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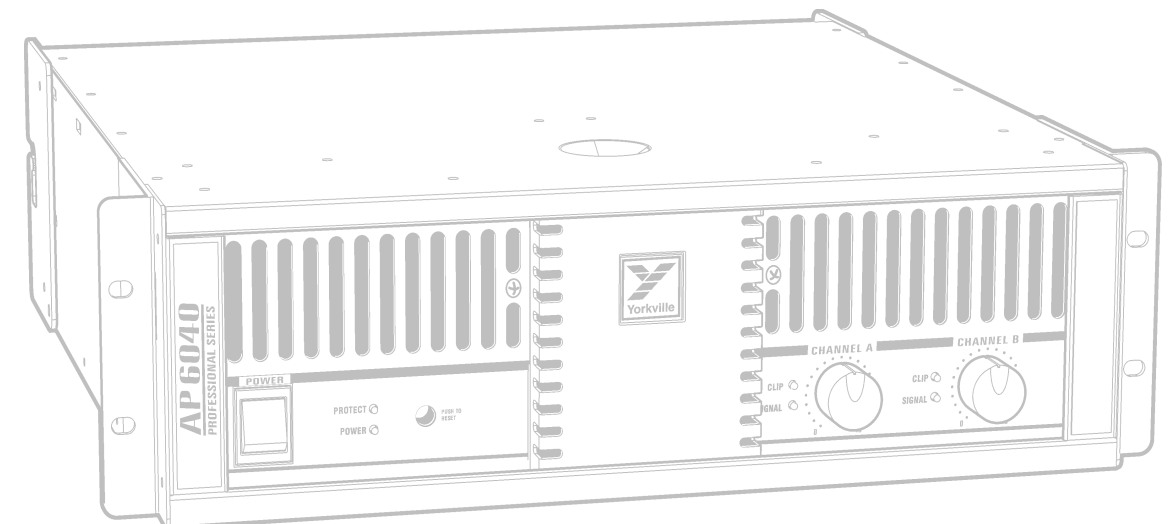
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Quality and Innovation Since 1963
Printed in Canada



AP 6040
PROFESSIONAL SERIES



MODEL TYPE: YS6040

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.

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.

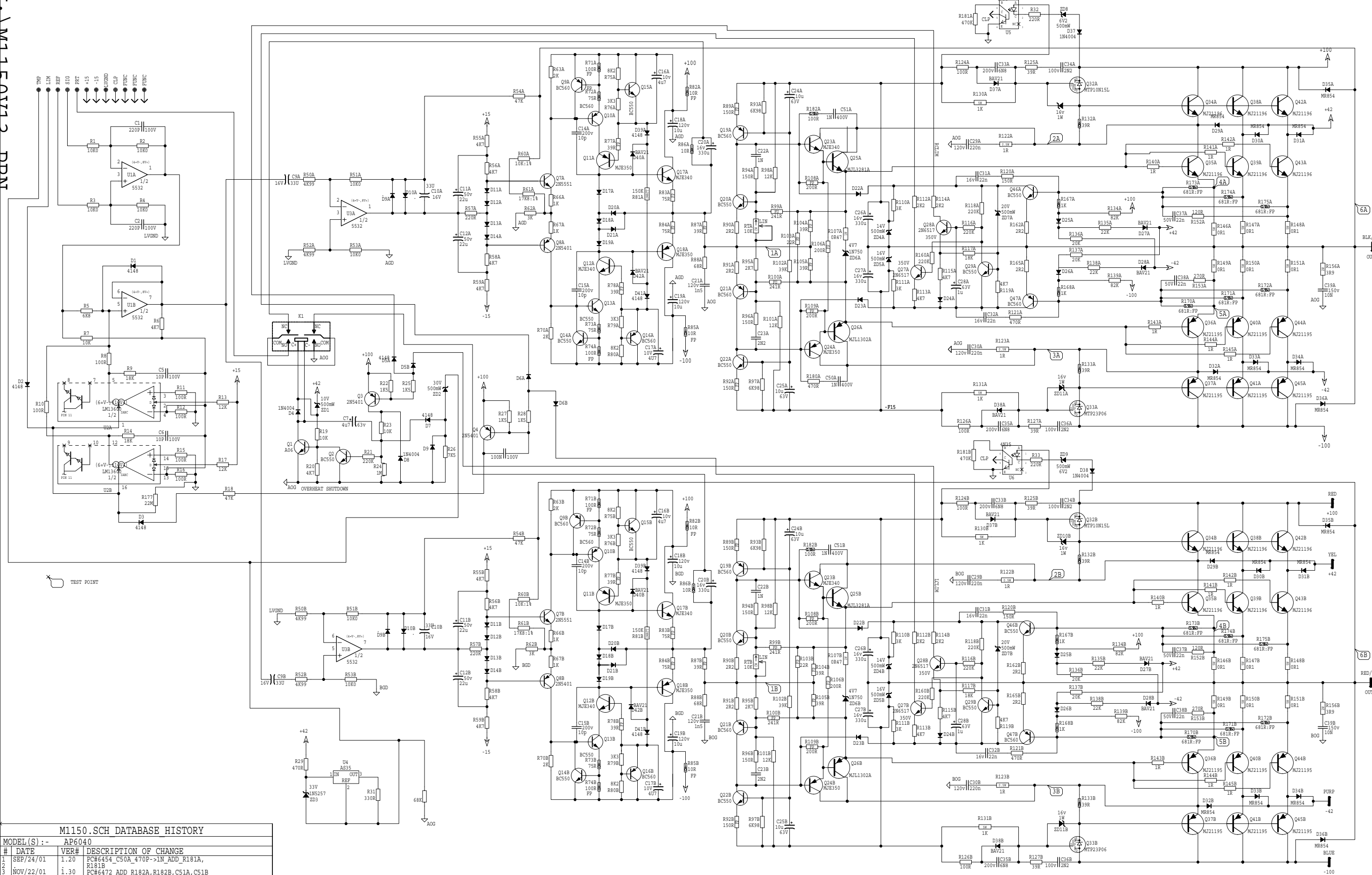
Les dispositifs marqués d'une symbole "d'éclair" sont des parties dangereuses au toucher et que les câblages extérieurs connectés à ces dispositifs de connexion extérieure doivent être effectués par un opérateur formé ou en utilisant des cordons déjà préparés.

Cordon d'Alimentation

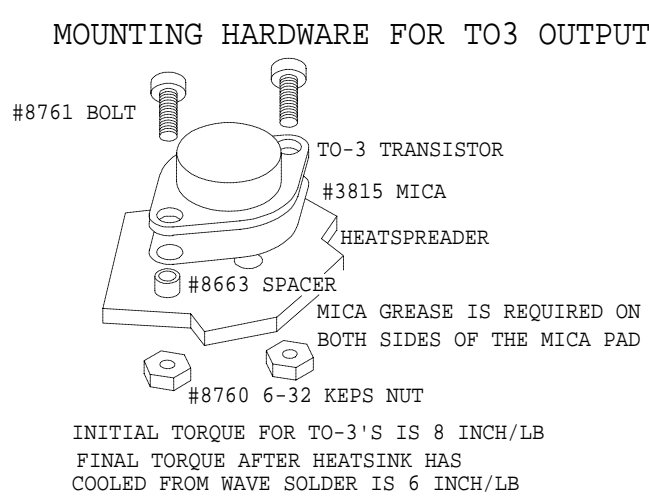
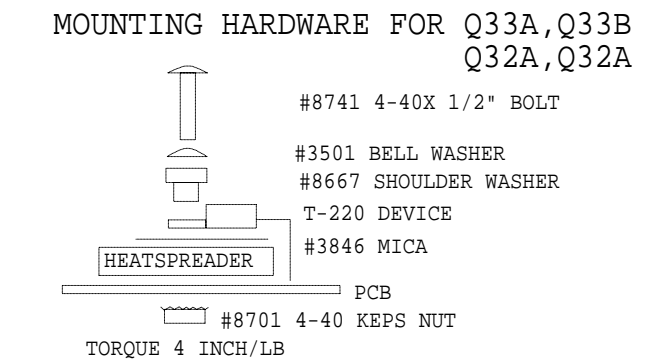
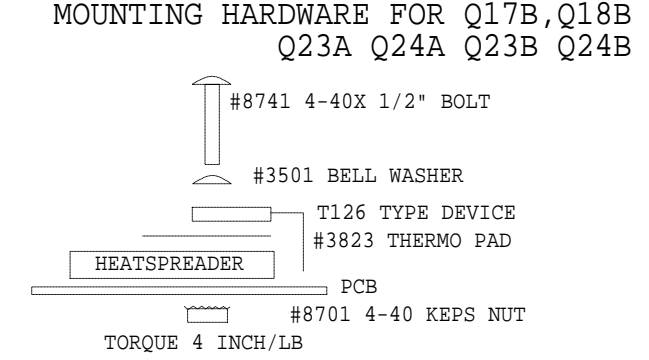
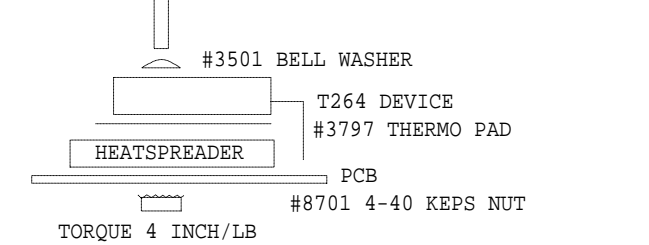
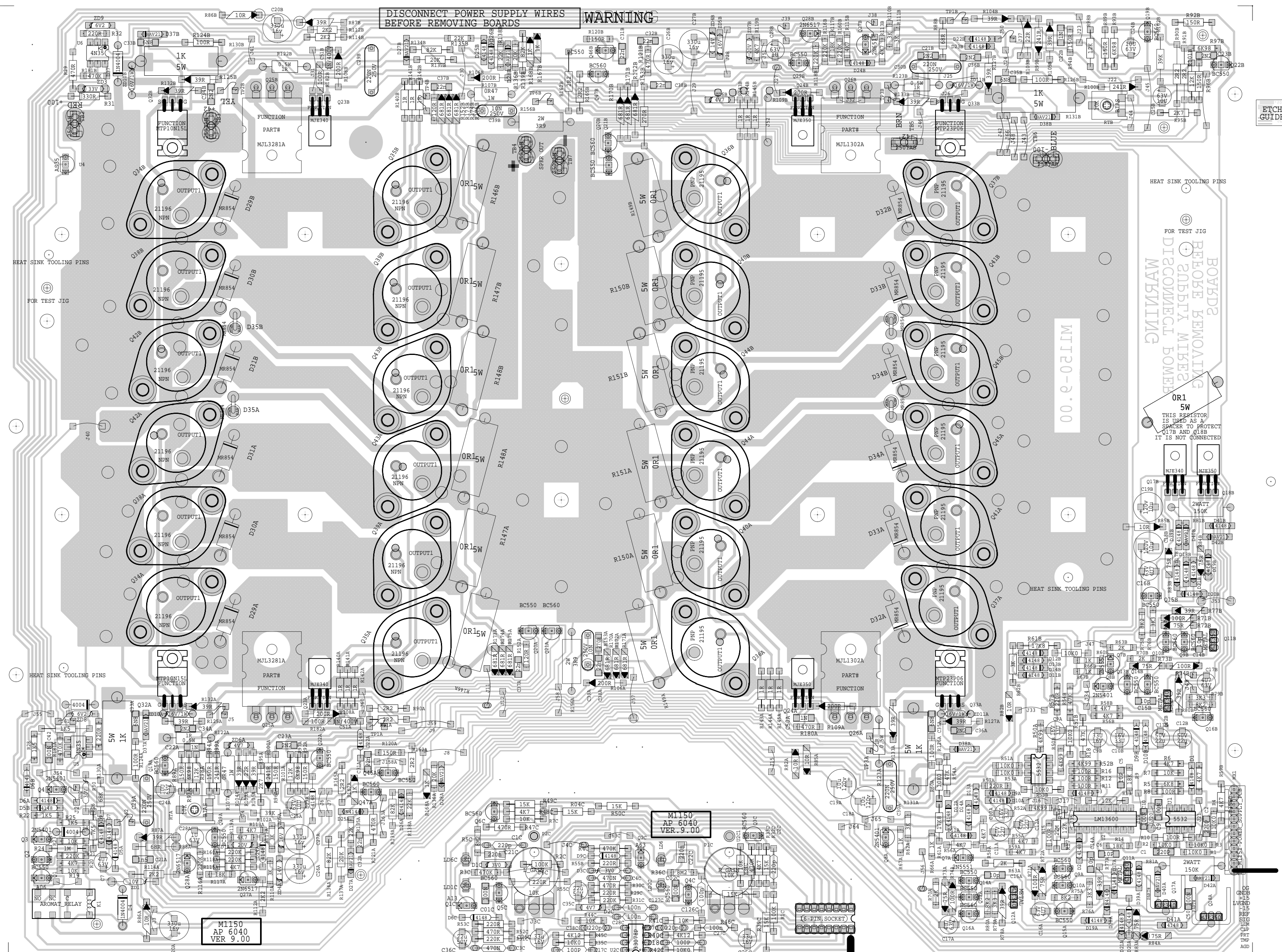
Évitez d'endommager le cordon d'alimentation. N'UTILISEZ PAS L'APPAREIL si le cordon d'alimentation est endommagé.

Service

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



M1150.SCH DATABASE HISTORY		
#	DATE	DESCRIPTION OF CHANGE
1	SEP/24/01	AP6040
2	1.20	PC#6454 C50A 470P->1N ADD R181A, R181B
3	NOV/22/01	1.30 PC#6472 ADD R182A, R182B, C51A, C51B
4	AUG/31/04	R99A/B, R100A/B 249R->241R FUSIBLE
5	NOV/29/04	8.10 FIX ERROR , C11A/B, C12A/B 16V->50V
6		N
7		N
8		N
9		N
10		N



USE 2 OZ. COPPER

ASSEMBLY M1150-9.00
ASSEMBLY M1150-9.00

M1150-PCB_DATABASE_HISTORY		
MODEL(S):-	AP#	VER#
#	DATE	DESCRIPTION OF CHANGE
1	MAY12/99	1.00 PILOT RUN RELEASE
2	AUG10/99	2.00 PC#6043 RELAY CONNECTIONS ALTERED
3		3.00 PC#6044 ADD R30A, R50A/B, R52A/B, L0K0
4		4.00 PC#6045 R35C/R45C 20K0->10K0
5		5.00 PC#6042 C50A, B TO C Q24A, ADD J63, TO
6		6.00 BLIMINATE SHORT TO SCREW
7		7.00 PC#6033 R163A/R158A->J163A/J158A
8	AUG/24/99	3.00 PC#6066 C126C 1 PIN V->GND
9	SEP/16/99	4.00 PC#6098 CHANGES AS PER PC
10	OCT/18/99	5.00 #3673 RIBBON->#3562 SKT
11	NOV/26/99	6.00 PC#6066_REPAIR_ERROR

1	MAY/08/00	5.00	REDUCE WIDTH OF PCB EACH SIDE .125"
2	SEP/24/01	6.00	PC# 6262 MOVE C208, R86B
3		7.00	PC#603 ADD R627C, C280
4		8.00	PC#6454 C50A 470P->IN_ADD_R181A, R181B
5	NOV/19/01	9.00	CORRECT TRACE AT Q23B
6	NOV/22/01	10.00	PC#6472 ADD R182A, R182B, C51A, C51B
7	JAN/15/02	11.00	NEW SOLDERMASK FOR TABS
8	AUG/31/04	12.00	R99A/B, R100A/B 249R->241R FUSIBLE
9	SEP/15/04	13.00	C11A-C12A 100/63V->220/50V
10	JUL/05/05	14.00	PC#6844 REDO SOLDERMASK
11		15.00	
12		16.00	
13		17.00	
14		18.00	
15		19.00	
16		20.00	

ETCH GUIDE

ETCH GUIDE

ETCH GUIDE

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ETCH GUIDE

ETCH GUIDE

M1150-9.00

M1150-9.00

M1150 AP 6040 VER. 9.00

M1150 AP 6040 VER. 9.00

FOR TEST JIG
BEFORE REMOVING
SUPPLY WIRES
DISCONNECT POWER
WARNING

DISCONNECT POWER SUPPLY WIRES
BEFORE REMOVING BOARDS
WARNING

HEAT SINK TOOLING PINS

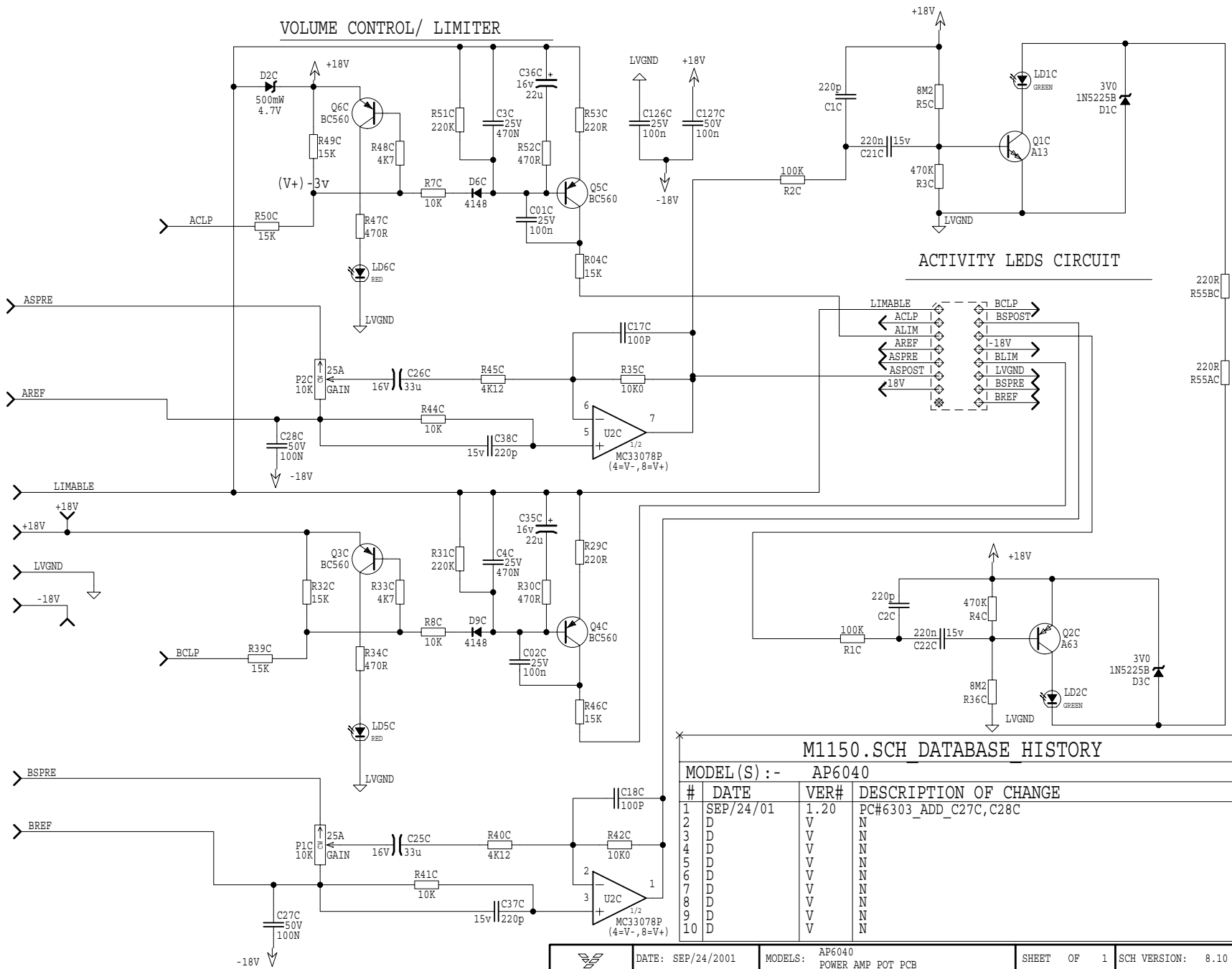
HEAT SINK TOOLING PINS

HEAT SINK TOOLING PINS

HEAT SINK TOOLING PINS

USE 2 OZ. COPPER

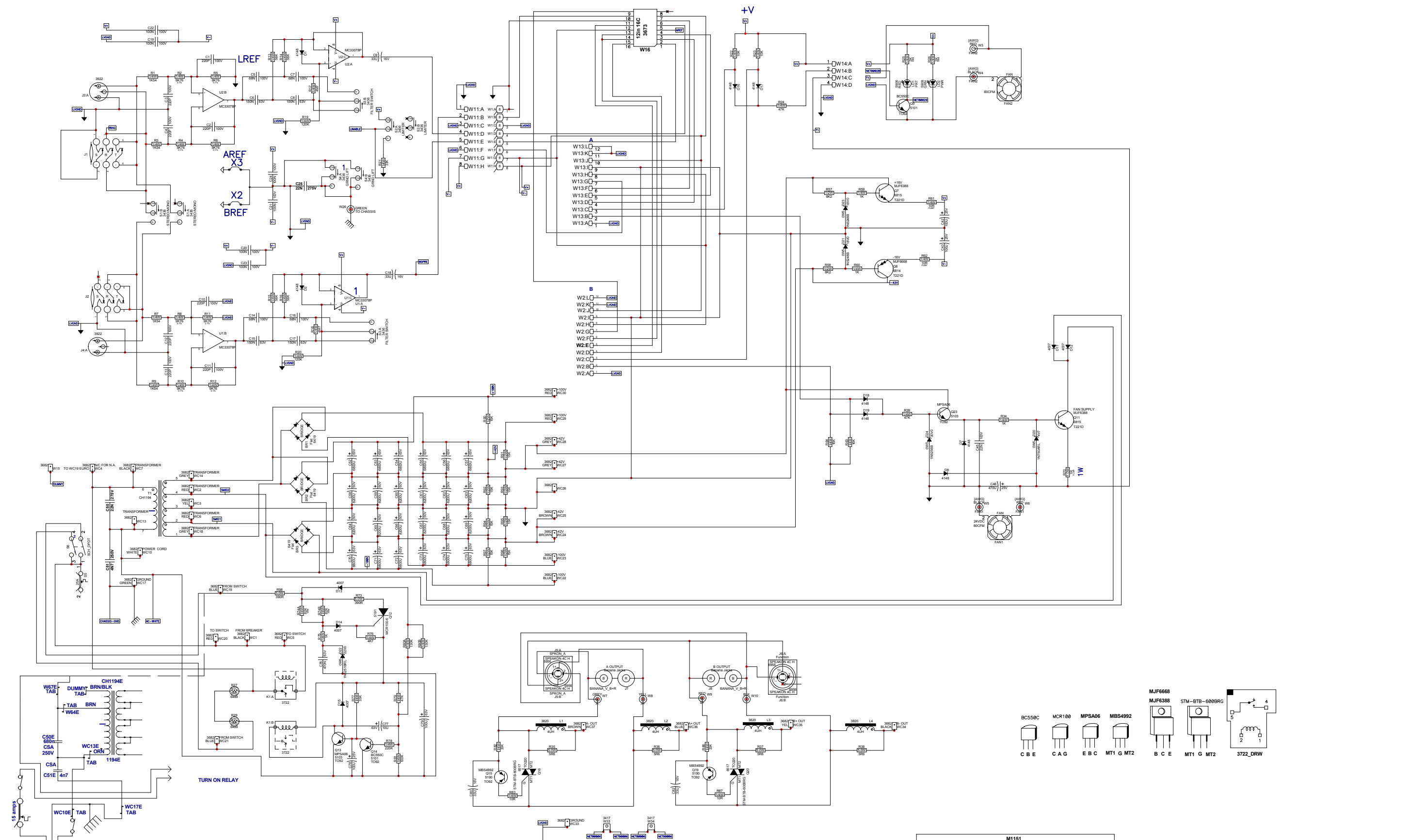
VOLUME CONTROL/ LIMITER



M1150.SCH DATABASE HISTORY

MODEL(S) :- AP6040

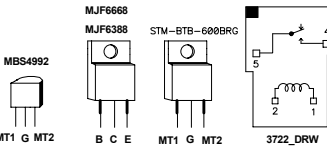
#	DATE	VER#	DESCRIPTION OF CHANGE
1	SEP/24/01	1.20	PC#6303_ADD_C27C,C28C
2	D	V	N
3	D	V	N
4	D	V	N
5	D	V	N
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D	V	N

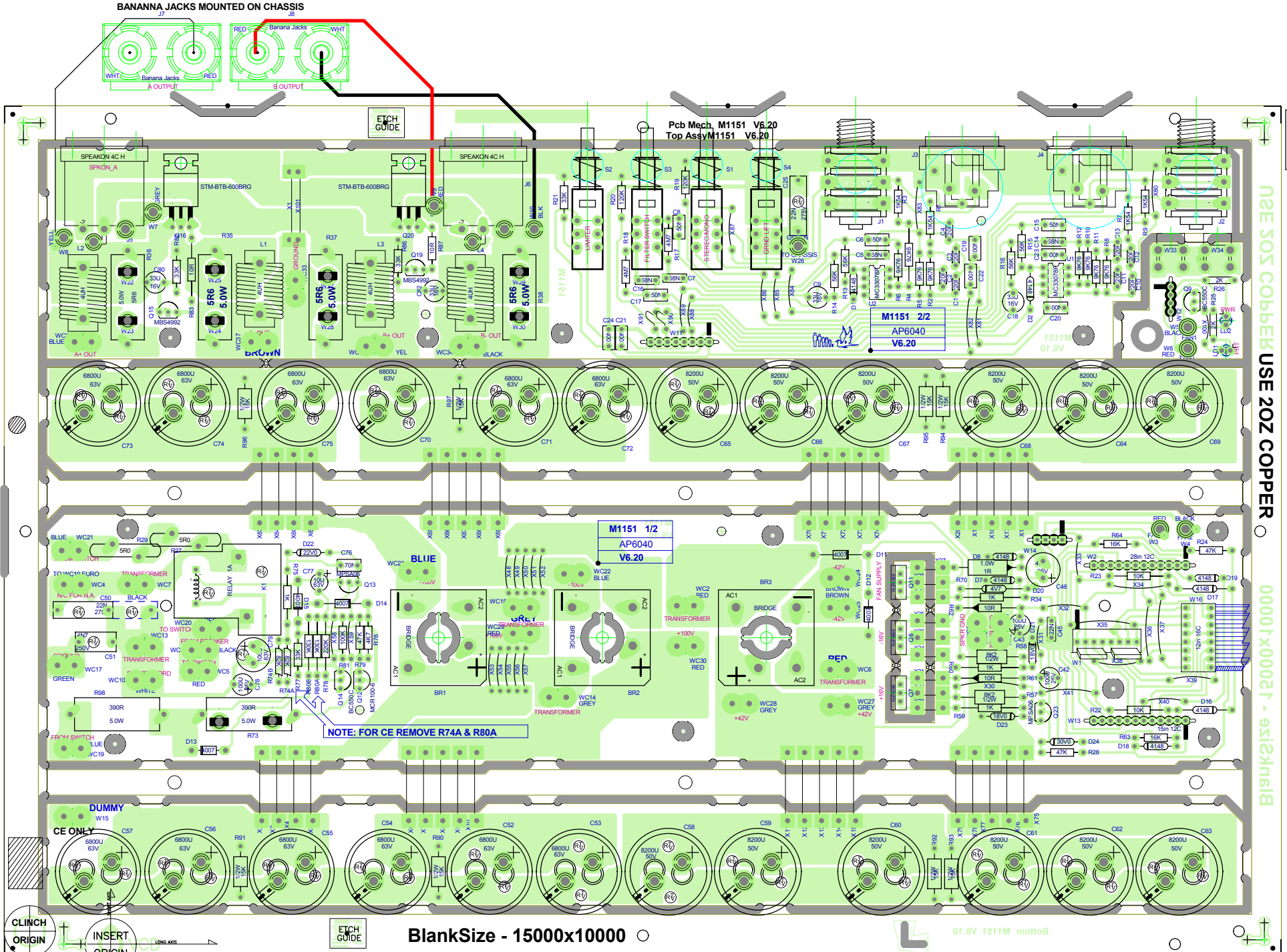


TRANSFORMER SHOWN WIRED FOR 230VAC INPUT VOLTAGE. FOR 245VAC SWITCH BROWN AND BRN BLK LEADS FROM W64E AND DUMMY TAB

M1151

#	DATE	VER#	DESCRIPTION OF CHANGE
1	AUG10/99	2.00	PC#904 LIZ ROTATED
2	.	.	TRACES Q18 Q22 DELETED, R85, Q17, C81
3	.	.	R84, R85, Q21, C83, R89 DELETED
4	SEP/28/99	3.00	PC#128 CHANGE SPACING R73, PC#6128
5	OCT/18/99	.	CHANGE SPACING OF COILS
6	JAN/31/00	3.10	REPLACE 14 PIN IC SOCKET WITH #3673
7	FEB/23/01	4.00	PC#207 REPLACE FUSE WITH 390R 5W
8	JUN/02/00	.	PC#227 SHEAR MOVED 0.050" IN X
9	NOV/18/01	4.10	ADD RTH HOLES TO RELAY





USE 20Z COPPER



ETCH GUIDE
BlankSize - 1500x1000

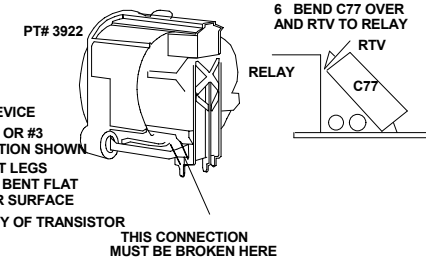
M1151			
MODEL(S):-	AP6040	DATE	DESCRIPTION OF CHANGE
1		AUG/10/99	2.00 PC#6034 LD2 ROTATED
2			TRIACS Q18 Q22 DELETED, R85, Q17, C81
3			R84, R86, Q21, C83, R89 DELETED
4			TRACES ENLARGED
5		SEP/28/99	3.00 PC#6125 CHANGE SPACING R73. PC#6128
6			CHANGE SPACING OF COILS
7		OCT/18/99	REPLACE 14 PIN IC SOCKET WITH #3673
8			REVISION CABLE
9		JAN/31/00	3.10 Q23 BC550 TO MPSA06 (TO MATCH
10			SCHEMATIC
11		FEB/23/01	4.00 PC#6207 REPLACE FUSE WITH 390R 5W
12		JUN/02/00	PC#6242 SHEAR MOVED 0.050" IN X
13		NOV/15/01	4.10 ADD RTV HOLES TO RELAY
1		JUL/08/02	4.20 PC#6553 REPLACE SHEAR WITH ROUT
2		JUL/15/02	5.00 PC#6395 MOVE R9E, PC#6426 REWIRE
3			CHAN A SPEAKON TO STEREO
4		JUN/10/03	5.10 ROUTING CHANGED AT JB2
5		SEP/18/03	5.20 PC#6626 C80 10u -> 33u/16V NP
6		FEB/01/2005	6.00 CONVERT TO PCAD2002. AC UPDATED FOR CE STAND
7			ADD TEST NODES
8		NOV-10-2005	6.10 GT:PC#7008;C82 #5281 10U/16V->#5961 33U/16V,
9			PC#7009 ENLARGE MOUNT HOLES FOR Q16&Q20 #6444

M1151 PCB HISTORY			
MODEL(S):-	AP6040	DATE	DESCRIPTION OF CHANGE
1		MAY/02/06	6.20 PC#7004 MAC224-4 TO STM-BTB-600BRG
2			V V N N N
3			V V N N N
4			V V N N N
5			V V N N N
6			V V N N N

M1151 PENDING CHANGES			
MODEL(S):-	AP6040	PC#	PENDING CHANGE
1		PC	X
2		PC	X
3		PC	X
4		PC	X
5		PC	X
6		PC	X

PRODUCTION NOTES

- MOUNTING DETAILS FOR Q30 TRIAC
USE #8799 TO MOUNT TRIAC Q30
- CUT LARGE CAP LEADS BEFORE WAVE SOLDER.
- SCREW DOWN BRIDGES WITH #8753 SCREW.
- FOR CE REMOVE R74A, R80A AND C50 -> #5266
- R73, BEND THE LEADS IN SAME DIRECTION.





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SERVICE BULLETIN

Date : February 29, 2000

Re : AP6020 / AP6040 Internal Fuse Problem

Dear Staff & Dealers,

We are sorry to advise that a service issue has developed with the AP6020 and AP6040 power amplifiers that will eventually affect every unit shipped before February 26th, 2000. All units in stock in Canada and the USA have been reworked to correct this problem.

The problem is serious enough that it is necessary to modify all units in the field, so we are here by issuing a service bulletin that will be followed up with letters and phone calls to all affected dealers and distributors.

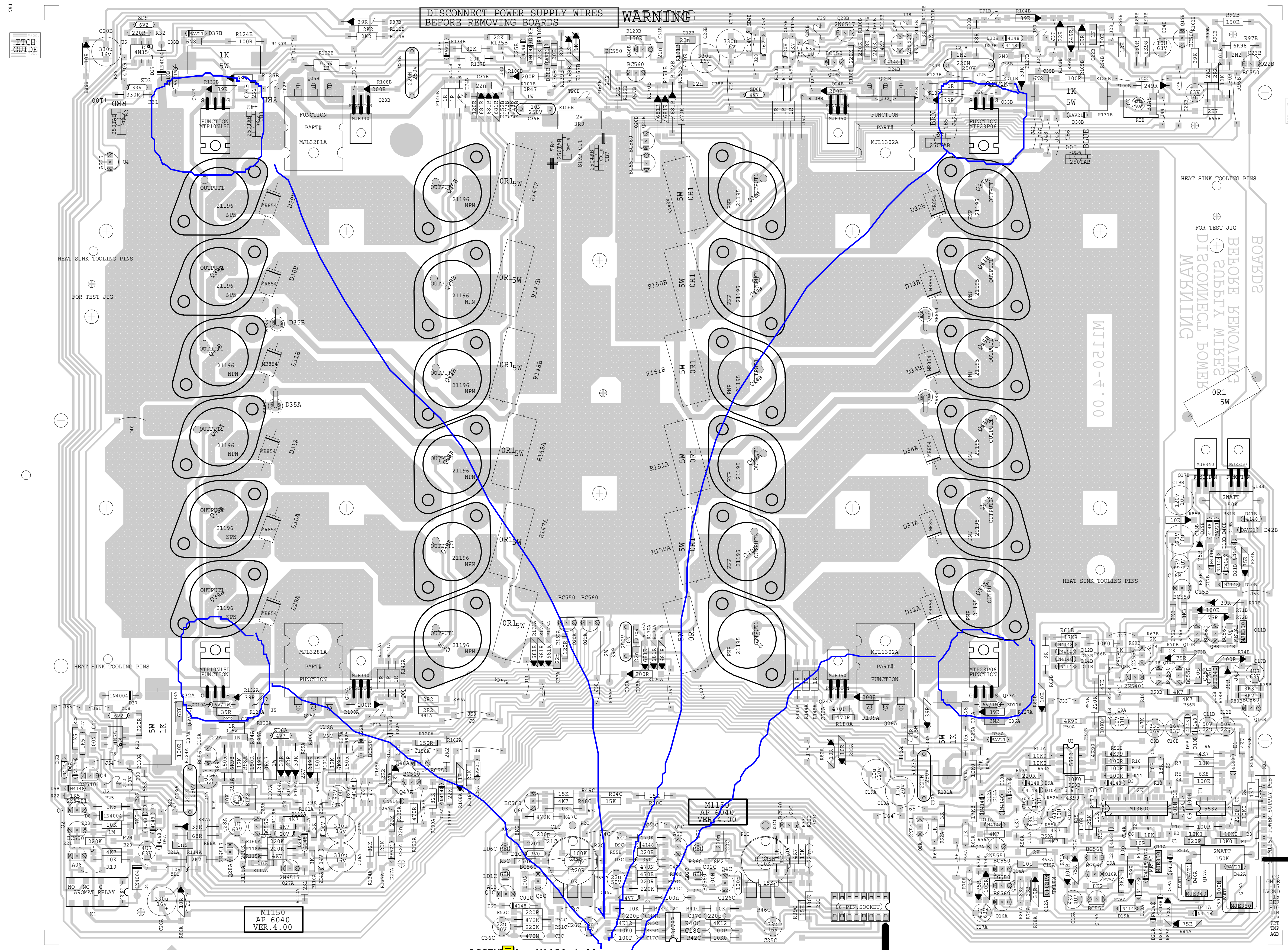
All units should be modified as soon as possible. The units can either be returned to Yorkville for modification, or can easily be modified in the field by a qualified service technician. We will, of course, accept warranty claims for this modification.

Required Modification:

- Remove the lid from the unit and both power amp boards.
- Locate the small 0.1A fuse on lower power supply board (#M1151 - AP6040 or M1177 - AP6020). This is the only fuse in the unit.
- Replace this fuse with a 5W 390R resistor (YSL Part#4736).
- Dress all wires away from the two 5W 390R resistors.
- In order to be sure that no damage was done to the upper power amp boards when they were removed it is strongly advised that the technician carefully retouch the solder on the three legs of each of the following transistors: #Q32A, Q32B, Q33A and Q33B on each of the two power amp boards (AP6040 - M1176/M1176A, AP6020 - M1150/M1150A)
- Replace the upper boards and lid.

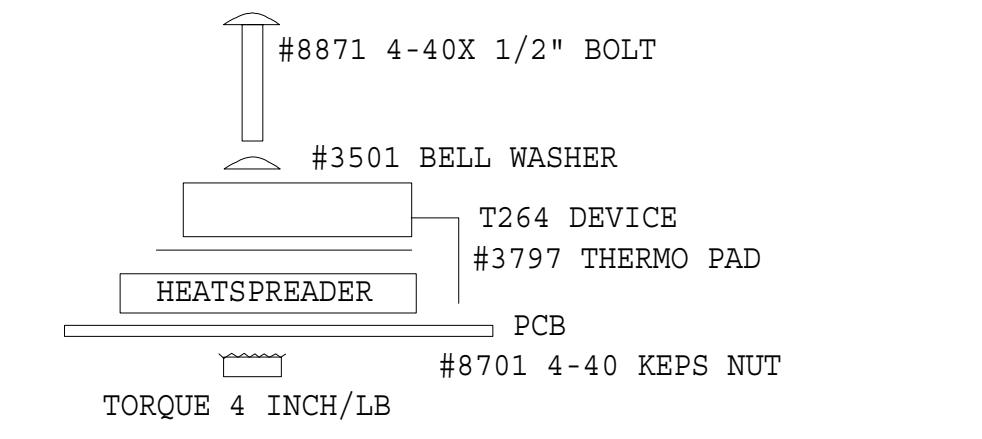
Sorry for any inconvenience caused as a result of this problem. For further technical information or assistance please contact Peter Mourtos at Yorkville Sound via phone at (905)837-8550 Ext.218 or via email at pmourtos@yorkville.com .

Enclosed - Layouts for AP6020/AP6040 Power Supply and Power Amplifier boards.

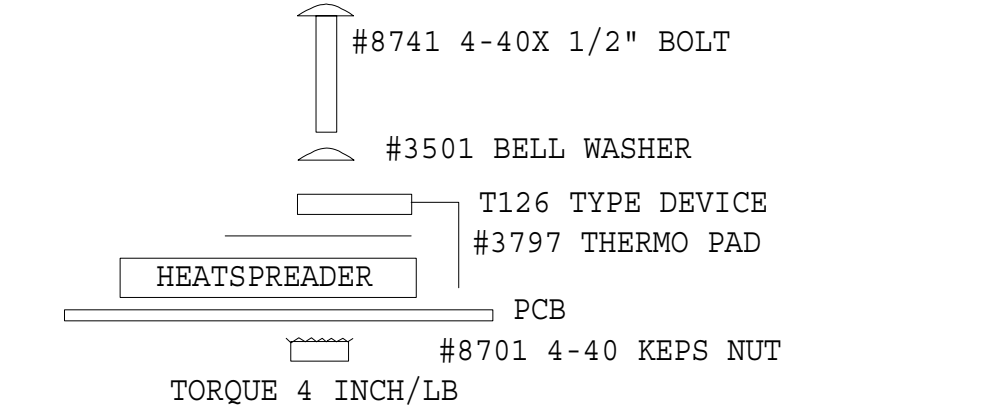


ADD #8629 SPACERS ONLY ON 5 WATT RESISTORS R29, R29A R45 AND R45A

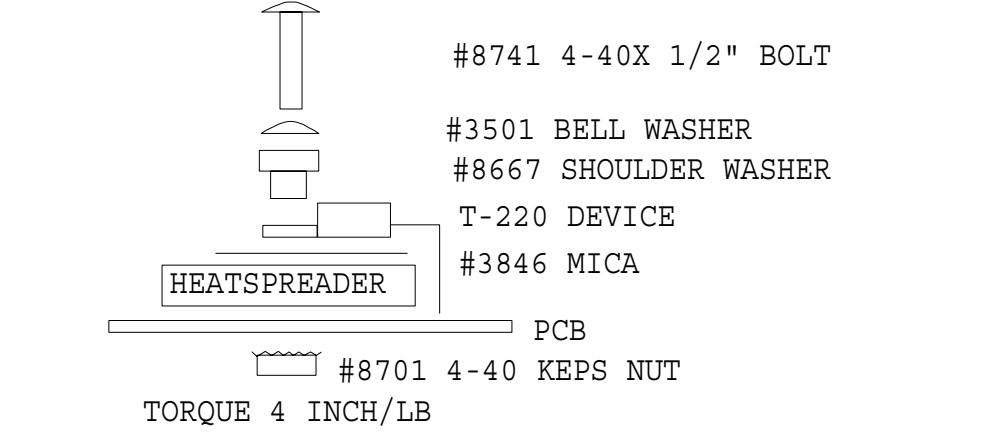
MOUNTING HARDWARE FOR Q5,Q6



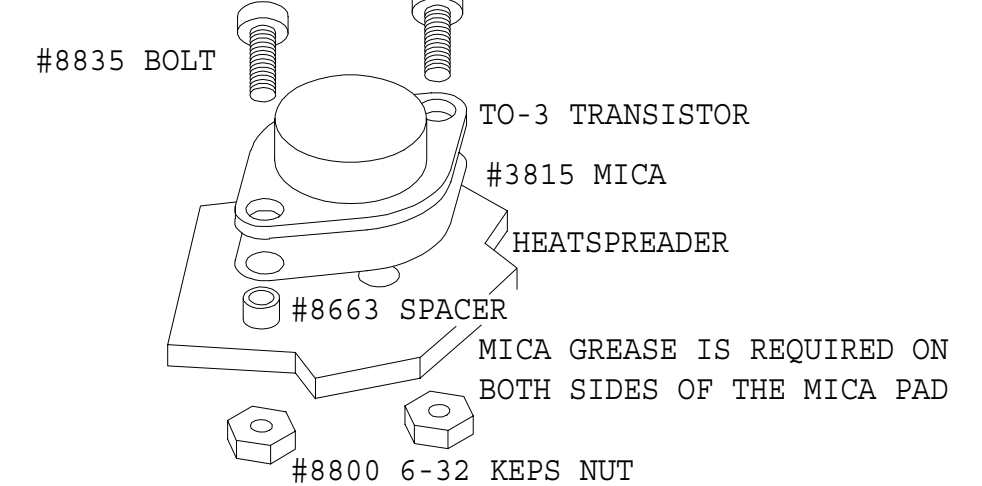
MOUNTING HARDWARE FOR Q40,Q41



MOUNTING HARDWARE FOR Q11,Q12



MOUNTING HARDWARE FOR TO3 OUTPUTS



INITIAL TORQUE FOR TO-3'S IS 8 INCH/LB
FINAL TORQUE AFTER HEATSINK HAS COOLED FROM WAVE SOLDER IS 6 INCH/LB

TAB WIRE COLOURS

- TAB 2 RED 14AWG
- TAB 3 YEL 14AWG
- TAB 5 BRN 14AWG
- TAB 6 BLU 14AWG
- TAB 4 OUTPUT +
- TAB 7 OUTPUT -

ETCH GUIDE USE 2 OZ. COPPER

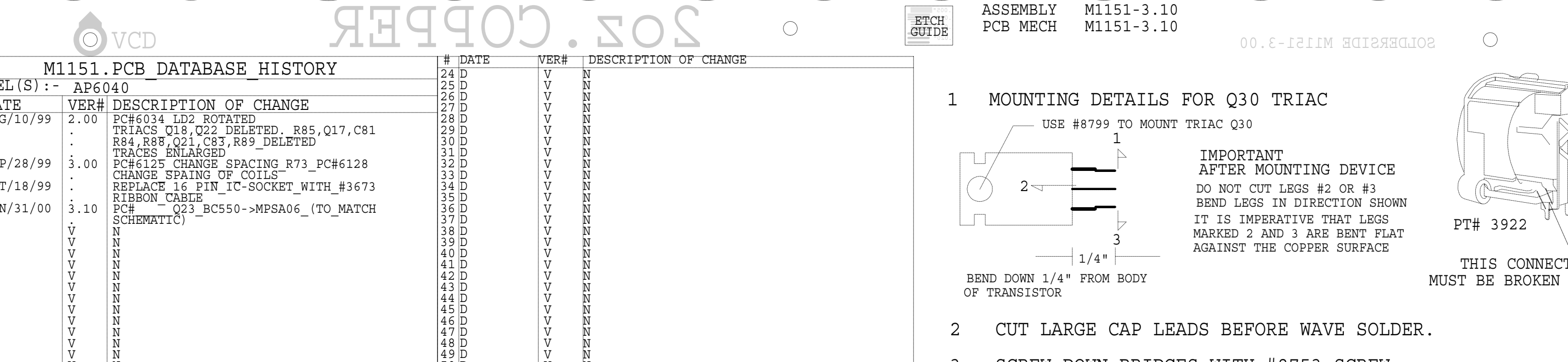
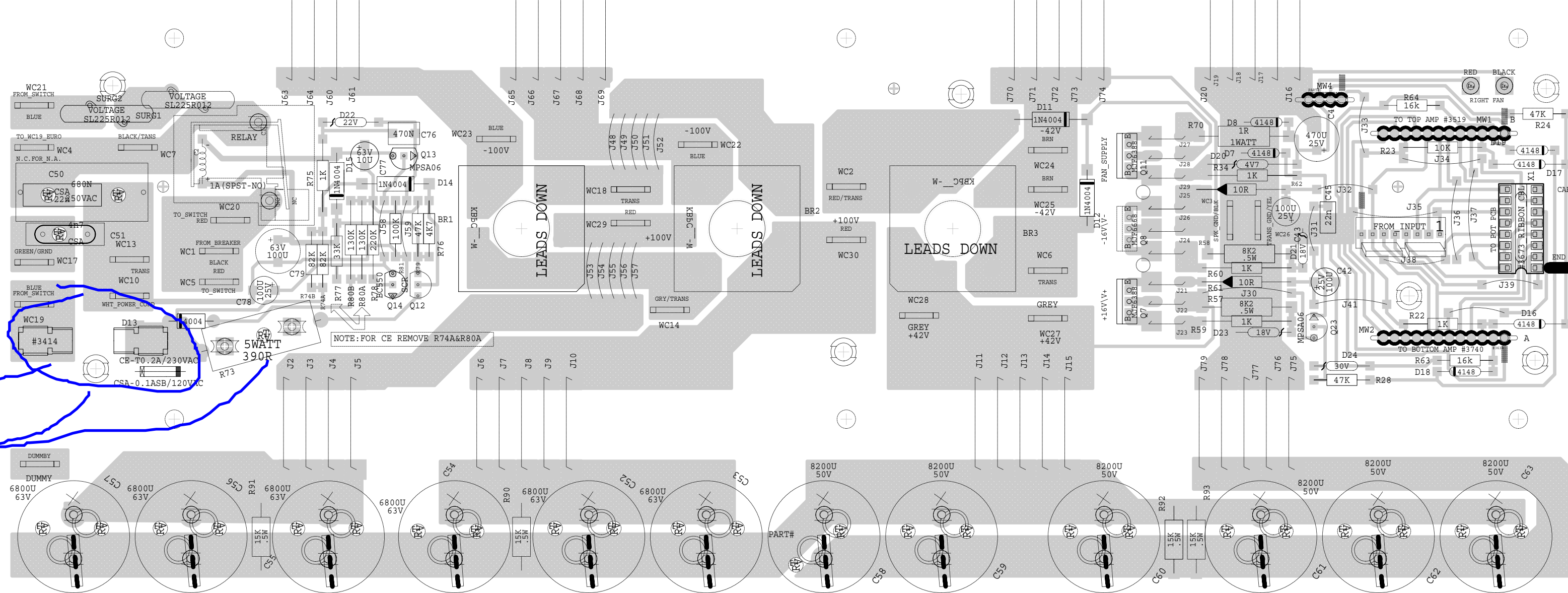
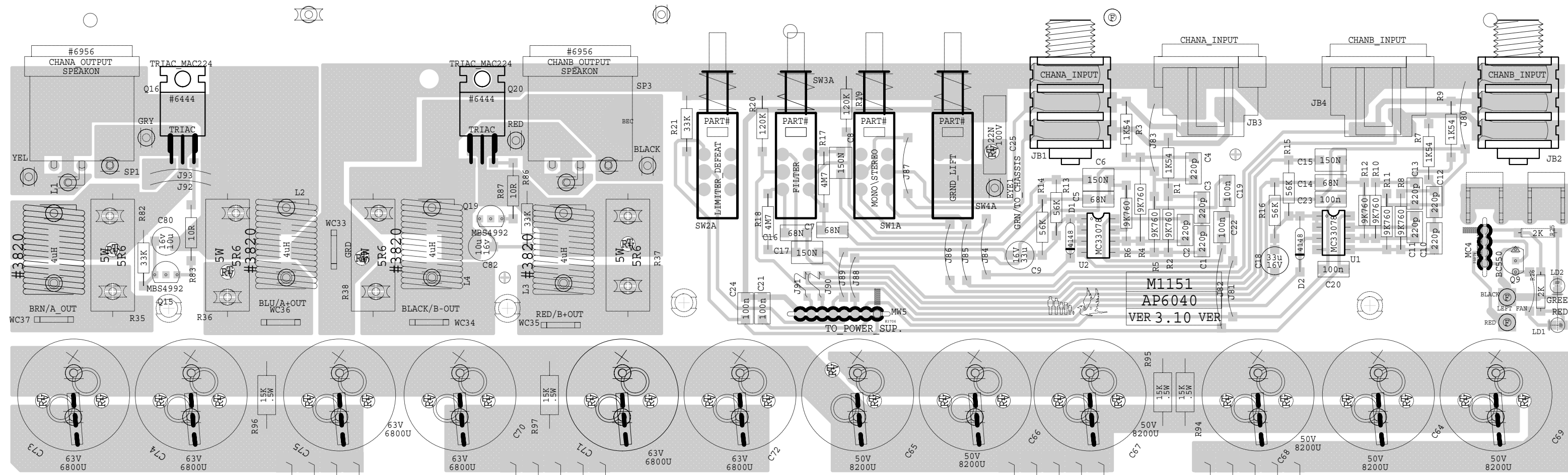
ASSEMBLY M1150-4.00
ASSEMBLY M1150-4.00

M1150-PCB DATABASE HISTORY

#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY12/99	1.00	PILOT RUN RELEASE
2	AUG/10/99	2.00	PC#6043 RELAY CONNECTIONS ALTERED
3			ADD R30 R50A/B R52A/B 10K0
4			->4K99 R35C/R42C 20K0->10K0
5			PC#6042 C50A B TO C Q24A ADD J63 TO
6			ELIMINATE SHORT SCREW
7			PC#6033 R163A/R158A->J163A/J158A
8	AUG/24/99	3.00	PC#6066 C126C 1 PIN V->GND
9	SEP/16/99		PC#6098 CHANGES AS PER PC
10	OCT/18/99		#3673 RIBBON->#3562 SKT
11	NOV/26/99	4.00	PC#6066 REPAIR ERROR

00.4-0211M YJHM22A

ETCH GUIDE



ETCH GUIDE

"000.01 X "000.24" M4
 "000.01 X "000.24" M4
 END DIRECTION
 CABLE OTHER
 BLANK SIZE=15.000"



50% COPPER

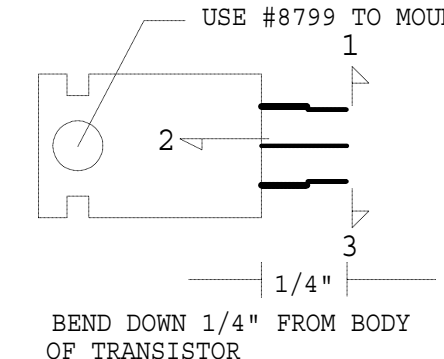
ETCH GUIDE

ASSEMBLY M1151-3.10
 PCB MECH M1151-3.10

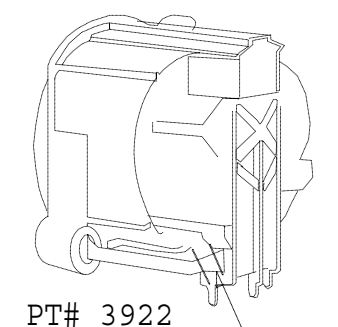
SOLDSIDE M1151-3.00

M1151.PCB DATABASE HISTORY			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	AUG/10/99	2.00	PC#6034 LD2 ROTATED
2	.	.	TRIACS Q18,Q22 DELETED. R85,Q17,C81
3	.	.	R84,R88,Q21,C83,R89 DELETED
4	SEP/28/99	3.00	PC#6125 CHANGE SPACING R73_PC#6128
5	.	.	CHANGE SPAING OF COILS
6	OCT/18/99	.	REPLACE 16 PIN IC-SOCKET WITH #3673
7	.	.	RIBBON_CABLE
8	JAN/31/00	3.10	PC# Q23 BC550->MPSA06_(TO_MATCH SCHEMATIC)
9	.	.	
10	.	.	
11	.	.	
12	.	.	
13	.	.	
14	.	.	
15	.	.	
16	.	.	
17	.	.	
18	.	.	
19	.	.	
20	.	.	
21	.	.	
22	.	.	
23	.	.	

1 MOUNTING DETAILS FOR Q30 TRIAC



USE #8799 TO MOUNT TRIAC Q30
 IMPORTANT
 AFTER MOUNTING DEVICE
 DO NOT CUT LEGS #2 OR #3
 BEND LEGS IN DIRECTION SHOWN
 IT IS IMPERATIVE THAT LEGS
 MARKED 2 AND 3 ARE BENT FLAT
 AGAINST THE COPPER SURFACE

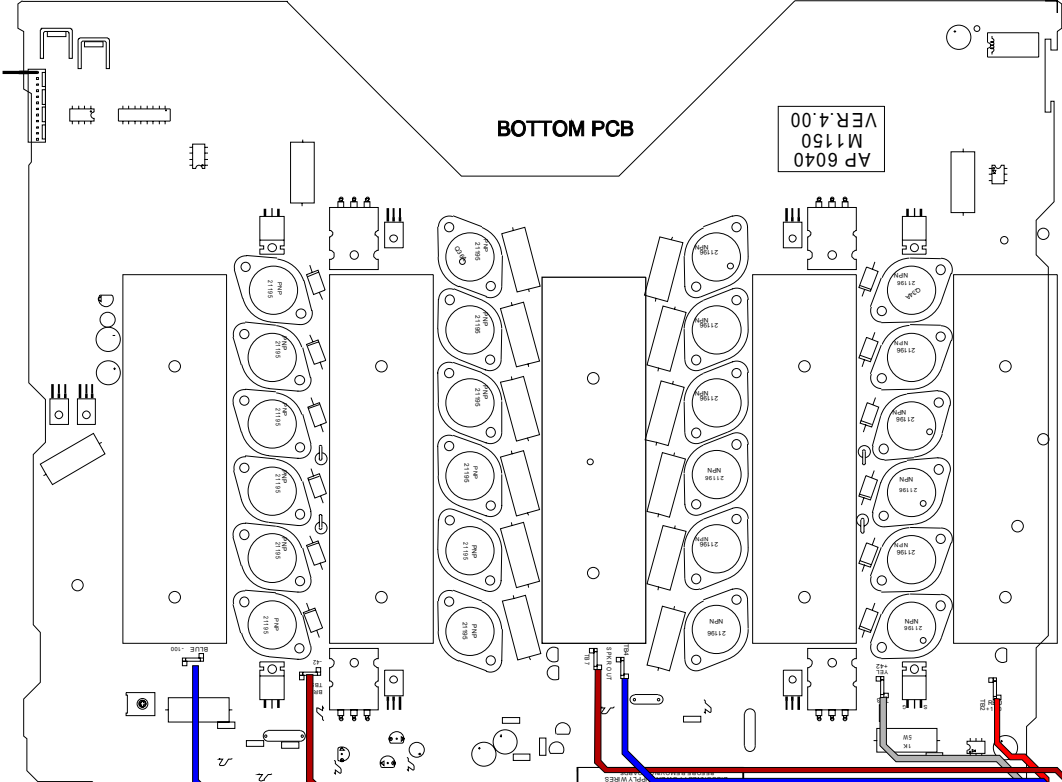


THIS CONNECTION
 MUST BE BROKEN HERE

- 2 CUT LARGE CAP LEADS BEFORE WAVE SOLDER.
- 3 SCREW DOWN BRIDGES WITH #8753 SCREW.

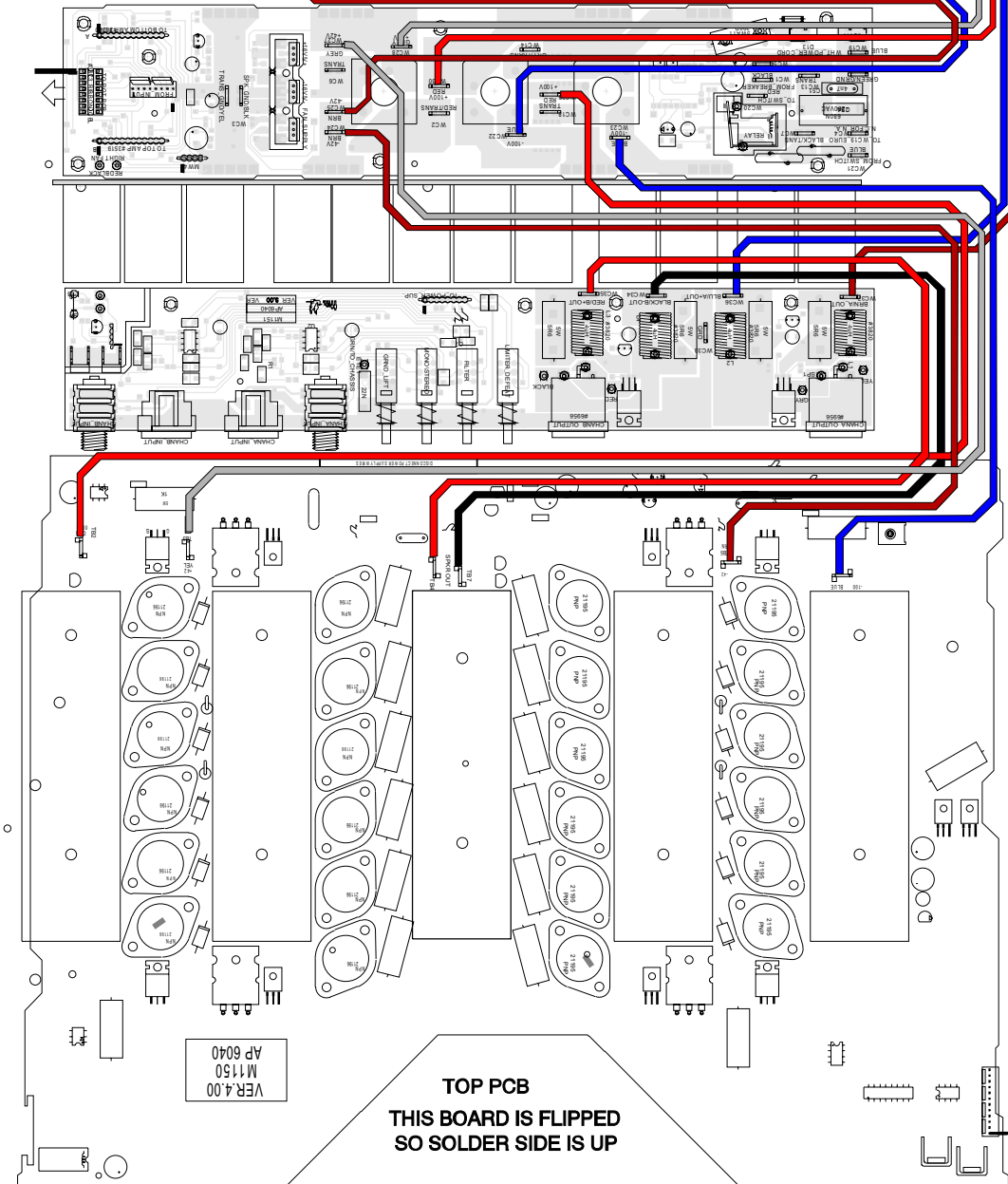
BOTTOM PCB

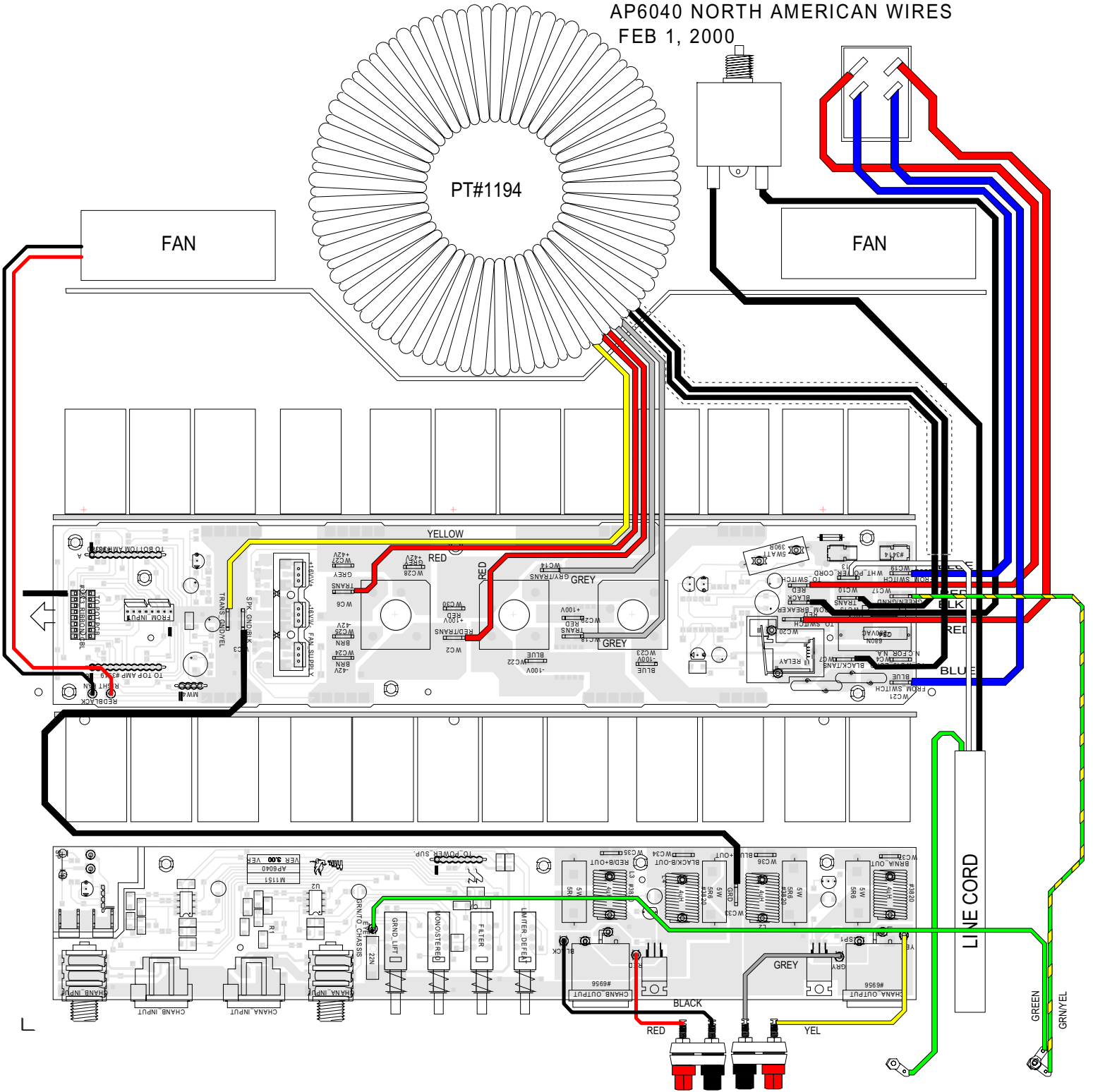
AP 6040
M150
VER.4.00

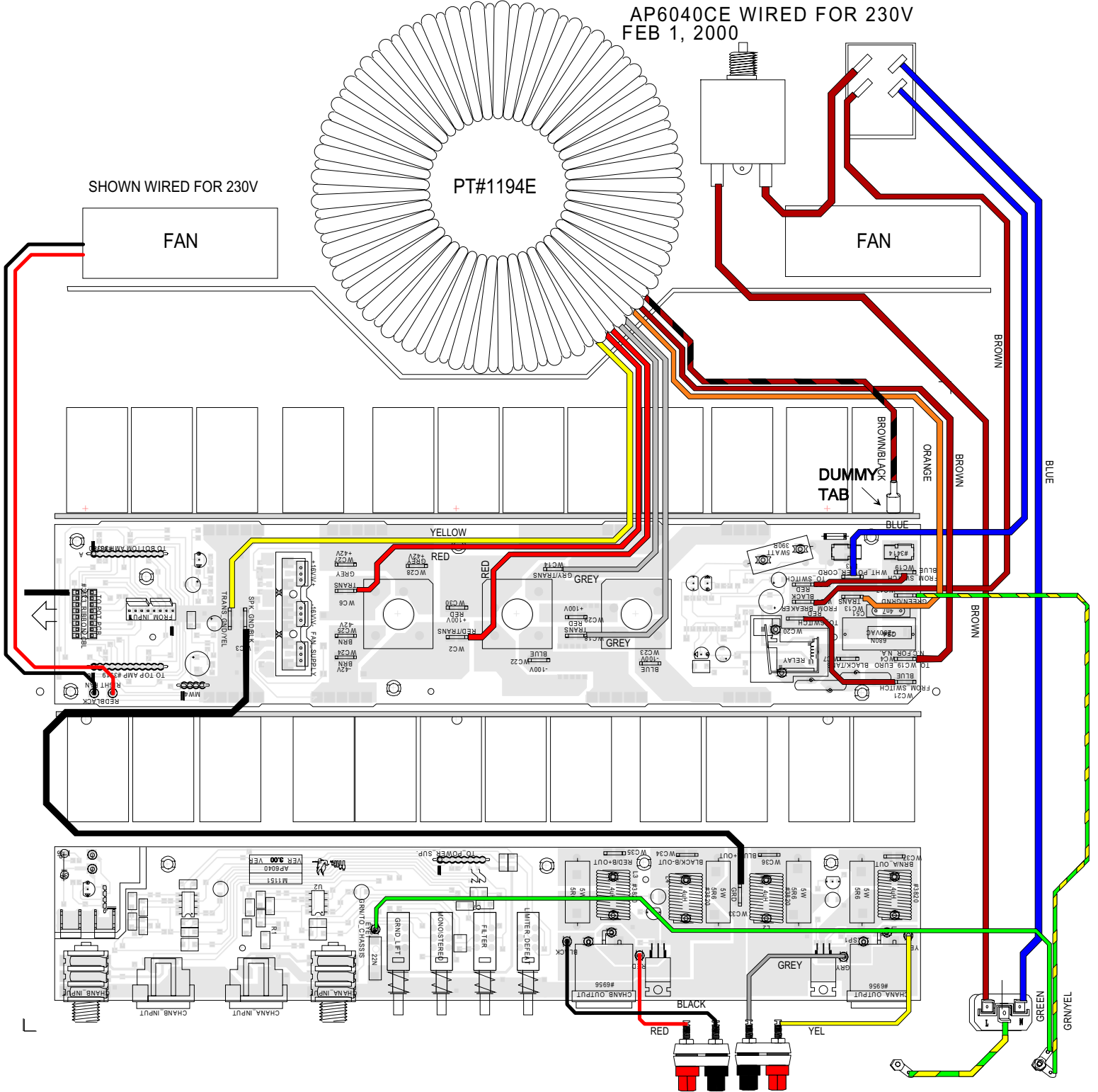


TOP PCB
THIS BOARD IS FLIPPED
SO SOLDER SIDE IS UP

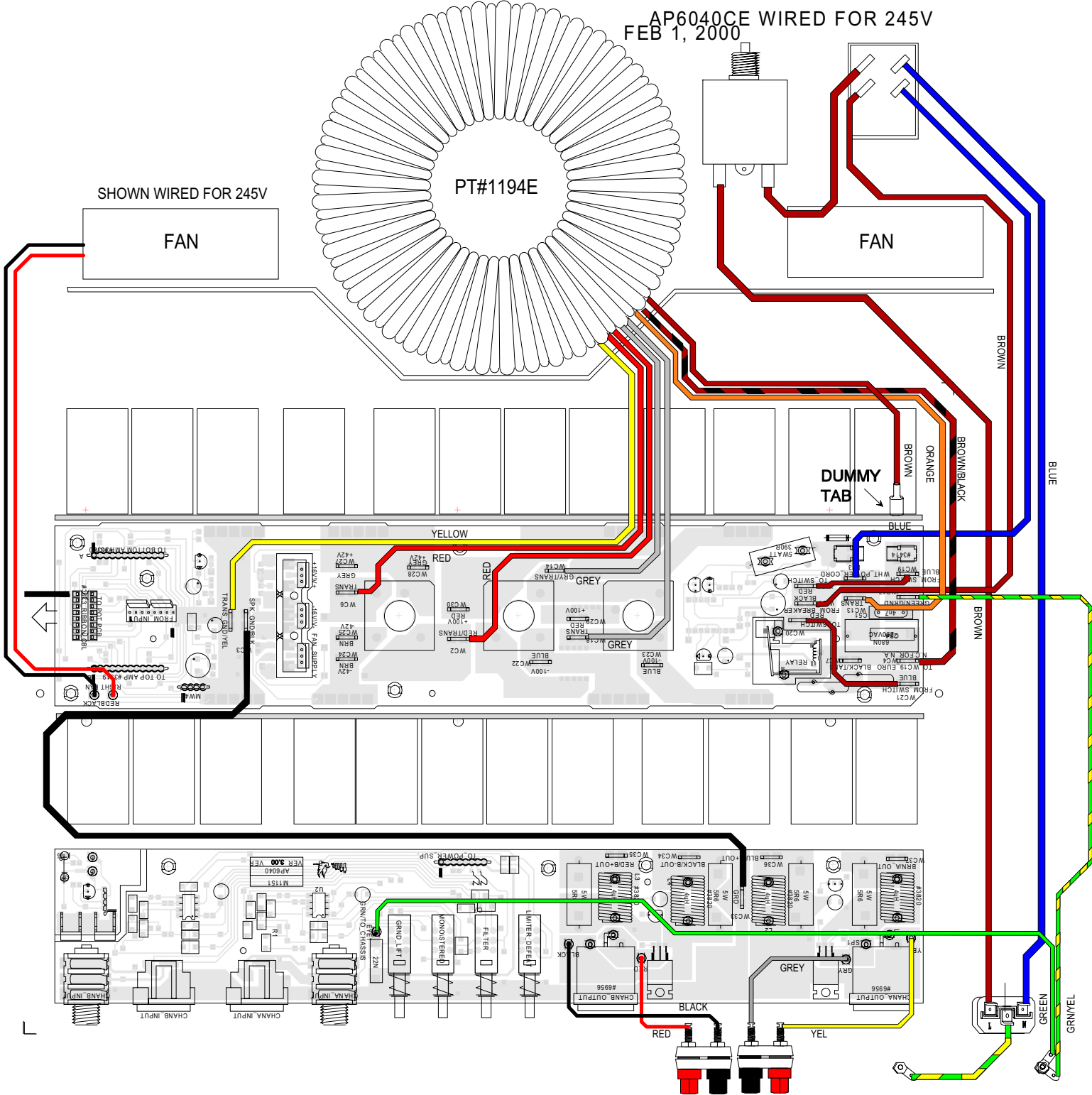
AP 6040
M150
VER.4.00







AP6040CE WIRED FOR 245V
FEB 1, 2000



FILE NAME AP6040AC.DRW