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Quality and Innovation Since 1963
Printed in Canada

SERVICE MANUAL



AP 312 320 WATT STEREO MIXER

1. Parts List

2. Block Diagram

3. Input Channel Board
• m1100 schematic
• m1100 pcb

4. Stereo & Master Board
• m1101 schematic
• m1101 pcb

5. Power-Amp
• m1106 schematic
• m1106 pcb

6. EFX Schematic

7. export Wiring Diagrams
• 245v
• 230v

7. Contact Info

IMPORTANT SAFETY INSTRUCTIONS



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

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.

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

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

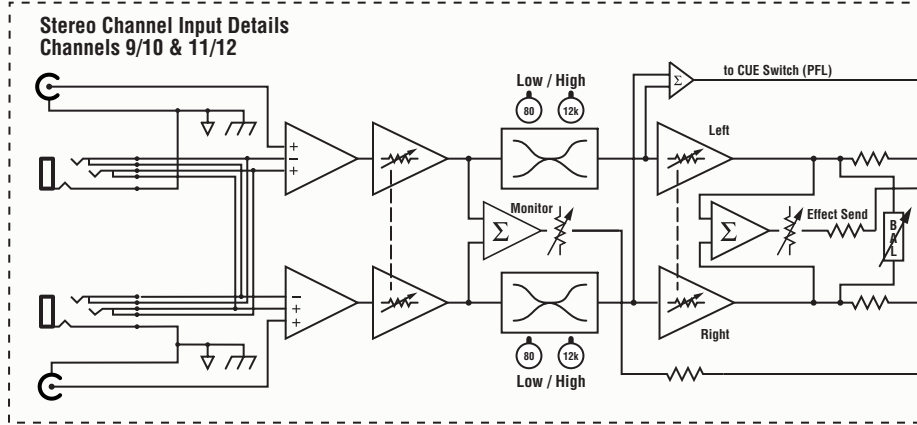
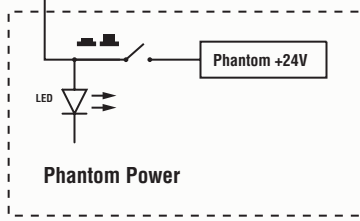
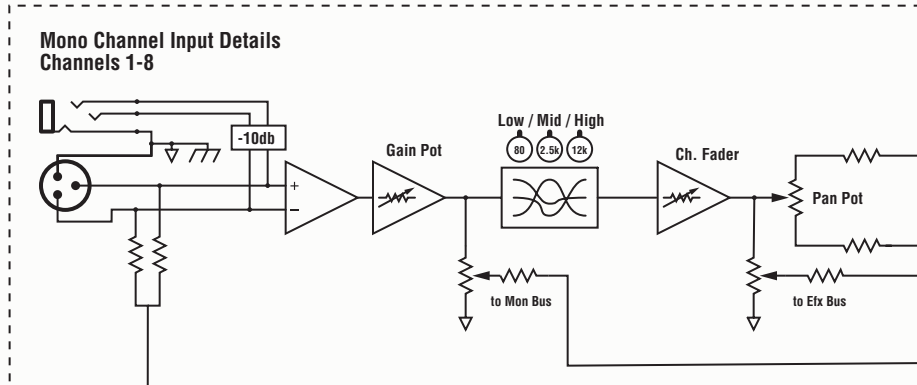
Évitez d'endommager le cordon d'alimentation. N'UTILISEZ PAS L'APPAREIL si le cordon d'alimentation est endommagé.

Service

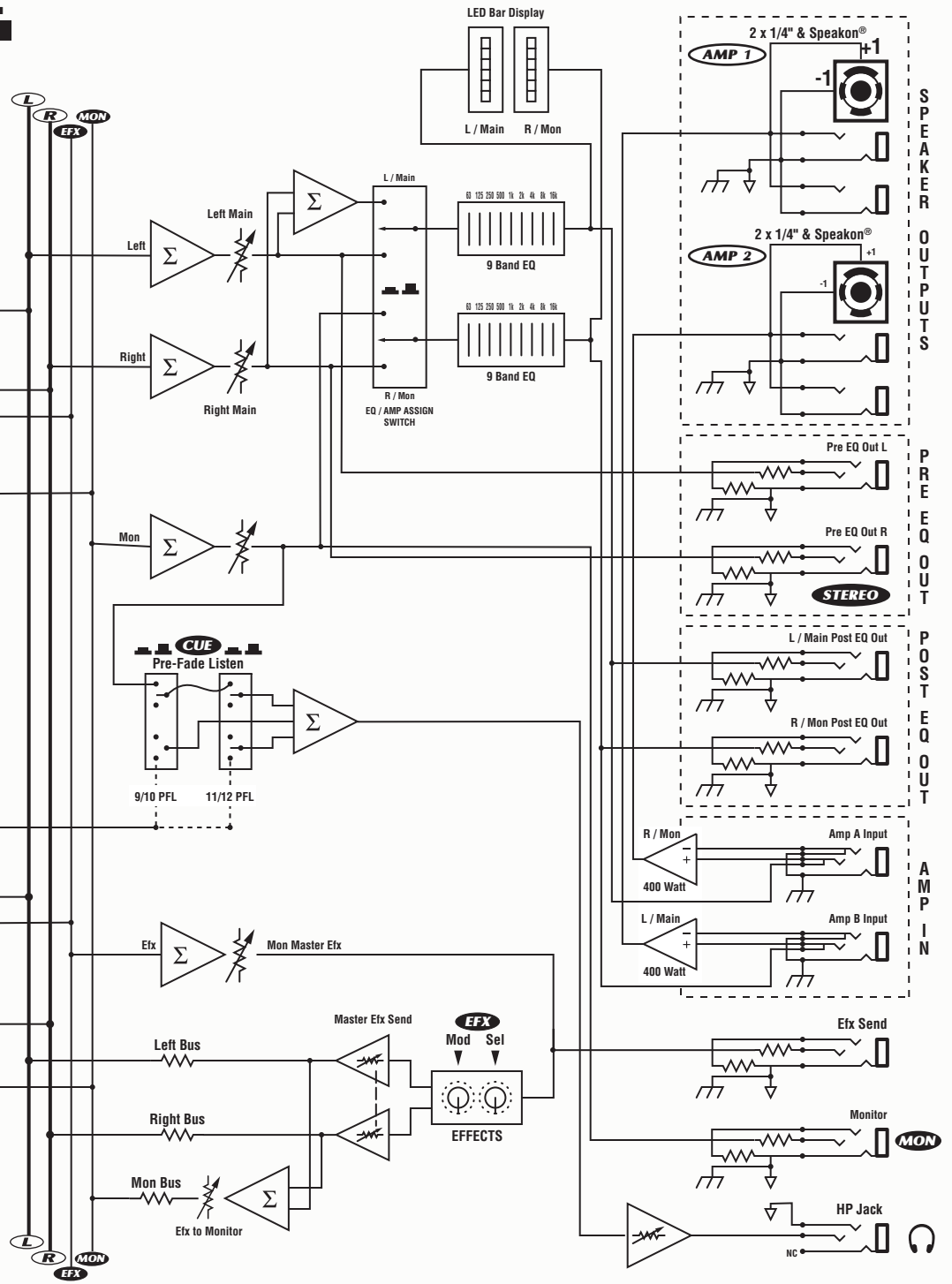
Consultez un technicien qualifié pour l'entretien de votre appareil.

Block Diagram for AP312

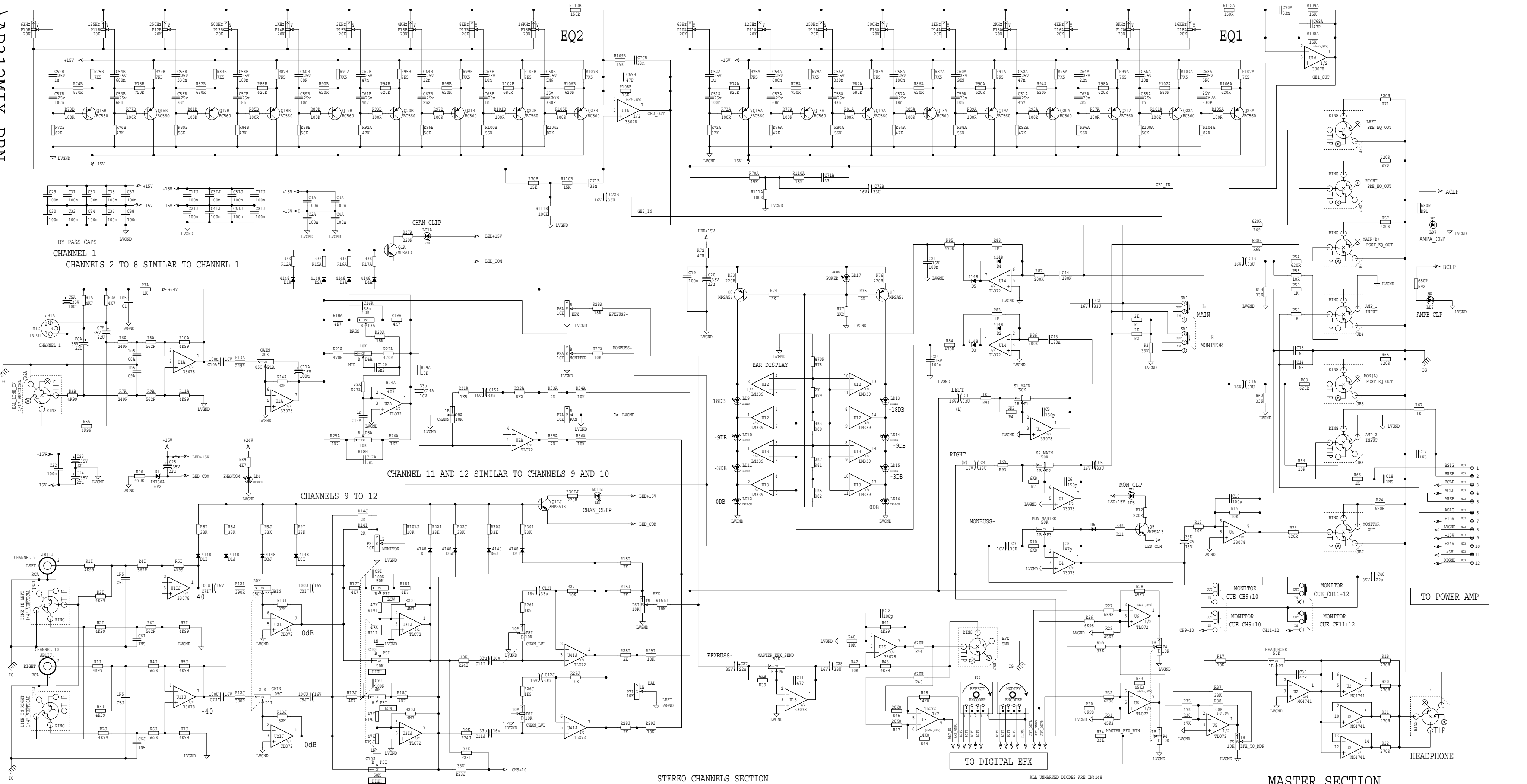
DESIGNED & MANUFACTURED BY YORKVILLE SOUND



ap312blk.pdf June /98 Version 1.0



U:\AP312MIX.PRN



M1100IN.SCH DATABASE HISTORY

MODEL(S) :-	AP312		
#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY/07/97	1.50	PC#5370_ADD_C17A
2	D	N	N
3	D	N	N
4	D	N	N
5	D	N	N
6	D	N	N
7	D	N	N
8	D	N	N
9	D	N	N
10	D	N	N

M1101.SCH DATABASE HISTORY

MODEL(S) :-	AP312		
#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY/07/97	1.50	PC#5370_R211/R21J 18K-347K
2	D	N	ADD 150R(R112A,B) TO EQ
3	NOV/15/99	1.60	PC#E140_HEADPHONE_IJK CHANGED
4	D	N	N
5	D	N	N
6	D	N	N
7	D	N	N
8	D	N	N
9	D	N	N
10	D	N	N

M1100/1101.PCB POT LIST

MODEL(S) :-	AP312				
#	REF	FUNCTION	PART#	KNOB	AS OF
1	P1A	CHAN_GAIN	#4567	#8392	JAN/2000
2	P2A	CHAN_MON_SND	#4566	#8394	.
3	P5A	CHAN_HIGH	#4737	#8395	.
4	P4A	CHAN_MID	#4537	#8395	.
5	P3A	CHAN_LOW	#4546	#8395	.
6	P6A	CHAN_EFX_SND	#4566	#8393	.
7	P7A	PAN	#4537	#8392	.
8	P8A	CHAN_VOLUME	#4489	#8680	.
9	P10-P18	EO	#3996	NO_KNOB	.
10	P3	MON_MASTER	#4568	#8394	.

MASTER SECTION

DATE:	NOV/16/99	MODEL#:	AP-312	SKN ISSU#:	1.10
FORVILLE:	NAME:	AP312MIX.SCH	PCB#:	M1100-M1101	TITLE:
REF	FUNCTION	PART#	KNOB	AS OF	
11	P6	MAS_EFX_SND	#4568	#8393	JAN/2000
12	P5	EFX_TO_MON	#4566	#8393	D
13	P4	EFX_RETURN	#4487	#8680	D
14	P1	MAIN_L	#4488	#8680	D
15	P2	MAIN_R	#4488	#8680	D
16	P7	HEADPHONE	#4568	#8392	D
17	P11	SELECT	#4561	#8397	D
18	P12	WOLFFY	#4561	#8397	D
19	D	K	N	K	D
20	D	F	N	K	D

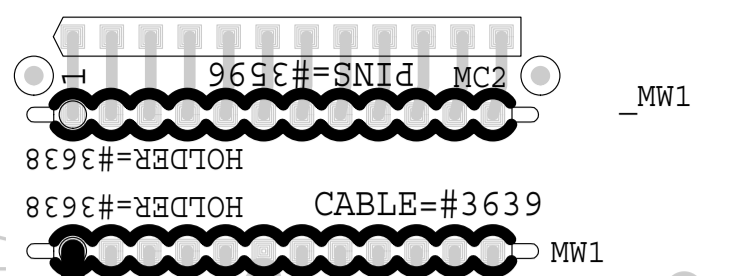
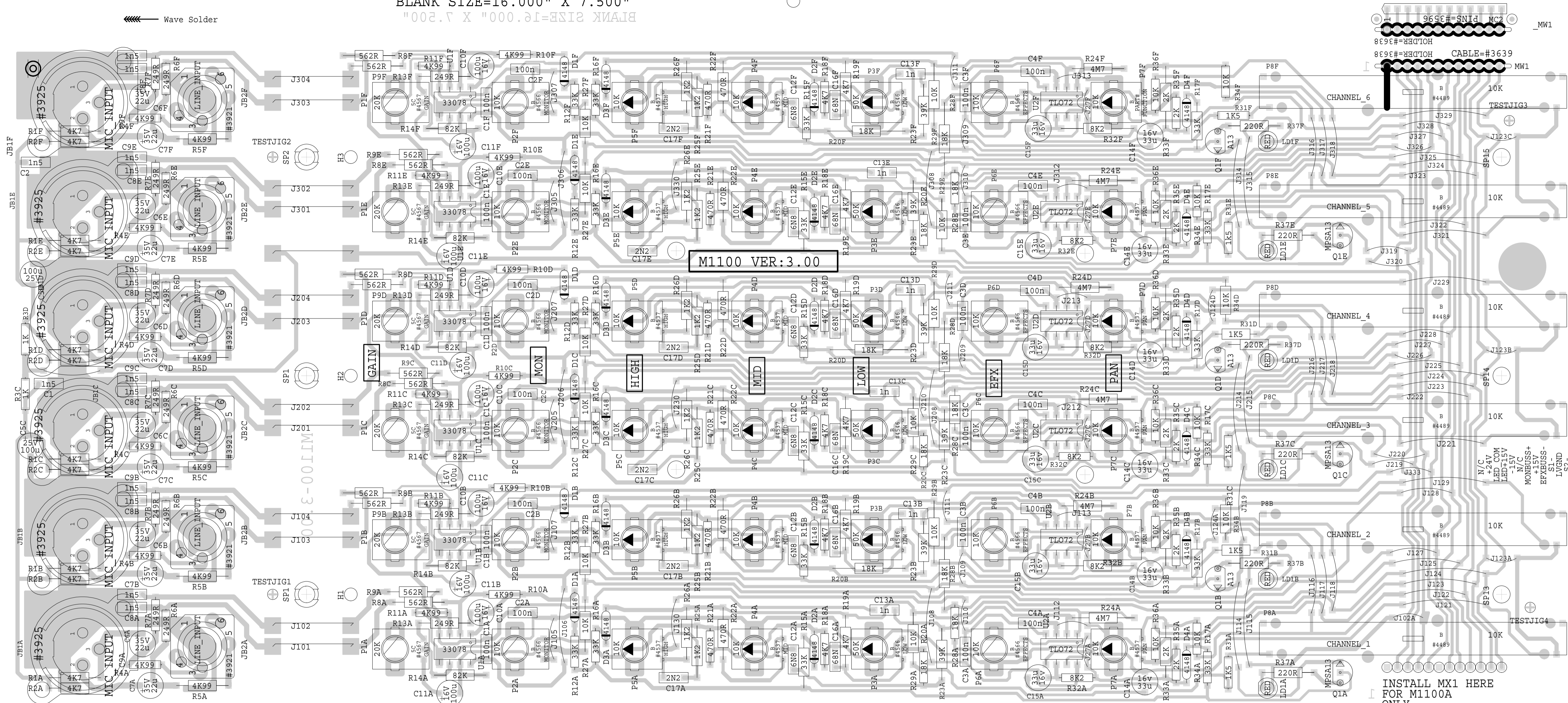
11000CMP.PEN

ASSEMBLY M1100-3.00
PCB MECH M1100-3.00

BLANK SIZE=16.000" X 7.500"

BLANK SIZE=16.000" X 7.500"

Wave Solder



SOLDERSIDE M100-3.00

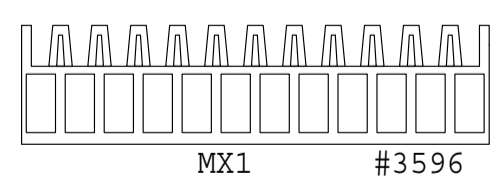
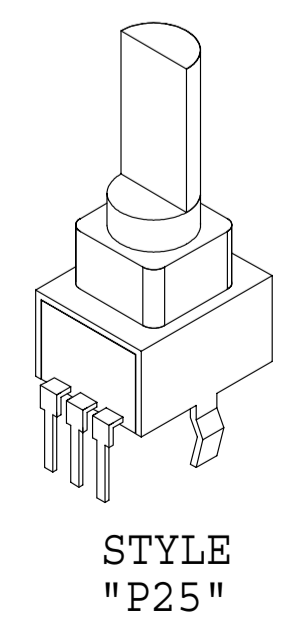
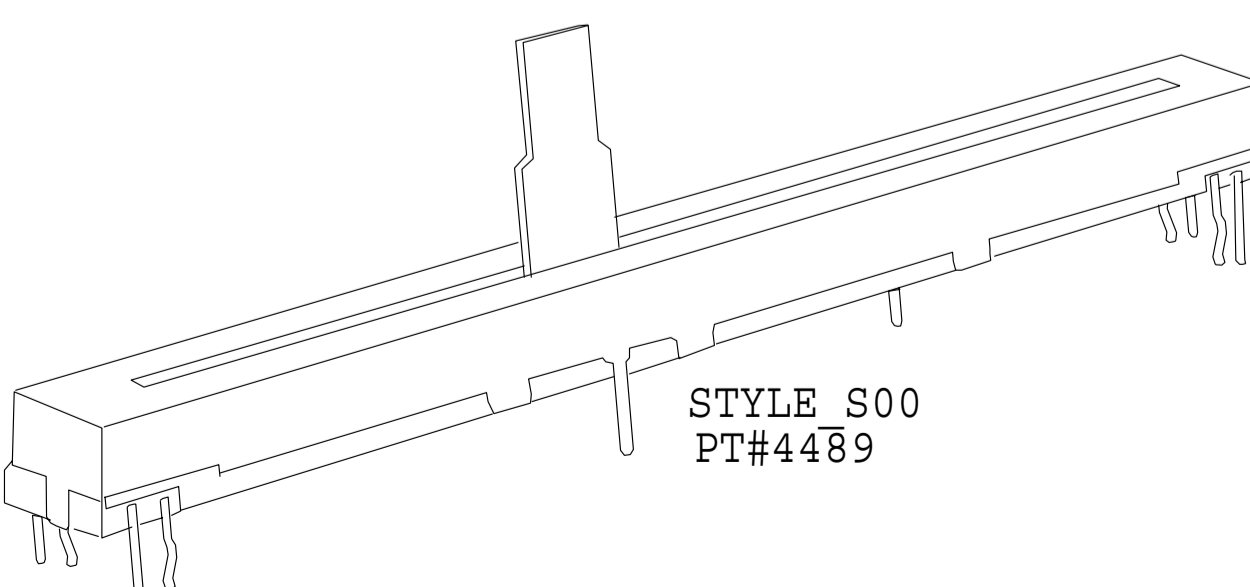
INSTALL MX1 HERE FOR M1100A ONLY

PRODUCTION NOTES

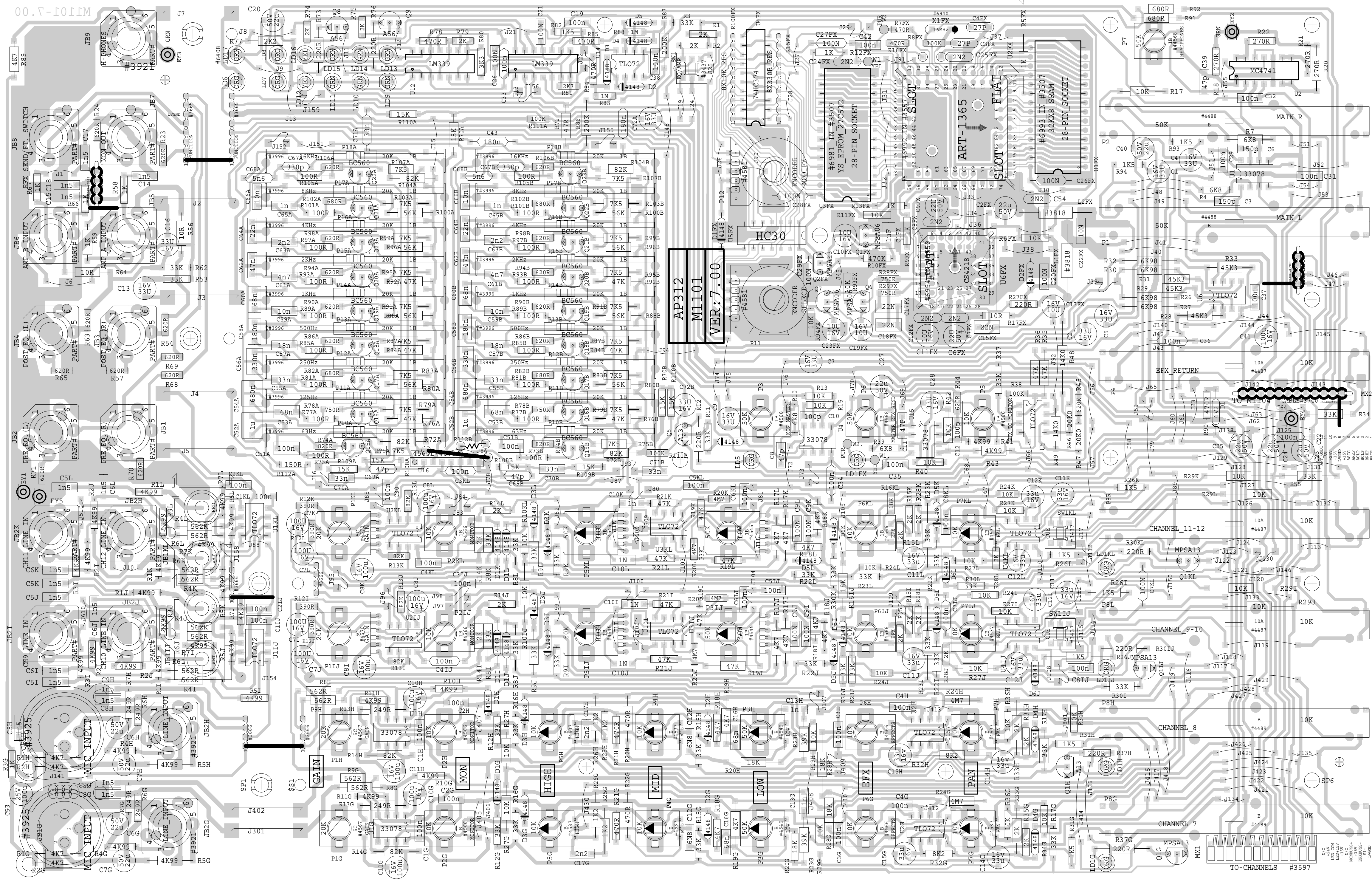
1 INSTALL MX1 FOR M1100A ONLY

#	DATE	VER#	DESCRIPTION OF CHANGE
1	JAN/11/97	P1.0	DEL R38A,R30A
2	MAR/03/97	P2.0	R32A->F TO 4K99
3	MAY/05/97	1.00	VALUE CHANGES SEE LIST
4	MAY/06/97	2.00	ADDED C2,C16A-F,CI7A-F_MOVED_JMPR AWAY FROM P7A-F
5			
6	AUG/31/99	2.10	XLR #3454->3925
7	JUL/10/02	3.00	PC#6554_#3921_JAX->SLOTS
8	D	V	N
9	D	V	N
10	D	V	N
11	D	V	N

MODEL(S) :-	AP312/812			
REF	FUNCTION	PART#	KNOB	AS OF
P1A-F	GAIN	#4567	#8392	JAN/2000
P2A-F	MONITOR	#4566	#8394	.
P5A-F	HIGH	#4537	#8395	.
P4A-F	MID	#4537	#8395	.
P3A-F	LOW	#4546	#8395	.
P6A-F	EFFECTS	#4566	#8393	.
P7A-F	PAN	#4537	#8392	.
P8A-F	VOLUME	#4489	#8680	.
.
.
.



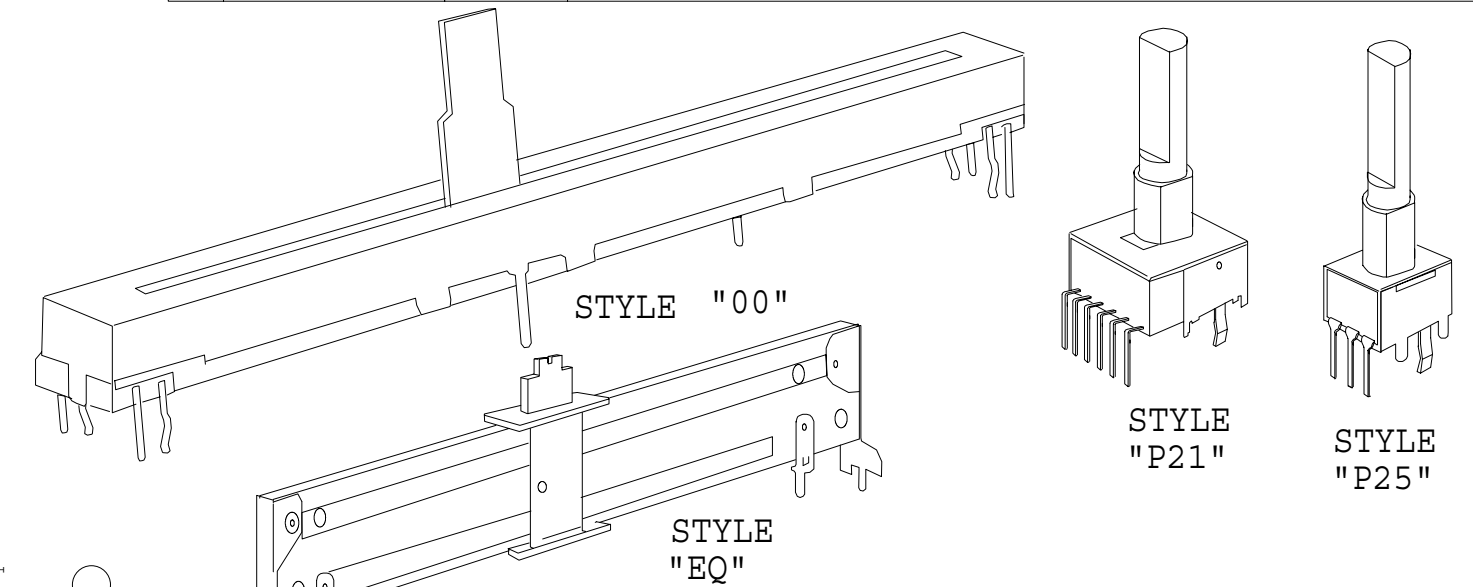
00.7-1011M



M1101.PCB DATABASE_HISTORY

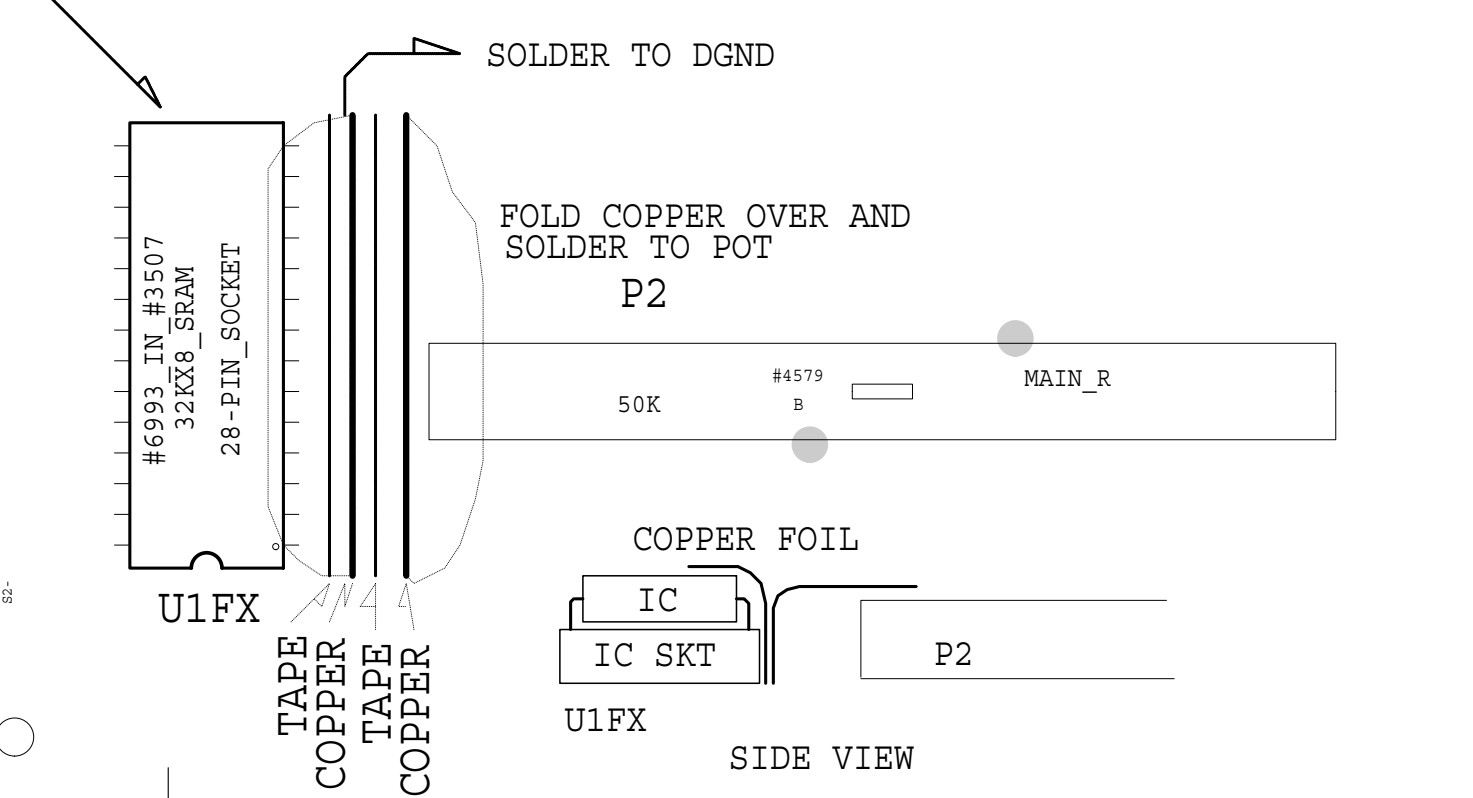
MODEL(S) :- AP-812/818

#	DATE	VER#	DESCRIPTION OF CHANGE
1	MAY/06/97	V1.5	PC#5367
2	D	V	- R92,R91 220R TO 680R
3	D	V	- R82,R88 240K TO 1M
4	D	V	- R86,R87 47K TO 200K
5	MAY/06/97	V1.5	PC#5368
6	D	V	- CORRECT Q7FX,Q6FX TO AGREE WITH SCHEMATIC
7	MAY/06/97	V1.5	PC#5370
8	.	.	- CHANGE R21I,J,K,L TO 47K
9	.	.	- CHANGE C2,C6 TO 150P
10	.	.	- TACK ON 1K5 IN SERIES WITH C1,C4
11	.	.	- TACK ON 150R IN SERIES WITH EQ,BUSS
1	.	.	- TACK ON 2N2 ACROSS OUT SIDE LEGS OF P5G,H
2	.	.	.
3	.	V2.00	-NOTE:IMPLEMENT ABOVE PC'S ON TAPE-UP
4	.	.	#5371 MOVE TRACE OF C5H,C1 TO AGREE WITH SCHEMATIC
5	.	.	.
6	MAY/07/97	.	- ADD 1N5 FROM R3G TO IG GROUND
7	JUN/23/97	3.00	PC#5426 ADD C26FX,27FX,28FX,29FX
8	AUG/18/97	.	RELOCATE PARTS 4 BETTER INSERTION
9	AUG/31/99	3.10	XLR #3454->#3925
10	OCT/25/99	4.00	PC#6140 HD-PH JK #3497->#3921
11	JAN/27/00	5.00	FIX MISSING TRACE AT U6FX_PIN_36
12	MAR/02/00	6.00	FIX ERROR AT HD-PHN-JK
13	OCT/17/00	6.10	PC#6292 RI6FX 680R->470R DEL C5FX
14	JUL/10/02	7.00	PC#6554-#3921 JAX-HOLES->SLOTS
15	NOV/23/04	.	PC#6771-#3571->#3507 SKT FOR #6993 SRAM
16	.	V	N



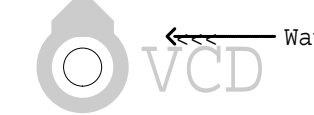
PRODUCTION NOTES

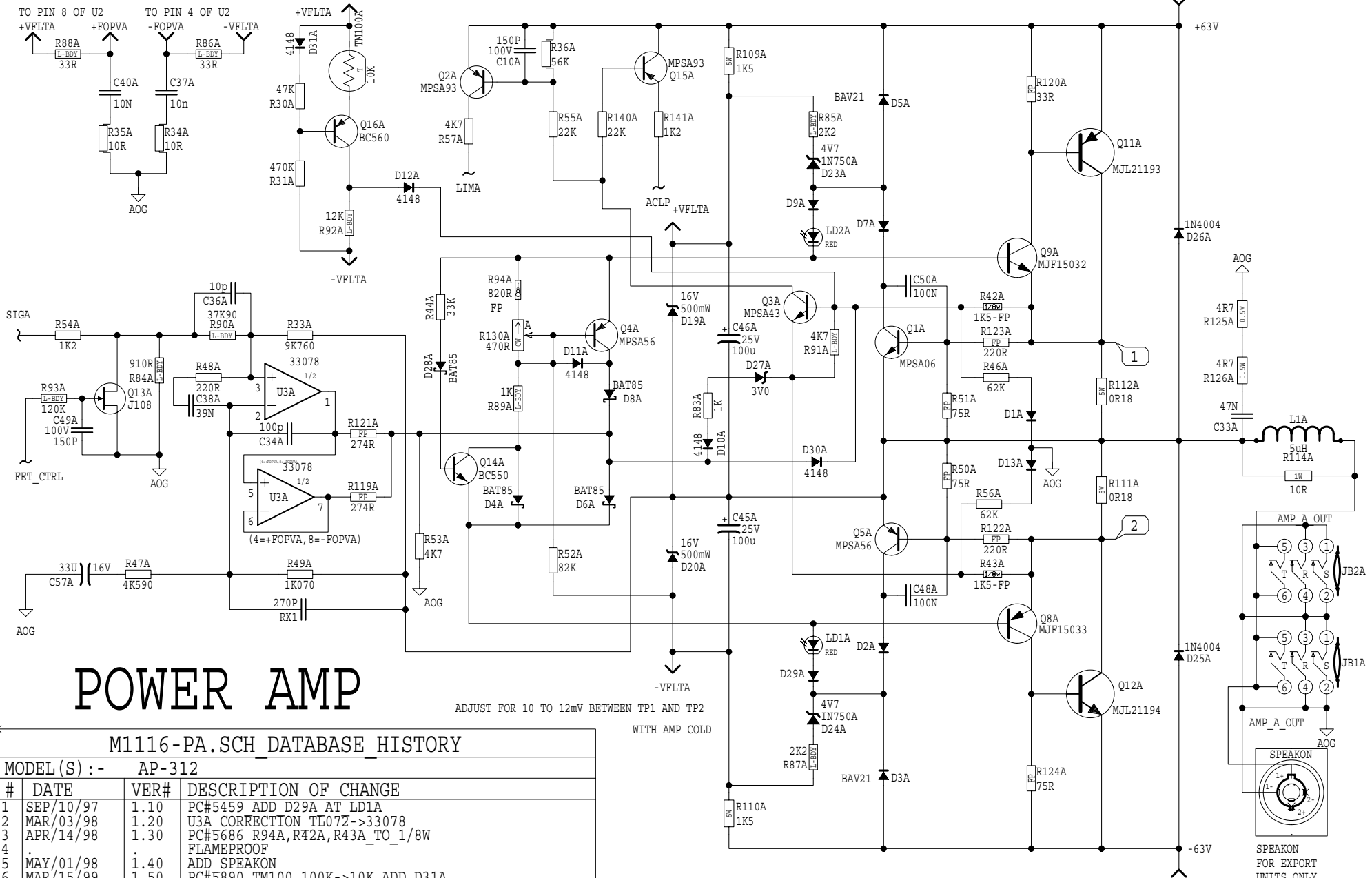
- PCBSA DEPT.
- 1 ADD COPPER FOIL ON I.C SOCKET OF U1FX ADD EXTRA SOLDEI
 - 2 ADD YELLOW WIRE NEXT TO U6
 - 3 ADD .5" COPPER STRIP ON TOP OF P2 FOR N.A. AND EXPOI
 - 4 ADD 1" COPPER STRIP ON BOTTOM OF U1FX FOR EXPORT
 - 5 J152,J155,J156,J159 ARE USED AS RIBBON CABLE CLAMPS
 - 6 J103 IS HAND INSERTED
 - 7 YEL AND PURPLE WIRES FROM WC1 AND WC2 MUST GO BEHIND P6
 - 8 R5FX MUST BE A MINI PT#4981



PUSH C5H AWAY BEFORE INSTALLING XLR

Wave Solder





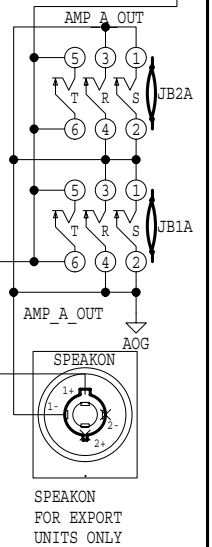
POWER AMP

ADJUST FOR 10 TO 12mv BETWEEN TP1 AND TP2
WITH AMP COLD

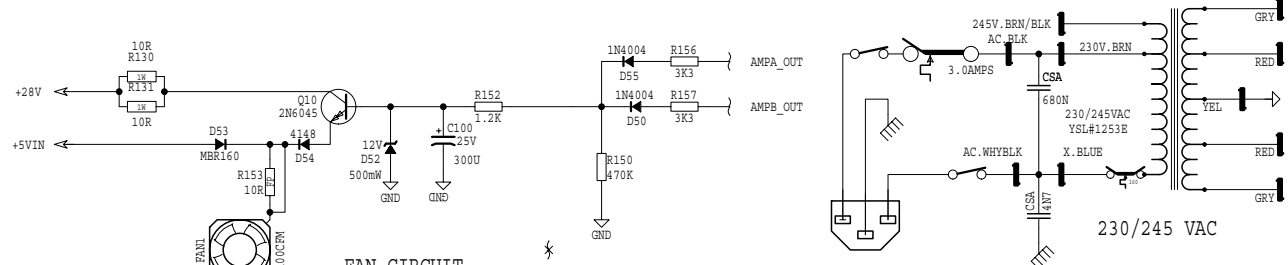
M1116-PA.SCH DATABASE HISTORY

MODEL(S) :- AP-312			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	SEP/10/97	1.10	PC#5459 ADD D29A AT LD1A
2	MAR/03/98	1.20	U3A CORRECTION TL072->33078
3	APR/14/98	1.30	PC#5686 R94A, R42A, R43A_TO_1/8W FLAMEPROOF
4			
5	MAY/01/98	1.40	ADD SPEAKON
6	MAR/15/99	1.50	PC#5890 TM100 100K->10K_ADD D31A, R30A, R31A, Q16A
7			
8	JUL/18/00	1.60	PC#6273_R48A_1K->220R_C38A_15N->39N
9	D	N	
10	D	N	

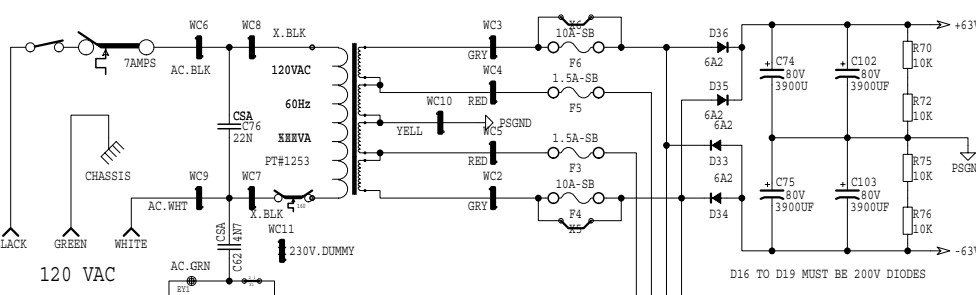
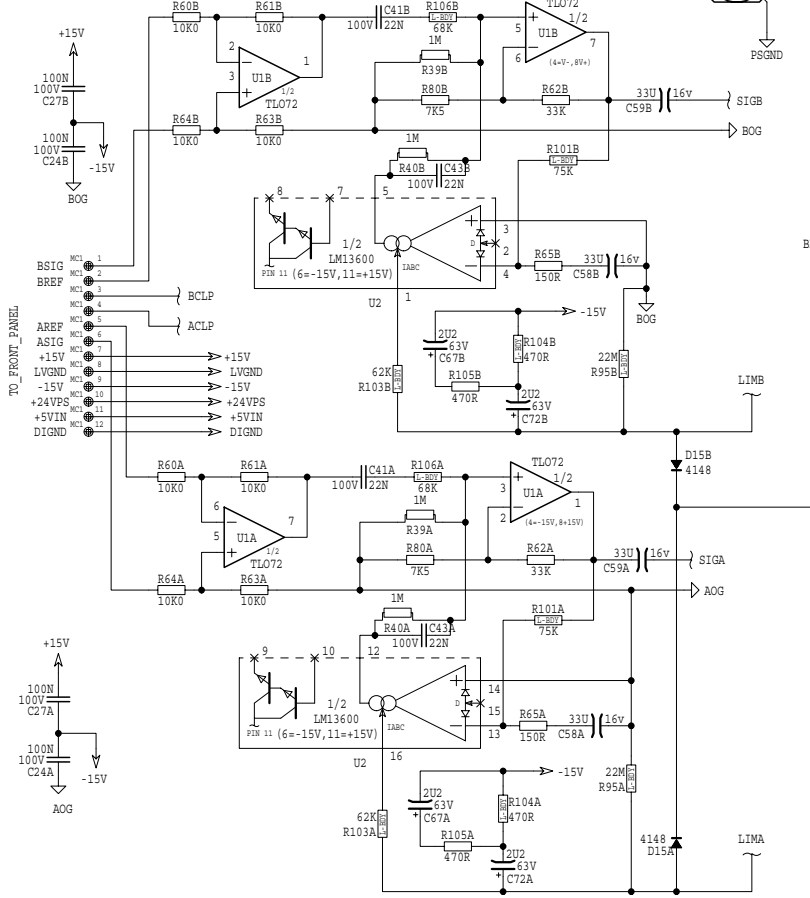
YORKVILLE	DATE: JUL/18/00	MODELS: AP-312	SHEET 7OF 7	SCH ISSUE: 1.60
	NAME: M1116-PA	PCB#&VER: M1116	TITLE: POWER_AMP	



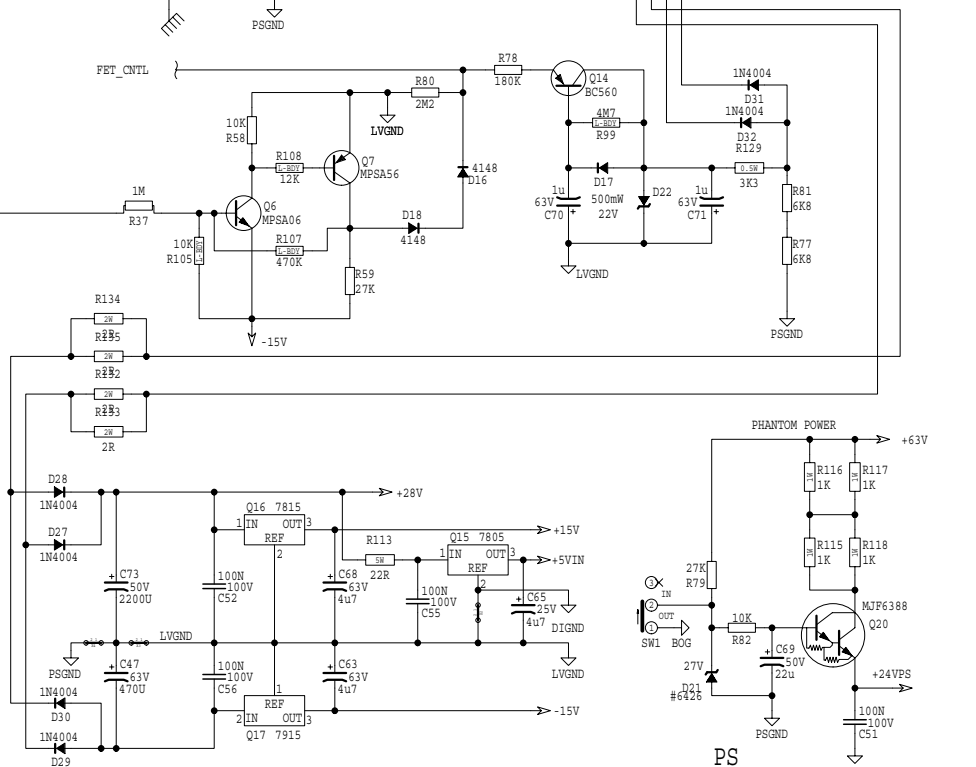
POWER SUPPLY AND LIMITERS



FAN CIRCUIT



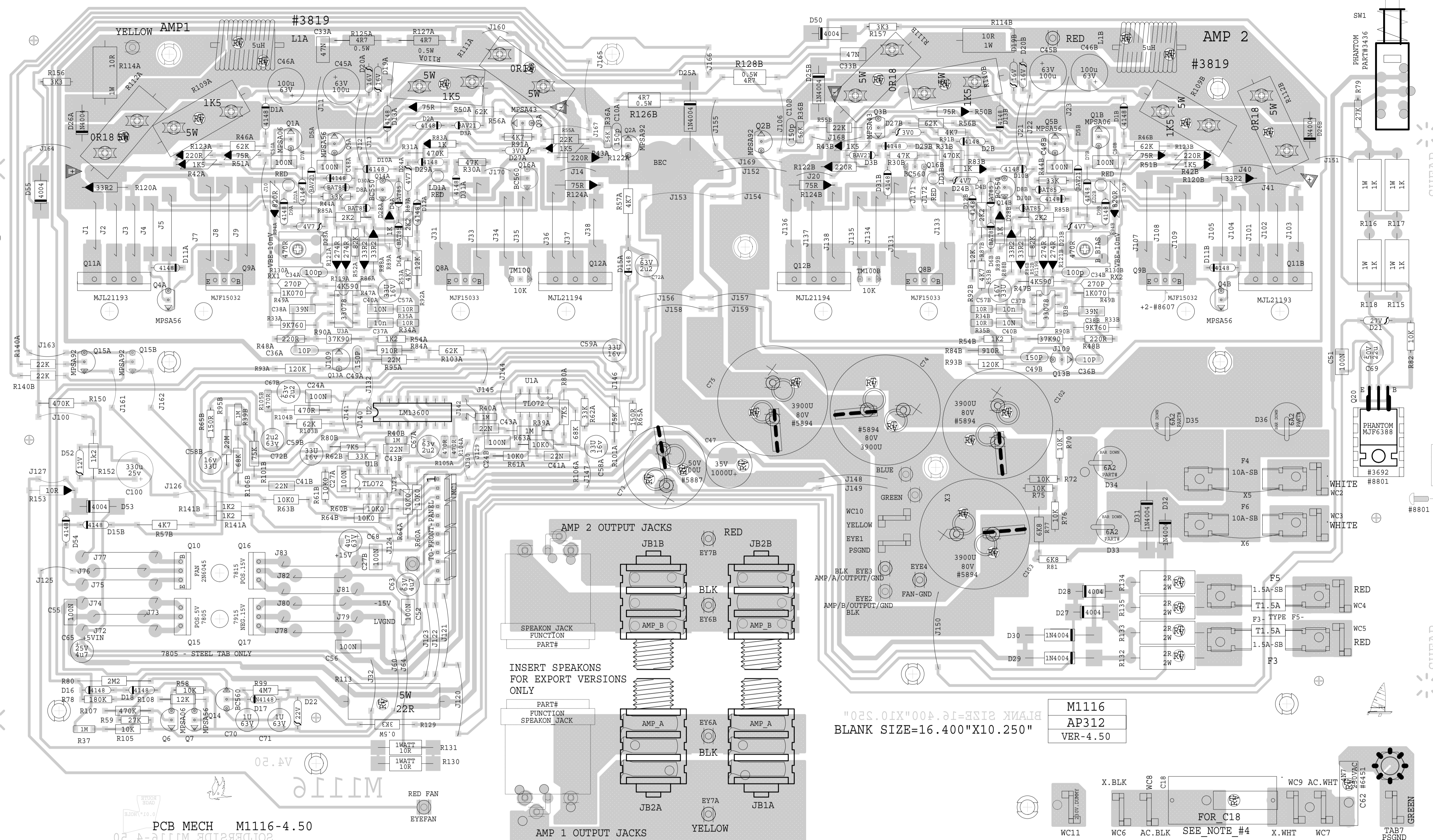
120 VAC



FET_CVTL

PS

M1116.SCH DATABASE HISTORY			
MODEL(S) :-	DATE	VER#	DESCRIPTION OF CHANGE
	SEP/10/97	1.20	PC#5459 ADD 470R R105A/B C67A/B_100U->2U2 C72A/B 10U->2U2
	FEB/02/99	1.30	XFMR WIRE COLOURS UPDATED
	JUL/19/00	1.40	CORRECT_CE_BRKR_37.5A .30OA
		N	N
		N	N
		N	N
		N	N
		N	N
		N	N
		N	N
		N	N



VCD

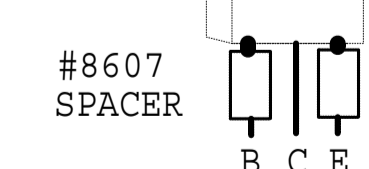
ETCH GUIDE

M116.PCB_DATABASE_HISTORY

#	DATE	VER#	DESCRIPTION OF CHANGE
1	SEP/02/97	2.00	PC#XXXX SPKONS ADDED
2	SEP/09/97	2.00	PC#5459 C67A/B C72A/B ->2U2 R104A/B 4K7->470R ADD 470R (RI05A/B_ADD D29A/B AT LD1A/B
3	.	.	.
4	APR/14/98	3.00	PC#5685 R94A, R94B, R42A, R42B, R43A, R43B TO 1/8W FLAMEPROOF
5	MAR/15/99	4.00	PC#5890 TM100 100K->10K_ADD_R30A/B R31A/B Q16A/B D31A/B
6	MAR/25/99	.	PC#5951 C47 470u->1000u
7	JAN/24/00	.	PC#5775 MOVE C50A/B FROM LD2A/B
8	.	.	PC#6133 MOVE C38A AWAY FROM R49A/ PC#5916 RX2 VALUE CONFIRMED(270P)
9	JUL/17/00	4.10	MOVE TRACE AWAY FROM PAD ADD SHEAR ON SIDE
10	JUL/18/00	4.20	PC#6273 R48B 1K->220R C38B 15N->39N
11	SEP/18/00	4.30	PC#6206 1 EYELET REMOVED FOR SPKONS
12	MAR/23/01	4.40	PC#6363 R83A/B R89A/B TO FLAMEPROOF
13	SEP/05/03	4.50	PC#6621_MPSA93->MPSA9Z
14	D	N	N
15	D	N	N
16	D	N	N
17	D	N	N
18	D	N	N
19	D	N	N
20	D	N	N
21	D	N	N
22	D	N	N
23	D	N	N

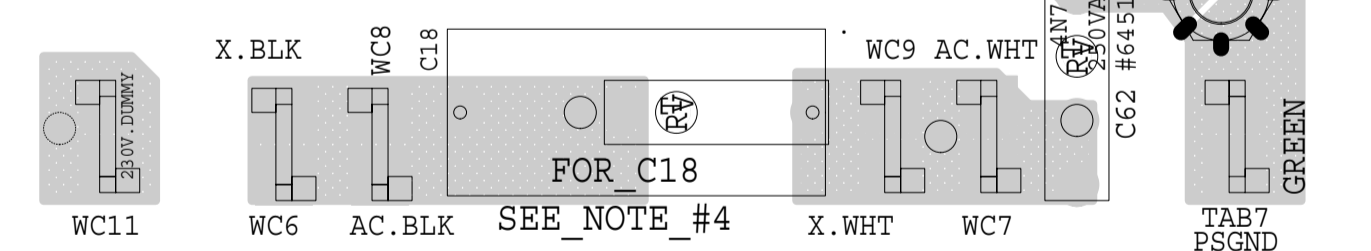
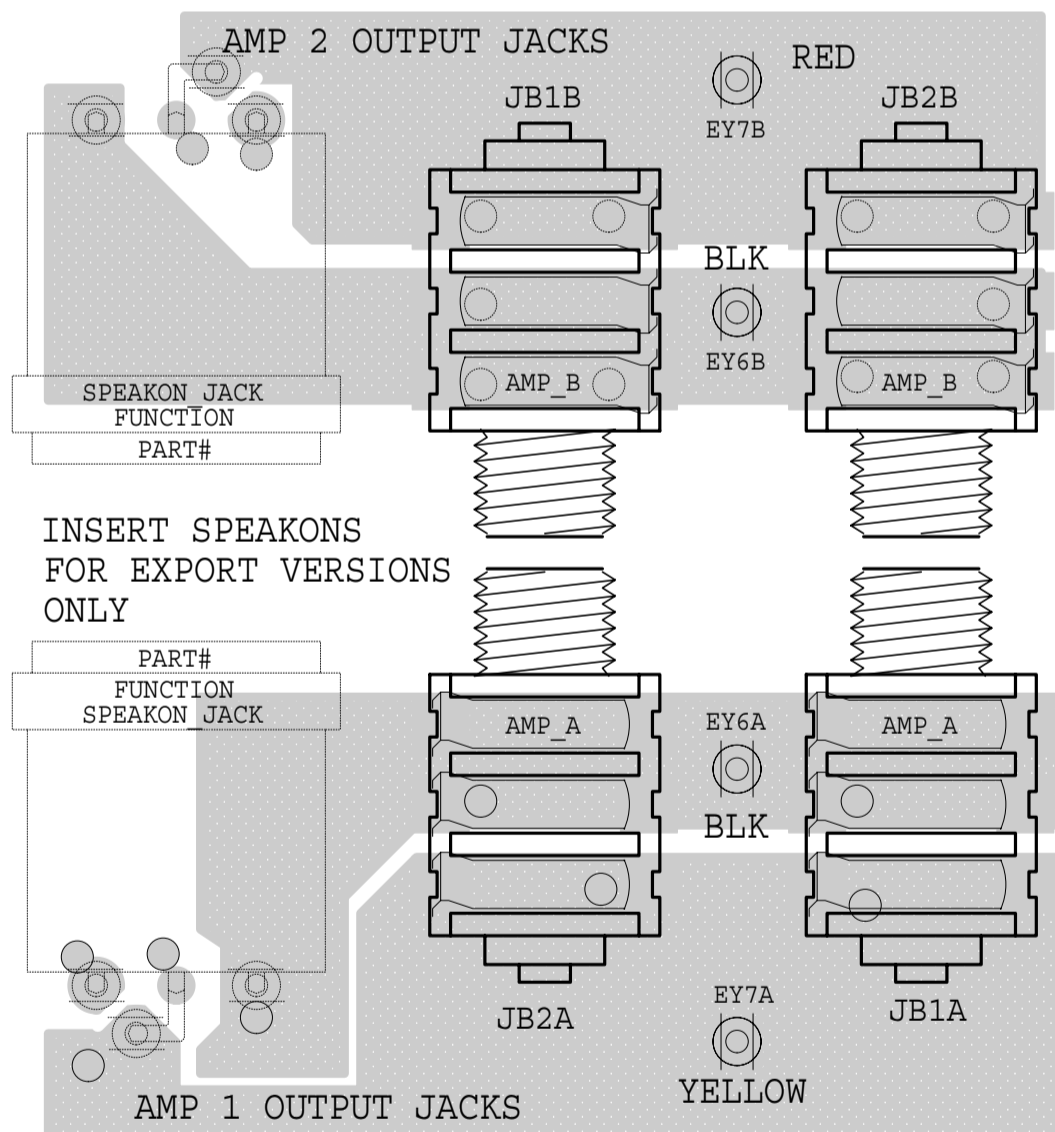
PRODUCTION NOTES

- AUTO-INSERTION
- BOARD-ASSEMBLY
- 1. MOUNT MJE15032 AND '33 TRANSISTORS WITH #8607 SPACERS ON TWO LEADS Q8A, Q8B, Q9A, Q9B
- 2. Q15 7805 REGULATOR MUST BE STEEL TAB VERSION ONLY.
- 3. NO FUSE HOLDERS SHOULD BE STUFFED. F3&5 ARE REPLACED WITH AUTO-INSERT FUSES, F4&6 WITH JUMPERS.
- 4. FOR NORTH AMERICAN C18 IS 22N, AND 680N FOR EUROPEAN.
- 5. INSERT SPEAKONS FOR EXPORT VERSIONS ONLY
- 6. HAND INSERT AS SHOWN R42A/B, R43A, R83A, R89A/B, R94A/B

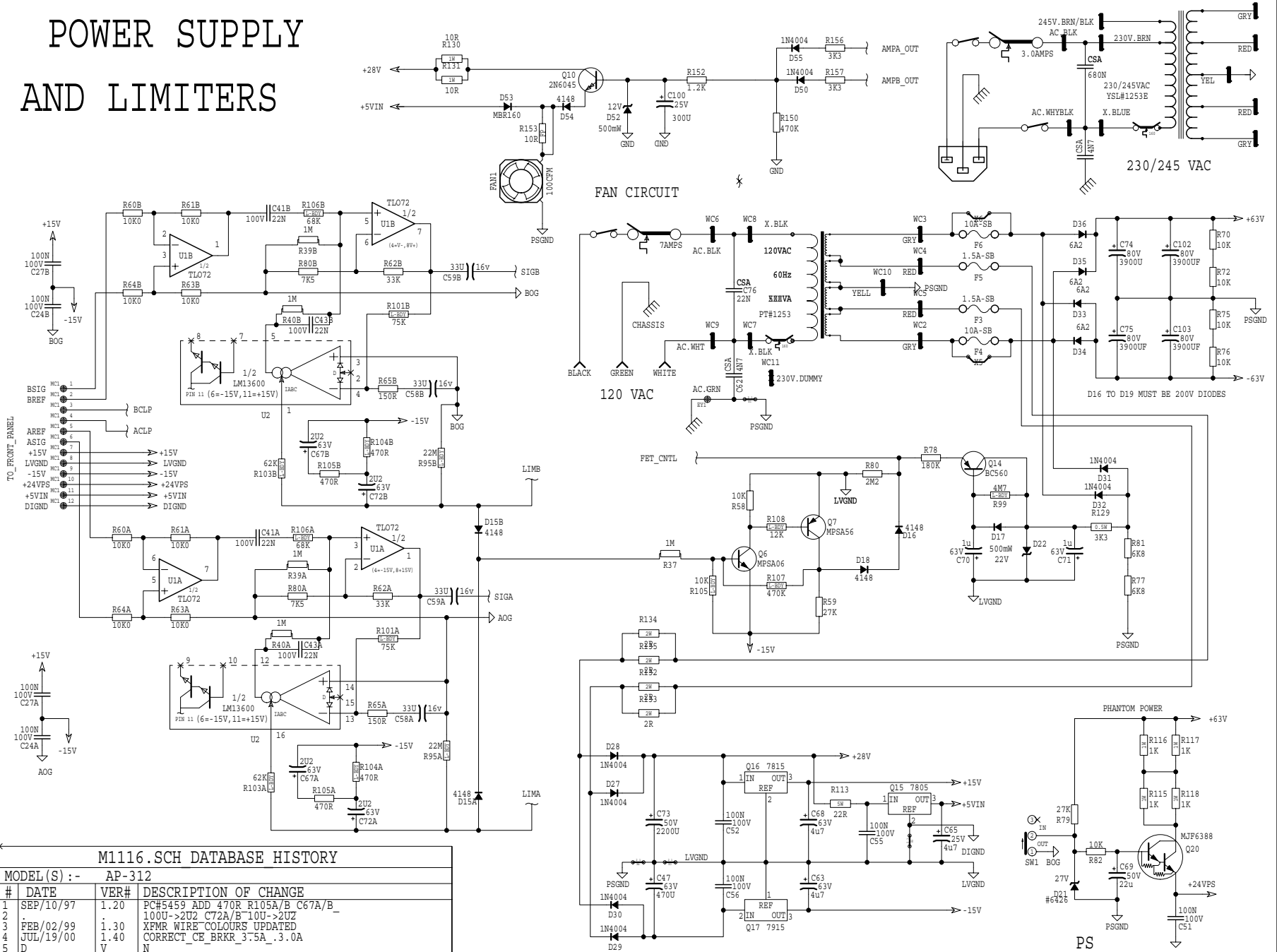


M116
AP312
VER-4.50

BLANK SIZE=16.400"X10.250"

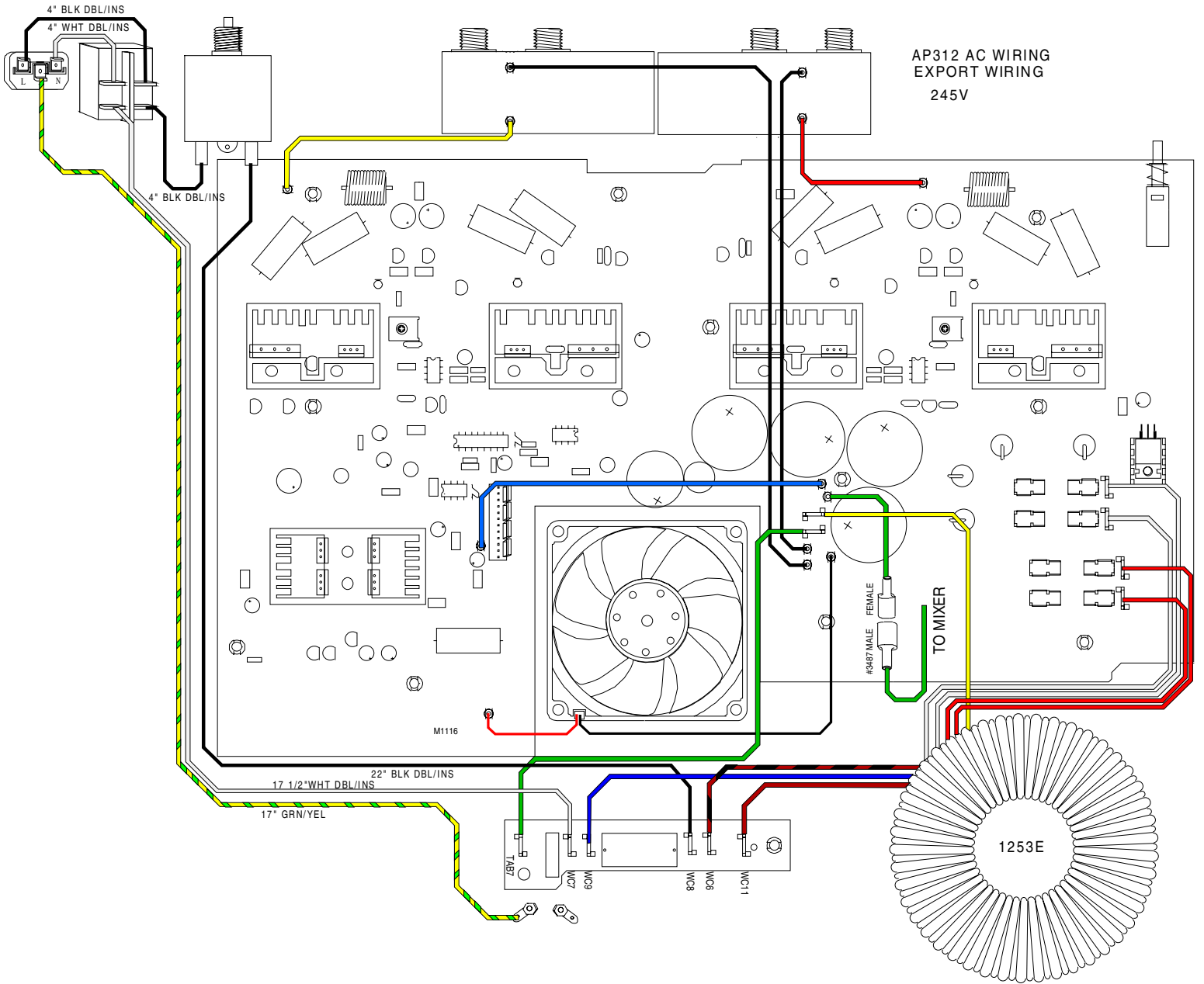


POWER SUPPLY AND LIMITERS

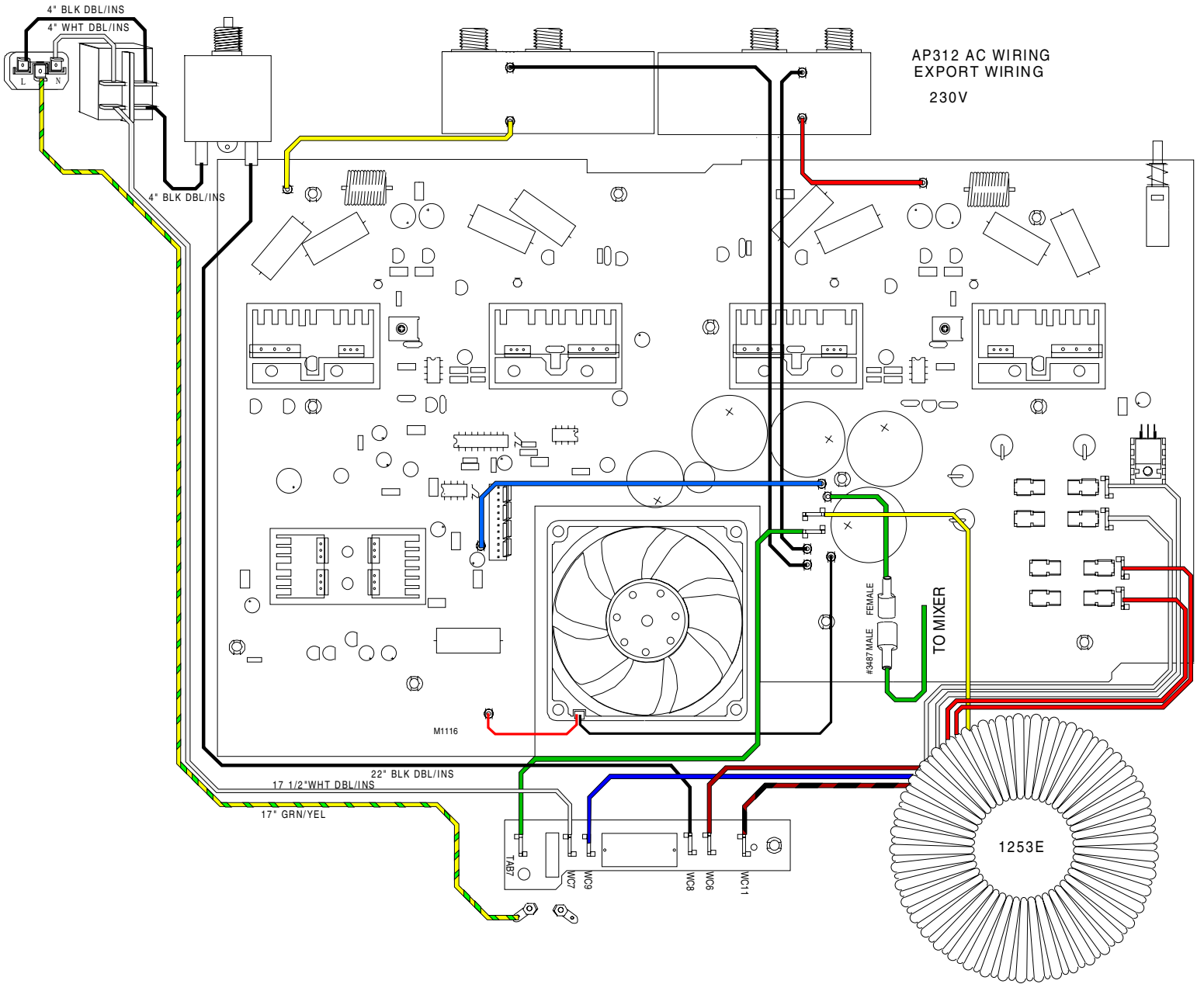


M1116.SCH DATABASE HISTORY			
MODEL(S) :- AP-312			
#	DATE	VER#	DESCRIPTION OF CHANGE
1	SEP/10/97	1.20	PC#5459 ADD 470R R105A/B C67A/B_100U->2U2 C72A/B_10U->2U2
2	FEB/02/99	1.30	XFMR WIRE COLOURS UPDATED
3	JUL/19/00	1.40	CORRECT_CE_BRKR_3.5A_3.0A
4	D	V	N
5	D	V	N
6	D	V	N
7	D	V	N
8	D	V	N
9	D	V	N
10	D	V	N

AP312 AC WIRING
EXPORT WIRING
245V



AP312 AC WIRING
EXPORT WIRING
230V



M1116

1253E

#18/2 MALE FEMALE
TO MIXER

4" BLK DBL/INS

4" WHT DBL/INS

4" BLK DBL/INS

22" BLK DBL/INS

17 1/2" WHT DBL/INS

17" GRN/YEL

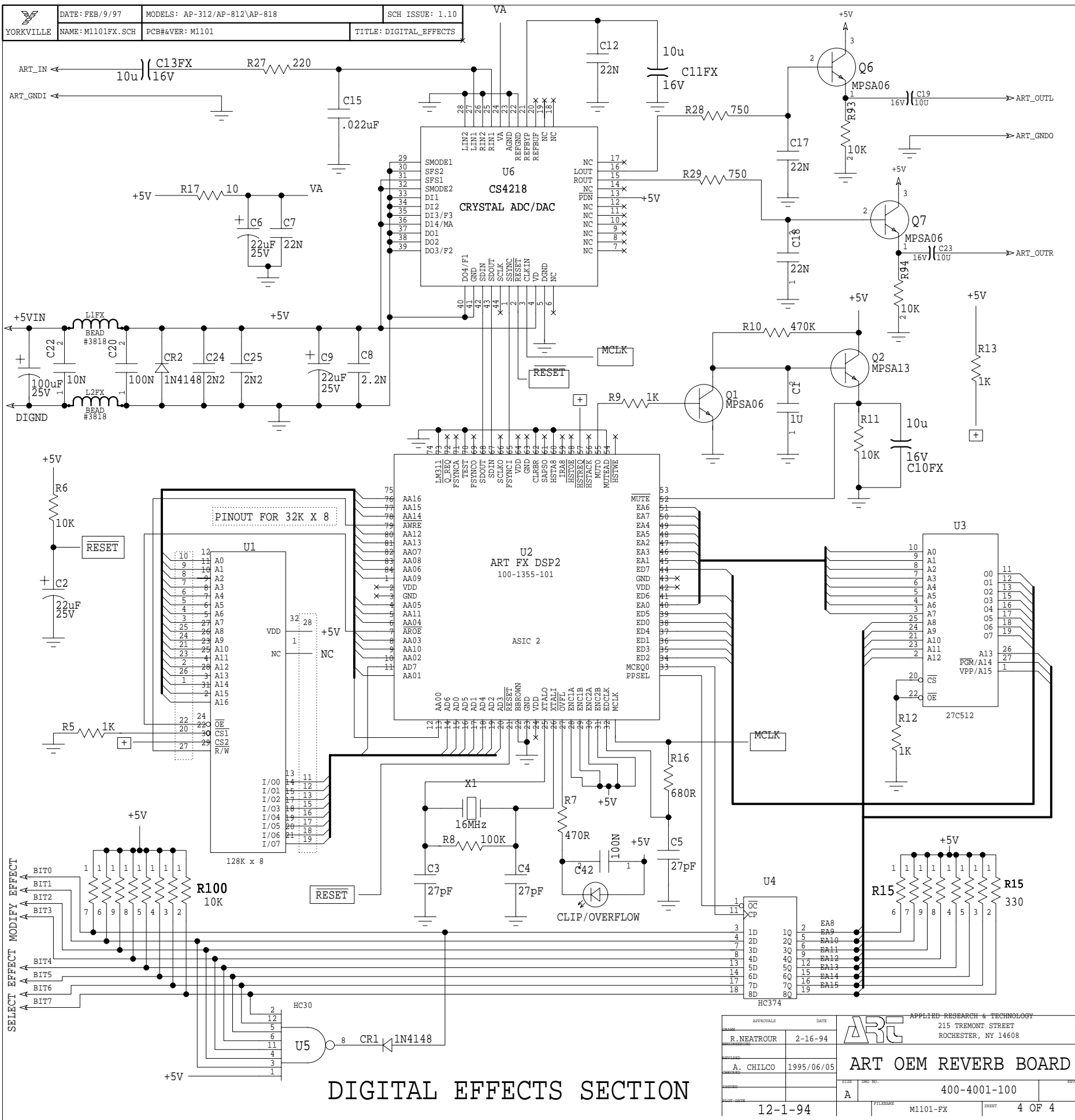
W/C1

W/C2

W/C3

W/C4

1A/B7



DIGITAL EFFECTS SECTION

APPROVALS	DATE	APPLIED RESEARCH & TECHNOLOGY 215 TREMONT STREET ROCHESTER, NY 14608	
R. NEATROUR	2-16-94	ART OEM REVERB BOARD	
A. CHILCO	1995/06/05		
FILE NO.	A	HWG NO.	400-4001-100
ISSUE DATE	12-1-94	FILENAME	M1101-FX
		SHEET	4 OF 4