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FIELD MAINTENANCE PRINT SET

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B-TC-TS11-D-01 TAPE DRIVE AND CAB ASSEMBLY
 B-DD-TS11-D TAPE DRIVE AND CAB ASSEMBLY
 E-UA-TS11-D-0 TAPE DRIVE AND CAB ASSEMBLY
 K-PL-TS11-D-D8P TAPE DRIVE AND CAB ASSEMBLY
 MP849 DRIVE AND INTERFACE ASSY. (TS11-A)

UNIT VARIATIONS COVERED BY THIS PRINT SET
TS11-DA
TS11-DB

TS11-D
Field Maintenance
Print Set

Digital Equipment Corporation
 PRINT SET ORDER NO. MPO0851

REVISIONS	REV.	A	USED ON OPTION/MODEL	DRN.	DATE	TITLE: TAPE DRIVE AND CAB ASSEMBLY (TS11-D)				
	CHG. NO.	MLO91	TS11	CHK'D	DATE		SIZE	CODE	NUMBER	REV.
	DATE	10/80								
			SHEET I OF I							



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DRAWING DIRECTORY

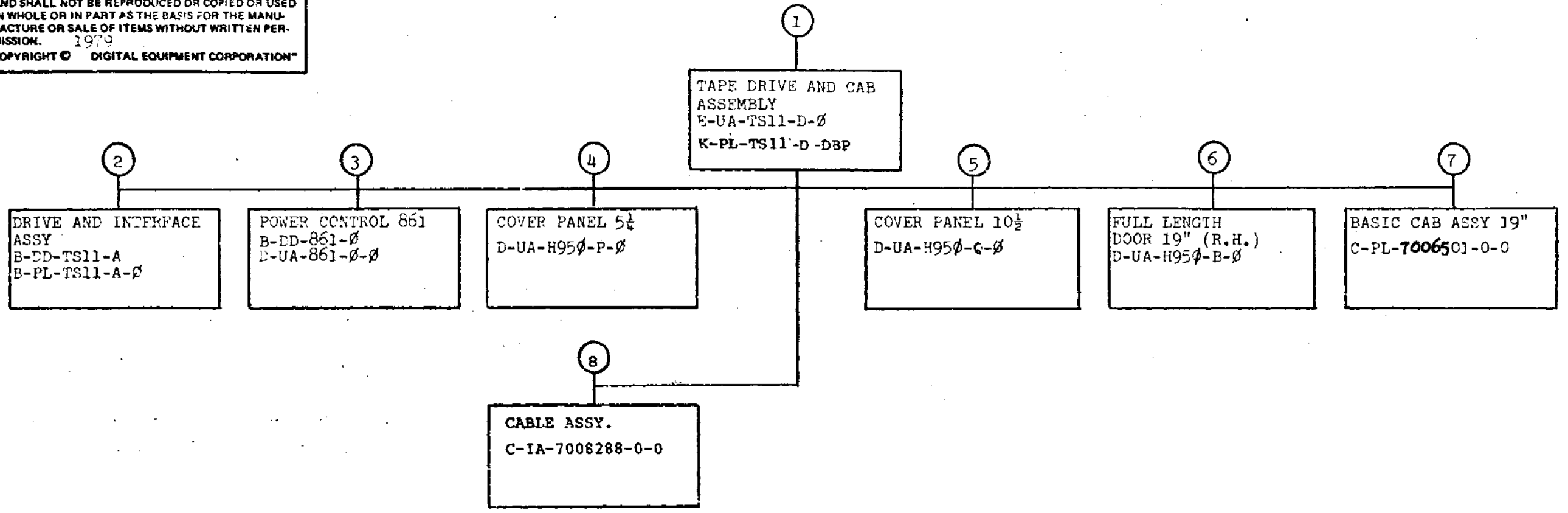
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FOR TABLE OF CONTENTS LISTING REFER TO DRAWING NO. B-TC-TS11-D-01

UNIT VARIATIONS	
VAR	TITLE
TS11-DA	TAPE DRIVE AND CAB ASSEMBLY (320V)
TS11-DB	TAPE DRIVE AND CAB ASSEMBLY (240V)

REV. A	ML001	CHK	USED ON OPTION/MODEL		DRN.	DATE	digital TAPE DRIVE AND CAB ASSEMBLY (TS11-D)							
			CHANGE NO.	TS11	G. Marini	3/20/79								
					CHK'D.	DATE	SIZE	CODE	NUMBER	REV				
					<i>DM</i>	9/25/79					B	DD	TS11-D	A
					PROJ. ENG.	DATE								
				<i>F. W. ...</i>	9/2/79	DIST.								
				PROD.	DATE									
					SHEET 1 OF 3	<i>J. ...</i>	1-7-79							

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FIND NO.	DRAWING NO.	DESCRIPTION	TYPE	FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	E-UA-TS11-D-0	TAPE DRIVE AND CAB ASSY	E/M				
	K-PL-TS11-D-DBP	TAPE DRIVE AND CAB ASSY (PL)	E/M				
	D-IA-7407936-0-0	LOGO PANEL (BLANK)	M				
	C-MD-7407606-0-0	PLATE JONES STRIP	M				
	A-DC-7407314-0-0	DECAL 115V	M				
	A-DC-7406574-0-0	DECAL 230V	M				
	C-MD-7422937-0-0	CHANNEL MTG.	M				
	C-MD-7422938-0-0	BRKT FILLER	M				
	A-PS-3615180-0-0	LABEL I.D.	M				
	A-PS-3613211-0-0	LABEL C.S.A.	M				
	A-DC-7416197-0-0	LABEL UL	M	B	C-IA-700S288-0-0	CABLE ASSY	E/M
	A-PS-3617249-0-0	LABEL CAUTION STABILITY H950	M				
	A-PS-3610267-0-0	DECAL ADHESIVE BACK-DANGER HIG	M				
	D-MD-7422059-0-0	FRAME SUPPORT	M				
2	B-DD-TS11-A	DRAWING DIRECTORY	E/M E/M				
3	B-DD-861-0	DRAWING DIRECTORY 861	E/M E/M				
4	D-UA-H950-P-0	COVER PANEL 5 $\frac{1}{2}$	M				
5	D-UA-H950-Q-0	COVER PANEL 10 $\frac{1}{2}$	M				
6	D-UA-H950-B-0	FULL LENGTH DOOR 19" (R.H.)	M				
7	C-PL-7006501-0-0	BASIC CAB ASSY 19"	M				

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

digital

TITLE TAPE DRIVE AND CAB ASSY

SHEET 3 OF 3

SIZE CODE B DD

NUMBER TS11-D

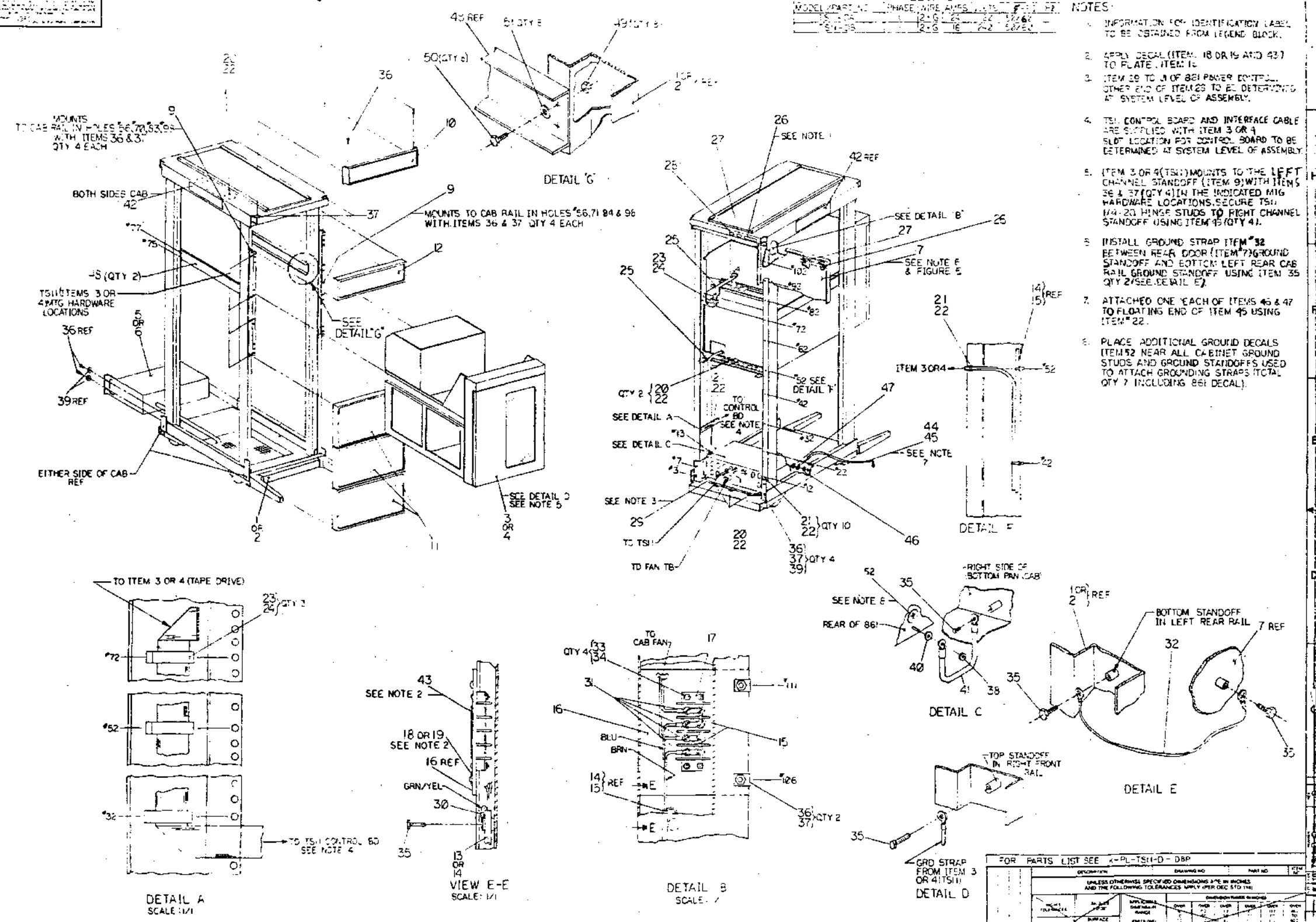
REV A

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LEGEND

MODEL PART NO.	12-6125	12-6126	12-6127	12-6128
DESCRIPTION	TSI CONTROL BOARD	TSI CONTROL BOARD	TSI CONTROL BOARD	TSI CONTROL BOARD
REV.	1	1	1	1

- NOTES:
1. INFORMATION FOR IDENTIFICATION LABEL TO BE OBTAINED FROM LEGEND BLOCK.
 2. APPLY DECAL (ITEM 18 OR 19 AND 43) TO PLATE (ITEM 16).
 3. ITEM 20 TO 21 OF 881 PAPER CONTROL. OTHER END OF ITEMS 20 TO 21 DETERMINED AT SYSTEM LEVEL OF ASSEMBLY.
 4. TSI CONTROL BOARD AND INTERFACE CABLE ARE SUPPLIED WITH ITEM 3 OR 4. SLOT LOCATION FOR CONTROL BOARD TO BE DETERMINED AT SYSTEM LEVEL OF ASSEMBLY.
 5. (ITEM 3 OR 4 (TSI)) MOUNTS TO THE LEFT CHANNEL STANDOFF (ITEM 9) WITH ITEMS 36 & 37 (QTY 4) IN THE INDICATED M1G HARDWARE LOCATIONS. SECURE TSI 1/4" 20 HINGE STUDS TO RIGHT CHANNEL STANDOFF USING ITEM 15 (QTY 4).
 6. INSTALL GROUND STRAP (ITEM 32) BETWEEN REAR DOOR (ITEM 7) GROUND STANDOFF AND BOTTOM LEFT REAR CAB RAIL GROUND STANDOFF USING ITEM 35 (QTY 2) (SEE DETAIL E).
 7. ATTACHED ONE EACH OF ITEMS 45 & 47 TO FLOATING END OF ITEM 45 USING ITEM 22.
 8. PLACE ADDITIONAL GROUND DECALS (ITEM 32) NEAR ALL CABINET GROUND STUDS AND GROUND STANDOFFS USED TO ATTACH GROUNDING STRAPS (TOTAL QTY 7 INCLUDING 881 DECAL).



FOR PARTS LIST SEE 4-PL-TSI-D-DBP

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
1	TSI CONTROL BOARD	1	EA
2	TSI CONTROL BOARD	1	EA
3	TSI CONTROL BOARD	1	EA
4	TSI CONTROL BOARD	1	EA
5	TSI CONTROL BOARD	1	EA
6	TSI CONTROL BOARD	1	EA
7	TSI CONTROL BOARD	1	EA
8	TSI CONTROL BOARD	1	EA
9	TSI CONTROL BOARD	1	EA
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96	TSI CONTROL BOARD	1	EA
97	TSI CONTROL BOARD	1	EA
98	TSI CONTROL BOARD	1	EA
99	TSI CONTROL BOARD	1	EA
100	TSI CONTROL BOARD	1	EA

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B01

AUTOMATED BY PRTLST.3L(40)

PARTS LIST

SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION	
					DA	DB
1	1	C-PL-7006501-0-0	7006501-47	BASIC CABINETS 19 IN.	1	-
2	2	C-PL-7006501-0-0	7006501-48	BASIC CABINETS 19 IN.	-	1
3	3	B-PL-TS11-A-0	OTS11-AA	TS04-AA & TS11 45IPS NRZI MAGTAP	1	-
4	4	B-PL-TS11-A-0	OTS11-AB	TS04-AB 25FT. SERIAL CABLE,M7982	-	1
5	5	D-UA-861-0-0	00861-C	120VAC 24A POWER CONTROL,19"W,5.	1	-
6	6	D-UA-861-0-0	00861-B	240VAC 16A POWER CONTROL,19"W,5.	-	1
7	7	D-UA-H950-B-0	0H950-BA	FULL LGTH RH DR BK	1	1
8	8	C-MD-7422938-0-0	7422938-00	*** THIS ITEM IS NOT USED ***	-	-
9	9	C-MD-7422937-0-0	7422937-00	CHANNEL,STANDOFF	2	2
10	10	D-IA-7407936-0-0	7407936-01	PANEL, LOGO	1	1
11	11		0H950-QA	COVER PNL 10 1/2 IN W THK LATCH	3	3
12	12		0H950-PA	PANEL COVER/THICK LATCH MOLD M	1	1
13	13		1700015-09	PWR CORD,TERM. 9FT,18-3,115V 10	1	-
14	14		1700016-09	PWR CORD,TERM. 9FT,18-3,230V 10	-	1
15	15		9009002-00	TERM BLOCK JUMPER	2	2
16	16	C-MD-7407607-0-0	7407607-00	PLATE, JONES STRIP	1	1
17	17		9006899-00	TERM BLOCK 04POS(2X02).437CC	1	1
18	18	A-DC-7407314-0-0	7407314-00	DECAL	1	-
19	19	A-DC-7406574-0-0	7406474-00	PLATE,LOCKING	-	1
20	20		9008264-00	MOUNT, CABLE TIE, ADHESIVE BACKE	7	7
21	21		9007867-00	MOUNT, PUSH,CABLE TIE	12	12
22	22		9007032-00	TIE,CABLE BUNDL.DIA 0-1-3/4"=101	20	20
23	23		1215843-00	CLIP,FLAT CABLE W/ADHESIVE BK	4	4
24	24		1213716-01	SPACER,FOAM 1/2	4	4
25	25		9009718-01	GROMMET,STRIP STYRENE	3	3
26	26	A-PS-3613210-0-0	3613210-00	LABEL, UL. FOIL ADH BACK	2	2
27	27	A-PS-3613211-0-0	3613211-01	DECAL,CLEAR PREPRINTED CSA 1-1/4	2	2
28	28	A-DC-7416197-0-0	7416197-01	DECAL	1	1
29	29	C-IA-7008288-0-0	7008288-8F	CABLE ASSY PDP-11	1	1
30	30		9007930-00	TERM,RING #10STUD CRIMP 16-2	1	1

REVISION HISTORY			BASIC PART NO: OTS11		DRN: A. J. ROCHA		DATE: 20-OCT-80		D I G I T A L			
ENG	ECO NUMBER	REV	SECTION A OF A		CHK'D: R. NELSON		DATE: 20-OCT-80		TITLE PARTS LIST			
DRN	TS11D-ML001	A	SECTION. VARIATION INDEX		DES.ENG.: DICK NELSON		DATE: 20-OCT-80		TAPE DRIVE AND CAB ASSEMBLY			
JB	TS11D-ML002	B	[A] DA,DB		RESP.ENG.: DICK NELSON		DATE: 12/11/79		DOCUMENT NUMBER			
			[B]		MFG.ENG.: JOHN SOUZA		DATE: 20-OCT-80		SIZE	CODE	NUMBER	REV
			[C]		ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		K	PL	TS11-D-DBP	B
			[D]		E-UA-TS11-D-0		#B-DD-TS11-D		FILE NAME:		EDIT #	
			[E]						Z1141B.PLS		14	
			[F]									

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C01
P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION	
					DA	DB
31	31		9007929-00	TERM,RING #5,6STUD CRIMP 16-2	4	4
32	32		1213756-16	GROUND STRAP	1	1
33	33		9006025-01	SCREW,MACH PAN PHIL 6-	4	4
34	34		9006560-00	NUT,HEX EXT TOOTH LCKWSHR 6-32	4	4
35	35		9010156-00	SCREW,SEMS HEX 10-	5	5
36	36		9009700-00	SCREW,SEMS TRUSS PHIL 10-	20	20
37	37		9007786-00	NUT,U-NUT RETAINER .240ID	20	20
38	38		9006565-00	NUT,HEX EXT TOOTH LCKWSHR 10-32	1	1
39	39		9006664-00	WASHER,FLAT SST	4	4
40	40		9007651-00	WASHER,LOCK EXTERNAL STEEL	1	1
41	41		1213756-20	GROUND STRAP	1	1
42	42	A-PS-3717249-0-0	3617249-00	LABEL,CAUTION,STABILITY H950	2	2
43	43	A-PS-3610267-0-0	3610267-00	DECAL, ADHESIVE BACK -DANGER HIG	1	1
44	44		9107250-00	TUBING,SHRINK .750ID EXP	1	1
45	45		9008887-00	STRAP,JUMPER, BRAID WITH TERMINA	1	1
46	46		9007959-00	WASHER,LOCK EXTERNAL STEEL	2	2
47	47		9006568-00	NUT,HEX EXT TOOTH LCKWSHR 3/16-18	2	2
48	48	D-MD-7422059-0-0	7422059-00	FRAME SUPPORT	2	2
49	49		9008203-00	NUT,HEX EXT TOOTH LCKWSHR 1/4-20	12	12
50	50		9006242-09	SCREW,MACH HEX PLN 1/4-	8	8
51	51		9007792-00	WASHER,FLAT SST	8	8
52	52		3612680-00	DECAL, GROUND SIGN PER 3E6 *	7	7

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

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 B-PL-TS11-A-0
 B-DD-M7982-0
 E-UA-M7982-0-0+
 D-CS-M7982-0-1
 K-PL-M7982-0-DEP
 MP848

UNIT VARIATIONS COVERED BY THIS PRINT SET
TS11-AA
TS11-AB

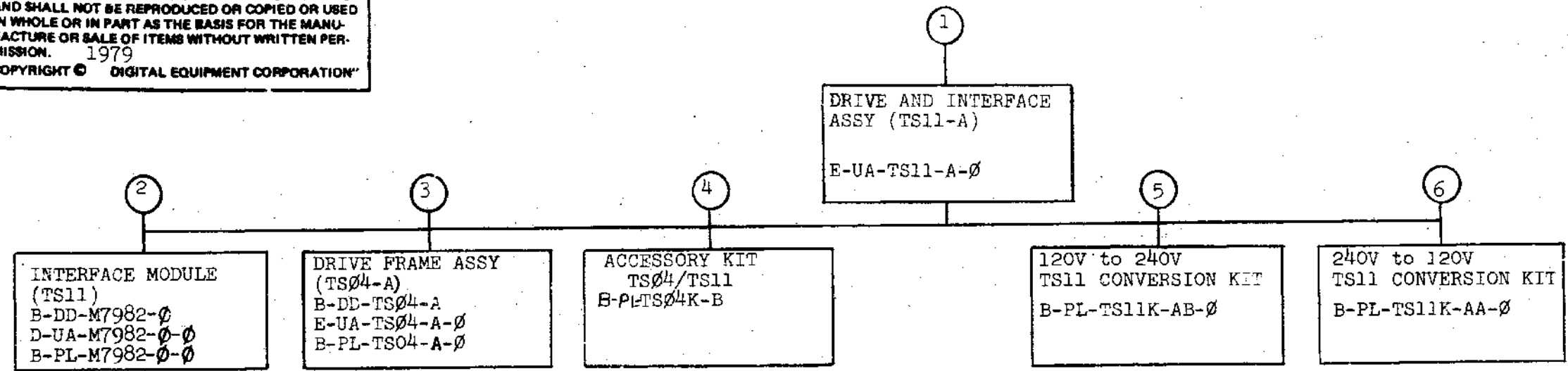
TS11-A
Field Maintenance
Print Set

Digital Equipment Corporation
 PRINT SET ORDER
 NO. MP00849

REVISIONS	REV.		USED ON OPTION/MODEL		DRN.	DATE	digital TITLE: FIELD MAINTENANCE PRINT SET TS11-A			
	CHG. NO.		TS11		G. Marini	3/20/79				
	DATE									
					CHK'D	DATE	SIZE B	CODE TC	NUMBER TS11-A-01	REV.
					<i>[Signature]</i>	7/28/79				
					PROJ. ENG.	DATE				
				<i>M. Cucini</i>	7/19/79					
				FIELD SERV.	DATE					
				<i>S. Lunkins</i>	7/19/79					
				SHEET 1 OF 1						

EN-0124-16-NB7B-(327)

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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>Fremblay</i> DATE 2/18/79		SECTION										REF DESIGNATION			
ENG <i>M. Cucin</i> DATE 7/19/79		PROD <i>T. Wright</i> DATE 7/18/79		ISSUED SECTION													
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	TS11-AA (120V)	TS11-AB (240V)												
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

DRAWING NO.	NO. OF SHTS.	PART NO.	DESCRIPTION	REVISIONS	
				REV.	DATE
B-DD-M7982-0	1		M7982 DRAWING DIRECTORY	*	A
D-UA-M7982-0-0	6		M7982 UNIT ASSEMBLY	C	D
K-PL-M7982-0-DBP	-		M7982 PARTS LIST DATA BASE	C	D
D-CS-M7982-0-1	12		UNIBUS TO SERIAL BUS CONTROLLER	C	D
D-FD-M7982-0-2	3		M7982 CONTROL FLOWS	*	*
D-TD-M7982-0-3	3		M7982 TIMING DIAGRAMS	*	*
A-SP-M7982-0-4	18		M7982 ENGINEERING SPEC.	*	*
D-BD-M7982-0-5	1		M7982 BLOCK DIAGRAM	*	*
D-MD-5012174-0/0	6		M7982 DRILL & ETCH DWG.	C	C
K-PC-M7982-0-DBC	-		M7982 PCB DESIGN DATABASE	A	A
		5012174	M7982 ETCHED CIRCUIT BOARD	D	D

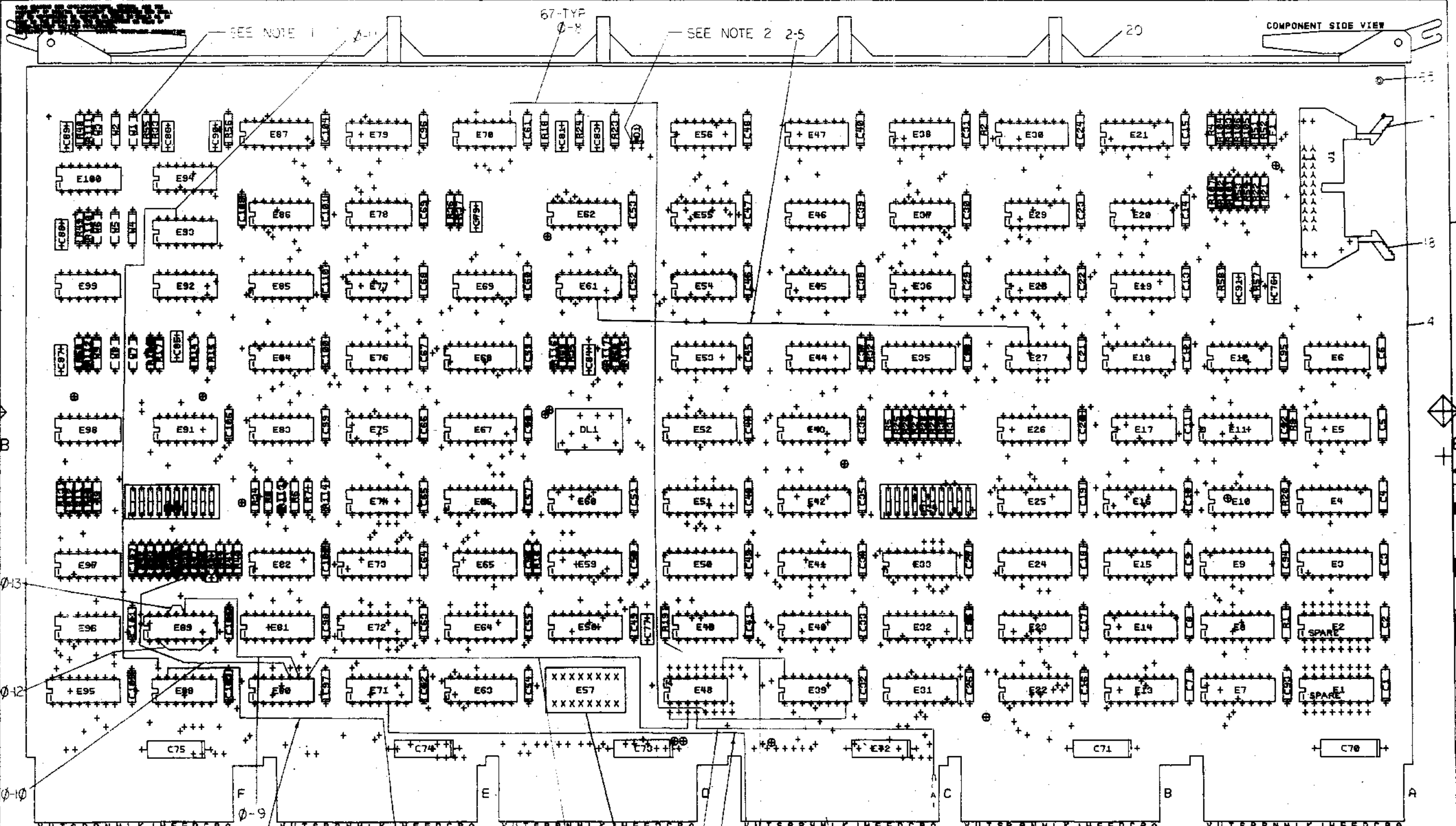
NOTES:

REVISIONS	DATE	CHG NO.	REV.	DESCRIPTION

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USED ON OPTION/MODEL	TS11	DRN. R. TREMBLAY	2/21/78	TITLE	UNIBUS TO SERIAL BUS CONTROLLER
		CHK'D R. TREMBLAY	2/22/78	SIZE	B DD
		ENG. <i>Paul King</i>	1/2/79	CODE	DD
		PROD. <i>John Baker</i>	1-17-79	NUMBER	M7982-0
				REV.	A
				SHEET	1 OF 1



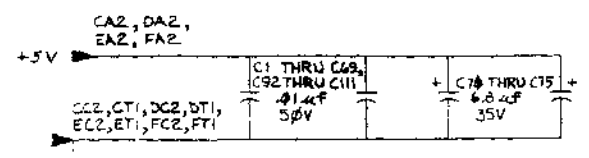
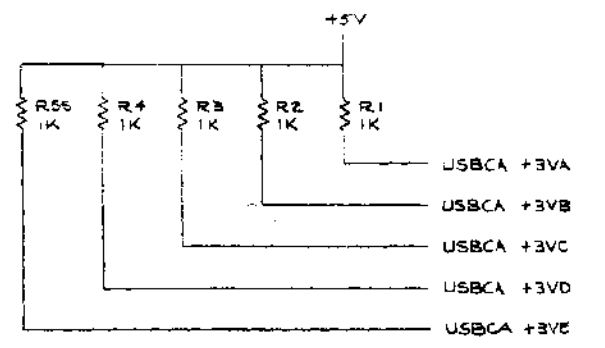
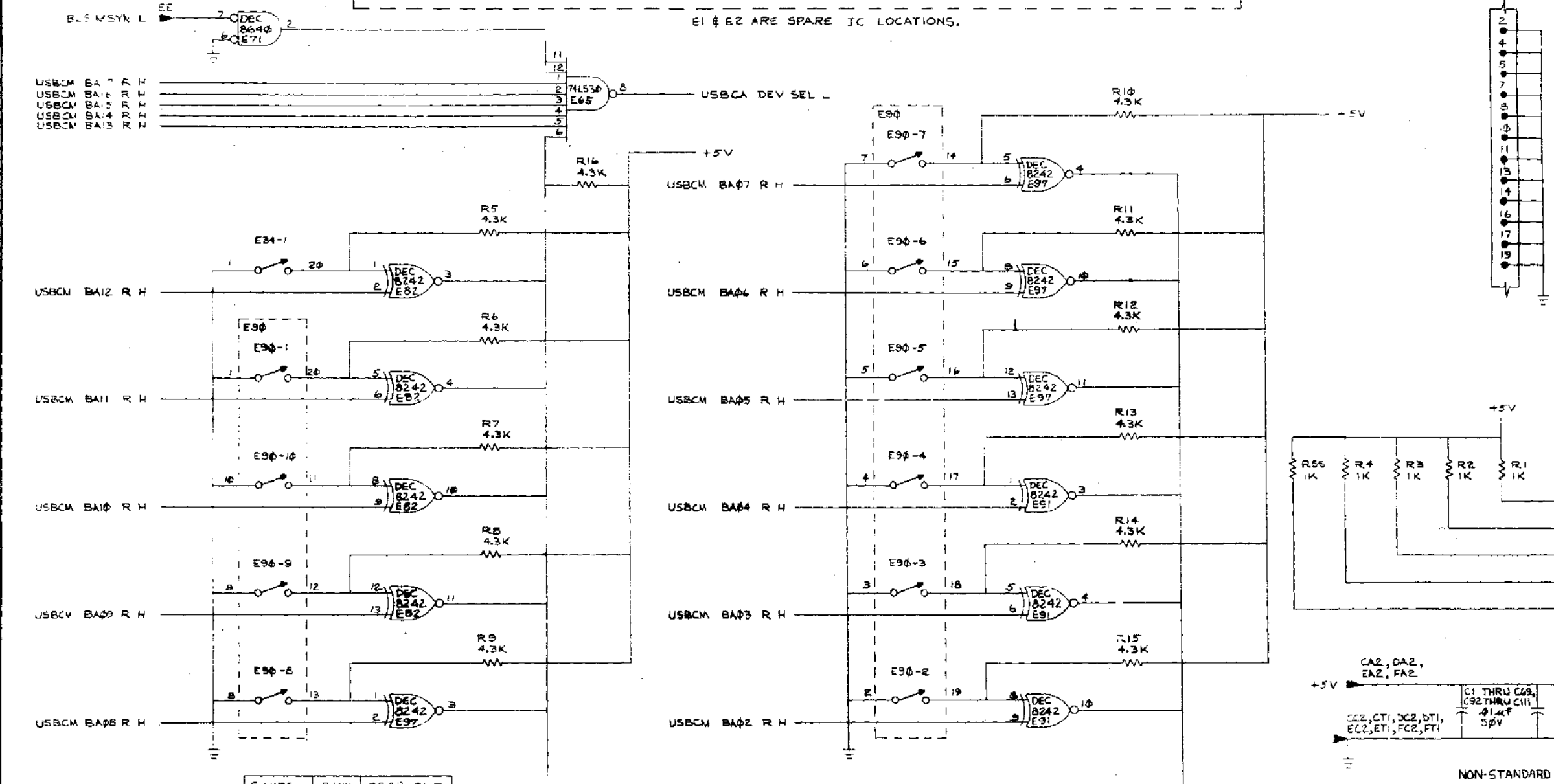
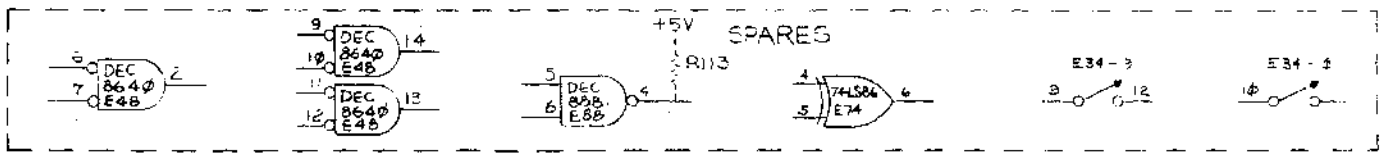
NOTES: 1. R101 THRU R108 AND R110 THRU R117 ARE OPTIONAL. DO NOT INSTALL. W1, W3, W5 THRU W8 & F1 ALSO.
 2. THIS IS FLAT SIDE OF LED.
 3. FOR REWORK, SEE SHEETS 1, 2, 5 & 6 OF THIS DWG.

CHANGE NO	REV	DATE	BY	CHK'D

ETCH REV.	DATE	BY	CHK'D
D-P2			
PLC DESIGN DATA			
BASE REV.	DL2 & DM2		

SIGNATURES	DATE	TITLE
DRN. [Signature]	6/2/78	digital
CHK'D. [Signature]	11/2/78	
ENG. [Signature]	1/17/79	TITLE UNIBUS TO SERIAL BUS CONTROLLER
PROD. [Signature]	1-17-79	
SCALE 2/1		
SMT. OF 6		
NEXT HIGHER ASSY. B-DU-M7982-0		

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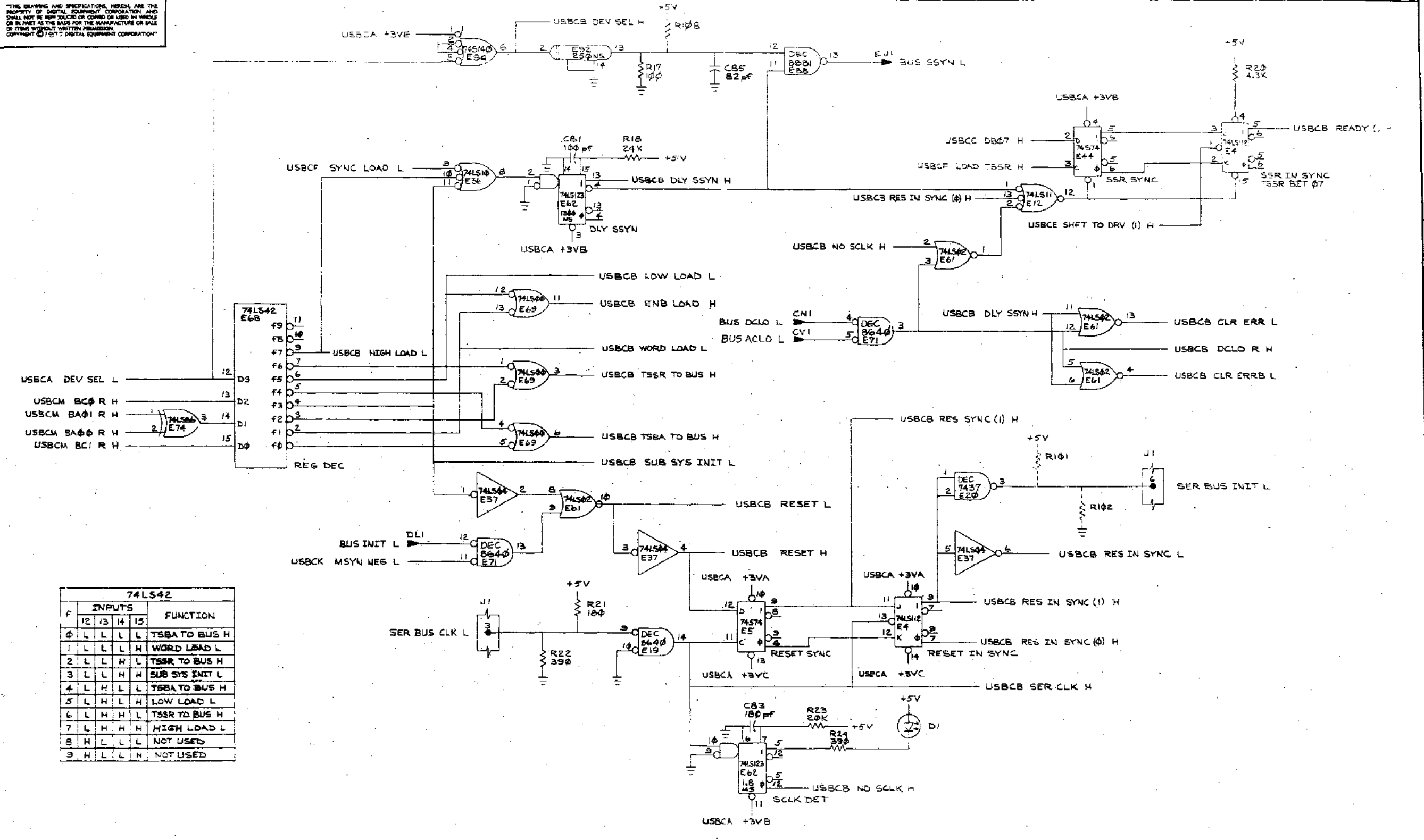
SWITCH	BAXX	8242 OUT
ON	L	H
ON	H	L
OFF	L	L
OFF	H	H

NON-STANDARD POWER CONNECTIONS:
 IC TYPE +5V GND
 DEC8640 8 1
 74LS75 5 12

REV. D	DATE 11/15/77
DESIGNED BY V. STANLEY	CHECKED BY J. W. HARRIS
DRAWN BY S. KINZELMAN	APPROVED BY J. W. HARRIS

ADDRESS DECODE		SPEC SLOT	
DRN. X. HARRIS	FIRST USED ON TSH	DIGITAL A	
CHK'D. J. W. HARRIS	TITLE (USBCA)	UNIBUS TO SERIAL BUS CONTROLLER	
ENG. R. J. HARRIS	PROD. DATE 11-15-77	NEXT HIGHER ASSY.	
SCALE 1:1	SIZE CODE D	NUMBER M7982-0-1	REV. C
SHEET 1 OF 12	DIST.		

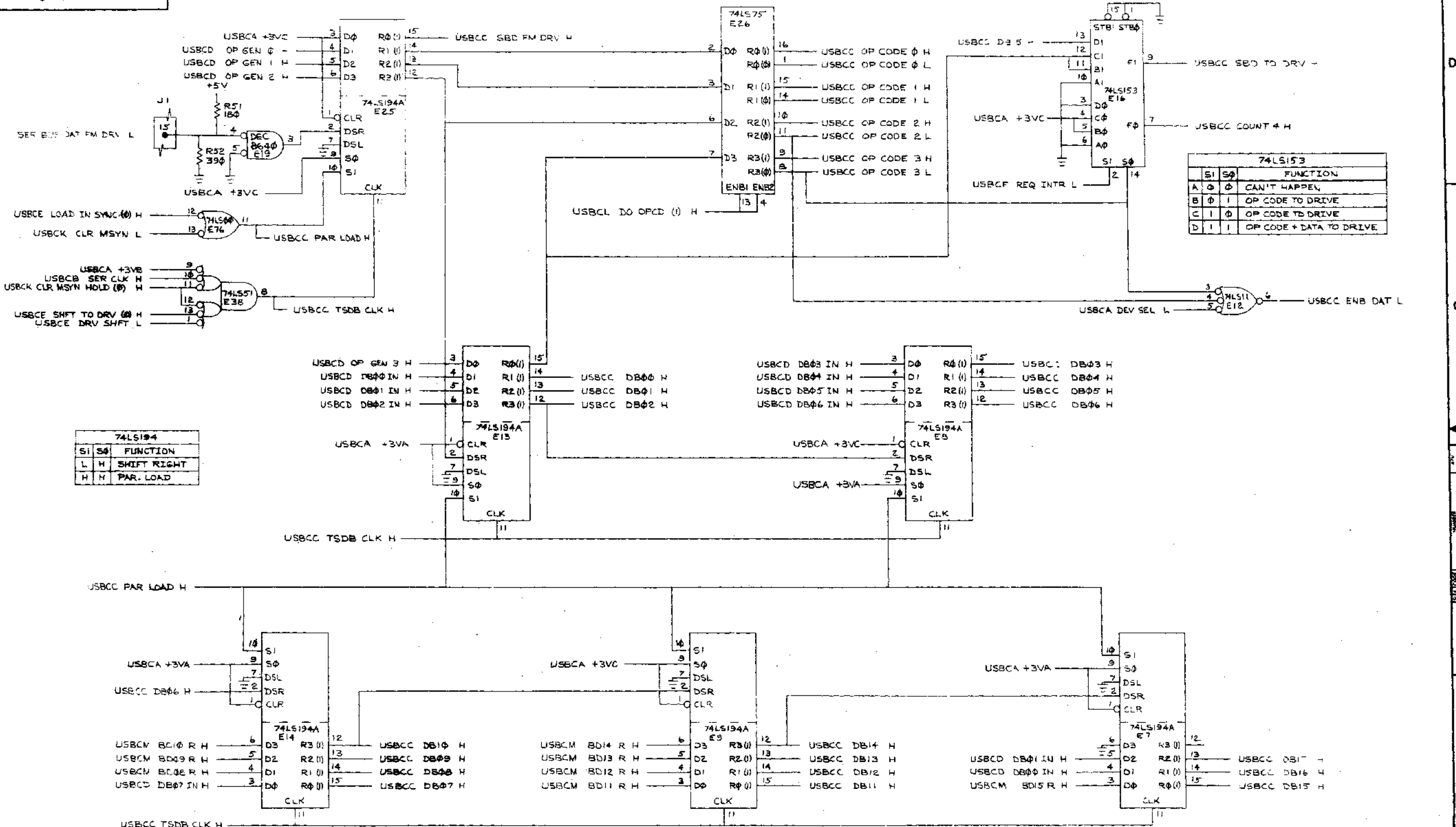
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74LS42					
F	12	13	14	15	FUNCTION
0	L	L	L	L	TSBA TO BUS H
1	L	L	L	H	WORD LOAD L
2	L	L	H	L	TSSR TO BUS H
3	L	L	H	H	SUB SYS INIT L
4	L	H	L	L	TSBA TO BUS H
5	L	H	L	H	LOW LOAD L
6	L	H	H	L	TSSR TO BUS H
7	L	H	H	H	HIGH LOAD L
8	H	L	L	L	NOT USED
9	H	L	L	H	NOT USED

REVISIONS		
CHK	CHANGE NO.	REV.

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74LS153		
SI	S0	FUNCTION
A	0	CAN'T HAPPEN
B	0	OP CODE TO DRIVE
C	1	OP CODE TO DRIVE
D	1	OP CODE + DATA TO DRIVE

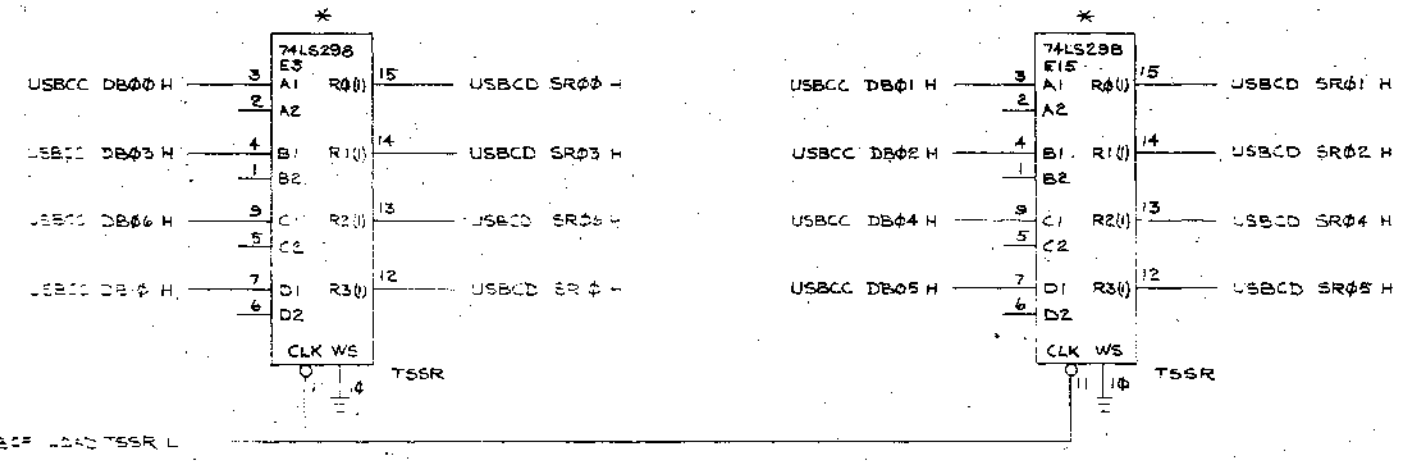
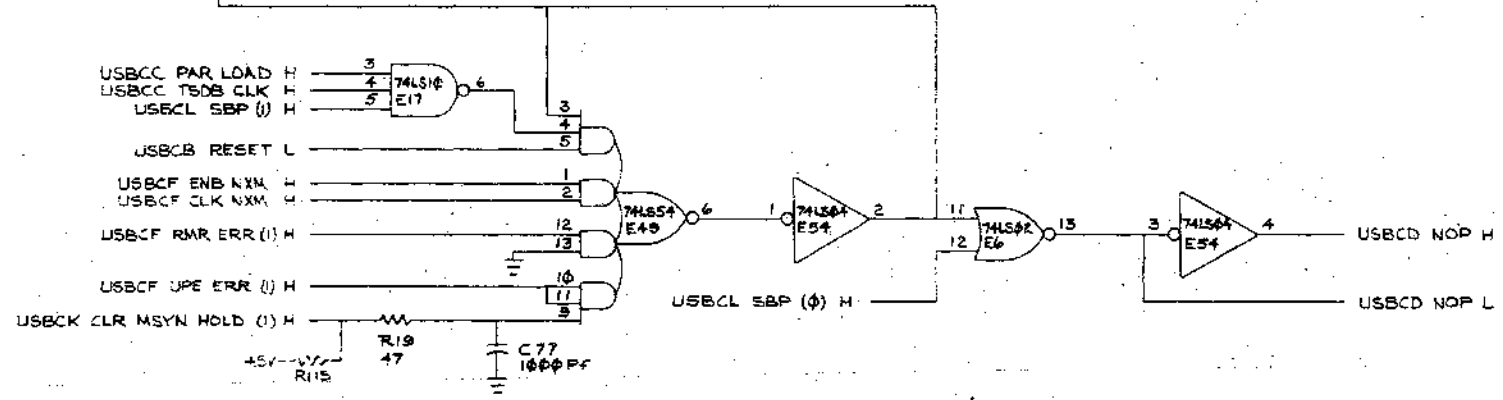
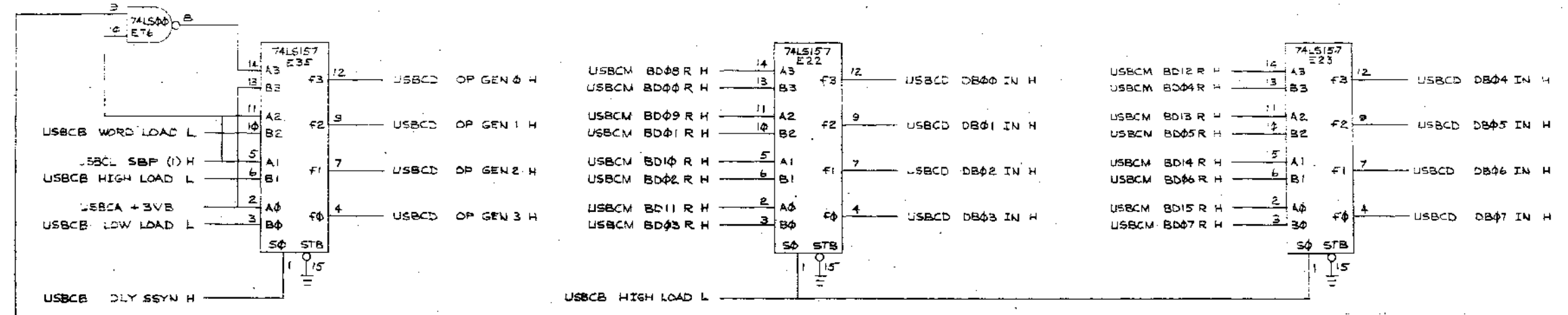
74LS194		
SI	S0	FUNCTION
L	H	SHIFT RIGHT
H	H	PAR. LOAD

REVISIONS			COUNT SELECTOR, JP CODE LATCH, DATA BUFFER, TSDB			SPC SLOT		
CHK	CHANGE NO.	REV.						

TITLE UNIBUS TO SERIAL BUS CONTROLLER (USBCC) SIZE CODE D CS NUMBER M7982-0-1 REV. D SHEET 3 OF 12 DIST.

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8 7 6 5 4 3 2 1



* THESE 5 BITS OF THE STATUS REGISTER ARE FOR SOFTWARE PURPOSES ONLY AND HAVE NO EFFECT ON THE TSDS. THEIR MEANING WILL VARY ACCORDING TO THE TYPE OF DRIVE USED.

OP CODE GEN, TSDS CLK, TSDS <30:00, 10> SPC SLOT

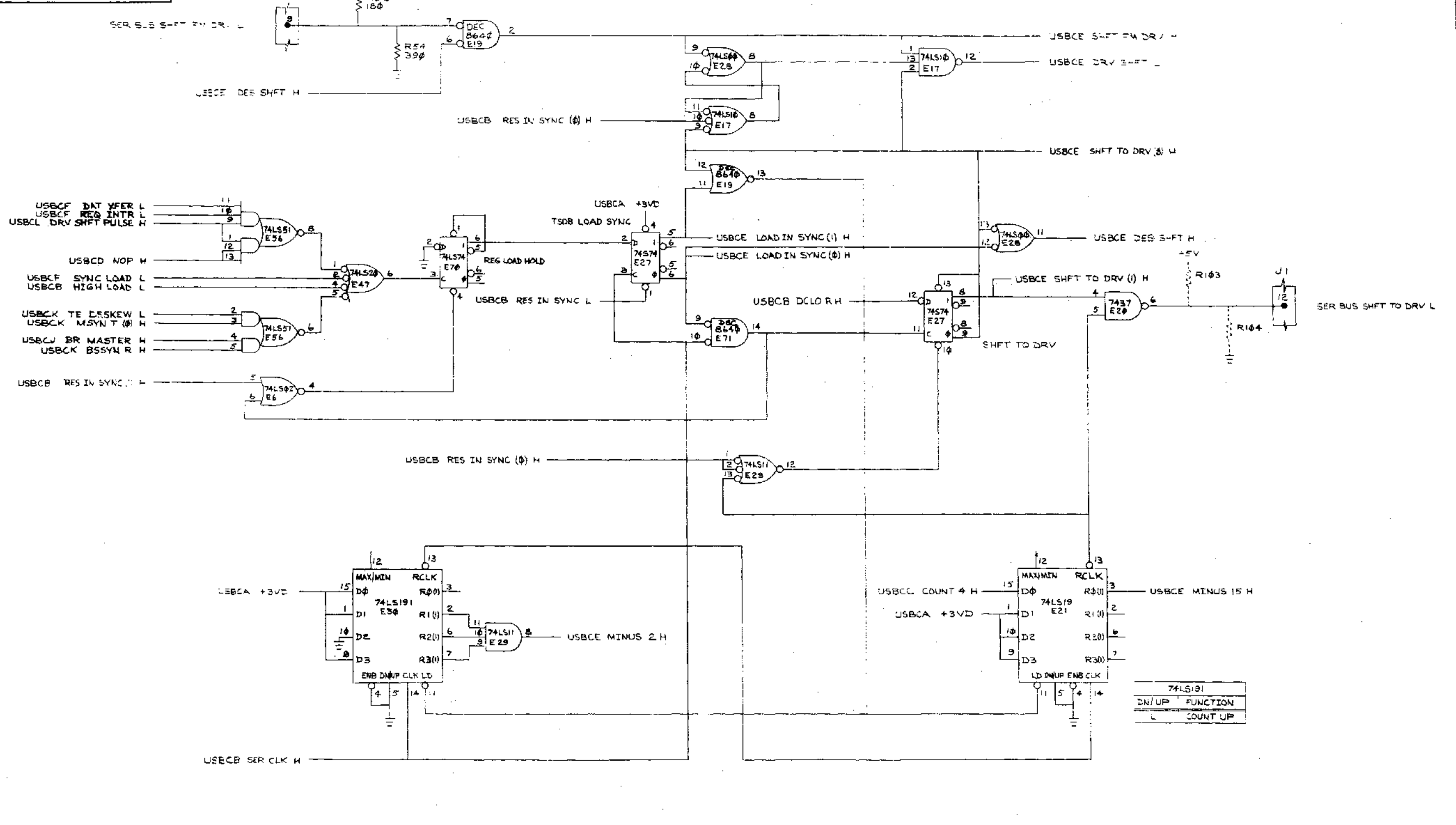
CHK	CHANGE NO.	REV.

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

M7982-0-1

8 7 6 5 4 3 2 1

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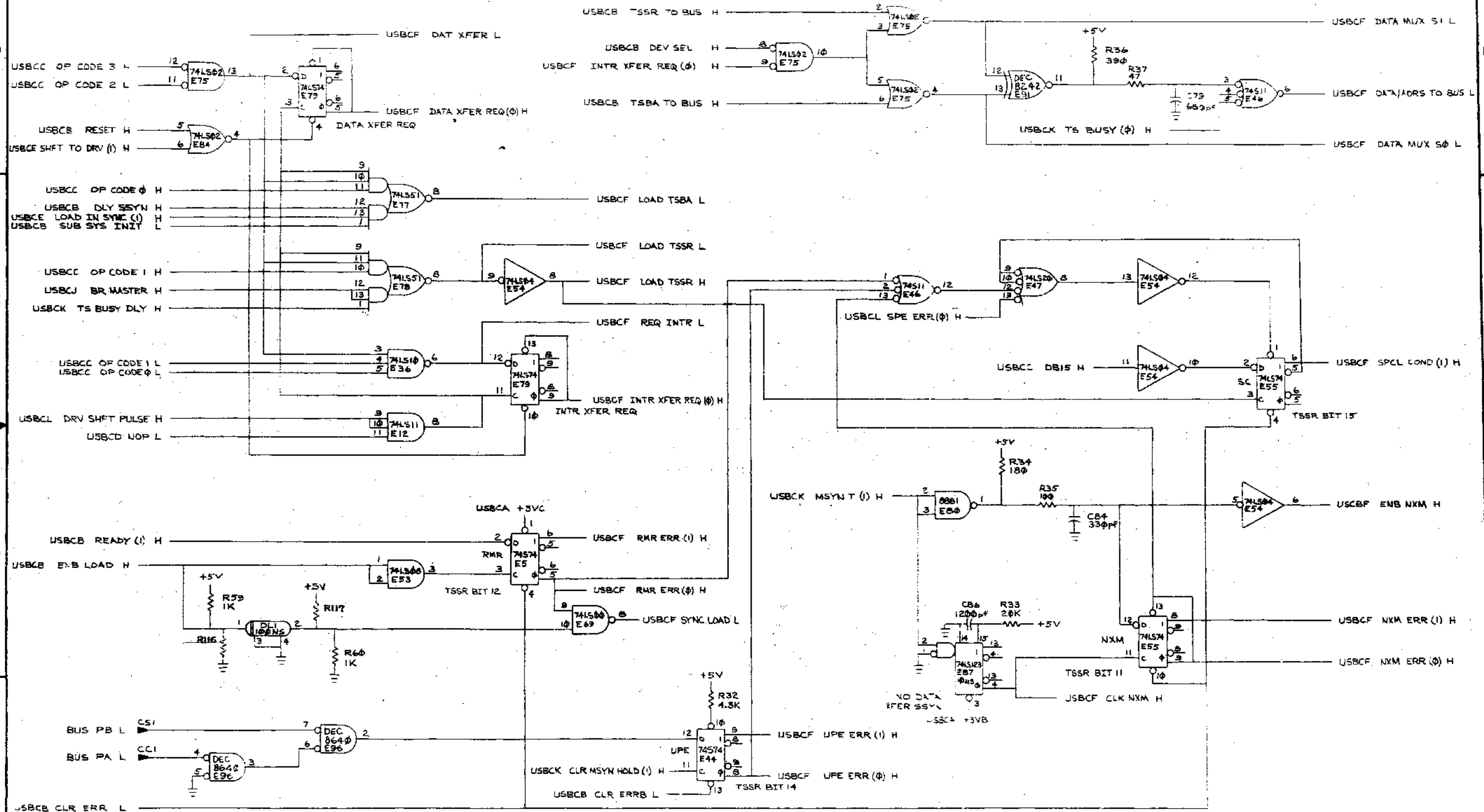


74LS191	
DN/UP	FUNCTION
L	COUNT UP

REVISIONS		
CHK	CHANGE NO.	REV.

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0 2 2-2861A 50 2

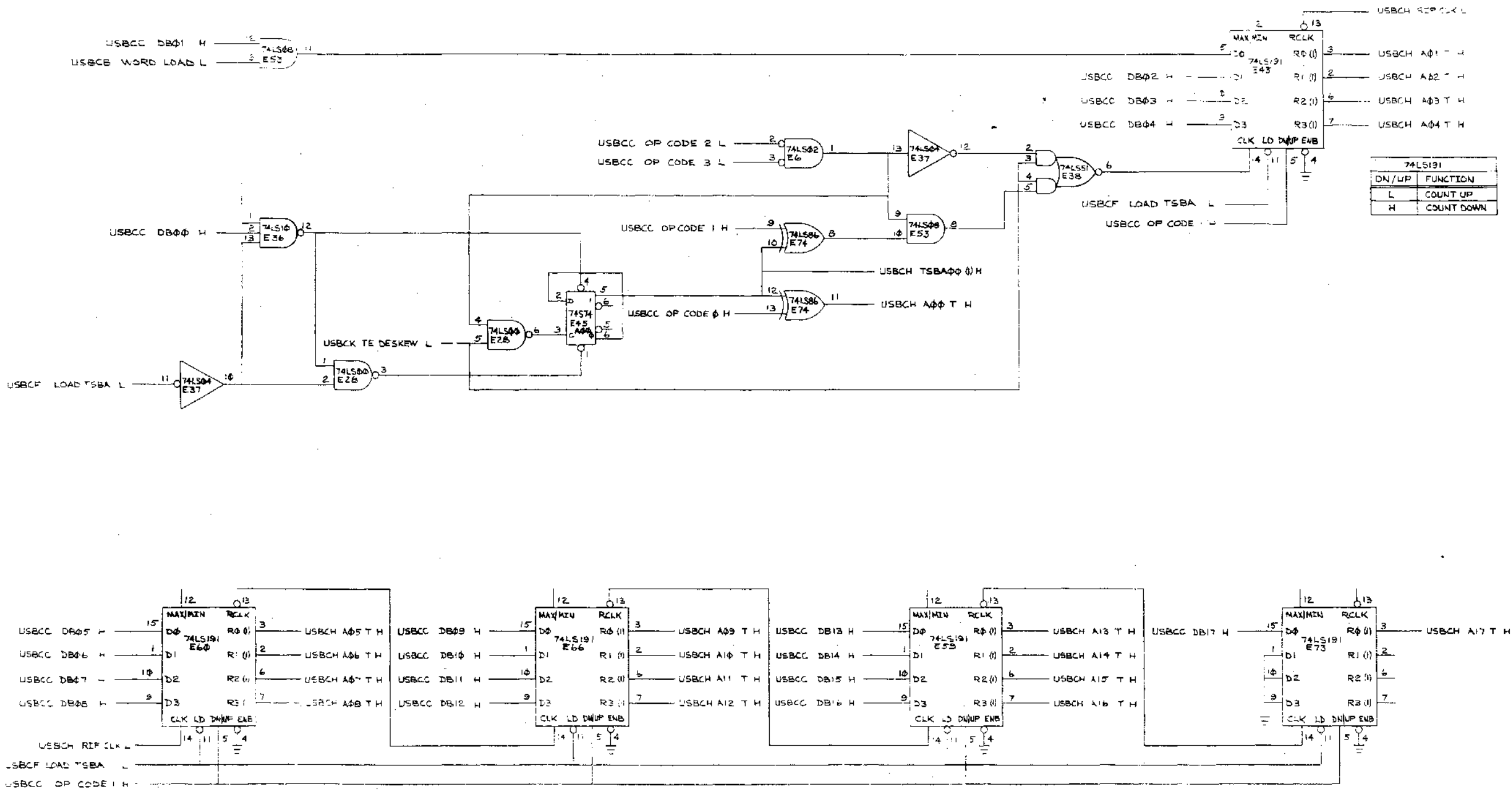


REVISIONS		
CHK	CHANGE NO.	REV.

UNIBUS TRANSFER REQUEST & ERRORS		SPEC SLOT	
TITLE	UNIBUS TO SERIAL BUS CONTROLLER (USBCF)	SIZE CODE	D CS
NUMBER	M7982-0-1	REV.	D
SCALE		SHEET	6 OF 12

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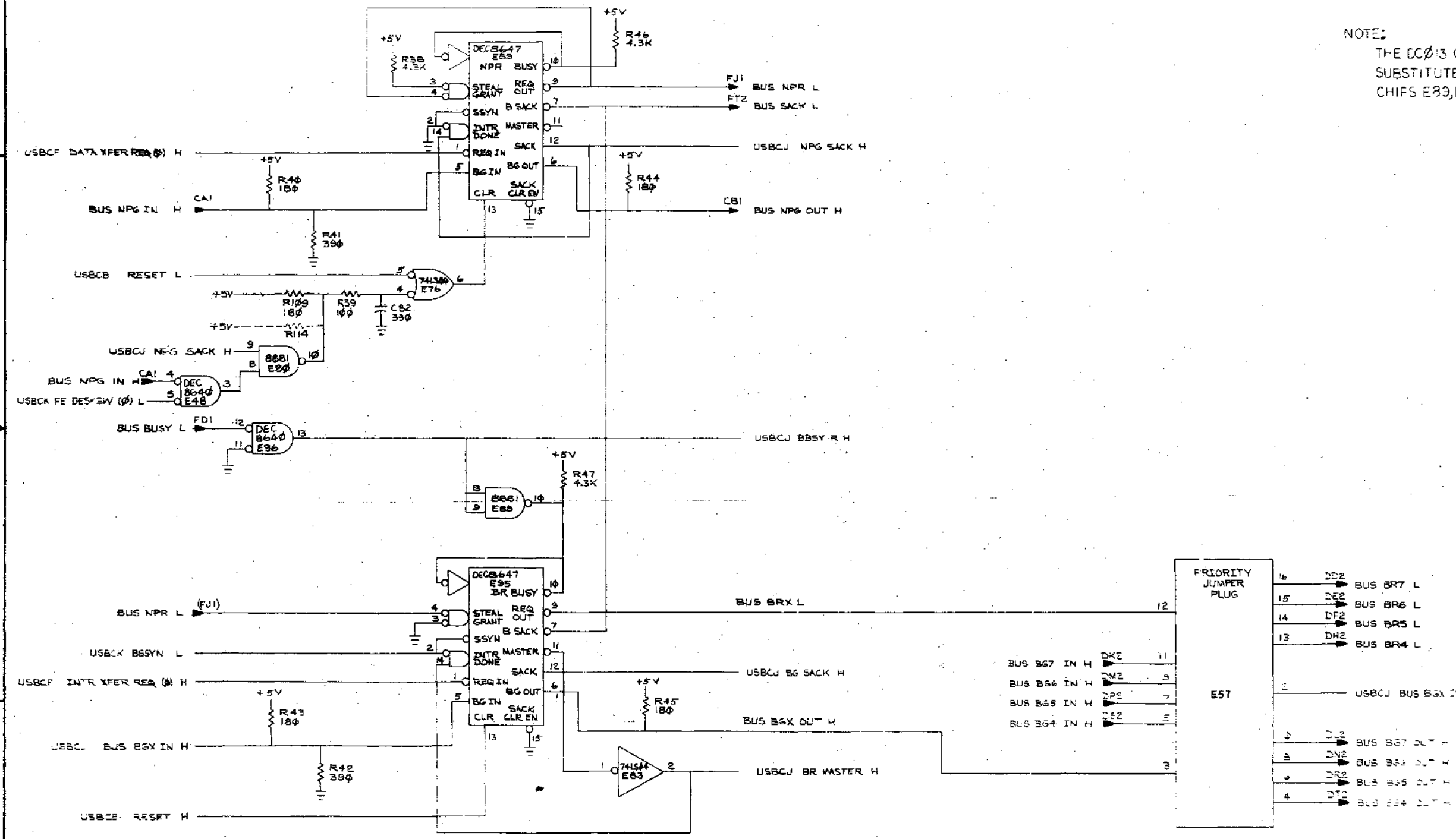
1 1 2 2 2



REVISIONS		
CHK	CHANGE NO.	REV.

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

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

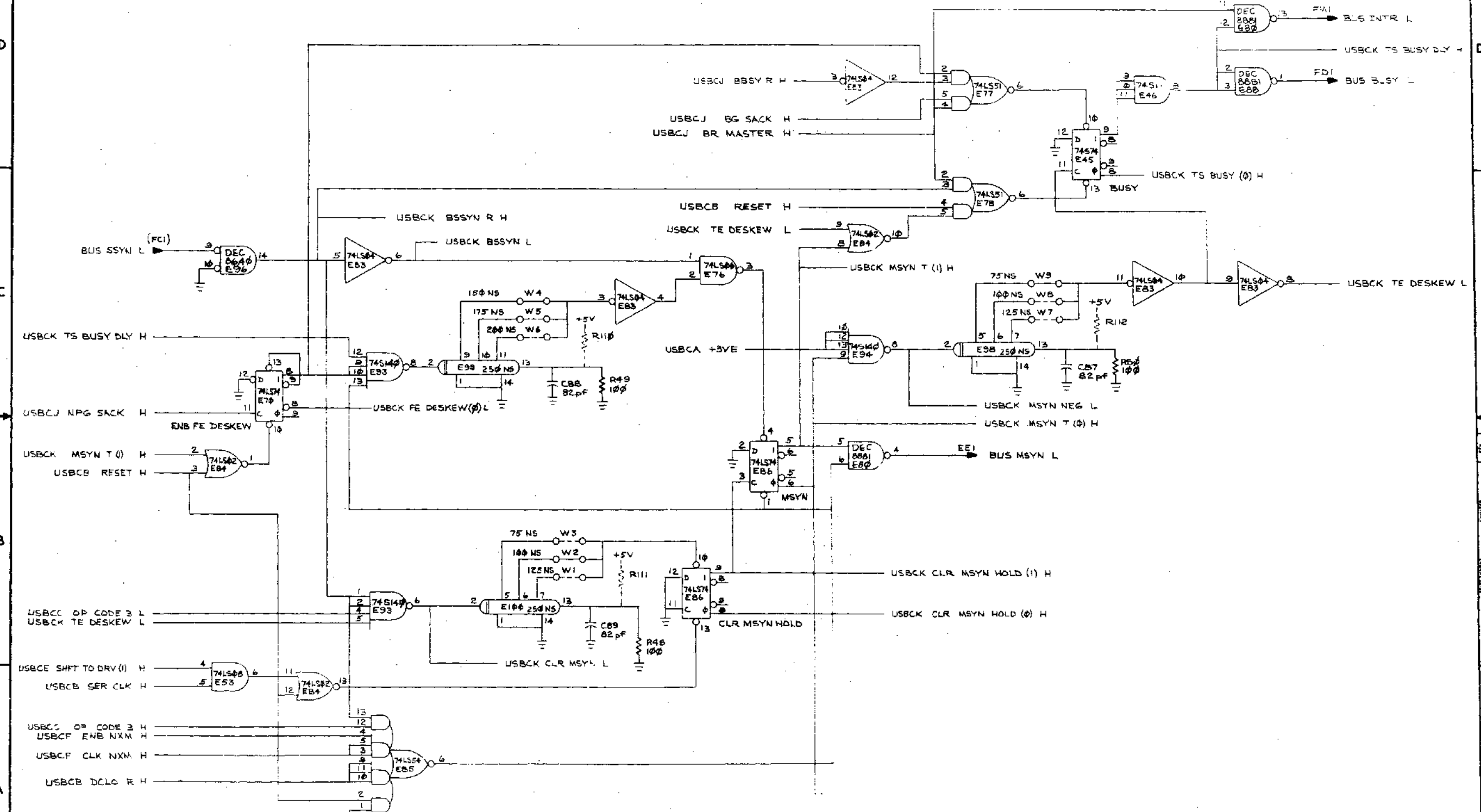
REVISIONS		
CHK	CHANGE NO.	REV.

UNIBUS CONTROL, SACK, GRANTS, REQUESTS SPC 5LJ7

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

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D 1-2-262W SCD 2

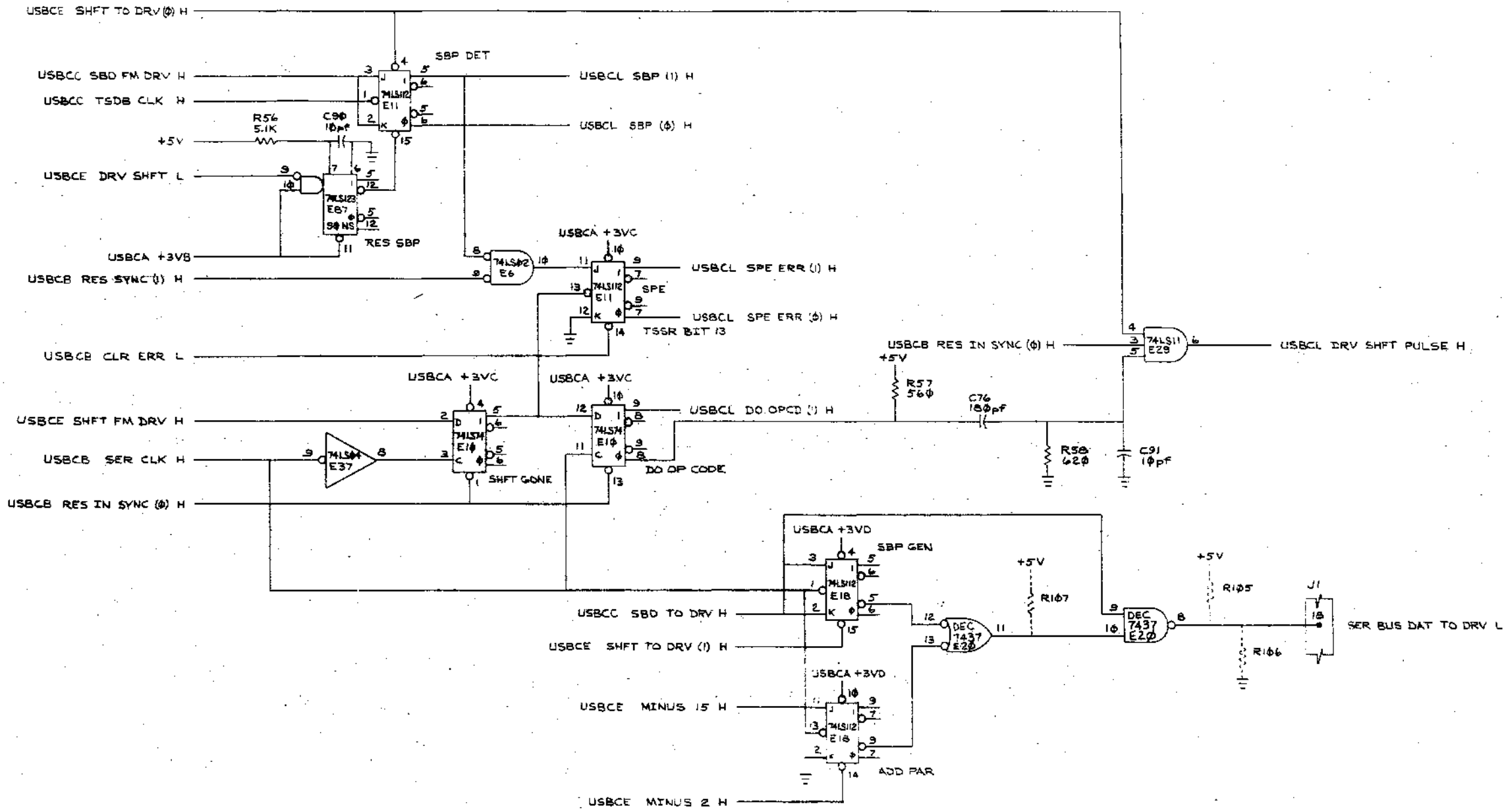


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE: UNIBUS TO SERIAL BUS CONTROLLER (USBCK)		SIZE CODE: DCS	NUMBER: M7932-01	REV: 0
SCALE: +	SHEET: 9 OF 12	DIST:		

DCS M7932-01

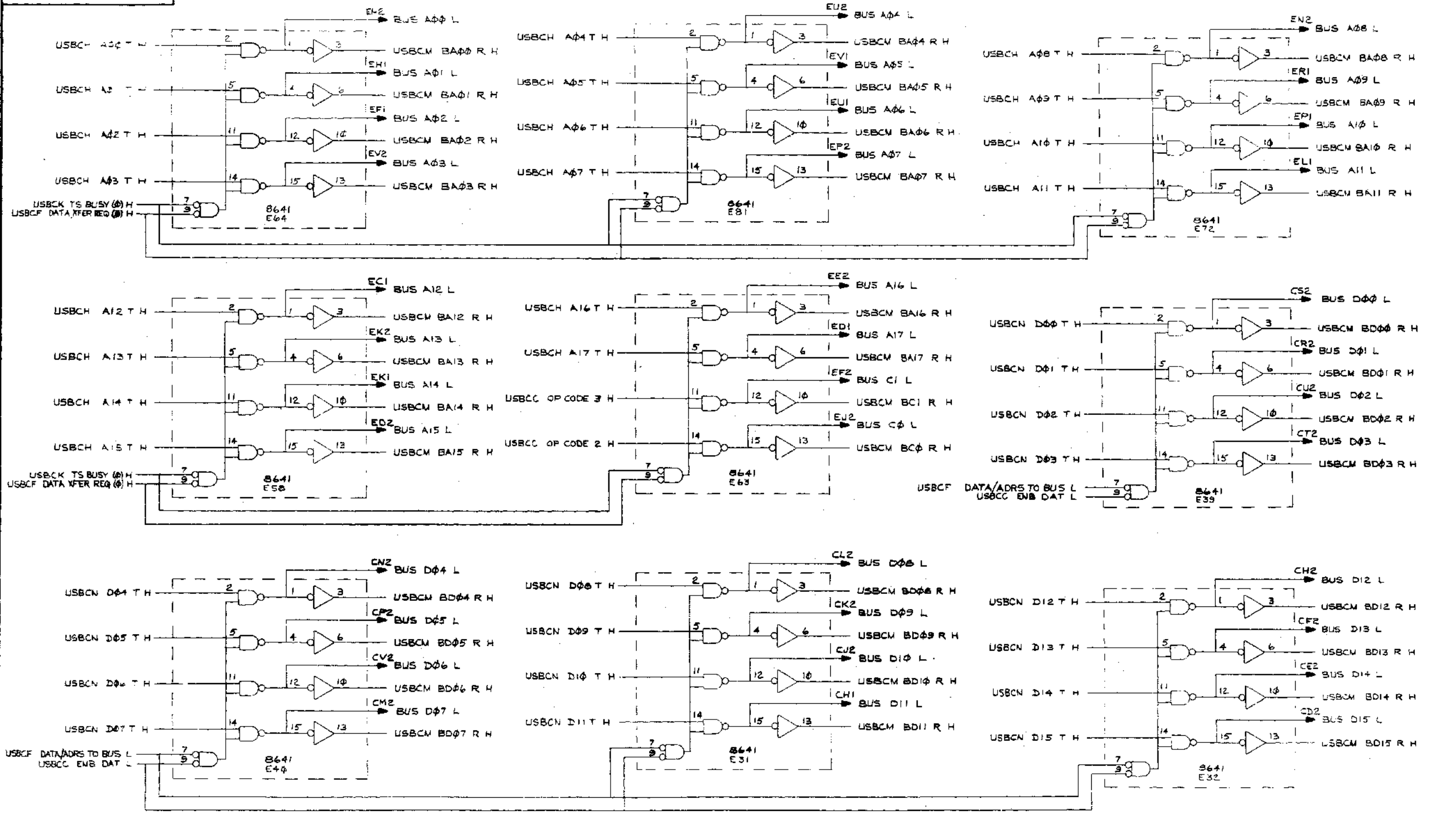
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SBP DETECT, GENERATE & ERROR SPC SLST

REVISIONS		
CHK	CHANGE NO.	REV.

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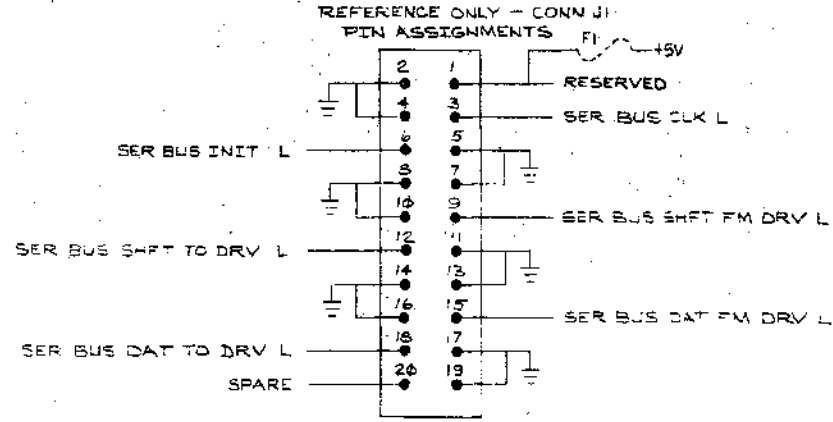
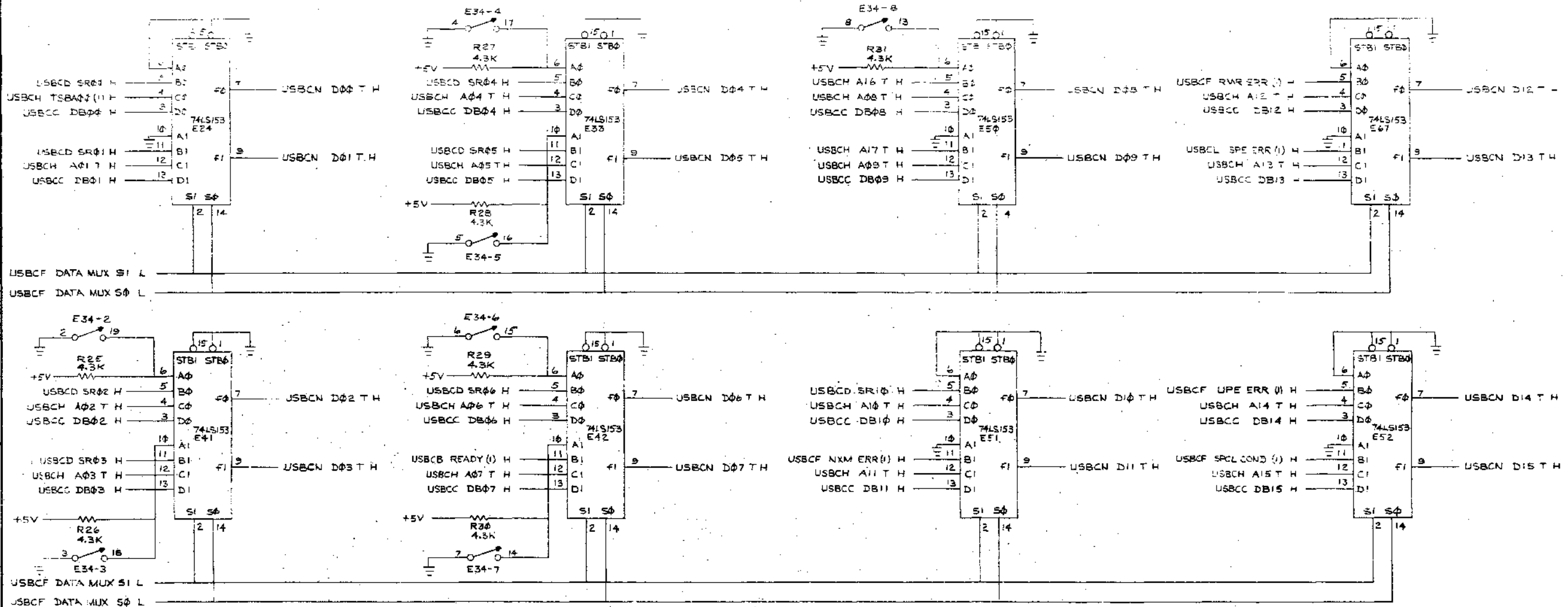
BUS ADDR, DATA XCHRS. SPC SLOT

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	UNITBUS TO SERIAL	SIZE/CODE	NUMBER	REV.
BUS CONTROLLER (USBCM)	DCS	M7982-01	1	0
SCALE	SHEET	11 OF 12	DIST.	

REV. D DCS M7982-01

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74LS153	
SI S0	FUNCTION
A 0 0 0	VECTOR TO BUS
B 0 0 1	TSSR TO BUS
C 1 0 0	TSSA TO BUS
D 1 1 1	TADB TO BUS

REVISIONS		
CHK	CHANGE NO.	REV.

REG. DATA MUX, VECTOR GEN. SPC SLOT

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
	D-05-M7982-0-1		CIRCUIT SCHEMATIC	REF	
	D-UA-M7982-0-0		UNIT ASSEMBLY	REF	
	S-05-M7982-0-0		DWG DIRECTORY	REF	
	D-MD-5012174-0-0	5012174-00	M7982		
		1000008-00	10.0 MMF 100V 5%200PPM MICA	1	C90,C91
		1000015-00	82.0 MMF 100V 5%200PPM MICA	1	C87,C85,C88,C89
		1000016-00	100.0 MMF 100V 5%200PPM MICA	1	C81
		1000020-00	180.0 MMF 100V 5%200PPM MICA	1	C76,C83
		1000023-00	330.0 MMF 100V 5%200PPM MICA	2	C82,C84
		1000026-00	580.0 MMF 100V 5%200PPM MICA	1	C79
		1000042-00	1000.0 MMF 100V 5%200PPM MICA	1	C77
		1001610-00	.01 MFD 50V +80-20% Z5U CER	89	C1-C69,C92-C111
		1002424-00	1200.0 MMF 100V 5%200PPM MICA	1	C86
		1005305-00	6.8MFD 35V 10% S.TANT	6	C70-C75
		1110864-00	LED 2MCD@10MA	1	D1
	USED FOR E57.	1209838-00	SKT IC 16PIN DIP GOLD PLATE	1	
		1209941-03	HEADER RT ANGLE LEFT L	1	
		1209941-04	HEADER RT ANGLE RIGHT	1	
		1209941-05	HEADER.100 20POS RT ANGLE	1	J1
		1210711-02	/REPLACED BY 12-16988-02	1	
		1211164-05	SW DIP 1P 1A 10POS	2	F34,F90
		1300202-00	47.0 .25 W 5.0 %	00	R37,R19
		1300229-00	100.0 .25 W 5.0 %	00	R17,R35,R39,R48-R50
		1300309-00	390.0 .25 W 5.0 %	00	R22,R24,R41,R42,R52,R54,R36
		1300365-00	1.0 K .25 W 5.0 %	00	R1-R4,R55,R59,R60
		1301322-00	180.0 .25 W 5.0 %	00	R21,R34,R40,R43-R45,R51,R53,R109
		1301890-00	560.0 .25 W 5.0 %	00	R57
		1302389-00	4.30 K .25 W 5.0 %	00	R5-R16,R20,R25-R31,R38,R46,R47
				24	R32
				2	R23,R33

REVISION HISTORY		BASIC PART NO: M7982		DRN: FRED MAY		DATE: 06-DEC-77		D I G I T A L	
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D:	C. CAMPBELL	DATE:	06-DEC-77	TITLE PARTS LIST	
PK	M7982-MLO02	D	SECTION VARIATION INDEX			UNIBUS SERIAL BUS CONTROLLER			
			(A) 00	DES. ENG: R. BOUCHER		DATE: 17-JUL-78		DOCUMENT NUMBER	
			(B)	RESP. ENG.: R. BOUCHER		DATE: 17-JUL-78		SIZE CODE NUMBER REV	
			(C)	MFG. ENG.: P. BARTON		DATE: 17-JUL-78		K PL M7982-0-08P 0	
			(D)	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME: EDIT #	
			(E)	D-UA-M7982-0-0		7911		210790.PLS 20	
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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
30	30		1303178-00	620.5 .25 W 5.0 % CC	1		R58
31	31		1312930-00	5.1G 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	1		E80,E88
35	35		1909712-00	DEC 8242 COMPARATOR-4BIT N	1		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		E46
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.
						CONT	E81
				/REPLACED BY 19-14438-00			E89,E95
42	42		1912083-00	LS75 LATCH 4BIT BISTABLE	2		E26
43	43		1912649-00	LS194A SHIFT REG. 4BIT BI-D	1		E7-E9,E13,E14,E25
44	44		1912696-00	LS90 NAND-GATE-QUAD 2IN,P	3		E28,E69,E76
45	45		1912799-00	LS92 NOR-GATE-QUAD 2IN	4		E6,E61,E75,E84
46	46		1912801-00	74LS04 INVERTER GATE,HEX	3		E37,E54,E83
47	47		1912803-00	LS08 AND GATE-QUAD 2IN,PO	1		E53
48	48		1912805-00	LS10 NAND GATE-TRIPLE 3IN	1		E17,E36
49	49		1912807-00	LS11 AND GATE-TRIPLE 3IN	1		E12,E29
50	50		1912808-00	LS20 NAND GATE-DUAL 4IN	1		E47
51	51		1912810-00	LS30 NAND GATE-SINGLE 6IN	1		E65
52	52		1912815-00	LS42 DECODER,BCD-DECIMAL	1		E68
53	53		1912819-00	LS51 A-O-I GATE 2-WIDE 2I	4		E38,E56,E77,E78.
54	54		1912820-00	LS54 A-O-I GATE 3-2-2-3IN	1		E85,E49
55	55		1912821-00	LS74 FF-D DUAL,EDGE TRIGG	5		E10,E55,E70,E79,E86
56	56		1912824-00	LS86 X-OR GATE-QUAD 2IN	1		E74
57	57		1912829-00	LS112 FF-JK DUAL,EDGE TRIG	3		E4,E11,E18
58	58		1912834-00	LS123 ONE SHOT-DUAL,RETRIG	1		E62,E67
59	59		1912837-00	LS153 MUX 1 OF 4 (DUAL)	9		E16,E67,E52,E50,E51,E33,E42,E24.
60	60		1912845-00			CONT	E41
61	61		1912847-00	LS157 MUX 1 OF 2(QUAD)	3		E22,E23,E35
62	62		1912867-00	LS298 MUX 1 OF 4 2IN W/S	3		E3,E15
63	63		1913939-00	LS191 COUNTER,SYNCR. UP/D	1		E21,E30,E73,E59,E60,E43,E66
64	64		5408778-00	PLUG PRIORITY	1		E57
65	65		9000024-01	EYELET,ROLL FLANGE .12100X .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	24.9 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 FL M7982-D-DBP	D

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FIELD MAINTENANCE PRINT SET

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E-UA-TS04K-A-0	K-PL-M8963-0-DBP
B-PL-TS11K-AA-0	D-UA-M8964-0-0*
B-PL-TS11K-AB-0	D-CS-M8964-0-1
B-DD-5412989-0	K-PL-M8964-0-DBP
E-UA-5412989-0-0*	D-UA-M8965-0-0*
D-CS-5412989-0-1	D-CS-M8965-0-1
K-PL-5412989-0-DBP	K-PL-M8965-0-DBP
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D-CS-G057-0-1	D-CS-M8966-0-1
K-PL-G057-0-DBP	K-PL-M8966-0-DBP
D-UA-G157-0-0*	D-UA-M8967-0-0*
D-CS-G157-0-1	D-CS-M8967-0-1
K-PL-G157-0-DBP	K-PL-M8967-0-DBP
D-UA-G158-0-0*	D-UA-M8968-0-0*
D-CS-G158-0-1	D-CS-M8968-0-1
K-PL-G158-0-DBP	K-PL-M8968-0-DBP
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K-PL-G159-0-DBP	B-PL-7016288-0-0
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D-CS-5413692-0-1	D-CS-5413609-0-1
K-PL-5413692-0-DBP	K-PL-5413609-0-DBP
D-UA-M8922-0-0*	D-CS-5411086-0-1
D-CS-M8922-0-1	D-UA-H744-0-0
K-PL-M8922-0-DBP	D-CS-H744-0-1
D-UA-M8923-0-0*	D-AD-7016287-0-0
D-CS-M8923-0-1	B-PL-7016287-0-0
K-PL-M8923-0-DBP	K-PL-TS04-A-DBP
D-UA-M8924-0-0*	
D-CS-M8924-0-1	
K-PL-M8924-0-DBP	
D-UA-M8929-0-0*	
D-CS-M8929-0-1	
K-PL-M8929-0-DBP	
D-UA-M8962-0-0*	
D-CS-M8962-0-1	

* INCLUDE SHEET 1 ONLY


UNIT VARIATIONS COVERED BY THIS PRINT SET	
TS11-AA	
TS11-AB	

TS04-A-1

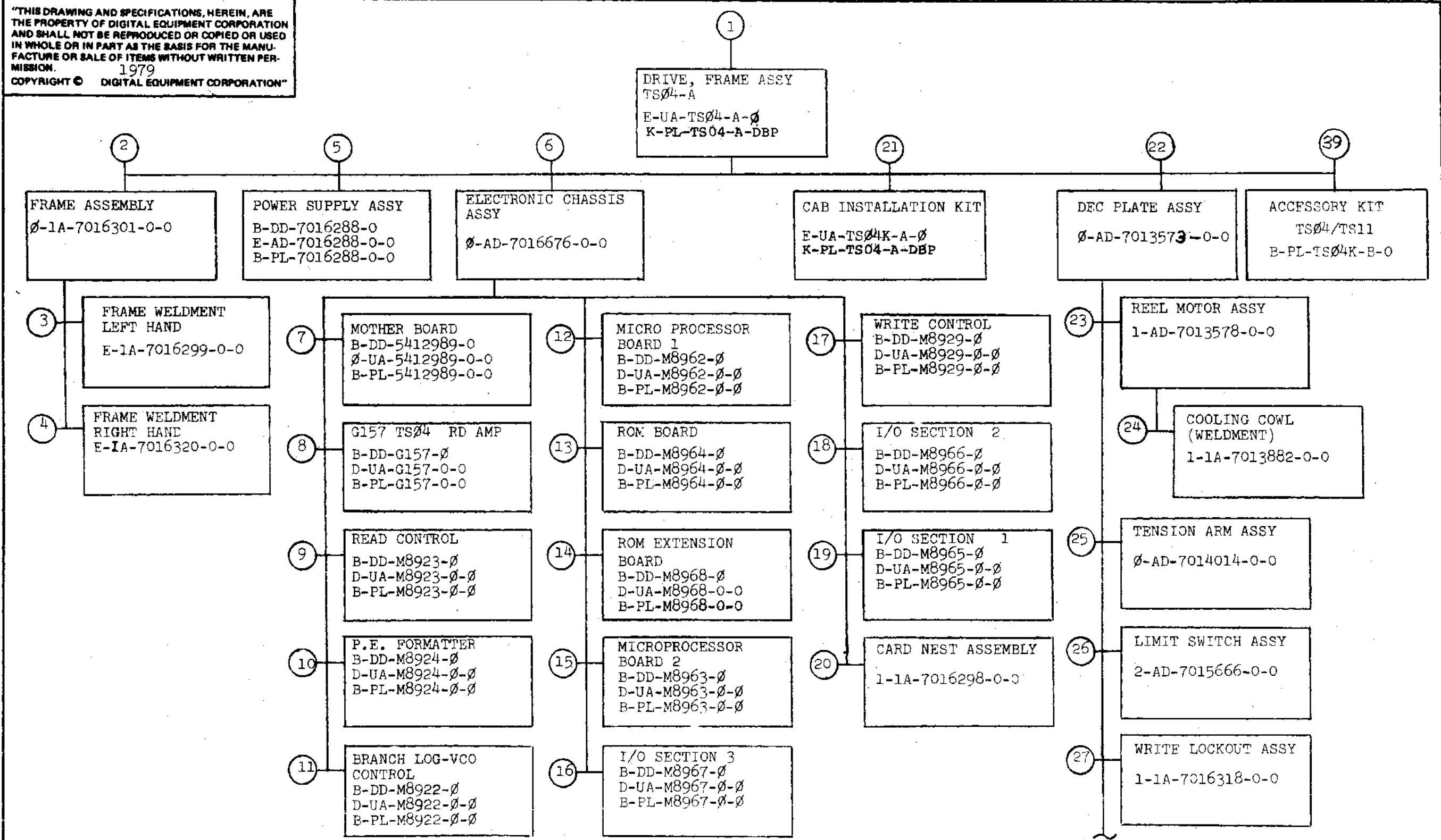
Field Maintenance Print Set

Digital Equipment Corporation

PRINT SET ORDER NO. MP03848

REVISES	REV.	A	B	USED ON OPTION/MODEL	DRN.	DATE												
	CHG. NO.	TS04A-ML092	TS04A-MI093		TS11	G. Marini		3/79										
	DATE	7/7/80	6/87		CHK'D	DATE		TITLE: FIELD MAINTENANCE PRINT SET (TS04)										
					R. Tremblay	7/79												
				PROJ. ENG.	DATE	<table border="1"> <tr> <th>SIZE</th> <th>CODE</th> <th>NUMBER</th> <th>REV.</th> </tr> <tr> <td>B</td> <td>TC</td> <td>TS04-A-01</td> <td>B</td> </tr> <tr> <td>DIST.</td> <td></td> <td></td> <td></td> </tr> </table>	SIZE	CODE	NUMBER	REV.	B	TC	TS04-A-01	B	DIST.			
SIZE	CODE	NUMBER	REV.															
B	TC	TS04-A-01	B															
DIST.																		
					M. Cucina	7/79												
					FIELD SERV.	DATE												
				SHEET 1 OF 1	S. Lunkins	7/79												

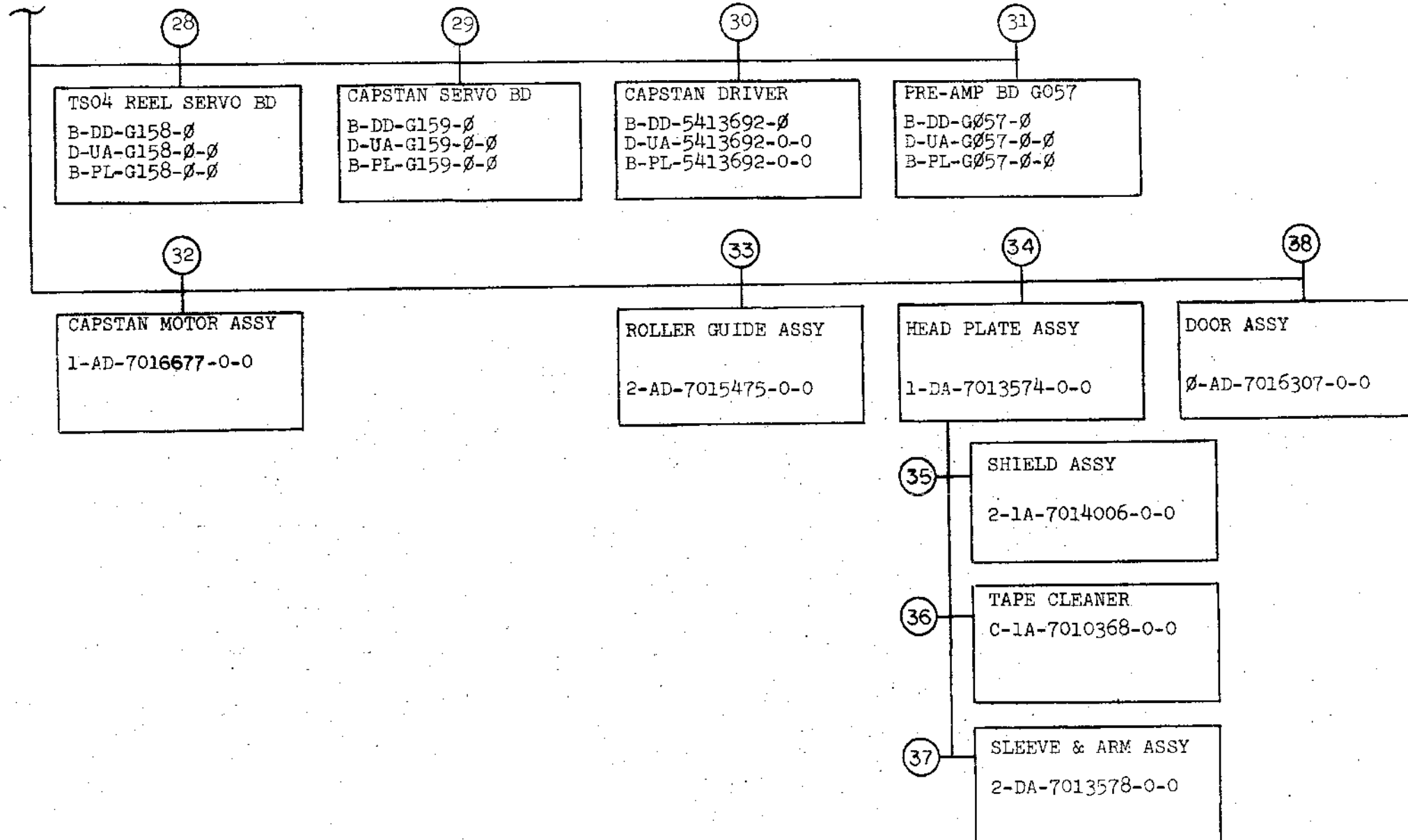
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CONTINUED ON SHEET 3 OF 6

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FROM SHEET 2 OF 7



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-SV	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	POM BOARD	E/M
	1-MD-7422084-0-0	FRAME SIDE L.H.	M		B-PL-M8964-0-0	ROM BOARD (PL)	E/M
	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
4	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
5	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				
	1-1A-7016285-0-0	CABLE, FAN LOGIC	E/M	17	B-DD-M8929-0	DRAWING DIRECTORY	--
					D-UA-M8929-0-0	WRITE CONTROL	E/M
7	B-DD-5412989-0	DRAWING DIRECTORY	---		B-PL-M8929-0-0	WRITE CONTROL (PL)	E/M
	0-UA-5412989-0-0	MOTHER BOARD	E/M				
	B-PL-5412989-0-0	MOTHER BOARD (PL)	E/M				
8	B-DD-0157-0	DRAWING DIRECTORY	---				
	0-UA-0157-0-0	0157 TS04 RE AMP	E/M				
	B-PL-0157-0-0	0157 TS04 RE 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
					A/1-PS-1214816-0-0	RING CENTER	M
19	B-DD-M8965-0	DRAWING DIRECTORY	---		A-PS-1214946-0-0	RING RUBBER	M
	D-UA-M8965-0-0	I/O SECTION 1	E/M		D-PS-1213119-0-0	HUB QUICK RELEASE	M
	B-PL-M8965-0-0	I/O SECTION 1 (PL)	E/M		A-PS-1214843-0-0	LATCH	M
					A-PS-1215235-0-0	LID SUPPORT	M
					2-MD-7422583-0-0	INSULATOR G057	M
20	1-1A-7016298-0-0	CARD NEST ASSY	M		A-PS-1214955-0-0	HINGE DEC PLATE	M
	1-1A-7422065-0-0	SUPPORT CARD GUIDE	M		2-MD-7418032-0-0	INSULATOR G158	M
	1-1A-7422081-0-0	PANEL CHASSIS	M		A-PS-1214609-0-0	LATCH GRIP	M
	1-MD-7422063-0-0	BRACKET FAN	M		1-1A-7014149-0-0	CABLE WRITE HEAD	E/M
					1-1A-7013582-0-0	CABLE READ HEAD	E/M
					1-1A-7016284-0-0	CABLE POWER R/W	E/M
					1-1A-7016259-0-0	HARNESS C/P	E/M
21	E-UA-TS04K-A-0	CAB INSTALLATION KIT	M		2-1A-7016528-0-0	CABLE INTERCONNECT	E/M
	K-PL-TS04-A-DBP	PARTS LIST	M		D-1A-7013577-0-0	HARNESS DRIVE	E/M
					1-1A-7016258-0-0	HARNESS W/L/L	E/M
					1-1A-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		1-1A-7013581-0-0	CABLE ASSY FOLDED	E/M
	0-MD-7417657-0-0	DECK PLATE	M		1-1A-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
	1-1A-7418004-0-0	BRACKET GUSSET R.H.	M		A-PS-1214528-0-0	REEL MOTOR	E/M
	1-1A-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		1-1A-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 COWL MTG	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-1214164-0-0	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
					B-MD-7422992-0-0	SHAFT BUFFER	M
27	1-IA-7016318-0-0	WRITE LOCKOUT ASSY	E/M		B-MD-7422993-0-0	WASHER	M
	2-IA-7422069-0-0	BRACKET W.L.O.	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	FERRITE	M
28	B-DD-G158-0	DRAWING DIRECTORY	---	36	C-IA-7010368-0-0	TAPE CLEANER	M
	D-UA-G158-0-0	TS04 REEL SERVO BD	E/M		C-MD-7414126-0-0	SUPPORT SCRAPER	M
	B-PL-G158-0-0	TS04 REEL SERVO BD (PL)	E/M		C-MD-7414127-0-0	SCRAPER, TAPE	M
29	B-DD-G159-0	DRAWING DIRECTORY	---				
	D-UA-G159-0-0	CAPSTAN SERVO BD	E/M	37	2-DA-7013578-0-0	SLEEVE ARM ASSY	M
	B-PL-G159-0-0	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		0-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-G057-0	DRAWING DIRECTORY	---		A-PS-1214956-0-0	HINGE	M
	D-UA-G057-0-0	PRE-AMP BOARD	E/M		A-PS-1214838-0-0	CLIP	M
	B-PL-G057-0-0	PRE-AMP BOARD (PL)	E/M	39	B-PL-TS04K-B-0	ACCESSORY KIT TS04/TS11	---
32	1-AD-7016677-0-0	CAPSTAN MOTOR ASSY	E/M				
	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-ME-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. CORE	---				
	B-MD-7418032-0-0	BLOCK AZIMUTH ASSY	M				
	2-MD-1218010-0-0	SPRING GUIDE	M				

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

digital

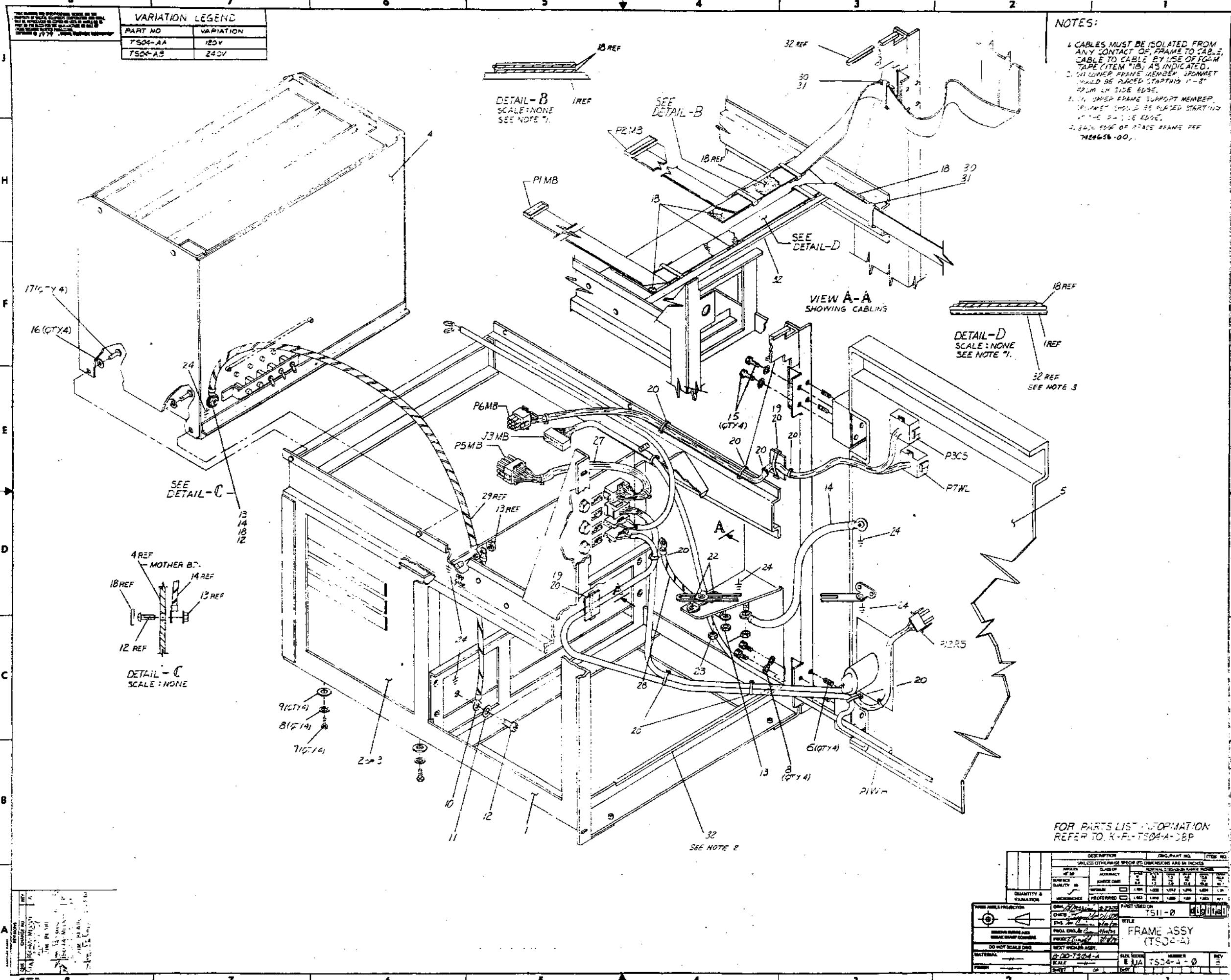
TITLE
DRAWING DIRECTORY

SHEET 6 OF 6

SIZE CODE
B DD

NUMBER
TS24-A

REV
A



VARIATION LEGEND

PART NO	VARIATION
TS04-AA	120V
TS04-AB	240V

NOTES:

1. CABLES MUST BE ISOLATED FROM ANY CONTACT OF FRAME TO CABLE, CABLE TO CABLE, BY USE OF FIBER TAPE (ITEM 18), AS INDICATED.
2. LOWER FRAME MEMBER SPACER SHOULD BE PLACED STARTING 1" FROM LH SIDE EDGE.
3. UPPER FRAME SUPPORT MEMBER SPACER SHOULD BE PLACED STARTING 1" FROM RH SIDE EDGE.
4. EDGE OF BRACE FRAME PER 74246-00.

DETAIL-B
SCALE: NONE
SEE NOTE 1.

DETAIL-D
SCALE: NONE
SEE NOTE 3.

DETAIL-C
SCALE: NONE

VIEW A-A
SHOWING CABLING

SEE NOTE 2

FOR PARTS LIST INFORMATION REFER TO X-F-TS04-A-38P

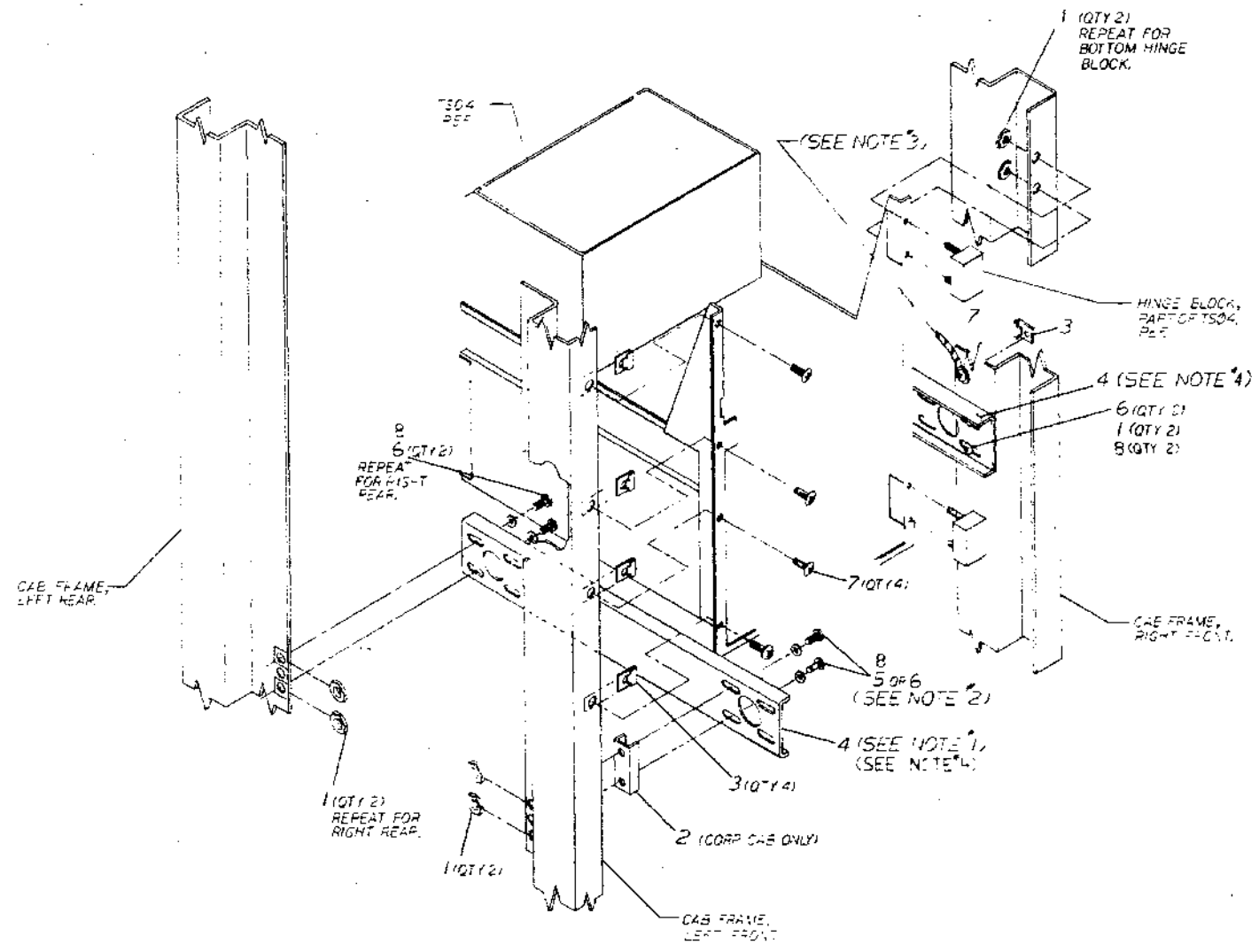
SEE INSTRUCTIONS FOR ASSEMBLY AND TESTING IN THE USER MANUAL FOR THIS EQUIPMENT.

QUANTITY & VARIATION	DESCRIPTION	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT
1	FRAME ASSY (TS04-A)																

TITLE: FRAME ASSY (TS04-A)
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: [Date]
 SCALE: 1:1
 SHEET: 1 OF 1

982

- NOTES:
1. 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.
 2. 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.50L) ON ALL OTHER CABS.
 3. SECURE GROUND STRAP PART OF TS04 TO CAB FRAME.
 4. WIDER EDGE DENOTES TOP OF "U" CHANNEL FRAME SUPPORT



FOR PARTS LIST REFER TO K-PL-TS04K-A-002

DESCRIPTION	QUANTITY	UNIT
1 (QTY 2) REPEAT FOR BOTTOM HINGE BLOCK	2	
2 (CORP CAB ONLY)	1	
3 HINGE BLOCK, PART OF TS04, P.F.F.	1	
4 (SEE NOTE 4)	2	
5 (QTY 2)	2	
6 (QTY 2)	2	
7 (QTY 4)	4	
8 (5 OF 6) (SEE NOTE 2)	5	
3 (QTY 4)	4	
1 (QTY 2) REPEAT FOR RIGHT REAR	2	
1 (QTY 2) REPEAT FOR LEFT REAR	2	
1 (QTY 2) REPEAT FOR RIGHT REAR	2	
1 (QTY 2) REPEAT FOR LEFT REAR	2	
TS04 P.F.F.	1	

FOR PARTS LIST REFER TO K-PL-TS04K-A-002

DIGITAL EQUIPMENT CORPORATION PARTS LIST				QUANTITY / VARIATION										NOTES:			
MADE BY G. Marini DATE 2/27/79		CHECKED R. Tremblay DATE 7/18/79															
ENG M. Cucini DATE 7/19/79		PROD T. Wright DATE 7/18/79															
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	TS11K-AA (120V)													REF DESIGNATION
1	D-AD-7016287-0-0	7016287-0	A.C. INPUT ASSY (120V)	1													
2	D-1A-1700083-0-0	1700083-00	POWER CORD ASSY (120V)	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.
MLO01
MLO02

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SHEET 1 OF 1								INSERTION PARTS LIST DATA BASE REV									

DIGITAL EQUIPMENT CORPORATION PARTS LIST				QUANTITY / VARIATION										NOTES:				
MADE BY G. Marini DATE 2/27/79		CHECKED Robert Tremblay DATE 7/18/79																
ENG M. Cucina DATE 7/19/79		PROD T. Wright DATE 7/18/79																
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

SIZE CODE
B PL

NUMBER
TS11K-AB-0

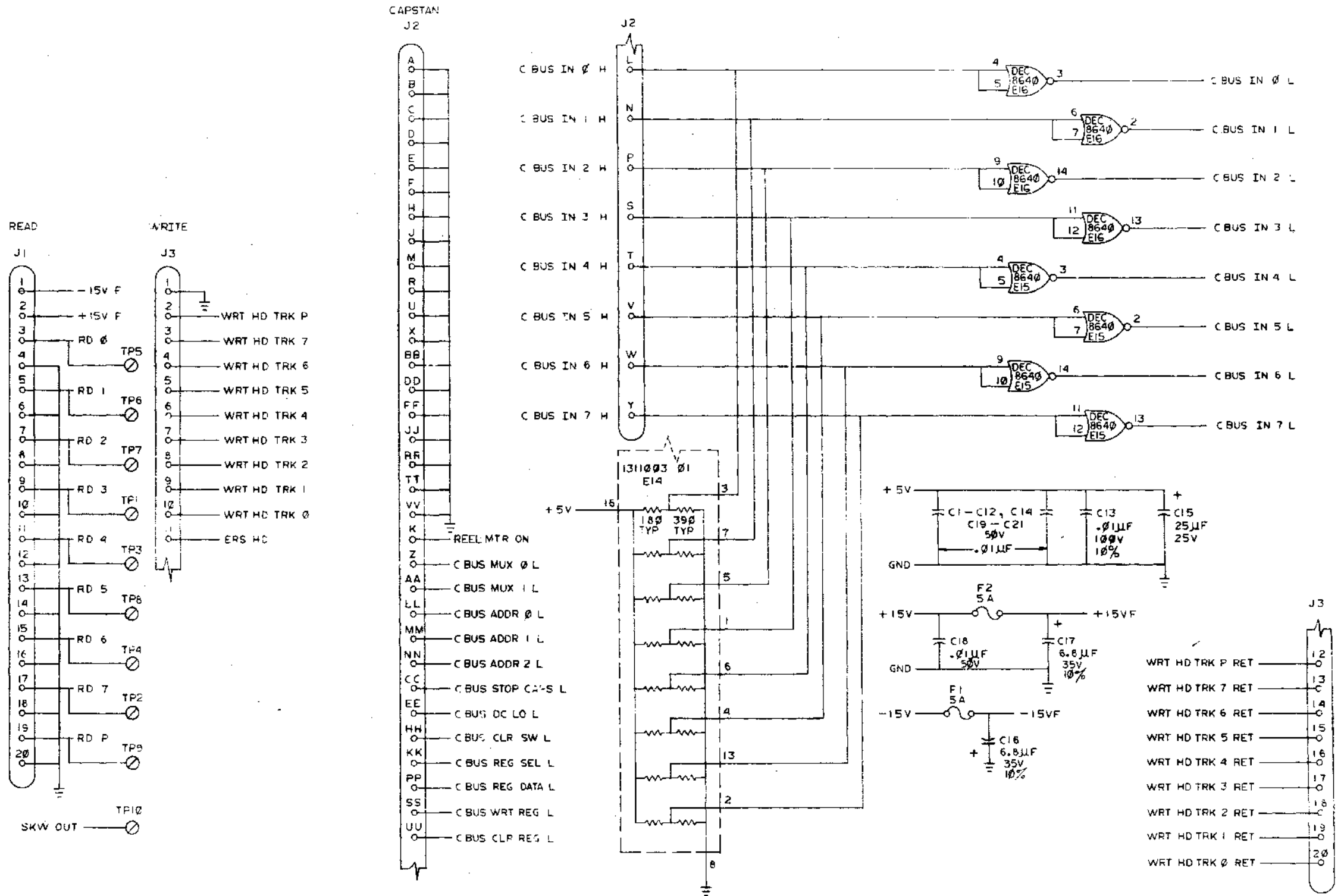
REV.
B

SHEET 1 OF 1

INSERTION PARTS LIST DATA BASE REV

M12

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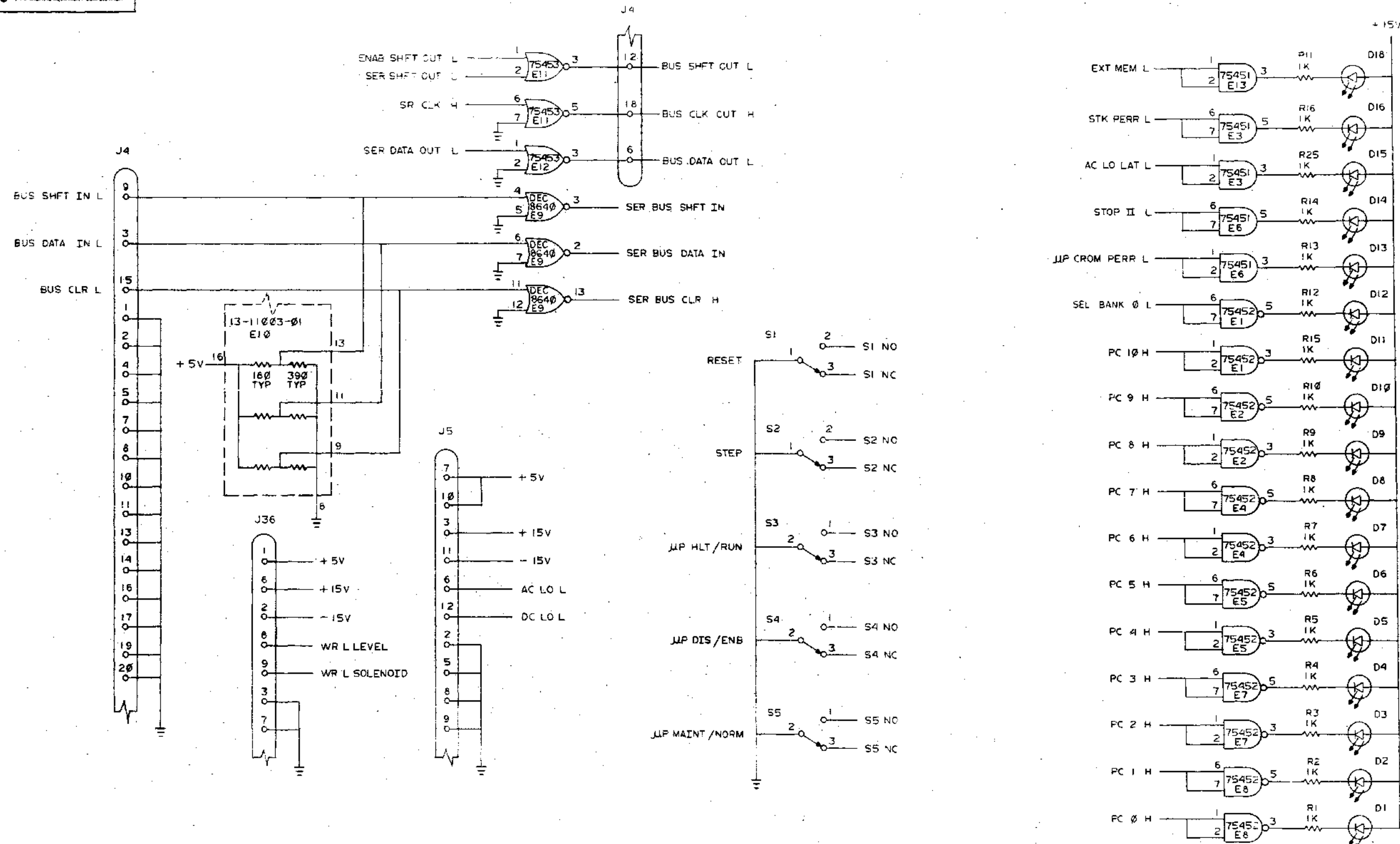


REV.	DATE	BY	CHK'D
1	10/12/78	W. J.
2	11/13/78
3	1/15/79
4	1/15/79
5	1/15/79
6	1/15/79
7	1/15/79
8	1/15/79

DRN. <i>[Signature]</i>	FIRST USED ON	digital
CHK'D <i>[Signature]</i>	TS11	
ENG. <i>[Signature]</i>	TITLE	MOTHER BOARD
PROJ. ENG. <i>[Signature]</i>	1/15/79	TSC-4
PROD. <i>[Signature]</i>	1/15/79	
NEXT HIGHER ASSY.		
B-DD-5412989-0	SIZE CODE	NUMBER
SCALE NONE	D	CS 5412989-0-1
SHEET 1 OF 8	DIST.	REV. F

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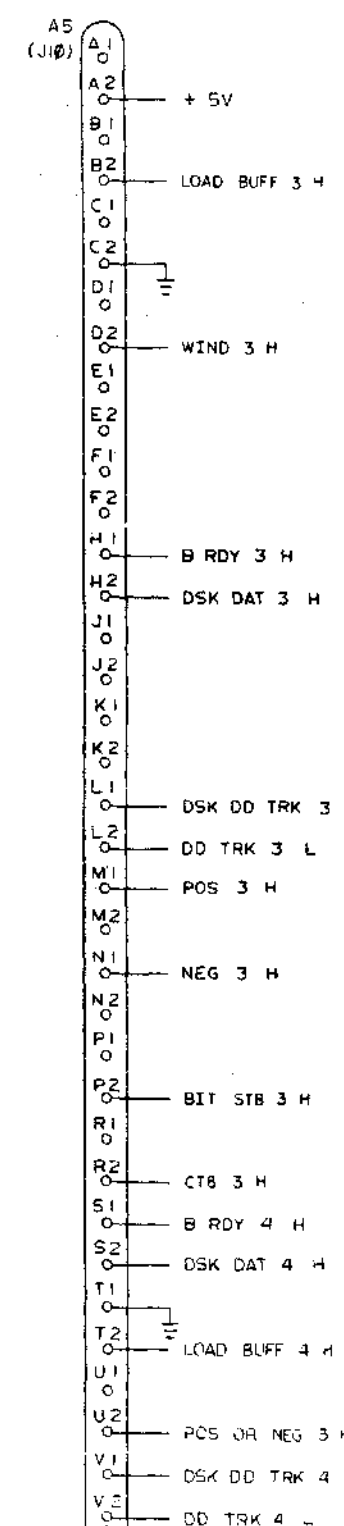
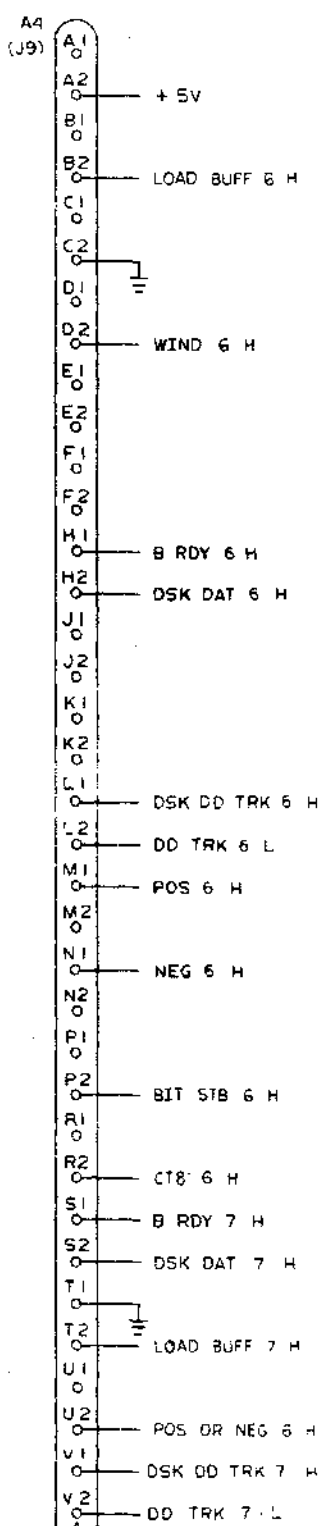
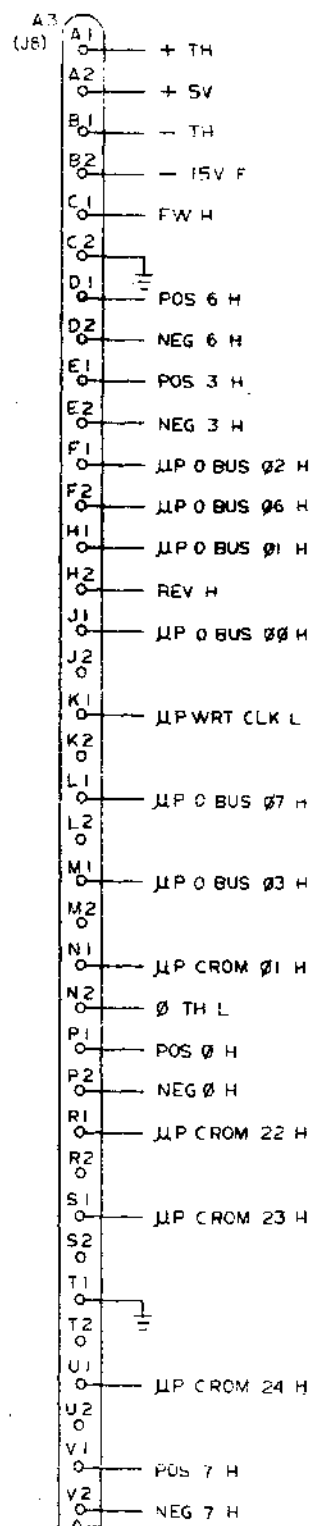
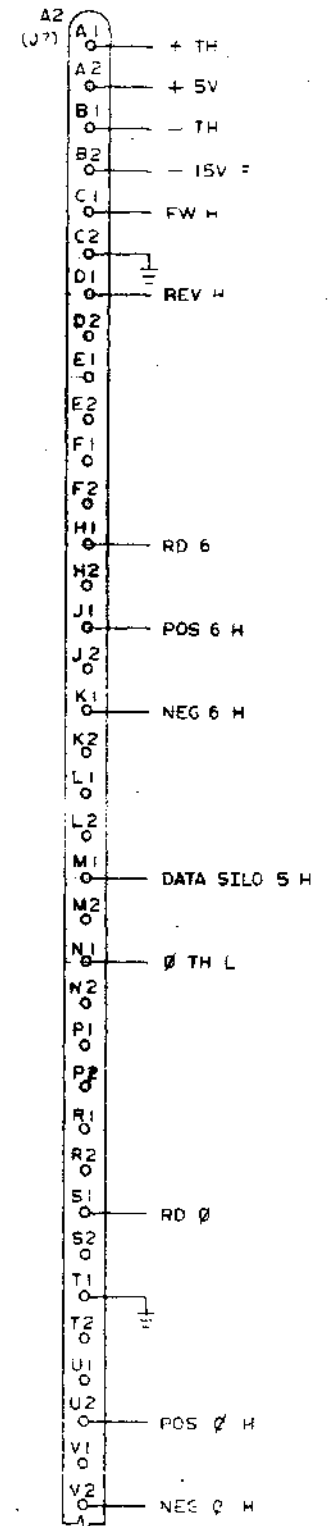
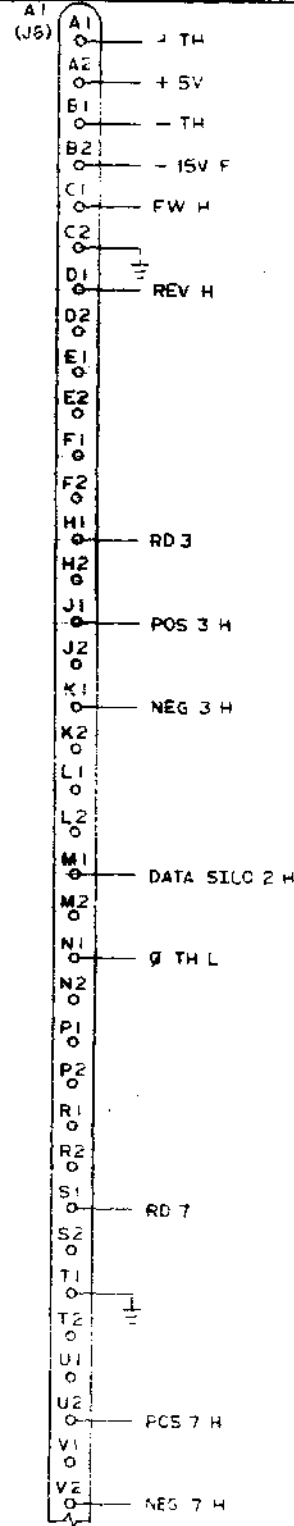
DCS 5412989-0-1 2



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE MOTHER BOARD
TS04
SCALE NONE SHEET 2 OF 8 DIST. NUMBER DCS 5412989-0-1 REV. F

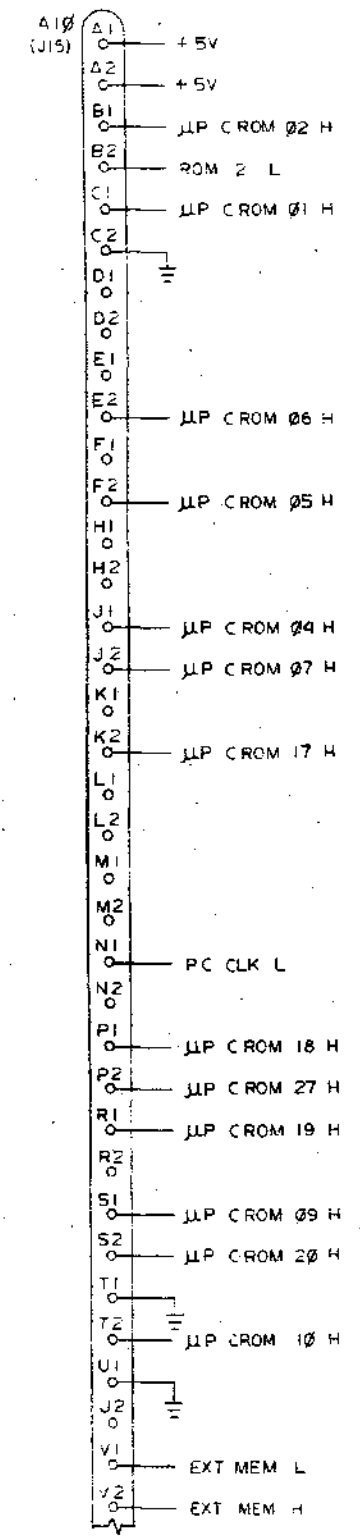
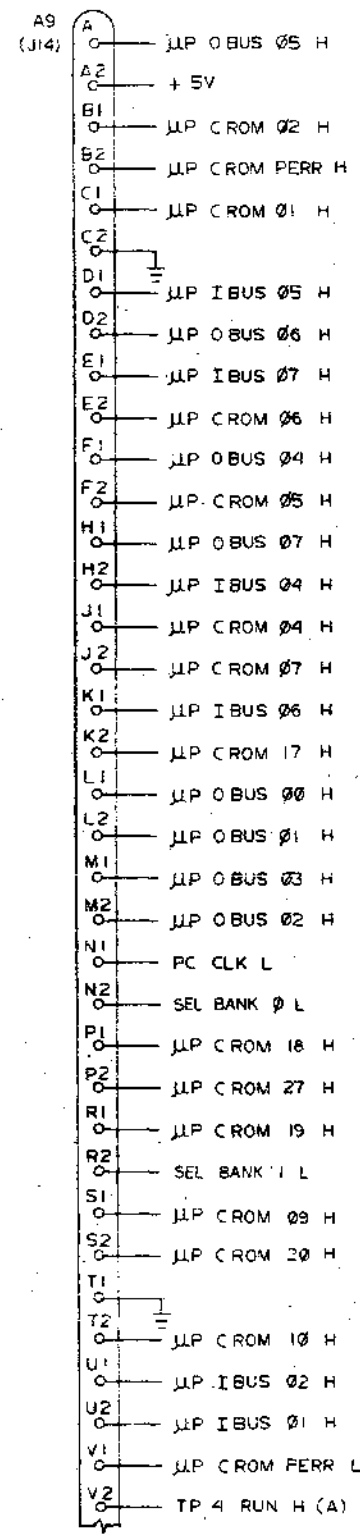
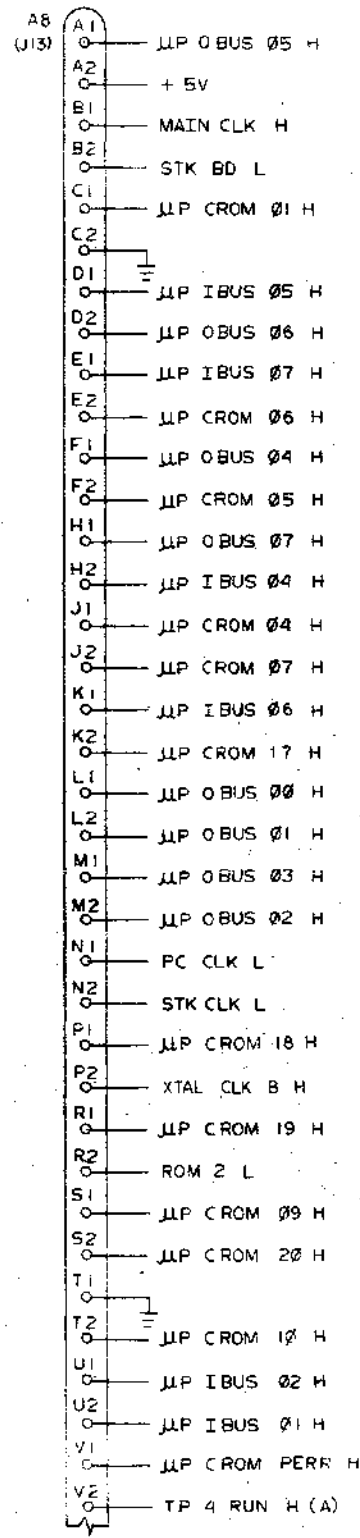
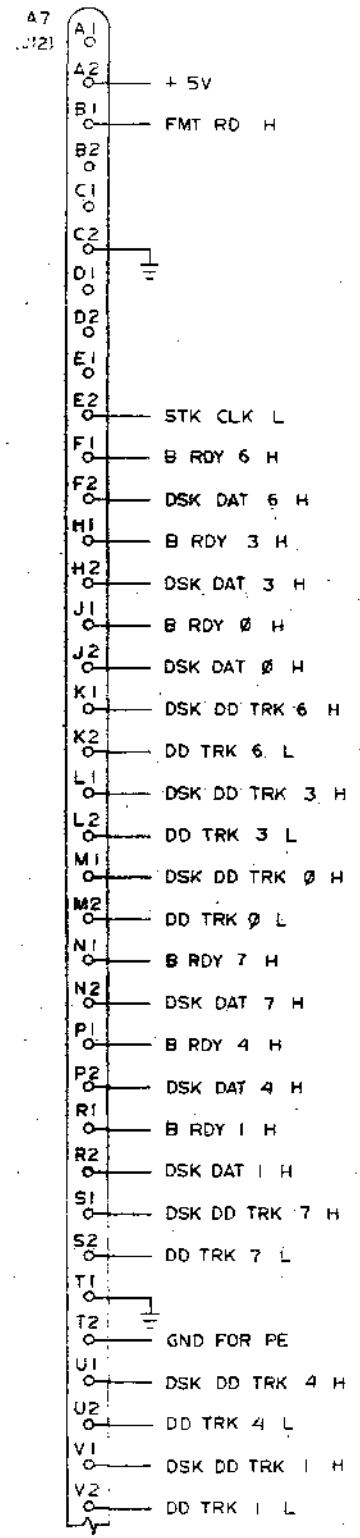
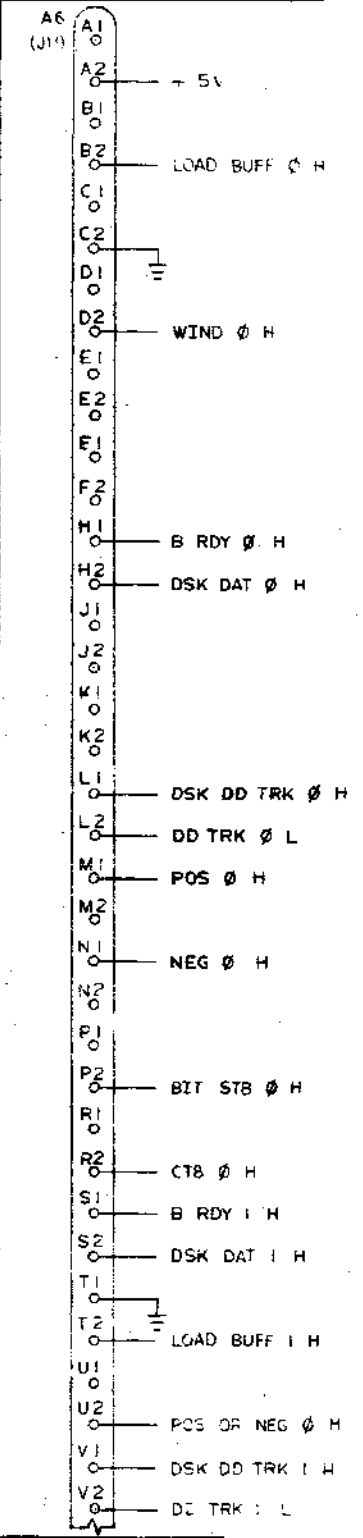
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REVISIONS		
CHK	CHANGE NO	REV.

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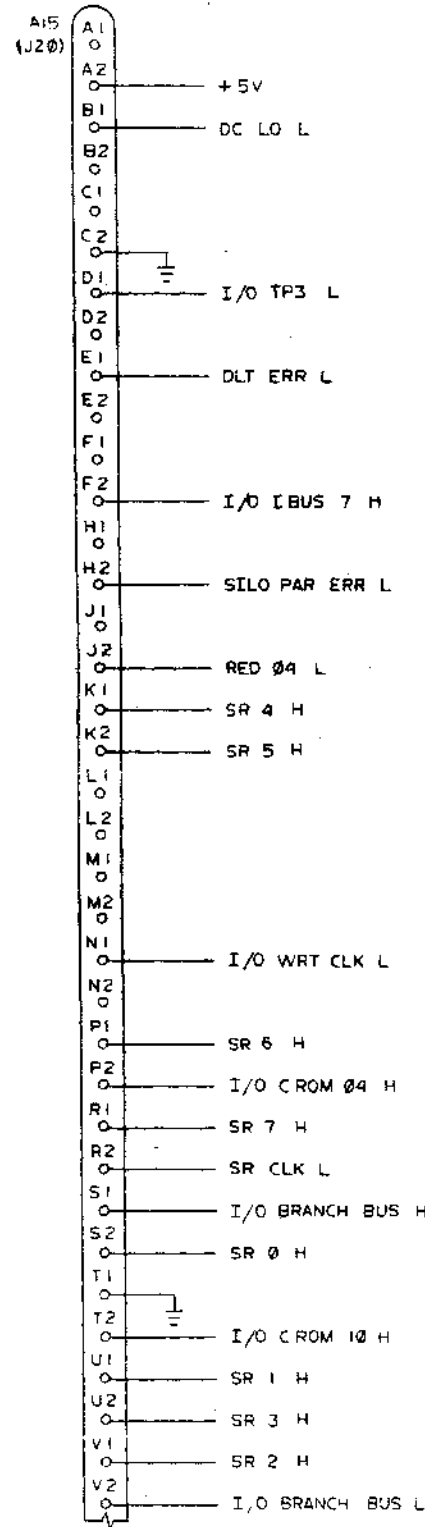
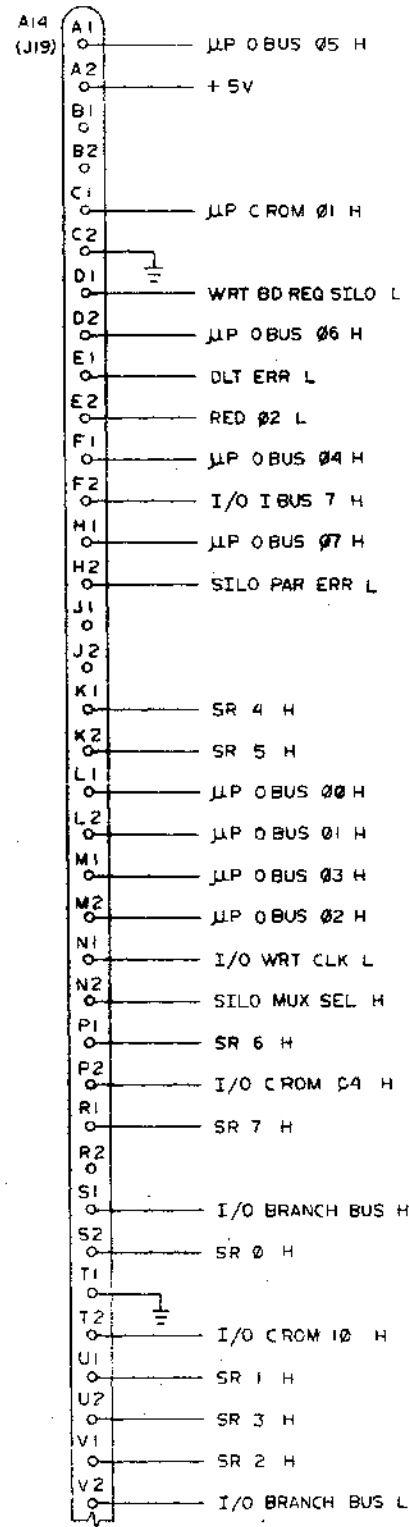
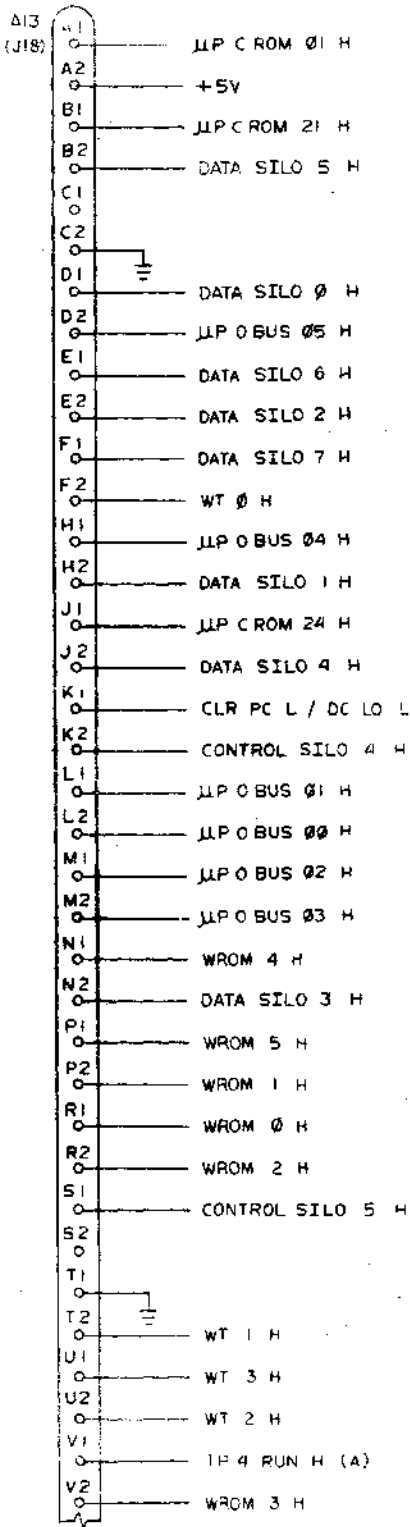
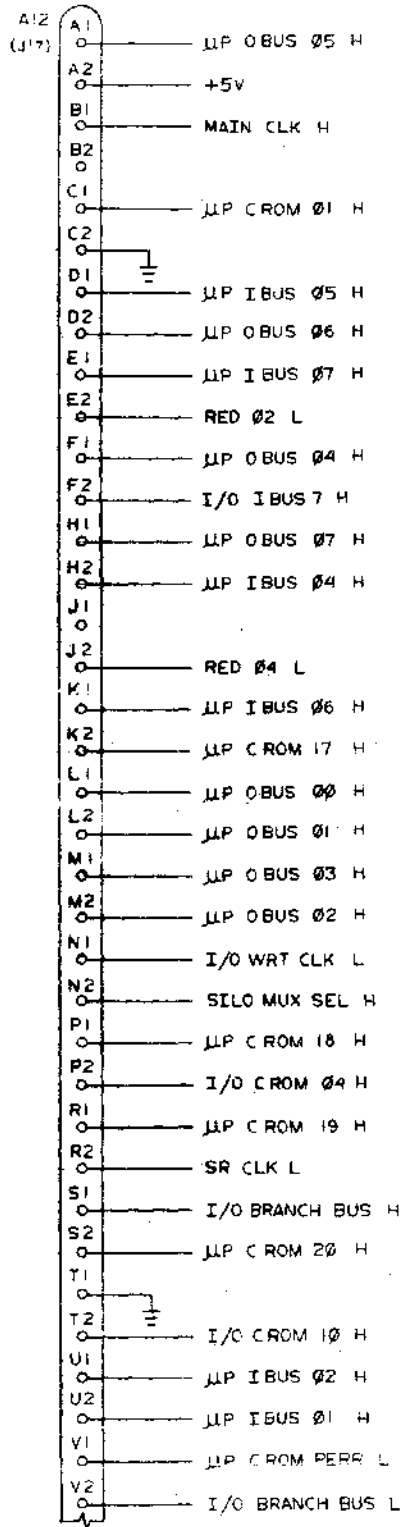
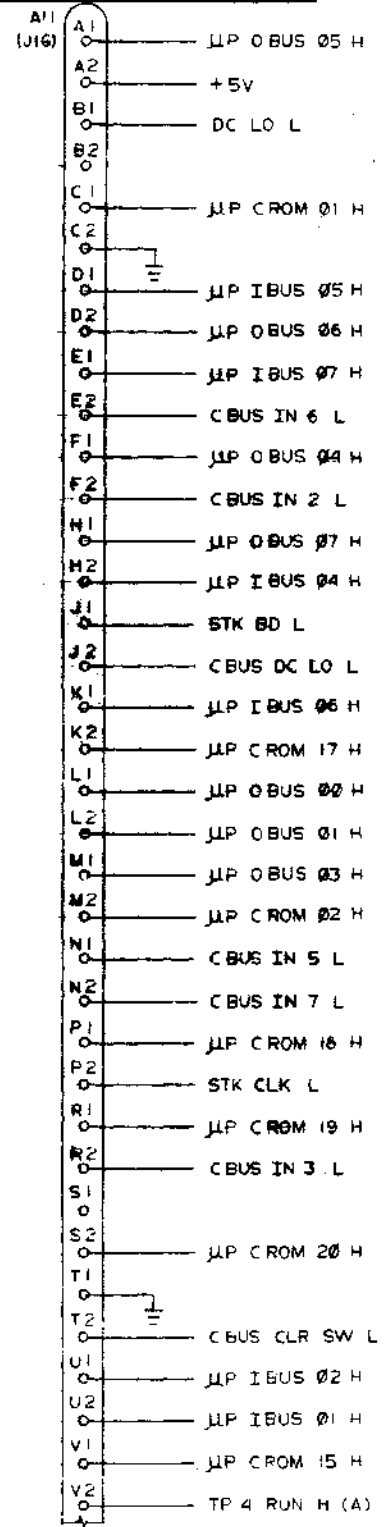
CS 5412989-0-1 2



REVISIONS		
CHK	CHANGE NO.	REV.

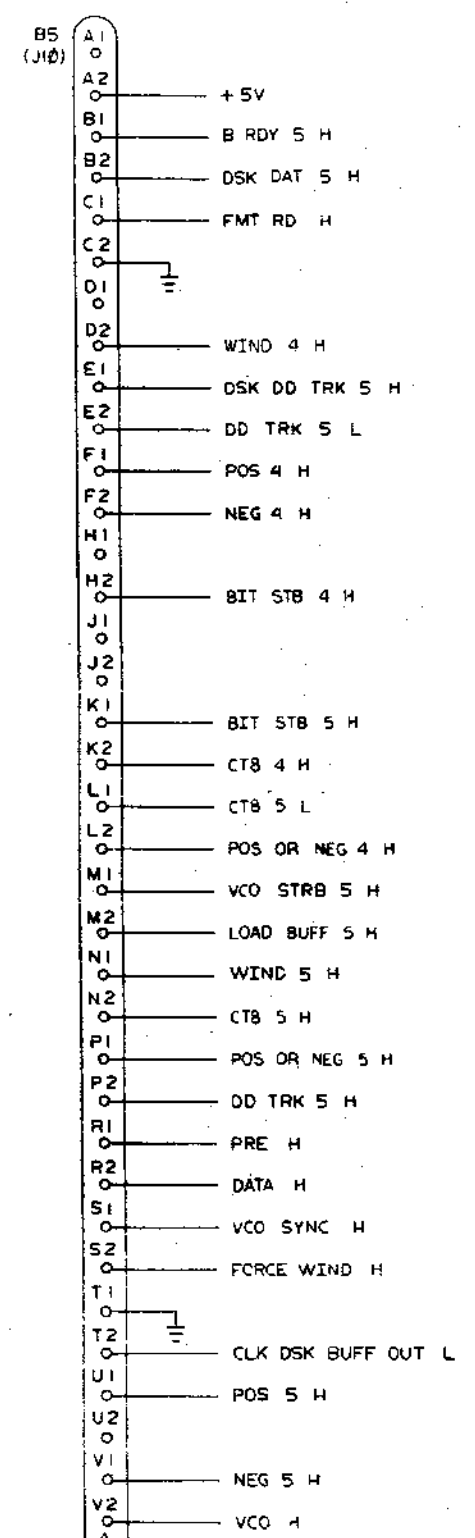
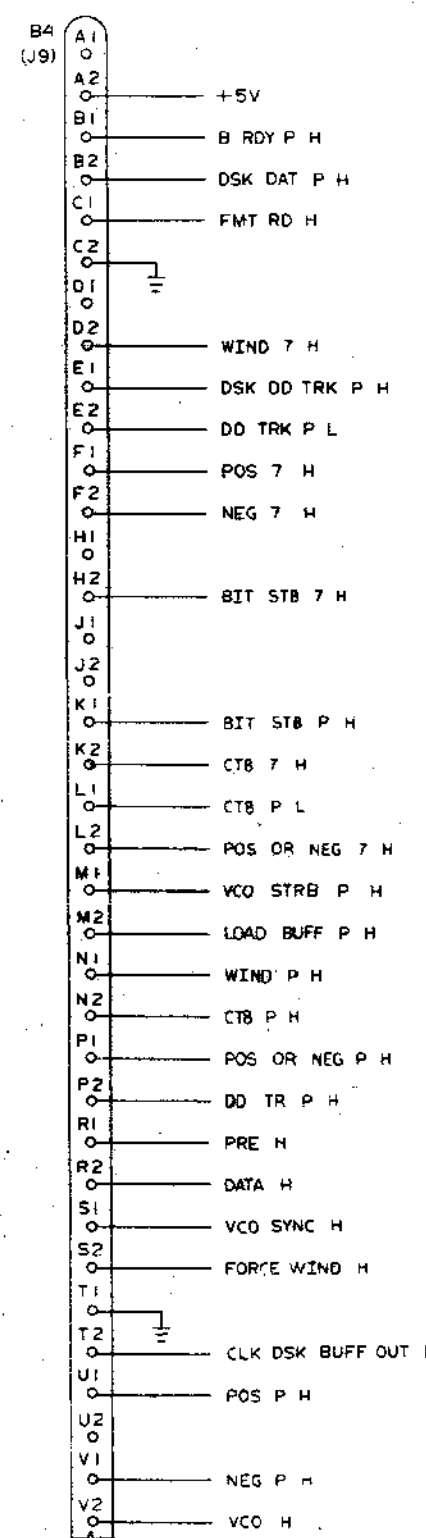
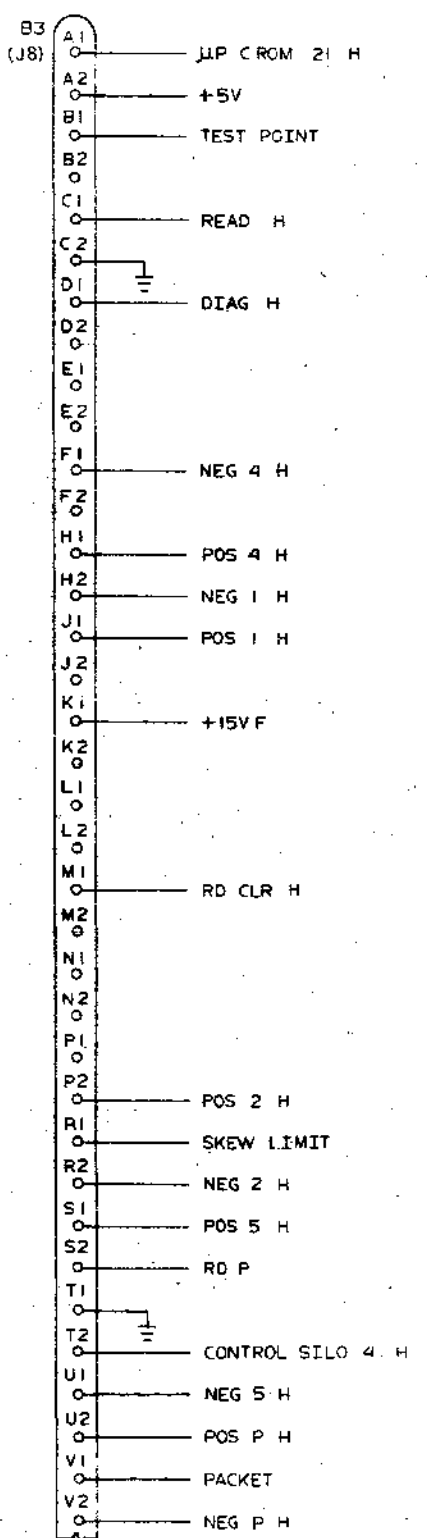
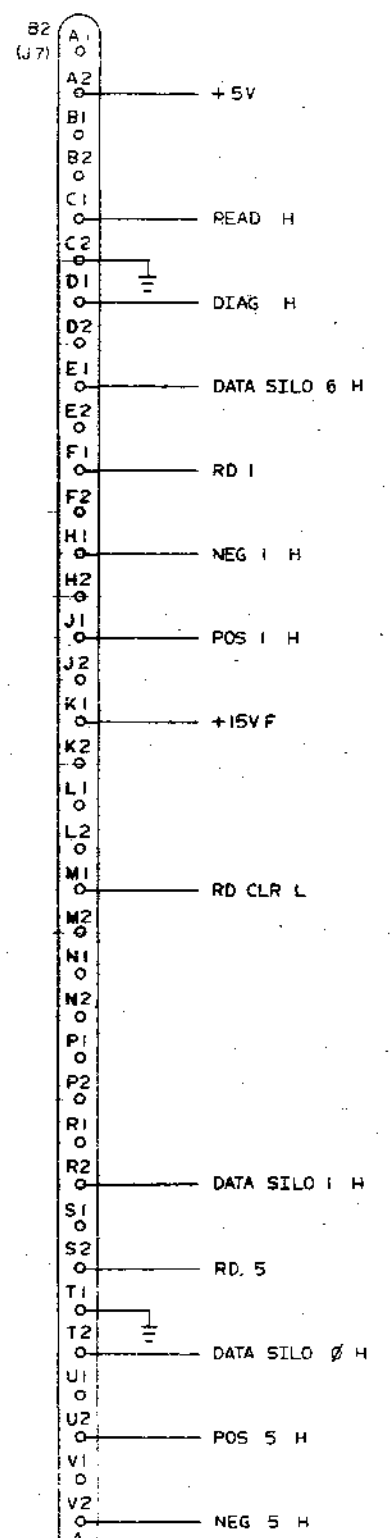
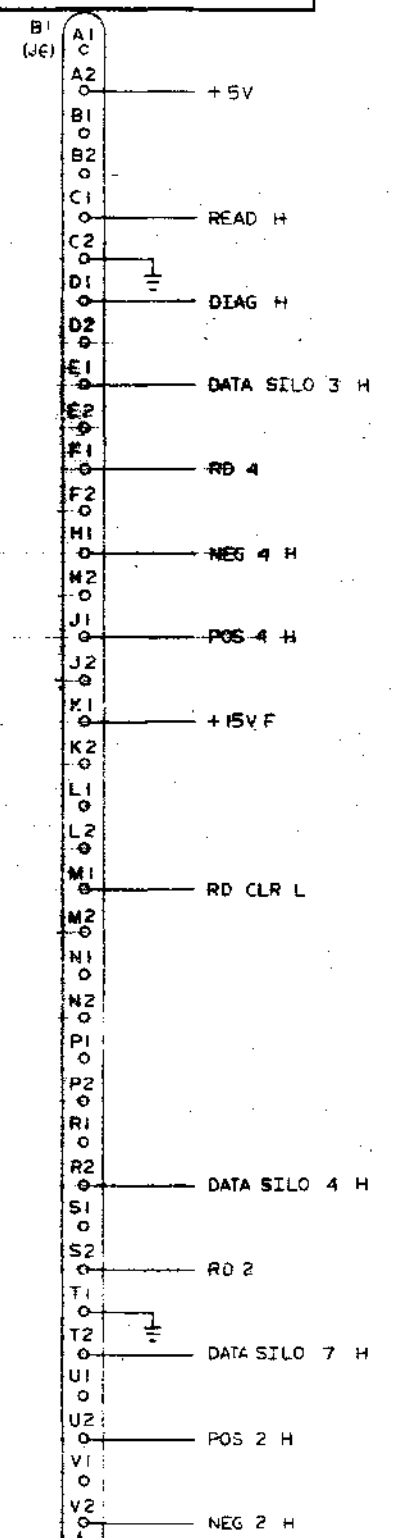
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SCALE	NONE	SHEET	4 OF 8	DIST.

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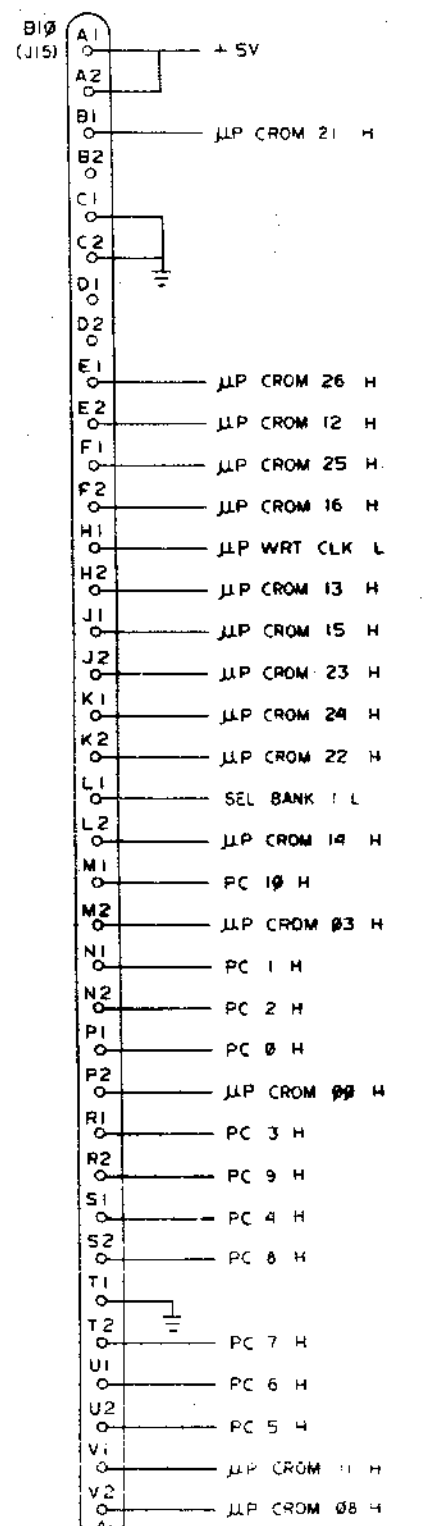
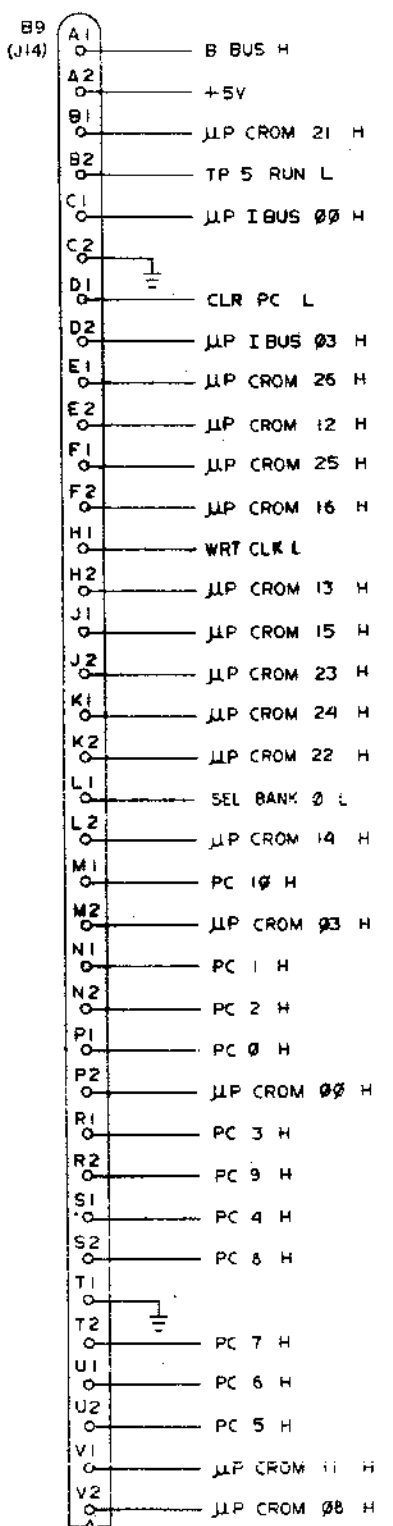
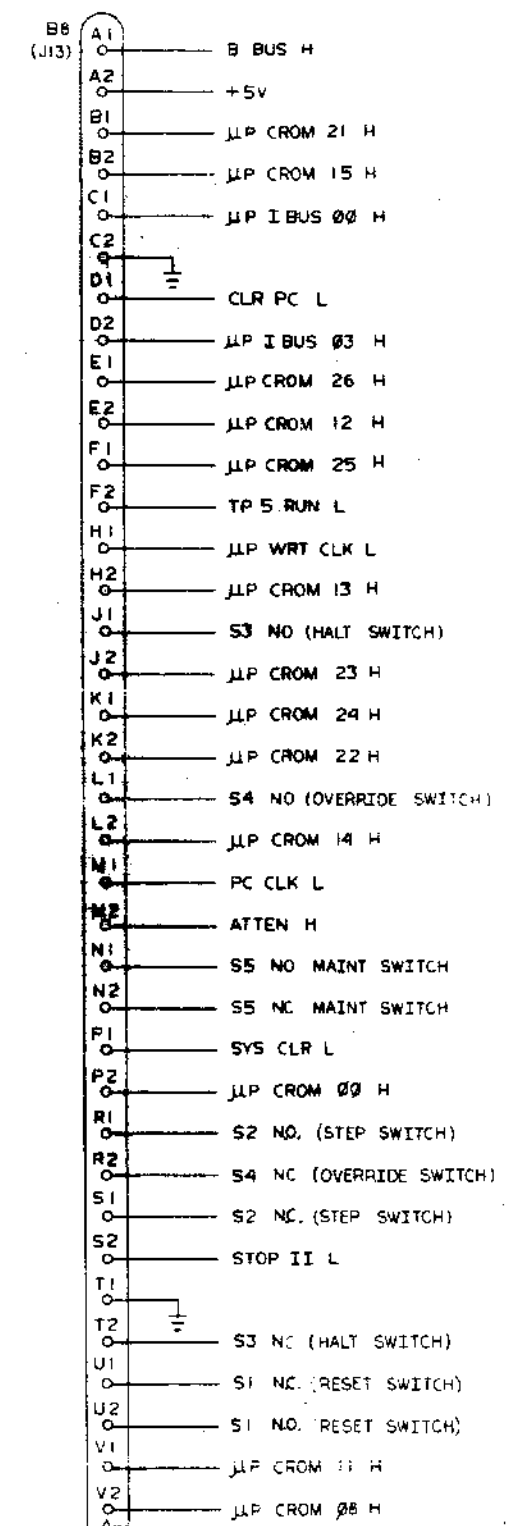
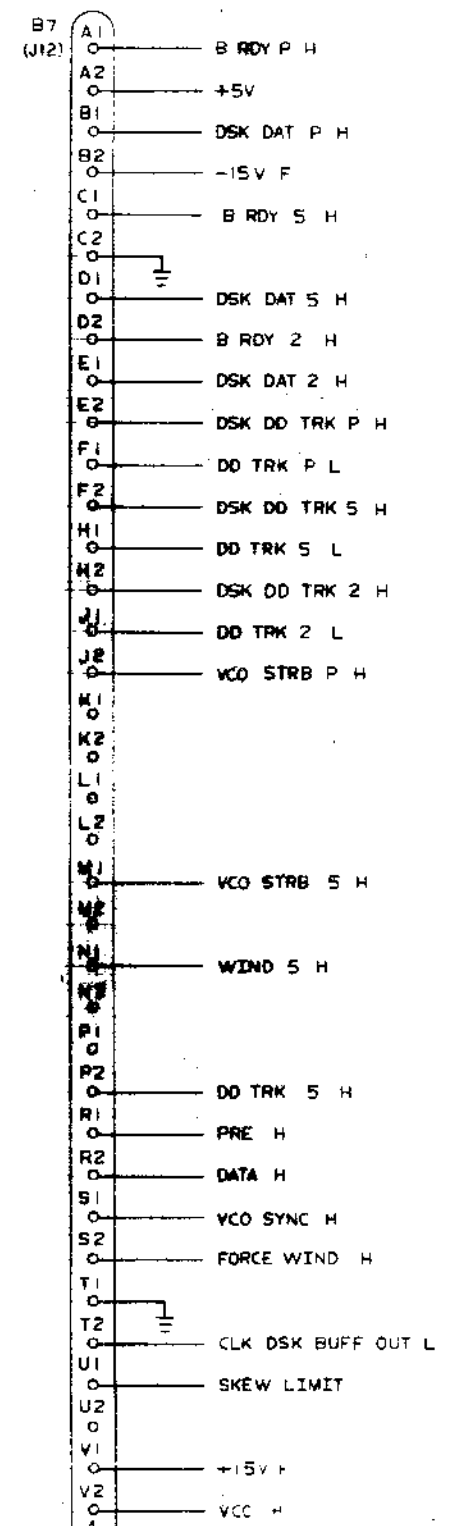
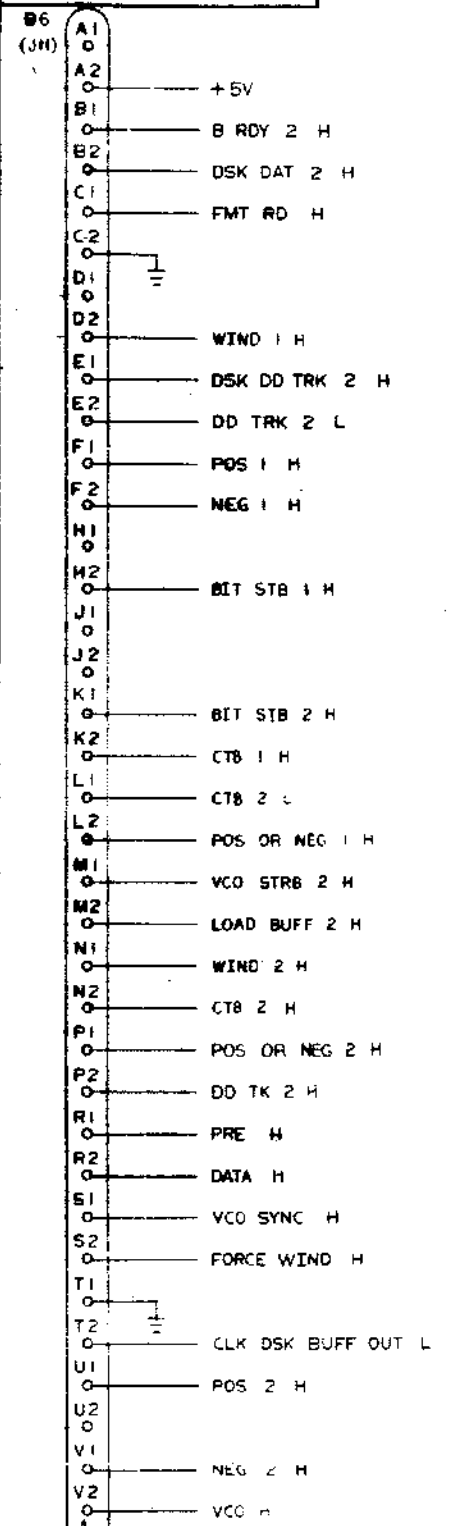
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CHK	CHANGE NO.	REV.

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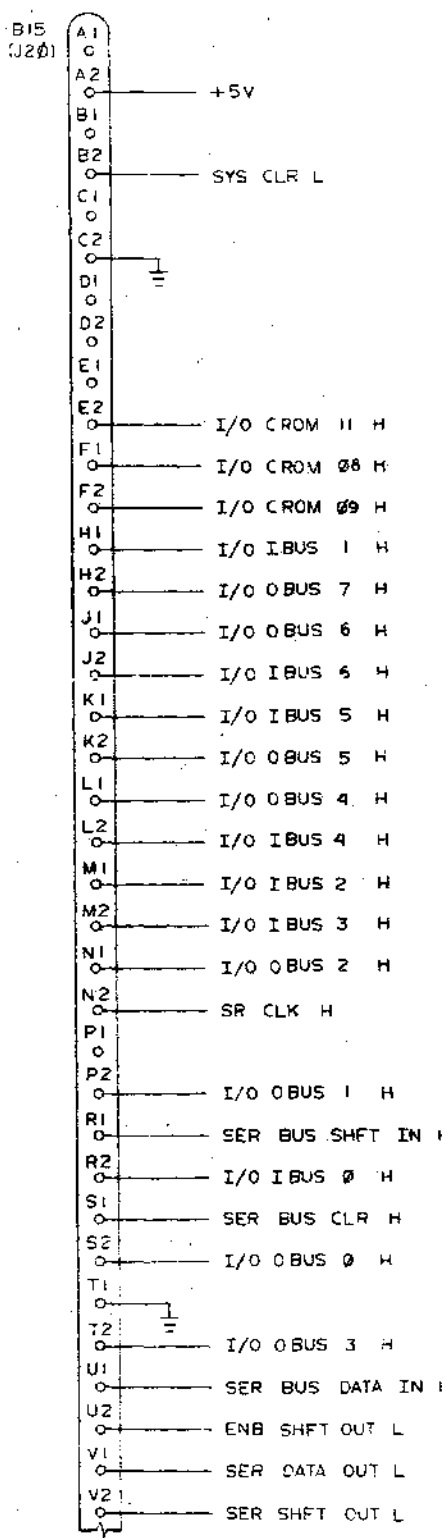
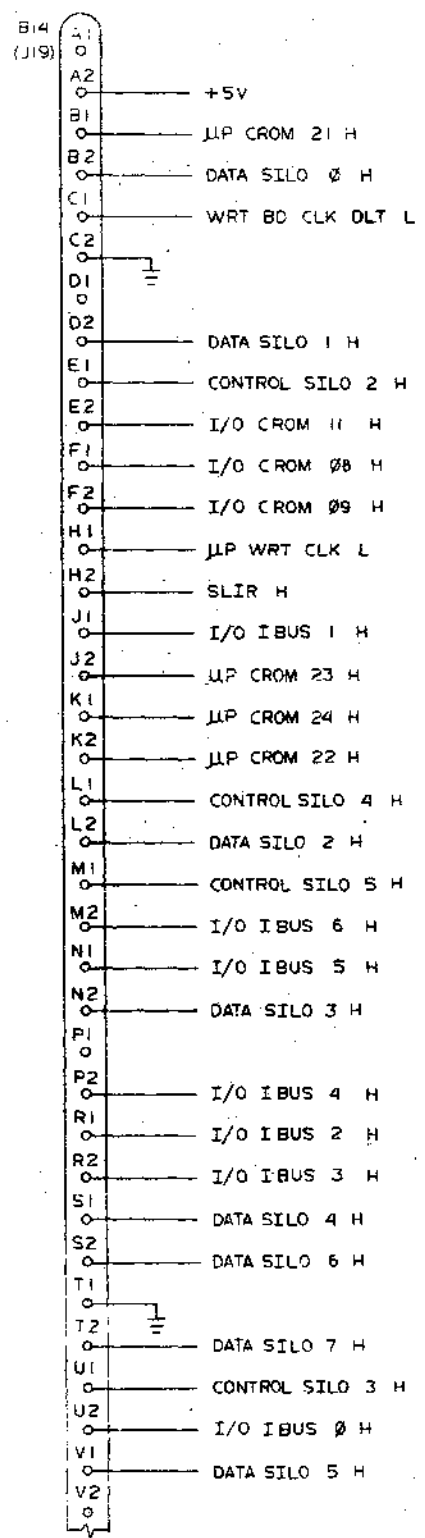
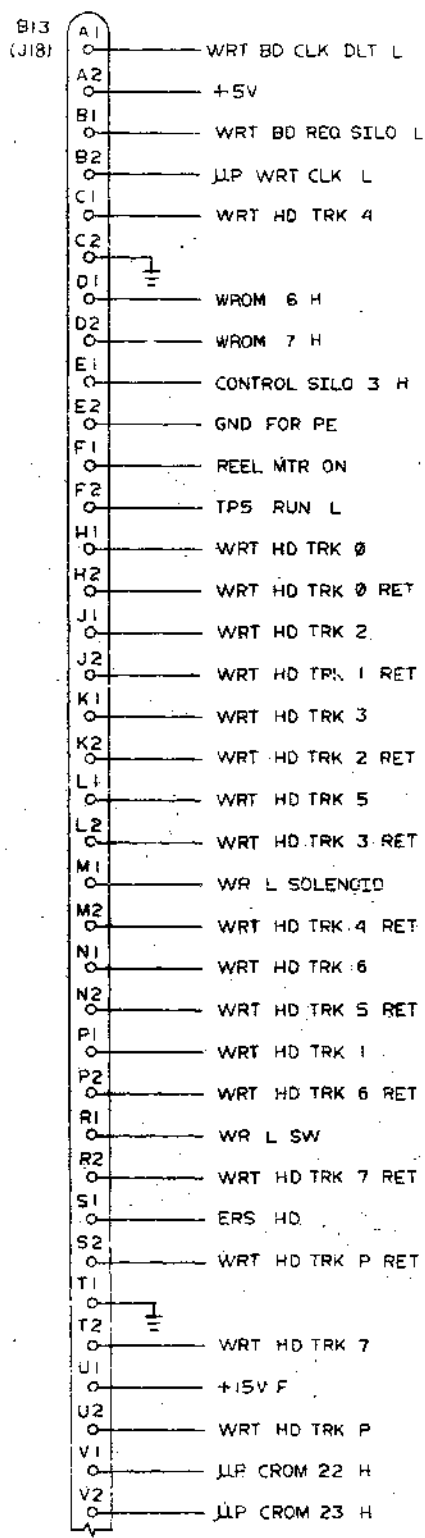
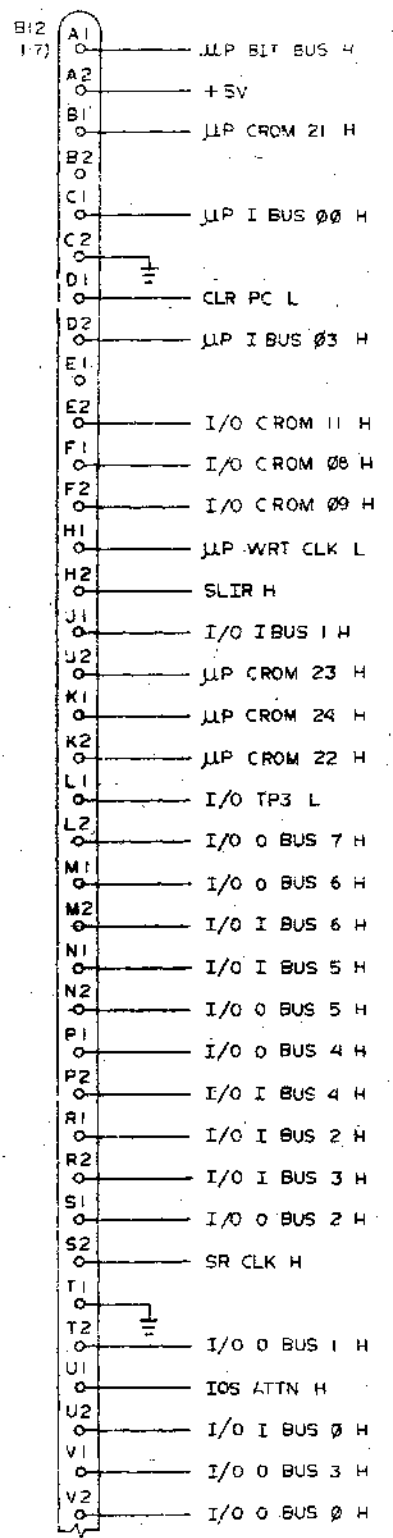
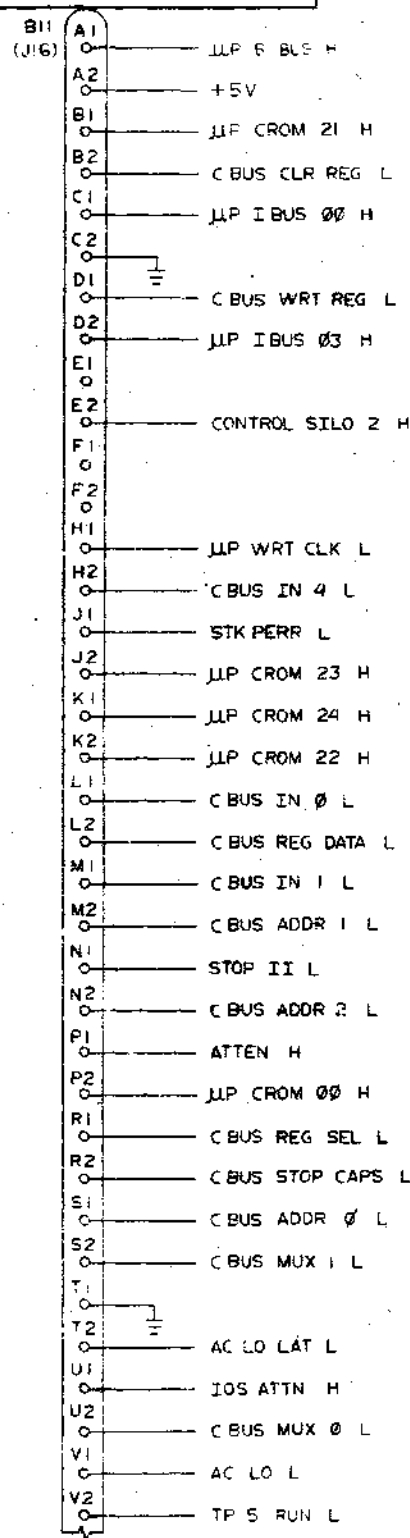
CHK	CHANGE NO.	REV.

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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		5012988-00	TS04 LOGIC BACKPLANE	1	
2		1000075-00	25 MFD 25V 0Z 300 AL EL	1	C15
3		1001610-00	.01 MFD 50V +80-20% ZSUCER	17	C1-C12,C14,C18-C20,C21
4		1005306-00	6.8MFD 35V 10% S.TANT	2	C16,C17
5		1005784-00	.01 MFD 100V 10% 663VW MYLR	1	C13
6		1110324-00	LED 1MCD910MA FIV=3	17	D1-D16,D18
7		1209590-00	SW,TJS 1P 5A ON/NONE/ON	3	S3-S5
8		1209941-02	HEADER 100 40POS RT ANGLE	1	J2
9	USED ON J1,J2,J4.	1209941-03	HEADER RT ANGLE LEFT L	3	
10	USED ON J1,J2,J4.	1209941-04	HEADER RT ANGLE,RIGHT	3	
11		1209941-06	HEADER.100 20POS RT ANGLE	2	J1,J4
12		1205747-00	FUSE- SUB-MINI, 5.000A, 125V, A	2	F1,F2
13		1211079-00	SW,PB 1P 1A	2	S1,S2
14		1211425-00	CONN,CARD 72PIN SLOTTED DOUBLE	15	J6-J20
15		1212297-02	MATE-N-LOK 9PIN UNIV HEADER	1	J36
16		1212297-06	MATE-N-LOK 12PIN UNIV HEADER	1	J5
17		1213335-00	HEADER 20POS RT ANGLE FOR 12	1	J3
18		1300365-00	1.0 K .25 W 5.0 X CC	17	R1-R16,R25
19		1311003-01	R NETWORK 14-180 14-390 16PIN	2	E10,E14
20		1910406-00	75451 DRIVER,PERIPH,DUAL,	3	E3,E6,E13
21		1910645-00	75452 DRIVER,PERIPH,DUAL,	6	E1,E2,E4,E5,E7,E8
22		1911036-00	75453 DRIVER,PERIPH,DUAL,	2	E11,E12
23		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	3	E9,E15,E16
24		7418023-00	BRACKET SWITCH	1	
25		9006735-00	EYELET, FUNNEL FLANGE, .059 OD X	14	
26	USED ON 31-35.	9008437-00	*** THIS ITEM IS NOT USED ***	-	
27		9006021-01	SCREW,PAN,PHIL 6-32X 5/16 SS	2	
28		9006709-00	*** THIS ITEM IS NOT USED ***	-	
29		9006560-00	NUT,KEP 6-32 X5/16AF	2	
30	SEE NOTE.	1210695-00	WASHER MOUNT LIGHT EMIT DIODE	17	

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

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AUTOMATED BY PRTLS1.2E(2)

PARTS LIST

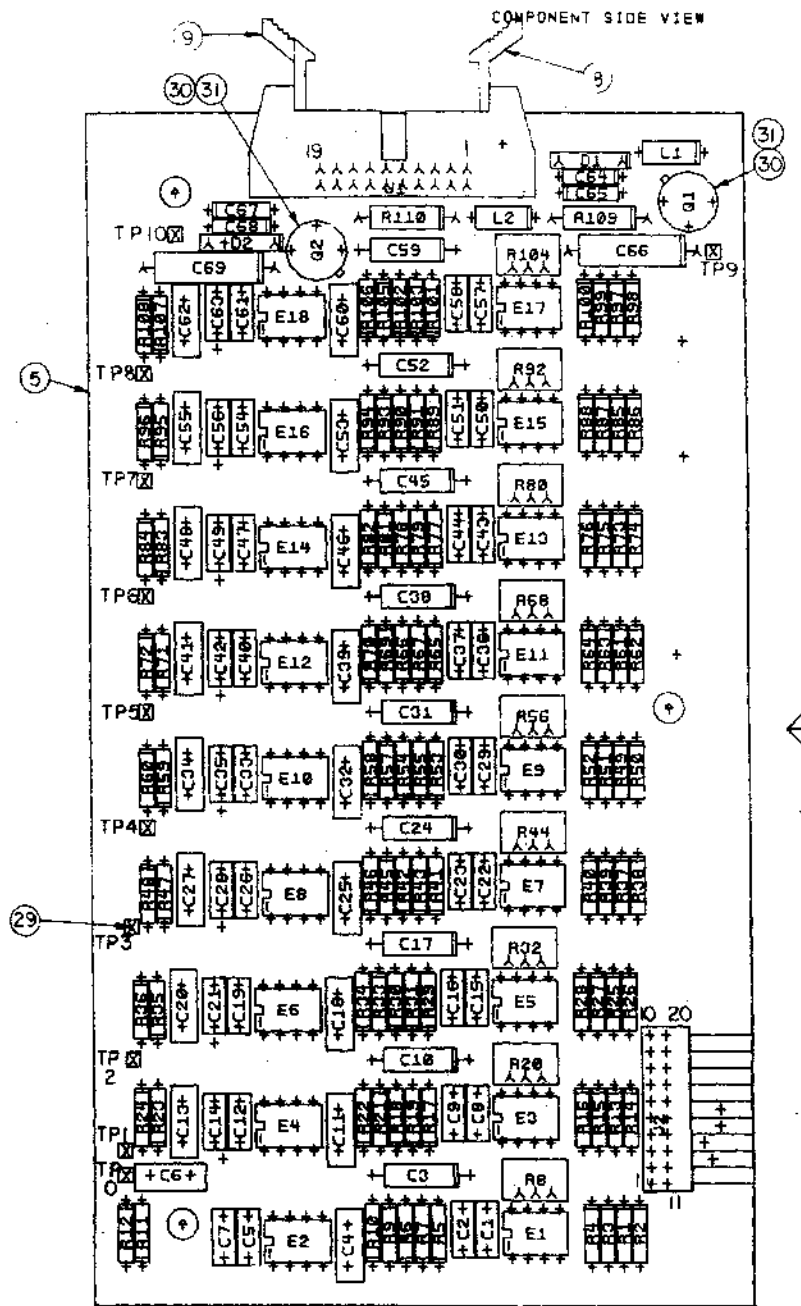
SHEET 02 OF 02

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
31	31		9107370-00	WIRE,STRND,14AWG,TPVC UL1534	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 TSG4				5412989-0-DBP	F

FOR THE USE OF THE OPERATOR, REFER TO THE
 INSTRUCTIONS FOR THE USE OF THE
 INSTRUMENT. THE INSTRUMENT IS NOT TO BE
 USED FOR ANY OTHER PURPOSE.
 DATE: 1978



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

CHANGE NO	REV	DATE	BY	CHK
1	1	7-18-78	P. NICHOLLS	
2	2	7-21-78	P. NICHOLLS	
3	3	7-28-78	P. NICHOLLS	
4	4	7-28-78	P. NICHOLLS	
5	5	7-28-78	P. NICHOLLS	

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

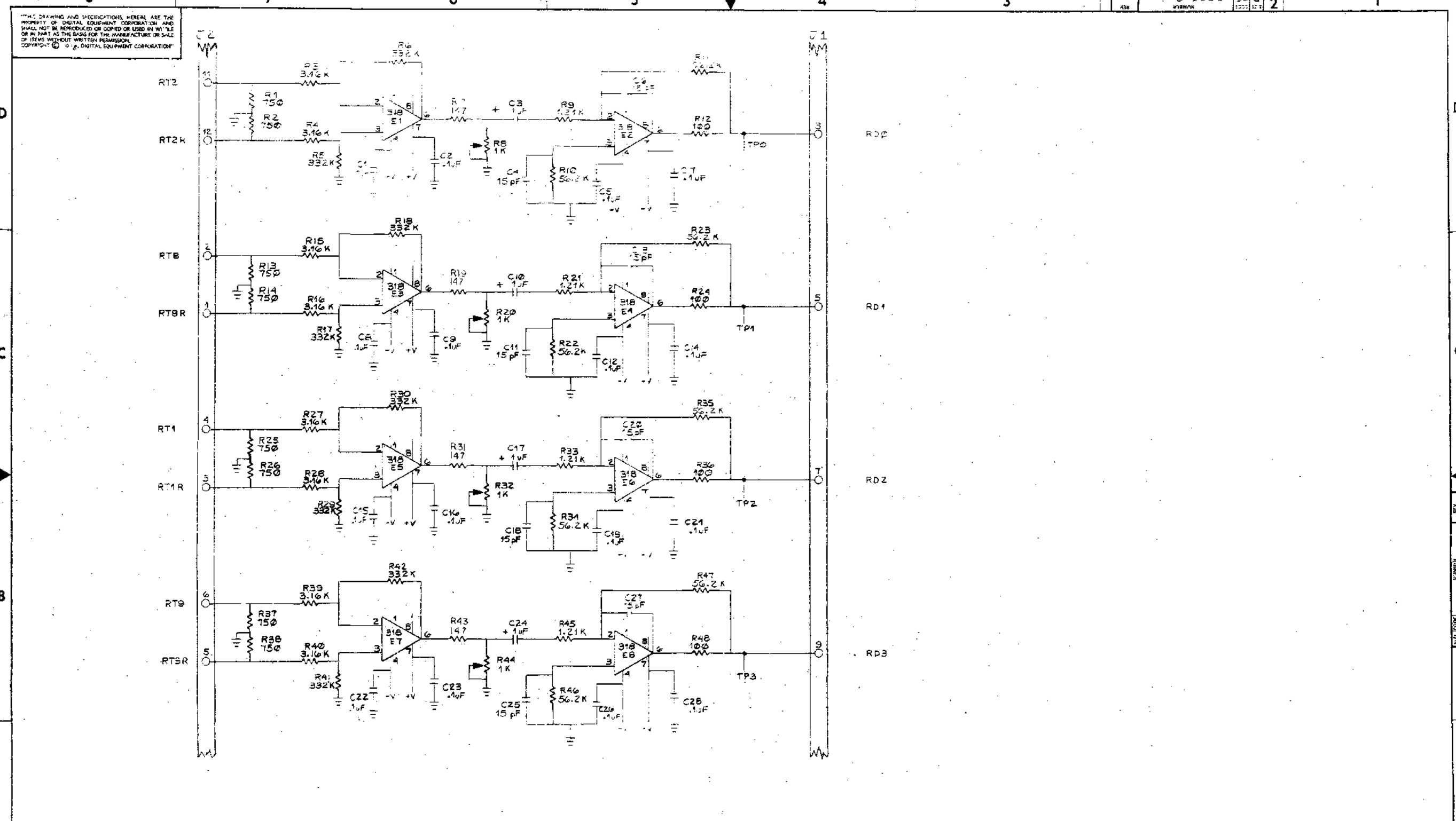
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CHK D. [Signature]	7-21-78	
ENG. P. [Signature]	7-28-78	
PROJ. ENG. P. [Signature]	7-28-78	TS04 PRE-AMP
PRDD. [Signature]		
SCALE 2:1		
SHT. 1 OF 3		
NEXT NUMBER ASSTY-B-00-G057-0-0		

0-0-1000
 D UA G057-0-0

B

A

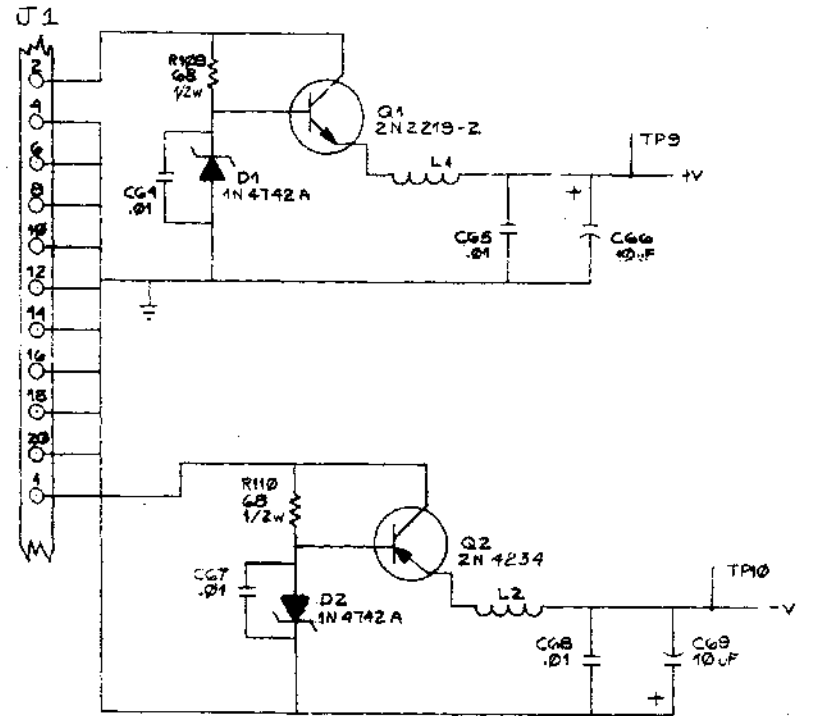
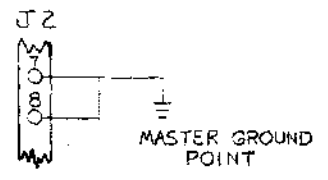
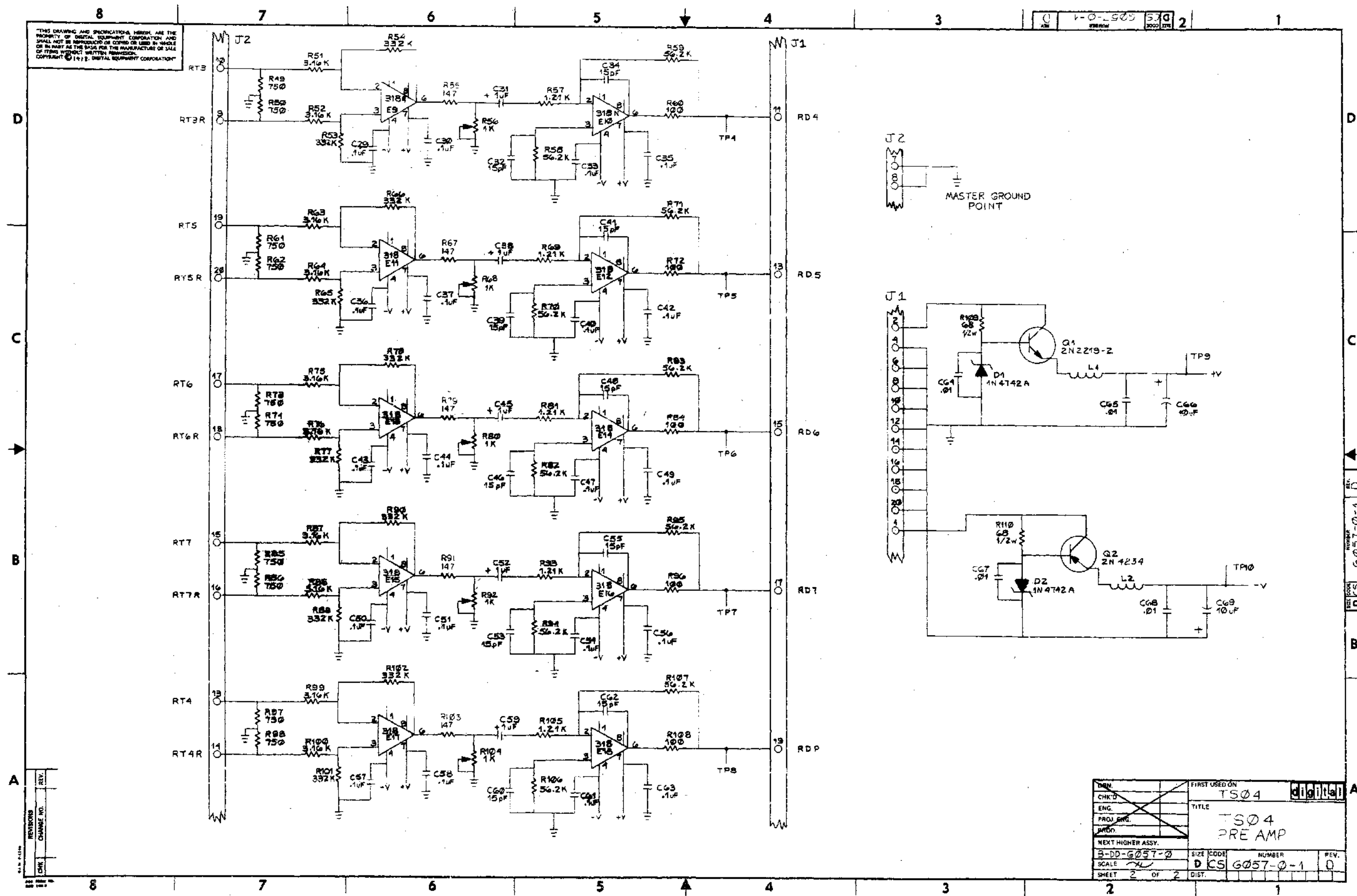
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REV.	CHG.	BY	DATE
1			
2			
3			
4			
5			
6			
7			
8			

DRN. S. E. 10-29-68	PST. USED ON	digital
CHK'D	-504	
ENG.		
PROJ. ENG.		
PROD. ENG.		
NEXT HIGHER ASSY.		
3-DD-6057-0	SIZE CODE	NUMBER
SCALE	D CS	6057-0-1
SHEET 1 OF 2	DIST.	REV. 0

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REV.	CHANGE NO.	REVISIONS

DESIGNED BY		FIRST USED ON	TS04	digital
CHK'D		TITLE	TS04	PRE AMP
ENG.		PROJ. ENG.		
NEXT HIGHER ASSY.				
B-DD-6057-0	SIZE CODE	NUMBER	REV.	
SCALE	D CS	G057-0-1	0	
SHEET 2 OF 2	DIST.			

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
1		D-06-0057-0-1		CIRCUIT SCHEMATIC		REF	
2		D-0A-0057-0-0		UNIT ASSEMBLY		REF	
3		D-0B-0057-0-0		DRAWING DIRECTORY		REF	
4		D-MC-5011944-0-0		DRILL & ETCH DRAWING		REF	
5			5011944-00	GO57	1		
6			1002427-00	15.0 MMF 100V 5X200PPM MICA	18		C4, C6, C11, C13, C18, C20, C25, C27, C32, C34, C39, C41, C46, C48, C53, C55, C60, C62
7			1213488-02	CONN 20POS HOUSING, STRAIGH	1		J2
8			1209941-03	HEADER RT ANGLE LEFT L	1		
9			1209941-04	HEADER RT ANGLE, RIGHT	1		
10			1209941-06	HEADER.100 20POS RT ANGLE	1		J1
11			1910735-02	318 OP AMP	18		E1-E18
12			1001610-00	.01 MFD 50V +80-20% 25U CER	4		C54, C65, C67, C68
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			1001776-00	1 MFD 35V 10% S.TANT	9		C3, C10, C17, C24, C31, C36, C45, C52, C59
15			1004813-00	10 MFD 20V 10% S.TANT	2		C66, C69
16			1109502-02	1N 4742A VZ= 12.0 5% 1W	2		D1, D2
17			1302874-00	147.0 .25 W 1.0 % RN55D-F10	9		R7, R19, R31, R43, R55, R67, R79, R91, R103
18			1309405-00	68.0 .50 W 5.0 % CC	2		R109, R110
19			1302858-00	100.0 .25 W 1.0 % RN55D-F10	9		R12, R24, R36, R48, R60, R72, R84, R96, R108
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:	0G057	DRN:	J. FITZGERALD	DATE:	19-SEP-78	D I G I T A L			
ENG:	ECG NUMBER	REV	SECTION A OF A	CHK'D:	P. KENDRICK	DATE:	19-SEP-78	TITLE			
CL	INIT	C	SECTION VARIATION INDEX				PARTS LIST				
J.R.	0057-ML002	D	(A) 00				TS04 PRE-AMP				
			(B)	DES. ENG:	J. ROLLINS	DATE:	19-SEP-78	DOCUMENT NUMBER			
			(C)								
			(D)	RESP. ENG.:	M. F.	DATE:	19-SEP-78	SIZE:	CODE:	NUMBER	REV
			(E)								
			(F)	MFG. ENG.:	G. DILLARD	DATE:	19-SEP-78	K	PL	0057-0-06P	0
			(G)								
			(H)	ASSEMBLY NUMBER:	D-UA-0057-0-0	TOP DOCUMENT NUMBER:	TS04	FILE NAME:	Z02000.PLS	EDIT #:	B
			(I)								
			(J)								

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AUTOMATED BY PARTLIST.BE.3

PARTS LIST

SHEET 02 OF 02

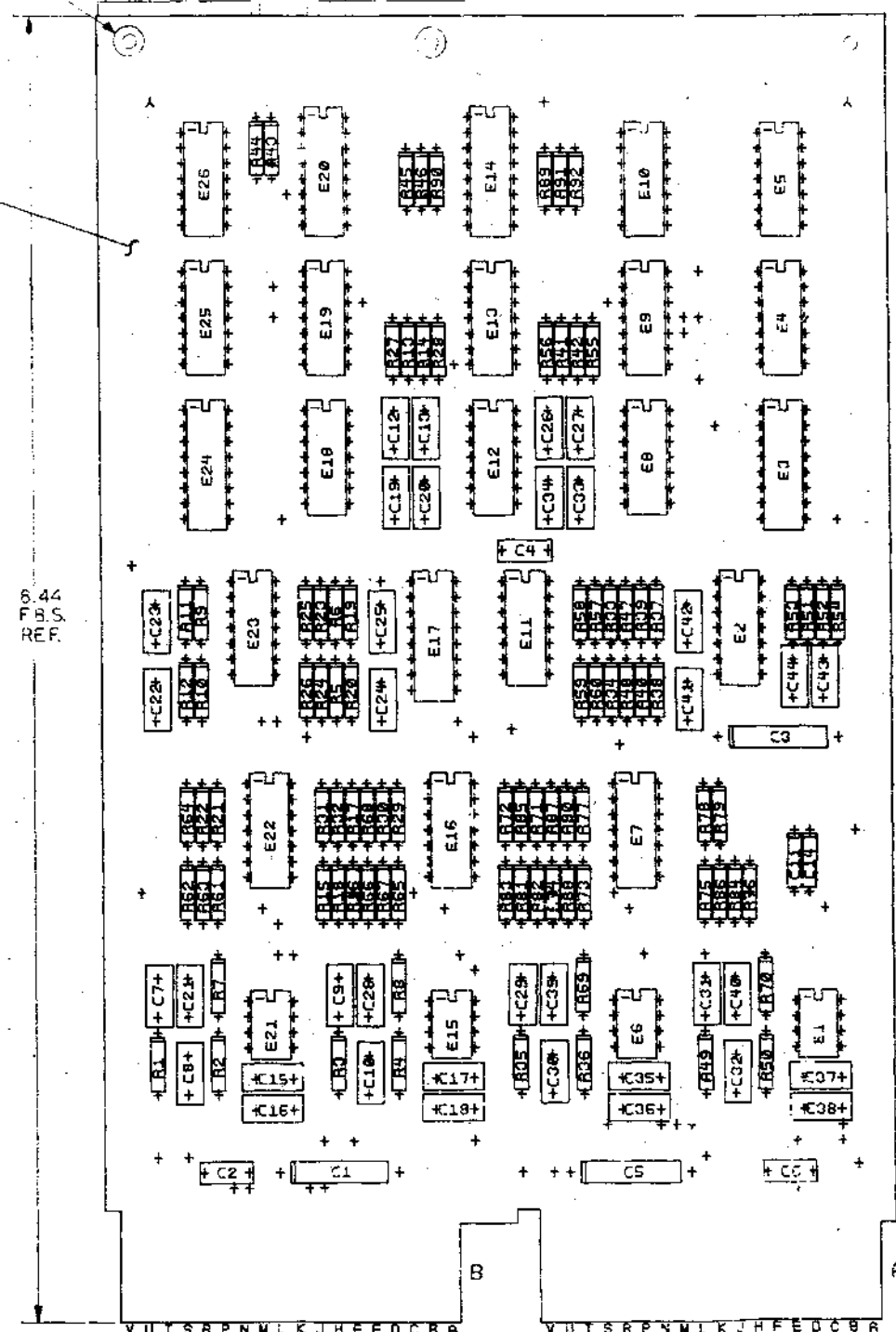
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
					00	
21	21		1302871-00	1.21 K .25 W 1.0 X RN55D-F10	9	CONT R97,R98 R9,R21,R33,R45,R57,R69,R81,R93, R105
22	22		1303045-00	3.16 K .25 W 1.0 X RN55D-F10	12	CONT R3,R4,R15,R16,R27,R28,R39,R40, R51,R52,R63,R64,R75,R76,R87,R88, R99,R100
23	23		1312747-00	56.20 K .25 W 1.0 X 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 X 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 1.0 X 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 7504

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							7504 PRE-AMP		K	PL	0057-0-05F	0

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1973

COMPONENT SIDE VIEW



708.44
R.D.G.
P.

NOTES:

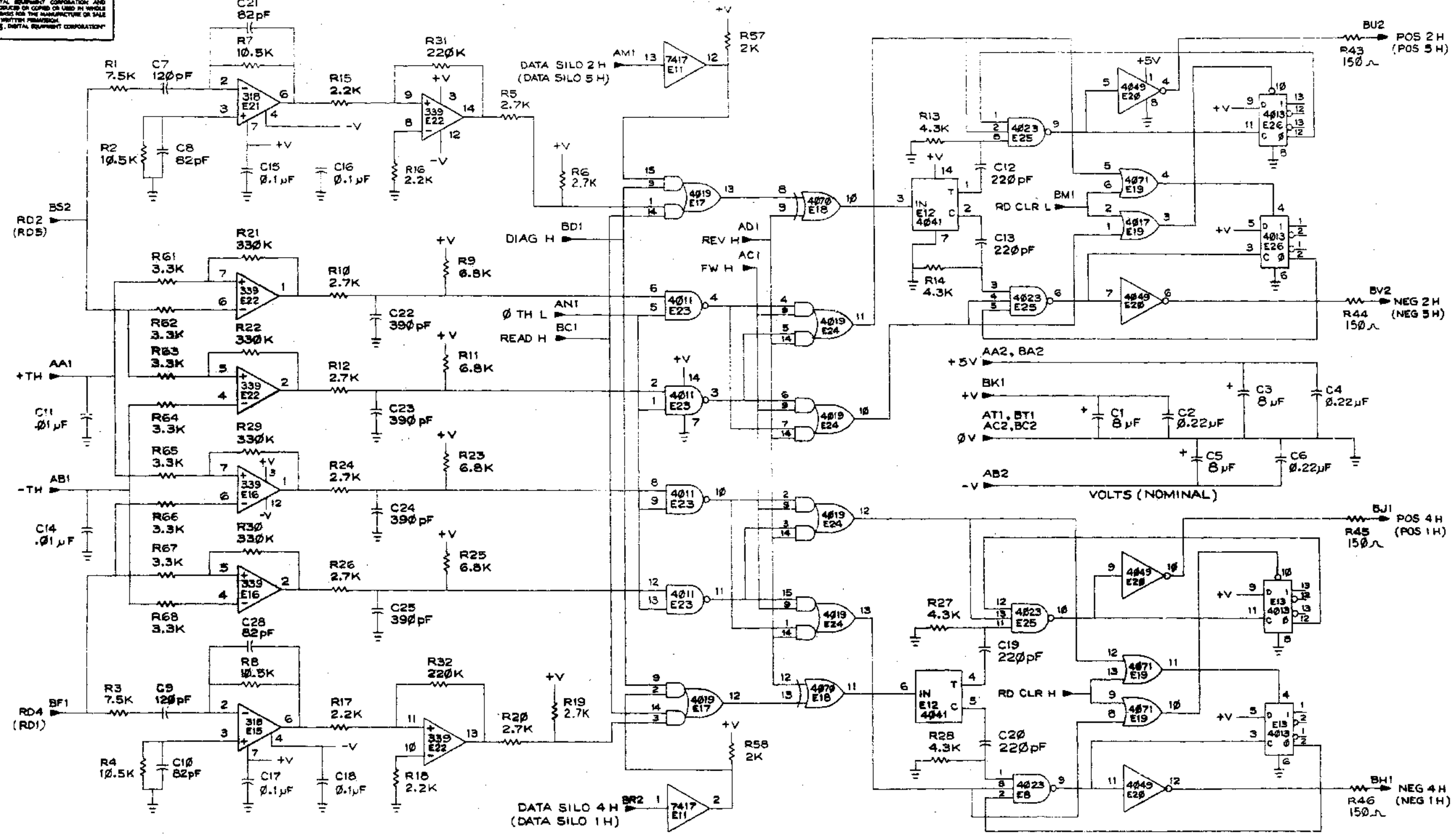
CHANGE NO	REV

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

SIGNATURES	DATE
DRN. D POWERS	3/27/73
CHK'D	3/27/73
ENG. J. Rollins	3/27/73
PROJ. ENG. J. Rollins	3/27/73
PROD.	
SCALE	2/1
SHT.	1 OF 3
NEXT HIGHER ASSY.	B-DD-G157-0

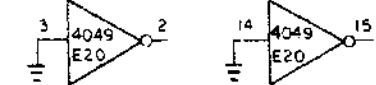
digital	
TITLE TSC+ READ AMP	
SIZE	CODE
0 1/4	
NUMBER	REV
G157-0-0	E

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REV.	1	DATE	10/17/76
CHK'D	J. Carter	DESIGNED BY	J. Carter
ENG.	J. Carter	DRAWN BY	J. Carter
PROJ. ENG.	J. Carter	CHECKED BY	J. Carter
EXT. DESK	J. Carter	DATE	10/17/76

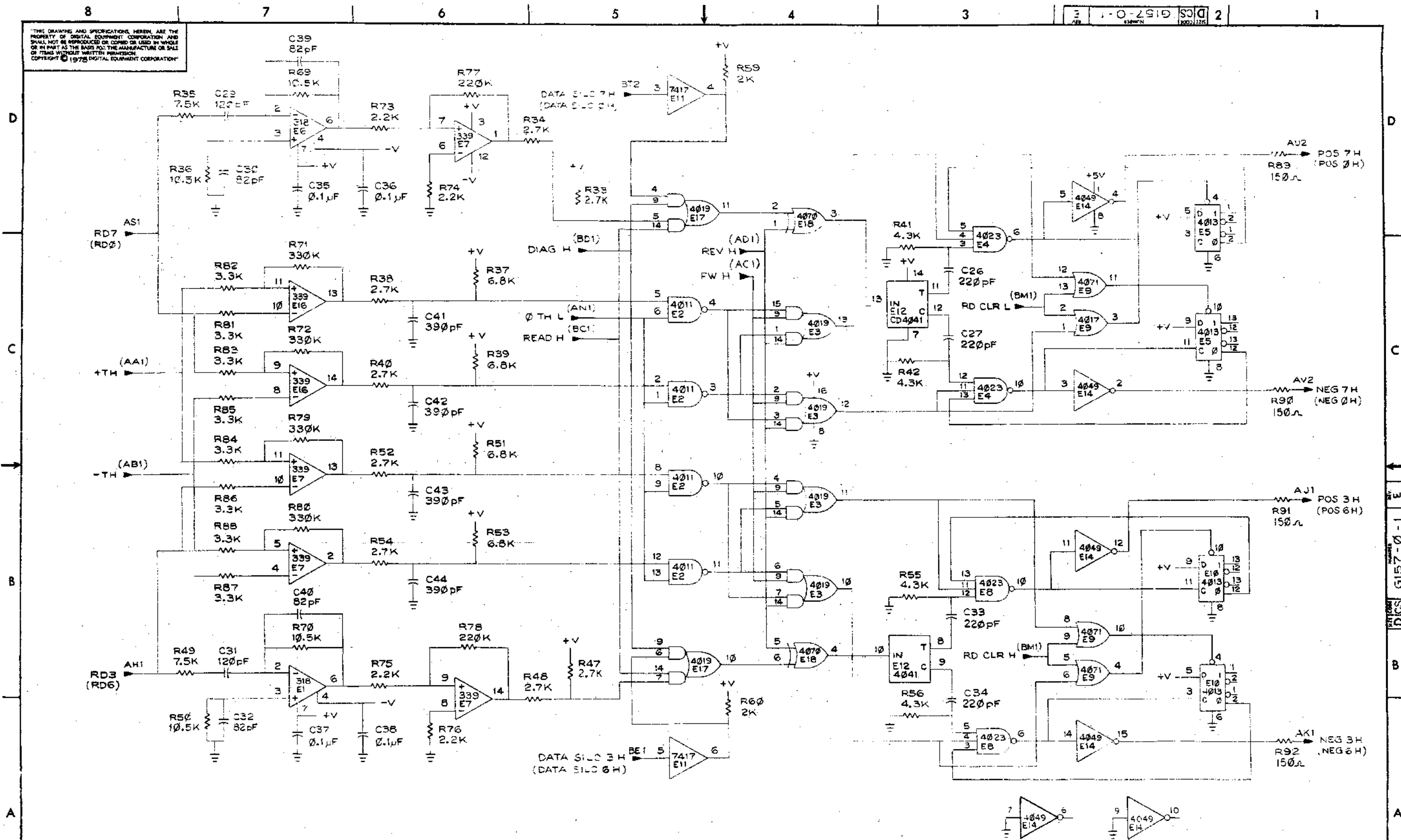
DRN. J. CARTER	6-19-76	FIRST USED ON	TS04
CHK'D	J. Carter	TITLE	TS04
ENG.	J. Carter	NUMBER	1
PROJ. ENG.	J. Carter	REV.	E
EXT. DESK	J. Carter	SIZE CODE	D CS
NEXT HIGHER ASSY.		SCALE	G157-0-1
B-DD-G157-0		SHEET	1 OF 2



DCS G157-0-1

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3 1-0-2910 301 2



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE TS04 READ AMP		SIZE CODE DCS	NUMBER G157-0-1	REV. E
SCALE	SHEET 2 OF 2	DIST.		

DCS G157-0-1

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	339 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	ECD 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	DES.ENG:	H. FINDEISEN	DATE:	16-SEP-78	DOCUMENT NUMBER			
	G157-ML002	E	[A] 00	RESP.ENG.:	H. FINDEISEN	DATE:	16-SEP-78	SIZE	CODE	NUMBER	REV
			[B]	MFG.ENG.:	G. DILLARD	DATE:	16-SEP-78	K	PL	G157-0-DBP	E
			[C]	ASSEMBLY NUMBER:				FILE NAME:		EDIT #	
			[D]	D-UA-G157-0-0				Z0476E.PLS		7	
			[E]								
			[F]								
			[G]								
			[H]								
			[I]								
			[J]								
			[K]								
			[L]								
			[M]								
			[N]								

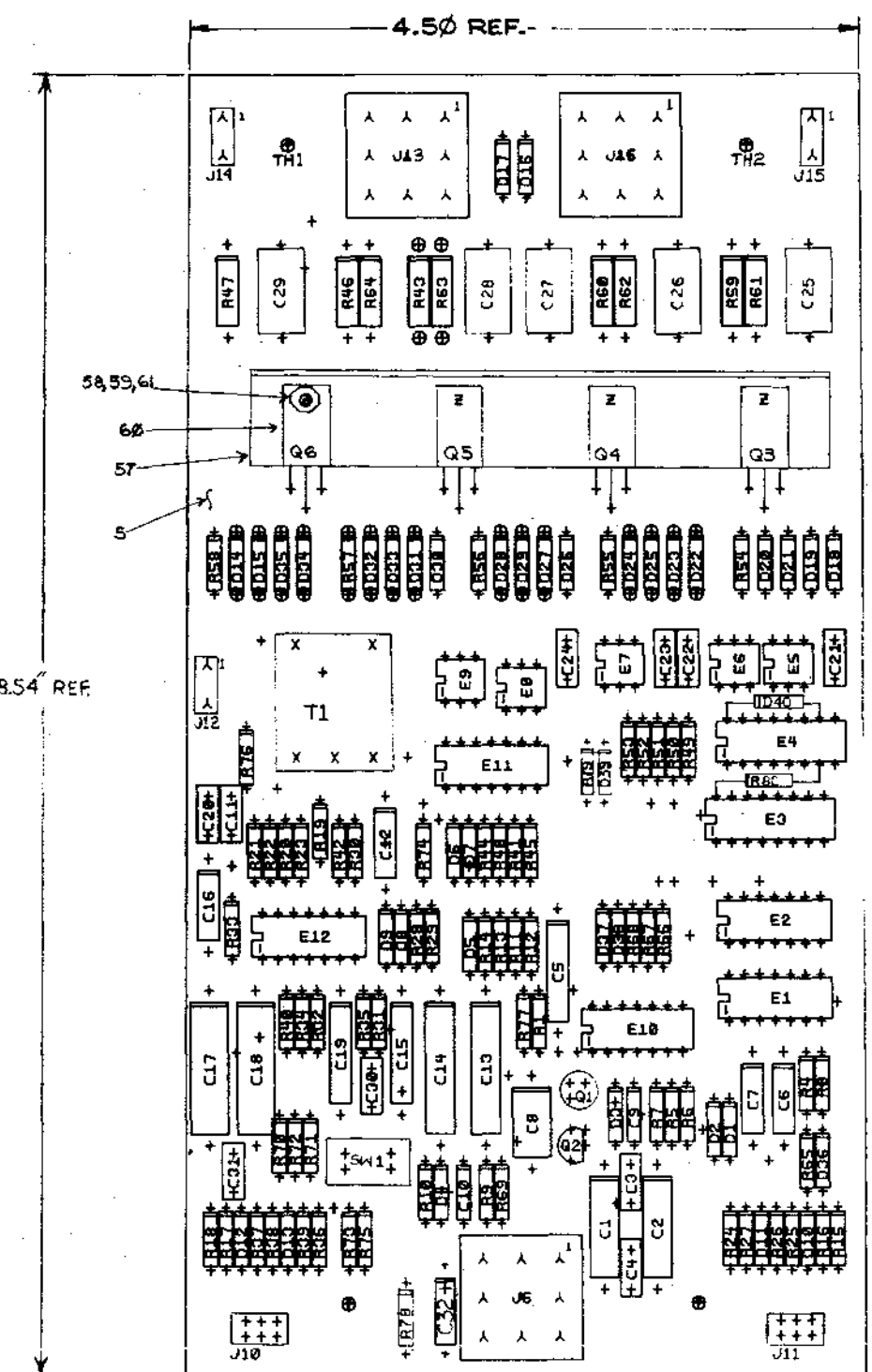
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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR	
					00			
29	29		2113613-00	4023B NAND GATE-TRIPLE 3IN	3		E4,E8,E25	
30	30		9105740-55	*** THIS ITEM IS NOT USED ***	-			
31	31	B-DD-G157-0-0		DRAWING DIRECTORY	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 0% 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-DRP	E

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COMPONENT SIDE VIEW



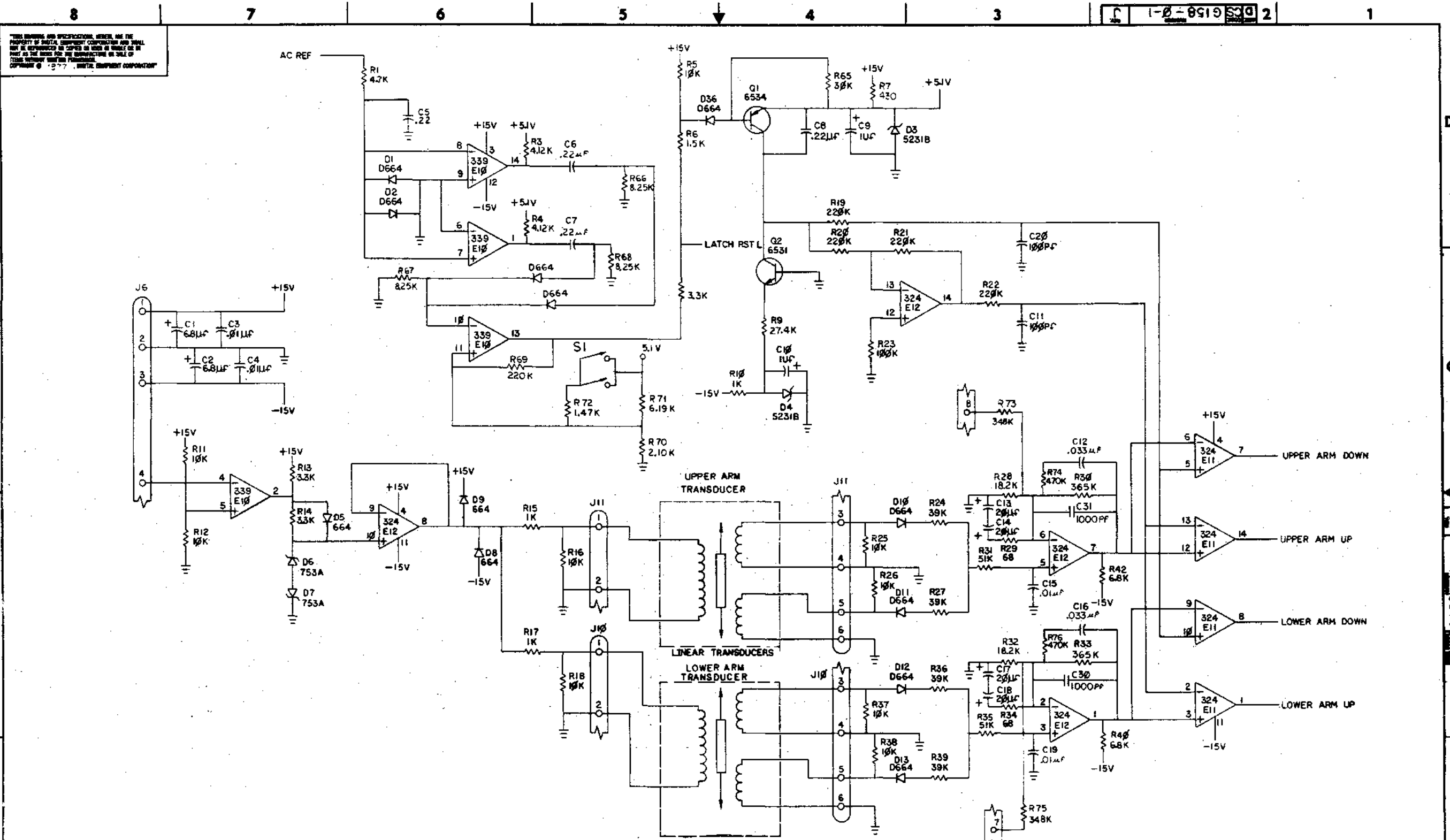
NOTES:
 1. THIS BOARD MUST MEET U.L. REQUIREMENTS.
 2. ECO-M1004 REWORK INSTRUCTIONS NOT REQUIRED PER ENGINEER BOB NUTE.

CHANGE NO	REV	DATE	BY	CHK'D
1	E	5/3/78	W.M.	W.M.
2	F	8/1/78	W.M.	W.M.
3	G	10/24/78	W.M.	W.M.
4	H	11/27/78	W.M.	W.M.
5	I	1/23/79	W.M.	W.M.
6	J	3/28/79	W.M.	W.M.
7	K	5/14/79	W.M.	W.M.
8	L	7/10/79	W.M.	W.M.
9	M	8/14/79	W.M.	W.M.
10	N	9/17/79	W.M.	W.M.
11	O	10/22/79	W.M.	W.M.
12	P	11/27/79	W.M.	W.M.
13	Q	1/23/80	W.M.	W.M.
14	R	3/28/80	W.M.	W.M.
15	S	5/14/80	W.M.	W.M.
16	T	7/10/80	W.M.	W.M.
17	U	8/14/80	W.M.	W.M.
18	V	9/17/80	W.M.	W.M.
19	W	10/22/80	W.M.	W.M.
20	X	11/27/80	W.M.	W.M.
21	Y	1/23/81	W.M.	W.M.
22	Z	3/28/81	W.M.	W.M.
23	AA	5/14/81	W.M.	W.M.
24	AB	7/10/81	W.M.	W.M.
25	AC	8/14/81	W.M.	W.M.
26	AD	9/17/81	W.M.	W.M.
27	AE	10/22/81	W.M.	W.M.
28	AF	11/27/81	W.M.	W.M.
29	AG	1/23/82	W.M.	W.M.
30	AH	3/28/82	W.M.	W.M.
31	AI	5/14/82	W.M.	W.M.
32	AJ	7/10/82	W.M.	W.M.
33	AK	8/14/82	W.M.	W.M.
34	AL	9/17/82	W.M.	W.M.
35	AM	10/22/82	W.M.	W.M.
36	AN	11/27/82	W.M.	W.M.
37	AO	1/23/83	W.M.	W.M.
38	AP	3/28/83	W.M.	W.M.
39	AQ	5/14/83	W.M.	W.M.
40	AR	7/10/83	W.M.	W.M.
41	AS	8/14/83	W.M.	W.M.
42	AT	9/17/83	W.M.	W.M.
43	AU	10/22/83	W.M.	W.M.
44	AV	11/27/83	W.M.	W.M.
45	AW	1/23/84	W.M.	W.M.
46	AX	3/28/84	W.M.	W.M.
47	AY	5/14/84	W.M.	W.M.
48	AZ	7/10/84	W.M.	W.M.
49	BA	8/14/84	W.M.	W.M.
50	BB	9/17/84	W.M.	W.M.
51	BC	10/22/84	W.M.	W.M.
52	BD	11/27/84	W.M.	W.M.
53	BE	1/23/85	W.M.	W.M.
54	BF	3/28/85	W.M.	W.M.
55	BG	5/14/85	W.M.	W.M.
56	BH	7/10/85	W.M.	W.M.
57	BI	8/14/85	W.M.	W.M.
58	BJ	9/17/85	W.M.	W.M.
59	BK	10/22/85	W.M.	W.M.
60	BL	11/27/85	W.M.	W.M.
61	BM	1/23/86	W.M.	W.M.
62	BN	3/28/86	W.M.	W.M.
63	BO	5/14/86	W.M.	W.M.
64	BP	7/10/86	W.M.	W.M.
65	BQ	8/14/86	W.M.	W.M.
66	BR	9/17/86	W.M.	W.M.
67	BS	10/22/86	W.M.	W.M.
68	BT	11/27/86	W.M.	W.M.
69	BU	1/23/87	W.M.	W.M.
70	BV	3/28/87	W.M.	W.M.
71	BW	5/14/87	W.M.	W.M.
72	BX	7/10/87	W.M.	W.M.
73	BY	8/14/87	W.M.	W.M.
74	BZ	9/17/87	W.M.	W.M.
75	CA	10/22/87	W.M.	W.M.
76	CB	11/27/87	W.M.	W.M.
77	CC	1/23/88	W.M.	W.M.
78	CD	3/28/88	W.M.	W.M.
79	CE	5/14/88	W.M.	W.M.
80	CF	7/10/88	W.M.	W.M.
81	CG	8/14/88	W.M.	W.M.
82	CH	9/17/88	W.M.	W.M.
83	CI	10/22/88	W.M.	W.M.
84	CJ	11/27/88	W.M.	W.M.
85	CK	1/23/89	W.M.	W.M.
86	CL	3/28/89	W.M.	W.M.
87	CM	5/14/89	W.M.	W.M.
88	CN	7/10/89	W.M.	W.M.
89	CO	8/14/89	W.M.	W.M.
90	CP	9/17/89	W.M.	W.M.
91	CQ	10/22/89	W.M.	W.M.
92	CR	11/27/89	W.M.	W.M.
93	CS	1/23/90	W.M.	W.M.
94	CT	3/28/90	W.M.	W.M.
95	CU	5/14/90	W.M.	W.M.
96	CV	7/10/90	W.M.	W.M.
97	CW	8/14/90	W.M.	W.M.
98	CX	9/17/90	W.M.	W.M.
99	CY	10/22/90	W.M.	W.M.
100	CZ	11/27/90	W.M.	W.M.

ETCH REV. F-P	PC DESIGN DATA BASE REV. F
---------------	----------------------------

SIGNATURES	DATE	TITLE
DAN. D. DINGEL	5/3/78	digital
CHK'D. J. J. J.	8/1/78	
ENG. J. J. J.	10/24/78	
PROJ. ENG. J. J. J.	11/27/78	
PROD. J. J. J.	1/23/79	
SCALE 2X		
SHT. 1 OF 3		
NEXT HIGHERassy.		

REEL SERVO	SIZE CODE	NUMBER	REV
0 UA G158-0-0	ML2	1	J



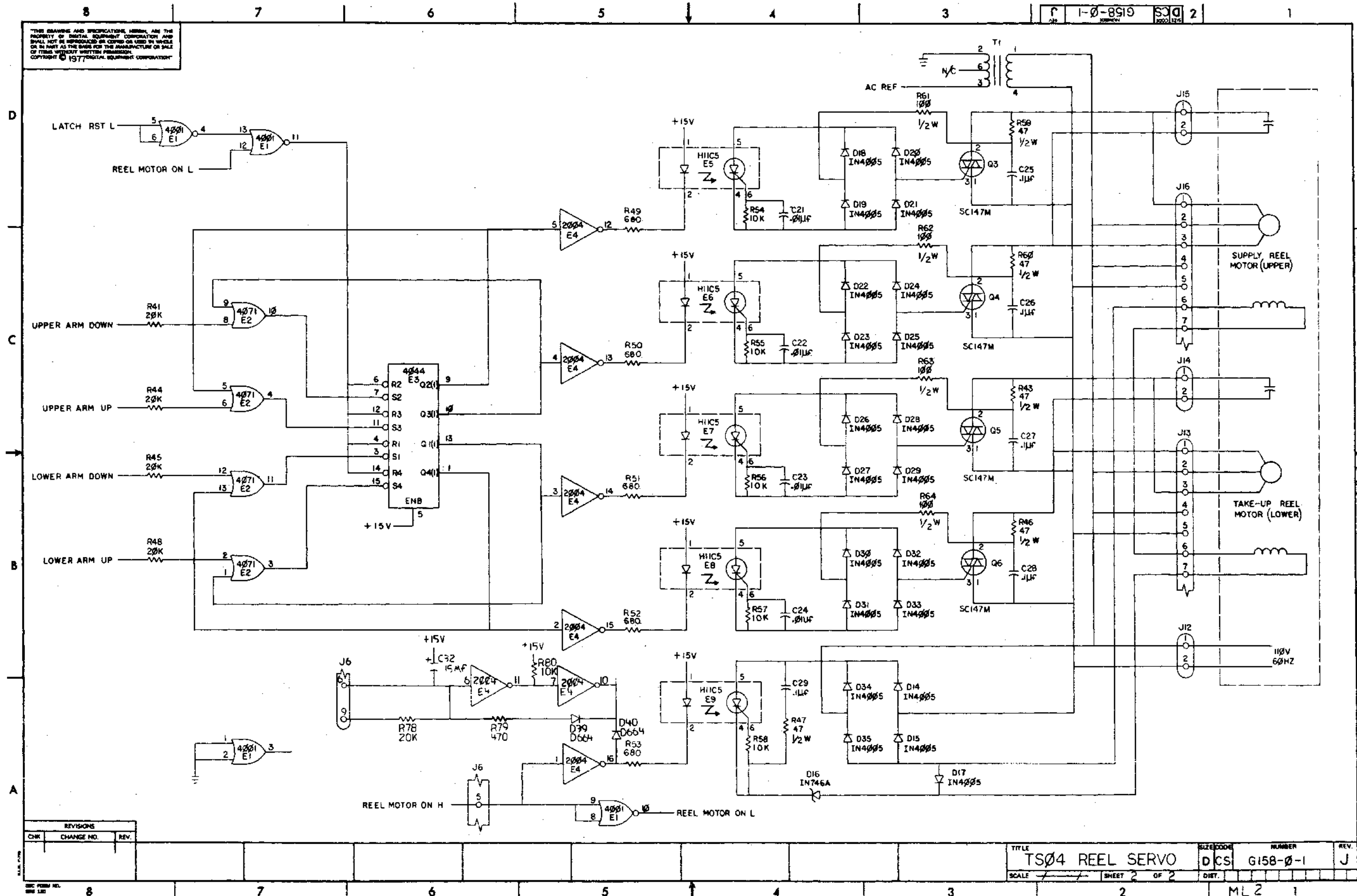
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REV	REV	REV	REV	REV	REV
1	2	3	4	5	6
DATE	DATE	DATE	DATE	DATE	DATE
BY	BY	BY	BY	BY	BY
CHKD	CHKD	CHKD	CHKD	CHKD	CHKD
ENG	ENG	ENG	ENG	ENG	ENG
PRG	PRG	PRG	PRG	PRG	PRG
DRN	DRN	DRN	DRN	DRN	DRN

DRN Steve Gaudin 11-4-77	FINISH USED ON	TS04
CHKD R. P. ... 12-2-77	TITLE	TS04
ENG H. ... 3-7-78		REEL SERVO
PRG ... 3-7-78		
DRN ... 3-7-78		
NEXT HIGHER ASSY.		
B-00-G158-0	SIZE CODE	RANGER
SCALE	D CS	G158-0-1
SHEET	OF 2	

ML2

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REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		SIZE/DWG	NUMBER	REV.
TS04 REEL SERVO		DCS	G158-0-1	J
SCALE	SHEET	OF		
	2	2		

REV. 000000
 DCS
 G158-0-1
 J

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
1		D-CS-G158-0-1		CIRCUIT SCHEMATIC			REF
2		D-UA-G158-0-0		UNIT ASSY			REF
3		B-DD-G158-0-0		DWG DIRECTORY			REF
4		D-MD-5011917-0-0		DRILL & ETCH DWG			REF
5			5011917-00	G158			1
6			1000002-01	20 MFD 50V 5% S.TANT			4 C13,C14,C17,C18
7			1000016-00	100.0 MMF 100V 5%200PPM MICA			2 C11,C20
8			1000050-00	.033 MFD 100V 80V 10% MYL			2 C12,C16
9			1001610-00	.01 MFD 50V +80-20% Z5U CER			6 C3,C4,C21-C24
10			1001776-00	1 MFD 35V 10% S.TANT			2 C9,C10
11			1002630-00	*** THIS ITEM IS NOT USED ***			1
12			1005306-00	6.8MFD 35V 10% S.TANT			2 C1,C2
13			1005784-00	.01 MFD 100V 200V 10% MYL			2 C15,C19
14			1010031-03	.22 MFD 50V 10% M.POLYCARB			4 C8,C6,C7,C5
15			1010075-00	.1 MFD 400V 20% MYLR			5 C25-C29
16			1100114-00	D 664 QS\75PCB PIV= 25V SP			14 D1,D2,D5,D8-D13,D36,D37,D38-D40,
17			1102421-00	IN 753A VZ= 6.2 5% .40W P			2 D6,D7
18			1104860-00	IN 746A VZ= 3.3 5%			1 D16
19			1109443-00	IN 5231B VZ= 5.1 5% .50W Y			2 D3,D4
20			1110967-00	IN 4005 PIV=600 I= 1A D041 SI			21 D14,D15,D17-D35
21			1114344-00	H1105 SCR2400V I=10A			5 E5-E9
22			1212297-00	MATE-N-LOK 02PIN(1X02).250CC HDR			3 J12,J14,J15
23			1212297-02	MATE-N-LOK 09PIN(2X05).250CC HDR			3 J13,J16,J6
24			1212297-05	*** THIS ITEM IS NOT USED ***			1
25			1213488-01	PCB,HEADER 05PIN(2X03).100CC STR			2 J10,J11
26			1300219-00	68.0 .25 W 5.0 % CC			2 R29,R34
27			1300228-00	100.0 .50 W 5.0 % CC			2 R61-R64
28			1300365-00	1.0 K .25 W 5.0 % CC			3 R10,R15,R17
29			1300391-00	1.50 K .25 W 5.0 % CC			1 R6
30			1300439-00	3.30 K .25 W 5.0 % CC			3 R13,R14,R77

REVISION HISTORY		BASIC PART NO: 0G158		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	DES.ENG: H.FINDEISEN		DATE: 02-MAR-78		DOCUMENT NUMBER	
J.R.	G158-ML001	E	[A] 00	RESP.ENG.: H.FINDEISEN		DATE: 02-MAR-78		SIZE: CODE: NUMBER REV	
M.C.	G158-ML002	F	[B]	MFG.ENG.: P.BARTON		DATE: 02-MAR-78		K PL G158-0-DBP J	
BN	G158-ML003	H	[C]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME: EDIT #	
BN	G158-ML004	J	[D]	D-UA-G158-0-0		TS04		Z0464J.PLS 22	
			[E]						
			[F]						
			[G]						
			[H]						
			[I]						
			[J]						
			[K]						
			[L]						
			[M]						
			[N]						

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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
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	15		R5, R11, R12, R16, R18, R25, R26, R37, R38, R54-R58, R80
						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	47.0 .50 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	5		R41, R44, R45, R48, R78
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 .25 W 1.0 % RN550-F10	1		R9
46	46		1312933-00	*** THIS ITEM IS NOT USED ***	-		
47	47		1503409-01	DEC65348 PNP 310MW SI 40 90 P	1		Q1
48	48		1509338-00	DEC65318 NPN 310MW 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= 12.6A10MA	1		T1
52	52		1912107-01	324ANOP AMP, QUAD	2		E11, E12
53	53		1912108-00	339 VOLT CMPRTR, QUAD	1		E10
54	54		2113603-00	4001UBIOR 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 CMO	1		E2
57	57		7418017-00	HEAT SINK	1		HS1
58	58		9006011-04	SCREW, MACH BIND SLOT 4-	4		
59	59		9006557-00	NUT, KEP 4-40X 1/4 AF	4		
60	60		9003268-00	COMPOUND, THERMAL JOINT	A/R		
61	61		9009769-00	WASHER, RECTNGLR STEEL	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 % RN550-F10	3		R66, R67, R68
66	66		1312923-00	2.10 K .25 W 1.0 % RN550-F10	1		R70
67	67		1305108-00	1.47 K .25 W 1.0 % RN550-F10	1		R72
68	68		1314187-00	6.19 K .25 W 1.0 % RN550-F10	1		R71
69	69		1211164-07	SW, DIP 2POS/1PST 5VDC100MA F	1		S1
70	70		1000042-00	1000.0 MNF 120V 5%200PPM MICA	2		C30, C31
71	71		1314763-00	4.12 K .25 W 1.0 % RN550-F10	2		R3, R4
72	72		1316576-00	348.0 K .25 W 1.0 % RN550-F10	2		R73, R75
73	73		1305266-00	365.0 K .25 W 1.0 % RN550-F10	2		R30, R33
74	74		1309412-00	18.20 K .25 W 1.0 % RN550-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
77	77		1300316-00	470.0 .25 W 5.0 % CC	1		R79

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

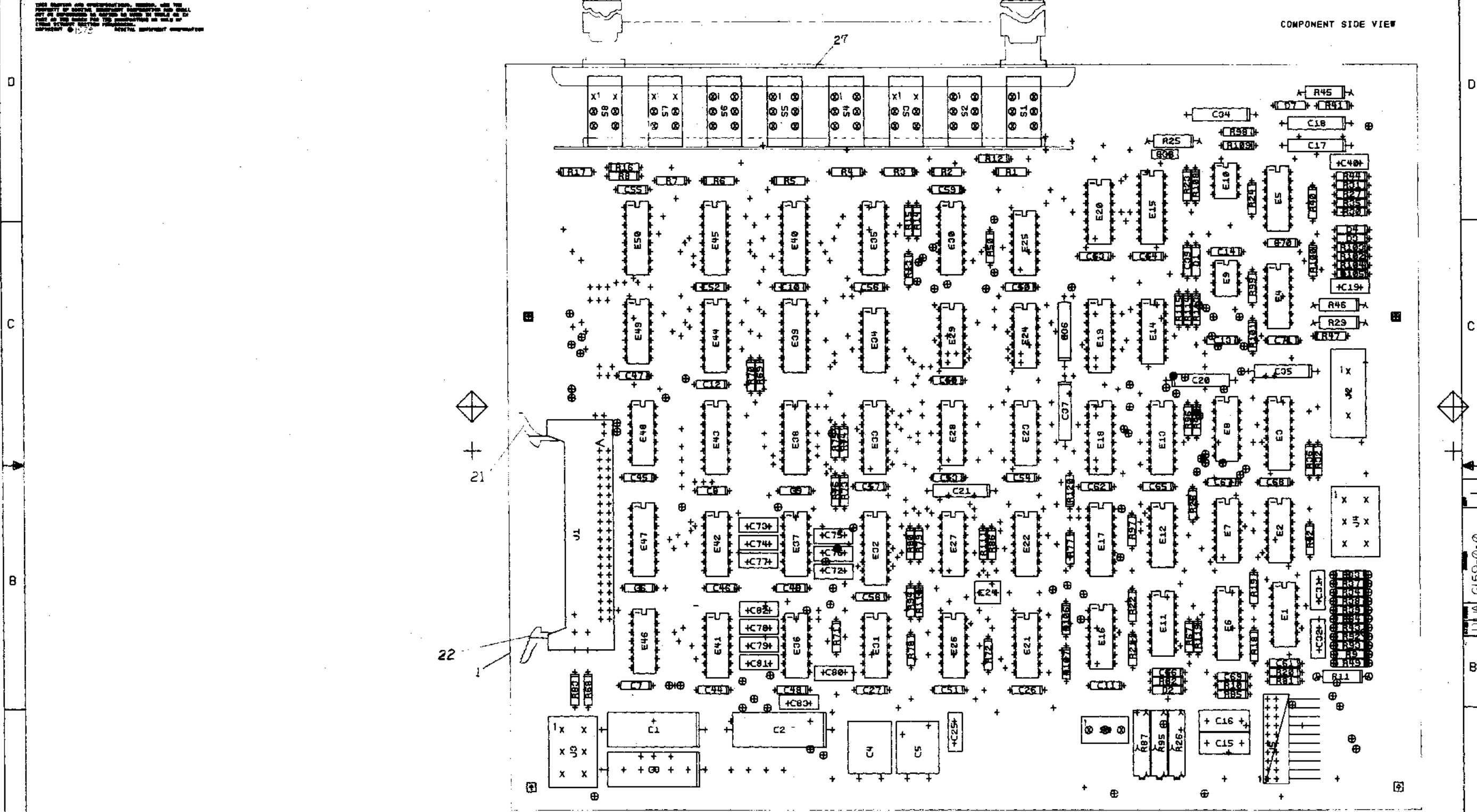
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PARTS LIST

SHEET 03 OF 03

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
78	78	1004812-00	15 MFD 20V 10% S.TANT	1	C32

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE CODE	DOCUMENT NUMBER	REV
							TS04 REEL SERVO		K	PL 6158-0-D8P	J



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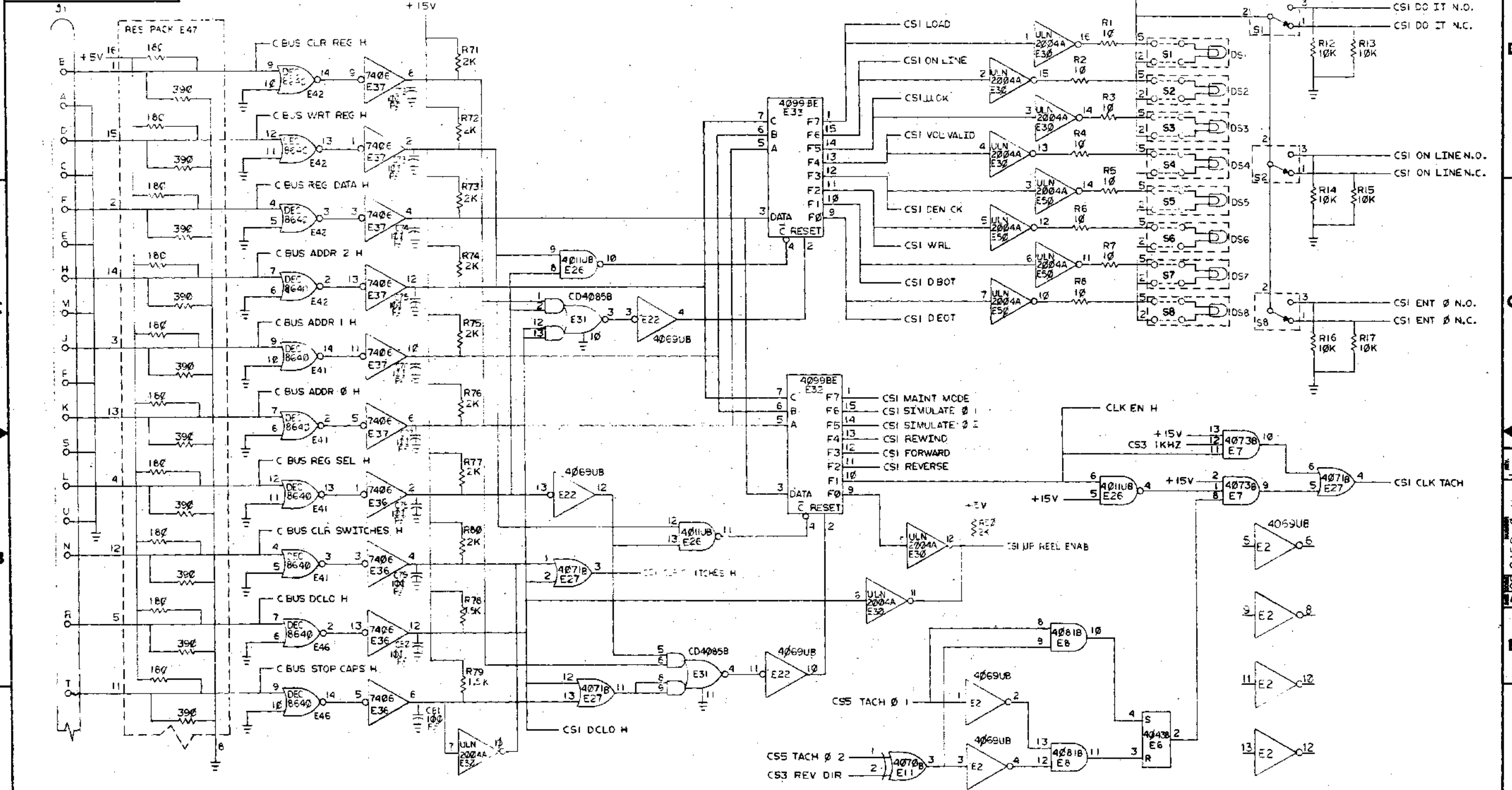
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REPEAT	+ X AXIS		STEP	TIMES

CHANGE NO	REV	DATE	BY	CHKD
1	1			

ETCH REV.	-1
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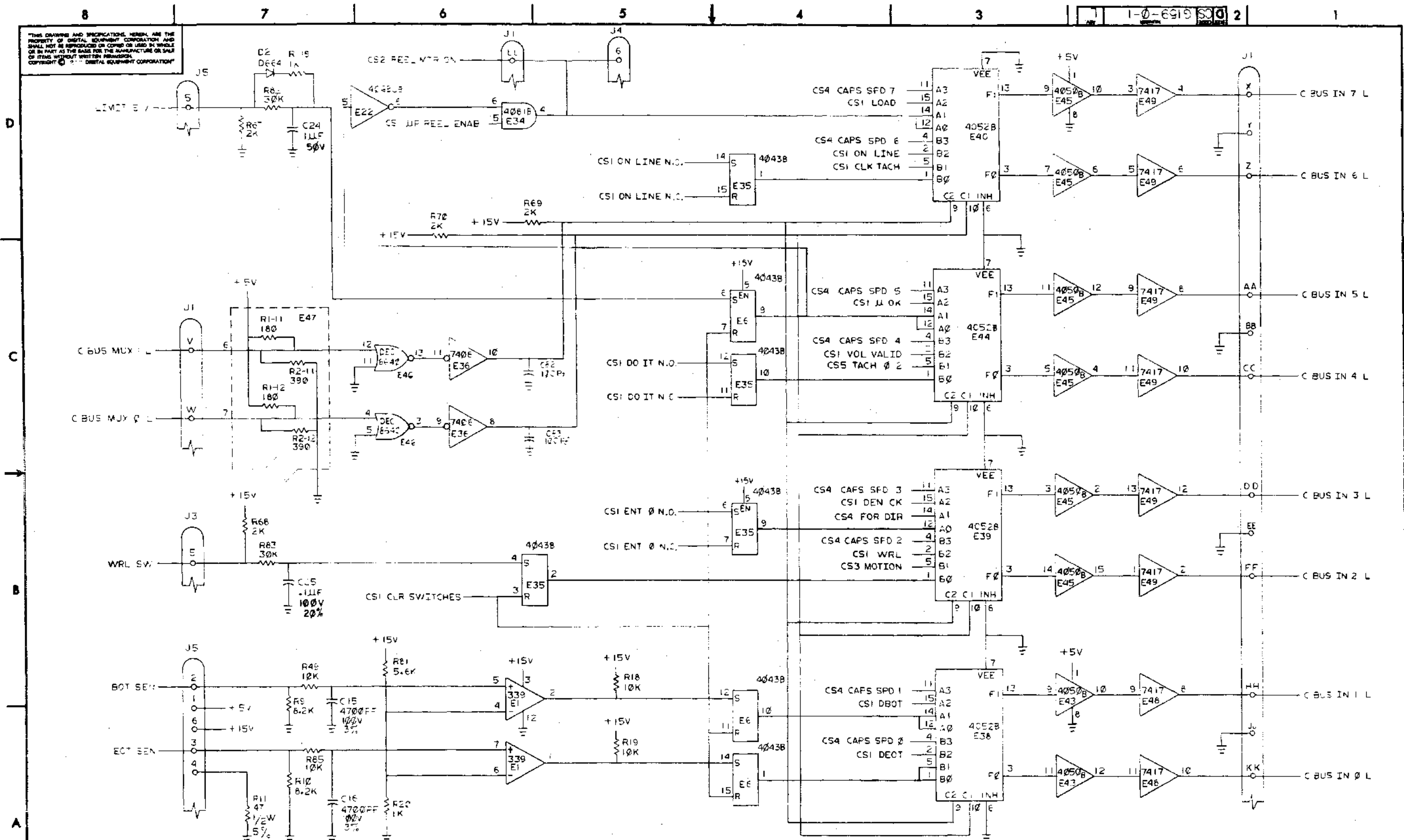
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DRN. <i>[Signature]</i>	1/26/77	digital
CHK'D. <i>[Signature]</i>		
TECH. ENG. <i>[Signature]</i>		TITLE CAPSTAN SERVO
PROJ. ENG. <i>[Signature]</i>		
PROD. <i>[Signature]</i>		
SCALE 2X1		SIZE CODE NUMBER REV
SHT. OF 3		D UA G159-0-2 L
NEXT HIGHERassy. B-DD-G159-0		

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REV. 1	DATE 11/17/77	BY B. KRASNICK
REV. 2	DATE 11/17/77	BY B. KRASNICK
REV. 3	DATE 11/17/77	BY B. KRASNICK
REV. 4	DATE 11/17/77	BY B. KRASNICK
REV. 5	DATE 11/17/77	BY B. KRASNICK
REV. 6	DATE 11/17/77	BY B. KRASNICK
REV. 7	DATE 11/17/77	BY B. KRASNICK
REV. 8	DATE 11/17/77	BY B. KRASNICK
REV. 9	DATE 11/17/77	BY B. KRASNICK
REV. 10	DATE 11/17/77	BY B. KRASNICK
REV. 11	DATE 11/17/77	BY B. KRASNICK
REV. 12	DATE 11/17/77	BY B. KRASNICK
REV. 13	DATE 11/17/77	BY B. KRASNICK
REV. 14	DATE 11/17/77	BY B. KRASNICK
REV. 15	DATE 11/17/77	BY B. KRASNICK
REV. 16	DATE 11/17/77	BY B. KRASNICK
REV. 17	DATE 11/17/77	BY B. KRASNICK
REV. 18	DATE 11/17/77	BY B. KRASNICK
REV. 19	DATE 11/17/77	BY B. KRASNICK
REV. 20	DATE 11/17/77	BY B. KRASNICK

DESIGNED BY B. KRASNICK	FIRST USED ON TS11 20-0000
CHECKED BY B. KRASNICK	
ENGR. B. KRASNICK	
PROG. ENG. B. KRASNICK	
PROD. B. KRASNICK	
NEXT HIGHER AUTH.	
TITLE CAPSTAN SERVO (CSI)	
SCALE NONE	SIZE CODE D CS
SHEET 1 OF 5	NUMBER G159-0-1
	REV. L

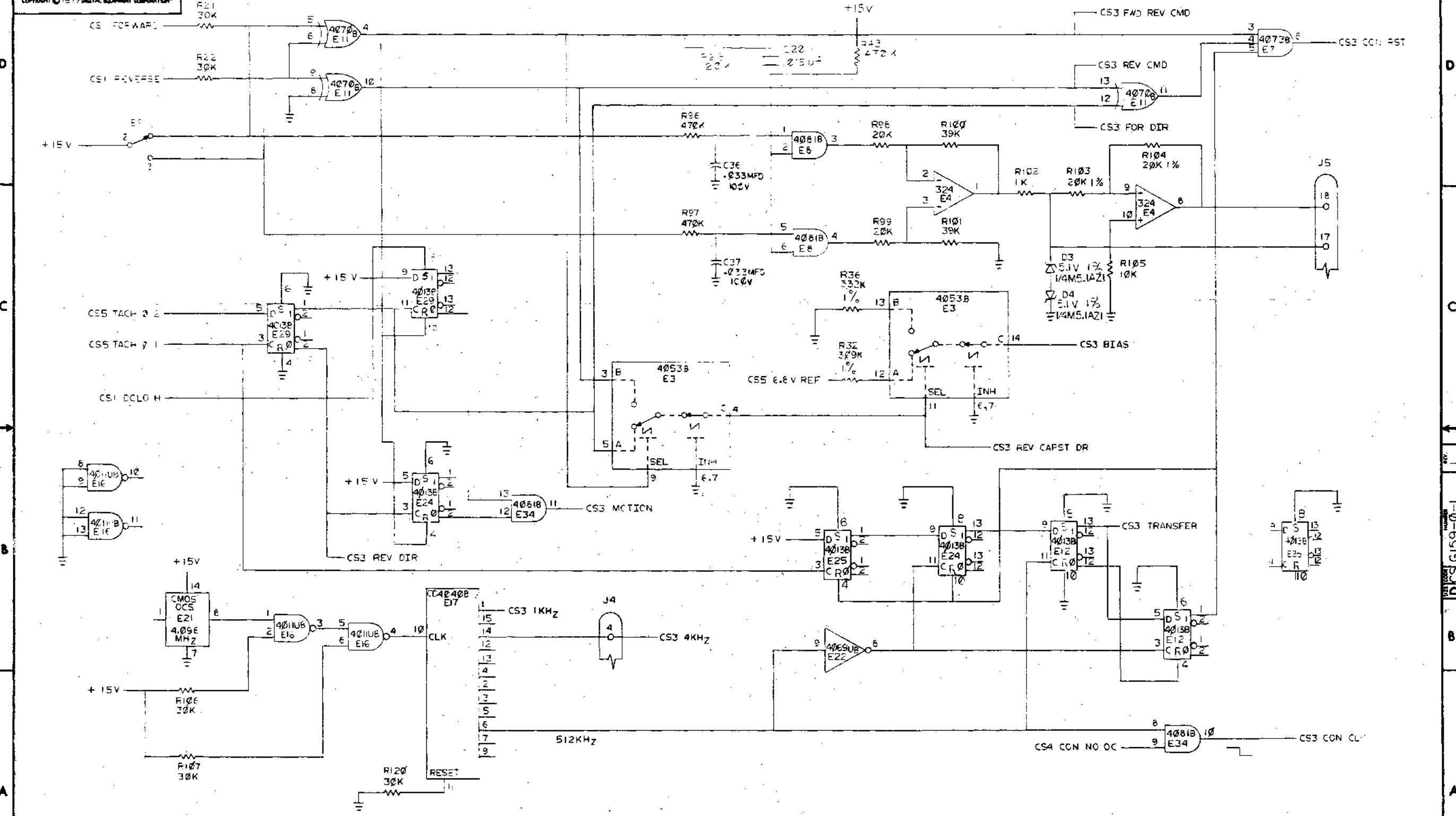


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		CAPSTAN SERVO (CS2)		SIZE CODE	D CS	NUMBER	G159-0-1	REV.	L
SCALE	NONE	SHEET	2 OF 5	DRY.					

DCS G159-0-1 L

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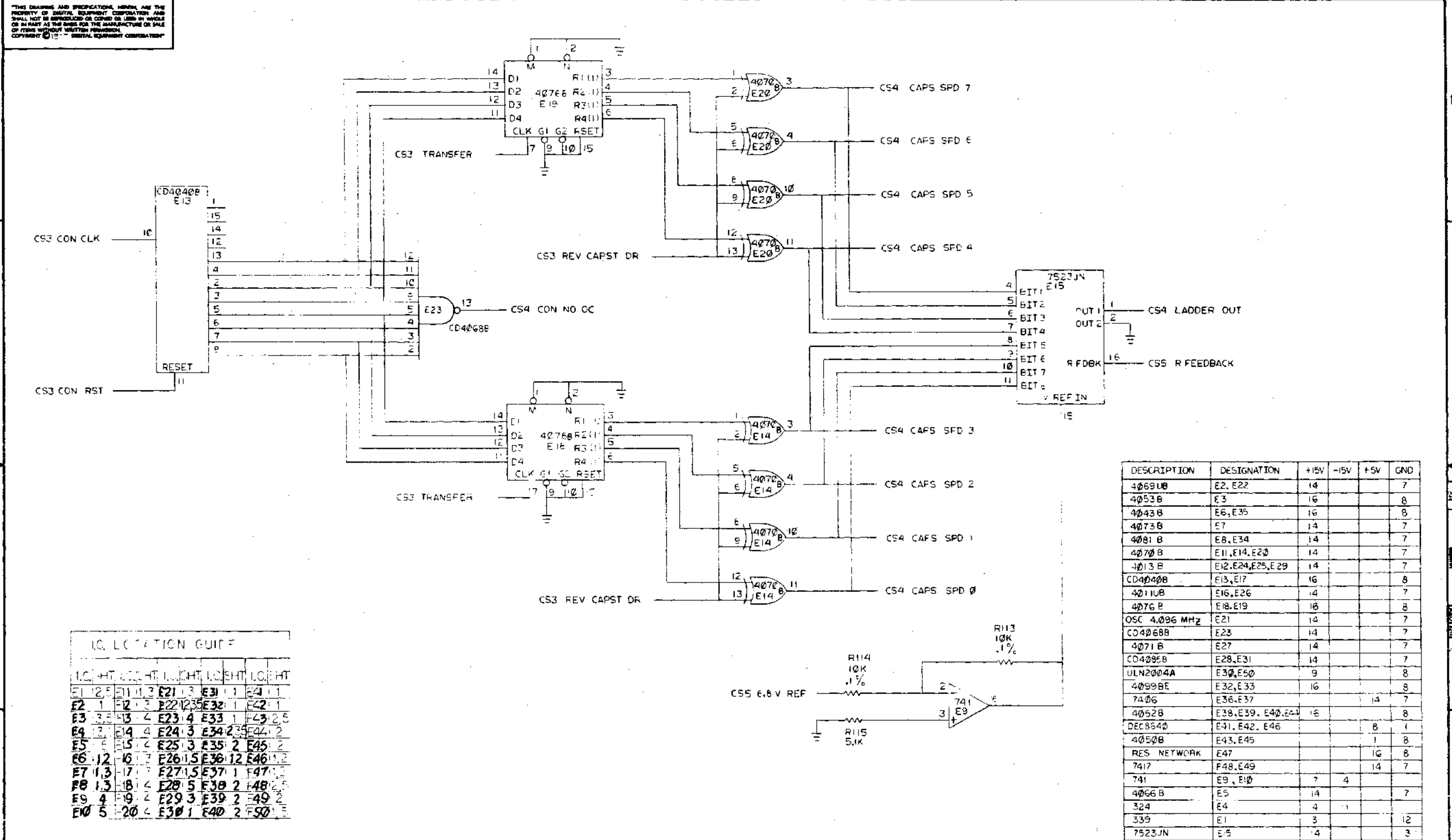


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	CAPSTAN SERVO (CS3)	SIZE CODE	D CS	NUMBER	G159-0-1	REV.	L
SCALE	NONE	SHEET	3 OF 5	DIST.			

DCS G159-0-1

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IC LOCATION GUIDE

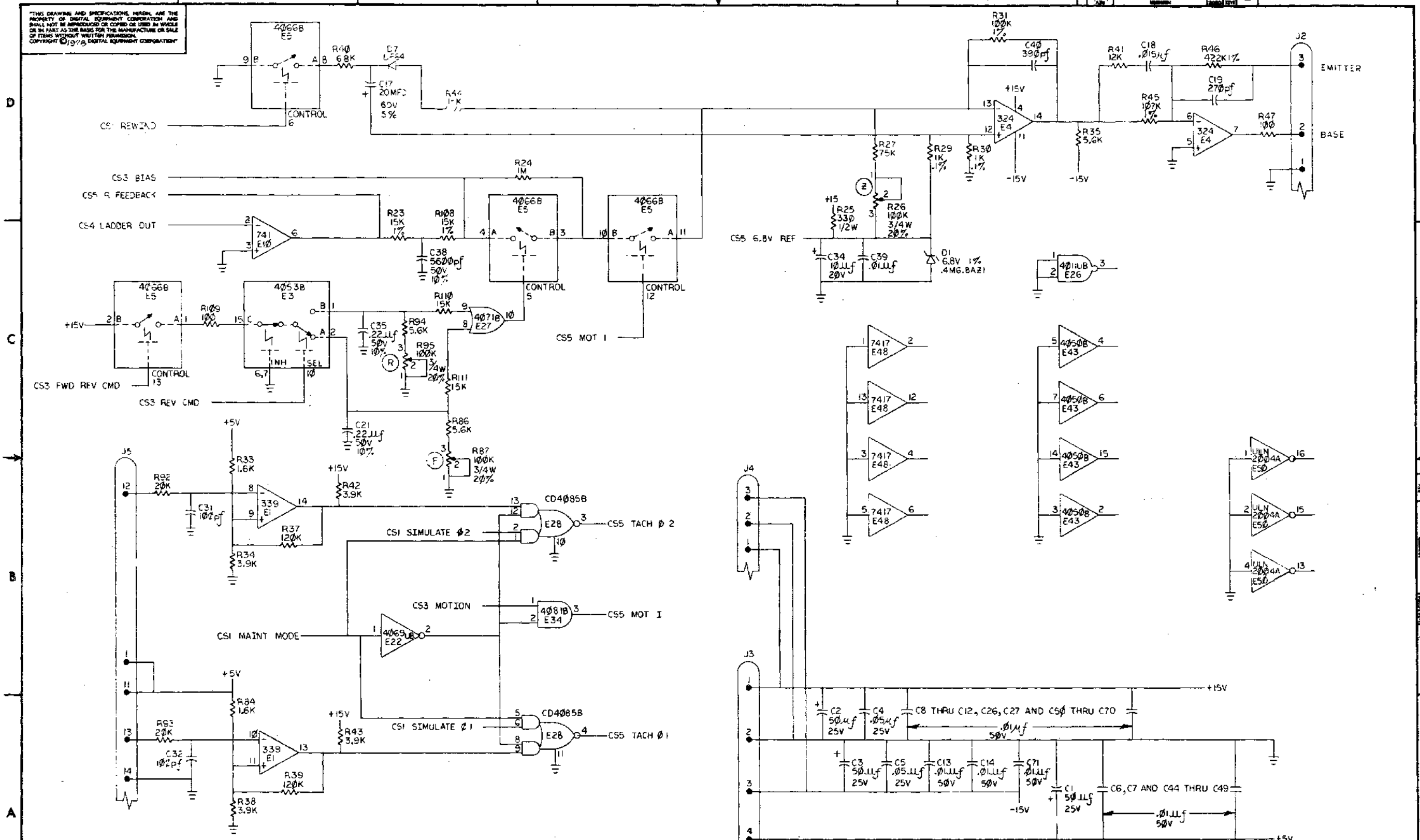
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E2	1	E12	4	E22	14	E32	2	E42	12
E3	3	E13	5	E23	15	E33	3	E43	13
E4	4	E14	6	E24	16	E34	4	E44	14
E5	5	E15	7	E25	17	E35	5	E45	15
E6	12	E16	18	E26	24	E36	12	E46	22
E7	13	E17	19	E27	25	E37	13	E47	23
E8	14	E18	20	E28	26	E38	14	E48	24
E9	4	E19	21	E29	27	E39	15	E49	25
E0	5	E20	22	E30	28	E40	16	E50	26

DESCRIPTION	DESIGNATION	+15V	-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	18			8
OSC 4.096 MHz	E21	14			7
CD4068B	E23	14			7
4071B	E27	14			7
CD4095B	E28, E31	14			7
ULN2004A	E30, E33	9			8
4099BE	E32, E33	16			8
7406	E36, E37			14	7
4052B	E38, E39, E40, E41	16			8
DEC8540	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		7
4066B	E5	14			7
324	E4	4			7
339	E1	3			12
7523JN	E5	14			3

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
					00	
1	1		5012399-00	G159	1	
2	2		1000016-00	100.0 MMF 100V 5X200PPH MICA	14	C31,C32,C72-C83
3	3		1000022-00	270.0 MMF 100V 5X200PPH MICA	1	C19
4	4		1010978-36	.1 MFD 50V 10% CER	1	C25
5	5		1001383-00	4700.0 MMF 100V 3X200PPH MICA	2	C15,C16
6	6		1001610-00	.01 MFD 50V +80-20% Z51 CFK	4	C6-C14,C26,C27,C39,C44-C71
7	7		1001631-00	390.0 MMF 100V 5X200PPH 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	4M6.8A71 VZ= 6.8 1% .40W	1	D1
19	19		1105871-00	1/4MS.1A21 = 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		1211180-06	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 6PIN(2X03).250CC HDR	2	J3,J4
26	26		1213335-00	PCB,HEADER 20POS(2X10).100CC 90D	1	J5
27	27	USED FOR S1-S3	1214343-02	SW,PB LT 2PDT 9SEC 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	DIGITAL				
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	P.ROSSMAN	DATE: 09-NOV-78	TITLE PARTS LIST				
							CAPSTAN SERVO				
							DOCUMENT NUMBER				
							SIZE	CODE	NUMBER	REV	
							K	PL	G159-0-DRP	L	
							ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:	FILE NAME:	EDIT #
							ID-UA-G159-0-0		IS-DD-G159-0-0	Z0517L.PLS	28

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PARTS LIST

SHEET A2 OF A3

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,R05,R105
33	33		1300488-00	12.0 K .25 W 5.0 % CC	1	R41
34	34		1313752-00	15.0 K .25 L 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	R11
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	R49,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	4011URNAND GATE-QUAD 2IN C	2	E16,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 GATF-QUAD CMOS	3	E11,E14,E20
76	76		2113635-00	4071B OR GATE-QUAD 2IN CHO	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				G159 J-DBP	L

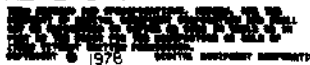
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PARTS LIST

SHEET A3 OF A3

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,8IN	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-G159-0-0		CIRCUIT SCHEMATIC	REF	
94	94	D-MD-5012399-0-0		DRILL AND ETCH DRAWING	REF	

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							CAPSTAN SERVO		K	PL	G:59-0-DBP	L

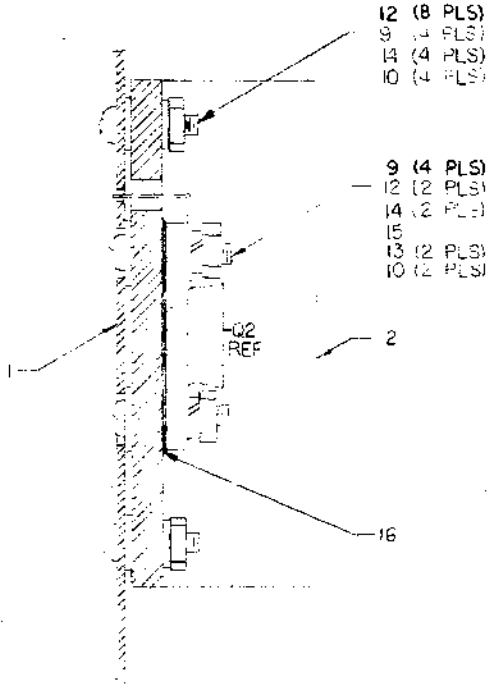


8 7 6 5 4 3 2 1

COMPONENT SIDE VIEW

D UA 5413692-0-0 2

SECTION A-A 2 PLACES

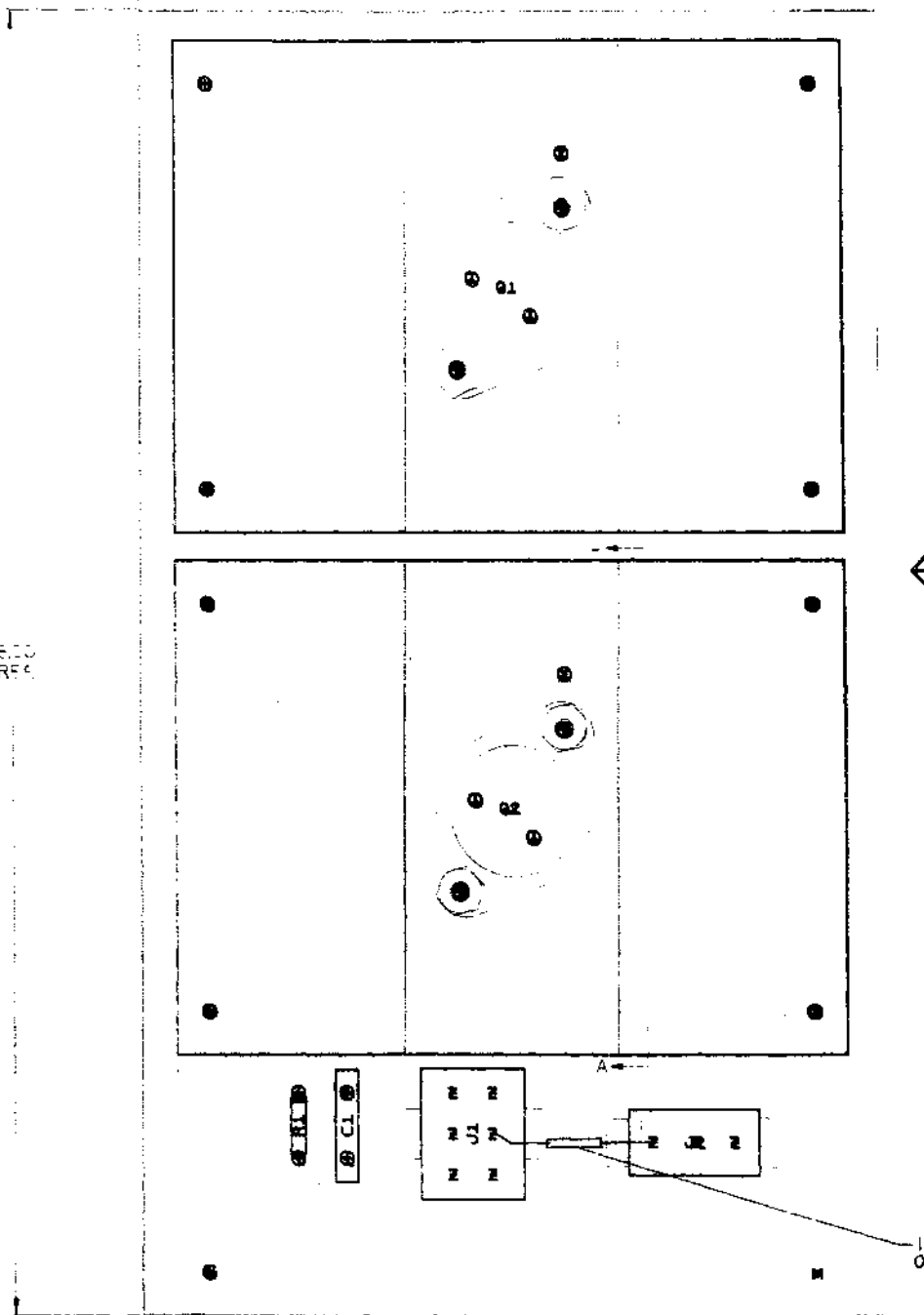


- 12 (8 PLS)
- 9 (4 PLS)
- 14 (4 PLS)
- 10 (4 PLS)

- 9 (4 PLS)
- 12 (2 PLS)
- 14 (2 PLS)
- 15
- 13 (2 PLS)
- 10 (2 PLS)

Q2 REF

16



17 0-1

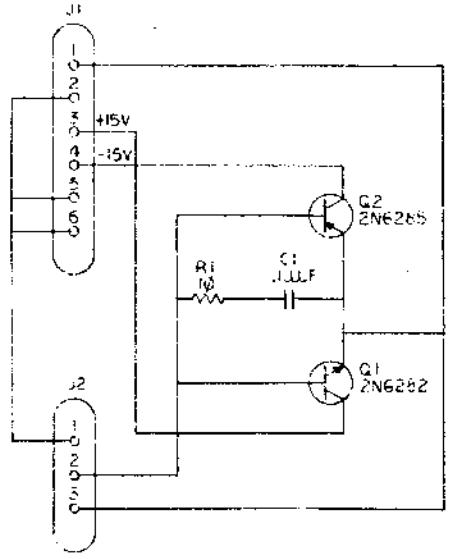
NOTES: THIS BOARD MUST BE UL APPROVED

CHANGE NO	REV	DATE	BY	REASON

SIGNATURES		DATE	digital
DRM. J. Fitzgerald			
CHK'D. J. Beaman		6 NOV 79	TITLE CAPSTAN DRIVER 80.
ENG. B. Kaminich		5/2/77	
PROJ. ENG. B. Kaminich		2/2/77	
PROD. L. Baker		1-17-79	
SCALE 2/1			SIZE CODE NUMBER D UA 5413692-0-0
SHT. 1 OF 4			
NEXT NUMBER REST. 0-0-5413692-0			

8 7 6 5 4 3 2 1 MS# 160437

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REV.	CHG.	BY	DATE
1			
2			
3			
4			
5			
6			
7			
8			

DRN. <i>1/10/68</i>	FIRST USED ON	<i>151</i>
CHK'D <i>1/10/68</i>	TITLE	CAPSTAN DRIVER BOARD
ENG. <i>1/10/68</i>	SIZE	D
PROJ. ENG. <i>1/10/68</i>	CODE	CS
PROD. <i>1/10/68</i>	NUMBER	5413692-0-1
NEXT HIGHER ASSY.	REV.	B
5413692-0	SCALE	
SHEET	OF	DIST.

AUTOMATED BY PRINT SEVER

PARTS LIST

SHEET 01 OF 01

LINE ITEM DOCUMENT NUMBER

DESCRIPTION

QTY PER VARIATION

REFERENCE DESIGNATOR

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
100	5413692	9013691-00	DRILL & FIT CH. BD	1	
101	5413692	9013692-00	HEAT SINK	1	
102	5413692	9013693-00	PNP 150M	1	
103	5413692	9013694-00	PNP 150M	1	
104	5413692	9013695-00	MFD 100V	1	
105	5413692	9013696-00	MATE-N-LOK 6PIN UNIV	1	
106	5413692	9013697-00	MATE-N-LOK 6PIN UNIV	1	
107	5413692	9007793-01	10.0 SCREW PAN, PHIL	1	
108	5413692	9006558-00	NUT, HEX	1	
109	5413692	9006655-00	SCREW PAN, PHIL	1	
110	5413692	9006655-00	SCREW PAN, PHIL	1	
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200	5413692	9006655-00	SCREW PAN, PHIL	1	

REVISION HISTORY

ENG	ECO NUMBER	REV	SECTION A OF A
B.K	5413692-ML001	A	SECTION, VARIATION INDEX

BASIC PART NO: 5413692

DRN: J.FITZGERALD

DATE: 25-SEP-78

CHK'D: P.BOSSMAN

DATE: 08-NOV-78

DATE: 08-NOV-78

DES. ENG.: B.KRASNIK

DATE: 08-NOV-78

DATE: 08-NOV-78

RESP. ENG.: B.KRASNIK

DATE: 25-SEP-78

DATE: 25-SEP-78

MFG. ENG.: P.BARTON

DATE: 08-NOV-78

DATE: 08-NOV-78

ASSEMBLY NUMBER: D-UR-5413692-0-0

TOP DOCUMENT NUMBER: 1511

DATE: 08-NOV-78

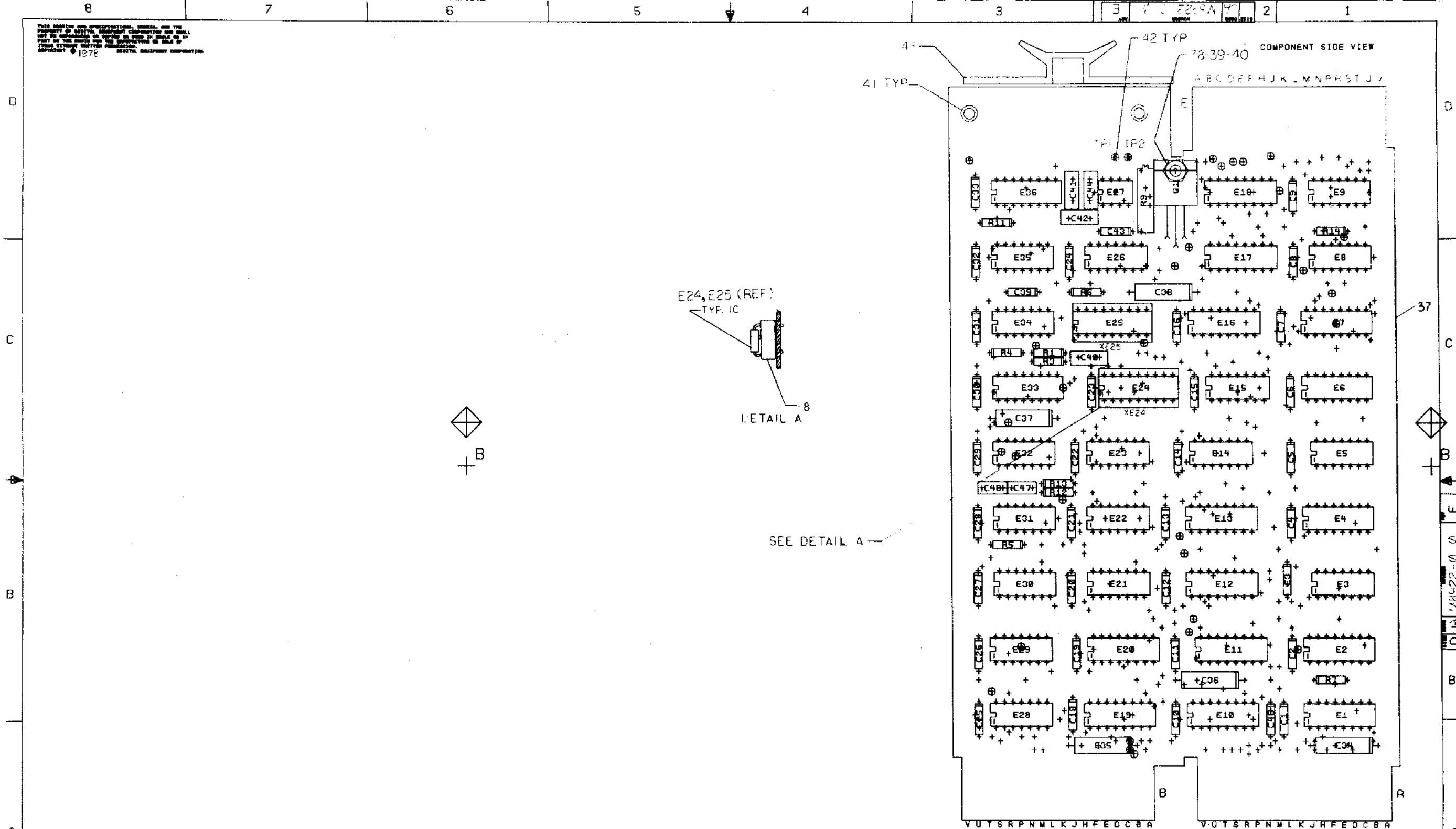
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DOCUMENT NUMBER: 5413692-0-09P

FILE NAME: 203008.PLS

EDIT # 9

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NOTES:

CHANGE NO.	REV.	DATE	BY
MS922-0-001	E	3/27/78	R. CORNEAU

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

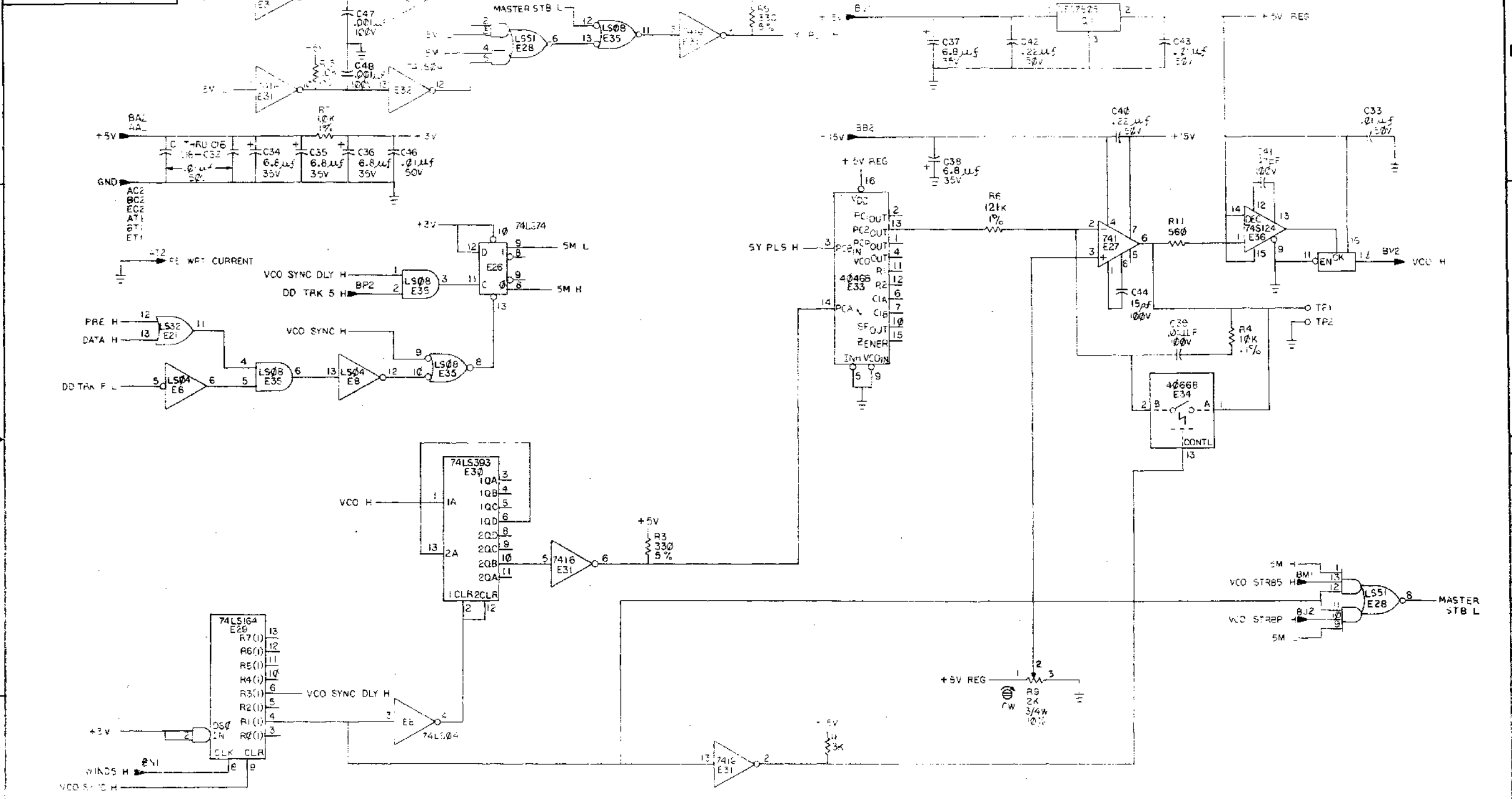
SIGNATURES		DATE
DRN. ANGEL COLON		3/27/78
CHK'D. <i>[Signature]</i>		3/27/78
ENG. <i>[Signature]</i>		
PROD. ENG. <i>[Signature]</i>		
PRD.		
SCALE 2/1	SIZE CODE	NUMBER
SHT. 1 OF 5	D JA MS922-0-0-2 E	
NEXT HIGHER ASSY. B-00-MS922-0		

digital

TITLE BRANCH - LOGIC AND VOP CONTROL

1 MS# 10-4737

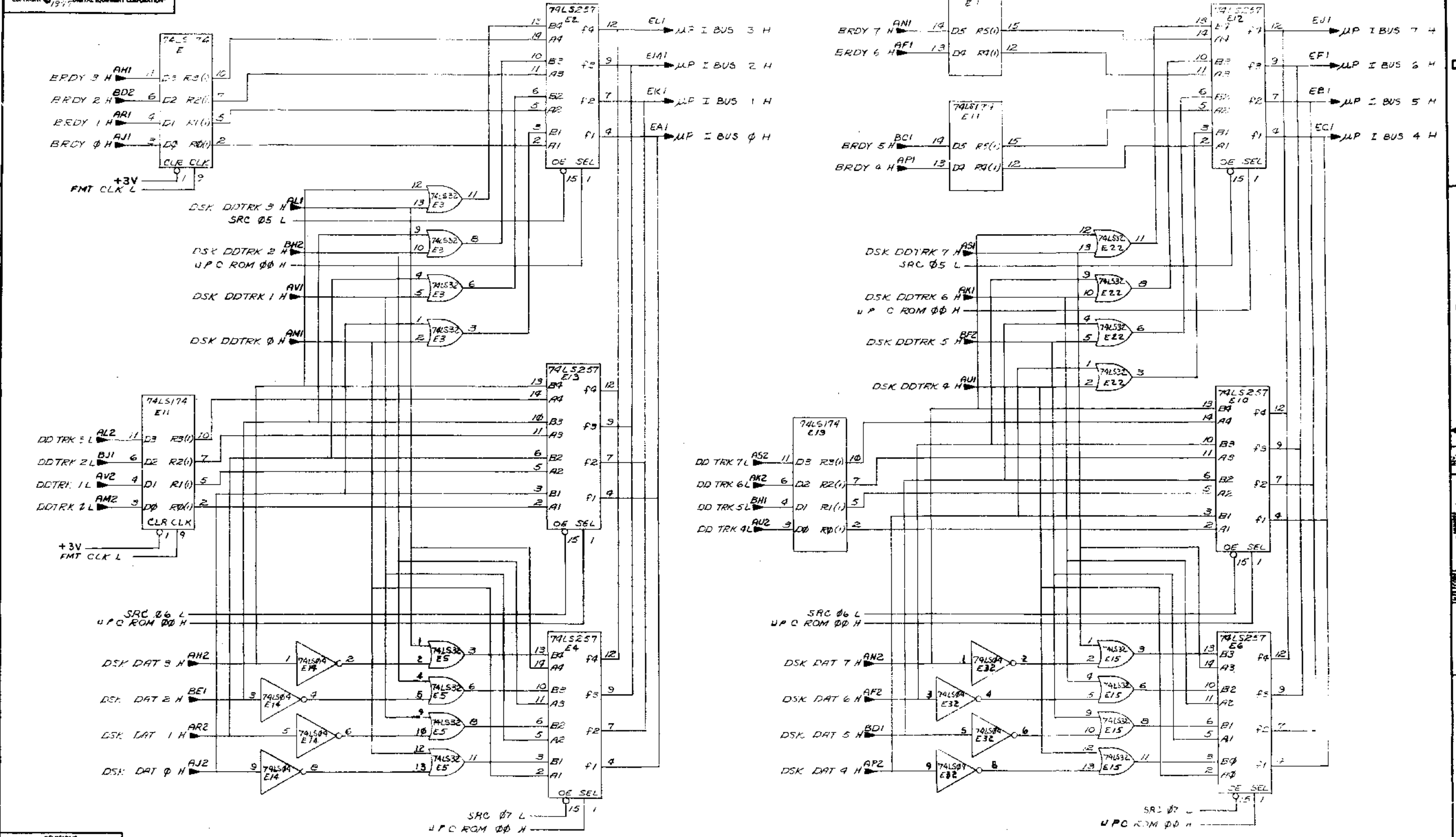
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REV	CHG	CHANGE NO.	DATE	BY
1				
2				
3				
4				
5				

DRN. NO. 00111111	REV. 1	FIRST USED ON	TS11
CHKD. 25	DATE 22 Nov 71	TITLE	BRANCH LOGIC VCC CONTROL
ENG. R. J. ...	DATE 24 ...	PROJ. ENG. ...	
PROD.			
NEXT HIGHER ASSY.			
B-DC-M8922-1	SIZE CODE	NUMBER	
SCALE NONE	D	CS M8922-0-1	
SHEET 1 OF 3	DIST.		

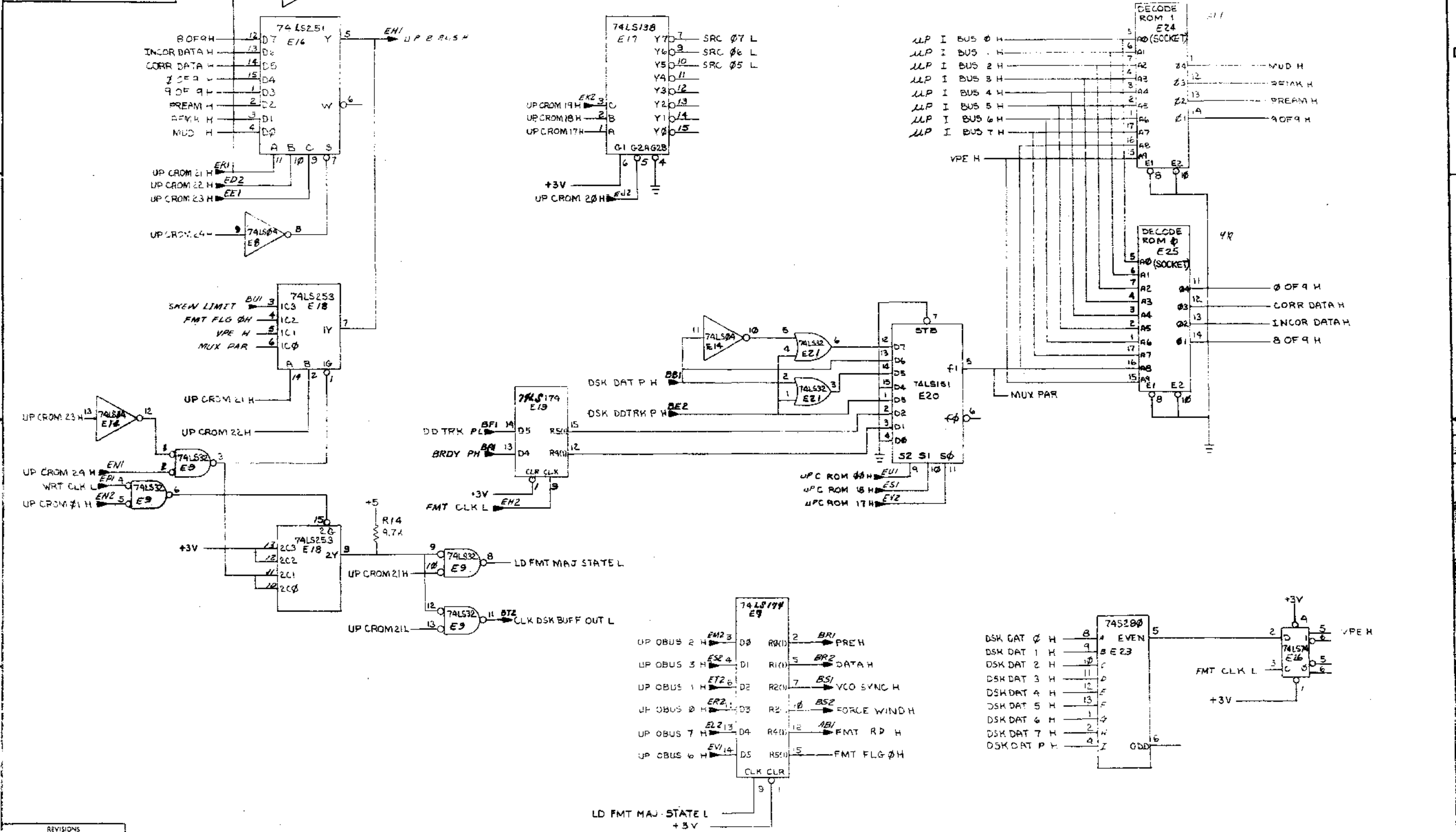
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REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE CODE	NUMBER	REV.
BRANCH LOGIC E VCO CONTROL	D CS	M8922-0-1	E
SCALE NONE	SHEET 2 OF 3	DIST.	

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REVISIONS		
CHK	CHANGE NO.	REV

TITLE	BRANCH LOGIC & VCO CONT	SIZE CODE	DCS	NUMBER	M8922-0-1
SCALE	NONE	SHEET	3 OF 3	DIST.	

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
	37		5012776-00	M8922	1		
			1000011-00	47.0 MMF 100V 5%200PPM MICA	1		C41
			1000042-00	1000.0 MMF 100V 5%200PPM MICA	1		C47, C48
			1001610-00	.01 MFD 50V +80-20% 25V CER	34		C1, C16, C18, C33, C45, C43
			1002427-00	15.0 MMF 100V 5%200PPM MICA	1		C44
			1005305-00	6.8MFD 35V 10% S.TANT	5		C34-C36
			1005784-00	.01 MFD 100V 10% MYLR	1		C39
			1010274-00	.22 MFD 50V +80-20% 25U CER	1		C40, C42
			1211666-00	SKT, IC 18PIN DIP GOLD PLATE	2		XE24, XE25
			1300432-00	3.0 K .25 W 5.0 % CC	1		R1
			1300447-00	4.70 K .25 W 5.0 % CC	1		R14
			1301890-00	560.0 .25 W 5.0 % CC	1		R11
			1302748-00	1.0 K .25 W 1.0 % RN55C-F 5	3		R7, R12, R13
			1303438-00	121.0 K .25 W 1.0 % RN55D-F10	1		R6
			1305431-00	10.0 K .25 W .10% RN55E-B 2	1		R4
			1309143-00	2.0 K .75 W 10.0 % POT	1		R9
			1909928-00	7416 INVERTER GATE-HEX 1I	1		E31
			1910298-00	741 OP AMP GEN PURP. COM	1		E27
			1911573-00	74S280 PARITY GEN/CHKR, 9BIT	1		E23
			1911911-00	DEC 74S124 OSCILLATOR, DUAL VOLT	1		E36
			1912536-00	DEC 7805 VOLT REG, FIX +5V	1		Q1
			1912646-00	LS253 MUX 1 OF 4 (DUAL)	1		E18
			1912647-00	LS257 MUX 1 OF 2 (QUAD)	6		E2, E4, E5, E10, E12, E13
			1912648-00	LS251 MUX 8 INPUT, TRI-STA	1		E16
			1912697-00	LS174 FF-D HEX W/CLEAR	4		E1, E7, E11, E19
			1912803-00	74LS04 INVERTER GATE, HEX	3		E8, E14, E32
			1912805-00	LS08 AND GATE-QUAD 2IN, FO	1		E25
			1912816-00	LS32 OR GATE-QUAD 2IN, POS	6		E3, E5, E9, E15, E21, E22
			1912820-00	LS51 A-O-I GATE 2-WIDE 2I	1		E28
			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						
	R.C. M8922-MLOC1	E	(A) 00						BRANCH LOGIC & VCO CONTROL
			(B)	DES. ENG:	R. ODOM	DATE:	10 NOV 78		
			(C)						
			(D)	RESP. ENG.:	R. ODOM	DATE:	10 NOV 78	DOCUMENT NUMBER	
			(E)						
			(F)					SIZE CODE	NUMBER
			(G)						REV
			(H)	MFG. ENG.:	P. BARTON	DATE:	10 NOV 78	K	PL M8922-G-DBP
			(I)						E
			(J)	ASSEMBLY NUMBER:	D-UA-M8922-0-0	TOP DOCUMENT NUMBER:	TS04	FILE NAME:	00564E.PLS
			(K)						EDIT #
			(L)						23

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AUTOMATED BY PRTLST.1D(10)

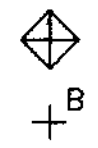
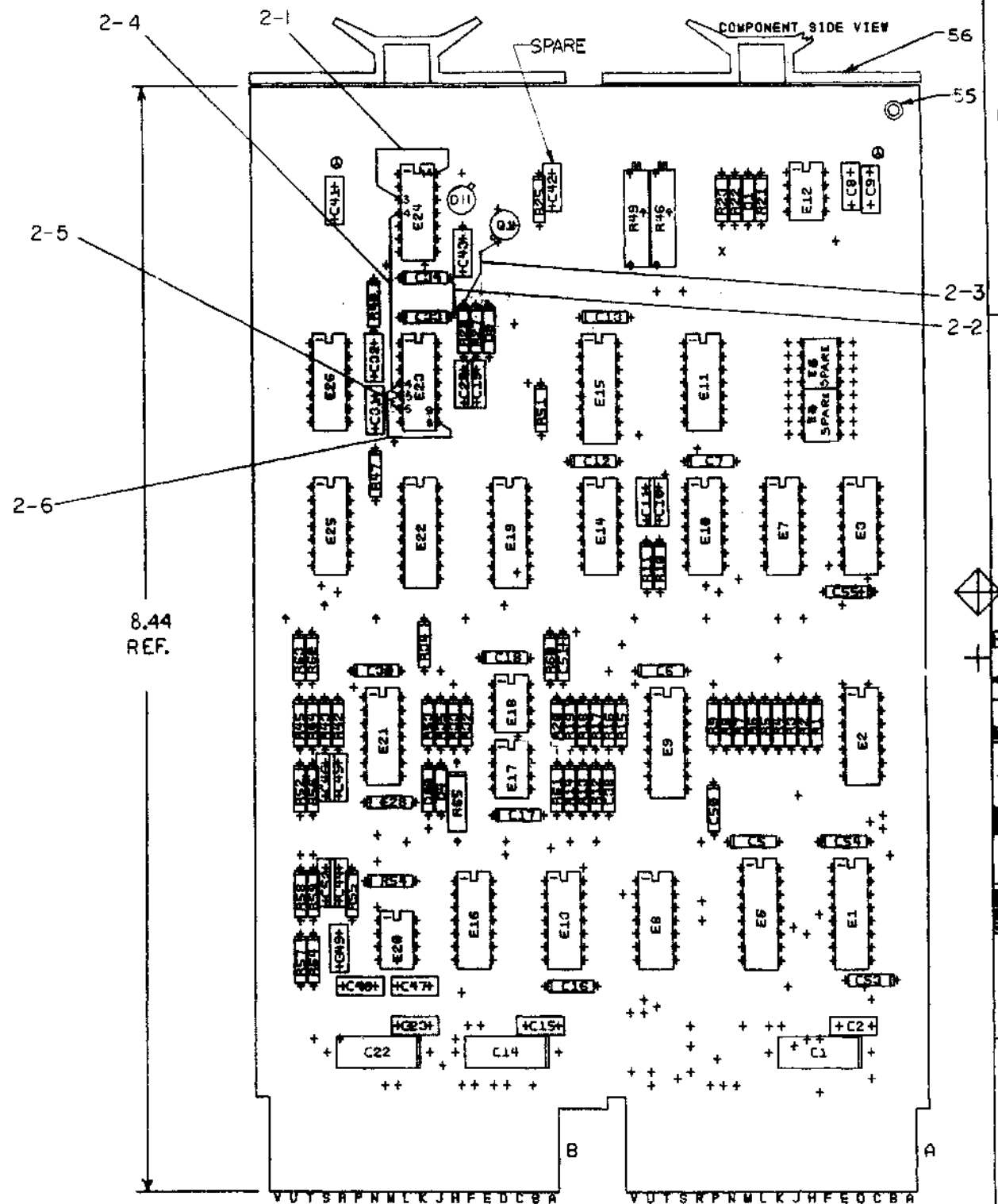
PARTS LIST

SHEET A2 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
41	30		1912842-00	LS138 DECODER-THREE INPUT,	1	E17
42	31		1912844-00	LS151 MUX 1 OF 8 & DATA	1	E20
43	32		1912850-00	LS164 SHIFT REG. 8BIT SERI	1	E29
44	33		1914451-00	74LS393 COUNTER, BINARY, 4BIT	1	E30
45	34		2113625-00	40468 PHASE-LOCKED LOOP	1	E33
46	35		2113632-00	40668 BILATERAL SWITCH-QUA	1	E34
47	44		23383F1-00	F1-01	1	E25
48	45		23384F1-00	F1-01	1	E24
49	39		9006009-04	SCREW, BIND, SLOT 4-40X 1/4 SS	1	
50	39		9006556-00	NUT, HEX 4-40X1/4 AF X 3/	1	
51	40		9006688-00	WASHER, LOCK, S.S. #4	1	
52	41		9006732-00	EYELET, ROLL FLANGE .12100X .219	2	
53	42		9006735-00	EYELET, FUNNEL FLANGE .059 00 X	2	TP1, TP2
54	43		9008337-06	HANDLE, FLIP CHIP, MAGENTA	1	
55	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 & VCG CONTROL		K	PL	MS922-0-02F	E

1978

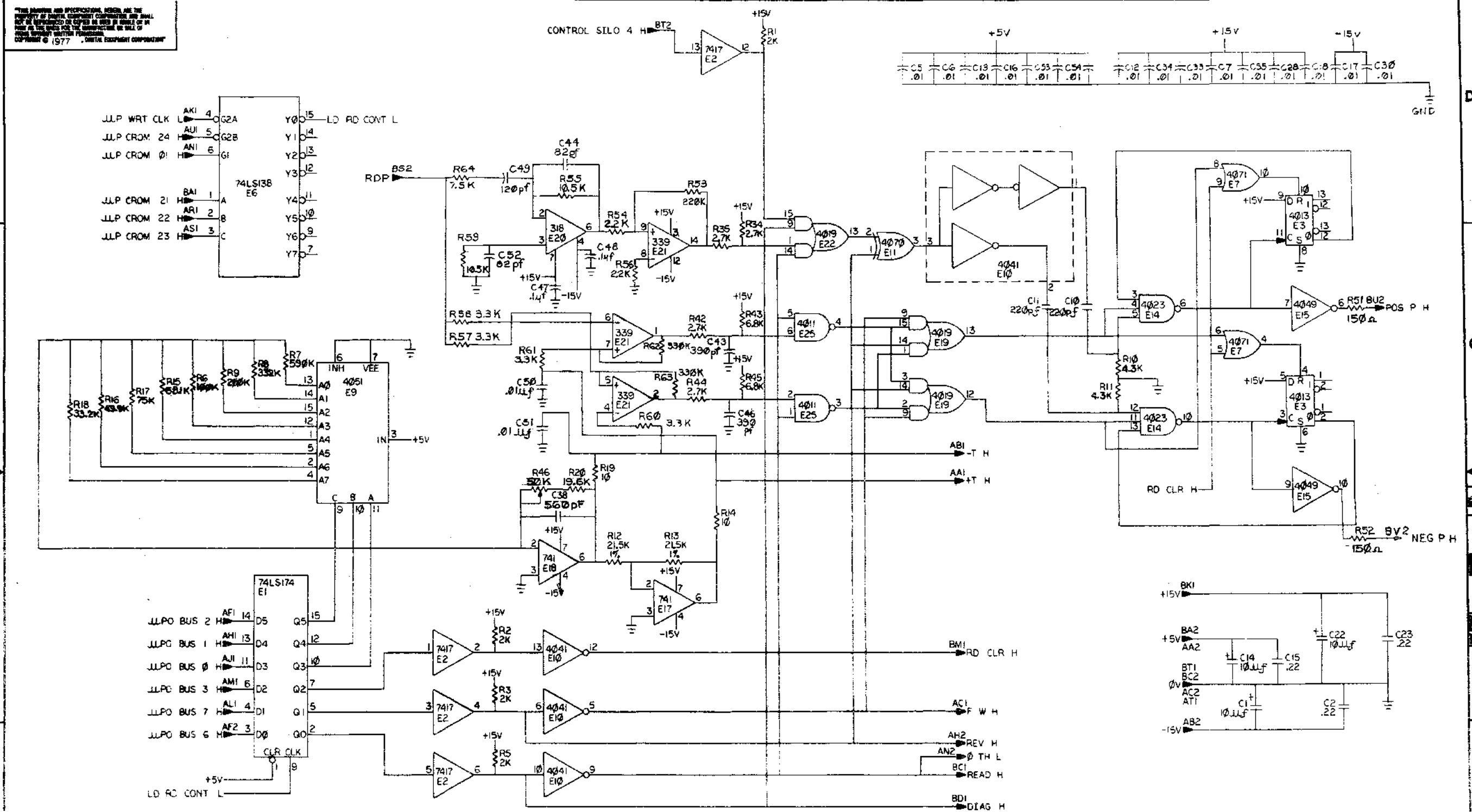


NOTES:

CHANGE NO	REV	DATE	BY	CHK'D
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4	F	11/14/77	MLG	MLG
5	F	11/14/77	MLG	MLG
6	F	11/14/77	MLG	MLG
7	F	11/14/77	MLG	MLG
8	F	11/14/77	MLG	MLG

SIGNATURES		DATE	digital
DRN. D. DINGELDEIN		11/14/77	
CHK'D. J. J. J.		11/14/77	TITLE READ CONTROL
ENG. J. J. J.		11/14/77	
PROJ. ENG. J. J. J.		11/14/77	SIZE CODE NUMBER
PROD. J. J. J.		11/14/77	
SCALE 1/1		REV	D UA M8923-0-4 H
SHT. 1 OF 2		1	
NEXT WORK PLAN 11-00-11823-0			

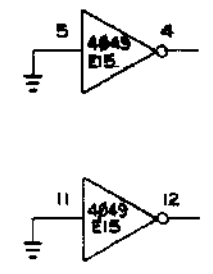
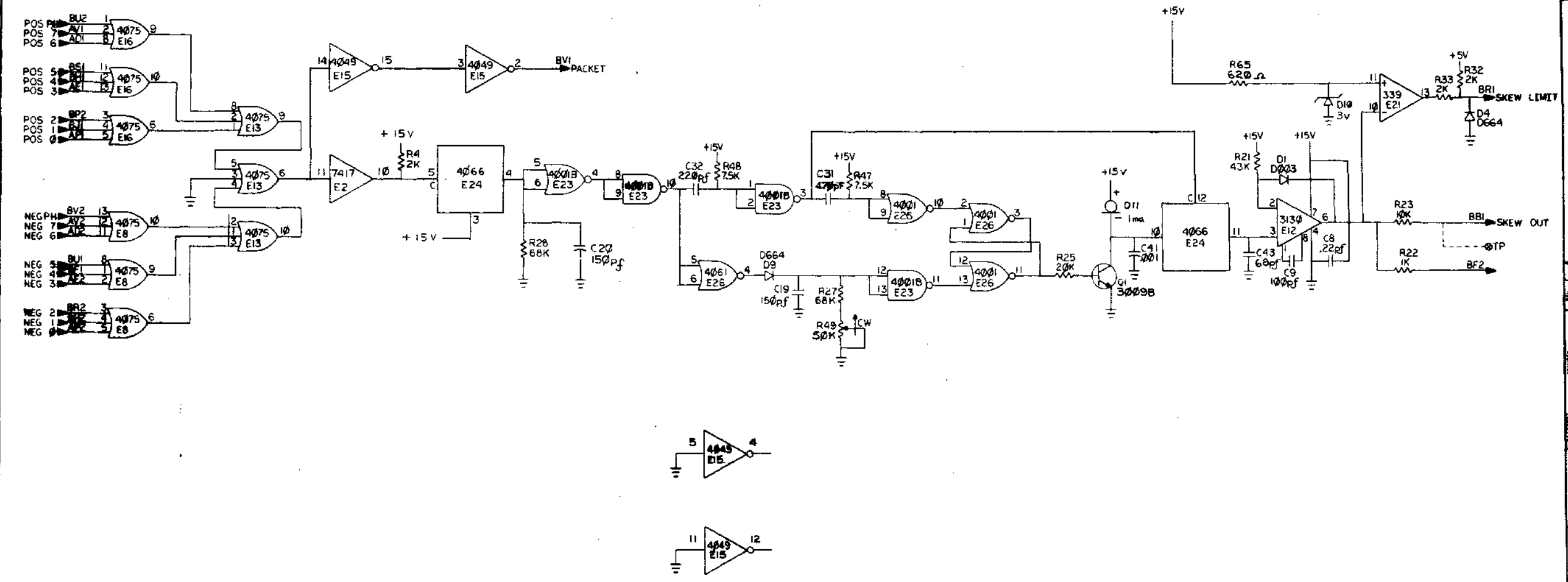
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REV.	CHANGES	NO.	DATE	BY	CHK'D
1	MILGOMIA	E			
2	J. ROLLINS				
3					
4					
5					
6					
7					

DRW: <i>[Signature]</i>	FIRST USED ON: TS04
CHK'D: <i>[Signature]</i>	TITLE: READ CONTROL
ENG. H. F. ...	PROJ. ENG. H. ...
NEXT HIGHER ASSY: B-00-M8923-0	SIZE CODE: DCS
SCALE: 1	NUMBER: M8923-0-1
SHEET: 1 OF 2	DIST.

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REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	TS04	SIZE CODE	NUMBER	REV.
READ CONTROL		D/CS	M8923-0-1	
SCALE	SHEET 2 OF 2	DIST.		

M8923-0-1

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
1		D-CS-M8923-0-1		READ CONTROL	REF		
2		D-UA-M8923-0-0		READ CONTROL	REF		
3		B-DD-M8923-0-0		READ CONTROL	REF		
4		D-MD-5012847-0-0		DRILL & ETCH DRAWING	REF		
5			5012847-00	M8923	1		
6			1000014-00	68.0 MMF 100V 5%200PPM MICA	1		C43
7			1000016-00	100.0 MMF 100V 5%200PPM MICA	1		C9
8			1000019-00	150.0 MMF 100V 5%200PPM MICA	1		C19, C20
9			1001610-00	.01 MFD 50V +80-20% Z5U CER	17	CONT	C5, C5, C7, C12, C13, C16-C18, C28, C30, C33, C34, C50, C51, C53-C55
10			1004813-00	10 MFD 20V 10% S.TANT	3		C1, C14, C22
11			1010274-00	.22 MFD 50V +80-20% Z5U CER	4		C2, C8, C15, C23
12			1100100-00	D 003 TR= 50NS PIV= 25V GN	1		D1
13			1100114-00	D 664 Q5\75PCB PIV= 25V SP	1		D4, D9
14			1300365-00	1.0 K .25 W 5.0 % CC	1		R22
15			1300426-00	2.70 K .25 W 5.0 % CC	3		R35, R42, R44
16			1300479-00	10.0 K .25 W 5.0 % CC	1		R23
17			1301317-00	10.0 K .25 W 5.0 % CC	2		R14, R19
18			1301327-00	68.0 K .25 W 5.0 % CC	2		R27, R28
19			1301422-00	7.50 K .25 W 5.0 % CC	2		R48, R47
20			1301423-00	6.80 K .25 W 5.0 % CC	2		R34, R43, R45
21			1302388-00	2.0 K .25 W 5.0 % CC	7		R1-R5, R32, R33
22			1302391-00	20.0 K .25 W 5.0 % CC	1		R25
23			1305336-00	200.0 K .25 W 1.0 % RN55D-F10	1		R9
24			1303155-00	21.50 K .25 W 1.0 % RN55D-F10	2		R12, R13
25			1313344-00	75.0 K .25 W 1.0 % RN55D-F10	1		R17
26			1305252-00	68.10 K .25 W 1.0 % RN55D-F10	1		R15
27			1303044-00	100.0 K .25 W 1.0 % RN55D-F10	1		R6
28			1309143-09	*** THIS ITEM IS NOT USED ***	1		
29			1309143-13	50.0 K .75 W10.0 % POT	2		R49, R46

REVISION HISTORY		BASIC PART NO: M8923		DRN: P.KENDRICH		DATE: 20-SEP-78		D I G I T A L	
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D:	T.QUILLIN	DATE:	20-SEP-78	TITLE PARTS LIST	
M.F.	M8923-M1001	E	SECTION VARIATION INDEX	DES.ENG:	J.ROLLINS	DATE:	20-SEP-78	DOCUMENT NUMBER	
RN	M8923-M1002	F	(A) 00	RESP.ENG.:	J.ROLLINS	DATE:	20-SEP-78	SIZE	CODE
DJ	M8923-M1003	H	(B)	MFG.ENG.:	P.BARTON	DATE:	20-SEP-78	K	PL
			(C)	ASSEMBLY NUMBER:	D-UA-M8923-0-0	TOP DOCUMENT NUMBER:	T504	FILE NAME:	21482H.PLS
			(D)					EDIT #	12
			(E)						
			(F)						
			(G)						
			(H)						
			(I)						
			(J)						
			(K)						
			(L)						
			(M)						
			(N)						

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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 % RN55D-F10	1		R18
31	31		1301732-00	620.0 .50 W 5.0 % CC	1		R65
32	32		1305427-00	590.0 K .25 W 1.0 % RN55D-F10	1		R7
33	33		1312985-00	332.0 K .25 W 1.0 % RN55D-F10	1		R8
34	34		1312988-00	49.90 K .25 W 1.0 % RN55D-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	4013B FF-D DUAL W/SET/RESE	1		E3
45	45		2113612-00	4019B 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 CMOS	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	1N 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 % RN55D-F10	1		R64
67	67		1312987-00	10.50 K .25 W 1.0 % RN55D-F10	1		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	1		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	3		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 % RN55D-F10	1		R20
77	77		1305265-00	*** THIS ITEM IS NOT USED ***			

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

AUTOMATED BY PRTLST.2E(3)

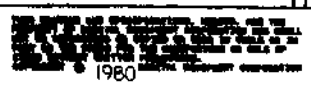
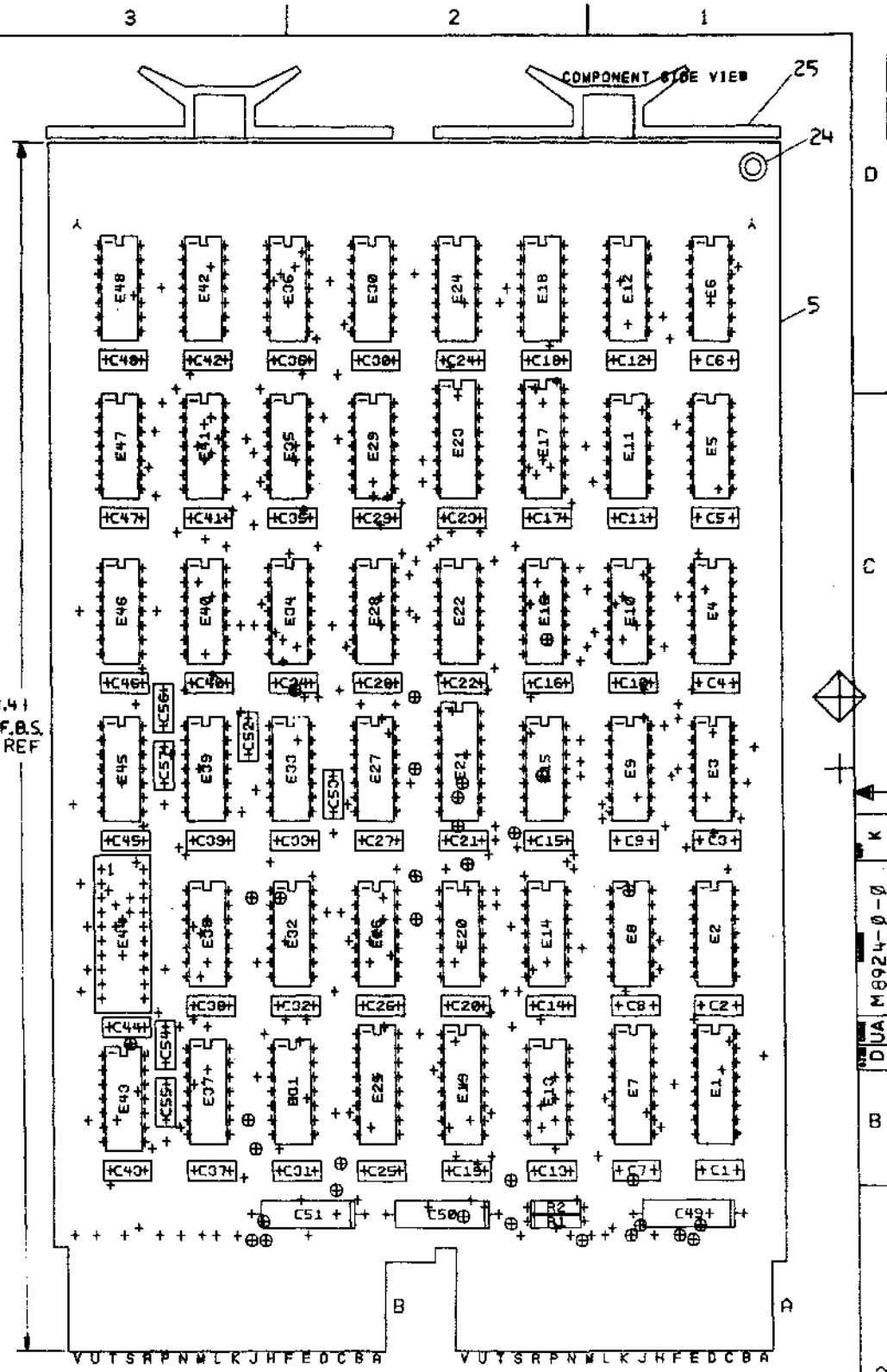
PARTS LIST

SHEET A3 OF A3

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
78	78		1000025-03	560.0 MMF 100V 5%200PPM MICA	1		C38
79	79		1000024-03	470.0 MMF 100V 5%200PPM MICA	1		C31
80	80		2116333-00	4001BE NOR GATE-QUAD 2IN C	1		E23

81 NOTE: USED ON:OPTION/MODEL T504

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							READ CONTROL		K	PL	MB923-0-DBP	H



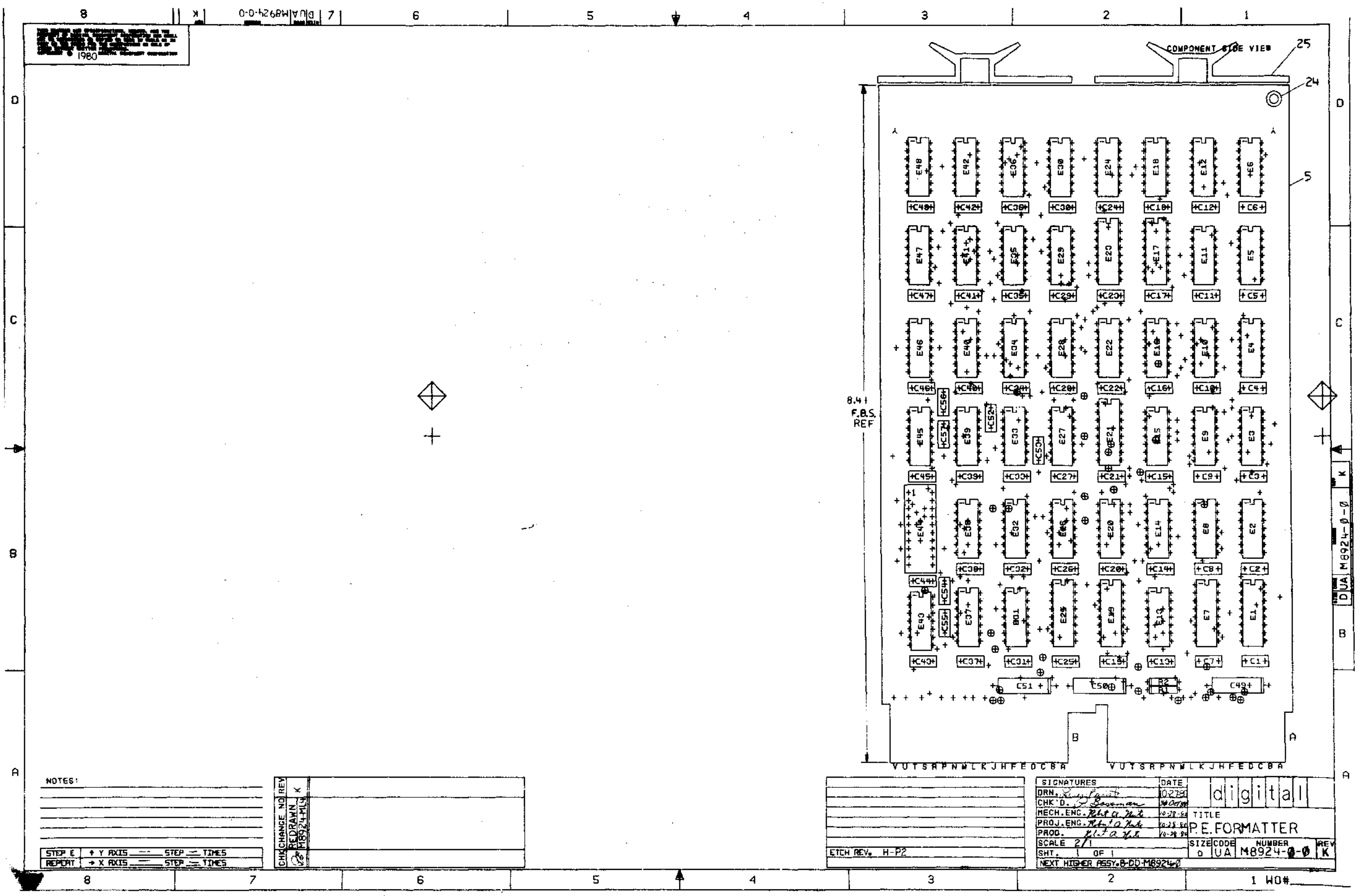
NOTES:

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

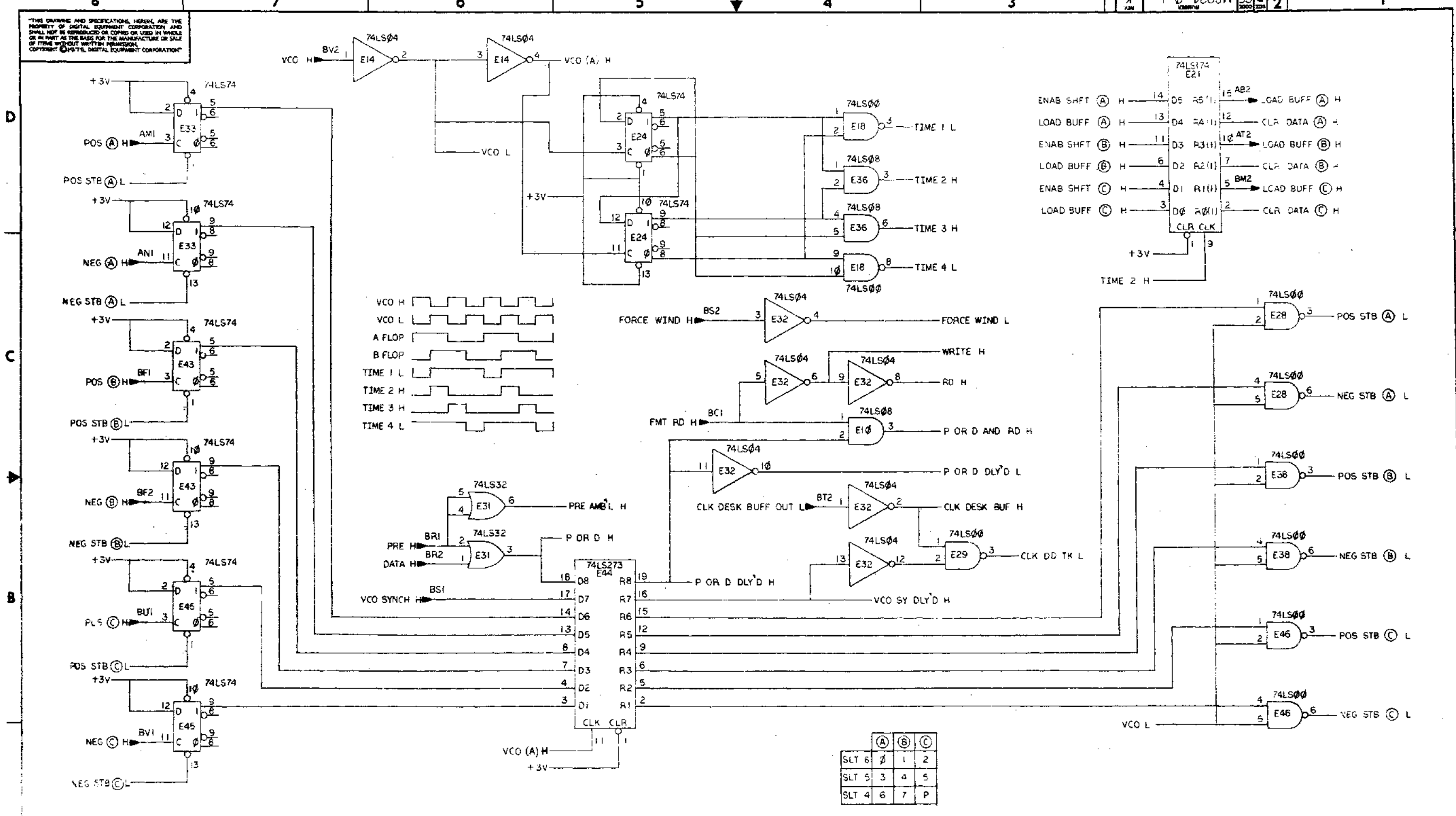
CHK CHANGE NO	REV
REDRAWN	K
DATE	
BY	

ETCH REV. H-P2

SIGNATURES		DATE	
DRN. <i>[Signature]</i>	02/23/80	digital	
CHK'D. <i>[Signature]</i>	02/23/80		
MECH. ENG. <i>[Signature]</i>	02/23/80	TITLE	
PROJ. ENG. <i>[Signature]</i>	02/23/80	P.E. FORMATTER	
PROD. <i>[Signature]</i>	02/23/80		
SCALE 2/1	SIZE CODE	NUMBER	REV
SHT. 1 OF 1	0 UA	M8924-0-0	K
NEXT HIGH-PER. ASSY. B-DD-M8924-0			



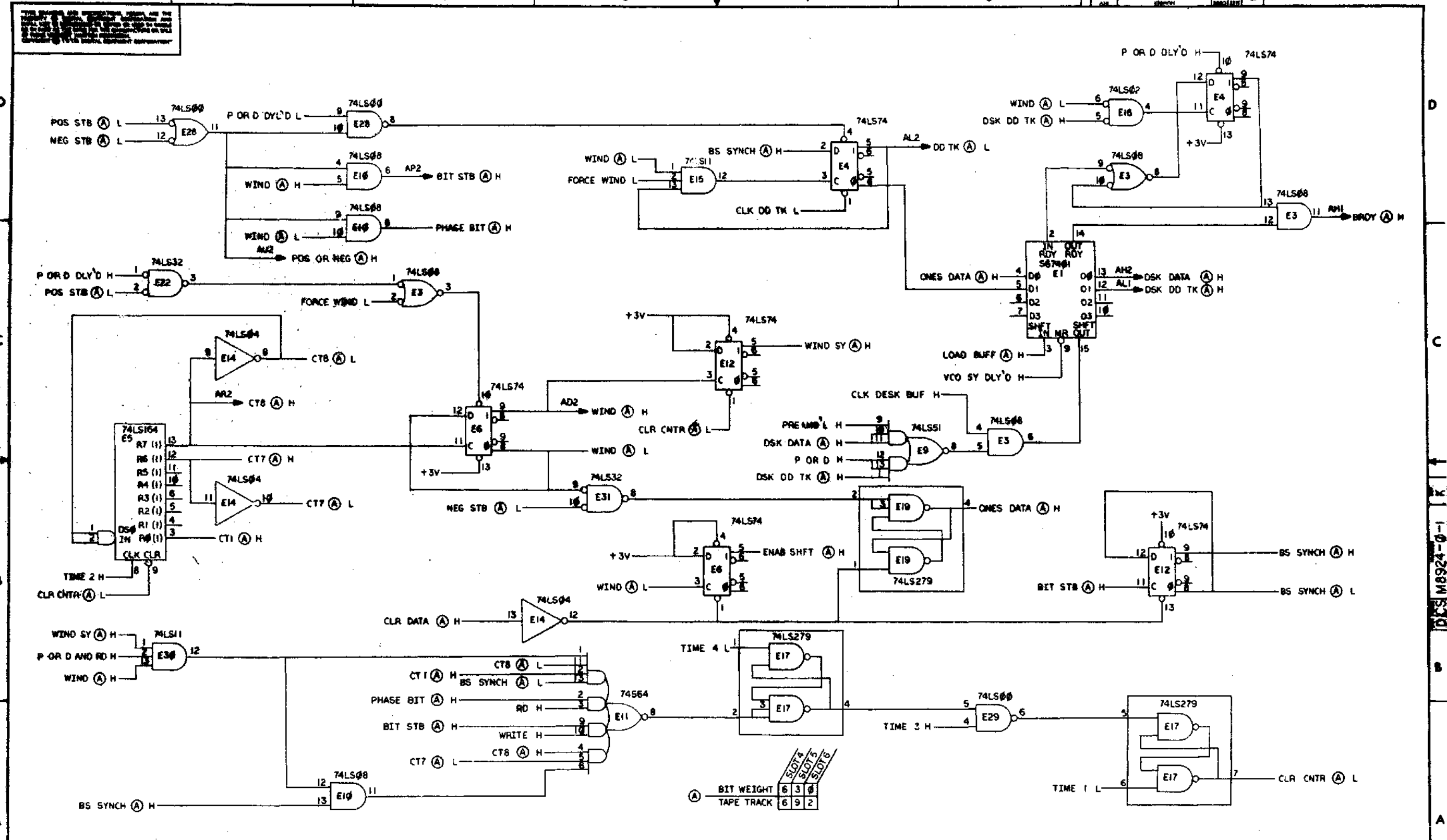
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REV.	CHANGES	BY	DATE
1			
2			
3			
4			
5			
6			
7			
8			

CHK'D	3-2-78	FIRST USED ON	TS04
ENG.	3-2-78	TITLE	P. E. FORMATTER
PROD. ENG.	3-5-78	NUMBER	M8924-0-1
PROD. ENG.	3-5-78	REV.	K
NEXT HIGHER ASSY.		SCALE	NONE
		SIZE	D
		DIST.	

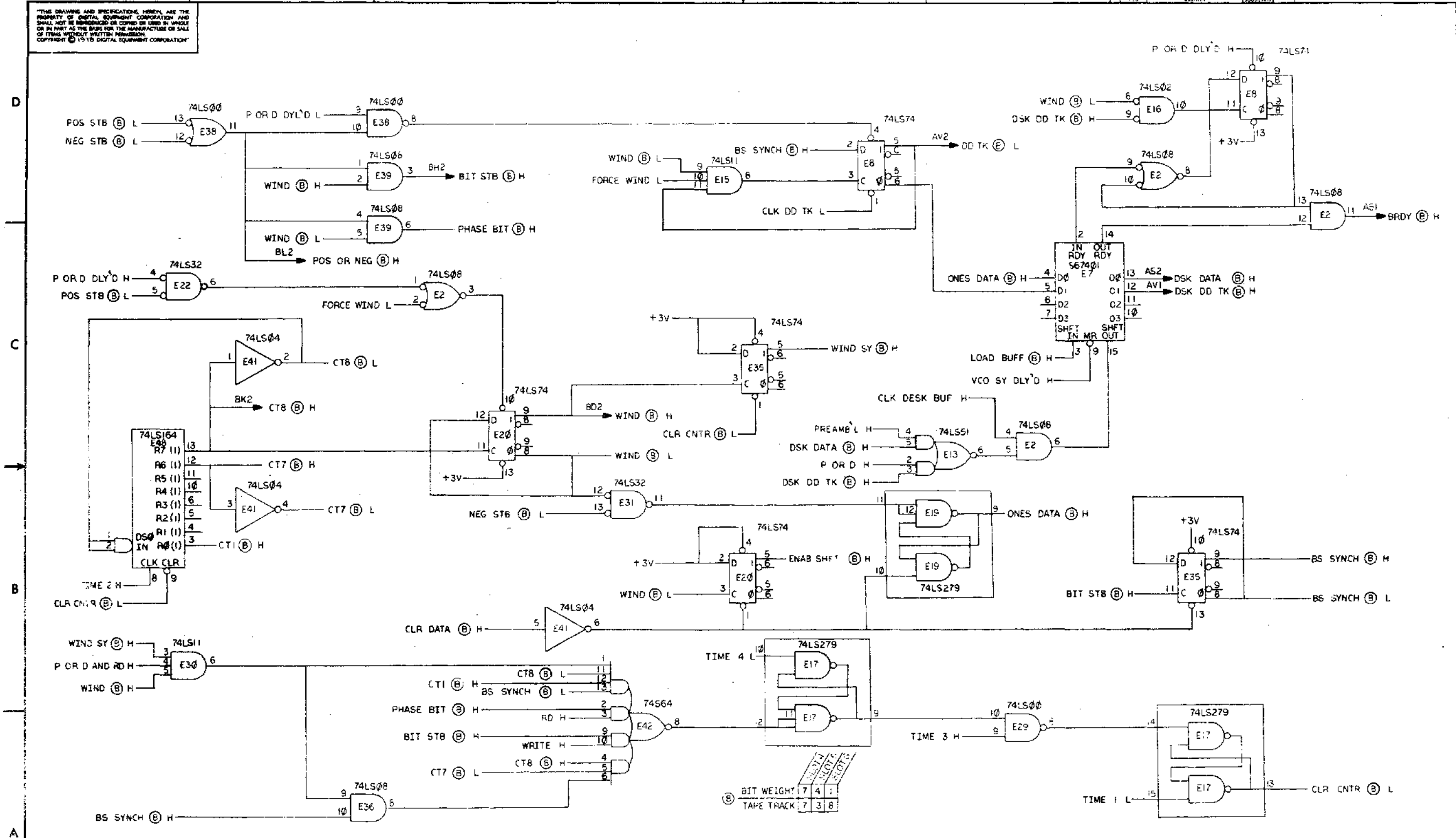
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REVISIONS		
CHK	CHANGE NO.	REV.

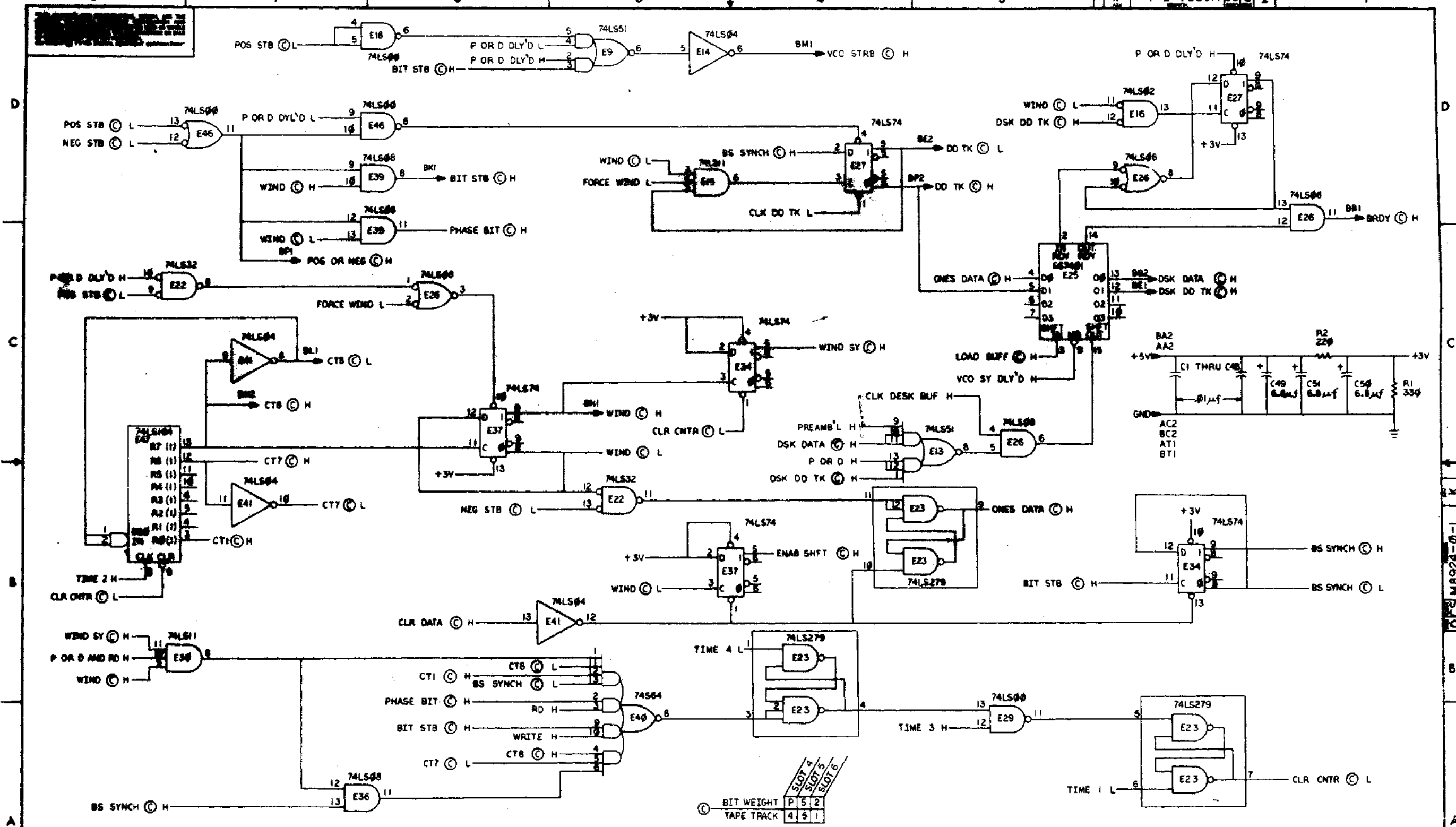
TITLE	P. E. FORMATTER	SIZE/SCALE	D. C.	NUMBER	M8924-0-1	REV.	K
SCALE	NONE	SHEET 2 OF 4		DIST.			

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DCS M8924-0-1

REVISIONS		
CHK	CHANGE NO.	REV.



BIT WEIGHT	P	5	2
TAPE TRACK	4	5	1

AUTOMATED BY PRTLST.1D(3)

PARTS LIST

SHEET A1 OF A1

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
					00	
1	1	D-CS-M8924-0-1		CIRCUIT SCHEMATIC	REF	
2	2	D-UA-M8924-0-0		UNIT ASSY	REF	
3	3	B-DD-M8924-0-0		DWG DIRECTORY	REF	
4	4	D-MU-5011956-0-0		DRILL & ETCH DWG	REF	
5	5		5011956-00	M8924	1	
6	6		1001610-00	.01 MFD 50V +80-20% 25U CER	48	C1-C48
7	7		1005306-00	6.8MFD 35V 10% S.TANT	3	C49-C51
8	8		1300271-00	220.0 .25 W 5.0 % CC	1	R2
9	9		1300295-00	330.0 .25 W 5.0 % CC	1	R1
10	10		1910542-00	74S64 A-0-I GATE 4-2-3-2	3	E11,E40,E42
11	11		1912697-00	LS174 FF-D HEX W/CLEAR	1	E21
12	12		1912799-00	LS00 NAND-GATE-QUAD 2IN,P	5	E18,E28,E29,E38,E46
13	13		1912801-00	LS02 NOR-GATE-QUAD 2IN	1	E16
14	14		1912803-00	774LS04 INVERTER GATE, HEX	3	E14,E32,E41
15	15		1912805-00	LS08 AND GATE-QUAD 2IN,PO	6	E2,E3,E10,E26,E36,E39
16	16		1912808-00	LS11 AND GATE-TRIPLE 3IN	2	E15,E30
17	17		1912816-00	LS32 OR GATE-QUAD 2IN,POS	2	E22,E31
18	18		1912820-00	LS51 A-0-I GATE 2-WIDE 2I	2	E9,E13
19	19		1912824-00	LS74 FF-D DUAL,EDGE TRIGG	13	E4,E6,E8,E12,E20,E24,E27, E33-E35,E37,E43,E45
						CONT
20	20		1912850-00	LS164 SHIFT REG. 8BIT SERI	3	E5,E47,E48
21	21		1912863-00	LS273 FF-D OCTAL W/CLEAR	1	E44
22	22		1912864-00	LS279 LATCH,QUAD-S-R	3	E17,E19,E23
23	23		1914768-01	FIFO, SLOW (67401)	3	E1,E7,E25
24	24		9006732-00	EYELET, ROLLED FLANGE, .121 OD X	4	
25	25		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
26	26		9105740-55	*** THIS ITEM IS NOT USED ***	-	
27	27		1000023-00	330.0 MMF 100V 5Z200PPM MICA	6	C52-C57
28	28	D-EC-5011956-0-0		ETCH CUT DRAWING	REF	

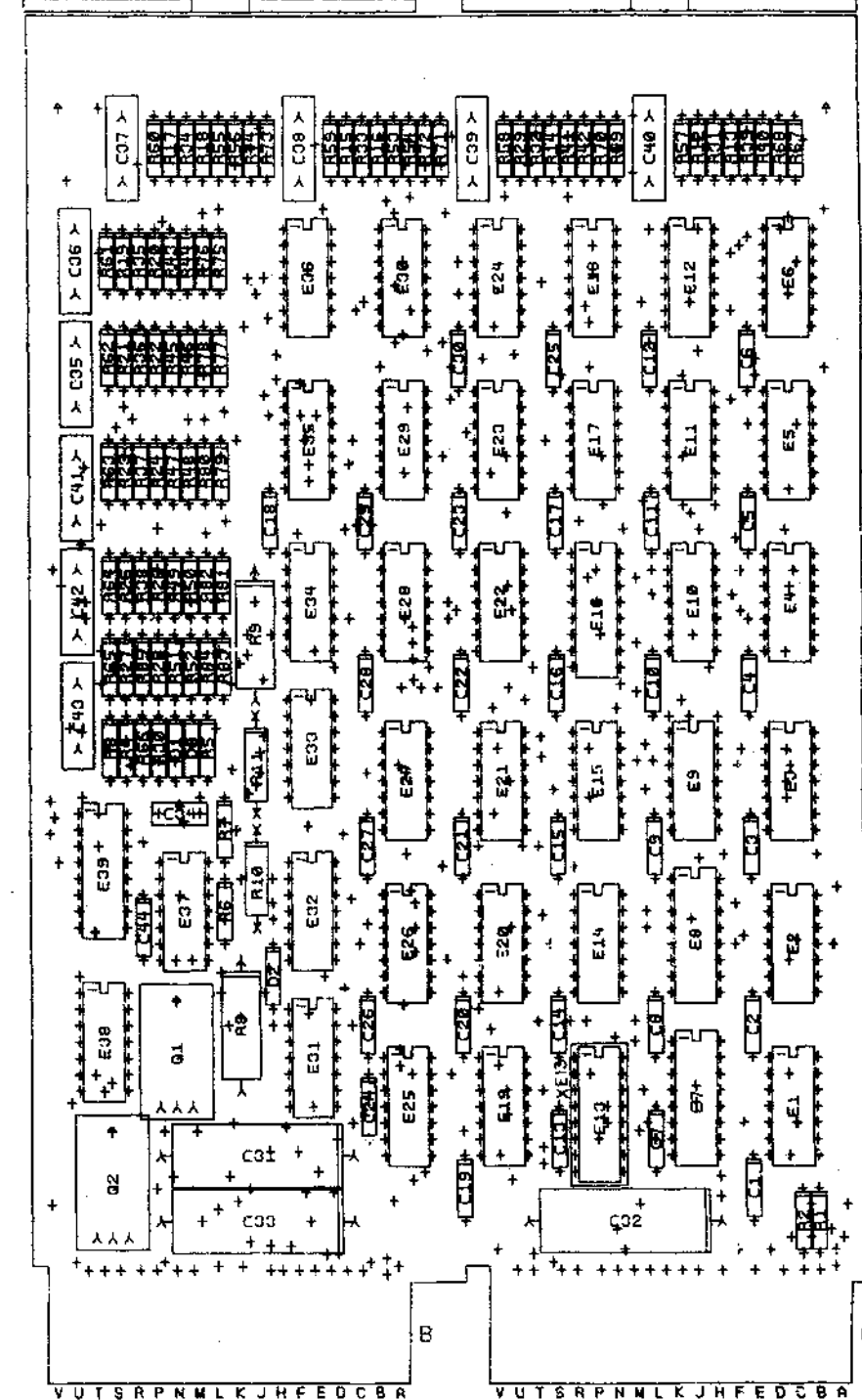
REVISION HISTORY		BASIC PART NO: M8924		DRN:	J.ROGERS	DATE:	30-DEC-77	D I G I T A L			
ENG!	ECO NUMBER	REV	SECTION A OF A	CHK'D:	H.RICHER	DATE:	13-JUL-78	TITLE PARTS LIST			
---	INIT	E	SECTION VARIATION INDEX	DES.ENG:	R.CORNEAU	DATE:	13-JUL-78	DOCUMENT NUMBER			
J.R.	M8924-ML001	F	[A] 00	RESP.ENG.:	R.DDOM	DATE:	13-JUL-78	SIZE	CODE	NUMBER	REV
BK	M8924-ML003	J	[B]	MFG.ENG.:	P.BARTON	DATE:	13-JUL-78	K	PL	M8924-0-DBP	K
R.N.	M8924-ML004	K	[C]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:		EDIT #	
			[D]	D-UA-M8924-0-0		#B-DD-M8924-0		Z0288K.PLS		22	
			[E]								
			[F]								
			[G]								
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D/UA M8929-0-0

COMPONENT SIDE VIEW



NOTES:

STEP E	+ Y AXIS	0	STEP 0 TIMES
REPEAT	+ X AXIS	0	STEP 1 TIMES

CHANCE NO	REV
REVISED	
PROGRAM	
IN LOG	

ETCH REV.	D
-----------	---

SIGNATURES		DATE	
DRN. J. RICHARD		5-31-78	digital
CHK'D		6-1-78	
RECH. ENG. R. CORREIA		6-2-78	
PROJ. ENG. R. CORREIA		6-2-78	
SCALE 2/1		6-2-78	
TITLE			WRITE CONTROL
SHT. 1 OF 3	SIZE CODE	NUMBER	REV
	D/UA	M8929-0-0	F
NEXT HIGHER REV. B-DD-M8929-0			

D/UA M8929-0-0

digital

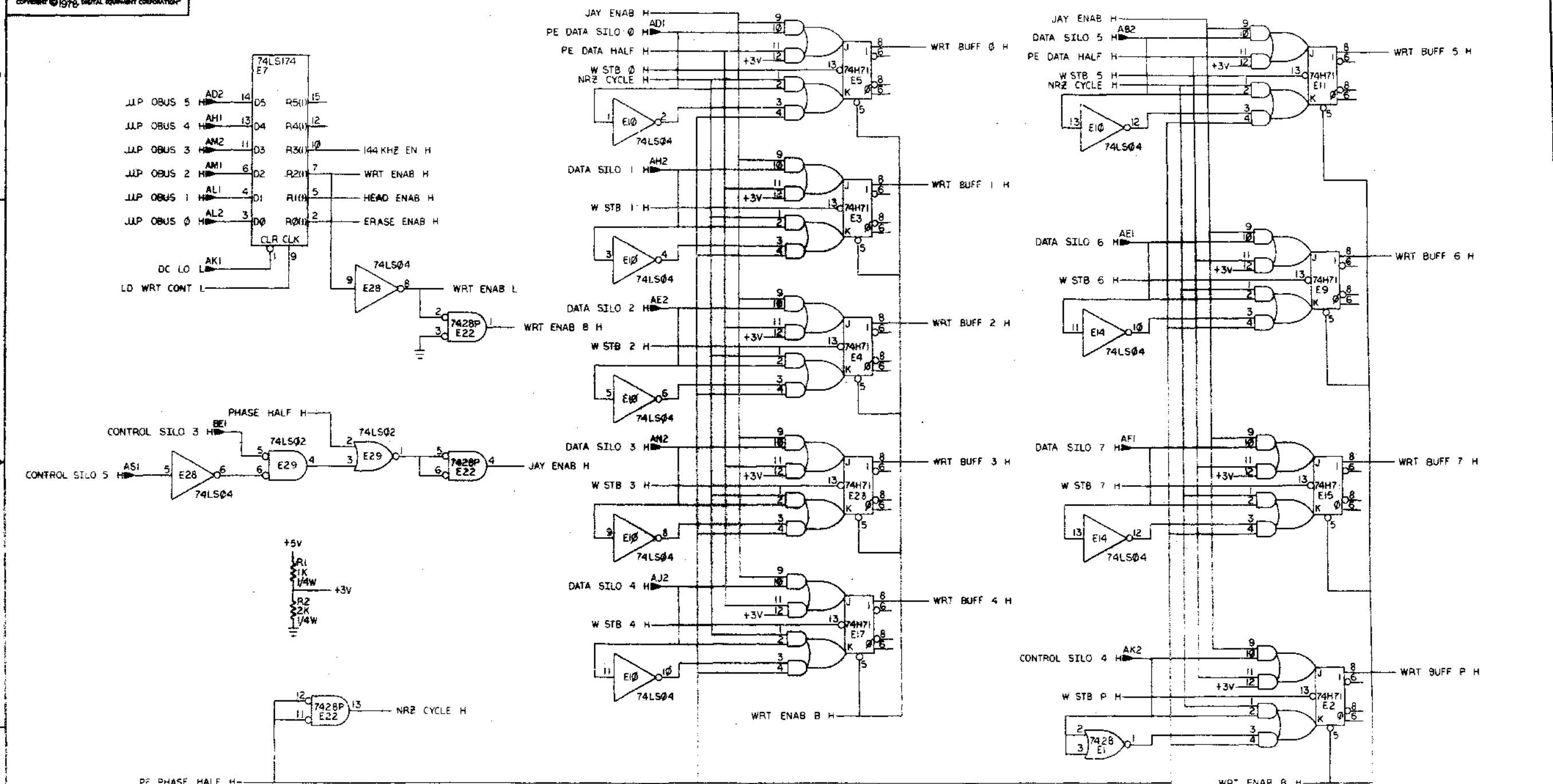
WRITE CONTROL

SIZE CODE NUMBER REV

D/UA M8929-0-0 F

1 MS#

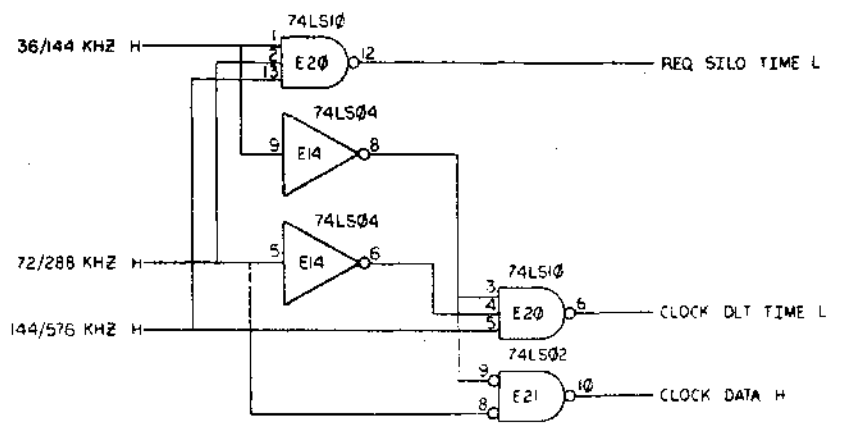
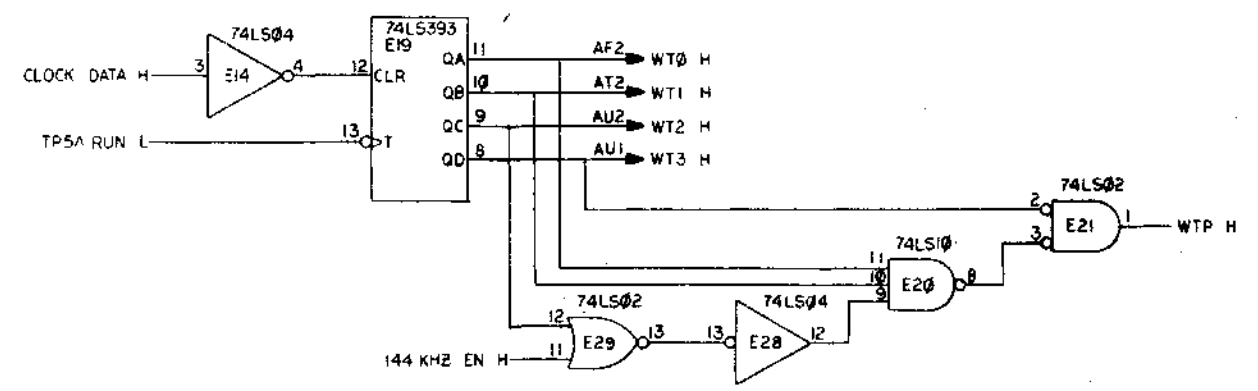
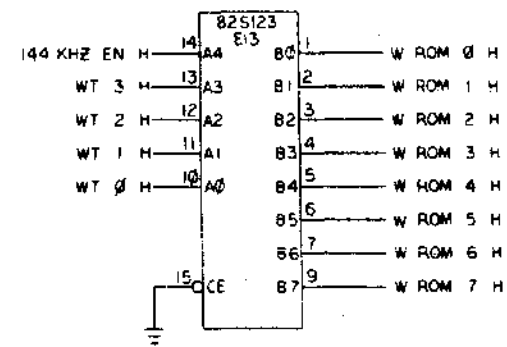
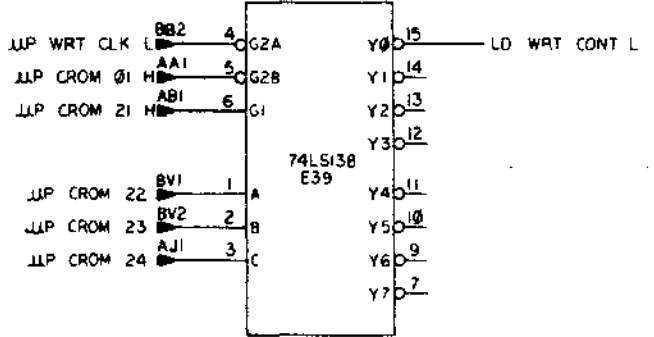
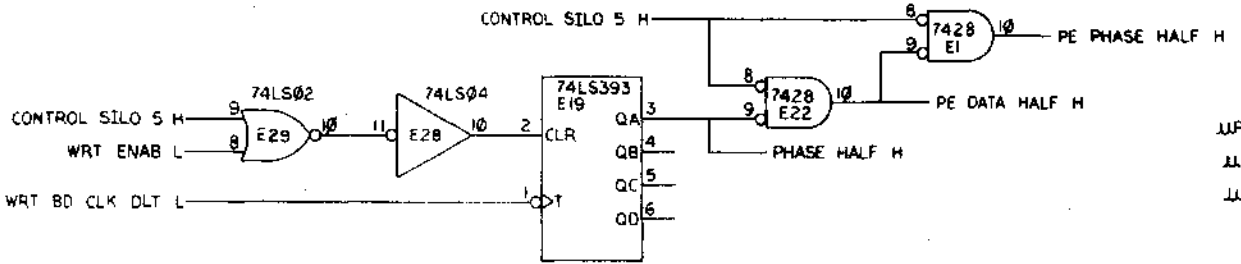
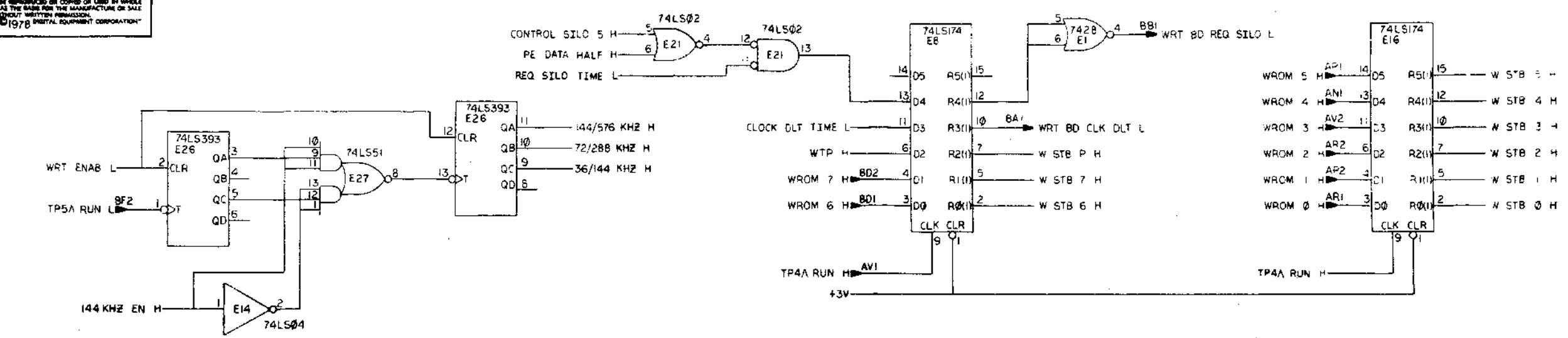
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REV	DATE	BY	CHKD
1	11/10/70	R. CORNEAU	
2	11/10/70	R. CORNEAU	
3	11/10/70	R. CORNEAU	
4	11/10/70	R. CORNEAU	
5	11/10/70	R. CORNEAU	
6	11/10/70	R. CORNEAU	
7	11/10/70	R. CORNEAU	

DRG: <i>Amell</i>	FIRST USED ON: TS04
CHKD: <i>R. Corneau</i>	TITLE: WRITE CONTROL
ENG: <i>R. Corneau</i>	NUMBER: M8929-0-1
PRD: <i>R. Corneau</i>	SCALE: D CS
NEXT HIGHER ASSY:	SHEET: 1 OF 5
B-DD-M8929-0	DIST:

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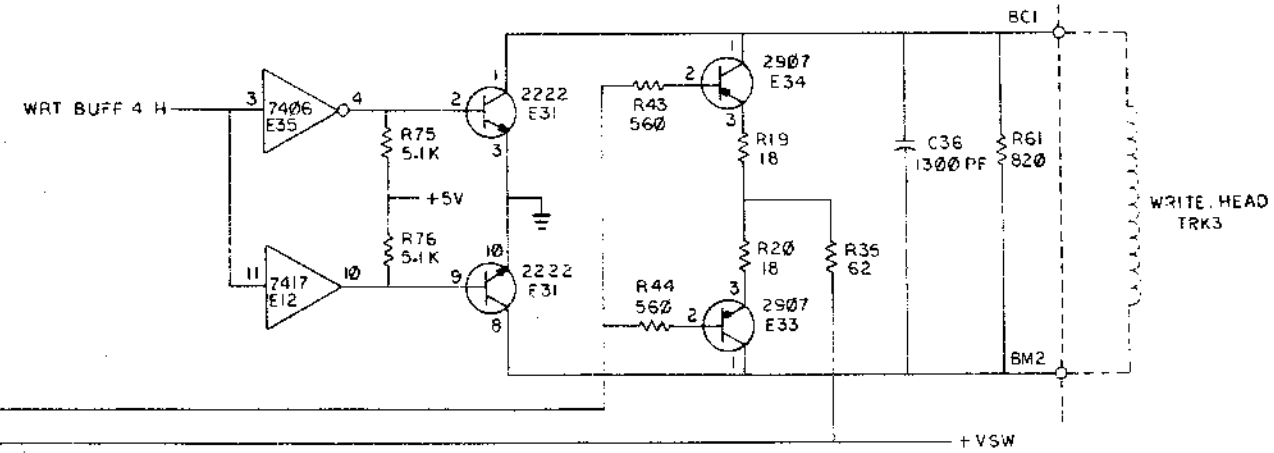
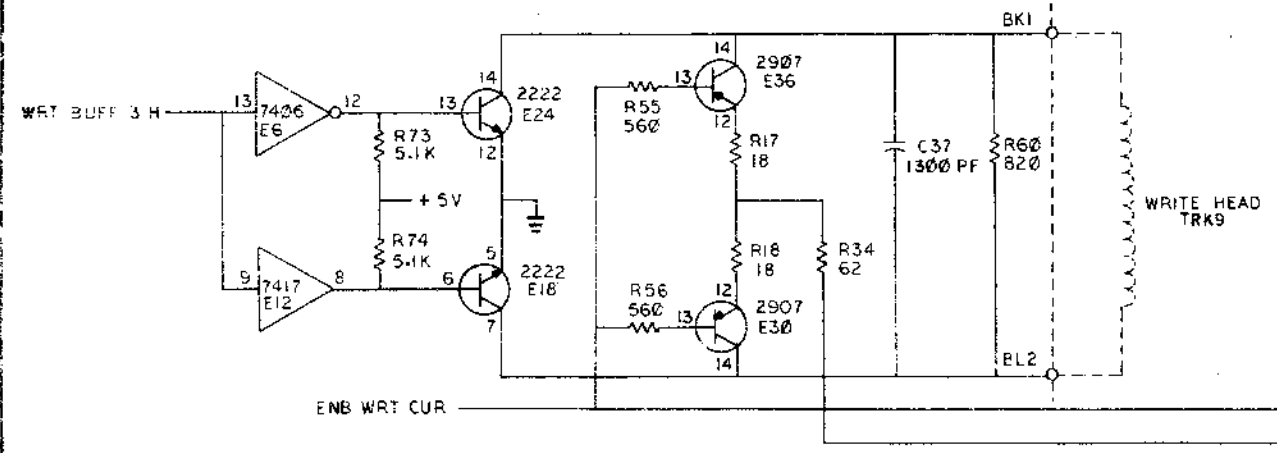
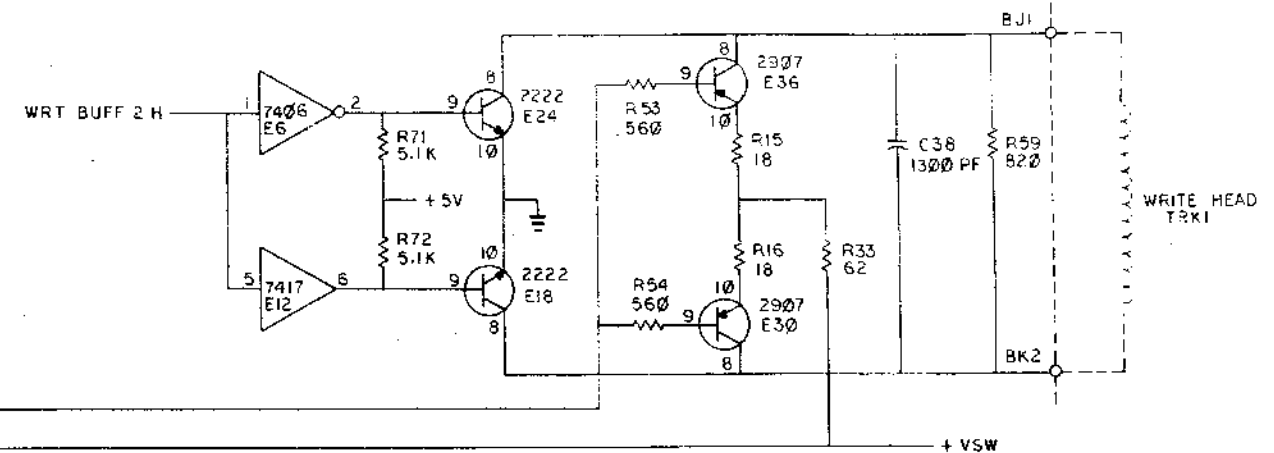
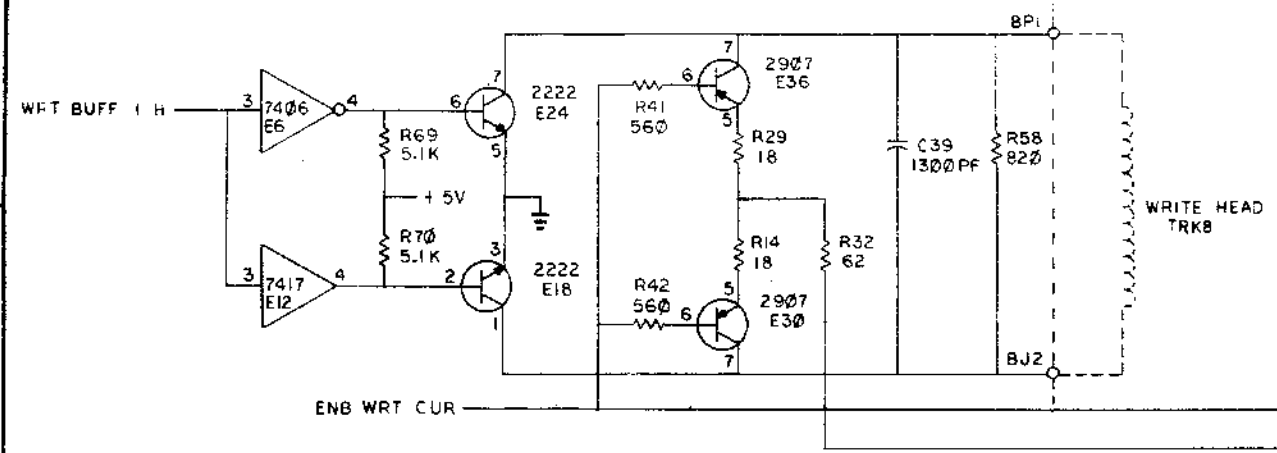


BIT	DESCRIPTION	BIT	DESCRIPTION
7	SILO PARITY	3	LPCC ENAB
6	INVERT PARITY	2	WRT FLAG
5	NRZ CYCLE	1	
4	DATA PARITY	0	

REVISIONS		
CHK	CHANGE NO.	REV

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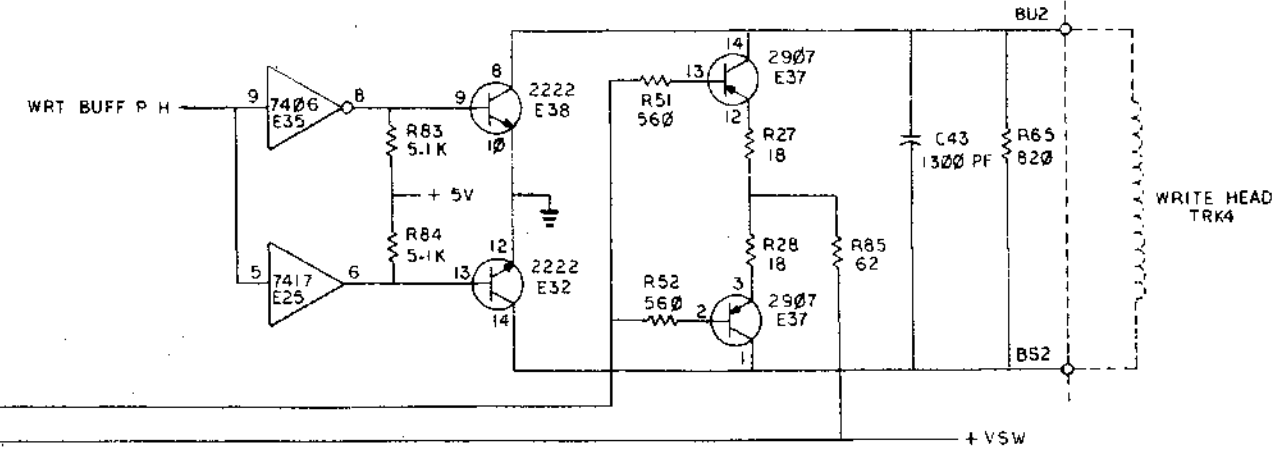
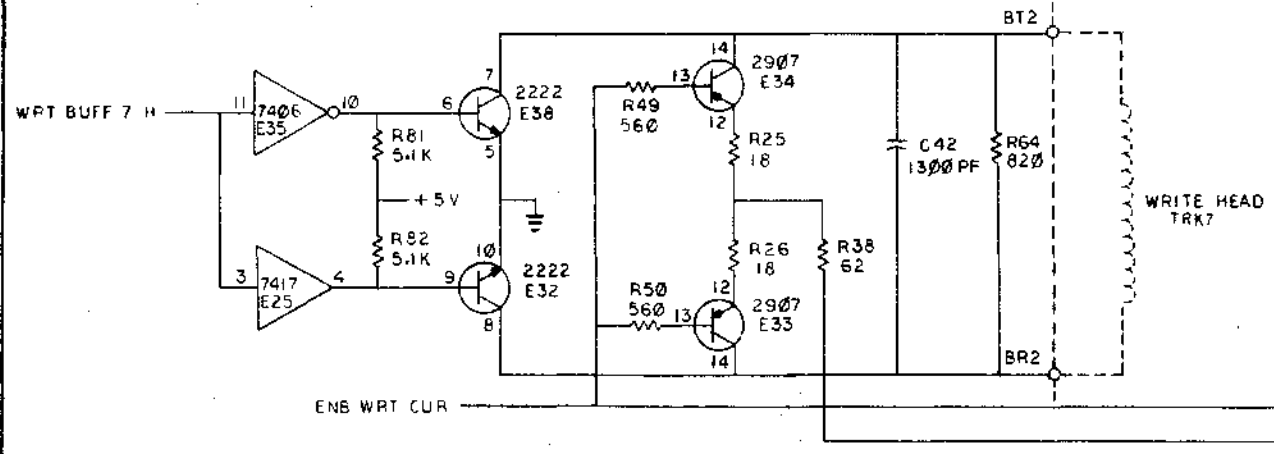
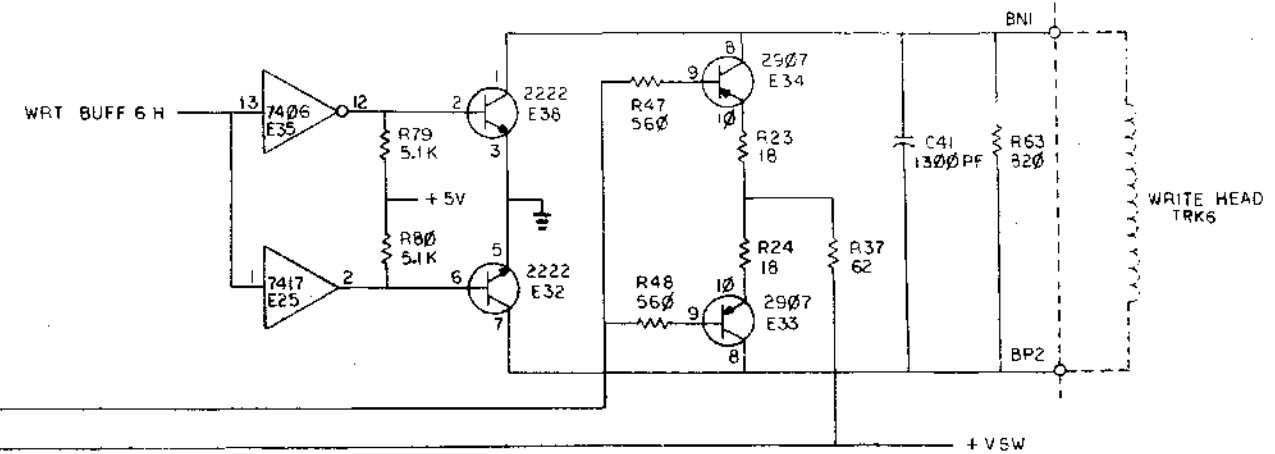
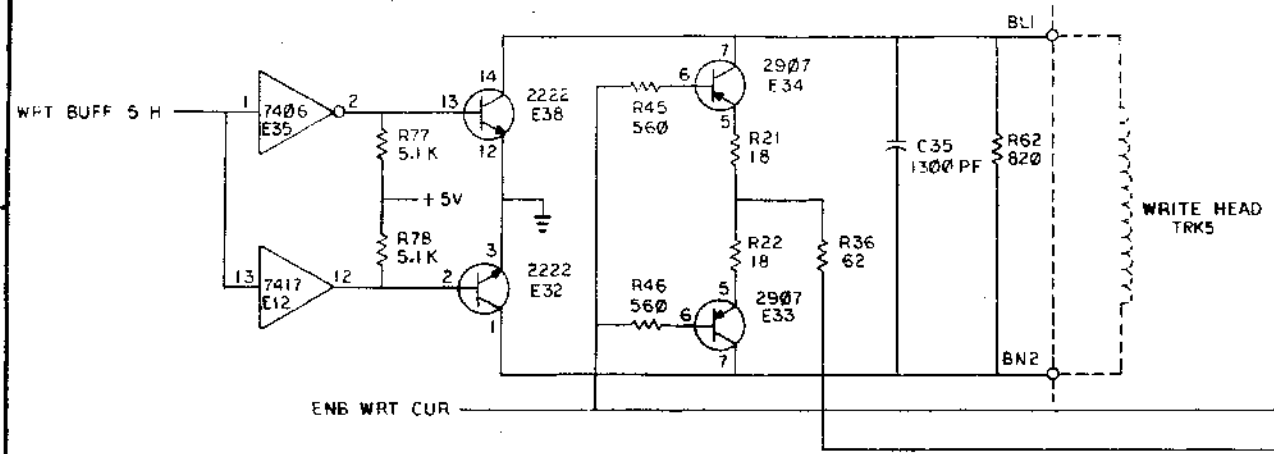
1-0-6268WCS 2



REVISIONS		
CHK	CHANGE	REV

TITLE	WRITE CONTROL	SIZE CODE	D	NUMBER	M8929-0-1	REV	F
SCALE		SHEET	3	OF	5	DIST.	

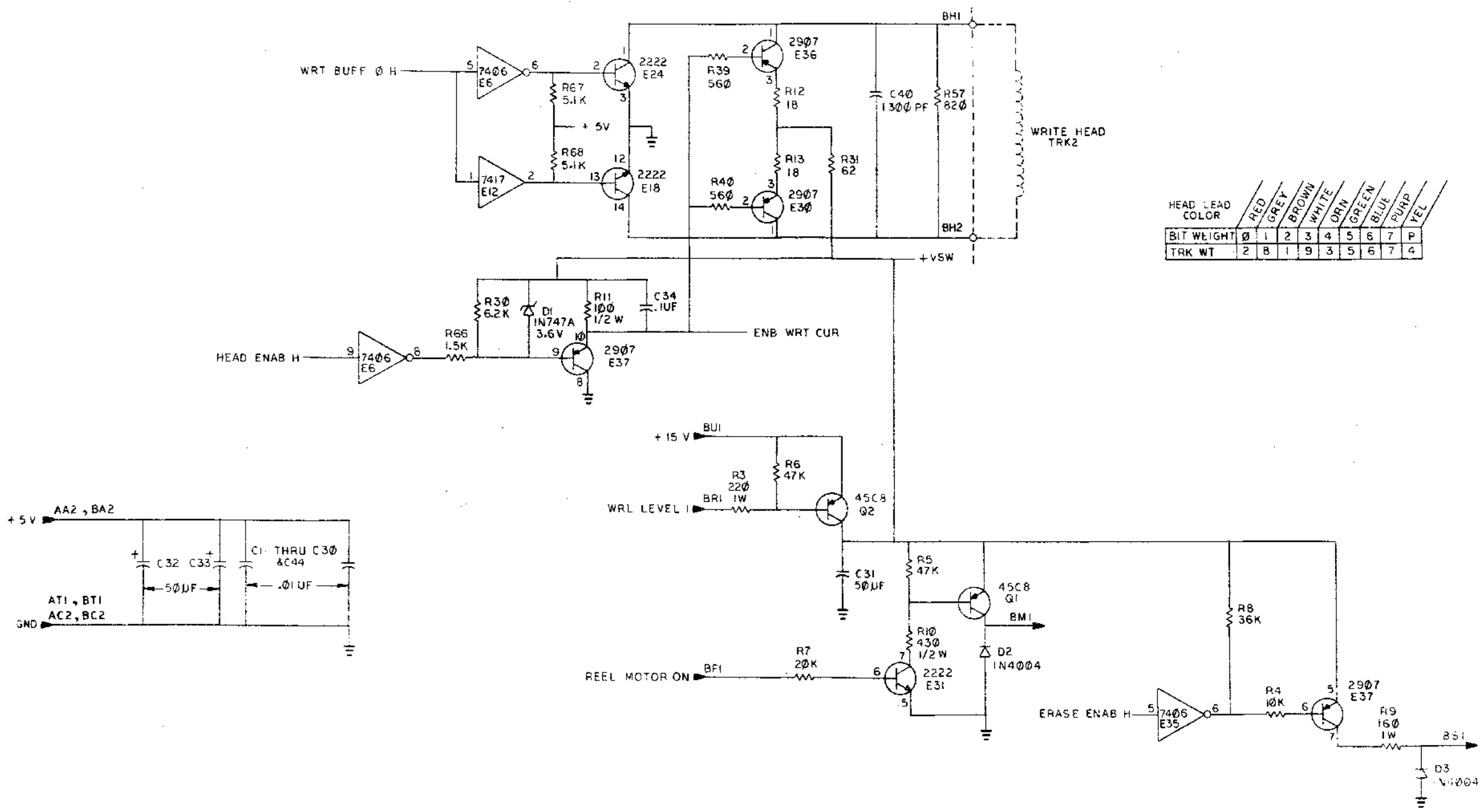
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REVISIONS		
CHK	CHANGE NO.	REV.

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1-Z-6768W 2



HEAD LEAD COLOR	RED	GREY	BROWN	WHITE	ORN	GREEN	BLUE	PURP	YEL
BIT WEIGHT	0	1	2	3	4	5	6	7	P
TRK WT	2	8	1	9	3	5	6	7	4

REVISIONS		
CHK	CHANGE NO.	REV.

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
		D-CS-M8929-0-1		CIRCUIT SCHEMATIC			
		D-UA-M8929-0-0		UNIT ASSY			
		B-DD-M8929-0-0		DWG DIRECTORY			
		D-MD-5012937-0-0		DRILL & ETCH DWG			
			5012937-00	M8929			
			1000061-00	*** THIS ITEM IS NOT USED ***			
			1000080-00	50 MFD 50V +75-10% AL EL	3		C31-C33
			1001610-00	.01 MFD 50V +80-20% 25U CER	31		C1-C30,C44
			1001739-00	*** THIS ITEM IS NOT USED ***			
			1005306-00	*** THIS ITEM IS NOT USED ***			
			1100124-00	*** THIS ITEM IS NOT USED ***			
			1101938-00	*** THIS ITEM IS NOT USED ***			
			1109991-01	*** THIS ITEM IS NOT USED ***			
			1105796-00	1N 4004 PIV=400 I= 1A DD41 SP	2		D2,D3
			1211813-02	SOCKET 16PIN IC LOW PROFILE,	1		XE13
			1300229-00	*** THIS ITEM IS NOT USED ***			
			1300277-00	220.0 1.0 W10.0 % CC	1		R3
			1300365-00	1.0 K .25 W 5.0 % CC	1		R1
			1300479-00	10.0 K .25 W 5.0 % CC	1		R4
			1301322-00	*** THIS ITEM IS NOT USED ***			
			1301401-00	*** THIS ITEM IS NOT USED ***			
			1302177-00	47.0 K .25 W 5.0 % CC	2		R5,R6
			1302388-00	2.0 K .25 W 5.0 % CC	1		R2
			1302391-00	20.0 K .25 W 5.0 % CC	1		R7
			1302466-00	*** THIS ITEM IS NOT USED ***			
			1302602-00	*** THIS ITEM IS NOT USED ***			
			1312932-00	36.0 K .25 W 5.0 % CC	1		R8
			1314953-00	160.0 1.0 W 5.0 % CC	1		R9
			1314954-00	430.0 .50 W 5.0 % CC	1		R10
			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:	ECD NUMBER	REV	SECTION A OF A	CHK'D:	R. ODOM	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)						
R.C.	M8929-MLO04	F	(D)	RESP.ENG.:	H. FINDEISEN	DATE:	04-APR-78	DOCUMENT NUMBER	
			(E)					SIZE CODE NUMBER	REV
			(F)						
			(H)	MFG.ENG.:	P. BARTON	DATE:	04-APR-78	K PL	M8929-0-08F
			(J)						
			(K)	ASSEMBLY NUMBER:	D-UA-M8929-0 J	TOP DOCUMENT NUMBER:	B-DD-M8929-0-0	FILE NAME:	Z0214F.PLS
			(L)						EDIT #
			(M)						21
			(N)						

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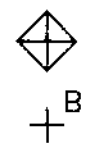
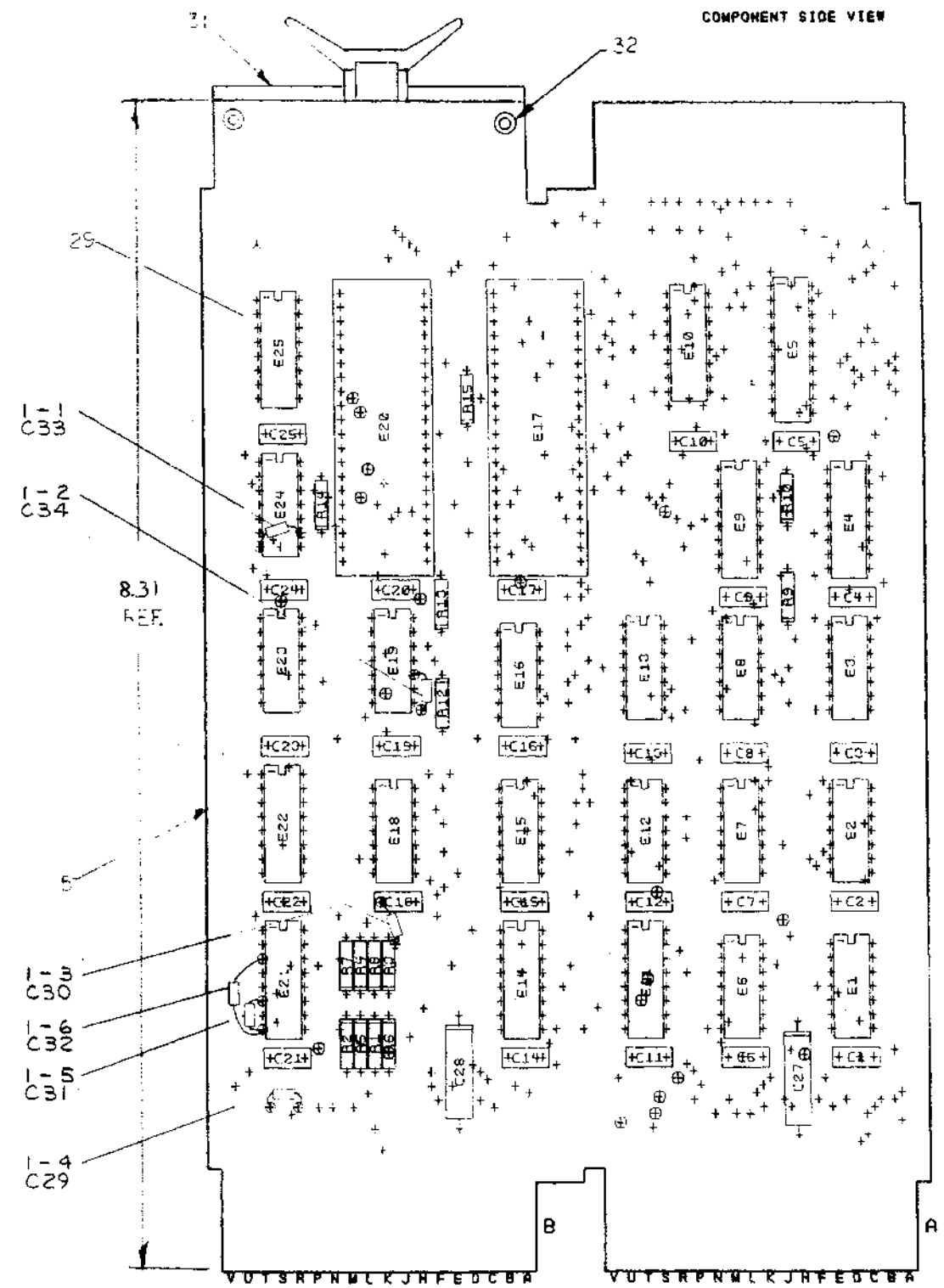
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
31			1510598-00	DEC4508 PNP 27WT SI 6D 20 Y	2	Q1, Q2
32			1514961-00	TPQ2222 NPN 500MW SI 40 100	2	E24, E18, E38, E32, E31
33			1514962-00	TPQ2907 PNP 500MW SI 40 100	2	E27, E36, E30, E34, E33
34			1909067-00	74H71 FF-JK MASTER SLAVE 2	2	E2, E5, E9, E11, E15, E17, E23
35			1910741-00	7406 INVERTER GATE-HEX 1I	2	E6, E35
36			1912697-00	LS174 FF-D HEX W/CLEAR	2	E7, E8, E16
37			1912801-00	LS02 NOR-GATE-QUAD 2IN	2	E21, E29
38			1912803-00	74LS04 INVERTER GATE, HEX	2	E10, E14, E28
39			1912807-00	LS10 NAND GATE-TRIPLE 3IN	1	E20
40			1912820-00	LS51 A-0-1 GATE 2-WIDE 2I	1	E27
41			1912842-00	LS138 DECODER-THREE INPUT	1	E39
42			1913312-00	7428P NOR GATE-QUAD 2IN POS	2	E1, E22
43			1914451-00	74LS393 COUNTER BINARY, 4BIT	2	E19, E25
44			1914466-00	*** THIS ITEM IS NOT USED ***	1	
45			2113646-00	*** THIS ITEM IS NOT USED ***	1	
46			9006732-00	EYELET, ROLL FLANGE .1210DX .219	4	
47			9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
48			23251A1-00	A1-07	1	E13
49			1909929-00	7417 BUFFER GATE-HEX 1IMP	2	E12, E25
50			1110672-00	1N 747A VZ= 3.6 5%	1	R1
51			1300228-00	180.0 .50 W 5.0 % CC	1	R11
52			1302124-00	18.0 .25 W 5.0 % CC	18	R12-R29
53			1312929-00	52.0 .25 W 5.0 % CC	9	R31-R38, R85
54			1301890-00	560.0 .25 W 5.0 % CC	18	R39-R56
55			1301775-00	820.0 .25 W 5.0 % CC	9	R57-R65
56			1300391-00	1.50 K .25 W 5.0 % CC	1	R66
57			1312930-00	5.10 K .25 W 5.0 % CC	18	R67-R84
58			1312931-00	6.20 K .25 W 5.0 % CC	1	R30
59			1010978-36	.1 MFD 50V 10% CER	1	C34
60			1001633-00	1300.0 MMF 100V 5%200PPM MICA	9	C35-C43
61			9008301-01	SCREW, PAN, PHIL 4-40X 1/4 SS	2	
62			9006557-00	NUT, KEP 4-40X 1/4 AF	2	

D	I	G	I	T	A	L	TITLE	WRITE CONTROL	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
										K	PL	MS929-0-DBF	F

COMPONENT SIDE VIEW

REWORK INSTRUCTIONS:

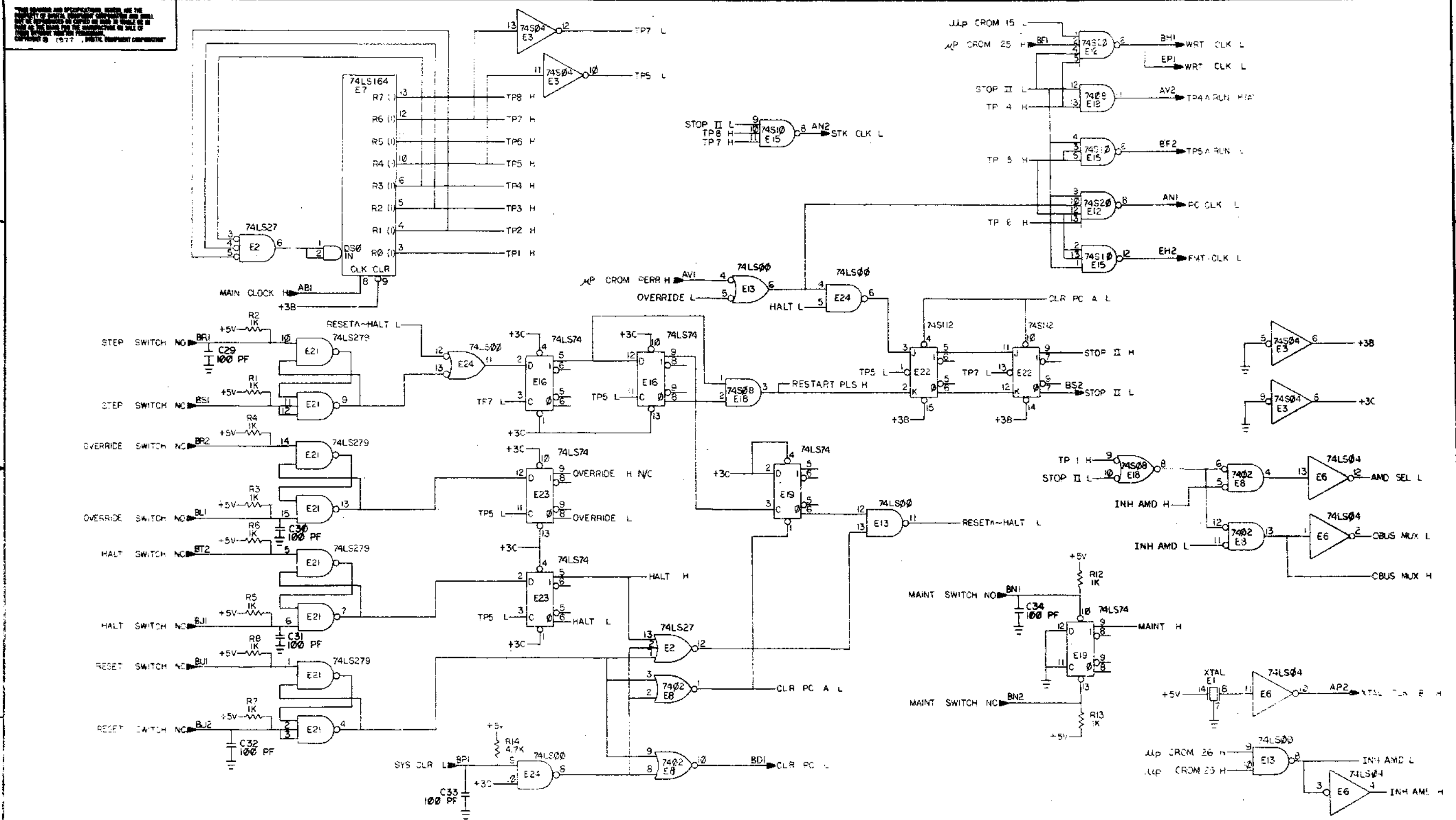
- ECO #1
- COMPONENT ADDS SIDE 1:
- 1-1 ADD CAPACITOR 100 PF FROM E24-9 TO E24-7
 - 1-2 ADD CAPACITOR 100 PF FROM E19-10 TO GND ETCH NEAR E19-8
 - 1-3 ADD CAPACITOR 100 PF FROM FEEDTHRU NEAR R3 TO GND END OF C18
 - 1-4 ADD CAPACITOR 100 PF FROM BT TO BR1 AT FEEDTHRU APPROX. 3/4" ABOVE GOLD FINGERS
 - 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
47	M8962X	MLOO	D	2-5-78

SIGNATURES		DATE	digital
DRN. <i>[Signature]</i>		2-5-78	
CHK. <i>[Signature]</i>		2-5-78	TITLE MICRO-PROCESSOR BOARD ONE
ENG. <i>[Signature]</i>		2-5-78	
PROJ. ENG. <i>[Signature]</i>		2/5/78	SIZE CODE NUMBER REV
PROD. <i>[Signature]</i>		2/5/78	
SCALE 2/1			D UA M8962-0-010
SHT. OF 5			
NEXT HIGHER ASSY. B-00-M8962-0-0			



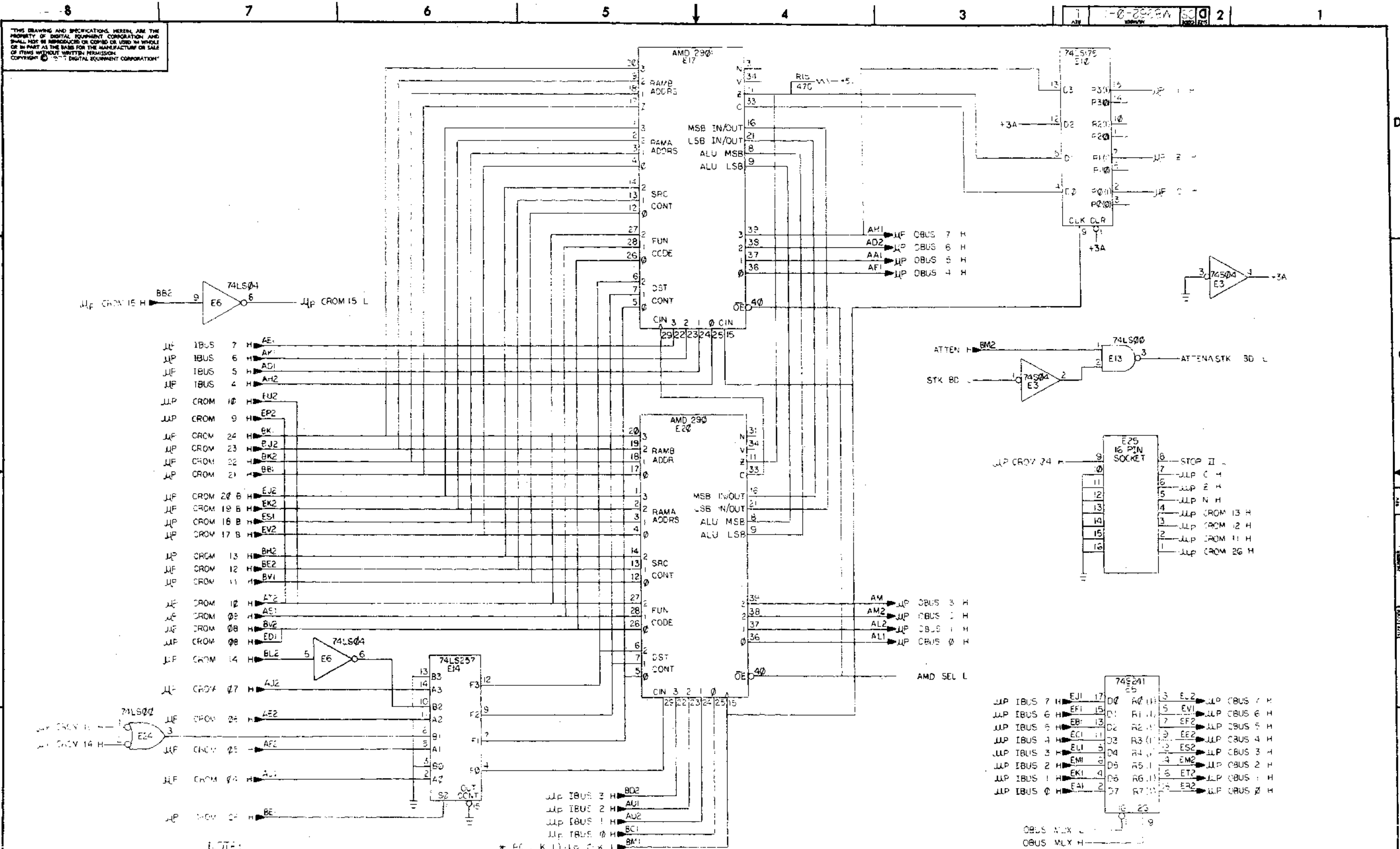
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D
C
B
A

D
C
B
A

REV.	REV.
1	D
2	C
3	B
4	A

CHK'D BY	DATE	FIRST USED ON	REV.
ENG.	DATE	TSC-	10-00-0
PROJ. ENG.	DATE	TITLE	
PROD. ENG.	DATE	MICROPROCESSOR BOARD 1	
NEXT HIGHER ASSY.		S21	CODE
B-DD-M8962-0		D	CS M8962-0-1
SCALE	SHEET	OF	DIST.
	3		

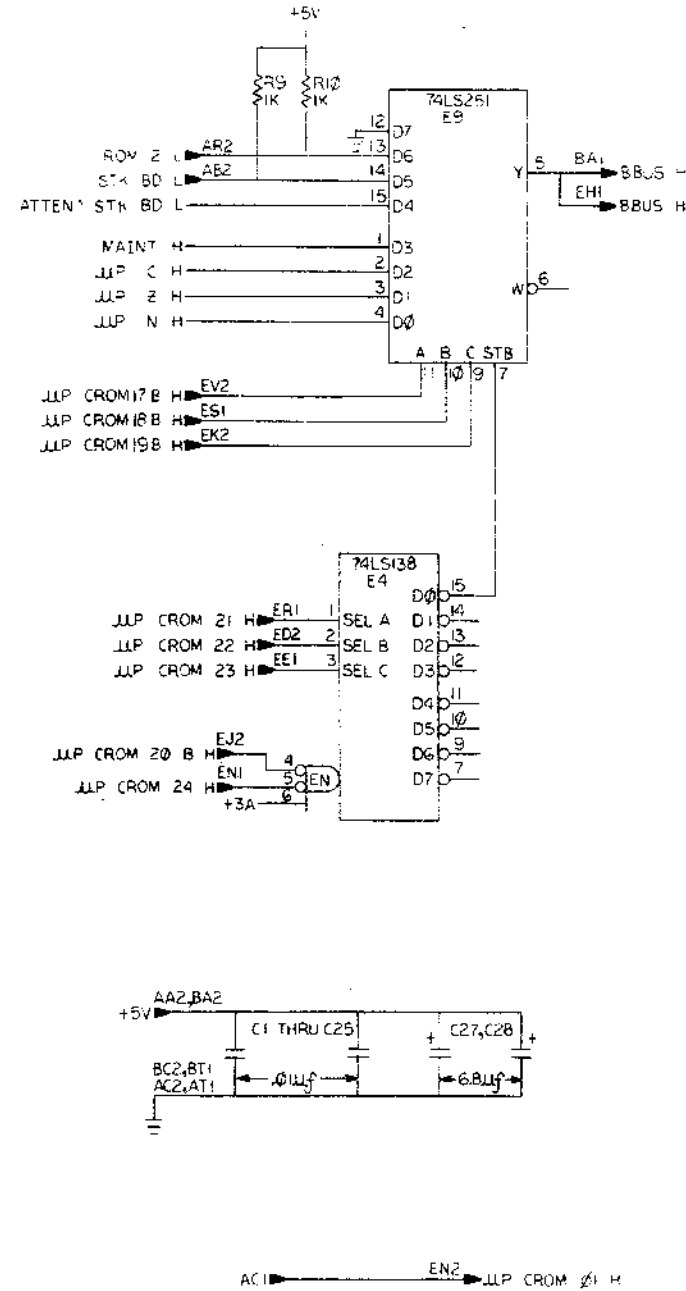


REVISIONS
 CHK CHANGE NO. REV.

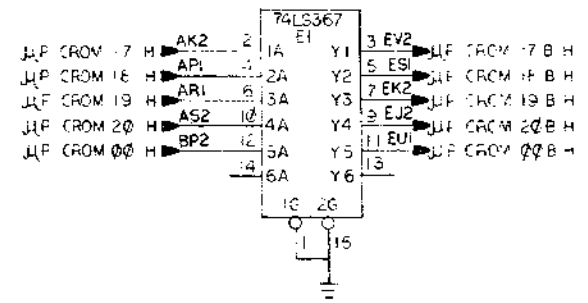
CHK	CHANGE NO.	REV.

TITLE MICROPROCESSOR BOARD
 SCALE SHEET 2 OF 3
 SIZE CODE DCS
 NUMBER V5-PC2-3-1
 REV. 0

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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	EN1
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	EV1
JLP OBUS 7 H	EL2
JLP IBUS 0 H	FA1
JLP IBUS 1 H	EK1
JLP IBUS 2 H	EM1
JLP IBUS 3 H	EL1
JLP IBUS 4 H	EC1
JLP IBUS 5 H	EB1
JLP IBUS 6 H	EF1
JLP IBUS 7 H	EJ1
BBUS H	EH1
FMT CLK L	EH2
WRT CLK L	EP1
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.

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
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% 250 CER	25		C1-C25
7	7		1005306-00	6.8MFD 35V 10% S.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 1I	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	CHK'D:	R. WALDIE	DATE:	21-NOV-77	TITLE	PARTS LIST
	INIT	C	SECTION VARIATION INDEX						
B.K.	M8962-ML001	D	(A) 00						MICRO PROCESSOR BOARD 1
			(B)	DES. ENG:	P. KINZELMAN	DATE:	05-JUL-78		
			(C)						DOCUMENT NUMBER
			(D)	RESP. ENG.:	P. KINZELMAN	DATE:	05-JUL-78	SIZE: CODE: NUMBER	REV
			(E)						
			(F)	MFG. ENG.:	P. BARTON	DATE:	05-JUL-78	K PL M8962-0-DBP	D
			(H)						
			(J)	ASSEMBLY N'MBER:	D-UA-M8962-0-0	TOP DOCUMENT NUMBER:	TS04	FILE NAME:	Z06110.PLS
			(K)					EDIT #	22
			(L)						
			(M)						
			(N)						

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AUTOMATED BY PRTLST.1C(5)

PARTS LIST

SHEET A2 OF A2

LINE ITEM DOCUMENT NUMBER

PART NUMBER

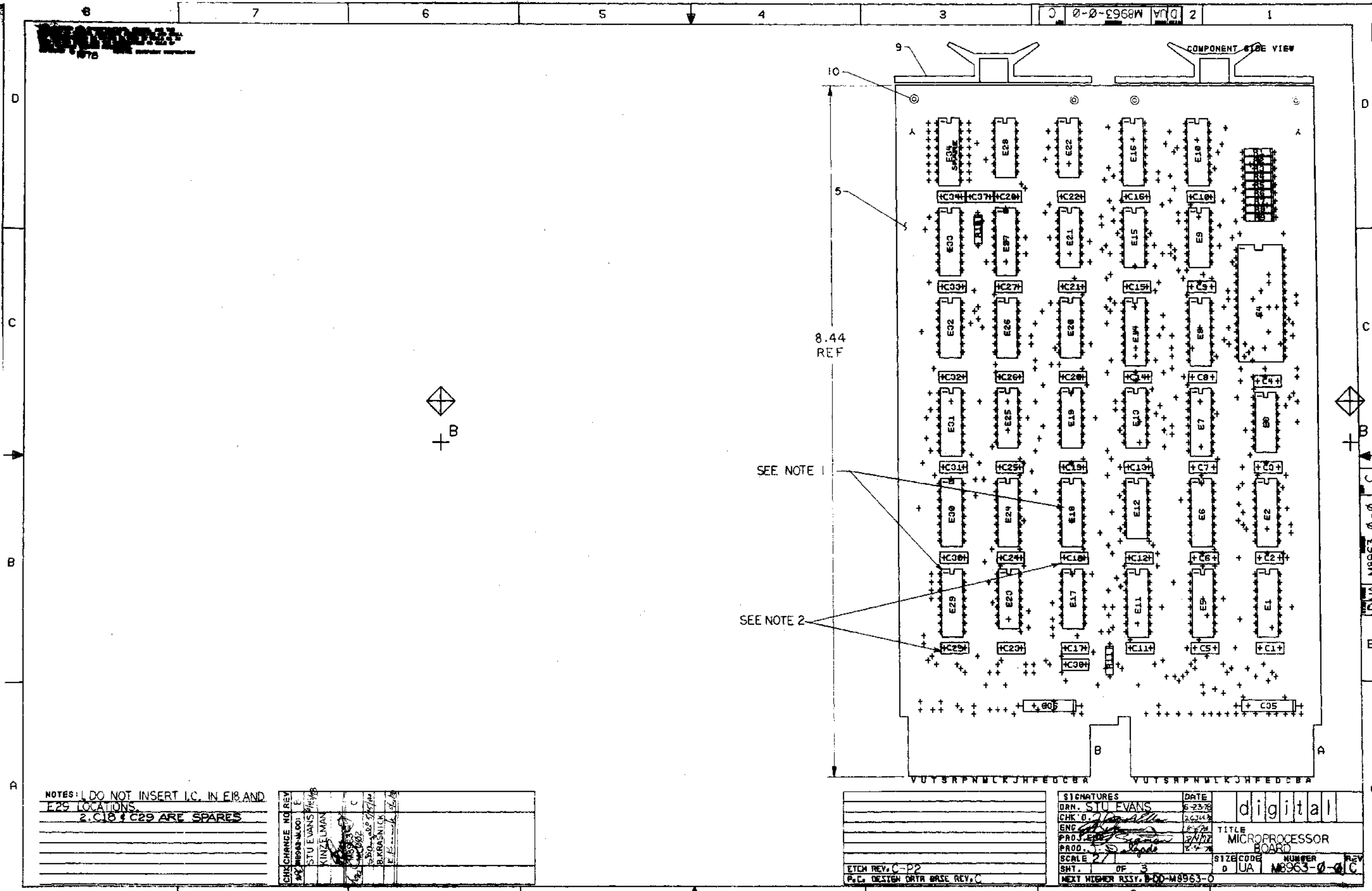
DESCRIPTION

QTY PER VARIATION
00

REFERENCE DESIGNATOR

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 5%200PPM 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



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

CHANGE NO	REV	DATE	BY
1	E	5/14/78	STU EVANS
2	F	5/14/78	KINZELMAN
3	G	5/14/78	B. KRASNICK

SEE NOTE 1

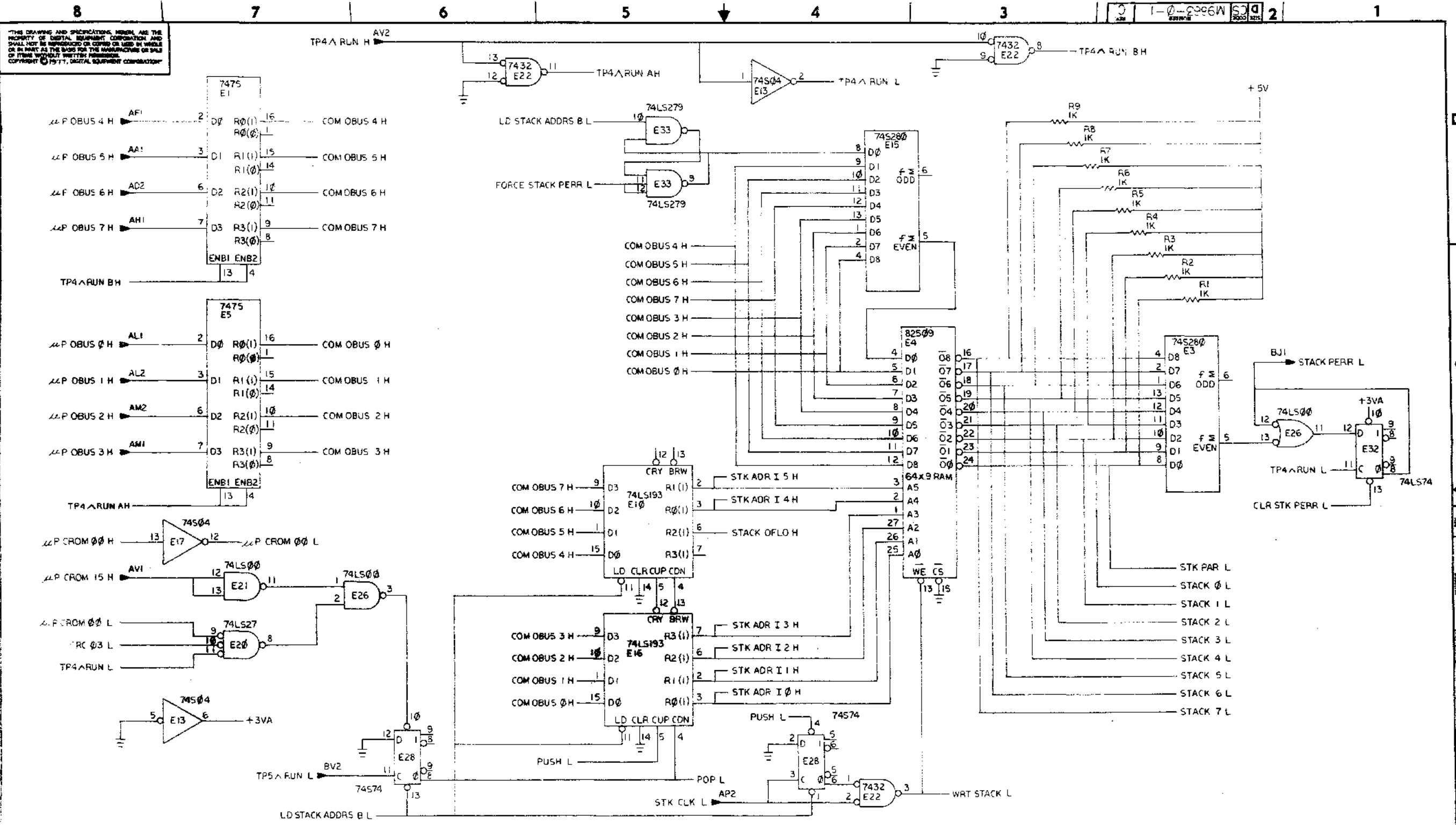
SEE NOTE 2

8.44
REF

SIGNATURES		DATE	digital
DRN.	STU EVANS	5-23-78	
CHK D.		2/23/78	TITLE MICROPROCESSOR BOARD
ENG			
PROD. ENGR.			SCALE 27
PROJ. ENGR.			
SCALE			SIZE CODE D U A
SHT.	OF 3		
NEXT HIGH PRIORITY: 8-00-M8963-0			NUMBER M8963-0-0 C

ETCH REV. C-22
P.C. DESIGN DATA BASE REV. C

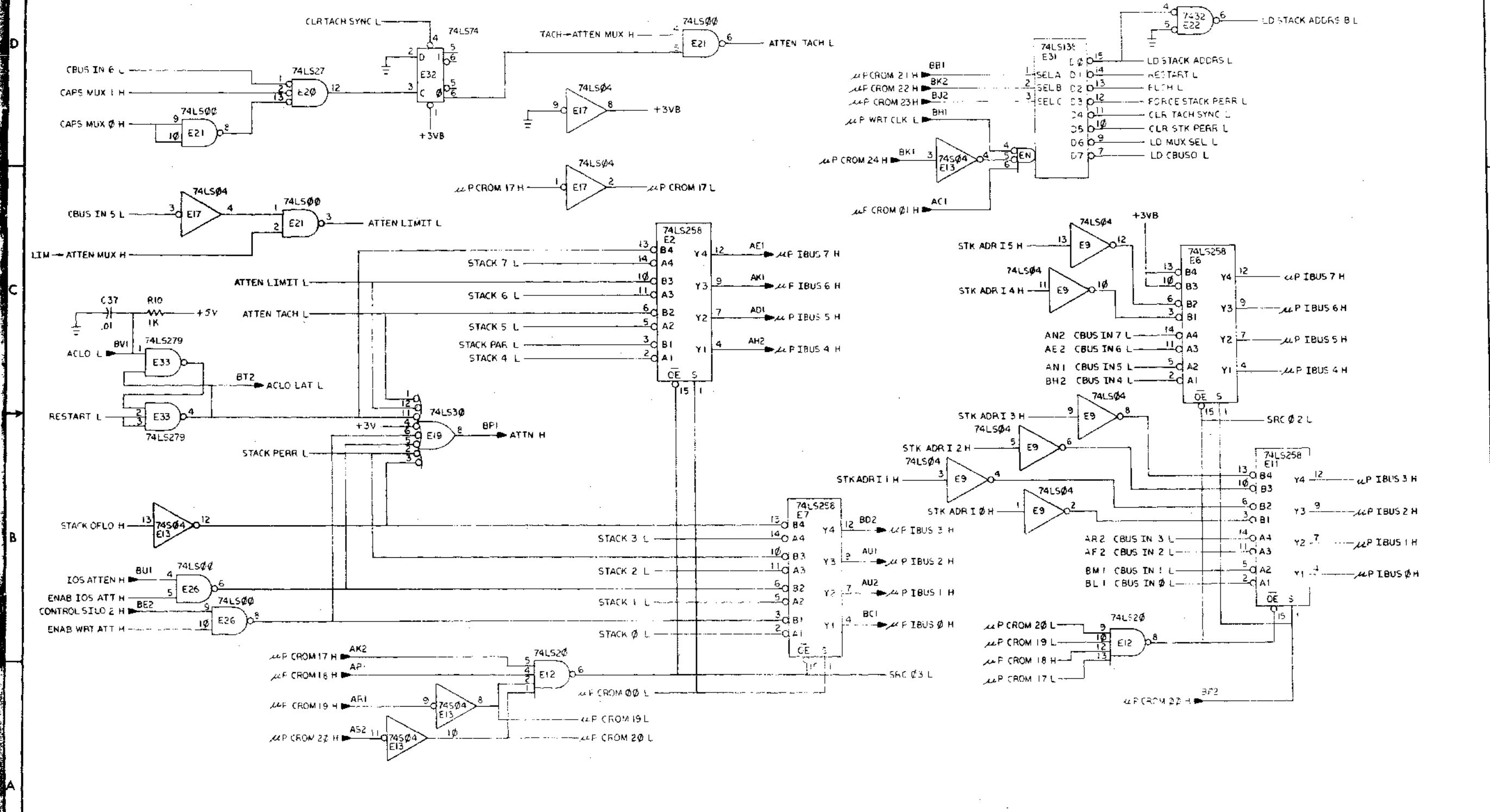
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REV.	CHANGED BY	DATE	REASON
1	S. EVANS	2/2/77	INITIAL
2	J. WILSON	2/2/77	REVISION
3	M. WILSON	2/2/77	REVISION
4	K. KRASNIK	2/2/77	REVISION

ETCH REV. C-P2		FIRST USED ON TS04	
DRN: J. Wilson	CHKD: J. Wilson	ENG: J. Wilson	PROJ. ENG: J. Wilson
TITLE MICROPROCESSOR BOARD 2		SIZE CODE D	NUMBER M8963-0-1
B-00-M8963-0	SCALE NONE	SIZE CODE D	NUMBER M8963-0-1
SHEET 1 OF 3		DIST.	

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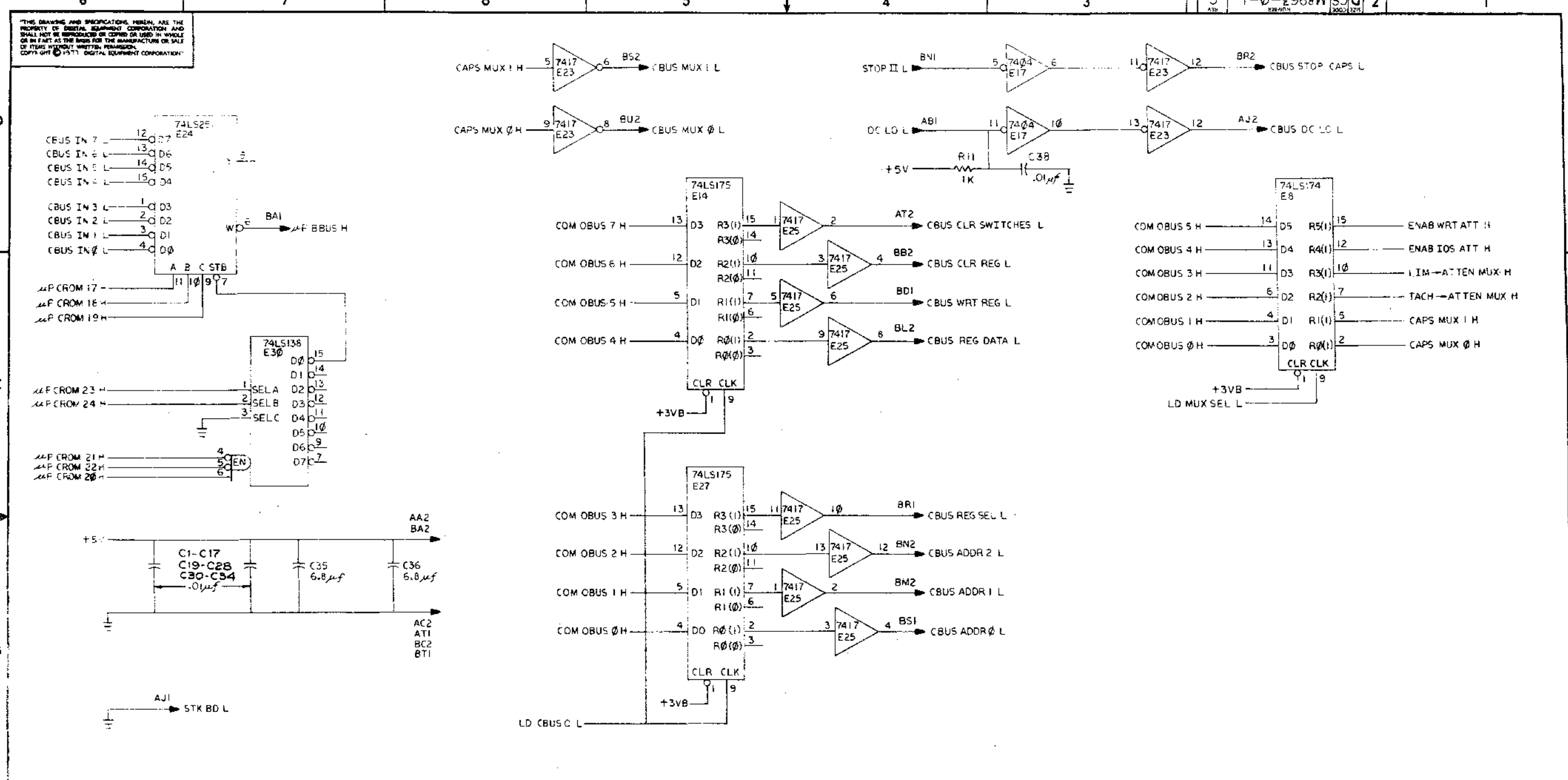
CHK	CHANGE NO	REV

TITLE	MICROPROCESSOR BOARD 2	SIZE CODE	D CS	NUMBER	M8963-0-1	REV.	C
SCALE	NONE	SHEET	2 OF 3	DIST			

D 2 1-0-2968W 53 2

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1-0-2968W 2



CBUS IN

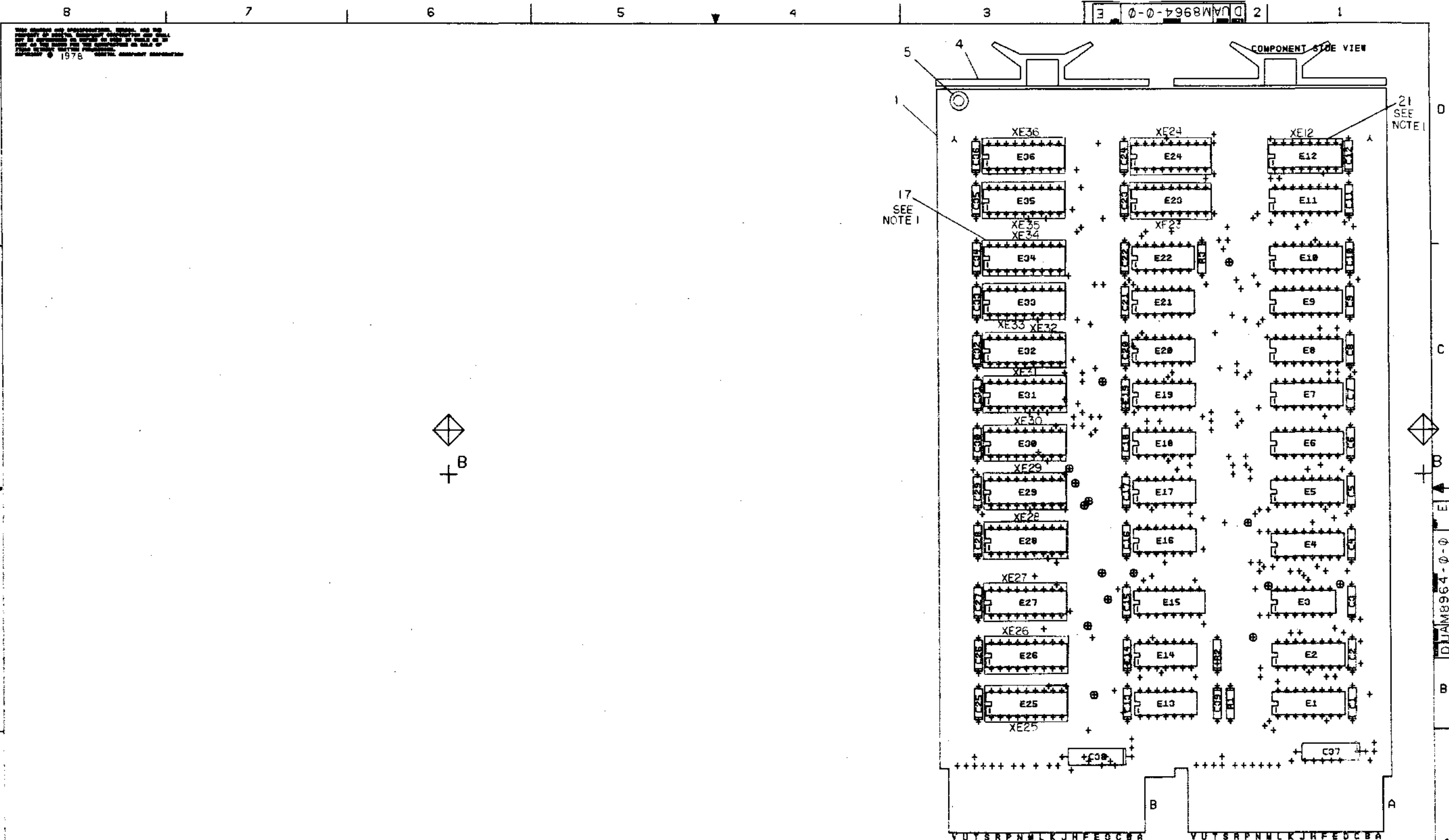
CBUS MUX 1	CBUS MUX 0	7	6	5	4	3	2	1	0
?	?	REL MTRON	ONLSWIT	LIMIT	DC ITSWIT	ENTER ZERO	WLK SWIT	BOT	EOT
?	?	REL MTRON	TACH 1	LIMIT	TACH 2	FWD DIR	MOVING	BOT	EOT
?	?	LOAD LT	ONLT	UOK LT	VV LT	IDB LT	WLK LT	BOT LT	EOT LT
		CS7	CS6	CS5	CS4	CS3	CS2	CS1	CS0

REV	DESCRIPTION	DATE

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-DD-M8963-0-0		DWG. DIRECTORY	REF	
4	4	D-MD-M8963-0-0		DRILL & ETCH DWG.	REF	
5	5		M8963		1	
6	6		5012890-00		34	C1-C17, C19-C28, C30-C34, C37, C38
7	7		1001610-00	.01 MFD 50V +80-20% 25U CER	2	C35, C36
8	8		1005306-00	6.8MFD 35V 10% 5.TANT	11	R1-R11
9	9		1300365-00	1.0 K .25 W 5.0 % CC	2	
10	10		9008337-06	HANDLE, FLIP CHIP, MAGENTA	4	
11	11		9006732-00	EYELET, ROLL FLANGE .1210DX .219	4	E2, E6, E11, E7
12	12		1912859-00	LS258 MUX 1 OF 2 (DUAL),	1	E12
13	13		1912810-00	LS20 NAND GATE-DUAL 4IN	1	E24
14	14		1912648-00	LS251 MUX 8 INPUT TRI-STA	2	E21, E26
15	15		1912799-00	LS00 NAND-GATE-QUAD 2IN, P	2	E9, E17
16	16		1912803-00	74LS04 INVERTER GATE, HEX	2	E14, E27
17	17		1912853-00	LS175 FF-D QUAD	2	E23, E25
18	18		1909929-00	7417 BUFFER GATE-HEX 1INP	1	E32
19	19		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	2	E1, E5
20	20		1909050-00	7475 LATCH 4BIT	1	E13
21	21		1910534-00	74504 INVERTER GATE-HEX 1I	1	E33
22	22		1912864-00	LS279 LATCH, QUAD-S-R	1	E20
23	23		1912813-00	LS27 NOR GATE-TRIPLE 3IN	1	E28
24	24		1910544-00	74574 FF-D DUAL, EDGE TRIGG	1	E22
25	25		1911521-00	7432 OR GATE-QUAD 2IN, PO	2	E3, E15
26	26		1911573-00	745280 PARITY GEN/CHKR, 9BIT	2	E10, E16
27	27		1912854-00	LS193 COUNTER, SYNCHR, 4BIT,	1	E8
28	28		1912697-00	LS174 FF-D HEX W/CLEAR	2	E30, E31
29	29		1912842-00	LS138 DECODER-THREE INPUT,	1	E19
30	30		1912815-00	LS30 NAND GATE-SINGLE 8IN	1	E4
			1913663-00	93419DC RAM 64X9 28PIN TT	1	

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:	DATE:	TITLE	PARTS LIST
WE	00001	B	SECTION VARIATION INDEX	C. CAMPBELL	17-JUL-78	MICROPROCESSOR BOARD 2	
BK	M8963-M1002	C	[A] 00				
			[B]				
			[C]	DES. ENG: N. FINDEAN	17-JUL-78		
			[D]				
			[E]	RESP. ENG.: N. FINDEAN	17-JUL-78	DOCUMENT NUMBER	
			[F]				
			[G]				
			[H]				
			[I]	MFG. ENG.: G. DILLARD	17-JUL-78	SIZE: CODE: NUMBER	REV
			[J]				
			[K]				
			[L]				
			[M]	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	FILE NAME:	EDIT #
			[N]	D-UA-M8963-0-0	T504	Z1472C.PLS	4

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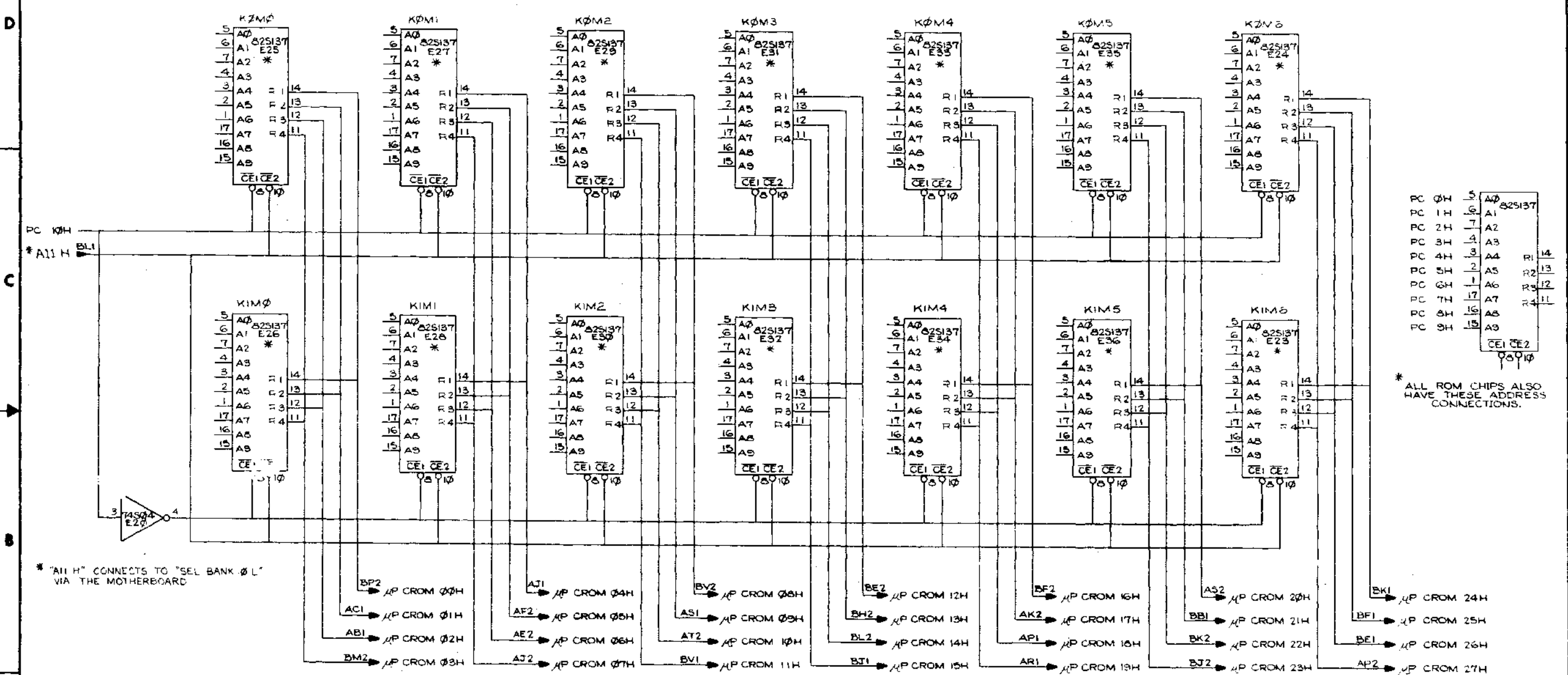
NOTES: 1. INSTAL. SOCKETS, ITEMS 17 & 21 BEFORE INSTALLING IC'S.

CHK	CHG	NO	REV	BY	DATE
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8

REV	DATE	BY	APP
ETDN REV. CP2			
P.C. DESIGN DATA REV. CL2 & CM2			

SIGNATURES	DATE	TITLE
DRN. <i>[Signature]</i>	7-19-78	digital
CHK'D. <i>[Signature]</i>	7-20-78	
ENG. <i>[Signature]</i>	7-20-78	
PROJ. ENG. <i>[Signature]</i>	7-20-78	
PROD. <i>[Signature]</i>	7-20-78	
SCALE 2/1		
SHT. 1 OF 5		
NEXT NUMBER REV. B-DD-M8964-0		

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PC 0H	5	A0	25137
PC 1H	6	A1	25137
PC 2H	7	A2	*
PC 3H	4	A3	
PC 4H	3	A4	R1 14
PC 5H	2	A5	R2 13
PC 6H	1	A6	R3 12
PC 7H	17	A7	R4 11
PC 8H	16	A8	
PC 9H	15	A9	

* ALL ROM CHIPS ALSO HAVE THESE ADDRESS CONNECTIONS.

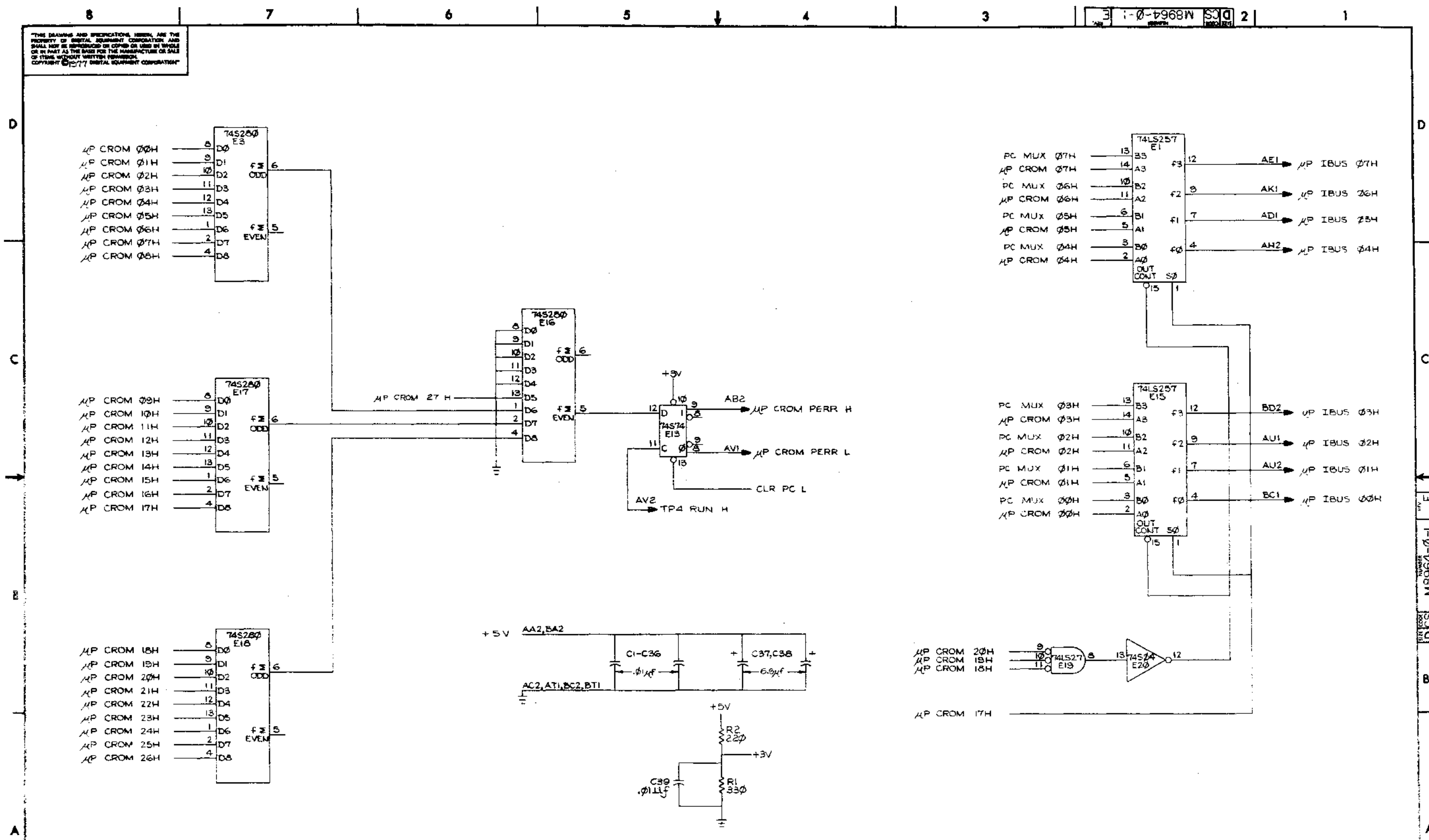
* "All H" CONNECTS TO "SEL BANK 0 L" VIA THE MOTHERBOARD

REV	DATE	BY	CHK'D	APP'D
1	10/22/77	A		
2	11/17/77	A		
3	12/14/77	A		
4	1/11/78	A		
5	2/8/78	A		
6	3/7/78	A		
7	4/4/78	A		
8	5/2/78	A		
9	6/1/78	A		
10	7/1/78	A		
11	8/1/78	A		
12	9/1/78	A		
13	10/1/78	A		
14	11/1/78	A		
15	12/1/78	A		
16	1/1/79	A		
17	2/1/79	A		
18	3/1/79	A		
19	4/1/79	A		
20	5/1/79	A		
21	6/1/79	A		
22	7/1/79	A		
23	8/1/79	A		
24	9/1/79	A		
25	10/1/79	A		
26	11/1/79	A		
27	12/1/79	A		
28	1/1/80	A		
29	2/1/80	A		
30	3/1/80	A		
31	4/1/80	A		
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95	8/1/85	A		
96	9/1/85	A		
97	10/1/85	A		
98	11/1/85	A		
99	12/1/85	A		
100	1/1/86	A		

DRN	5 Gandy	4-29-77	FRST USED ON	TS04
CHK'D	D. Kinzelman	11-17-77	TITLE	ROM BOARD
ENG	S. Kinzelman	11-17-77	SCALE	
PROJ. ENG.	H. Kinzelman	11-17-77	NUMBER	MB964-0-1
PROD. DRW.	A. Kinzelman	11-17-77	REV	E
NEXT HIGHER ASBY.			SIZE	D
SCALE			DRW	CS
SHEET	OF 3	DIST.		

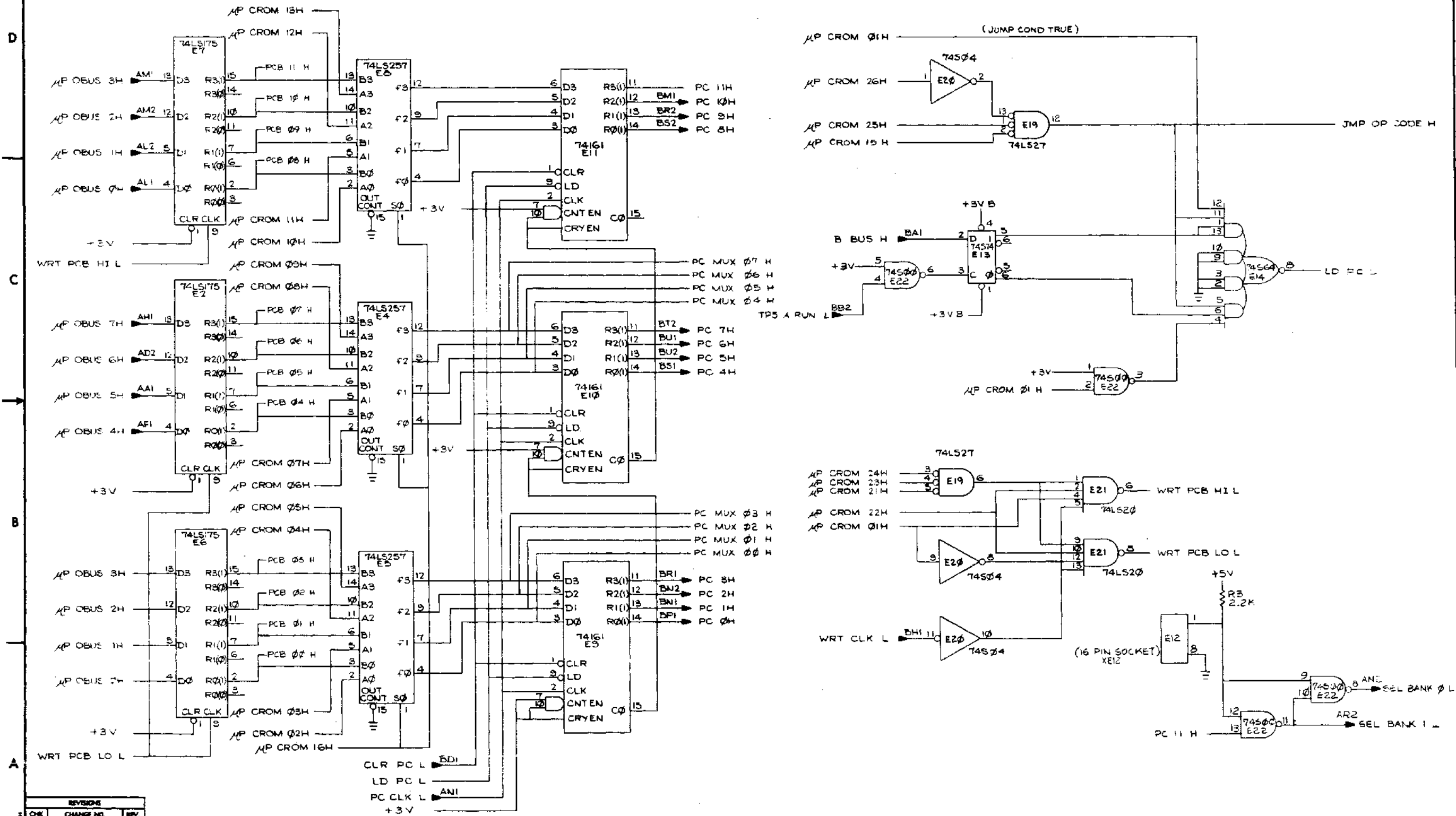
D CS MB964-0-1 E

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REVISIONS		
CHK	CHANGE NO.	REV.
	M8964-NL002	2
ENR	Paul Kinzelman	1
ENG	PAUL KINZELMAN	

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CHK	CHANGE NO.	REV.
	M8964-M.002	1
GRN	Paul K. ...	1/1/77
ENG	PAUL KATZELMAN	1/1/77

DCS M8964-0-1 E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1		5012817-00	H8964	1	
2	2		1001610-00	.01 MFD 50V +80-20% Z5U 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,ROLLED 0.1210DX0.219	4	
6	6		1910534-00	74S04 INVERTER GATE-HEX 11	1	E20
7	7		1912810-00	LS20 NAND GATE-DUAL 4IN	1	E21
8	8		1910532-00	74S00 NAND GATE-QUAD 2IN	1	E22
9	9		1910650-00	74161 COUNTER,SYNCHR. UP	3	E9-E11
10	10		1910950-00	74S74 FF-D DUAL (-45 VERSI	1	E13
11	11		1912813-00	LS27 NOR GATE-TRIPLE 3IN	1	E19
12	12		1910542-00	74S64 A-D-I GATE 4-2-3-2	1	E14
13	13		1911573-00	74S280 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 SOLD	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		1211613-00	/REPLACED BY 12-15006-02	1	XE12
22	22		23622F1-00	*** THIS ITEM IS NOT USED ***	-	
23	23		23623F1-00	*** THIS ITEM IS NOT USED ***	-	
24	24		23624F1-00	*** THIS ITEM IS NOT USED ***	-	
25	25		23625F1-00	*** THIS ITEM IS NOT USED ***	-	
26	26		23626F1-00	*** THIS ITEM IS NOT USED ***	-	
27	27		23627F1-00	*** THIS ITEM IS NOT USED ***	-	
28	28		23628F1-00	*** THIS ITEM IS NOT USED ***	-	
29	29		23620F1-00	F1-01	1	E26
30	30		23397F1-00	F1-01	1	E28

REVISION HISTORY		BASIC PART NO: H8964		DRN:	L.METZGER	DATE: 18-JUL-78	DIGITAL			
ENGR	ECD NUMBER	REV	SECTION A OF A	CHK'D:	S.TUTTLE	DATE: 18-JUL-78	PARTS LIST			
	INIT		SECTION VARIATION INDEX				ROM BOARD			
IPB	H8964-ML002	A	[A] 00							
IPK	H8964-ML003	B	[B]							
IPK	H8964-ML004	C	[C]	DES. ENGR:	P.KINZELMAN	DATE: 12-SEP-78				
IBK	H8964-ML005	D	[D]							
IRN	H8964-ML006	E	[E]	RESP. ENGR:	P.KINZELMAN	DATE: 12-SEP-78	DOCUMENT NUMBER			
			[F]				SIZE	CODE	NUMBER	REV
			[G]							
			[H]							
			[I]							
			[J]							
			[K]	INFO. ENGR:	P.BARTON	DATE: 18-JUL-78	K	FL	H8964-0-DBP	E
			[L]							
			[M]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:		EDIT #:
			[N]	ID-UA-H8964-0-0		ITS04		Z0609F.PLS		10

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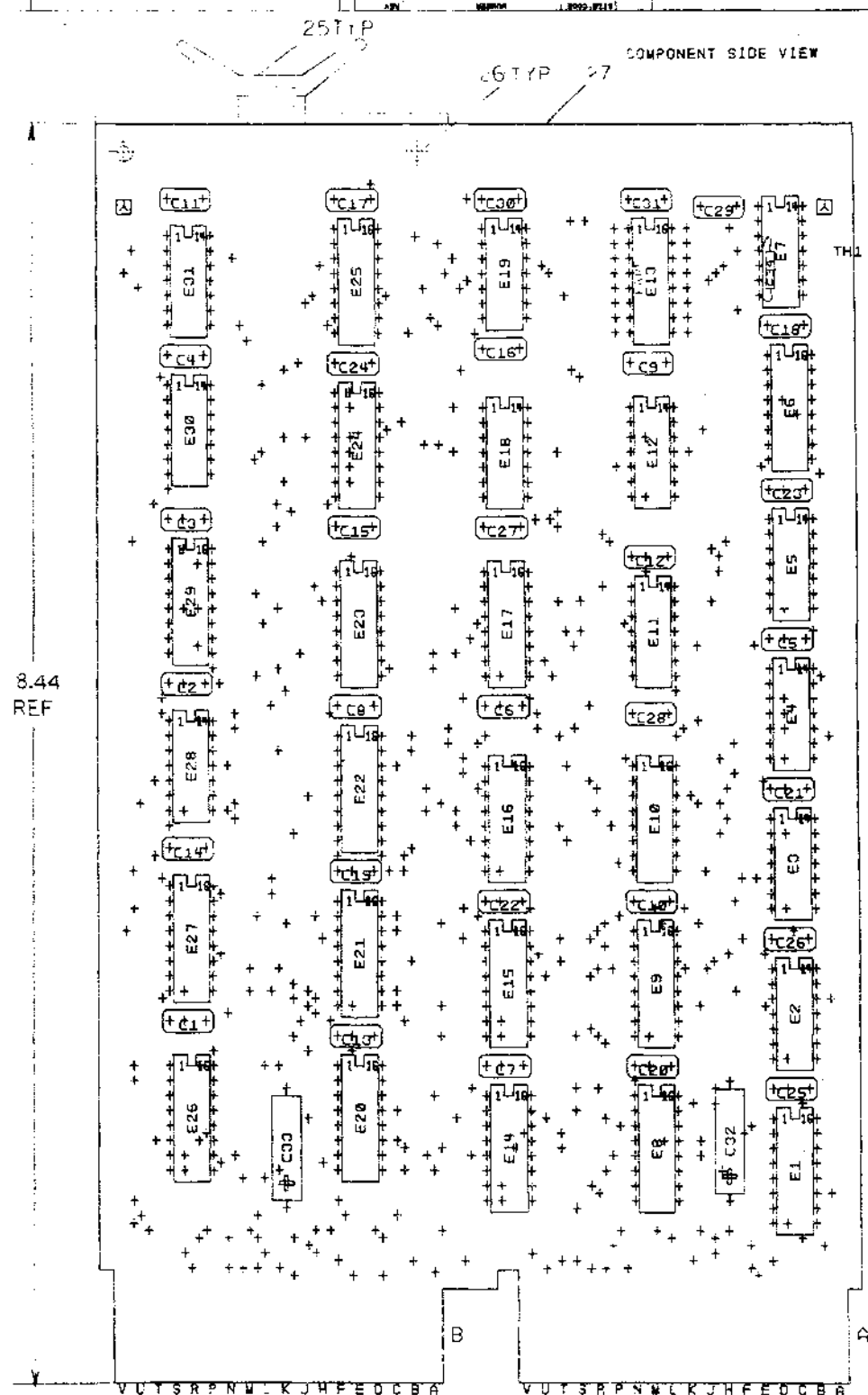
ML2

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
36	36	23982F1-00	F1-01	1	E25
37	37	23983F1-00	F1-01	1	E27
38	38	23984F1-00	F1-01	1	E29
39	39	23985F1-00	F1-01	1	E31
40	40	23986F1-00	F1-01	1	E33
41	41	23987F1-00	F1-01	1	E35
42	42	23988F1-00	F1-01	1	E24

D	I	S	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							ROM BOARD				K PL 18944-0-DBP	E

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ECG
 COMPONENT ADD: SIDE 1
 CAPACITOR (C34) BETWEEN E7 AND E4



NOTES:

CHG	NO	REV	DATE

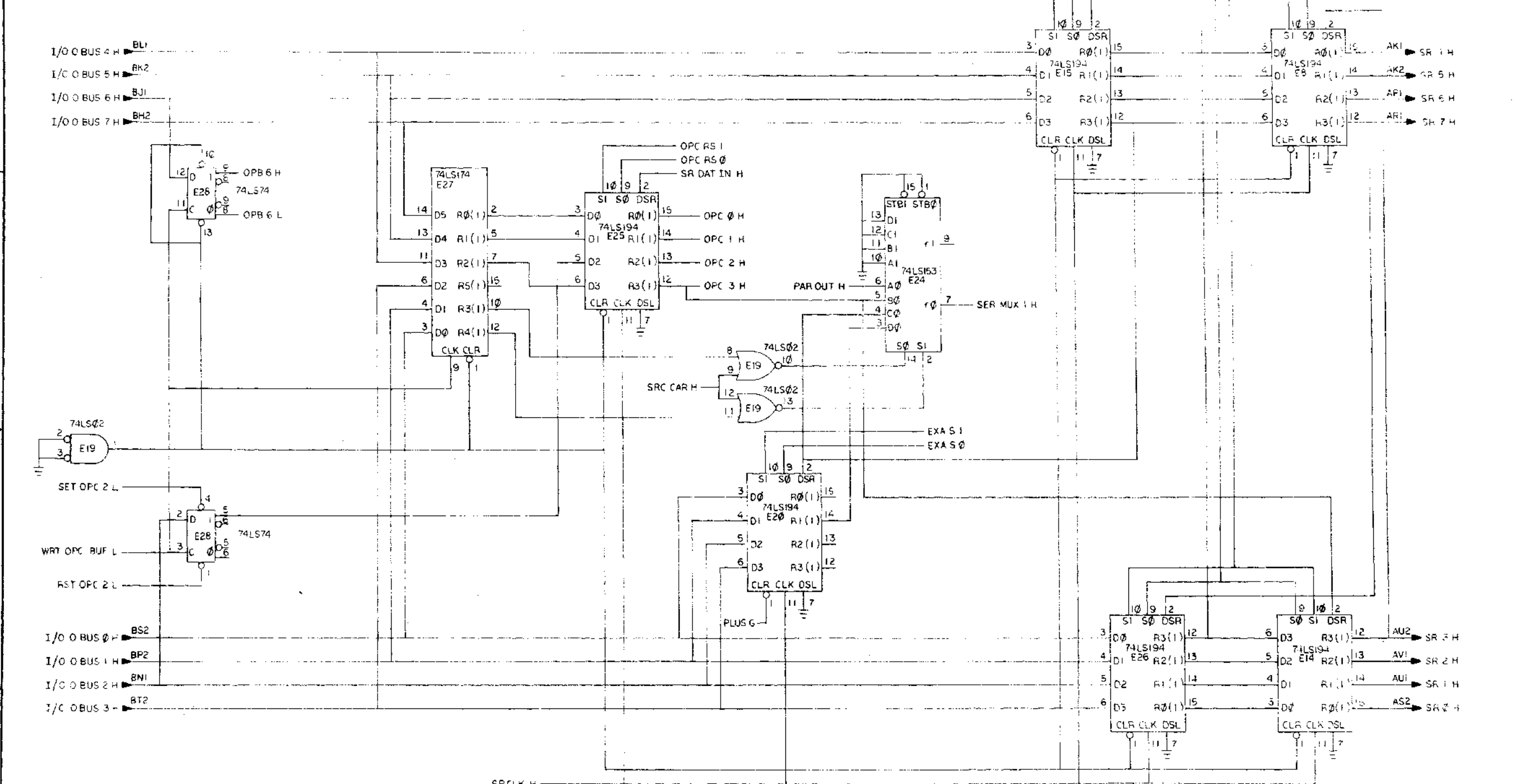
ETCH REV. C	DESIGN DATA BASE REV. C
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SIGNATURES	DATE	digital
DRN. <i>[Signature]</i>		
CHK'D. <i>[Signature]</i>		TITLE
ENG. <i>[Signature]</i>		1/0 SECTION 1
PROJ. ENG. <i>[Signature]</i>		
PROD. <i>[Signature]</i>		
SCALE 2/1	SIZE CODE	NUMBER
SHT. 1 OF 3	0 UA	M8965-0-0
NEXT HIGHER ASSY. B-DD-M8965-0		REV

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1 MS# 11E062

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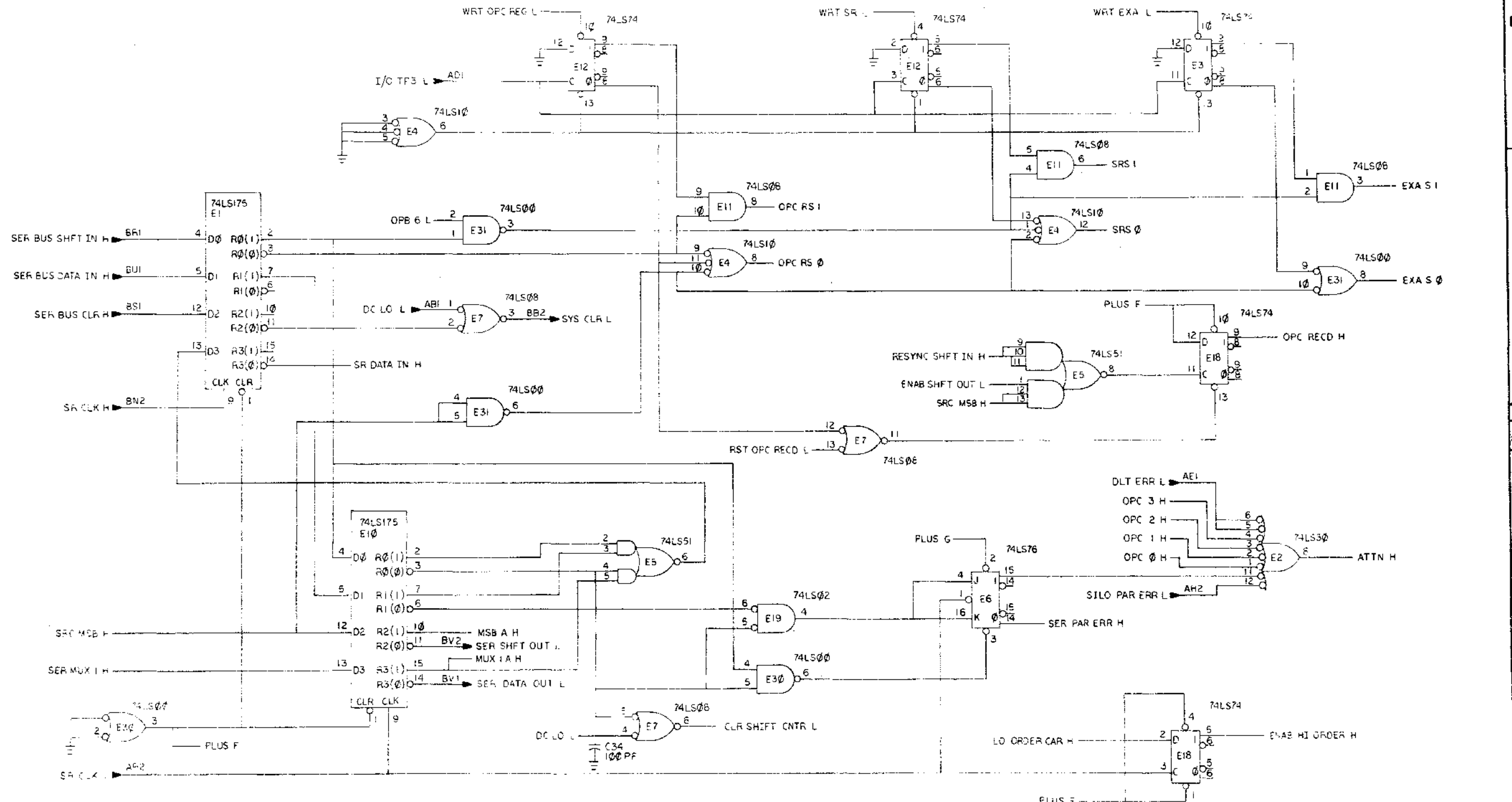


REV	CHG	NO	DATE	BY	CHK
1	MB965	ML001	C	1/27/79	
2					
3					

CHK'D	REV	DATE	BY	CHK
ENG	MB965	ML001	C	1/27/79
PROJ	MB965	ML001	C	1/27/79
PROD				
NEXT HIGHER ASSY.				
B-DD-M8965-0	SIZE	CODE	NUMBER	REV.
SCALE	NONE	D	CS	M8965-0-1
SHEET	OF 3	DIST		

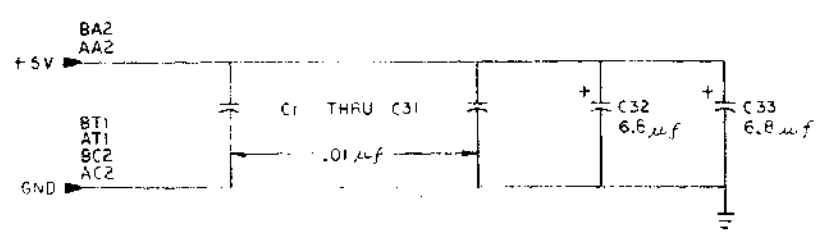
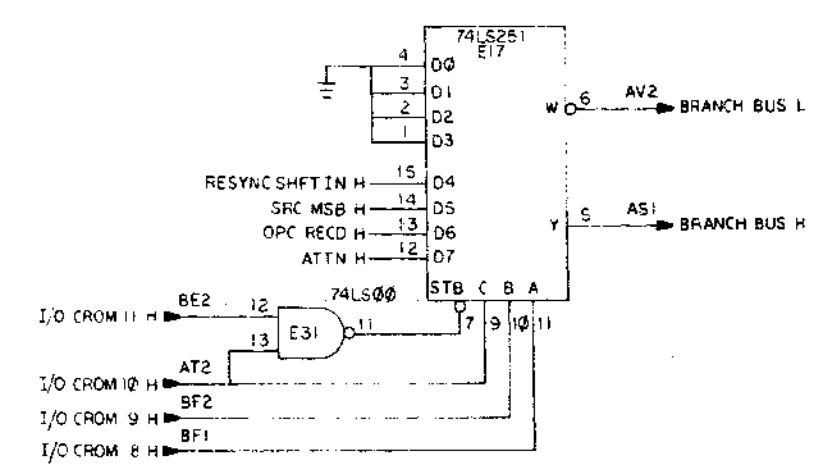
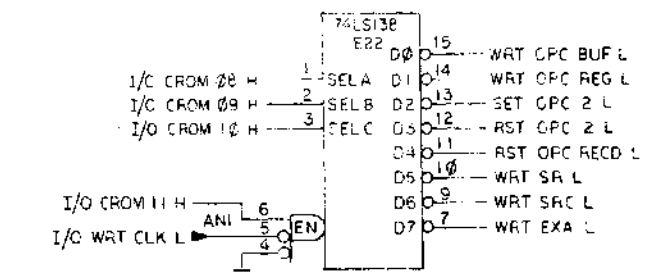
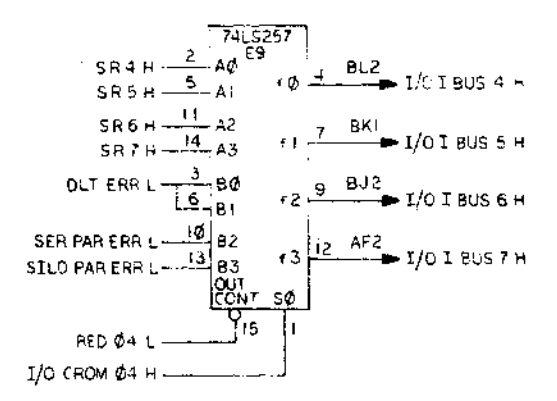
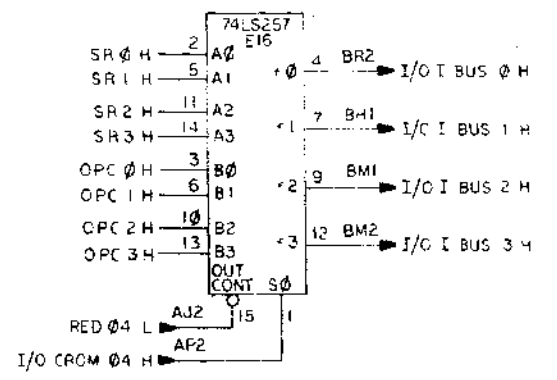
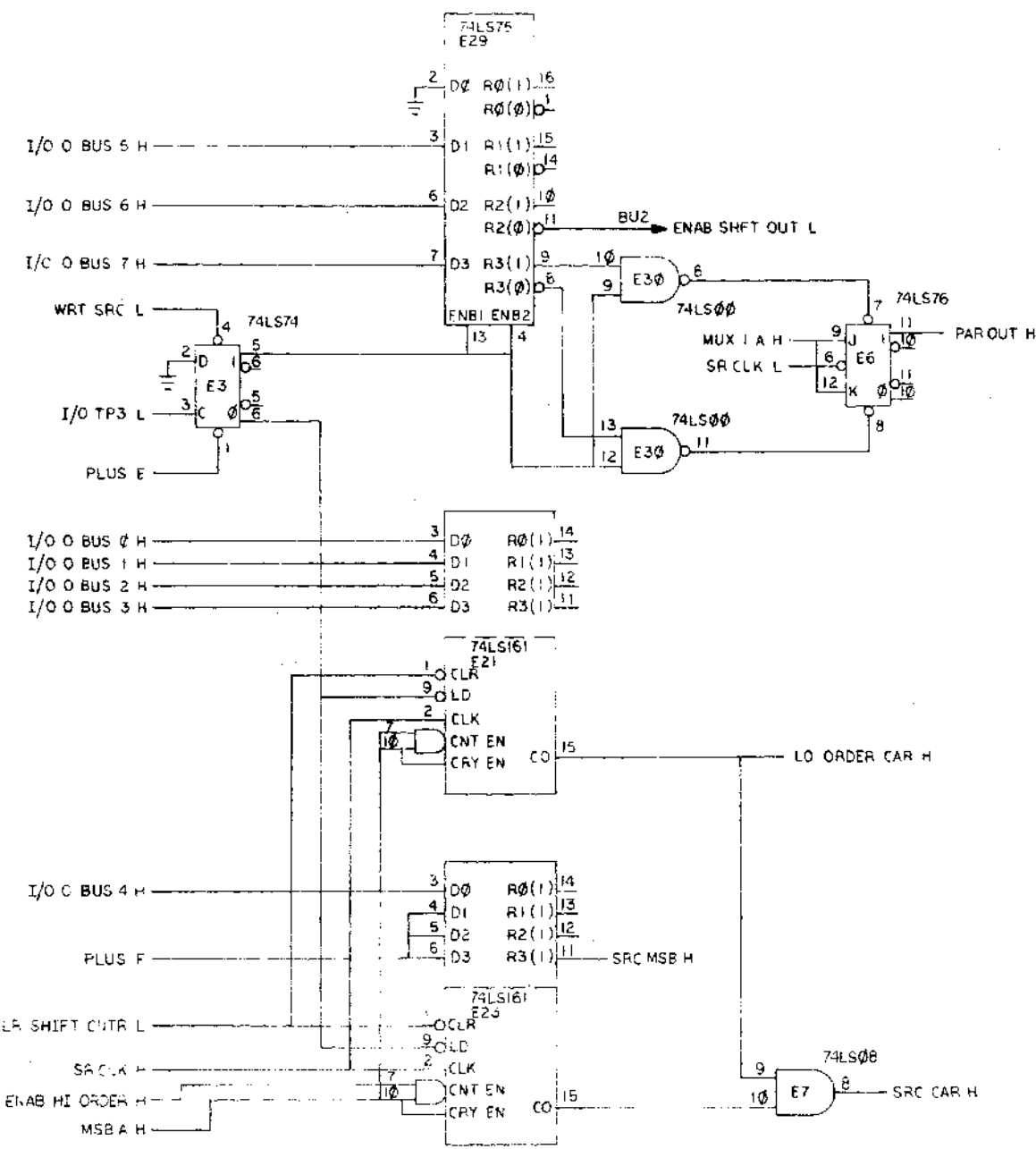
FIRST USED ON: TS04
 TITLE: I/O SECTION 1

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REVISIONS		
CHK	CHANGE NO	REV

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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.			

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
1		D-C5-M8965-0-1		CIRCUIT SCHEMATIC			REF
2		D-UA-M8965-0-0		UNIT ASSY			REF
3		B-DD-M8965-0-0		DWG DIRECTORY			REF
4		D-MD-5012885-0-0		DRILL & ETCH DWG			REF
5			1001610-00	.01 MFD 50V +80-20% 25U CER	31		C1-C31
6			1005306-00	6.8MFD 35V 10% S.TANT	2		C32, C33
7			1912647-00	LS257 MUX 1 OF 2 (QUAD)	2		E9, E15
8			1912648-00	LS251 MUX 8 INPUT, TRI-STA	1		E17
9			1912649-00	LS75 LATCH 4BIT, BISTABLE	1		E29
10			1912696-00	LS194A SHIFT REG., 4BIT BI-D	6		E8, E14, E15, E20, E25, E26
11			1912697-00	LS174 FF-D HEX W/CLEAR	1		E27
12			1912799-00	LS00 NAND-GATE-QUAD 2IN, P	2		E30, E31
13			1912801-00	LS02 NOR-GATE-QUAD 2IN	1		E19
14			1912805-00	LS08 AND GATE-QUAD 2IN, PO	2		E7, E11
15			1912807-00	LS10 NAND GATE-TRIPLE 3IN	1		E4
16			1912815-00	LS30 NAND GATE-SINGLE BIN	1		E2
17			1912820-00	LS51 A-0-1 GATE 2-WIDE 2I	1		E5
18			1912824-00	LS74 FF-D DUAL EDGE TRIGG	4		E3, E12, E18, E28
19			1912825-00	LS76 FF-JK DUAL W/PRESET	1		E6
20			1912842-00	LS138 DECODER-THREE INPUT,	1		E22
21			1912845-00	LS153 MUX 1 OF 4 (DUAL)	1		E24
22			1912849-00	LS161 COUNTER SYNCHR, 4BIT	2		E21, E23
23			1912853-00	LS175 FF-D QUAD	2		E1, E10
24		SPARE LOCATION		IC SPARE	1		E13
25			9008337-06	HANDLE, FLIP CHIP, MAGENTA	2		
26			9006732-00	EYELET, ROLL FLANGE .1210DX .219	4		
27			5012885-00	M8965	1		
28			1000016-00	100.0 MMF 100V 5%200PPM MICA	1		C34

REVISION HISTORY		BASIC PART NO: M8965		ORN: 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!MLOOI	C	[A] 00						
			[B]	DES. ENG:	R. ODOM	DATE:	11-JAN-78	DOCUMENT NUMBER	
			[C]						
			[D]	RESP. ENG.:	H. FINDEISEN	DATE:	11-JAN-78	SIZE CODE NUMBER	REV
			[E]						
			[F]	MFG. ENG.:	P. BARTON	DATE:	11-JAN-78	K PL M8965-0-DBP	C
			[G]						
			[H]	ASSEMBLY NUMBER:	D-UA-M8965-0-0	TOP DOCUMENT NUMBER:		FILE NAME:	EDIT #
			[I]					Z0510C.PLS	23
			[J]						
			[K]						
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			[M]						
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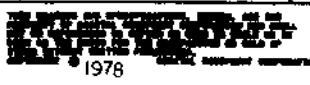
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D/UA M8966-0-0

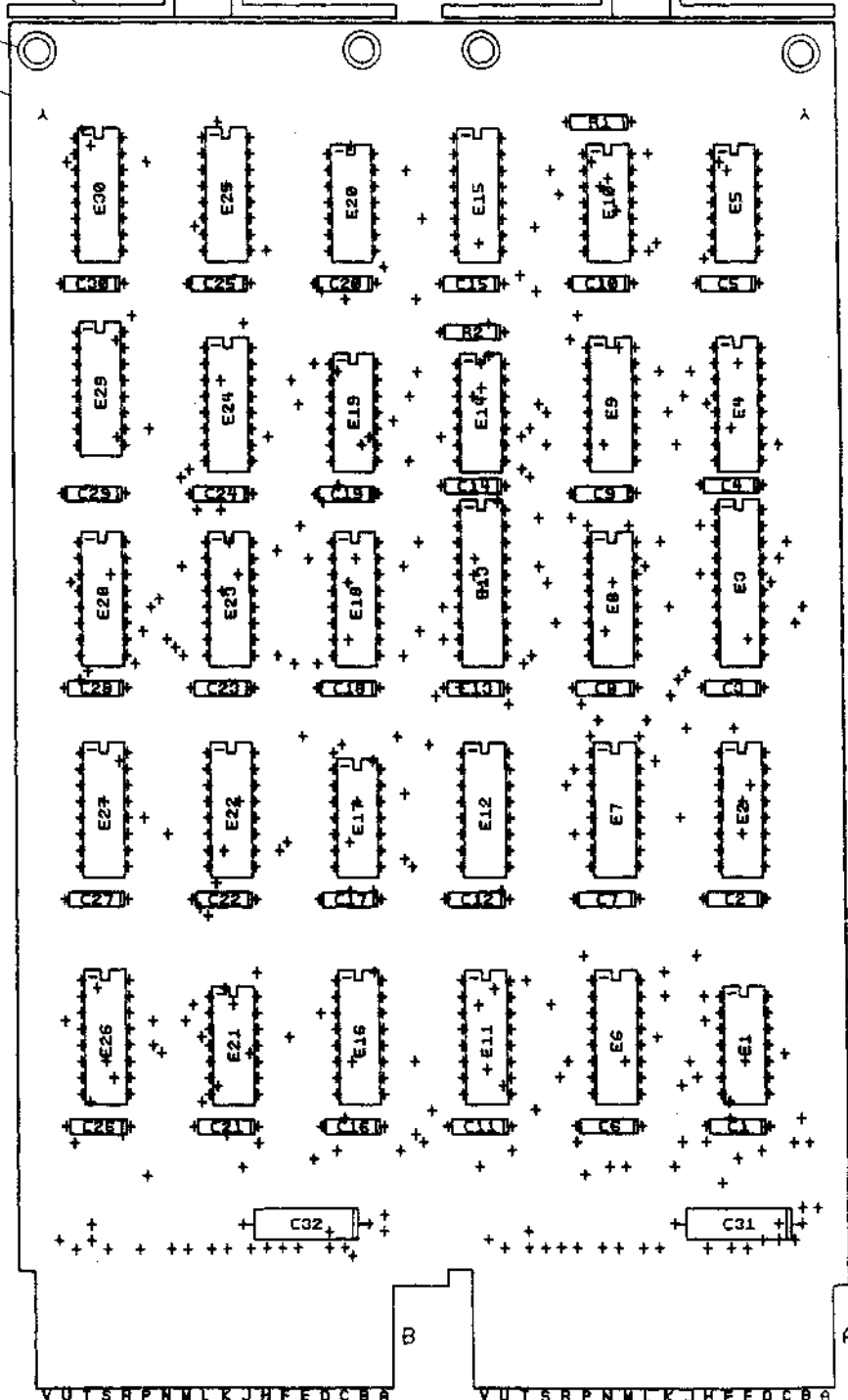


1978

20 TYP

19 TYP

COMPONENT SIDE VIEW



NOTES:

CHANCE NO	REV	DATE	BY
1			
2			
3			
4			

ETCH REV.	C-P2
P.C. DESIGN DATA BRZE REV.	CL2 & CM2

SIGNATURES		DATE	TITLE
DRN. <i>V. F. Smith</i>		4-27-78	
CHK'D. <i>B. Cassidy</i>		4-27-78	
ENC. <i>B. Cassidy</i>		4-27-78	
PROJ. ENG. <i>B. Cassidy</i>		4-27-78	
PROJ. MGR. <i>B. Cassidy</i>		4-27-78	
SCALE	2/1		SIZE CODE
SHT.	1 OF 5		NUMBER
NEXT HIGHER ASSY.	B-00-M8966-0		REV

digitall

8

7

6

5

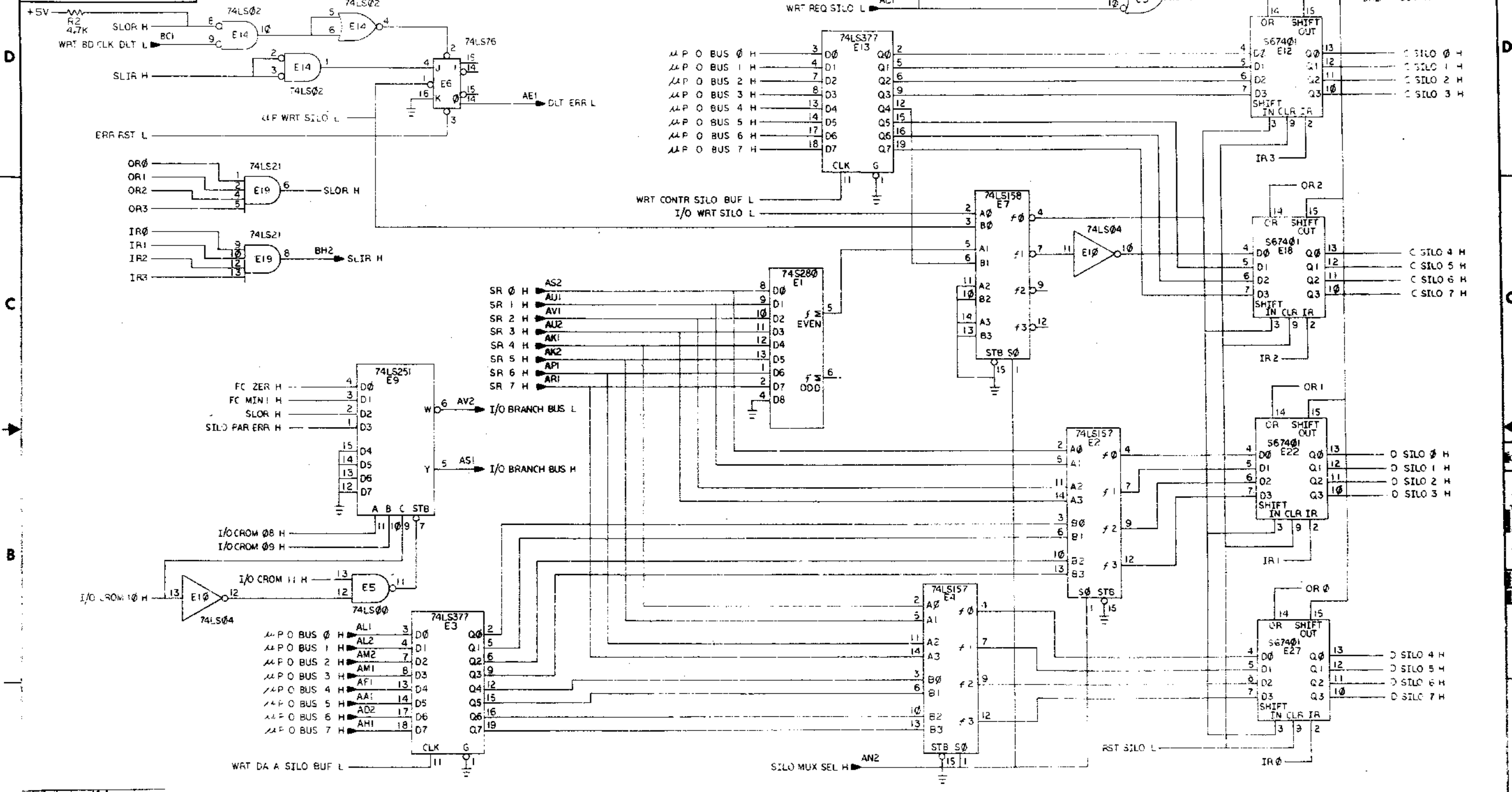
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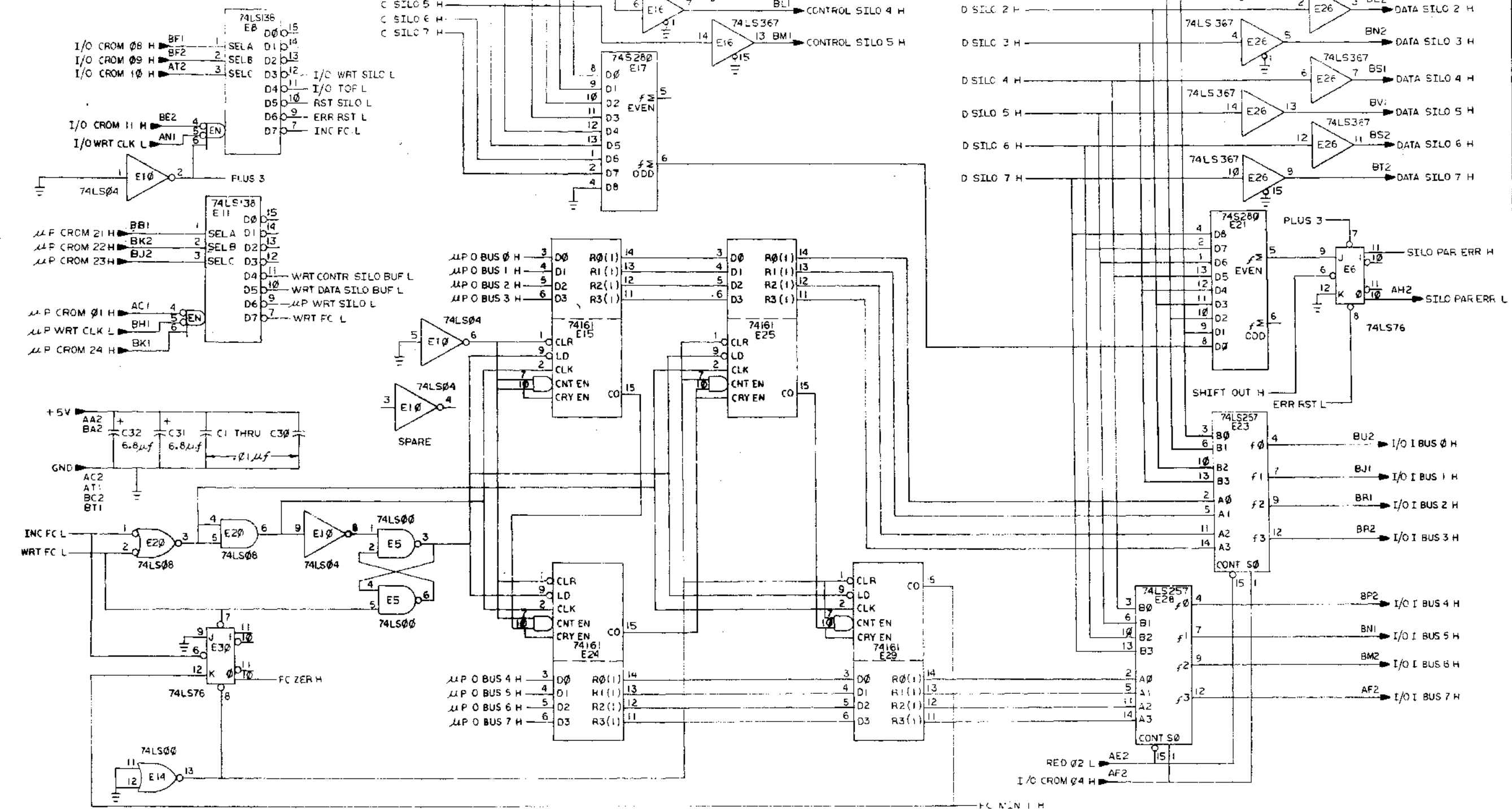
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REV.	CHANGED BY	DATE	REVISIONS
1	PAUL KINZELMAN	11/13/77	INITIAL DESIGN
2	MRS. B. KRASNICK	11/17/77	REVISED
3	B. KRASNICK	11/17/77	REVISED

DRN	1-0-9969W	REV. 1	FIRST USED ON	
CHK'D	J. G. [Signature]	11/17/77	TITLE	I/O SECTION 2
ENG.	M. [Signature]	11/17/77	SIZE	D
PROJ. ENG.	M. [Signature]	11/17/77	CODE	CS
PROD. DES.	M. [Signature]	11/17/77	NUMBER	M8966-0-1
NEXT H. GHER ASSY			SHEET	1 OF 2
B-DT-V8505-0			DIST.	

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CHK	CHANGE NO.	REV.
	M8966 M1001	E
DR		03e/73
ENGR	KINZELMAN	

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

D
C
B
A

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
1	1		5012886-00	M8966	1	
2	2		1001610-00	.01 MFD 50V +80-20% Z5U CER	30	C1-C30
3	3		1005306-00	6.8MFD 35V 10% 5.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)	2	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	745280 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 .1210DX .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
---	INIT	A	SECTION VARIATION INDEX	DES.ENG:	B.KRASNICK	DATE:	29-AUG-78
ER	MLO01	B	[A] 00	RESP.ENG.:	B.KRASNICK	DATE:	29-AUG-78
BK	M8966-MLO02	C	[B]	MFG.ENG.:	P.BARTON	DATE:	29-AUG-78
			[C]	ASSEMBLY NUMBER:	D-UA-M8966-D-D	TOP DOCUMENT NUMBER:	TS04
			[D]			FILE NAME:	20950C.PLS
			[E]			SIZE: CODE: NUMBER	REV
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			[G]				
			[H]				
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			[J]				
			[K]				
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			[M]				
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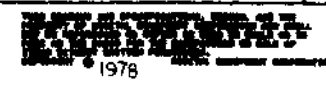
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2		D-UA-M8965-0-0		UNIT ASSY	REF		
3		B-DD-M8965-0-0		DWG DIRECTORY	REF		
4		D-MD-5012885-0-0		DRILL & ETCH DWG	REF		
5			1001610-00	.01 MFD 50V +80-20% 250 CER	31		C1-C31
6			1005306-00	6.8MFD 35V 10% S.TANT	2		C32, C33
7			1912647-00	LS257 MUX 1 OF 2 (QUAD)	2		E9, E16
8			1912648-00	LS251 MUX 8 INPUT TRI-STA	1		E17
9			1912649-00	LS75 LATCH 4BIT, BISTABLE	1		E29
10			1912696-00	LS194A SHIFT REG., 4BIT BI-D	6		E8, E14, E15, E20, E25, E26
11			1912697-00	LS174 FF-D HEX W/CLEAR	1		E27
12			1912799-00	LS00 NAND-GATE-QUAD 2IN, P	2		E30, E31
13			1912801-00	LS02 NOR-GATE-QUAD 2IN	1		E19
14			1912805-00	LS08 AND GATE-QUAD 2IN, PO	2		E7, E11
15			1912807-00	LS10 NAND GATE-TRIPLE 3IN	1		E4
16			1912815-00	LS30 NAND GATE-SINGLE BIN	1		E2
17			1912820-00	LS51 A-O-I GATE 2-WIDE 2I	1		E5
18			1912824-00	LS74 FF-D DUAL EDGE TRIGG	4		E3, E12, E18, E28
19			1912825-00	LS76 FF-JK DUAL W/PRESET	1		E6
20			1912842-00	LS138 DECODER-THREE INPUT,	1		E22
21			1912845-00	LS153 MUX 1 OF 4 (DUAL)	1		E24
22			1912849-00	LS161 COUNTER SYNCHR, 4BIT	2		E21, E23
23			1912853-00	LS175 FF-D QUAD	2		E1, E10
24		SPARE LOCATION		IC SPARE	1		E13
25			9008337-06	HANDLE, FLIP CHIP, MAGENTA	2		
26			9006732-00	EYELET, ROLL FLANGE .1210DX .219	4		
27			5012885-00	M8965	1		
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		DIGITAL	
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D:	DON COREY	DATE:	07-NOV-77	TITLE	PARTS LIST
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			(B)	DES. ENG:	R. ODOM	DATE:	11-JAN-78	DOCUMENT NUMBER	
			(C)						
			(D)	RESP. ENG.:	H. FINDEISEN	DATE:	11-JAN-78	SIZE: CODE: NUMBER	REV
			(E)						
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			(G)						
			(H)	ASSEMBLY NUMBER:	D-UA-M8965-0-0	TOP DOCUMENT NUMBER:		FILE NAME:	EDIT #
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			(J)						
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			(M)						
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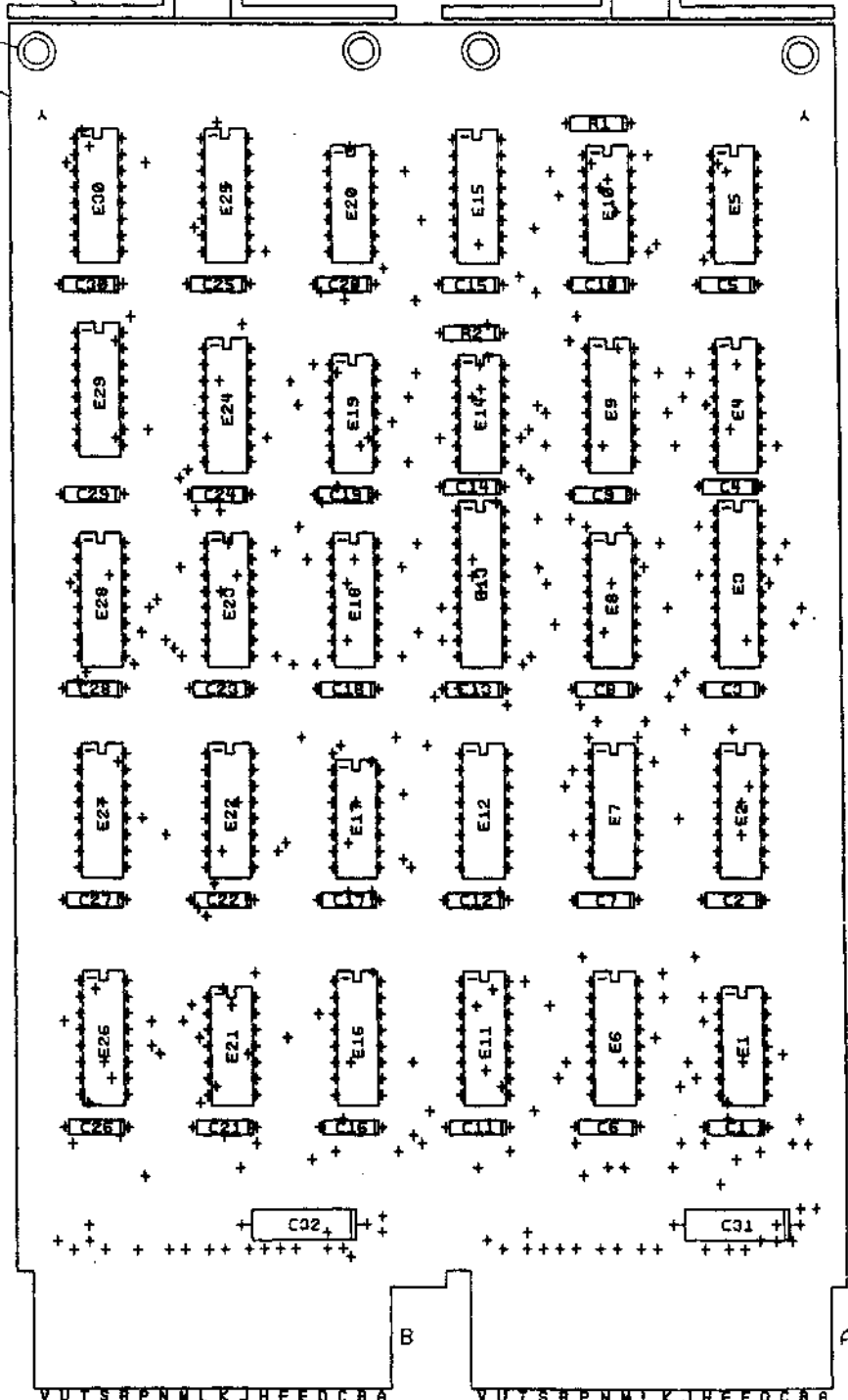
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DUA M8966-0-0



1978

20 TYP
19 TYP
COMPONENT SIDE VIEW



NOTES:

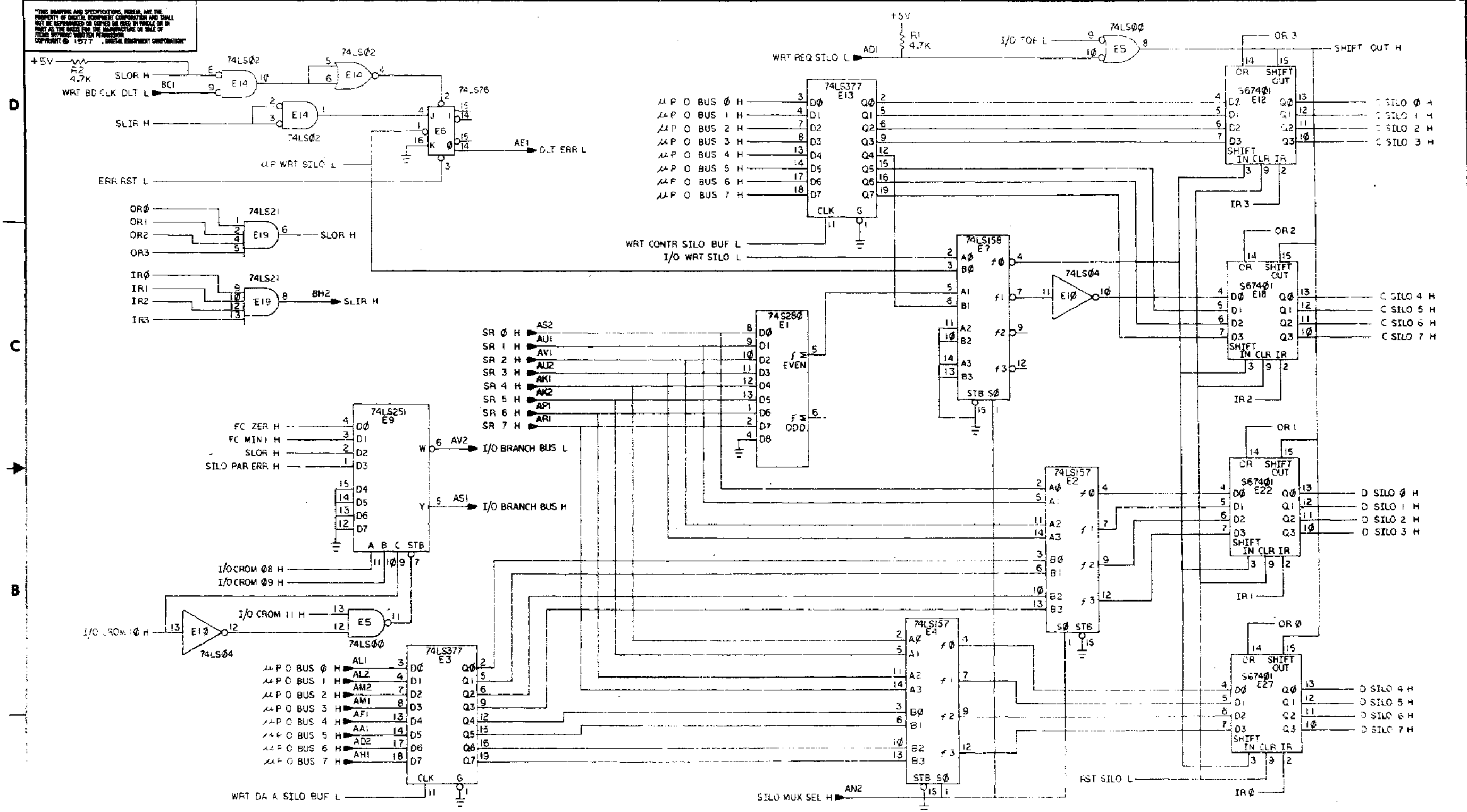
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4	D	1/15/79	W. J. ...
5	E	2/15/79	W. J. ...
6	F	3/15/79	W. J. ...
7	G	4/15/79	W. J. ...
8	H	5/15/79	W. J. ...
9	I	6/15/79	W. J. ...
10	J	7/15/79	W. J. ...
11	K	8/15/79	W. J. ...
12	L	9/15/79	W. J. ...
13	M	10/15/79	W. J. ...
14	N	11/15/79	W. J. ...
15	O	12/15/79	W. J. ...
16	P	1/15/80	W. J. ...
17	Q	2/15/80	W. J. ...
18	R	3/15/80	W. J. ...
19	S	4/15/80	W. J. ...
20	T	5/15/80	W. J. ...

ETCH REV.	C- P2
P.C. DESIGN DATA BASE REV.	CL2 & CM2

SIGNATURES	DATE	TITLE	SIZE	CODE	NUMBER	REV
DRN. <i>W. J. ...</i>	10-22-78	I/O SECTION 2	D	UA	M8966-0-0	C
CHK'D. <i>B. Cassidy</i>	10-27-78					
ENG. <i>W. J. ...</i>	11-15-78					
PROJ. ENG. <i>W. J. ...</i>	12-15-78					
PROD. <i>Peter Bauman M.C.</i>	1-15-79					

8 7 6 5 4 3 2 1 MS# 262426

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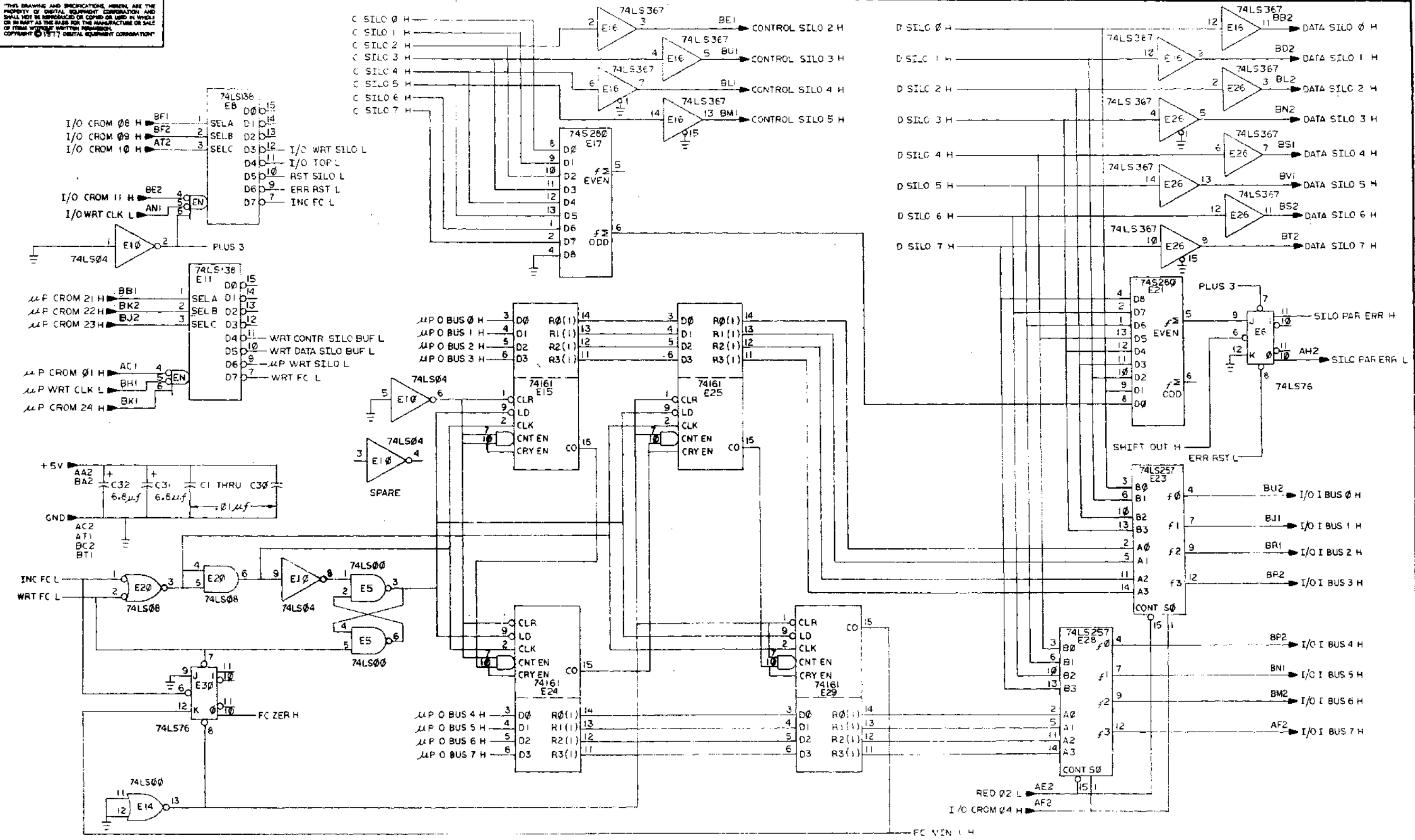


REV. 1	10/1/76	PAUL KINZELMAN
REV. 2	11/1/76	PAUL KINZELMAN
REV. 3	12/2/76	PAUL KINZELMAN
REV. 4	1/1/77	PAUL KINZELMAN
REV. 5	2/1/77	PAUL KINZELMAN
REV. 6	3/1/77	PAUL KINZELMAN
REV. 7	4/1/77	PAUL KINZELMAN
REV. 8	5/1/77	PAUL KINZELMAN
REV. 9	6/1/77	PAUL KINZELMAN
REV. 10	7/1/77	PAUL KINZELMAN
REV. 11	8/1/77	PAUL KINZELMAN
REV. 12	9/1/77	PAUL KINZELMAN
REV. 13	10/1/77	PAUL KINZELMAN
REV. 14	11/1/77	PAUL KINZELMAN
REV. 15	12/1/77	PAUL KINZELMAN
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REV. 17	2/1/78	PAUL KINZELMAN
REV. 18	3/1/78	PAUL KINZELMAN
REV. 19	4/1/78	PAUL KINZELMAN
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REV. 25	10/1/78	PAUL KINZELMAN
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REV. 44	5/1/80	PAUL KINZELMAN
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REV. 46	7/1/80	PAUL KINZELMAN
REV. 47	8/1/80	PAUL KINZELMAN
REV. 48	9/1/80	PAUL KINZELMAN
REV. 49	10/1/80	PAUL KINZELMAN
REV. 50	11/1/80	PAUL KINZELMAN
REV. 51	12/1/80	PAUL KINZELMAN
REV. 52	1/1/81	PAUL KINZELMAN
REV. 53	2/1/81	PAUL KINZELMAN
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REV. 55	4/1/81	PAUL KINZELMAN
REV. 56	5/1/81	PAUL KINZELMAN
REV. 57	6/1/81	PAUL KINZELMAN
REV. 58	7/1/81	PAUL KINZELMAN
REV. 59	8/1/81	PAUL KINZELMAN
REV. 60	9/1/81	PAUL KINZELMAN
REV. 61	10/1/81	PAUL KINZELMAN
REV. 62	11/1/81	PAUL KINZELMAN
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REV. 65	2/1/82	PAUL KINZELMAN
REV. 66	3/1/82	PAUL KINZELMAN
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REV. 80	5/1/83	PAUL KINZELMAN
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REV. 82	7/1/83	PAUL KINZELMAN
REV. 83	8/1/83	PAUL KINZELMAN
REV. 84	9/1/83	PAUL KINZELMAN
REV. 85	10/1/83	PAUL KINZELMAN
REV. 86	11/1/83	PAUL KINZELMAN
REV. 87	12/1/83	PAUL KINZELMAN
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REV. 89	2/1/84	PAUL KINZELMAN
REV. 90	3/1/84	PAUL KINZELMAN
REV. 91	4/1/84	PAUL KINZELMAN
REV. 92	5/1/84	PAUL KINZELMAN
REV. 93	6/1/84	PAUL KINZELMAN
REV. 94	7/1/84	PAUL KINZELMAN
REV. 95	8/1/84	PAUL KINZELMAN
REV. 96	9/1/84	PAUL KINZELMAN
REV. 97	10/1/84	PAUL KINZELMAN
REV. 98	11/1/84	PAUL KINZELMAN
REV. 99	12/1/84	PAUL KINZELMAN
REV. 100	1/1/85	PAUL KINZELMAN

DRN. 11/1/76	REV. 1	FIRST USED ON	11/1/76
CHK'D. 11/1/76	REV. 1	TITLE	I/O SECTION 2
ENG. 11/1/76	REV. 1	PROJ. ENG. 11/1/76	
PROD. 11/1/76	REV. 1	PROD. 11/1/76	
NEXT HIGHER ASSY.			
B-DY-1000-0	SIZE CODE	NUMBER	REV.
SCALE NONE	D CS	M8966-01	C
SHEET 1	OF 2	DIST.	

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1-0-9966PW SCD 2



REVISIONS		
CHK	CHANGE NO.	REV.
MB	M8966 M.021	8
DR		8/30/78
ENGR	KINZELMAN	

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

DCS M8966-0-1

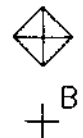
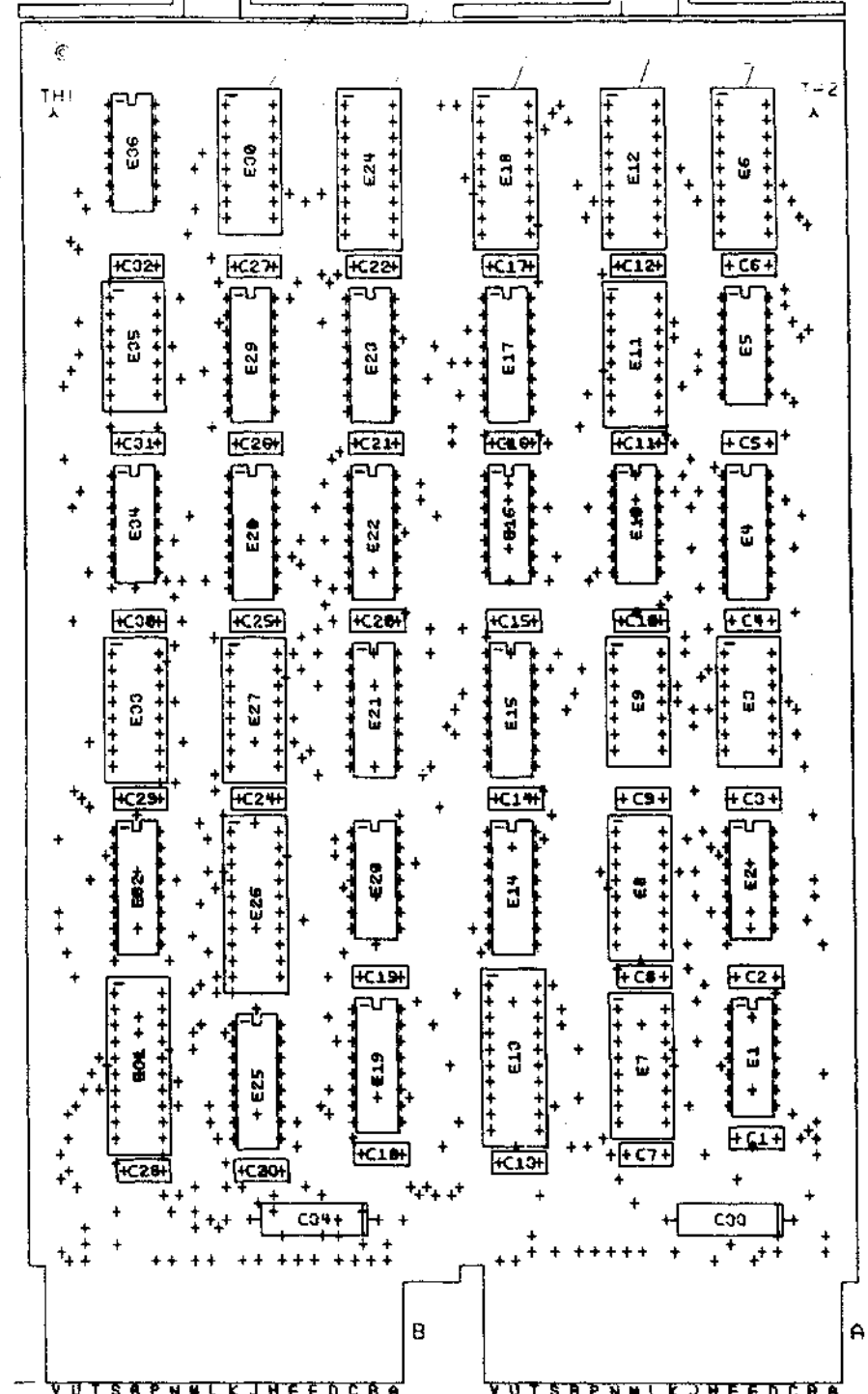
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1	1		5012886-00	M8966	1	
2	2		1001610-00	.01 MFD 50V +80-20% Z5U CER	30	C1-C30
3	3		1005306-00	6.8MFD 35V 10% S.TANT	2	C31,C32
4	4		1910650-00	74161 COUNTER, SYNCHR. UP	4	E15,E24,E25,E29
5	5		1912647-00	LS257 MUX 1 OF 2 (QUAD)	2	E23,E28
6	6		1912648-00	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	745280 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 .1210DX .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					I/O SECTION 2			
ER	MLO01	B	[A] 00	DES.ENG:	B.KRASNICK	DATE:	29-AUG-78	DOCUMENT NUMBER			
BK	M8966-MLO02	C	[B]	RESP.ENG.:	B.KRASNICK	DATE:	29-AUG-78	SIZE	CODE	NUMBER	REV
			[C]	MFG.ENG.:	P.BARTON	DATE:	29-AUG-78	K	PL	M8966-0-DBP	C
			[D]	ASSEMBLY NUMBER:	D-UR-M8966-0-0	TOP DOCUMENT NUMBER:	TS04	FILE NAME:	EDIT #		
			[E]					Z0950C.PLS	9		
			[F]	"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"							
			[G]								
			[H]								
			[I]								
			[J]								
			[K]								
			[L]								
			[M]								
			[N]								

7-7-63

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COMPONENT SIDE VIEW



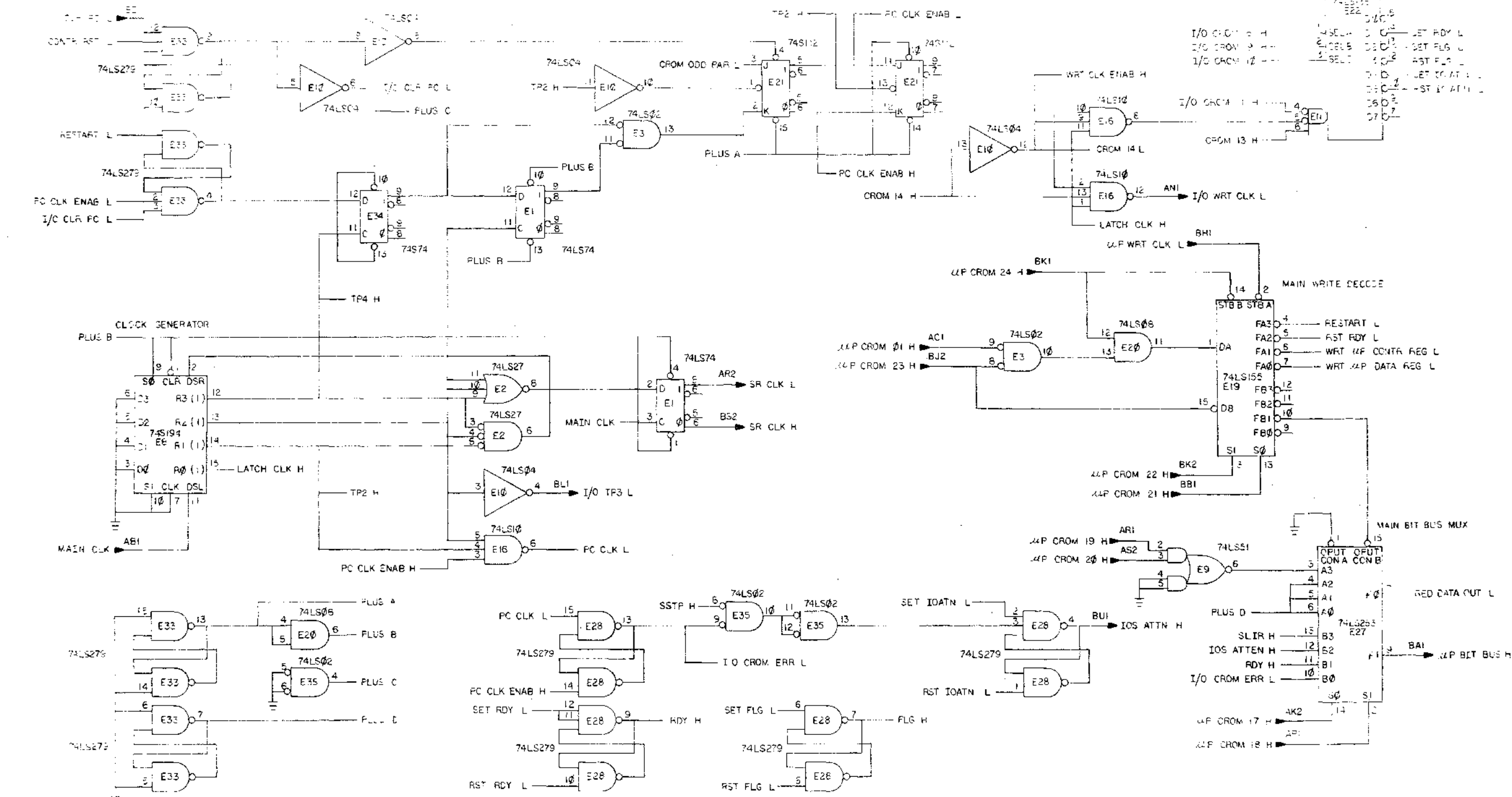
NOTES:

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

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

SIGNATURES	DATE	TITLE
DRN.		digital
CHK'D.		
ENC.		
PROJ. ENG.		
PROD.		
SCALE 2/1		
SHT. 1 OF 3		
NEXT HIGHER ASSY.		
SIZE CODE	NUMBER	REV
UA	M8967-0-0	D

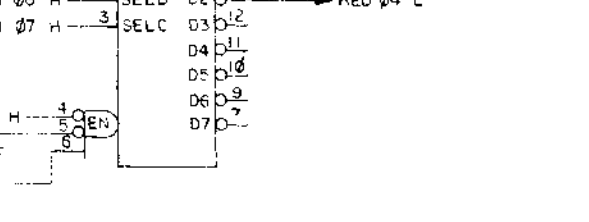
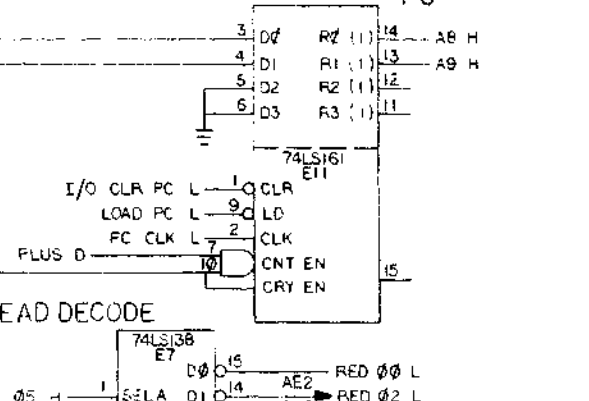
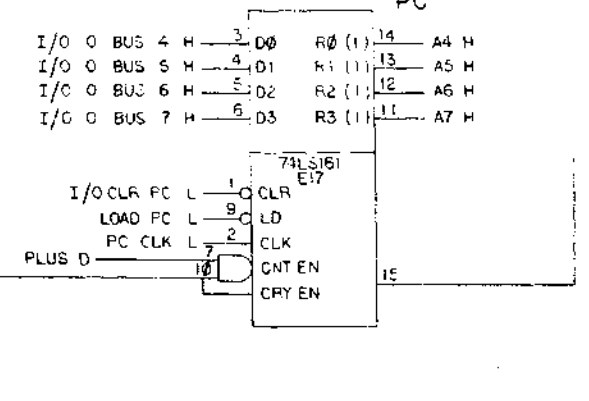
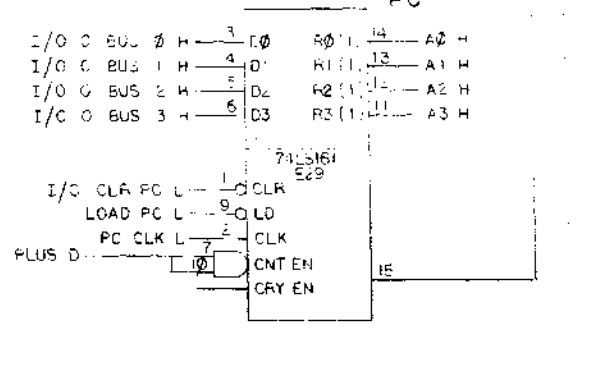
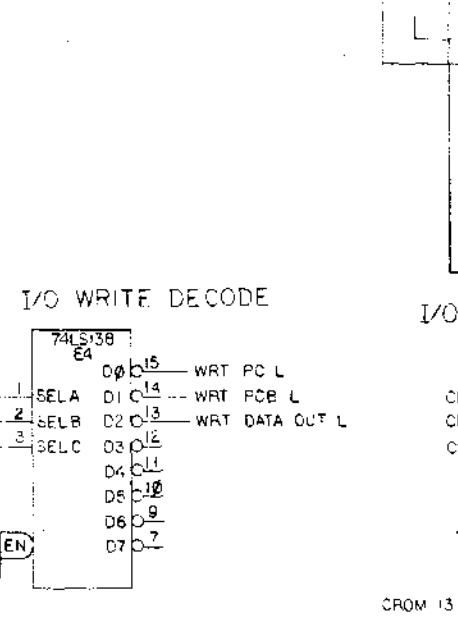
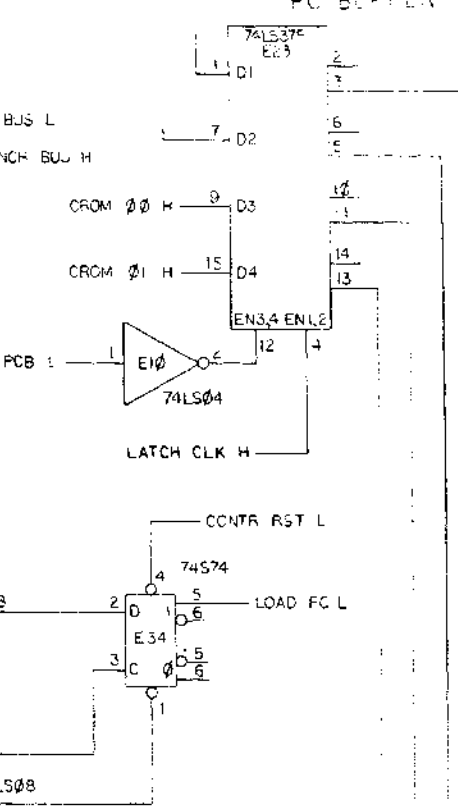
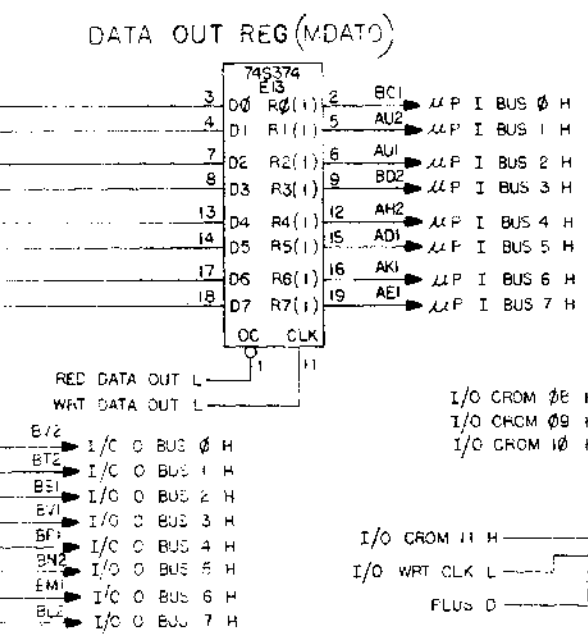
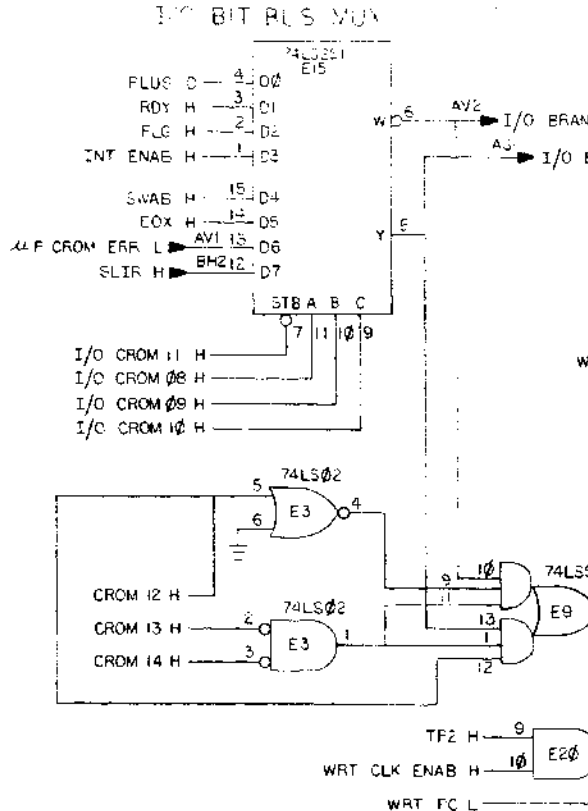
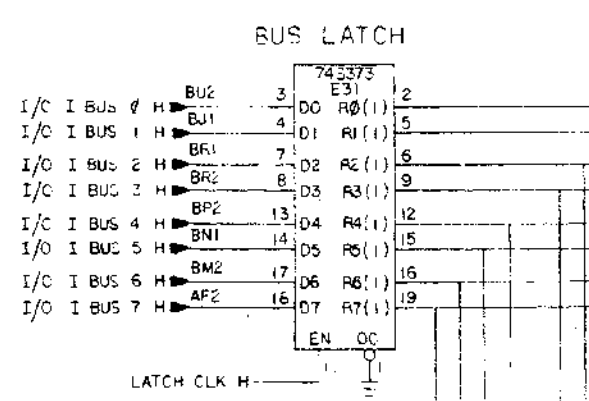
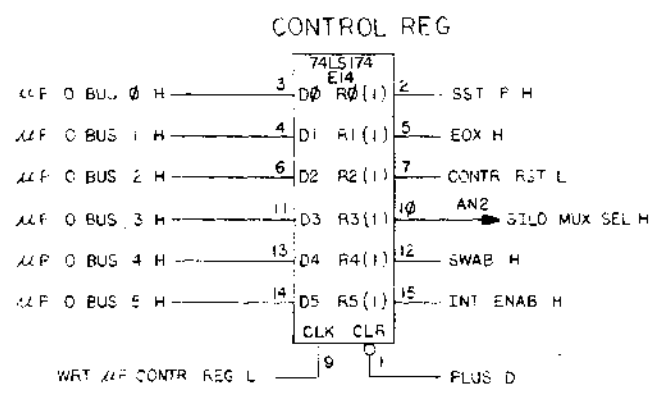
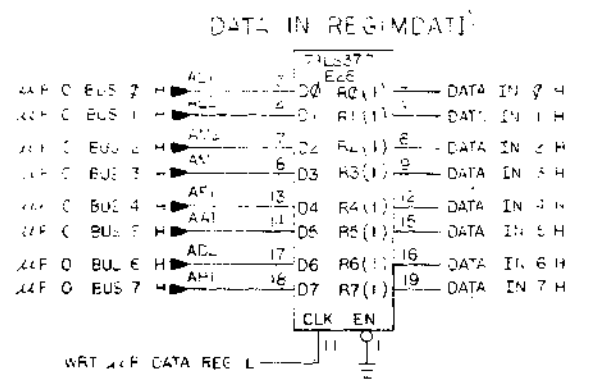
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REV	DATE	BY	CHK'D
1			
2			
3			
4			
5			
6			
7			
8			

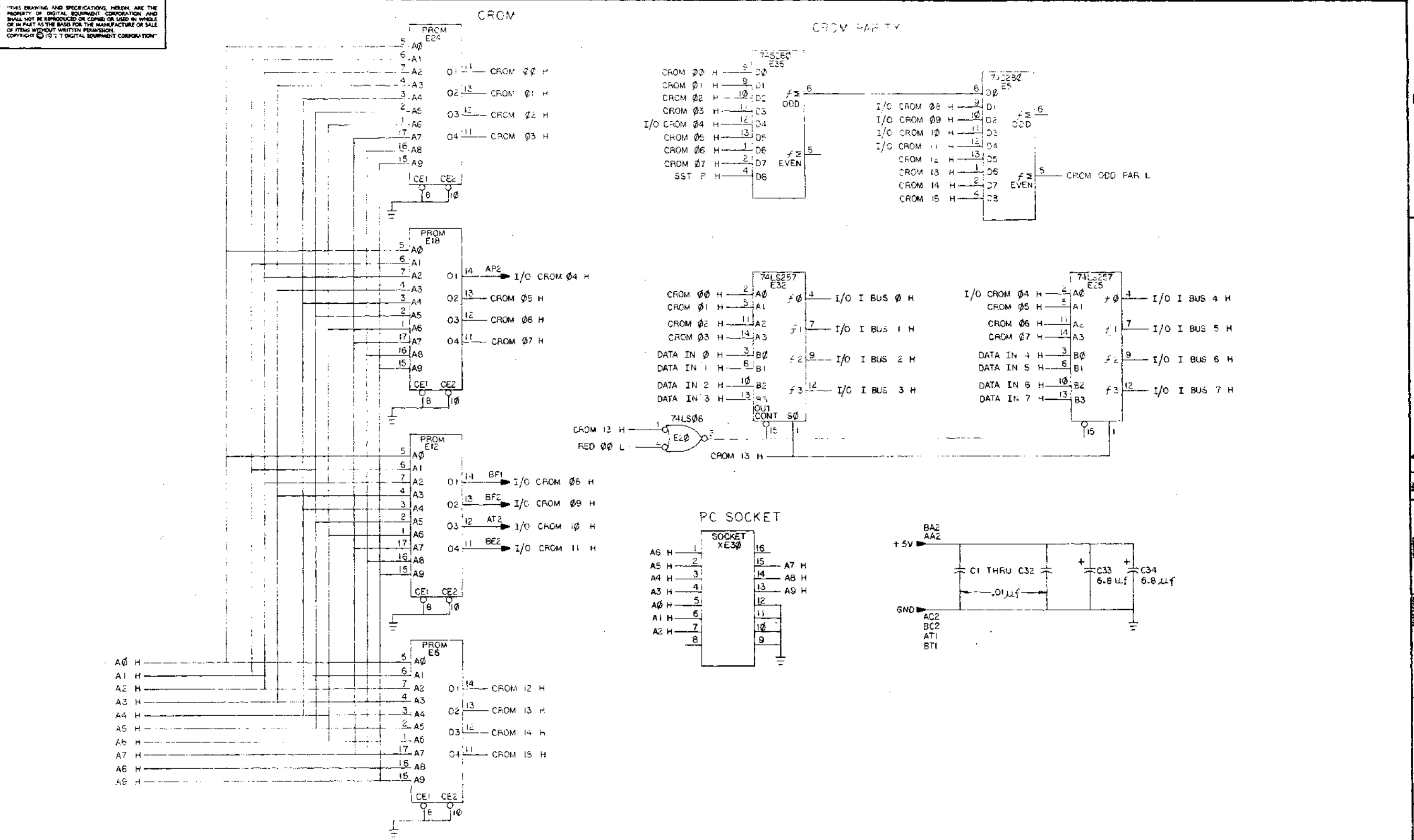
DRN: <i>[Signature]</i>	FIRST USED ON: TSC4
CHK'D: <i>[Signature]</i>	TITLE: I/O STATION 3
ENG: <i>[Signature]</i>	PROJECT: <i>[Signature]</i>
PROJ ENG: <i>[Signature]</i>	SCALE: NONE
PRODD: <i>[Signature]</i>	SIZE CODE: D
NEXT HIGHER ASSY:	NUMBER: M8967-0-1
B-DD-M8967-0	SCALE: NONE
SCALE: NONE	DIST: <i>[Signature]</i>
SHEET: 1	OF 3

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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		D-C5-M8967-0-1		CIRCUIT SCHEMATIC		REF	
2		B-DD-M8967-0-0		DRAWING DIRECTORY		REF	
3		D-UA-M8967-0-0		UNIT ASSEMBLY		REF	
4		D-MD-5012887-0-0		DRILL & ETCH DRAWING		REF	
5			5012887-00	M8967	1		
6			1001610-00	.01 MFD 50V +80-20% 25U CER	32		C1-C32
7			1005306-00	6.BMFD 35V 10% S.TANT	2		C33, C34
8			1912801-00	LS02 NOR-GATE-QUAD 2IN	2		E3, E35
9			1912803-00	74LS04 INVERTER GATE, HEX	1		E10
10			1912805-00	LS08 AND GATE-QUAD 2IN, PO	1		E20
11			1912807-00	LS10 NAND GATE-TRIPLE 3IN	1		E16
12			1912813-00	LS27 NOR GATE-TRIPLE 3IN	1		E2
13			1912820-00	LS51 A-0-1 GATE 2-WIDE 2I	1		E9
14			1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1		E1
15			1912842-00	LS138 DECODER-THREE INPUT,	3		E4, E7, E22
16			1912846-00	LS155 DECODER, 2 OF 4 (DUAL)	1		E19
17			1912849-00	LS161 COUNTER, SYNCHR, 4BIT	3		E11, E17, E29
18			1912697-00	LS174 FF-D HEX W/CLEAR	1		E14
19			1912648-00	LS251 MUX 8 INPUT, TRI-STA	1		E15
20			1912646-00	LS253 MUX 1 OF 4 (DUAL)	1		E27
21			1912647-00	LS257 MUX 1 OF 2 (QUAD)	2		E25, E32
22			1912864-00	LS279 LATCH, QUAD-5-R	2		E28, E33
23			1912871-00	LS375 LATCH	1		E23
24			1912872-00	LS377 FF-D BBIT W/ENABLE	1		E26
25			1910950-00	74S74 FF-D DUAL (-45 VERSI	1		E34
26			1910545-00	74S112 FF-JK DUAL, EDGE TRIG	1		E21
27			1910552-00	74S194 SHIFT REG, 4BIT RIGH	1		E8
28			1911573-00	74S280 PARITY GEN/CHKR, 9BIT	2		E5, E36
29			1913670-00	74S373 LATCH 8BIT TRASP TR	1		E31
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		
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
P.K.	M8967-MLO03	D	[C]	ASSEMBLY NUMBER:	D-UA-M8967-0-0	TOP DOCUMENT NUMBER:	T504	NUMBER	REV
			[D]			FILE NAME:	Z03220.PLS		8
			[E]			EDIT #			
			[F]						
			[H]						
			[J]						
			[K]						
			[L]						
			[M]						
			[N]						

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AUTOMATED BY PRTLST.2E(3)

PARTS LIST

SHEET A2 OF A2

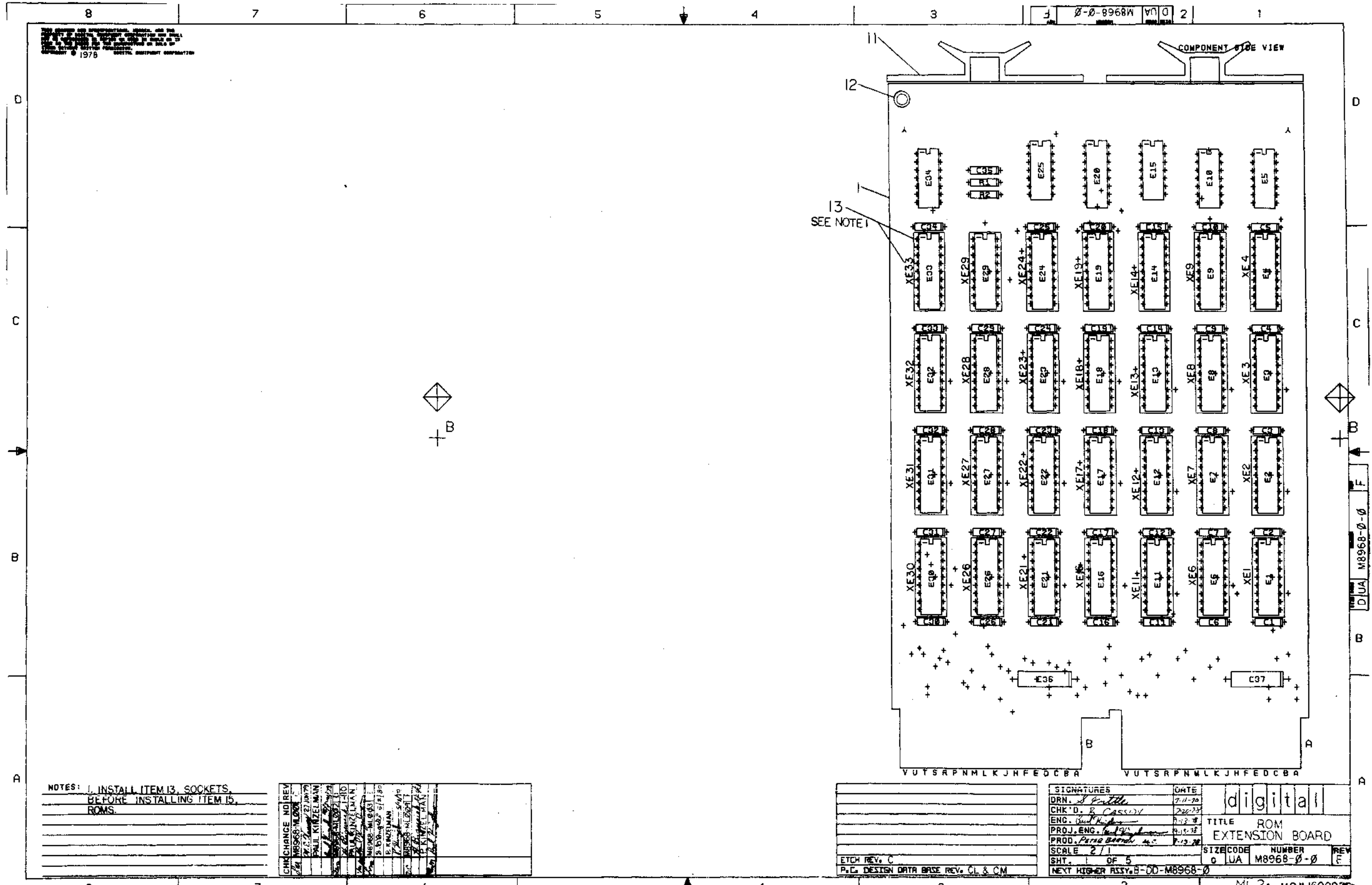
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31	31		23000F1-01	*** THIS ITEM IS NOT USED ***	-	
32	32		9006732-00	EYELET, ROLL FLANGE .121DDX .219	4	
33	33		9008337-06	HANDLE, FLIP CHIP, MAGENTA	2	
34	34		1211813-02	SOCKET 16PIN IC LOW PROFILE	1	E30
35	35		1211666-00	SOCKET 18PIN IC LOW PROFILE	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	C

REVISIONS TO DRAWING
 DATE: 7-11-70
 BY: J. B. CASSELL
 1978 DIGITAL EQUIPMENT CORPORATION

D/UA M8968-0-0 2

COMPONENT SIDE VIEW



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

CHG	NO	REV	DATE	BY	APP
M8968-ML001	1		7-11-70	J. B. CASSELL	
M8968-ML002	2		7-12-70	J. B. CASSELL	
M8968-ML003	3		7-13-70	J. B. CASSELL	
M8968-ML004	4		7-13-70	J. B. CASSELL	
M8968-ML005	5		7-13-70	J. B. CASSELL	
M8968-ML006	6		7-13-70	J. B. CASSELL	
M8968-ML007	7		7-13-70	J. B. CASSELL	
M8968-ML008	8		7-13-70	J. B. CASSELL	
M8968-ML009	9		7-13-70	J. B. CASSELL	
M8968-ML010	10		7-13-70	J. B. CASSELL	

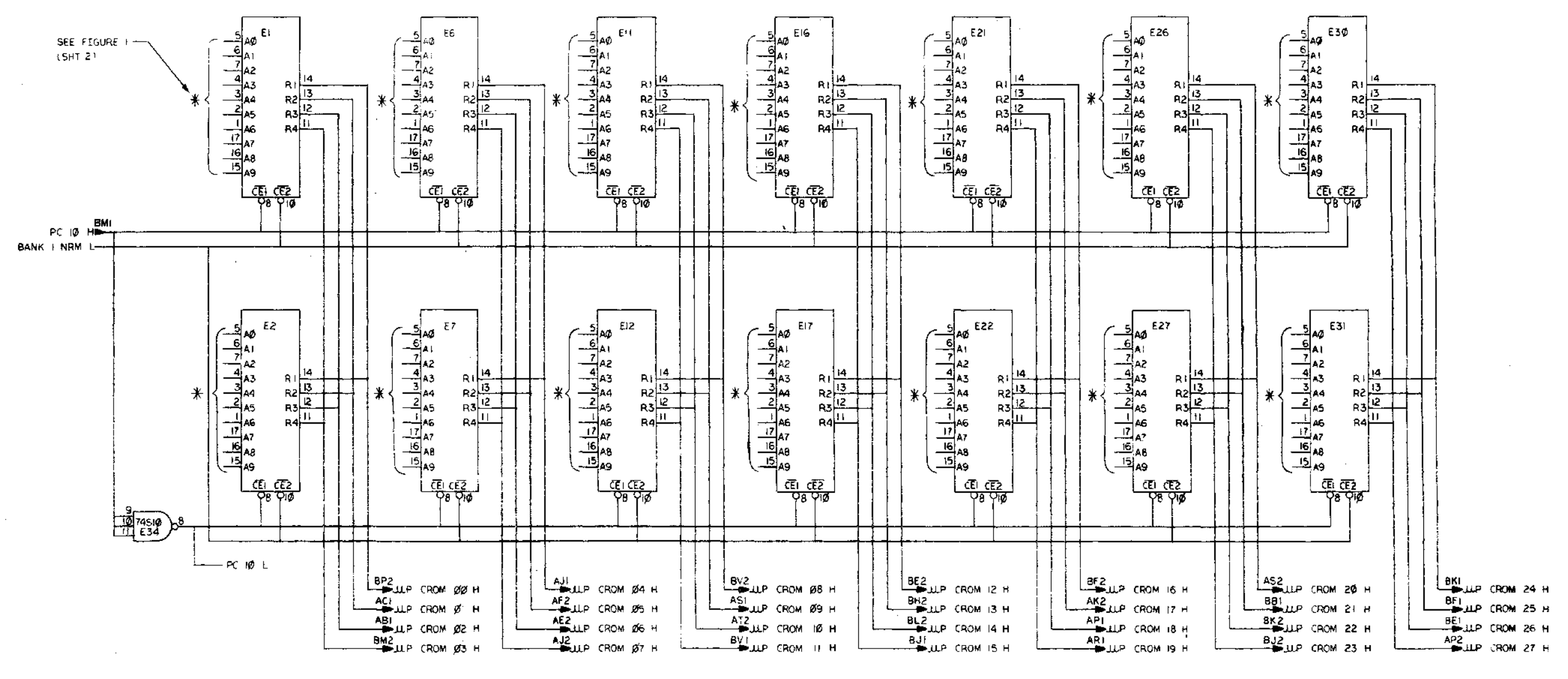
ETCH REV. C	
P.L.C. DESIGN DATA BASE REV. CL & CM	

SIGNATURES	DATE
DRN. J. B. CASSELL	7-11-70
CHK'D. R. CASSELL	7-12-70
ENG. J. B. CASSELL	7-12-70
PROJ. ENG. J. B. CASSELL	7-13-70
PROD. P. CASSELL	7-13-70

digital	
TITLE ROM EXTENSION BOARD	
SIZE CODE	NUMBER
D/UA	M8968-0-0
REV	F

ML21 MS#160092C

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REV.	CHANGE NO.	DATE	BY	CHK'D
1	1	27 JUN 79	PAUL KINZELMAN	
2	2	27 JUN 79	PAUL KINZELMAN	
3	3	27 JUN 79	PAUL KINZELMAN	
4	4	27 JUN 79	PAUL KINZELMAN	
5	5	27 JUN 79	PAUL KINZELMAN	
6	6	27 JUN 79	PAUL KINZELMAN	
7	7	27 JUN 79	PAUL KINZELMAN	
8	8	27 JUN 79	PAUL KINZELMAN	

DRN	1-0-8968W	FIRST USED ON	TS04
CHK'D		TITLE	ROM EXTENSION BOARD
ENG		PROJ. ENG.	
PROD. PRICE		PROJ. PRICE	
NEXT HIGHER ASSY.		SIZE CODE	NUMBER
B-DD-M8968-0		D CS	M8968-0-1
SHEET 1 OF 2		DIST.	

D CS M8968-0-1

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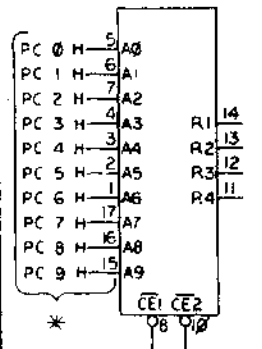
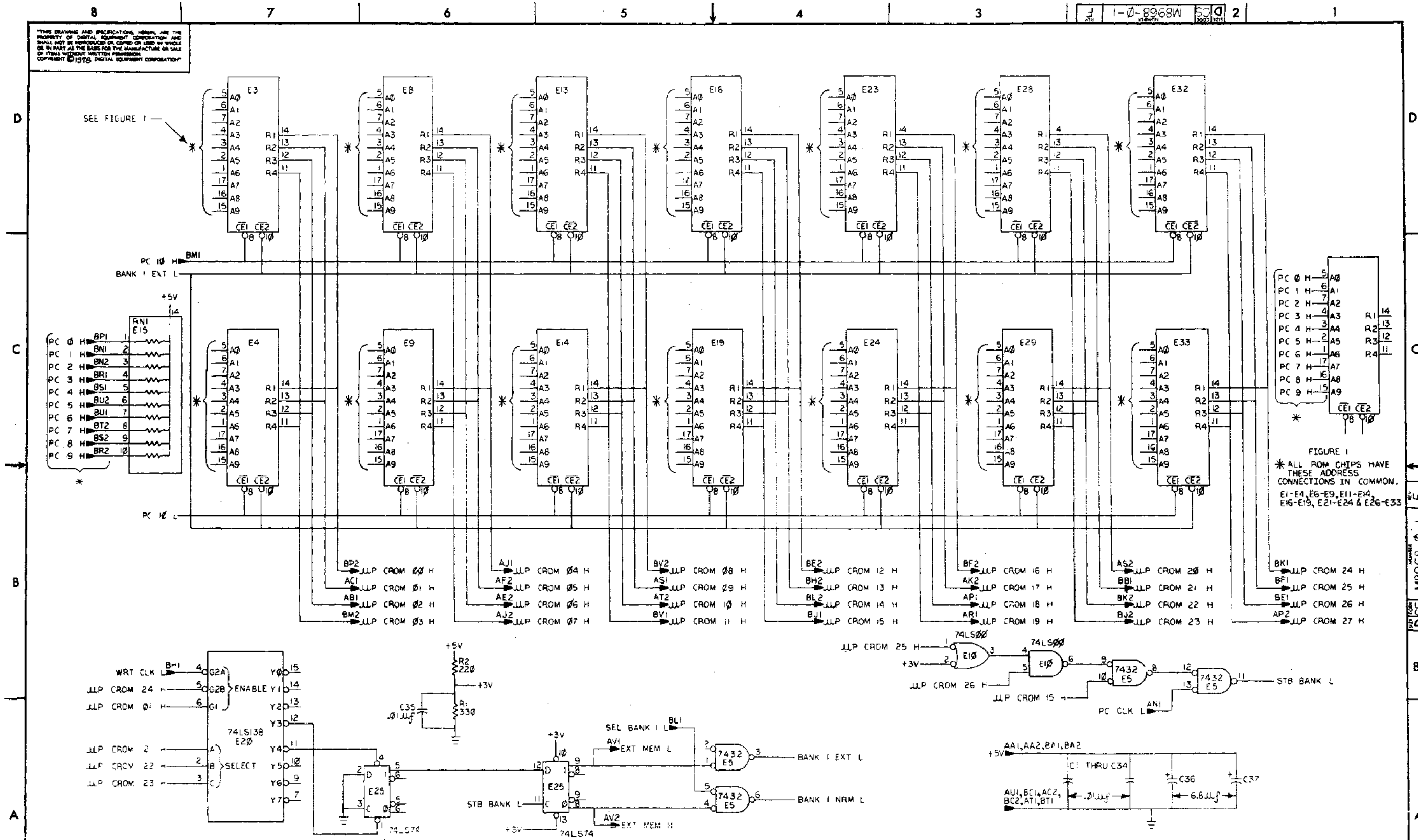
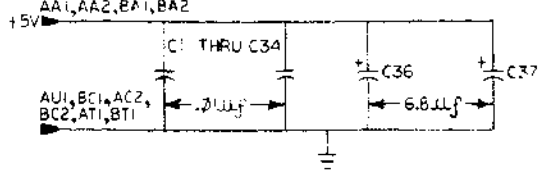
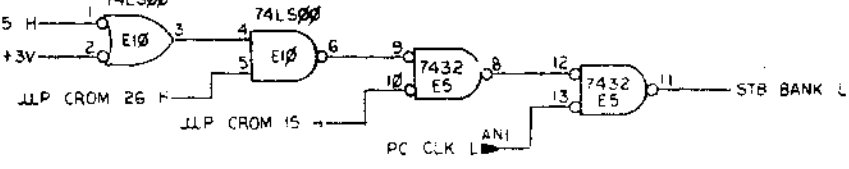
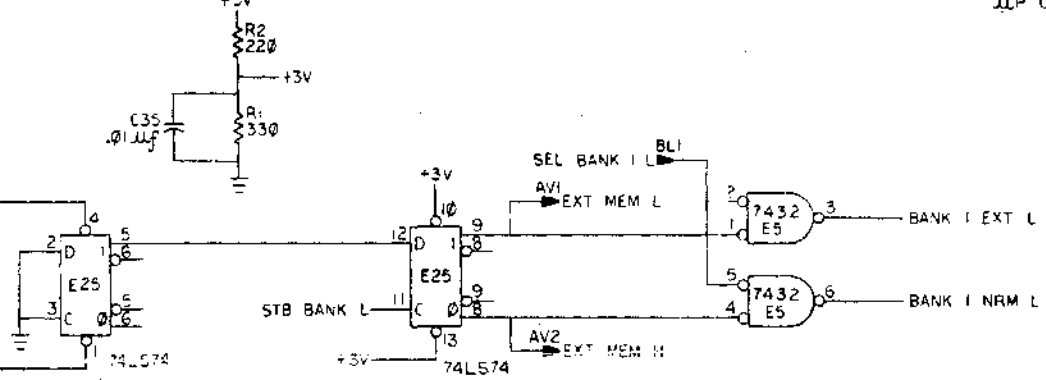
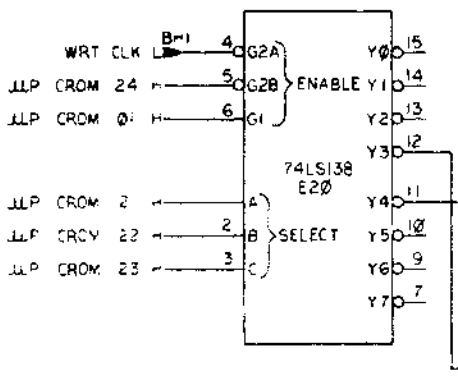


FIGURE 1
* ALL ROM CHIPS HAVE THESE ADDRESS CONNECTIONS IN COMMON.
E1-E4, E6-E9, E11-E14, E16-E19, E21-E24 & E26-E33

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



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	ROM EXTENSION BOARD	SIZE/CODE	D CS	NUMBER	M8968-0-1	REV.	F
SCALE	1/1	SHEET	2 OF 2	DIST			

AUTOMATED BY PRTLST.10(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% Z5U 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 % 14PIN	1		E15
7	7		1911521-00	7432 OR GATE-QUAD 2IN, PO	1		E5
8	8		1912824-00	LS74 FF-0 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		
14	14		1910536-00	74S10 NAND GATE-TRIPLE 3IN	1	CONT	XE1-XE4, XE6-XE9, XE11-XE14, XE16-XE19, XE21-XE24, XE26-XE33
15	15		23403F1-00	F1-01	1		E34
16	16		23404F1-00	F1-01	1		E1
17	17		23405F1-00	F1-01	1		E6
18	18		23406F1-00	F1-01	1		E11
19	19		23407F1-00	F1-01	1		E16
20	20		23408F1-00	F1-01	1		E21
21	21		23409F1-00	F1-01	1		E26
22	22		23813F1-00	F1-01	1		E30
23	23		23658F1-00	F1-01	1		E2
24	24		23659F1-00	F1-01	1		E7
25	25		23660F1-00	F1-01	1		E12
26	26		23661F1-00	F1-01	1		E17
27	27		23662F1-00	F1-01	1		E22
28	28		23814F1-00	F1-01	1		E27
29	29		23417F1-00	F1-01	1		E31

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-ML001	C	[A] 00	RESP.ENG.:	R.ODOM	DATE:	01-MAR-78	DOCUMENT NUMBER	
PK	M8968-ML002	D	[B]	MFG.ENG.:	P.BARTON	DATE:	01-MAR-78	SIZE: CODE: NUMBER	REV
PK	M8968-ML003	E	[C]	ASSEMBLY NUMBER:	D-UA-M8968-0-0	TOP DOCUMENT NUMBER:	T504	FILE NAME:	20597F.PLS
PK	M8968-ML004	F	[D]					EDIT #	21
		G	[E]						
		H	[F]						
		I	[G]						
		J	[H]						
		K	[I]						
		L	[J]						
		M	[K]						
		N	[L]						

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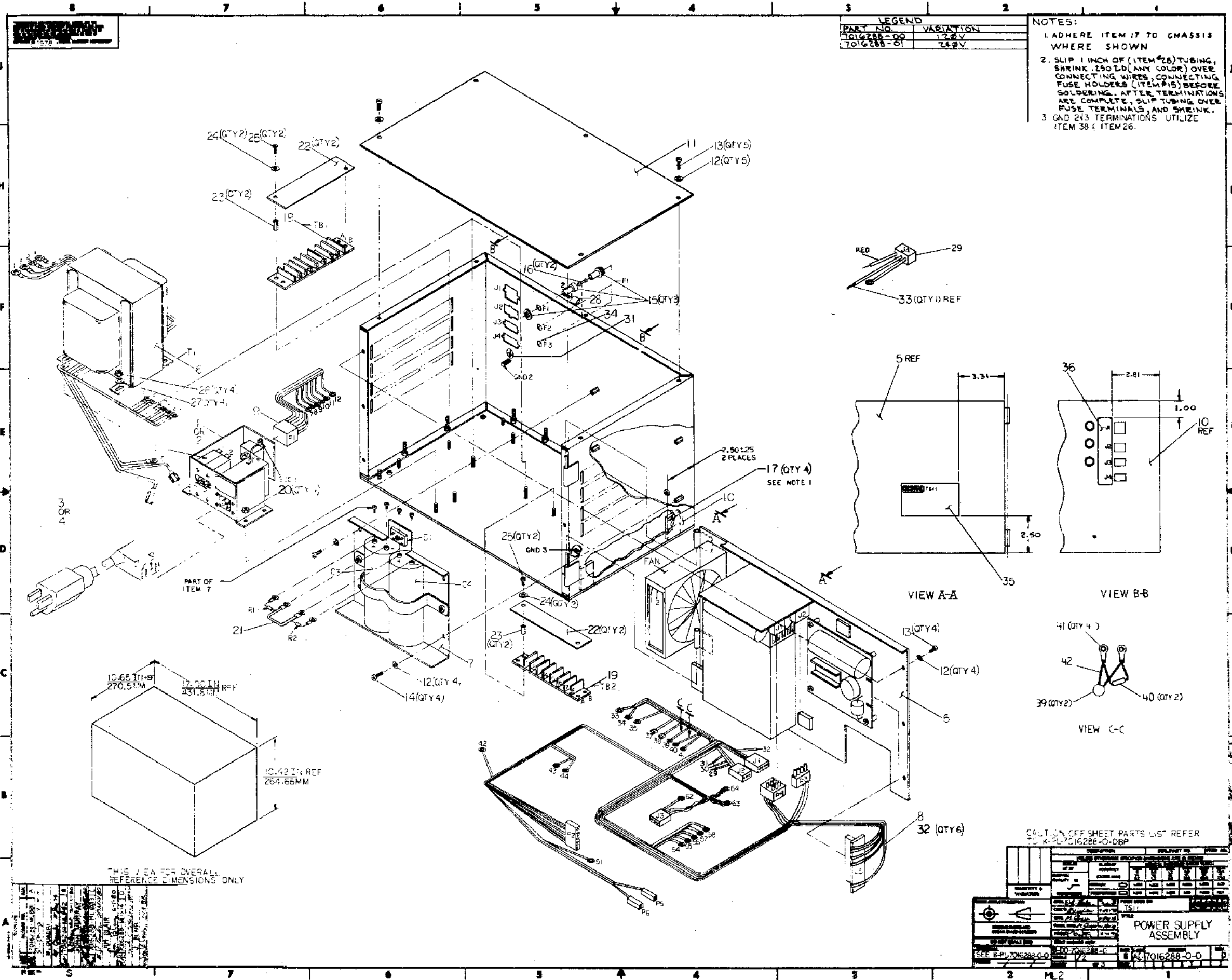
AUTOMATED BY PRTLST.ID(10)

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



LEGEND	
PART NO.	VARIATION
7016288-00	12.0V
7016288-01	24.0V

NOTES:
 1. ADHERE ITEM 17 TO CHASSIS WHERE SHOWN
 2. SLIP 1 INCH OF (ITEM 26) 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.

THIS VIEW FOR OVERALL REFERENCE DIMENSIONS ONLY

CAUTION OFF SHEET PARTS LIST REFER TO X-PL-2016288-0-DBP

Part No.	Description	Quantity	Notes
1
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POWER SUPPLY ASSEMBLY

SEE B-P-2016288-0-0

WIRE TABLE 7016288-00

WIRE TABLE 7016288-01

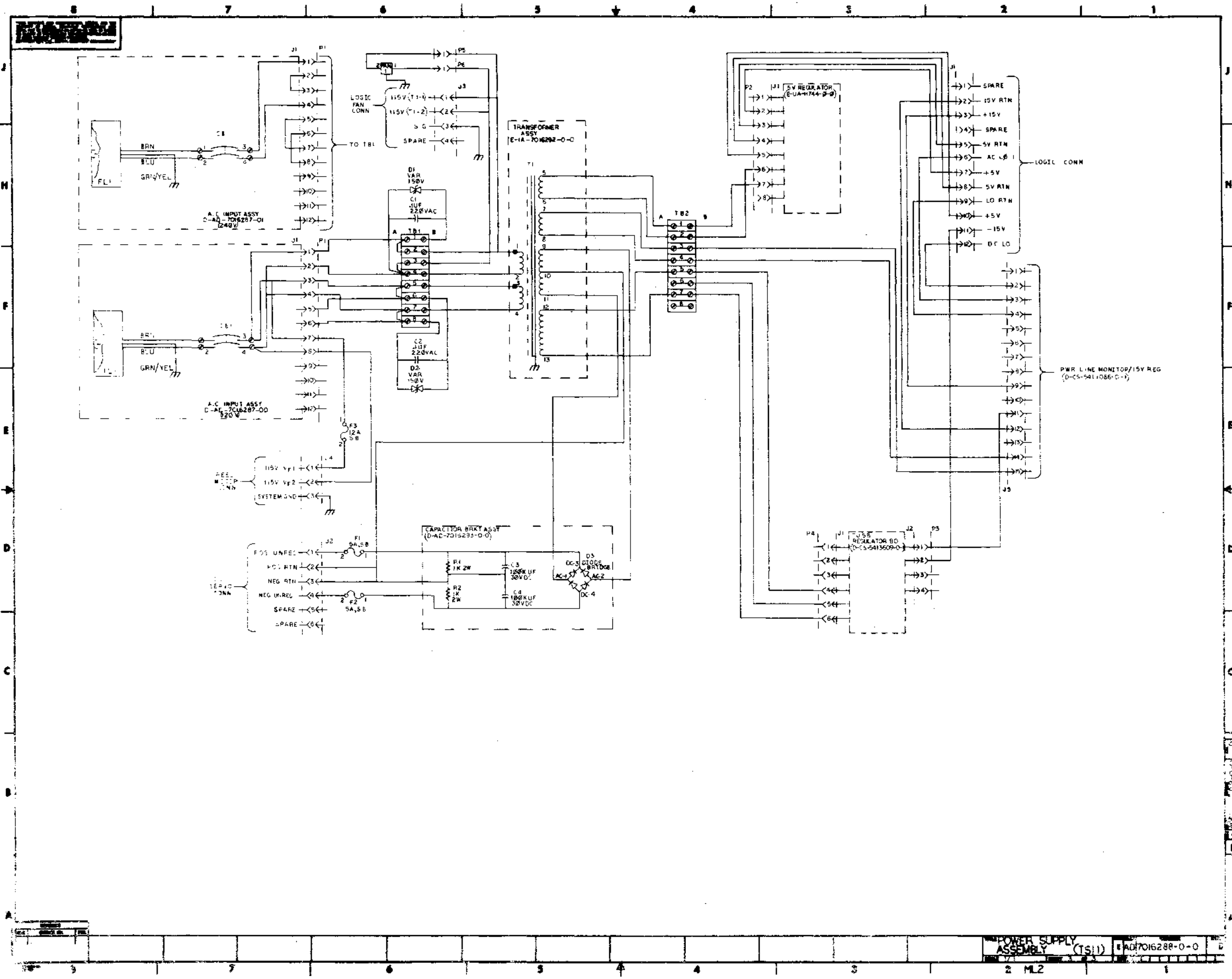
ITEM NO	DESCRIPTION	FROM			TO			REMARKS
		AWG	COLOR	POINT CONNECTION WITH	POINT CONNECTION WITH	POINT CONNECTION WITH	POINT CONNECTION WITH	
8	14 BLACK	50		P2-7	43	TB2-18		
8	14 BLACK	49		P2-6	44	TB2-2B		
8	14 GRN/YEL	51		FAN-GND	42	GND-3	26,38	
2	18 RED	P6		FAN-1	64	TB1-3B		
2	18 WHITE	P5		FAN-2	63	TB1-2B		
6	5 RED	60		J3-2	54	TB1-3B		
6	5 WHITE	59		J3-1	53	TB1-2B		
8	14 GRN/YEL	61		J3-3	62	GND-2	26	
8	18 BLACK	1		P4-5	54	TB2-7B		
8	18 BLACK	2		P4-5	55	TB2-5B		
8	18 BLACK	3		P4-4	56	TB2-5B		
5	18 BLACK	6		J5-10	58	TB2-3B		
8	18 BLACK	7		J5-14	57	TB2-4B		
8	18 BLACK	8		J5-13	56	C4-2		
8	14 BLUE	33		C4-1	37	D3-4		
8	14 BLUE	34		C4-1	31	F7-1	28	
8	14 BLACK	29		J2-5	35	C4-3		
8	14 ORANGE	26		D2-3	41	C3-1		
8	14 BLACK	28		J2-2	39	C3-1		
8	14 ORANGE	40		C3-4	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		P1-1	12	TB1-2A		
9	14 BLACK	2		P1-2	11	TB1-4A		
9	14 BLACK	3		P1-3	10	TB1-5A		
9	14 BLACK	4		P1-4	8	TB1-7A		
9	14 BLACK	5		P1-5	9	TB1-6A		
9	14 BLACK	6		P1-6	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				TB1-5B		D2		
19				TB1-5B		C2		
19				TB1-6A		D2		
19				TB1-6A		C2		
21	18 BROWN			F3-1		P1-7	33,28	
22	18 BLUE			J4-2		P1-8	33	
21	18 RED			J4-1		F3-2	28	
22	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	A.C. INPUT	
1	14 BLACK			J1-2		CBI-4	ASSEMBLY	
1	14 BLACK			J1-3		CBI-3	D-1A-7016287-01	
1	14 BLACK			J1-4		CBI-4	120V WIRING	
1	14 BLACK			J1-7		CBI-3	(ONLY)	
1	14 BLACK			J1-8		CBI-4		
1	14 BLACK			J1-2		CBI-4		
1	BROWN			FL1-1		CBI-1		
1	BLUE			FL1-2		CBI-2		
1	14 GRN/YEL			FL1-GND		GND 1		

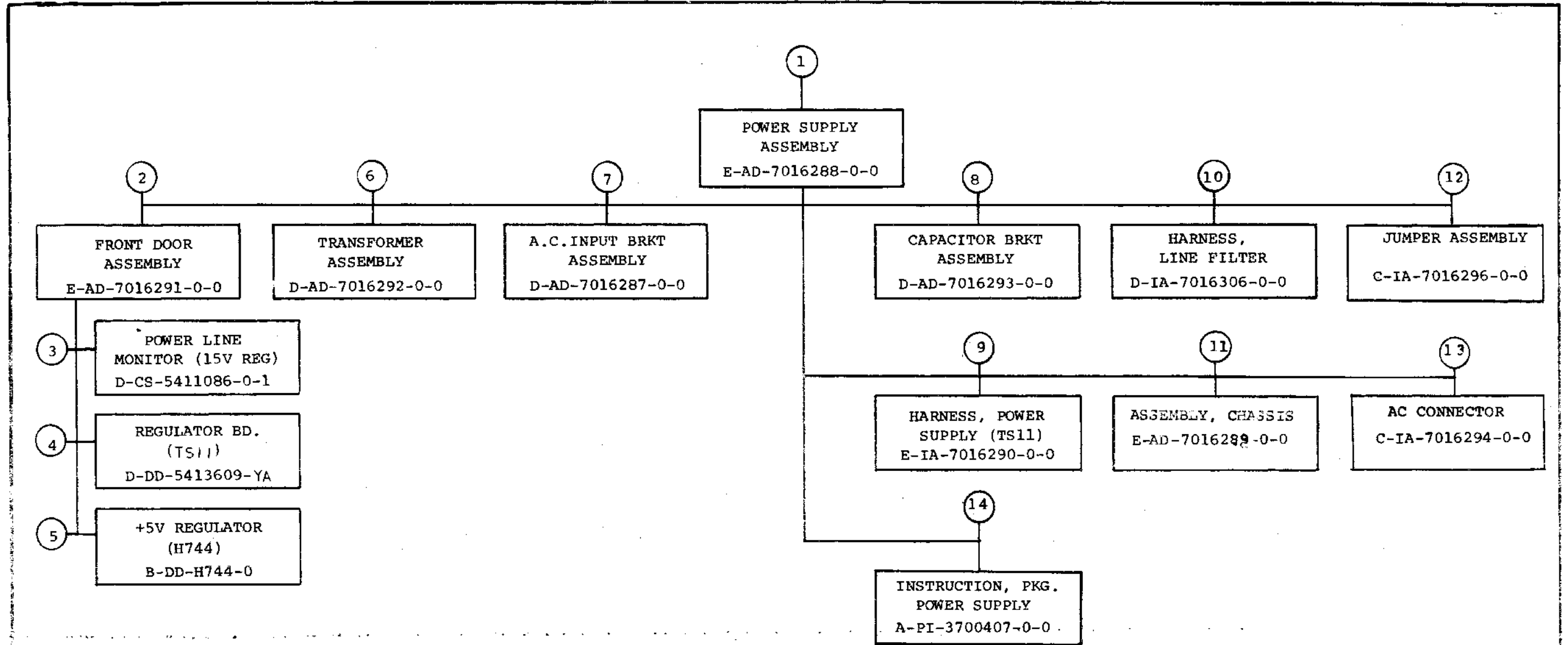
ITEM NO	DESCRIPTION	FROM			TO			REMARKS
		AWG	COLOR	POINT CONNECTION WITH	POINT CONNECTION WITH	POINT CONNECTION WITH	POINT CONNECTION WITH	
2	14 BLACK			CBI-3		J1-1	A.C. INPUT	
2	14 BLACK			CBI-4		J1-4	ASSEMBLY	
2	14 BLACK			J1-2		J1-3	D-1A-7016287-01	
2	14 BLACK			J1-5		J1-7	240V WIRING	
2	14 BLACK			J1-6		J1-8	(ONLY)	
2	BROWN			FL1-1		CBI-1		
2	BLUE			FL1-2		CBI-2		
2	14 GRN/YEL			FL1-GND		GND 1		

WIRING FOR 7016288-01 (ONLY)

WIRING TYPICAL FOR BOTH 7016288-00 AND 7016288-01

WIRING FOR 7016288-00 (ONLY)





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

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE	FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	MP00699	FIELD MAINTENANCE PRINT SET (MP)	REF	5	B-DD-H744-0	+5V REGULATOR (H744)	E/M
	E-AD-7016288-0-0	POWER SUPPLY (TS11)	E/M				
	X-PL-7016288-0-0	POWER SUPPLY (TS11) DBP	E/M				
	D-MD-7421771-0-0	COVER, TOP	M				
	B-MD-7422499-0-0	PLEXI COVER	M				
				6	D-AD-7016292-0-0	TRANSFORMER ASSY	E/M
					B-PL-7016292-0-0	TRANSFORMER ASSY	E/M
				7	D-AD-7016287-0-0	A.C. INPUT BRKT ASSEMBLY	E/M
					B-PL-7016287-0-0	A.C. INPUT BRKT ASSEMBLY	E/M
					D-IA-7422052-0-0	BRACKET, A.C. INPUT	M
2	E-AD-7016291-0-0	FRONT DOOR ASSEMBLY	E/M				
	B-PL-7016291-0-0	FRONT DOOR ASSEMBLY	E/M				
	D-IA-7421772-0-0	DOOR, FRONT	M	8	D-AD-7016293-0-0	CAPACITOR BRKT ASSEMBLY	E/M
	C-IA-7421770-0-0	BRACKET, FAN	M		B-PL-7016293-0-0	CAPACITOR BRKT ASSEMBLY	E/M
					D-IA-7421773-0-0	BRACKET, CAPACITOR	M
					C-IA-7418370-0-0	RETAINER CAPACITOR	M
3	D-CS-5411086-0-1	POWER LINE MONITOR/15V REG	E/M				
	K-CO-5411086-0-4	X-Y COORDINATE HOLE LOCATION	M	9	E-IA-7016290-0-0	HARNESS, POWER SUPPLY (TS11)	E/M
	D-AH-5411086-0-5	ASSY/DRILLING HOLE LAYOUT	M		B-PL-7016290-0-0	HARNESS, POWER SUPPLY (TS11)	E/M
	B-MH-5411086-0-6	MODULE E.C.O. HISTORY	REF				
	5011085	ETCHED CIRCUIT BOARD	M				
	A-SP-11/45-TA-2	MODULE TEST PROCEDURE	REF				
	A-SP-5411086-0-3	ENG. SPEC-AND TEST PROC.	REF				
	7413721-0-0	.010 INCH SHIM	M				
				10	D-IA-7016206-0-0	HARNESS, LINE FILTER	E/M
					B-PL-7016306-0-0	HARNESS, LINE FILTER	E/M
4	B-DD-5413609-YA	REGULATOR BD. (TS11)	E/M				

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

digital

TITLE

POWER SUPPLY (TS11)

SHEET 3 OF 4

SIZE CODE
B DD

NUMBER
7016288-0

REV
B

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION	
				00	01
10	D-AD-7016287-0-0	7016287-00	A.C. INPUT ASSY 120V	1	1
11	D-AD-7016287-0-0	7016287-01	A.C. INPUT ASSY 240V	1	1
12	A-PS-1700083-0-0	1700083-00	PWR CORD, TERM. 75IN, 14-3, 125V 15	1	1
13	A-PS-1700083-0-0	1700083-17	PWR CORD, TERM. 75IN, 1E-3, 250V E	1	1
14	E-AD-7016291-0-0	7016291-00	FRONT DOOR ASSY	1	1
15	E-IA-7016292-0-0	7016292-00	TRANSFORMER ASSY	1	1
16	D-AD-7016293-0-0	7016293-00	CAPACITOR BRKT. ASSY	1	1
17	E-IA-7016290-0-0	7016290-00	HARNESS, POWER SUPPLY	1	1
18	E-IA-7016290-0-0	7016290-00	HARNESS, LINE FILTER	1	1
19	E-AD-7016289-0-0	7016289-00	CHASSIS WELDMENT ASSY	1	1
20	D-MD-7421771-0-0	7421771-00	TOP COVER	1	1
21		9005634-00	WASHER, LOCK, INT, .2300D X .172ID	10	10
22		9005035-01	SCREW, PAN, PHIL 6-32X 1/4 SS	10	10
23		9005037-01	SCREW, PAN, PHIL 8-32X 3/8 SS	4	4
24	A-PS-1212893-0-0	1212893-00	FUSE HOLDER, 20A, 300V, PNL MNT	2	2
25		9007222-00	FUSE, SLO BLO 5 A 250V GLASS	2	2
26		9008254-00	MOUNT, CABLE TIE, ADHESIVE BACKE	A/R	A/R
27		9008509-00	*** THIS ITEM IS NOT USED ***		
28		9005910-00	TERM BLOCK 8POS 7/16 SPACING CL	2	2
29		9005560-00	NUT, KEP 6-32X 5/16AF	4	4
30	C-IA-7016296-0-0	7016296-00	JUMPER ASSY	1	1
31	B-MD-7422499-0-0	7422499-00	PLEXI-COVER	1	1
32		9005857-00	SPACER, HEX THD'D, ALUM 6-32X 5	4	4
33		9005659-00	WASHER, FLAT .375 O.D. X .156 I	4	4
34		9005020-01	SCREW, PAN, PHIL 6-32X 1/4 SS	4	4
35		9005565-00	NUT, KEP 10-32X 3/8 AF	4	4
36		9005664-00	WASHER, FLAT, .437 OD X .218 ID	4	4
37		9107253-00	TUBING, SHRINK 1/4 DIA. EXP UL	A/R	A/R
38	C-IA-7016294-0-0	7016294-00	LINE FILTER ASSY	1	1
39		9009003-00	JUMPER FOR TERM BLOCK	4	4

REVISION HISTORY			BASIC PART NO: 7016288		DRN: W.J. MAHER		DATE: 28-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	DOCUMENT NUMBER			
			(A) 00,01	RESP. ENG.:	M. QUADRI	DATE:	10-NOV-78	SIZE:	CODE:	NUMBER	REV
			(B)	MFG. ENG.:	P. BARTON	DATE:	10 NOV 78	K	PL	7016288-0-DBP	D
			(C)	ASSEMBLY NUMBER:	E-AD-7016288-0-0	TOP DOCUMENT NUMBER:		FILE NAME:			EDIT #
			(D)					23068D.PLS			20
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			(F)								

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P A R T S L I S T

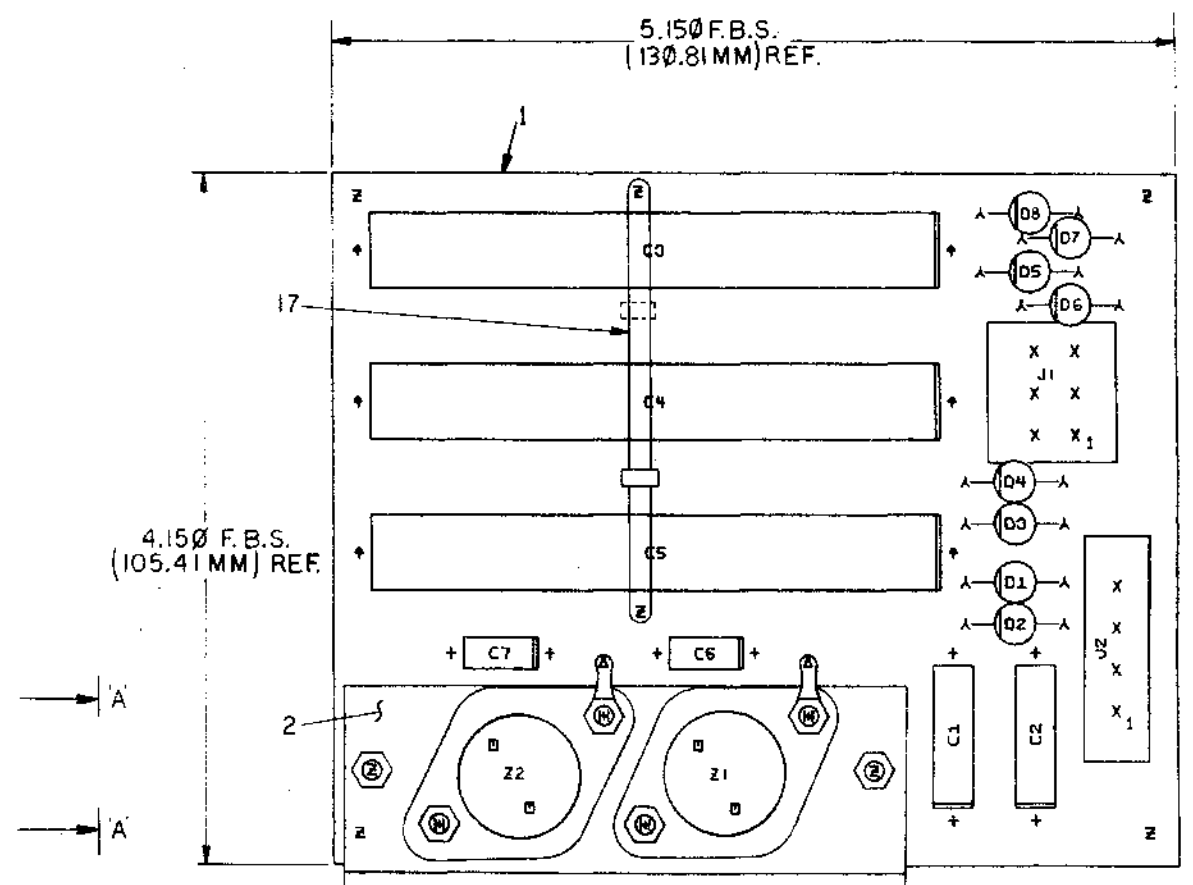
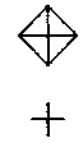
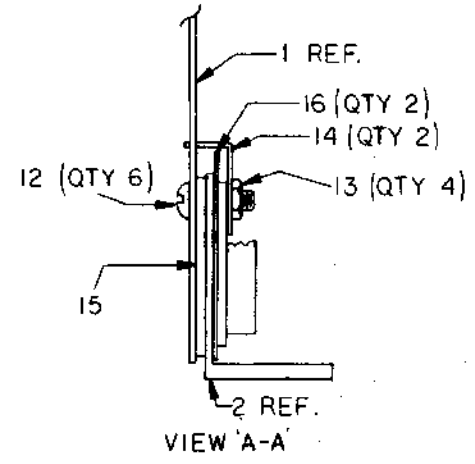
SHEET A2 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION:	
					00	01
31	31	A-PS-3612680-0-0	3612680-00	DECAL, GROUND SIGN PER 365 *	0	0
33	33	A-PS-1212170-0-0	9007880-00	TIE, CABLE BUNDL DIA 3-1.14"=101	0	0
34	34		1212170-00	MATE-N-LOK SKT UNIV 20-14AWG REE	0	0
35	35	A-SP-3616126-0-0	9008290-01	FUSE, SLO BLO 12 A 250V CER.	1	1
36	36	A-SP-3616128-0-0	3616126-00	LABEL, VOLTAGE & FREQUENCY CONFIG	1	1
37	37	A-P1-3700407-0-0	3616128-00	LABEL, TS11 PWR SUPPLY FUSE RATIN	1	1
38	38		3700407-00	INSTR, PKG POWER SUPPLY 7016288-0	1	1
39	39	A-PS-1311996-0-0	9007651-00	WASHER, LOCK, EXTERNAL TOOTH #10	1	1
40	40	A-PS-1012210-0-0	1311996-00	VARIATOR 150VAC VOLT TRANS SUP	0	0
41	41		1012210-00	.1 MFD 220V 10% MET. MYLR	0	0
42	42		9005762-00	TERM, LUG #6STUD LOCKING 30	4	4
			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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 AND TO BE KEPT IN THE OFFICE OF THE DRAWING
 ENGINEER. 1979

COMPONENT SIDE VIEW



NOTES:

STEP E	→ Y AXIS	STEP	TIMES
REPORT	→ X AXIS	STEP	TIMES

CHANGE NO	REV	DATE	BY	CHK'D
1	B			
2	C			
3	D			

ETCH REV. C-PI

SIGNATURES	DATE	TITLE
DRN. Paul Nicholas	12-28-79	digital
CHK'D. J. Berman	1-7-80	
MECH. ENG. J. Berman	2-28-80	
PROJ. ENG. J. Berman	2-28-80	
PROD. J. Berman	2-28-80	
SCALE 2/1		
SHT. 1 OF 1		
NEXT HIGHER ASSY. B-DD-5413689-2		

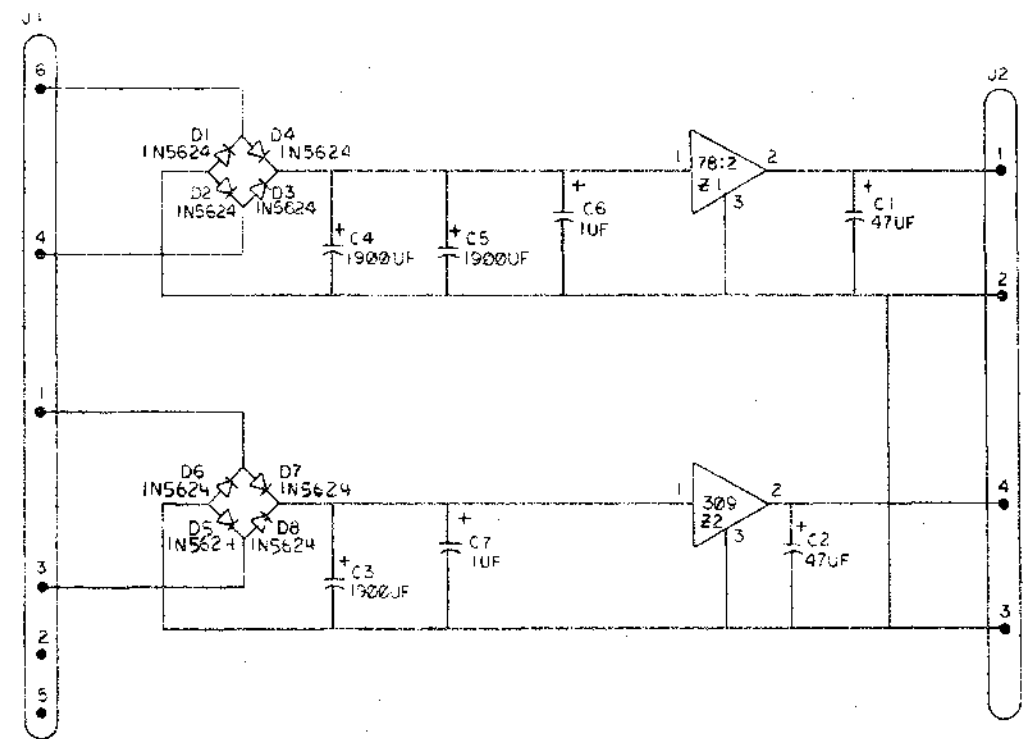
DUA 5413689-0-0

B

A

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CS 5413609-0-1



REV	1
CHANGE NO.	1
DATE	10/12/78
BY	A. BARON
CHKD	A. BARON
APP'D	A. BARON

DRN/USE	CS 5413609-0-1	REV	1
CHKD	A. BARON	DATE	10/12/78
ENG	Long	DATE	10/12/78
PROJ. ENG.	Long	DATE	10/12/78
PROD. ENG.	Long	DATE	10/12/78
TITLE	TU58 REGULATOR BOARD		
SIZE	8-DD-5413609-0	CODE	D
SCALE	1/1	NUMBER	5413609-0-1
SHEET	1	OF	1

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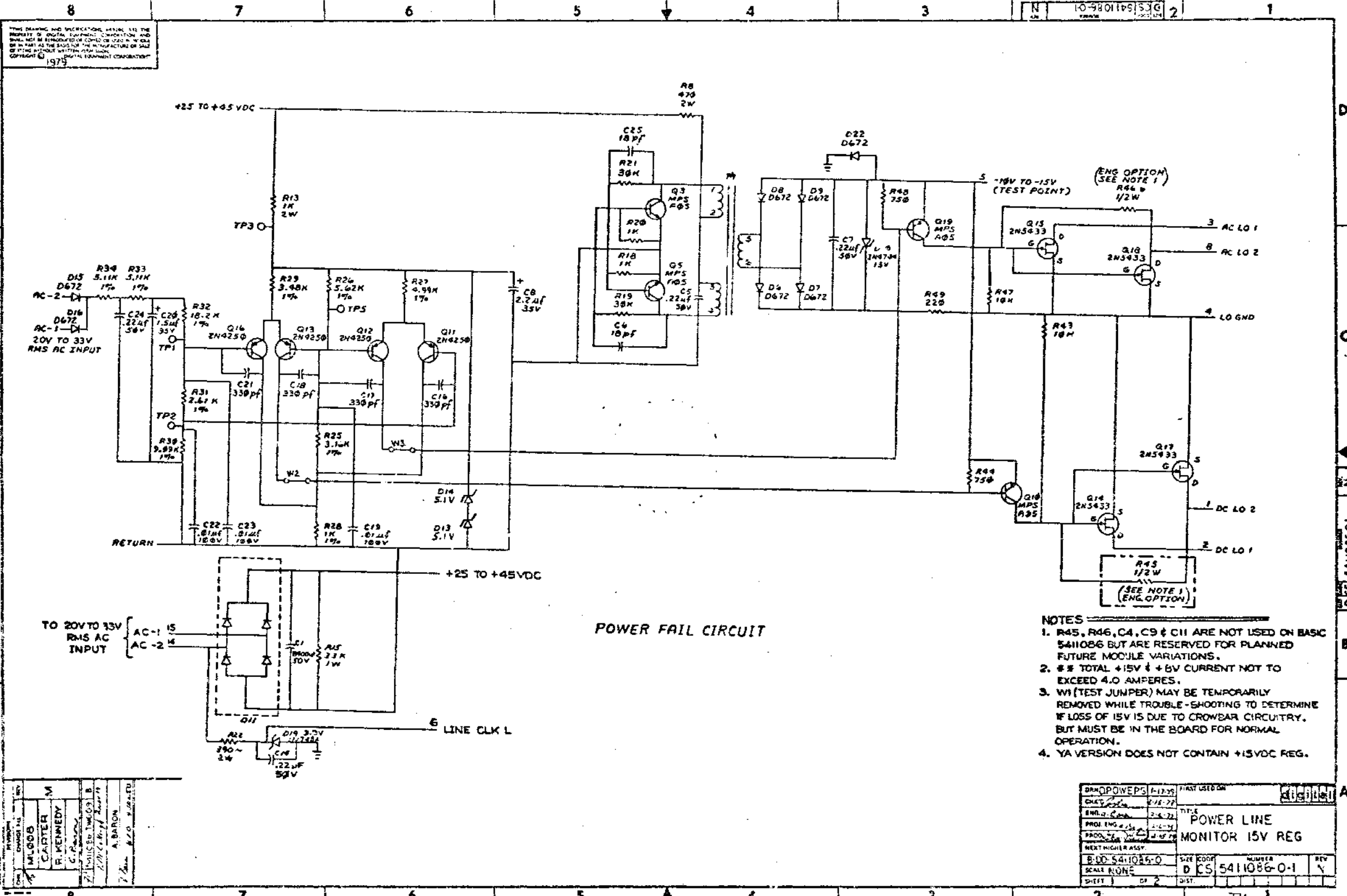
PARTS LIST

SHEET A1 OF A1

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
		D-MD-5013609-0-0	5013609-00	DRILL & ETCH BD	1	
			12158934-00	HEAT SINK 2-3 ALUM		
			1912048-04	DEC 7812 VOLT REG FIX +12V		
			1910460-00	DEC 309 VOLT REG FIX +15V		
			1110420-00	IN 5624 FIV=200 I=5A		
			1105796-00	*** THIS ITEM IS NOT USED ***		
			1011607-00	1900 MFD 40V +75-10% AL EL		
			1001776-00	1 MFD 35V 10% S.TANT		
			1000079-00	47 MFD 20V 20% S.TANT		
			1212297-01	MATE-N-LOK 4PIN UNIV HEADER		
			1212297-05	MATE-N-LOK 6PIN UNIV HEADER		
			9006023-01	SCREW PAN,PHIL 6-32X 7/16 SS		
			9008185-00	NUT,KEP 6-32X 1/4 AF		
			9009576-00	TERM. SOLDER BARRIER STR		
			1215580-00	INSULATOR, MOLDED		
			1213071-02	INSULATOR, RUBBER SILICONE SM		
			9007880-00	TIE, CABLE BUNDL DIA 0-1.14"=101		
		D-EC-5013609-0-0		ETCH CUT DRAWING		
		D-UA-5013609-0-0		UNIT ASSEMBLY		
		D-CS-5413609-0-1		CIRCUIT SCHEMATIC		

REVISION HISTORY			BASIC PART NO: 5413609		DRN: J.WHITNEY DATE: 10-JUN-80		DIGITAL		
ENG:	ECC NUMBER	REV	SECTION A OF A	CHK'D:	LARRY DOIRON	DATE:	10-JUN-80	TITLE	PARTS LIST
	INITIAL	A	SECTION VARIATION INDEX						
AB	5413609-M1001	B	[A] 00						
AB	5413609-M1002	C	[B]						
			[C]						
			[D]						
			[E]						
			[F]						
			[G]						
			[H]						
			[I]						
			[J]						
			[K]						
			[L]						
			[M]						
			[N]						
				DES.ENG:	LARRY DOIRON	DATE:	10-JUN-80		
				RESP.ENG.:	LARRY DOIRON	DATE:	10-JUN-80	DOCUMENT NUMBER	
				MFG.ENG.:	PETER BARTON	DATE:	10-JUN-80	SIZE: CODE: NUMBER	REV
				ASSEMBLY NUMBER:	D-UA-5413609-0-0	TOP DOCUMENT NUMBER:	#B-00-5413609-C	K PL 5413609-0-0BP	C
						FILE NAME:	214830.PLS		EDIT #
									E

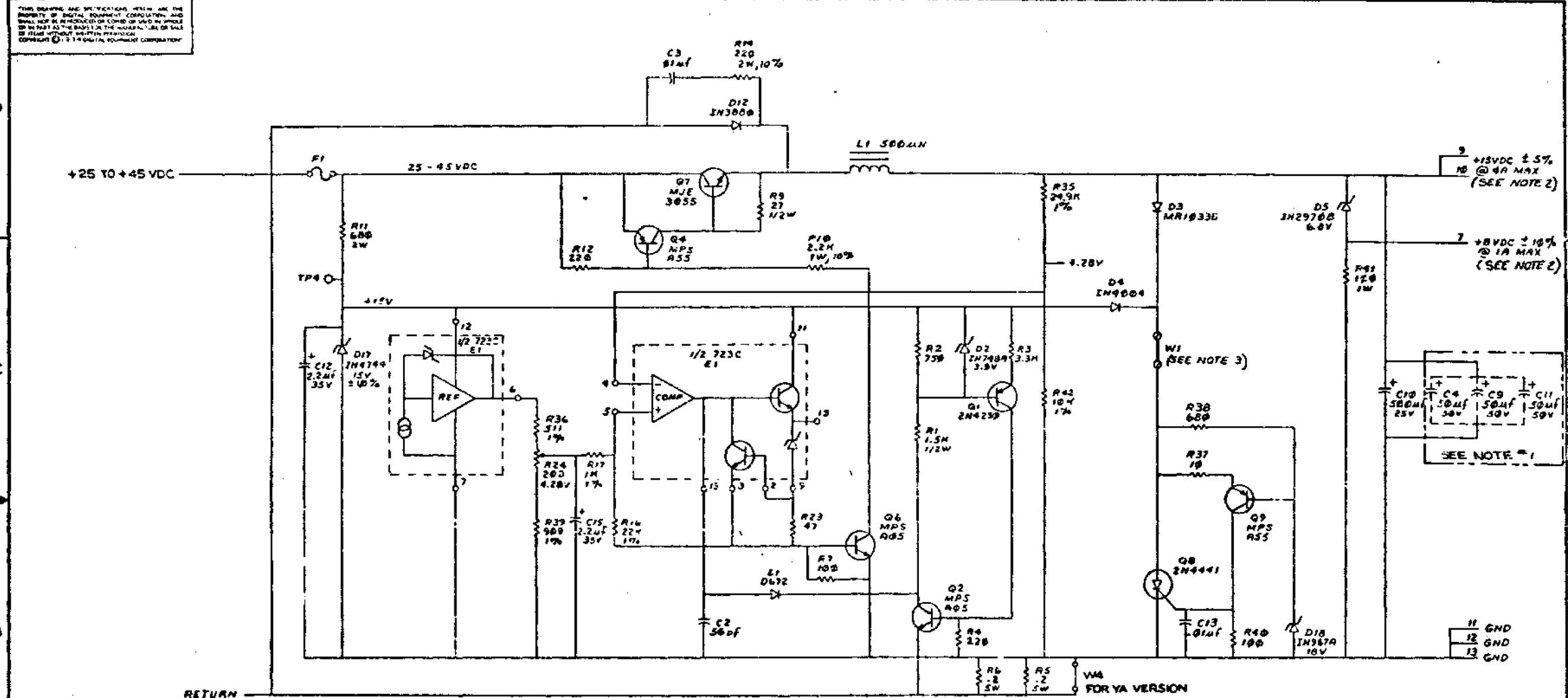
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- NOTES**
1. R45, R46, C4, C9 & C11 ARE NOT USED ON BASIC 5411086 BUT ARE RESERVED FOR PLANNED FUTURE MODULE VARIATIONS.
 2. ** TOTAL +15V & +5V CURRENT NOT TO EXCEED 4.0 AMPERES.
 3. W1 (TEST JUMPER) MAY BE TEMPORARILY REMOVED WHILE TROUBLE-SHOOTING 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	DATE	BY	CHKD
1	11-17-75	ML000	
2	1-18-77	CAPIER	
3	2-18-77	R. KENNEDY	
4	1-18-77	G. C.	
5	2-18-77	Z. J.	
6	2-18-77	A. BARON	
7	2-18-77	M. J. O.	

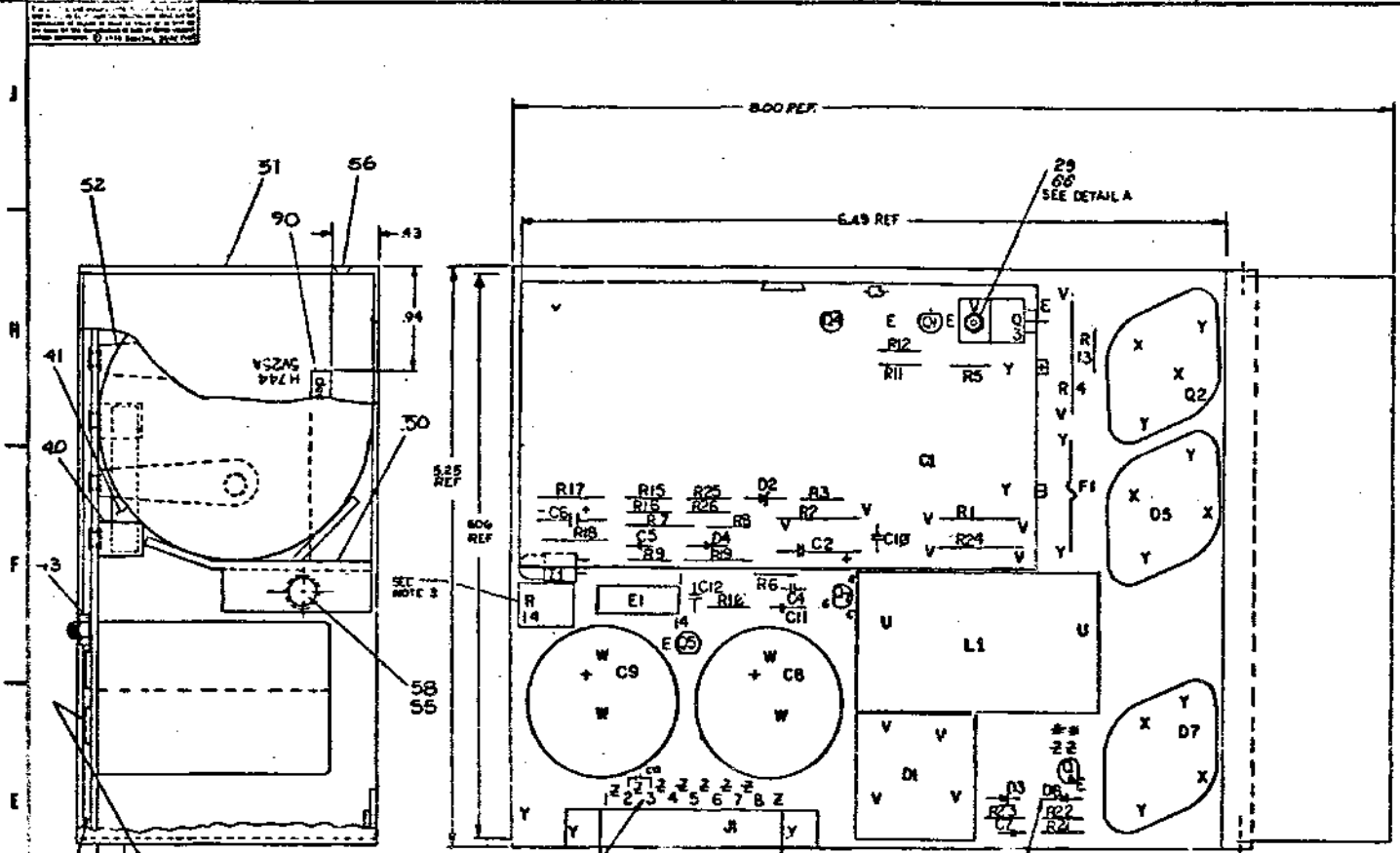
BRANDPOWER'S	1-17-75	FIRST USED ON	
DATE	2-18-77		
ENGR. DATE	2-18-77	TITLE	POWER LINE
PROJ. ENG. DATE	1-18-77		MONITOR 15V REG
PROJ. DATE	2-18-77		
NEXT HIGHER ASSY.			
SCALE	1:1	SIZE	ROOM
SHEET	1	OF	2
		DIST.	



15V REGULATOR
(SEE NOTE #4)

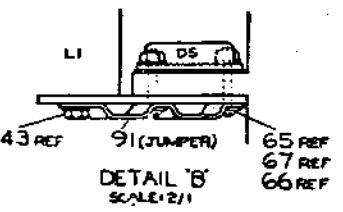
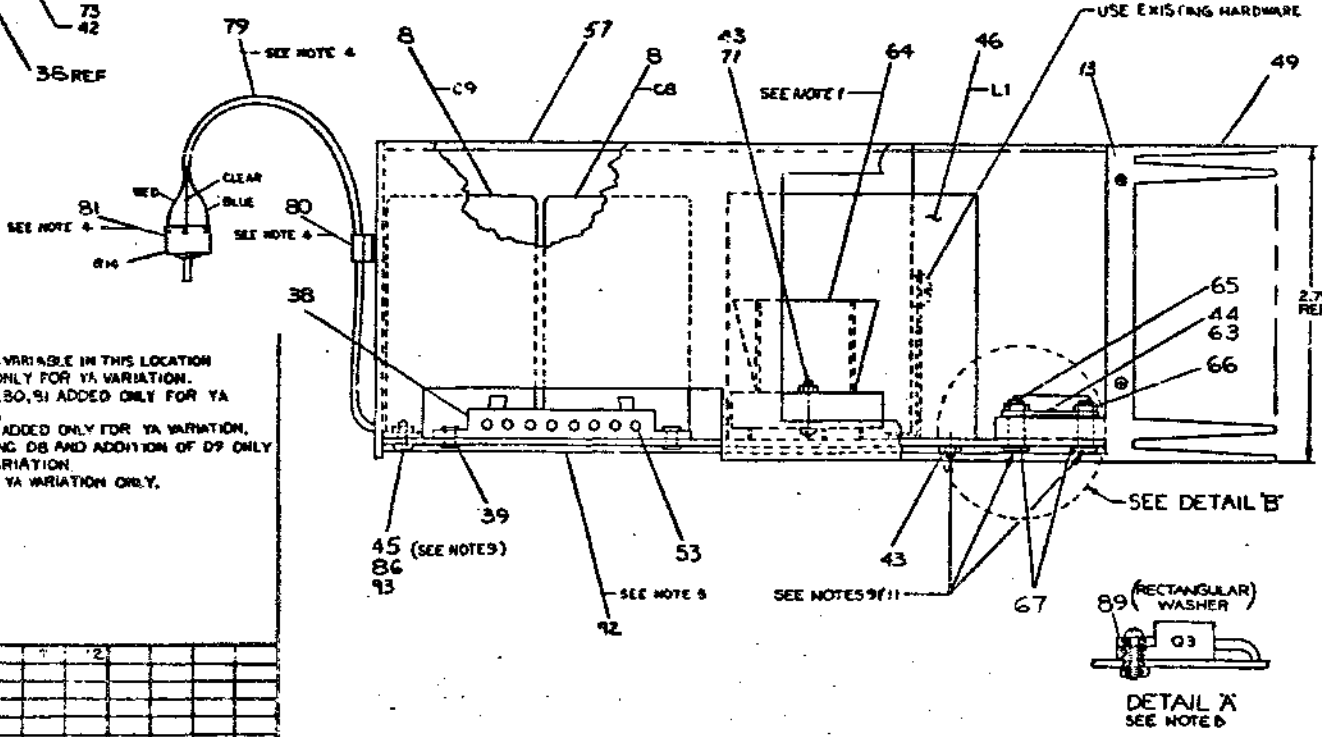
REVISIONS		
CHG	CHANGE NO	REV

NOTES:
 1. APPLY ITEM #63 (COMPOUND) BETWEEN TRANSISTOR (Q2), DIODES (D5, D7) AND ITEM #41 (WASHER) ALSO BETWEEN ITEM #44 (WASHER) AND HEAT SINK (ITEM #49). ALSO APPLY ITEM #63 (COMPOUND) BETWEEN ITEM #9 (DIODE BRIDGE) AND ITEM #64 (HEAT SINK BRIDGE).



NOTES:
 3. R14 - 200Ω VARIABLE IN THIS LOCATION DELETED ONLY FOR YA VARIATION.
 4. ITEMS #79, 80, 81 ADDED ONLY FOR YA VARIATION.
 5. ITEM #92A ADDED ONLY FOR YA VARIATION.
 6. RELOCATING D8 AND ADDITION OF D9 ONLY FOR YA VARIATION.
 7. USE D9 IN YA VARIATION ONLY.

NOTES CONT:
NOTE 8:
 (Q3) SCREW HEAD SHOULD BE ON TOP OF FLAT RECTANGULAR WASHER AS SHOWN. APPLY 8 INCH LBS. OF TORQUE WHEN SECURING Q3 TO EXT. BOARD BEFORE SOLDERING.
NOTE 9: TORQUE APPLICATION
 (1) APPLY 12 INCH LBS. OF TORQUE TO THE SCREW HEAD OF #4 HARDWARE EXCEPT Q3.
 (2) APPLY 12 INCH LBS. OF TORQUE TO #6 HARDWARE ON L1.
 (3) APPLY 16 INCH LBS. OF TORQUE TO ALL #6 AND #10 HARDWARE EXCEPT ON L1.
 (4) ALL HARDWARE TO BE TORQUED BEFORE SOLDERING.
NOTE 10:
 INSERT C9 INTO ETCH PAD HOLES CONNECTED TO J1 TERMINALS, 2-3.
NOTE 11:
 MIN TORQUE REQUIRED FOR INSPECTION:
 8 INCH LBS FOR #4 HARDWARE;
 12 INCH LBS FOR #6 AND #10 HARDWARE
 *SEE NOTE 7



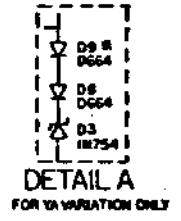
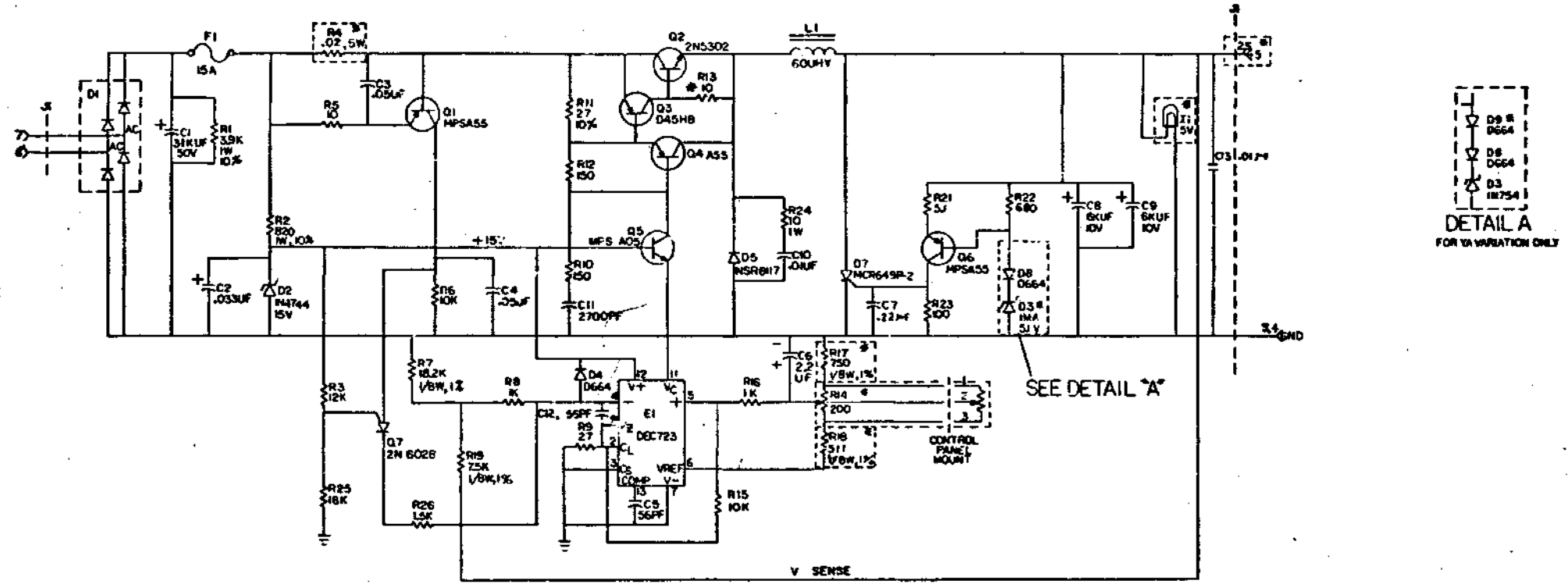
CAUTION:
 OFF SHEET PARTS LIST REF TO K-PL-W744-0-D8P

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ITEM NO	QTY	DESCRIPTION	UNIT	REVISION
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ITEM NO	QTY	DESCRIPTION	UNIT	REVISION
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See drawing and manufacturer's data for the type of components and their values. The values of components are given in the drawing. The values of components are given in the drawing. The values of components are given in the drawing.



SEE DETAIL "A"

*FUSIBLE RESISTOR

V SENSE

- FOR YA VARIATION COMPONENT VALUES ARE AS FOLLOWS:
- R4 - 06 SW
 - R14 - 1K 10 TURN
 - R17 - 300 1/8W 1%
 - R18 - 150 1/4W 5%
 - D3 - M754
 - L1 - 15V
 - R-2,5 - +2D-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		
	D664	IN3606	2N5302	
	MOR649A2	D45H3		
	IN751A	SAME	MPSA05	
	IN744	SAME		
	NSR817			
	2N5302			
DEC NO	EDA NO	DEC NO	EDA NO	SCALE
				1/1
SEMICONDUCTOR CONVERSION CHART				

+5V REGULATOR

DCS H744-0-1

DCS H744-0-1 2

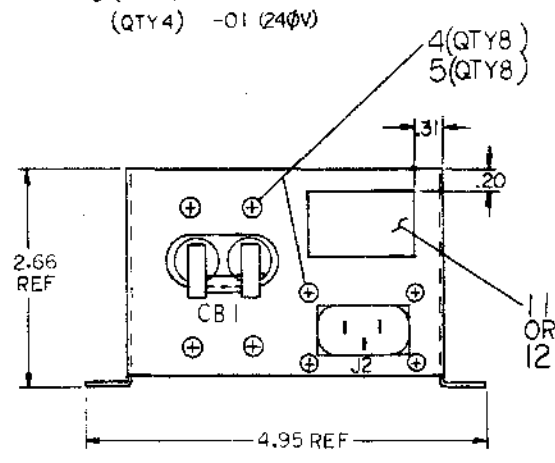
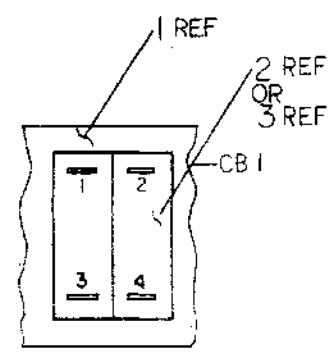
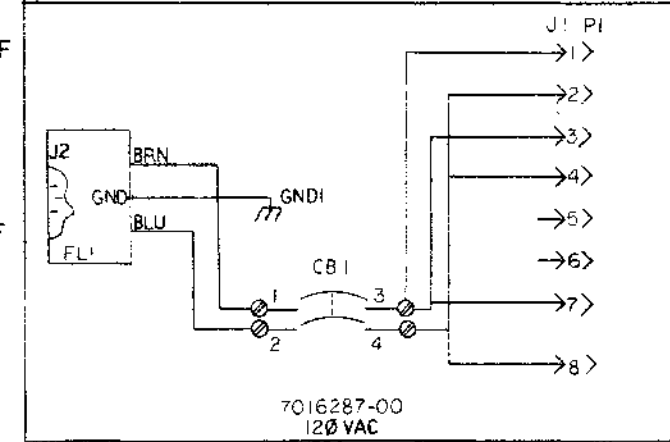
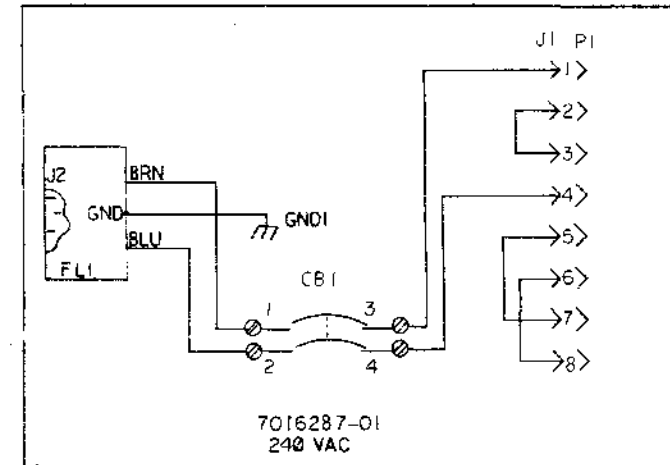
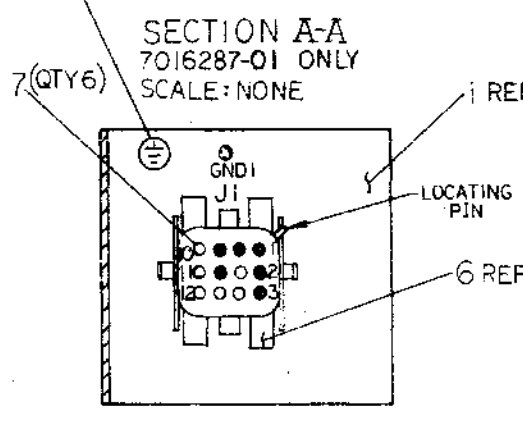
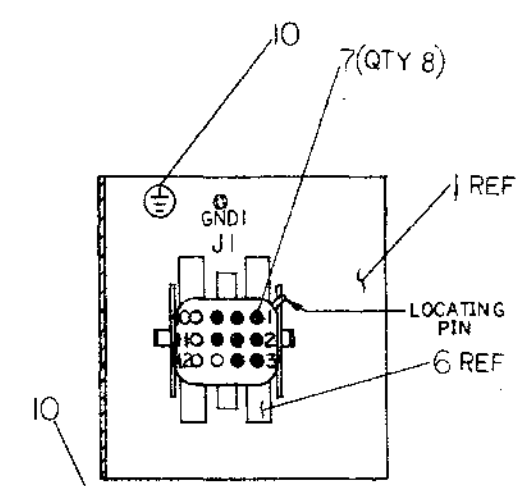
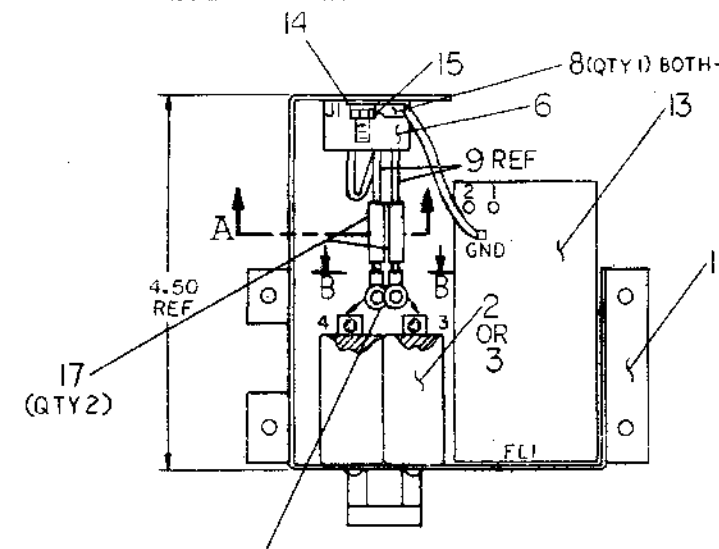
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ITEM NO	AWG	COLOR	CONN	WITH	CONN	WITH	REMARKS
9	14	BLACK	J1-1	7	CBI-3	8	
			J1-2		CBI-3		
			J1-3		CBI-3		
			J1-4		CBI-4		
			J1-7		CBI-3		
9	14	BLACK	J1-8	7	CBI-4	8	
13	-	BROWN	FL1-1	-	CBI-1	8	
13	-	BLUE	FL1-2	-	CBI-2	8	
16	14	GRN/YEL	FL1-GND	SOLDER	GND-1	8	

ITEM NO	AWG	COLOR	CONN	WITH	CONN	WITH	REMARKS
9	14	BLACK	J1-1	7	CBI-3	8	
			J1-2		CBI-3		JUMPER
			J1-4		CBI-4		
			J1-5		J1-7		JUMPER
9	14	BLACK	J1-6	7	J1-8	7	JUMPER
13	-	BROWN	FL1-1	-	CBI-1	8	
13	-	BLUE	FL1-2	-	CBI-2	8	
16	14	GRN/YEL	FL1-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	DATE	BY	CHK'D	APP'D	DESCRIPTION
1	11/10/78	M. QUARRELL			REVISED TO 120V/240V
2	11/10/78	M. QUARRELL			REVISED TO 120V/240V
3	11/10/78	M. QUARRELL			REVISED TO 120V/240V

DESCRIPTION	DWG. PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
ANGLES 45° 30°	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES
SURFACE QUALITY (CHECK ONE)	MEDIUM	OVER 0.125 TO 0.250
		0.250 TO 0.500
QUANTITY & VARIATION	PREFERRED	0.500 TO 1.000
		1.000 TO 1.500
THIRD ANGLE PROJECTION	DRN: M. QUARRELL	FIRST USED ON
REMOVE BURRS AND BREAK SHARP CORNERS	CHK'D: M. QUARRELL	TS11
DO NOT SCALE DWG	ENG. M. QUARRELL	TITLE
MATERIAL	PROD. DATE	A.C. INPUT ASSEMBLY
FINISH	NEXT HIGHER ASSY.	SIZE CODE
SEE B-PL-7016287-0-0	E-AD-7016288-0-0	NUMBER
SHEET	OF	DIST.

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY
1	0-14-7422051-0-0	7422051-00	BKLT 90 INPUT	1
2		1312131403	CKT BRK 10.0 A 240V 2P	1
3		1312131405	CKT BRK 20.0 A 240V 2P	1
4		90066033001	CORREN PAN PH INT 6-32X 174 SS	1
5		90066033003	WASHER LOCK INT 28000 X 14610	1
6		1312169903	MATE N-LOCK 13P03 UNIV HSG PIN OR	1
7		1312169900	MATE N-LOCK PIN 14-20RNG	1
8		9007929000	TERM RING #10STUD CRIMP 14-1	1
9		9107379000	WTRNG STRND 14AWG 1PVC UL1534 *	1
10		3612680000	DECRG, GROUND SIGN PER 3E6	1
11		361616127-01	LABEL, INPUT POWER 240V	1
12		121616196-01	LABEL, INPUT POWER 240V	1
13		9007651000	FILTER, LINE 115V 47-63H2 8R	1
14		9006665000	WASHER, LOCK, EXTERNAL TOOTH #10	1
15		9107772000	NUT KEK 10-32X 3/8 AF	1
16		1605147-00	WTR STRND 14AWG 1PVC UL1534 GR	1
17			SS-251-30-38 FERRITE TUBE	1

REVISION HISTORY

ENG	ECO NUMBER	REV	SECTION R OF A	SECTION VARIATION INDEX
M.J.	7016287	0		[A] 00,01

BASIC PART NO: 7016287
 DRN: N.J. MAHER
 DATE: 28 AUG 78
 TITLE: A.C. INPUT BRACKET ASSY

DES. ENG.: M. QUADRI
 DATE: 10 NOV 78
 RESP. ENG.: M. QUADRI
 DATE: 11-JAN-82
 MFG. ENG.: P. EARLICK
 DATE: 10 NOV 78

ASSEMBLY NUMBER: 0-RD-7016287-0-0
 TOP DOCUMENT NUMBER: 7016287-0-035
 FILE NAME: 207845.PLS
 EDIT # 2

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QTY	PART NUMBER	DESCRIPTION	QTY
1	7016201-0-0	ASSY 120V	1
1	7016202-0-0	ASSY 120V	1
1	7016203-0-0	ASSY 120V	1
1	7016204-0-0	ASSY 120V	1
1	7016205-0-0	ASSY 120V	1
1	7016206-0-0	ASSY 120V	1
1	7016207-0-0	ASSY 120V	1
1	7016208-0-0	ASSY 120V	1
1	7016209-0-0	ASSY 120V	1
1	7016210-0-0	ASSY 120V	1
1	7016211-0-0	ASSY 120V	1
1	7016212-0-0	ASSY 120V	1
1	7016213-0-0	ASSY 120V	1
1	7016214-0-0	ASSY 120V	1
1	7016215-0-0	ASSY 120V	1
1	7016216-0-0	ASSY 120V	1
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1	7016218-0-0	ASSY 120V	1
1	7016219-0-0	ASSY 120V	1
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1	7016224-0-0	ASSY 120V	1
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1	7016299-0-0	ASSY 120V	1
1	7016300-0-0	ASSY 120V	1

REVISION HISTORY
 ENG: ECO NUMBER REV SECTION A OF A
 101 TS04-A-10003 15 SECTION, VARIATION INDEX
 101 A9, A9

BASIC PART NO: 01504
 DRN: G. MARINI
 DATE: 22-JUN-81
 TITLE: DRIVE FRAME ASSY (TS04-A)

DES. ENG.: M. QUICINA
 DATE: 22-JUN-81
 RESF. ENG.: M. QUICINA
 DATE: 22-JUN-81
 MFG. ENG.: T. WRIGHT
 DATE: 22-JUN-81

ASSEMBLY NUMBER: 9-00-TS04-A-0
 TOP DOCUMENT NUMBER: 227455.PLS
 FILE NAME: 5017

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DATE 1987-01-01

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LINE ITEM DOCUMENT NUMBER

PART NUMBER

DESCRIPTION

QUANTITY PER VARIATION

01 01 H-FS-1213715-0-0

4013715-0-0
9009116-0-0

SECTION FOR FOR EMT WIRE CLIP
SECTION FOR FOR EMT WIRE CLIP

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							DRIVE FRAME HSSV 91509-H)		X	PL	1509-9-08F	B