

SERVICE MANUAL

401 SURROUND STEREO
TUNER AMPLIFIER

MODEL **AS-8100**

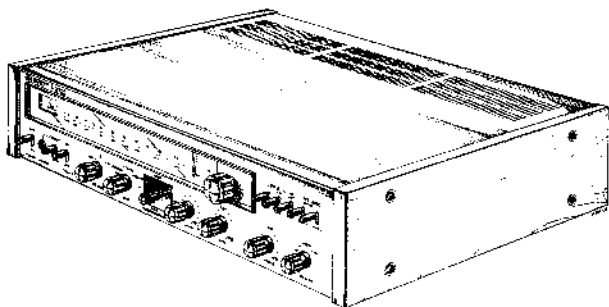


TABLE OF CONTENTS

I.	SPECIFICATIONS	2
II.	DISMANTLING OF AMPLIFIERS	3
III.	DISPOSITION OF P.C. BOARD AS WELL AS CONDENSER OUTPUT	4
IV.	TUNER SECTION ADJUSTMENT	5
V.	MAIN AMPLIFIER ADJUSTMENT	10
VI.	EPC (ELECTRONIC PROJECTION CIRCUIT) ADJUSTMENT	11
VII.	DISPOSITION OF EACH ADJUSTMENT PART	12
VIII.	COMPOSITE VIEWS OF COMPONENTS	14

When placing order for parts,
please use separate PARTS LIST.

I. SPECIFICATIONS

An asterisk next to a figure, indicates the minimum guaranteed performance.

AMPLIFIER SECTION

OUTPUT

MUSIC POWER OUTPUT

20 W each channel at 8 Ω , 4-channel
50 W each channel at 8 Ω , 2-channel

RATED POWER OUTPUT

18 W each channel at 8 Ω , 4-channel
40 W each channel at 8 Ω , 2-channel

RFC OUTPUT

Dist: 22 mV
Rin: 150 mV

INPUT SENSITIVITY

Phono: 3 mV
Aux.: 150 mV
Tape 1: 150 mV

FREQUENCY RESPONSE

20 to 100,000 Hz ± 0.5 dB at 8 Ω
(20 to 50,000 Hz ± 0.1 dB at 8 Ω *)

POWER BAND WIDTH

20 to 30,000 Hz at 8 Ω

HARMONIC DISTORTION

Less than 0.1% at 8 Ω

HUM AND NOISE

48 dBm

SIGNAL TO NOISE RATIO

Phono: 20 dB (15 dB*)
Aux.: 80 dB (75 dB*)
Tape: 80 dB (75 dB*)

TONE CONTROL

Bass: 110 dB at 100 Hz
Treb: 410 dB at 10,000 Hz

EQUALNESS CONTROL

+7 ± 2 dB at 100 Hz
-4 ± 2 dB at 10,000 Hz

FILTERS

High Cut Filter: -9.12 dB at 50 Hz
-6 ± 2 dB at 10,000 Hz

FM TUNER SECTION

FREQUENCY RANGE

75 to 91 MHz (800 KHz) (JAPAN)
87 to 109 MHz (200 KHz) (U.S.A. and S. AFRICA)

IF FREQUENCY

10.7 MHz

SENSITIVITY

Less than 10 dB

HARMONIC DISTORTION

Mono: Less than 0.5%
Stereo: Less than 0.8% (100%)

SIGNAL TO NOISE RATIO

Better than 60 dB

SELECTIVITY

Better than 60 dB (40 dB*)

IMAGE REJECTION RATIO

Better than 100 dB (80 dB*)

IF INTERFERENCE RATIO

Better than 100 dB (90 dB*)

CAPTURE RATIO

Better than 4.5 dB (2 dB*)

SPIRIOUS RATIO

Better than 34 dB

MUTING SENSITIVITY

20 ± 3 dB

S/A INTERFERENCE RATIO

Better than 50 dB

SEPARATION

Better than 35 dB

ANTENNA INPUT IMPEDANCE

300 Ω (balanced), 75 Ω (unbalanced)

AM TUNER SECTION

FREQUENCY RANGE

525 to 1630 ± 15 KHz

IF FREQUENCY

455 KHz

SENSITIVITY

Monop: Less than 15 dB
Loop: Less than 46 dB

HARMONIC DISTORTION

Less than 1.5%

SIGNAL TO NOISE RATIO

Better than 50 dB (40 dB*)

SELECTIVITY

50 dB (30 dB*)

IMAGE INTERFERENCE RATIO

Better than 70 dB

IF INTERFERENCE RATIO

Better than 70 dB

TRANSISTORS USED

4 ... 2SA545 (M)	2 ... 2SC335
5 ... 2SC938 (H)	8 ... 2SC953 (M)
12 ... 2SC960 (F, H)	3 ... 2SC945 (R)
1 ... 2SC969 (3)	1 ... 2SC1014 (D1, D2)
8 ... 2SD332	1 ... SE3901

FET USED

1 ... 2SK30

IC USED

2 ... LA1111
6 ... LD3320
1 ... A3300

DIODES USED

6 ... 1N34A	4 ... 1N60
5 ... 1N91	1 ... 5B2
7 ... 1RC3	1 ... 1S233A
4 ... V101211	

THERMISTORS USED

4 ... 23D29

POWER SUPPLY

100 V to 240 V AC, 50/60 Hz
U.S.A.: 117 V AC, 60 Hz as per U.L.

POWER CONSUMPTION

200 W

DIMENSIONS

457(W) X 165(H) X 346(D) mm (17 7/8" X 7" X 14 1/2")

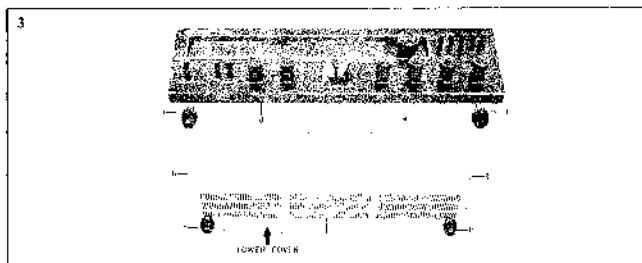
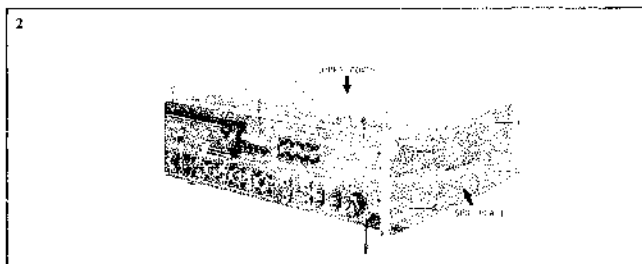
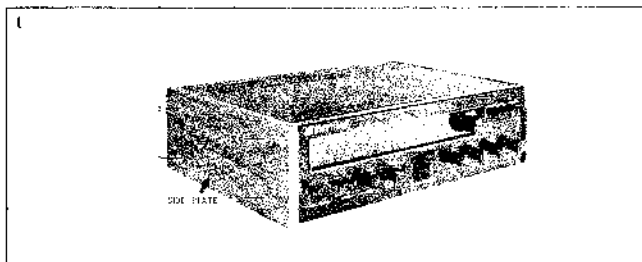
WEIGHT

16 kg (35.3 lbs.)

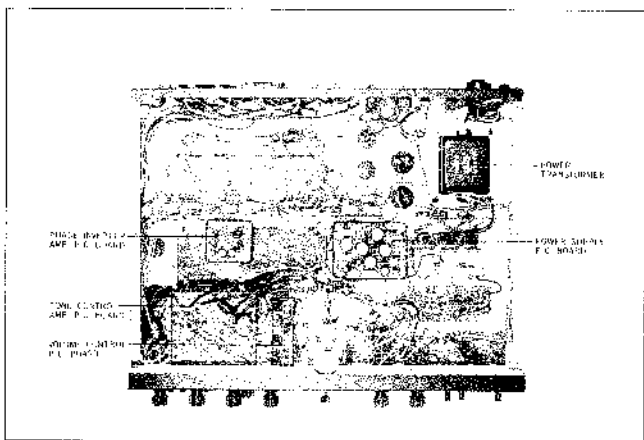
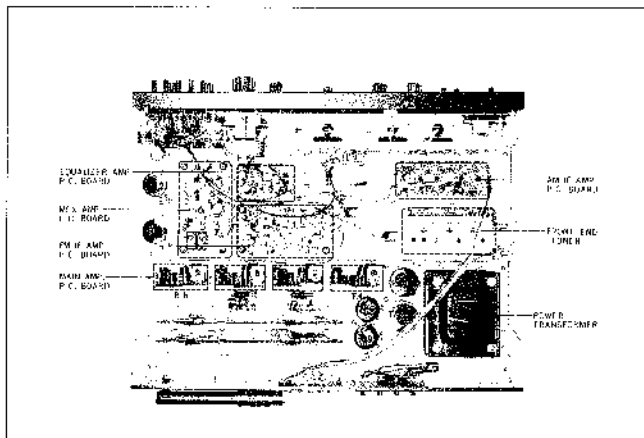
2

II. DISMANTLING OF AMPLIFIERS

In case of trouble, etc. necessitating disassembly, please disassemble in the order shown in photographs. Reassemblable in reverse order.



III. DISPOSITION OF P.C. BOARD AS WELL AS CONDENSER OUTPUT



IV. TUNER SECTION ADJUSTMENT

1. FM IF CIRCUIT ADJUSTMENTS

(See Figs. 1 and 2)

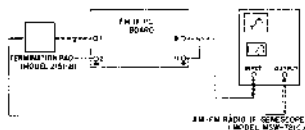


Fig. 1

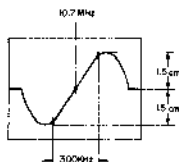


Fig. 2

- 1) Adjust V-Gain Volume to obtain a 2 cm amplitude of 0.3V p-p AM FM Radio IF Genescope calibration voltage on screen and set Genescope Output to 50 dB.
- 2) Connect Genescope Output to point (1) (FM IF Input), and Genescope Input to point (5) (AF Output).
- 3) Set Mode Switch to "FM" and set dial to about 109 MHz reception frequency.
- 4) Adjust the upper core of IFT "1₂" of FM IF Amp. P.C. Board so that the S Curve output voltage is maximum. Also adjust the lower core to obtain optimum S Curve polarity.
- 5) In making this adjustment, in some cases the rank of the ceramic filter causes a discrepancy in the S Curve Marker Point, but it is satisfactory if through adjustment a margin of within 1500 Hz can be obtained (See Fig. 3).

Ceramic Filter Rank

Color	Center Frequency	Error Tolerance
Green	10.60 MHz	+ 30 KHz
Black	10.65 MHz	± 30 KHz
Red	10.70 MHz	± 30 KHz
White	10.75 MHz	± 30 KHz
Yellow	10.80 MHz	± 30 KHz

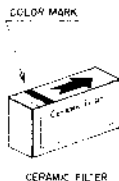


Fig. 3

2. FRONT END AND FM IF MATCHING ADJUSTMENT (See Fig. 6)



IF COIL (Front end)

Fig. 4

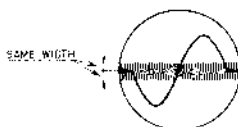


Fig. 5

- 1) Adjust V-Gain Volume to obtain a 2 cm amplitude of 0.3V p-p AM FM Radio IF Genescope calibration voltage on screen, and set Genescope Output to 90 dB.
- 2) Connect Genescope Output to 300Ω impedance FM Antenna Terminal, and Genescope Input to Terminal (8) (AF Output) of FM IF P.C. Board.
- 3) Set Mode Switch to "FM" and set the tuning indicator to the right end of the dial.
- 4) Adjust the upper core of IF Adjustment Core in front end so that the value of the S Curve wave height is maximum. Then adjust the lower core so that the noise element is maximum and the upper and lower reaches of the scanning line are the same level (See Figs. 4, 5 and 7).

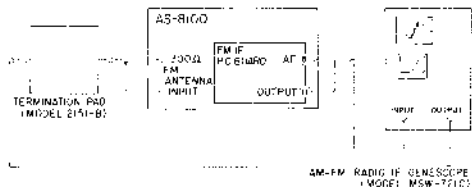
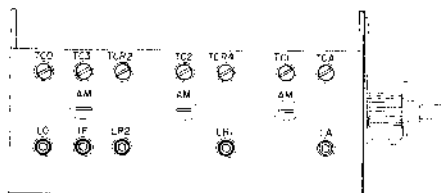


Fig. 6



TOP VIEW OF FRONT END

Fig. 7

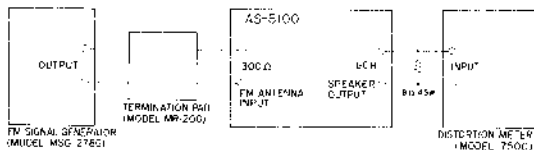


Fig. 8

3. FM RECEPTION FREQUENCY RANGE ADJUSTMENT (See Figs. 7 and 8).

- 1) Connect the FM Signal Generator Output to the 300Ω impedance FM Antenna Terminal of Model AS-8100 through the termination pad. Introduce an 85Ω 45W dummy load resistor to the left channel speaker output and connect a distortion meter to this output. At this time, with speaker output at 10 dB, set Speaker Servoed Balance Shift to Front Full position.
- 2) Set the FM Generator to 90 MHz (±400 Hz, 30% modulated modulation) and the output to 90 dB.
- 3) Adjust the core of Oscillator Coil "L₀" of FM Local Oscillator in front end so that the distortion meter level is maximum and the detection factor is maximum.
- 4) Set the tuning indicator to the right end of the dial. Set the FM Signal Generator frequency to 110 MHz.
- 5) Adjust Tunner Condenser "C10" in front end so that the distortion meter level is maximum and the detection factor is maximum.
- 6) Repeat items 2) through 5) two or three times until perfect reception is obtained in the reception frequency range of 87 to 109 MHz.

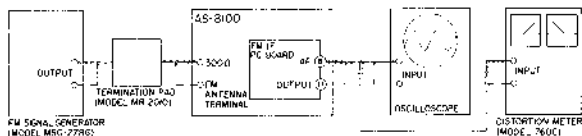


Fig 9



Fig 10

4. FM TUNER TRACKING ADJUSTMENT (See Figs. 7 and 8)

Use the same instruments as in item 3 (Fig. 8) and connect them in the same way.

- 1) Set the FM Signal Generator frequency to 98 MHz (400 Hz, 75% external modulation) and the output to 16 dB.
- 2) Set the Tuning Dial to receive the 98 MHz signal. Adjust core "IF" of coil in front end so that the distortion meter level is maximum and the distortion factor is less than 0.3%.
- 3) Set the FM Signal Generator frequency to 100 MHz and set the tuning dial to receive the 100 MHz signal. Adjust Trimmer Condensers "T1A", "TCR 1" and "TCR 2" in the front end so that the distortion meter level is maximum and the distortion factor is less than 0.3%.
- 4) Set the FM Signal Generator frequency to 90 MHz and set the tuning dial to receive the 90 MHz signal. Adjust cores "1A", "LR 1" and "LR 2" in front end so that the distortion meter level is maximum and the distortion factor is minimum.
- 5) Repeat items 1) through 4) two or three times until perfect tracking and maximum reception sensitivity is obtained at 90 MHz, 98 MHz, and 100 MHz.

Note: When the distortion factor is 0.3%, the generator output level is less than 16 dB.

5. MUTING SENSITIVITY ADJUSTMENT (See Figs. 9 and 10)

- 1) Set the Signal Generator output level to 20 dB (33 dB) and connect this output to the FM Antenna Terminal of Model AS-8100 through the termination pad, and connect the vertical input of the Oscilloscope as well as the distortion meter input to Terminal 80 (AF Output) of AM IF PC Board.

- 2) Turn Muting Lever Adjustment Semi-Fixed Resistor VR-1 168 KHz in AM IF PC Board fully clockwise and set FM Mute Lever to "OFF" position.
- 3) Turn semi-fixed resistor VR-1 counter-clockwise to position at which Oscilloscope sine wave form is completely erased (do not turn beyond this point). If in the waveform erasing process, the waveform is not erased and appears as in Fig. 10, the more circuit is defective.
- 4) If perfect adjustment cannot be made by adjusting muting sensitivity tuning VR-1, because this is due to poor alignment of Coil "L₁" (05M-755) in the mute circuit, adjust the core of "L₁" for improved mute circuit sensitivity.

6. TUNING INDICATOR CHECK AND DISTORTION ADJUSTMENT

- 1) Use the same instruments as in Section 5 (Muting Sensitivity Adjustment) and connect them in the same way.
- 2) Set the FM Signal Generator Output to 06 dB, and connect this output to the FM Antenna Terminal of Model AS-8100 through the termination pad. Connect the Oscilloscope Vertical Input as well as the Distortion Meter Input to Terminal 80 (AF Output Terminal) of FM IF PC Board.
- 3) Set the FM Signal Generator frequency to 98 MHz, and set the tuning dial of Model AS-8100 to the same 98 MHz frequency.
- 4) Adjust the upper core of "L₁" (05M-755A) so that the tuning indicator needle is centered, and adjust the lower core of "L₁" to obtain the least distortion.

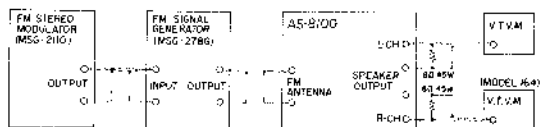


Fig. 11

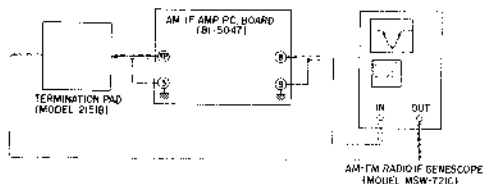


Fig. 12

7. SEPARATION ADJUSTMENT (See Fig. 11)

- 1) Set the FM Stereo Modulator Pilot Signal 19 kHz to 10% modulation and the main signal (L + R) to 400 Hz, 90% modulation. Connect this composite signal (ratio 9:1) to the EXT MOD Terminal of the FM Signal Generator.
- 2) Set the FM Signal frequency to 98 MHz and set this output level to 66 dB, and connect to the FM Antenna Terminal of Model AS-8100. Connect a high sensitivity V.T.V.M. or an 8Ω more than 45W dummy load resistors to the various speaker output terminals. Set Tone Control to "Flat" position and then set the tuning dial to 98 MHz and speaker output to 20 dB.
- 3) Turn Separation Adjustment Volume VR-1 (1 KB) fully clockwise. Set the FM Stereo Modulator to right channel, and adjust the cores of "L₁" and "L₂" coils so that the indication of V.T.V.M. (connected to left channel) is minimum. Then turn VR-3 counter-clockwise to position at which the V.T.V.M. indication is minimum.
- 4) Set FM Stereo Modulator to left channel and adjust the cores of "L₁" and "L₂" so that the indication of V.T.V.M. (connected to right channel) is minimum. Then adjust VR-3 so that the V.T.V.M. indication is minimum.
- 5) If separation is not better than 35 dB, repeat the above adjustments again. Avoid turning the coil cores too much when making this second adjustment.
- 6) If the FM Signal Generator output has been decreased to 26 dB (+3 dB), check to see whether the stereo indicator lamp has been extinguished.

8. AM IF CIRCUIT ADJUSTMENT (See Figs. 12 and 13)

- 1) Adjust the Y-Gain Volume to obtain a 2 cm amplitude of 0.3V p-p AM FM Radio IF Genescope calibration voltage on screen, and set the Genescope output to 60 dB.

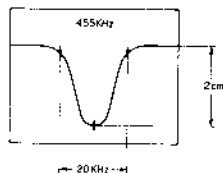


Fig. 13

- 2) Connect Genescope output to Test Point (TP) and Genescope Input to Point (S) (AF Output).
- 3) Set Mode Switch to "AM" and reception frequency to about 1630 kHz.
- 4) Adjust cores of IFT, T₁, T₂, and T₃ of AM IF Amp PC Board so that the waveform (Fig. 13) level is maximum and center frequency is 455 kHz (Center frequency differs according to country. Adjust according to country's center frequency).

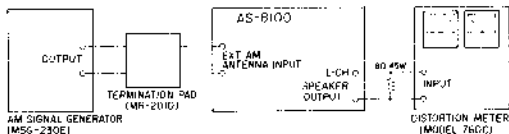


Fig. 14

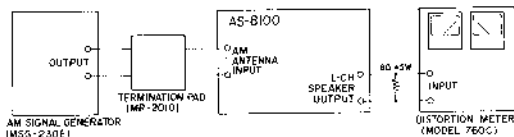


Fig. 15

9. AM RECEPTION FREQUENCY RANGE ADJUSTMENT (See Fig. 14.)

- 1) Connect the AM Signal Generator output to the EXT AM Antenna input terminal of Model AS-8100 through the termination pad. Introduce an 85Ω more than 45W dummy load resistor to the left channel speaker output and connect a distortion meter to this output. At this time, set speaker output level to 10 dB and the Surround Balance Shift to Front/Left position.
- 2) Set the tuning indicator to the left end of the dial. Set the AM Signal Generator frequency to 525 kHz (±5 kHz), (400 Hz, 30% modulation) and the output to 20 to 80 dB.
- 3) Adjust the core of AM Local Oscillator Coil "L1" (09A-465) in the AM IF P.C. Board so that the distortion meter level is maximum and the distortion factor is minimum.
- 4) Set the tuning indicator to the right end of the dial. Set the AM Signal Generator frequency to 1530 kHz (±5 kHz).
- 5) Adjust Trimmer Condenser "TC3" in front end block so that the distortion meter level is maximum and the distortion factor is minimum.
- 6) Repeat adjustments outlined in items 2) through 5) above two or three times until perfect reception is obtained in the reception frequency range of 525 to 1530 kHz.

10. AM TUNER TRACKING ADJUSTMENT (See Fig. 15)

- 1) Connect the Signal Generator output to the AM input point of Model AS-8100 through the termination pad. Introduce an 85Ω more than 45W dummy load resistor to the left channel speaker output and connect this output to the distortion meter input.
At this time, with speaker output level at 10 dB, set Speaker Surround Balance Shift to Front/Left and Tone Control to "Flat" position.
 - 2) Set the AM Signal Generator frequency to 1400 kHz (400 Hz, 100% internal modulation) and the output to 21 dB. Set the tuning dial to receive the 1400 kHz signal.
 - 3) Adjust Trimmer Condensers "TC 1" and "TC 2" in the front end so that the distortion meter level is maximum and the distortion factor is minimum.
 - 4) Set the AM Signal Generator frequency to 600 kHz and set the tuning dial to receive the 600 kHz signal.
 - 5) Adjust the core of coil "L₁" (05M-741 A) in AM IF P.C. Board as well as core of the Bar Antenna so that the distortion meter level is maximum and the distortion factor is less than 10%.
 - 6) Set the AM Signal Generator frequency to 1000 kHz and set the tuning dial to receive the 1000 kHz signal.
 - 7) Check to confirm that the distortion meter level is maximum and the distortion factor is less than 10%.
 - 8) Repeat items 2) through 6) above two or three times until perfect tracking is obtained at these three frequencies.
- Note: When the distortion factor is 10%, the Generator output level is less than 21 dB.

V. MAIN AMPLIFIER ADJUSTMENT

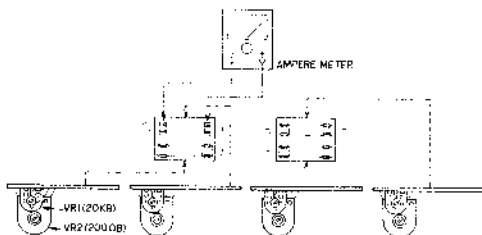


Fig. 16

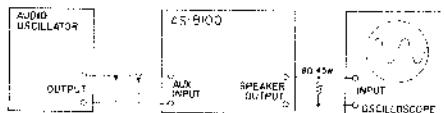


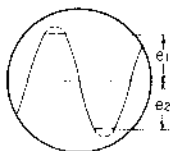
Fig. 17

1. IDLING CURRENT ADJUSTMENT (See Fig. 16)

Set Mode Switch to "Stereo". Remove fuse from fuse holder and connect ammeter to both of the fuse terminals (marked 1 and -1). Adjust semi-fixed resistor VR-2 (200Ω B) to obtain an ammeter indication of 35 mA.

2. OUTPUT WAVEFORM ADJUSTMENT (See Figs. 17 and 18)

- 1) Connect Audio Oscillator to the "AUX" input terminals of Model AS-5100 and connect an 8Ω (more than 45W dummy load resistor) to the speaker output and then connect this terminal to the oscilloscope vertical input.
- 2) Turn Volume Control to maximum. Adjust Audio Oscillator Attenuator to point at which the speaker output waveform distortion is least and supply this input voltage to the "AUX" terminal. Adjust semi-fixed volume VR 1 (20 KΩ) so that the clipping portion of the upper and lower parts of the waveform on the oscilloscope are equal.



$E_1 = E_2 = \text{ABOUT } 12V$

Fig. 18

VI. EPC (ELECTRONIC PROTECTION CIRCUIT) ADJUSTMENT

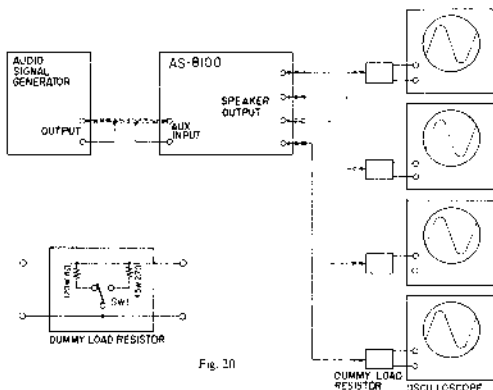


Fig. 20

Fig. 19

- Supply output from the Audio Signal Generator to the various "Aux" output terminals of Model AS-8100. Connect a dummy load resistor equipped with resistor value switch to the various speaker output terminals as shown in Fig. 20 and connect this output terminal to the Oscilloscope input terminal.
- Turn EPC Operating Point Adjustment Semi-Fixed Resistor VR-4 (1 KB) fully clockwise.
- Set Mode Selector Switch to "Stereo" and set dummy load resistor switch to 8Ω position. Adjust volume control to obtain an undistorted oscilloscope waveform of maximum value.
- At this condition, set dummy load resistor switch to "2.7Ω" position and turn operating point adjustment semi-fixed resistor VR-4 counter-clockwise to the point at which the output waveform is erased and from this point, turn clockwise again about 20° from erased point. With a 2.7Ω dummy load resistor, the waveform will appear as shown in Fig. 21.
- Set Mode Switch to "Surround" and manipulate Surround Balance Shift to check whether or not EPC functions. If EPC functioned during this check, turn EPC operating point adjustment semi-fixed resistor slightly further clockwise.

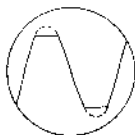


Fig. 21 Waveform when the dummy load resistor is 2.7Ω

- In the check outlined in item 51, if EPC did not function, try shorting the various speaker output terminals. Check to confirm that no matter which terminal is shorted, EPC functions. When making this check, even if a single waveform is not erased, turn EPC operating point adjustment semi-fixed resistor slightly further clockwise.
- When EPC functions regardless of which speaker output terminal is shorted, EPC adjustment is perfect.

VII. DISPOSITION OF EACH ADJUSTMENT PART

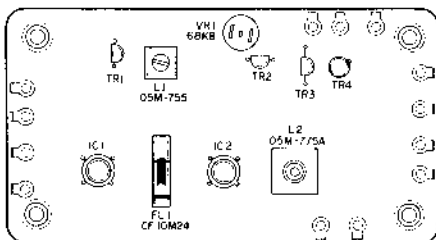


Fig. 22 81-5045 FM IF AMP P.C. BOARD

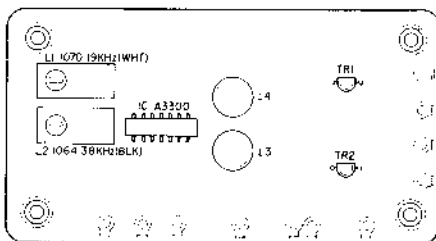


Fig. 23 81-5050 MPX AMP P.C. BOARD

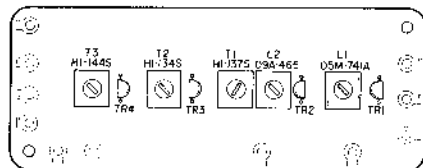


Fig. 24 81-5047 AM IF AMP P.C. BOARD

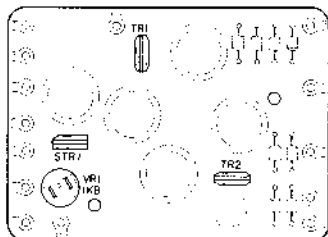


Fig. 25 X1-51144 POWER SUPPLY P.C. BOARD

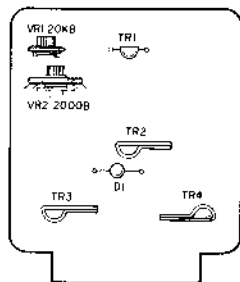
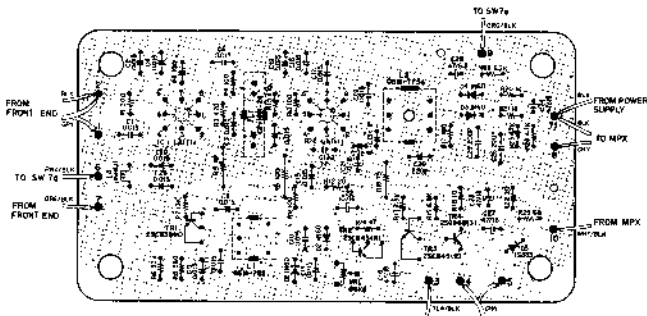


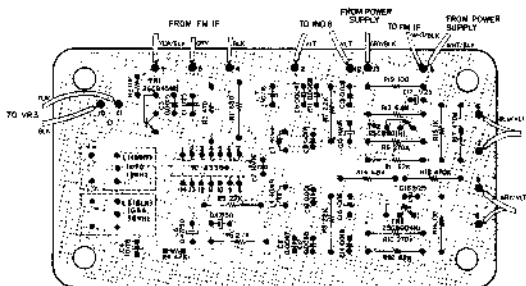
Fig. 26 X1-5049 MAIN AMP. P.C. BOARD

VIII. COMPOSITE VIEWS OF COMPONENTS

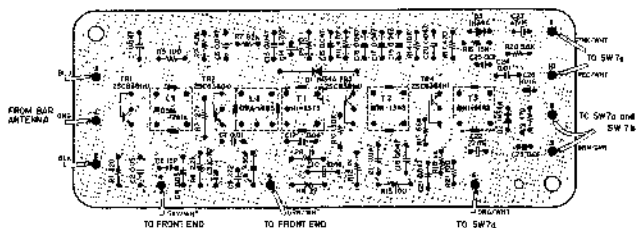
FM IF AMP. P.C. BOARD (81-5045)



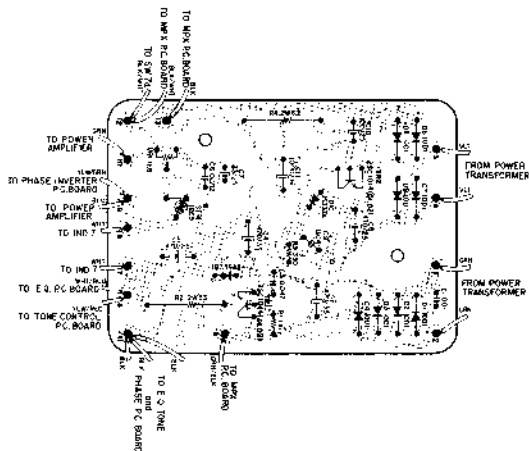
MPX. AMP. P.C. BOARD (81-5050)



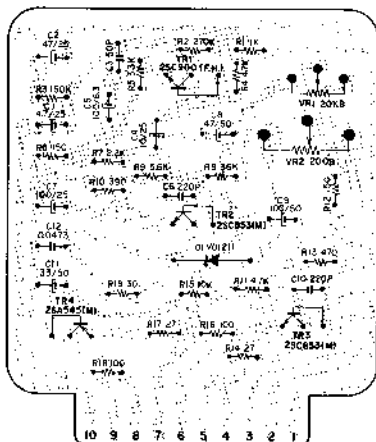
AM IF AMP. P. C. BOARD (81-5047)



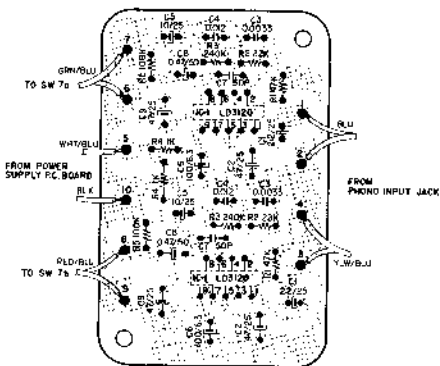
POWER SUPPLY P. C. BOARD (81-5044)



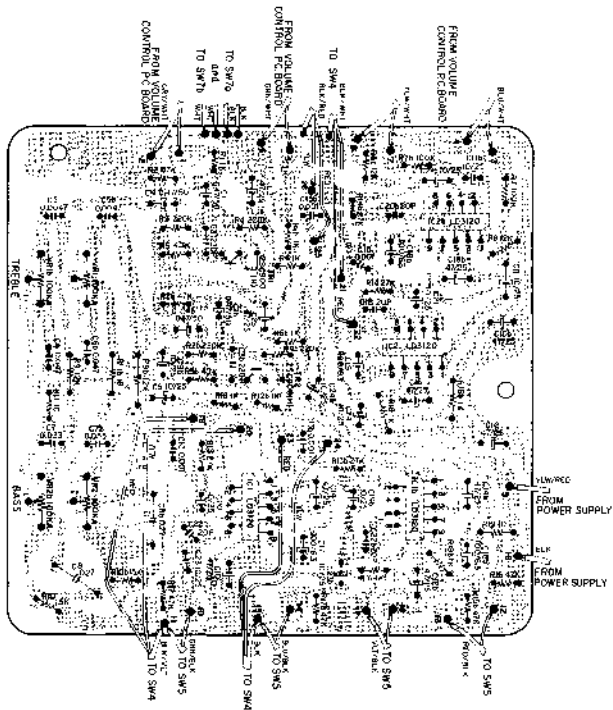
MAIN AMP. P.C. BOARD (81-5049)



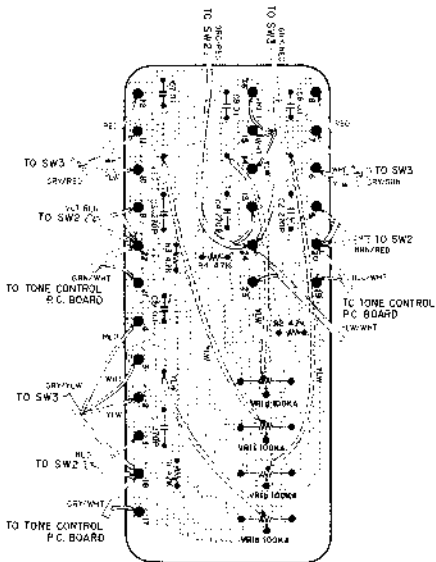
EQUALIZER AMP. P.C. BOARD (81-5046)



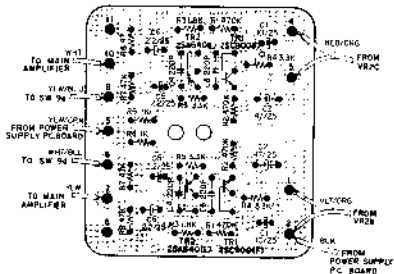
TONE CONTROL AMP. P.C. BOARD (81-5048)



VOLUME CONTROL P.C. BOARD (81-5051)



PHASE INVERTER AMP. P.C. BOARD (81-5052)



MEMOS:

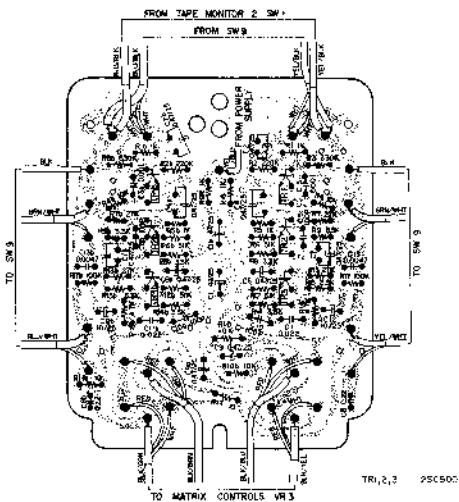
MEMOS: End Inskiloven 24/11 17:00

--

SERVICE MANUAL**PARTS LIST** **AKAI SURROUND STEREO
TUNER AMPLIFIER****MODEL AS-8100S**THIS MANUAL APPLIES TO ALL COUNTRIES. FOR OTHER APPLICABLE
PERIODS, CONSULT SERVICE MANUAL AND ACCESSORIES PARTS LIST.



MATRIX AMP. P.C. BOARD (81-5201)



AS-8100

TO PW#

+50VDC

4-12V DC

LEFT

OUTPUT

FROM
PT-10 BOARD

RIGHT

OUTPUT

NOTE

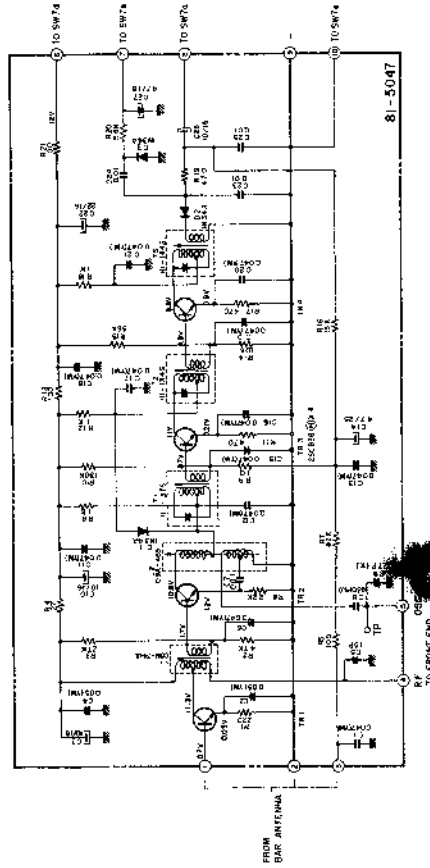
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS UNLESS
ALL CAPACITORS IN MICROSECS. K

VOLTAGE ADJ.

RESISTOR	U.S.A.	METRIC
C 12	0.012	—
F 15	—	0.015
F 16	—	0.015
C 14	—	0.015

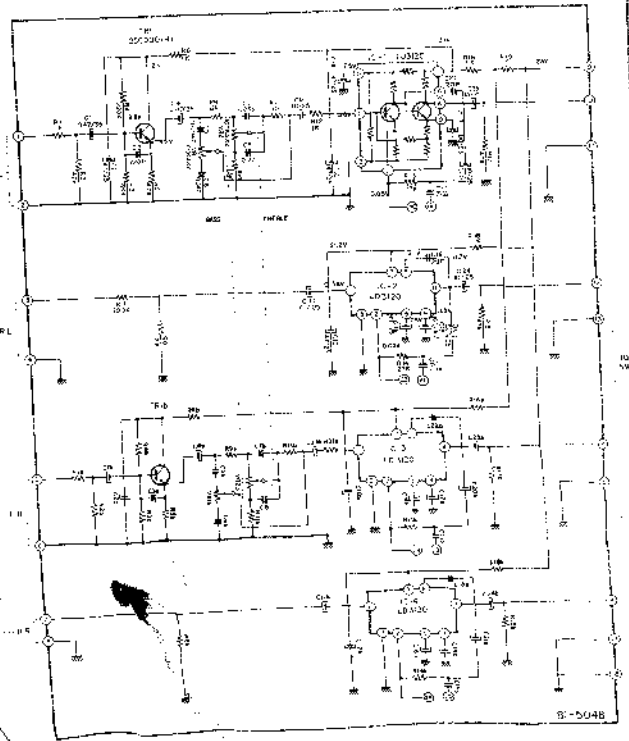
81-5050

AS-8100 (IMPX AMP) SCHEMATIC DIAGRAM NO.6-3 1422423A

AS-8100

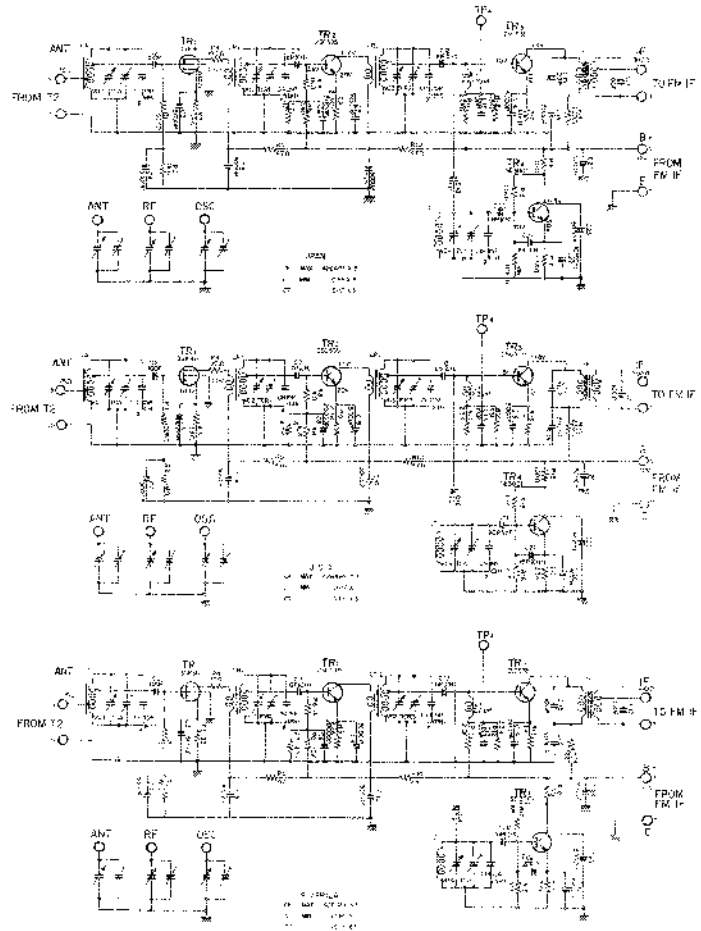
AS-8100 (AM-IF AMP) SCHEMATIC DIAGRAM NO.6-4 1422423A

FROM
VOLUME
CONTROL

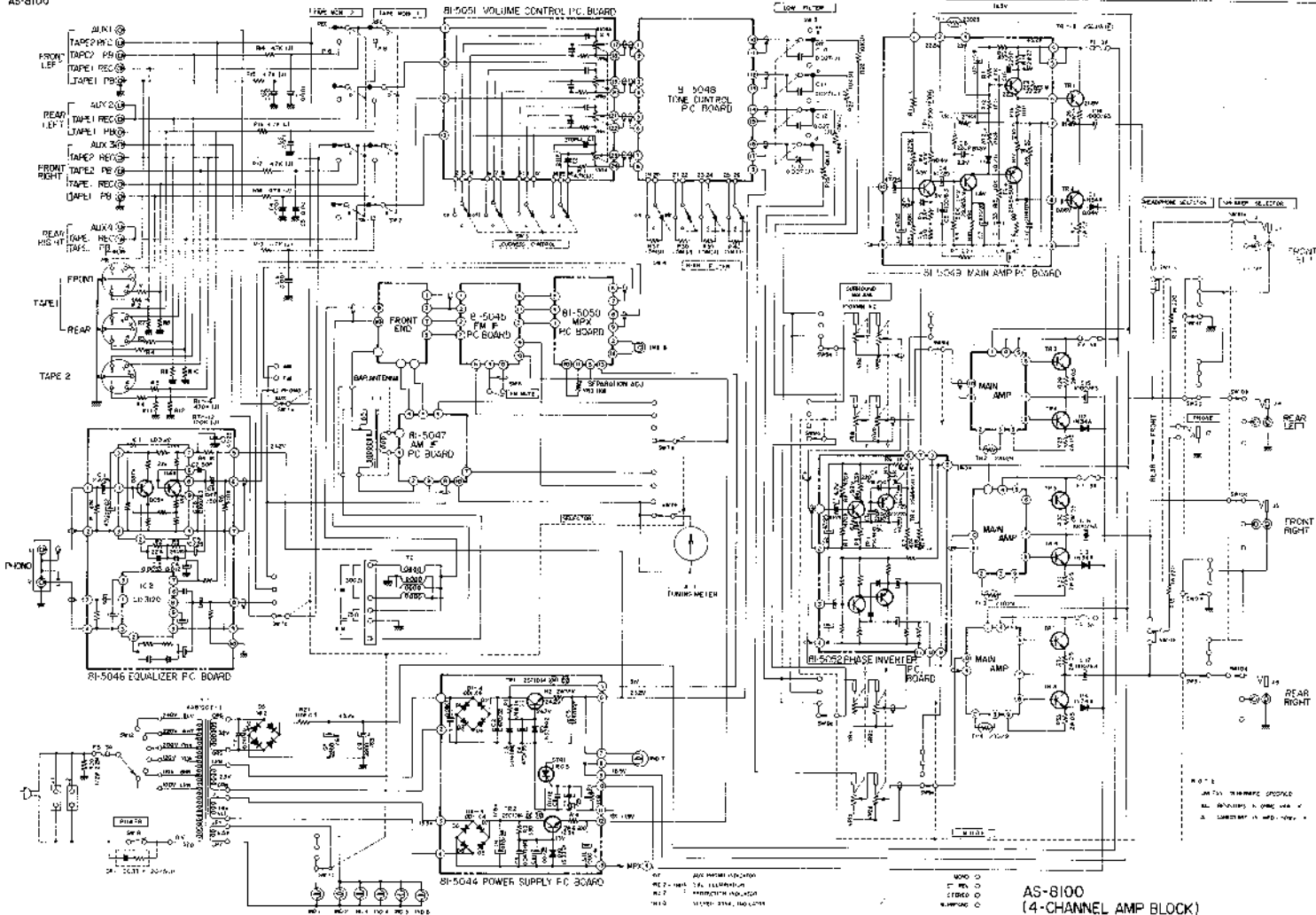


NOTE: ALL CAPACITANCE UNLESS OTHERWISE SPECIFIED IS IN MICROFARADS.
RESISTANCE IS IN OHMS UNLESS OTHERWISE SPECIFIED.
RESISTANCE IN KILOHMS IS INDICATED BY "K".

AS-3100 (TONE CONTROL) SCHEMATIC DIAGRAM
REV. 5 1422421A

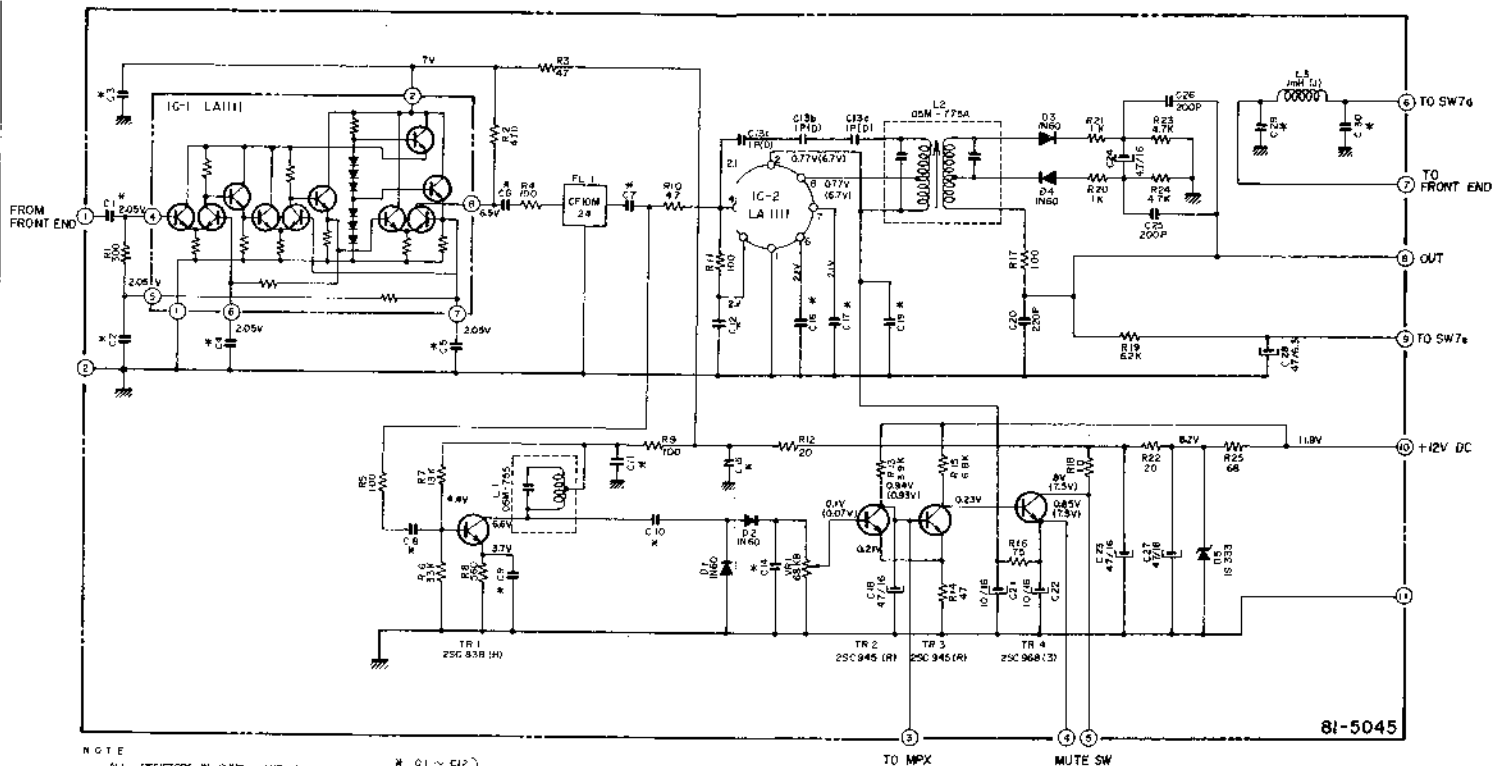


AS-500 FM FRONT END (TUNER) SCHEMATIC DIAGRAM
REV. 5 1422425A



NOTE:
 1. ALL TOL. UNLESS SPECIFIED
 2. ALL RESISTORS IN OHMS UNLESS NOTED
 3. CAPACITORS IN P.F. UNLESS NOTED

AS-8100
 (4-CHANNEL AMP BLOCK)
 SCHEMATIC DIAGRAM NO 6-1 1422420A

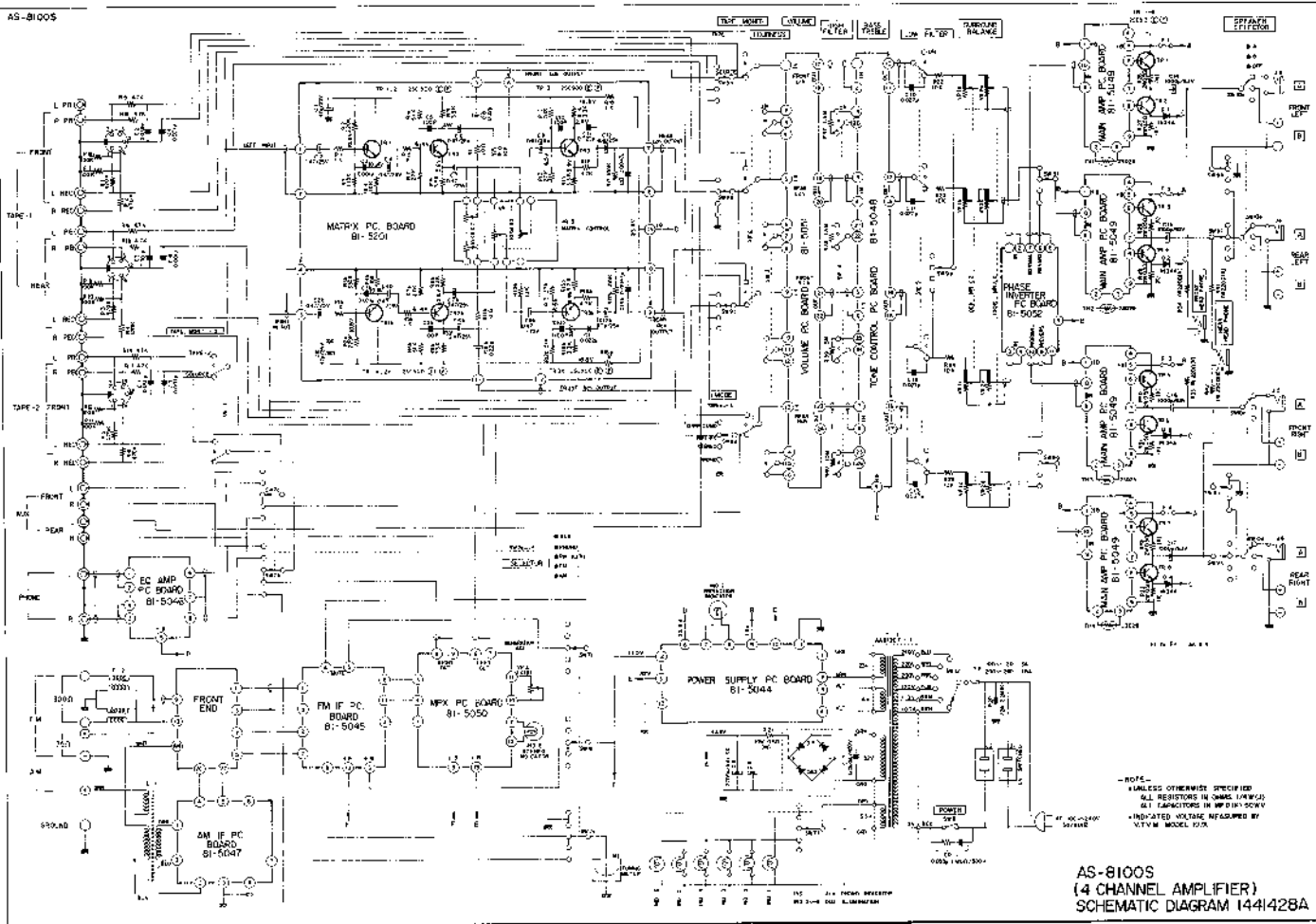


NOTE

ALL RESISTORS IN OHMS 1/4W J
CAPACITORS IN MF/50WV J

* C1 ~ C2
CM ~ C17
C18
C28 ~ C30 } 0.015μF TFM1 50WV

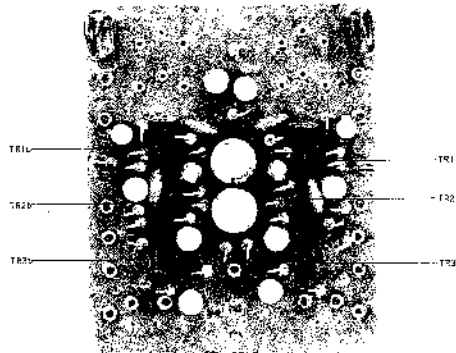
AS-8100 (FM IF AMP) SCHEMATIC DIAGRAM NO.6-2 1422422A



AS-8100S
 (4 CHANNEL AMPLIFIER)
 SCHEMATIC DIAGRAM 1441428A

The parts for AS-8160S which differ from AS-8160 are as follows:

PHOTO OF MATRIX AMP. P.C. BOARD (81-5201) BLOCK



ASSEMBLY BLOCK

MATRIX P.C. BOARD (81-5201) BLOCK

Ref. No.	Parts No.	Description	Sepecs. Qty. %	Symbol No.	Parts No.	Description	Qty.
FRONT CHASSIS LIGHT BOX BLOCK							
10-48ax	82479237	Front Chassis Light Box	35-8005	11-11x	80479248	Matrix P.C. Board Comp. (81-5201)	1
		Block Comp.		10-TR1,2,3	E1952667	Transformer 250V/0.003(4F)	6
10-49a	82479068	Front Chassis	35-8002	Capacitor, Vertical Type			
10-17a	82479081	Rotary Switch E365	35-6-0	11-071	EC230679	Elect. 5.7uF 500V	2
10-20a	82479092	Rotary Switch Fx-124	35-6-0	11-072	EC422608	Elect. 0.47uF 500V (modelless)	2
10-71a	82479103	Switch Bracket	35-503	11-073	EC550575	Elect. 0.001uF (1) 500V	2
				11-074	EC422608	Elect. 0.47uF 500V (modelless)	2
10-111	E1488413	SP Mate N-Link Cap.	35-900	11-075	EC390320	VF-M 100PF (1) 500V	2
		Comp. 815		11-076, 7	11-652908	Elect. 0.22uF 500V (modelless)	4
				11-078	EC351620	Elect. 0.22uF (1) 500V	2
				11-079	EC432608	Elect. 0.47uF 500V (modelless)	2
FRONT CHASSIS RILUCK							
10-112ax	82479204	Front Chassis Comp.	35-606F	11-070	EC290520	VF-M 100PF (1) 500V	2
10-113ax	82479237	Front Chassis Light Box	35-8005	11-071	EC265215	Matrix 0.022uF 500V	2
		Block Comp.		11-072	EC210944	Elect. 10uF 250V	2
				11-073	EC317500	Elect. 0.0047uF (1) 500V	2
10-14	L148646	SP Mate N-Link Plug	35-900	Resistor, Stopper Type			
		Comp. 815		11-071	ER211365	Carbon RD114 10(1)	2
10-125	EV479441	Adjuster Variable	35-910	11-072	ER360711	Carbon RD114 220k (1)	2
		V16LS16xN 10K (B10K x 2) x 2)	35-910	11-073	ER367895	Carbon RD114 250k (1)	2
				11-074	ER316442	Carbon RD114 10k (1)	2
				11-075	ER211465	Carbon RD114 1k (1)	2
FRONT PANEL BLOCK							
10-130ax	82479103	Front Panel Block Comp.	35-8005	11-076	ER359675	Carbon RD114 51k (1)	2
10-132a	SP479057	Front Panel U	35-8005	11-077	ER365955	Carbon RD114 27k (1)	2
				11-078	TR372423	Carbon RD114 1.5k (1)	4
				11-079	ER326642	Carbon RD114 10k (1)	2
				11-081	ER364290	Carbon RD114 10 (1)	2
				11-082	ER359675	Carbon RD114 51k (1)	2
				11-083	ER364293	Carbon RD114 25k (1)	2
				11-084, 11	ER212077	Carbon RD114 5.1k (1)	4
				11-086	ER212683	Carbon RD114 5.7k (1)	2
				11-087	ER211757	Carbon RD114 100k (1)	2
				11-088	ER211465	Carbon RD114 1k (1)	2

AKAI ELECTRIC CO., LTD.
AKAI TRADING CO., LTD.

1-1-1, BOX 21, TOKYO, JAPAN
1-1-1, BOX 21, TOKYO, JAPAN
1-1-1, BOX 21, TOKYO, JAPAN
1-1-1, BOX 21, TOKYO, JAPAN

Printed in Japan

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.