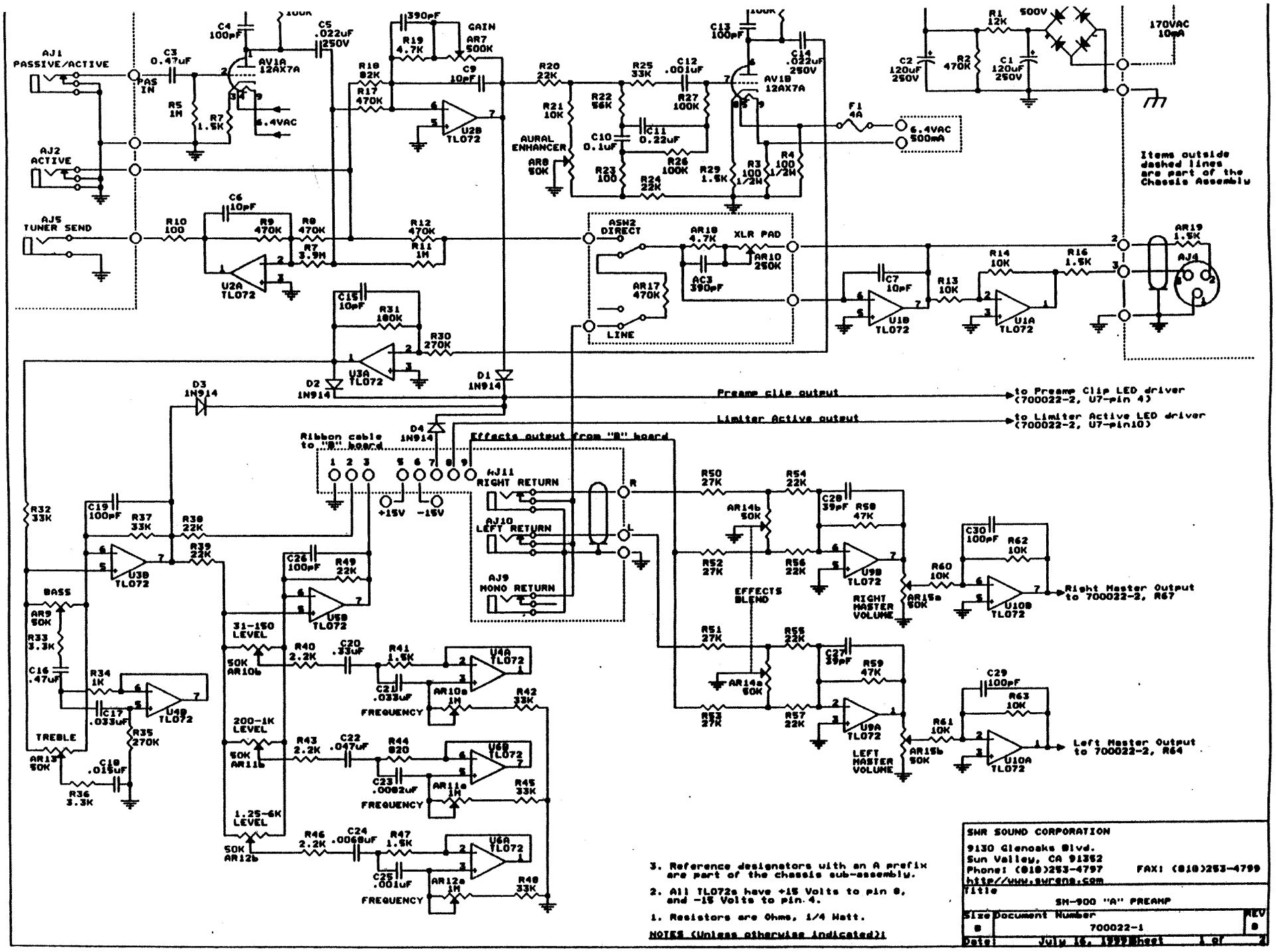


3. Reference designators with an A prefix are part of the chassis sub-assembly.

2. All TL072s have +15 Volts to pin 8, and -15 Volts to pin 4.

1. Resistors are Ohms, 1/4 Watt.

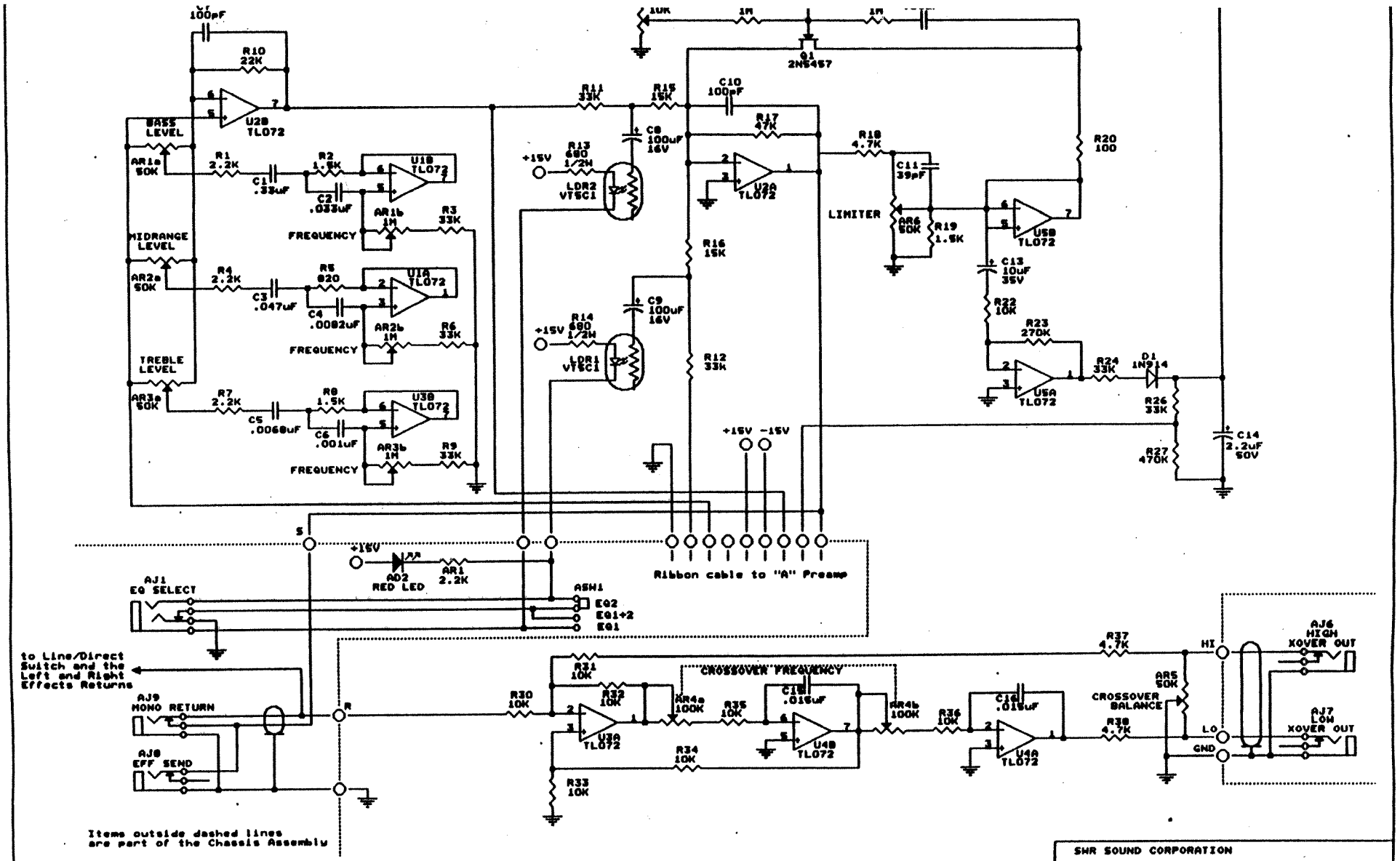
NOTES (Unless otherwise indicated):

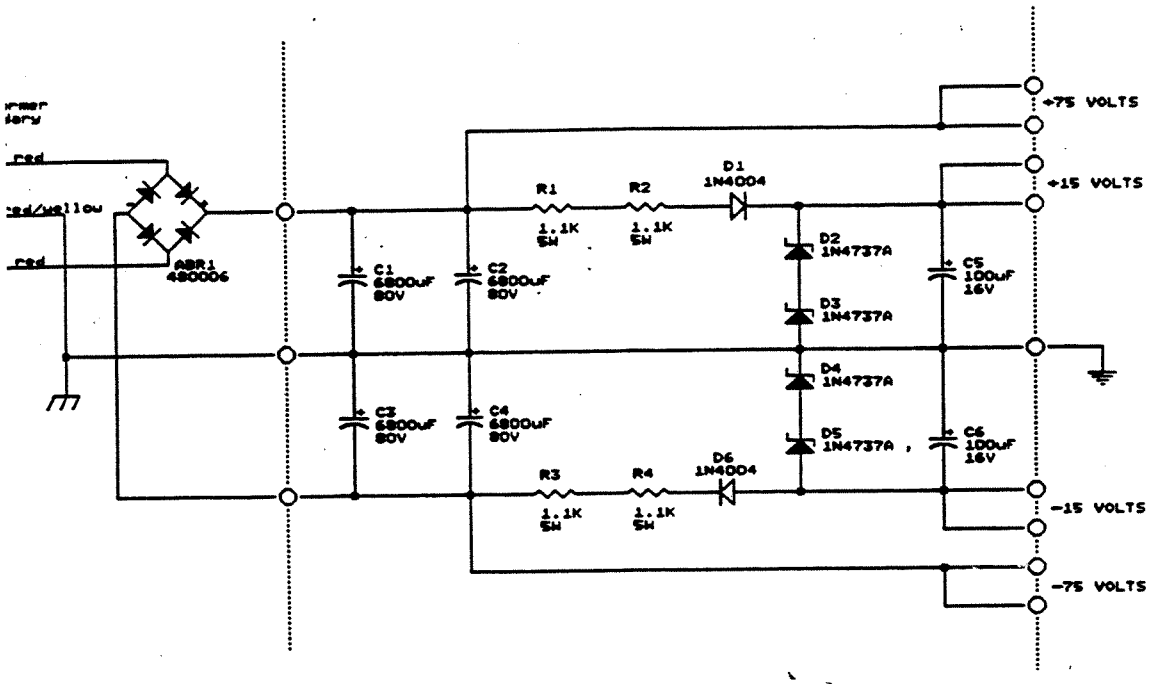
SHR SOUND CORPORATION
9130 Glenoaks Blvd.
Sun Valley, CA 91352
Phone: (818)253-4797 FAX: (818)253-4799
http://www.shrsnd.com

Title: SM-900 "A" PREAMP

Size	Document Number	REV
B	700022-1	B

Date: July 16, 1999 Sheet 1 of 2


100pF
R10 22K
U2B TL072
BASS LEVEL
AR1a 50K
R1 2.2K
C1 .33uF
R2 1.5K
C2 .033uF
U1B TL072
AR1b 1M
FREQUENCY
R3 33K
MIDRANGE LEVEL
AR2a 50K
R4 2.2K
C3 .047uF
R5 820
C4 .0082uF
U1A TL072
AR2b 1M
FREQUENCY
R6 33K
TREBLE LEVEL
AR3a 50K
R7 2.2K
C5 .0068uF
R8 1.5K
C6 .001uF
U3B TL072
AR3b 1M
FREQUENCY
R9 33K
1UK
1M
1M
Q1 2N5457
R11 33K
R15 15K
C10 100pF
R17 47K
C8 100uF 16V
+15V
R13 680 1/2W
LDR2 VTSC1
U2A TL072
R18 4.7K
C11 39pF
LIMITER
AR6 50K
R19 1.5K
R20 100
U5B TL072
C13 10uF 35V
R22 10K
R23 270K
U5A TL072
R24 33K
D1 1N914
R26 33K
R27 470K
C14 2.2uF 50V
R16 15K
C9 100uF 16V
R14 680 1/2W
LDR1 VTSC1
R12 33K
+15V -15V
S
+15V
AD2 RED LED
AR1 2.2K
Ribbon cable to "A" Preamp
AJ1 EQ SELECT
ASW1
EQ2
EQ1+2
EQ1
to Line/Direct Switch and the Left and Right Effects Returns
AJ9 MONO RETURN
AJ8 EFF SEND
R
R31 10K
R32 10K
R30 10K
CROSSOVER FREQUENCY
AR4a 100K
R35 10K
C15 .015uF
U3A TL072
U4B TL072
R34 10K
R33 10K
AR4b 100K
R36 10K
C16 .015uF
U4A TL072
R37 4.7K
R38 4.7K
AR5 50K
CROSSOVER BALANCE
HI
LO
GND
AJ6 HIGH XOVER OUT
AJ7 LOW XOVER OUT
Items outside dashed lines are part of the Chassis Assembly
SHR SOUND CORPORATION
9130 Glenoaks Blvd.
Sun Valley, CA 91352
PHONE:(818)253-4797 FAX:(818)253-4799
http//www.shrsnd.com
Title
SH-900 "B" PREAMP
Size B
Document Number 700023
REV B
Date: July 19, 1999 Sheet 1 of 1

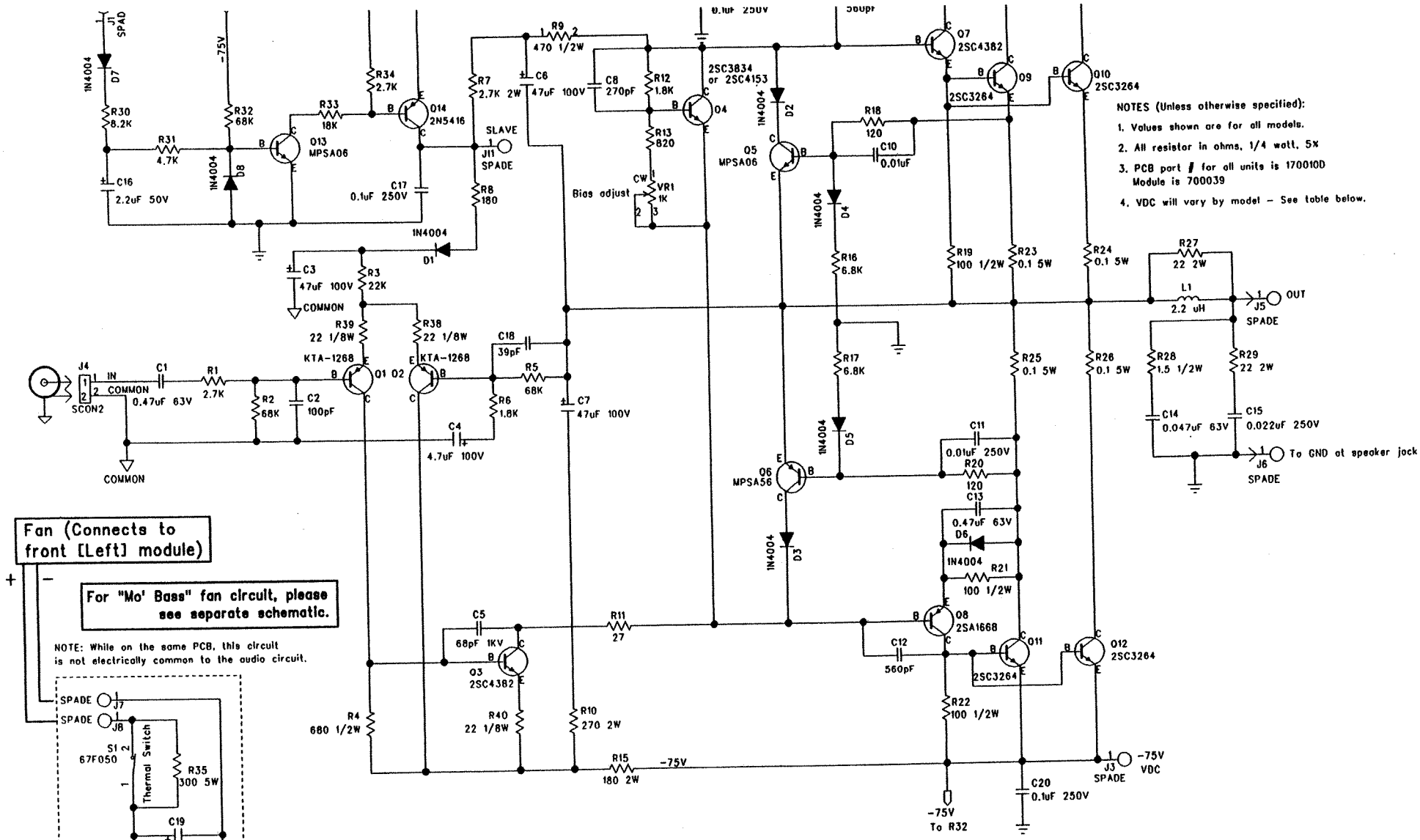


SWR SOUND CORPORATION
9130 Glenoaks Blvd.
Sun Valley, CA 91352
PHONE:(818) 253-4797 FAX:(818) 253-4799
http//www.swrsng.com

Title
Power Supply Filter Board - SM-900

Size	Document Number	REV
A	700024	A

Date: July 1, 1999 Sheet 1 of 1



VDC Table

Model	+ VDC	- VDC
SM-900 Mo' Bass	78	78
SM-500	59	59
Bass 350/350x Super Redhead Silverado Black Beauty	77	77
WM4004	79	79

SWR Sound Corp.

SWR2000 – Power Amp Module

May 2000 Revision D Page 1 of 1

Last updated: 22 Nov. 2002

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR632	30-JUL-04	B H
B	EC3147	30-SEP-04	S.M.B.
C	EC3174	07-JAN-05	S.M.B.
D	EC3213	14-APR-05	S.M.B.
E	EC3279	11-OCT-05	S.M.B.

PWR_OUTPUT — W,I1 BLACK — P10
+BASE_DRIVE
PA_GND_A
-HV
-PROTECT
PROTECT_MIRROR
PROTECT
-DRIVER_BASE
+15V
-15V

Connections between PCB halves

P8 — PWR_OUTPUT — P2
+BASE_DRIVE
PA_GND_A
-HV
-PROTECT
PROTECT_MIRROR
PROTECT
-DRIVER_BASE
+15V
-15V

+97.5VDC TP1 — P5 +HV

Output Power Test: 4
With 700W power platform connected (XFMR 0064818000 & PS assy 0068893000):
Connect 4 ohm resistive load to speaker terminals. Increase input signal amplitude to clipping @ .1THD. 700W output power should be observed.
For other amplifier configurations, refer to the product level service diagram and test plan for output power measurements.

TO PREAMP PCB — PW1 — PA_SEND_A, PA_GND_A, RESET, CLIP_LIGHT, +15V, -15V, GND

100mVAC TP8

Q6 MPSW92, Q7 MPSW92, Q5 MPSW92, Q3 MPSW92, Q4 MPSW92, Q9 MPSW92, Q8 2SA1016K, Q34 2SC4793, Q14 2SC2362K, Q16 2SC2362K, Q10 2SC2362K, Q15 2SC2362K, Q12 MPSW42, Q11 MPSW42, Q13 MPSW42, Q28 MPSW42, Q27 MPSW42, Q2 MPSW42, Q1 MPSW42, Q24 2SD1857, Q26 2SB1236, Q29 MPSW92, Q30 MPSW92, Q35 MJE15034, Q44 MJE15035, Q36 2SC3264, Q37 2SC3264, Q38 2SC3264, Q39 2SC3264, Q43 2SA1295, Q41 2SA1295, Q42 2SA1295, Q40 2SA1295

D1, D2 FDH400, D3, D4, D5, D6, D7, D8, D9, D10, D11 FDH400, D12 1N5240B 10V5%, D15 1N5240B 10V5%, D16 1N5240B 10V5%, D17, D19 1N4003, D20 1N4003, D26

C1 100 16VNP, C2 22pF 5%, C3 100 16VNP, C4 22pF 5%, C5 .47, C6 .01uF 5%, C7 DNS, C8 10pF, C9 .1, C10 .47, C12 DNS, C13 10 35V, C14 .1, C15 .1, C30 .0047, C31 .0047

R1 10 1W, R2 Fp220, R3 10, R4 1k, R5 100k, R6 10, R7 Fp10k, R8 Fp1k, R9 Fp1k, R10 Fp47, R11 Fp47, R12 27k, R13 DNS, R14 Fp47, R15 1k, R16 Fp47, R17 Fp47, R18 10k, R19 4.7k, R20 4.7k, R21 Fp47, R22 Fp470, R23 Fp220, R24 Fp470, R25 1k, R26 27k, R27 2.7k, R28 1M, R29 1k, R30 27k, R31 100k, R32 10k, R33 1M, R34 Fr47 2W, R35 10, R36 56k, R37 470, R38 10k, R39 100k, R40 DNS, R41 470k, R42 15k, R43 Fr47 2W, R44 316 1%, R45 Fp220, R46 18k 1/2W, R47 1.69k 1%, R48 825 1%, R49 1k, R50 Fr.15 2W, R51 Fr.15 2W, R52 Fr.15 2W, R53 Fr.15 2W, R54 Fp4.7, R55 Fp4.7, R56 Fp4.7, R57 Fp4.7, R58 Fp4.7, R59 Fr.15 2W, R60 Fr.15 2W, R61 Fp4.7, R62 Fr.15 2W, R63 Fr.15 2W, R64 Fp4.7, R65 Fp4.7, R66 Fp220, R69 18k 1/2W, R70 DNS, R71 Fp100, R79 2.2k, R80 Fp10k, R81 Fp1k, R82 Fp1k, R83 10, R84 100k, R85 10 5W, R86 560, R87 2.2k, R88 1.5k, R89 11k, R90 10

L1 2.5uH, P1 SPEAKER+, 2.75VAC TP9, P3 SPEAKER-, P4 CENTERTAP, P9 -HV

PWR_OUTPUT, SPKR_GND, PROTECT_MIRROR, +BASE_DRIVE, -DRIVER_BASE, PROTECT, B_CLMP_P, B_CLMP_M

RESET, -15V, D15, R36 56k, Q17 2SA1016K, C6 .01uF 5%, R25 1k, Q18 2N4401, R37 470, D16 1N5240B 10V5%, R90 10, P13, R49 1k, C13 10 35V, Q19 2N4403, C10 4.7

+18.4VAC TP3, P7, F1 F7A 125V, F2 F7A 125V, P6, -18.4VAC TP4

D23 1N4003, D24 1N4003, D21 1N4003, D22 1N4003

C18 2200 35V 105C, C20 4.7 50V, C29 2200 35V 105C, C17 2200 35V 105C, C19 4.7 50V, C16 .1uF, C25 .1uF, C22 4.7 50V, C23 .1uF, C26 .1uF, C24 4.7 50V

U2 7815, +15.5VDC TP5, +15V, D27, D28, R78 2.2k, R79 2.2k, D29 1N4003, D34 1N4003, PA_GND_A, U1 7915, -15.8VDC TP6, -15V

PROTECT, D36, TC1 10k, D37 9.1V 1N5239B, -15V, R89 11k, D32, D33 1N5223B, D35, P12 IDLE DISABLE, R77 680, R87 2.2k, R76 47k

Q25 2SA1306A, Q31 2N4403, R72 470, R66 5x, TP7 FAN, P11 FAN, 6-16VDC TP7, C27 .1, C28 .1, C21 .01uF 5%, R74 1k, D31, D30, D25, R73 6.2k, Q32 2N4403, Q33 2N4403, R88 1.5k, R75 2.7k, R86 560, +15V

Fan Control Circuit

CLIP_LIGHT, 2N4401 Q22, R42 15k, R28 1M, 2N4401 Q23, R33 1M, R39 100k, D14, 2N4403 Q21, R27 2.7k, C11 100V, R41 470k, D13, R31 100k, B_CLMP_M, R32 10k, R26 27k, 2N4401 Q20, D18, R35 100k, B_CLMP_P, R38 10k, +15V, -15V

Clip Light Driver

4 TP1-2 & output power measurements are shown here for 700W platform. Refer to the product level service diagram for product specific measurements. All other measurements should be the same regardless of the amplifier configuration.

8. AC AND DC VOLTAGES READ TO GROUND WITH A DVM UNDER THE FOLLOWING CONDITIONS (VOLTAGES MAY VARY +/-20%):
   - POWER SUPPLY CONNECTED AS APPROPRIATE FOR THE INTENDED PRODUCT USAGE. (SEE NOTE #9)
   - DC SUPPLY TO BE OPERATING AT RATED LINE VOLTAGE
   - TEST POINTS TP1-6 MEASURED WITH NO INPUT SIGNAL.
   - TEST POINT 7 VARIES WITHIN THE SPECIFIED RANGE DEPENDING ON THE TEMPERATURE OF THE HEATSINK
   - TEST POINTS TP8-9 MEASURED WITH: 100mV, 1kHz SINEWAVE AT PW1 PIN 1, SIGNAL GND AT PIN 2 4 OHM RESISTIVE LOAD BETWEEN P1-P3

7. THIS SCHEMATIC SHEET IS FOR PCB FABRICATION P/N 0064547000 AND PCB ASSEMBLY P/N 0064548000
6. DO NOT STUFF: C7 C12 R13 R40 R70 R91 P11 P14
5. FOR SWR500 MODULE, DELETE Q39 & Q43
4. ALL DIODES 1N4448.
3. ALL POLARIZED CAPACITORS IN uF, 20%; 50V MINIMUM.
2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
1. ALL RESISTORS IN OHMS, 5%; 1/4W.

NOTES: (UNLESS OTHERWISE NOTED)

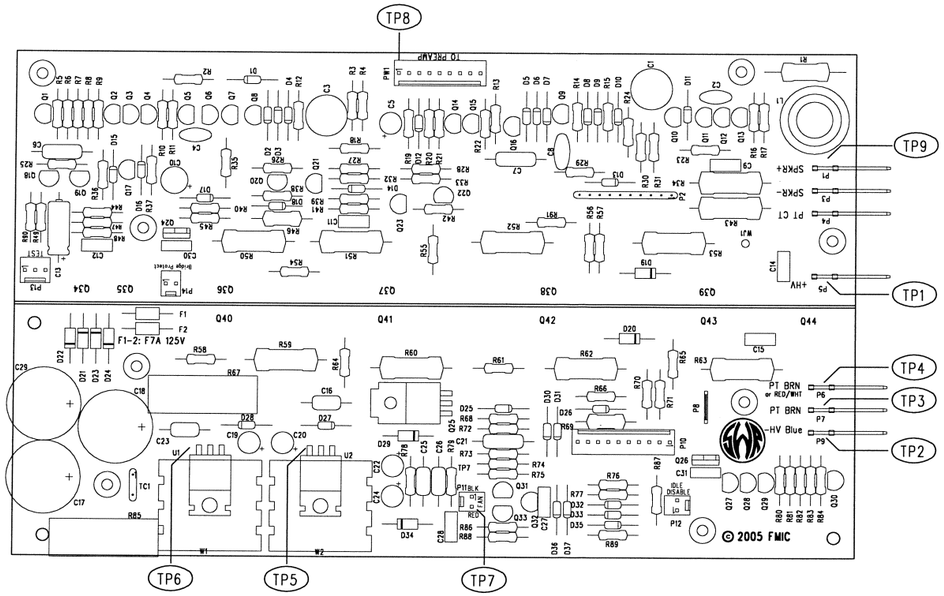
SWR
Corona, CA U.S.A.

CHECKED BY: BHH DATE: 11 OCT 05
APPROVED BY: S. Bradley DATE: 11-Oct-05
DRAWN: W. HUGHES ENGR: W. HUGHES
DATABASE FILE: s632s5.SCH

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
SWR 500/1000
POWER AMP

SIZE D | DRAWING NUMBER 0064549000 | REV. E
RELEASE DATE: 29-JUL-04 | SHEET: 1 OF 2

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	PR632	30-JUL-04	S.M.B.
B	EC3147	30-SEP-04	S.M.B.
C	EC3174	07-JAN-05	S.M.B.
D	EC3213	14-APR-05	S.M.B.
E	EC3279	11-OCT-05	S.M.B.



FILM/DWG:	SERVICE DIAGRAM
DATABASE: z632p5.PCB	DATE: 14-APR-05

NOTES: (UNLESS OTHERWISE NOTED)
1. SEE SHEET 1 FOR TEST CONDITIONS & TEST POINT VALUES

CHECKED BY: BM
DATE: 11-Oct-05
APPROVED BY: S. Brandstead
DATE: 11-Oct-05
DRAWN: R.MURRAY | ENGR: B.HUGHES
DATABASE FILE: z632p5.PCB

SWR
Corona, CA U.S.A.

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)
SWR 500/1000
POWER AMP

SIZE	DRAWING NUMBER	REV.
C	0064549000	E

RELEASE DATE: 30-JUL-04 | SHEET 2 OF 2

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	EC3184	10-JUN-05	G A R

INPUT BREAK AWAY PCB
PASSIVE INPUT
(Front Panel)
ACTIVE INPUT
(Front Panel)
100mVAC TP1
280mVAC TP3
190 VDC TP25
210 VDC TP24
13 VDC TP26
MONO RETURN
PCB ASSY #0064471000
XLR PAD
360mVAC TP22
360mVAC TP23
1.2VAC TP5
1.2VAC TP6
Level
Frequency
PCB ASSY #0064471000
(Rear Panel)
RIBBON CABLE TO BREAK-AWAY PCB
3.0VAC TP11
3.0VAC TP12
630mVAC TP13
630mVAC TP14
TO LEFT POWER AMP P/N 0064714000
TO RIGHT POWER AMP P/N 0064714000
TO MONO STEREO SWITCH ON REAR PANEL
To Speaker Out PCB Assy 0064471000.
+15 VDC TP18
-15 VDC TP19

MONO
STEREO
MONO STEREO SWITCH
PCB ASSY #0064471000
(Rear Panel)

6. AC AND DC VOLTAGES ARE READ WITH RESPECT TO GROUND WITH A DVM UNDER THE FOLLOWING CONDITIONS:
UNIT AT RATED LINE VOLTAGE.
INJECT A 100mV, 1kHz SIGNAL INTO PASSIVE INPUT ON FRONT OF CHASSIS.
MASTER VOLUME SET TO 50x ROTATION (12:00)
NO LOAD EXCEPT FOR OUTPUT POWER TEST.
NO INPUT FOR DC TESTS (TP18 - TP19, TP24 - TP26).
VOLTAGES MAY VARY BY +/-20%.
LINE OUT LEVEL AT 50X ROTATION (12:00).
5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0065411000 AND PCB ASSEMBLY P/N 0065412000.
4. ALL DIODES ARE IN4448.
3. ALL POLARIZED CAPACITORS IN uF, 20%, 50V MINIMUM.
2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
1. ALL RESISTORS IN OHMS, 5%; 1/4W.

NOTES: (UNLESS OTHERWISE NOTED)

CHECKED BY: [illegible] DATE: 10-JUN-05
APPROVED BY: G. Rocheleau DATE: 10-JUN-05
DRAWN: G Rocheleau ENGR: G Rocheleau
DATABASE FILE: Z63051.SCH

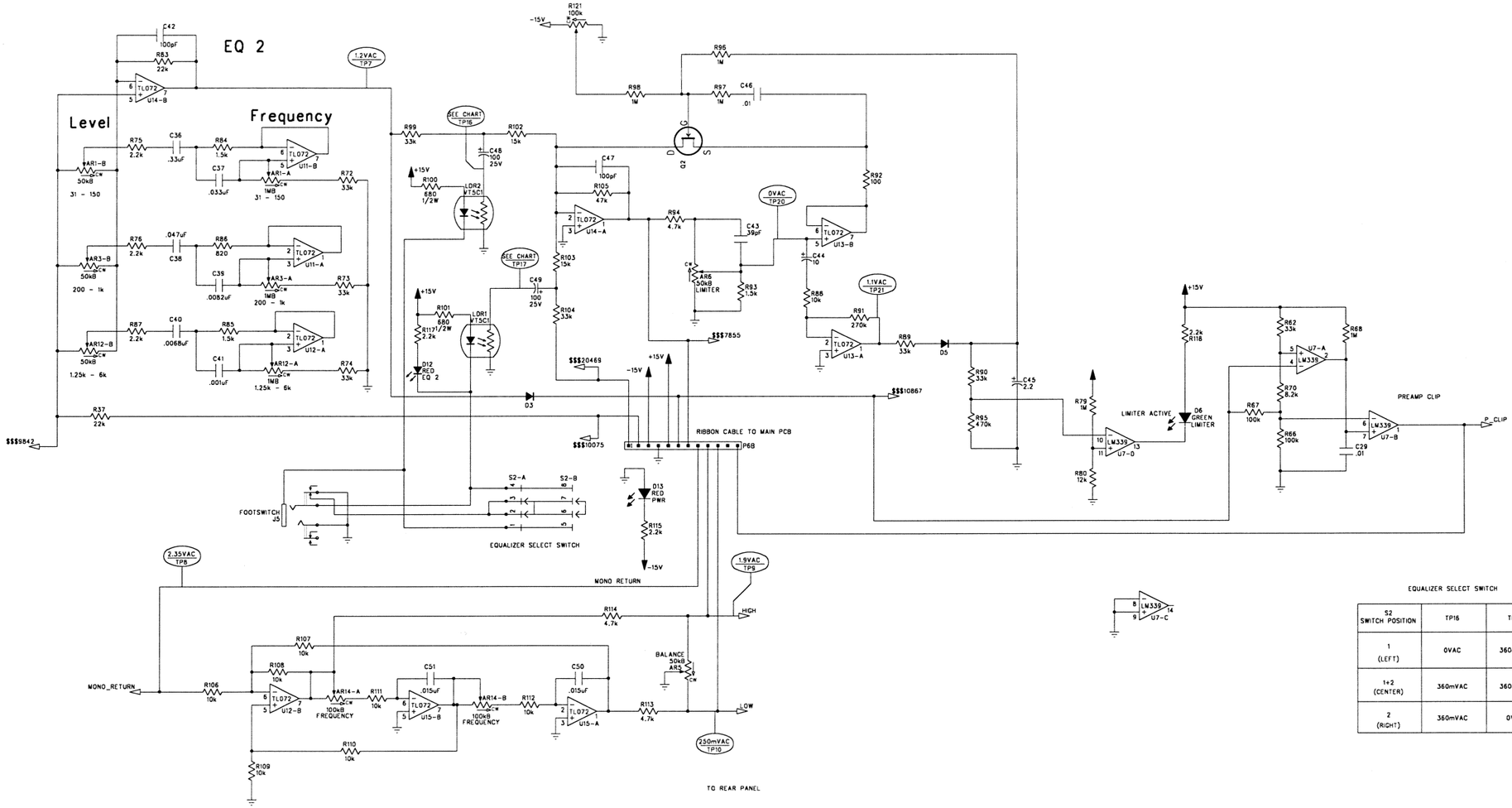
Fender MUSICAL INSTRUMENTS
Corona, CA U.S.A.

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
SWR SM-900 '05
SERVICE DIAGRAM, SM-900 PREAMP

SIZE D | DRAWING NUMBER 0065413000 | REV. A

RELEASE DATE: 27-MAY-05 | SHEET: 1 OF 3

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	EC3184	10-JUN-05	G A R



EQUALIZER SELECT SWITCH

S2 SWITCH POSITION	TP16	TP17
1 (LEFT)	0VAC	360mVAC
1+2 (CENTER)	360mVAC	360mVAC
2 (RIGHT)	360mVAC	0VAC

NOTES: (UNLESS OTHERWISE NOTED)

1. ALL RESISTORS IN OHMS, 5%; 1/4W.
2. ALL UNPOLARIZED CAPACITORS IN uF, 10% OR BETTER; 50V MINIMUM. (POWER SUPPLY BYPASS CAPACITORS ARE 20%).
3. ALL POLARIZED CAPACITORS IN uF, 20%; 50V MINIMUM.
4. ALL DIODES ARE 1N4448.
5. THIS SCHEMATIC IS FOR PCB FABRICATION P/N 0065411000 AND PCB ASSEMBLY P/N 0065412000.

CHECKED BY: GDR
DATE: 10-JUN-05
APPROVED BY: G. Rocheleau
DATE: 10-JUN-05
DRAWN: G Rocheleau ENGR: G Rocheleau
DATABASE FILE: Z630S1.SCH

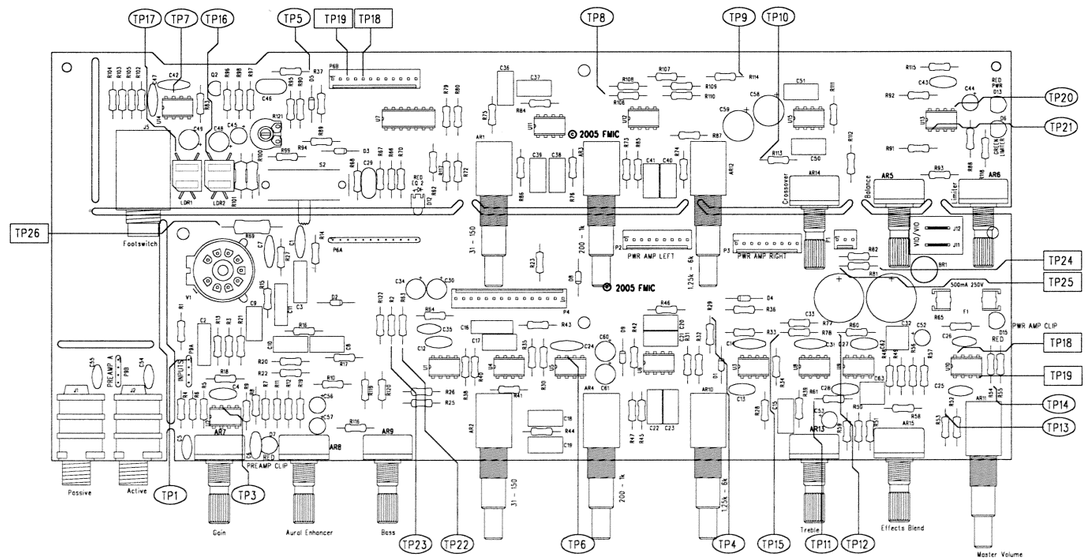
FENDER MUSICAL INSTRUMENTS
Corona, CA U.S.A.

TITLE: SERVICE DIAGRAM, COMBINED (schematic)
SWR SM-900 '05
SERVICE DIAGRAM, SM-900 PREAMP

SIZE D | DRAWING NUMBER 0065413000 | REV. A

RELEASE DATE: 27-MAY-05 | SHEET: 2 OF 3

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	EC 3184	27-May-05	G A R



FILM/DWG:	SERVICE DIAGRAM	
DATABASE:	Z630P1.PCB	DATE: 18-MAY-05

Limiter test & adjustment

This amplifier has an adjustable limiter circuit that needs to be set before final sound testing of the unit. Use the following procedure to test and set the limiter circuit.

Test Conditions:

1. Amplifier running at rated line voltage. While operating the amp at full power, make sure there is not excessive voltage "sag" at the power outlet.
2. Limiter control at "MAX"
3. GAIN control and MASTER control fully clockwise to their maximum position.
4. All other controls should be set to center detent or 50% rotation.
5. Four Ohm load to each channel.
6. Begin with the limiter control (R121) in the clockwise position.
7. Monitor the amplifier output with an oscilloscope.

Test Procedure:

1. Apply a 1kHz, 100mV sine wave at the passive input. This will create a full power square-wave condition at the output.
2. Adjust R121 until there is no amplifier clipping observed on the oscilloscope.
3. Verify that the green Limiter Active LED is illuminated.
4. Turn the limiter control to "OFF", and verify that the Limiter Active LED turns off, and the PREAMP CLIP LED turns on.
5. Use caution and perform this test quickly, since the amplifier will be operating at full power & will heat up quickly.
6. The limiter adjustment, R121, on the SM-900 should be somewhere near 60% rotation.

3. PCB SHOWN AS FABRICATED BEFORE BREAKAWAYS ARE INSTALLED IN CHASSIS.
2. WIRES NOT SHOWN FOR CLARITY.
1. SEE SHEET 1 FOR PRIMARY WIRING, TEST CONDITIONS, AND TEST POINT VALUES

NOTES: (UNLESS OTHERWISE NOTED)

CHECKED BY: [signature]
DATE: 10-JUN-05
APPROVED BY: _____
DATE: _____
DRAWN: Rocheleau ENGR: Rocheleau
DATABASE FILE: Z630P1.PCB

FENDER MUSICAL INSTRUMENTS
Corona, CA U.S.A.

TITLE: SERVICE DIAGRAM, COMBINED (PCB assy)
SM-900 '05
PREAMP PCB

SIZE	DRAWING NUMBER	REV.
D	0065413000	A

RELEASE DATE: 3-JUN-05 SHEET 3 OF 3