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**WORLD HEADQUARTERS
CANADA**

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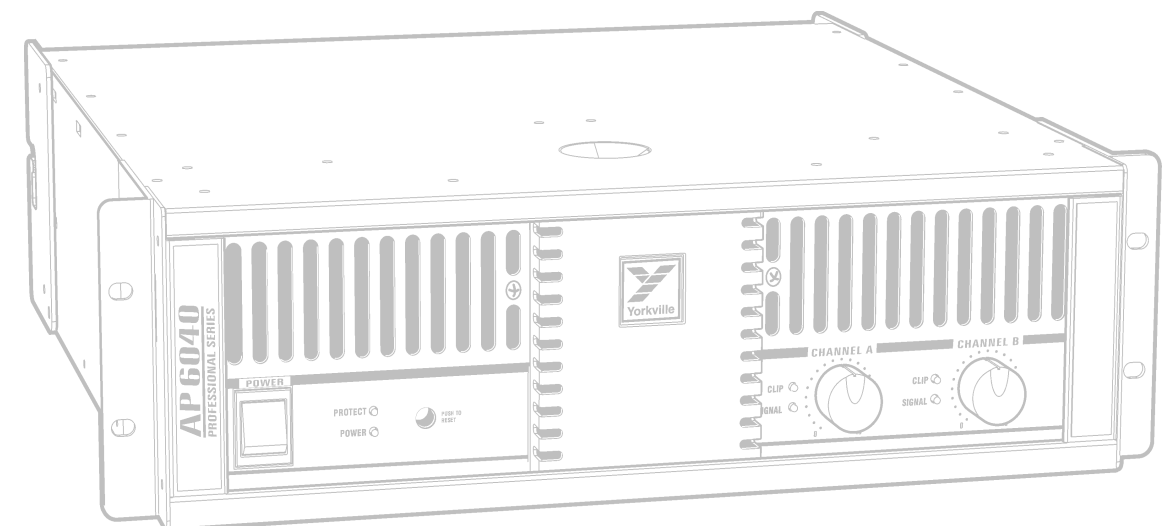
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Quality and Innovation Since 1963
Printed in Canada



AP 6040
PROFESSIONAL SERIES



MODEL TYPE: YS6040

SERVICE MANUAL

IMPORTANT SAFETY INSTRUCTIONS



This lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Ce symbole d'éclair avec tête de flèche dans un triangle équilatéral est prévu pour alerter l'utilisateur de la présence d'un « voltage dangereux » non-isolé à proximité de l'enceinte du produit qui pourrait être d'ampleur suffisante pour présenter un risque de choc électrique.



CAUTION AVIS

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

**RISQUE DE CHOC ELECTRIQUE
NE PAS OUVRIR**



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est prévu pour alerter l'utilisateur de la présence d'instructions importantes dans la littérature accompagnant l'appareil en ce qui concerne l'opération et la maintenance de cet appareil.

FOLLOW ALL INSTRUCTIONS

**Instructions pertaining to a risk of fire,
electric shock, or injury to a person**

**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.

THIS DEVICE IS FOR INDOOR USE ONLY!

SUIVEZ TOUTES LES INSTRUCTIONS

**Instructions relatives au risque de feu,
choc électrique, ou blessures aux personnes**

**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

CE PRODUIT EST POUR L'USAGE À L'INTÉRIEUR SEULEMENT

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

Clean only with dry cloth.

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

Warning: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. *Do not use this apparatus near water!*

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. An apparatus with CLASS I construction shall be connected to a Mains socket outlet with a protective earthing ground. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

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. Only use attachments/accessories specified by the manufacturer

Note: Prolonged use of headphones at a high volume may cause health damage on your ears.

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. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

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

Power Cord

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. The AC supply cord should be routed so that it is unlikely that it will be damaged. Protect the power cord from being walked on or pinched particularly at plugs. If the AC supply cord is damaged DO NOT OPERATE THE UNIT. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle. The mains plug of the power supply cord shall remain readily operable.

Unplug this apparatus during lightning storms or when unused for long periods of time.

Service

The unit should be serviced only by qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Veillez Lire le Manuel: Il contient des informations qui devraient être comprises avant l'opération de votre appareil. Conservez. Gardez S.V.P. ces instructions pour consultations ultérieures et observez tous les avertissements.

Nettoyez seulement avec le tissu sec.

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

Avertissement: Pour réduire le risque de feu ou la décharge électrique, n'exposez pas cet appareil à la pluie ou à l'humidité. *N'utilisez pas cet appareil près de l'eau!*

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. Un appareil construit selon les normes de CLASS I devrait être raccordé à une prise murale d'alimentation avec connexion intacte de mise à la masse. Lorsqu'une prise de branchement ou un coupleur d'appareils est utilisée comme dispositif de débranchement, ce dispositif de débranchement devra demeurer pleinement fonctionnel avec raccordement à la masse.

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. Utilisez seulement les attachments/accessoires indiqués par le fabricant

Note: L'utilisation prolongée des écouteurs à un volume élevé peut avoir des conséquences néfastes sur la santé sur vos oreilles. .

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. Ne procédez pas à l'installation près de source de chaleur tels que radiateurs, registre de chaleur, fous ou autres appareils (incluant les amplificateurs) qui produisent de la chaleur.

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.

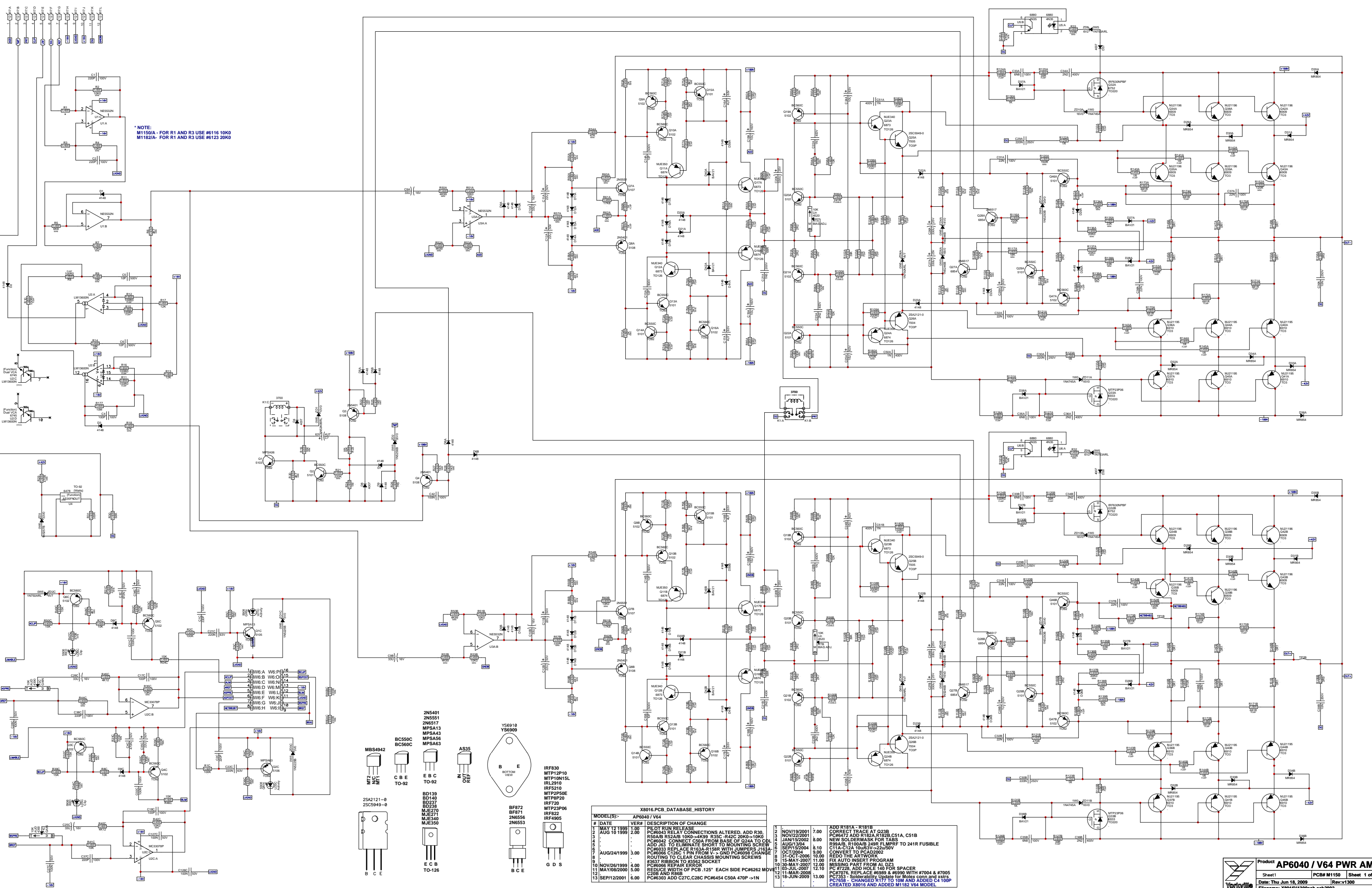
Cordon d'Alimentation

Ne pas enlever le dispositif de sécurité sur la prise polarisée ou la prise avec tige de mise à la masse du cordon d'alimentation. Une prise polarisée dispose de deux lames dont une plus large que l'autre. Une prise avec tige de mise à la masse dispose de deux lames en plus d'une troisième tige qui connecte à la masse. La lame plus large ou la tige de mise à la masse est prévu pour votre sécurité. La prise murale est désuète si elle n'est pas conçue pour accepter ce type de prise avec dispositif de sécurité. Dans ce cas, contactez un électricien pour faire remplacer la prise murale. Évitez d'endommager le cordon d'alimentation. Protégez le cordon d'alimentation. Assurez-vous qu'on ne marche pas dessus et qu'on ne le pince pas en particulier aux prises. **N'UTILISEZ PAS L'APPAREIL** si le cordon d'alimentation est endommagé. Pour débrancher complètement cet appareil de l'alimentation CA principale, déconnectez le cordon d'alimentation de la prise d'alimentation murale. Le cordon d'alimentation du bloc d'alimentation de l'appareil doit demeurer pleinement fonctionnel.

Débranchez cet appareil durant les orages ou si inutilisé pendant de longues périodes.

Service

Consultez un technicien qualifié pour l'entretien de votre appareil. L'entretien est nécessaire quand l'appareil a été endommagé de quelque façon que se soit. Par exemple si le cordon d'alimentation ou la prise du cordon sont endommagés, si il y a eu du liquide qui a été renversé à l'intérieur ou des objets sont tombés dans l'appareil, si l'appareil a été exposé à la pluie ou à l'humidité, si il ne fonctionne pas normalement, ou a été échappé.



* NOTE:
 M1150/A - FOR R1 AND R3 USE #6116 10K0
 M1182/A - FOR R1 AND R3 USE #6123 20K0

- MBS4942
- 2N5401
- 2N6517
- MPSA13
- MPSA43
- MPSA46
- MPSA63
- BC550C
- BC560C
- BD139
- BD140
- BD237
- MJE270
- MJE271
- MJE340
- MJE350
- AS35
- YS6918
- YS6909
- BF872
- BF871
- 2N6556
- 2N6553
- 2S2121-8
- 2SC5949-8
- IRF830
- MTP12P15
- IRL2910
- IRFS210
- MTP2P50E
- MTP8P20
- IRF720
- IRF4905
- MTP23P06
- IRF822
- IRF4905

MODEL(S):		AP6040 / V64	
#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY 12 1999	1.00	PILOT RUN RELEASE
2	AUG 10 1999	2.00	PC#693 RELAY CONNECTIONS ALTERED. ADD R30, R50A/B, R52A/B, 10K0->4K99, R33C-R42C 20K0->10K0
3			
4			
5	AUG 13 2001	8.00	PC#694 CONNECT C59A FROM BASE OF Q24A TO COL. ADD J63 TO ELIMINATE SHORT TO MOUNTING SCREW
6	SEP 15 2004	9.10	PC#6933 REPLACE R163A-R168R WITH JUMPERS J163A-PC#696 C126: 1 PIN FROM V-> GND PC#6968 CHANGE ROUTING TO CLEAR CHASSIS MOUNTING SCREWS
7	OCT 07 2004	9.10	PC#6968 CHANGE ROUTING TO CLEAR CHASSIS MOUNTING SCREWS
8	31-OCT-2006	10.00	PC#6968 CHANGE ROUTING TO CLEAR CHASSIS MOUNTING SCREWS
9	15-MAY-2007	11.00	PC#6968 CHANGE ROUTING TO CLEAR CHASSIS MOUNTING SCREWS
10	NOV/26/1999	4.00	PC#6968 CHANGE ROUTING TO CLEAR CHASSIS MOUNTING SCREWS
11	MAY/08/2000	5.00	PC#6968 CHANGE ROUTING TO CLEAR CHASSIS MOUNTING SCREWS
12			
13	SEP/12/2001	6.00	PC#6303 ADD C27C, C28C, PC#6454 C59A 470P ->1N

2	NOV/19/2001	7.00	ADD R181A-R181B
3	NOV/22/2001	8.00	CORRECT TRACES AT Q23B
4	JAN/15/2002	8.00	PC#6472 ADD R182A, R182B, C51A, C51B
5	AUG/13/04	9.00	NEW SOLDERMASK FOR TABS
6	SEP 15 2004	9.10	R99A/B, R100A/B 240R FLMPRF TO 241R FUSIBLE
7	OCT 07 2004	9.10	CONVERT TO PC#AD5002
8	31-OCT-2006	10.00	REDO THE ARTWORK
9	15-MAY-2007	11.00	FIX AUTO INSERT PROGRAM
10	30-MAY-2007	12.00	MISSING PART FROM AL D23
11	03-JUL-2007	12.10	PC#7228, ADD HOLE 140 FOR SPACER
12	11-MAR-2008	13.00	PC#7076, REPLACE #6989 & #6990 WITH #7004 & #7005
13	18-JUN-2009	13.00	PC#7335 - Solderability Update for Wicks cond and 330R PC#7335 - CHANGED R177 TO 10M AND ADDED C4 100P
			CREATED X8016 AND ADDED M1182 V64 MODEL

M1150

AP6040

5 OZ COPPER

BlankSize - 18000x14000

Into Wave

DISCONNECT POWER SUPPLY WIRES BEFORE REMOVING BOARDS

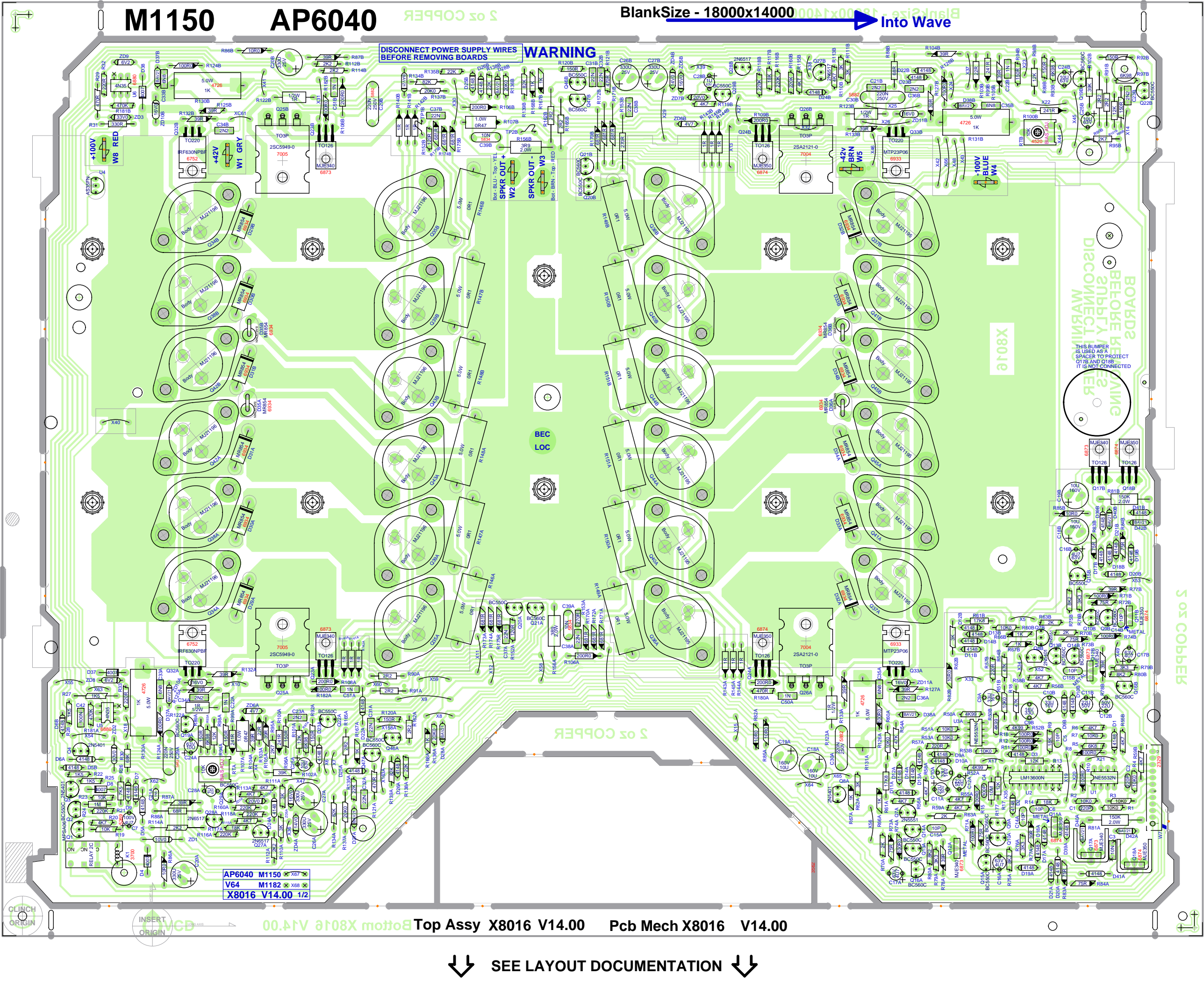
WARNING

BOARDS REMAINING BEFORE REMOVING SUPPLY WIRES
DISCONNECT WARNING
THIS BUMPER IS USED AS A SPACER TO PROTECT Q17B AND Q18B. IT IS NOT CONNECTED.

AP6040 M1150 X67
V64 M1182 X68
X8016 V14.00 1/2

00.41V 0108X Bottom Top Assy X8016 V14.00 Pcb Mech X8016 V14.00

SEE LAYOUT DOCUMENTATION



M1150 A AP6040

5 oz COPPER

BlankSize - 18000x14000



DISCONNECT POWER SUPPLY WIRES BEFORE REMOVING BOARDS

WARNING

BEFORE REMOVING BOARDS
DISCONNECT POWER SUPPLY WIRES
WARNING
THIS BUMPER IS USED AS A SPACER TO PROTECT Q17B AND Q18B IT IS NOT CONNECTED

AP6040	M1150	X67	X
V64	M1182	X68	X
X8016	V14.00	1/2	

AP6040 / V64 2/2
X8016 V14.00

Top Assy X8016 V14.00 Pcb Mech X8016 V14.00

SEE LAYOUT DOCUMENTATION

5 oz COPPER

5 oz COPPER

X8016

LOC
LOC



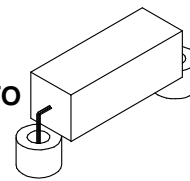


SEE LAYOUT DIAGRAM

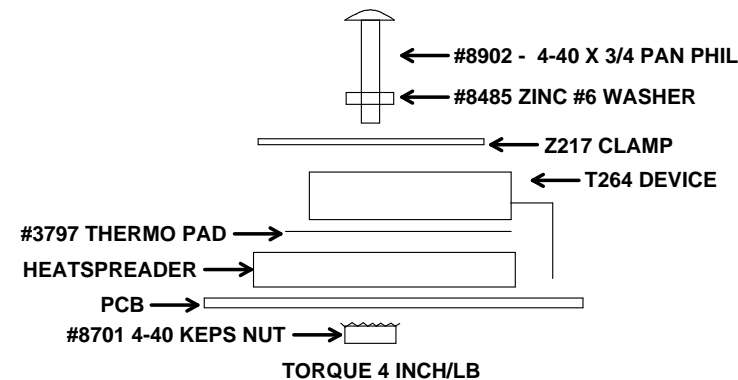


M1150/M1150A - AP6040 M1182/M1182A - V64 PRODUCTION NOTES

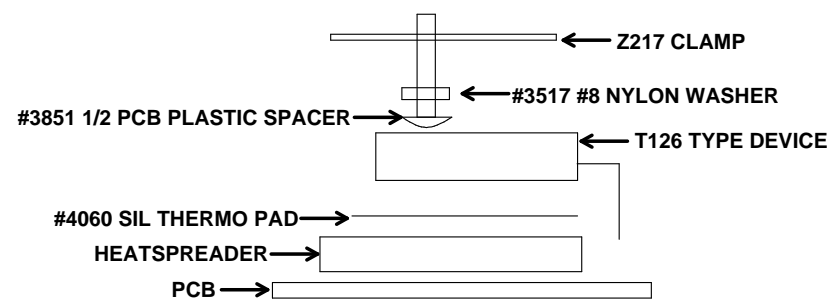
1. MOUNTING DETAILS FOR 5W ADD #8629 SPACERS ONLY ON 5 WATT RESISTORS R130, R131A, R130B AND R131A. ENSURE SPACERS ARE UNDER RESISTOR BODY ENOUGH TO RAISE IT OFF THE BOARD SURFACE.



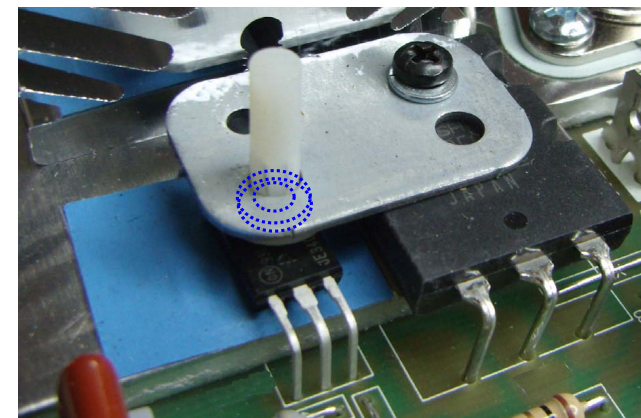
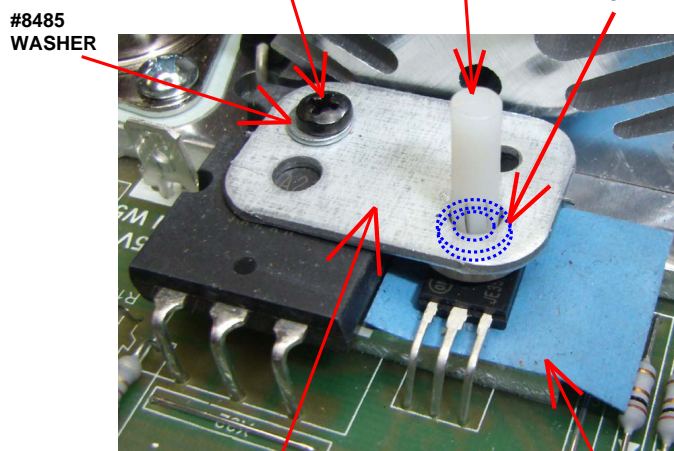
2. MOUNTING HARDWARE FOR Q25A AND Q26A.



3. MOUNTING HARDWARE FOR Q23A, Q23BA, Q24A AND Q24B.



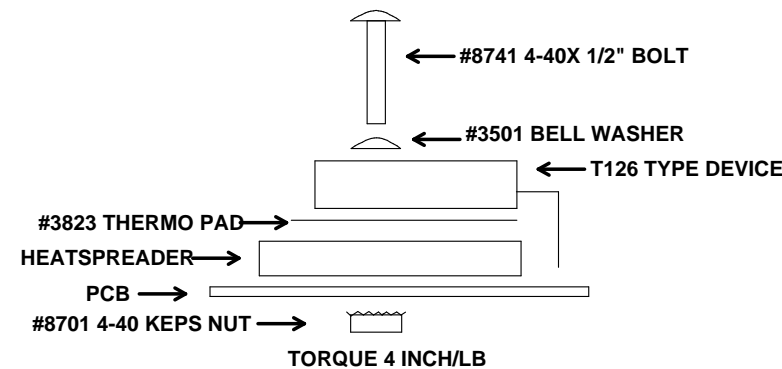
#8902 440- SCREW
#3851 SPCR
#3517 WASHER



FLIPPED VERSION

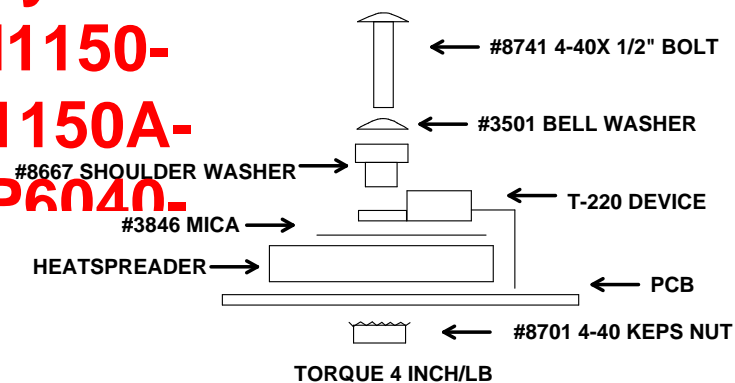
Z217 CLAMP
#4060 SIL-PAD
CLAMP DETAIL - SEE NOTES 2 AND 3.

4. MOUNTING HARDWARE FOR Q17B AND Q18B.

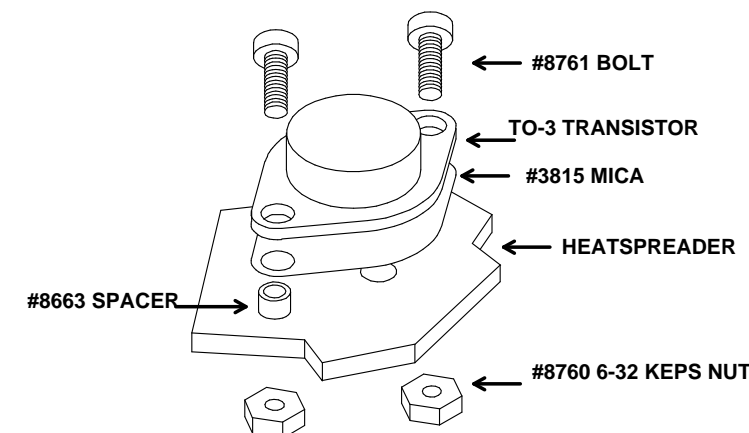


5. MOUNTING HARDWARE FOR Q33A AND Q33B.

Layout-
M1150-
M1150A-
AP6040.



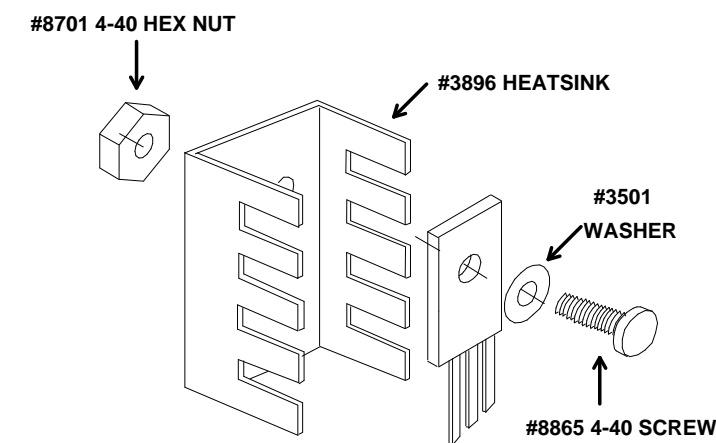
6. MOUNTING HARDWARE FOR TO3 OUTPUTS



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

7. C3, #5228 100N IS USED AS SPACER.

8. MOUNTING HARDWARE FOR Q17A AND Q18A.



9. PCBSA: BREAK OUT BOARD BEFORE TESTING.

X8016.PCB_DATABASE_HISTORY

MODEL(S):- AP6040 / V64

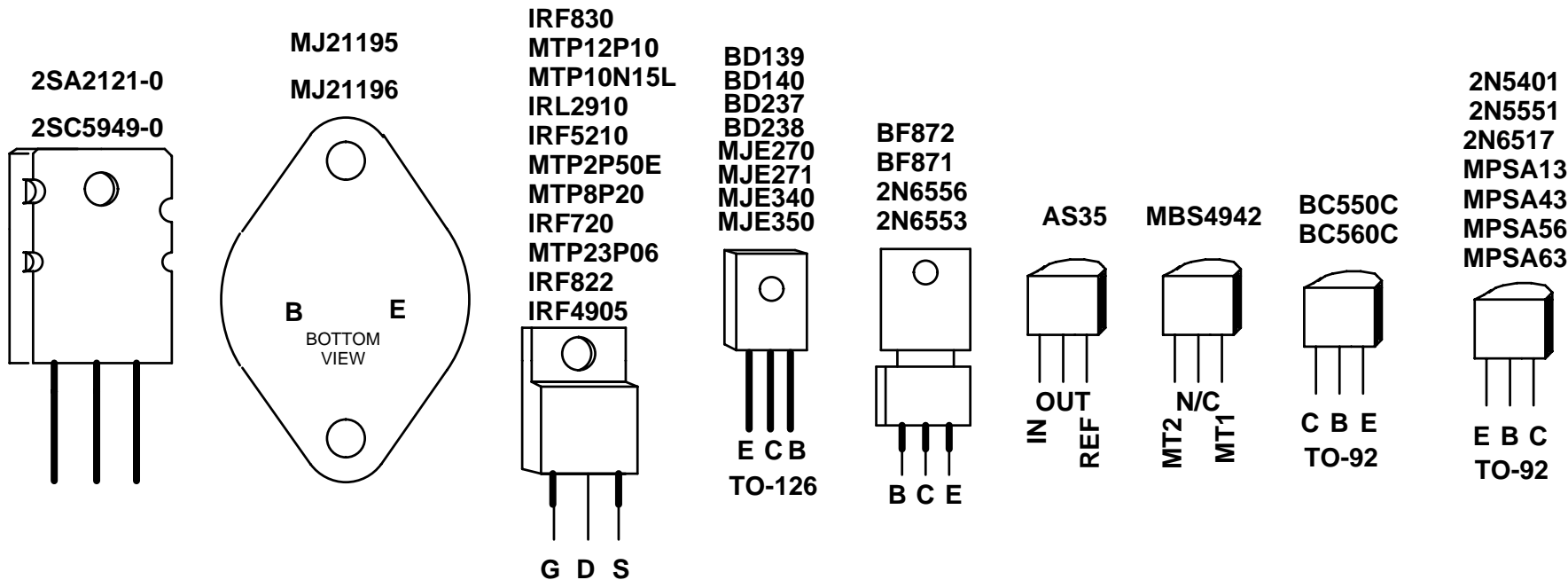
#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY 12 1999	1.00	PILOT RUN RELEASE
2	AUG 10 1999	2.00	PC#6043 RELAY CONNECTIONS ALTERED. ADD R30, R50A/B R52A/B 10K0->4K99 R35C -R42C 20K0->10K0
3	.	.	PC#6042 CONNECT C50A FROM BASE OF Q24A TO COL
4	.	.	ADD J63 TO ELIMINATE SHORT TO MOUNTING SCREW
5	.	.	PC#6033 REPLACE R163A-R158R WITH JUMPERS J163A-
6	.	.	PC#6066 C126C 1 PIN FROM V- > GND PC#6098 CHANGE
7	AUG/24/1999	3.00	ROUTING TO CLEAR CHASSIS MOUNTING SCREWS
8	.	.	#3637 RIBBON TO #3562 SOCKET
9	.	.	PC#6066 REPAIR ERROR
10	NOV/26/1999	4.00	PC#6066 REPAIR ERROR
11	MAY/08/2000	5.00	REDUCE WIDTH OF PCB .125" EACH SIDE PC#6262 MOVE
12	.	.	C20B AND R86B
13	SEP/12/2001	6.00	PC#6303 ADD C27C,C28C PC#6454 C50A 470P ->1N

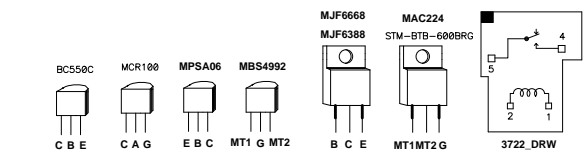
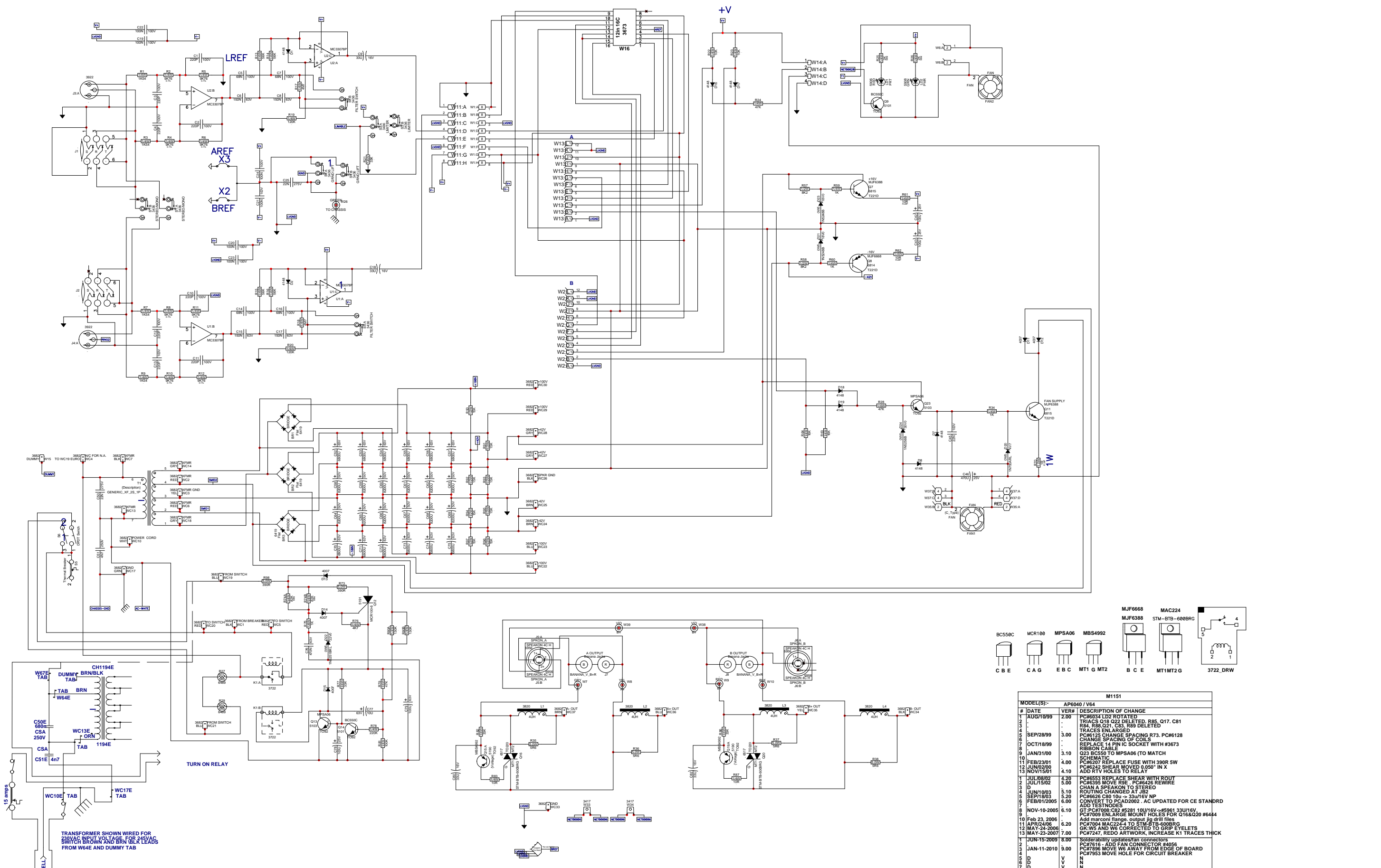
1	.	.	ADD R181A - R181B
2	NOV/19/2001	7.00	CORRECT TRACE AT Q23B
3	NOV/22/2001	.	PC#6472 ADD R182A,R182B,C51A, C51B
4	JAN/15/2002	8.00	NEW SOLDERMASK FOR TABS
5	AUG/13/04	.	R99A/B, R100A/B 249R FLMPRF TO 241R FUSIBLE
6	SEP/15/2004	8.10	C11A-C12A 10u/63V->22u/50V
7	OCT/2004	9.00	CONVERT TO PCAD2002
8	31-OCT-2006	10.00	REDO THE ARTWORK
9	15-MAY-2007	11.00	FIX AUTO INSERT PROGRAM
10	30-MAY-2007	12.00	MISSING PART FROM AI, DZ3
11	03-JUL-2007	12.10	PC #7228, ADD HOLE 140 FOR SPACER
12	11-MAR-2008	.	PC#7076, REPLACE #6989 & #6990 WITH #7004 & #7005
13	18-JUN-2009	13.00	PC7353 - Solderability Update for Molex conn and xstrs
			PC7658 - CHANGED R177 TO 10M AND ADDED C4 100P
			CREATED X8016 AND ADDED M1182 V64 MODEL

1	05-JAN-2009	14.0	PC7850: Update parts #7004, #7005, more clearance
2	.	.	PC7935: Replace C7 #5259 with #5269
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
11	D	V	N
12	D	V	N
13	D	V	N



SEE LAYOUT DIAGRAM

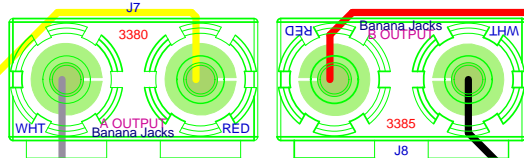




TRANSFORMER SHOWN WIRED FOR 240VAC INPUT VOLTAGE FOR 245VAC SWITCH BRWN AND BRN BLK LEADS FROM W64E AND DUMMY TAB

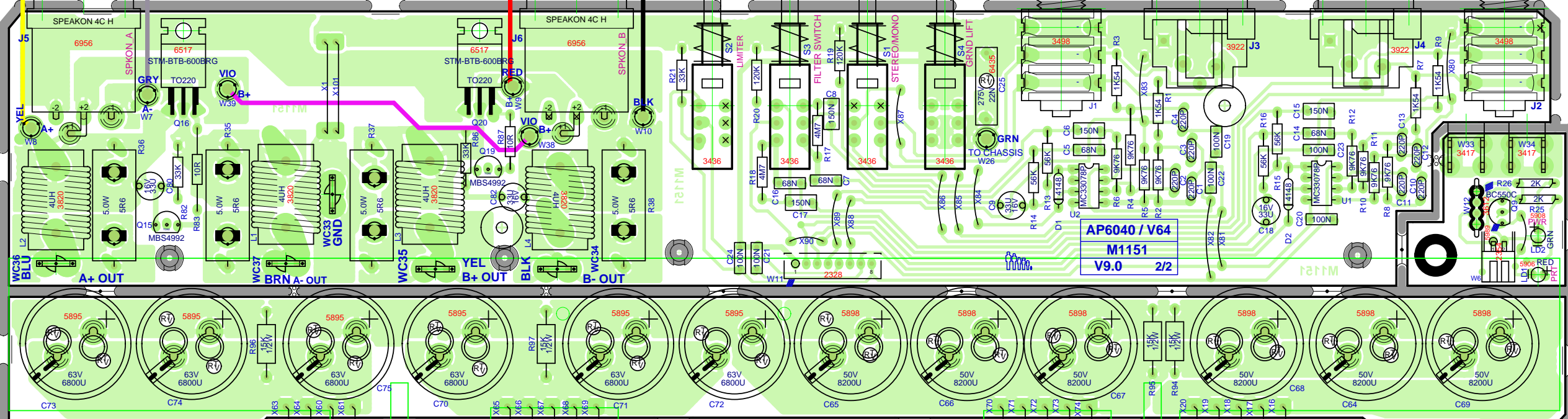
MODEL(S)	AP6040 / V64	M1151	
#	DATE	VER#	DESCRIPTION OF CHANGE
1	AUG/10/99	2.00	PC#8358 LIDZ ROTATED
2	.	.	TRIACS Q18 Q21 DELETED, R85, Q17, C81
3	.	.	R84, R88 Q21, C83, R89 DELETED
4	.	.	TRACES ENLARGED
5	SEP/28/99	3.00	PC#R125 CHANGE SPACING R73, PC#6128
6	OCT/18/99	.	CHANGE SPACING OF COILS
7	.	.	REPLACE 14 PIN IC SOCKET WITH #3673
8	.	.	RIBBON CABLE
9	JAN/31/00	3.10	Q23 BC550 TO MPSA06 TO MATCH
10	.	.	SCHEMATIC
11	FEB/23/01	4.00	PC#8207 REPLACE FUSE WITH 390R SW
12	JUN/02/00	5.10	PC#6242 SHEAR MOVED 0.090" IN X
13	NOV/15/01	4.10	ADD RTV HOLES TO RELAY
1	JUL/08/02	4.20	PC#6553 REPLACE SHEAR WITH ROUTY
2	JUL/15/02	5.00	PC#6395 MOVE R9E PC#6426 REWIRE
3	D	.	CHAN A SPEAKON TO STEREO
4	JUN/18/03	5.10	ROUTING CHANGED AT JB2
5	SEP/18/03	5.20	PC#6508 C80 10u -> 33uFV NP
6	FEB/01/2005	6.10	CONVERT TO PCAD2002 AC UPDATES FOR CE STANDRD
7	.	.	ADD TESTNODES
8	NOV-10-2005	6.10	Q1-PC#7085:CS2 #5281 10U16V->#5961 33U16V
9	.	.	PC#7099 ENLARGE MOUNT HOLES FOR Q16&Q20 #6444
10	Feb 23, 2006	6.20	Add mcom1 filename, output file dml files
11	APR/24/06	6.20	PC#7094 MAC224-4 TO STM-BTB-600BRG
12	MAY-24-2006	.	OK'ING AND W6 CORRECTED TO GRIP EYELETS
13	MAY-23-2007	7.00	PC#7247, REDD ARTWORK, INCREASE K11 TRACES THICK
1	JUN-15-2009	8.00	Solderability updates/An connectors
2	PC#7616	.	ADD FAN CONNNECTOR #4666
3	JAN-11-2010	9.00	PC#7896 MOVE W6 AWAY FROM EDGE OF BOARD
4	.	.	PC#7953 MOVE HOLE FOR CIRCUIT BREAKER

BANANNA JACKS MOUNTED ON CHASSIS

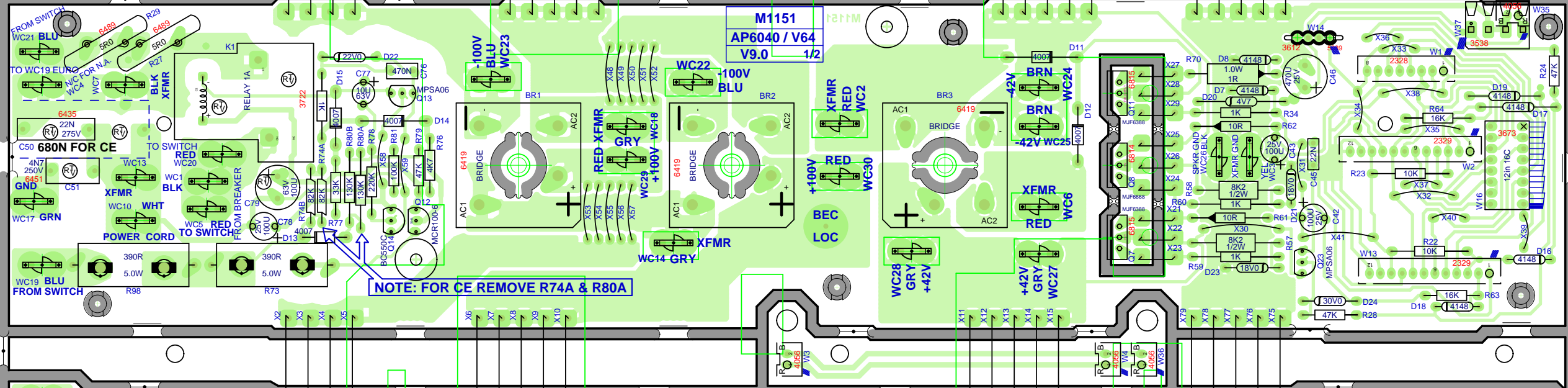


Pcb Mech M1151V9.0
Top Assy M1151V9.0

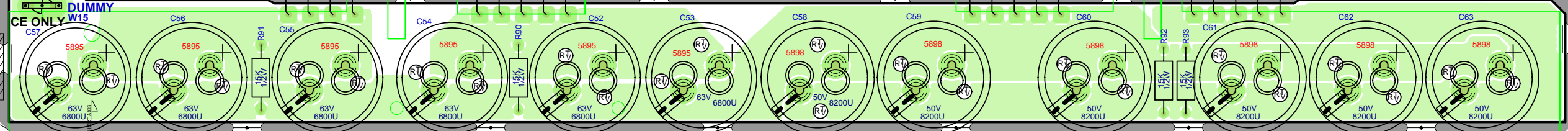
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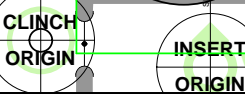
!!!!!! DO NOT DISCARD!!!!
YS PART# M1149-58
SAVE FOR USE IN WIRING



NOTE: FOR CE REMOVE R74A & R80A



USE 50% COPPER USE 20% COPPER

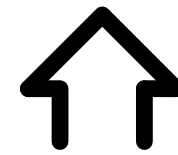


Into Wave

SEE LAYOUT DOCUMENTATION



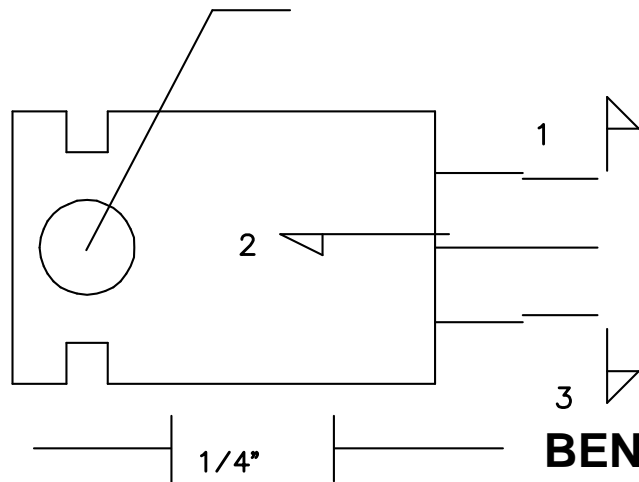
SEE LAYOUT DIAGRAM



M1151 PRODUCTION NOTES

1. MOUNTING DETAILS FOR TRIAC

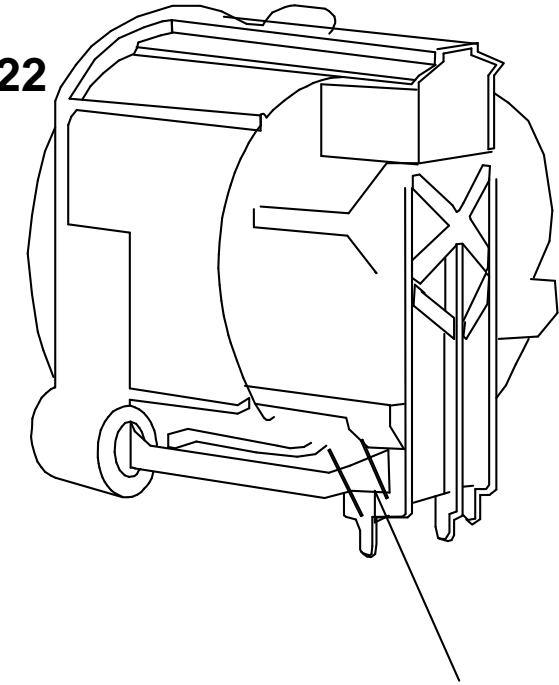
USE #8799 TO MOUNT TRIAC



**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**

BEND DOWN 1/4" FROM BODY OF TRANSISTOR

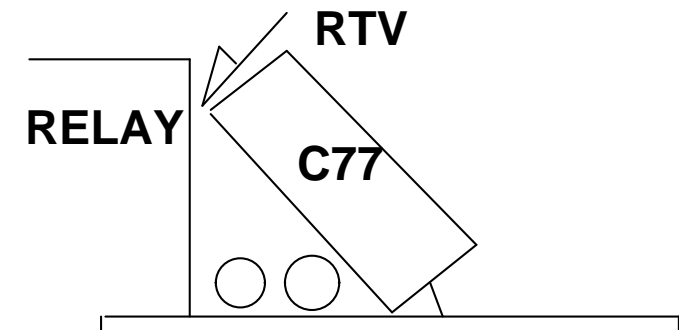
6. PT# 3922



**THIS CONNECTION
MUST BE BROKEN HERE**

- 2. CUT LARGE CAP LEADS BEFORE WAVE SOLDER.**
- 3. SCREW DOWN BRIDGES WITH #8753 SCREW.**
- 4. FOR CE REMOVE R74A, R80A.**
- 5. R73, BEND THE LEADS IN SAME DIRECTION.**
- 6. DO NOT STUFF W3, W4 AND W36**

7. BEND C77 OVER AND RTV TO RELAY





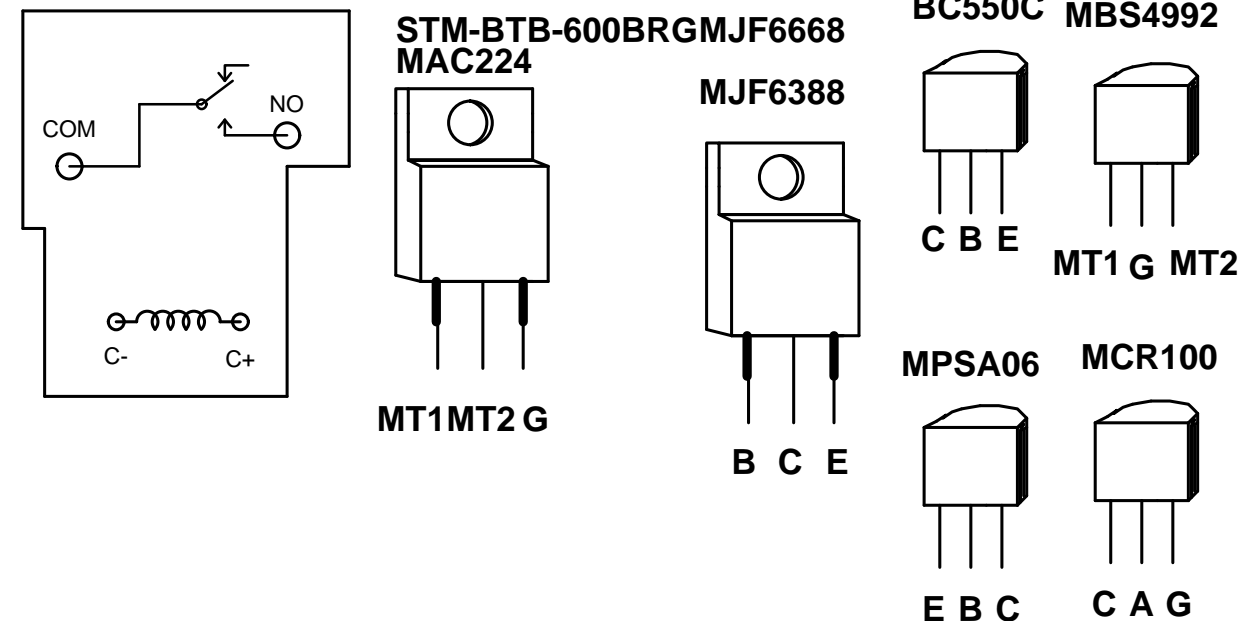
SEE LAYOUT DIAGRAM



M1151			
MODEL(S):-		AP6040 / V64	
#	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	.	.	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	.	.	RIBBON 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	D	.	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 STANDRD
7	.	.	ADD TESTNODES
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
10	Feb 23, 2006	.	Add marconi flange. output jig drill files
11	APR/24/06	6.20	PC#7004 MAC224-4 TO STM-BTB-600BRG
12	MAY-24-2006	.	GK:W5 AND W6 CORRECTED TO GRIP EYELETS
13	MAY-23-2007	7.00	PC#7247, REDO ARTWORK, INCREASE K1 TRACES THICK
1	JUN-15-2009	8.00	Solderability updates/fan connectors
2	.	.	PC#7616 - ADD FAN CONNECTOR #4056
3	JAN-11-2010	9.00	PC#7896 MOVE W6 AWAY FROM EDGE OF BOARD
4	.	.	PC#7953 MOVE HOLE FOR CIRCUIT BREAKER
5	D	V	N
6	DD	VV	NN
7	DD	VV	NN
8	DD	VV	NN
9	DD	VV	NN
10	DD	VV	NN
11	DD	VV	NN
12	DD	VV	NN
13	DD	VV	NN

M1151 DRILL HISTORY			
MODEL(S):-		AP6040 / V64	
#	DATE	VER#	DESCRIPTION OF CHANGE
1	D	V	N
2	D	V	NN
3	D	V	NN
4	D	V	NN
5	D	V	NN
6	D	V	NN
M1151 PENDING CHANGES			
MODEL(S):-		AP6040 / V64	
#	PC#	PENDING CHANGE	
1	PC	X	
2	PC	X	
3	PC	X	
4	PC	X	
5	PC	X	
6	PC	X	
*PLACE IMPLEMENTED CHANGES INTO BOARD HISTORY			

LEAD/PIN REFERENCE





Yorkville Sound
550 Granite Court
Pickering, Ontario
Canada L1W 3Y8

Phone: (905)837-8550 Ext.218
Fax: (905)839-5776
Email: pmourtos@yorkville.com
www.yorkville.com

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.

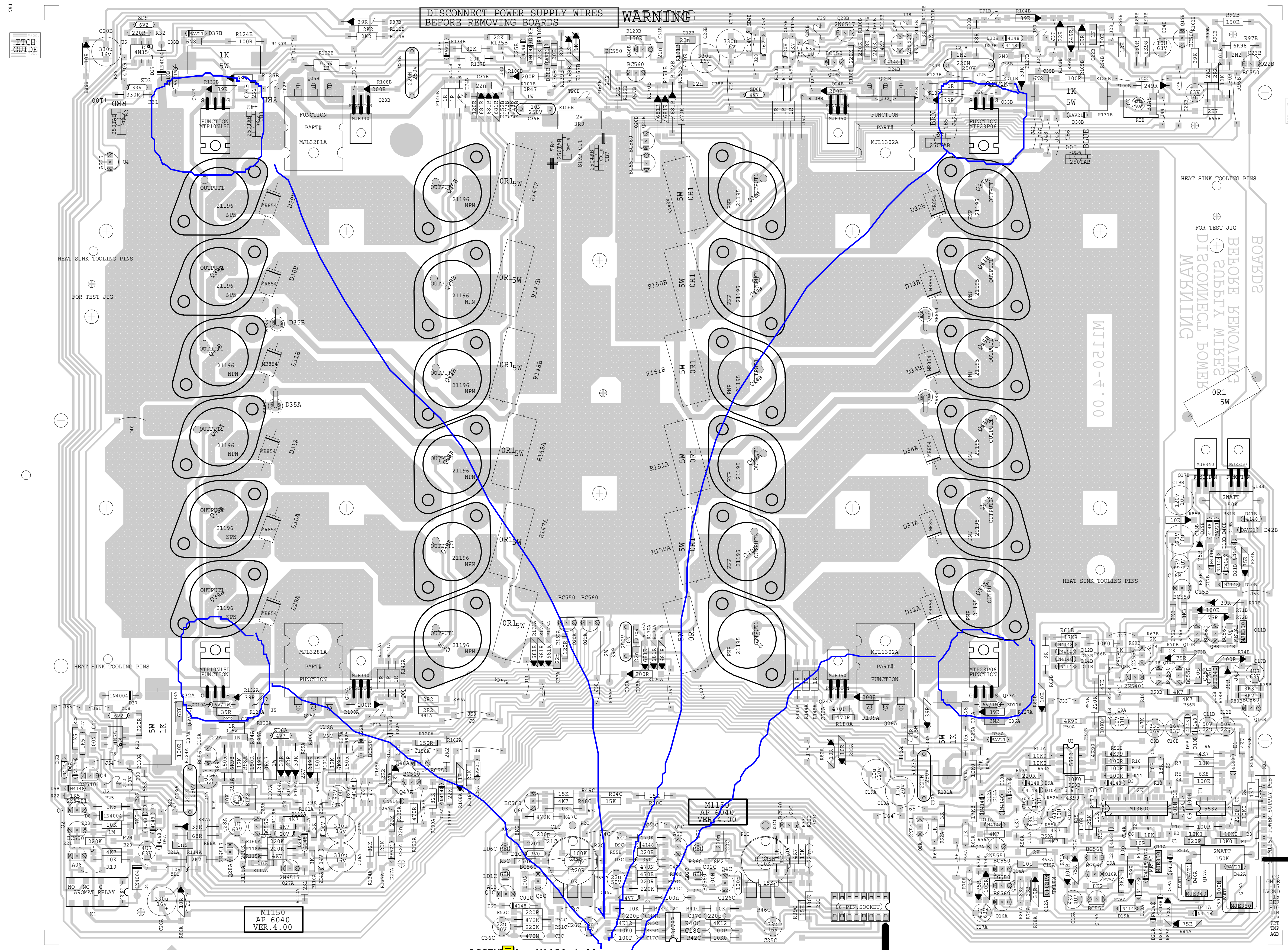
All units should be modified as soon as possible. The units can either be returned to Yorkville for modification, or can easily be modified in the field by a qualified service technician. We will, of course, accept warranty claims for this modification.

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.*

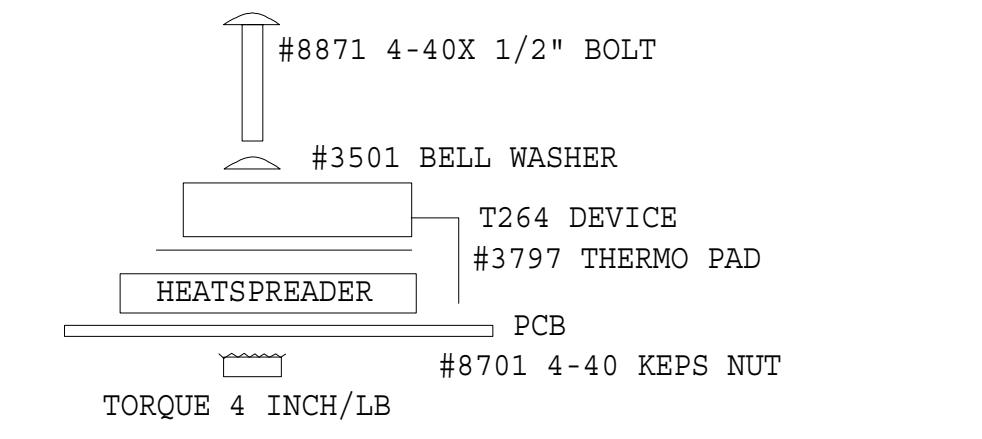
Sorry for any inconvenience caused as a result of this problem. For further technical information or assistance please contact Peter Mourtos at Yorkville Sound via phone at (905)837-8550 Ext.218 or via email at pmourtos@yorkville.com .

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

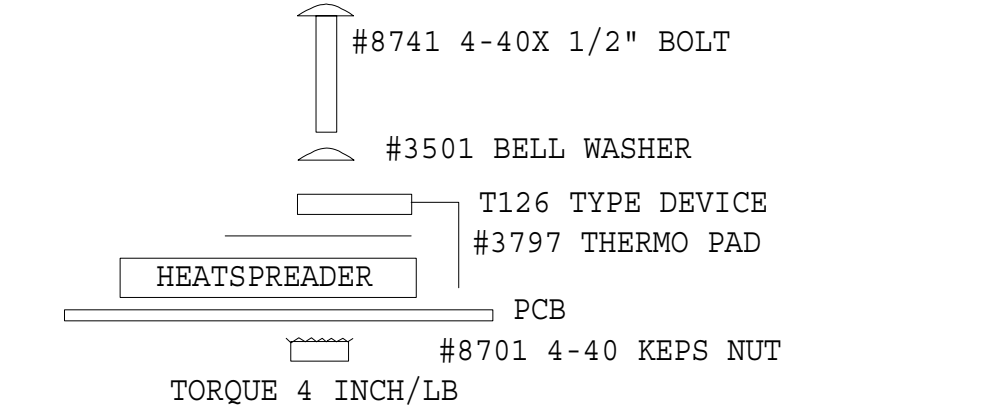


ADD #8629 SPACERS ONLY ON 5 WATT RESISTORS R29, R29A R45 AND R45A

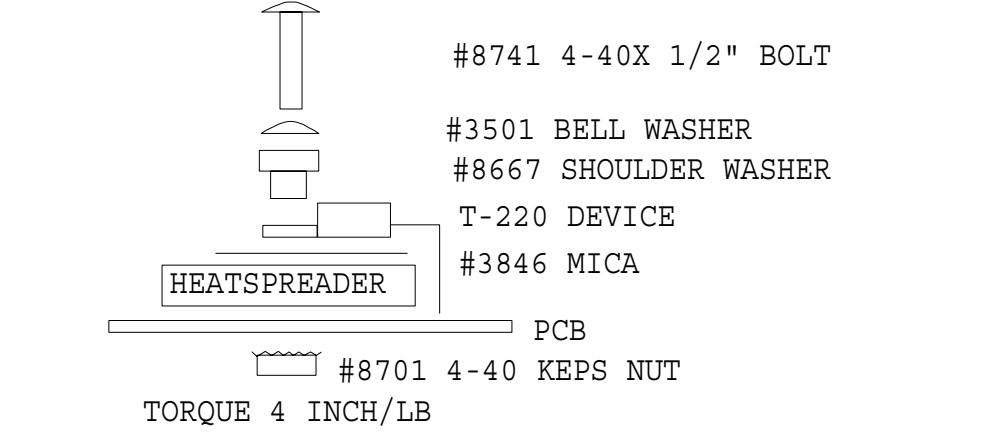
MOUNTING HARDWARE FOR Q5,Q6



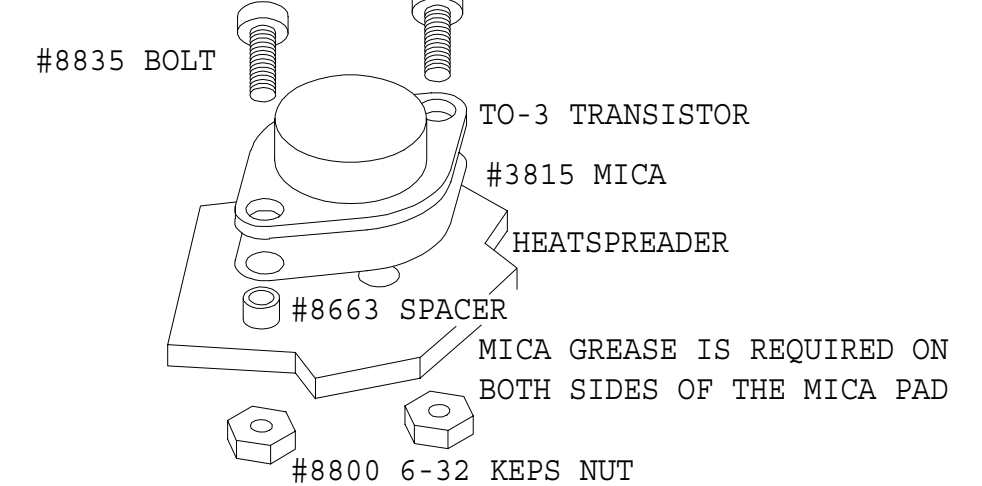
MOUNTING HARDWARE FOR Q40,Q41



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

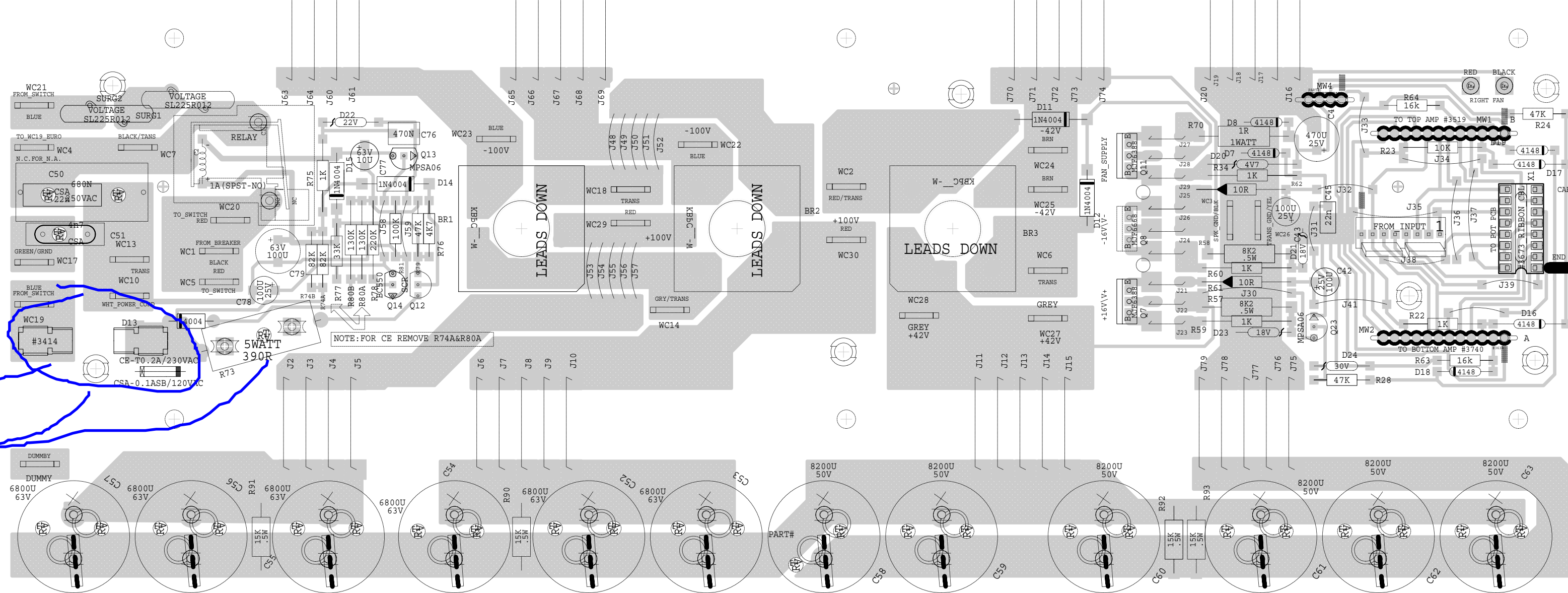
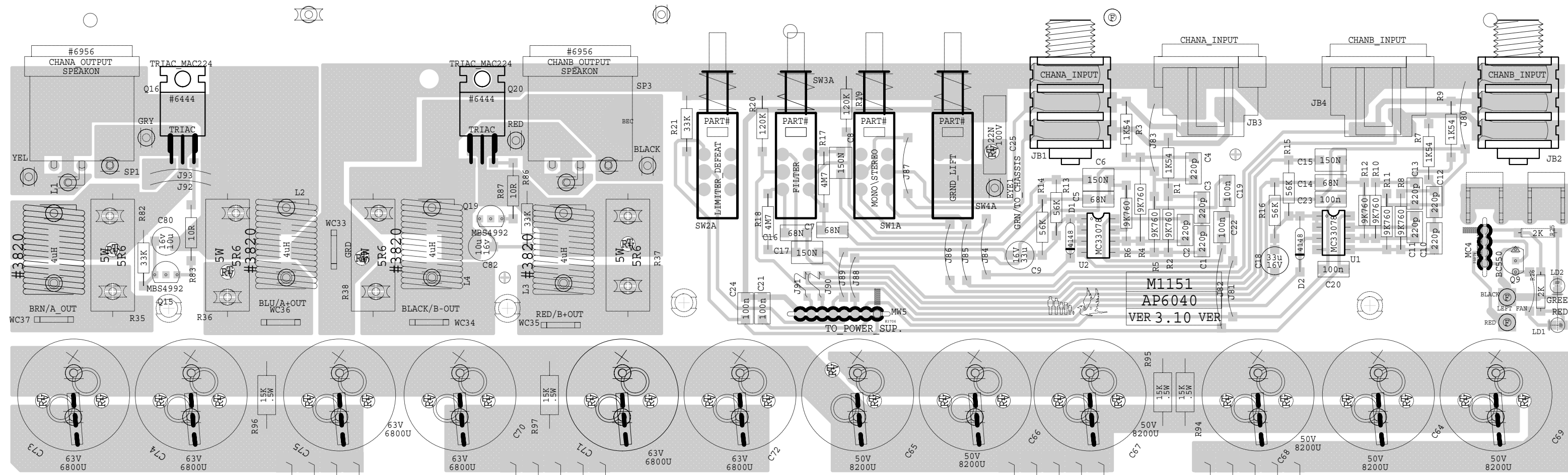
- TAB 2 RED 14AWG
- TAB 3 YEL 14AWG
- TAB 5 BRN 14AWG
- TAB 6 BLU 14AWG
- TAB 4 OUTPUT +
- TAB 7 OUTPUT -

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



ETCH GUIDE

"000.01 X "000.24" M4
 "000.01 X "000.24" M4
 BLANK SIZE=15.000"



VCD 50% COPPER

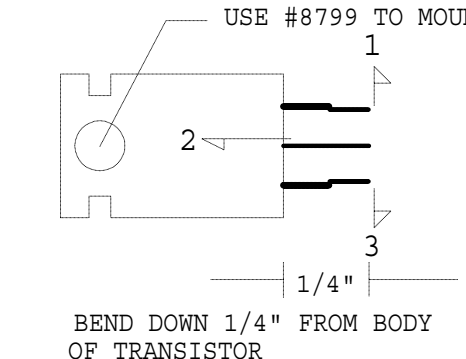
ETCH GUIDE

ASSEMBLY M1151-3.10
 PCB MECH M1151-3.10

SOLDSIDE M1151-3.00

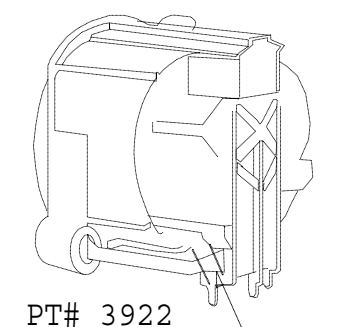
M1151.PCB DATABASE HISTORY			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	AUG/10/99	2.00	PC#6034 LD2 ROTATED
2	.	.	TRIACS Q18,Q22 DELETED. R85,Q17,C81
3	.	.	R84,R88,Q21,C83,R89 DELETED
4	SEP/28/99	3.00	PC#6125 CHANGE SPACING R73_PC#6128
5	.	.	CHANGE SPAING OF COILS
6	OCT/18/99	.	REPLACE 16 PIN IC-SOCKET WITH #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

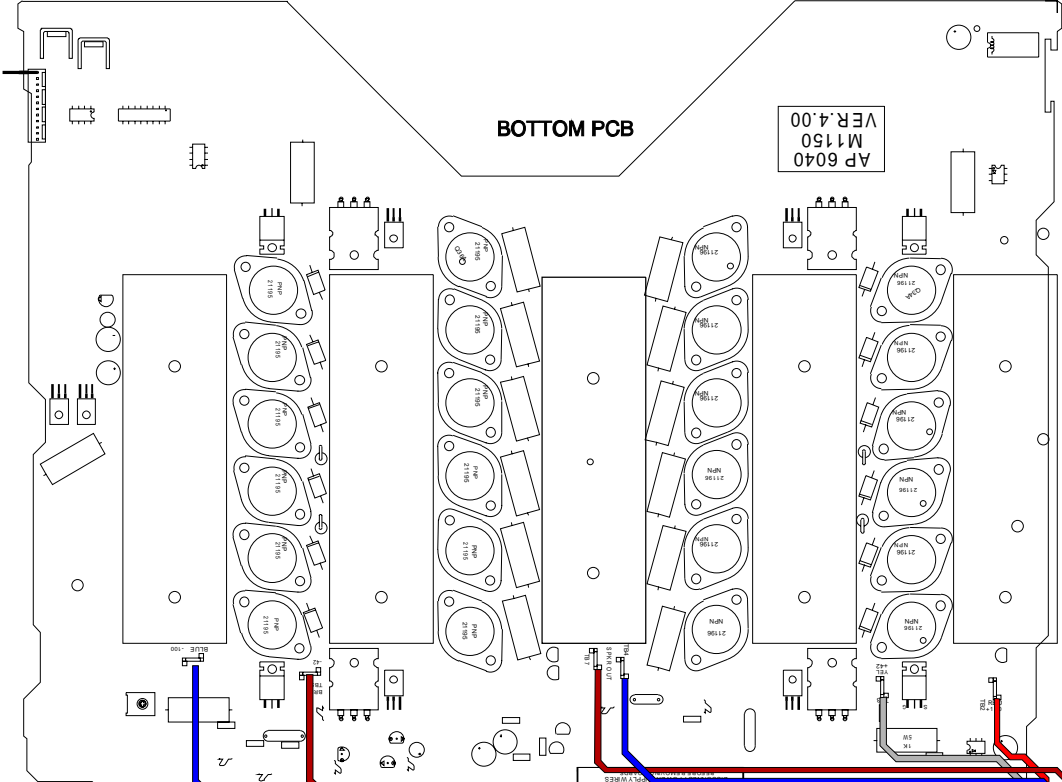


THIS CONNECTION MUST BE BROKEN HERE

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

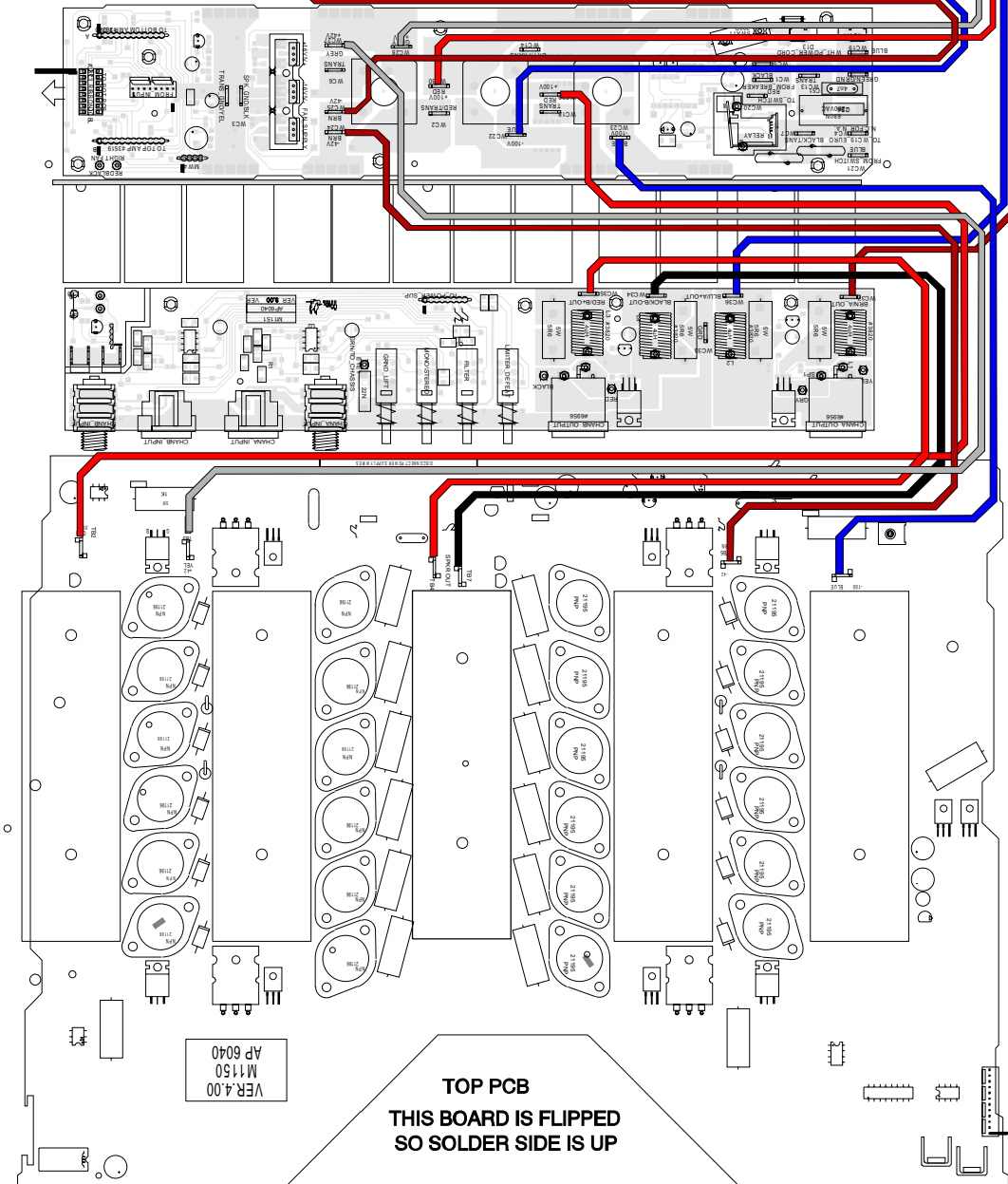
BOTTOM PCB

AP 6040
M150
VER.4.00



TOP PCB
THIS BOARD IS FLIPPED
SO SOLDER SIDE IS UP

AP 6040
M150
VER.4.00



AP6040 Parts List 8/15/2012

YS #	Description	Qty.	YS #	Description	Qty.	YS #	Description	Qty.
6478	AS35FN-T092 TEMPERATURE SENSOR	2	4520	10K TRIM POT	4	6128	1/4W 4K99 1%MINI MF T&R RES	8
5906	RED 3MM LED 1V9 20MA 4SPCER T&R	3	2444	25.00 AMP CIRCUIT BREAKER	1	4978	1/4W 6K8 5%MINI T&R RES	2
5908	GRN 3MM LED 1V9 20MA 4SPCER T&R	3	3820	.4UH COIL 14AWG ZOBEL HORIZONTAL	4	6121	1/4W 6K98 1%MINI MF T&R RES	8
6419	BRIDGE 35A 400V WIRE LEAD GI3504	3	8521	RUBBER BUMPER WITH WASHER VERYSMALL	2	4887	1/4W 7K5 5% T&R RES	2
6425	BAV21 200V 0A25 DIODE T&R	24	3441	CLIP 250X032 16-14AWG RIGHT ANGLE	28	4663	1/2W 8K2 5% T&R RES	2
6825	1N4148 75V 0A45 DIODE T&R	100	3470	CLIP 250X032 14-16AWG DISCO-LOK	8	4990	1/4W 8K2 5%MINI T&R RES	8
6438	1N4007 1000V 1A0 DIODE T&R	13	3485	CLIP 250X032 18-22AWG RIGHT ANGL	1	4762	1/4W 9K760 0.1% *** T&R RES	8
6934	MR854 400V 3A0 DIODE FASREC	32	3601	RING TERMINAL 16AWG WIRE & #8 SCREW	2	4829	1/4W 10K 5% T&R RES	5
6432	1N5248B 18V0 0W5 ZENER 5% T&R	2	3618	STAR RING TERMINAL14-16AWG #10SCREW	4	4983	1/4W 10K 5%MINI T&R RES	5
6433	1N5257B 33V0 0W5 ZENER 5% T&R	2	3380	RED/LEFT/WHITE:RIGHT BIND POST TPP5	1	6116	1/4W 10K0 1%MINI MF T&R RES	24
6436	1N753ARL 6V2 0W5 ZENER 5% T&R	4	3385	RED:RIGHT/WHITE:LEFT BIND POST TPP5	1	4856	1/4W 12K 5% T&R RES	12
6439	1N5225B 3V0 0W5 ZENER 5% T&R	2	3498	1/4" JCK PCB MT HORZ	2	4630	1/2W 15K 5% T&R RES	8
6440	1N750ARL 4V7 0W5 ZENER 5% T&R	6	6956	SPKON 4C PCB MT HORZ GRY #4	2	4830	1/4W 15K 5% T&R RES	6
6461	1N5240BRL 10V0 0W5 ZENER 5% T&R	2	3922	XLR FEML PCB MT HORZ THIN SNAP-IN	2	4876	1/4W 16K 5% T&R RES	2
6465	1N5250B 20V0 0W5 ZENER 5% T&R	4	3864	FAN 92MM X 92MM 60CFM 24VDC	2	4771	1/4W 17K8 1% T&R RES	4
6466	1N5256B 30V0 0W5 ZENER 5% T&R	3	3894	HEATSINK TO-220 W/TAB BLACK ANODIZE	4	6125	1/4W 18K 5%MINI T&R RES	8
6486	1N5244B 14V0 0W5 ZENER 5% T&R	4	3501	B52200F006 COMP WASH #4 SMALL	32	6123	1/4W 20K0 1%MINI MF T&R RES	8
6824	1N5246B 16V0 0W5 ZENER 5% T&R	4	3518	CLEAR PVC TUBING .500" DIA. 105°C	0.35	6118	1/4W 22K 5%MINI T&R RES	8
6822	1N4745A 16V0 1W0 ZENER 5% T&R	8	3799	ROUND BUMPER BUTTON BLACK	1	4840	1/4W 33K 5% T&R RES	11
5101	BC550C TO92 NPN TRAN T&R TB	32	3801	5/8" BUMPER BUTTON BLACK	4	4853	1/4W 39K 5% T&R RES	4
5102	BC560C TO92 PNP TRAN T&R TB	28	3810	4" NYLON CABLE TIE	21	4834	1/4W 47K 5% T&R RES	2
5103	MPSA06 TO92 NPN TRAN T&R TA	3	3827	SQUARE BUMPER BUTTON BLACK	5	6119	1/4W 47K 5%MINI T&R RES	6
5107	2N6551 TO92 NPN TRAN T&R TA	4	8433	KNOB AP SERIES PLASTIC	2	4835	1/4W 56K 5% T&R RES	4
5108	2N5401 TO92 PNP TRAN T&R TA	8	8661	KNOB BUTTON FLAT GREY	4	4836	1/4W 68K 5% T&R RES	2
6854	2N6517 TO92 NPN TRAN TA	9	8437	FAN FILTER LABEL	1	4586	1/4W 82K 5%MINI T&R RES	8
5105	MPSA13 TO92 NPN DARL T&R TA	1	8261	GE VELVET/MATTE LEXAN .007"X12"X24"	0.25	4838	1/4W 100K 5% T&R RES	3
5106	MPSA63 TO92 PNP DARL T&R TA	1	8701	4-40 KEPS NUT ZINC	27	4851	1/4W 120K 5% T&R RES	3
6814	MJF6668 T221D PNP TRAN DARL TJ	1	8666	6-32 X 1/4" PEM THRD SPACER 0.213	4	4894	1/4W 130K 5% T&R RES	2
6815	MJF6388 T221D NPN TRAN DARL TJ	2	8760	6-32 KEPS NUT TIN PLATED	96	4790	2.0W 150K 5%10MM BODY T&R RES	4
6873	MJE340 TO126 NPN TRAN TG	12	8800	6-32 KEPS NUT ZINC	10	4841	1/4W 220K 5% T&R RES	1
6874	MJE350 TO126 PNP TRAN TG	12	8844	6-32 PEMNUT	6	6126	1/4W 220K 5%MINI T&R RES	16
6752	MTP10N15L TO220 NCH MFET TN	4	8841	10-32 KEPS NUT TIN PLATED	3	4842	1/4W 330K 5% T&R RES	1
6933	MTP23P06 TO220 PCH MFET TN	4	3797	TO-247 THERMO CONDUCTIVE PAD	8	6127	1/4W 470K 5%MINI T&R RES	6
6909	MJ21196 TO3 NPN TRAN TH	24	3823	TO-220 THERMO PAD SMALL HOLE	4	4844	1/4W 1M 5% T&R RES	2
7004	2SA2121-0 TO3P PNP TRAN TK	4	3846	TO220 THERMO PAD LARGE HOLE 56359B	8	4888	1/4W 4M7 5% T&R RES	2
7005	2SC5949-0 TO3 NPN TRANSISTOR TK	4	3916	TO3 SIL-PAD REPLACES MICA	48	6132	1/4W 8M2 5%MINI T&R RES	2
6910	MJ21195 TO3 PNP TRAN TH	24	4124	SILPAD 1500ST 1.100 X0.820 BERQUIST	8	4809	1/4W 10M 5% T&R RES	2
6840	MC33078P IC DUAL OP AMP	3	8498	6-32 X 3/8 STEEL PEM STUD	6	3673	14" 18C-28AWG DIP HDR CABLE .05"	1
6884	NE5532N IC DUAL OP AMP	4	4597	22AWG STRAN TC WIR JMP	49	3019	RELAY 1C 30AMP DC110 08MA PC-C	1
6745	LM13600N IC XCONDUCTANCE AMP	2	4599	22AWG SOLID SC WIR T&R JMP	126	3700	RELAY 2C 01AMP DC24 015MA PC-S	2
5190	MBS4992 TO92 8V5 DIAC T&R	2	5299	24AWG SOLID SC WIR RAD JMP	4	8870	#4 X 1/4 PAN PH TYPE A ZINC	2
6517	BTB24-600 TO220AB 25A TRIAC 600V	2	4745	5.0W 0R1 5% BLK RES	24	8729	#4 X 3/8 FLAT QUAD TYPE A JS500 BLK	8
6880	4N35 OPTO-COUPLER	4	2005	1.0W 0R47 5%FLAME PROOF T&R RES	4	8799	#6 X 1/4 PAN PH TYPE B JS500	4
6489	5R 20% THERM-SURGR NTC KNK LEADS	2	2006	1.0W 1R 5%FLAME PROOF T&R RES	1	8753	#10 X 1/2 PAN QUAD TY A JS500 BLACK	3
5401	10P 500V 5%CAP T&R RAD CER.2NPO	12	2007	1/4W 1R 5%FLAME PROOF T&R RES	24	8865	4-40 X 5/16 PAN PH MS JS500	4
5199	100P 100V 2%CAP T&R RAD CER.2NPO	2	4677	1/2W 1R 5% T&R RES	8	8861	4-40 X 3/8 PAN PH MS JS500	3
5410	100P 100V 10%CAP T&R BEAD NPO	2	4911	1/4W 2R2 5% T&R RES	16	8741	4-40 X 1/2 PAN PH MS JS500	20
5197	220P 100V 2%CAP T&R RAD CER.2NPO	12	4748	2.0W 3R9 5% T&R	8	8871	4-40 X 5/8 PAN PH MS JS500	8
5412	220P 100V 10%CAP T&R BEAD NPO	4	4733	5.0W 5R6 5% BLK RES	4	8902	4-40 X 3/4 PAN PHIL MS B/O & WAX	8
5206	1N 400V 5%CAP T&R RAD 2FLM	10	2009	1/4W 10R 2%FLAME PROOF T&R RES	2	8832	6-32 X 1/4 PAN PH TAPTITE JS500	7
5273	1N5 200V 5%CAP T&R RAD CER.2NPO	2	2010	1/6W 10R0 2%FLAME PROOF T&R RES	12	8807	6-32 X 5/16 PAN PH MS JS500	2
5208	2N2 400V 5%CAP T&R RAD 2FLM	14	4875	1/4W 10R 5% T&R RES	2	8801	6-32 X 3/8 PAN PH TAPTITE JS500	4
6451	4N7 250V 20%CAP BLK Y 10MM AC	1	2039	1/4W 22R0 FUSIBLE T&R RES	4	8829	6-32 X 3/8 FLAT PH TAPTITE BO#C HEA	78
5272	6N8 100V 5%CAP T&R RAD 2FLM	8	2016	1/6W 39R 2%FLAME PROOF T&R RES	36	8761	6-32 X 1/2 PAN PHIL MS ZINC CLEAR	96
5204	10N 100V 10%CAP T&R RAD 2FLM	2	4811	1/4W 68R 5% T&R RES	4	8999	8-32 X 5/8 PAN PH TAPTITE JS500	20
5834	10N 400V 10%CAP BLK RAD POLY FLM	4	2018	1/6W 75R 2%FLAME PROOF T&R RES	16	8809	10-32 X 1/4 PAN PH TAPTITE JS500	8
5210	22N 100V 10%CAP T&R RAD 2FLM	17	2019	1/8W 100R0 1%FLAME PROOF T&R RES	32	8773	10-32 X 1 1/4 PN PH TT FULL THD JS5	3
6435	22N 275V 20%CAP BLK X2 15MM AC	2	4987	1/4W 120R 5%MINI T&R RES	4	8772	1/4-20 X 1 TRUSS PH MS JS500 BLACK	2
5226	68N 100V 5%CAP T&R RAD 2FLM	4	4984	1/4W 150R 5%MINI T&R RES	20	3351	16 PIN SCKT CLOSED FRAME DIP ONLY	1
5228	100N 100V 5%CAP T&R RAD 2FLM	10	2021	1/4W 200R0 1%FLAME PROOF T&R RES	12	8663	11/64 NYLON SPACER (MICRO PLASTIC)	96
5314	100N 50V 10%CAP T&R BEAD X7R	4	4977	1/4W 220R 5%MINI T&R RES	12	8851	250 SPACER ID.190 OD.31 ALUMINIUM	6
5229	150N 63V 10%CAP T&R RAD 2FLM	4	2046	1/4W 240R FUSIBLE T&R RES	8	3744	SNAP IN .375 SPACER RICHO	4
5231	220N 63V 5%CAP T&R RAD 2FLM	2	4867	1/4W 270R 5% T&R RES	2	3743	SNAP ON 0.5" SPACER RICHO	6
5882	220N 250VDC 10%CAP BLK RAD PLY FLM	8	4945	1/4W 270R 5% 2"U T&R RES	2	3851	1/2 PCB PLASTIC SPACER	11
5234	470N 63V 10%CAP T&R RAD 2FLM	1	4855	1/4W 330R 5% T&R RES	2	3417	6-32 SCREW TERMINAL PC MNT SNAP-IN	4
5322	470N 50V 20%CAP T&R BEAD 25U	2	4980	1/4W 470R 5%MINI T&R RES	12	8629	10-32 X 1/4 SPACER PHENOLIC	12
5255	1U 63V 20%CAP T&R RAD 2EL	4	2030	1/6W 681R 1%FLAME PROOF T&R RES	24	8667	SHOULDER WASHER SWS-229 LENGTH 1/8	8
5259	4U7 63V 20%CAP T&R RAD 2	8	2033	1/6W 1K 2%FLAME PROOF T&R RES	16	3511	#6 FLAT WASHER NYLON	2
5269	4U7 100V 20%CAP T&R RAD LESR2	2	4726	5.0W 1K 5% BLK RES	9	8485	#6 SPLIT WASHER ZINC	8
5629	10U 160V 20%CAP BLK 10X13MM EL	9	4823	1/4W 1K 5% T&R RES	3	8852	#6 INTERNAL TOOTH LOCKWASHER	1
5945	10U 63V 20%CAP T&R RAD 2EL	8	4988	1/4W 1K5 5%MINI T&R RES	8	8818	3/4 OD X 3/8 ID X .080 THICK WASHER	1
5959	10U 450V 20%CAP BLK EL	1	4791	1/4W 1K54 1% T&T RES	4	3517	NYLON WASHER #8 0.062	9
5260	22U 50V 20%CAP T&R RAD 2EL	10	6113	1/4W 2K 5%MINI T&R RES	10	3436	DPDT PUSH SW PCMT H BREAK B4 MAKE	4
5961	33U 16V 20%CAP T&R RAD 2IN NP	14	6104	1/4W 2K2 5%MINI T&R RES	8	3587	DPDT ROKR SW QUIK 250°AC/PWR ON-OFF	1
5267	100U 25V 20%CAP T&R RAD 2EL	2	4864	1/4W 2K7 5% T&R RES	4	CH1194-1	AP6040 / V64 XFMR	1
5630	330U 25V 20%CAP BLK 10X13MM EL	12	6124	1/4W 3K 5%MINI T&R RES	12	3511	#6 FLAT WASHER NYLON	2
5618	470U 25V 20%CAP BLK 10X15MM EL	1	6136	1/4W 3K3 5%MINI T&R RES	8	8485	#6 SPLIT WASHER ZINC	8
5895	6800U 63V 20%CAP BLK 25X50MM	12	5032	5.0W 3K6 5% STANDOFF BLK RES	1	8852	#6 INTERNAL TOOTH LOCKWASHER	1
5898	8200U 50V 20%CAP 25X50MM ELS	12	4774	1/4W 4K12 1% T&R RES	2	8818	3/4 OD X 3/8 ID X .080 THICK WASHER	1
4390	10K AUD 16MM DETENT P22	2	4982	1/4W 4K7 5%MINI T&R RES	34	3517	NYLON WASHER #8 0.062	9