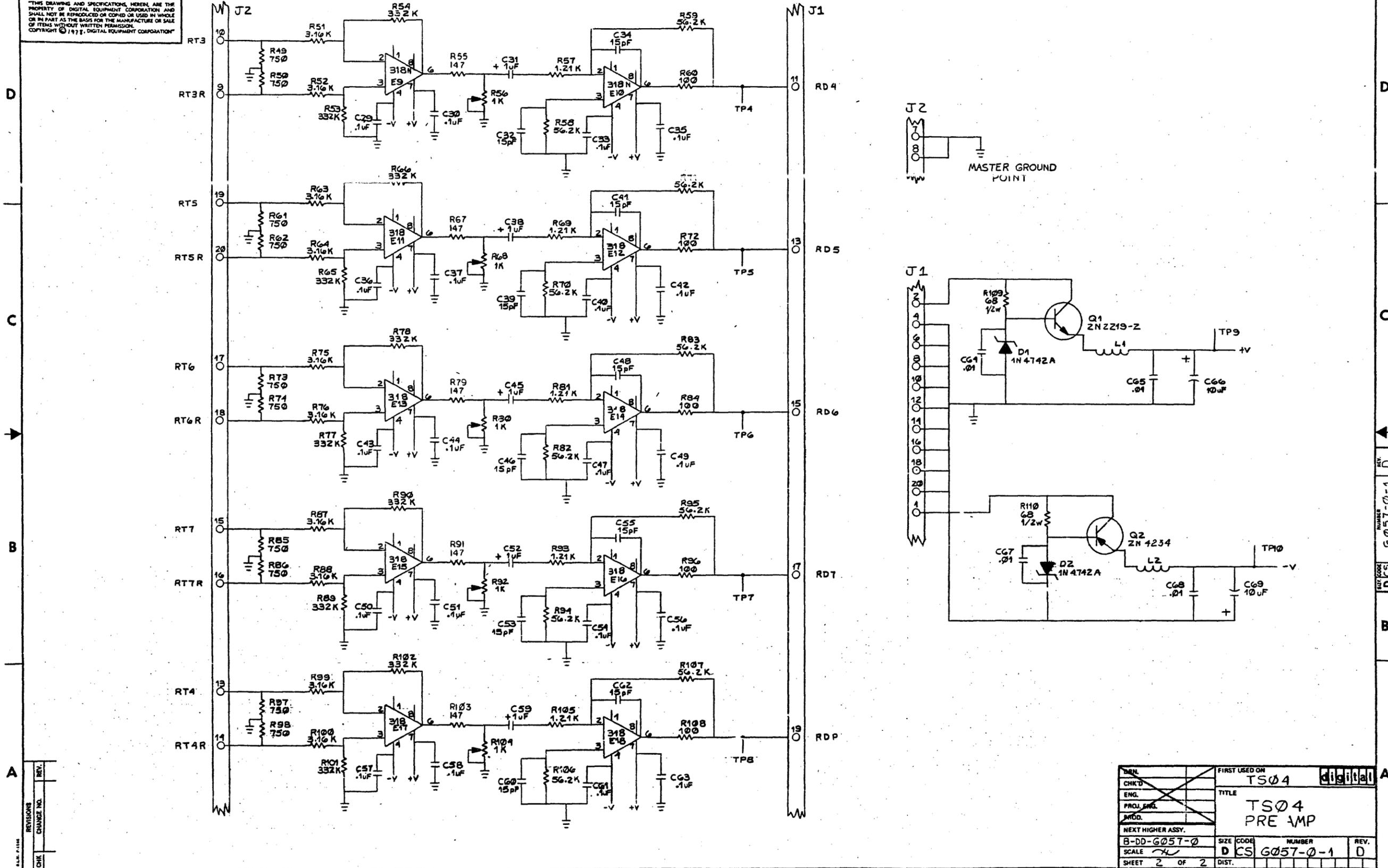
CHK	CHANGE NO	REV
REVISION		
RE DRAWN		
DESIGNED		
CHECKED		
DATE		
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DATE		

ETCH REV. D
P.C. DESIGN DATA BASE REV. D-P1

SIGNATURES	DATE	TITLE
DRN. P. NICHOLLS	7-18-78	
CHK. D. [Signature]	7-23-78	
ENG. J. [Signature]	7-28-78	
PROJ. ENG. J. Rollins	7-28-78	TS04 PRE-AMP
PROD. [Signature]		
SCALE 2:1		
SHT. 1 OF 3		
NEXT HIGHER ASSY. B-00-G057-0-0		

digital		
SIZE CODE	NUMBER	REV
D U A	G057-0-0	0

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REV.	
CHANGE NO.	
CHK	

DESIGN		FIRST USED ON	TS04	digital
CHK'D		TITLE	TS04 PRE-IMP	
ENG.		SCALE	2	
PROJ. ENGR.		SHEET	2	OF 2
MOD.		DIST.		
NEXT HIGHER ASSY.	B-DD-G057-0	SIZE	D	CS
		NUMBER	G057-0-1	REV.
				D

AUTOMATED BY PRTLST.2E(3)

PARTS LIST

SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
1	1	D-CS-G057-0-1		CIRCUIT SCHEMATIC			REF
2	2	D-UA-G057-0-0		UNIT ASSEMBLY			REF
3	3	B-DD-G057-0-0		DRAWING DIRECTORY			REF
4	4	D-MD-5011944-0-0		DRILL & ETCH DRAWING			REF
5	5		5011944-00	G057	1		
6	6		1002427-00	15.0 MMF 100V 5%200PPM MICA	18		C4, C6, C11, C13, C18, C20, C25, C27, C32, C34, C39, C41, C46, C48, C53, C55, C60, C62
7	7		121348E-02	CONN 20POS HOUSING, STRAIGH	1		J2
8	8		1209941-03	HEADER RT ANGLE LEFT L	1		
9	9		1209941-04	HEADER RT ANGLE RIGHT	1		
10	10		1209941-06	HEADER.100 20POS RT ANGLE	1		J1
11	11		1910735-02	318 OP AMP	18		E1-E18
12	12		1001610-00	.01 MFD 50V +80-20% 25U CER	4		C64, C65, C67, C68
13	13		1010978-36	.1 MFD 50V 10% CER	36		C1, C2, C5, C7, C8, C9, C12, C14, C15, C16, C19, C21, C22, C23, C26, C28, C29, C30, C33, C35, C36, C37, C40, C42, C43, C44, C47, C49, C50, C51, C54, C56, C57, C58, C61, C63
14	14		1001776-00	1 MFD 35V 10% S.TANT	9		C3, C10, C17, C24, C31, C38, C45, C52, C59
15	15		1004813-00	10 MFD 20V 10% S.TANT	2		C66, C69
16	16		1109502-02	1N 4742A VZ= 12.0 5% 1W	2		D1, D2
17	17		1302874-00	147.0 .25 W 1.0 % RN55D-F10	9		R7, R19, R31, R43, R55, R67, R79, R91, R103
18	18		1309405-00	68.0 .50 W 5.0 % CC	2		R109, R110
19	19		1302858-00	100.0 .25 W 1.0 % RN55D-F10	9		R12, R24, R36, R48, R60, R72, R84, R96, R108
20	20		1302955-00	750.0 .25 W 1.0 % RN55D-F10	18		R1, R2, R13, R14, R25, R26, R37, R38, R49, R50, R61, R62, R73, R74, R85, R86,

REVISION HISTORY		BASIC PART NO: OG057		DRN: J. FITZGERALD		DATE: 19-SEP-78		D I G I T A L	
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D: P. KENDRICK		DATE: 19-SEP-78		TITLE PARTS LIST	
CL	INIT	C	SECTION VARIATION INDEX	DES. ENG: J. ROLLINS		DATE: 19-SEP-78		DOCUMENT NUMBER	
J.R.	G057-ML002	D	[A] 00	RESP. ENG.: M. F.		DATE: 19-SEP-78		SIZE: CODE: NUMBER REV	
			[B]	MFG. ENG.: G. DILLARD		DATE: 19-SEP-78		K PL G057-0-DBP D	
			[C]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME: EDIT #	
			[D]	D-UA-G057-0-0		TS04		Z02000.PLS 8	
			[E]	<p>"THIS DRAWING AND SPECIFICATIONS HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT (C) 1981. DIGITAL EQUIPMENT CORPORATION"</p>					
			[F]						
			[G]						
			[H]						
			[I]						

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P A R T S L I S T

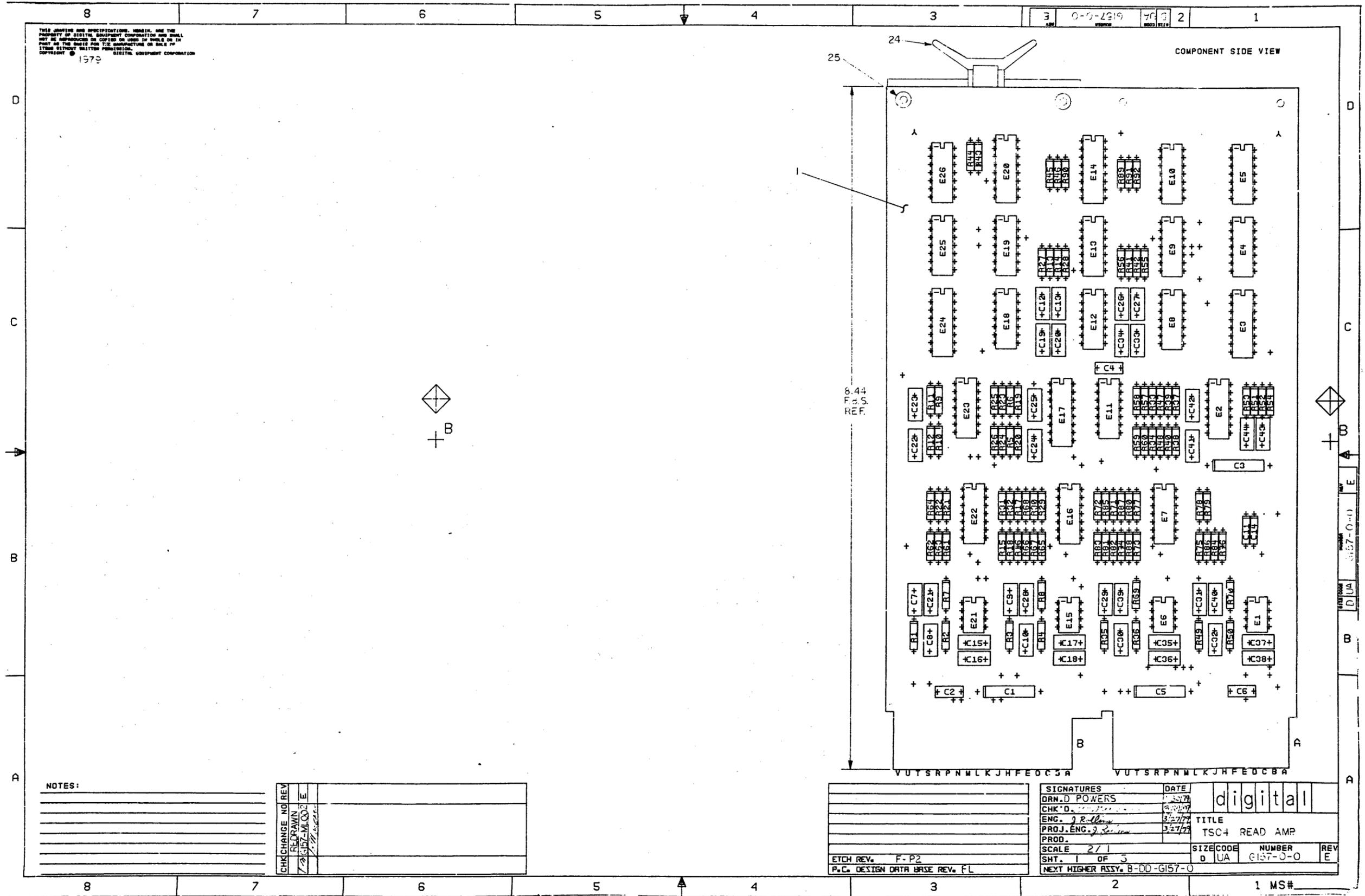
SHEET A2 OF A2

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
21	21	1302871-00	1.21 K .25 W 1.0 % RN55D-F10	9	CONT R97, R98 R9, R21, R33, R45, R57, R69, R81, R93, R105
22	22	1303045-00	3.16 K .25 W 1.0 % RN55D-F10	18	CONT R3, R4, R15, R16, R27, R28, R39, R40, R51, R52, R53, R54, R75, R76, R87, R89, R99, R100
23	23	1312747-00	56.20 K .25 W 1.0 % RN55D-F10	18	CONT R10, R11, R22, R23, R34, R35, R46, R47, R58, R59, R70, R71, R82, R83, R94, R95, R106, R107
24	24	1312985-00	332.0 K .25 W 1.0 % RN55D-F10	18	CONT R5, R6, R17, R18, R29, R30, R41, R42, R53, R54, R65, R66, R77, R78, R89, R90, R101, R102
25	25	1315900-00	1.0 K .50 W 10.0 % POT	9	CONT R8, R20, R32, R44, R56, R68, R80, R92, R104
26	26	1501883-00	DEC2219-2 NPN 3WC SI 30100 M	1	Q1
27	27	1504809-00	2N 4234 PNP 5W TO-5	1	Q2
28	28	1611257-01	CHOKE(CERAMIC BEAD)AXIAL LEAD, ON	2	L1, L2
29	29	1210385-01	PIN 1POS WIRE WRAP	11	TP0-TP10
30	30	1210001-00	HEAT SINK BLACK	2	
31	31	9007201-00	TRANSIPADS #10253	2	

32 NOTE: USED ON: OPTION/MODEL TS04

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							TS04 PRE-AMP		K	PL	G057-0-DBP	D

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NOTES:

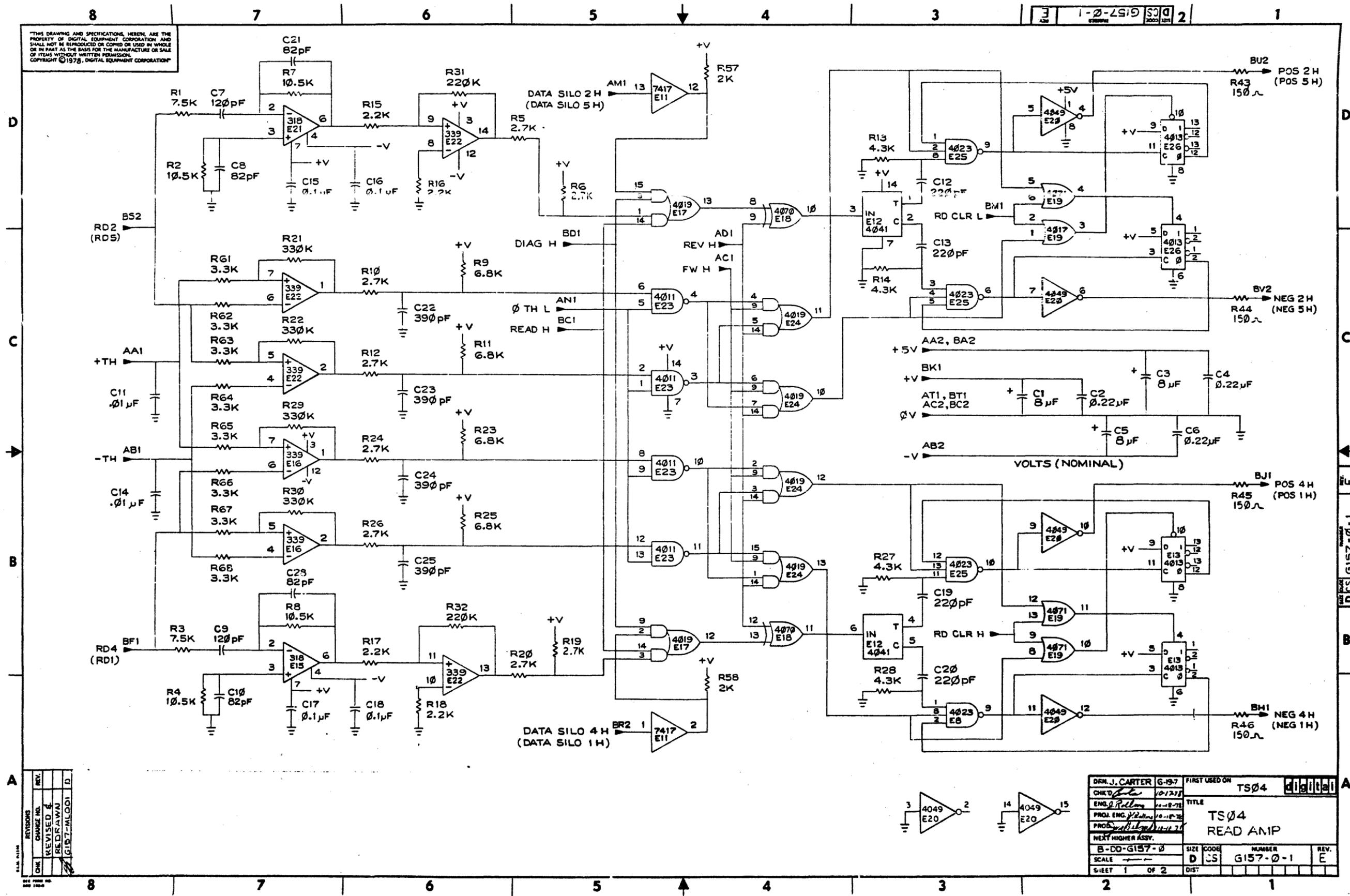
CHANGE NO	REV	

ETCH REV.	F-P2
P.C. DESIGN DATA	BASE REV. FL

SIGNATURES		DATE	digital
DRN. D. POWERS		3/27/77	
CHK'D.		3/27/77	TITLE
ENG. J. R. ...		3/27/77	
PROJ. ENG. J. R. ...		3/27/77	TSC4 READ AMP
SCALE	2/1	SIZE CODE	NUMBER
SHT.	1 OF 3	D UA	G157-0-0
NEXT HIGHER ASSY. B-DD-G157-0		REV	E

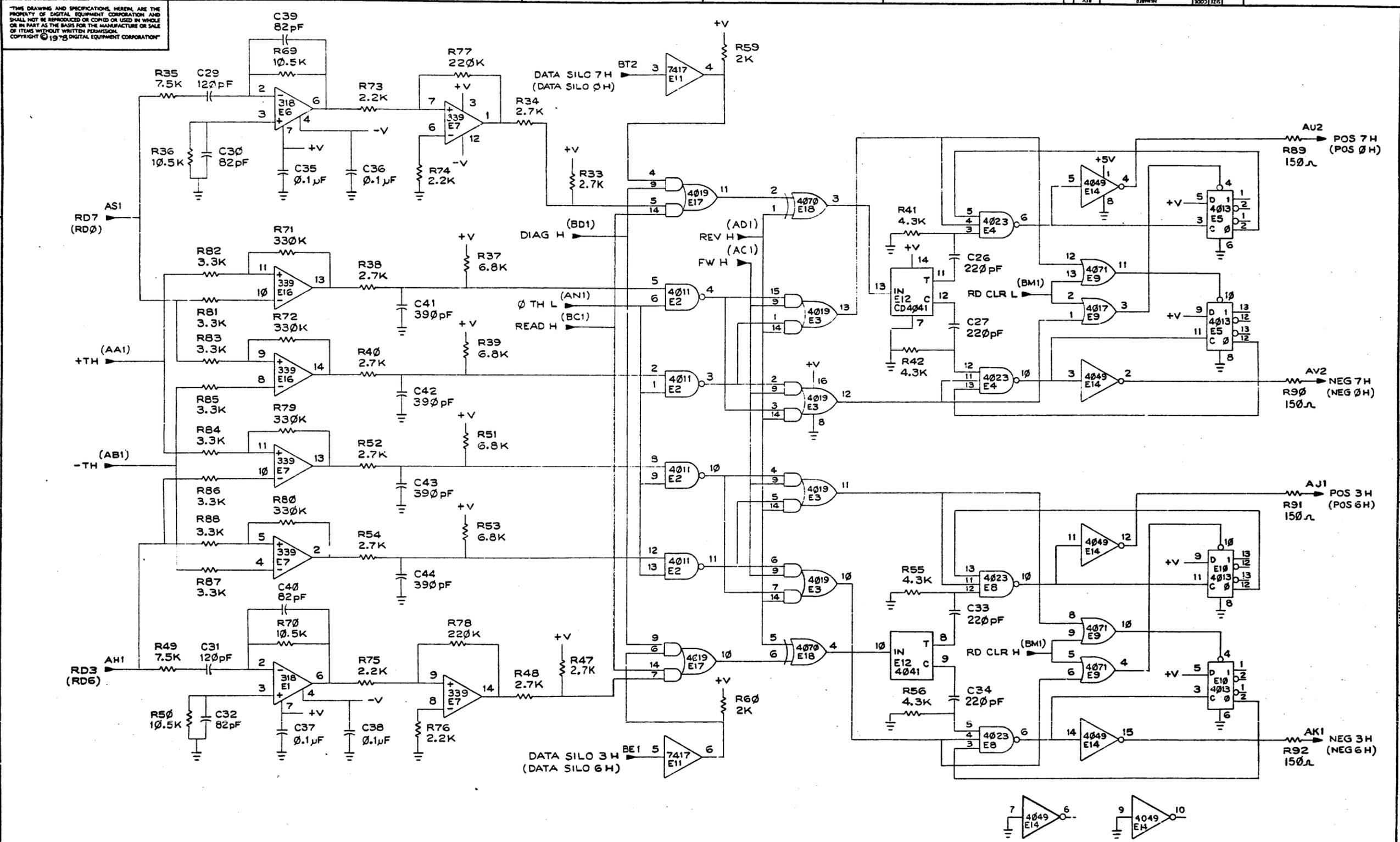
1 MS#

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REV.	CHANGE NO.	BY	DATE
1		REVISOR	
2		REVISOR	
3		REVISOR	
4		REVISOR	
5		REVISOR	
6		REVISOR	
7		REVISOR	
8		REVISOR	

DRN. J. CARTER	6-19-78	FIRST USED ON	TS04
CHK'D. <i>[Signature]</i>	10-12-78	TITLE	
ENGL. <i>[Signature]</i>	11-28-78		
PROJ. ENG. <i>[Signature]</i>	10-18-78		
PROD. <i>[Signature]</i>	11-14-78		
NEXT HIGHER ASSY.			
B-DD-G157-0	SIZE	CODE	NUMBER
SCALE	D	CS	G157-0-1
SHEET 1 OF 2	DIST		



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REVISIONS		
CHK	CHANGE NO.	REV.

NO. 26 332 NET

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
				00	
1	1	D-MD-5011898-0-0	5011898-00	G157	1
2	2		1013292-00	*** THIS ITEM IS NOT USED ***	-
3	3		1010274-01	.22 MFD 50V -20+80 Z5U CER	3 C2,C4,C6
4	4		1004813-00	*** THIS ITEM IS NOT USED ***	-
5	5		1000016-00	*** THIS ITEM IS NOT USED ***	-
6	6		1000006-00	*** THIS ITEM IS NOT USED ***	-
7	7		1100114-00	*** THIS ITEM IS NOT USED ***	-
8	8		1300271-00	*** THIS ITEM IS NOT USED ***	-
9	9		1300365-00	*** THIS ITEM IS NOT USED ***	-
10	10		1301423-00	6.8 K 1/4W 5% CC	8 R9,R11,R23,R25,R37,R39,R51,R53
11	11		1300426-00	2.7 K 1/4W 5% CC	16 R5,R10,R12,R20,R24,R26,R34,R38, CONT R40,R48,R52,R54,R6,R19,R33,R47
12	12		1302466-00	*** THIS ITEM IS NOT USED ***	-
13	13		1300479-00	*** THIS ITEM IS NOT USED ***	-
14	14		1302398-00	*** THIS ITEM IS NOT USED ***	-
15	15		1302389-00	4.3 K 1/4W 5% CC	8 R13,R14,R27,R28,R41,R42,R55,R56
16	16		1910735-02	318 OP AMP	4 E1,E6,E15,E21
17	17		1912108-00	33V VOLT CMPRTR,QUAD	3 E7,E16,E22
18	18		2113612-00	4019B AND-OR SELECT GATE-Q	3 E3,E17,E24
19	19		2113634-00	4070B X-OR GATE-QUAD CMOS	1 E18
20	20		2113607-00	4011UBNAND GATE-QUAD 2IN C	2 E2,E23
21	21		2113621-00	4041B BUFFER GATE-QUAD TRU	1 E12
22	22		2113627-00	4049UBINVERTER-HEX BUFFER-	2 E14,E20
23	23		2113635-00	4071B OR GATE-QUAD 2IN CMO	2 E9,E19
24	24		9008337-01	HANDLE, FLIP CHIP, GREEN	2
25	25		9006732-00	EYELET, ROLLED FLANGE, .121 OD X	4
26	26		1302388-00	2 K 1/4W 5% CC	4 R57-R60
27	27		1909929-00	7417 BUFFER GATE-HEX 1INP	1 E11
28	28		2113609-00	4013B FF-D DUAL W/SET/RESE	4 E5,E10,E13,E26

REVISION HISTORY		BASIC PART NO: 0G157		DRN:	P. KENDRICK	DATE:	16-SEP-78	D I G I T A L			
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	P. BOSSMAN	DATE:	16-SEP-78	TITLE	PARTS LIST		
C.L	G157-ML001	D	SECTION VARIATION INDEX	CHK'D:	P. BOSSMAN	DATE:	16-SEP-78	TITLE	TS04 READ AMP		
	G157-ML002	E	[A] 00								
			[B]								
			[C]	DES.ENG:	H. FINDEISEN	DATE:	16-SEP-78				
			[D]								
			[E]								
			[F]	RESP.ENG.:	H. FINDEISEN	DATE:	16-SEP-78	DOCUMENT NUMBER			
			[G]								
			[H]					SIZE	CODE	NUMBER	REV
			[I]								
			[J]	MFG.ENG.:	G. DILLARD	DATE:	16-SEP-78	K	PL	G157-0-DBP	E
			[K]								
			[L]	ASSEMBLY NUMBER:				FILE NAME:	EDIT #		
			[M]					Z0476E.PLS	7		
			[N]	D-UA-G157-0-0							

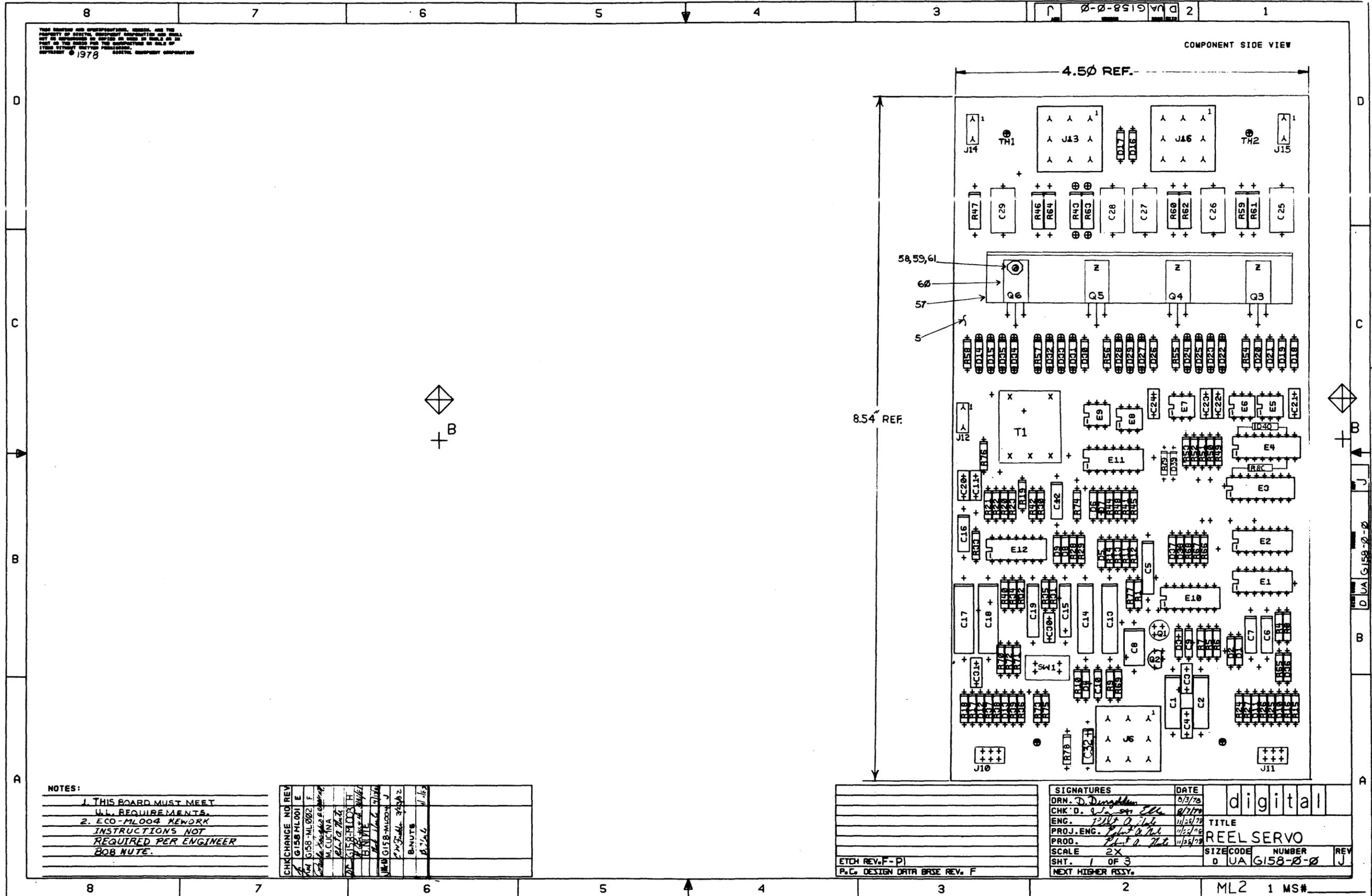
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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
29	29		2113613-00	4023B NAND GATE-TRIPLE 3IN	3	E4,E8,E25
30	30		9105740-55	*** THIS ITEM IS NOT USED ***	-	
31	31	B-DD-G157-0-0		DRAWING DIRECTORY	REF	
32	32	D-CS-G157-0-1		CIRCUIT SCHEMATIC	REF	
33	33		1305322-00	7.5 K 1/4W 1% RN55D-F 100PPM	4	R1,R3,R35,R49
34	34		1300417-00	2.2 K 1/4W 5% CC	8	R15-R18,R73-R76
35	35		1312987-00	10.5 K 1/4W 1% RN55D-1052F	8	R2,R4,R7,R8,R36,R50,R69,R70
36	36		1300439-00	3.3 K 1/4W 5% CC	16	R61-R68,R81-R88
37	37		1302092-00	220 K 1/4W 5% CC	4	R31,R32,R77,R78
38	38		1000018-00	120.0 MMF 100V 5%200PPM DM15S	4	C7,C9,C29,C31
39	39		1000015-00	82.0 MMF 100V 5%200PPM DM15S	8	C8,C10,C21,C28,C30,C32,C39,C40
40	40		1001610-00	.01 MFD 50V -20+80 Z5U AXIAL	2	C11,C14
41	41		1010978-36	.1 MFD 50V 10% 2C067 CER	8	C15-C18,C35-C38
42	42		1001631-00	390.0 MMF 100V 5%200PPM DM15S	8	C22-C25,C41-C44
43	43		1302091-00	330 K 1/4W 5% CC	8	R21,R22,R29,R30,R71,R72,R79,R80
44	44		1300250-00	150 1/4W 5% CC	8	R43-R46,R89-R92
45	45		1012084-01	8 MFD 25V 6% 30D AL EL	3	C1,C3,C5
46	46		1000021-00	220.0 MMF 100V 5%200PPM DM15S	8	C12,C13,C19,C20,C26,C27,C33,C34
*****				RELEASABLE	*****	

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							TS04 READ AMP		K	PL	G157-0-DBP	E

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COMPONENT SIDE VIEW



- NOTES:
1. THIS BOARD MUST MEET U.L. REQUIREMENTS.
 2. ECO-MLOO4 NETWORK INSTRUCTIONS NOT REQUIRED PER ENGINEER BOB NUTE.

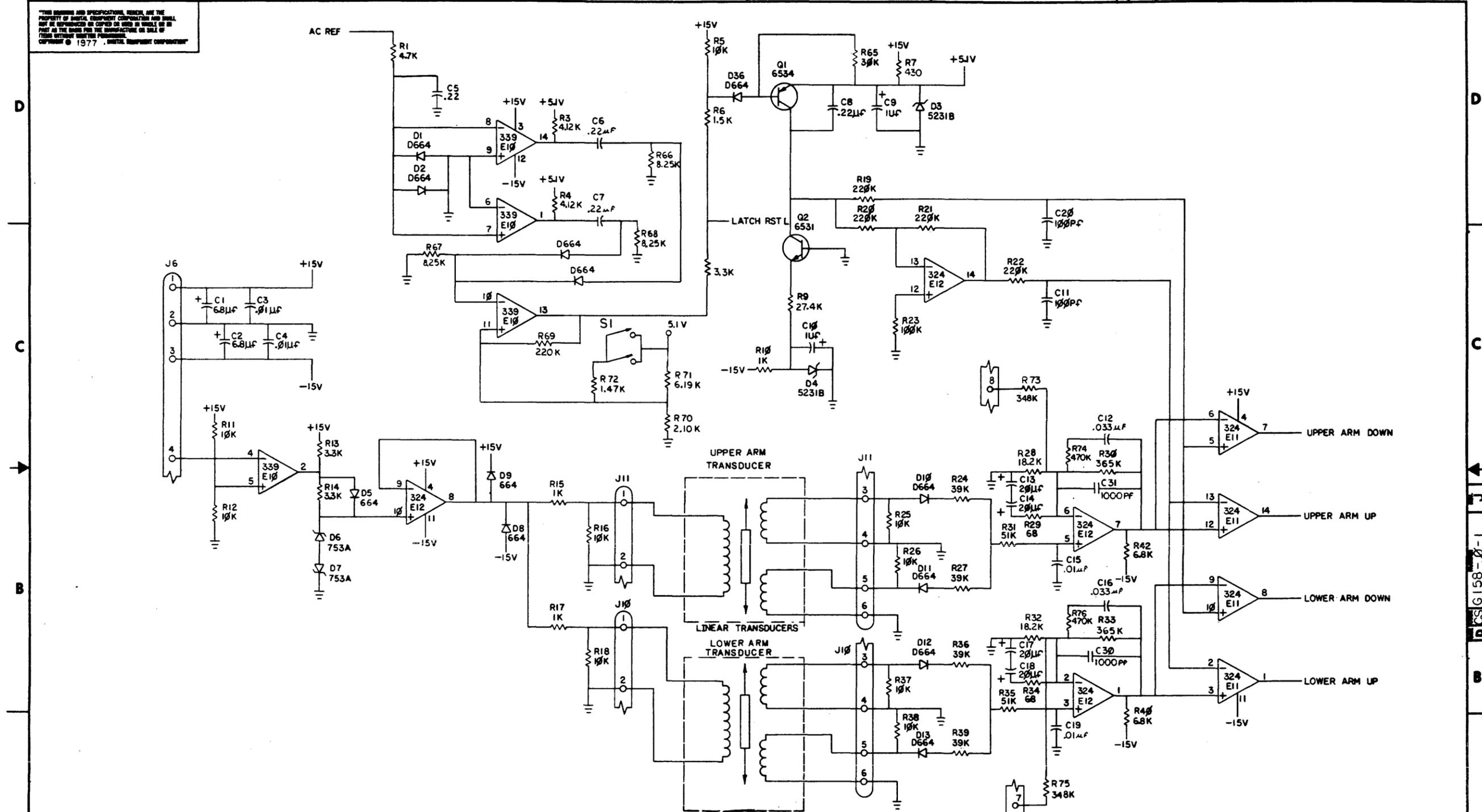
CHANGE NO	REV	DATE	BY	CHK'D	DESCRIPTION
G158-MLOO1	E				
G158-MLOO2	F				
G158-MLOO3	H				
G158-MLOO4	J				
B-NUTE					

ETCH REV. F-P1
P.C. DESIGN DATA BRSE REV. F

SIGNATURES	DATE	TITLE
DRN. D. Dingledine	6/3/78	digital
CHK'D. [Signature]	8/7/78	
ENG. [Signature]	11/28/78	
PROJ. ENG. [Signature]	11/28/78	REEL SERVO
PROD. [Signature]	11/28/78	
SCALE 2X	SIZE CODE	NUMBER
SHT. 1 OF 3	D U A G158-0-0	J
NEXT HIGHER ASSY.		

ML2 1 MS#

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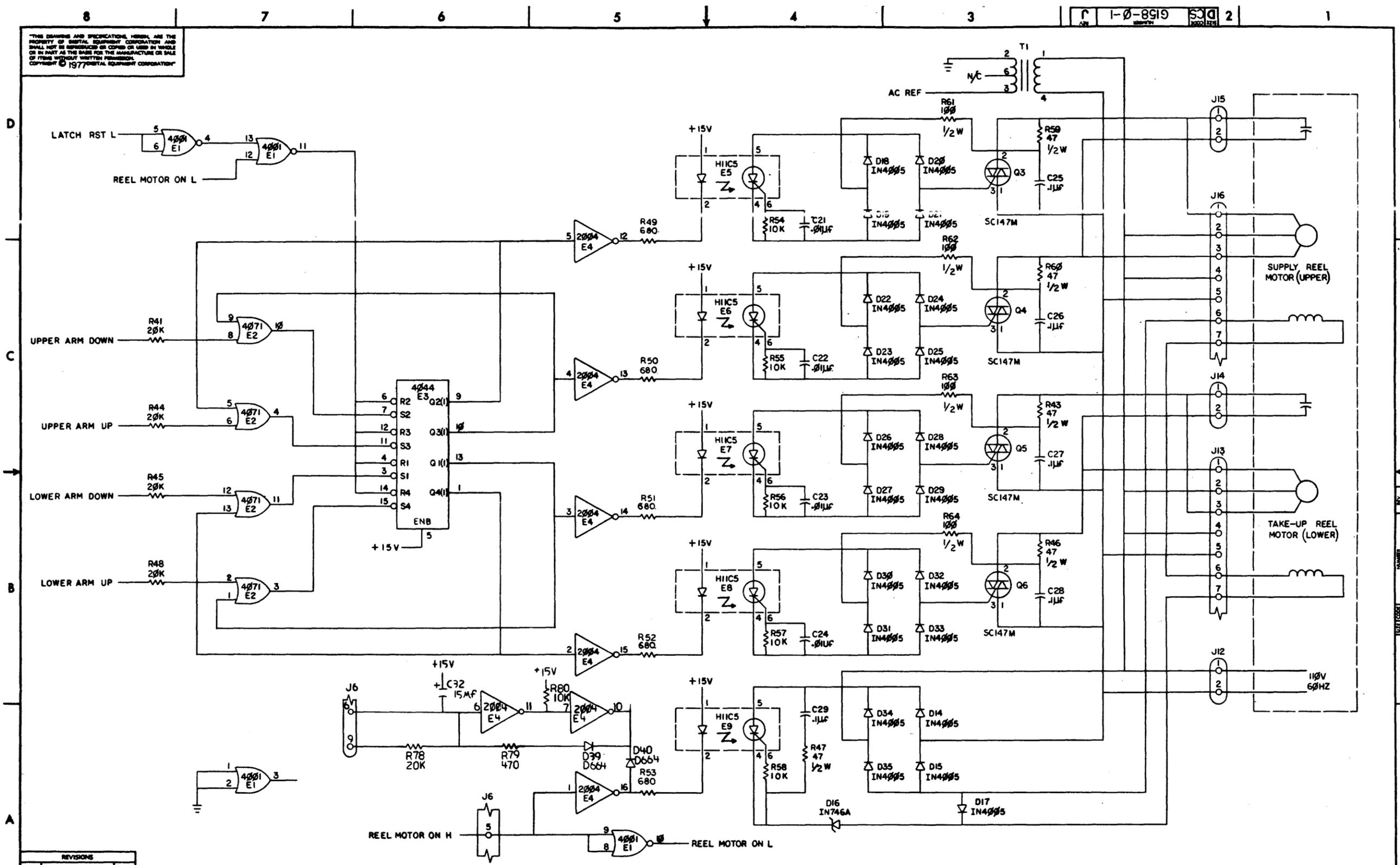


REV.	DATE	BY	CHKD.
1	11/10/77	B. NUTE	
2	1/10/78	B. NUTE	
3	1/10/78	B. NUTE	
4	1/10/78	B. NUTE	
5	1/10/78	B. NUTE	
6	1/10/78	B. NUTE	
7	1/10/78	B. NUTE	
8	1/10/78	B. NUTE	

DRN. Steve Garity	11-4-77	FINN USED ON	TS04
CHK'D. J. P. [unclear]	12-4-77	TITLE	TS04 REEL SERVO
ENG. H. F. [unclear]	5.7.78	SCALE	1/2" = 1"
PROJ. ENG. [unclear]	5.7.78	SIZE	D
PROD. [unclear]	5.7.78	CODE	CS
NEXT HIGHER ASSY.		NUMBER	G158-0-1
B-DD-G158-0		REV.	J
SHEET 1 OF 2		DRW.	

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1-0-8919 SCD 2



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE: TS04 REEL SERVO
 SIZE CODE: DCS
 NUMBER: G158-0-1
 REV: J
 SHEET 2 OF 2
 SCALE: ML 2

PART NO. G158-0-1
 REV. J
 DCS

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
1	1	D-CS-G158-0-1		CIRCUIT SCHEMATIC	REF		
2	2	D-UA-G158-0-0		UNIT ASSY	REF		
3	3	B-DD-G158-0-0		DWG DIRECTORY	REF		
4	4	D-MD-5011917-0-0		DRILL & ETCH DWG	REF		
5	5		5011917-00	G158	1		
6	6		1000002-01	20 MFD 50V 5% S.TANT	4		C13,C14,C17,C18
7	7		1000016-00	100.0 MMF 100V 5%200PPM MICA	2		C11,C20
8	8		1000050-00	.033 MFD 100V 10% MYLR	2		C12,C16
9	9		1001610-00	.01 MFD 50V +80-20% 25U CER	6		C3,C4,C21-C24
10	10		1001776-00	1 MFD 35V 10% S.TANT	2		C9,C10
11	11		1002630-00	*** THIS ITEM IS NOT USED ***	1		
12	12		1005306-00	6.8MFD 35V 10% S.TANT	2		C1,C2
13	13		1005784-00	.01 MFD 100V 10% MYLR	2		C15,C19
14	14		1010031-03	.22 MFD 50V 10% M.POLYCARB	4		C8,C5,C7,C5
15	15		1010075-00	.1 MFD 400V 20% MYLR	5		C25-C29
16	16		1100114-00	D 664 QS\75PCB PIV= 25V SP	12		D1,D2,D5,D8-D13,D36,D37,D39
17	17		1102421-00	1N 753A VZ= 6.2 5% .40W P	2		D6,D7
18	18		1104860-00	1N 746A VZ= 3.3 5%	1		D16
19	19		1109443-00	1N 5231B VZ= 5.1 5% .50W Y	2		D3,D4
20	20		1110967-00	1N 4005 PIV=600 I= 1A D041 SI	21		D14,D15,D17-D35
21	21		1114344-00	H11C5 SCR2400V I=10A	5		E5-E9
22	22		1212297-00	MATE-N-LOK 2PIN UNIV HEADER	3		J12,J14,J15
23	23		1212297-02	MATE-N-LOK 9PIN UNIV HEADER	3		J13,J16,J6
24	24		1212297-05	*** THIS ITEM IS NOT USED ***	1		
25	25		1213488-01	CONN 6PIN HOUSING STRAIGH	2		J10,J11
26	26		1300219-00	68.0 .25 W 5.0 % CC	2		R29,R34
27	27		1300229-00	100.0 .50 W 5.0 % CC	4		R61-R64
28	28		1300365-00	1.0 K .25 W 5.0 % CC	3		R10,R15,R17
29	29		1300391-00	1.50 K .25 W 5.0 % CC	1		R6
30	30		1300439-00	3.30 K .25 W 5.0 % CC	3		R13,R14,R77

REVISION HISTORY		BASIC PART NO: OG158		DRN: P.KENDRICK		DATE: 19-DEC-77		D I G I T A L	
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D:	R.A.M.	DATE:	19-DEC-77	TITLE	PARTS LIST
---	INIT	D	SECTION.VARIATION INDEX					TS04 REEL SERVO	
J.R.	G158-MLO01	E	[A] 00						
M.C.	G158-MLO02	F	[B]						
BN	G158-MLO03	H	[C]						
				DES.ENG: H.FINDEISEN		DATE: 02-MAR-78			
				RESP.ENG.: H.FINDEISEN		DATE: 02-MAR-78		DOCUMENT NUMBER	
				MFG.ENG.: P.BARTON		DATE: 02-MAR-78		K PL G158-0-DBP H	
				ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME: Z0464H.PLS	
				D-UA-G158-0-0		TS04		EDIT 21	

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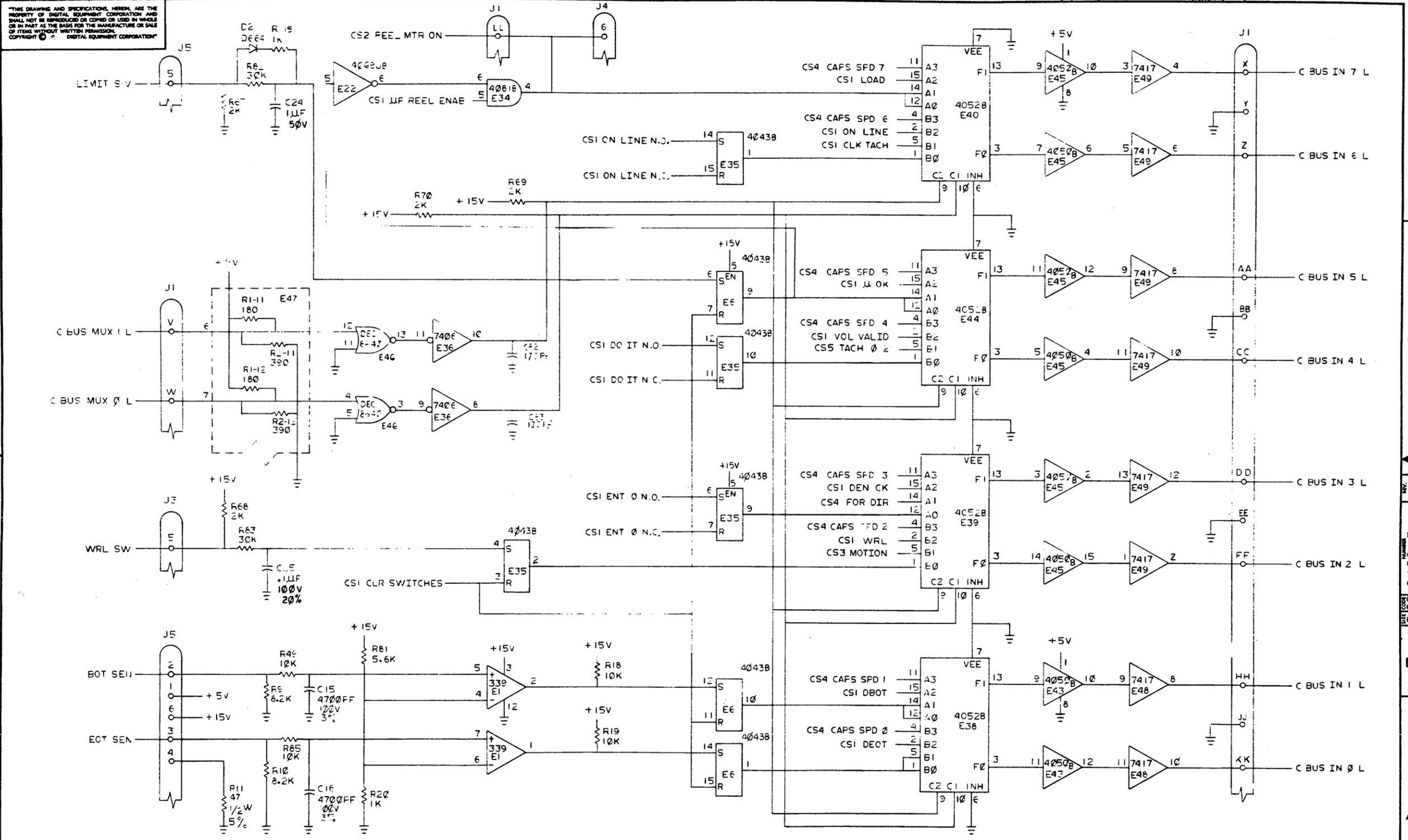
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PARTS LIST

SHEET A2 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
31	31		1300447-00	4.70 K .25 W 5.0 % CC	1		R1
32	32		1300479-00	10.0 K .25 W 5.0 % CC	14		R5, R11, R12, R16, R18, R25, R26, R37, R38, R54-R58
						CONT	
33	33		1313349-00	*** THIS ITEM IS NOT USED ***	-		
34	34		1301423-00	6.80 K .25 W 5.0 % CC	2		R40, R42
35	35		1301695-00	17.0 K .25 W 5.0 % CC	5		R59, R60, R43, R46, R47
36	36		1302092-00	220.0 K .25 W 5.0 % CC	5		R19-R22, R69
37	37		1302177-00	*** THIS ITEM IS NOT USED ***	-		
38	38		1302391-00	20.0 K .25 W 5.0 % CC	4		R41, R44, R45, R48
39	39		1302394-00	30.0 K .25 W 5.0 % CC	1		R65
40	40		1302465-00	*** THIS ITEM IS NOT USED ***	-		
41	41		1302466-00	100.0 K .25 W 5.0 % CC	1		R23
42	42		1302514-00	39.0 K .25 W 5.0 % CC	4		R24, R27, R36, R39
43	43		1304839-00	51.0 K .25 W 5.0 % CC	2		R31, R35
44	44		1305130-00	*** THIS ITEM IS NOT USED ***	-		
45	45		1309417-00	27.40 K .25 W 1.0 % RN55D-F10	1		R9
46	46		1312933-00	*** THIS ITEM IS NOT USED ***	-		
47	47		1503409-01	DEC6534B PNP 310HW SI 40 90 P	1		Q1
48	48		1509338-00	DEC6531B NPN 310HW SI 40 90 P	1		Q2
49	49		1514341-00	ULN2004A NPN 1W SI ARRAY	1		E4
50	50		1514342-00	*** THIS ITEM IS NOT USED ***	-		
51	51		1609844-00	XFMR P=A S= 12.6310HA	1		T1
52	52		1912107-01	324ANOP AHP, QUAD	2		E11, E12
53	53		1912108-00	339 VOLT CAPTR, QUAD	1		E10
54	54		2113603-00	4001UBNOR GATE-QUAD 2IN CM	1		E1
55	55		2113624-00	4044B NAND R/S LATCH, QUAD	1		E3
56	56		2113635-00	4071B OR GATE-QUAD 2IN CM	1		E2
57	57		7418017-00	HEAT SINK	1		HS1
58	58		9006011-04	SCREW BIND, SLOT 4-40X 3/8 SS	4		
59	59		9006557-00	NUT, KEP 4-40X 1/4 AF	4		
60	60		9009268-00	COMPOUND, THERMAL JOINT	A/R		
61	61		9009769-00	WASHER, RECTANGULAR .405X.225X.0	4		
62	62		1312992-00	*** THIS ITEM IS NOT USED ***	-		
63	63		1313150-00	430.0 .25 W 5.0 % CC	1		R7
64	64		1302398-00	470.0 K .25 W 5.0 % CC	2		R74, R76
65	65		1305325-00	8.25 K .25 W 1.0 % RN55D-F10	3		R66, R67, R68
66	66		1312923-00	2.10 K .25 W 1.0 % RN55D-F10	1		R70
67	67		1305108-00	1.47 K .25 W 1.0 % RN55D-F10	1		R72
68	68		1314187-00	6.19 K .25 W 1.0 % RN55D-F10	1		R71
69	69		1211164-07	SW, DIP 1P 1A 2POS	1		S1
70	70		1000042-00	1000.0 MMF 100V 5%200PPM MICA	2		C30, C31
71	71		1314763-00	4.12 K .25 W 1.0 % RN55D-F10	2		R3, R4
72	72		1316576-00	348.0 K .25 W 1.0 % RN55D-F10	2		R73, R75
73	73		1305266-00	365.0 K .25 W 1.0 % RN55D-F10	2		R30, R33
74	74		1309412-00	18.20 K .25 W 1.0 % RN55D-F10	2		R28, R32
75	75		1514342-01	TRIAC 600V 10A	4		Q3-Q6
76	76		1301424-00	680.0 .25 W 5.0 % CC	5		R49-R53

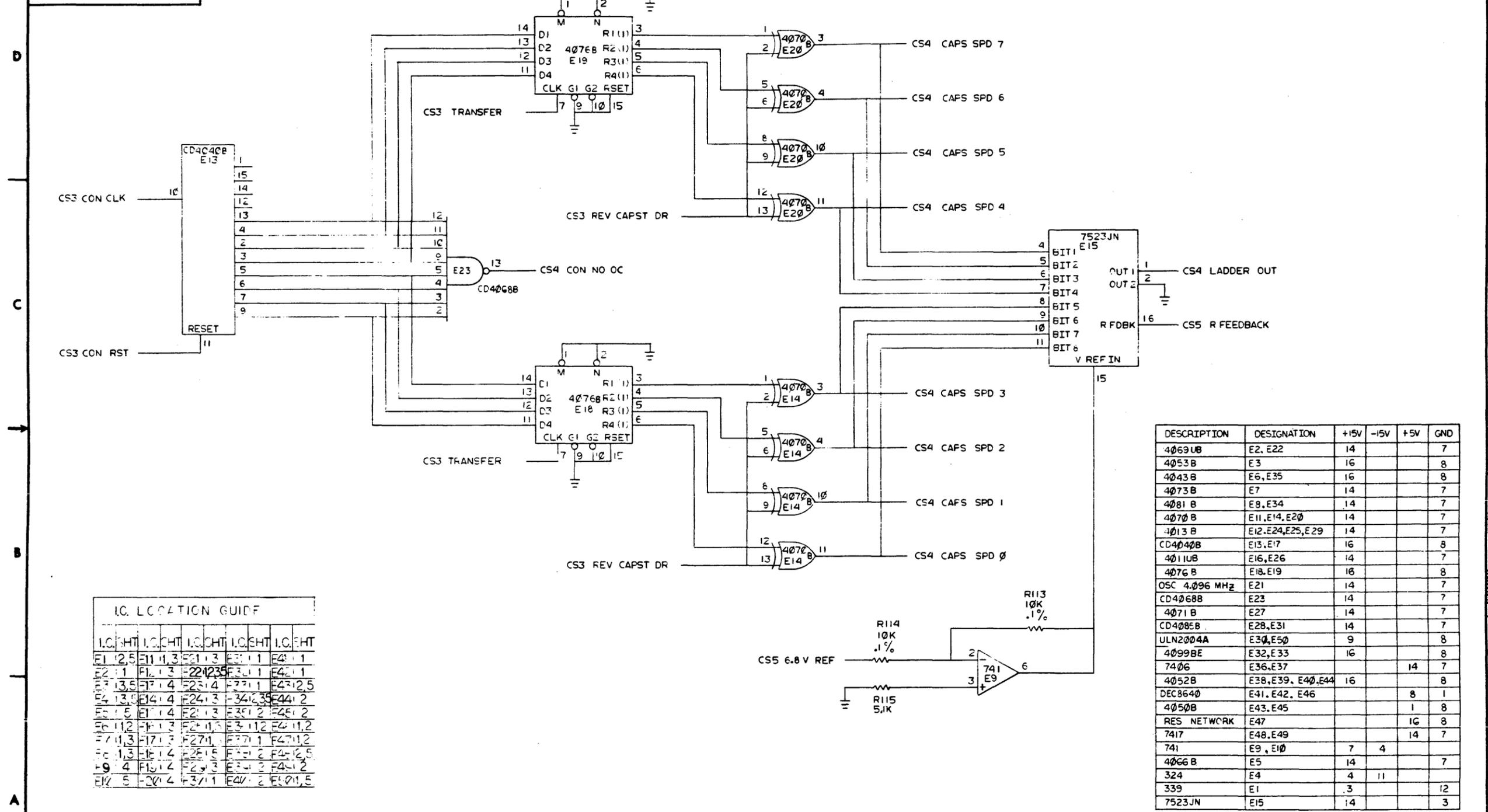
D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							TS04 REEL SERVO		K	PL	G158-0-DBP	H



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REVISIONS		
CHK	CHANGE NO.	REV.

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IO LOCATION GUIDE

IO SHT	IO CHT	IO SHT	IO CHT	IO SHT	IO CHT
E1 12,5	E11 11,3	E21 13	E3 11	E4 11	
E2 11	E1 13	E22 13,5	E3 11	E4 11	
E3 13,5	E1 14	E23 14	E3 11	E4 12,5	
E4 13,5	E14 4	E24 13	E3 12,3,5	E4 12	
E5 15	E1 14	E2 13	E3 12	E4 12	
E6 11,2	E1 13	E2 11,5	E3 11,2	E4 11,2	
E7 11,3	E1 13	E2 11	E3 11	E4 11,2	
E8 11,3	E1 14	E2 11,5	E3 12	E4 12,5	
E9 14	E1 12	E2 13	E3 12	E4 12	
E10 5	E2 14	E3 11	E4 12	E10 1,5	

DESCRIPTION	DESIGNATION	+5V	-15V	+5V	GND
4069UB	E2, E22	14			7
4053B	E3	16			8
4043B	E6, E35	16			8
4073B	E7	14			7
4081B	E8, E34	14			7
4070B	E11, E14, E20	14			7
4013B	E12, E24, E25, E29	14			7
CD4040B	E13, E17	16			8
4011UB	E16, E26	14			7
4076B	E18, E19	16			8
OSC 4.096 MHz	E21	14			7
CD4068B	E23	14			7
4071B	E27	14			7
CD4085B	E28, E31	14			7
ULN2004A	E30, E50	9			8
4099BE	E32, E33	16			8
7406	E36, E37			14	7
4052B	E38, E39, E40, E44	16			8
DEC8640	E41, E42, E46			8	1
4050B	E43, E45			1	8
RES NETWORK	E47			16	8
7417	E48, E49			14	7
741	E9, E10	7	4		
4066B	E5	14			7
324	E4	4	11		
339	E1	3			12
7523JN	E15	14			3

REVISIONS

CHK	CHANGE NO.	REV.

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
1	1		5012399-00	G159	1		
2	2		1000016-00	100.0 MMF 100V 5%200PPM MICA	14		C31,C32,C72-C83
3	3		1000022-00	270.0 MMF 100V 5%200PPM MICA	1		C19
4	4		1010978-36	.1 MFD 50V 10% CER	1		C25
5	5		1001383-00	4700.0 MMF 100V 3%200PPM MICA	2		C15,C16
6	6		1001610-00	.01 MFD 50V +80-20% Z5U CER	40		C6-C14,C26,C27,C39,C44-C71
7	7		1001631-00	390.0 MMF 100V 5%200PPM MICA	1		C40
8	8		1001774-00	.05 MFD 25V 10% Y5U DISC	2		C4,C5
9	9		1001796-00	50 MFD 25V +75-10% AL EL	3		C1-C3
10	10		1010716-00	20 MFD 60V 5% W.TANT	1		C17
11	11		1004813-00	10 MFD 20V 10% S.TANT	1		C34
12	12		1010031-03	.22 MFD 50V 10% M.POLYCARB	2		C21,C35
13	13		1010274-02	1 MFD 50V +80-20% CER	1		C24
14	14		1010646-00	.015 MFD 50V 2% M.POLYCARB	1		C18
15	15		1011740-00	5600.0 MMF 50V 10% CER	1		C38
16	16		1000050-00	.033 MFD 100V 80V 10% MYL	2		C36,C37
17	17		1100114-00	D 664 QS\75PCB PIV= 25V SP	2		D2,D7
18	18		1109991-01	4M6.8AZ1 VZ= 6.8 1% .40W	1		D1
19	19		1105871-00	1/4M5.1AZ1 = 5.1 1% .25W N	2		D3,D4
20	20		1209941-02	PCB,HEADER 40PIN(2X20).100CC 90D	1		J1
21	21	USED ON J1	1209941-03	PCB,HEADER LATCH	1		
22	22	USED ON J1	1209941-04	PCB,HEADER LATCH	1		
23	23		1211180-00	SW,TOG 1PDT ON-OFF-ON 5A	1		S9
24	24		1212297-03	MATE-N-LOK 03PIN(1X03).250CC HDR	1		J2
25	25		1212297-05	MATE-N-LOK 06PIN(2X03).250CC HDR	2		J3,J4
26	26		1213335-00	PCB,HEADER 20POS(2X10).100CC 90D	1		J5
27	27	USED FOR S1-S8	1214343-02	SW,PB LT 2PDT 8SEC W/BUTTONS 1A	1		
28	28		1300229-00	100.0 .25 W 5.0 % CC	2		R47,R109
29	29		1300296-00	330.0 .50 W 5.0 % CC	1		R25
30	30		1300365-00	1.0 K .25 W 5.0 % CC	3		R20,R102,R119

REVISION HISTORY		BASIC PART NO: 0G159		DRN:	MILT RIPLEY	DATE:	17-OCT-78	D I G I T A L			
ENG	ECO NUMBER	REV	SECTION A OF A				TITLE	PARTS LIST			
---	INIT	D	SECTION VARIATION INDEX	CHK'D:	P. BOSSMAN	DATE:	09-NOV-78				
B.K	G159-ML002	E	[A] 00				CAPSTAN SERVO				
B.K	G159-ML003	F	[B]								
BK	G159-ML004	H	[C]	DES.ENG:	B. KRASNICK	DATE:	09-NOV-78				
RN	G159-ML007	K	[D]								
RN	G159-ML009	L	[E]								
			[F]	RESP.ENG.:	B. KRASNICK	DATE:	09-NOV-78	DOCUMENT NUMBER			
			[G]								
			[H]								
			[I]								
			[J]	MFG.ENG.:	P. BARTON	DATE:	09-NOV-78	K	PL	G159-0-DRP	REV
			[K]								
			[L]								
			[M]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:		EDIT #	
			[N]	D-UA-G159-0-0		DD-G159-0-0		Z0517L PLS		28	

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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
					00	
31	31		1300444-00	3.90 K .25 W 5.0 % CC	4	R34,R38,R42,R43
32	32		1300479-00	10.0 K .25 W 5.0 % CC	11	R12-R19,R49,R85,R105
33	33		1300488-00	12.0 K .25 W 5.0 % CC	1	R41
34	34		1313752-00	15.0 K .25 W 1.0 % RN55D-F10	2	R23,R108
35	35		1300539-00	120.0 K .25 W 5.0 % CC	2	R37,R39
36	36		1301317-00	10.0 .25 W 5.0 % CC	8	R1-R8
37	37		1301695-00	47.0 .50 W 5.0 % CC	1	K11
38	38		1301808-00	*** THIS ITEM IS NOT USED ***	-	
39	39		1301874-00	5.60 K .25 W 5.0 % CC	4	R35,R81,R86,R94
40	40		1300496-00	15.0 K .25 W 5.0 % CC	3	R110,R111,R44
41	41		1302388-00	2.0 K .25 W 5.0 % CC	13	R67-R77,R80,R50
42	42		1302391-00	20.0 K .25 W 5.0 % CC	5	R28,R92,R93,R98,R99
43	43		1302394-00	30.0 K .25 W 5.0 % CC	7	R21,R22,R82,R83,R106,R107,R120
44	44		1302398-00	470.0 K .25 W 5.0 % CC	3	R48,R96,R97
45	45		1302514-00	39.0 K .25 W 5.0 % CC	2	R100,R101
46	46		1303044-00	100.0 K .25 W 1.0 % RN55D-F10	1	R31
47	47		1303176-00	1.60 K .25 W 5.0 % CC	2	R33,R84
48	48		1303179-00	8.20 K .25 W 5.0 % CC	2	R9,R10
49	49		1301327-00	68.0 K .25 W 5.0 % CC	1	R40
50	50		1304841-00	75.0 K .25 W 5.0 % CC	1	R27
51	51		1304865-00	1.0 K .25 W .10% RN55E-B 2	2	R29,R30
52	52		1305425-00	309.0 K .25 W 1.0 % RN55D-F10	1	R32
53	53		1305431-00	10.0 K .25 W .10% RN55E-B 2	2	R113,R114
54	54		1309143-14	100.0 K .75 W 10.0 % POT	3	R26,R87,R95
55	55		1309595-00	1.0 M .25 W 5.0 % CC	1	R24
56	56		1310607-00	422.0 K .25 W 1.0 % RN55C-F 5	1	R46
57	57		1311003-01	R NETWORK 14-180 14-390 16PIN	1	E47
58	58		1312930-00	5.10 K .25 W 5.0 % CC	1	R115
59	59		1313843-00	107.0 K .25 W 1.0 % RN55D-F10	1	R45
60	60		1514341-00	ULN2004A NPN 1W SI ARRAY	2	E30,E50
61	61		1814249-00	OSCILLATOR, XTAL 4.096 MHZ	1	E21
62	62		1909929-00	7417 BUFFER GATE-HEX 1INP	2	E48,E49
63	63		1910298-00	741 OP AMP GEN PURP. COM	2	E10,E9
64	64		1910741-00	7406 INVERTER GATE-HEX 1I	2	E36,E37
65	65		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	3	E41,E42,E46
66	66		1912107-00	324 OP AMP,QUAD	1	E4
67	67		1912108-00	339 VOLT CMPRTR,QUAD	1	E1
68	68		2113607-00	4011UBNAND GATE-QUAD 2IN C	2	F16,E26
69	69		2113609-00	4013B FF-D DUAL W/SET/RESE	4	E12,E24,E25,E29
70	70		2113623-00	4043B NOR R/S LATCH,QUAD	2	E6,E35
71	71		2113628-00	4050B BUFFER/CONVERTER GAT	2	E43,E45
72	72		2113630-00	4052B MULTIPLEXER 4CHAN DI	4	E38-E40,E44
73	73		2113632-00	4066B BILATERAL SWITCH-QUA	1	E5
74	74		2113633-00	4069UBINVERTER GATE-HEX	2	E22,E2
75	75		2113634-00	4070B X-OR GATE-QUAD CMOS	3	E11,E14,E20
76	76		2113635-00	4071B OR GATE-QUAD 2IN CMO	1	E27
77	77		2113637-00	4073B AND GATE-TRIPLE 3IN	1	E7
78	78		2113639-00	4076B REGISTER 4BIT D-TYPE	2	E18,E19

D	I	G	I	T	A	L	TITLE	SECTION A	OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							CAPSTAN SERVO			K	PL	G159-0-DBP	L

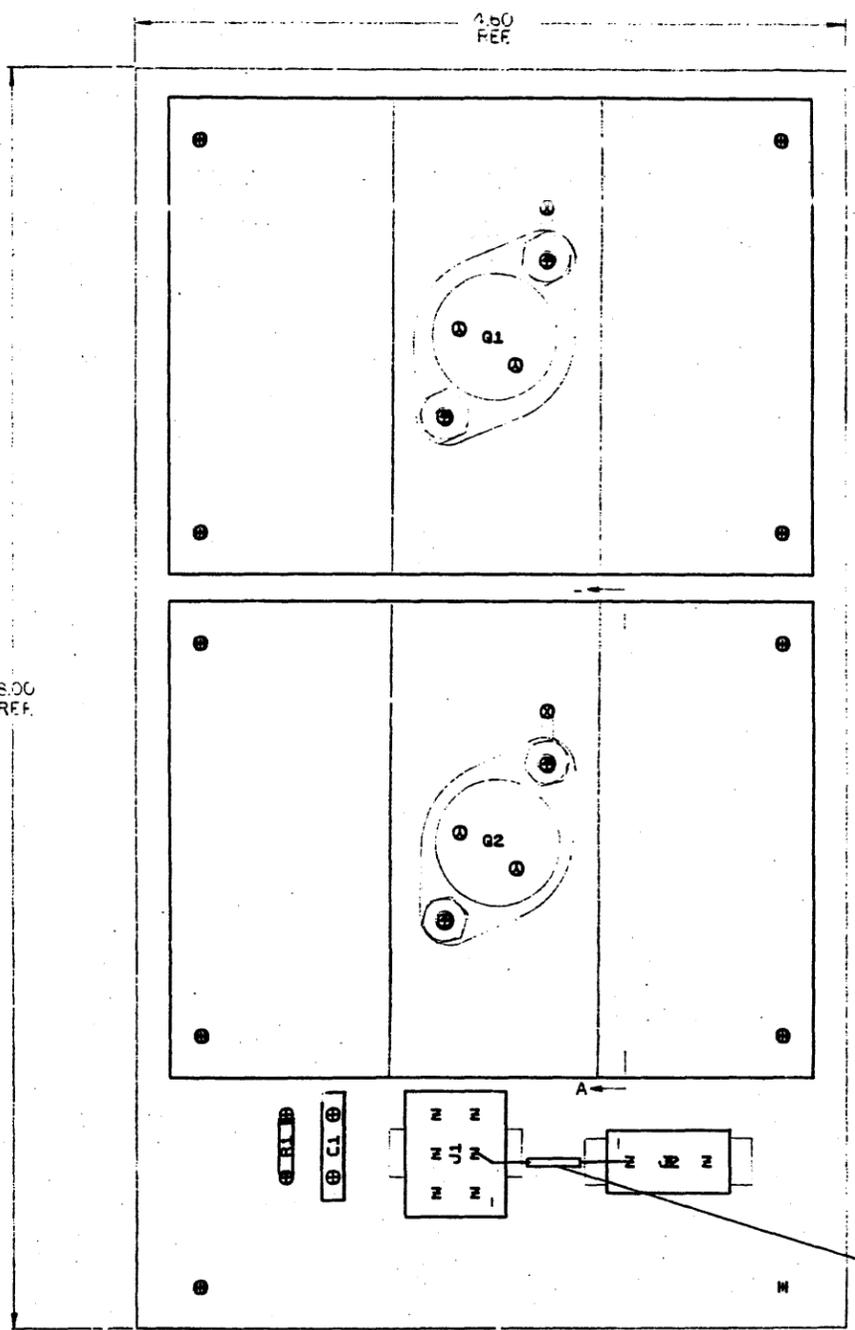
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
79	79		2113642-00	4081B AND GATE-QUAD 2IN CM	2	E34,E8
80	80		2113946-00	4053B MULTIPLEXER 2CHAN CM	1	E3
81	81		2114462-00	4040B COUNTER/DIVIDER,BINA	2	E13,E17
82	82		2114463-00	4068B NAND GATE,BIN	1	E23
83	83		2114464-00	4085B AND-OR GATE,DUAL,2IN	2	E28,E31
84	84		2114465-00	4099BELATCH-ADDRESSABLE 8BIT	2	E32,E33
85	85		2116019-00	7523JND/A CONVERTER,MULT,8	1	E15
86	86		1312985-00	332.0 K .25 W 1.0 % RN55D-F10	1	R36
87	87		9105740-55	*** THIS ITEM IS NOT USED ***	-	
88	88		1313596-00	20.0 K .25 W 1.0 % RN55D-F10	2	R103,R104
89	89		9107256-11	*** THIS ITEM IS NOT USED ***	-	
90	90		1300391-00	1.50 K .25 W 5.0 % CC	2	R78,R79
91	91		1002630-00	.015 MFD 100V 10% MYLR	1	C20
92	92	D-UA-G159-0-0		UNIT ASS'Y	REF	
93	93	D-CS-G159-0-1		CIRCUIT SCHEMATIC	REF	
94	94	D-MD-5012399-0-0		DRILL AND ETCH DRAWING	REF	

D	I	G	I	T	A	L	TITLE	CAPSTAN SERVO	SECTION A	OF A	SIZE	CODE	DOCUMENT NUMBER	REV
											K	PL	G159-0-DBP	L

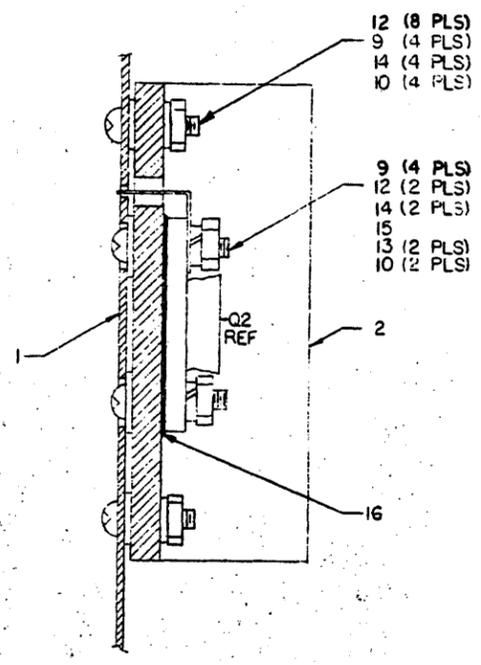
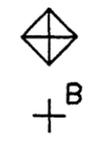
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 SEPTEMBER • 1978

5413692-0-0 2 1

COMPONENT SIDE VIEW



SECTION 'A-A' 2 PLACES



NOTES: THIS BOARD MUST BE U.L. APPROVED

CHK CHANGE NO	REV	DATE	BY
5413692-0-1	B	18 Jun 77	C. B. ...
			B. KRASNICK

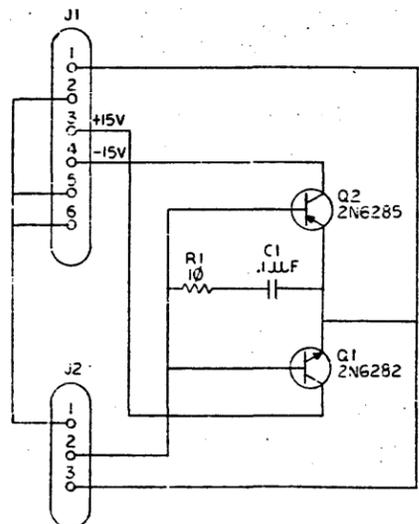
ETCH REV. 8	P.C. DESIGN DATA BASE REV. 8L
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SIGNATURES		DATE	digital
DRN. J. Fitzgerald		10 Nov 76	
CHK'D. C. Bowman		3 Nov 77	
ENG. S. ...		2/2/79	
PROJ. ENG. S. ...		2/2/79	TITLE
PROD. Kit ...		1-7-79	CAPSTAN DRIVER ED.
SCALE 2/1			SIZE CODE
SHT. 1 OF 4			NUMBER
NEXT HIGHER ASSY: B-00-5413692-0			5413692-0-0

1 MS# 160437

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D 5413692-0-1 2



REV. NO.	REV.
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02	B
03	B
04	B
05	B
06	B
07	B
08	B
09	B
10	B

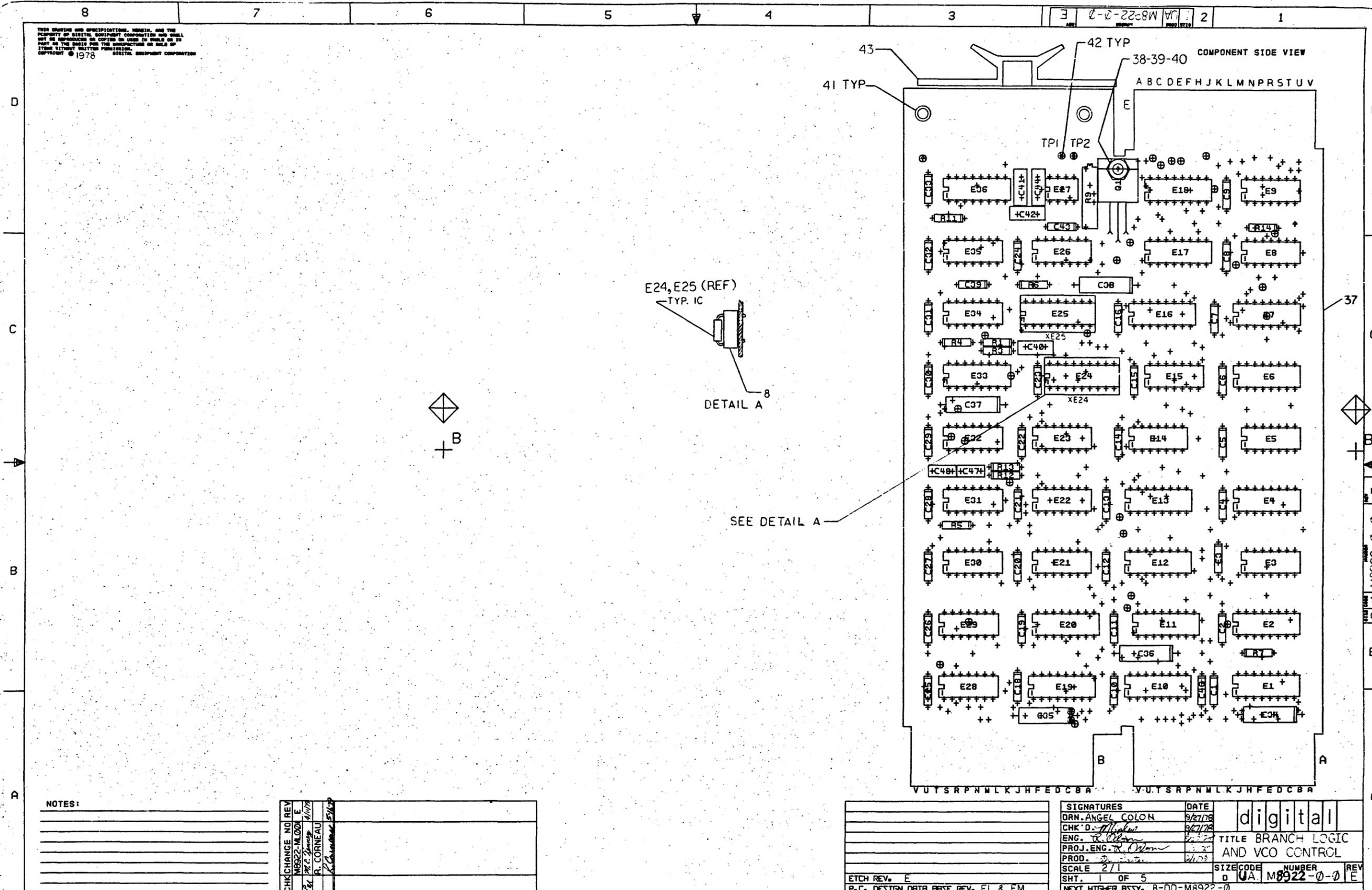
DRG. NO.	DATE	REV.	FIG. SY. USED ON	DIGITAL
R-DO-5413692-0-1	11/17/77	2-1-77	TS11	
ENGR. G. K.	1/2/77		TITLE	
PROJ. ENG. G. K.	1/2/77		CAPSTAN DRIVER BOARD	
PROJ. ENG. G. K.	1-17-77		NEXT HIGHER ASSY.	
R-DO-5413692-0-1	SIZE	CODE	NUMBER	REV.
	D	CS	5413692-0-1	B
SHEET	OF	DIST.		

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1		5013691-00	DRILL & ETCH BD	1	
2		1216232-00	HEAT SINK 3 X 4-1/8	2	
3		1516120-01	PNP 160W SI 60 750 DA	1	Q2
4		1516120-00	PNP 160W SI 60 750 DA	1	Q1
5		1000030-00	.1 MFD 100V 20% Z5U DISC	1	C1
6		1212297-03	MATE-N-LOK 3PIN UNIV HEADER	1	J2
7		1212297-05	MATE-N-LOK 6PIN UNIV.	1	J1
8		1301317-00	10 1/4W 5% CC	1	R1
9		9007793-01	SCREW,PAN,PHIL, 6-32X 9/16	4	
10		9006558-00	NUT,HEX, 6-32X5/16AF X 7/	12	
11		9006656-00	*** THIS ITEM IS NOT USED ***	-	
12		9006022-01	SCREW,PAN,PHIL, 6-32X 3/8	8	
13		9007801-00	WASHER, LOCK, S.S. #6	4	
14		9008992-00	WASHER, FLAT, WHITE NYLON, 375 X	20	
15		9009676-00	TERM LUG 1POS SOLDER	2	
16		9008268-00	COMPOUND, THERMAL JOINT	8 A/R	
17		9107636-55	WIRE,STRND,26AWG,IPVC UL1429	A/R	

REVISION HISTORY		BASIC PART NO: 5413692		DRN:	J,FITZGERALD	DATE:	25-SEP-78	D I G I T A L			
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	P,BOSSMAN	DATE:	08-NOV-78	TITLE	PARTS LIST		
---	INIT	A	SECTION VARIATION INDEX	CHK'D:	P,BOSSMAN	DATE:	08-NOV-78	CAPSTAN DRIVER RD			
B,K	5413692-AL001	B	[A] 00	DES,ENG:	B,KRASNICK	DATE:	08-NOV-78	DOCUMENT NUMBER			
			[B]	RESP,ENG.:	B,KRASNICK	DATE:	25-SEP-78	SIZE CODE NUMBER	REV		
			[C]	MFG,ENG.:	P,BARTON	DATE:	08-NOV-78	K PL 5413692-0-DBP	B		
			[D]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:	EDIT #		
			[E]	D-UA-5413692-0-0		TS11		Z0300B,PLS	9		
			[F]								
			[G]								
			[H]								
			[I]								
			[J]								
			[K]								
			[L]								
			[M]								
			[N]								

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NOTES:

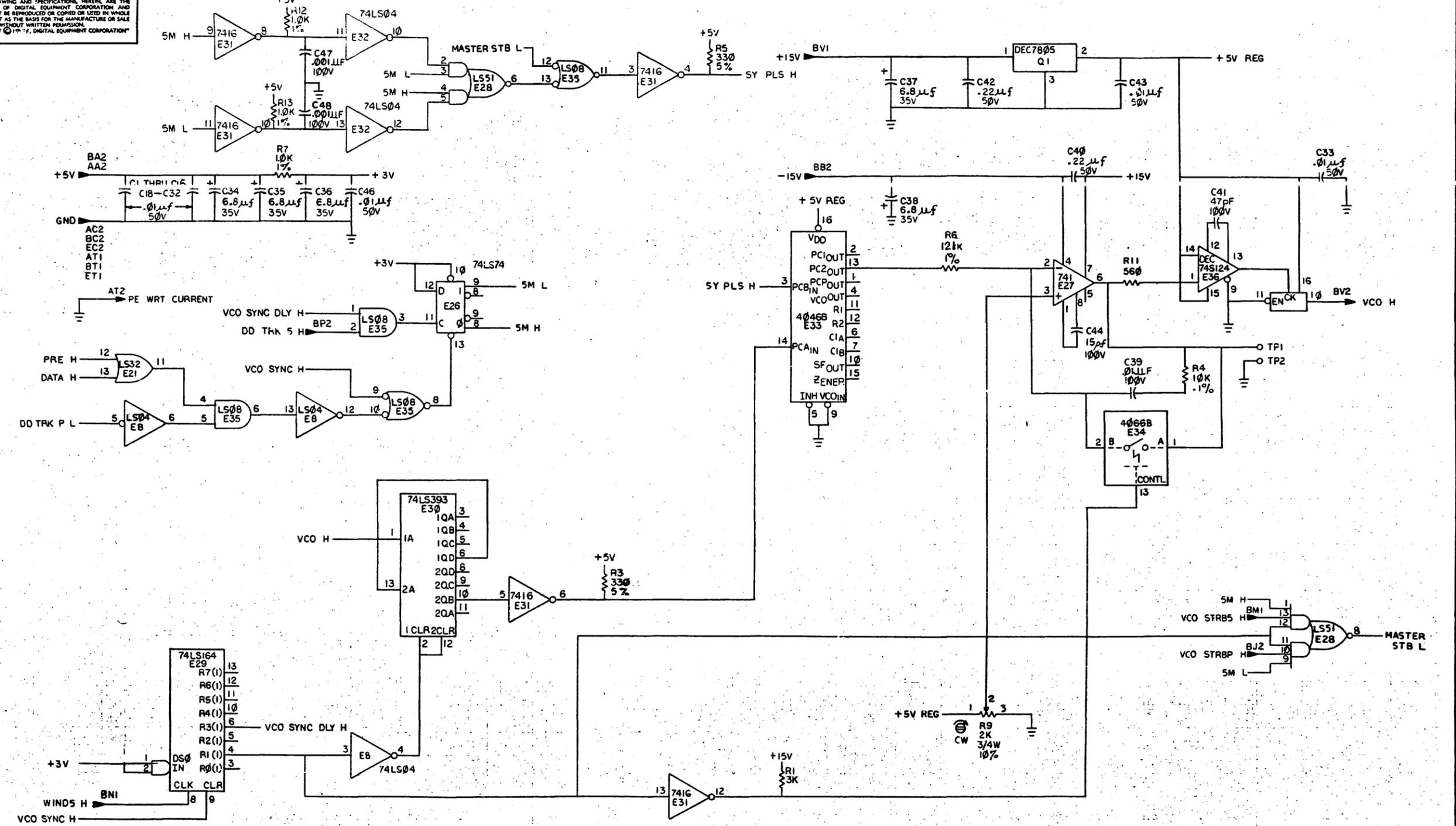
CHG	NO	REV	DATE	BY	CHK

ETCH REV. E
P.C. DESIGN DATA BASE REV. EL & EM

SIGNATURES	DATE	REV
DRN. ANGEL COLON	9/27/78	
CHK'D. <i>[Signature]</i>	9/27/78	
ENG. <i>[Signature]</i>	9/27/78	
PROJ. ENG. <i>[Signature]</i>	9/27/78	
PROD. <i>[Signature]</i>	9/27/78	
SCALE 2/1		
SHT. 1 OF 5		
NEXT HIGHER ASSY. B-DD-M8922-0		

digital
TITLE BRANCH LOGIC
AND VCO CONTROL
SIZE CODE NUMBER
d UA M8922-0-0 E
REV

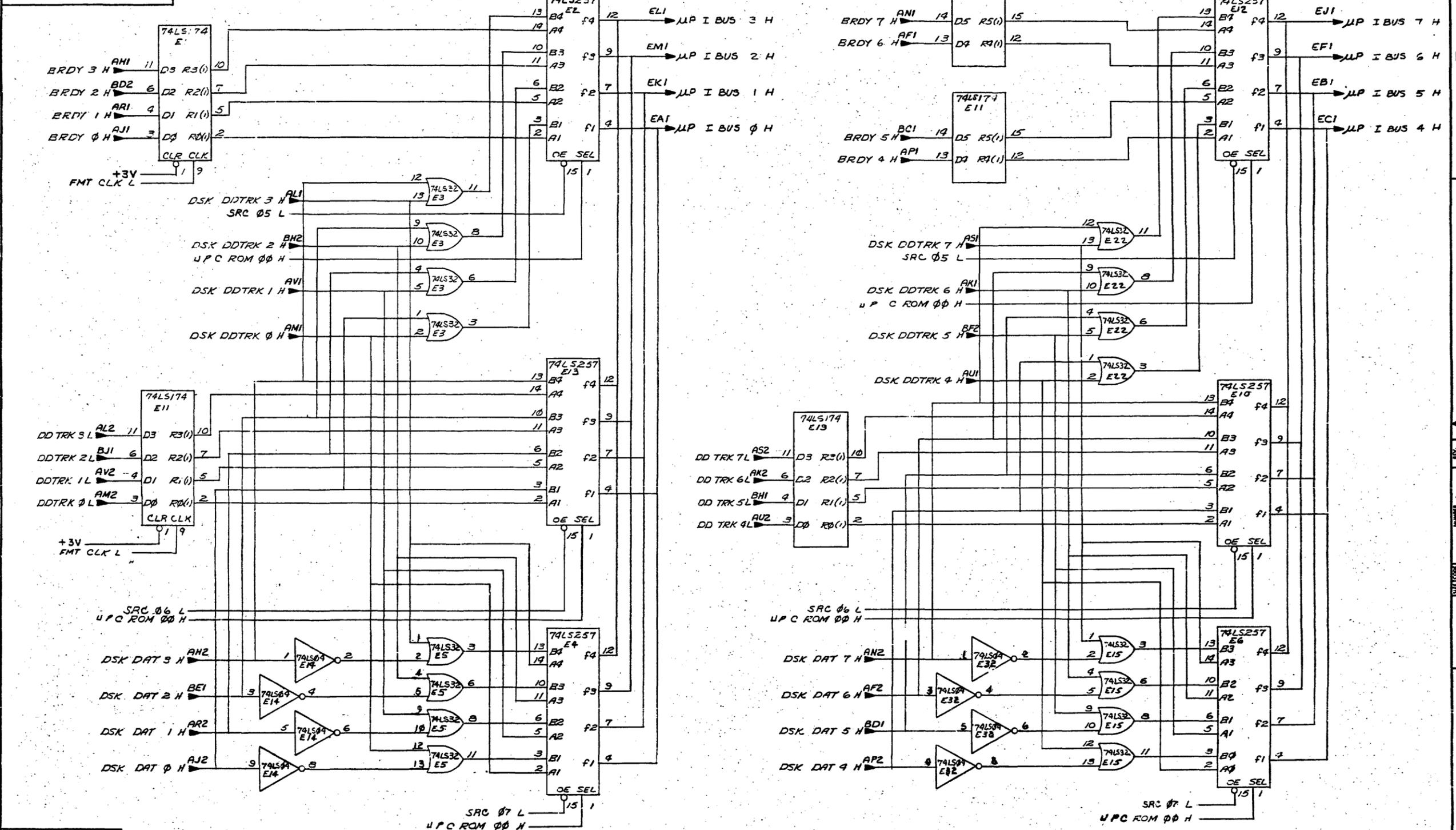
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REV.	CHG.	BY	DATE
1	1	R. CORNEAU	11 MAY 79
2	1	R. CORNEAU	5-16-79

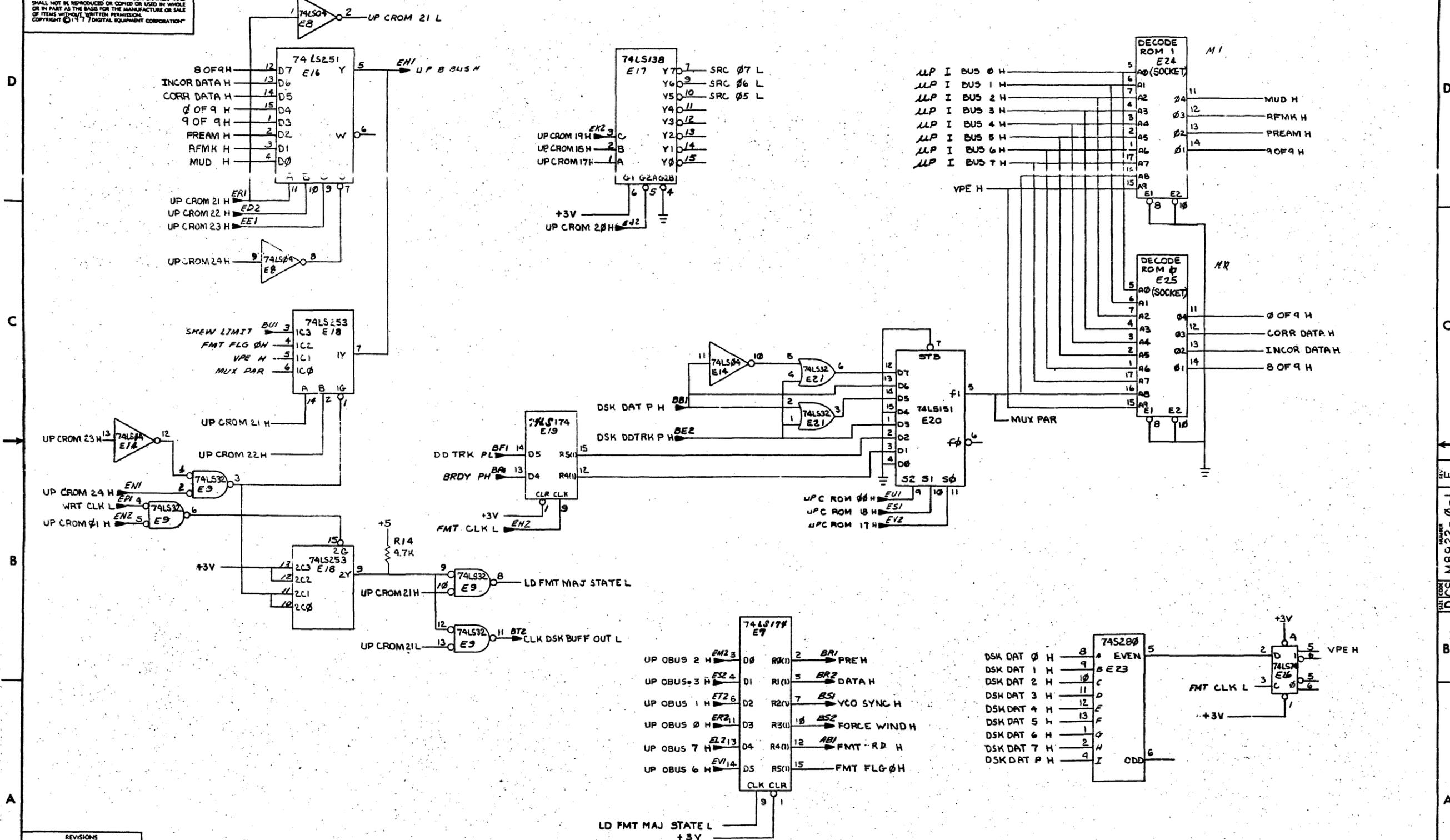
DRN DA PHILIPPS	4/26/78	FIRST USED ON	TS11
CHK'D BY	22 Nov 78	TITLE	BRANCH LOGIC & VCO CONTROL
ENGR	22 Nov 78	SCALE	NONE
PROL ENG	20 Nov 78	SIZE	D
PROD	21/1/79	CODE	CS
NEXT HIGHER ASSY.		NUMBER	M8922-0-1
SCALE	NONE	REV.	E
SHEET	1 OF 3	DIST.	

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REVISIONS		
CHK	CHANGE NO.	REV.

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REVISIONS		
CHK	CHANGE NO.	REV.

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
1	37		5012776-00	M8922	1		
2			1000011-00	47.0 MMF 100V 5%200PPM MICA	1		C41
3			1000042-00	1000.0 MMF 100V 5%200PPM MICA	1		C47, C48
4			1001610-00	.01 MFD 50V +80-20% 25U CER	34		C1-C16, C18-C33, C46, C43
5			1002427-00	15.0 MMF 100V 5%200PPM MICA	1		C44
6			1005306-00	6.8MFD 35V 10% S. TANT	5		C34-C38
7			1005784-00	.01 MFD 100V 10% MYLR	1		C39
8			1010274-00	.22 MFD 50V +80-20% Z5U CER	2		C40, C42
9			1211666-00	SKT, IC 18PIN DIP GOLD PLATE	2		XE24, XE25
10			1300432-00	3.0 K .25 W 5.0 % CC	1		R1
11			1300447-00	4.70 K .25 W 5.0 % CC	1		R14
12			1301890-00	560.0 .25 W 5.0 % CC	1		R11
13			1302748-00	1.0 K .25 W 1.0 % RN55C-F 5	3		R7, R12, R13
14			1303438-00	121.0 K .25 W 1.0 % RN55D-F10	1		R6
15			1305431-00	10.0 K .25 W .10% RN55E-B 2	1		R4
16			1309143-08	2.0 K .75 W10.0 % POT	1		R9
17			1909928-00	7416 INVERTER GATE-HEX 1I	1		E31
18			1910298-00	741 OP AMP GEN PURP. COM	1		E27
19			1911573-00	745280 PARITY GEN/CHKR, 9BIT	1		E23
20			1911911-00	DEC 745124 OSCILLATOR, DUAL VOLT	1		E36
21			1912536-00	DEC 7805 VOLT REG. FIX +5V	1		Q1
22			1912646-00	LS253 MUX 1 OF 4 (DUAL)	1		E18
23			1912647-00	LS257 MUX 1 OF 2 (QUAD)	6		E2, E4, E6, E10, E12, E13
24			1912648-00	LS251 MUX 8 INPUT, TRI-STA	1		E16
25			1912697-00	LS174 FF-D HEX W/CLEAR	4		E1, E7, E11, E19
26			1912803-00	74LS04 INVERTER GATE, HEX	3		E8, E14, E32
27			1912805-00	LS08 AND GATE-QUAD 2IN, PO	1		E35
28			1912816-00	LS32 OR GATE-QUAD 2IN, POS	6		E3, E5, E9, E15, E21, E22
29			1912820-00	LS51 A-O-I GATE 2-W'DE 2I	1		E28
30			1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1		E26

REVISION HISTORY		BASIC PART NO: M8922		DRN: H. RICHER	DATE: 20-FEB-78	D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D: P. BOSSMAN	DATE: 21-JUN-78	TITLE PARTS LIST	
	INIT	D	SECTION VARIATION INDEX			BRANCH LOGIC & VCO CONTROL	
	R.C. M8922-ML001	E	(A) 00	DES. ENG: R. ODOM	DATE: 10 NOV 78	DOCUMENT NUMBER	
			(B)	RESP. ENG.: R. ODOM	DATE: 10 NOV 78	SIZE: CODE: NUMBER	REV
			(C)	MFG. ENG.: P. BARTON	DATE: 10 NOV 78	K PL M8922-0-DBP	E
			(D)	ASSEMBLY NUMBER: D-UA-M8922-0-0	TOP DOCUMENT NUMBER: T504	FILE NAME: Z0564E.PLS	EDIT # 23
			(E)				
			(F)				
			(G)				
			(H)				
			(I)				
			(J)				
			(K)				
			(L)				
			(M)				
			(N)				

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AUTOMATED BY PRTLST.1D(10)

PARTS LIST

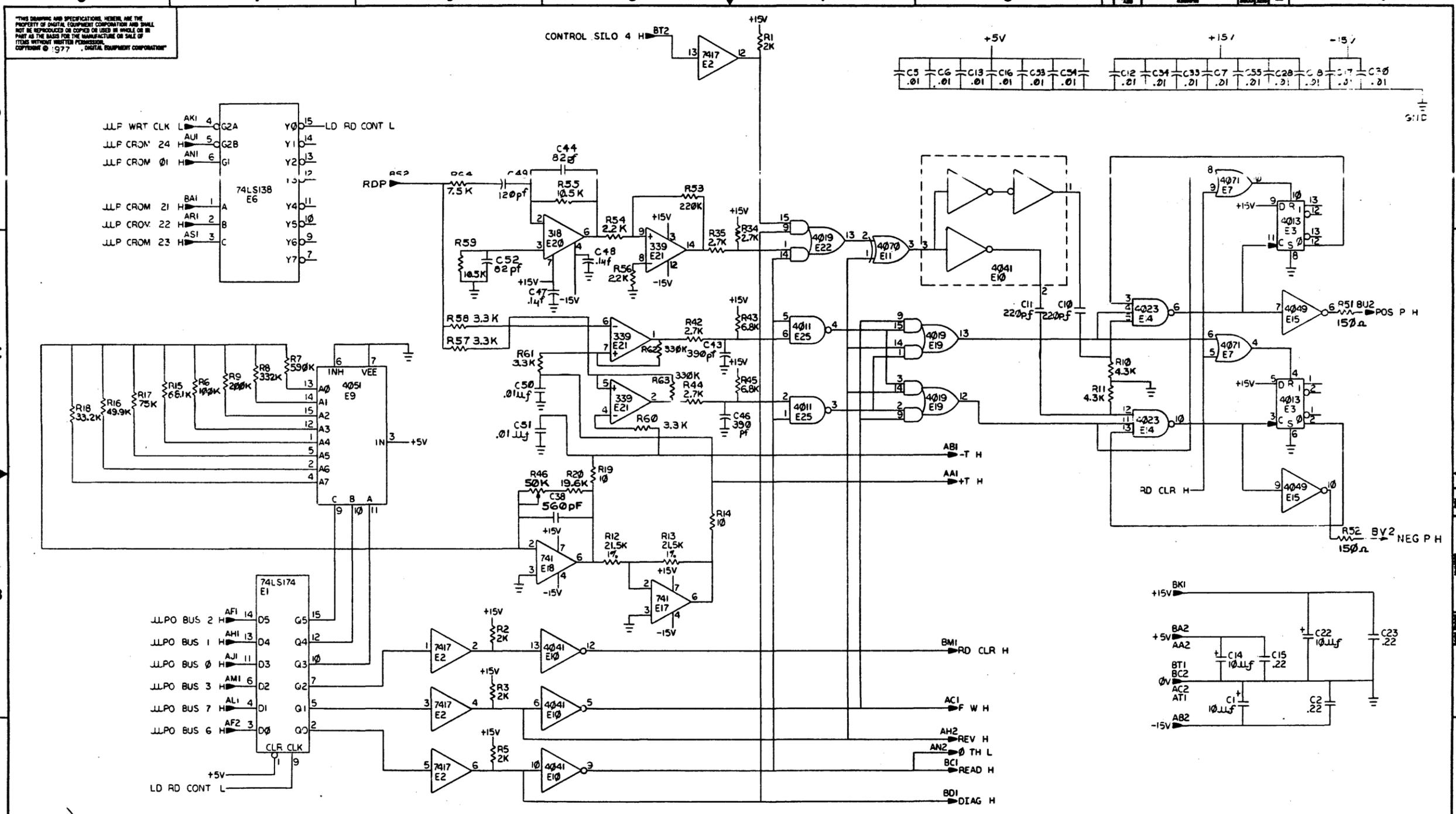
SHEET A2 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
31	30		1912842-00	LS138 DECODER-THREE INPUT,	1	E17
32	31		1912844-00	LS151 MUX 1 OF 8 & DATA	1	E20
33	32		1912850-00	LS164 SHIFT REG. 8BIT SERI	1	E29
34	33		1914451-00	74LS393 COUNTER.BINARY.4BIT	1	E30
35	34		2113625-00	40468 PHASE-LOCKED LOOP	1	E33
36	35		2113632-00	40668 BILATERAL SWITCH-QUA	1	E34
37	36		23383F1-00	F1-01	1	E25
38	37		23384F1-00	F1-01	1	E24
39	38		9006009-04	SCREW,BIND,SLOT 4-40X 1/4 SS	1	
40	39		9006556-00	NUT,HEX 4-40X1/4 AF X 3/	1	
41	40		9006682-00	WASHER, LOCK, S.S. #4	1	
42	41		9006732-00	EYELET,ROLL FLANGE .1210DX .219	2	TP1,TP2
43	42		9006735-00	EYELET, FUNNEL FLANGE .059 OD X	2	
44	43		9008337-06	HANDLE, FLIP CHIP, MAGENTA	1	
45	44		1300295-00	330.0 .25 W 5.0 X CC	2	R3,R5

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							BRANCH LOGIC & VCO CONTROL		K	FL	M8922-0-DBP	E

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H 1-0-2260W 2

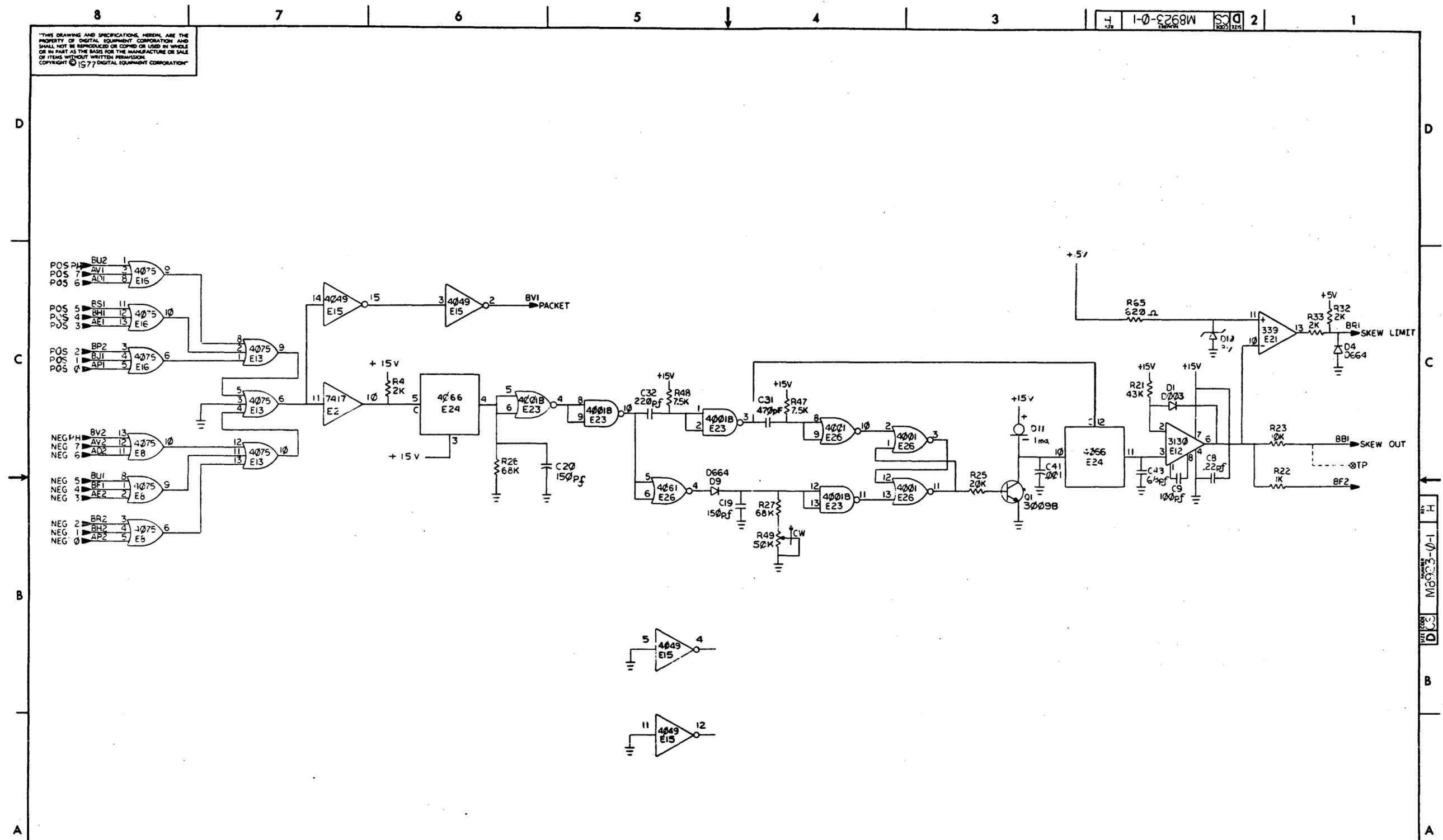


REV.	DATE	BY	CHKD.
1	11/10/77	J. POLLINE	M. G. MITCHELL
2	11/10/77	R. NUTE	J. POLLINE
3	11/10/77	R. NUTE	J. POLLINE
4	11/10/77	R. NUTE	J. POLLINE
5	11/10/77	R. NUTE	J. POLLINE
6	11/10/77	R. NUTE	J. POLLINE
7	11/10/77	R. NUTE	J. POLLINE
8	11/10/77	R. NUTE	J. POLLINE

DRN. <i>[Signature]</i>	FIRST USED ON	digital
CHK'D. <i>[Signature]</i>	TS04	
ENG. <i>[Signature]</i>	TITLE	
PROJ. ENGR. <i>[Signature]</i>	READ CONTROL	
PROD. <i>[Signature]</i>		
NEXT HIGHER ASSY.		
B-00-M8923-0	SIZE CODE	NUMBER
SCALE	D CS	M8923-0-1
SHEET 1 OF 2	DIST.	REV. H

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M8923-0-1 2



REVISIONS		
CHK	CHANGE NO.	REV

TITLE: READ CONTROL TS04 SIZE/COOE: DCS NUMBER: M8923-0-1 REV: H
 SCALE: / / SHEET 2 OF 2 DIST. / /

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
1	1	D-CS-M8923-0-1		READ CONTROL			REF
2	2	D-UA-M8923-0-0		READ CONTROL			REF
3	3	B-DD-M8923-0-0		READ CONTROL			REF
4	4	D-MD-5012847-0-0		DRILL & ETCH DRAWING			REF
5	5		5012847-00	M8923	1		
6	6		1000017-00	50.0 MMF 100V 5%200PPM MICA	1		C13
7	7		1000016-00	100.0 MMF 100V 5%200PPM MICA	1		C9
8	8		1000019-00	150.0 MMF 100V 5%200PPM MICA	2		C19, C20
9	9		1001610-00	.01 MFD 50V +80-20% Z5U CER	17	CONT	C5, C6, C7, C12, C13, C16-C18, C28, C30, C33, C34, C50, C51, C53-C55
10	10		1004813-00	10 MFD 20V 10% S.TANT	3		C1, C14, C22
11	11		1010274-00	.22 MFD 50V +80-20% Z5U CER	4		C2, C8, C15, C23
12	12		1100100-00	0 003 TR= 50NS PIV= 25V GN	1		D1
13	13		1100114-00	0 664 QS-75PCB PIV= 25V SP	2		D4, D9
14	14		1300365-00	1.0 K .25 W 5.0 % CC	1		R22
15	15		1300426-00	2.70 K .25 W 5.0 % CC	3		R35, R42, R44
16	16		1300479-00	10.0 K .25 W 5.0 % CC	1		R23
17	17		1301317-00	10.0 K .25 W 5.0 % CC	2		R14, R19
18	18		1301327-00	68.0 K .25 W 5.0 % CC	2		R27, R28
19	19		1301422-00	7.50 K .25 W 5.0 % CC	2		R48, R47
20	20		1301423-00	6.80 K .25 W 5.0 % CC	3		R34, R43, R45
21	21		1302388-00	2.0 K .25 W 5.0 % CC	7		R1-R5, R32, R33
22	22		1302391-00	20.0 K .25 W 5.0 % CC	1		R25
23	23		1305336-00	200.0 K .25 W 1.0 % RN55D-F10	1		R9
24	24		1303155-00	21.50 K .25 W 1.0 % RN55D-F10	2		R12, R13
25	25		1313344-00	75.0 K .25 W 1.0 % RN55D-F10	1		R17
26	26		1305252-00	68.10 K .25 W 1.0 % RN55D-F10	1		R15
27	27		1303044-00	100.0 K .25 W 1.0 % RN55D-F10	1		R6
28	28		1309143-09	*** THIS ITEM IS NOT USED ***	-		
29	29		1309143-13	50.0 K .75 W10.0 % POT	2		R49, R46

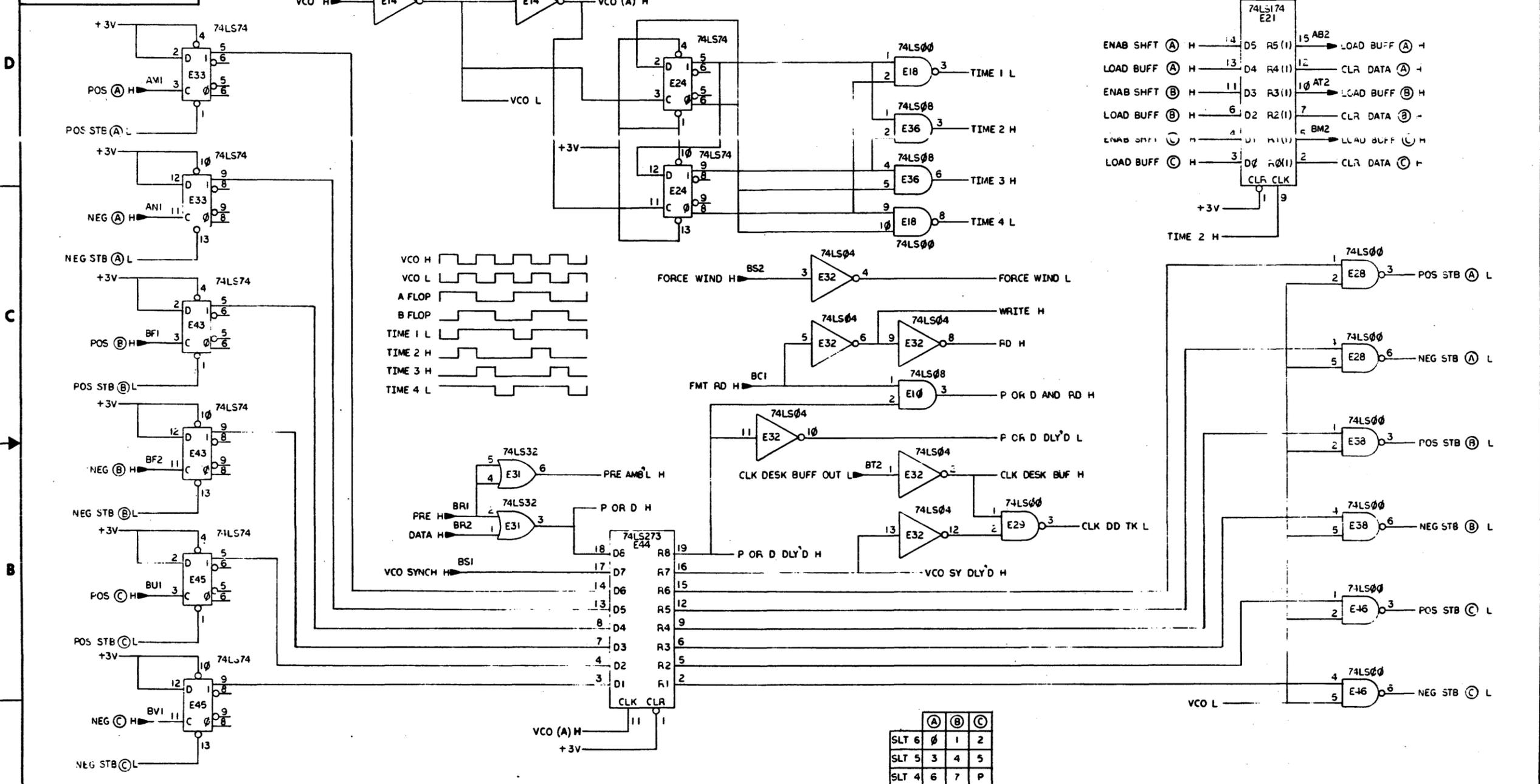
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M.F	M8923-ML001	E	SECTION VARIATION INDEX	DES.ENG:	J.ROLLINS	DATE:	20-SEP-78	READ CONTROL	
RN	M8923-ML002	F	[A] 00	RES.ENG.:	J.ROLLINS	DATE:	20-SEP-78	DOCUMENT NUMBER	
DJ	M8923-ML003	H	[B]	RESP.ENG.:	J.ROLLINS	DATE:	20-SEP-78	SIZE: CODE: NUMBER	REV
			[C]	MFG.ENG.:	P.BARTON	DATE:	20-SEP-78	K PL M8923-0-DBP	H
			[D]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:	EDIT #
			[E]	0-UA-M8923-0-0		TS04		Z1482H.PLS	12
			[F]						
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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
30	30		1305420-00	33.20 K .25 W 1.0 % RN550-F10	1		R19
31	31		1301732-00	620.0 .50 W 5.0 % CC	1		R65
32	32		1305427-00	590.0 K .25 W 1.0 % RN550-F10	1		R7
33	33		1312985-00	332.0 K .25 W 1.0 % RN550-F10	1		R8
34	34		1312988-00	49.90 K .25 W 1.0 % RN550-F10	1		R16
35	35		1503100-00	DEC30098 NPN 200MW SI 20 25	1		Q1
36	36		1909929-00	7417 BUFFER GATE-HEX 1INP	1		E2
37	37		1910298-00	741 OP AMP GEN PURP. COM	2		E17,E18
38	38		1910735-02	318 OP AMP	1		E20
39	39		1912108-00	339 VOLT CMPRTR, QUAD	1		E21
40	40		1912697-00	LS174 FF-D HEX W/CLEAR	1		E1
41	41		1912842-00	LS138 DECODER-THREE INPUT,	1		E6
42	42		2113603-00	4001UBNOR GATE-QUAD 2IN CM	1		E26
43	43		2113607-00	4011UBNAND GATE-QUAD 2IN C	1		E25
44	44		2113609-00	40138 FF-D DUAL W/SET/RESE	1		E3
45	45		2113612-00	40198 AND-OR SELECT GATE-Q	2		E19,E22
46	46		2113613-00	4023UBNAND GATE, TRIPLE, 3IN	1		E14
47	47		2113621-00	4041UB BUFFER GATE, QUAD TR	1		E10
48	48		2113627-00	4049UBINVERTER-HEX BUFFER-	1		E15
49	49		2113629-00	4051B MULTIPLEXER 8CHAN CM	1		E9
50	50		2113632-00	4066B BILATERAL SWITCH-QUA	1		E24
51	51		2113634-00	4070B X-OR GATE-QUAD CMOS	1		E11
52	52		2113638-00	4075B OR GATE-TRIPLE 3IN C	3		E8,E13,E16
53	53		2113644-00	*** THIS ITEM IS NOT USED ***	-		
54	54		1914466-00	3130E OP AMP MOS/FET IN,CM	1		E12
55	55		9006732-00	EYELET, ROLL FLANGE .1210DX .219	4		
56	56		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2		
57	57		2113635-00	4071B OR GATE-QUAD 2IN CMO	1		E7
58	58		1302389-00	4.30 K .25 W 5.0 % CC	2		R10,R11
59	59		1304838-00	43.0 K .25 W 5.0 % CC	1		R21
60	60		1001739-00	*** THIS ITEM IS NOT USED ***	-		
61	61		1118180-00	CR 100 POV=100V 1MA	1		D11
62	62		1113295-00	IN 4372A VZ= 3.0 5% .40W	1		D10
63	63		1300250-00	150.0 .25 W 5.0 % CC	2		R51,R52
64	64		1300417-00	2.20 K .25 W 5.0 % CC	2		R54,R55
65	65		1300439-00	3.30 K .25 W 5.0 % CC	4		R57,R58,R60,R61
66	66		1305322-00	7.50 K .25 W 1.0 % RN550-F10	1		R64
67	67		1312987-00	10.50 K .25 W 1.0 % RN550-F10	2		R55,R59
68	68		1302092-00	220.0 K .25 W 5.0 % CC	1		R53
69	69		1302091-00	330.0 K .25 W 5.0 % CC	2		R62,R63
70	70		1014169-00	1000.0 MMF 100V 1%200PPM MICA	1		C41
71	71		1000018-00	120.0 MMF 100V 5%200PPM MICA	1		C49
72	72		1000015-00	82.0 MMF 100V 5%200PPM MICA	2		C44,C52
73	73		1001631-00	390.0 MMF 100V 5%200PPM MICA	2		C45,C46
74	74		1010978-36	.1 MFD 50V 10% CER	2		C47,C48
75	75		1000021-00	220.0 MMF 100V 5%200PPM MICA	3		C10,C11,C32
76	76		1309419-00	19.60 K .25 W 1.0 % RN550-F10	1		R20
77	77		1305265-00	*** THIS ITEM IS NOT USED ***	-		

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							READ CONTROL		K	PL	M8923-0-DBP	H

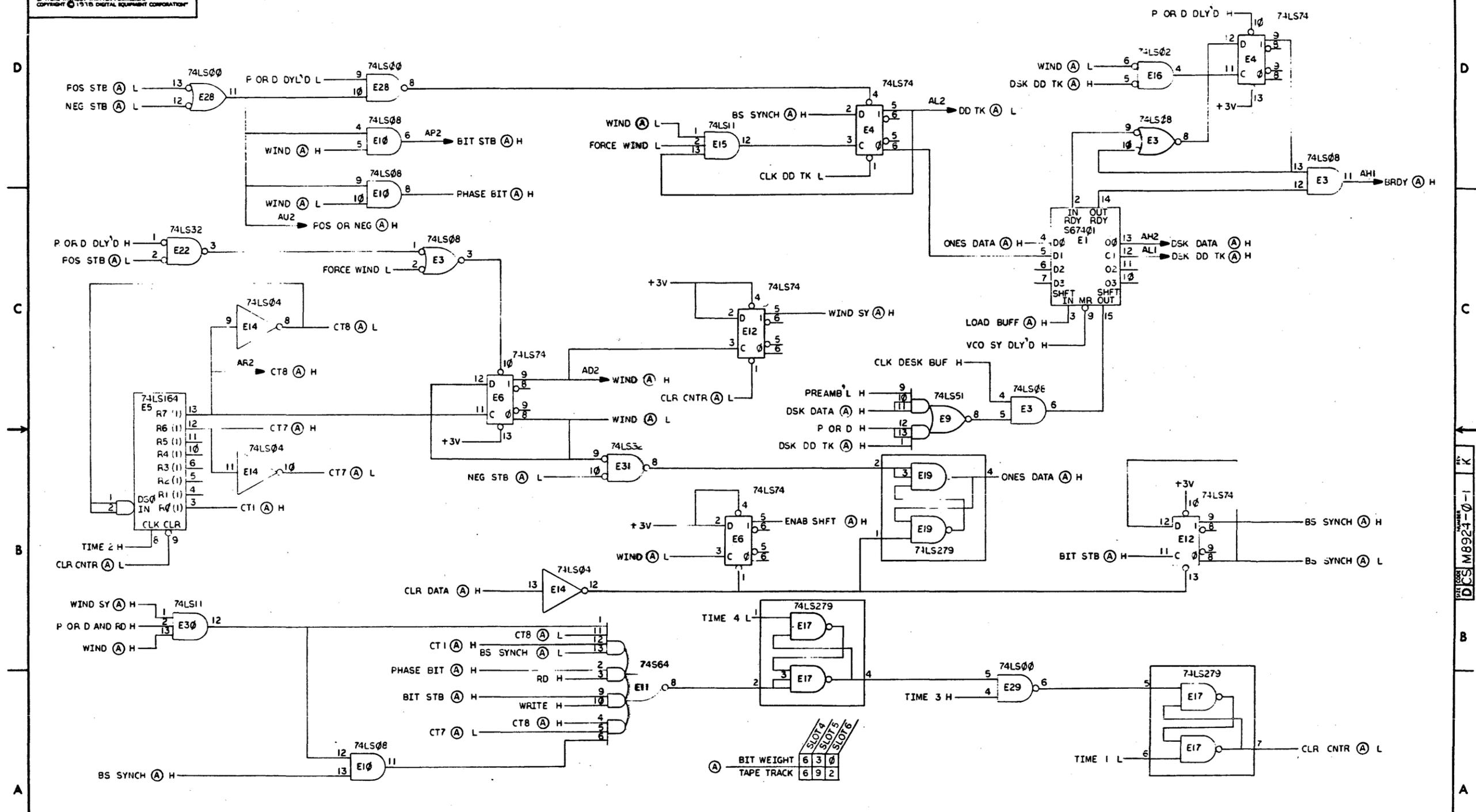
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REV.							
1	2	3	4	5	6	7	8
J. COLLINS							
M. CASTELLANOS							

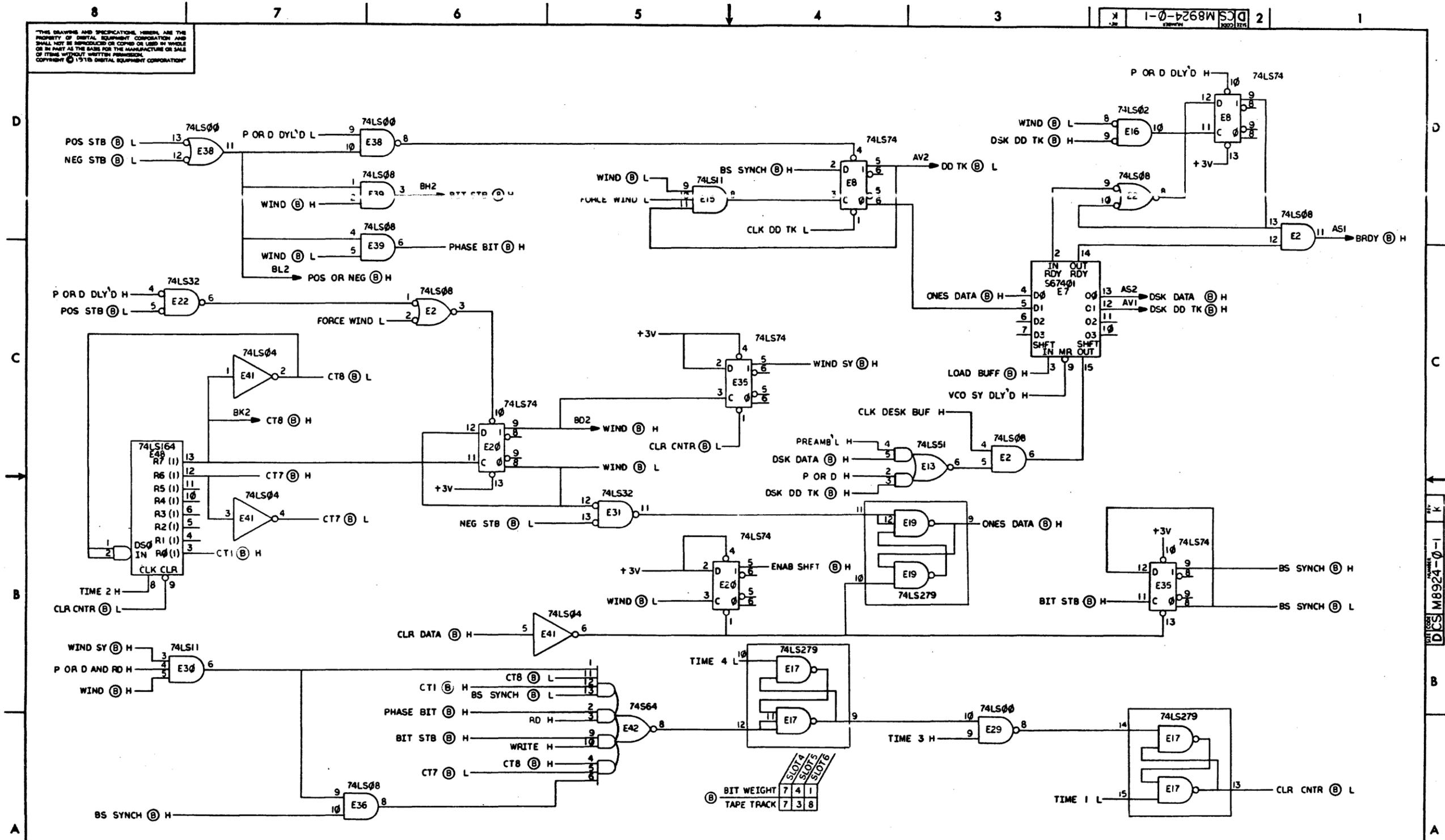
DRN. 1000000	1-24-78	FIRST USED ON	TS04
CHK'D	3-2-78	TITLE	P. E. FORMATTER
ENGR. J. COLLINS	3-2-78	SCALE	NONE
PROJ. ENGR. J. COLLINS	3-2-78	SIZE	CODE
PROD. PLAN. J. COLLINS	3-2-78	NUMBER	M8924-0-1
NEXT HIGHER ASSY.		REV.	K
B-DD-M8924-0		SHEET	1 OF 4
DIST.			

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1-0-268W SCS 2



DCS M8924-0-1

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE: P.E. FORMATTER
 SCALE: NONE SHEET: 3 OF 4
 NUMBER: DCS M8924-0-1
 REV: 1

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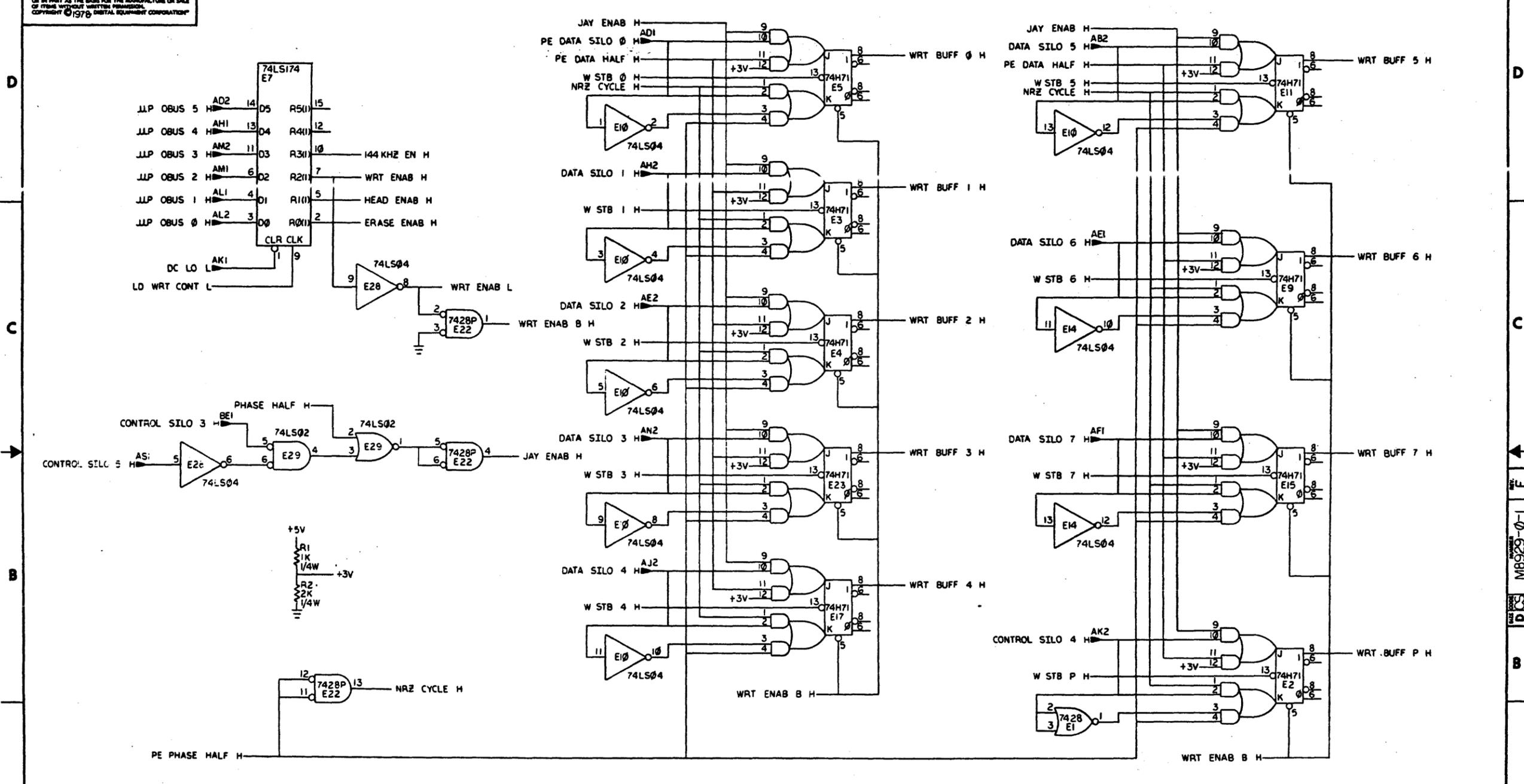
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2	D-UA-M8924-0-0		UNIT ASSY	REF	
3	B-DD-M8924-0-0		DWG DIRECTORY	REF	
4	D-MD-5011956-0-0		DRILL & ETCH DWG	REF	
5		5011956-00	M8924	1	
6		1001610-00	.01 MFD 50V +80-20% 25U CER	48	C1-C48
7		1005306-00	6.8MFD 35V 10% S.TANT	3	C49-C51
8		1300271-00	220.0 .25 W 5.0 % CC	1	R2
9		1300275-00	330.0 .25 W 5.0 % CC	1	R1
10		1910542-00	74S64 A-0-I GATE 4-2-3-2	3	E11,E40,E42
11		1912697-00	LS174 FF-D HEX W/CLEAR	1	E21
12		1912799-00	LS00 NAND-GATE-QUAD 2IN,P	5	E18,E28,E29,E38,E46
13		1912801-00	LS02 NOR-GATE-QUAD 2IN	1	E16
14		1912803-00	774LS04 INVERTER GATE, HEX	3	E14,E32,E41
15		1912805-00	LS08 AND GATE-QUAD 2IN,PO	6	E2,E3,E10,E26,E36,E39
16		1912808-00	LS11 AND GATE-TRIPLE 3IN	2	E15,E30
17		1912816-00	LS32 OR GATE-QUAD 2IN,POS	2	E22,E31
18		1912820-00	LS51 A-0-I GATE 2-WIDE 2I	2	E9,E13
19		1912824-00	LS74 FF-D DUAL,EDGE TRIGG	13	E4,E6,E8,E12,E20,E24,E27, E33-E35,E37,E43,E45
				CONT	
20		1912850-00	LS164 SHIFT REG. 8BIT SERI	3	E5,E47,E48
21		1912863-00	LS273 FF-D OCTAL W/CLEAR	1	E44
22		1912864-00	LS279 LATCH,QUAD-S-R	3	E17,E19,E23
23		1914768-01	FIFO, SLOW (67401)	3	E1,E7,E25
24		9006732-00	EYELET, ROLLED FLANGE, .121 OD X	4	
25		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
26		9105740-55	*** THIS ITEM IS NOT USED ***	-	
27		1000023-00	330.0 MMF 100V 5%200PPM MICA	6	C52-C57
28	D-EC-5011956-0-0		ETCH CUT DRAWING	REF	

REVISION HISTORY		BASIC PART NO: M8924		DRN:	J.ROGERS	DATE:	30-DEC-77	D I G I T A L			
ENG!	ECO NUMBER	REV	SECTION A OF A	CHK'D:	H.RICHER	DATE:	13-JUL-78	TITLE PARTS LIST			
---	INIT	E	SECTION VARIATION INDEX	DES.ENG:	R.CORNEAU	DATE:	13-JUL-78	DOCUMENT NUMBER			
J.R!	M8924-ML001	F	[A] 00	MFG.ENG.:	P.BARTON	DATE:	13-JUL-78	SIZE!	CODE!	NUMBER	REV
BK!	M8924-ML003	J	[B]	ASSEMBLY NUMBER:	D-UA-M8924-0-0	TOP DOCUMENT NUMBER:	B-DD-M8924-0	K	PL	M8924-0-DBP	K
R.N!	M8924-ML004	K	[C]	FILE NAME:	Z0288K.PLS	EDIT #:	22				
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			[E]								
			[F]								
			[H]								
			[J]								
			[K]								
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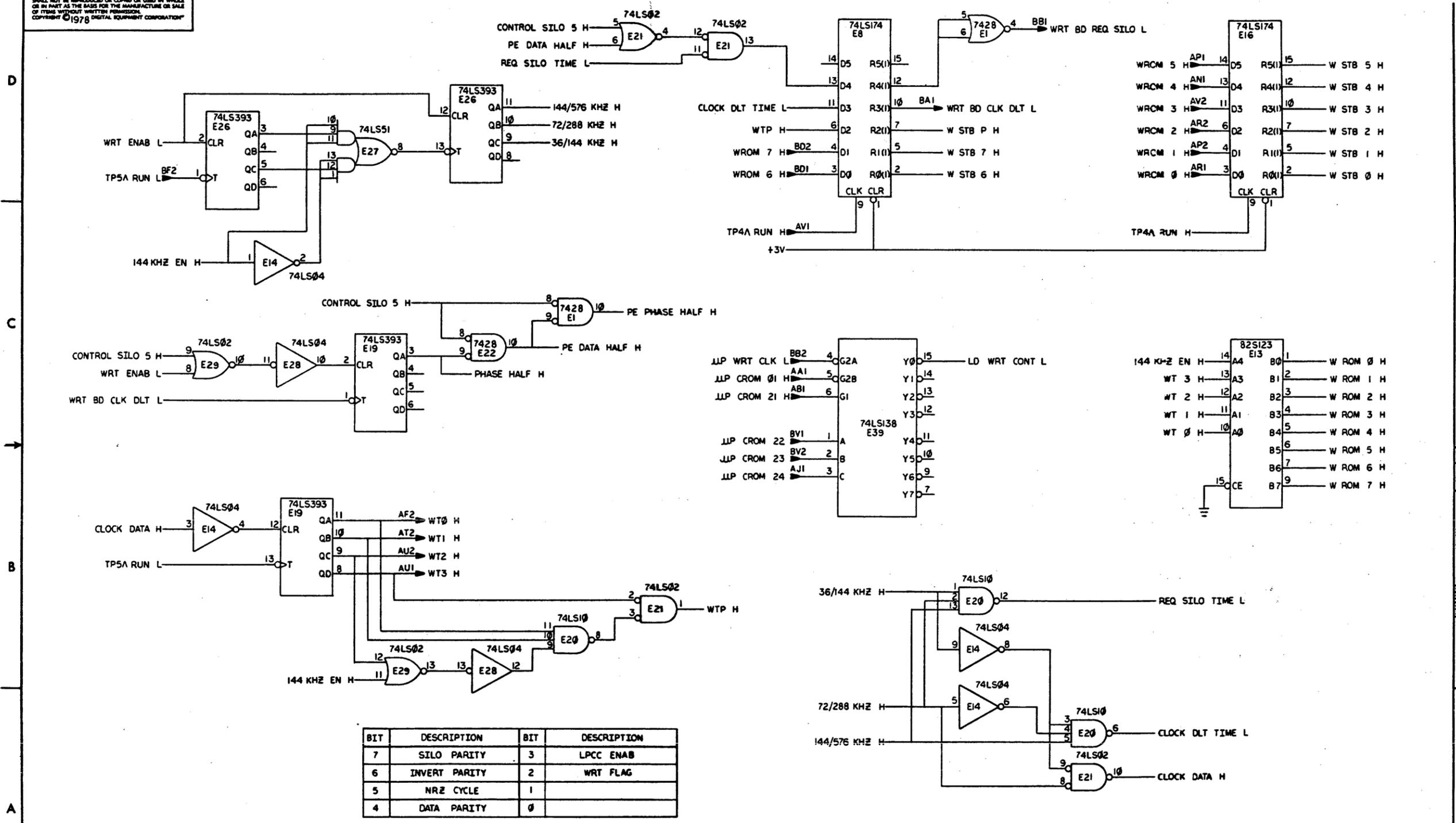
1-0-6268M 2



REV	BY	CHKD	DATE
1	R. CORNEAU	R. CORNEAU	1-25-78
2	R. CORNEAU	R. CORNEAU	1-25-78
3	R. CORNEAU	R. CORNEAU	1-25-78
4	R. CORNEAU	R. CORNEAU	1-25-78
5	R. CORNEAU	R. CORNEAU	1-25-78
6	R. CORNEAU	R. CORNEAU	1-25-78
7	R. CORNEAU	R. CORNEAU	1-25-78
8	R. CORNEAU	R. CORNEAU	1-25-78

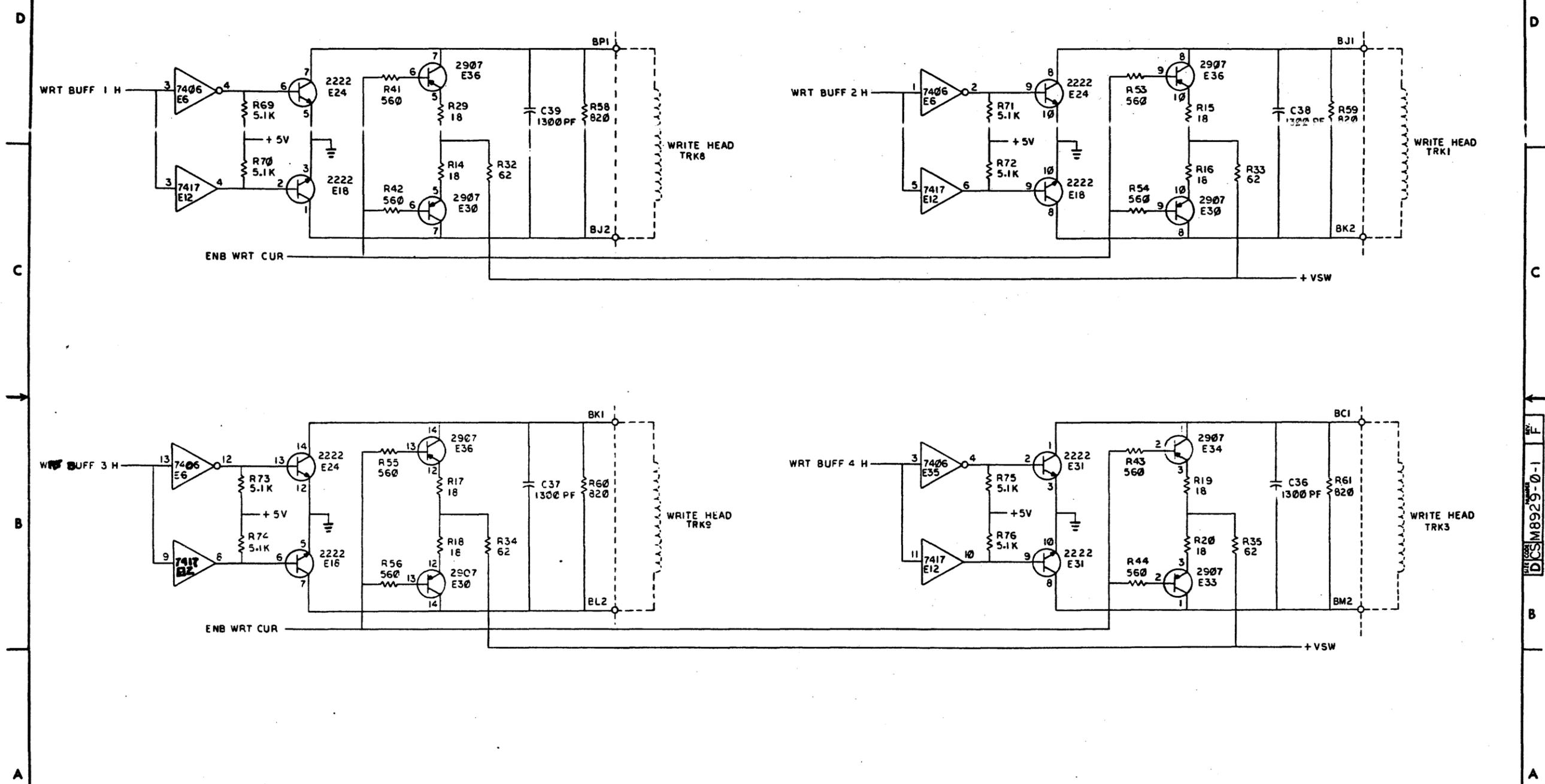
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ENG: <i>[Signature]</i>	TITLE	WRITE CONTROL
PRD: <i>[Signature]</i>	SCALE	
PROD. PLN: <i>[Signature]</i>	SIZE CODE	D CS
NEXT HIGHER ASSY.	NUMBER	M8929-0-1
B-00-M8929-0	REV.	F
SHEET 1 OF 5	DIST.	

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REVISIONS		
CHK	CHANGE NO.	REV.

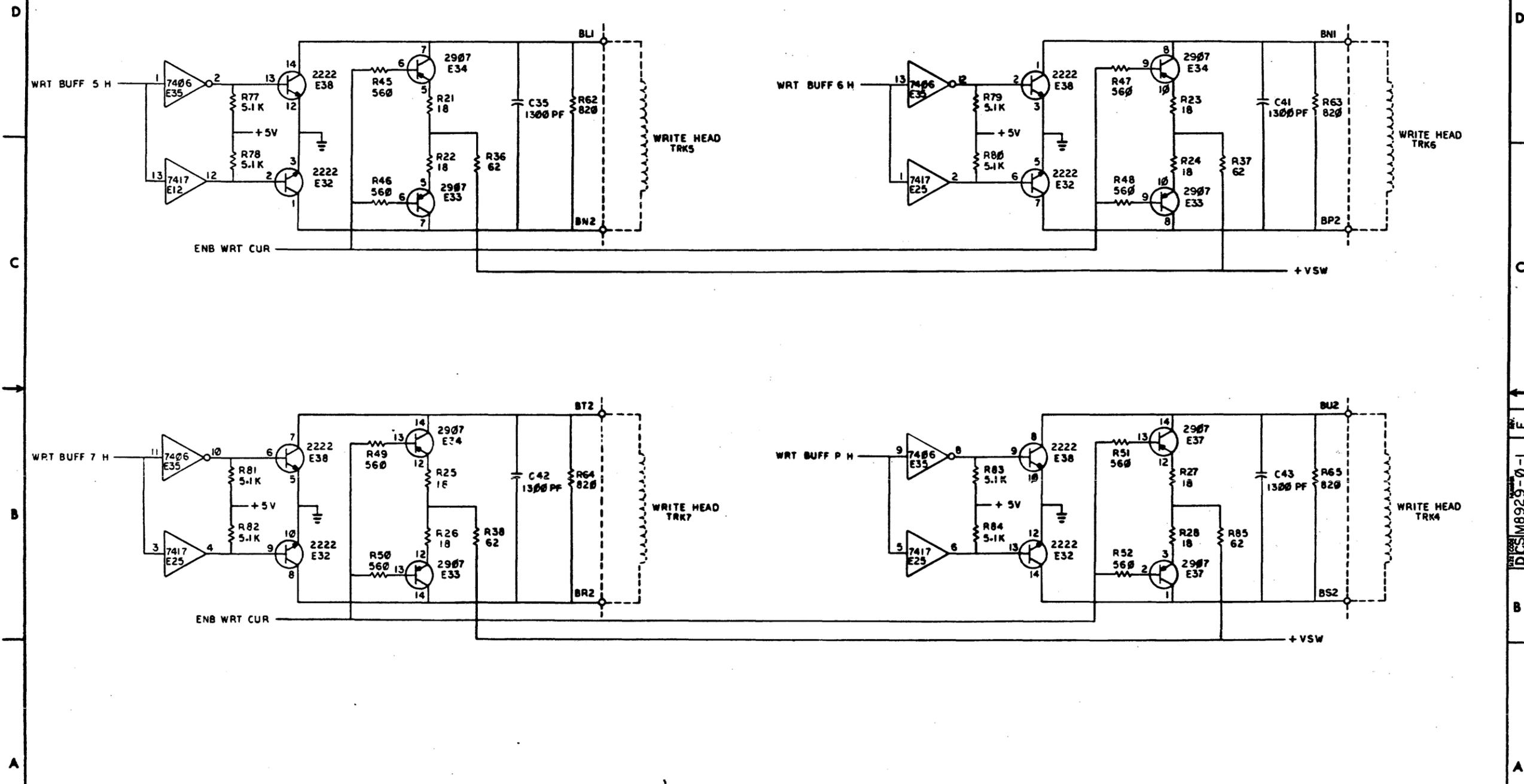
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REVISIONS		
CHK	CHANGE NO.	REV.

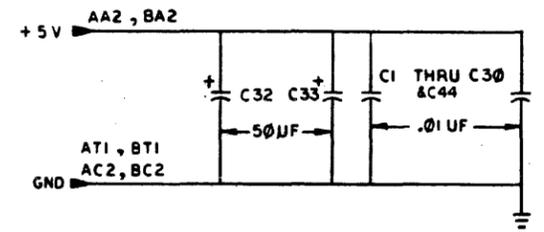
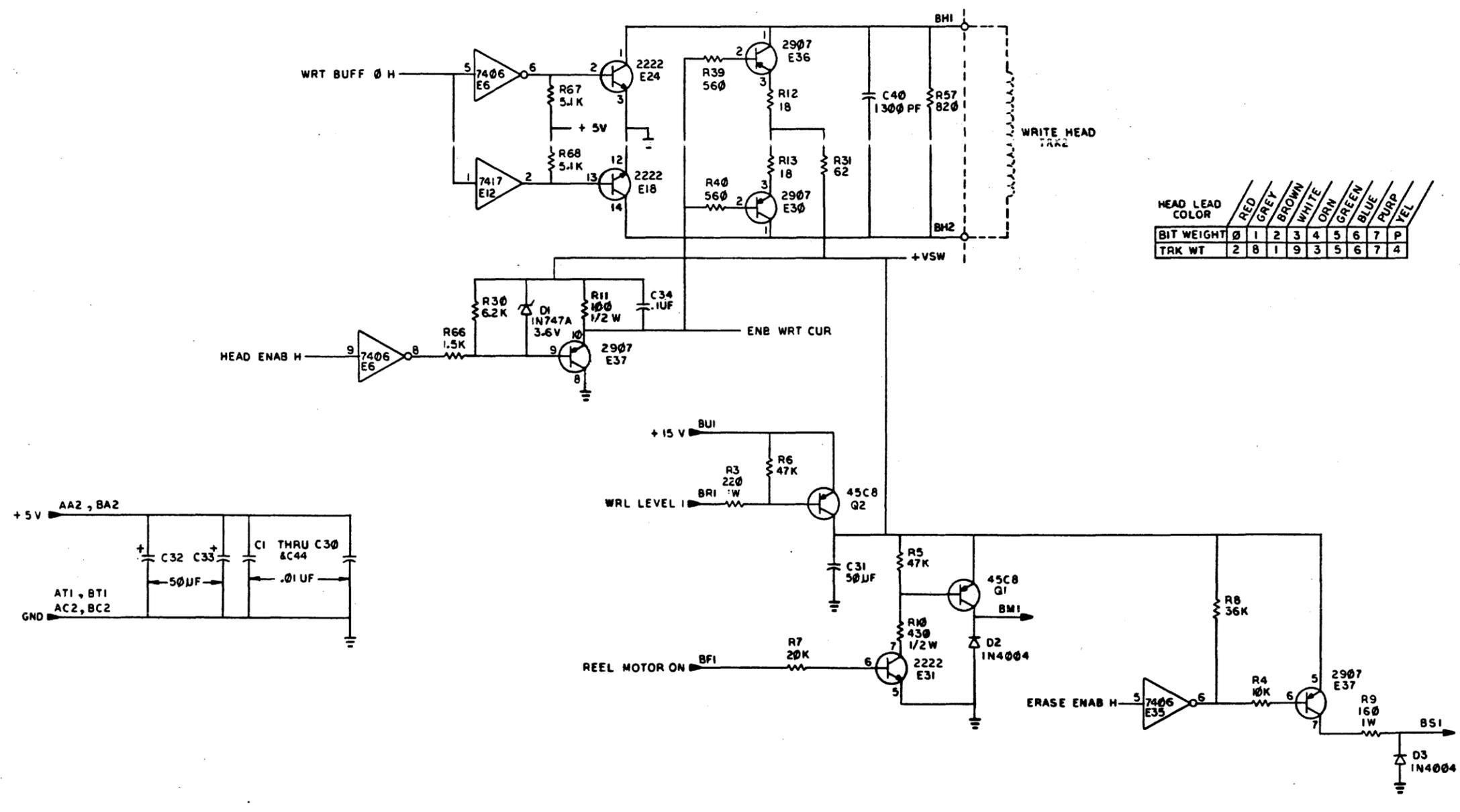
DCS M8929-0-1 F

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REVISIONS		
CHK	CHANGE NO.	REV.

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REVISIONS		
CHK	CHANGE NO.	REV.

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
1	1	D-CS-M8929-0-1		CIRCUIT SCHEMATIC			REF
2	2	D-UA-M8929-0-0		UNIT ASSY			REF
3	3	B-DD-M8929-0-0		DWG DIRECTORY			REF
4	4	D-MD-5012937-0-0		DRILL & ETCH DWG			REF
5	5		5012937-00	M8929			1
6	6		1000061-00	*** THIS ITEM IS NOT USED ***			-
7	7		1000080-00	50 MFD 50V +75-10% AL EL	3		C31-C33
8	8		1001610-00	.01 MFD 50V +80-20% 25U CER	31		C1-C30,C44
9	9		1001739-00	*** THIS ITEM IS NOT USED ***			-
10	10		1005306-00	*** THIS ITEM IS NOT USED ***			-
11	11		1100124-00	*** THIS ITEM IS NOT USED ***			-
12	12		1101938-00	*** THIS ITEM IS NOT USED ***			-
13	13		1109991-01	*** THIS ITEM IS NOT USED ***			-
14	14		1105796-00	1N 4004 PIV=400 I= 1A D041 SP	2		D2,D3
15	15		1211813-02	SOCKET 16PIN IC LOW PROFILE.	1		XE13
16	16		1300229-00	*** THIS ITEM IS NOT USED ***			-
17	17		1300277-00	220.0 1.0 W10.0% CC	1		R3
18	18		1300365-00	1.0 K .25 W 5.0% CC	1		R1
19	19		1300479-00	10.0 K .25 W 5.0% CC	1		R4
20	20		1301322-00	*** THIS ITEM IS NOT USED ***			-
21	21		1301401-00	*** THIS ITEM IS NOT USED ***			-
22	22		1302177-00	47.0 K .25 W 5.0% CC	2		R5,R6
23	23		1302388-00	2.0 K .25 W 5.0% CC	1		R2
24	24		1302391-00	20.0 K .25 W 5.0% CC	1		R7
25	25		1302466-00	*** THIS ITEM IS NOT USED ***			-
26	26		1302602-00	*** THIS ITEM IS NOT USED ***			-
27	27		1312932-00	36.0 K .25 W 5.0% CC	1		R8
28	28		1314953-00	160.0 1.0 W 5.0% CC	1		R9
29	29		1314954-00	430.0 .50 W 5.0% CC	1		R10
30	30		1510421-00	*** THIS ITEM IS NOT USED ***			-

REVISION HISTORY		BASIC PART NO: M8929		DRN: H.WEINBRENNER	DATE: 02-FEB-78	D I G I T A L	
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D: R.ODOH	DATE: 02-FEB-78	TITLE PARTS LIST	
	INIT	B	SECTION VARIATION INDEX			WRITE CONTROL	
	BHF MLO01	C	[A] 00				
	R.C M8929-MLO02	D	[B]	DES.ENG: H.FINDEISEN	DATE: 04-APR-78		
	P.K M8929-MLO03	E	[C]			DOCUMENT NUMBER	
	R.C M8929-MLO04	F	[D]	RESP.ENG.: H.FINDEISEN	DATE: 04-APR-78		
			[E]			SIZE CODE NUMBER REV	
			[F]				
			[H]	MFG.ENG.: P.BARTON	DATE: 04-APR-78	K	PL M8929-0-DBP F
			[J]				
			[K]	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	FILE NAME:	EDIT #
			[L]	D-UA-M8929-0-0	B-DD-M8929-0-0	Z0214F.PLS	21
			[M]				
			[N]				

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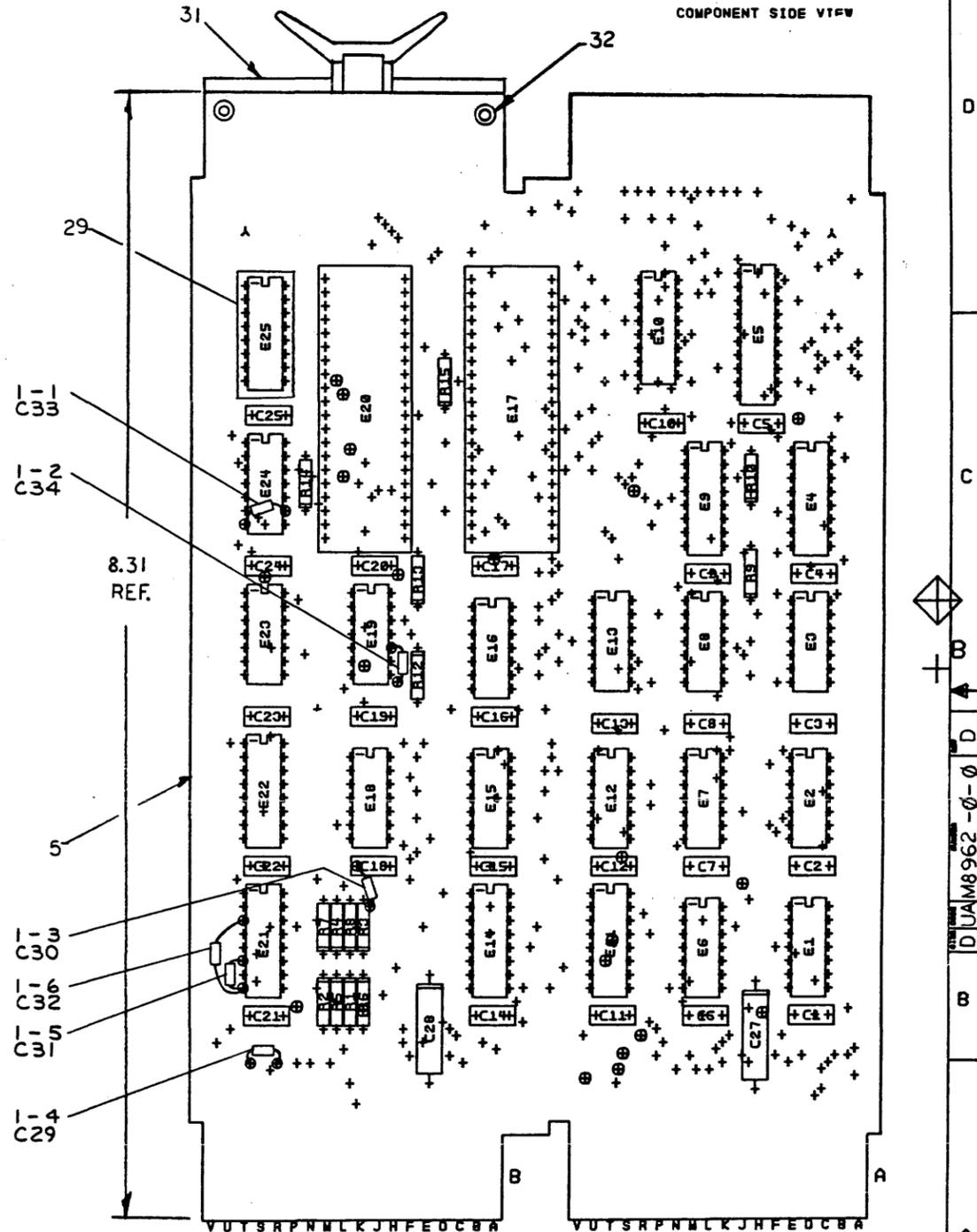
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
					00	
31	31		1510598-00	DEC45C8 PNP 27WT SI 60 20 Y	2	Q1, Q2
32	32		1514961-00	TPQ2222 NPN 500MW SI 40 100	5	E24, E18, E38, E32, E31
33	33		1514962-00	TPQ2907 PNP 500MW SI 40 100	5	E37, E36, E30, E34, E33
34	34		1909067-00	74H71 FF-JK MASTER SLAVE 2	2	E2, E5, E9, E11, E15, E17, E23
35	35		1910741-00	7406 INVERTER GATE-HEX 1I	2	E6, E35
36	36		1912697-00	LS174 FF-D HEX W/CLEAR	2	E7, E8, E16
37	37		1912801-00	LS02 NOR-GATE-QUAD 2IN	2	E21, E29
38	38		1912803-00	74LS04 INVERTER GATE, HEX	2	E10, E14, E28
39	39		1912807-00	LS10 NAND GATE-TRIPLE 3IN	1	E20
40	40		1912820-00	LS51 A-0-1 GATE 2-WIDE 2I	1	E27
41	41		1912842-00	LS138 DECODER-THREE INPUT	1	E39
42	42		1913312-00	7428P NOR GATE-QUAD 2IN POS	1	E1, E22
43	43		1914451-00	74LS393 COUNTER, BINARY, 4BIT	2	E19, E26
44	44		1914466-00	*** THIS ITEM IS NOT USED ***	-	
45	45		2113646-00	*** THIS ITEM IS NOT USED ***	-	
46	46		9006732-00	EYELET, ROLL FLANGE .1210DX .219	4	
47	47		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
48	48		23251A1-00	A1-07	1	E13
49	49		1909929-00	7417 BUFFER GATE-HEX 1INP	2	E12, E25
50	50		1110672-00	1N 747A VZ= 3.6 5%	1	D1
51	51		1300228-00	100.0 .50 W 5.0 % CC	1	R11
52	52		1302124-00	18.0 .25 W 5.0 % CC	18	R12-R29
53	53		1312929-00	62.0 .25 W 5.0 % CC	18	R31-R38, R85
54	54		1301890-00	560.0 .25 W 5.0 % CC	18	R39-R56
55	55		1301775-00	820.0 .25 W 5.0 % CC	9	R57-R65
56	56		1300391-00	1.50 K .25 W 5.0 % CC	1	R66
57	57		1312930-00	5.10 K .25 W 5.0 % CC	18	R67-R84
58	58		1312931-00	6.20 K .25 W 5.0 % CC	1	R30
59	59		1010978-36	.1 MFD 50V 10% CER	1	C34
60	60		1001633-00	1300.0 MMF 100V 5%200PPM MICA	9	C35-C43
61	61		9008301-01	SCREW, PAN, PHIL 4-40X 1/4 SS	2	
62	62		9006557-00	NUT, KEP , 4-40X 1/4 AF	2	

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							WRITE CONTROL		K	PL	M8929-0-DBP	F

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REWORK INSTRUCTIONS:
ECO #1

- COMPONENT ADDS SIDE 1:
 1-1 ADD CAPACITOR 100 PF FROM E24-9 TO E24-7
 1-2 ADD CAPACITOR 100 PF FROM E19-10 TO GND ETCH NEAR E19-8
 1-3 ADD CAPACITOR 100 PF FROM FEEDTHRU NEAR R3 TO GND END OF C18
 1-4 ADD CAPACITOR 100 PF FROM BT1 TO BR1 AT FEEDTHRU APPROX. 3/4" ABOVE GOLD FINGERS
 1-5 ADD CAPACITOR 100 PF FROM E21-6 TO E21-8
 1-6 ADD CAPACITOR 100 PF FROM E21-3 TO E21-8 (USE SLEEVING)



NOTES:

CHK	CHANGE NO	REV	DATE

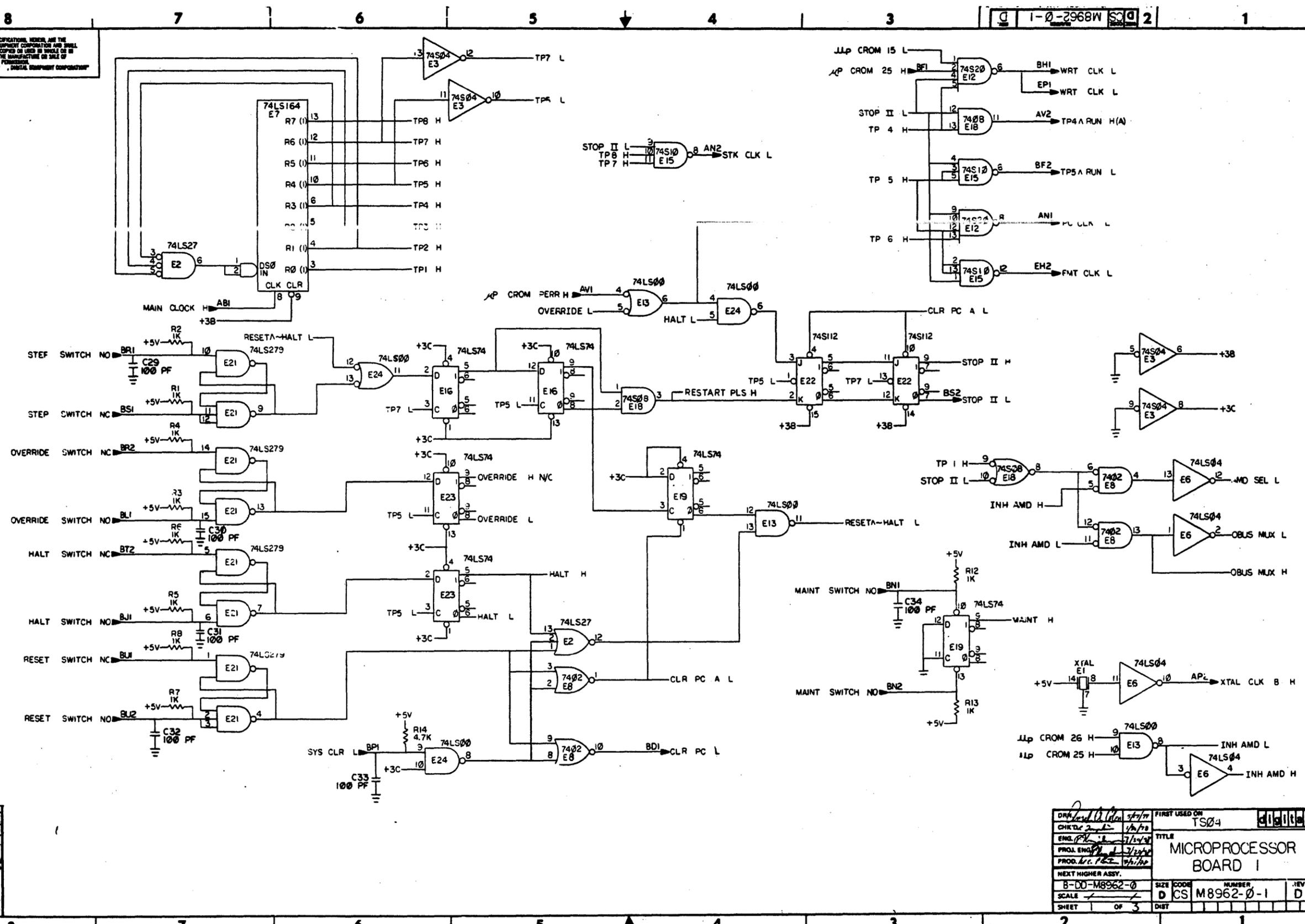
ETCH REV. D
P.C. DESIGN DATA BASE REV. M8962X D1

SIGNATURES		DATE
DRN. <i>[Signature]</i>		2-5-78
CHK. <i>[Signature]</i>		2-15-78
ENG. <i>[Signature]</i>		2/19/78
PROJ. ENG. <i>[Signature]</i>		2/24/78
PROD. <i>[Signature]</i>		2/21/78
SCALE 2/1		
SHT. 2	OF 5	
NEXT HIGHER ASSY. B-DD-M8962-0-0		

digital		
TITLE MICRO-PROCESSOR BOARD ONE		
SIZE	CODE	NUMBER
0	UA	M8962-0-0
REV	D	

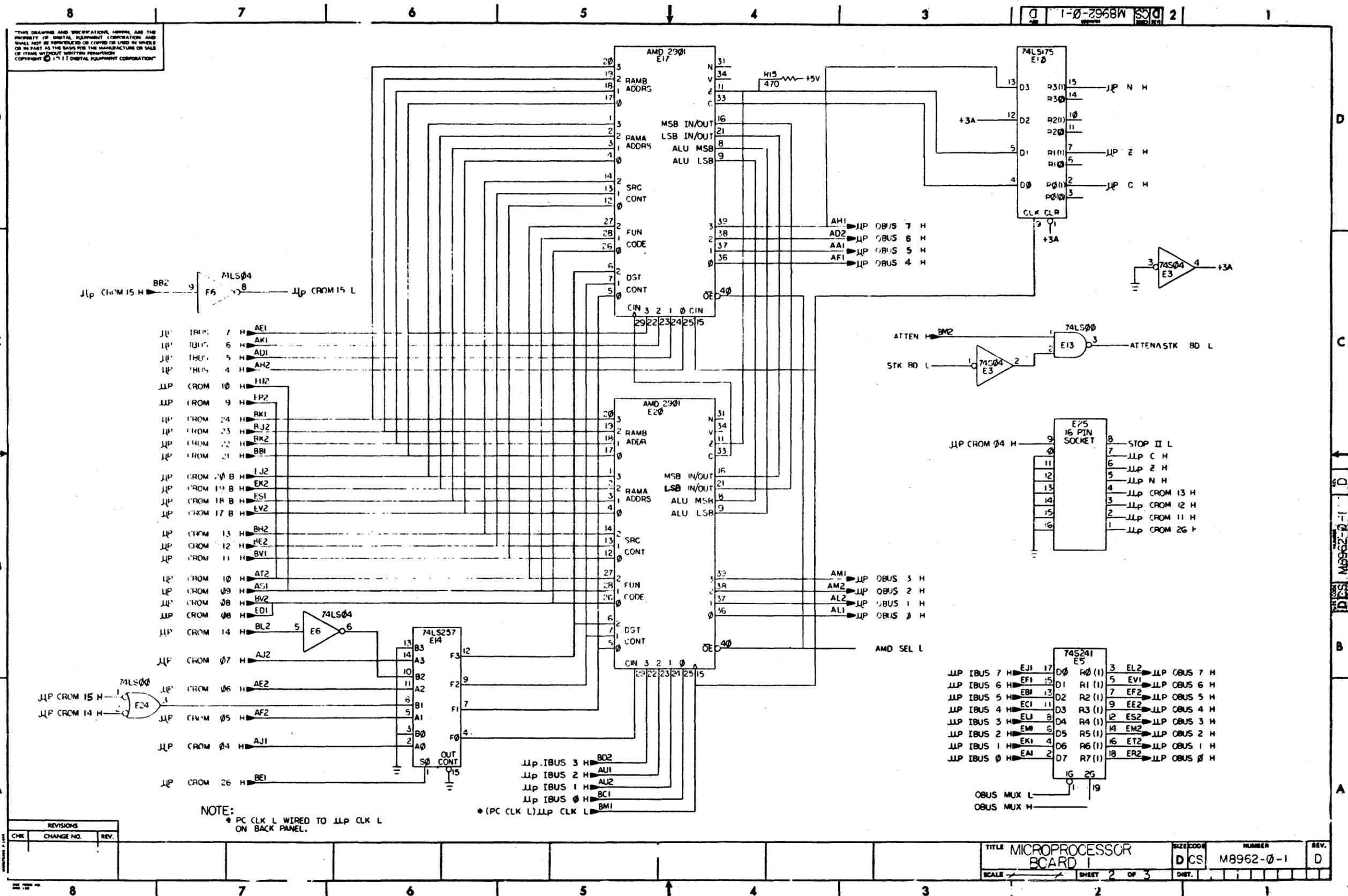
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1-0-2968W 2



REV	D
CHANGE NO.	1
DATE	26 JUN 79
BY	BERNIE KRASNICK
CHKD	9 JUL 79
BY	

DESIGNED BY	SP/SM	FIRST USED ON	TS04
CHKD BY	1/1/79	TITLE	MICROPROCESSOR BOARD 1
ENGR	7/1/79	SCALE	D CS M8962-0-1 D
PROJ ENGR	7/2/79	SIZE	B-DD-M8962-0
PROD. BY	White	NUMBER	D CS M8962-0-1
NEXT HIGHER ASSY.		SCALE	D CS M8962-0-1
B-BDD-M8962-0		SIZE	D CS M8962-0-1
SHEET	OF 3	DIST	



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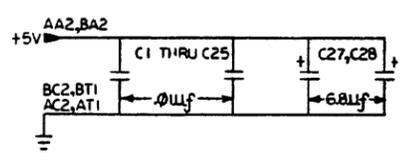
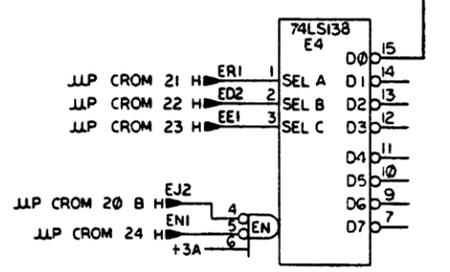
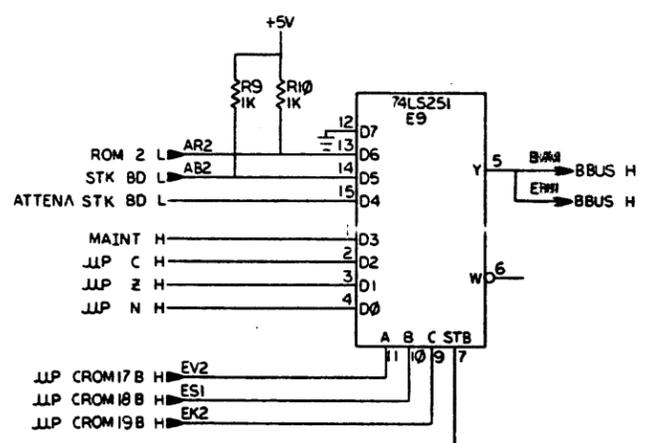
REVISIONS		
CHK	CHANGE NO.	REV.

NOTE:
 * PC CLK L WIRED TO JLP CLK L ON BACK PANEL.
 * (PC CLK L) JLP CLK L

TITLE	MICROPROCESSOR BOARD 1	SIZE CODE	DCS	NUMBER	M8962-0-1	REV.	D
SCALE		SHEET	2 OF 3	DIST.			

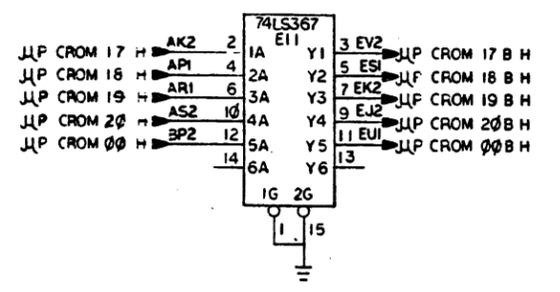
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M8962-0-1 2



AC1 → EN2 → JLP CROM 00 H

OVER TOP CONNECTOR	
SIGNAL	PIN
JLP CROM 00 B H	EU1
JLP CROM 01 H (AC1)	EN2
JLP CROM 17 B H	EV2
JLP CROM 18 B H	ES1
JLP CROM 19 B H	EK2
JLP CROM 20 B H	EJ2
JLP CROM 21 H	ER1
JLP CROM 22 H	ED2
JLP CROM 23 H	EE1
JLP CROM 24 H	ENI
JLP OBUS 0 H	ER2
JLP OBUS 1 H	ET2
JLP OBUS 2 H	EM2
JLP OBUS 3 H	ES2
JLP OBUS 4 H	EE2
JLP OBUS 6 H	EVI
JLP OBUS 7 H	EL2
JLP IBUS 0 H	EAI
JLP IBUS 1 H	EKI
JLP IBUS 2 H	EMI
JLP IBUS 3 H	ELI
JLP IBUS 4 H	EBI
JLP IBUS 5 H	EFI
JLP IBUS 6 H	EJI
JLP IBUS 7 H	EJI
BBUS H	ENI
FMT CLK L	EN2
WRT CLK L	ENI
JLP OBUS 5 H	EF2
JLP CROM 8 H	ED1
JLP CROM 9 H	EP2
JLP CROM 10 H	EU2



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE MICROPROCESSOR BOARD 1
 NUMBER M8962-0-1
 SCALE 1:1 SHEET 3 OF 3
 REV. D

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
1	1	D-CS-M8962-0-1		CIRCUIT SCHEMATIC		REF	
2	2	D-UA-M8962-0-0		UNIT ASSY		REF	
3	3	B-DD-M8962-0-0		DWG DIRECTORY		REF	
4	4	D-MD-5012863-0-0		DRILL & ETCH DWG		REF	
5	5		5012863-00	M8962	1		
6	6		1001610-00	.01 MFD 50V +80-20% 25U CER	25		C1-C25
7	7		1005306-00	6.8MFD 35V 10% 5.TANT	2		C27,C28
8	8		1300316-00	470.0 .25 W 5.0 % CC	1		R15
9	9		1300365-00	1.0 K .25 W 5.0 % CC	12		R1-R10,R12,R13
10	10		1300447-00	4.70 K .25 W 5.0 % CC	1		R14
11	11		1913471-00	LS367 DRIVER,BUS,HEX,TRI-	1		E11
12	12		1912850-00	LS164 SHIFT REG. 8BIT SERI	1		E7
13	13		1910534-00	74504 INVERTER GATE-HEX II	1		E3
14	14		1910539-00	74520 NAND GATE-DUAL 4INPU	1		E12
15	15		1910545-00	745112 FF-JK DUAL,EDGE TRIG	1		E22
16	16		1911641-00	SN 745257 MUX,QUAD 2 TO 1	1		E14
17	17		1912389-00	74508 AND GATE-QUAD 2IN,PO	1		E18
18	18		1912648-00	LS251 MUX 8 INPUT,TRI-STA	1		E9
19	19		1912799-00	LS00 NAND-GATE-QUAD 2IN,P	2		E13,E24
20	20		1912813-00	LS27 NOR GATE-TRIPLE 3IN	1		E2
21	21		1912824-00	LS74 FF-D DUAL,EDGE TRIGG	3		E16,E19,E23
22	22		1912853-00	LS175 FF-D QUAD	1		E10
23	23		1912864-00	LS279 LATCH,QUAD-S-R	1		E21
24	24		1913245-00	2901 BIPOLAR MICROPROCESSO	2		E17,E20
25	25		1909004-00	DEC 7402 NOR GATE-QUAD 2IN	1		E8
26	26		1910536-00	74510 NAND GATE-TRIPLE 3IN	1		E15
27	27		1912842-00	LS138 DECODER-THREE INPUT	1		E4
28	28		1913493-00	745241 OCTAL BUFFER,TRI-STA	1		E5
29	29		1211813-02	SKT,IC 16PIN DIP GOLD PLATE	1		E25
30	30		1812131-00	OSCILLATOR, XTAL 13.824 MHZ	1		E1

REVISION HISTORY		BASIC PART NO: M8962		DRN: J. ROGERS		DATE: 21-NOV-77		D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A	*****		*****		TITLE PARTS LIST	
	INIT	C	SECTION VARIATION INDEX	CHK'D:	R. WALDIE	DATE:	21-NOV-77	MICRO PROCESSOR BOARD 1	
	B.K!M8962-ML001	D	[A] 00	*****		*****		DOCUMENT NUMBER	
			[B]	DES.ENG:	P. KINZELMAN	DATE:	05-JUL-78	*****	
			[C]	*****		*****		DOCUMENT NUMBER	
			[D]	RESP.ENG.:	P. KINZELMAN	DATE:	05-JUL-78	*****	
			[E]	*****		*****		SIZE CODE NUMBER REV	
			[F]	MFG.ENG.:	P. BARTON	DATE:	05-JUL-78	K	PL
			[G]	*****		*****		M8962-0-DBP	D
			[H]	ASSEMBLY NUMBER:	D-UA-M8962-0-0	TOP DOCUMENT NUMBER:	TS04	FILE NAME:	Z0611D.PLS
			[I]	*****		*****		EDIT #	22
			[J]	*****		*****		*****	
			[K]	*****		*****		*****	
			[L]	*****		*****		*****	
			[M]	*****		*****		*****	
			[N]	*****		*****		*****	

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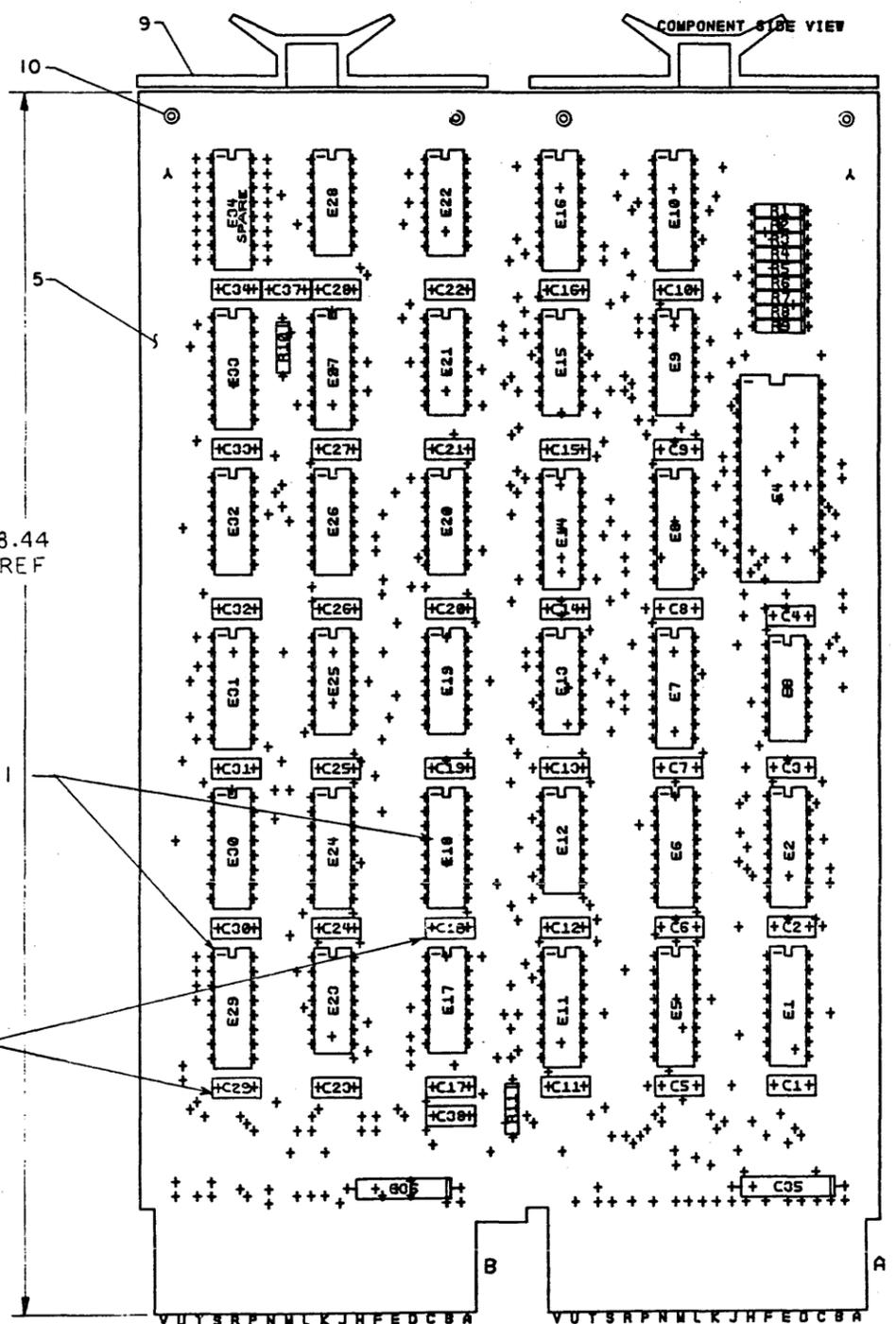
PARTS LIST

SHEET A2 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
					00	
31	31		9008337-06	HANDLE, FLIP CHIP, MAGENTA	1	
32	32		9006732-00	EYELET, ROLL FLANGE .1210DX .219	2	
33	33		1912803-00	74LS04 INVERTER GATE, HEX	1	E6
34	34		1000016-00	100.0 MMF 100V 5x200PPM MICA	6	C29-C34
35	35		9107256-11	TUBING, THIN WALL, .027ID	UL A/R	

D	I	G	I	T	A	L	TITLE	MICRO PROCESSOR BOARD 1	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
										K	PL	M8962-0-DBP	D

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NOTES: 1. DO NOT INSERT I.C. IN E18 AND E29 LOCATIONS.
2. C18 & C29 ARE SPARES

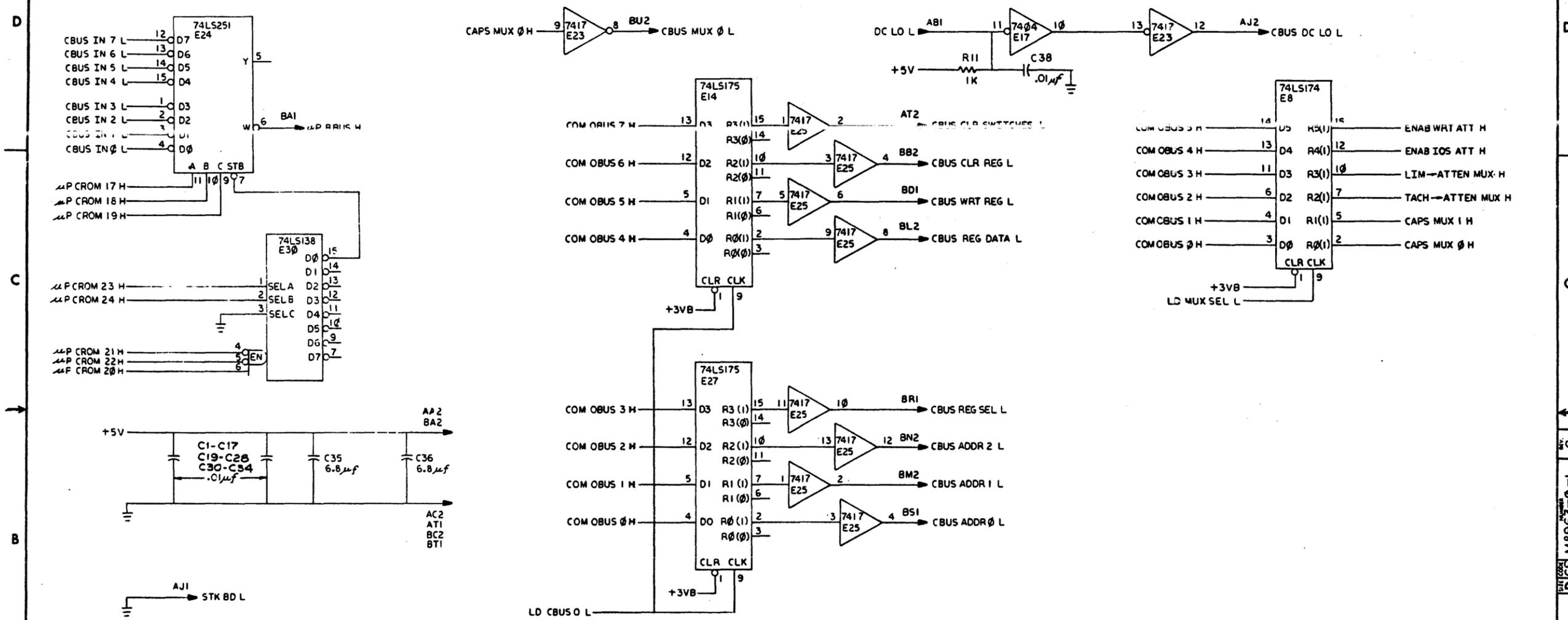
CHK	CHANGE NO	REV	DATE	BY

ETCH REV. C-P2
P.C. DESIGN DATA BASE REV. C

SIGNATURES	DATE
DRM. STU EVANS	6-23-78
CHK'D. [Signature]	6-23-78
ENG. [Signature]	6-23-78
PROJ. ENG. [Signature]	6-23-78
PROD. [Signature]	6-23-78

digital
TITLE MICROPROCESSOR BOARD
SIZE CODE NUMBER REV D UA M8963-0-Z1C

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CBUS IN

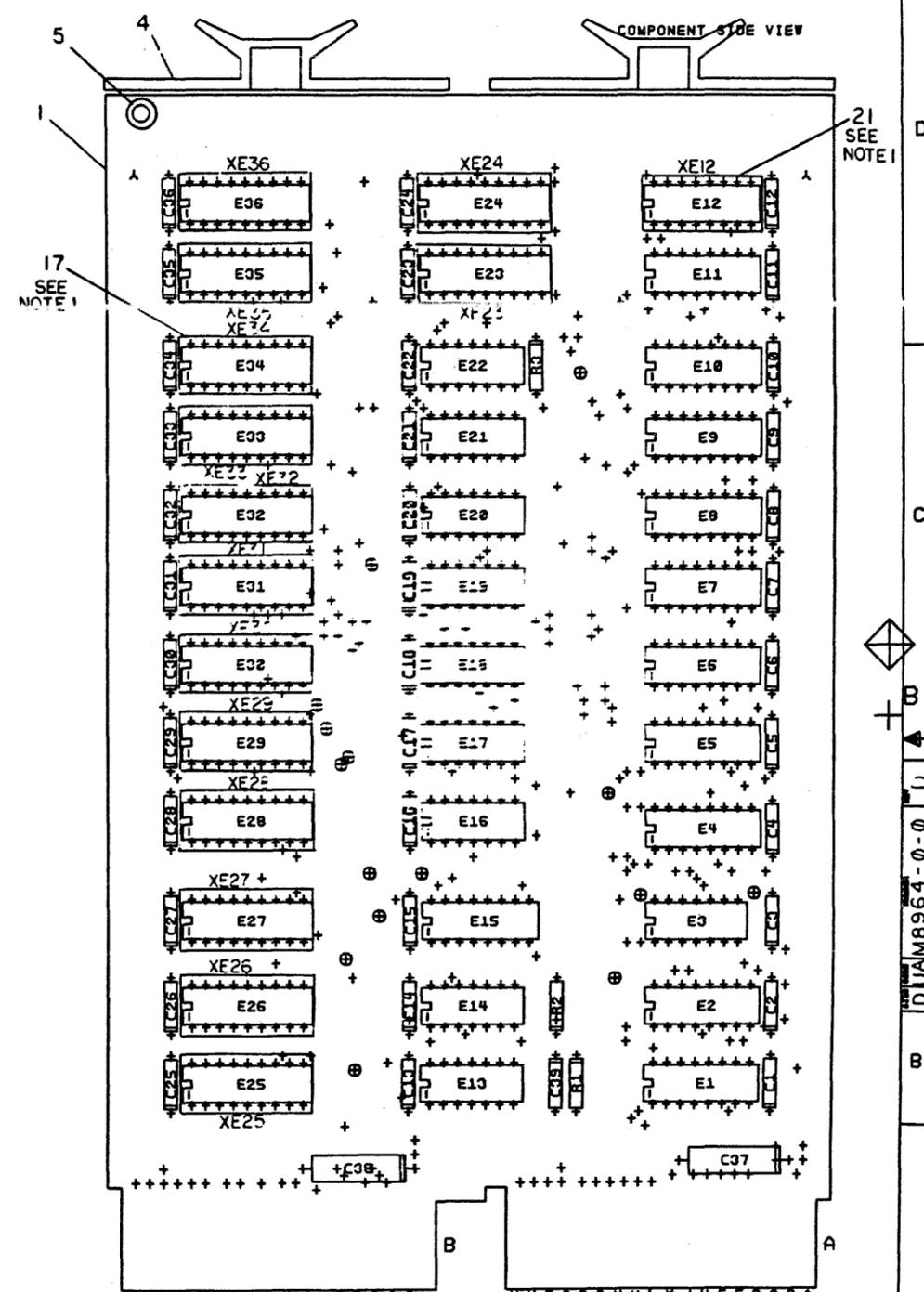
CBUS MUX I	CBUS MUX 0	7	6	5	4	3	2	1	0
0	0	RL MTRON	ONLSWIT	LIMIT	DO ITSWIT	ENTER ZERO	WLK SWIT	BOT	EOT
0	1	RL MTRON	TACH 1	LIMIT	TACH 2	FWD DIR	MOVING	BOT	EOT
1	0	LOAD LT	ONLT	UOK LT	VV LT	IDB LT	WLK LT	BOT LT	EOT LT
1	1	CS7	CS6	CS5	CS4	CS3	CS2	CS1	CS0

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
					00	
1	1	D-CS-M8963-0-1		CIRCUIT SCHEMATIC	REF	
2	2	D-UA-M8963-0-0		UNIT ASSEMBLY	REF	
3	3	B-ID-M8963-0-0		DWG. DIRECTORY	REF	
4	4	D-MD-M8963-0-0		DRILL & ETCH DWG.	REF	
5	5		5012890-00	M8963	1	
6	6		1001610-00	.01 MFD 50V +80-20% ZSUCER	34	C1-C17,C19-C28,C30-C34,C37,C38
7	7		1005306-00	6.8MFD 35V 10% S.TANT	2	C35,C36
8	8		1300365-00	1.0 K .25 W 5.0 % CC	11	R1-R11
9	9		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
10	10		9006732-00	EYELET, ROLLED FLANGE, .121 OD X	4	
11	11		1912859-00	LS258 MUX 1 OF 2 (DUAL),	4	E2,E6,E11,E7
12	12		1912810-00	LS20 NAND GATE-DUAL 4IN	1	E12
13	13		1912648-00	LS251 MUX 8 INPUT,TRI-STA	1	E24
14	14		1912799-00	LS00 NAND-GATE-QUAD 2IN,P	2	E21,E26
15	15		1912803-00	LS04 INVERTER GATE-HEX 1I	2	E9,E17
16	16		1912853-00	LS175 FF-D QUAD	2	E14,E27
17	17		1909929-00	7417 BUFFER GATE-HEX 1INP	2	E23,E25
18	18		1912824-00	LS74 FF-D DUAL,EDGE TRIGG	1	E32
19	19		1909050-00	7475 LATCH 4BIT	2	E1,E5
20	20		1910534-00	74S04 INVERTER GATE-HEX 1I	1	E13
21	21		1912864-00	LS279 LATCH,QUAD-S-R	1	E33
22	22		1912813-00	LS27 NOR GATE-TRIPLE 3IN	1	E20
23	23		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	1	E28
24	24		1911521-00	7432 OR GATE-QUAD 2IN, PO	1	E22
25	25		1911573-00	74S280 PARITY GEN/CHKR,9BIT	2	E3,E15
26	26		1912854-00	LS193 COUNTER,SYNCHR,4BIT,	2	E10,E16
27	27		1912697-00	LS174 FF-D HEX W/CLEAR	1	E8
28	28		1912842-00	LS138 DECODER-THREE INPUT,	2	E30,E31
29	29		1912815-00	LS30 NAND GATE-SINGLE 8IN	1	E19
30	30		1913663-00	93419DC RAM 64X9 28PIN TT	1	E4

REVISION HISTORY			BASIC PART NO: M8963		DRN: H. WEINBRENNER		DATE: 17-JUL-78		D I G I T A L		
ENG	ECO NUMBER	REV	SECTION A OF A		CHK'D:	C. CAMPBELL	DATE: 17-JUL-78	TITLE PARTS LIST			
WE	00001	B	SECTION.VARIATION INDEX		CHK'D:	C. CAMPBELL	DATE: 17-JUL-78	MICROPROCESSOR BOARD 2			
BK	M8963-ML002	C	[A] 00								
			[B]								
			[C]		DES.ENG:	N. FINDEAN	DATE: 17-JUL-78				
			[D]								
			[E]								
			[F]		RESP.ENG.:	N. FINDEAN	DATE: 17-JUL-78	DOCUMENT NUMBER			
			[H]								
			[J]								
			[K]		MFG.ENG.:	G. DILLARD	DATE: 17-JUL-78	K	PL	M8963-0-DBP	REV C
			[L]								
			[M]		ASSEMBLY NUMBER:	D-UA-M8963-0-0	TOP DOCUMENT NUMBER:	TS04	FILE NAME:	Z1472C.PLS	EDIT # 4
			[N]								

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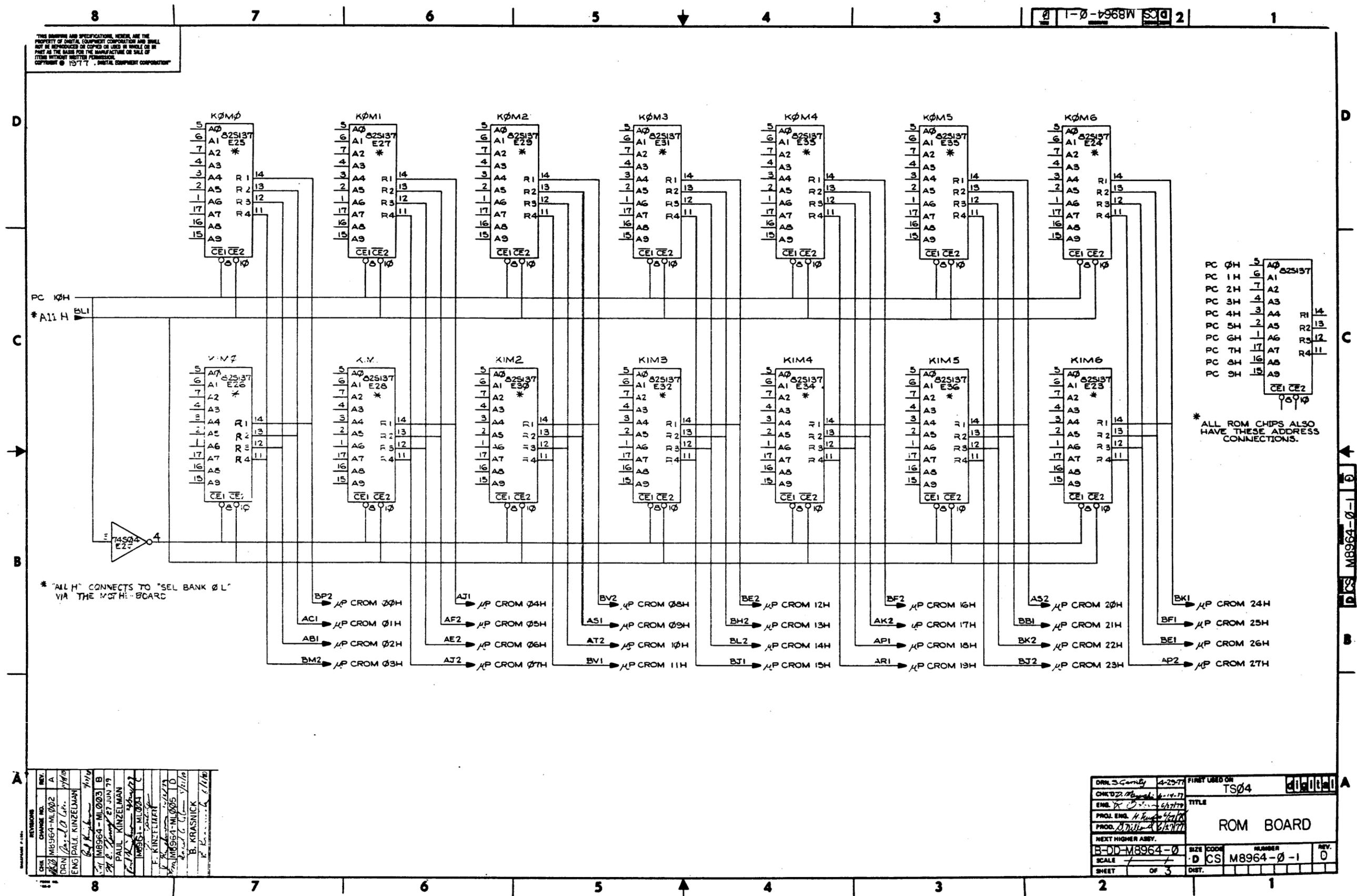
NOTES: INSTALL SOCKETS, ITEMS 17 & 21 BEFORE INSTALLING IC'S.

CHK	CHANGE NO	REV
1	MS864-PL002	A
2	MS864-M 0003	B
3	MS864-M 0003	C
4	MS864-M 0005	D
5	MS864-M 0005	E
6	MS864-M 0005	F
7	MS864-M 0005	G
8	MS864-M 0005	H

ETCH REV. CP2
P.C. DESIGN DATA BRD REV. CL2 & CM2

SIGNATURES	DATE	TITLE
DRN. <i>[Signature]</i>	7-19-78	ROM BOARD
CHK'D. <i>[Signature]</i>	2-2-79	
ENG. <i>[Signature]</i>	4-2-79	ROM BOARD
PROJ. ENG. <i>[Signature]</i>	4-2-79	
SCALE 2/1		SIZE CODE NUMBER REV
SHT. 1 OF 5		0 UA M8964-0-0 D
NEXT HIGHER ASSY. B-DD-M8964-0		

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PC 0H	5	A0
PC 1H	6	A1
PC 2H	7	A2
PC 3H	4	A3
PC 4H	3	A4
PC 5H	2	A5
PC 6H	1	A6
PC 7H	17	A7
PC 8H	16	A8
PC 9H	15	A9
		R1
		R2
		R3
		R4
		CE1
		CE2

* ALL ROM CHIPS ALSO HAVE THESE ADDRESS CONNECTIONS.

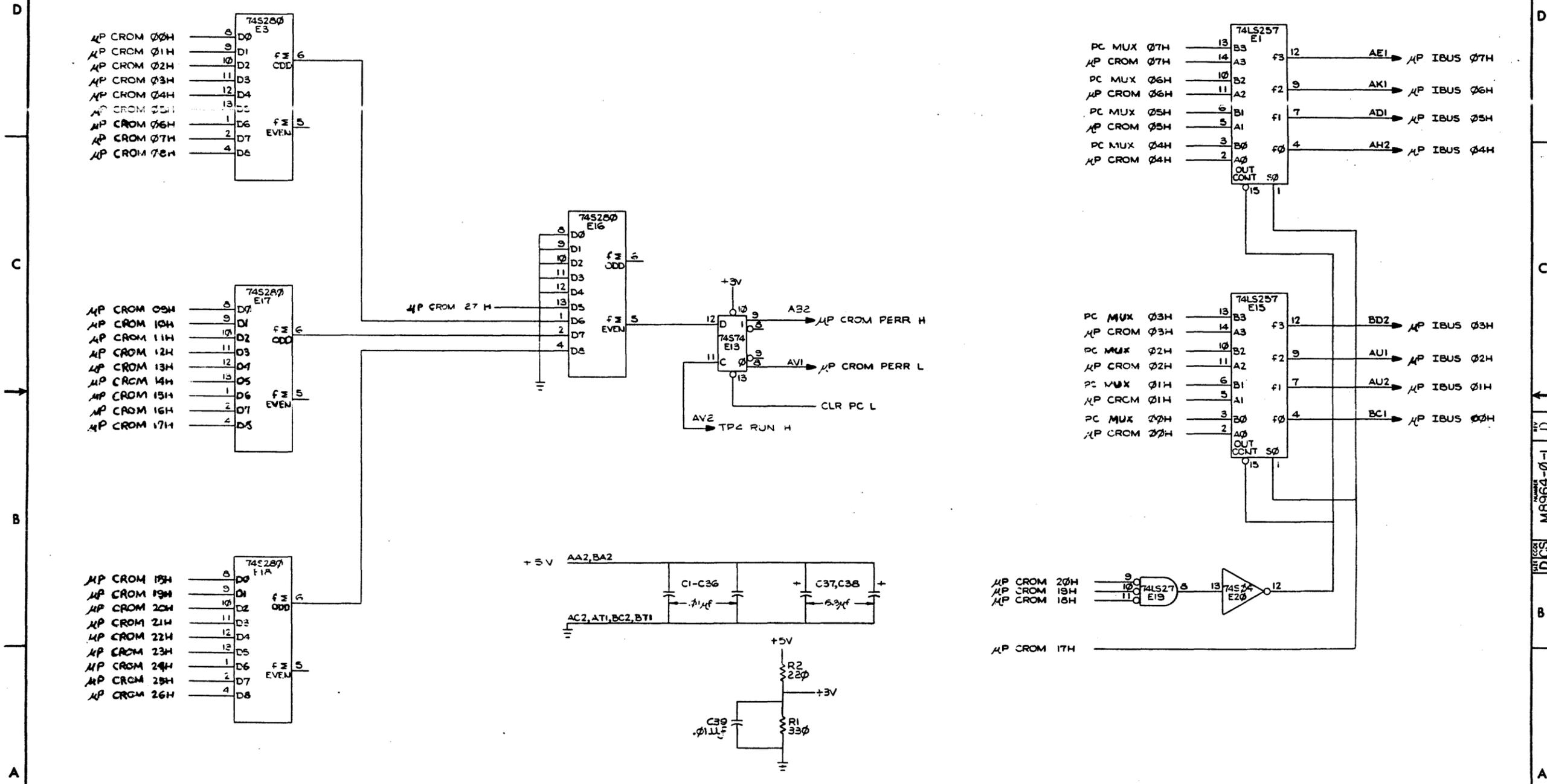
* "A11 H" CONNECTS TO "SEL BANK 0 L" VIA THE MOTHER BOARD

REV.	CHG.	NO.	DATE	BY	REASON
A					
B					
C					
D					

DRN. 3-Comby	4-25-77	FIRST USED ON	TS04
CHK'D P. M. ...	4-14-77	TITLE	ROM BOARD
ENR. ...	4-17-77	SCALE	1:1
PROD. ...	4-17-77	SHEET	OF 3
NEXT HIGHER ASSY.		SIZE CODE	NUMBER
B-00-M8964-0		D CS	M8964-0-1
REV. 0			

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1-0-1968W DCS M8964-0-1 2

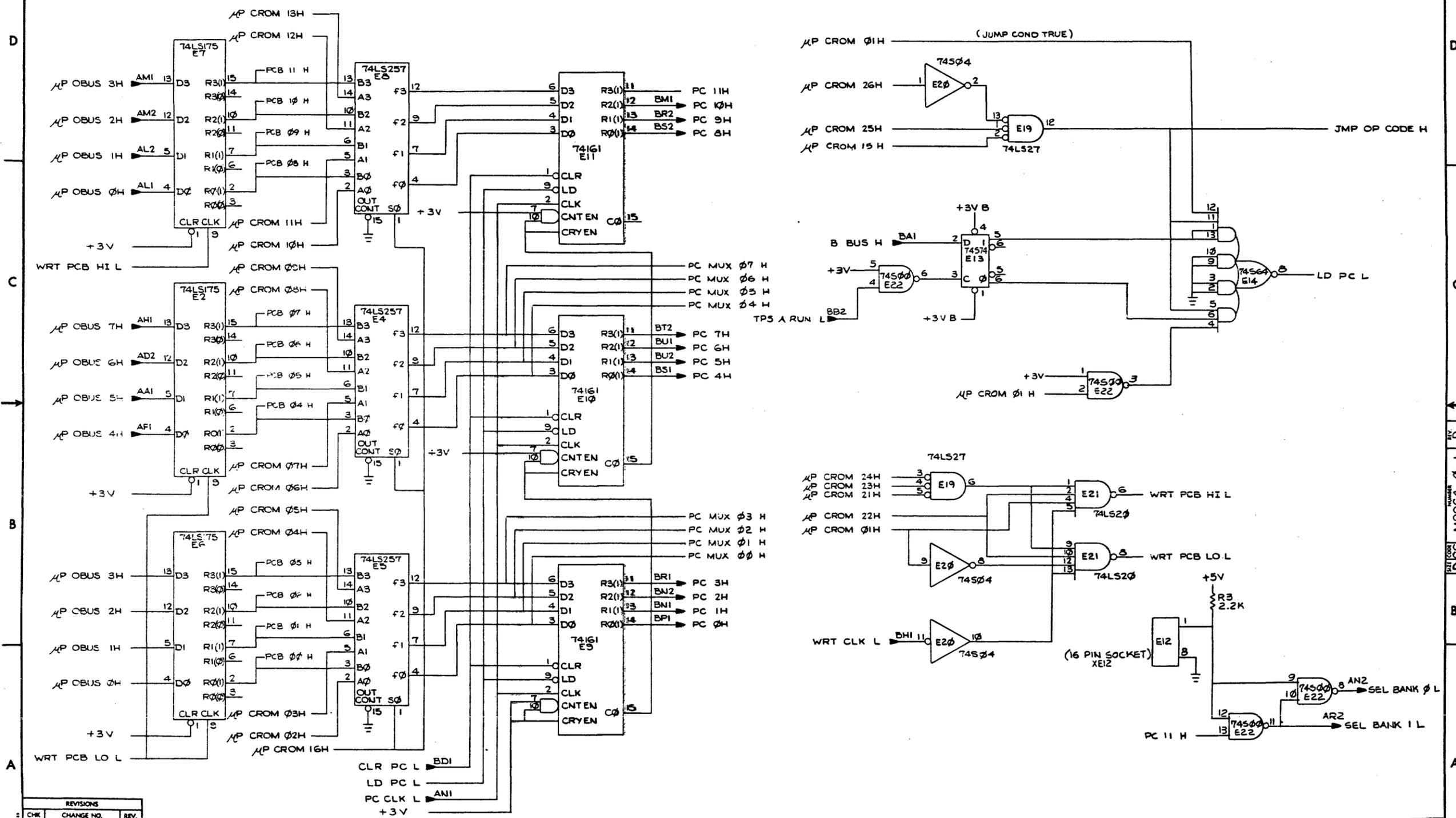


PART CODE DCS M8964-0-1 REV D

REVISIONS		
CHK	CHANGE NO.	REV.
AN	1	1
AN	2	2
AN	3	3
AN	4	4

TITLE ROM BOARD SIZE CODE DCS NUMBER M8964-0-1 REV. D
SCALE SHEET 2 OF 3 DIST.

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REVISIONS		
CHK	CHANGE NO.	REV.
DRN	M8964-MLO02	A
ENG	PAUL KINZELMAN	

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1		5012817-00	M8964	1	
2	2		1001610-00	.01 MFD 50V +80-20% 25U CER	37	C1-C36, C39
3	3		1005306-00	6.8MFD 35V 10% S.TANT	2	C37, C38
4	4		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
5	5		9006732-00	EYELET, ROLL FLANGE .1210DX .219	4	
6	6		1910534-00	74504 INVERTER GATE-HEX 11	1	E20
7	7		1912810-00	LS20 NAND GATE-DUAL 4IN	1	E21
8	8		1910532-00	74500 NAND GATE-BOARD 2IN	1	E22
9	9		1910650-00	74161 COUNTER, SYNCHR. UP	3	E9-E11
10	10		1910950-00	74574 FF-D DUAL (-45 VERSI	1	E13
11	11		1912813-00	LS27 NOR GATE-TRIPLE 3IN	1	E19
12	12		1910542-00	74564 A-0-1 GATE 4-2-3-2	1	E14
13	13		1911573-00	745280 PARITY GEN/CHKR. 9BIT	4	E3, E16-E18
14	14		1912647-00	LS257 MUX 1 OF 2 (QUAD)	5	E1, E4, E5, E8, E15
15	15		1912853-00	LS175 FF-D QUAD	3	E2, E6, E7
16	16		23000F1-01	*** THIS ITEM IS NOT USED ***	-	
17	17		1211666-00	SKT, IC 18PIN DIP GOLD PLATE	14	XE23-XE36
18	18		1300271-00	220.0 .25 W 5.0 % CC	1	R2
19	19		1300295-00	330.0 .25 W 5.0 % CC	1	R1
20	20		1300417-00	2.20 K .25 W 5.0 % CC	1	R3
21	21		1211813-00	/REPLACED BY 12-15006-02	1	XE12
22	22		23622F1-00	F1-01	1	E25
23	23		23623F1-00	F1-01	1	E27
24	24		23624F1-00	F1-01	1	E29
25	25		23625F1-00	F1-01	1	E31
26	26		23626F1-00	F1-01	1	E33
27	27		23627F1-00	F1-01	1	E35
28	28		23628F1-00	F1-01	1	E24
29	29		23620F1-00	F1-01	1	E26
30	30		23397F1-00	F1-01	1	E28

REVISION HISTORY		BASIC PART NO: M8964		DRN: L.METZGER		DATE: 18-JUL-78		D I G I T A L	
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D:	S.TUTTLE	DPTE:	18-JUL-78	TITLE PARTS LIST	
	INIT	*	SECTION VARIATION INDEX	DES.ENG: P.KINZELMAN		DATE: 12-SEP-78		DOCUMENT NUMBER	
PB	MLO02	A	[A] 00	RESP.ENG.: P.KINZELMAN		DATE: 12-SEP-78		SIZE	CODE
P.K	M8964-MLO03	B	[B]	MFG.ENG.: P.BARTON		DATE: 18-JUL-78		K	PL
PK	M8964-MLO04	C	[C]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:	
BK	M8964-MLO05	D	[D]	D-UA-M8964-0-0		TS04		20609D.PLS	
		E	[E]					REV	
		F	[F]					8	
		H	[H]						
		J	[J]						
		K	[K]						
		L	[L]						
		M	[M]						
		N	[N]						

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AUTOMATED BY PRTLST.2E(3)

PARTS LIST

SHEET A2 OF A2

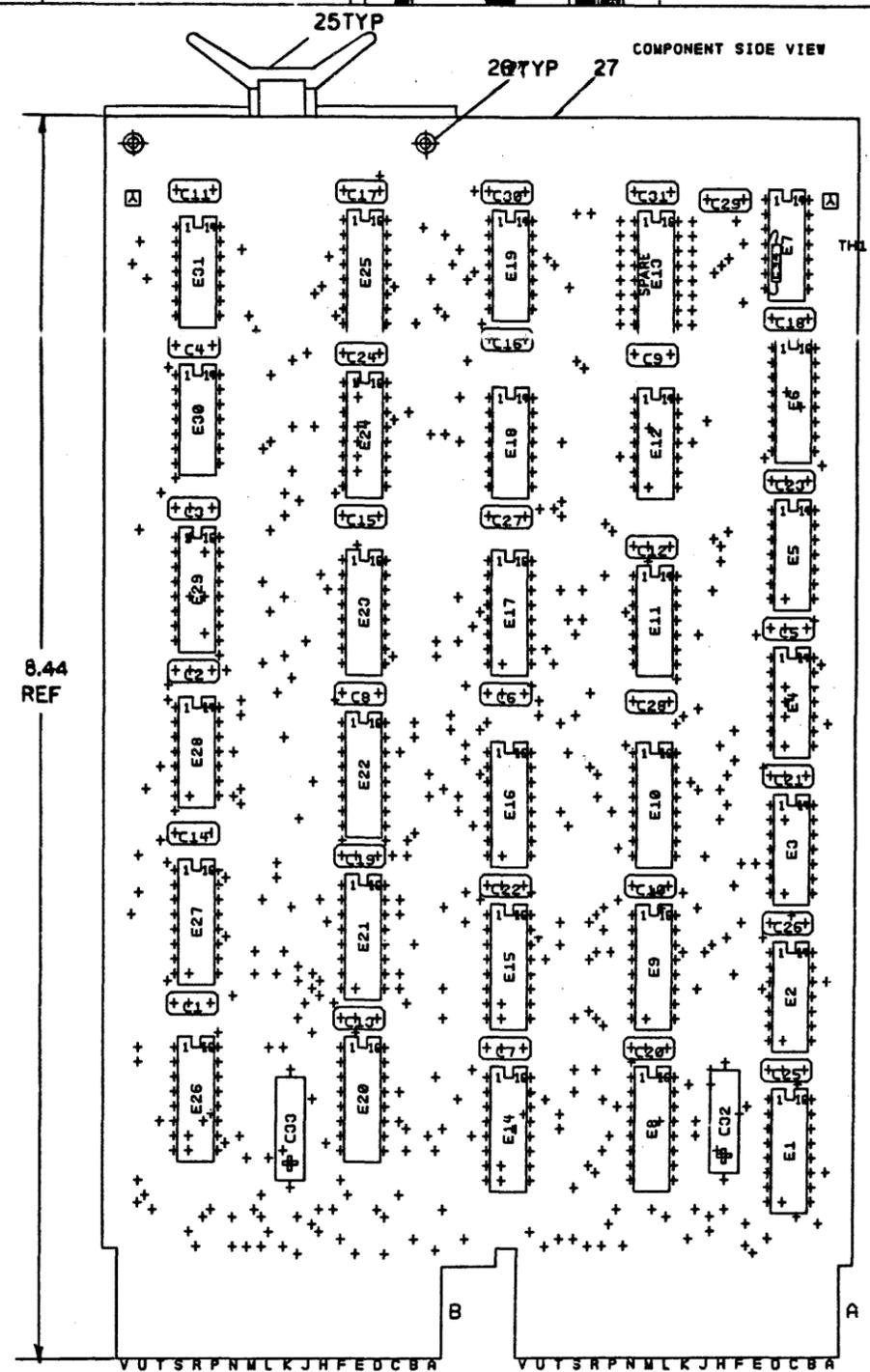
LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
31	31	23398F1-00	F1-01	1	E30
32	32	23399F1-00	F1-01	1	E32
33	33	23400F1-00	F1-01	1	E34
34	34	23401F1-00	F1-01	1	E36
35	35	23621F1-00	F1-01	1	E23

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							ROM BOARD		K	PL	M8964-0-DBP	D

8 7 6 5 4 3 2 1

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ECO #1
 COMPONENT ADD: SIDE 1
 1-1 CAPACITOR (C34) BETWEEN E7 AND E4



NOTES:

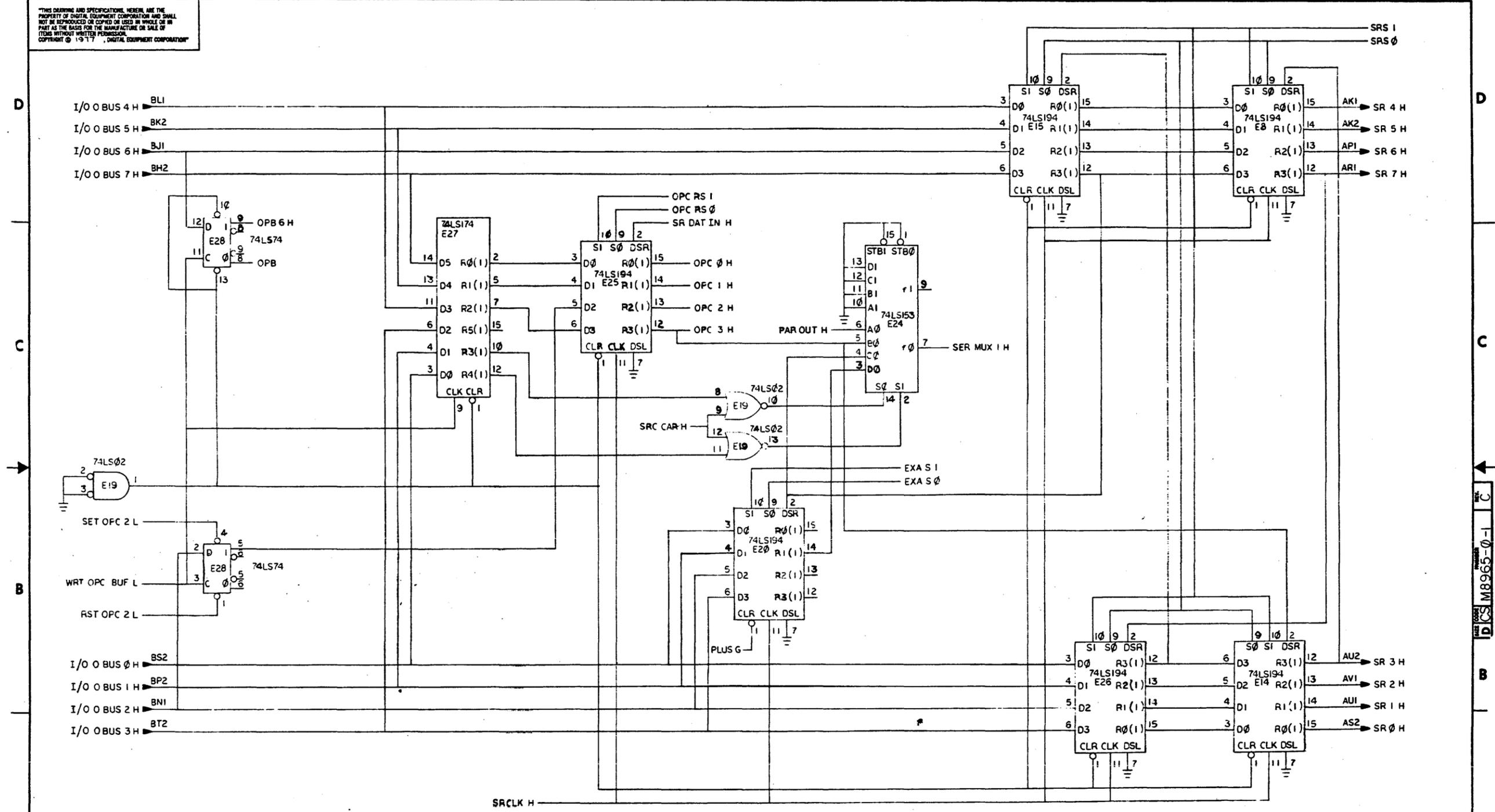
CHG	NO	REV
2/21	MS895-MLL	C
	Switchgear	2/21/77
	G. KRASNIKI	
	E. M. ...	2/21/77

SIGNATURES		DATE	TITLE
DRN.	<i>John Gray</i>	16/5/77		I/O SECTION 1
CHK'D.	<i>H. Gant</i>	27/8/77	
ENG.	<i>H. Farnham</i>	2/2/77	
PROJ. ENG.	<i>M. Anderson</i>	2/2/77	
PROD.	<i>John Gant</i>	1-13-77	
SCALE	2/1		SIZE CODE
SHT.	1 OF 3		NUMBER
NEXT HIGHER ASSY.	B-DD-M8965-0		REV

8 7 6 5 4 3 2 1 MS#116062

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1-0-9968W SCS 2

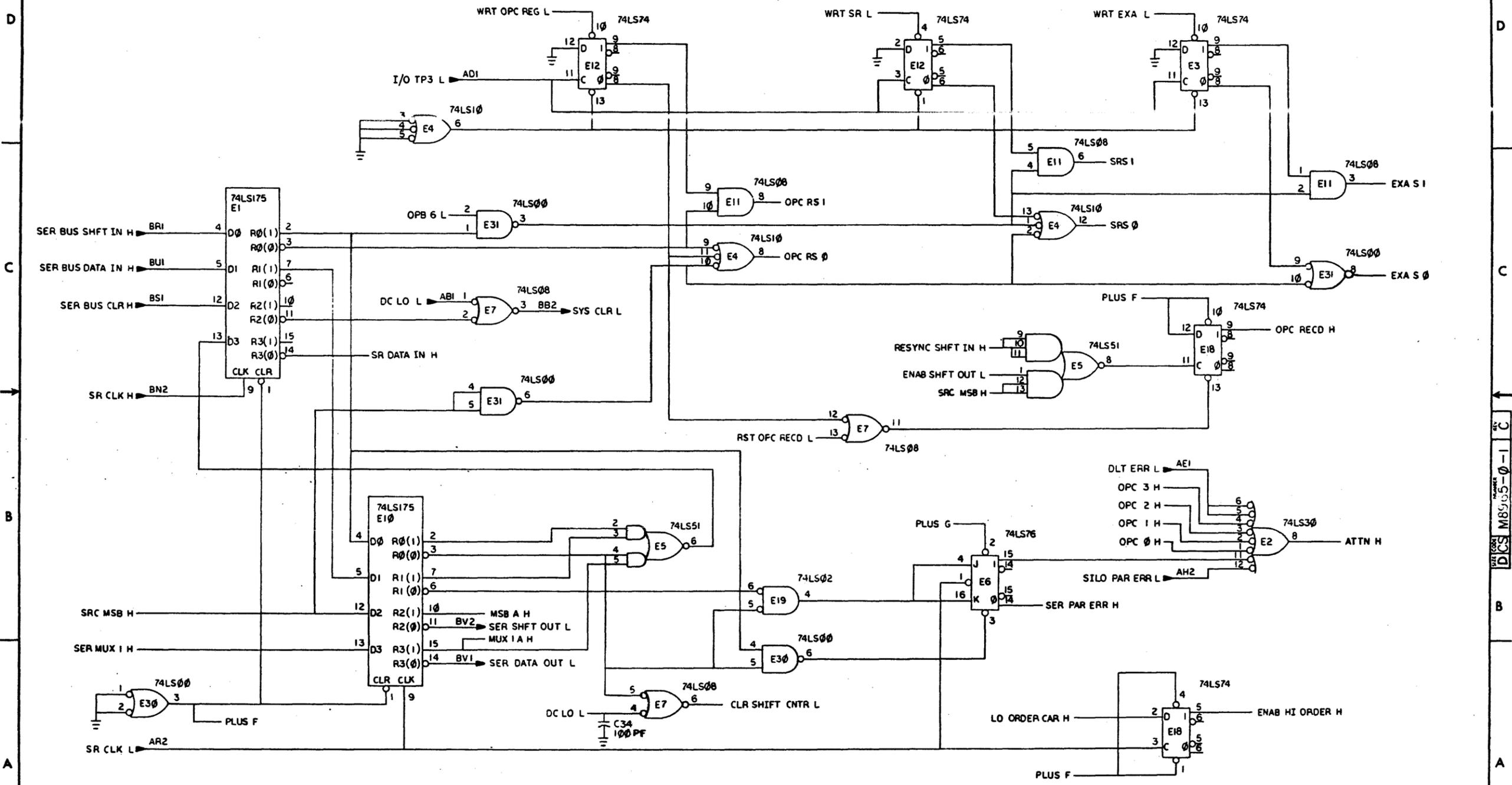


REV.	CHG.	BY	DATE
1	1	B. KRASNICK	1/17/79
2	1	B. KRASNICK	1/17/79

DRW. <i>[Signature]</i>	14 OCT 77	FIRST USED ON	TS04 digital
CHK'D <i>[Signature]</i>	14 OCT 77	TITLE	I/O SECTION 1
ENG. <i>[Signature]</i>	14 OCT 77	SIZE CODE	D CS
PROJ. ENG. <i>[Signature]</i>	14 OCT 77	NUMBER	M8965-0-1
PROD. <i>[Signature]</i>	14 OCT 77	REV.	C
NEXT HIGHER ASSY.		SCALE	NONE
B-DD-M8965-0		SHEET	1 OF 3

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1-0-9968W 2



REV. C
NUMBER M8965-0-1
D/C S

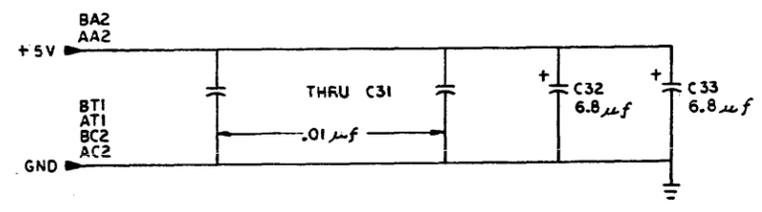
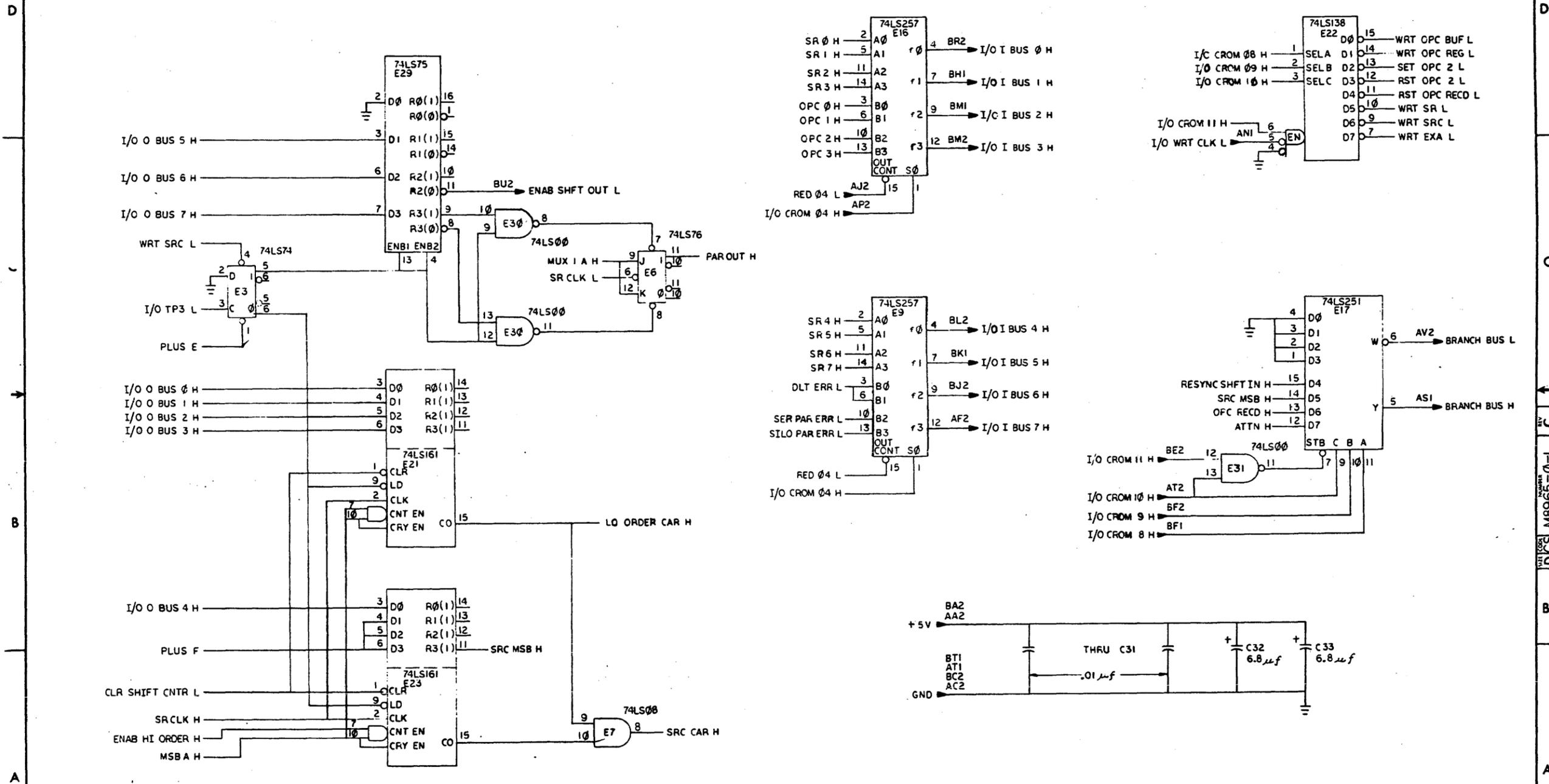
REVISIONS		
CHK	CHANGE NO	REV

TITLE	I/O SECTION 1	SIZE CODE	D/C S	NUMBER	M8965-0-1	REV.	C
SCALE	NONE	SHEET	2	OF	3	DIST.	

DEC FORM 100
OCT 1968

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1-0-9968W 2



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	I/O SECTION 1	SIZE CODE	D CS	NUMBER	M8965-0-1	REV.	C
SCALE	NONE	SHEET	3 OF 3	DIST.			

DEC FORM NO. 080 130

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	D-CS-M8965-0-1		CIRCUIT SCHEMATIC	REF	
2	2	D-UA-M8965-0-0		UNIT ASSY	REF	
3	3	B-DD-M8965-0-0		DWG DIRECTORY	REF	
4	4	D-MD-S012885-0-0		DRILL & ETCH DWG	REF	
5	5		1001610-00	.01 MFD 50V +80-20% 25U CER	31	C1-C31
6	6		1005306-00	6.8MFD 35V 10% S.TANT	2	C32,C33
7	7		1912647-00	LS257 MUX 1 OF 2 (QUAD)	2	E9,E16
8	8		1912648-00	LS251 MUX 8 INPUT TRI-STA	1	E17
9	9		1912649-00	LS75 LATCH 4BIT BISTABLE	1	E29
10	10		1912696-00	LS194A SHIFT REG. 4BIT BI-D	6	E8,E14,E15,E20,E25,E26
11	11		1912697-00	LS174 FF-D HEX W/CLEAR	1	E27
12	12		1912799-00	LS00 NAND-GATE-QUAD 2IN,P	2	E30,E31
13	13		1912801-00	LS02 NOR-GATE-QUAD 2IN	1	E19
14	14		1912805-00	LS08 AND GATE-QUAD 2IN,PO	2	E7,E11
15	15		1912807-00	LS10 NAND GATE-TRIPLE 3IN	1	E4
16	16		1912815-00	LS30 NAND GATE-SINGLE 8IN	1	E2
17	17		1912820-00	LS51 A-0-1 GATE 2-WIDE 2I	1	E5
18	18		1912824-00	LS74 FF-D DUAL EDGE TRIGG	4	E3,E12,E18,E28
19	19		1912825-00	LS76 FF-JK DUAL W/PRESET	1	E6
20	20		1912842-00	LS138 DECODER-THREE INPUT	1	E22
21	21		1912845-00	LS153 MUX 1 OF 4 (DUAL)	1	E24
22	22		1912849-00	LS161 COUNTER SYNCHR,4BIT	2	E21,E23
23	23		1912853-00	LS175 FF-D QUAD	2	E1,E10
24	24	SPARE LOCATION		IC SPARE	1	E13
25	25		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
26	26		9006732-00	EYELET,ROLL FLANGE .12100X .219	4	
27	27		S012885-00	M8965	1	
28	28		1000016-00	100.0 MMF 100V 5%200PPM MICA	1	C34

REVISION HISTORY		BASIC PART NO: M8965		DRN: DON COREY		DATE: 07-NOV-77		D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	DON COREY	DATE:	07-NOV-77	TITLE	PARTS LIST
---	INIT	B	SECTION VARIATION INDEX					I/O SECTION 1	
B.K!	ML001	C	(A) 00	DES.ENG:	R.ODOM	DATE:	11-JAN-78	DOCUMENT NUMBER	
			(B)	RESP.ENG.:	H.FINDEISEN	DATE:	11-JAN-78	SIZE:CODE: NUMBER	REV
			(C)	MFG.ENG.:	P.BARTON	DATE:	11-JAN-78	K PL M8965-0-DBP	C
			(D)	ASSEMBLY NUMBER:	D-UA-M8965-0-0	TOP DOCUMENT NUMBER:		FILE NAME:	EDIT #
			(E)					Z0610C.PLS	23
			(F)						
			(G)						
			(H)						
			(I)						
			(J)						
			(K)						
			(L)						
			(M)						
			(N)						

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8 7 6 5 4 3 2 1

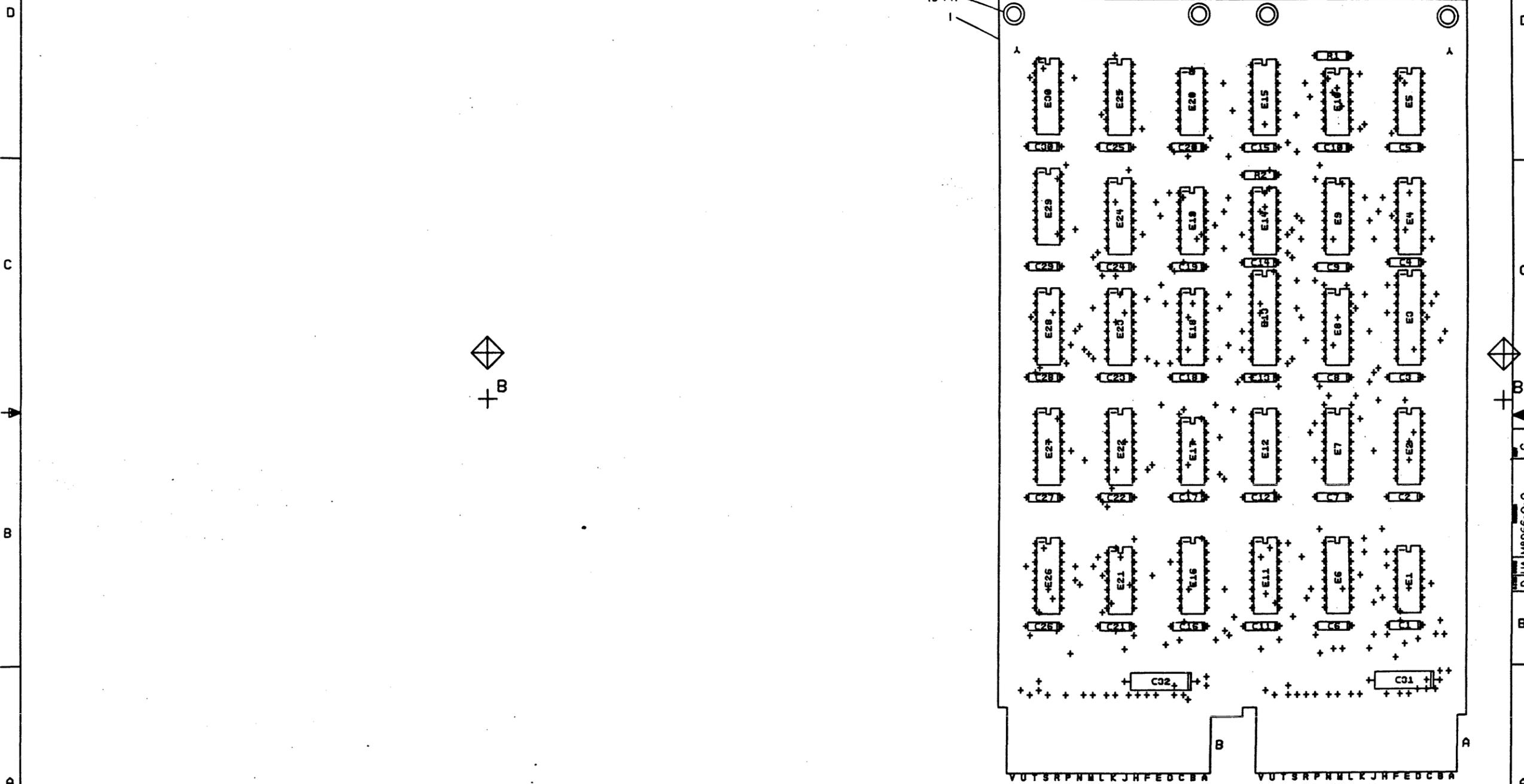
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 DATE 11-19-98 BY 60322 UCBAW/STP

1978

0-0-9968W V110 2

COMPONENT SIDE VIEW

20 TYP
 19 TYP



NOTES:

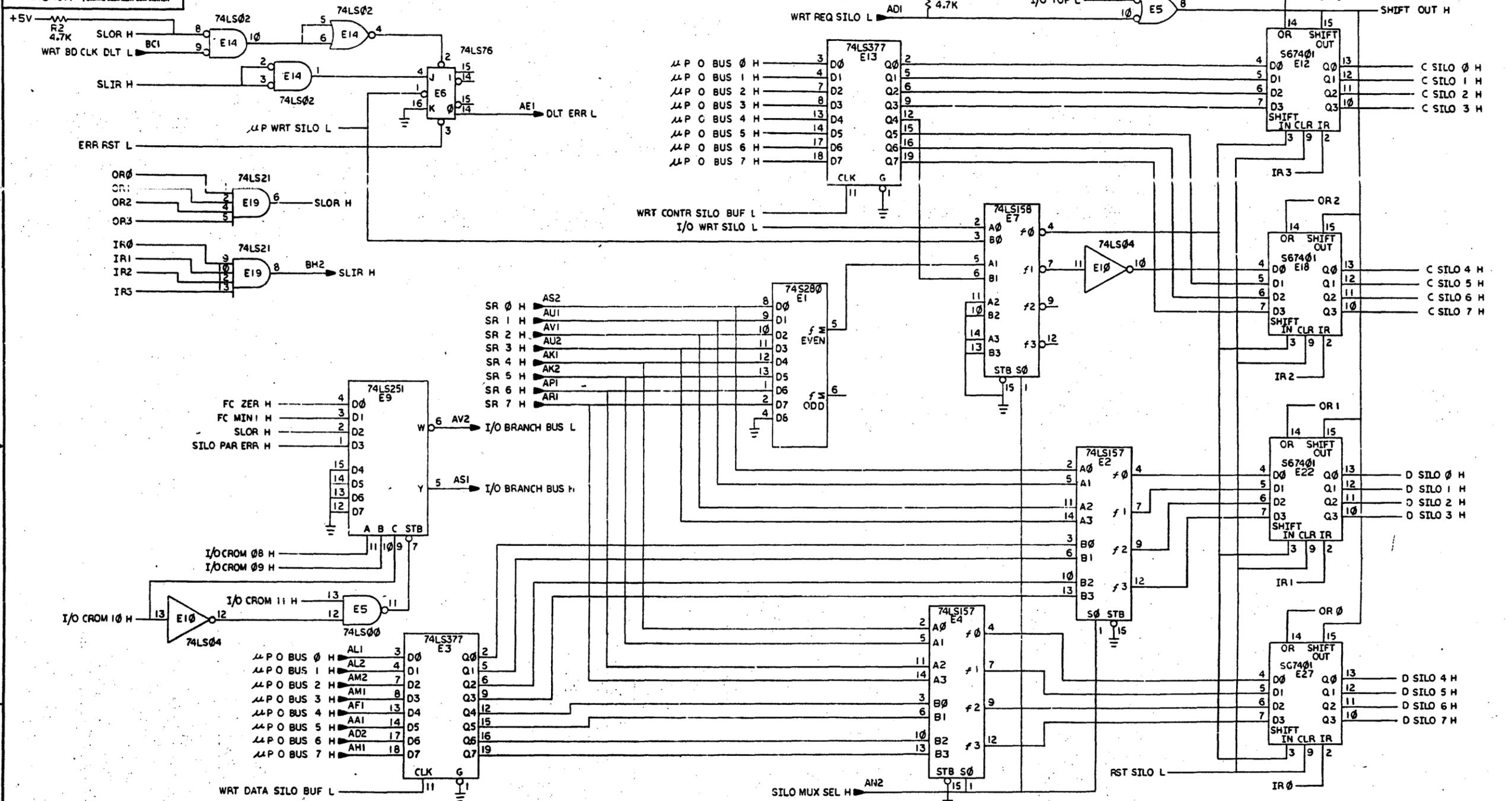
CHANGE NO	REV	DATE	BY	CHK'D
1				
2				
3				
4				
5				
6				
7				
8				

ETCH REV.	C-2
P.C. DESIGN DATA	BASE REV. CL2 & CM2

SIGNATURES		DATE	TITLE
DRN.	<i>[Signature]</i>	1-12-78		I/O SECTION 2
CHK'D.	<i>[Signature]</i>	0-0-78	
ENG.	<i>[Signature]</i>	1-13-78	
PROJ. ENG.	<i>[Signature]</i>	1-13-78	
PROD.	<i>[Signature]</i>	1-13-78	
SCALE	2/1		SIZE CODE
SHT.	1 OF 5		NUMBER
NEXT HIGHER ASSY.	8-DD-M8966-0		REV

8 7 6 5 4 3 2 1 MS#262426

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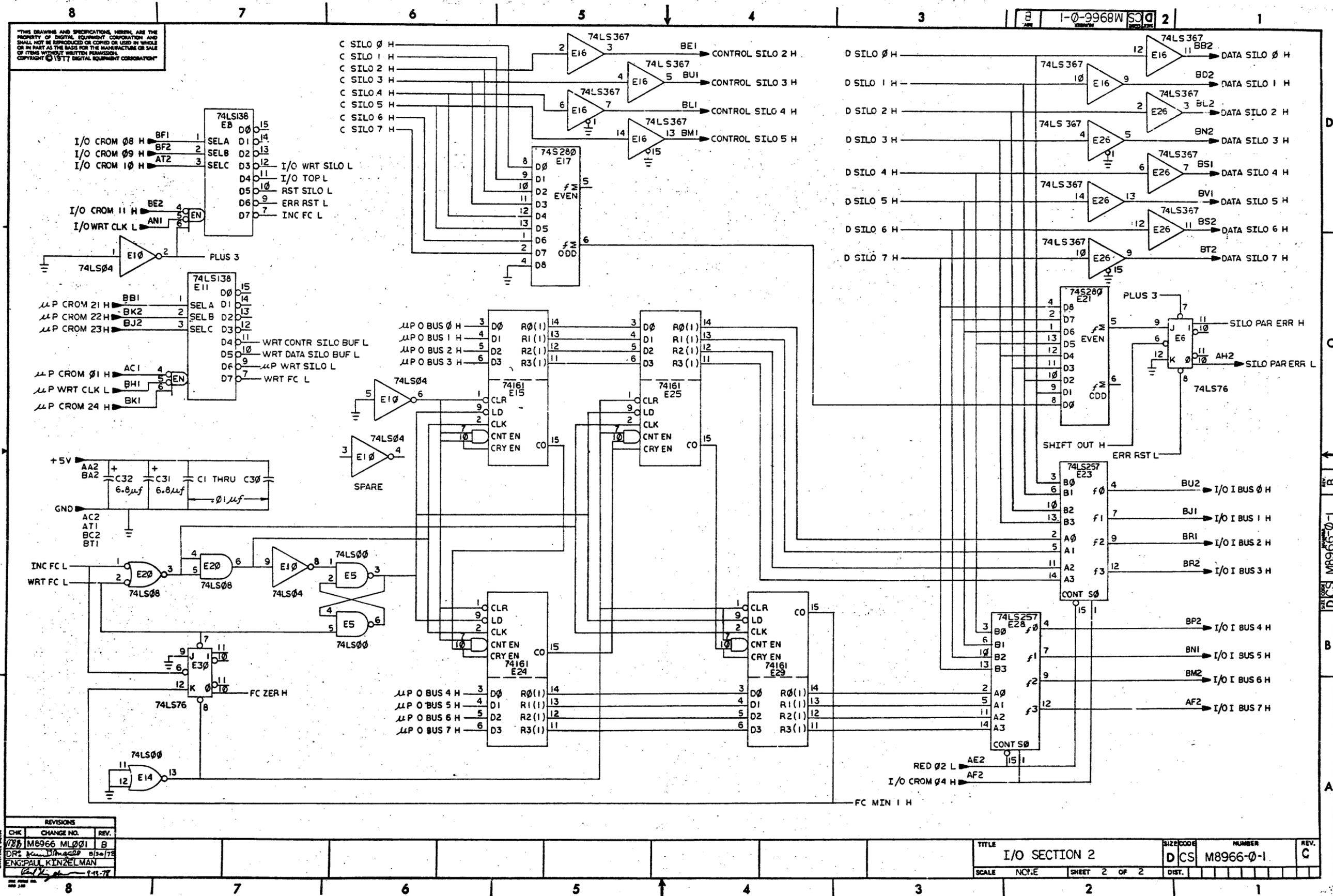


REV.	CHANGE NO.	DATE	BY
1	1	12/28/77	PAUL KINZELMAN
2	2	1/11/78	B. KRASNICK

ORIG. <i>John...</i>	DATE <i>1/11/78</i>	FIRST USED ON	digital
CHK'D. <i>H. T...</i>	<i>1/11/78</i>	TITLE	I/O SECTION 2
ENG. <i>H. T...</i>	<i>12/28/77</i>	SCALE	NONE
PROJ. ENG. <i>H. T...</i>	<i>12/28/77</i>	SIZE CODE	D CS
PROD. <i>H. T...</i>	<i>12/28/77</i>	NUMBER	M8966-0-1
NEXT HIGHER ASSY.		REV.	C
B-DD-M8966-0	SCALE	SHEET	1 OF 2
DIST.			

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1-0-9968W S00 2



REVISIONS		
CHK	CHANGE NO.	REV.
DR2	M8966 ML001	B
DR2	DR2	8/30/78
ENG	PAUL KINZELMAN	

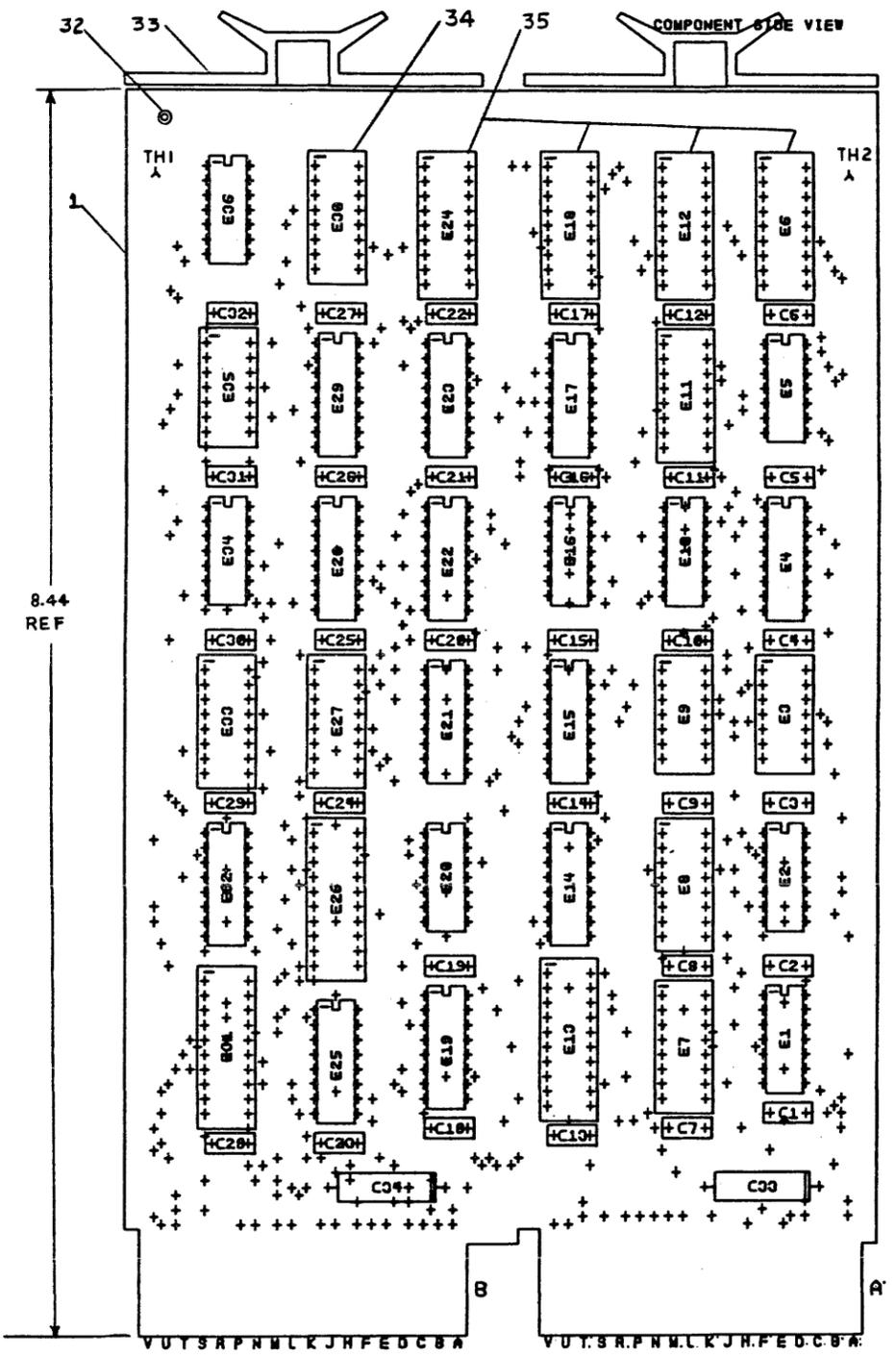
TITLE	I/O SECTION 2	SIZE CODE	D CS	NUMBER	M8966-0-1	REV.	C
SCALE	NONE	SHEET	2 OF 2	DIST.			

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
1	1		5012986-00	M8966	1	
2	2		1001610-00	.01 MFD 50V +80-20% Z5U CER	30	C1-C30
3	3		1005306-00	6.8MFD 35V 10% S.TANT	2	C31,C32
4	4		1910650-00	74161 COUNTER SYNCHR. UP	4	E15,E24,E25,E29
5	5		1912647-00	LS257 MUX 1 OF 2 (QUAD)	1	E23,E28
6	6		1912648-00	LS251 MUX 8 INPUT TRI-STA	1	E9
7	7		1912801-00	LS02 NOR-GATE-QUAD 2IN	1	E14
8	8		1912825-00	LS76 FF-JK DUAL W/PRESET	2	E6,E30
9	9		1912847-00	LS157 MUX 1 OF 2 (QUAD)	2	E2,E4
10	10		1912872-00	LS377 FF-D 8BIT W/ENABLE	2	E3,E13
11	11		1914768-01	FIFO, SLOW (67401)	4	E12,E18,E22,E27
12	12		1911573-00	74S280 PARITY GEN/CHKR 9BIT	3	E1,E17,E21
13	13		1912799-00	LS00 NAND-GATE-QUAD 2IN,P	1	E5
14	14		1912803-00	74LS04 INVERTER GATE,HEX	1	E10
15	15		1912805-00	LS08 AND GATE-QUAD 2IN,PO	1	E20
16	16		1912842-00	LS138 DECODER-THREE INPUT,	2	E8,E11
17	17		1912848-00	LS158 MUX 1 OF 2 (QUAD)	1	E7
18	18		1912811-00	LS21 AND GATE-DUAL 4IN,PO	1	E19
19	19		9006732-00	EYELET,ROLL FLANGE .121ODX .219	4	
20	20		9008337-06	HANDLE,FLIP CHIP,MAGENTA	2	
21	21		1300447-00	4.70 K .25 W 5.0 % CC	2	R1,R2
22	22		1913471-00	LS367 DRIVER,BUS,HEX,TRI-	2	E16,E26

REVISION HISTORY			BASIC PART NO: M8966			DRN: H.WEINBRENNER			DATE: 29-AUG-78			D I G I T A L		
ENG	ECO NUMBER	REV	SECTION A OF A			CHK'D: W.CASSIDY			DATE: 29-AUG-78			TITLE PARTS LIST		
---	INIT	A	SECTION VARIATION INDEX			DES.ENG: B.KRASNICK			DATE: 29-AUG-78			I/O SECTION 2		
ER	ML001	B	[A]	00	RESP.ENG.: B.KRASNICK			DATE: 29-AUG-78			DOCUMENT NUMBER			
BK	M8966-ML002	C	[B]		MFG.ENG.: P.BARTON			DATE: 29-AUG-78			SIZE:CODE: NUMBER REV			
			[C]		ASSEMBLY NUMBER:			TOP DOCUMENT NUMBER:			FILE NAME: EDIT #			
			[D]		D-UA-M8966-0-0			TS04			20950C.PLS 9			
			[E]		"THIS DRAWING AND SPECIFICATIONS HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT (C) 1981. DIGITAL EQUIPMENT CORPORATION"									
			[F]											
			[G]											
			[H]											
			[I]											

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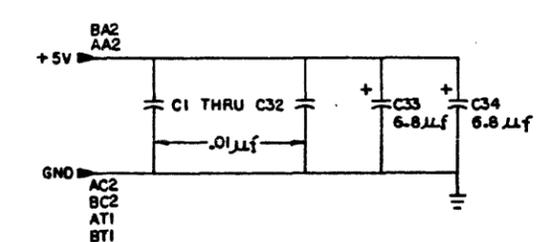
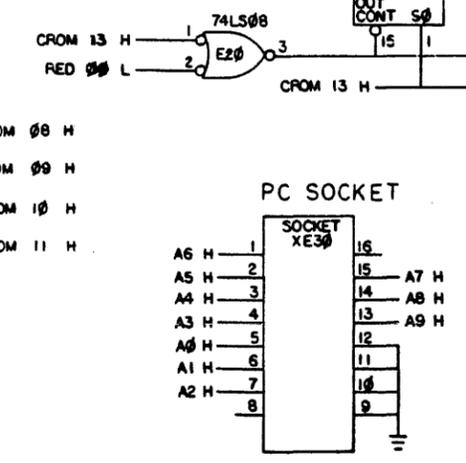
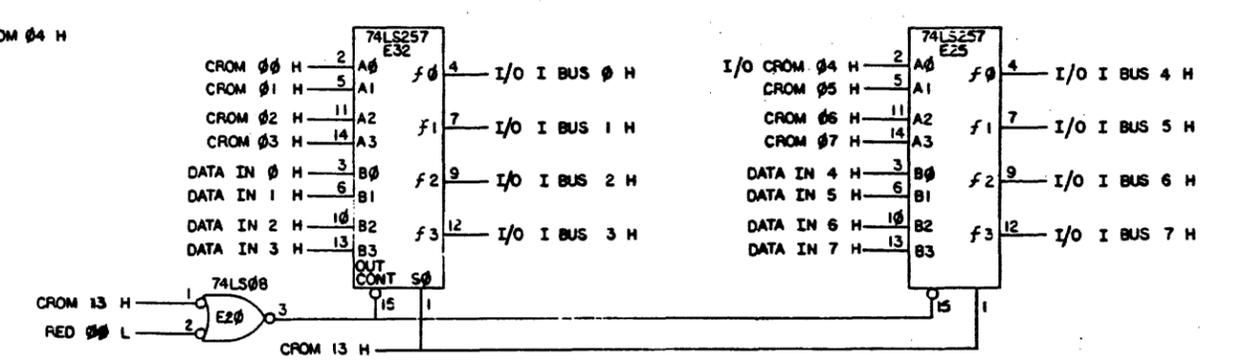
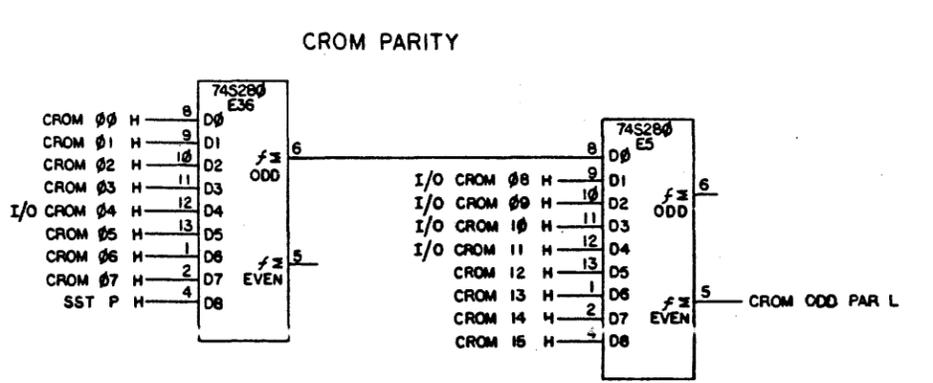
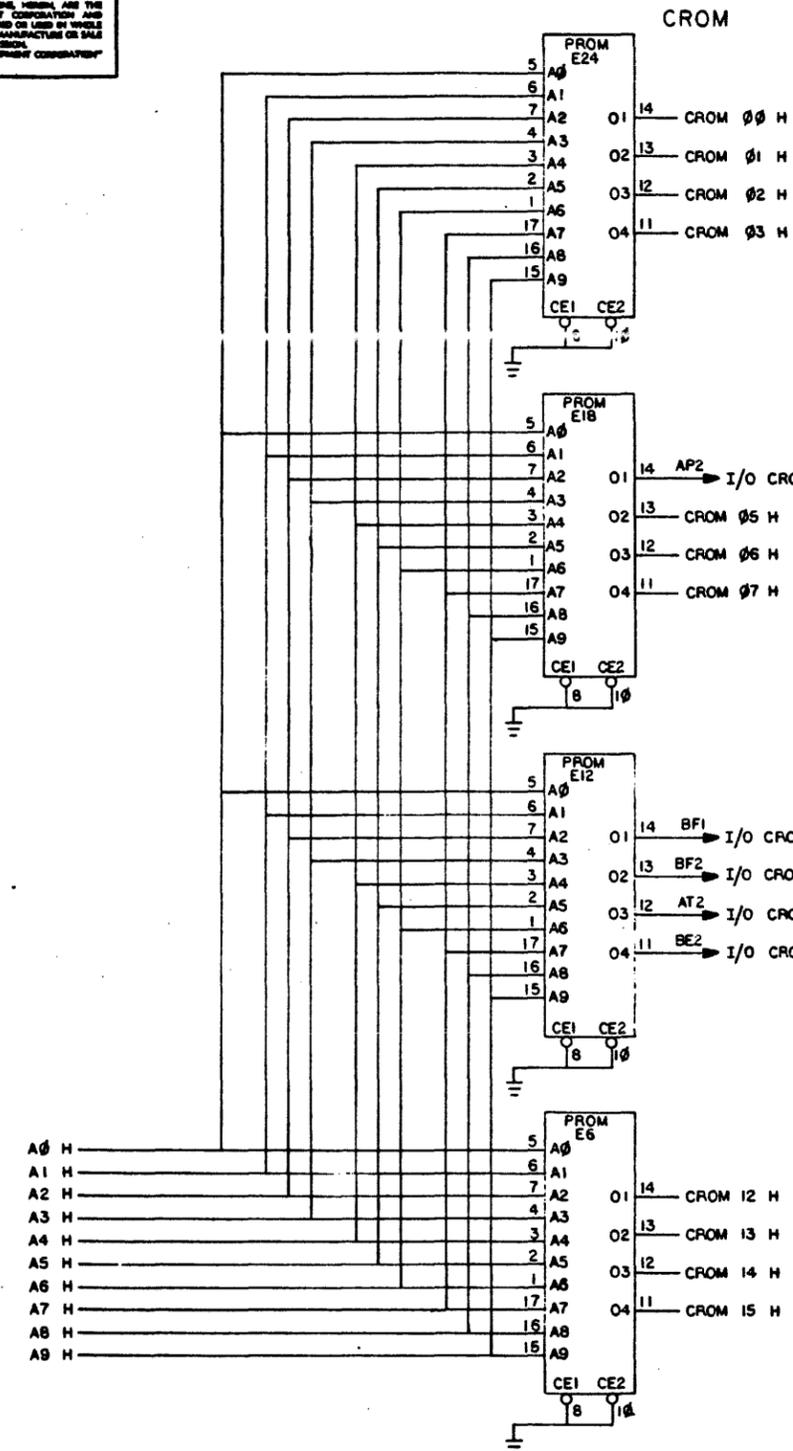
NOTES:

CHANGE NO.	REV.	BY	DATE
1	B	W. J. Kinzelman	12/14/78
2	C	W. J. Kinzelman	12/14/78
3	D	W. J. Kinzelman	12/14/78

ETCH REV. C-P1
P.C. DESIGN DATA BRSE REV. C

SIGNATURES	DATE	TITLE
DAN. [Signature]	12/14/78	digital
CHK. D. [Signature]	12/14/78	
PROJ. ENG. E. Kinzelman	12/14/78	I/O SECTION
PROD. [Signature]		
SCALE 2:1		SIZE CODE NUMBER REV
SHT. 1 OF 3		D UA M8967-0-0 D
NEXT HIGHER ASSY. 6-00-M8967-0		

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REVISIONS		
CHK	CHANGE NO.	REV.

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
1	1	D-CS-M8967-0-1		CIRCUIT SCHEMATIC	REF	
2	2	B-DD-M8967-0-0		DRAWING DIRECTORY	REF	
3	3	D-UA-M8967-0-0		UNIT ASSEMBLY	REF	
4	4	D-MD-5012887-0-0		DRILL & ETCH DRAWING	REF	
5	5		5012867-00	M8967	1	
6	6		1001610-00	.01 MFD 50V +80-20% 25U CER	32	C1-C32
7	7		1005306-00	6.8MFD 35V 10% S.TANT	2	C33,C34
8	8		1912801-00	LS02 NOR-GATE-QUAD 2IN	2	E3, E35
9	9		1912803-00	74LS04 INVERTER GATE, HEX	1	E10
10	10		1912805-00	LS08 AND GATE-QUAD 2IN, PO	1	E20
11	11		1912807-00	LS10 NAND GATE-TRIPLE 3IN	1	E16
12	12		1912813-00	LS27 NOR GATE-TRIPLE 3IN	1	E2
13	13		1912820-00	LS51 A-0-1 GATE 2-WIDE 2I	1	E9
14	14		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1	E1
15	15		1912842-00	LS138 DECODER-THREE INPUT,	3	E4, E7, E22
16	16		1912846-00	LS155 DECODER, 2 OF 4 (DUAL)	1	E19
17	17		1912849-00	LS161 COUNTER, SYNCHR, 4BIT	3	E11, E17, E29
18	18		1912697-00	LS174 FF-D HEX W/CLEAR	1	E14
19	19		1912648-00	LS251 MUX 8 INPUT, TRI-STA	1	E15
20	20		1912646-00	LS253 MUX 1 OF 4 (DUAL)	1	E27
21	21		1912647-00	LS257 MUX 1 OF 2 (QUAD)	2	E25, E32
22	22		1912864-00	LS279 LATCH, QUAD-S-R	2	E28, E33
23	23		1912871-00	LS375 LATCH	1	E23
24	24		1912872-00	LS377 FF-D 8BIT W/ENABLE	1	E26
25	25		1910950-00	74S74 FF-D DUAL (-45 VERSI	1	E34
26	26		1910545-00	74S112 FF-JK DUAL, EDGE TRIG	1	E21
27	27		1910552-00	74S194 SHIFT REG, 4BIT RIGH	1	E8
28	28		1911573-00	74S280 PARITY GEN/CHKR, 9BIT	2	E5, E36
29	29		1913670-00	74S373 LATCH 8BIT TRASP TR	1	E31
30	30		1913671-00	74S374 FF-D OCTAL TRISTATE	1	E13

REVISION HISTORY		BASIC PART NO: M8967		DRN:	WEINBRENNER	DATE:	22-AUG-78	D I G I T A L	
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D:	W. CASSIDY	DATE:	22-AUG-78	TITLE PARTS LIST	
---	00000	A	SECTION VARIATION INDEX	DES.ENG:	H. FINDEISEN	DATE:	22-AUG-78	I/O SECTION 3	
CL	MLO01	B	[A] 00	RESP.ENG.:	H. FINDEISEN	DATE:	22-AUG-78	DOCUMENT NUMBER	
P.K:	M8967-MLO02	C	[B]	MFG.ENG.:	E. PINA	DATE:	22-AUG-78	SIZE:	CODE: NUMBER REV
P.K:	M8967-MLO03	D	[C]	ASSEMBLY NUMBER:	D-UA-M8967-0-0	TOP DOCUMENT NUMBER:	TS04	K	PL M8967-0-DBP D
			[D]			FILE NAME:	Z03220.PLS		EDIT # 8
			[E]						
			[F]						
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AUTOMATED BY PRTLST.2E(3)

PARTS LIST

SHEET A2 OF A2

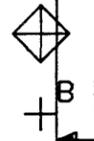
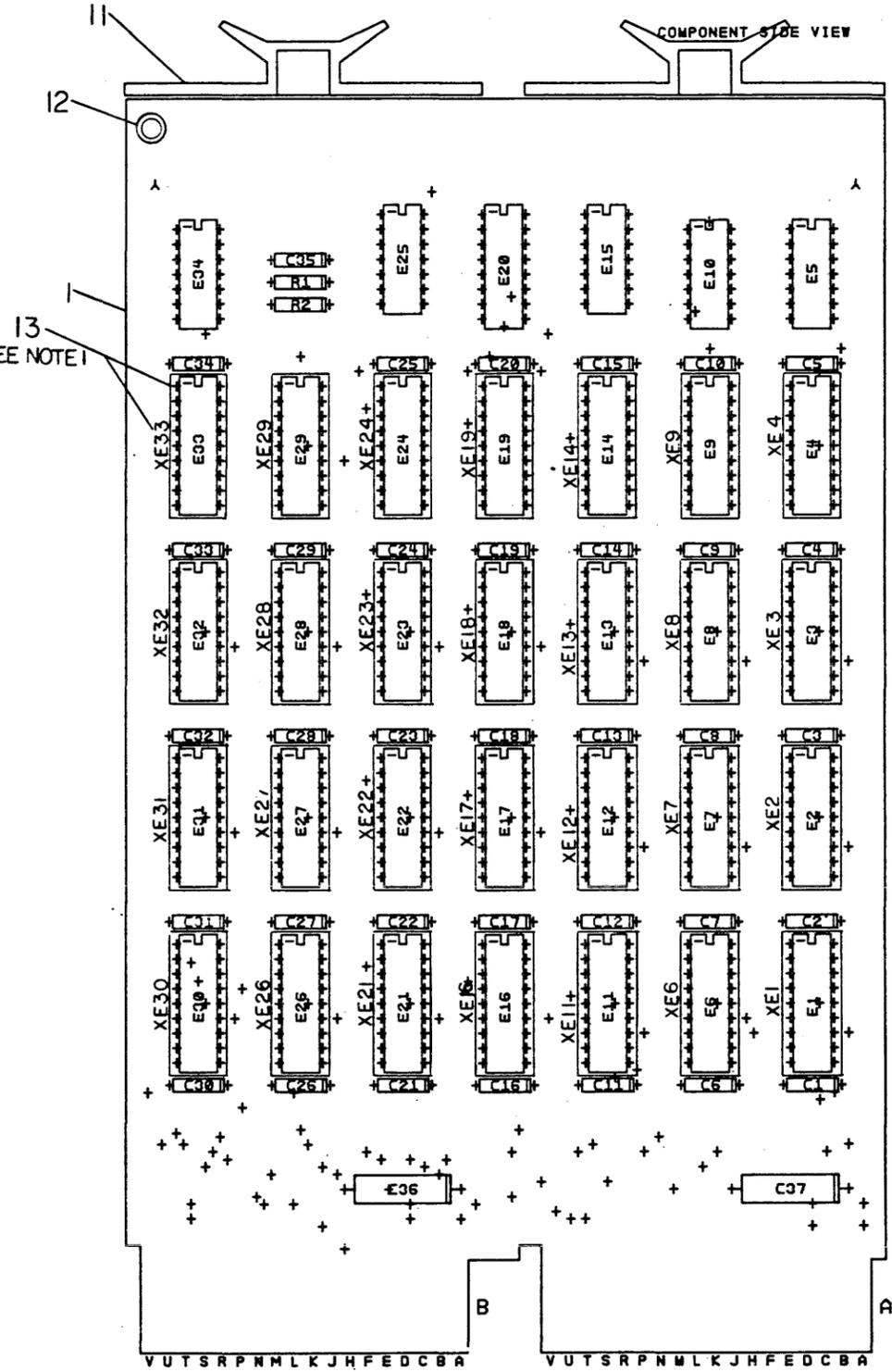
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
31	31		23000F1-01	*** THIS ITEM IS NOT USED ***	-	
32	32		9006732-00	EYELET, ROLL FLANGE .12100X .219	4	
33	33		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
34	34		1211813-02	SOCKET 16PIN IC LOW PROFILE	1	E30
35	35		1211666-00	SOCKET 18PIN IC LOW PROFILE	4	XE6, XE12, XE18, XE24
36	36		23476F1-00	F1-01	1	E24
37	37		23477F1-00	F1-01	1	E18
38	38		23478F1-00	F1-01	1	E12
39	39		23479F1-00	F1-01	1	E6

D	I	G	I	T	A	L	TITLE	I/O SECTION 3	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
										K	PL	M8967-0-DBP	D

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D U A M8968-0-0 2

COMPONENT SIDE VIEW



D U A M8968-0-0 F

NOTES: 1. INSTALL ITEM 13, SOCKETS, BEFORE INSTALLING ITEM 15, ROMS.

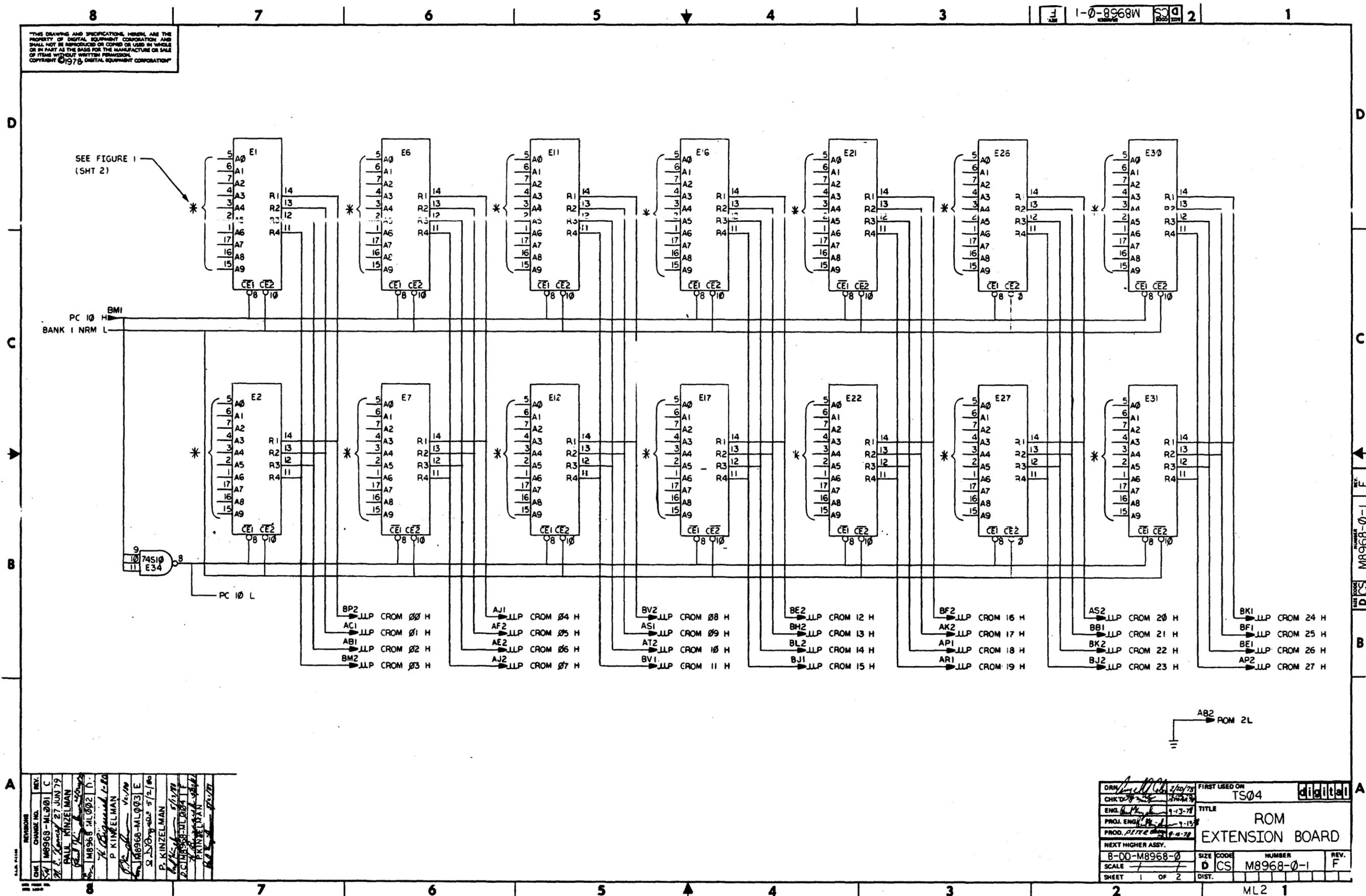
CHK CHANGE NO	REV	DATE	BY
M8968-ML004	C	7/11/78	PAUL KINZELMAN
M8968-ML004	D	7/12/78	PAUL KINZELMAN
M8968-ML004	E	7/13/78	PAUL KINZELMAN
M8968-ML004	F	7/13/78	PAUL KINZELMAN

ETCH REV. C	P.C. DESIGN DATA BRD REV. CL & CM
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SIGNATURES	DATE	digital
DRN. <i>S. G. Little</i>	7-11-78	
CHK'D. <i>R. Cassidy</i>	7-12-78	TITLE ROM EXTENSION BOARD
ENG. <i>Paul Kinzelman</i>	7-13-78	
PROJ. ENG. <i>Paul Kinzelman</i>	7-13-78	SIZE CODE NUMBER REV
PROD. <i>Peria Boards Inc.</i>	7-13-78	
SCALE 2/1	SHT. 1 OF 5	D U A M8968-0-0 F
NEXT HIGH-ER ASSY. B-DD-M8968-0		

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1-0-8968W



SEE FIGURE 1 (SHT 2)

- BP2 JLP CROM 00 H
- AC1 JLP CROM 01 H
- AB1 JLP CROM 02 H
- BM2 JLP CROM 03 H
- AJ1 JLP CROM 04 H
- AF2 JLP CROM 05 H
- AE2 JLP CROM 06 H
- AJ2 JLP CROM 07 H
- BV2 JLP CROM 08 H
- AS1 JLP CROM 09 H
- AT2 JLP CROM 10 H
- BV1 JLP CROM 11 H
- BE2 JLP CROM 12 H
- BH2 JLP CROM 13 H
- BL2 JLP CROM 14 H
- BJ1 JLP CROM 15 H
- BF2 JLP CROM 16 H
- AK2 JLP CROM 17 H
- AP1 JLP CROM 18 H
- AR1 JLP CROM 19 H
- AS2 JLP CROM 20 H
- BB1 JLP CROM 21 H
- BK2 JLP CROM 22 H
- BJ2 JLP CROM 23 H
- BK1 JLP CROM 24 H
- BF1 JLP CROM 25 H
- BE1 JLP CROM 26 H
- AP2 JLP CROM 27 H

REV.	CHANGE NO.	DATE	BY
1			
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DRN	2/20/78	FIRST USED ON	TS04
CHK'D			
ENG.	1-13-78	TITLE	ROM EXTENSION BOARD
PROJ. ENGR.	1-15-78		
PROD. DATE	1-18-78		
NEXT HIGHER ASSY.			
B-DD-M8968-0		SIZE CODE	D CS
SCALE		NUMBER	M8968-0-1
SHEET 1 OF 2		DIST.	F

ML2 1

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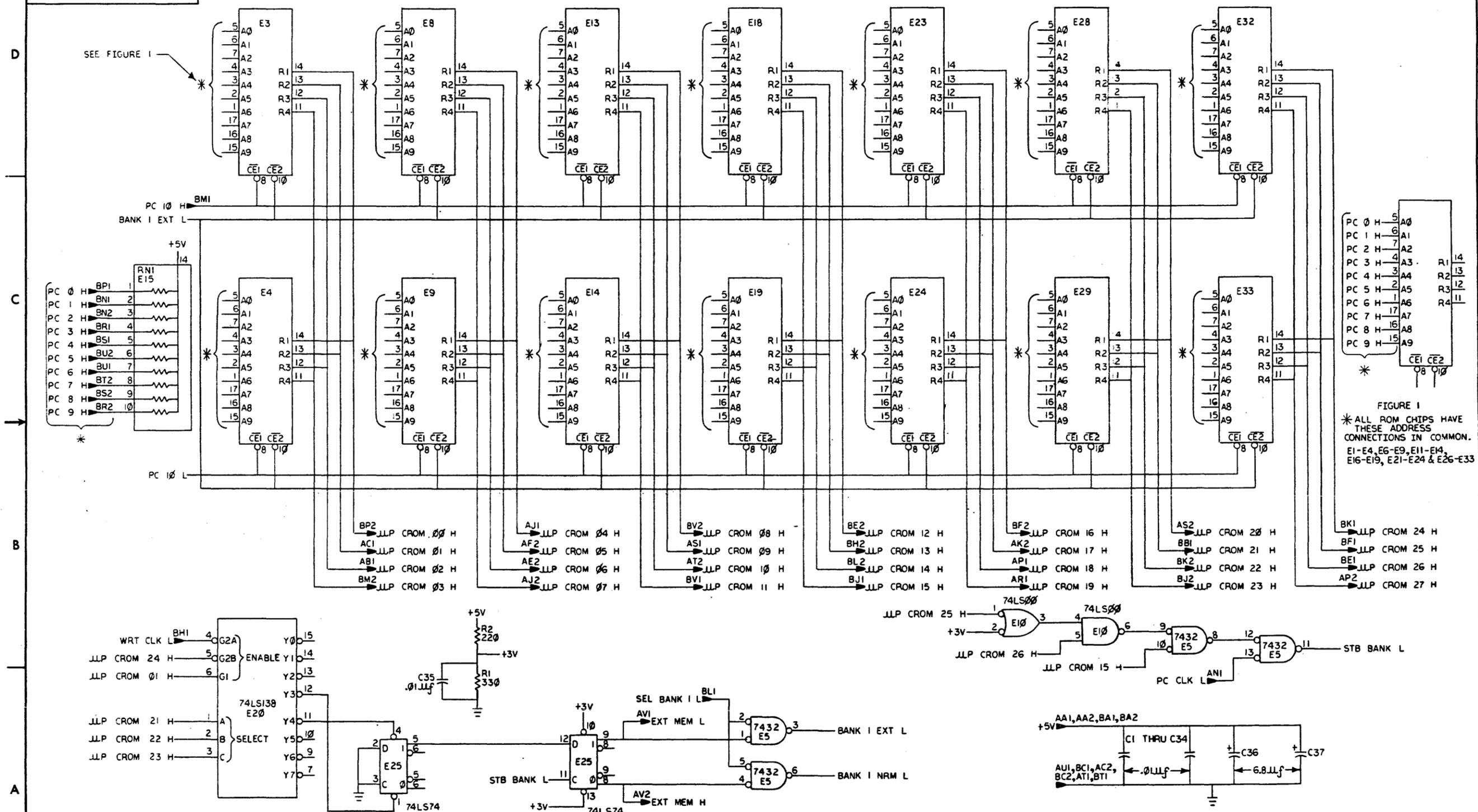


FIGURE 1
* ALL ROM CHIPS HAVE THESE ADDRESS CONNECTIONS IN COMMON.
E1-E4, E6-E9, E11-E14, E16-E19, E21-E24 & E26-E33

REV. 001 M8968-0-1

REVISIONS		
CHK	CHANGE NO.	REV.

AUTOMATED BY PRTLST.1D(10)

PARTS LIST

SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
1	1		5013277-00	M8968	1	
2	2		1001610-00	.01 MFD 50V +80-20% ZSU CER	35	C1-C35
3	3		1005306-00	6.8MFD 35V 10% S.TANT	2	C36,C37
4	4		1300271-00	220.0 .25 W 5.0 % CC	1	R2
5	5		1300295-00	330.0 .25 W 5.0 % CC	1	R1
6	6		1300005-01	R NETWORK 13-1K 5.0 X 14PIN	1	E15
7	7		1911521-00	7432 OR GATE-QUAD 2IN, PO	1	E5
8	8		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1	E25
9	9		1912799-00	LS00 NAND-GATE-QUAD 2IN, P	1	E10
10	10		1912842-00	LS138 DECODER-THREE INPUT,	1	E20
11	11		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
12	12		9006732-00	EYELET, ROLL FLANGE .12100X .219	4	
13	13	SEE NOTE	1211666-00	SKT, IC 18PIN DIP GOLD PLATE	28	CONT XE1-XE4, XE6-XE9, XE11-XE14, XE16-XE19, XE21-XE24, XE26-XE33
14	14		1910536-00	74510 NAND GATE-TRIPLE 3IN	1	E34
15	15		23403F1-00	F1-01	1	E1
16	16		23404F1-00	F1-01	1	E6
17	17		23405F1-00	F1-01	1	E11
18	18		23406F1-00	F1-01	1	E16
19	19		23407F1-00	F1-01	1	E21
20	20		23408F1-00	F1-01	1	E26
21	21		23409F1-00	F1-01	1	E30
22	22		23813F1-00	F1-01	1	E2
23	23		23658F1-00	F1-01	1	E7
24	24		23659F1-00	F1-01	1	E12
25	25		23660F1-00	F1-01	1	E17
26	26		23661F1-00	F1-01	1	E22
27	27		23662F1-00	F1-01	1	E27
28	28		23814F1-00	F1-01	1	E31
29	29		23417F1-00	F1-01	1	E3

REVISION HISTORY		BASIC PART NO: M8968		DRN:	R.WALDIE	DATE:	01-MAR-78	D I G I T A L			
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D:	R.ODOM	DATE:	01-MAR-78	TITLE PARTS LIST			
---	INIT	B	SECTION VARIATION INDEX	DES.ENG:	R.ODOM	DATE:	01-MAR-78	ROM EXTENSION BD			
P.K.	M8968-MLO01	C	[A] 00	RESP.ENG.:	R.ODOM	DATE:	01-MAR-78	DOCUMENT NUMBER			
PK	M8968-MLO02	D	[B]	MFG.ENG.:	P.BARTON	DATE:	01-MAR-78	SIZE	CODE	NUMBER	REV
PK	M8968-MLO03	E	[C]	ASSEMBLY NUMBER:	D-UA-M8968-0-0	TOP DOCUMENT NUMBER:	TS04	K	PL	M8968-0-DBP	F
PK	M8968-MLO04	F	[D]			FILE NAME:	Z0597F.PLS				EDIT #
			[E]								21
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AUTOMATED BY PRTLST.1D(10)

PARTS LIST

SHEET A2 OF A2

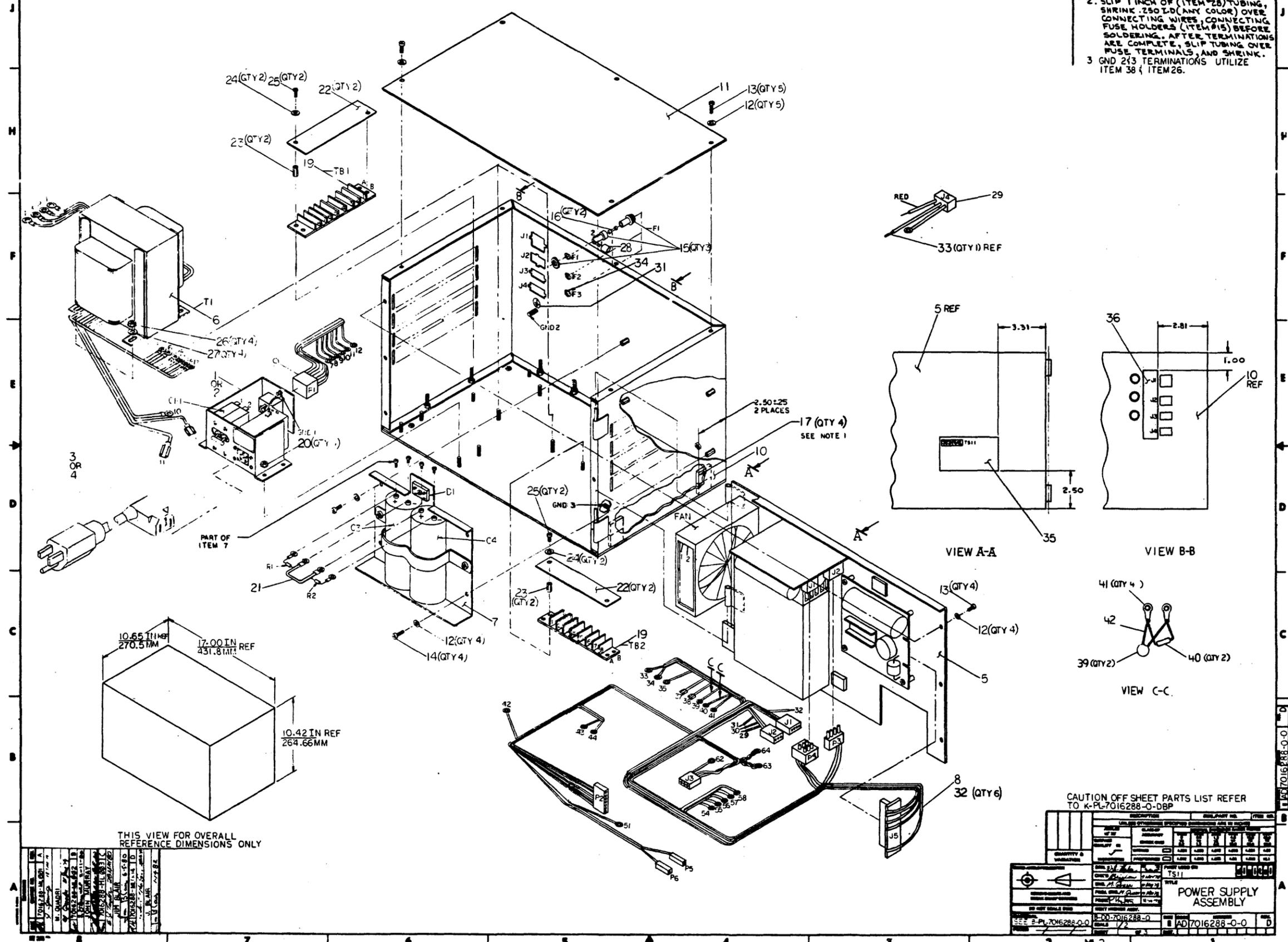
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
30	30		23611F1-00	F1-01	1	E8
31	31		23419F1-00	F1-01	1	E13
32	32		23420F1-00	F1-01	1	E18
33	33		23421F1-00	F1-01	1	E23
34	34		23422F1-00	F1-01	1	E28
35	35		23612F1-00	F1-01	1	E32
36	36		23424F1-00	F1-01	1	E4
37	37		23613F1-00	F1-01	1	E9
38	38		23426F1-00	F1-01	1	E14
39	39		23427F1-00	F1-01	1	E19
40	40		23428F1-00	F1-01	1	E24
41	41		23429F1-00	F1-01	1	E29
42	42		23614F1-00	F1-01	1	E33

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							ROM EXTENSION BD		K	PL	M8968-0-DBP	F

1978

LEGEND	
PART NO.	VARIATION
7016288-00	12.2V
7016288-01	24.2V

- NOTES:
1. ADHERE ITEM 17 TO CHASSIS WHERE SHOWN
 2. SLIP 1 INCH OF (ITEM 28) TUBING, SHRINK .250 I.D. (ANY COLOR) OVER CONNECTING WIRES, CONNECTING FUSE HOLDERS (ITEM 15) BEFORE SOLDERING. AFTER TERMINATIONS ARE COMPLETE, SLIP TUBING OVER FUSE TERMINALS, AND SHRINK.
 3. GND 2 & 3 TERMINATIONS UTILIZE ITEM 38 & ITEM 26.



REV	DESCRIPTION	DATE	BY	CHKD
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QTY	DESCRIPTION	REF	UNIT
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POWER SUPPLY ASSEMBLY

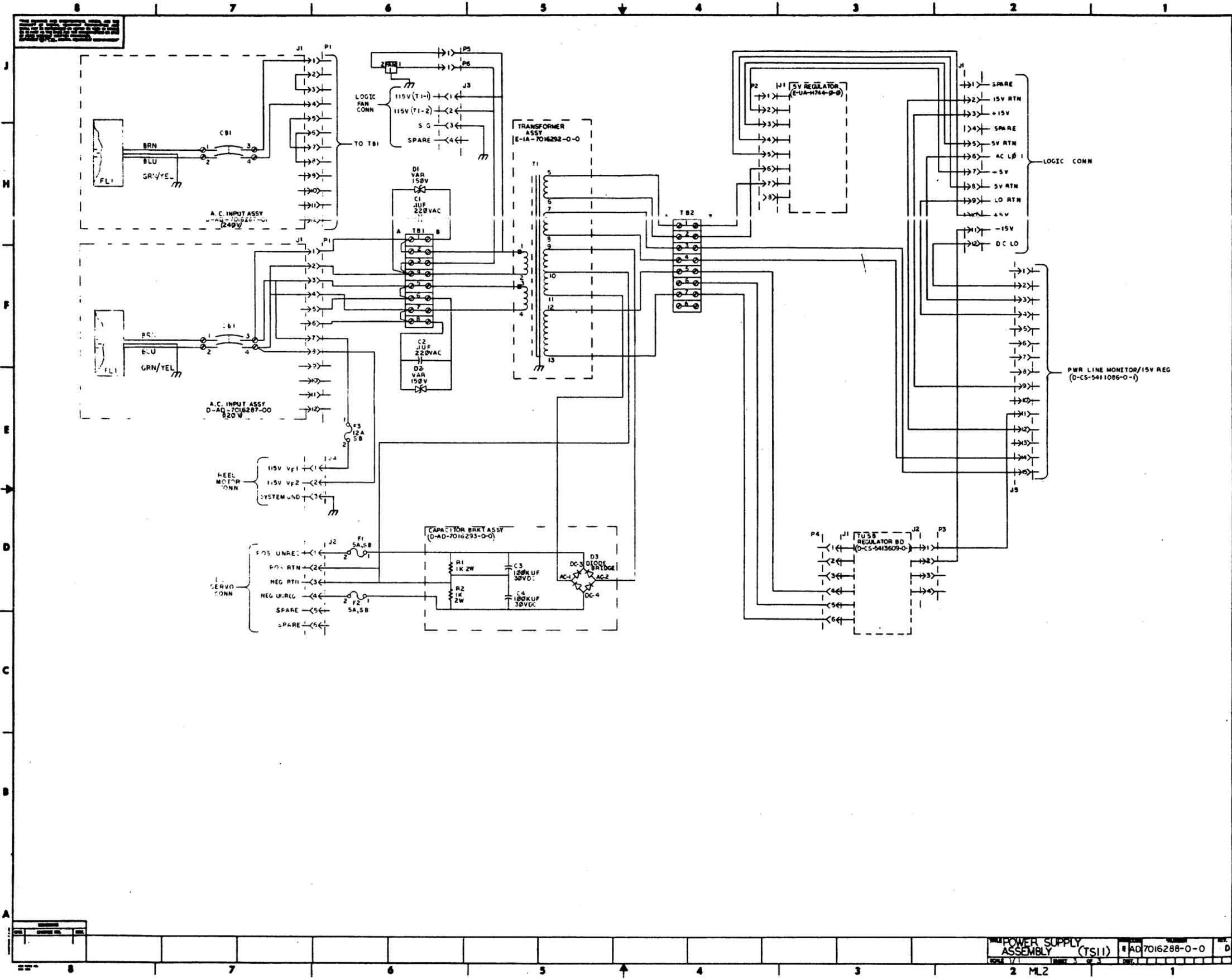
ML2

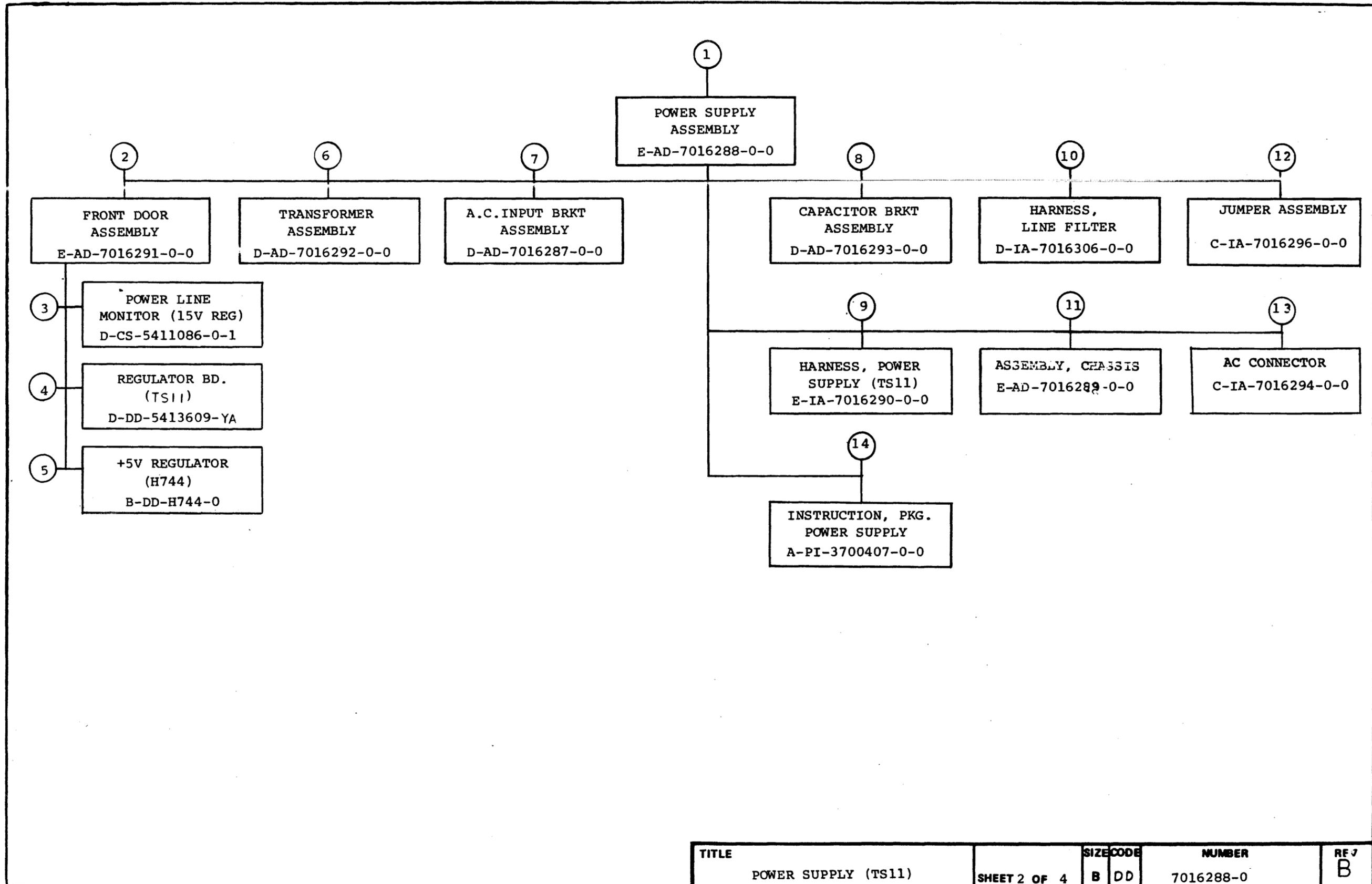
WIRE TABLE 7016288-00											WIRE TABLE 7016288-01										
ITEM NO	DESCRIPTION	FROM POINT	CONNECTION	WITH	POINT	CONNECTION	WITH	REMARKS	ITEM NO	DESCRIPTION	FROM POINT	CONNECTION	WITH	POINT	CONNECTION	WITH	REMARKS				
8	14	BLACK	50	P2-7	43	TB2-1B			2	14	BLACK			CBI-3			A.C. INPUT ASSEMBLY				
8	14	BLACK	49	P2-6	44	TB2-2B			2	14	BLACK			CBI-4			D-1A-7016287-01				
8	14	GRN/YEL	51	FAN-GND	42	GND-3	26/38		2	14	BLACK			J1-2			240V WIRING (ONLY)				
8	18	RED	P6	FAN-1	64	TB1-3B			2	14	BLACK			J1-5							
8	TWP	WHITE	P5	FAN-2	63	TB1-2B			2	14	BLACK			J1-6							
8	18	RED	60	J3-2	64	TB1-3B			2	BROWN				FLI-1							
8	TWP	WHITE	59	J3-1	63	TB1-2B			2	BLUE				FLI-2							
8	14	GRN/YEL	61	J3-3	62	GND-2	26		2	14	GRN/YEL			FLI-GND							
8	18	BLACK	1	F4-5	54	TB2-7B															
8	18	BLACK	2	F4-5	55	TB2-6B															
8	18	BLACK	3	F4-4	56	TB2-5B															
8	18	BLACK	6	J5-1B	58	TB2-3B															
8	18	BLACK	7	J5-1A	57	TB2-4B															
8	18	BLACK	3	J5-2B	58	TB2-3B															
8	14	BLUE	33	C4-1	37	D3-4															
8	14	BLUE	34	C4-2	31	F2-1	28														
8	14	BLACK	25	J2-3	35	C4-3															
8	14	ORANGE	38	D3-3	41	C3-3															
8	14	BLACK	26	J2-2	39	C3-2															
8	14	ORANGE	40	C3-3	32	F1-1	28														
8	14	BLUE	28	J2-4	30	F2-2	28														
8	14	ORANGE	27	J2-1	29	F1-2	28														
9	14	BLACK	1	PI-1	12	TB1-2A															
9	14	BLACK	2	PI-2	11	TB1-4A															
9	14	BLACK	3	PI-3	10	TB1-5A															
9	14	BLACK	4	PI-4	8	TB1-7A															
9	14	BLACK	5	PI-5	9	TB1-6A															
9	14	BLACK	6	PI-6	7	TB1-8A															
19				TB1-2A		TB1-1A	30														
19				TB1-4A		TB1-3A	30														
19				TB1-6A		TB1-5A	30														
19				TB1-8A		TB1-7A	30														
19				TB1-4A		D1															
19				TB1-4A		C1															
19				TB1-2B		D1															
19				TB1-2B		C1															
19				TB1-2B		D2															
19				TB1-2B		C2															
19				TB1-2B		D2															
19				TB1-2B		C2															
20	18	BROWN		F3-1		PI-7	33(28)	LINE													
20	14	BLUE		J4-2		PI-8	33	FILTER													
								ASSEMBLY													
								CIA-7016294													
21	14	RED		J4-1		F3-2	28														
27	14	GRN/YEL		J4-3		GND-2	26/38														
6	14	BLACK		T1-1		TB1-2B															
6	14	BLACK		T1-2		TB1-4B															
6	14	BLACK		T1-3		TB1-5B															
6	14	BLACK		T1-4		TB1-7B															
6	14	BLACK		T1-5		TB2-1A															
6	14	BLACK		T1-6		TB2-2A															
6	14	BLACK		T1-7		TB2-3A															
6	14	BLACK		T1-8		TB2-4A															
6	14	BLACK		T1-9		D3-2															
6	14	BLACK		T1-10		J2-3															
6	14	BLACK		T1-11		D3-1															
6	14	BLACK		T1-12		TB2-5A															
6	14	BLACK		T1-13		TB2-7A															
1	14	BLACK		J1-1		CBI-3															
1	14	BLACK		J1-2		CBI-4															
1	14	BLACK		J1-3		CBI-3															
1	14	BLACK		J1-4		CBI-4															
1	14	BLACK		J1-7		CBI-3															
1	14	BLACK		J1-8		CBI-4															
1	14	BLACK		J1-2		CBI-4															
1		BROWN		FLI-1		CBI-1															
1		BLUE		FLI-2		CBI-2															
1	14	GRN/YEL		FLI-GND		GND 1															

WIRING TYPICAL FOR BOTH 7016288-00 AND 7016288-01

WIRING FOR 7016288-00 (ONLY)

WIRING FOR 7016288-01 (ONLY)





TITLE	POWER SUPPLY (TS11)	SHEET 2 OF 4	SIZE CODE B DD	NUMBER 7016288-0	REV B
-------	---------------------	--------------	-------------------	---------------------	----------

ML2

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION	
				00	01
1	D-AD-7016287-0-0	7016287-00	A.C. INPUT ASSY 120V	1	-
	D-AD-7016287-0-0	7016287-01	A.C. INPUT ASSY 240V	1	1
	A-PS-1700083-0-0	1700083-00	PWR CORD, TERM. 75IN, 14-3, 125V 15	1	-
	A-PS-1700083-0-0	1700083-17	PWR CORD, TERM. 75IN, 14-3, 250V 6	1	1
	F-AD-7016291-0-0	7016291-00	FRONT DOOR ASSY	1	1
	F-IA-7016292-0-0	7016292-00	TRANSFORMER ASSY	1	1
	D-AD-7016293-0-0	7016293-00	CAPACITOR BRKT. ASSY	1	1
	F-IA-7016290-0-0	7016290-00	HARNESS, POWER SUPPLY	1	1
	C-IA-7016306-0-0	7016306-00	HARNESS, LINE FILTER	1	1
	F-AD-7016289-0-0	7016289-00	CHASSIS WELDMENT ASSY	1	1
	D-MD-7421771-0-0	7421771-00	TOP COVER	1	1
		9006634-00	WASHER, LOCK, INT., .2300 X .172 ID	13	13
		9006035-01	SCREW, PAN, PHIL 8-32X 1/4 SS	9	9
		9006037-01	SCREW, PAN, PHIL 8-32X 3/8 SS	4	4
	A-PS-1212893-0-0	1212893-00	FUSE HOLDER, 20A, 300V, PNL MNT	3	3
		9007222-00	FUSE, SLO BLO 5 A, 250V GLASS	2	2
		9008264-00	MOUNT, CABLE TIE, ADHESIVE BACKE	A/R	A/R
		9008509-00	*** THIS ITEM IS NOT USED ***	1	1
		9006910-00	TERM BLOCK 8POS 7/16 SPACING CL	2	2
		9006560-00	NUT, KEP 6-32X 5/16AF	4	4
	C-IA-7016296-0-0	7016296-00	JUMPER ASSY	1	1
	B-MD-7422499-0-0	7422499-00	PLEXI-COVER	2	2
		9006857-00	SPACER, HEX THD'D, ALUM 6-32X 5	4	4
		9006659-00	WASHER, FLAT, .375 O.D. X .156 I	4	4
		9006020-01	SCREW, PAN, PHIL 6-32X 1/4 SS	4	4
		9006565-00	NUT, KEP 10-32X 3/8 AF	4	4
		9006664-00	WASHER, FLAT, .437 OD X .218 ID	4	4
		9107253-00	TUBING, SHRINK 1/4 DIA. EXP UL	A/R	A/R
	C-IA-7016294-0-0	7016294-00	LINE FILTER ASSY	1	1
		9009003-00	JUMPER FOR TERM BLOCK	4	4

REVISION HISTORY		BASIC PART NO: 7016288		DRN: W.J. MAHER	DATE: 26-AUG-78	D I G I T A L	
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D: D. BRIGHAM	DATE: 09-NOV-78	TITLE PARTS LIST	
J.B.	7016288-ML004	D	SECTION. VARIATION INDEX	DES. ENG.: M. QUADRI	DATE: 10-NOV-78	POWER SUPPLY ASSEMBLY	
			(A) 00,01	RESP. ENG.: M. QUADRI	DATE: 10-NOV-78	DOCUMENT NUMBER	
			(B)	MFG. ENG.: P. BARTON	DATE: 10 NOV 78	SIZE: K	CODE: PL
			(C)	ASSEMBLY NUMBER: E-AD-7016288-0-0	TOP DOCUMENT NUMBER:	NUMBER: 7016288-0-DBP	REV: D
			(D)			FILE NAME: Z30680.PLS	EDIT #: 20
			(E)				
			(F)				

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AUTOMATED BY PRTLST.3P(44)

PARTS LIST

SHEET A2 OF A2

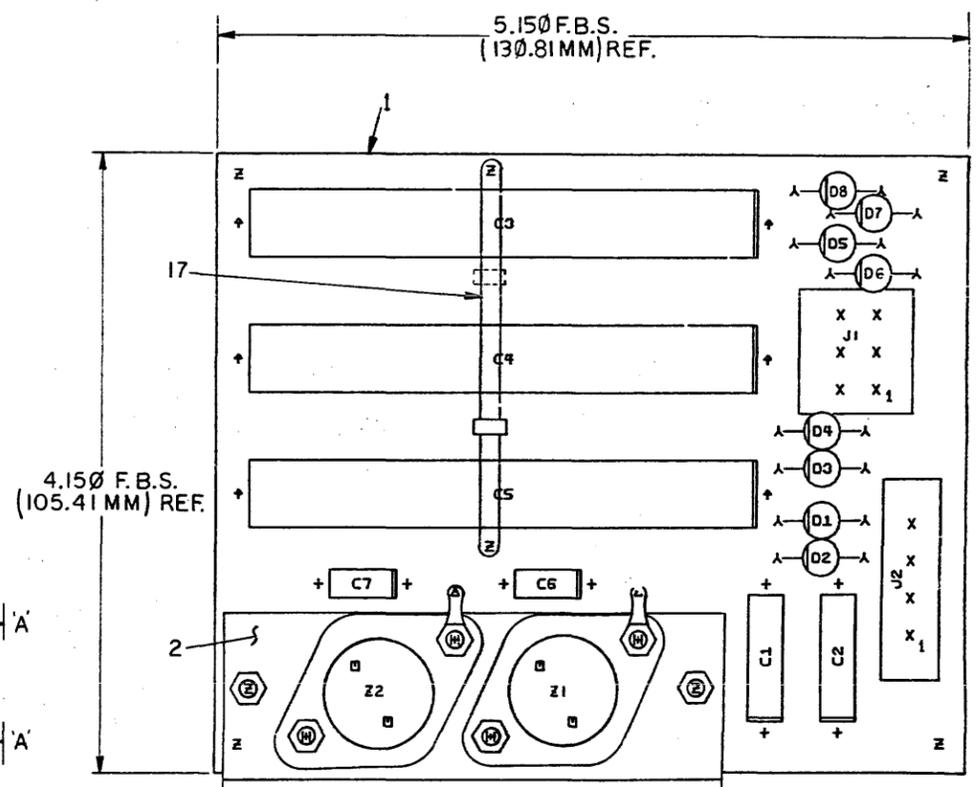
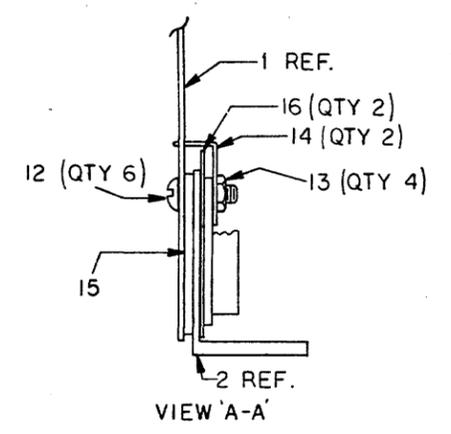
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION	
					00	01
31		A-PS-3612680-0-0	3612680-00	DECAL, GROUND SIGN PER 3E6 *	2	2
32			9007880-00	TIE, CABLE BUNDL DIA 0-1.14"=101	2	2
33		A-PS-1212170-0-0	1212170-00	MATE-N-LOK SKT UNIV 20-14AWG REE	2	2
34			9008290-01	FUSE, SLO BLO 12 A 250V CER.	1	1
35		A-SP-3616126-0-0	3616126-00	LABEL, VOLTAGE & FREQUENCY CONFIG	1	1
36		A-SP-3616128-0-0	3616128-00	LABEL, TS11 PWR SUPPLY FUSE RATIN	1	1
37		A-PT-3600400-0-0	3600400-00	INSTB, PKG POWER SUPPLY 7016288-0	1	1
38			9007651-00	WASHER, LOCK, EXTERNAL TOOTH #10	1	1
39		A-PS-1311996-0-0	1311996-00	VARISTOR 150VAC VOLT TRANS SUP	2	2
40		A-PS-1012210-0-0	1012210-00	1 MFD 220V 10% MET. MYLR	2	2
41			9006762-00	TERM, LUG #6STUD LOCKING 30	4	4
42			9107278-11	TUBING, THIN WALL, .042ID UL	A/R	A/R

D	I	G	I	T	A	L	TITLE	POWER SUPPLY ASSEMBLY	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
										K	PL	7016288-0-DBP	D

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D UA 5413609-0-0 2

COMPONENT SIDE VIEW



NOTES:

STEP E	→ Y AXIS	STEP	TIMES
REPEAT	→ X AXIS	STEP	TIMES

CHG	NO	REV	BY	DATE	DESCRIPTION
1	REDRAWN	B			
2	MLOOI	C			
3	5413609-0-002				
4	5413609-0-002				
5	5413609-0-002				
6	5413609-0-002				
7	5413609-0-002				
8	5413609-0-002				

ETCH REV. C-P1

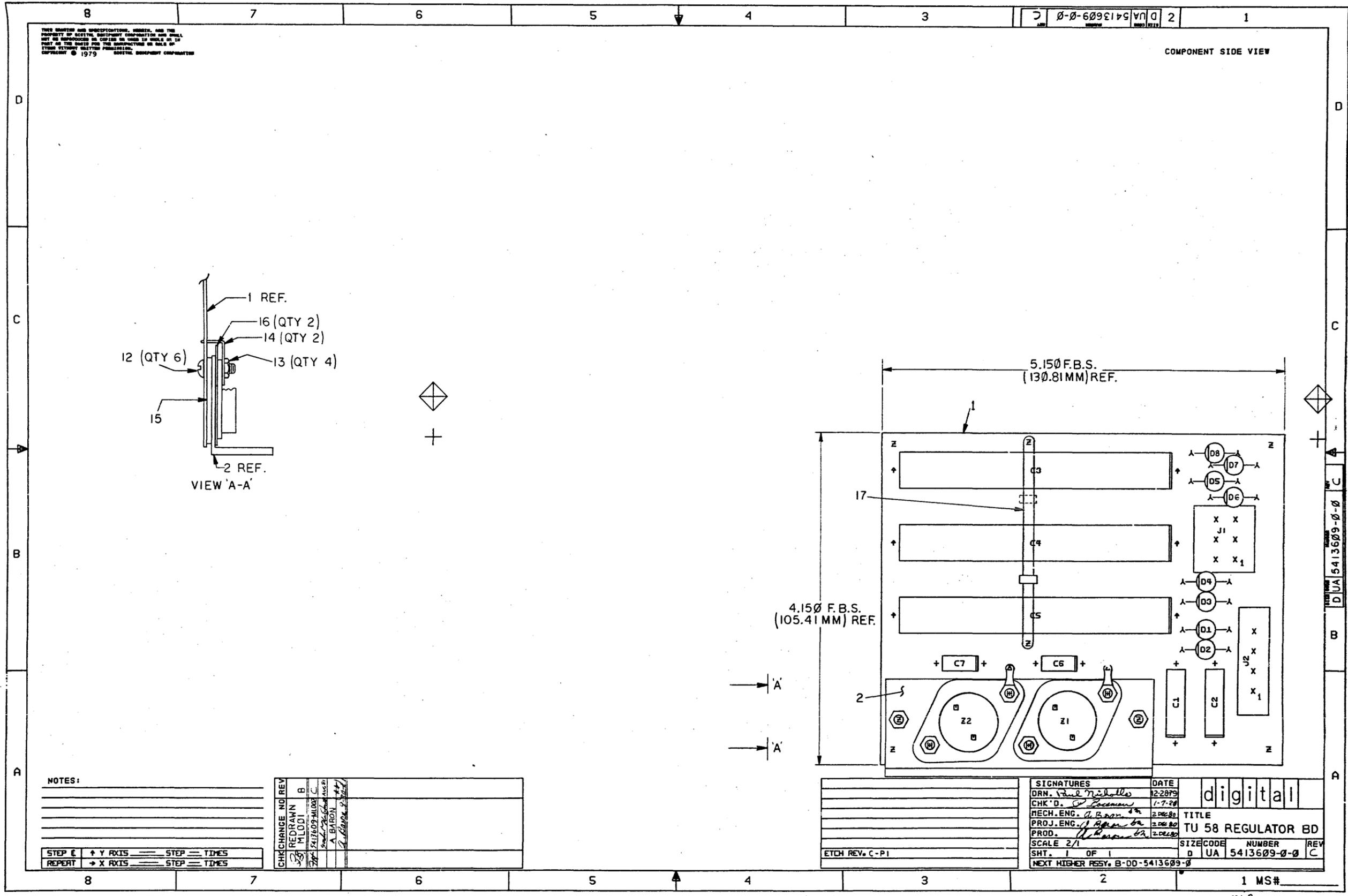
SIGNATURES		DATE	digital
DRN. <i>W. E. Nichols</i>		2-28-79	
CHK'D. <i>D. Bowman</i>		1-7-80	
RECH. ENG. <i>A. Brown</i>		2-28-80	
PROJ. ENG. <i>J. Brown</i>		2-28-80	
PROD. <i>J. Brown</i>		2-28-80	
SCALE 2/1	TITLE		TU 58 REGULATOR BD
SHT. 1 OF 1	SIZE	CODE	NUMBER
NEXT HIGHER REV. B-DD-5413609-0	D	UA	5413609-0-0
			C

1 MS#

D UA 5413609-0-0

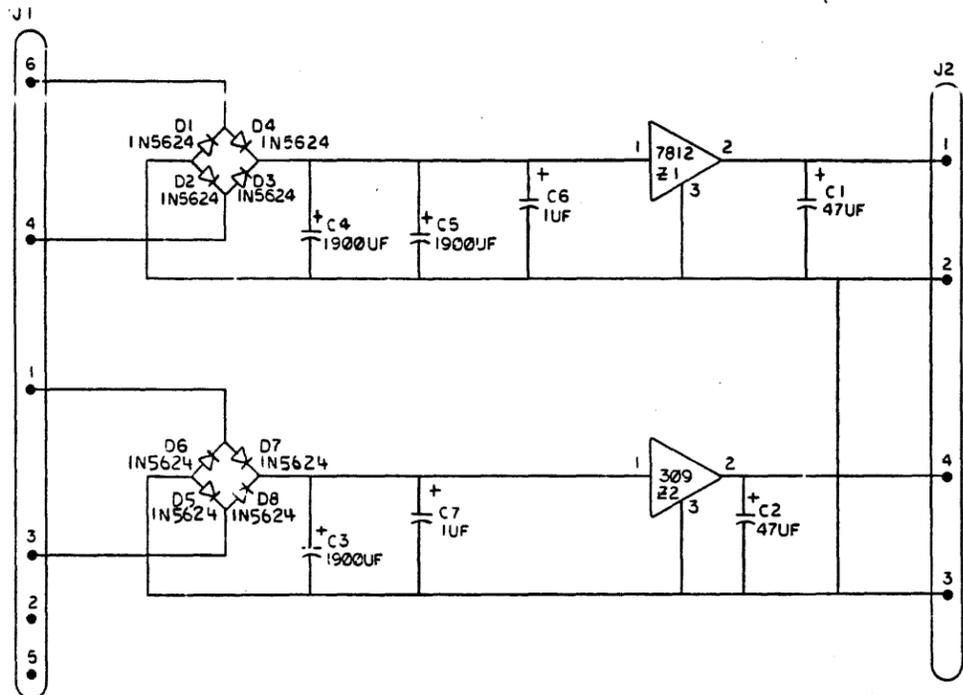
B

A



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DIGITAL 5413609-0-1



REV.	CHG.	NO.	BY	DATE
1	5413609-ML1	B	J. L. BARON	12/23/78
2	5413609-ML1	C	J. L. BARON	12/23/78
3	5413609-ML1	C	J. L. BARON	12/23/78
4	5413609-ML1	C	J. L. BARON	12/23/78
5	5413609-ML1	C	J. L. BARON	12/23/78

DRN. Lise Gamma 8/23/78	FIRST USED ON	DIGITAL
CHK'D. [Signature] 12/23/78	TITLE	TU58 REGULATOR BOARD
ENG. Xing Duan 12/12/78	SIZE	D
PROJ. ENG. [Signature] 12/12/78	CODE	CS 5413609-0-1
PROD. [Signature] 12/12/78	NUMBER	1
NEXT HIGHER ASSY.	REV.	C
B-DD-5413609-0	SCALE	1/1
SHEET 1 OF 1	DIST.	

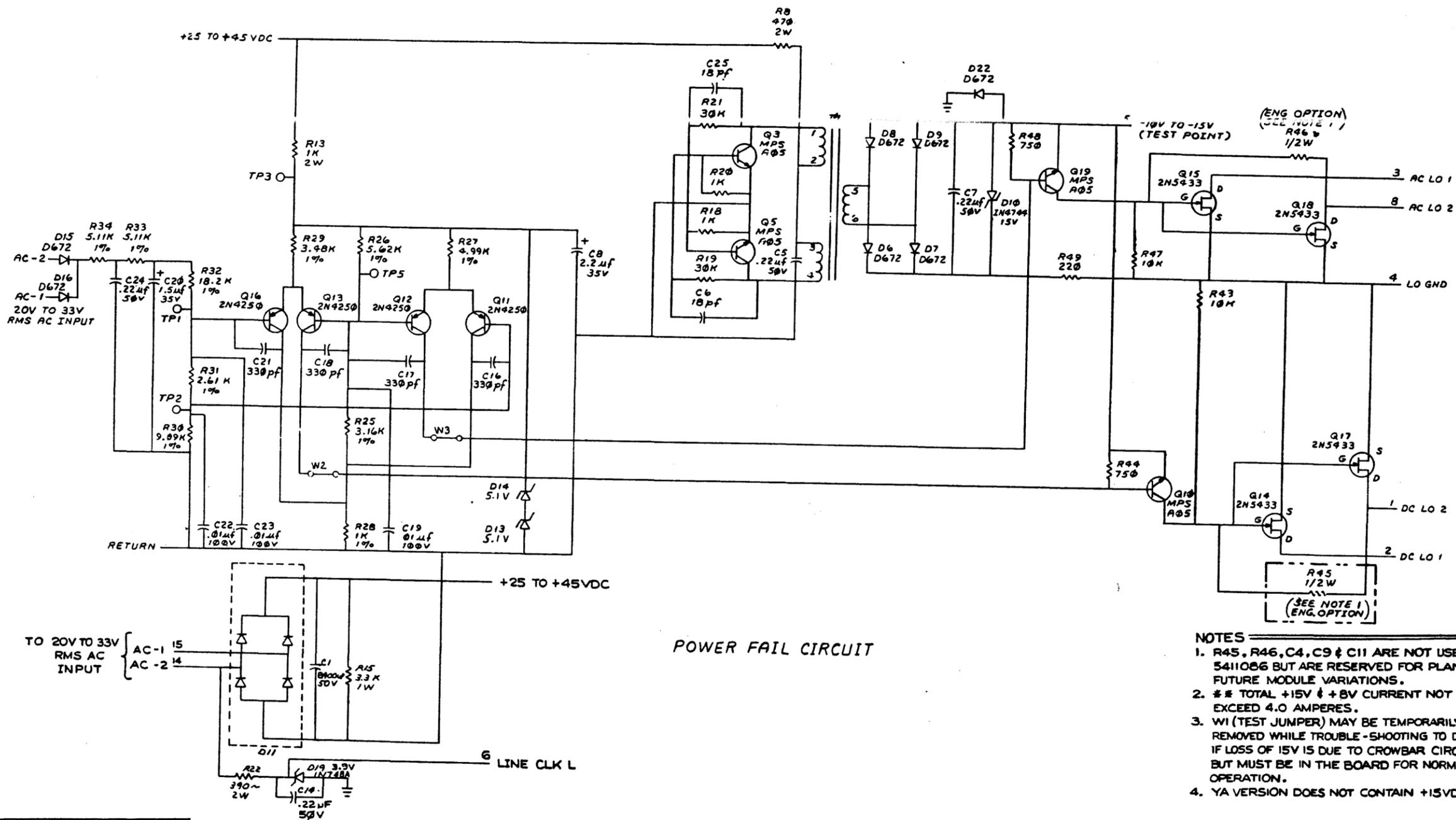
ML2 1

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	D-MD-5013608-0-0	5013608-00	DRILL & ETCH BD	1	
2		1215894-00	HEAT SINK, 2-3, ALUM	1	
3		1912048-04	DEC 7812 VOLT REG, FIX +12V	1	Z1
4		1910460-00	DEC 309 VOLT REG, FIX +15V	1	Z2
5		1110420-00	IN 5624 PIV=200 I= 5A	8	D1-D8
6		1105796-00	*** THIS ITEM IS NOT USED ***	-	
7		1011607-00	1900 MFD 40V +75-10% AL EL	3	C3-C5
8		1001776-00	1 MFD 35V 10% S.TANT	2	C6, C7
9		1000079-00	47 MFD 20V 20% S.TANT	2	C1, C2
10		1212297-01	MATE-N-LOK 4PIN UNIV HEADER	1	J2
11		1212297-05	MATE-N-LOK 6PIN UNIV HEADER	1	J1
12		9006022-01	SCREW, PAN, PHIL 6-32X 3/8 SS	6	
13		9008185-00	NUT, KEP 6-32X1/4 AF	4	
14		9009676-00	TERM LUG 1POS SOLDER	2	
15		1215580-00	INSULATOR, MOLDED	2	
16		1213071-02	INSULATOR, RUBBER SILICONE SM	2	
17		9007880-03	TIE, CABLE BUNDL DIA 0-1.14"-101	2	
18	D-EC-5013608-0-0		ETCH CUT DRAWING	REF	
19	D-UA-5413609-0-0		UNIT ASSEMBLY	REF	
20	D-CS-5413609-0-1		CIRCUIT SCHEMATIC	REF	

REVISION HISTORY			BASIC PART NO: 5413609	DRN: J.WHITNEY	DATE: 10-JUN-80	DIGITAL			
ENG.	ECO NUMBER	REV	SECTION A OF A	CHK'D: LARRY DOIRON	DATE: 10-JUN-80	TITLE PARTS LIST			
---	INITIAL	A	SECTION VARIATION INDEX	DES. ENG: LARRY DOIRON <td>DATE: 10-JUN-80 <td colspan="3">TU58 REGULATOR BD </td></td>	DATE: 10-JUN-80 <td colspan="3">TU58 REGULATOR BD </td>	TU58 REGULATOR BD			
AB	5413609-ML001	B	[A] 00	RESP. ENG.: LARRY DOIRON <td>DATE: 10-JUN-80 <td colspan="3">DOCUMENT NUMBER</td> </td>	DATE: 10-JUN-80 <td colspan="3">DOCUMENT NUMBER</td>	DOCUMENT NUMBER			
			[B]	MFG. ENG.: PETER BARTON <td>DATE: 10-JUN-80 <td>SIZE: K</td> <td>CODE: PL</td> <td>NUMBER: 5413609-0-DBP</td> <td>REV: B</td> </td>	DATE: 10-JUN-80 <td>SIZE: K</td> <td>CODE: PL</td> <td>NUMBER: 5413609-0-DBP</td> <td>REV: B</td>	SIZE: K	CODE: PL	NUMBER: 5413609-0-DBP	REV: B
			[C]	ASSEMBLY NUMBER: D-UA-5413609-0-0 <td>TOP DOCUMENT NUMBER: #B-DD-5413609-0 <td colspan="2">FILE NAME: 214838.PLS</td> <td>EDIT #: 4</td> </td>	TOP DOCUMENT NUMBER: #B-DD-5413609-0 <td colspan="2">FILE NAME: 214838.PLS</td> <td>EDIT #: 4</td>	FILE NAME: 214838.PLS		EDIT #: 4	
			[D]	"THIS DRAWING AND SPECIFICATIONS HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT (C) 1981. DIGITAL EQUIPMENT CORPORATION"					
			[E]						
			[F]						
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			[M]						
			[N]						

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DIGITAL EQUIPMENT CORPORATION
 10-9801186-01
 2



POWER FAIL CIRCUIT

- NOTES
1. R45, R46, C4, C9 & C11 ARE NOT USED ON BASIC 5411086 BUT ARE RESERVED FOR PLANNED FUTURE MODULE VARIATIONS.
 2. ** TOTAL +15V & +5V CURRENT NOT TO EXCEED 4.0 AMPERES.
 3. W1 (TEST JUMPER) MAY BE TEMPORARILY REMOVED WHILE TROUBLE-SHOOTING TO DETERMINE IF LOSS OF 15V IS DUE TO CROWBAR CIRCUITRY. BUT MUST BE IN THE BOARD FOR NORMAL OPERATION.
 4. YA VERSION DOES NOT CONTAIN +15VDC REG.

REV	REV	REV	REV
1	2	3	4
ML008	CARTER	R. KENNEDY	G. BARON
A. BARON			

DRN POWERS	1-17-79	FIRST USED ON	
CHKD	2-15-79		
ENG. a. G.	2-5-79	TITLE	POWER LINE MONITOR 15V REG
PROJ. ENG. a. G.	2-5-79	SCALE	NONE
PROD. a. G.	2-5-79	SIZE	D
		CODE	CS
		NUMBER	5411086-0-1
		REV	N
		SHEET	1 OF 2
		DIST.	

8

7

6

5

4

3

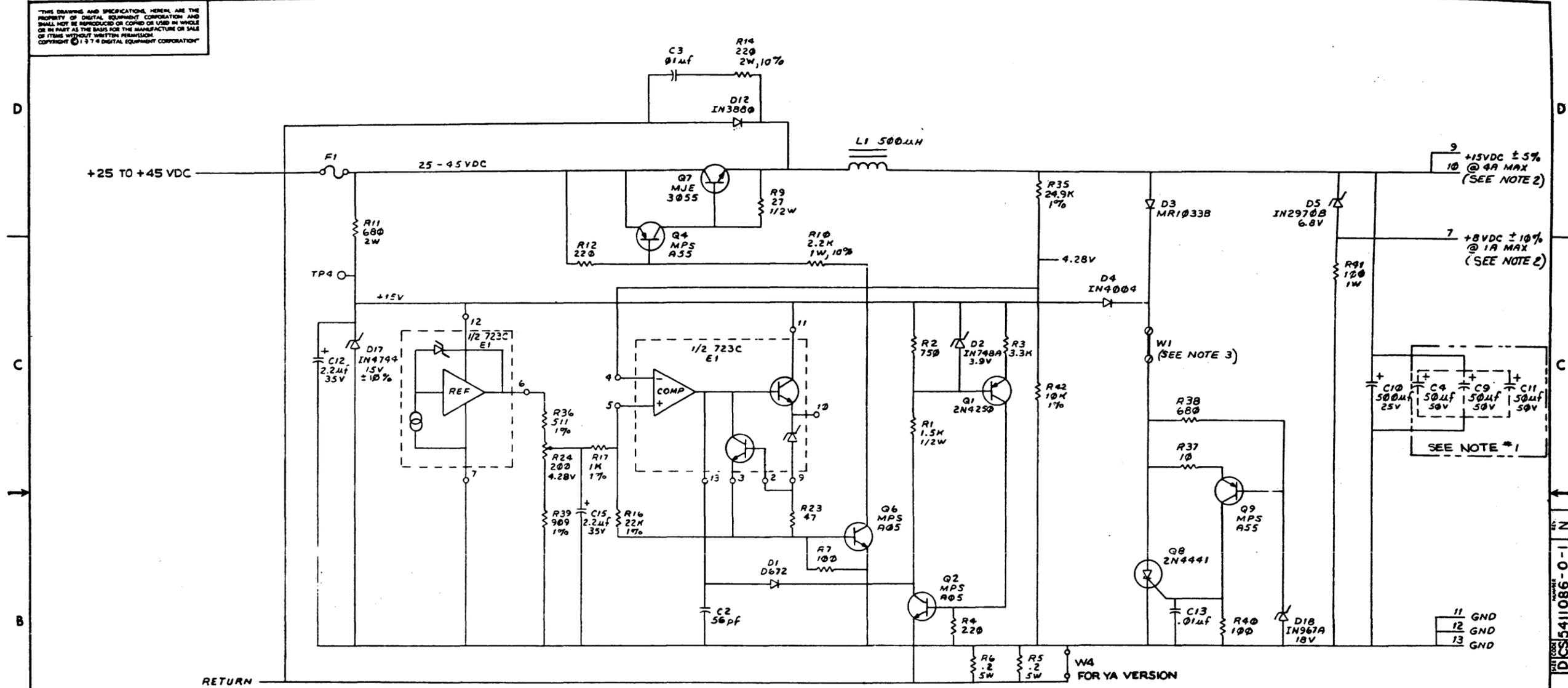
2

TW 1

A

5411086-01

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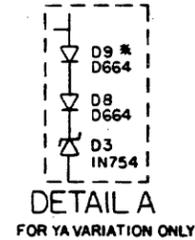
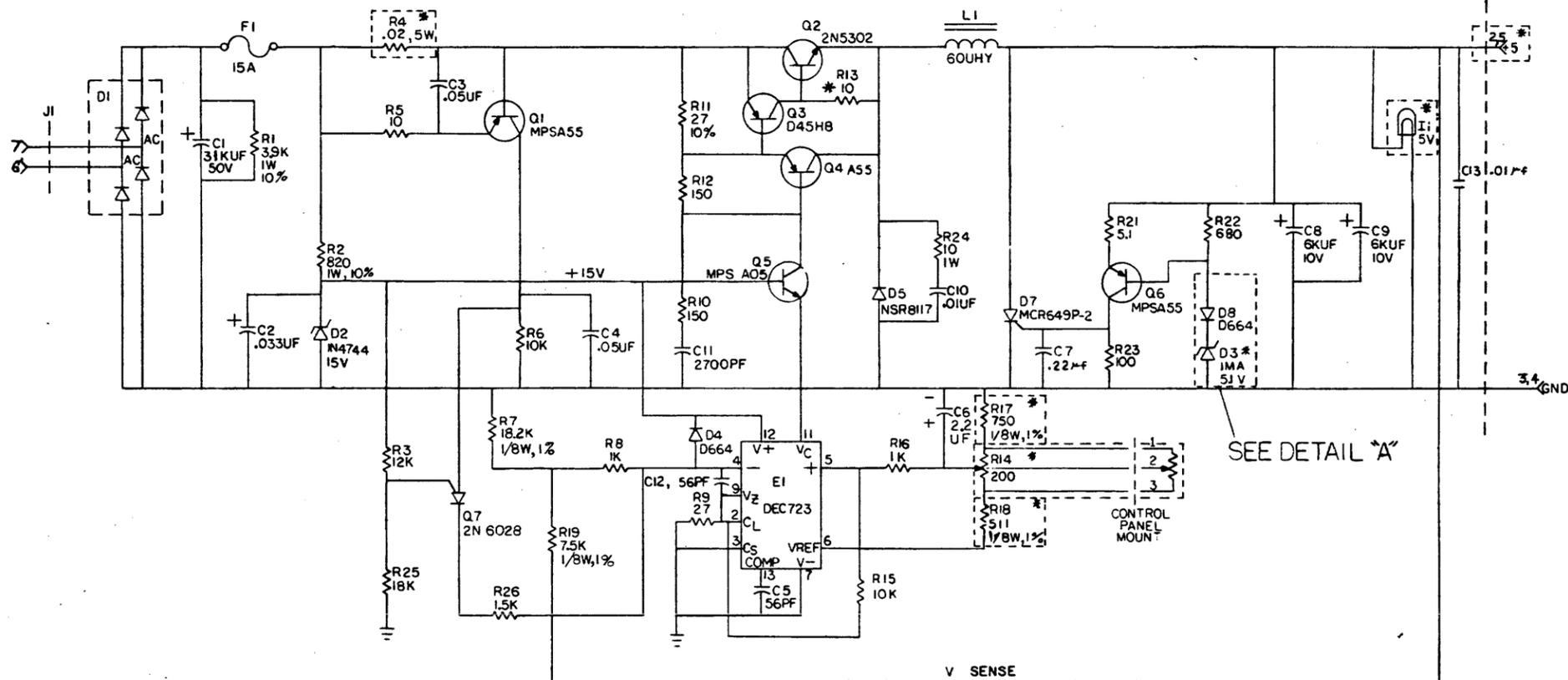
15V REGULATOR
(SEE NOTE #4)

REVISIONS		
CHK	CHANGE NO	REV

TITLE	PWR. LINE MONITOR/15V REG.	SIZE/COO	NUMBER	REV.
SCALE	SHEET 2 OF 2	DIST.	DCS5411086-0-1	N

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Z 1-0-0-1 H744 CS 2



*FUSIBLE RESISTOR

FOR YA VARIATION COMPONENT VALUES ARE AS FOLLOWS:-

- R4 - .06 5W
- R14 - 1K 10 TURN
- R17 - 300 1/8W 1%
- R19 - 150 1/4W 5%
- D3 - IN754
- I1 - 15V
- J1-2,5 - +20-80V

* D9 - D664 ADDED FOR YA VARIATION ONLY

UNLESS OTHERWISE INDICATED:
RESISTORS ARE 1/4W, 5%

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
	ETCH BOARD REV	F H		
	IN964A	SAME	MPSA55	
	D664	IN3606	2N5302	
	MCR649P-2		D45H8	
	IN751A	SAME	MPSA05	
	IN4744	SAME		
	NSR8117			
	2N6028			
	DEC NO.	EIA NO.	DEC NO.	EIA NO.
SEMICONDUCTOR CONVERSION CHART				
DRN. <i>[Signature]</i> DATE 9-2-71		digital EQUIPMENT CORPORATION		
ENGR. <i>[Signature]</i> DATE 1-5-71		TITLE		
PROJ. <i>[Signature]</i> DATE 1/1/72		+5V REGULATOR		
TEST. <i>[Signature]</i> DATE 1/1/72		SCALE		
NEXT HIGHER ASSY		SIZE CODE: DCS NUMBER: H744-0-1 REV: Z		
SHEET 1 OF 1		DST.		

G. BARON 3-30-81	A. BARON	H744-0-0013	T
H744-0-0021	Z	H744-0-0015	V
H744-0-0018	V	H744-0-0014	U
H744-0-0026	S	H744-0-0012	S
H744-0-0016	W	H744-0-0011	R
H744-0-0017	X	H744-0-0010	Q
H744-0-0018	Y	H744-0-0009	P
H744-0-0019	Z	H744-0-0008	O
H744-0-0020	AA	H744-0-0007	N
H744-0-0021	AB	H744-0-0006	M
H744-0-0022	AC	H744-0-0005	L
H744-0-0023	AD	H744-0-0004	K
H744-0-0024	AE	H744-0-0003	J
H744-0-0025	AF	H744-0-0002	I
H744-0-0026	AG	H744-0-0001	H
H744-0-0027	AH	H744-0-0000	G
H744-0-0028	AI		F
H744-0-0029	AJ		E
H744-0-0030	AK		D
H744-0-0031	AL		C
H744-0-0032	AM		B
H744-0-0033	AN		A
H744-0-0034	AO		
H744-0-0035	AP		
H744-0-0036	AQ		
H744-0-0037	AR		
H744-0-0038	AS		
H744-0-0039	AT		
H744-0-0040	AU		
H744-0-0041	AV		
H744-0-0042	AW		
H744-0-0043	AX		
H744-0-0044	AY		
H744-0-0045	AZ		
H744-0-0046	BA		
H744-0-0047	BB		
H744-0-0048	BC		
H744-0-0049	BD		
H744-0-0050	BE		
H744-0-0051	BF		
H744-0-0052	BG		
H744-0-0053	BH		
H744-0-0054	BI		
H744-0-0055	BJ		
H744-0-0056	BK		
H744-0-0057	BL		
H744-0-0058	BM		
H744-0-0059	BN		
H744-0-0060	BO		
H744-0-0061	BP		
H744-0-0062	BQ		
H744-0-0063	BR		
H744-0-0064	BS		
H744-0-0065	BT		
H744-0-0066	BU		
H744-0-0067	BV		
H744-0-0068	BW		
H744-0-0069	BX		
H744-0-0070	BY		
H744-0-0071	BZ		
H744-0-0072	CA		
H744-0-0073	CB		
H744-0-0074	CC		
H744-0-0075	CD		
H744-0-0076	CE		
H744-0-0077	CF		
H744-0-0078	CG		
H744-0-0079	CH		
H744-0-0080	CI		
H744-0-0081	CJ		
H744-0-0082	CK		
H744-0-0083	CL		
H744-0-0084	CM		
H744-0-0085	CN		
H744-0-0086	CO		
H744-0-0087	CP		
H744-0-0088	CQ		
H744-0-0089	CR		
H744-0-0090	CS		
H744-0-0091	CT		
H744-0-0092	CU		
H744-0-0093	CV		
H744-0-0094	CW		
H744-0-0095	CX		
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H744-0-0100	DC		

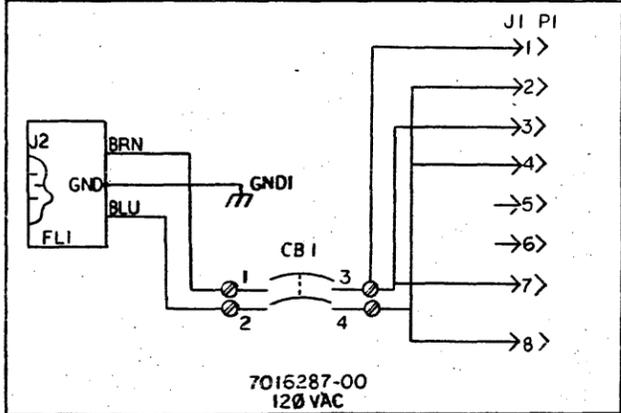
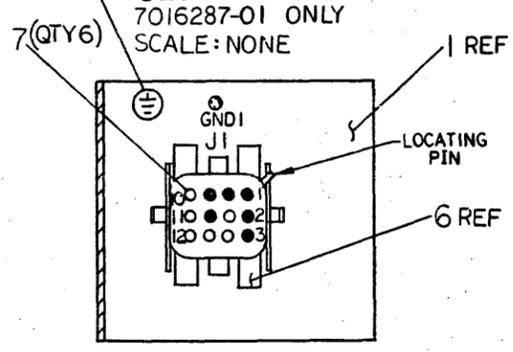
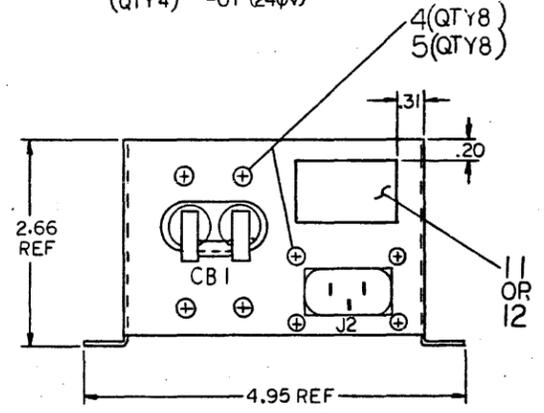
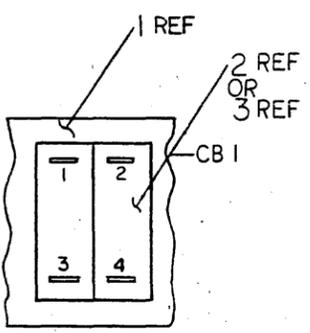
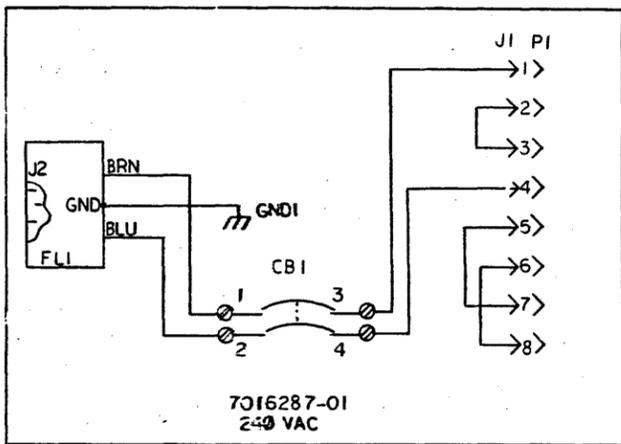
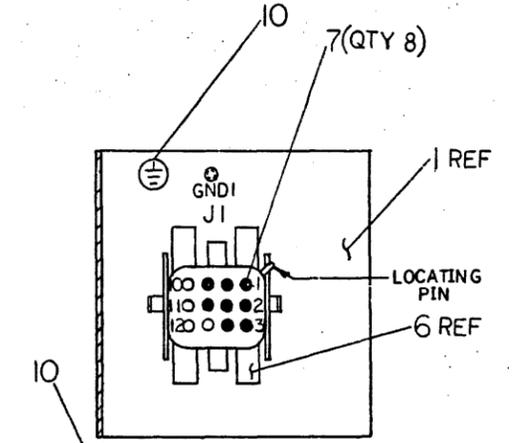
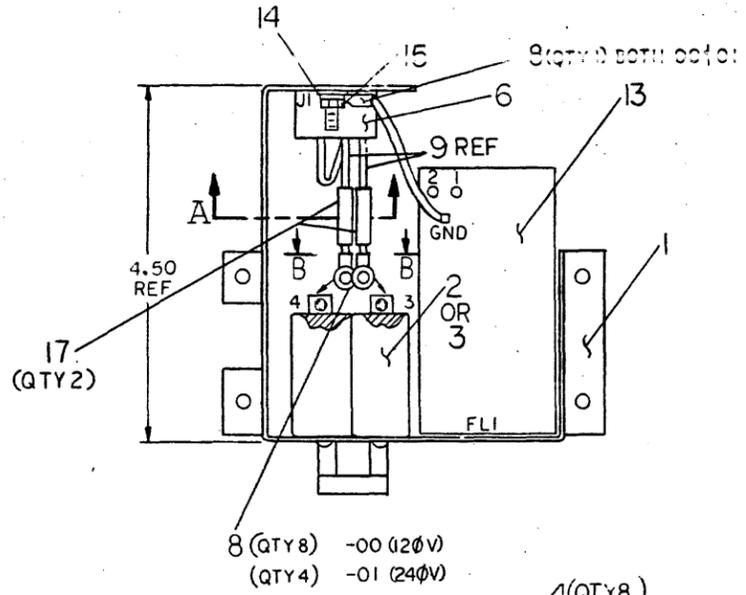
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ITEM NO	DESCRIPTION	FROM	TO	REMARKS
9	14 BLACK	J1-1	CBI-3	8
		J1-2	CBI-4	8
		J1-3	CBI-3	8
		J1-4	CBI-4	8
		J1-7	CBI-3	8
9	14 BLACK	J1-8	CBI-4	8
13	BROWN	FLI-1	CBI-1	8
13	BLUE	FLI-2	CBI-2	8
16	14 GRN/YEL	FLI-GND	SOLDER GND-1	8

ITEM NO	DESCRIPTION	FROM	TO	REMARKS
9	14 BLACK	J1-1	CBI-3	8
		J1-2	CBI-4	8
		J1-4	CBI-3	7
		J1-5	CBI-4	8
		J1-6	J1-7	7
		J1-7	J1-8	7
9	14 BLACK	J1-6	J1-7	7
13	BROWN	FLI-1	CBI-1	8
13	BLUE	FLI-2	CBI-2	8
16	14 GRN/YEL	FLI-GND	SOLDER GND-1	8

PART NO	VARIATION
7016287-00	120V
7016287-01	240V

NOTES:



CAUTION OFF SHEETS PARTS LIST REFER TO K-PL-7016287-0-DBP (Z3784)

REV.	DESCRIPTION	DATE
1	REVISED TO 120V	10/10/78
2	REVISED TO 240V	11/16/78

DESCRIPTION	DWG. PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
ANGLES 28° 30'	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES
SURFACE QUALITY	CHECK ONE	OVER 0.25 TO 1.25
QUANTITY & VARIATION	MEDIUM	1.25 TO 2.50
THIRD ANGLE PROJECTION	PREFERRED	2.50 TO 4.00
DRILL	1.012	4.00 TO 6.00
CHUCK	1.018	6.00 TO 8.00
ENG. M. QUADRI	1.024	8.00 TO 12.00
PROD. P. G. L. G. L.	1.030	12.00 TO 24.00
DO NOT SCALE DWG	1.036	24.00 TO 48.00
NEXT HIGHER ASSY.	1.042	48.00 TO 96.00
MATERIAL SEE B-PL-7016287-0-0	1.048	96.00 TO 192.00
FINISH	1.054	192.00 TO 384.00
	1.060	384.00 TO 768.00
	1.066	768.00 TO 1536.00
	1.072	1536.00 TO 3072.00
	1.078	3072.00 TO 6144.00
	1.084	6144.00 TO 12288.00
	1.090	12288.00 TO 24576.00
	1.096	24576.00 TO 49152.00
	1.102	49152.00 TO 98304.00
	1.108	98304.00 TO 196608.00
	1.114	196608.00 TO 393216.00
	1.120	393216.00 TO 786432.00
	1.126	786432.00 TO 1572864.00
	1.132	1572864.00 TO 3145728.00
	1.138	3145728.00 TO 6291456.00
	1.144	6291456.00 TO 12582912.00
	1.150	12582912.00 TO 25165824.00
	1.156	25165824.00 TO 50331648.00
	1.162	50331648.00 TO 100663296.00
	1.168	100663296.00 TO 201326592.00
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	1.186	805306368.00 TO 1610612736.00
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	1.234	206158430208.00 TO 412316860416.00
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LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION
1	D-1A-7422051-0-0	7422051-00	BRKT AC INPUT	1
2		1212124-03	CKT BKR 10.0 A 240V 2P SERIES TR	1
3		1212124-05	CKT BKR 20.0 A 240V 2P SERIES TR	1
4		9006020-01	SCREW PAN PHIL 6-32X 1/4 SS	8
5		9006633-00	WASHER LOCK INT. 2800D X. 146ID	8
6		1212168-03	MATE-N-LOK 12POS UNIV HSG, PIN OR	1
7		1212169-00	MATE-N-LOK PIN 14-20AWG	6
8		9007928-00	TERM RING #10STUD CRIMP 14-1	9
9		9107370-00	WIRE STRND 14AWG TPVC UL1534 *	A/R
10		3612680-00	DECAL, GROUND SIGN PER 3E6	1
11		3616127-00	LABEL, INPUT POWER 120V	1
12	A-PS-3616127-0-0	3616127-01	LABEL, INPUT POWER 240V	1
13		1216196-01	FILTER LINE 115W 47-47-63H2 8A	1
14		9007651-00	WASHER LOCK, EXTERNAL TOOTH #10	1
15		9006565-00	NUT KEP 10-32X 3/8 AF	1
16		9107777-54	WIRE STRND 14AWG TPVC UL3317 GR	A/R
17		1605147-00	56-261-30-38 FERRITE TUBE	A/R

REVISION HISTORY

ENG	ECO NUMBER	REV	SECTION A OF A	SECTION VARIATION INDEX	DATE	BY	TITLE
M.G.	7016287-ML002	C		[A] 00, 01	10 NOV 78	BRIGHAM	A.C. INPUT BRACKET ASSY

BASIC PART NO: 7016287

DRN: M.J. MAHER DATE: 28 AUG 78

CHK'D: BRIGHAM DATE: 10 NOV 78

DES. ENG.: M. QUADRI DATE: 10 NOV 78

RESP. ENG.: M. QUADRI DATE: 11-JAN-82

MFG. ENG.: P. BARLION DATE: 10 NOV 78

ASSEMBLY NUMBER: D-AD-7016287-0-0

TOP DOCUMENT NUMBER: K PL 7016287-0-08P

FILE NAME: 23784C.PLS

EDIT # 6

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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION	
					AA	AB
1	1	0-1A-7016301-0-0	7016301-00	FRAME ASSY	1	1
2	2	E-AD-7016288-0-0	7016288-00	POWER SUPPLY ASSY 120V	1	1
3	3	E-AD-7016288-01-0	7016288-01	POWER SUPPLY ASSY 240V	1	1
4	4	0-1A-7016676-0-0	7016676-00	ELECTRONIC CHASSIS ASSY	1	1
5	5	0-AD-7013573-0-0	7013573-00	TAPE DRIVE ASSY TS04	1	1
6	6		1216608-00	SCREW, SET ,SKT, 1/4-20X 1-1/4	4	4
7	7		9006241-09	SCREW, HEX 1/4-20X 1/2	4	4
8	8		9007797-00	WASHER, LOCK, S.S. 1/4	8	8
9	9		9008071-00	WASHER, FLAT .500 O.D. X .281 ID	4	4
10	10	A-PS-1213756-0-0	1213756-16	GROUND STRAP	1	1
11	11		9007651-00	WASHER, LOCK, EXTERNAL TOOTH #10	1	1
12	12		9006071-01	SCREW, PAN, PHIL 10-32X 3/8 SS	2	2
13	13		9006565-00	NUT, KEP 10-32X 3/8 AF	4	4
14	14	A-PS-1213756-0-0	1213756-12	GROUND STRAP	1	1
15	15		9006243-09	SCREW, HEX 1/4-20X 3/4	4	4
16	16		9006633-00	WASHER, LOCK, INT., .28000 X .146ID	4	4
17	17		9006021-01	SCREW, PAN, PHIL 6-32X 5/16 SS	4	4
18	18		9008228-00	FOAM TAPE, SINGLE COATED VINYL 1	A/R	A/R
19	19		9009911-00	MOUNT, CABLE TIE, SCREW OR ADHESI	2	2
20	20		9007032-00	TIE, CABLE BUNDL. DIA 0-1-3/4"=101	11	11
21	21	E-UA-TS04K-A-0	TS11K-AA	CONVERT TS11 TO 120V(LINE CORD,F	REF	REF
22	22		9006022-02	SCREW, FLAT, PHIL, 6-32X 3/8	2	2
23	23		9009030-00	/REPLACED BY 90-06560-00	1	1
24	24		3512680-00	DECAL, GROUND SIGN PER 3E6 *	5	5
25	25	A-PS-3612063-0-0	3612063-00	LABEL, ADHESIVE I.D. FOR UL C	1	1
26	26	A-PS-3613210-0-0	3613210-00	LABEL, ELECTRICAL DATA	1	1
27	27	C-1A-7013603-0-0	7013603-00	POWER SUPPLY HARNESS	1	1
28	28	A-PS-1213756-0-0	1213756-20	GROUND STRAP	1	1
29	29	A-PS-1213756-0-0	1213756-07	GROUND STRAP	1	1
30	30	A-PS-1215843-0-0	1215843-00	CLIP, FLAT CABLE W/ADHESIVE BK	5	5

REVISION HISTORY			BASIC PART NO: OTS04		DRN: G.MARINI		DATE: 22-JUN-81		DIGITAL			
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	B.TREMBLY	DATE:	22-JUN-81	TITLE	PARTS LIST			
JB	TS04-A-MLO03	B	SECTION. VARIATION INDEX					DRIVE, FRAME ASSY 9TS04-A)	(TS04-A)			
			(A) AA, AB						DOCUMENT NUMBER			
			(B)		DES. ENG.: M.CUCINA		DATE: 22-JUN-81		SIZE: CODE: NUMBER			
			(C)		RESP. ENG.: M.CUCINA		DATE: 22-JUN-81		REV			
			(D)						K PL TS04-A-DBP B			
			(E)		MFG. ENG.: T.WRIGHT		DATE: 22-JUN-81		FILE NAME: EDIT #			
			(F)		ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		Z27458.PLS 7			
					E-UA-TS04-A-0		B-DD-TS04-A-0					

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AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

SHEET A2 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION	
					AA	AB
31	31	A-PS-1213716-0-0	1213716-01	SPACER, FOAM FOR FLAT WIRE CLIP	5	5
32	32		9009718-00	GROMMET, STRIP, 14"	3	3

D	I	G	I	T	A	L	TITLE	DRIVE, FRAME ASSY 9TS04-A)	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							(TS04-A)			K	PL	TS04-A-DBP	B

