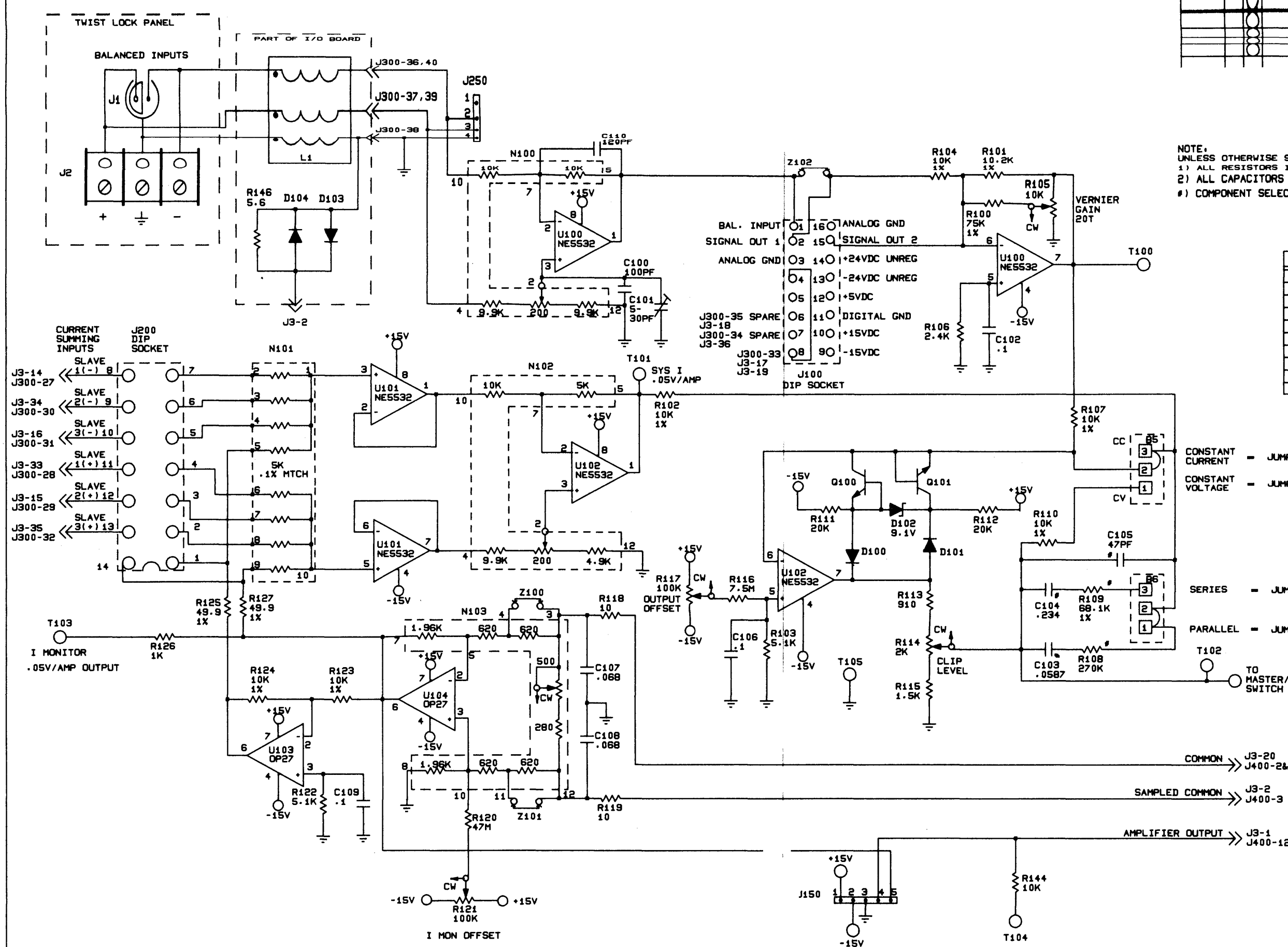


E.C.N.	ZONE	REV	DESCRIPTION	DATE	BY	CHK	APP



NOTE:
 1) ALL RESISTORS IN OHMS, .25W 5%
 2) ALL CAPACITORS IN MICROFARADS
 3) COMPONENT SELECTED ACCORDING TO APPLICATION.

LAST USED	OBSOLETE
U104	
R146	R128-R143
C110	
D101	
Z102	
N103	
B6	B1-B4
D104	
T105	
L1	

CONSTANT CURRENT - JUMPER 2 & 3
 CONSTANT VOLTAGE - JUMPER 1 & 2

SERIES - JUMPER 2 & 3
 PARALLEL - JUMPER 1 & 2

COMMON → J3-20
 J400-2&4
 SAMPLED COMMON → J3-2
 J400-3
 AMPLIFIER OUTPUT → J3-1
 J400-12

TECHNICON (219)294-8300

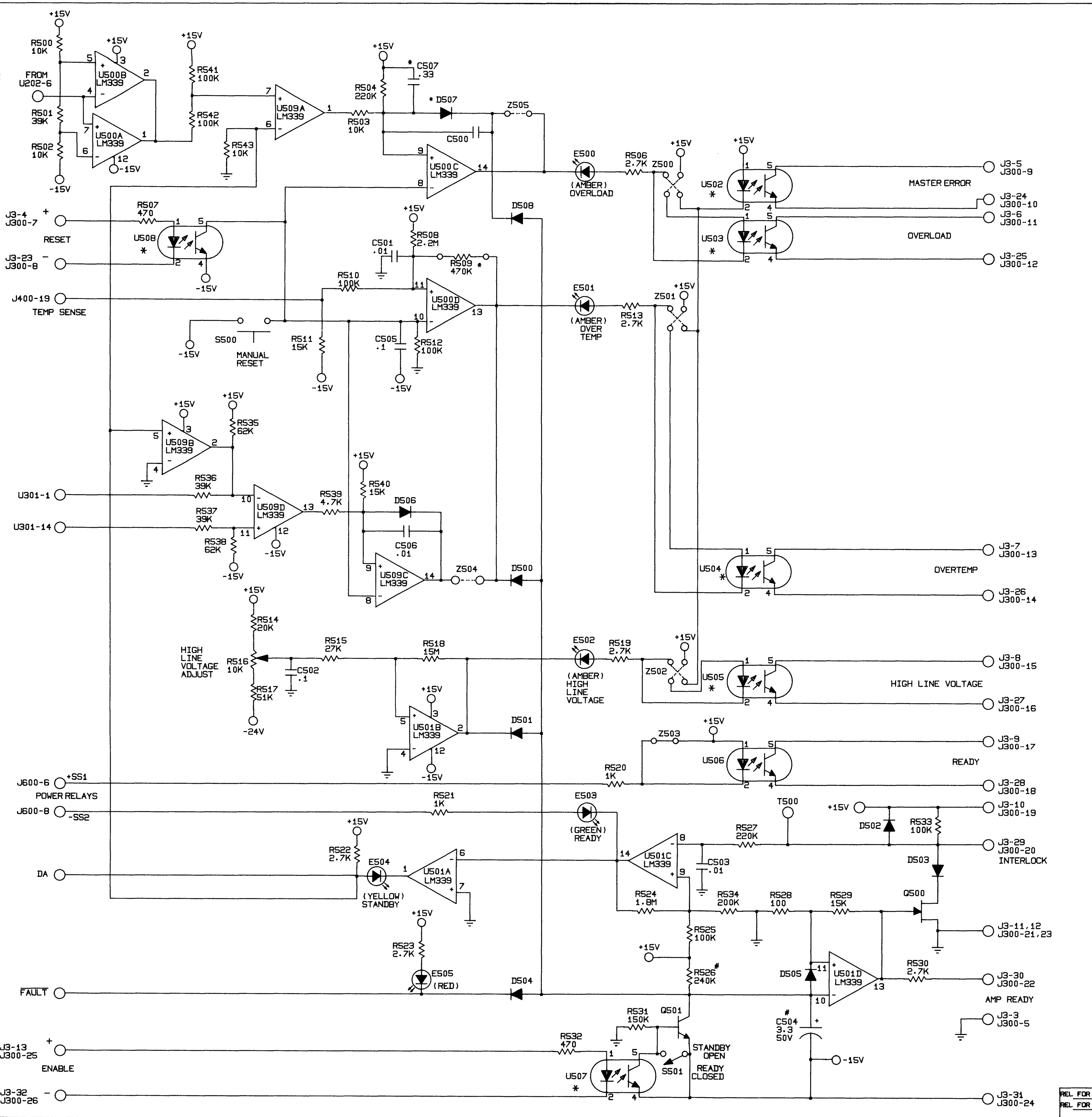
ISA FRONT END

DRAM LCD 8-8-88 APPROVED BY: [Signature] SUPERSEDES [Signature]

REL FOR TOOLING BY: [Signature] DATE: 9-19-88 SCALE: NONE EX: R-L-J 9-19-88 E.C.N. 88-706

REL FOR PROD BY: [Signature] DATE: [] PROJ: T819 FE: [] C.P.N. 10307-9

E.C.N.	ZONE	REV	DESCRIPTION	DATE	BY	CHK	APPROVALS
88-0884		(A)	SEE ECN 88-0884	10-25-88	JB		RJ



LAST USED	OBSOLETE
R543	R505
C507	
E505	
D508	
Z504	
Q501	
S501	
U509	
T500	

OPTIONAL ITEM	CHECK BLOCK IF PRESENT
U502	
U503	
U504	
U505	
U507	
U508	
R509	
Z504	
Z505	
D507	

NOTES :

- 1) ALL RESISTORS .25W IN OHMS AT 5%
- 2) ALL CAPACITORS IN MICROFARADS
- 3) INSTALL Z505 TO LATCH OVERLOAD SIGNAL
- 4) INSTALL R509 TO LATCH OVERTEMP SIGNAL
- 5) INSTALL Z504 TO LATCH TRANSISTOR JUNCTION OVERTEMPERATURE

*) OPTIONAL AT CUSTOMER REQUEST.
 #) ON 8420 MODEL R526-604K, C504-10UF

TECHRON 1718 N. HERRING ROAD ELKHART, INDIANA 46517 PHONE (219)294-8300

ISA STATUS AND INTERLOCK

DRAWN	LCD	9/8/88	APPROVED BY	DO NOT SCALE PRINT
CHK D	RLJ	9-19-88	RE	SUPERSEDES
SCALE	NONE	RE	RLJ	9-19-88
PROJ	T048	RE	RM	9-19-88

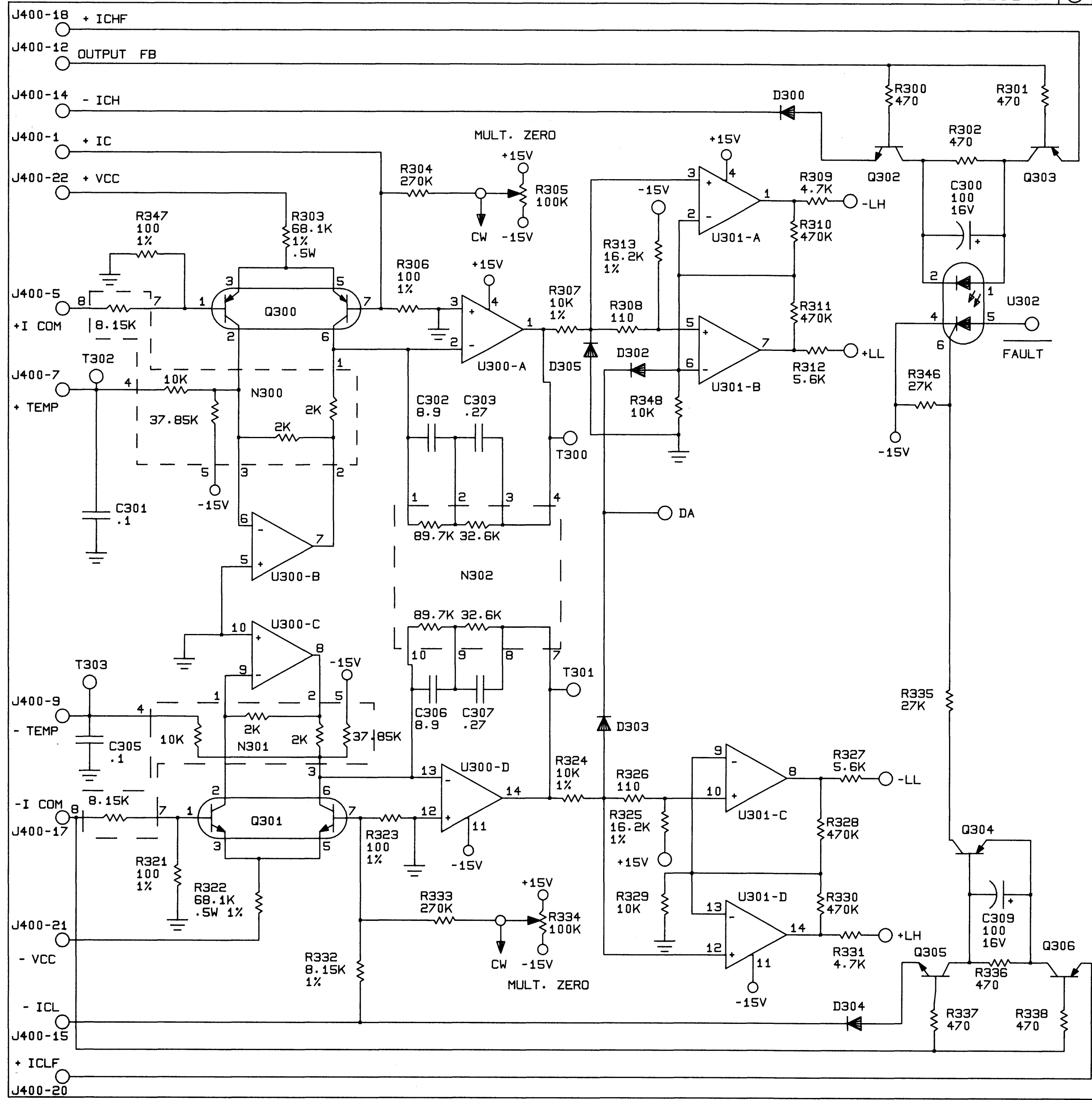
REL. FOR TOOLING BY DATE
 REL. FOR PROD BY DATE

E.C.N. 88-0708

NEXT ASSEMBLY

J0305-3 (A)

C.P.N. J0308-7 REV (A)



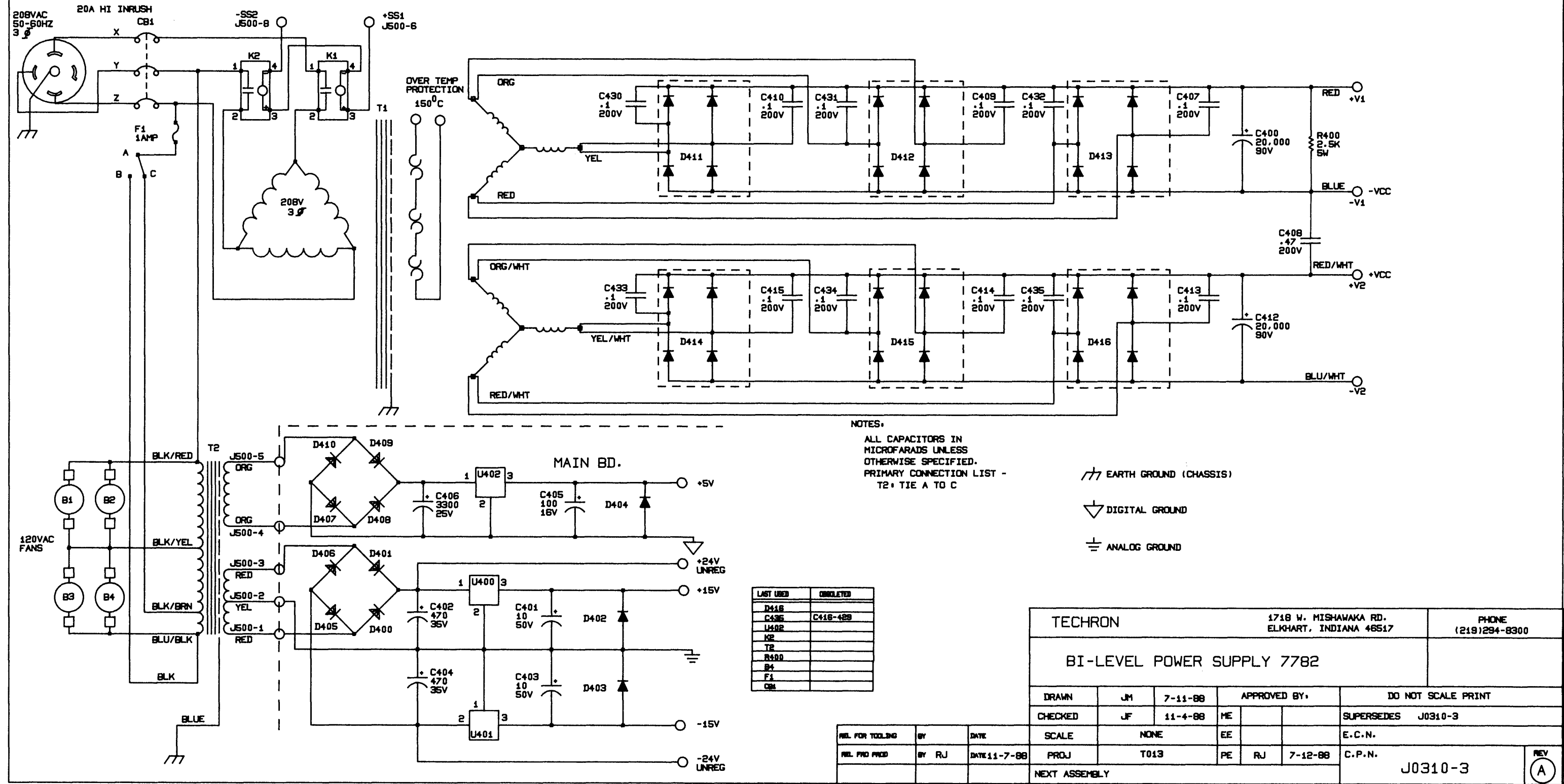
E.C.N.	ZONE	REV	DESCRIPTION	DATE	BY	CHK	HP	RF	DF
88-0972		(A)	ENLARGE TERMINAL TEXT	11-18-88	LCD	TF		RJ	DA

LAST USED	OBSOLETE
R348	R314-320
C309	R339-345
D305	C304 C308
Q306	D301
U302	
N302	
T303	

NOTES:
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS ± 5%.25W
 ALL CAPACITORS IN MICROFARADS

TECHNICON		1718 W. HISHAWANA ROAD ELKHART, INDIANA 46517		PHONE (219)294-8300	
		BI-LEVEL PROTECTION			
DRWN	LCD	9-8-88	APPROVED BY:	DO NOT SCALE PRINT	
CK'D	RLJ	9-19-88	DE	RLJ	SUPERSEDES J0308-7
SCALE	NONE		DE	RLJ	9-19-88
REL. FOR TOOLS	BY	DATE	PROJ	TO13	FE RM
REL. FOR PRG	BY	DATE	PROJ	TO13	FE RM
NEXT ASSEMBLY					E.C.N. 88-0709
					C.P.N. J0308-7 (A)

E.C.N.	ZONE	REV	DESCRIPTION	DATE	BY	APPROVALS								
BB-1046		(A)	REPLACE SECONDARY OF T1	12-14-88	LCD	<table border="1"> <tr> <td>CHK</td> <td>PE</td> <td>EE</td> <td>FE</td> </tr> <tr> <td>SF</td> <td></td> <td></td> <td>RJ</td> </tr> </table>	CHK	PE	EE	FE	SF			RJ
CHK	PE	EE	FE											
SF			RJ											



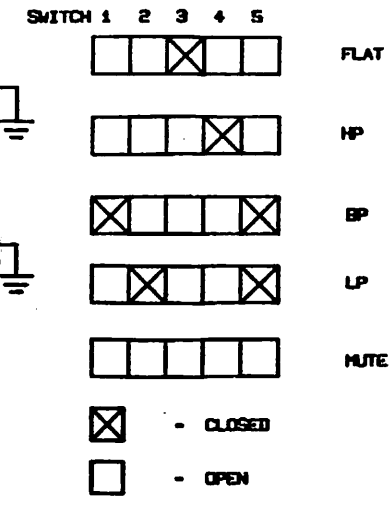
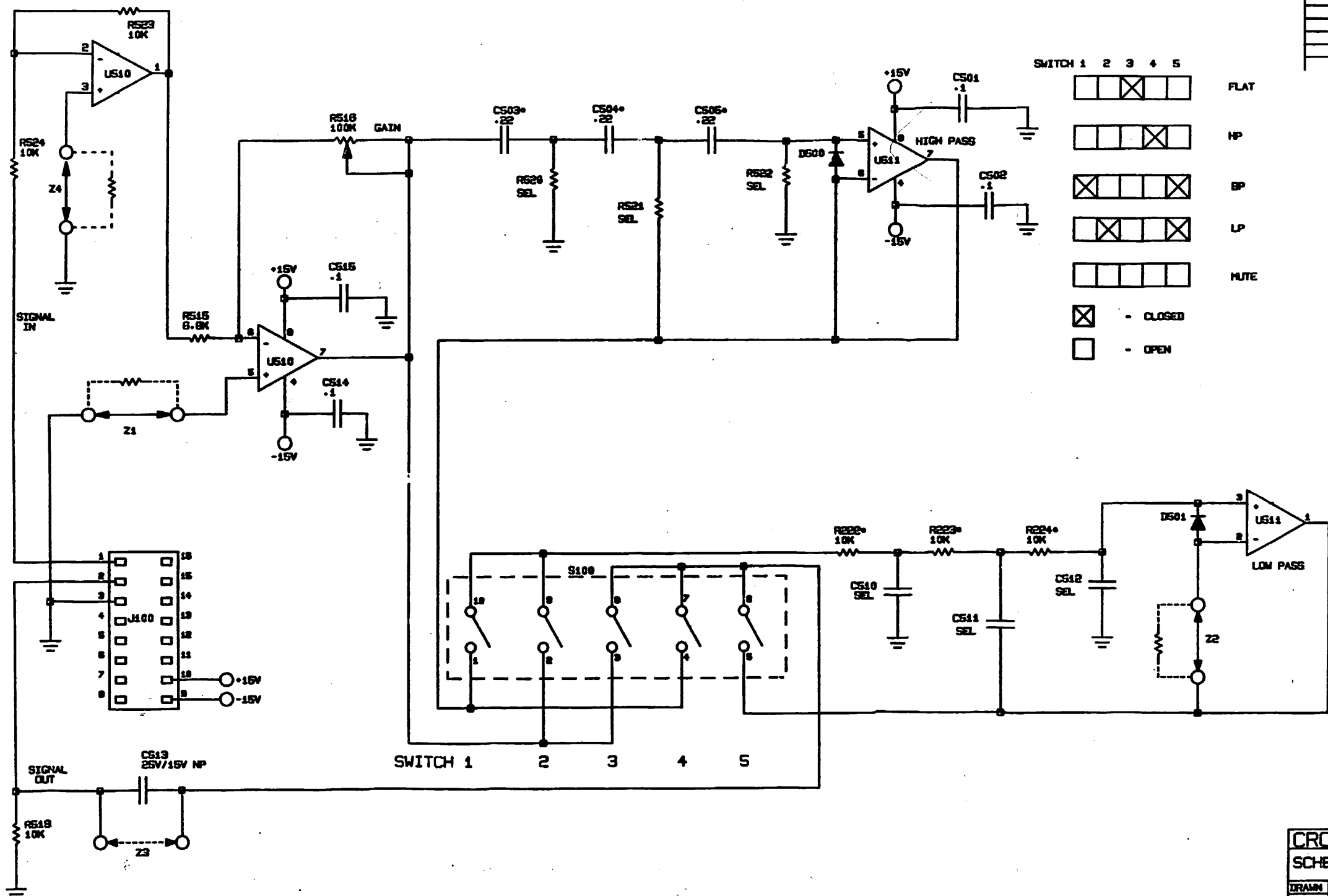
NOTES:
 ALL CAPACITORS IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 PRIMARY CONNECTION LIST - T2+ TIE A TO C

- EARTH GROUND (CHASSIS)
- DIGITAL GROUND
- ANALOG GROUND

LAST USED	OBSOLETE
D416	
C436	C416-488
U402	
ME	
TE	
R400	
B4	
F1	
CB1	

TECHRON		1718 W. MISHAWAKA RD. ELKHART, INDIANA 46517		PHONE (219)294-8300	
BI-LEVEL POWER SUPPLY 7782					
DRAWN	JM	7-11-88	APPROVED BY:	DO NOT SCALE PRINT	
CHECKED	JF	11-4-88	ME	SUPERSEDES J0310-3	
REL. FOR TOOLING	BY	DATE	SCALE	NONE	EE
REL. FOR PROD.	BY RJ	DATE 11-7-88	PROJ	T013	PE RJ 7-12-88
NEXT ASSEMBLY					E.C.N.
					C.P.N.
					J0310-3
					REV (A)

ZONE	REV	DESCRIPTION	DATE	BY	APP
(A)		ADDED NEW CIRCUITRY, Z2 WERE Xd	4/30/85	GWS	
(B)		ADDED DIODES DS00, DS01	4-23-87	PPAJ	
(C)					
(D)					
(E)					



NOTES:
UNLESS OTHERWISE SPECIFIED:

- 1) ALL CAPACITORS IN MICROFARADS
- 2) ALL RESISTORS IN OHMS, .25W 5%.
- 3) THE THREE CHANGES SHOWN IN DOTTED LINES ARE FOR INDUSTRIAL APPLICATIONS USING DC SIGNALS
- 4) R₀ IS CHOSEN ACCORDING TO THE FOLLOWING LIMITATIONS:
 - A) 2K < R₀ < 330K
 - B) R520 > 2K
 - C) R522 < 1M
- 5) WITH VALID VALUES OF R₀ AND C₀ R520, R521, R522, & C510, C511, C512 ARE CHOSEN ACCORDING TO THE FOLLOWING FORMULAS:

$$R520 = \frac{.7184}{2\pi F_c C_0} \quad C510 = \frac{1.362}{2\pi F_c R_0}$$

$$R521 = \frac{.2820}{2\pi F_c C_0} \quad C511 = \frac{3.548}{2\pi F_c R_0}$$

$$R522 = \frac{4.941}{2\pi F_c C_0} \quad C512 = \frac{.2024}{2\pi F_c R_0}$$

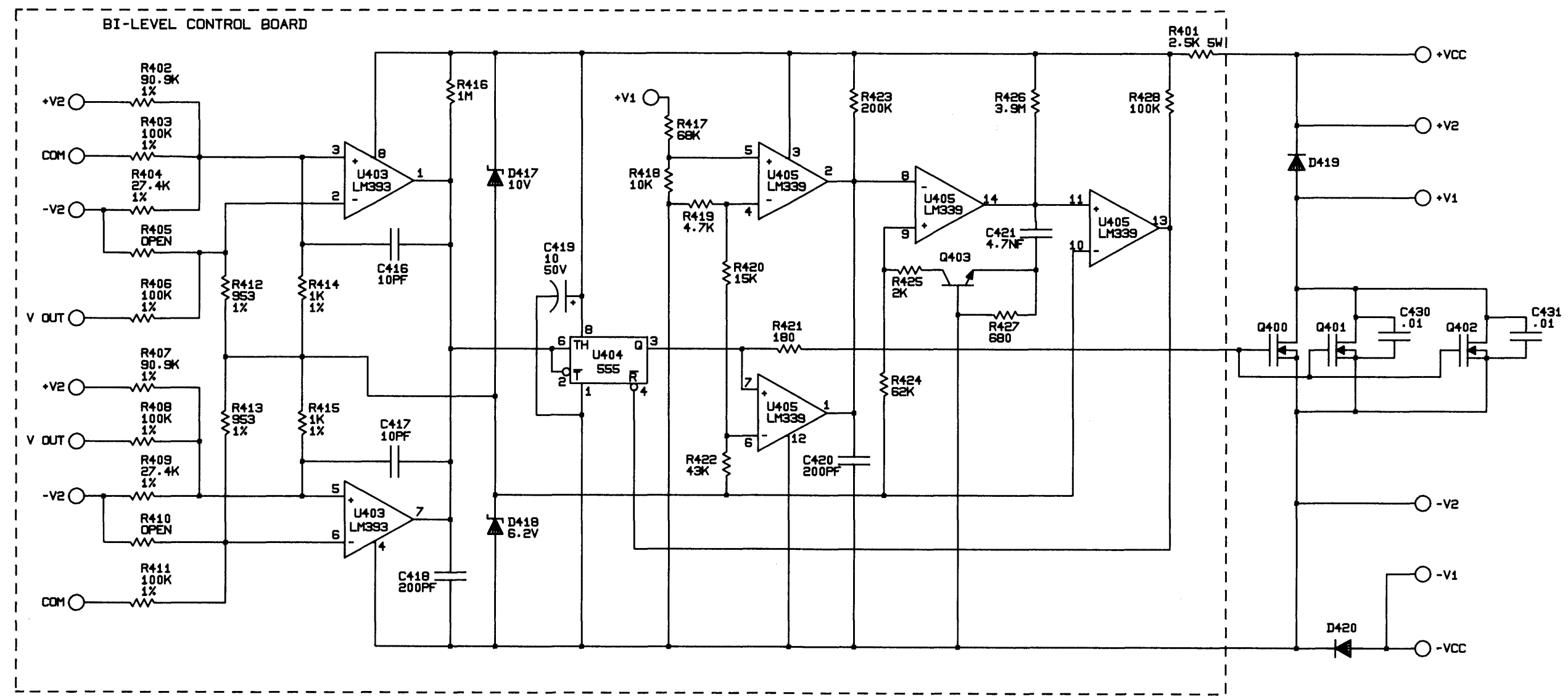
WHEN F_c - HIGH PASS CUTOFF
AND F_l - LOWPASS CUTOFF

CROWN INTL		1718 BROWN RD	PHOENIX
SCHEMATIC, FILTER INPUT MOD		CLAVETT, IN 4000	(610) 251-0000
DRAWN	GWS	6/5/85	SCALE NONE
CHKD			DO NOT SCALE PRINT
APPD			PROJ D106 SUPERSEDES
NEXT ASSEMBLY			X- 1628 C.P.N.
			J0202-2

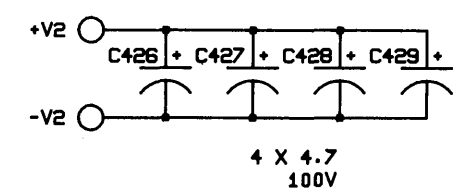
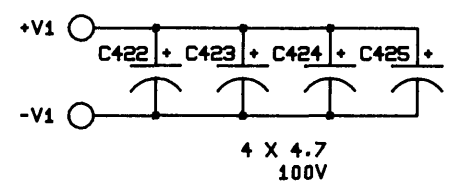
6 | 5 | 4 | 3 | 2 | 1

E.C.N.	ZONE	REV	DESCRIPTION	DATE	BY	APPROVALS			
						CHK	PE	EE	PE
89-0225		(A)	REVISED PER PRINT	3-9-89	LCD	JF			RM
89-1020		(B)	ADD C430 & C431	12-29-89	LCD	JF		R	RW
		(C)							
		(D)							

LAST USED	OBSOLETE
R428	R400
C431	C400-415
U405	U400-402
D420	D400-416
Q403	



- NOTES:
1. ALL RESISTORS IN OHMS .25W 5% UNLESS OTHERWISE SPECIFIED
 2. ALL CAPACITORS IN MICROFARADS UNLESS OTHERWISE SPECIFIED
 3. I/O CONNECTIONS:
J0295-6: COM, VOUT, +VCC, -VCC
J0300-4: +V1, -V1, +V2, -V2



CROWN INTERNATIONAL, INC.
1718 WEST MISHAWAKA ROAD ELKHART, INDIANA 46517 PHONE (219)294-8000

BI-LEVEL CONTROLLER

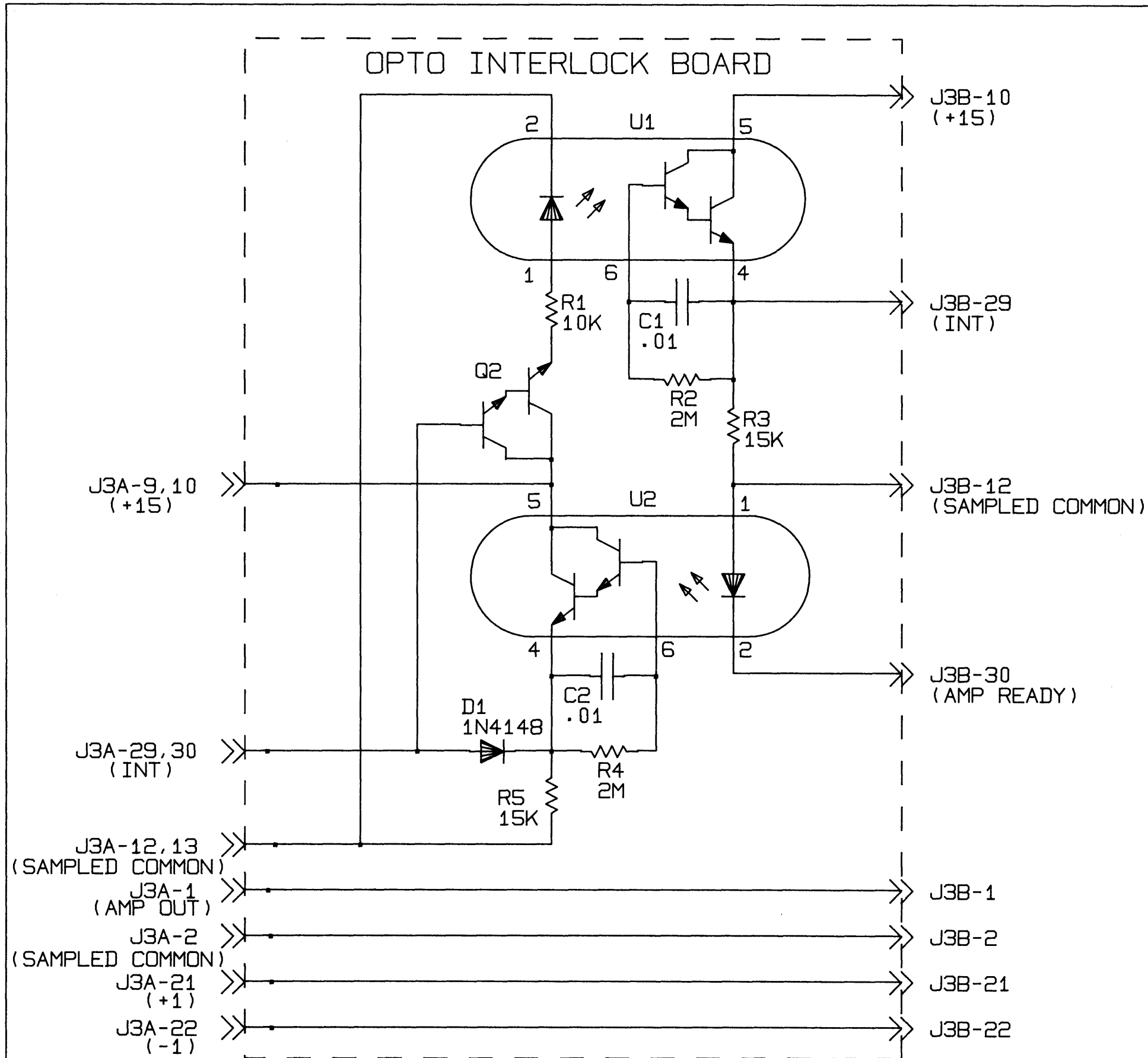
DRAWN	JM	8-16-88	APPROVED BY:	DO NOT SCALE PRINT
CHECKED	JF	8-17-88	ME	SUPERSEDES J0320-2
REL FOR TOOLING	BY	DATE	SCALE	NONE
REL FOR PROD	BY RM	DATE 3-21-89	PROJECT	T013
NEXT ASSEMBLY			EE	R 1-4-90
			PE	R JONES 8-17-88
				E.C.N.
				C.P.N.
				J0320-2 (B)

6 | 5 | 4 | 3 | 2 | 1

D
C
B
A

C.P.N. J0320-2
REV. (B)

D
C
B
A



E.C.N.	ZONE	REV	DESCRIPTION	DATE	BY	APPROVALS			
						CHK	ME	EE	PE
88-1069		(A)	WAS J3A-10, J3A-29 WAS J3A-12	12-16-88	LCD	JF		RJ	RM
88-1105		(B)	Q2 WAS Q1	12-28-88	LCD	JF			
		(C)							
		(D)							

C.P.N. J0339-2
REV. (B)

LAST USED	OBSOLETE
R5	
C2	
D1	
U2	
Q2	Q1

- NOTES:**
- ALL RESISTORS ARE IN OHMS, .25 WATT 5% UNLESS SPECIFIED OTHERWISE.
 - ALL CAPACITORS ARE IN MICROFARADS UNLESS SPECIFIED OTHERWISE.

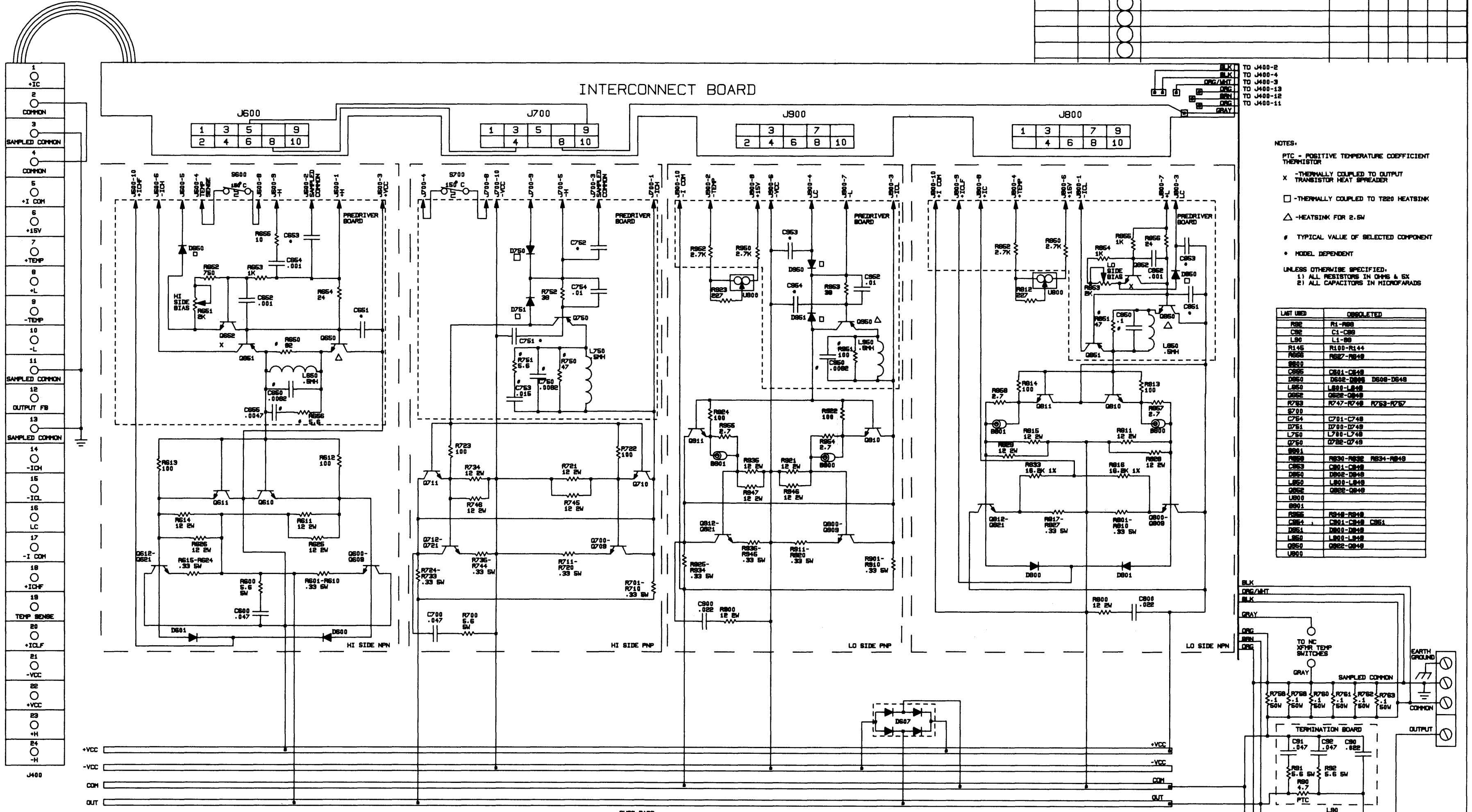
TECHRON 1718 W. MISHAWAKA ROAD ELKHART, INDIANA 46517 PHONE (219) 294-8300

OPTO INTERLOCK

DRAWN	JB	11-29-88	APPROVED BY:	DO NOT SCALE PRINT
CK D	JF	11-30-88	ME	SUPERSEDES J0339-2 REV A
SCALE	NONE		EE RLJ	11-30-88
PROJ	T045		PE RM	12-1-88
NEXT ASSEMBLY				J0339-2 (B)

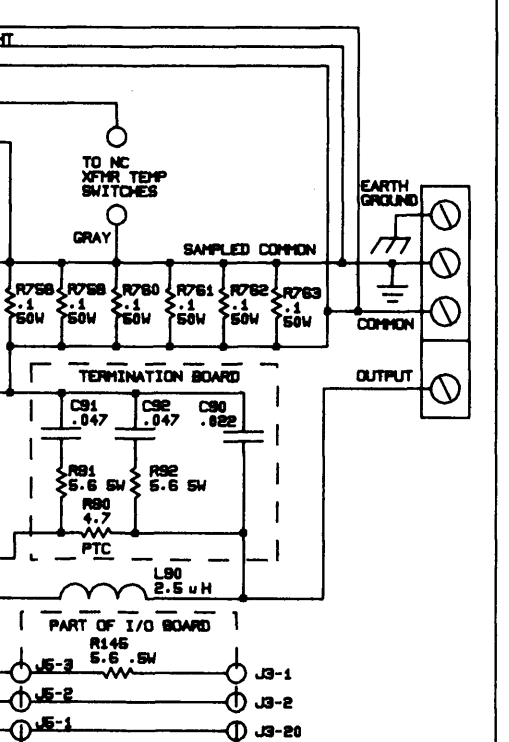
REL FOR TOOLING	BY	DATE
REL FOR PROD	BY	DATE

E.C.N.	ZONE	REV	DESCRIPTION	DATE	BY	APPROVALS
88-0804		(A)	MODIFY PER MARKED PRINT	9-26-88	LCD JF	CK ME EE PE
88-1002		(B)	MODIFY PER MARKED PRINT	11-30-88	LCD JF	CK ME EE PE



- NOTES:
- PTC = POSITIVE TEMPERATURE COEFFICIENT THERMISTOR
 - X = THERMALLY COUPLED TO OUTPUT TRANSISTOR HEAT SPREADER
 - = THERMALLY COUPLED TO T220 HEATSINK
 - △ = HEATSINK FOR 2.5W
 - # = TYPICAL VALUE OF SELECTED COMPONENT
 - * = MODEL DEPENDENT
- UNLESS OTHERWISE SPECIFIED:
- 1) ALL RESISTORS IN OHMS & 5X
 - 2) ALL CAPACITORS IN MICROFARADS

LAST USED	OBSOLETE
R82	R1-R80
C82	C1-C80
L80	L1-80
R145	R100-R144
R85	R82-R84
D80	D82-D84
C85	C81-C84
D85	D82-D84 D86-D84
L85	L81-L84
C82	C82-C84
R78	R747-R748 R753-R757
D70	
C74	C701-C748
D71	D700-D748
L75	L701-L748
D72	D722-D748
R80	
R89	R820-R822 R831-R849
C83	C801-C808
D85	D822-D849
L85	L821-L849
C82	C822-D849
L80	
R80	R848-R849
C81	C811-C848 C851
D81	D800-D848
L85	L801-L848
D80	D822-D848



TECHRON 1718 W. MISHAWAKA RD. ELKHART, INDIANA 46517 PHONE (219)294-8300

BI-LEVEL OUTPUT

DRAWN	LCD	9-9-88	APPROVED BY:	DO NOT SCALE PRINT
CHECKED	JF	9-19-88	ME	SUPERSEDES J0309-5 REV A
REL FOR TOOLING	BY	DATE	SCALE	NONE
REL FOR PROD	BY	DATE	PROJ	T013
			EE	RLJ 9-19-88
			PE	RM 9-19-88
				E.C.N. 88-0713
				C.P.N.

REV J0309-5 (B)

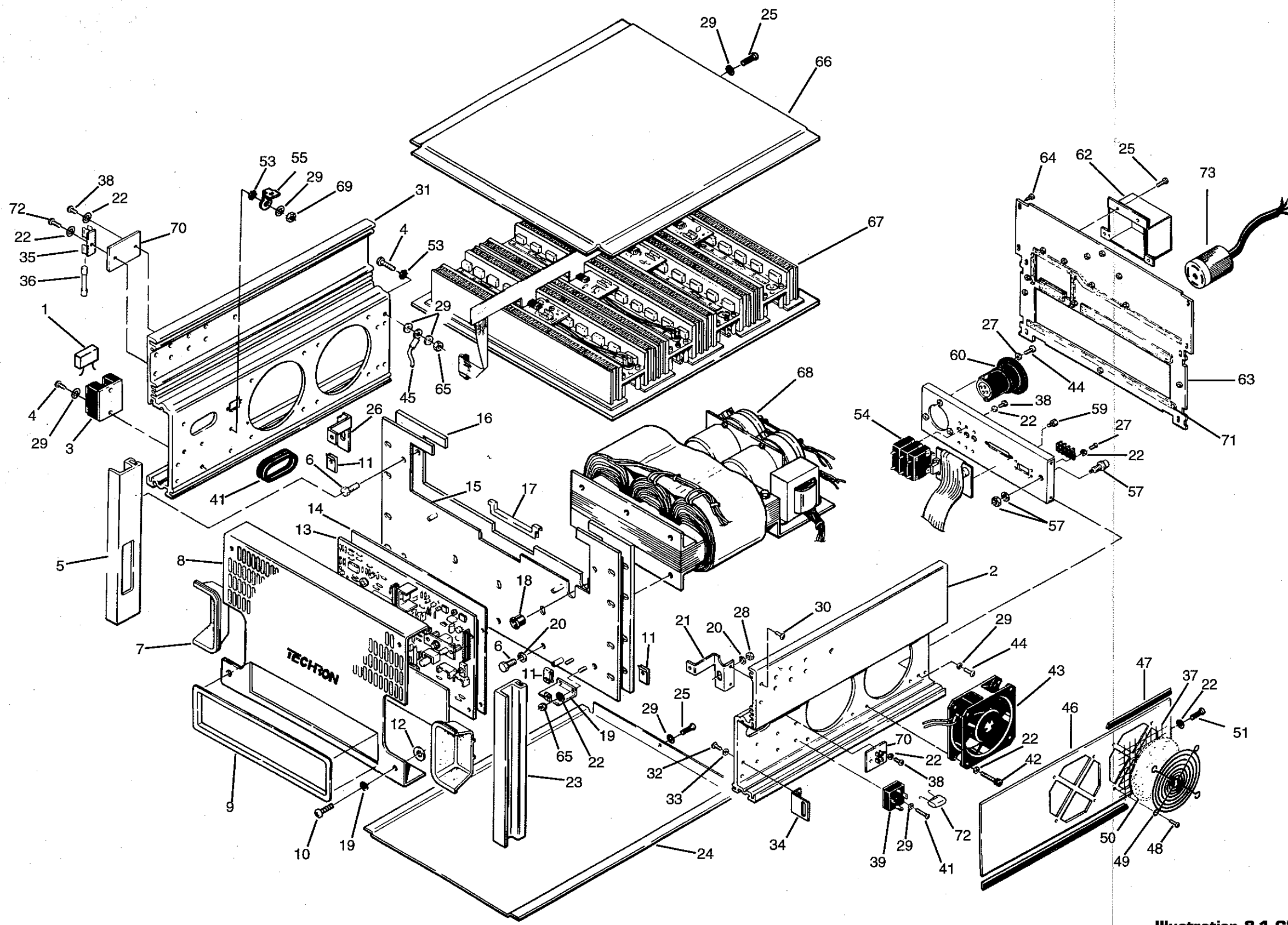
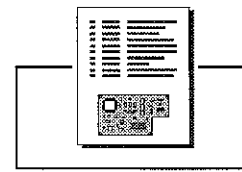


Illustration 8-1 Chassis Exploded View



8.7 Output Heat Sink Mounting

ITEM #	PART #	DESCRIPTION
1	D 7760-8	Washer, .375 X .171 X .297 Shoulder
2	A10096-1	#8 Split Ring Lockwasher
3	A10092-10812	8-32 X .75 Socket Head Cap Screw
4	A10094-6	#8 Internal Star Washer
5	A10089-10808	8-32 X .5 Pan Head Phillips Machine Screw
6	A10098-7	#6 Bellville Washer
7	A10086-10605	6-32 X .3125 Rd Head Phillips Machine Screw

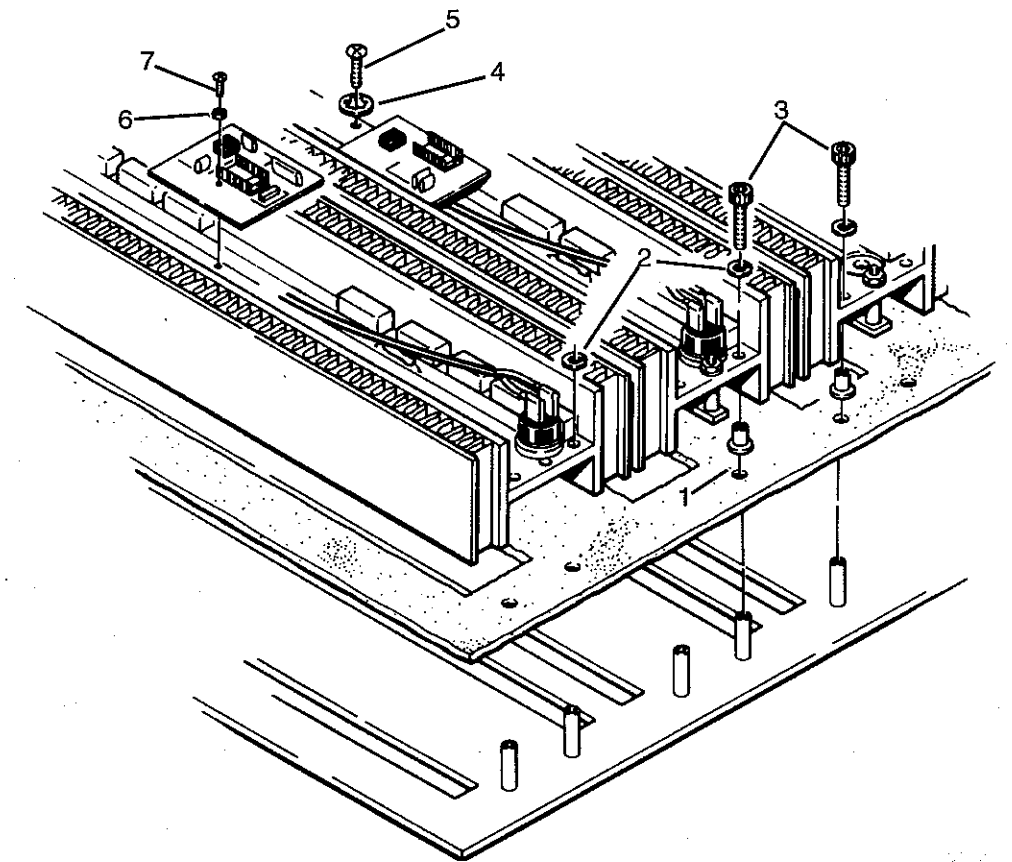


Illustration 8-2 Heat Sink Mounting Exploded View