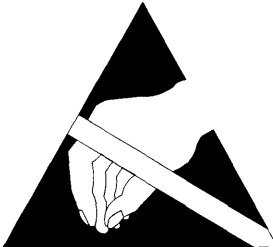


REVISION HISTORY

E. C. N.	REV	DESCRIPTION	DATE	APPROVED			
				DWN	CHK	CM	PE
T991963	A	RELEASE TO PRODUCTION	11-29-99	JAW	JLM	JL	JM

NOTES:

1. FOR SCHEMATIC SEE LAST SHEET.
2. FOR PRINTED WIRING BOARD SEE 127478-2.
3. ALL LEADS SHALL BE TRIMMED TO 0.093" OR LESS.
4. POSITION COMPONENTS AS SHOWN ON COMPONENT MAP.
5. REMOVE SOLDER OR PREVENT SOLDER FROM ACCUMULATING IN HOLES INDICATED.
6. INSTALL SHUNT JUMPERS (C 6419-3) AT LOCATIONS SHOWN ON THE COMPONENT MAP.
7. MARK THE SQUARE NEXT TO "PWA 127502-2".



CAUTION

STATIC CAN DAMAGE COMPONENTS!


DO NOT HANDLE

UNLESS WRIST STRAP IS WORN

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF CROWN INTERNATIONAL, INC. AND SHALL NOT BE REPRODUCED, COPIED, OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION.

UNCONTROLLED

UNLESS OTHERWISE MARKED IN RED INK BY CM AS A CONTROLLED COPY, COPIES OF THESE DOCUMENTS INCLUDING ASSOCIATED ELECTRONIC REPRODUCTIONS ARE FOR REFERENCE ONLY.

DISTRIBUTION		DWN	JAW	11-29-99	 crown 1718 W. MISHAWAKA RD. ELKHART IN. 46517 PHONE (219) 294-8000 HTTP://WWW.CROWNINTL.COM
K		CHK	JLM	11-29-99	
FILENAME		CM	JL	11-29-99	TITLE
127502-2_A_01.PCB		PE	JM	11-29-99	
TOLERANCE UNLESS OTHERWISE SPECIFIED					PWA, PIP-ATNJ
.00 = ±.02"					
.000 = ±.010"					
DRILLS = ±.003"					SIZE DWG NO.
DO NOT SCALE DRAWING					A 127502-2
					REV A
					SCALE NONE PROJ NO. MD22450 SHEET 1 OF 6

PARTS LIST

C.P.N.	DESCRIPTION	QTY	REFERENCE DESIGNATION
A10124-24	WIRE, #24 SOLID BUSS	4"	R100, R200
A10265-11511	1.15KOHM .25W 1% MF T/R	2	R108, R208
A10265-13021	13.0KOHM .25W 1% MF T/R	2	R105, R205
A10265-14011	1.4 KOHM .25W 1% MF T/R	2	R109, R209
A10265-15421	15.4KOHM .25W 1% MF T/R	2	R113, R213
A10265-20021	20. KOHM .25W 1% MF T/R	2	R101, R201
A10265-23211	2.32KOHM .25W 1% MF T/R	2	R107, R207
A10265-24921	24.9 KOHM .25W 1% MF T/R	8	R103, R112, R203, R212
			R118, R119, R218, R219
A10265-34011	3.4 KOHM .25W 1% MF T/R	2	R106, R206
A10265-45301	453. OHM .25W 1% MF T/R	2	R111, R211
A10265-53611	5.36KOHM .25W 1% MF T/R	2	R104, R204
A10265-78711	7.87 KOHM .25W 1% MF T/R	2	R114, R214
A10265-82501	825. OHM .25W 1% MF T/R	2	R102, R202
A10265-88701	887. OHM .25W 1% MF T/R	2	R110, R210
A10265-88711	8.87KOHM .25W 1% MF T/R	4	R115, R116, R215, R216
A10266-4701	47.0 OHM .25W 5 CF T/R	6	R120, R121, R122, R220, R221, R222
C 2851-1	RECTIFIER, 1N4004 SILICON T/	2	D1, D2
C 5095-2	MC7815CT +15V. REG	1	U1
C 5096-0	MC7915CT -15V. REG	1	U2
C 5619-9	250PF MICA 50V 5% RADIAL T	2	C109, C209
C 6419-3	SHUNT 0.025" SQ. POST 2 POS	2	Z100X, Z200X
C 6814-5	12PF 200V AXIAL CER T/R 120	2	C112, C212
C 7283-2	8.9UF 35V 10% NP VERT ELEC T	2	C108, C208
C 7432-5	.01UF 250V 5% MET POLY CAP	2	C103, C203
C 7636-1	MC33078P DUAL LOW NOISE OP A	3	U100, U200, U3
C 7724-5	3P4T PC MT SLIDE SWITCH	2	S100, S200
C 7746-8	3POS SGLROW HDR .025 POST GO	2	Z100, Z200
C 8576-8	100UF 35V 10% ALUM ELECT T/A	2	C111, C211
C 8897-8	.1UF 100V 20% Z5U RAD CER T/	7	C1, C3, C4, C101, C102, C201, C202
C 9465-3	10UF 50V 20% VERT ELECT T/A	1	C2
C 9615-3	680PF 100V 5% AXIAL CER NPO	2	C104, C204
C 9676-5	3 POS, R/A 5MM HDR RND PIN	2	P100, P200
C 9785-4	5K OHM 20% LNR 21 DNT POT .1	2	R117, R217
C 9796-1	200PF 500V 5% MICA CAP T/R	2	C110, C210
C10505-3	.33UF 50/63V 5% MTL FILM T/R	6	C105, C106, C107, C205, C206, C207
127478-2	PWB, PIP-ATNJ	1	
127479-1	XFMR, 1:1 ISOLATION INPUT	2	T100, T200
	...OPEN...	6	C100, C200, R123, R223, C109X, C209X

UNCONTROLLED

UNLESS OTHERWISE MARKED IN RED INK BY CM AS A CONTROLLED COPY, COPIES OF THESE DOCUMENTS INCLUDING ASSOCIATED ELECTRONIC REPRODUCTIONS ARE FOR REFERENCE ONLY.

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF CROWN INTERNATIONAL, INC. AND SHALL NOT BE REPRODUCED, COPIED, OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION.

SIZE A	DWG NO. 127502-2	REV A
SCALE NONE	PROJ NO. MD22450	SHEET 2 OF 6

PARTS LIST

REF DES	C. P. N.	DESCRIPTION	MAP LOC.
C1	C 8897-8	.1UF 100V 20% Z5U RAD CER T/R	C 3
C2	C 9465-3	10UF 50V 20% VERT ELECT T/A	D 3
C3	C 8897-8	.1UF 100V 20% Z5U RAD CER T/R	C 3
C4	C 8897-8	.1UF 100V 20% Z5U RAD CER T/R	D 3
C100	OPEN		
C101	C 8897-8	.1UF 100V 20% Z5U RAD CER T/R	E 1
C102	C 8897-8	.1UF 100V 20% Z5U RAD CER T/R	E 2
C103	C 7432-5	.01UF 250V 5% MET POLY CAP	E 2
C104	C 9615-3	680PF 100V 5% AXIAL CER NPO	E 2
C105	C10505-3	.33UF 50/63V 5% MTL FILM T/R	E 2
C106	C10505-3	.33UF 50/63V 5% MTL FILM T/R	E 2
C107	C10505-3	.33UF 50/63V 5% MTL FILM T/R	D 2
C108	C 7283-2	8.9UF 35V 10% NP VERT ELEC T/R	D 3
C109	C 5619-9	250PF MICA 50V 5% RADIAL T/R	D 1
C109X	OPEN		
C110	C 9796-1	200PF 500V 5% MICA CAP T/R	E 1
C111	C 8576-8	100UF 35V 10% ALUM ELECT T/A	D 4
C112	C 6814-5	12PF 200V AXIAL CER T/R 120	D 3
C200	OPEN		
C201	C 8897-8	.1UF 100V 20% Z5U RAD CER T/R	B 1
C202	C 8897-8	.1UF 100V 20% Z5U RAD CER T/R	B 2
C203	C 7432-5	.01UF 250V 5% MET POLY CAP	B 2
C204	C 9615-3	680PF 100V 5% AXIAL CER NPO	A 2
C205	C10505-3	.33UF 50/63V 5% MTL FILM T/R	B 2
C206	C10505-3	.33UF 50/63V 5% MTL FILM T/R	B 2
C207	C10505-3	.33UF 50/63V 5% MTL FILM T/R	C 2
C208	C 7283-2	8.9UF 35V 10% NP VERT ELEC T/R	C 3
C209	C 5619-9	250PF MICA 50V 5% RADIAL T/R	C 1
C209X	OPEN		
C210	C 9796-1	200PF 500V 5% MICA CAP T/R	B 1
C211	C 8576-8	100UF 35V 10% ALUM ELECT T/A	C 4
C212	C 6814-5	12PF 200V AXIAL CER T/R 120	C 3
D1	C 2851-1	RECTIFIER, 1N4004 SILICON T/R	C 3
D2	C 2851-1	RECTIFIER, 1N4004 SILICON T/R	D 3
P100	C 9676-5	3 POS. R/A 5MM HDR RND PIN	E 4
P200	C 9676-5	3 POS. R/A 5MM HDR RND PIN	B 4
R100	A10265-24	WIRE, #24 SOLID BUSS	E 4
R101	A10265-20021	20. KOHM .25W 1 MF T/R	E 1
R102	A10265-82501	825. OHM .25W 1% MF T/R	E 2
R103	A10265-24921	24.9 KOHM .25W 1 MF T/R	E 1
R104	A10265-53611	5.36KOHM .25W 1 MF T/R	E 1
R105	A10265-13021	13.0KOHM .25W 1% MF T/R	E 2
R106	A10265-34011	3.4 KOHM .25W 1% MF T/R	D 2
R107	A10265-23211	2.32KOHM .25W 1% MF T/R	D 2
R108	A10265-11511	1.15KOHM .25W 1% MF T/R	D 2
R109	A10265-14011	1.4 KOHM .25W 1% MF T/R	D 2
R110	A10265-88701	887. OHM .25W 1% MF T/R	D 2
R111	A10265-45301	453. OHM .25W 1% MF T/R	D 2
R112	A10265-24921	24.9 KOHM .25W 1% MF T/R	D 1

UNCONTROLLED

UNLESS OTHERWISE MARKED IN RED INK BY CM AS A CONTROLLED COPY, COPIES OF THESE DOCUMENTS INCLUDING ASSOCIATED ELECTRONIC REPRODUCTIONS ARE FOR REFERENCE ONLY.

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF CROWN INTERNATIONAL, INC. AND SHALL NOT BE REPRODUCED, COPIED, OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION.

SIZE DWG NO.

A

127502-2

REV

A

SCALE NONE

PROJ NO. MD22450

SHEET 3 OF 6

PARTS LIST

REF DES	C.P.N.	DESCRIPTION	MAP LOC.
R113	A10265-15421	15.4KOHM .25W 1 MF T/R	D 1
R114	A10265-78711	7.87 KOHM .25W 1% MF T/R	D 1
R115	A10265-88711	8.87KOHM .25W 1% MF T/R	D 1
R116	A10265-88711	8.87KOHM .25W 1% MF T/R	D 1
R117	C 9785-4	5K OHM 20% LNR 21 DNT POT .187	D 4
R118	A10265-24921	24.9 KOHM .25W 1 MF T/R	D 4
R119	A10265-24921	24.9 KOHM .25W 1 MF T/R	D 4
R120	A10266-4701	47.0 OHM .25W 5 CF T/R	D 3
R121	A10266-4701	47.0 OHM .25W 5 CF T/R	D 1
R122	A10266-4701	47.0 OHM .25W 5 CF T/R	D 1
R123	OPEN		
R200	A10265-24	WIRE, #24 SOLID BUSS	B 4
R201	A10265-20021	20. KOHM .25W 1 MF T/R	B 1
R202	A10265-82501	825. OHM .25W 1% MF T/R	B 2
R203	A10265-24921	24.9 KOHM .25W 1 MF T/R	B 1
R204	A10265-53611	5.36KOHM .25W 1 MF T/R	B 1
R205	A10265-13021	13.0KOHM .25W 1% MF T/R	A 2
R206	A10265-34011	3.4 KOHM .25W 1% MF T/R	C 2
R207	A10265-23211	2.32KOHM .25W 1% MF T/R	C 2
R208	A10265-11511	1.15KOHM .25W 1% MF T/R	C 2
R209	A10265-14011	1.4 KOHM .25W 1% MF T/R	C 2
R210	A10265-88701	887. OHM .25W 1% MF T/R	C 2
R211	A10265-45301	453. OHM .25W 1% MF T/R	C 2
R212	A10265-24921	24.9 KOHM .25W 1% MF T/R	C 1
R213	A10265-15421	15.4KOHM .25W 1 MF T/R	C 1
R214	A10265-78711	7.87 KOHM .25W 1% MF T/R	C 1
R215	A10265-88711	8.87KOHM .25W 1% MF T/R	C 1
R216	A10265-88711	8.87KOHM .25W 1% MF T/R	C 1
R217	C 9785-4	5K OHM 20% LNR 21 DNT POT .187	C 4
R218	A10265-24921	24.9 KOHM .25W 1 MF T/R	C 4
R219	A10265-24921	24.9 KOHM .25W 1 MF T/R	C 4
R220	A10266-4701	47.0 OHM .25W 5 CF T/R	C 3
R221	A10266-4701	47.0 OHM .25W 5 CF T/R	C 1
R222	A10266-4701	47.0 OHM .25W 5 CF T/R	C 1
R223	OPEN		
S100	C 7724-5	3P4T PC MT SLIDE SWITCH	D 2
S200	C 7724-5	3P4T PC MT SLIDE SWITCH	C 2
T100	127479-1	XFMR, 1:1 ISOLATION INPUT	E 3
T200	127479-1	XFMR, 1:1 ISOLATION INPUT	B 3
U1	C 5095-2	MC7815CT +15V. REG	C 3
U2	C 5096-0	MC7915CT -15V. REG	D 3
U3	C 7636-1	MC33078P DUAL LOW NOISE OP AMP	D 3
U100	C 7636-1	MC33078P DUAL LOW NOISE OP AMP	E 1
U200	C 7636-1	MC33078P DUAL LOW NOISE OP AMP	B 1
Z100	C 7746-8	3POS SGLROW HDR .025 POST GOLD	E 2
Z100X	C 6419-3	SHUNT .025 SQ. POST 2 POS	E 1
Z200	C 7746-8	3POS SGLROW HDR .025 POST GOLD	B 2
Z200X	C 6419-3	SHUNT .025 SQ. POST 2 POS	B 2
	127478-2	PWB, PIP-ATNJ	

UNCONTROLLED

UNLESS OTHERWISE MARKED IN RED INK BY CM AS A CONTROLLED COPY, COPIES OF THESE DOCUMENTS INCLUDING ASSOCIATED ELECTRONIC REPRODUCTIONS ARE FOR REFERENCE ONLY.

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF CROWN INTERNATIONAL, INC. AND SHALL NOT BE REPRODUCED, COPIED, OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION.

SIZE DWG NO.

A

127502-2

REV

A

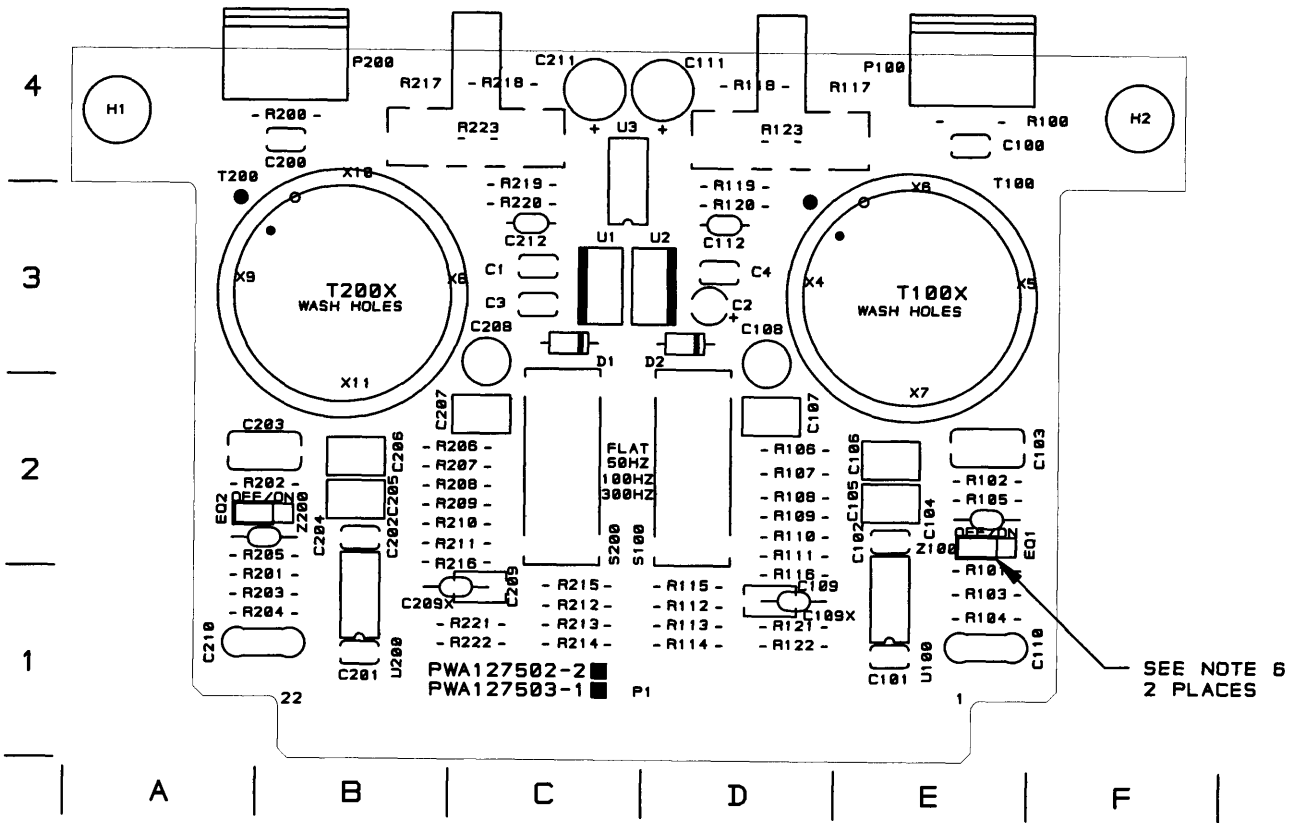
SCALE NONE

PROJ NO. MD22450

SHEET 4 OF 6

COMPONENT MAP

(COMPONENT SIDE VIEW)

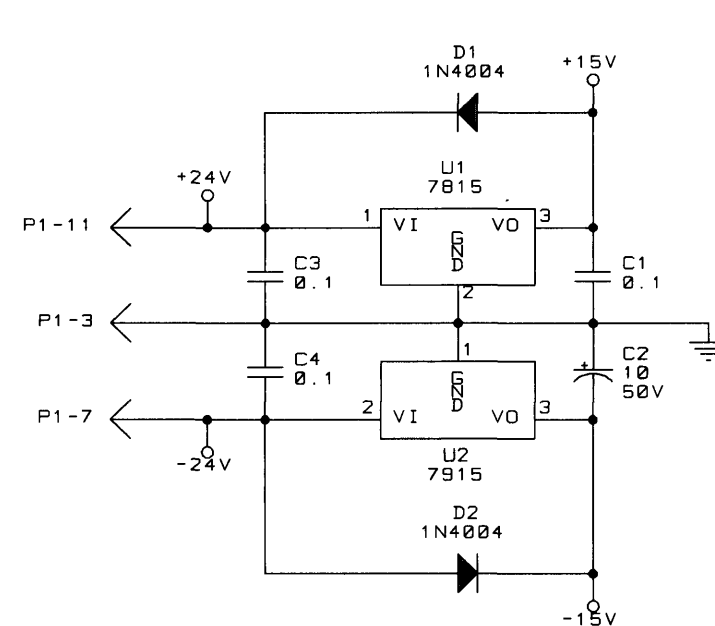
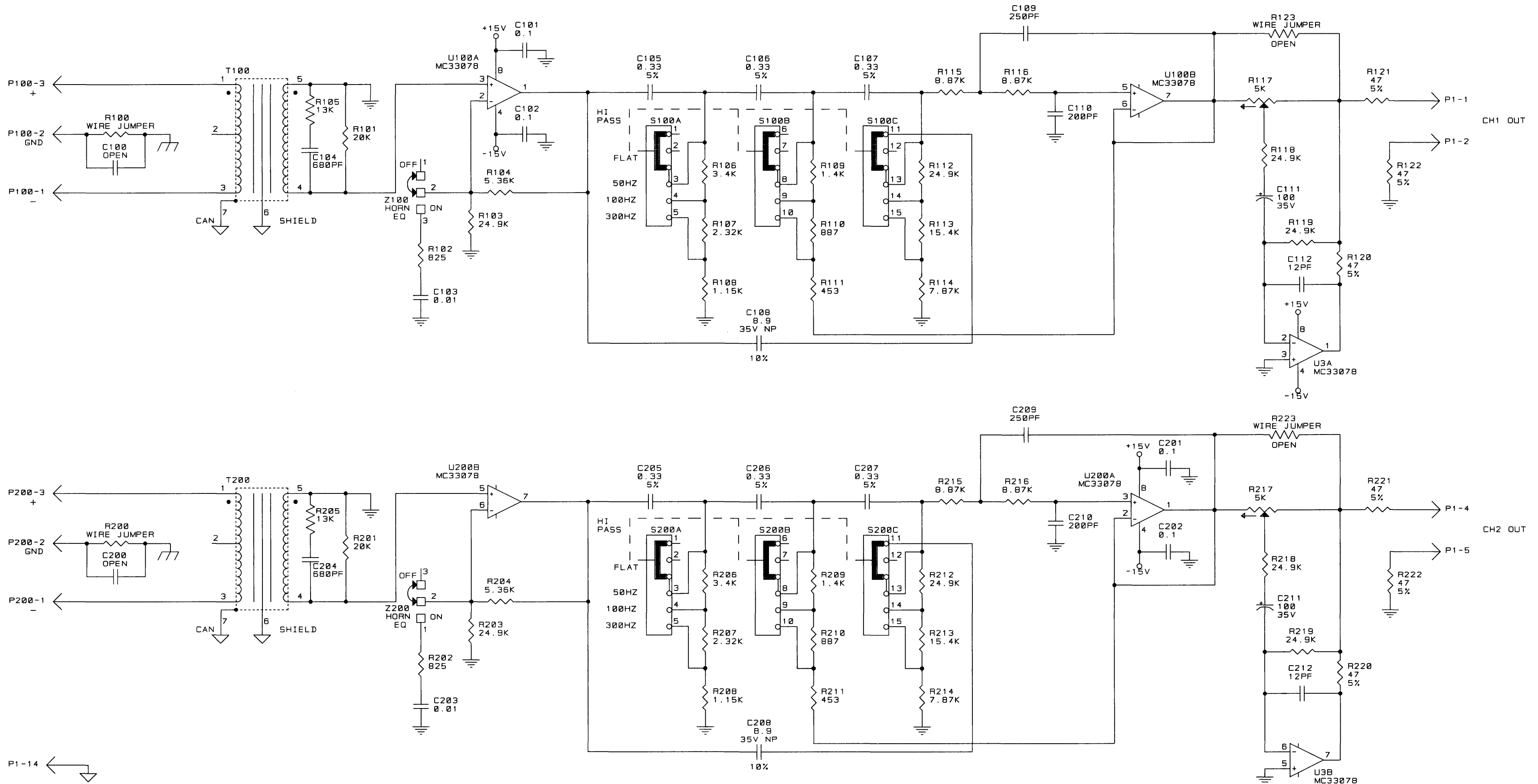


UNCONTROLLED

UNLESS OTHERWISE MARKED IN RED INK BY CM AS A CONTROLLED COPY, COPIES OF THESE DOCUMENTS INCLUDING ASSOCIATED ELECTRONIC REPRODUCTIONS ARE FOR REFERENCE ONLY.

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF CROWN INTERNATIONAL, INC. AND SHALL NOT BE REPRODUCED, COPIED, OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION.

SIZE	DWG NO.	127502-2	REV
A			A
SCALE	NONE	PROJ NO.	MD22450
		SHEET	5 OF 6



LAST USED	OBSOLETE
C212	5-99, 104, 113-199, 204
D2	
P200	2-99, 101-199
R223	105, 124-199, 205
S200	1-99, 101-199
T200	1-99, 101-199
U200	4-99, 101-199

- NOTES :
- ALL RESISTORS ARE IN OHMS, 1/4W, 1% UNLESS OTHERWISE SPECIFIED.
 - ALL CAPACITORS ARE IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 - J3 PINS 6, 8-10, 12, 13, AND 15-44 ARE NOT USED.