



AP 800

PROFESSIONAL SERIES

WORLD HEADQUARTERS CANADA

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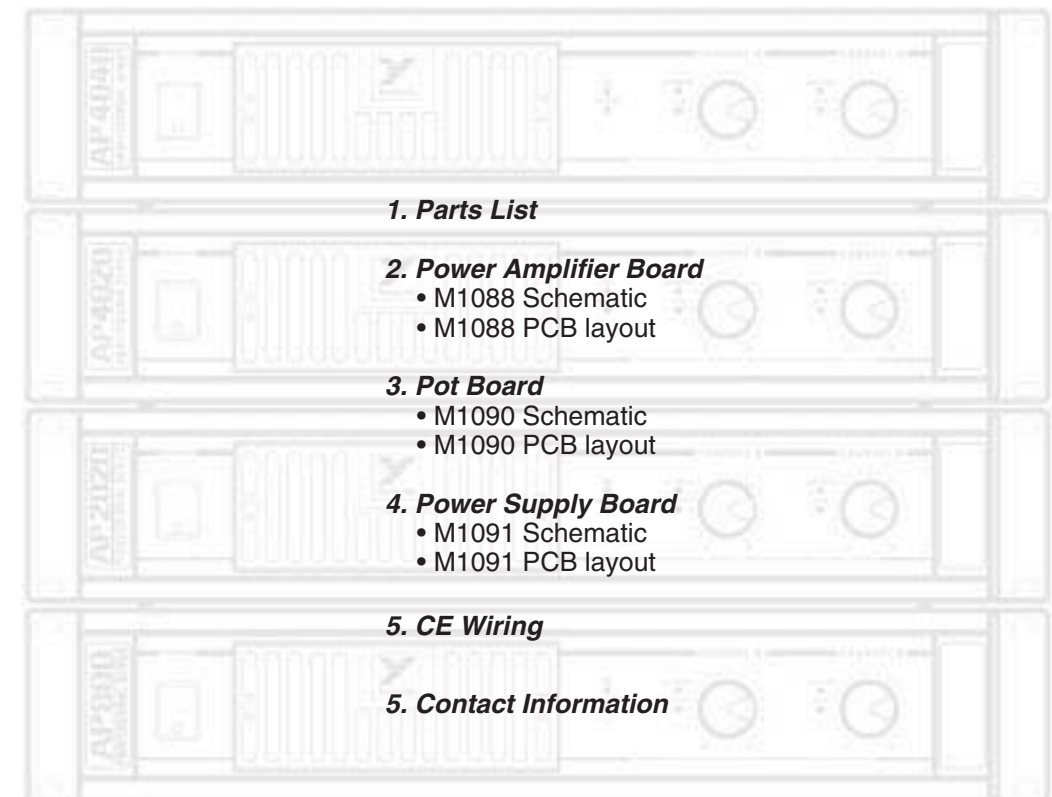
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Quality and Innovation Since 1963
Printed in Canada



SERVICE MANUAL

IMPORTANT SAFETY INSTRUCTIONS



INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

INSTRUCTIONS RELATIVES AU RISQUE DE FEU, CHOC ÉLECTRIQUE, OU BLESSURES AUX PERSONNES

CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).

NO USER SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

AVIS:

AFIN DE REDUIRE LES RISQUE DE CHOC ELECTRIQUE, N'ENLEVEZ PAS LE COUVERT (OU LE PANNEAU ARRIERE)

NE CONTIENT AUCUNE PIECE REPARABLE PAR L'UTILISATEUR.

CONSULTEZ UN TECHNICIEN QUALIFIE POUR L'ENTRETIEN

Read Instructions

The Owner's Manual should be read and understood before operation of your unit. Please, save these instructions for future reference.

Packaging

Keep the box and packaging materials, in case the unit needs to be returned for service.

Warning

When using electric products, basic precautions should always be followed, including the following:

Power Sources

Your unit should be connected to a power source only of the voltage specified in the owners manual or as marked on the unit. This unit has a polarized plug. Do not use with an extension cord or receptacle unless the plug can be fully inserted. Precautions should be taken so that the grounding scheme on the unit is not defeated.

Hazards

Do not place this product on an unstable cart, stand, tripod, bracket or table. The product may fall, causing serious personal injury and serious damage to the product. Use only with cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Follow the manufacturer's instructions when installing the product and use mounting accessories recommended by the manufacturer.

The apparatus should not be exposed to dripping or splashing water; no objects filled with liquids should be placed on the apparatus.

Terminals marked with the "lightning bolt" are hazardous live; the external wiring connected to these terminals require installation by an instructed person or the use of ready made leads or cords.

Ensure that proper ventilation is provided around the appliance.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

Power Cord

The AC supply cord should be routed so that it is unlikely that it will be damaged. If the AC supply cord is damaged DO NOT OPERATE THE UNIT.

Service

The unit should be serviced only by qualified service personnel.

Veillez Lire le Manuel

Il contient des informations qui devraient être comprises avant l'opération de votre appareil. Conservez S.V.P. ces instructions pour consultations ultérieures.

Emballage

Conservez la boîte au cas où l'appareil devait être retourner pour réparation.

Attention:

Lors de l'utilisation de produits électrique, assurez-vous d'adhérer à des précautions de bases incluant celle qui suivent:

Alimentation

L'appareil ne doit être branché qu'à une source d'alimentation correspondant au voltage spécifié dans le manuel ou tel qu'indiqué sur l'appareil. Cet appareil est équipé d'une prise d'alimentation polarisée. Ne pas utiliser cet appareil avec un cordon de raccordement à moins qu'il soit possible d'insérer complètement les trois lames. Des précautions doivent être prises afin d'éviter que le système de mise à la terre de l'appareil ne soit désengagé.

Risque

Ne pas placer cet appareil sur un chariot, un support, un trépied ou une table instables. L'appareil pourrait tomber et blesser quelqu'un ou subir des dommages importants. Utiliser seulement un chariot, un support, un trépied ou une table recommandés par le fabricant ou vendus avec le produit. Suivre les instructions du fabricant pour installer l'appareil et utiliser les accessoires recommandés par le fabricant.

Il convient de ne pas placer sur l'appareil de sources de flammes nues, telles que des bougies allumées.

L'appareil ne doit pas être exposé à des égouttements d'eau ou des éclaboussures et qu'aucun objet rempli de liquide tel que des vases ne doit être placé sur l'appareil.

Assurez que l'appareil est fourni de la propre ventilation.

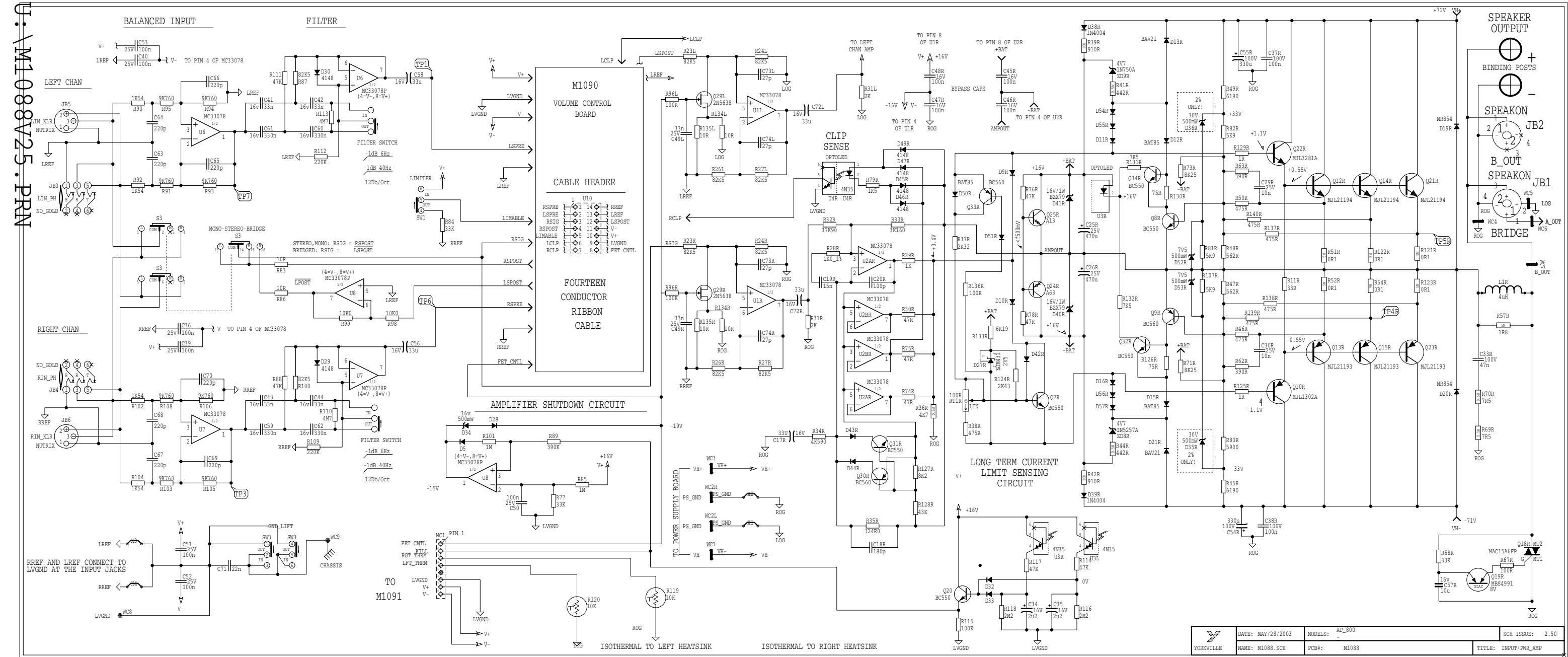
Les dispositifs marqués d'un symbole "d'éclair" sont des parties dangereuses au toucher et que les câblages extérieurs connectés à ces dispositifs de connection extérieure doivent être effectués par un opérateur formé ou en utilisant des cordons déjà préparés.

Cordon d'Alimentation

Évitez d'endommager le cordon d'alimentation. N'UTILISEZ PAS L'APPAREIL si le cordon d'alimentation est endommagé.

Service

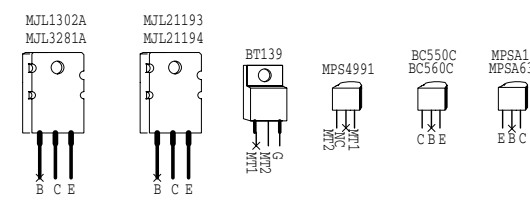
Consultez un technicien qualifié pour l'entretien de votre appareil.



M1088V25.PRN

M1088.SCH_DATABASE_HISTORY			
MODEL(S) :-	AP-800		
#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY/30/95	1.10	PC#4806_R126R/R130R_47R-->75R
2	JUN/21/95	1.20	DC VOLTAGES ADDED TO SCHEMATIC
3	JUN/26/95	2.00	PC#4848_R50L/R_446L/R_158R-->475R
4	.	.	C29L/R_C30L/R_47N-->10N--ADD 4148
5	.	.	DIODE IN SERIES WITH D11L/R AND
6	.	.	D16L/R ADD 475R FROM EMITTER Q14,
7	.	.	Q21 TO THE BASE OF Q8 ALSO FOR Q15,
8	.	.	Q23 TO THE BASE OF Q9
9	AUG/14/96	2.10	PC#5189_C65,C66,C69,C70_27P-->220P
10	D	V	N

REV#	DESCRIPTION
2.50	PC#6609_C54R/C55R_220u->330u



NOTES:
ADJUST RT1R FOR
10mV BETWEEN
TP4 @ TP5
WHILE AMP IS
IN 4 OHM MODE
AT 120VAC

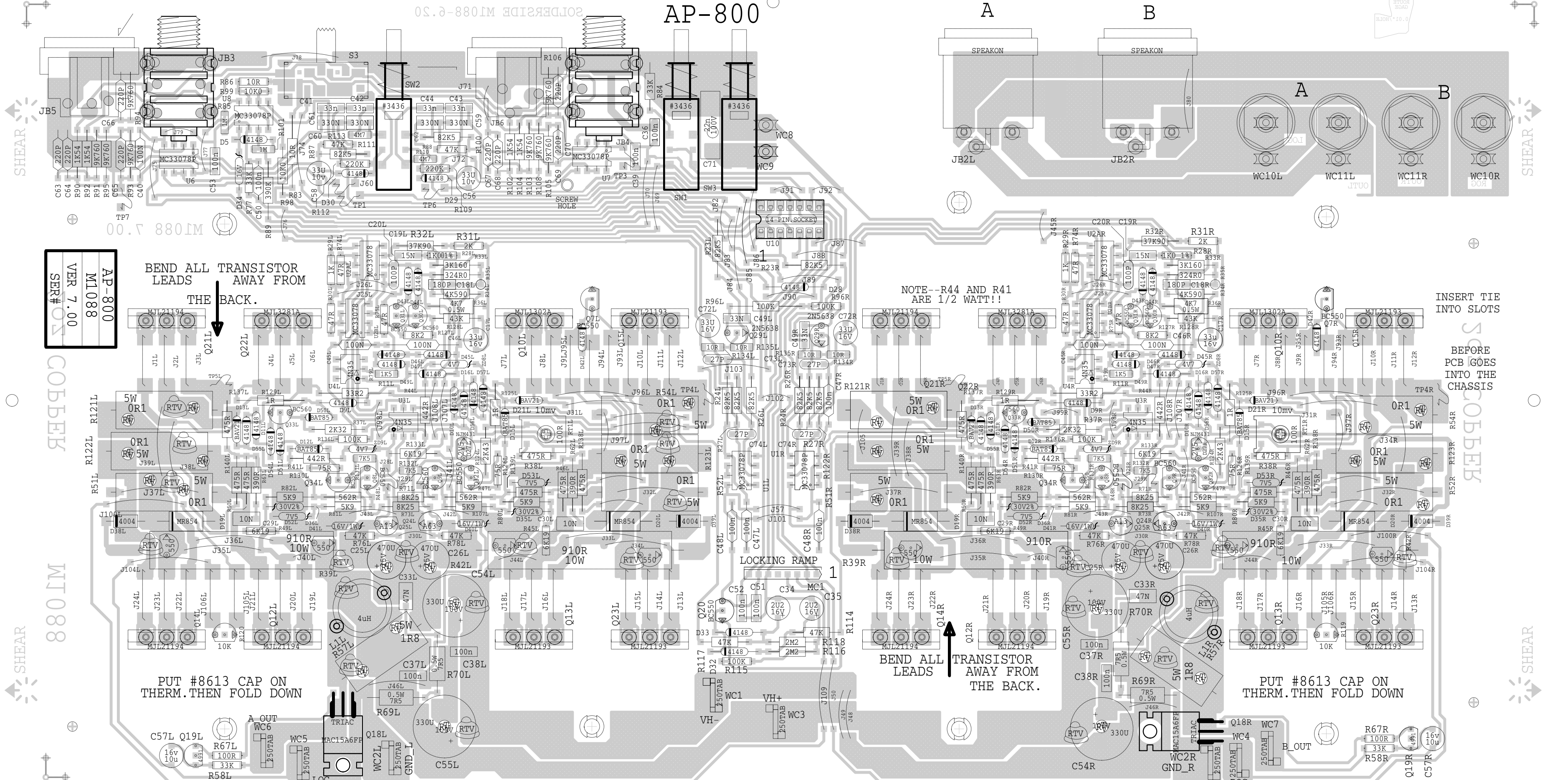
NOTES:
ALL UNMARKED DIODES ARE IN4148
TEST POINT **TP2**

NOTE:
V+ = +16VDC
V- = -16VDC
LEFT = A CHANNEL
RIGHT = B CHANNEL

NOTE:
LAST R = R140
LAST C = C74
LAST D = D57
LAST Q = Q34
LAST U = U10
LAST J = J109

YORKVILLE	DATE: MAY/28/2003	MODELS: AP_800	SCH ISSUE: 2.50
	NAME: M1088.SCH	PCB#: M1088	TITLE: INPUT/PWR_AMP

AP-800



AP-800
M1088
VER 7.00
SER#

BEND ALL TRANSISTOR LEADS AWAY FROM THE BACK.

NOTE--R44 AND R41 ARE 1/2 WATT!!

INSERT TIE INTO SLOTS BEFORE PCB GOES INTO THE CHASSIS

PUT #8613 CAP ON THERM. THEN FOLD DOWN

BEND ALL TRANSISTOR LEADS AWAY FROM THE BACK.

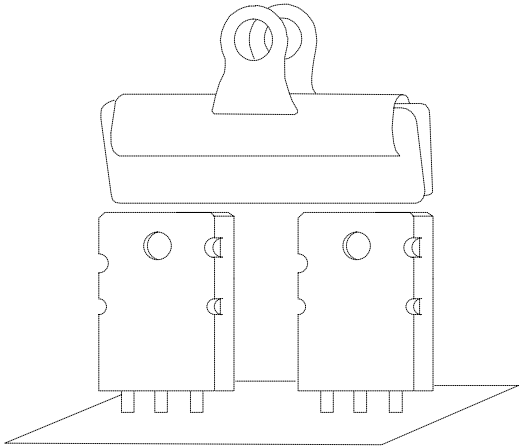
PUT #8613 CAP ON THERM. THEN FOLD DOWN

M1088.PCB_DATABASE_HISTORY

#	DATE	VER#	DESCRIPTION OF CHANGE
1	APR/25/95	1.00	R44 L/R 470R TO 442R 1%. D13, D16 L/R, HAVE 1N4148 IN SERIES
2			
3	MAY/30/95	1.10	PC#4806 R130 L/R, R126 L/R 47R MINI TO 75R MINI
4			
5	JUL/07/95	2.00	PC#4848 R46 L/R, R50 L/R 158R TO 475R. NEW RESISTORS R137,138,139,140 475R TO FEED CURRENT LIMIT. ADD DIODE IN SERIES WITH D11 L/R, D16 L/R C29 L/R, C30 L/R 47N TO 10N
6			
7			
8			
9	JUL/20/95	2.10	SOME PARTS MOVED FOR CLEARANCE FOR AUTO INSERTION MACHINES.
10	OCT/31/95	2.20	ADD EYELETS FOR SPKON JACKS
11	AUG/14/96	2.30	PC#5189 C65,C66,C69,C70 27P TO 220P PC#4787 BREAKAWAYS MOVED PC#5032 SLDMASK ALTERED AT S3 ROUTING ALTERED AT O7L/R
12			
13			
14	DEC/19/96		
15	APR/25/97	3.00	PC#5360 EYELETS ADDED FOR PHONE JKS
16	MAY/12/97	4.00	PC#5393 MODIFIED FOR NEW HEATSINK
17	APR/21/98	4.01	PC#5573 C18R/C18L 220P->180P
18	AUG/20/98	4.10	PC#5762 ADD EYELETS FOR OUTPUT TRANSISTORS
19	JAN/26/99	5.00	
20	APR/21/99		PC#5890 R119,R120 100K->10K
21	OCT/14/99		PC#6009 DELETE ONE SPEAKON
22	JAN/17/00		C18L/R AXIAL->RADIAL
23	JUL/12/00	5.10	ZIPPERS FOR OUTPUTS MOVED TO ELIMINATE SHORTS
24	SEP/18/00	5.20	PC#6206_1 EYLET FOR SPKON DELETED REPLACED BY 0.052" HOLE
25	FEB/13/01	5.30	PC#6339 REPLACE BOTTOM SHEAR WITH ROUTING
26	MAR/07/01	5.40	PC#6352_R28L/R_2K->1K 1%
27	JAN/07/03	6.00	PC#6580_ENLARGE_XLR_PADS
28	MAY/28/03	6.10	PC#6609 C54,C55L/R 220u TO 330u 100V P#6610 Q18L/R BT139 ->MAC15A6FP
29	MAY/27/05	7.00	PC#6917 REDO SOLDERMASK

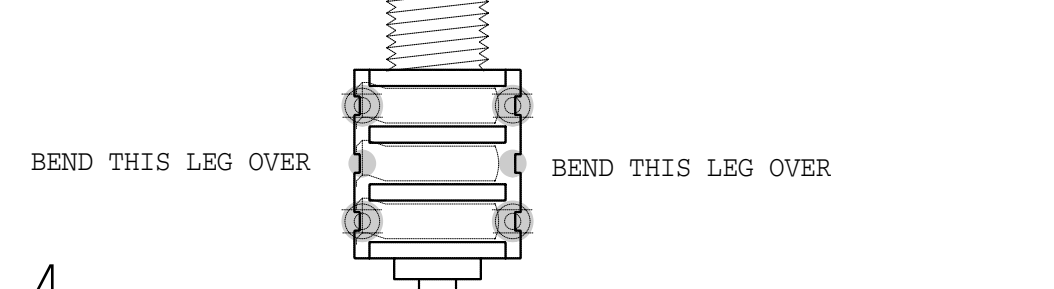
PRODUCTION NOTES

- NOTE--R44R,R44L AND R41R,R41L ARE 1/2 WATT!!
- MIDDLE LEGS OF PHONE JACKS MUST BE BENT OVER BEFORE WAVE SOLDER
- ADD SPRING PAPER CLIP ON ALL 8 PAIRS OF OUTPUT TRANSISTORS WHEN WAVE SOLDERING



BLANK SIZE=16.375"X9.000"

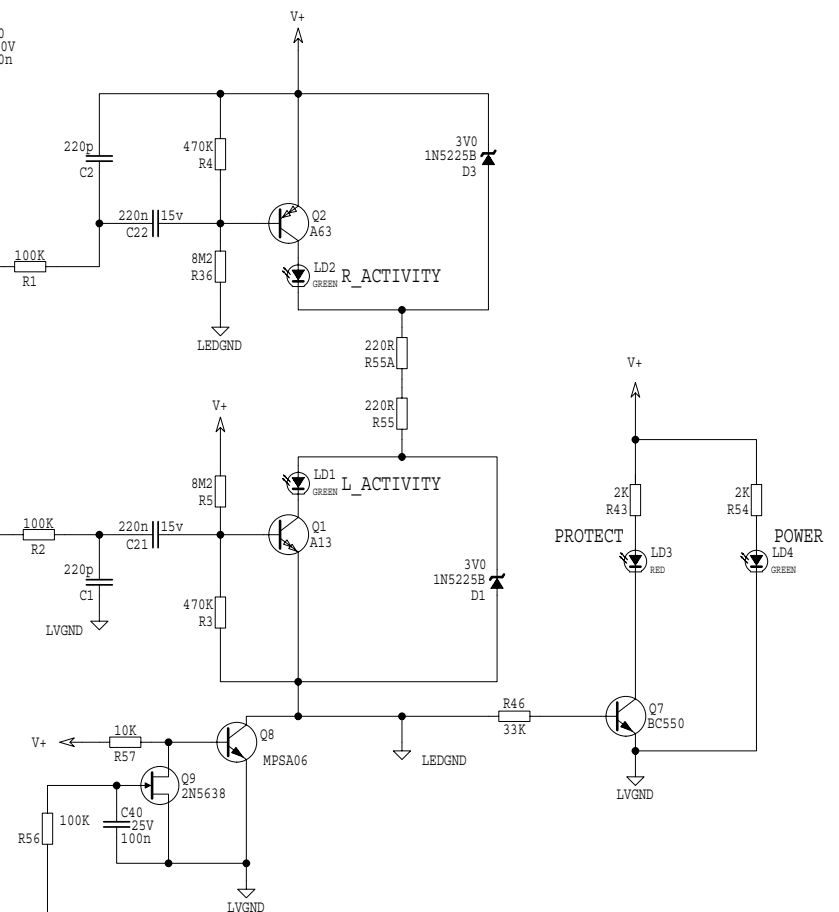
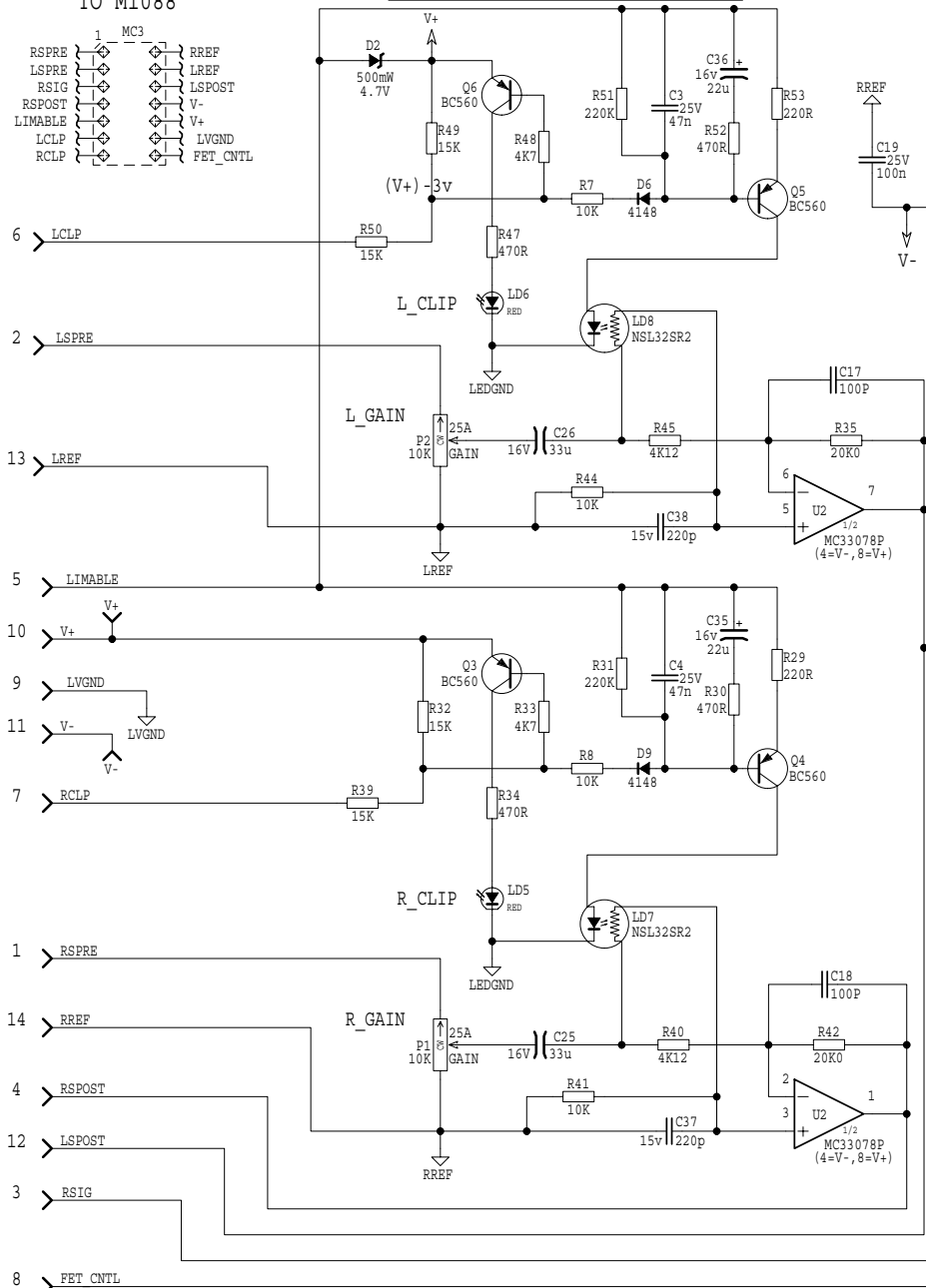
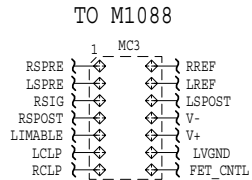
MIDDLE LEGS OF PHONE JACKS MUST BE BENT OVER BEFORE WAVE SOLDER



- BEND THIS LEG OVER
- BEND THIS LEG OVER
- GRIP EYELETS FOR OUTPUT TRANSISTORS MUST BE INSTALLED WITH THE SLOT IN THIS DIRECTION
- R28L R28R MUST BE 1K0 1% TOLERANCE NO SUBSTITUTION ALLOWED

VOLUME CONTROL/ LIMITER

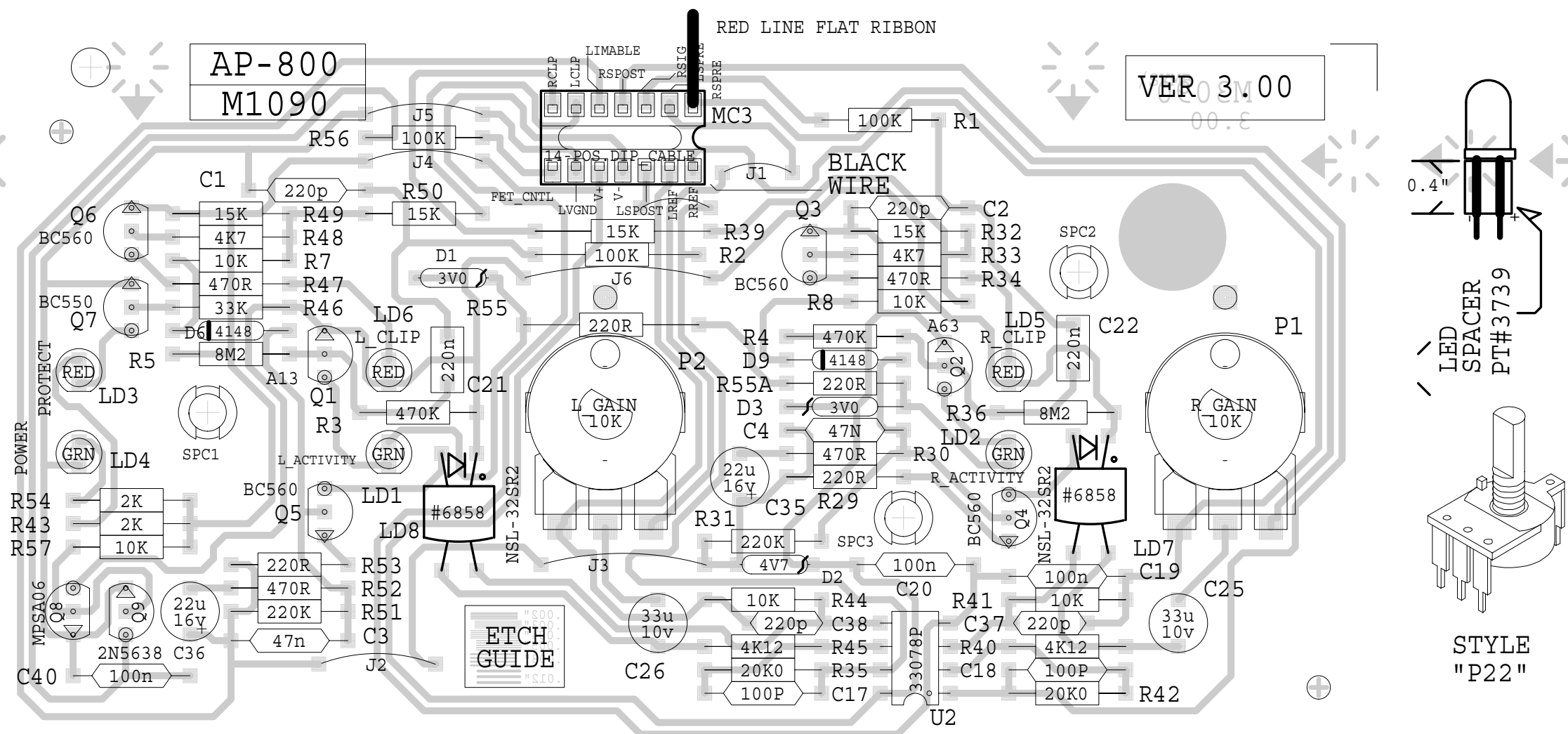
ACTIVITY LEDS CIRCUIT



M1090.SCH DATABASE HISTORY

MODEL(S) :- AP300

#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY/30/95	1.10	PC#4789 R57 15K->10K
2			PC#4802 Q8 BC550->MPSA06
3	AUG/14/96	1.20	PC#5180 C17, C18 27P->100P
4	NOV/20/01	1.30	PC#6466 LD7, LD8 NSL-28AA->NSL-32SR2
5	D	V	N
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D	V	N



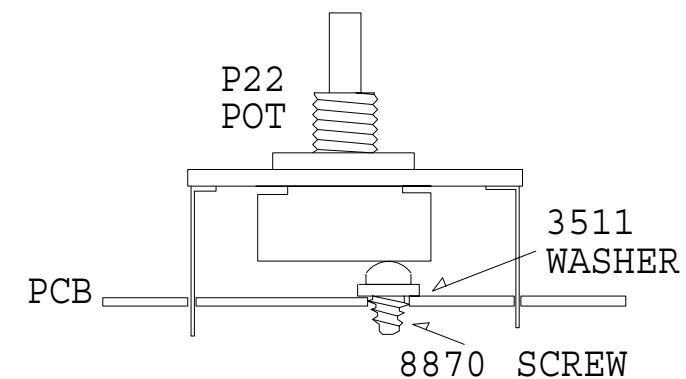
M1090.PCB DATABASE HISTORY

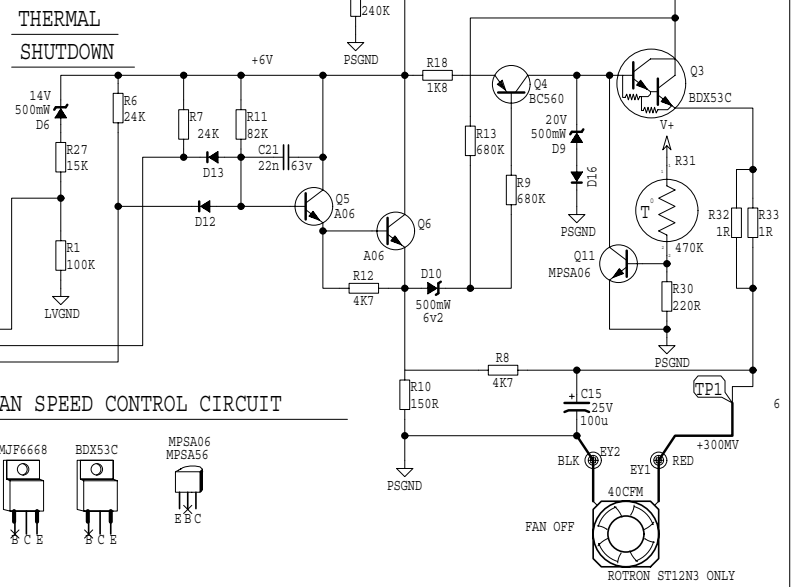
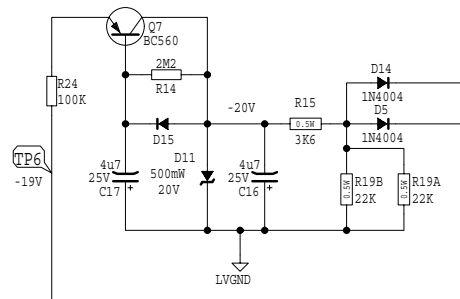
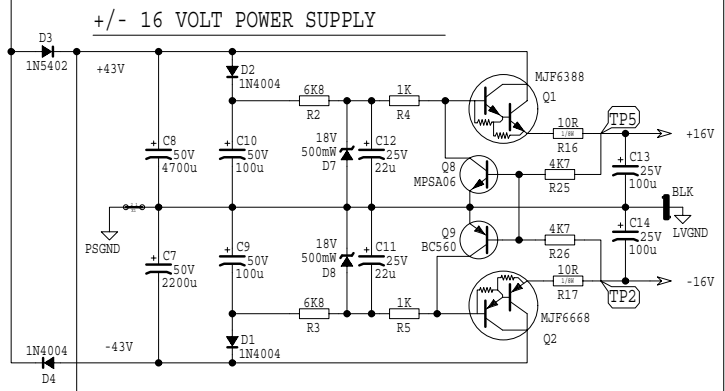
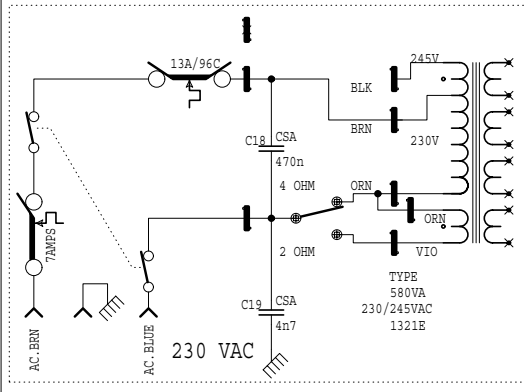
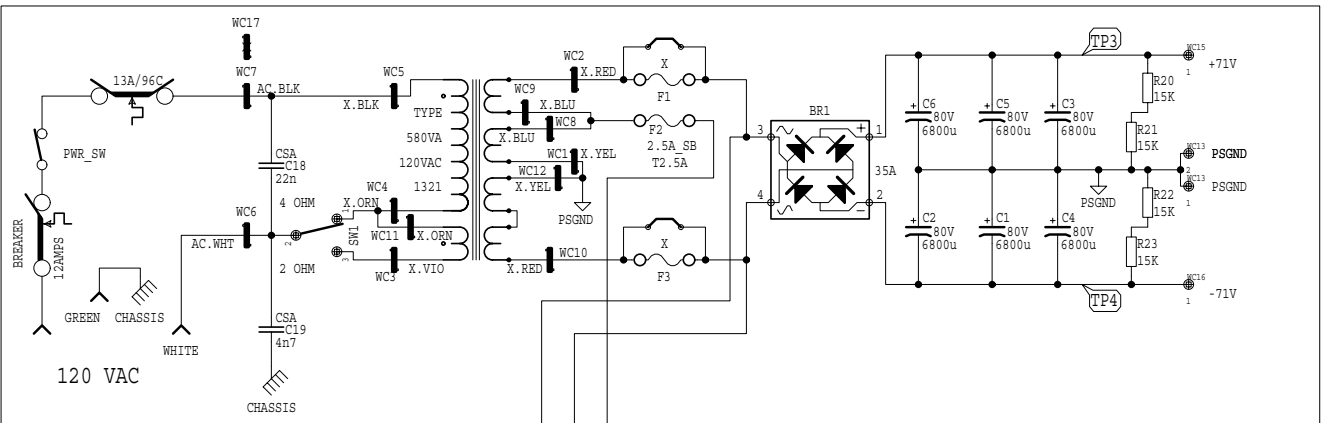
MODEL(S) : - ○ AP-800

#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY/23/95	1.02	PC#8789 R57 15K--.10K
2	.	.	PC#4802 Q8 BC550-->MPSA06
3	JUN/29/95	2.00	PC#4839 PCB SPREAD APART IN X
4	AUG/14/96	2.10	PC#5189 C17-C18 27P-->100P
5	DEC/08/98	2.20	PC# ADD SUPPORT SCREWS FOR POTS
6	NOV/20/01	2.30	PC#6466 OPTO-COUPLER #6859->#6858
7	MAY/27/05	3.00	PC#6917 REDO SOLDERMASK
8	D	V	N
9	D	V	N
10	D	V	N
11	D	V	N
12	D	V	N
13	D	V	N
14	D	V	N
15	D	V	N
16	D	V	N
17	D	V	N
18	D	V	N
19	D	V	N
20	D	V	N

NOTES

- 1 P1 AND P2 FOR NORTH AMERICAN USE PART #4390
- 2 ADD A STICKER OVER THE AP-800 LEGEND "M1090VC" TO AID IN IDENTIFYING VC800 BOARDS





TO M1088

DC VOLTAGES APPROXIMATE
4 OHM MODE
120VAC

YORKVILLE	DATE: NOV/30/2004	MODELS: AP800	SHEET 1 OF 3	SCH VERSION: 1.50
	NAME: M1091.SCH	PCB#: M1091	TITLE: POWER_SUPPLY@FAN	

M1091.SCH DATABASE HISTORY

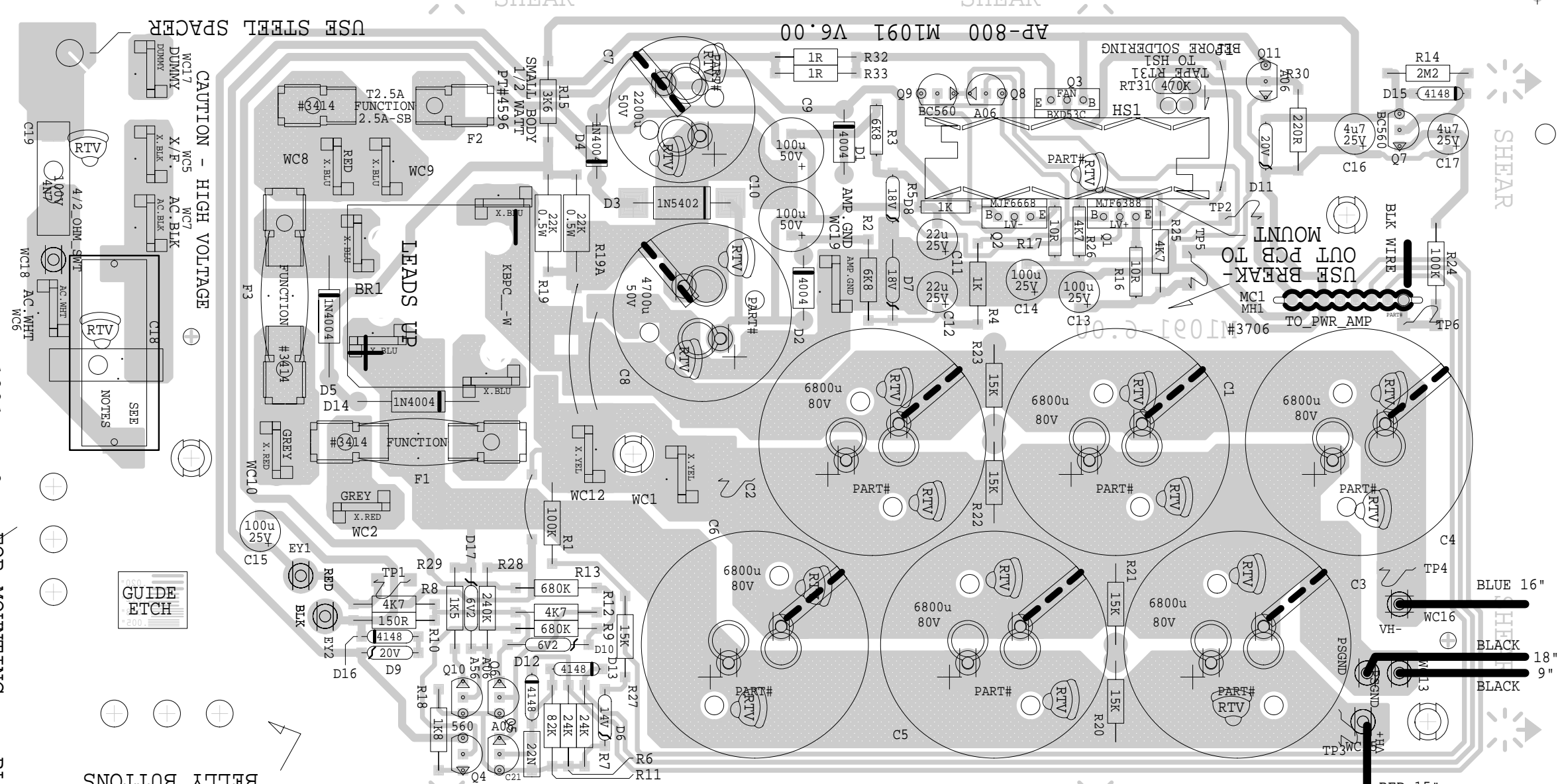
#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY/30/95	1.10	PC#4803 Q1 FROM BDX53C TO MJP6368 Q2
2	.	.	FROM BDX54C TO MJP6668
3	.	.	PC#4809
4	JUN/20/95	1.20	PC#4829 C19 FROM 22N TO 4N7
5	DEC/12/95	1.30	PC#4975 R15 FROM 3K3 1/4W TO 3K6 1/2W
6	MAY/08/00	1.40	PC# R6, R7, R12 AND R13 1R 1/4W
7	NOV/30/2004	1.50	PC#6764 R11 680K->82K, R27 13K->15K
8	D	N	N
9	V	N	N
10	D	N	N

11			
12			
13			
14			
15			
16			
17		V	N
18			
19			
20			
21			
22			
23			
24			
25			

P:1091CMP.PRN

SOLDERSIDE M1091-6.00

RADIAL



ASSEMBLY M1091-6.00
PCB MECH M1091-6.00

FOR MOUNTING TRANSISTORS Q1 AND Q2

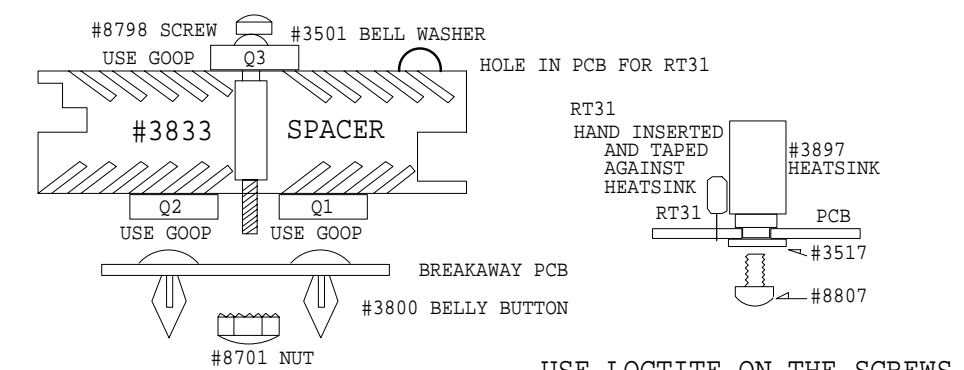
M1091.PCB_DATABASE_HISTORY

MODEL(S) :- AP-800

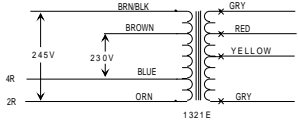
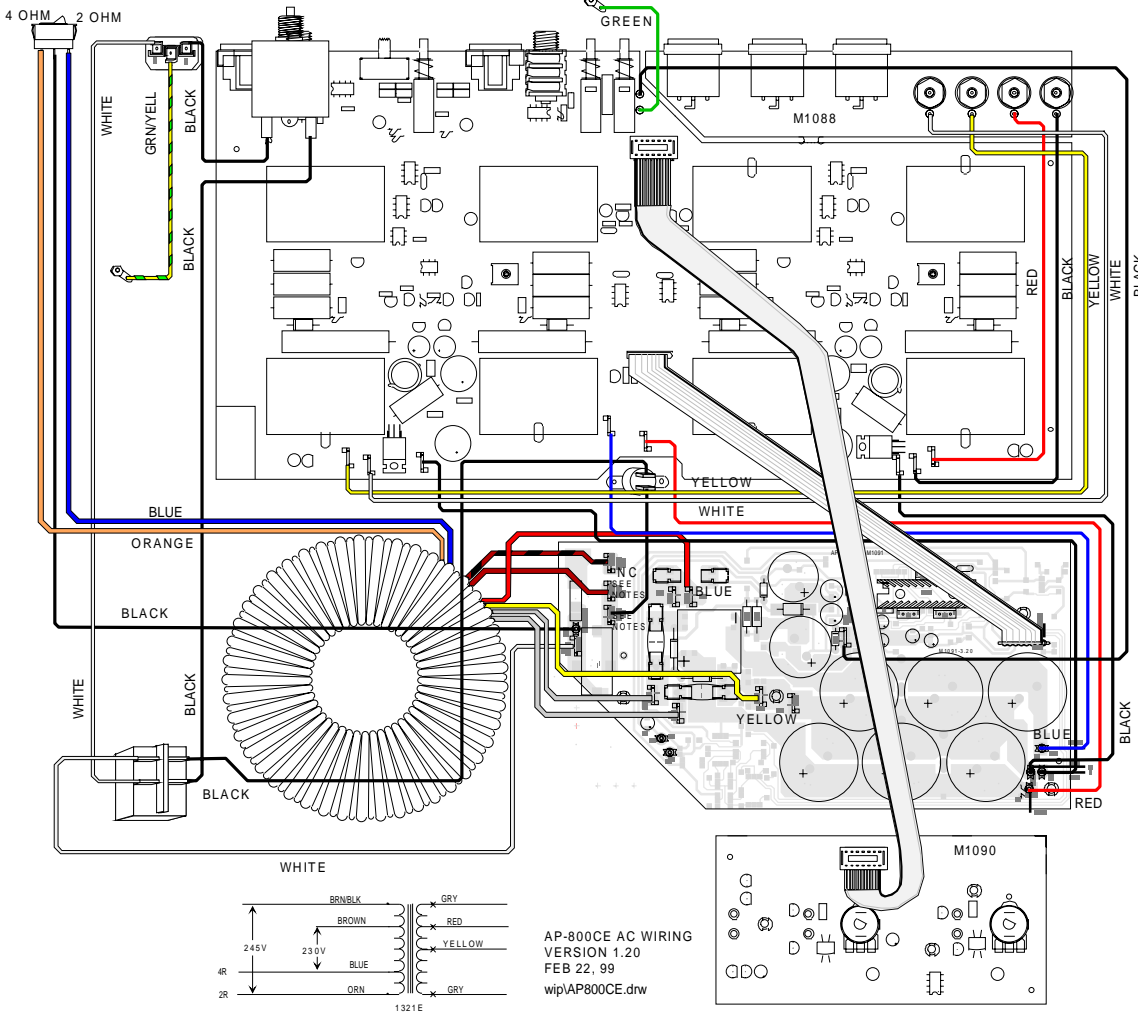
#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY/29/95	2.00	PC#4803 ADDED RTV HOLES TO CSA CAPS. MOVED WC19 AWAY FROM C11/C12. Q1 BDX53C->MJF6388 Q2 BDX54C->MJF6668. MOVED R31 ADDED HOLE UNDER HS1 TO ALLOW RT31 TO SIT UNDER HEATSINK
2	MAY/30/95
3	JUN/28/95	3.00	PC#4809 C19 22N->4N7 PC#4838 FROM PANEL OF 4 TO PANEL OF 3 PC#4829 R15 3K3 1/4W -> 3K6 1/2W
4	NOV/06/95	3.10	PC#4919 RETAPE FOR 470N AC CAP FOR CE
5	DEC/12/95	3.20	PC#4975 ADD TWO 1R 1/4W R32,R33
6	MAY/96	. . .	PC#5126 REMOVE #8607 FROM TR31 AND INSTALL FLAT
7	OCT/27/99	4.00	PC#5758 EYELETS FOR CAPS_PC#5773_ ADD PAD FOR RT31_PC#6105_NEW_ JUMPERS FOR BRIDGE RECTIFIER
8	JAN/17/00	4.10	PC#_ R6,7 240K->24K_R29_2K7->2K2
9	MAY/08/00	4.20	R29_2K2->1K5
10	JAN/08/02	5.00	CHANGE BRIDGE MOUNTING
11	NOV/30/04	5.10	PC#6764_R11_680K->82K_R27_13K->15K
12	MAY/27/05	6.00	PC#6917 REDO SOLDERMASK
13	D	V	N

PRODUCTION NOTES

- 1 C18 FOR NORTH AMERICA USE 22N PT#6435
C18 FOR CE USE 680N PT#5266
- 2
- 3



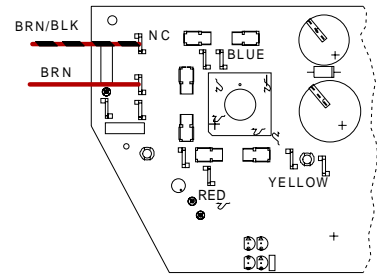
USE LOCTITE ON THE SCREWS USED ON THE HEATSINK



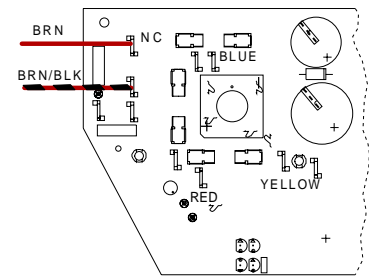
AP-800CE AC WIRING
 VERSION 1.20
 FEB 22, 99
 wip/AP800CE.drw

NOTES

FOR CE
230VAC OPERATION
 CONNECT AS FOLLOWS
 BRN/BLK XFMR TO NC
 BROWN XFMR AS SHOWN



FOR E4
245VAC OPERATION
 CONNECT AS FOLLOWS
 BROWN XFMR TO NC
 BRN/BLK XFMR AS SHOWN



CE -STICKER ON CHASSIS ON VC800CE
 CE-SER# CE STICKER
 E4-SER# CE STICKER