



1200W into 4 ohms per channel



SERVICE MANUAL

TYPE: YS1026

A4.4

WEB ACCESS: <http://www.yorkville.com>

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

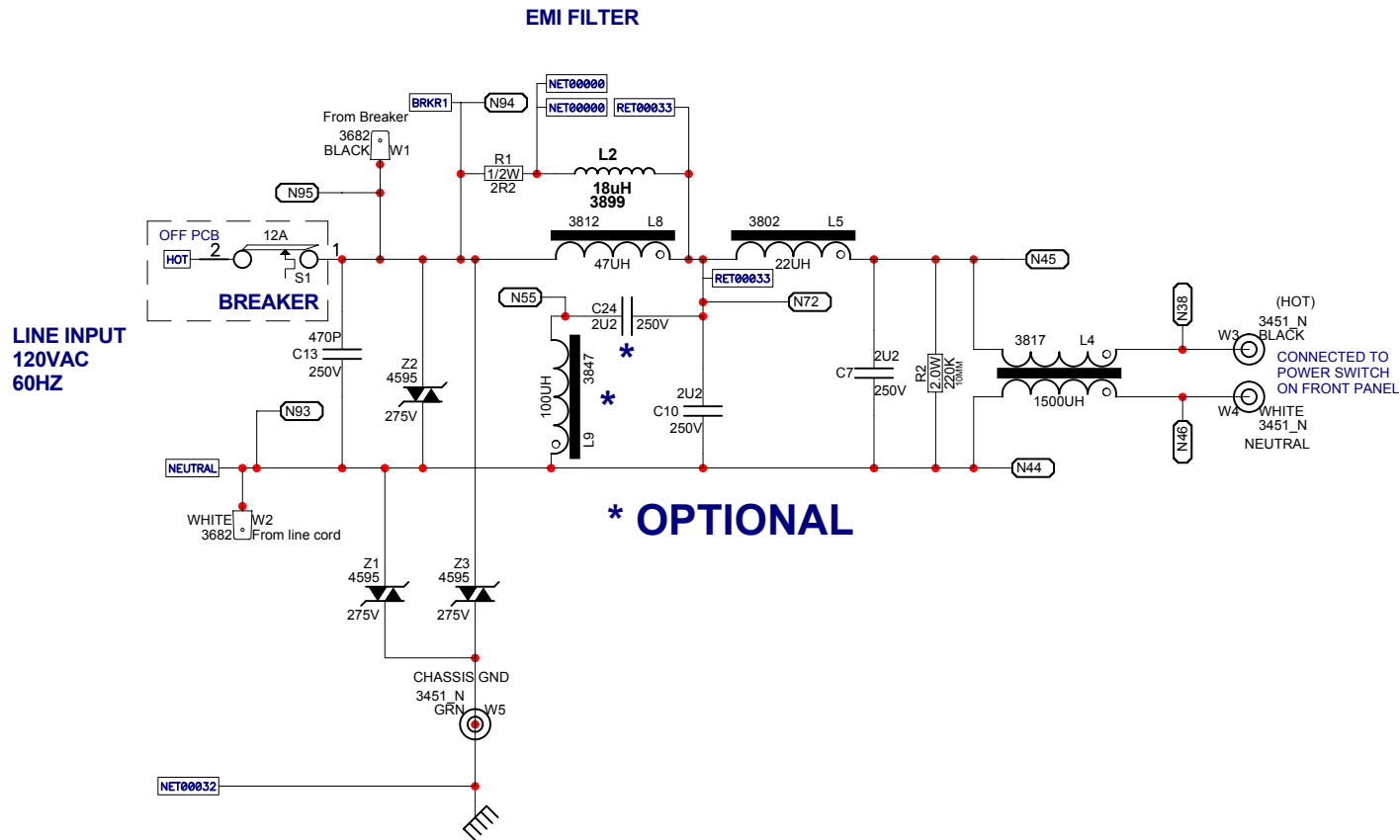
Les dispositifs marqués d'une symbole "d'éclair" sont des parties dangereuses au toucher et que les câblages extérieurs connectés à ces dispositifs de connection extérieure doivent étre effectués par un opérateur formé ou en utilisant des cordons déjà préparés.

Cordon d'alimentation:

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

Service:

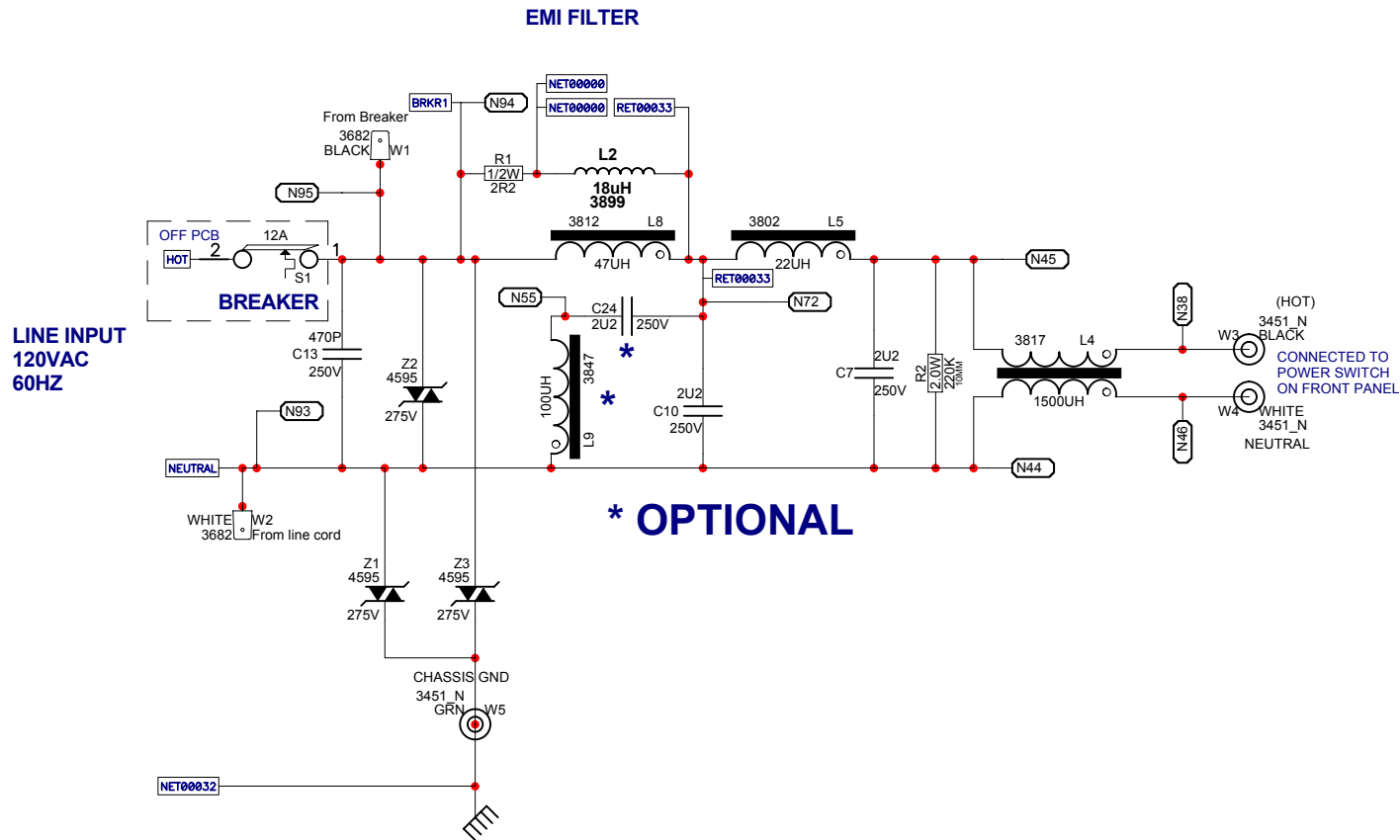
Consultez un technicien qualifié pour l'entretien de votre appareil.



M1164 LINE FILTER FOR (SMPS)			
MODEL(S):- A4.4 / A4.4CE			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	AUG 28 2001	V2.00	Mounting NPH changed from 156 to 189
2	Sept 17 2001	V2.00	W3 & W4 changed from tab to eyelets
3	SEPT 17 2001	V2.00	L4,L5,L8 POLARITY SHOWN
4	OCT 04 2001	V2.00	ADD L2&R1 ACROSS L8
5	JAN 24 2002	V2.10	pc#6497 ADD R2 ACROSS C7
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



Product {Drawing Number}		
EMI FILTER	PCB# M1164	Sheet 1 of 2
Date: Sat Feb 23, 2002		Rev: V2.10
Filename: M11642V1sch.SCH2001		



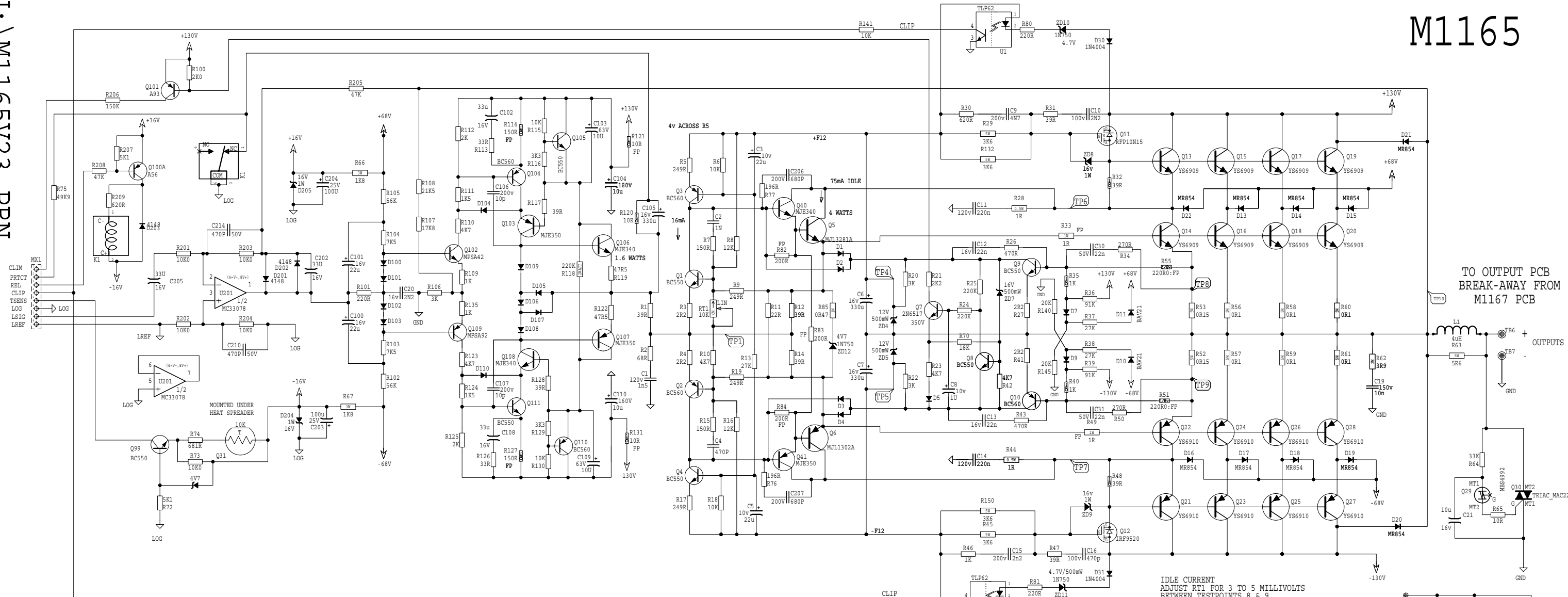
M1164 LINE FILTER FOR (SMPS)			
MODEL(S):- A4.4 / A4.4CE			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	AUG 28 2001	V2.00	Mounting NPH changed from 156 to 189
2	Sept 17 2001	V2.00	W3 & W4 changed from tab to eyelets
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4	OCT 04 2001	V2.00	ADD L2&R1 ACROSS L8
5	JAN 24 2002	V2.10	pc#6497 ADD R2 ACROSS C7
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



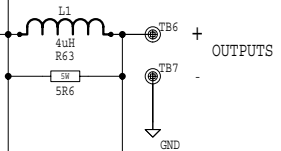
Product {Drawing Number}		
EMI FILTER	PCB# M1164	Sheet 1 of 2
Date: Sat Feb 23, 2002		Rev: V2.10
Filename: M11642V1sch.SCH2001		

M1165

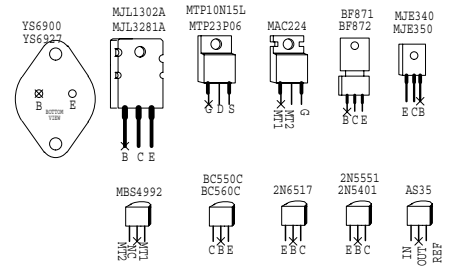
J:\M1165V23.PRN



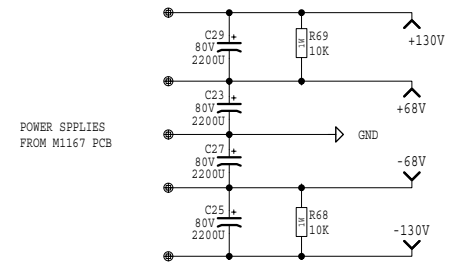
TO OUTPUT PCB
BREAK-AWAY FROM
M1167 PCB

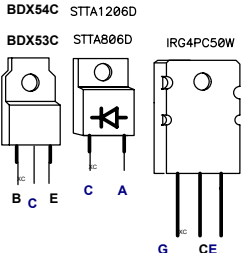
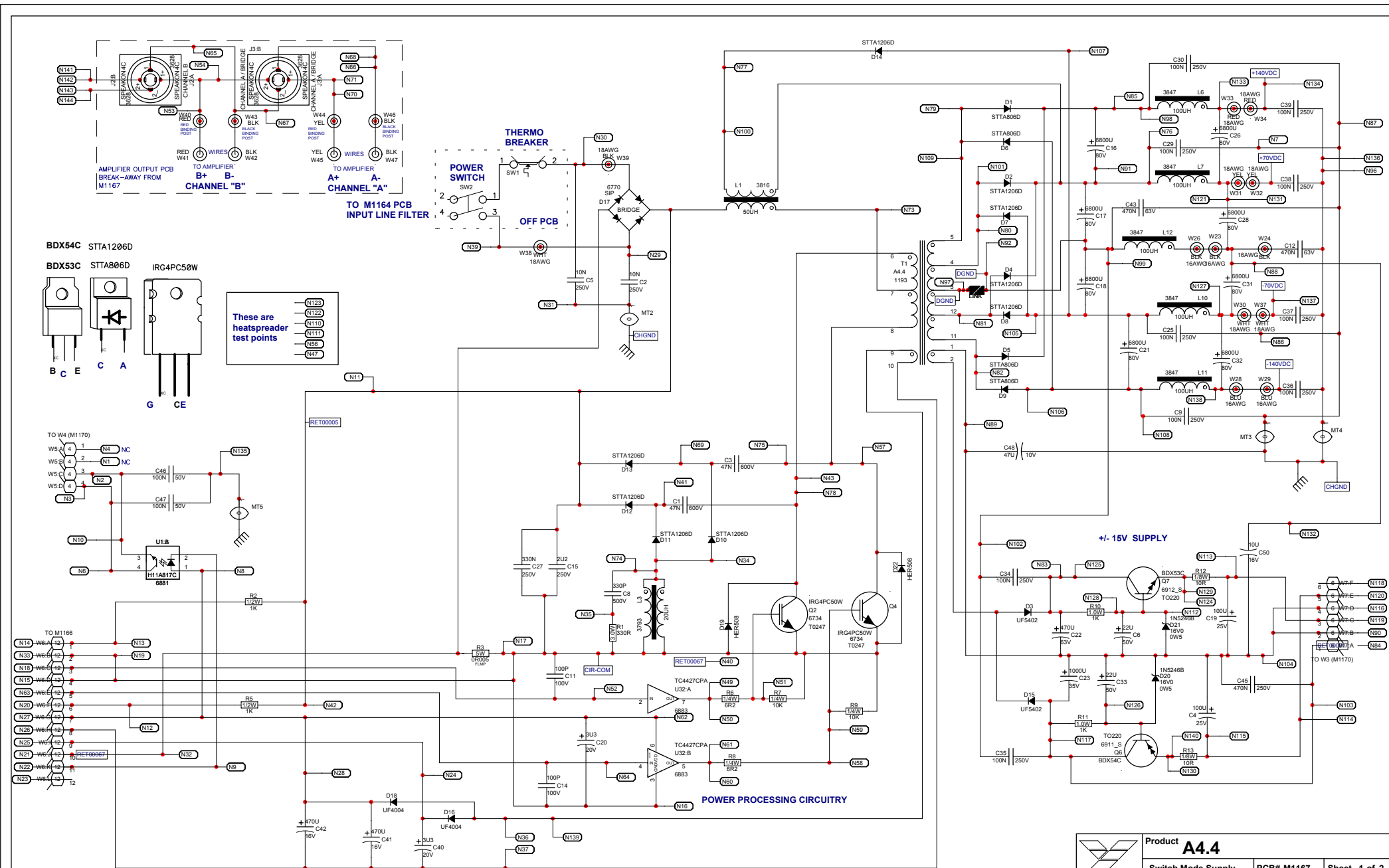


IDLE CURRENT
ADJUST RT1 FOR 3 TO 5 MILLIVOLTS
BETWEEN TESTPOINTS 8 & 9
FP = FLAME PROOF



M1165.SCH DATABASE HISTORY			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	SEP/05/01	V2.00	R72-->5K1, R66&R67-->1K8/3W
2	SEP/05/01	2.00	ADD 470R&220P ACROSS (BASE-EMITTER)
3	D	V	Q40K041
4	OCT/18/01	2.00	YS6900-->YS6909&YS6927-->YS6910
5	JAN/21/02	2.10	PC#6495 R76/R77 470R->196R C206/C207 220P->5680P PC#6510 ADD R141 @ U1 C23, 25, 27, 29 4700u->2200u
6	FEB/05/02	2.20	
7	FEB/12/02	2.30	
8	D	V	
9	D	V	
10	D	V	





These are heatspreader test points

- N123
- N122
- N110
- N111
- N56
- N47

BIAS SUPPLY

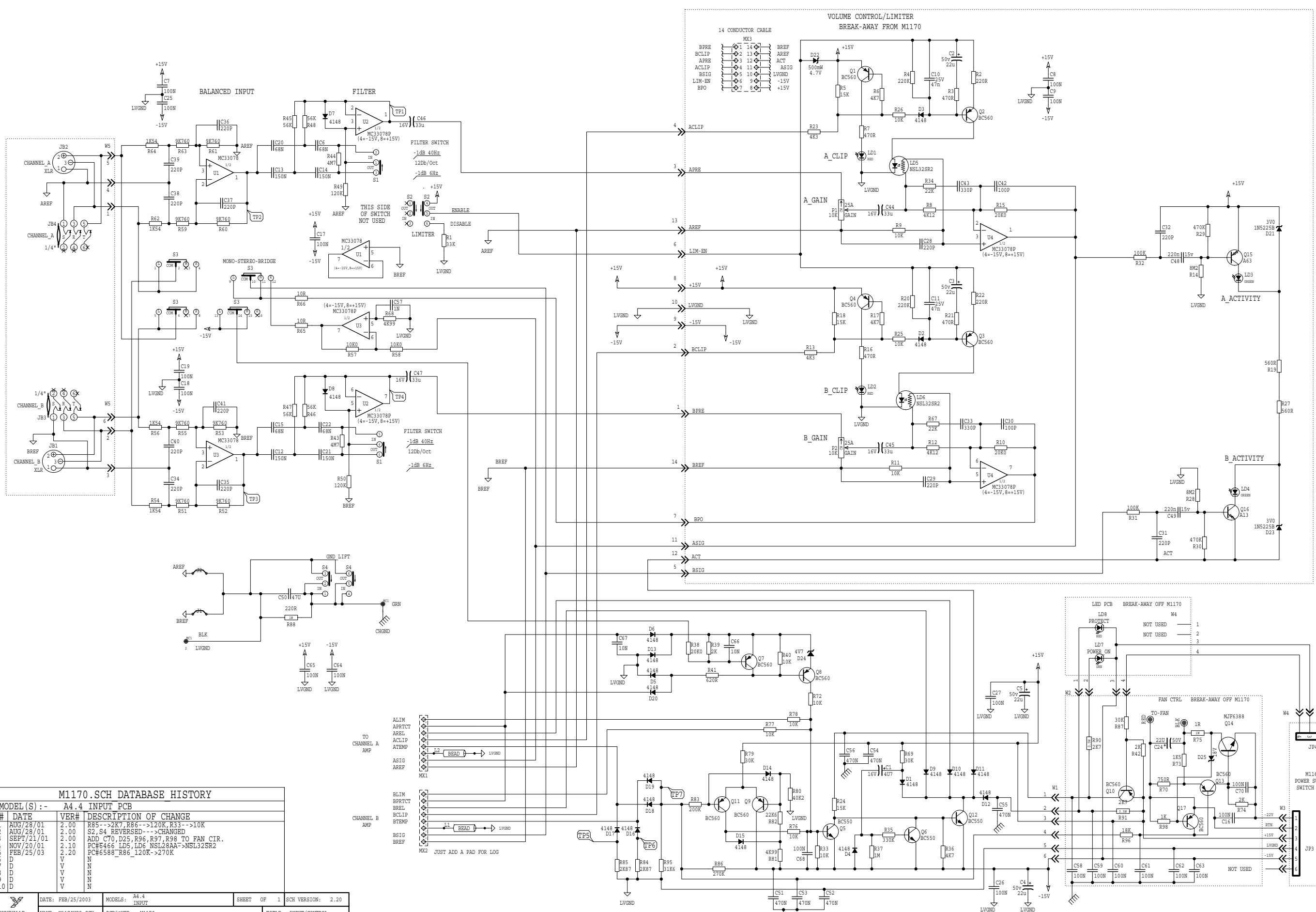
POWER PROCESSING CIRCUITRY

+/- 15V SUPPLY

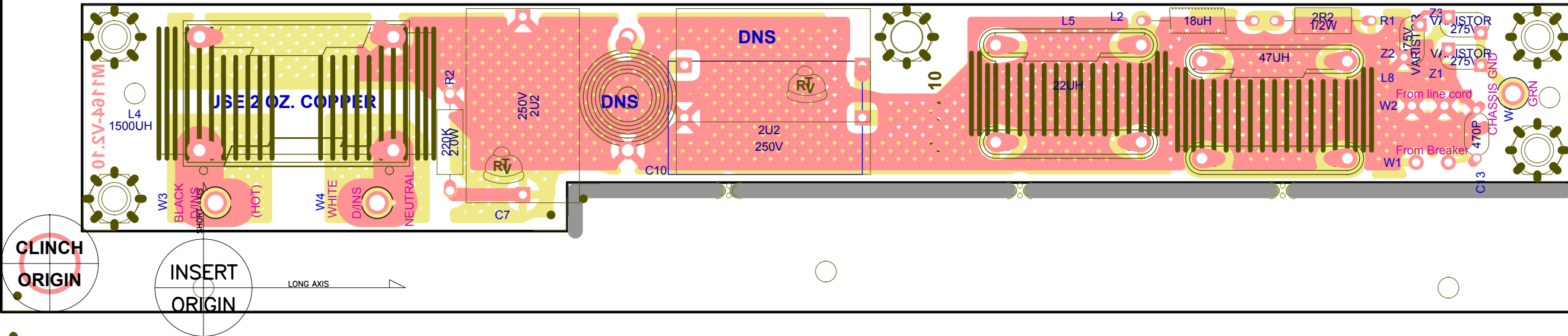
NOTE: PRIMARY LINE IS LIVE
DANGER HIGH VOLTAGE ON PRIMARY SIDE



Product A4.4		
Switch Mode Supply	PCB# M1167	Sheet 1 of 2
Date: Tue Oct 07, 2003	Rev: 2.20	
Filename: m1167 2V2 SCH.SCH2002		



M1170.SCH DATABASE HISTORY			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	AUG/28/01	2.00	R85-->2K7, R86-->120K, R33-->10K
2	AUG/28/01	2.00	S2, S4 REVERSED-->CHANGED
3	SEPT/21/01	2.00	ADD C70, D25, R96, R97, R98 TO FAN CIR.
4	NOV/20/01	2.10	PC#6466 LD5, LD6 NSL28AA->NSL32SR2
5	FEB/25/03	2.20	PC#6588_R86_120K->270K
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D	V	N



M1164 LINE FILTER FOR (SMPS)

MODEL(S):- A4.4 / A4.4CE

#	DATE	VER#	DESCRIPTION OF CHANGE
1	AUG 28 2001	V2.00	Mounting NPH changed from 156 to 189
2	Sept 17 2001	V2.00	W3 & W4 changed from tab to eyelets
3	SEPT 17 2001	V2.00	L4,L5,L8 POLARITY SHOWN
4	OCT 04 2001	V2.00	ADD L2&R1 ACROSS L8
5	FEB 14 2002	V2.1	ADD R2 220K 2W ACROSS C7
6	FEB 14 2002	V2.1	FIX HOLE SIZE FOR L5&L8
7	FEB 14 2002	V2.1	FIX MASKING PROBLEM FOR R1&L2
8	D	V	N
9	D	V	N
10	D	V	N
11	D	V	N
12	D	V	N
13	D	V	N

M1164 PENDING CHANGES

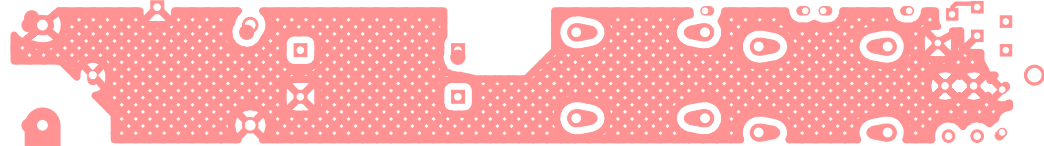
MODEL(S):- A4.4

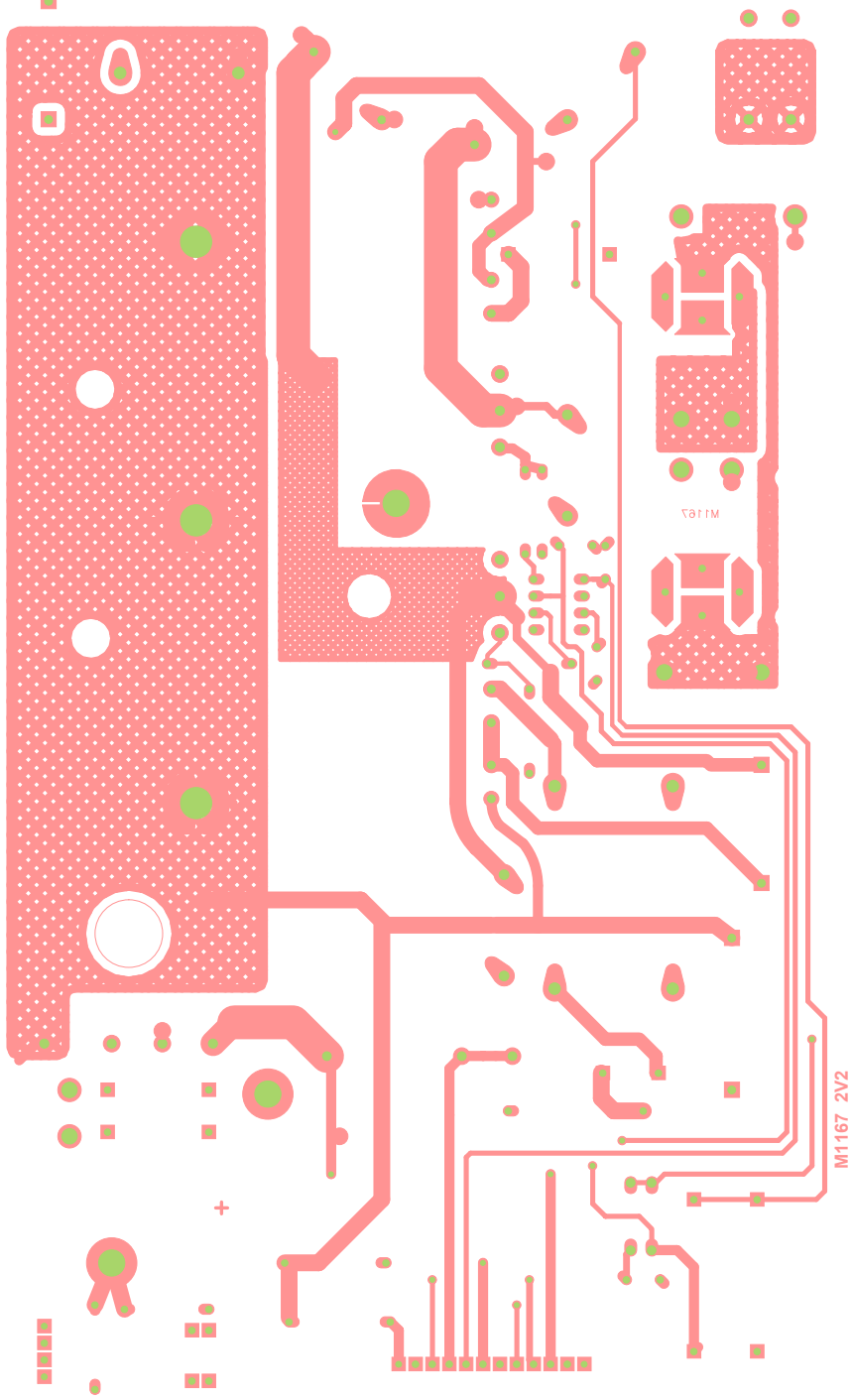
#	PC#	PENDING CHANGE
1	PC	Force update parts #4595, 5521, 3682 which have new pads that reduce the chance of shorting.
2	PC	
3	PC	X
4	PC	X
5	PC	X
6	PC	X
7	PC	X
8	PC	X
9	PC	X
10	PC	X
11	PC	X
12	PC	X
13	PC	X

*PLACE IMPLEMENTED CHANGES INTO BOARD HISTORY

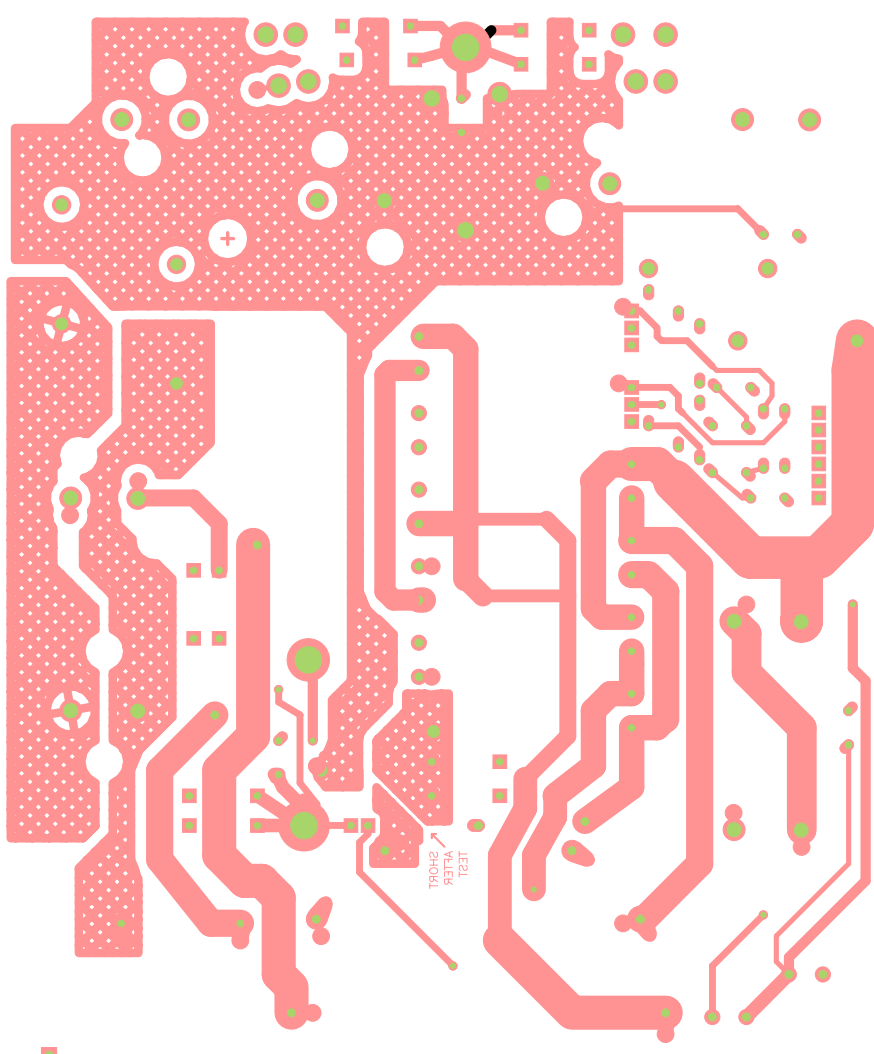


Ø1.5V-4ø11M



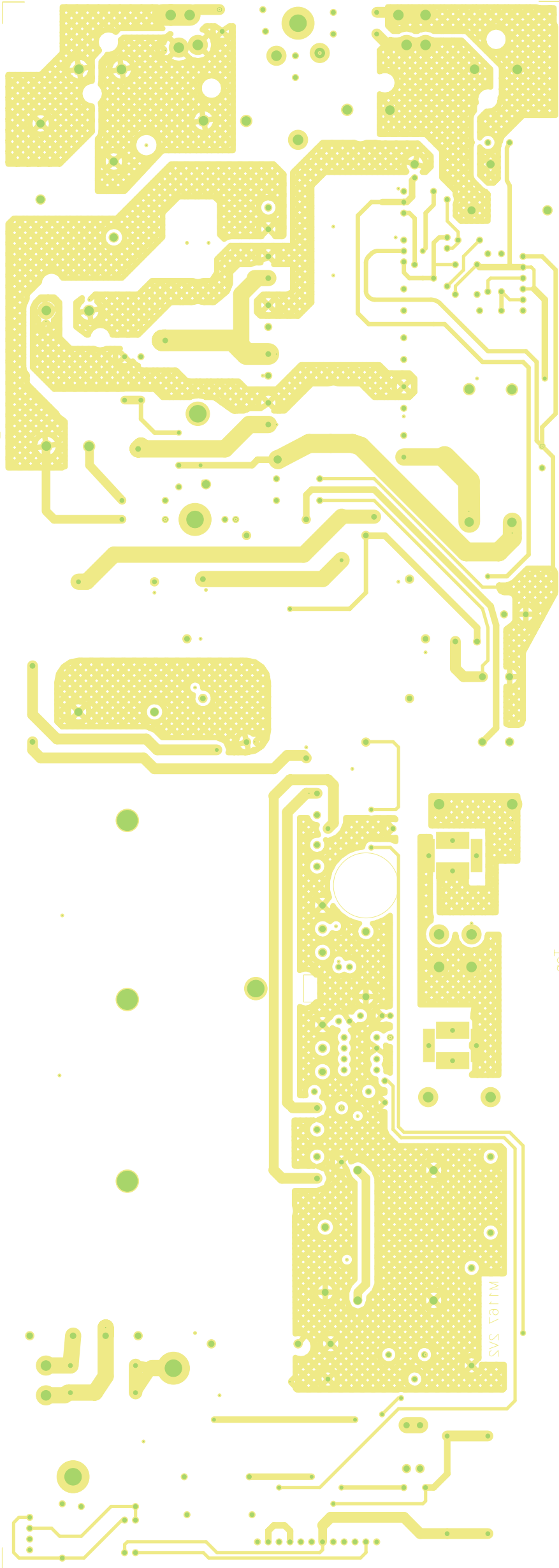


D2 Bottom M1167SAS



0.005"
0.005"
0.010"
0.010"
0.020"

PROBE
GAGE
CATCHHOLE



qoT

USE 2 OZ. COPPER

0.005"
0.005"
0.010"
0.010"
0.020"

.005"
.010"
.010"
.020"

BLANK SIZE=14.500" X 9.500" X 0.0625" (1.1875" X 2.4125" X 0.015625")

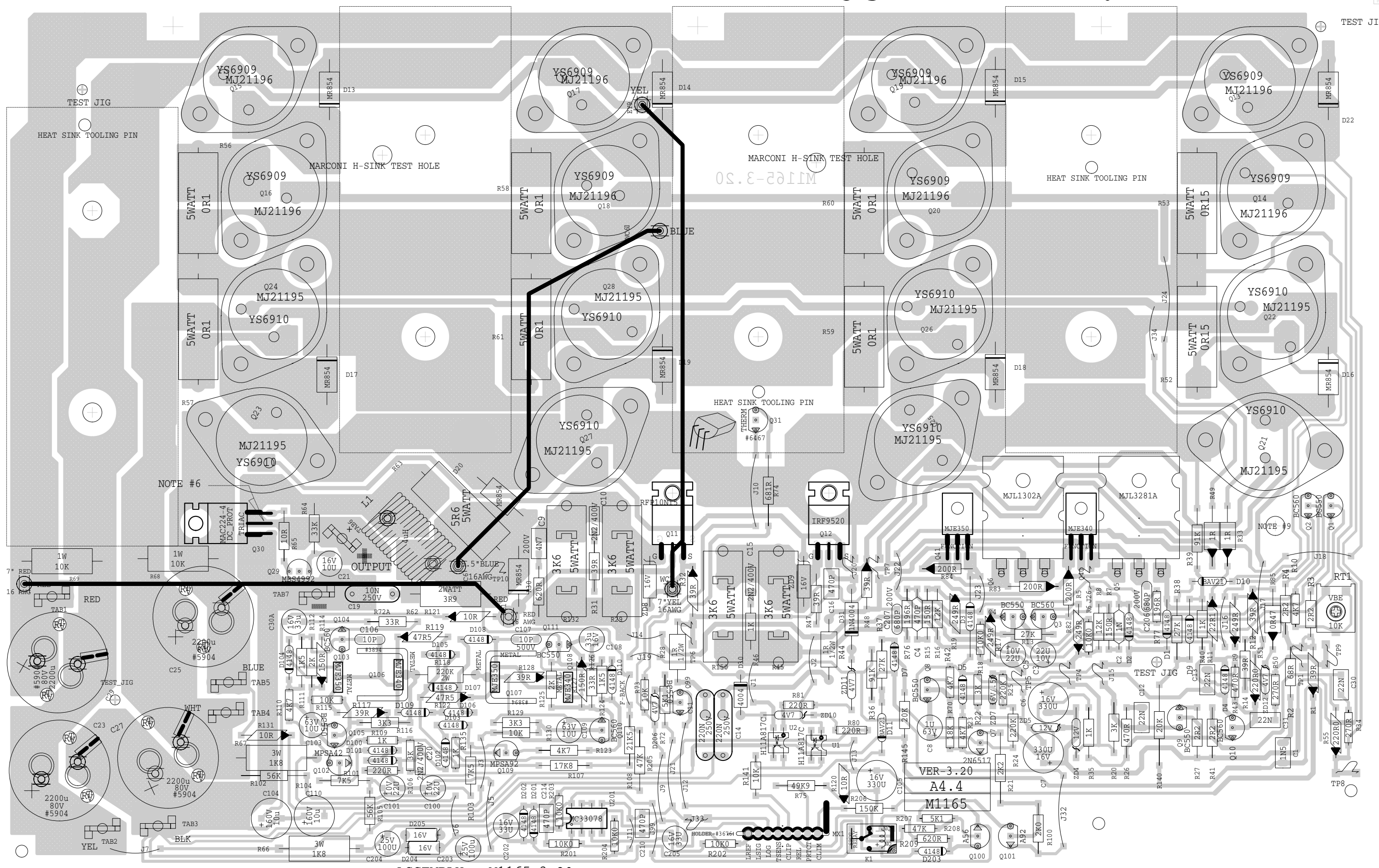
SOZ COBBLER

BLANK SIZE=14.500" X 9.500" X 0.0625" (1.1875" X 2.4125" X 0.015625")

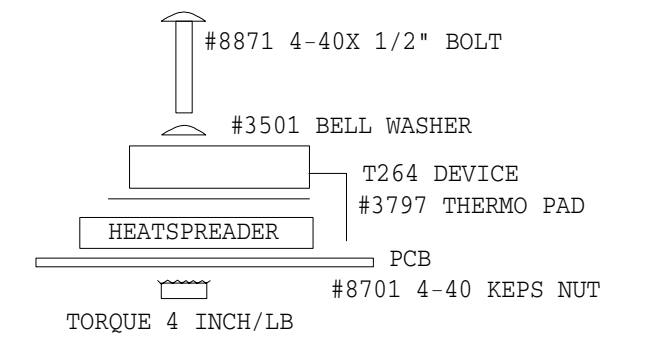
M1165

A4.4

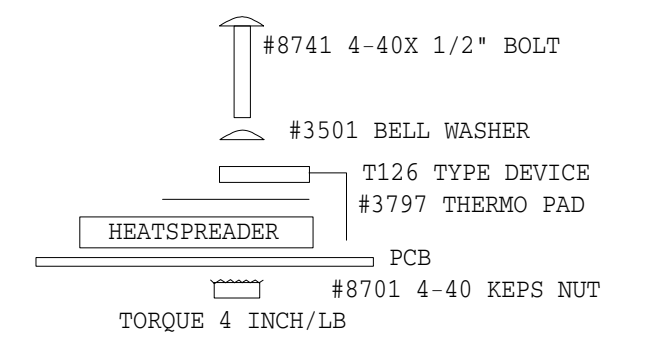
PRODUCTION NOTES



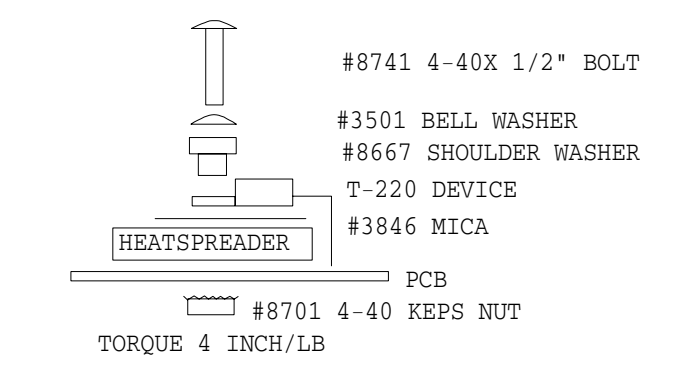
1 MOUNTING HARDWARE FOR Q5,Q6



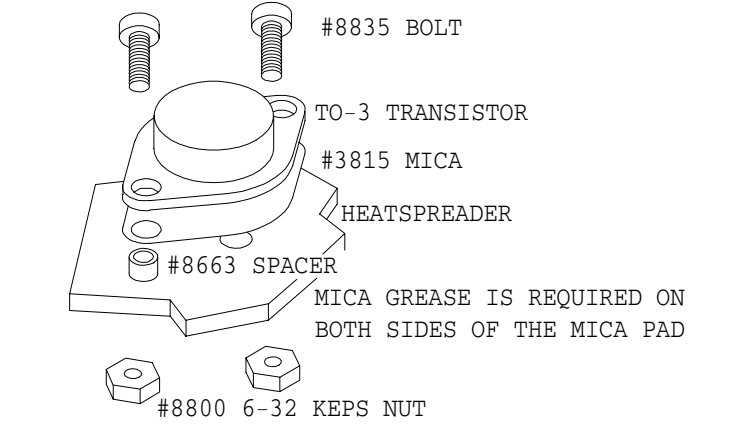
2 MOUNTING HARDWARE FOR Q40,Q41



3 MOUNTING HARDWARE FOR Q11,Q12



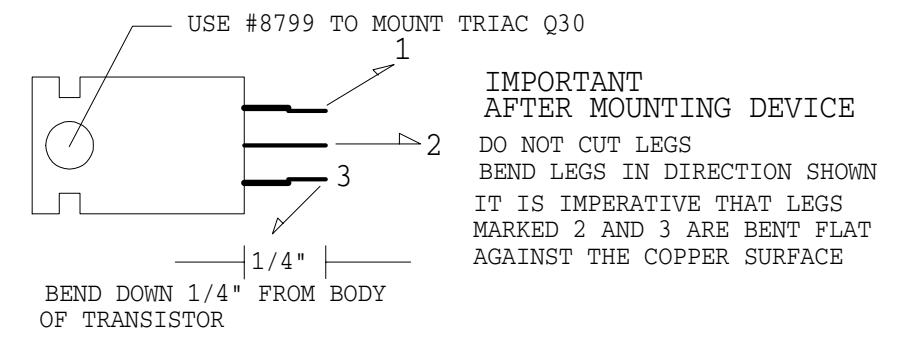
4 MOUNTING HARDWARE FOR TO3 OUTPUTS



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

5 USE #4973FP SMALL BODY 1R 1W FOR R33,R49

6 MOUNTING DETAILS FOR Q30 TRIAC



IMPORTANT AFTER MOUNTING DEVICE DO NOT CUT LEGS BEND LEGS IN DIRECTION SHOWN IT IS IMPERATIVE THAT LEGS MARKED 2 AND 3 ARE BENT FLAT AGAINST THE COPPER SURFACE

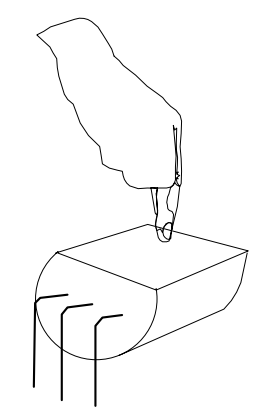
M1165 USE 2 oz. COPPER

ASSEMBLY M1165-3.20
PCB MECH M1165-3.20

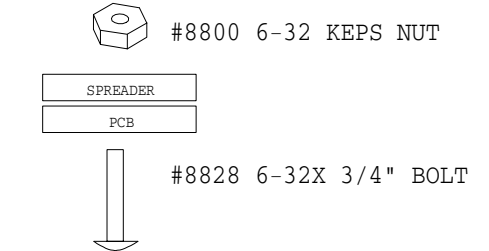
7 TAB WIRE COLOURS

TAB 1	RED	16AWG
TAB 2	YEL	16AWG
TAB 3	BLK	16AWG
TAB 4	WHT	16AWG
TAB 5	BLU	16AWG
TAB 6	OUTPUT +	
TAB 7	OUTPUT -	

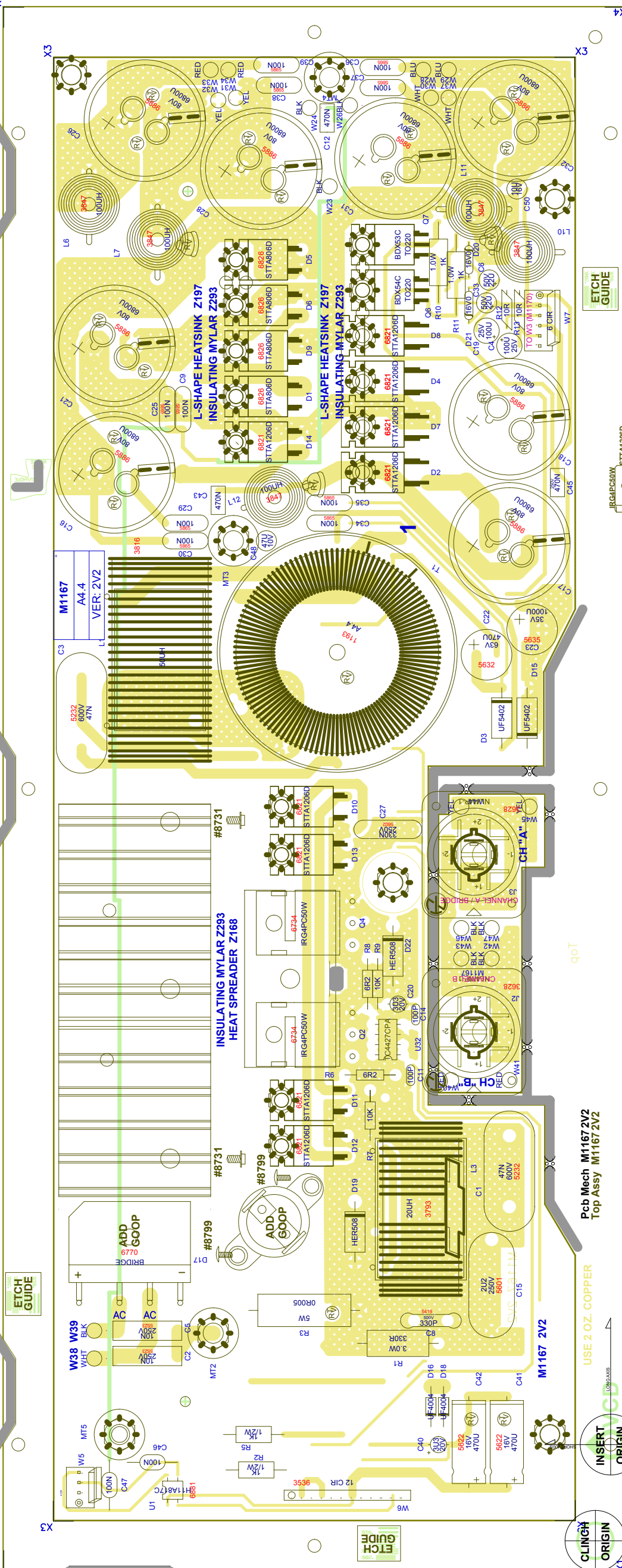
8 Q31 IS HAND INSERTED AND BENT OVER WITH FLAT SIDE UP AS SHOWN.



9 MOUNTING DETAILS FOR #6 SCREW



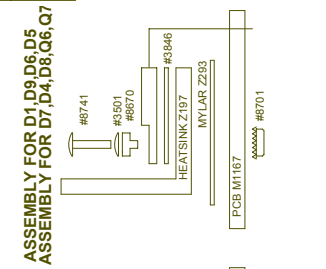
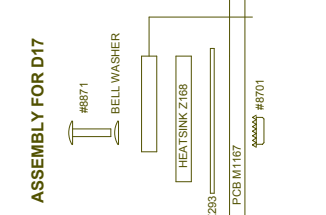
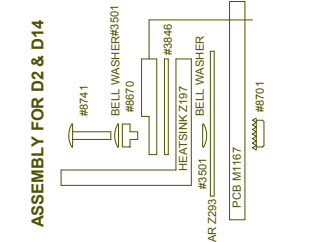
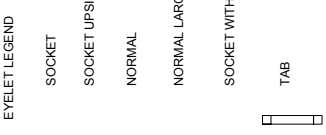
M1165.PCB_DATABASE_HISTORY			
MODEL(S) :- A4.4			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	SEPT/05/01	2.00	ADD RC NETWORK ON Q40,Q41
2	SEPT/05/01	2.00	R66&R67-->1K8/3W R72-->5K1
3	JAN/21/02	3.00	PC#6495 R76/R77 470R->196R C206/C207 220P->680P TRACES_CHANGED
4			PC#6510 J4->R141 10K
5	FEB/05/02		
6	MAY/16/03	3.10	PC#6607 C10,C15,C20 #5427->#5208
7	SEP/08/03	3.20	PC#6621 Q101 MPSA93->MPSA92
8		V	N
9		V	N
10		V	N
11		V	N



USE 2 OZ. COPPER

Pcb Mech M11672V2
Top Assy M1167 2V2

MODEL(S):-		A4.4 SWITCH MODE POWER SUPPLY	
A4.4			
#	DATE	DESCRIPTION OF CHANGE	
1	D	VER#	V
2	D	Mounting NPH changed from 156 to 189	V
3	D	move mounting hole near C24 and C15&C1 moved. Enlarge MTH pad for D14&D2	V
4	APR/05/02	Corrections to some pads	V
5	Oct/07/2003	D2, D4, D7, D8 #6826->#6821	V
6	D	N	V
7	D	N	V
8	D	N	V
9	D	N	V
10	D	N	V
11	D	N	V
12	D	N	V
13	D	N	V

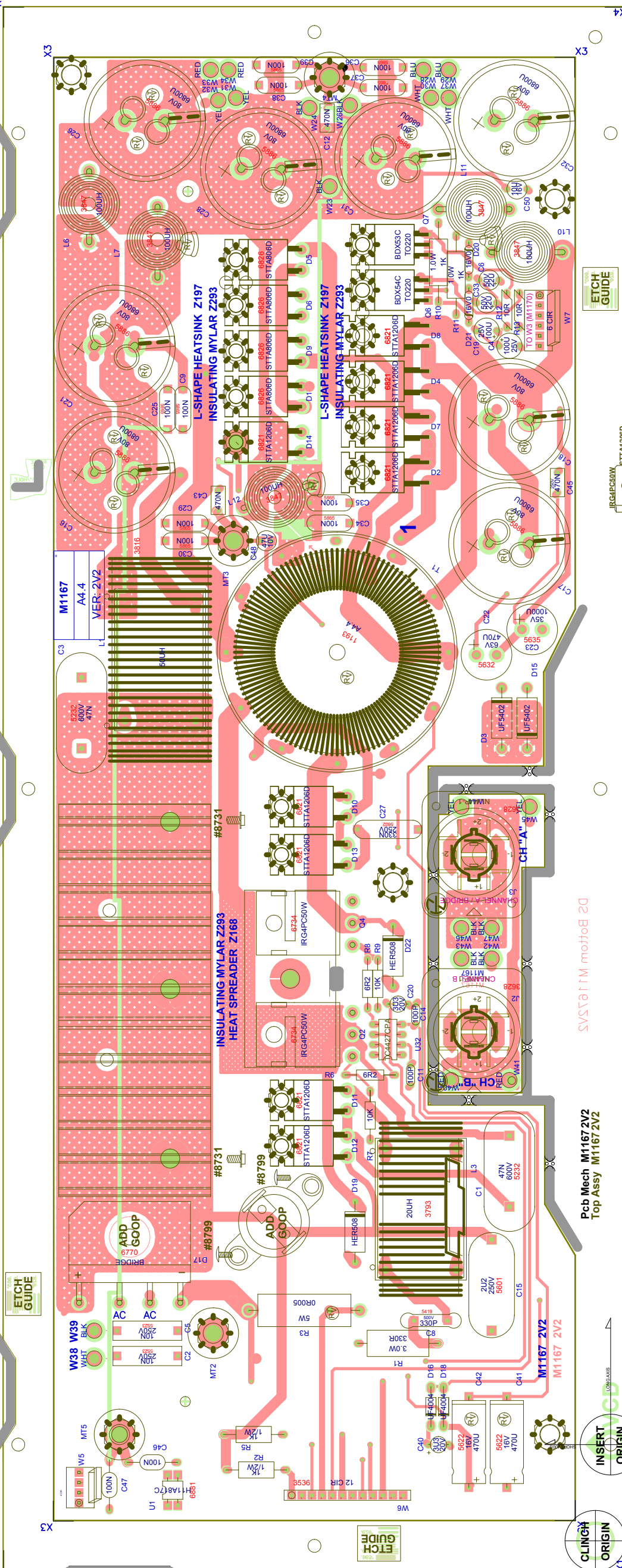


- PRODUCTION NOTES:**
1. CHECK ALL TO-220 & TO-3 PBL FOR SHORTS BEFORE WAVE SOLDER
 2. SHORT SOLDER LINK AFTER FINISHING
 3. USE I.C SOCKET FOR U32 PART #3564
 4. FOR PARTS USING TEAR DROP SHAPE PAD BEND LEADS TO FOLLOW BARE COPPER OF THE PAD AS SHOWN
 5. USE EPOXY TO GLUE T1 AND L1 TO PCB
 - USE NUT AND BOLT (8747-8800) TO MOUNT T1

ETCH GUIDE

ETCH GUIDE

ETCH GUIDE



MODEL(S):-		A4.4 SWITCH MODE POWER SUPPLY	
#	DATE	VER#	DESCRIPTION OF CHANGE
1	D	2.00	Mounting NPH changed from 156 to 189
2	D	2.00	move mounting hole near C24 and C15&C1 moved. Enlarge MTH pad for D14&D2
3	D	2.00	Corrections to some pads
4	APR/05/02	2.10	D2, D4, D7, D8 #6826->#6821
5	Oct/07/2003	2.20	N N N N N N N N N N
6	D	V	N N N N N N N N N N
7	D	V	N N N N N N N N N N
8	D	V	N N N N N N N N N N
9	D	V	N N N N N N N N N N
10	D	V	N N N N N N N N N N
11	D	V	N N N N N N N N N N
12	D	V	N N N N N N N N N N
13	D	V	N N N N N N N N N N

ASSEMBLY FOR	COMPONENTS
ASSEMBLY FOR D1, D9, D6, D5	IRG4PC50W, STTA1206D, BXD53C, ANODE, CATHODE, G, C, E
ASSEMBLY FOR D7, D4, D8, D6, Q7	#8741, #8301, #8670, HEATSINK Z168, MYLAR Z193, PCB M1167, #8701
ASSEMBLY FOR D17	#8871, BELL WASHER, HEATSINK Z168, MYLAR Z293, PCB M1167, #8701
ASSEMBLY FOR D2 & D14	#8741, BELL WASHER #8301, #8670, HEATSINK Z168, #8346, BELL WASHER, #83501, MYLAR Z293, PCB M1167, #8701

ETCH GUIDE

CLINGH ORIGIN

INSERT ORIGIN

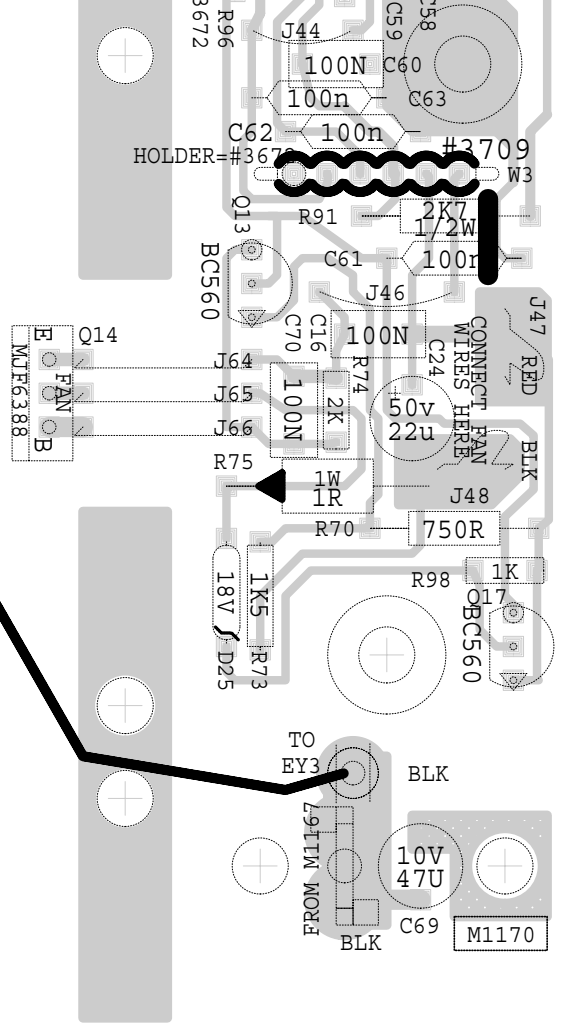
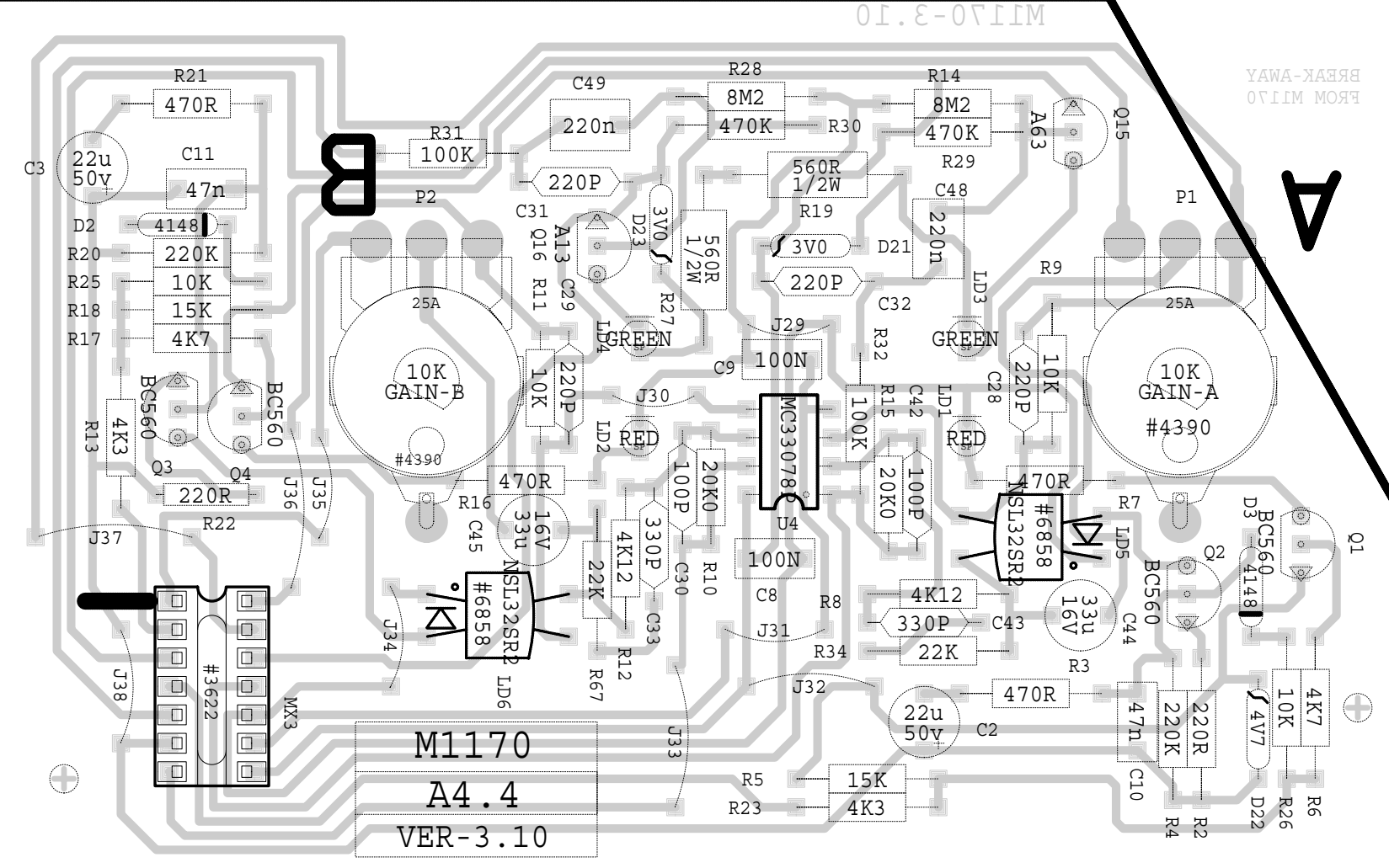
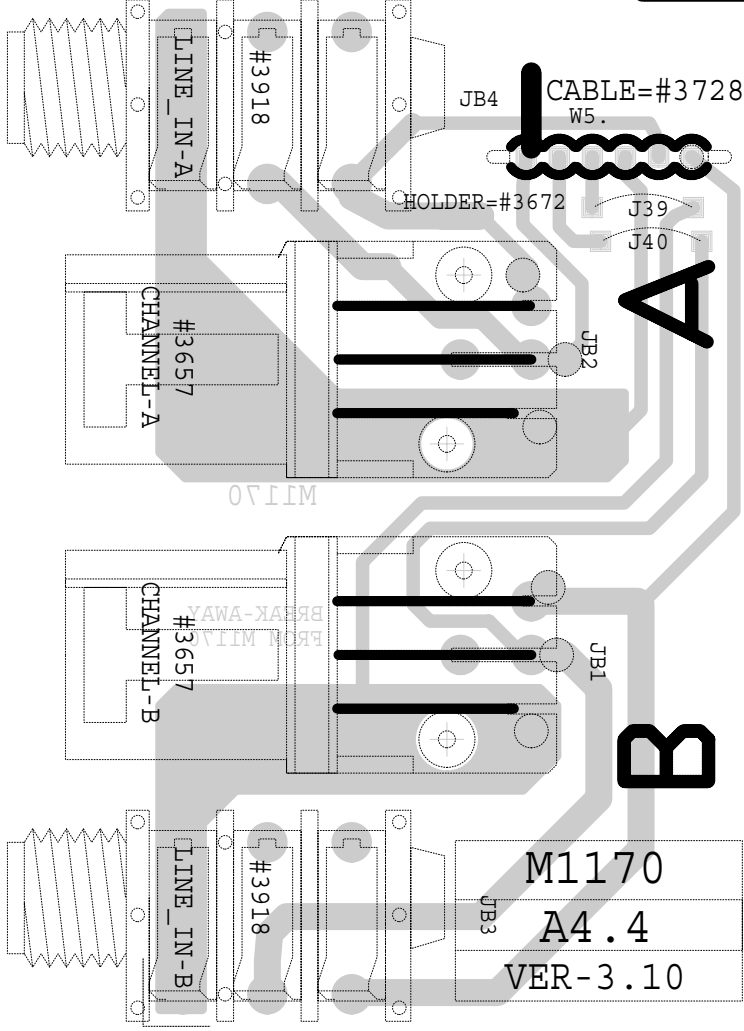
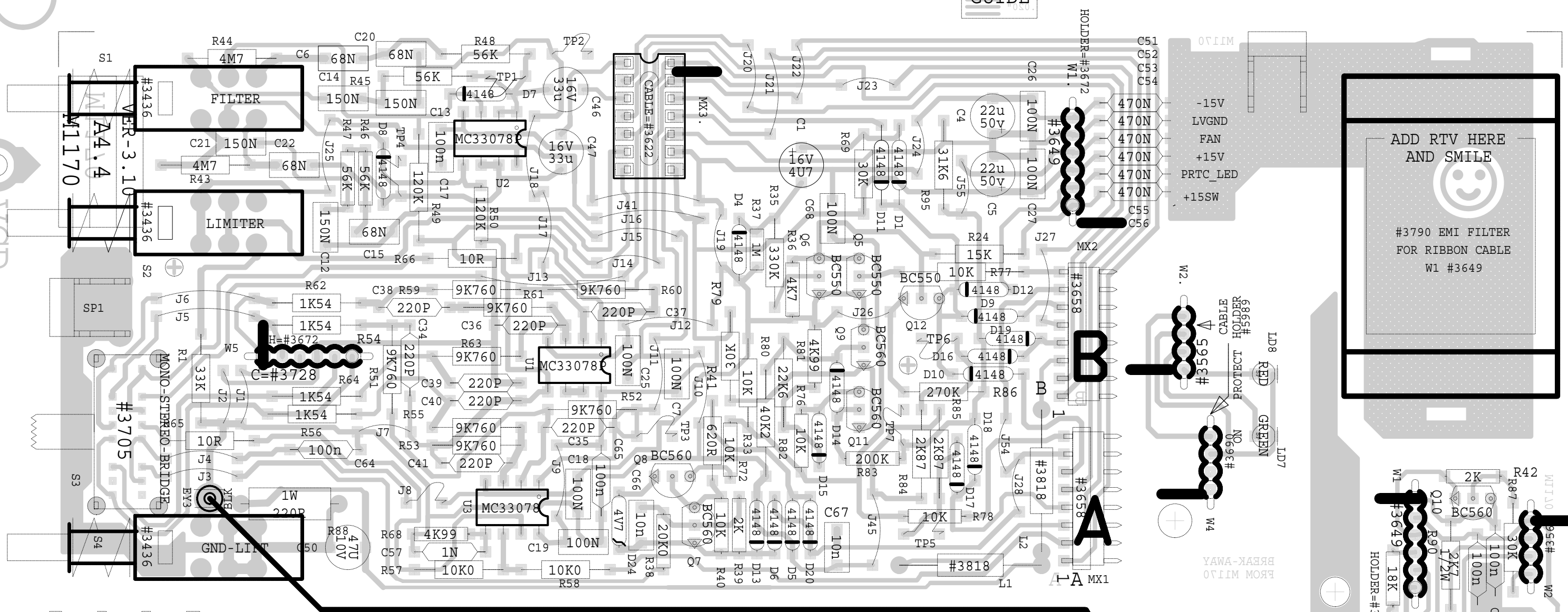
ETCH GUIDE

PCB Mech M1167 2V2
Top Assy M1167 2V2

PRODUCTION NOTES:

- CHECK ALL TO-220 & TO-3 PBL FOR SHORTS BEFORE WAVE SOLDER
- SHORT SOLDER LINK AFTER FINISHING
- USE I.C SOCKET FOR U32 PART #3564
- FOR PARTS USING TEAR DROP SHAPE PAD BEND LEADS TO FOLLOW BARE COPPER OF THE PAD AS SHOWN
- USE EPOXY TO GLUE T1 AND L1 TO PCB
- USE NUT AND BOLT (#8747-8800) TO MOUNT T1

ETCH GUIDE



M1170.PCB DATABASE HISTORY

MODEL(S) :- A4.4 PCB MECH M1170-3.10

#	DATE	VER#	DESCRIPTION OF CHANGE
1	FEB/07/00	P1	FIRST PROTO
2	MAY/05/01	P2	2nd PROTO
3	AUG/28/01	V2	R33-->10K, R86-->120K, R85&R84-->2K87
4	AUG/28/01	V2	S2, S4 REVERSED--->CHANGED
5	AUG/28/01	V2	JB1, JB2 ADD HOLES FOR MOUNTING
6	SEP/11/01	V2	R73-->1K3, Q14-->MJF6388
7	SEP/11/01	V2	MOVE LED-PCB MOUNTING-HOLE
8	NOV/15/01	2.10	PC#6466 LD5, LD6 NSL28AA->NSL32SR2
9	FEB/11/02	3.00	PC# REPLACE AN WIRE_EYELETS WITH RADIAL JUMPERS
11	FEB/25/03	3.10	PC#6588_R86_120K->270K

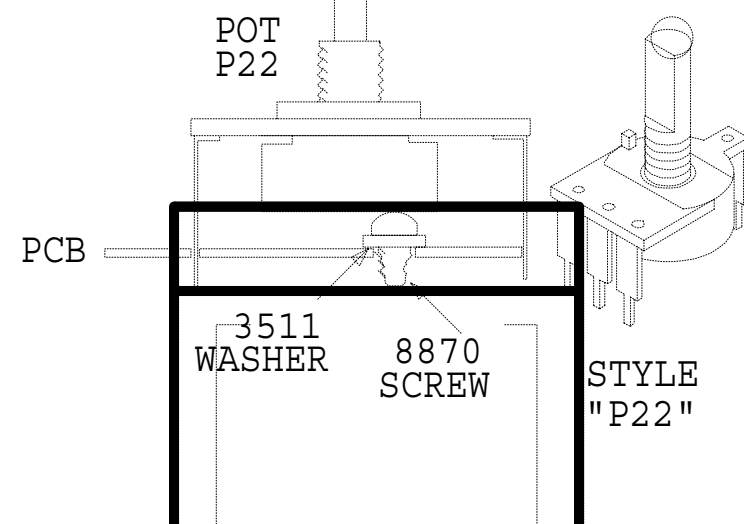
M1170.PCB POT LIST

MODEL(S) :- A4.4

REF	FUNCTION	PART#	KNOB	AS OF
P1	CHAN_A_GAIN	4395	8433	FEB/07/00
P2	CHAN_B_GAIN	4395	8433	FEB/07/00
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N
R	F	P	K	N

PRODUCTION NOTES:

1. C24 USE #5631 (SHORT) 22U/50V



PCB SIDE M1170-3.10

A4.4 AC WIRES
JUN/2001

POWER PCB,S

