SERVICE MANUAL
PARTS LIST

PRIDE IN QUALITY

AKAI 4-CH/STEREO RECEIVER

MODEL AS-960

4-CH/STEREO RECEIVER

MODE AS-960

SECTION 1

SERVICE MANUAL

TABLE OF CONTENTS

I. SPECIFICATIONS

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

§ **AMPLIFIER SECTION**

RATED OUTPUT	4-CHANNEL	20W at 8Ω (1 channel operation 1 kHz 0.5%)
	2-CHANNEL POWER DOUBLER	40W at 8Ω (1 channel operation 1 kHz 0.5%)
FREQUENCY RESPONSE	PHONO	100 Hz 13.5±1.5 dB
		10 kHz −13.5±1.5 dB
	AUX	20 Hz/−2.0 dB, 50 kHz/−3.0 dB
POWER BAND WIDTH		10 Hz to 50 kHz at 8Ω
INPUT SENSITIVITY	PHONO	3 mV (−47.5±1.5 dB)
	MIC	3 mV (−47.5±1.5 dB)
	AUX	170 mV (−13±1.5 dB)
	TAPE 1	170 mV (−13±1.5 dB)
	TAPE 2	150 mV (−14.5±1.5 dB)
	CD-4	150 mV (−14.5±1.5 dB)
SIGNAL TO NOISE RATIO	PHONO	Better than 35 dB
	MIC	Better than 35 dB
	AUX-DISC 4 CH	Better than 40 dB
	AUX-SQ	Better than 35 dB
	TAPE 1, 2	Better than 40 dB
	CD-4	Better than 40 dB
RESIDUAL NOISE		Less than 4.3 mV (Less than −45 dB)
TONE CONTROL	BASS	10±1.5 dB at 100 Hz
		−10±1.5 dB at 100 Hz
	TREBLE	10±1.5 dB at 10 kHz
		−10±1.5 dB at 10 kHz
LOUDNESS CONTROL		8±2 dB at 100 Hz
		4.5±2 dB at 10 kHz
CROSS TALK		Better than 50 dB
LEFT-RIGHT DEVIATION		Within 3 dB
FRONT-REAR DEVIATION		Within 3 dB
RECORDING OUTPUT	TAPE 1 DIN	34 mV (−27±1.5 dB)
	PIN	170 mV (−13±1.5 dB)
	TAPE 2 PIN	150 mV (−14.5±1.5 dB)
DISTORTION FACTOR		Less than 0.1% (8Ω 10W output)

§ **SQ SECTION**

	Input		F.L	F.R	R.L	R.R
CROSS TALK	F.L	1 kHz	0±2 dB	−15±2 dB	−2.5±2 dB	−2.5±2 dB
	F.R	1 kHz	−15±2 dB	0±2 dB	−2.5±2 dB	−2.5±2 dB
PHASE DEVIATION	F.L	1 kHz	0°		−115±20°	
	F.R	1 kHz		0°		+65±20°

§ **FM SECTION**

	Input		F.L	F.R	R.L	R.R
CROSS TALK	F.L	1 kHz	0±2 dB	−12±2 dB	−1±2 dB	−6±2 dB
	F.R	1 kHz	−12±2 dB	0±2 dB	−6±2 dB	−1±2 dB
PHASE DEVIATION	F.L	1 kHz	0°		+90±20°	
	F.R	1 kHz		0°		−90±20°

§ FM TUNER SECTION

FREQUENCY RANGE		J 75 to 91±1 MHz U 86 to 109±1 MHz
DIAL TRACKING ERROR		±250 kHz
SENSITIVITY (IHF)		2μV *Less than 4μV(Less than 12 dB)
SENSITIVITY DEVIATION		Within 3 dB
IMAGE REJECTION RATIO		65 dB *Better than 45 dB
IF REJECTION RATIO		90 dB *Better than 60 dB
SPURIOUS REJECTION RATIO		Better than 60 dB
CAPTURE RATIO (IHF)		Less than 2 dB
SELECTIVITY		65 dB *Better than 60 dB
AM SUPPRESION RATIO		Better than 45 dB
SIGNAL TO NOISE RATIO	MONAURAL	70 dB *Better than 55 dB
	STEREO	Better than 45 dB
DISTORTION FACTOR	MONAURAL	0.4% *Less than 0.5%
	STEREO	0.8% *Less than 2.0%
FREQUENCY RESPONSE		J −11±1.5 dB at 10 kHz U −13.0 dB at 10 kHz
STEREO SENSITIVITY		45 μV (33±3 dB)
STEREO INDICATOR SENSITIVITY		32 μV (30±3 dB)
STEREO SEPARATION		40 dB *Better than 33 dB
REJECTION RATIO		Better than 45 dB
L-R DEVIATION		Within 3 dB
RECORDING OUTPUT	PIN	170 mV (−13±1.5 dB)
	DIN	35 mV (−27±1.5 dB)

§ AM TUNER SECTION

FREQUENCY RANGE	525±5 kHz to 1,650±20 kHz
DIAL TRACKING ERROR	Within 2%
SENSITIVITY (IHF)	250 μV *Less than 350 μV (Less than 50 dB)
SENSITIVITY DEVIATION	Within 6 dB
IMAGE REJECTION RATIO	55 dB *Better than 50 dB
IF REJECTION RATIO	Better than 45 dB
SELECTIVITY	Better than 30 dB
SIGNAL TO NOISE RATIO	50 dB *Better than 40 dB
DISTORTION FACTOR	Less than 1.5%
FREQUENCY RESPONSE	−15 dB at 3 kHz

§ OTHER

Transistors	2SA684 . . . 4	2SC945 (P) (Q) (R) . . . 4
	2SA733 (P) (Q) (R) . . . 1	2SC1312 (F) (G) . . . 20
	2SC454 . . . 3	2SC1318 (P) (Q) . . . 4
	2SC839 (E) (F) . . . 4	2SC1384 (Q) (R) . . . 4
	2SC922 . . . 1	2SD313 (E) (F) . . . 9
I.C.	LA-3300 . . . 1	TA-7061AP . . . 1
DIODES	1N34A . . . 3	10D1 . . . 12
	1N60 . . . 6	HIFI 400V 3A . . . 4
ZENER DIODES	WZ-120 . . . 1	WZ-130 . . . 1
VARISTORS	STV-3H . . . 4	
POWER SOURCE	100 to 240V A.C. 50/60 Hz 120V A.C. 60 Hz (CSA Models)	
POWER CONSUMPTION	300W/4Ω (at maximum output) 160W/4Ω (at 1/3 output)	
DIMENSIONS	480 (W)x168(H)x402(D) mm (18.9"x6.6"x15.8")	
WEIGHT	13.06 kg (28.7 lbs.)	

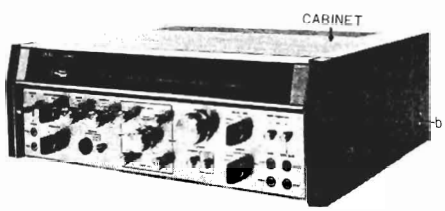
NOTE: Specifications subject to change without notice.

II. DISMANTLING OF UNIT

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

1

2



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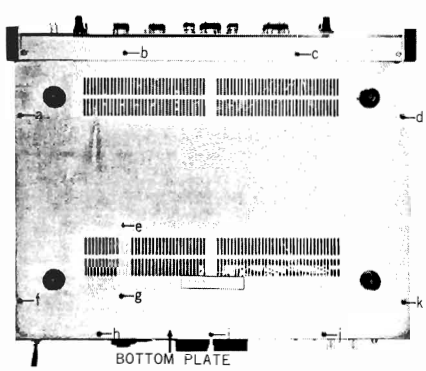

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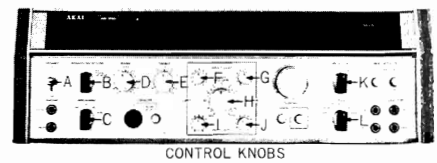

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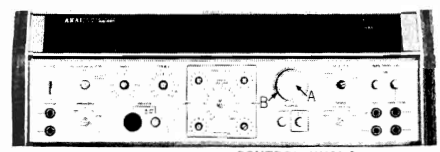

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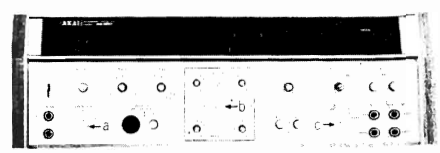

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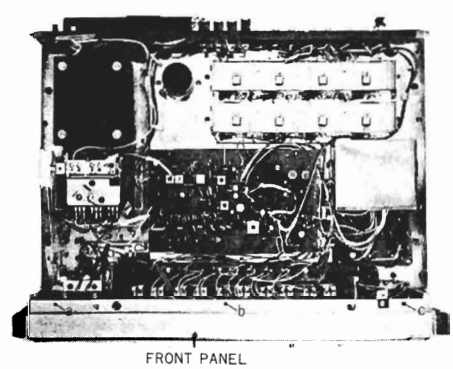


III. ARRANGEMENT OF MAIN PARTS

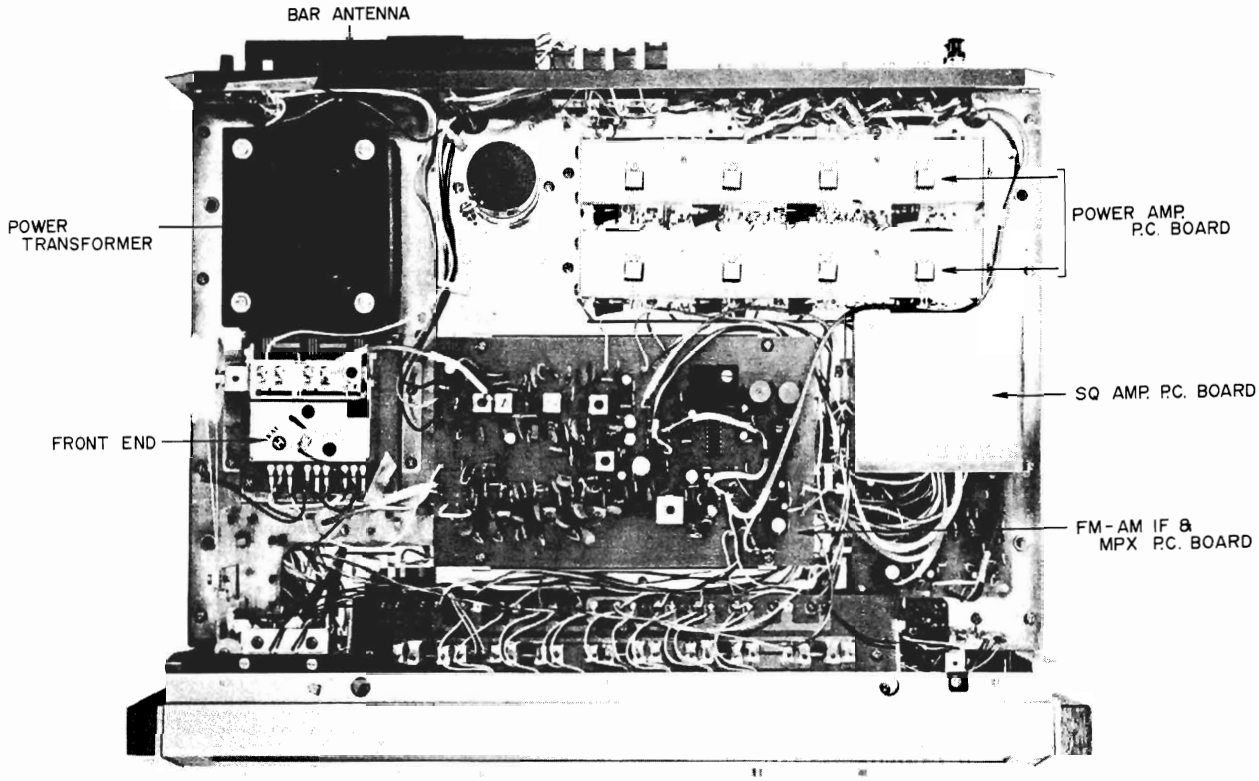


Fig. 1

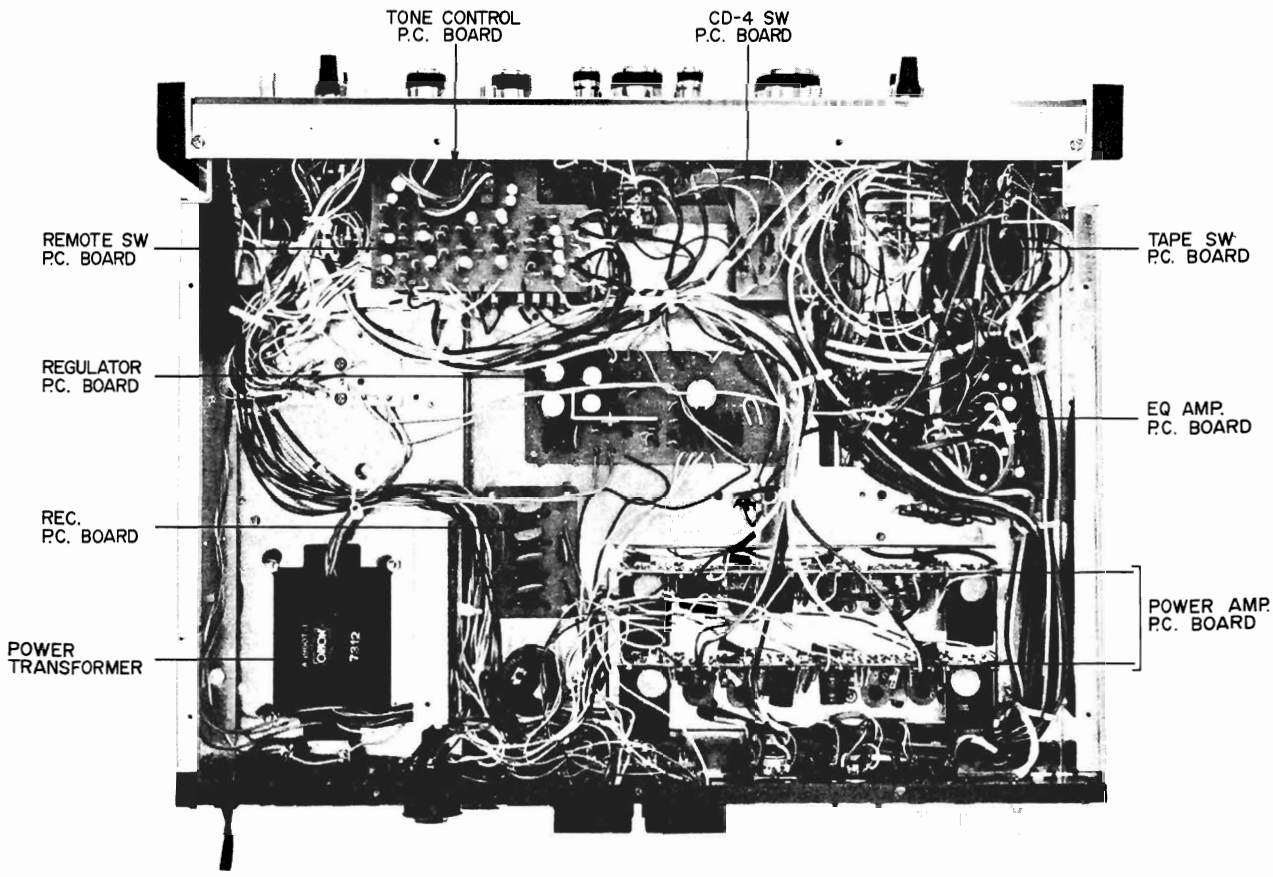


Fig. 2

IV. NECESSARY MEASURING INSTRUMENTS

Measuring Instrument	Model	For
AM-FM Radio IF Genescope	Meguro MSW-721C	FM and AM IF Adjustment
FM Standard Signal Generator	Meguro MSG-278G	FM Tracking, Sensitivity Adjustment
FM Stereo Modulator	Meguro MSG-211E	Stereo Separation Adjustment
AM Standard Signal Generator	Meguro MSG-221C	AM Tracking, Sensitivity Adjustment
AM Loop Antenna	Meguro MLA-1001B	AM Tracking, Sensitivity Adjustment
High Sensitivity V.T.V.M.	Kikusui 183E	Sensitivity, Stereo Separation Adjustment
Distortion Meter	Shibasoku 760C	Sensitivity Adjustment
Ampere Meter	Yokogawa 2011	Power Amp. Adjustment

Chart 1

V. CLASSIFICATION OF VARIOUS P.C. BOARDS AND INTERCHANGEABILITY

P.C. Board		Model			
		AS-980	AS-970	AA-910	AA-910DB
TAPE SWITCH P.C. BOARD	96-5001	98-5002	97-5004		
CD-4 SWITCH P.C. BOARD	96-5003	98-5004	97-5003		
EQ. AMP. P.C. BOARD	96-5004	98-5008	98-5008	91-5034	91-5034
LOUDNESS P.C. BOARD	96-5005	98-5016			
TONE CONTROL P.C. BOARD	96-5006	98-5007	98-5007	91-5036	91-5036
FRONT END P.C. BOARD	96-5007				
POWER AMP. P.C. BOARD	96-5008	92-5005	97-5009	91-5030	91-5030
RECT. P.C. BOARD	98-5010	98-5010	98-5010		
HEAD PHONE P.C. BOARD	98-5012	98-5012	98-5012		
DUB. P.C. BOARD	98-5013	98-5013			
MIC. P.C. BOARD	98-5059	98-5059			
REGULATOR P.C. BOARD	98-5084	98-5084*	98-5084*		
DIAL ILLUMINATION P.C. BOARD	97-5008	98-5001	97-5008	91-5035	91-5035
SQ AMP. P.C. BOARD	97-5010	98-5015	97-5010		
FM-AM IF & MPX. P.C. BOARD	91-5033			91-5033	91-5033

NOTE: * . . . No interchangeable

Chart 2

VI. FM TUNER SECTION ADJUSTMENTS

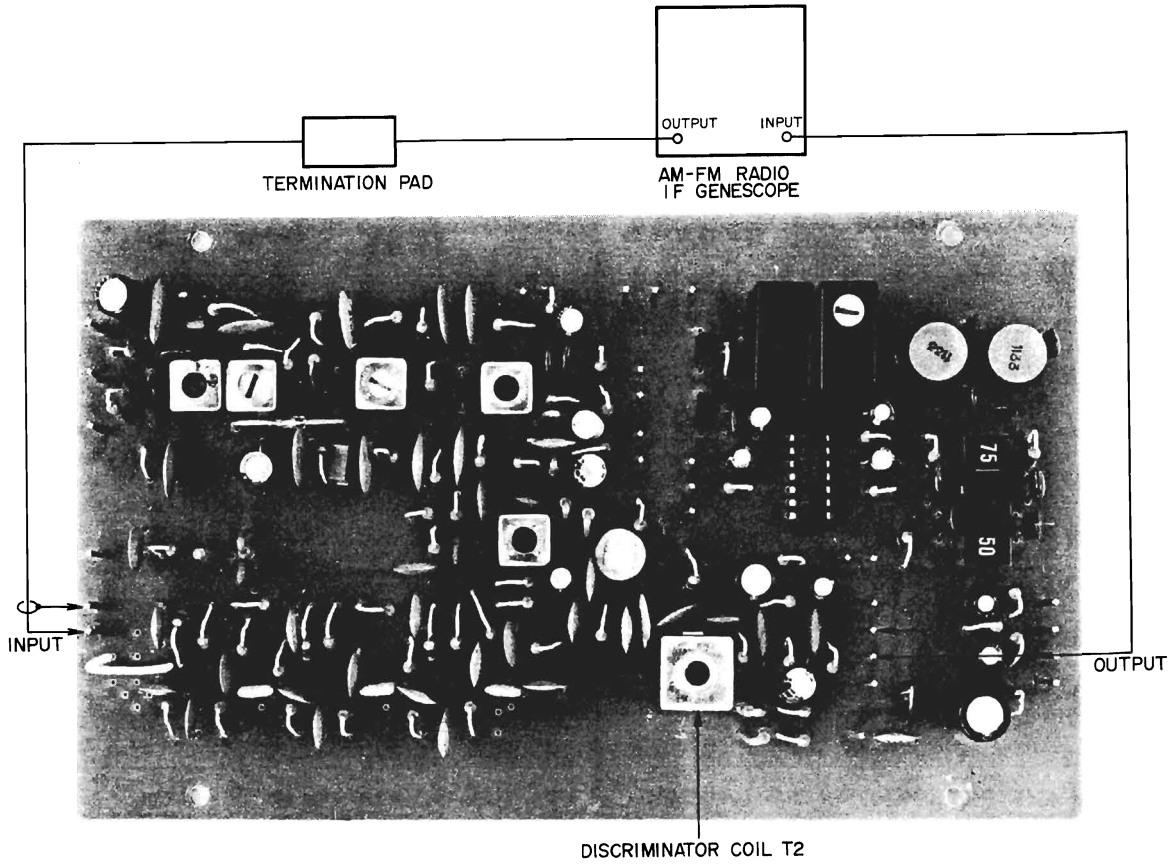


Fig. 3 INSTRUMENT CONNECTIONS

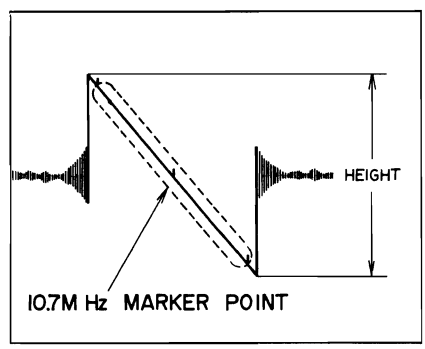
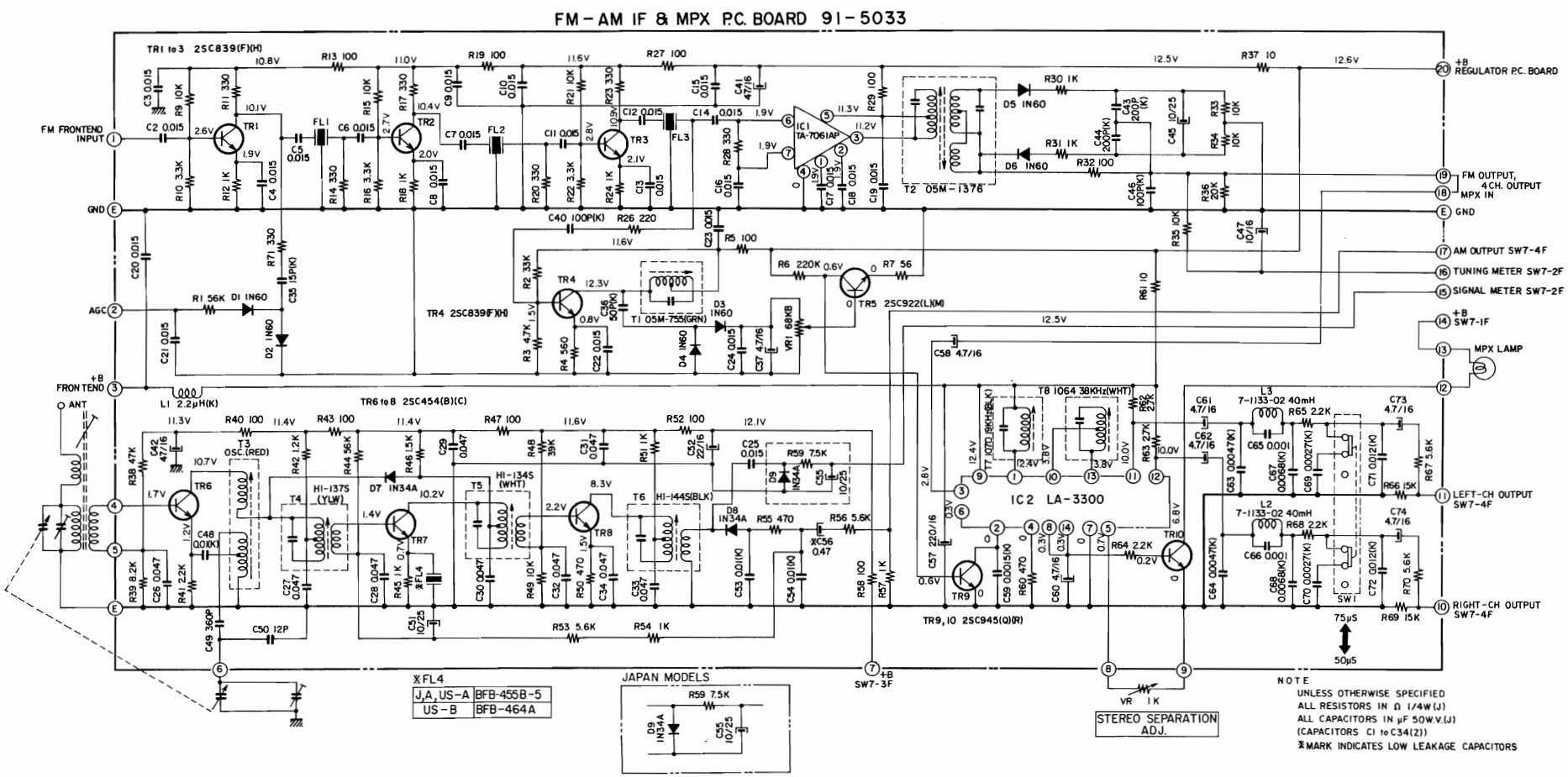


Fig. 4 S Curve

Vertical Gain	0.3Vp-p to 1 cm
Genesco Output Level	50 to 60 dB
Discriminator Coil	T2
S Curve Height	5 to 6 cm

Chart 3


FM – AM IF & MPX P.C. BOARD 91-5033
TR1 to 3 2SC839(F)(H)
FM FRONTEND INPUT
GND
AGC
+B FRONTEND
ANT
L1 2.2μH(K)
TR4 2SC839(F)(H)
TR5 2SC922(L)(M)
TR6 to 8 2SC454(B)(C)
TR9, 10 2SC945(Q)(R)
IC1 TA-7061AP
IC2 LA-3300
T1 05M-755(GRN)
T2 05M-1376
T3 OSC.(RED)
T4 HI-137S (YLW)
T5 HI-134S (WHT)
T6 HI-144S(BLK)
T7 4070.8KHz(BLK)
T8 1064.38KHz(WHT)
D1 IN60
D2 IN60
D3 IN60
D4 IN60
D5 IN60
D6 IN60
D7 IN34A
D8 IN34A
D9 IN34A
VR1 68KB
VR 1K
SW1
+B REGULATOR P.C. BOARD
FM OUTPUT, 4CH. OUTPUT MPX IN
GND
AM OUTPUT SW7-4F
TUNING METER SW7-2F
SIGNAL METER SW7-2F
+B SW7-1F
MPX LAMP
LEFT-CH OUTPUT SW7-4F
RIGHT-CH OUTPUT SW7-4F
+B SW7-3F
75μS
50μS
※FL4
JA, US-A BFB-455B-5
US-B BFB-464A
JAPAN MODELS
R59 7.5K
D9 IN34A
C55 10/25
STEREO SEPARATION ADJ.
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)
(CAPACITORS C1 to C34(Z))
※MARK INDICATES LOW LEAKAGE CAPACITORS

SCHEMATIC 1

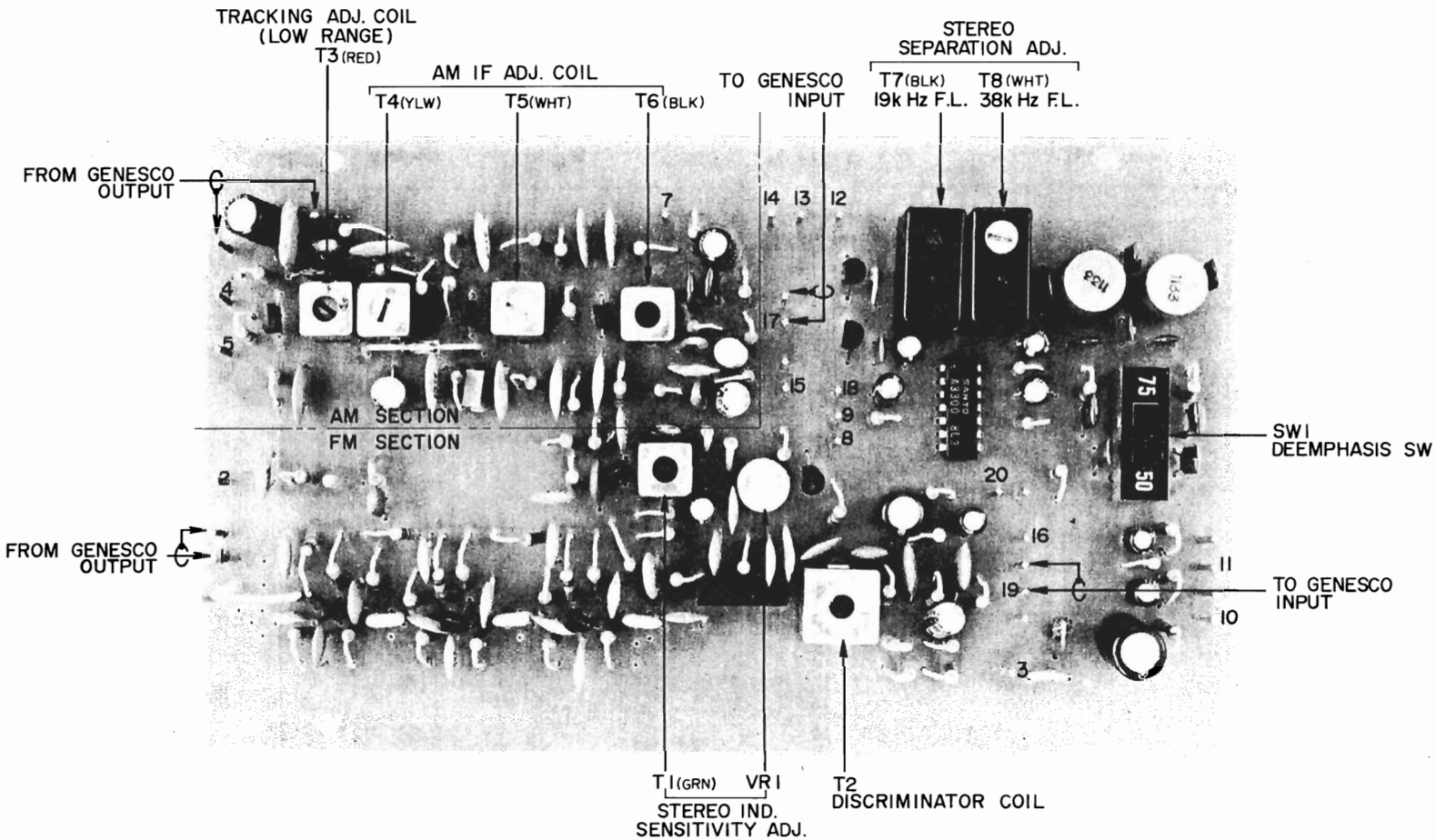


Fig. 5 FM-AM IF & MPX P.C. BOARD 91-5033 (Face)

TR1 to 4
2SC839(FXH)
FL1 to 3
SFE-10.7MA5
TR6 to 8
2SC454(B)
*FL4
J.A. US-A | US-B
BFB-455B-5 | BFB-464A
T1 05M-755(GRN)
T2 05M-1376
IC2 LA-3300
VR1 68KB
T3 0.9A-465 MW OSC (RED)
T4 HI-137S (YLW)
T5 HI-134S (WHT)
T6 HI-144S (BLK)
T7 1070 19KHz(BLK)
T8 1064 38KHz(WHT)
L1 2.2μH(K)
L2 7-1133-02 40mH
L3 7-1133-02 40mH
SW1 50μS 75μS
AKAI
91-5033

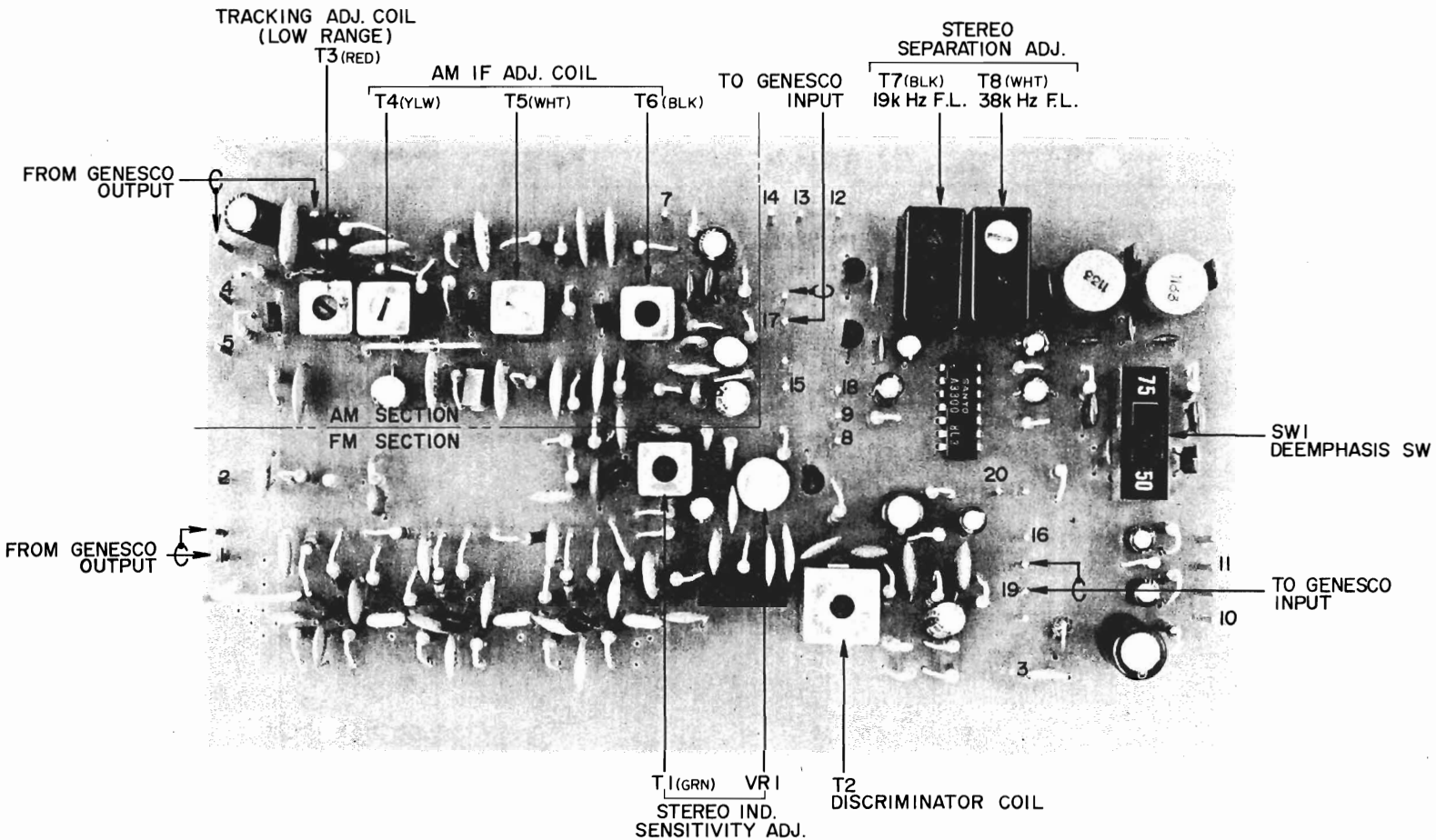


Fig. 5 FM-AM IF & MPX P.C. BOARD 91-5033 (Face)

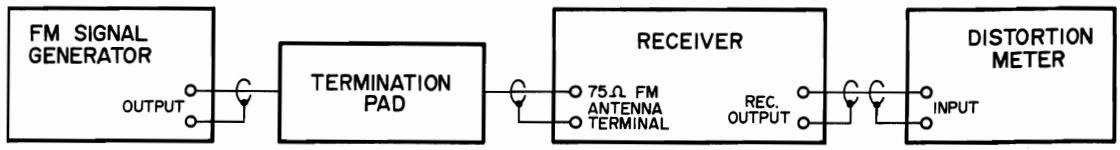


Fig. 9 INSTRUMENT CONNECTIONS

Ref. In making Tracking Adjustments, set dial to following positions.

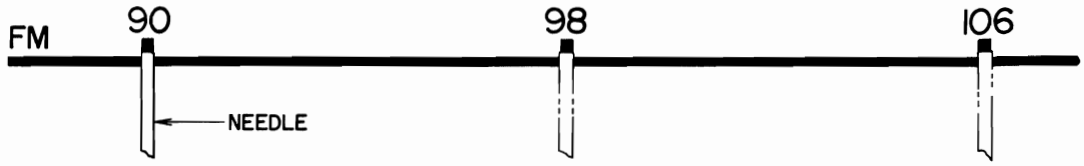


Fig. 10

2. FRONT END AND FM IF MATCHING ADJUSTMENT

1) Connect the GENESCO lead wires to the 75Ω FM ANTENNA TERMINALS of the Receiver as well as to the FM-AM IF & MPX P.C. Board output as shown in Fig. 7.
2) Set the GENESCO to FM mode and adjust the V gain of GENESCO to obtain a 10 mm amplitude of the 0.3Vp-p calibration voltage on GENESCO screen and set the attenuator to 100 dB.
3) Set Receiver SELECTOR to FM AUTO, and set the tuning indicator needle to extreme right end of the dial.
4) Adjust the upper core of Front End IF Coil (see Fig. 16) to obtain maximum wave height value of S Curve in Fig. 8, and adjust the lower core to obtain maximum noise level.
5) Make this adjustment again following FM Sensitivity Adjustment.

FM S.G. Output	46 dB
Core (low range)	Lo
Trimmer Condenser (high range)	TCo

Chart 4

3. TRACKING ADJUSTMENT

1) Connect the various measuring instruments as shown in Fig. 9.
2) Set the oscillation frequency of the FM SIGNAL GENERATOR (hereinafter referred to FM S.G.) to 90 MHz (400 Hz 100% internal modulation), and set the output of the FM S.G. to 46 dB. (Refer to Chart 4)
3) Set Receiver SELECTOR to FM AUTO, and set the tuning indicator needle to 90 MHz. (Refer to Fig. 10)
4) Adjust Coil Lo of Front End (Fig. 16) until the distortion meter level is maximum and the distortion factor is minimum. (Refer to Chart 4)
5) Set the oscillation frequency of FM S.G. and tuning indicator needle to 106 MHz. (Refer to Fig. 10)
6) Adjust Trimmer Condenser TCo of Front End (Fig. 16) until the distortion meter level is maximum and the distortion factor is minimum. (Refer to Chart 4)
7) Repeat adjustments outlined in Items 2) through 6) two or three times for minimum tracking error.

Core (low range)	LR
Trimmer Condenser (high range)	TCA, TCR
IF Coil (mid range)	IF
Discriminator Coil (mid range)	T2

Chart 5

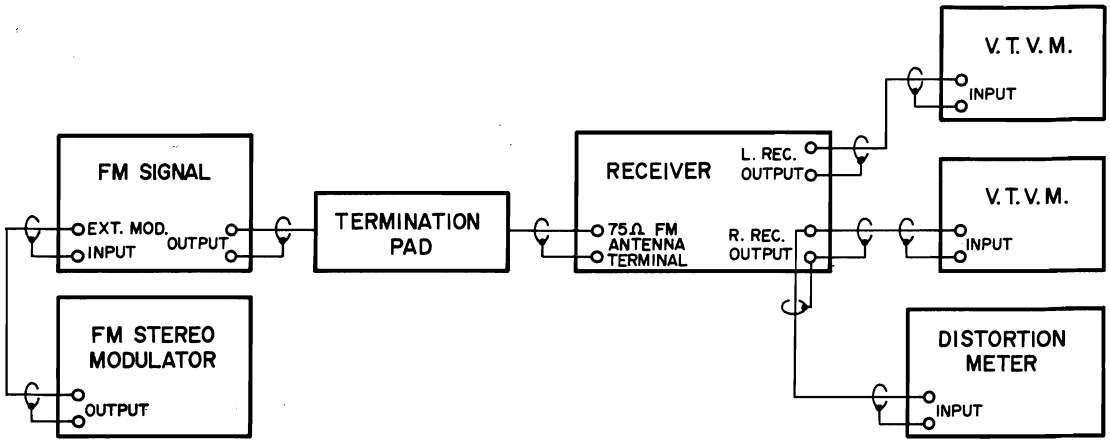


Fig. 11 INSTRUMENT CONNECTIONS

4. SENSITIVITY ADJUSTMENT

1) Carry out these adjustments after the previously described Tracking Adjustments have been completed.
2) Measuring instrument connections are the same as described in Tracking Adjustments.
3) Set the oscillation frequency of the FM S.G. to 90 MHz (400 Hz, 100% internal modulation), set Receiver Selector to FM-AUTO, and set the tuning indicator needle to 90 MHz. (Refer to Fig. 10)
4) Adjust the FM S.G. Attenuator to obtain a 3% distortion factor.
5) Adjust Coil LR of front end (Fig. 16), until the distortion meter level is maximum and the distortion factor is minimum. (Refer to Chart 5)
6) Set the oscillation frequency of FM S.G. and tuning indicator needle to 106 MHz. (Refer to Fig. 10)
7) Adjust the FM S.G. Attenuator to obtain a 3% distortion factor.
8) Adjust Trimmer Condensers TCA, TCR of front end (Fig. 16), until the distortion meter level is maximum and the distortion factor is minimum. (Refer to Chart 5)
9) Set the oscillation frequency of FM S.G. and the tuning indicator needle to 98 MHz. (Refer to Fig. 10)
10) Adjust the FM S.G. Attenuator to obtain a 3% distortion factor.
11) Adjust the upper and lower core of IF Coil in front end (Fig. 16) and the lower core of FM-AM IF & MPX P.C. Board Discriminator Coil until the distortion meter level is maximum and the distortion factor is minimum. (Refer to Chart 5)
12) Repeat adjustments outlined in Items 3) through 11) at 90 MHz, 98 MHz, and 106 MHz two or three times for highest sensitivity.

5. STEREO SEPARATION ADJUSTMENT

1) Connect the various measuring instruments as shown in Fig. 11.
2) Set the FM STEREO MODULATOR pilot signal 19 kHz to 10%, and the main signal 400 Hz (left channel + right channel) to 90% modulation, and supply this composite signal (ratio 9:1) to the EXT MOD input terminal of the FM S.G.
3) Set the oscillation frequency of the FM S.G. to 98 MHz, and the attenuator to 66 dB.
4) Set Receiver SELECTOR to FM AUTO and the tuning indicator needle to 98 MHz to receive the FM S.G. Signal.
5) Set the output signal selector of FM STEREO MODULATOR to SUB.
6) Adjust the cores of FM-AM IF & MPX P.C. BOARD 19 kHz Filter T7(BLK), and 38 kHz Filter T8(WHT) until the distortion factor is minimum. (Refer to Fig. 5)
7) Set the output signal selector of FM STEREO MODULATOR to left channel.
8) Adjust the MPX Adjustment Volume located on rear panel of the Receiver until the right channel output level is minimum.

6. TUNING METER CENTER ADJUSTMENT

After completing the adjustments outlined in Parts 1 through 4 of this manual, set the FM S.G. Attenuator to non-output condition, and adjust the upper core of FM-AM IF & MPX P.C. Board Discriminator Coil T2 shown in Fig. 5 until the tuning indicator needle of tuning meter comes to the center. Then set Receiver dial to 98 MHz, supply a 98 MHz (400 Hz, 100% internal modulation) 66 dB signal from the FM S.G. and fine adjust the lower core of Discriminator Coil T2 for minimum distortion factor.

7. STEREO INDICATOR SENSITIVITY ADJUSTMENT (MUTING LEVEL ADJUSTMENT)

1) Connect the various measuring instruments as shown in Fig. 11.
2) Set the FM S.G. oscillation frequency to 98 MHz (400 Hz, 100% internal modulation) and Attenuator to non-output condition.
3) Set Receiver dial to 98 MHz. (There will be no output at either channel)
4) Adjust FM-AM IF & MPX P.C. Board Semi-fixed Resistor VR1 68 kB so that when the attenuation decreases and the Attenuator scale is at 30 dB signal output is emitted at both channels.

VII. AM TUNER SECTION ADJUSTMENTS

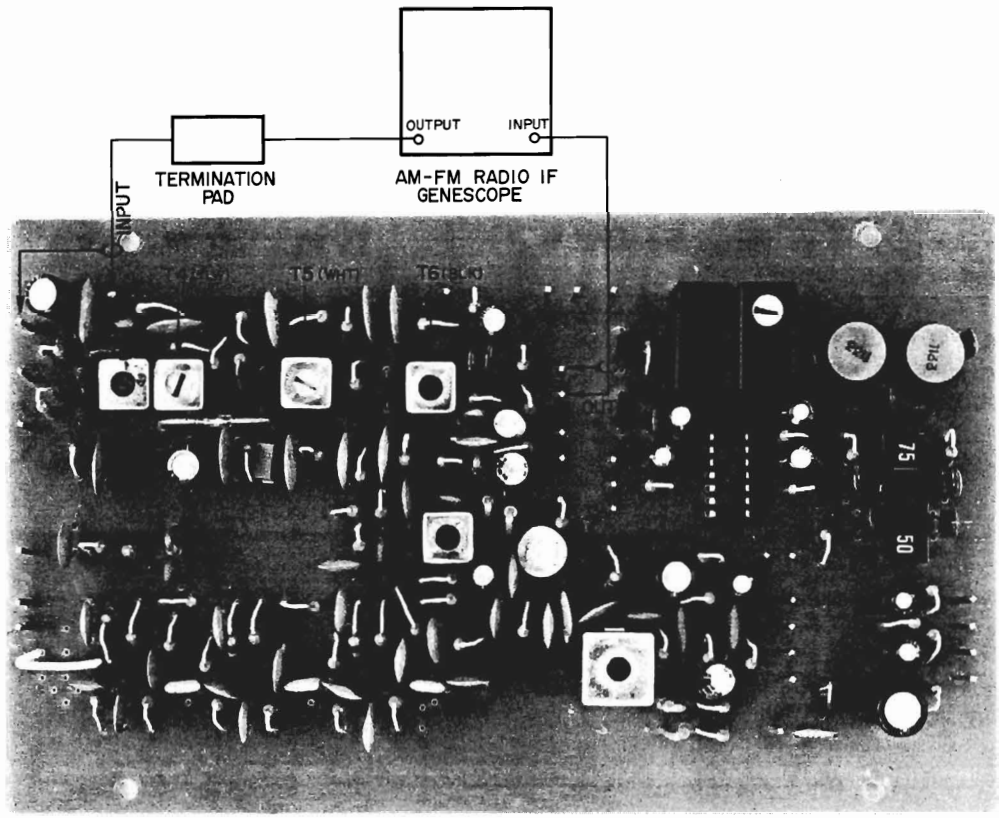


Fig. 12 INSTRUMENT CONNECTIONS

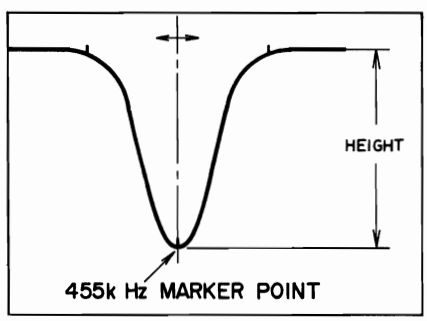


Fig. 13

Vertical Gain	0.3Vp-p to 3 cm
GENESCO Output Level	96 dB
Single Peaked Curve Height	2 cm

Chart 6

1. AM IF CIRCUIT ADJUSTMENT

1) Connect the AM-FM Radio IF GENESCOPE (hereinafter referred to as GENESCO) lead wires to input terminal as well as output terminal of the FM-AM IF & MPX P.C. Board as shown in Fig. 12.
2) Set GENESCO to AM mode and adjust vertical gain. (Refer to Chart 6)
3) Set Receiver SELECTOR to AM and set the tuning indicator needle to extreme right end of dial.

NOTE: A Noise Element should not enter the single peaked curve shown in Fig. 13.

4) Adjust output level of GENESCO. (Refer to Chart 6)
5) Adjust the core of FM-AM IF & MPX P.C. Board IFT T6(BLK) (Refer to Fig. 5) so that the 455 kHz marker point of the single peaked curve displays maximum amplitude as shown in Fig. 13.
6) Adjust the cores of FM-AM IF & MPX P.C. Board IFT T5(WHT), T4(YLW) (refer to Fig. 5) so that the left and right rise up characteristics of the single peaked curve shown in Fig. 13 are identical from the center (indicated by the dotted line in the figure).
7) In making this adjustment, the single peaked curve marker point will differ according to the rank of the ceramic filter.

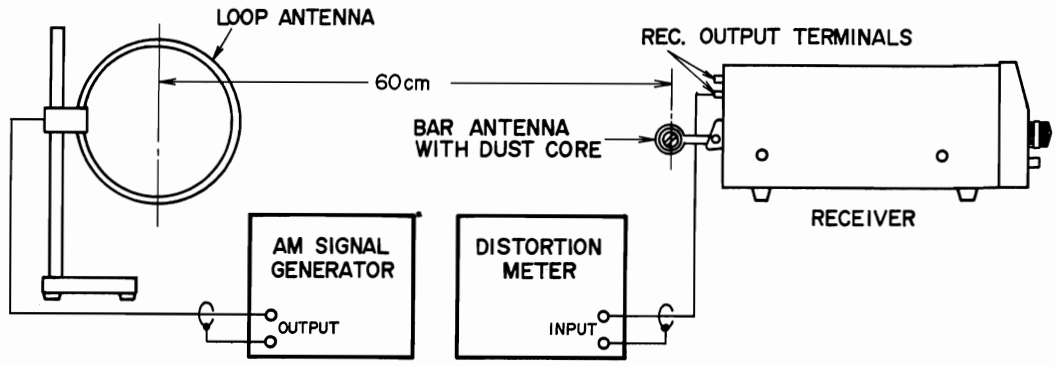


Fig. 14 INSTRUMENT CONNECTIONS

Ref. In making Tracking Adjustments, set dial to following positions. Fig. 15

AM S.G. Output	60 dB
Core (low range)	T3 (RED)
Trimmer Condenser (high range)	TC1

Chart 7

Bar Antenna Dust Core (low range)	ANT1
Trimmer Condenser (high range)	TC2

Chart 8

2. TRACKING ADJUSTMENT

1) Connect the various measuring instruments as shown in Fig. 14.
2) Set the oscillation frequency of the AM SIGNAL GENERATOR (hereinafter referred to as AM S.G.) to 600 kHz (400 Hz 30% internal modulation) and adjust the AM S.G. Attenuator. (Refer to Chart 7)
3) Set Receiver SELECTOR to AM and set the tuning indicator needle to 600 kHz. (Refer to Fig. 15)
4) Adjust the core of FM-AM IF & MPX P.C. Board Tracking Adjustment Coil T3 (RED) in Fig. 5 until the distortion meter level is maximum and the distortion factor is minimum.
5) Set the oscillation frequency of AM S.G. and tuning indicator needle of Receiver to 1,400 kHz. (Refer to Fig. 15)
6) Adjust front end Trimmer Condenser TC1 in Fig. 16 until the distortion meter level is maximum and the distortion factor is minimum. (Refer to Chart 7)
7) Repeat adjustments outlined in Items 2) through 6) two or three times for minimum tracking error.

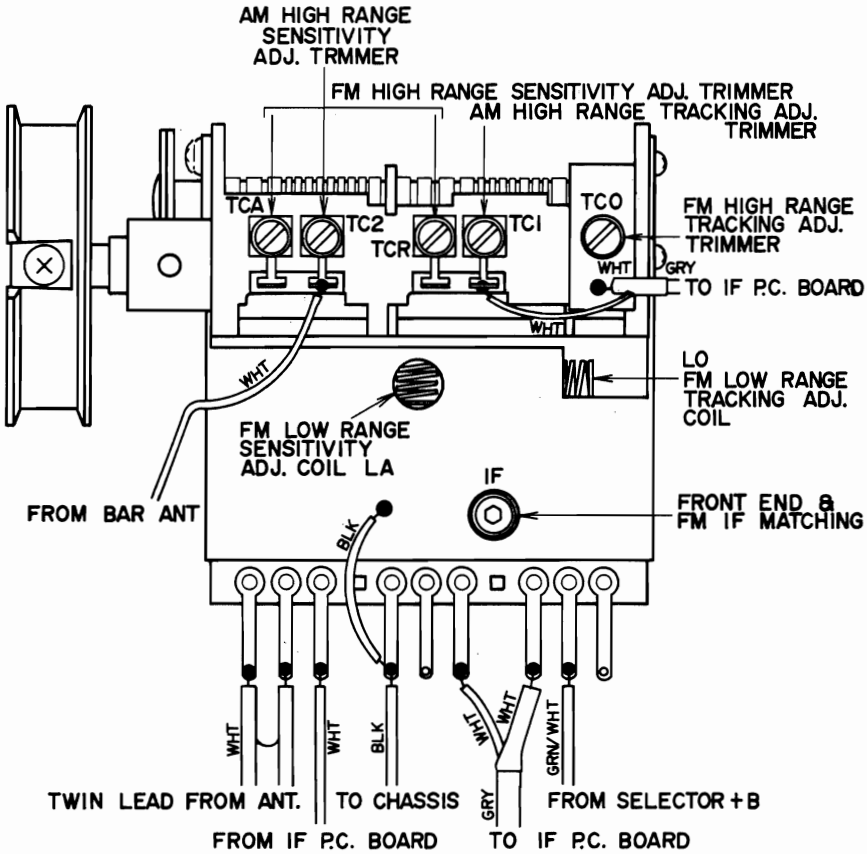


Fig. 16

3. SENSITIVITY ADJUSTMENT

1) Carry out these adjustments after the previously described Tracking Adjustments have been completed.
2) Measuring instrument connections are the same as described in Tracking Adjustments. (Refer to Fig. 14)
3) Set the oscillation frequency of the AM S.G. to 600 kHz (400 Hz, 30% internal modulation). Set Receiver SELECTOR to AM and the tuning indicator needle to 600 kHz. (Refer to Fig. 15)
4) Adjust AM S.G. Attenuator to obtain a 10% distortion factor.
5) Adjust dust core of Bar Antenna shown in Fig. 14 until the distortion meter level is maximum and the distortion factor is minimum.
6) Set the oscillation frequency of AM S.G. and Tuning indicator needle to 1,400 kHz. (Refer to Fig. 15)
7) Adjust AM S.G. Attenuator to obtain a 10% distortion factor.
8) Adjust front end Trimmer Condenser TC2 in Fig. 16 until the distortion meter level is maximum and the distortion factor is minimum. (Refer to Chart 8)
9) Repeat adjustments outlined in Items 3) through 8) at 600 kHz and 1,400 kHz two or three times for highest sensitivity.

VIII. TUNING CORD THREADING

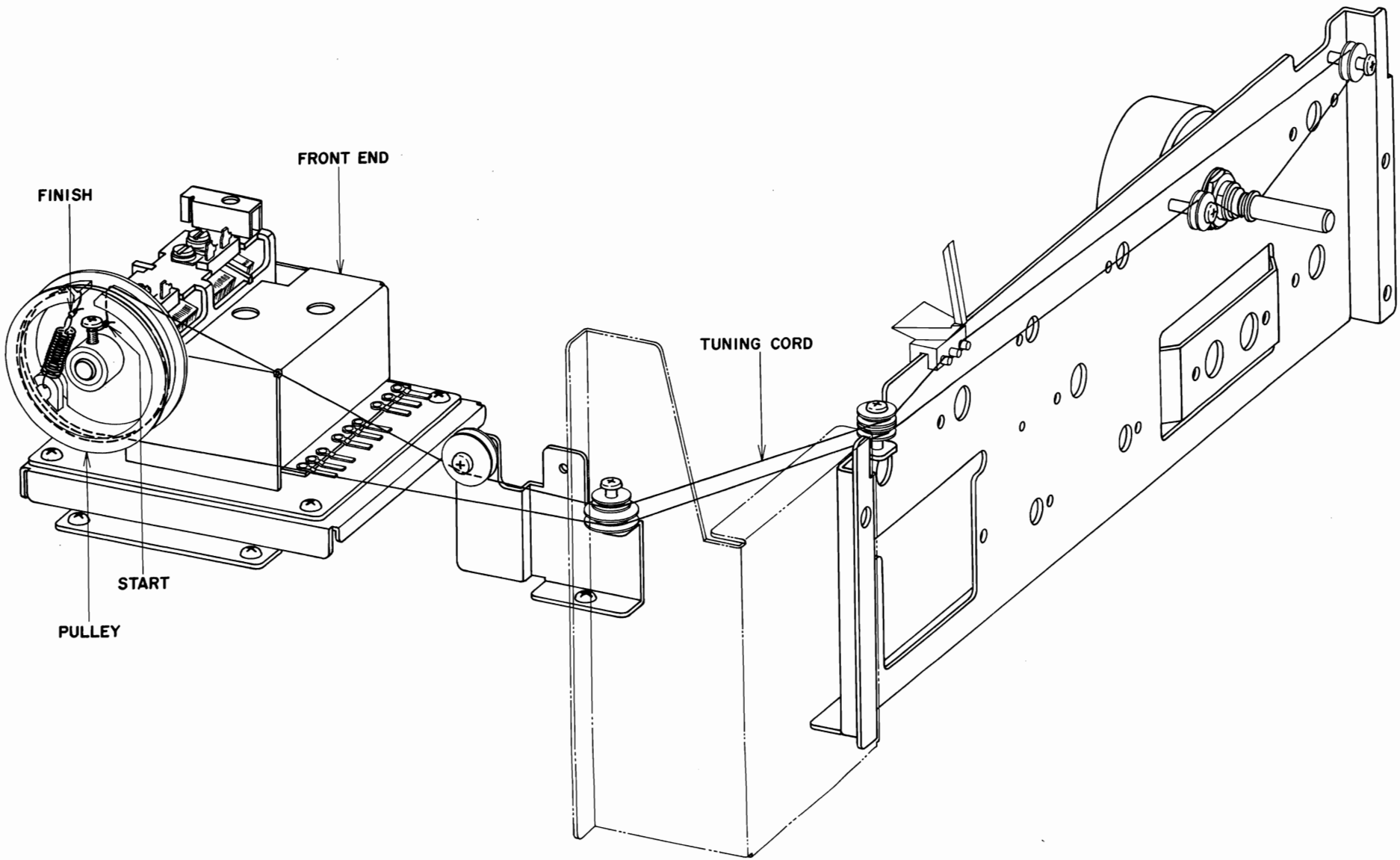


Fig. 17

IX. POWER AMPLIFIER ADJUSTMENTS

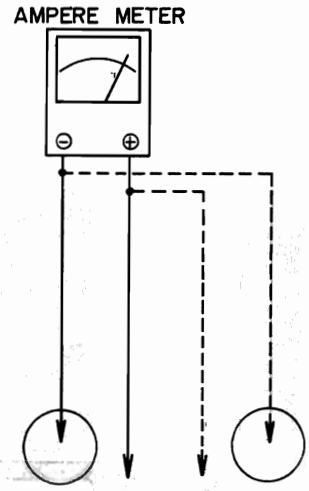


Fig. 18 ○ INDICATES SOLDERING POINTS

1. CURRENT ADJUSTMENT AT NON-INPUT

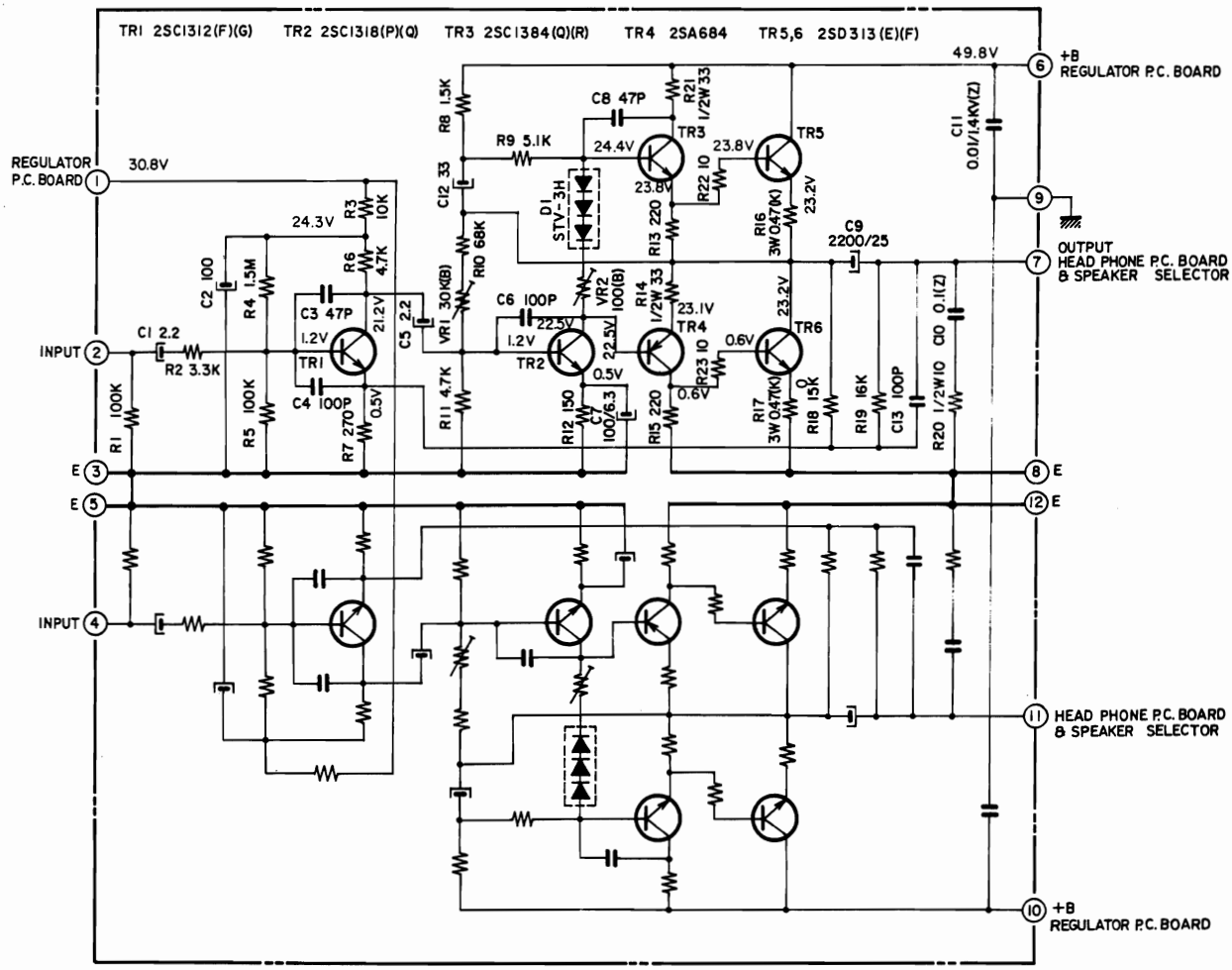
* Turn Volume Control to minimum and proceed as follows:

1) Remove solder from soldering point of Power Amp. P.C. Board shown in Fig. 18.
2) Connect a 50 to 100 mA scale Ampere Meter as shown in Fig. 18.
   (Be sure to match Ampere Meter polarities)
3) Adjust Power Amp. P.C. Board semi-fixed resistor VR2 100B shown in Fig. 19 to obtain an Ampere Meter indication of 40 mA.

2. VOLTAGE ADJUSTMENT BETWEEN POWER TRANSISTORS C-E

* Refer to Schematic Diagram

1) Connect Voltage Meter to Power Amp. P.C. Board TR6 Collector and terminal 8 shown in Fig. 19.
2) Adjust Power Amp. P.C. Board semi-fixed resistor VR1 30 kB shown in Fig. 19 so that the Voltage Meter indication is 1/2 of the supply voltage value.



POWER AMP. P. C. BOARD 96-5008

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)

SCHEMATIC 2

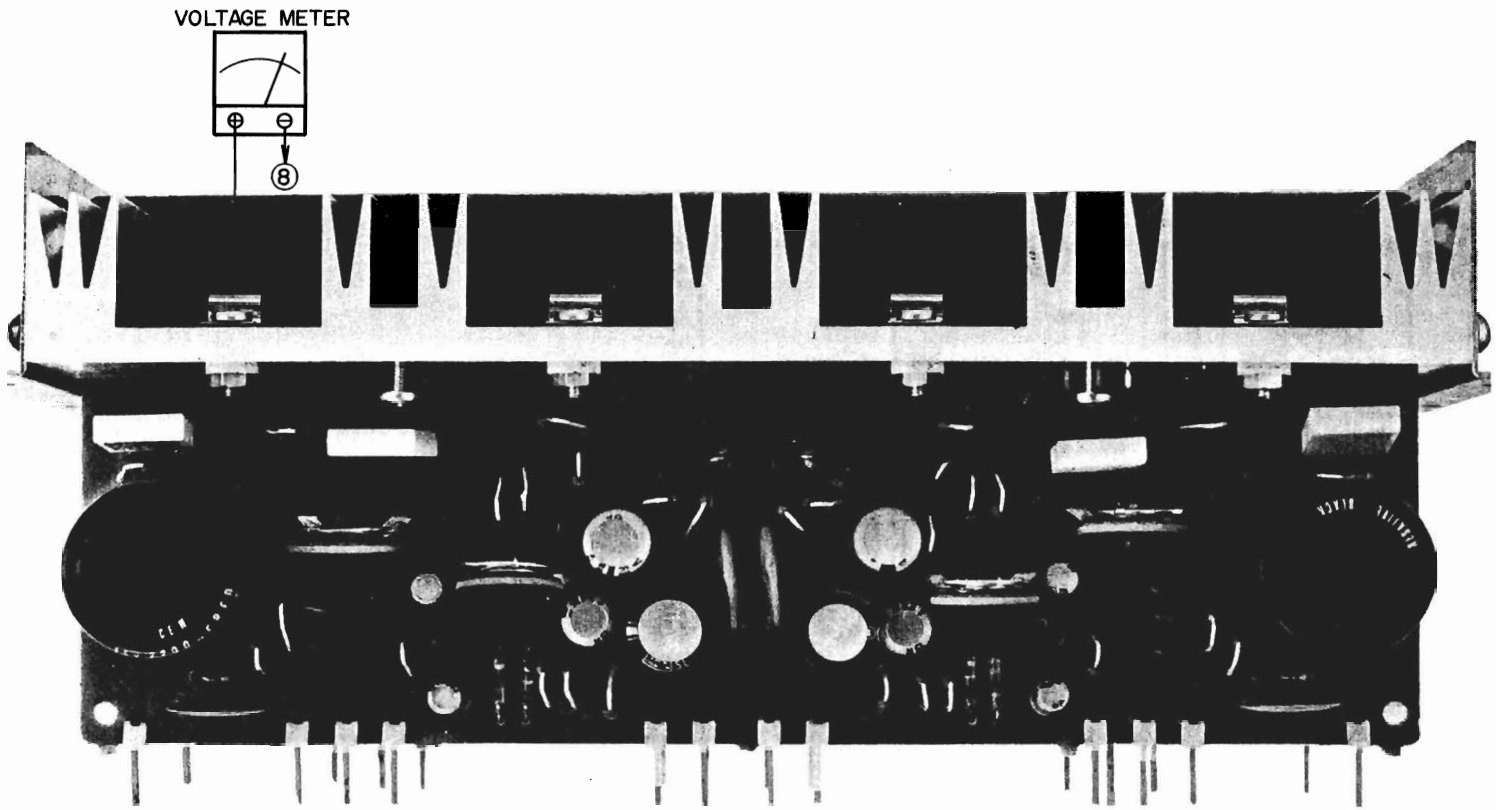


Fig. 19

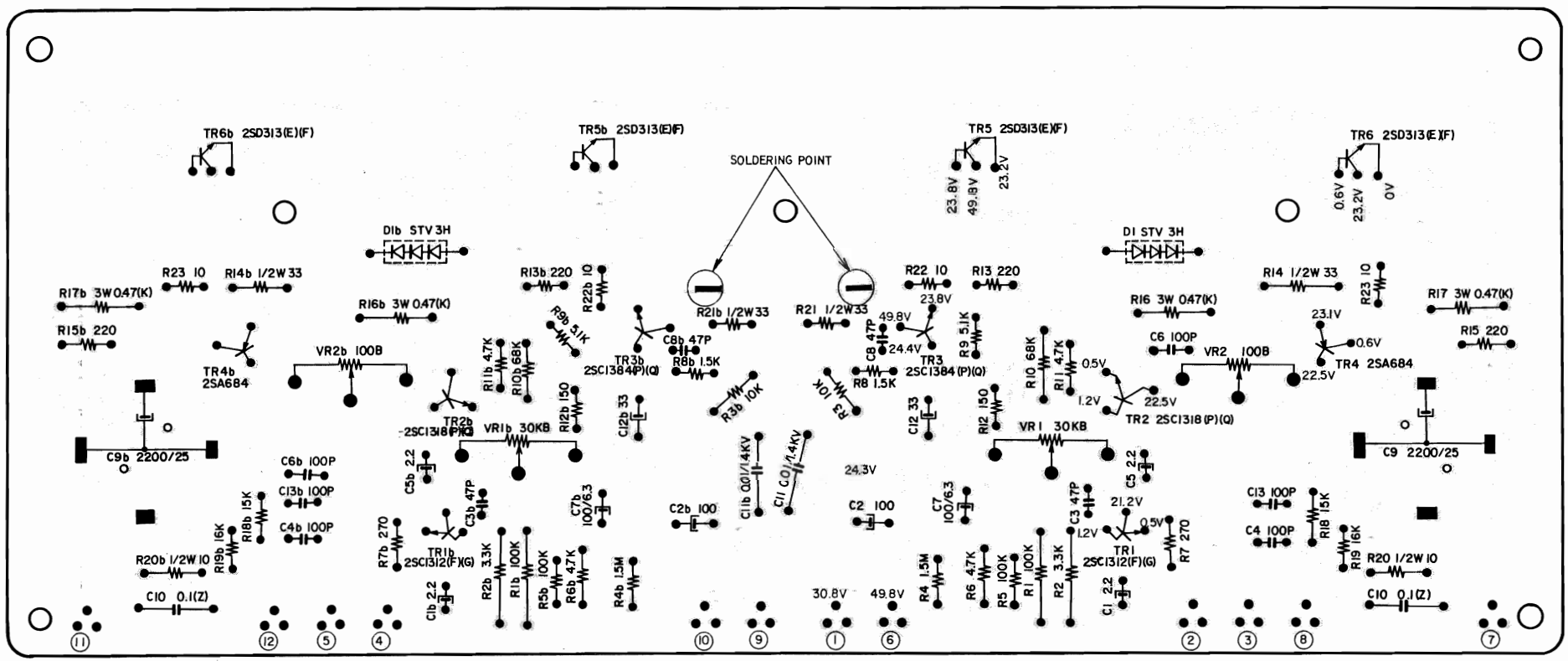
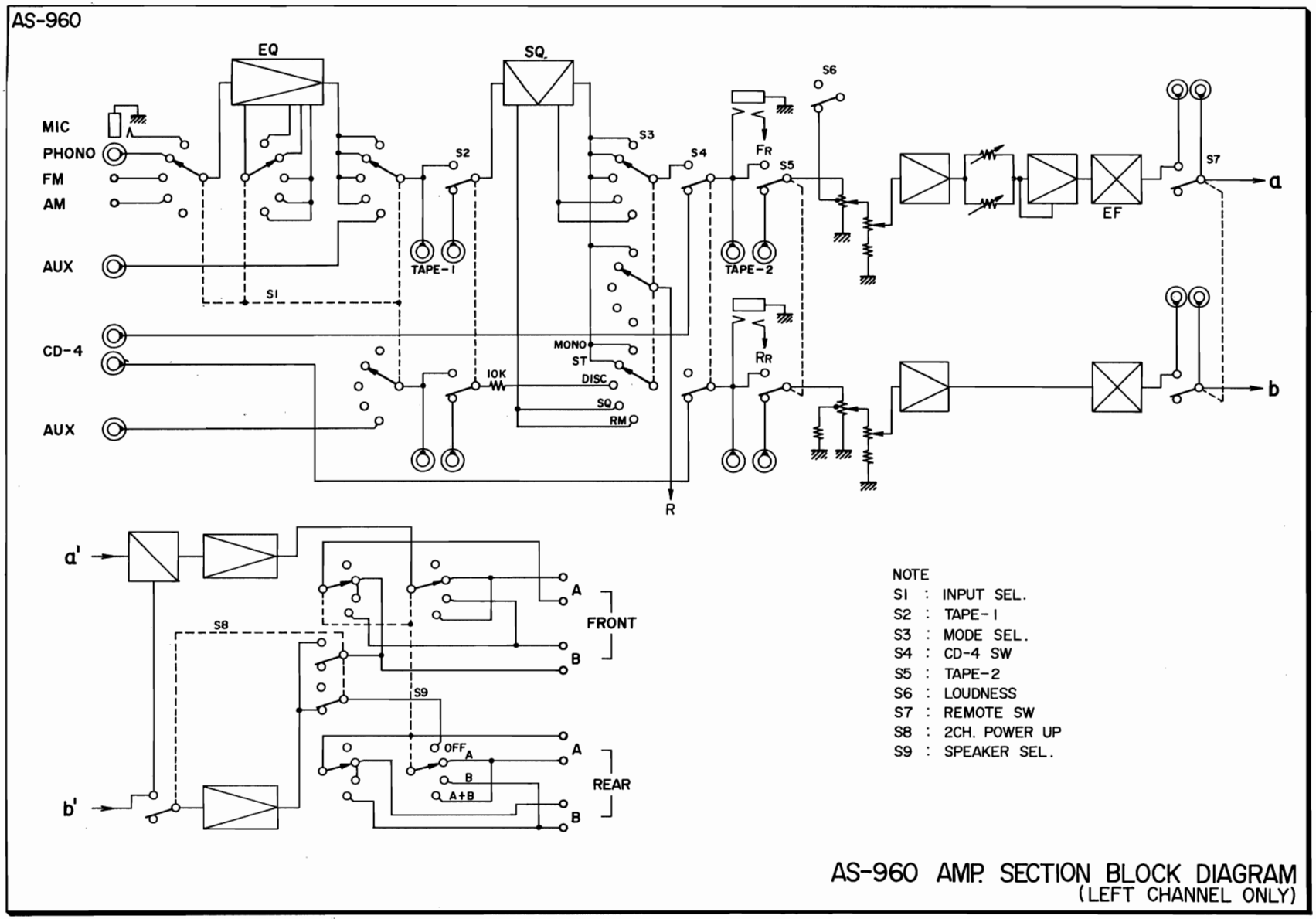

TR6b 2SD313(E)(F)
TR5b 2SD313(E)(F)
SOLDERING POINT
TR5 2SD313(E)(F)
TR6 2SD313(E)(F)
D1b STV 3H
D1 STV 3H
R17b 3W 0.47(K)
R23 10
R14b 1/2W 33
R16b 3W 0.47(K)
R15b 220
R13b 220
R22b 10
R21b 1/2W 33
R21 1/2W 33
R22 10
R13 220
R14 1/2W 33
R23 10
R16 3W 0.47(K)
R17 3W 0.47(K)
R15 220
TR4b 2SA684
VR2b 100B
R11b 4.7K
R10b 68K
R9b 5.1K
TR3b 2SC1384(P)(Q)
C8b 47P
R8b 1.5K
R3b 10K
TR2b 2SC1318(P)(Q)
VR1b 30KB
R12b 150
C12b 33
C9b 2200/25
C6b 100P
C13b 100P
C4b 100P
C5b 2.2
C3b 47P
C7b 100/6.3
C2b 100
C11b 0.01/1.4KV
C11 0.01/1.4KV
C2 100
C7 100/6.3
C5 2.2
C3 47P
C13 100P
C4 100P
R18b 15K
R19b 16K
R7b 270
TR1b 2SC1312(F)(G)
R20b 1/2W 10
C10 0.1(Z)
R2b 3.3K
R1b 100K
R5b 100K
R6b 47K
R4b 1.5M
C1b 2.2
R4 1.5M
R6 4.7K
R5 100K
R1 100K
R2 3.3K
C1 2.2
R7 270
R18 15K
R19 16K
R20 1/2W 10
C10 0.1(Z)
C9 2200/25
TR4 2SA684
VR2 100B
R10 68K
R11 4.7K
TR3 2SC1384(P)(Q)
R9 5.1K
R8 1.5K
R3 10K
TR2 2SC1318(P)(Q)
VR1 30KB
R12 150
C12 33
C8 47P
C6 100P
23.8V
49.8V
23.2V
24.4V
24.3V
30.8V
49.8V
21.2V
1.2V
0.5V
22.5V
23.1V
0.6V
0V
0.6V
23.2V
0.5V
1.2V
22.5V
(11)
(12)
(5)
(4)
(10)
(9)
(1)
(6)
(2)
(3)
(8)
(7)

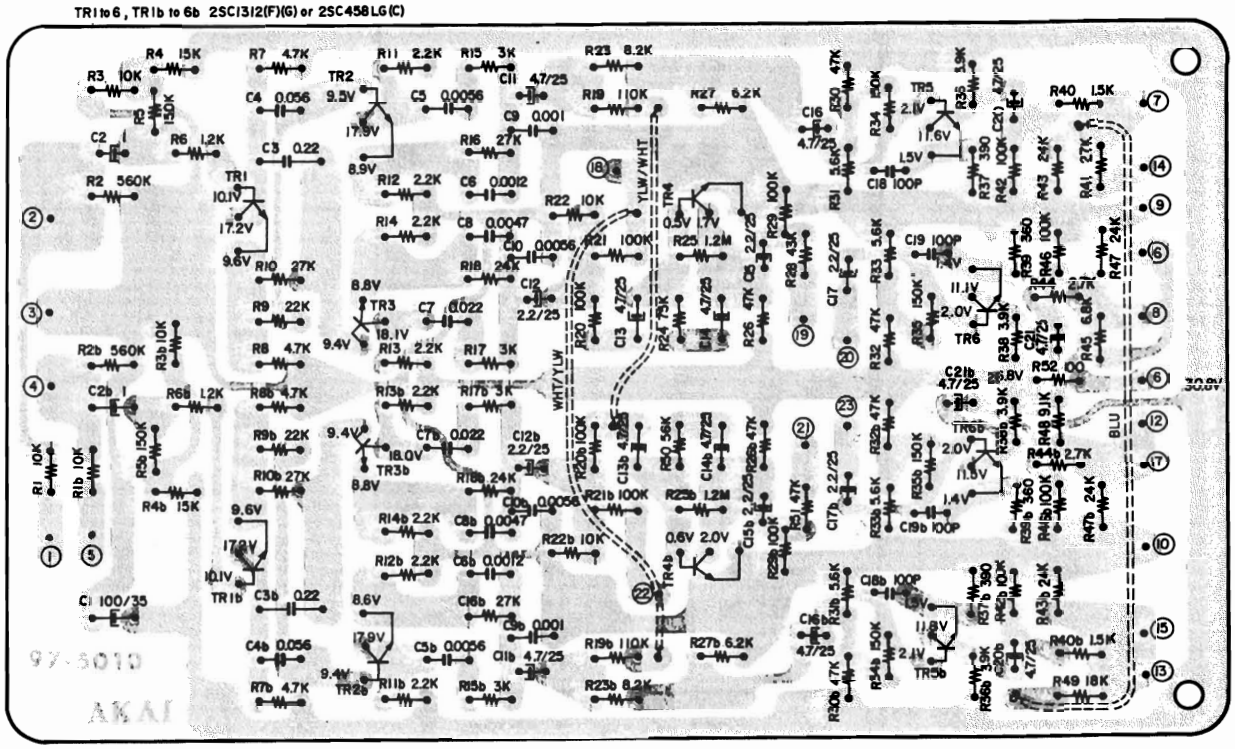
Fig. 20



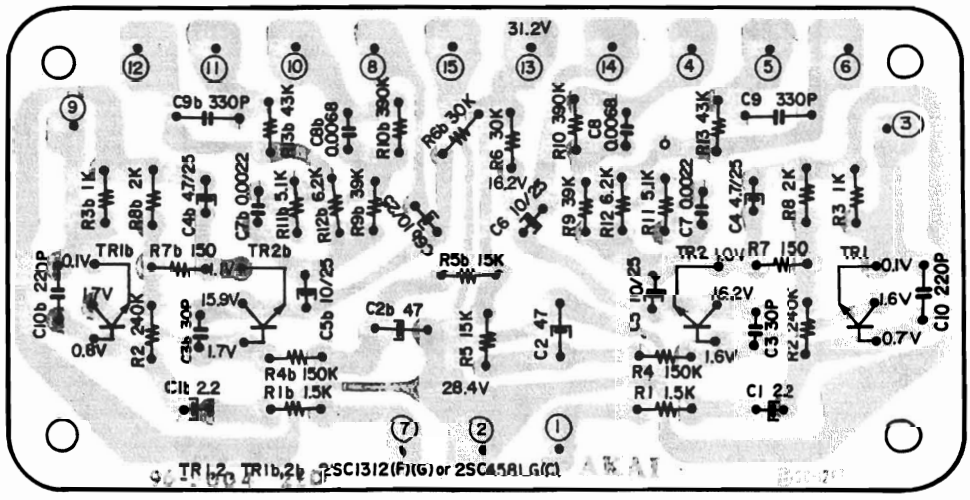
AS-960 AMPLIFIER SECTION BLOCK DIAGRAM (Left Channel Only)

X. COMPOSITE VIEWS OF COMPONENTS

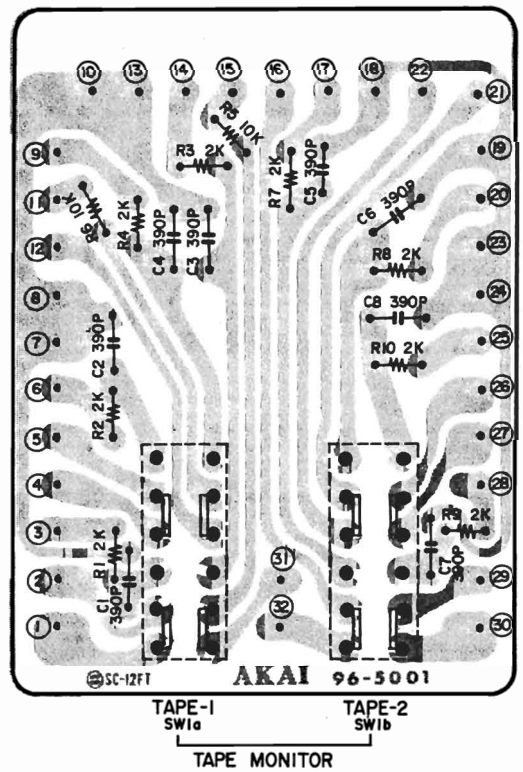
1. SQ P.C. BOARD 97-5010



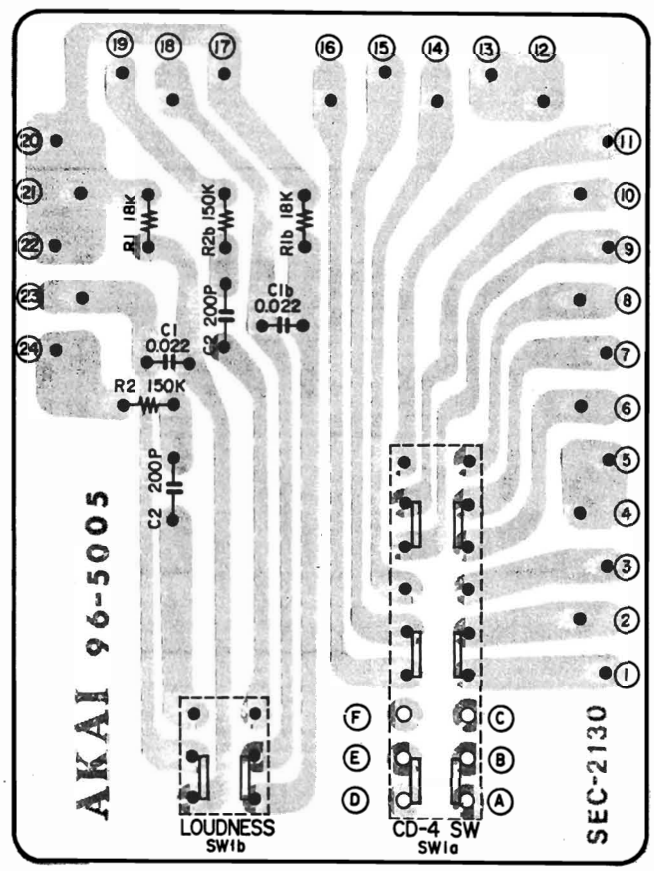
2. EQ AMP. P.C. BOARD 96-5004



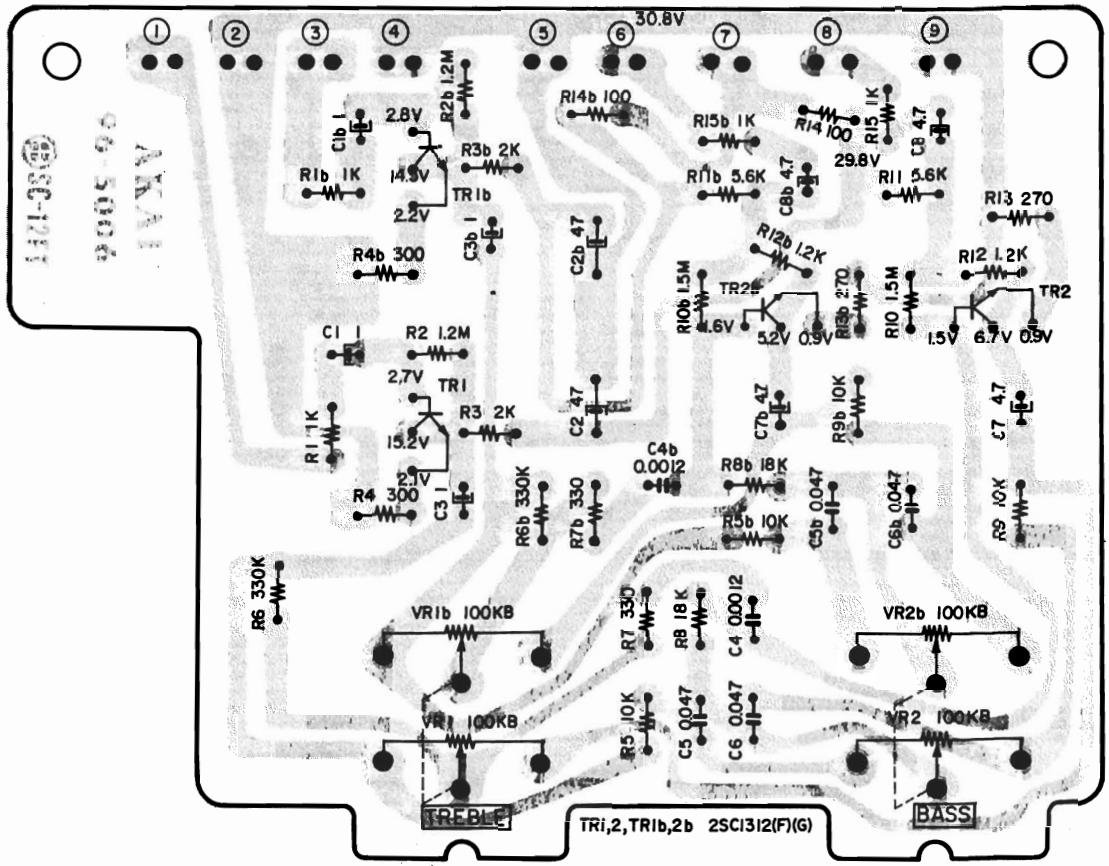
3. TAPE SW. P.C. BOARD 96-5001



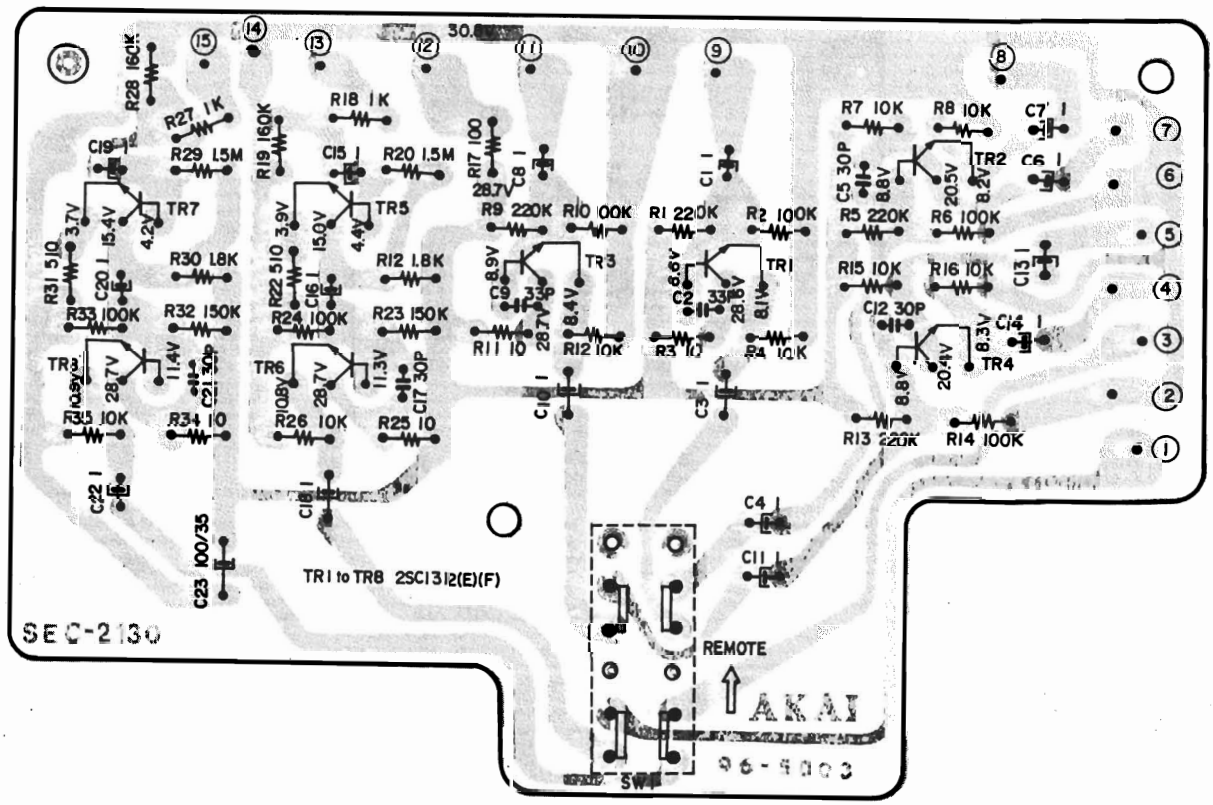
4. LOUDNESS SW. P.C. BOARD 96-5005



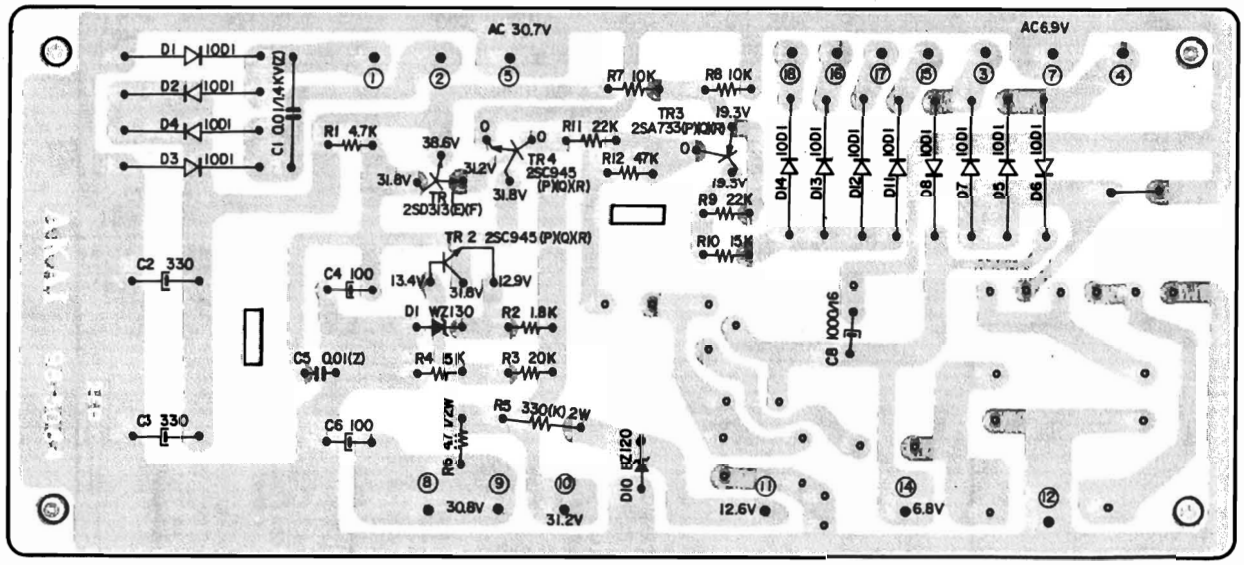
5. TONE CONTROL P.C. BOARD 96-5006



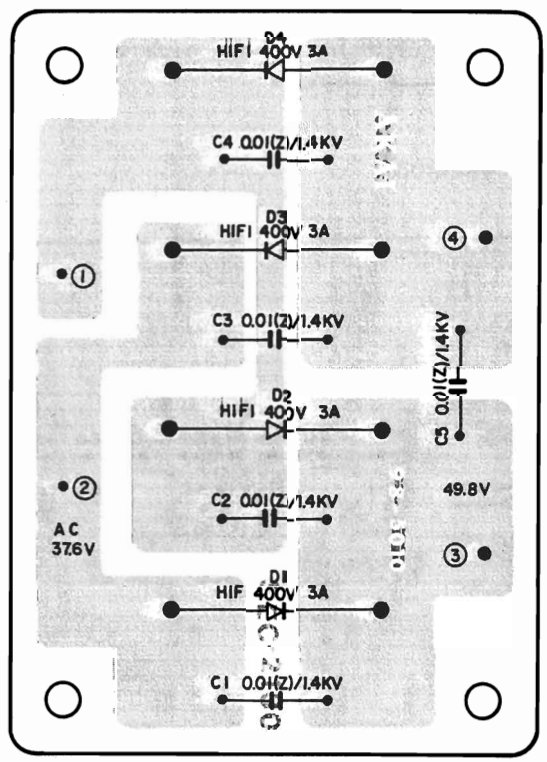
6. REMOTE SW. P.C. BOARD 96-5003



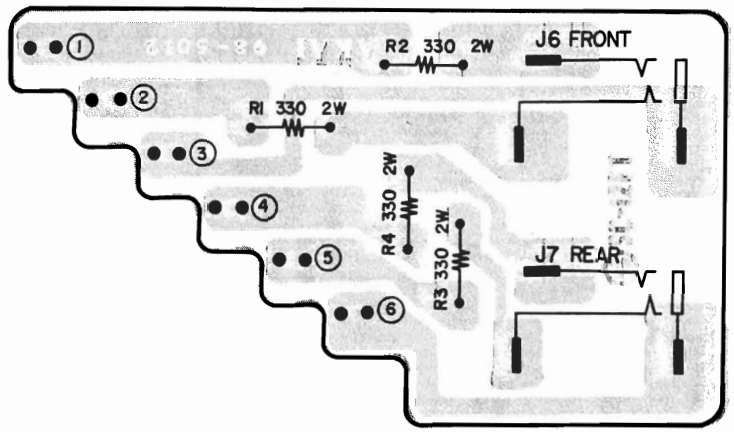
7. REGULATOR P.C. BOARD 98-5084



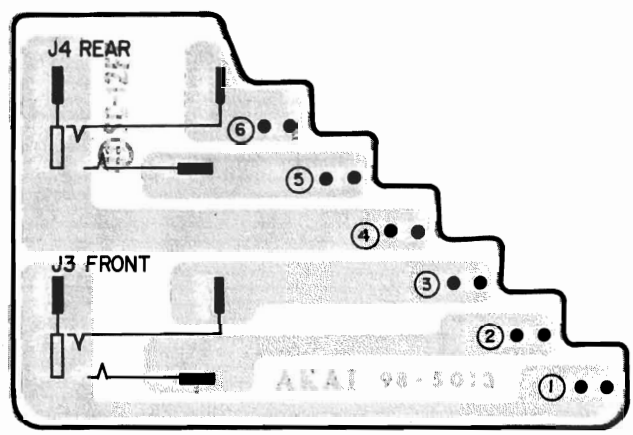
8. RECTIFIER P.C. BOARD (1) 98-5010



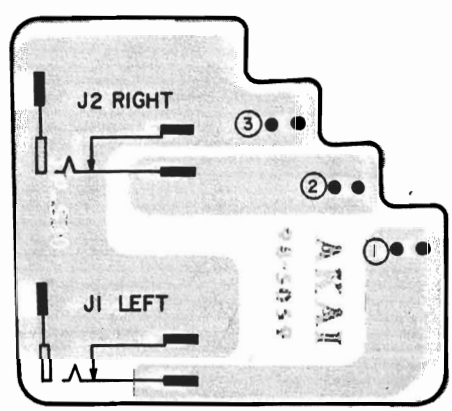
9. HEAD PHONE P.C. BOARD 98-5012



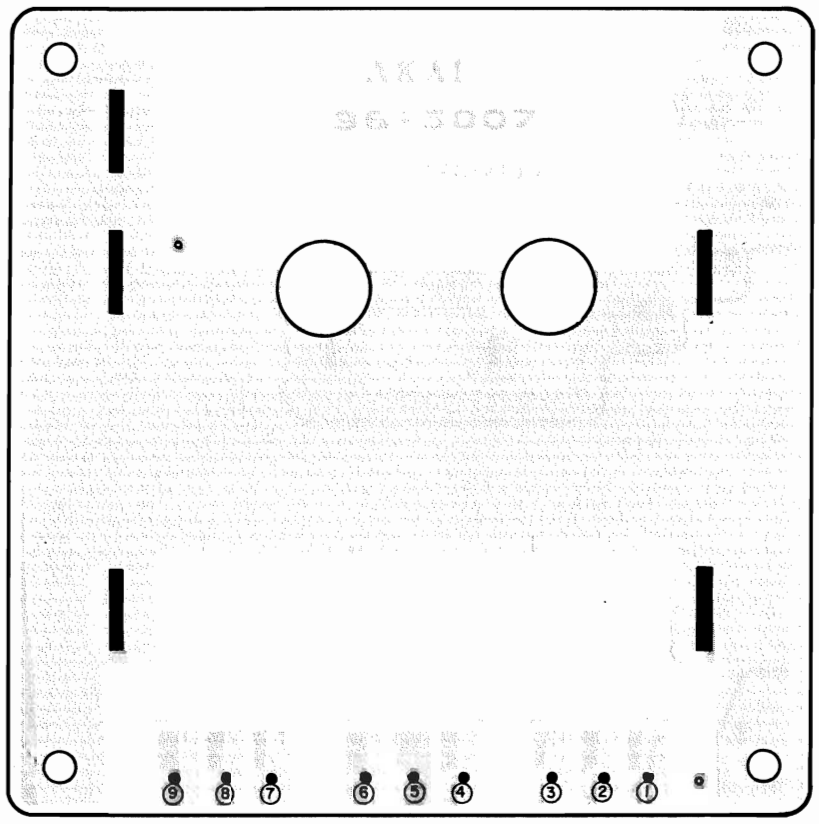
10. DUB P.C. BOARD 98-5013



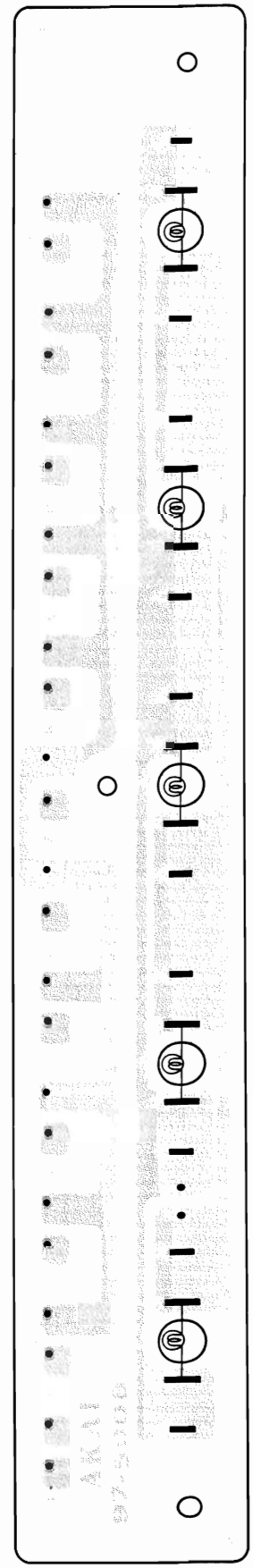
11. MIC P.C. BOARD 98-5059



12. FRONT END P.C. BOARD 96-5007



13. DIAL ILLUMINATION P.C. BOARD 97-5008



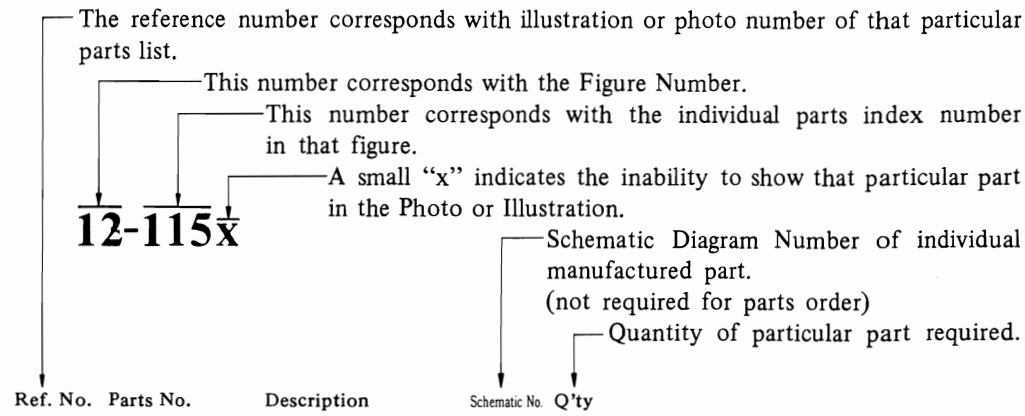
SECTION 2

PARTS LIST

TABLE OF CONTENTS

HOW TO USE THIS PARTS LIST

1. This parts list is compiled by various individual blocks based on assembly process.
2. When ordering parts, please describe parts number, serial number, and model number in detail.
3. How to read list.



Ref. No.	Parts No.	Description	Schematic No.	Q'ty
		FLYWHEEL BLOCK #13		
12-115x	800425	Flywheel Block Assy. Comp.	RDG #13	1
12-116	244506	Flywheel Only	RD-233	1
12-117x	244754	Felt, Flywheel	RD-275	1
12-118	251324	Main Metal Case	RD-236	1
12-119	253080	Main Metal	RD-237	1

4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of components of the Schematic Diagram or Service Manual.
5. The indications of Resistors and Capacitors in the photos of P.C. Board are being eliminated.
6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts Table of P.C. Board.
7. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List.
   It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in Item 3 above).
8. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.

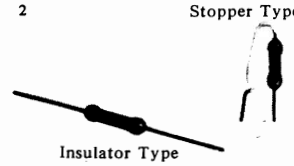
ELECTRICAL PARTS TABLE

Because the indication of resistors and capacitors in the P. C. Board photos are being eliminated, please confirm parts name and shape by comparing them with the parts shown in this table.

1

Solid Resistor

2 Stopper Type



Insulator Type

Carbon Resistor

3

Metal Oxide Film Resistor

4

Cement Resistor

5

Wire-Wound Resistor

6

Thermister

7

Enamel Resistor

1

MP Capacitor (Tubular Type)

2

Plastic Capacitor

3

Mylar Capacitor

4

VFM (Hi-Q) Capacitor

5

Mylar Capacitor

6

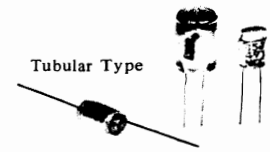
Tantalum Capacitor

7

Oil Capacitor (Tubular Type)

8 Vertical Type

Tubular Type



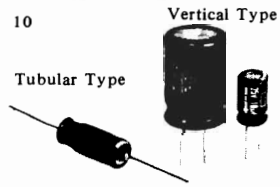
Styrol Capacitor

9

Electrolytic Capacitor (Tubular Type)

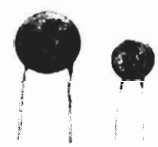
10 Vertical Type

Tubular Type



Electrolytic Capacitor

11



Ceramic Capacitor

12

Metalized Mylar (Paper) Capacitor

13

Trimmer Condenser

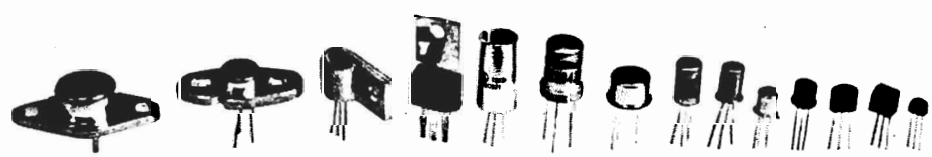
VR

Semi-Fixed Volume

L

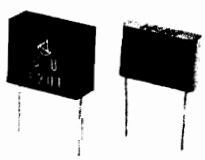
Ferri Inductor

TR



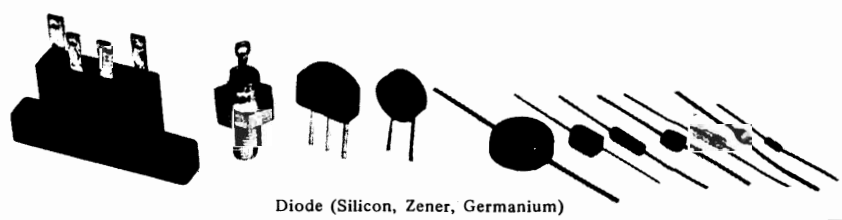
Transistor

CR



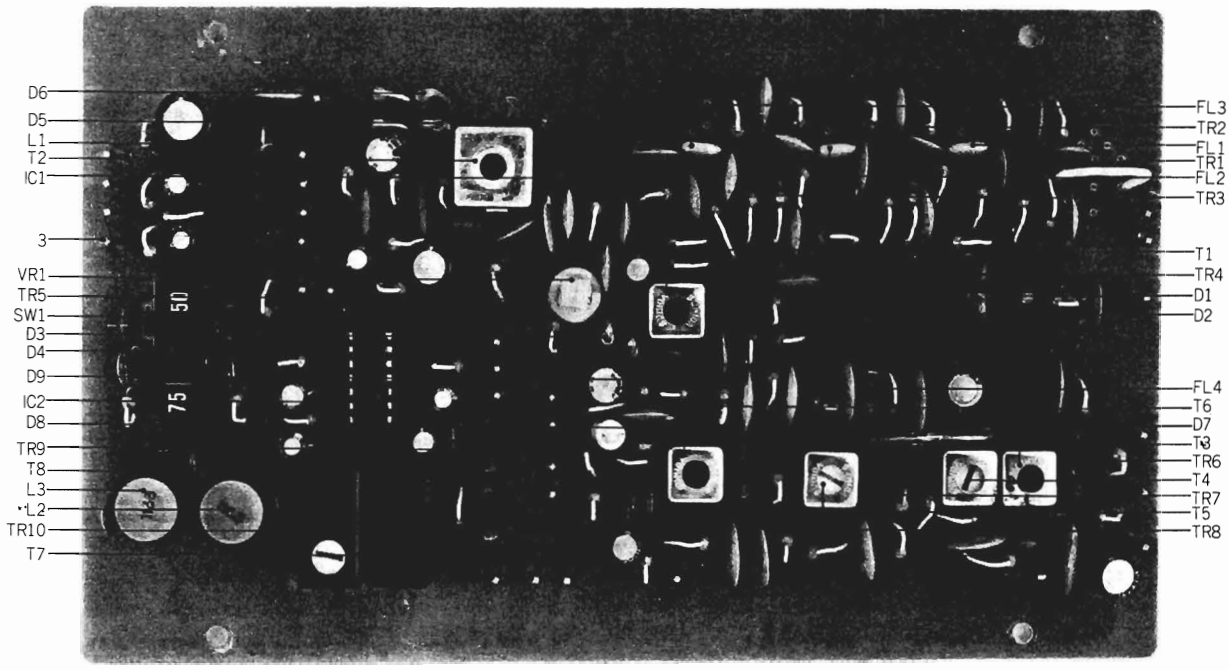
Spark Quencher

D



Diode (Silicon, Zener, Germanium)

FIG. 1 PHOTO OF IF P.C. BOARD (91-5033) BLOCK



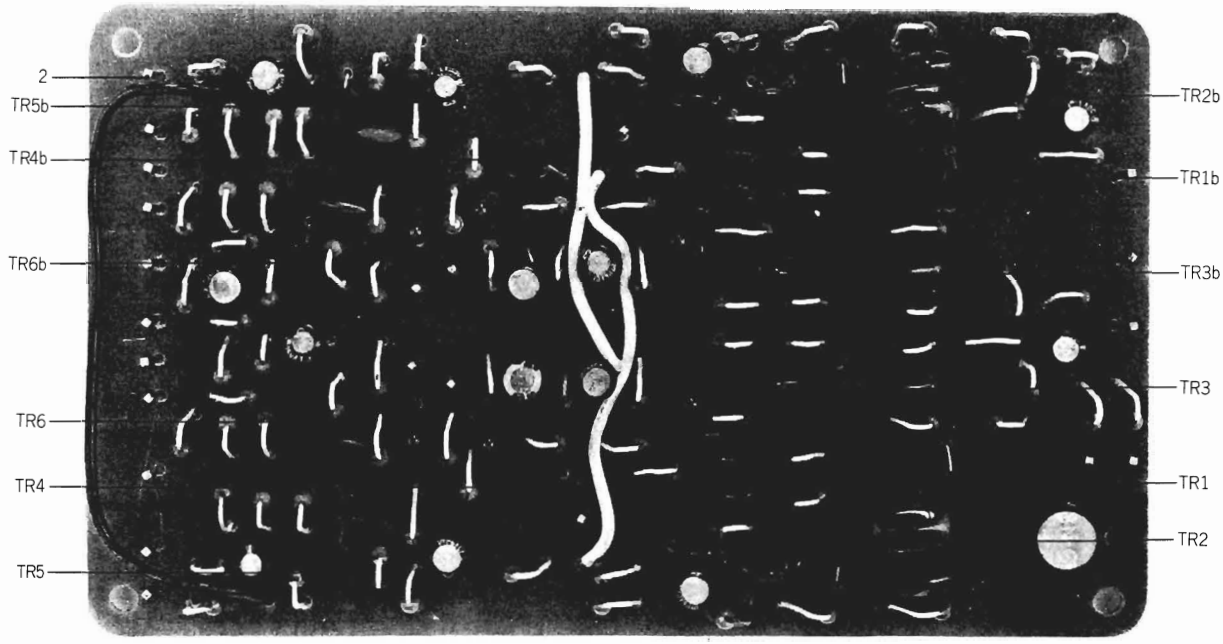
IF P.C. BOARD (91-5033) BLOCK

Symbol No.	Parts No.	Description	Q'ty
1-1x	BA563106	IF P.C. Board Comp. (91-5033)	1
1-2x	BA563861	IF P.C. Board Comp. (91-5033) (US-B)	1
1-IC1	EI485291	I.C TA-7061AP	1
1-IC2	EI443744	I.C LA-3300	1
1-TR1 to 4	ET554016	Transistor 2SC839 (F) (H)	4
1-TR5	ET510693	Transistor 2SC922 (L) (M)	1
1-TR6 to 8	ET591366	Transistor 2SC454 (B) (C)	3
1-TR9, 10	ET398711	Transistor 2SC945 (Q) (R)	2
1-D1 to 6	ED428264	Germanium Diode 1N60	6
1-D7 to 9	ED219464	Germanium Diode 1N34A	3
1-FL1 to 3	ER539818	Filter SFE-10.7MA5	3
1-FL4	ER380406	Filter BFB 455B-5	1
1-FL4	ER380417	Filter BFB 464-A (US-B)	1
1-T1	EO443700	Coil 05M-755 (Green) (10.7MHz)	1
1-T2	EO537232	Discri Coil 05M-1376	1
1-T3	BT427915	AM OSC. Trans. ET-OSC	1
1-T4	BT379991	Trans. HI-137S (Yellow)	1
1-T5	BT380384	Trans. HI-134S (White)	1
1-T6	BT443610	Trans. HI-144S (Black)	1
1-T7	EO443766	Coil (19KC) 02-1070-03 1070 (Black)	1
1-T8	EO443777	Coil (38KC) 02-1064-03 1064 (White)	1
1-L1	EO539820	Peaking Coil 2.2μH(K)	1
1-L2, 3	EO445788	Choke Coil 7-1133-02 L=40MH	2
1-VR1	EV539831	Semi-fixed/Vol. SR19R-68 kH (Solid Type)	1
1-SW1	ES513922	Slide SW. SSB02242	1
1-3	EJ539662	Wrapping Post 1x17	28
		Capacitor, Vertical Type	
1-C2 to 25	EC404256	Ceramic DD610YM 0.015μF (Z) 50WV	24
1-C26 to 34	EC492142	Ceramic DD512YM 0.047μF (Z) 50WV	9
1-C35	EC443654	VFM 15PF(K) 50WV	1
1-C36	EC357827	VFM 50PF(K) 50WV	1
1-C37	EC350706	Elect. 4.7μF 16WV	1
1-C40	EC290531	VFM 100PF(K) 50WV	1
1-C41, 42	EC320040	Elect. 4.7μF 16WV	2
1-C43, 44	EC539842	VFM 200PF(K) 50WV	2
1-C45	EC220994	Elect. 10μF 25WV	1
1-C46	EC290531	VFM 100PF(K) 50WV	1
1-C47	EC320051	Elect. 10μF 16WV	1
1-C48	EC250885	Mylar 0.01μF(K) 50WV	1
1-C49	EC427937	VFM 360PF(J) 50WV	1
1-C50	EC419231	VFM 12PF(J) 50WV	1
1-C51	EC220994	Elect. 10μF 25WV	1
1-C52	EC331705	Elect. 22μF 16WV	1
1-C53, 54	EC250885	Mylar 0.01μF(K) 50WV	2
1-C55	EC220994	Elect. 10μF 25WV	1
1-C56	EC432808	Elect. 0.47μF 50WV NL	1
1-C57	EC321208	Elect. 220μF 16WV	1
1-C58	EC350706	Elect. 4.7μF 16WV	1
1-C59	EC250661	Mylar 0.0015μF(K) 50WV	1
1-C60 to 62	EC350706	Elect. 4.7μF 16WV	3
1-C63, 64	EC362158	Mylar 0.0047μF(K) 50WV	2
1-C65, 66	EC350875	Mylar 0.001μF(J) 50WV	2
1-C67, 68	EC342821	Mylar 0.0068μF(K) 50WV	2
1-C69, 70	EC390633	Mylar 0.0027μF(K) 50WV	2
1-C71, 72	EC250964	Mylar 0.012μF(K) 50WV	2
1-C73, 74	EC350706	Elect. 4.7μF 16WV	2

Symbol No.	Parts No.	Description	Q'ty
		Resistor, Stopper Type	
1-R1	ER361528	Carbon RD1/4 56k(J)	1
1-R2	ER349907	Carbon RD1/4 33k(J)	1
1-R3	ER212883	Carbon RD1/4 4.7k(J)	1
1-R4	ER363644	Carbon RD1/4 560(J)	1
1-R5	ER211667	Carbon RD1/4 100(J)	1
1-R6	ER380711	Carbon RD1/4 220k(J)	1
1-R7	ER213120	Carbon RD1/4 56(J)	1
1-R9	ER336442	Carbon RD1/4 10k(J)	1
1-R10	ER212477	Carbon RD1/4 3.3k(J)	1
1-R11	ER212681	Carbon RD1/4 330(J)	1
1-R12	ER211465	Carbon RD1/4 1k(J)	1
1-R13	ER211667	Carbon RD1/4 100(J)	1
1-R14	ER212681	Carbon RD1/4 330(J)	1
1-R15	ER336442	Carbon RD1/4 10k(J)	1
1-R16	ER212477	Carbon RD1/4 3.3k(J)	1
1-R17	ER212681	Carbon RD1/4 330(J)	1
1-R18	ER211465	Carbon RD1/4 1k(J)	1
1-R19	ER211667	Carbon RD1/4 100(J)	1
1-R20	ER212681	Carbon RD1/4 330(J)	1
1-R21	ER336442	Carbon RD1/4 10k(J)	1
1-R22	ER212477	Carbon RD1/4 3.3k(J)	1
1-R23	ER212681	Carbon RD1/4 330(J)	1
1-R24	ER211465	Carbon RD1/4 1k(J)	1
1-R26	ER357412	Carbon RD1/4 220(J)	1
1-R27	ER211667	Carbon RD1/4 100(J)	1
1-R28	ER212681	Carbon RD1/4 330(J)	1
1-R29	ER211667	Carbon RD1/4 100(J)	1
1-R30, 31	ER211465	Carbon RD1/4 1k(J)	2
1-R32	ER211667	Carbon RD1/4 100(J)	1
1-R33 to 35	ER336442	Carbon RD1/4 10k(J)	3
1-R36	ER349828	Carbon RD1/4 20k(J)	1
1-R37	ER304290	Carbon RD1/4 10(J)	1
1-R38	ER346601	Carbon RD1/4 47k(J)	1
1-R39	ER349942	Carbon RD1/4 8.2k(J)	1
1-R40	ER211667	Carbon RD1/4 100(J)	1
1-R41	ER357456	Carbon RD1/4 2.2k(J)	1
1-R42	ER306843	Carbon RD1/4 1.2k(J)	1
1-R43	ER211667	Carbon RD1/4 100(J)	1
1-R44	ER361528	Carbon RD1/4 56k(J)	1
1-R45	ER211465	Carbon RD1/4 1k(J)	1
1-R46	ER211320	Carbon RD1/4 1.5k(J)	1
1-R47	ER211667	Carbon RD1/4 100(J)	1
1-R48	ER357535	Carbon RD1/4 39k(J)	1
1-R49	ER336442	Carbon RD1/4 10k(J)	1
1-R50	ER304402	Carbon RD1/4 470(J)	1
1-R51	ER211465	Carbon RD1/4 1k(J)	1
1-R52	ER211667	Carbon RD1/4 100(J)	1
1-R53	ER213030	Carbon RD1/4 5.6k(J)	1
1-R54	ER211465	Carbon RD1/4 1k(J)	1
1-R55	ER304402	Carbon RD1/4 470(J)	1
1-R56	ER213030	Carbon RD1/4 5.6k(J)	1
1-R57	ER212681	Carbon RD1/4 330(J)	1
1-R58	ER211667	Carbon RD1/4 100(J)	1
1-R59	ER420232	Carbon RD1/4 7.5k(J)	1
1-R60	ER304402	Carbon RD1/4 470(J)	1
1-R61	ER304290	Carbon RD1/4 10(J)	1
1-R62, 63	ER343078	Carbon RD1/4 2.7k(J)	2
1-R64, 65	ER357456	Carbon RD1/4 2.2k(J)	2
1-R66	ER306887	Carbon RD1/4 15k(J)	1
1-R67	ER213030	Carbon RD1/4 5.6k(J)	1
1-R68	ER357456	Carbon RD1/4 2.2k(J)	1
1-R69	ER306887	Carbon RD1/4 15k(J)	1
1-R70	ER213030	Carbon RD1/4 5.6k(J)	1
1-R71	ER212681	Carbon RD1/4 330(J)	1

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

FIG. 2 PHOTO OF SQ P.C. BOARD (97-5010) BLOCK

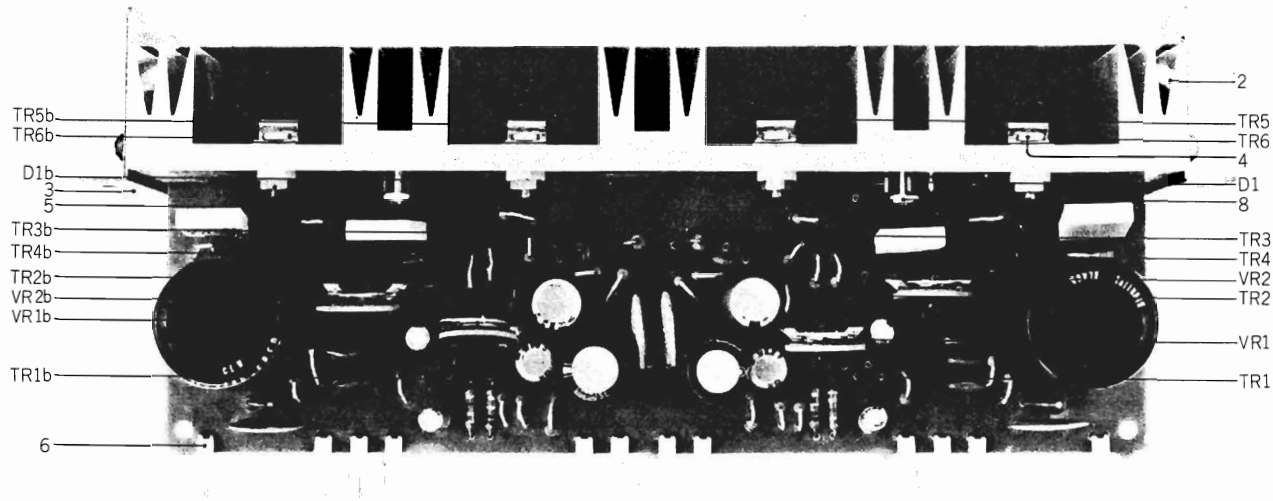


SQ P.C. BOARD (97-5010) BLOCK

Symbol No.	Parts No.	Description	Q'ty
2-1x	BA562342	SQ P.C. Board Comp. (97-5010)	1
2-TR1 to 6	ET539987	Transistor 2SC1312 (F) (G)	12
2-2	EJ539662	Wrapping Post 1x17	22
		Capacitor, Vertical Type	
2-C1	EC455354	Elect. 100μF 35WV	1
2-C2	EC313108	Elect. 1μF 50WV	2
2-C3	EC538435	Mylar 0.22μF(J) 50WV	2
2-C4	EC368357	Mylar 0.056μF(J) 50WV	2
2-C5	EC329883	Mylar 0.0056μF(J) 50WV	2
2-C6	EC379721	Mylar 0.0012μF(J) 50WV	2
2-C7	EC368335	Mylar 0.022μF(J) 50WV	2
2-C8	EC337500	Mylar 0.0047μF(J) 50WV	2
2-C9	EC350875	Mylar 0.001μF(J) 50WV	2
2-C10	EC329883	Mylar 0.0056μF(J) 50WV	2
2-C11	EC450527	Elect. 4.7μF 25WV	2
2-C12	EC522551	Tantalum 2.2μF(M) 25WV (DTS Type)	2
2-C13, 14	EC450527	Elect. 4.7μF 25WV	4
2-C15	EC522551	Tantalum 2.2μF(M) 25WV (DTS Type)	2
2-C16	EC450527	Elect. 4.7μF 25WV	2
2-C17	EC522551	Tantalum 2.2μF(M) 25WV (DTS Type)	2
2-C18, 19	EC290520	VFM 100PF(J) 50WV	4
2-C20, 21	EC450527	Elect. 4.7μF 25WV	4
		Resistor, Stopper Type	
2-R1	ER336442	Carbon RD1/4 10k(J)	2
2-R2	ER430086	Carbon RD1/4 560k(J)	2
2-R3	ER336442	Carbon RD1/4 10k(J)	2
2-R4	ER306887	Carbon RD1/4 15k(J)	2
2-R5	ER357570	Carbon RD1/4 150k(J)	2
2-R6	ER306843	Carbon RD1/4 1.2k(J)	2
2-R7, 8	ER212883	Carbon RD1/4 4.7k(J)	4
2-R9	ER212264	Carbon RD1/4 22k(J)	2
2-R10	ER342933	Carbon RD1/4 27k(J)	2
2-R11 to 14	ER357456	Carbon RD1/4 2.2k(J)	8
2-R15	ER346544	Carbon RD1/4 3k(J)	4
2-R16	ER342933	Carbon RD1/4 27k(J)	2
2-R17	ER346544	Carbon RD1/4 3k(J)	2
2-R18	ER407316	Carbon RD1/4 24k(J)	2
2-R19	ER379552	Carbon RD1/4 110k(J)	2
2-R20, 21	ER211757	Carbon RD1/4 100k(J)	4
2-R22	ER336442	Carbon RD1/4 10k(J)	2
2-R23	ER349942	Carbon RD1/4 8.2k(J)	2
2-R24	ER362520	Carbon RD1/4 75k(J)	1
2-R25	ER423753	Carbon RD1/4 1.2M(J)	2
2-R26	ER346601	Carbon RD1/4 47k(J)	2
2-R27	ER380755	Carbon RD1/4 6.2k(J)	2
2-R28	ER419556	Carbon RD1/4 43k(J)	1
2-R29	ER211757	Carbon RD1/4 100k(J)	2
2-R30	ER346601	Carbon RD1/4 47k(J)	2
2-R31	ER213030	Carbon RD1/4 5.6k(J)	2
2-R32	ER346601	Carbon RD1/4 47k(J)	2
2-R33	ER213030	Carbon RD1/4 5.6k(J)	2
2-R34, 35	ER357570	Carbon RD1/4 150k(J)	4
2-R36	ER352045	Carbon RD1/4 3.9k(J)	2
2-R37	ER349784	Carbon RD1/4 390(J)	2
2-R38	ER352045	Carbon RD1/4 3.9k(J)	2
2-R39	ER381723	Carbon RD1/4 360(J)	2
2-R40	ER211320	Carbon RD1/4 1.5k(J)	2
2-R41	ER342933	Carbon RD1/4 27k(J)	1
2-R42	ER211757	Carbon RD1/4 100k(J)	2
2-R43	ER407316	Carbon RD1/4 24k(J)	2
2-R44	ER343078	Carbon RD1/4 2.7k(J)	2
2-R45	ER306360	Carbon RD1/4 6.8k(J)	1
2-R46	ER211757	Carbon RD1/4 100k(J)	2
2-R47	ER407316	Carbon RD1/4 24k(J)	2
2-R48	ER399060	Carbon RD1/4 9.1k(J)	1
2-R49	ER346994	Carbon Rd1/4 18k(J)	1
2-R50	ER361528	Carbon RD1/4 56k(J)	1
2-R51	ER346601	Carbon RD1/4 47k(J)	1
2-R52	ER211667	Carbon RD1/4 100(J)	1

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

FIG. 3 PHOTO OF MAIN AMP. P.C. BOARD (96-5008) BLOCK

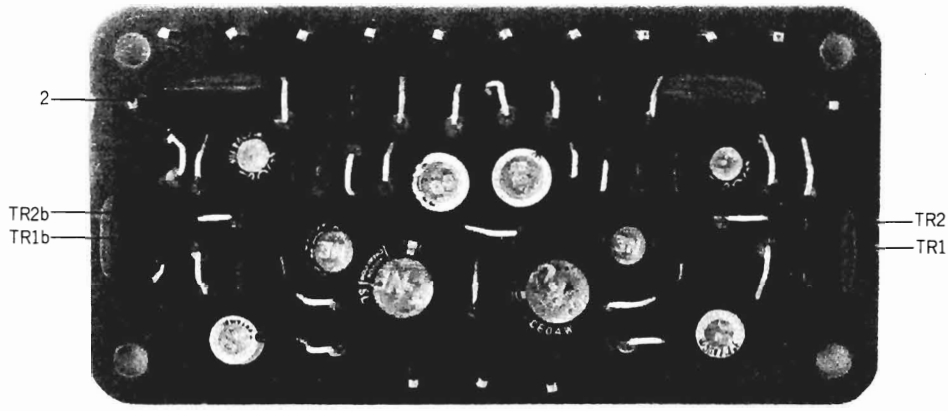


MAIN AMP. P.C. BOARD (96-5008) BLOCK

Symbol No.	Parts No.	Description	Q'ty
3-1x	BA570914	Main Amp. P.C. Board Comp. (96-5008)	1
3-TR1	ET539987	Transistor 2SC1312 (F) (G)	2
3-TR2, 3, 4	ET562858	Transistor 2SC1318 (P) (Q)	6
3-TR5, 6	ET452531	Transistor 2SD313 (E) (F)	4
3-D1	ED556514	Varistor STV-3H	2
3-VR1	EV383398	Semi-fixed/Vol. V18k3-2 30 kB (4US)	2
3-VR2	EV409858	Semi-fixed/Vol. V18k3-2 100B (4US)	2
3-2	EZ548234	Heat-sink Plate	1
3-3	AZ562836	Heat-sink Holder RH-14	4
3-4	ZS450832	ISO Screw, binding head 3x12	4
3-5	ZW348107	ISO Nut M3	4
3-6	EJ550012	Wrapping Terminal T5280	12
3-7x	ZW426622	Washer (SPC) D3.4x7.8x0.5t	2
3-8	ZS321298	ISO Screw, binding head 3x8	3
		Capacitor, Vertical Type	
3-C1	EC354947	Elect. 2.2μF 50WV	2
3-C2	EC321221	Elect. 100μF 50WV	2
3-C3	EC377212	VFM 47PF(J) 50WV	2
3-C4	EC290520	VFM 100PF(J) 50WV	2
3-C5	EC354947	Elect. 2.2μF 50WV	2
3-C6	EC290520	VFM 100PF(J) 50WV	2
3-C7	EC336104	Elect. 100μF 6.3WV	2
3-C8	EC377212	VFM 47PF(J) 50WV	2
3-C9	EC562847	Elect. 2200μF 25WV (Lug Type)	2
3-C10	EC228745	Ceramic DB209YZ 0.1μF(Z) 50WV	2
3-C11	EC551160	Ceramic NB821YZ 0.01μF(Z) 1.4kWV	2
3-C12	EC373296	Elect. 33μF 50WV	2
3-C13	EC290520	VFM 100PF(J) 50WV	2

Symbol No.	Parts No.	Description	Q'ty
		Resistor, Stopper Type	
3-R1	ER213715	Carbon RD1/4 100k(J) (Insu. Type)	2
3-R2	ER364948	Carbon RD1/4 3.3k(J) (Insu. Type)	2
3-R3	ER336442	Carbon RD1/4 10k(J)	2
3-R4	ER430007	Carbon RD1/4 1.5M(J)	2
3-R5	ER211757	Carbon RD1/4 100k(J)	2
3-R6	ER212883	Carbon RD1/4 4.7k(J)	2
3-R7	ER347038	Carbon RD1/4 270(J)	2
3-R8	ER211320	Carbon RD1/4 1.5k(J)	2
3-R9	ER324202	Carbon RD1/4 5.1k(J)	2
3-R10	ER350100	Carbon RD1/4 68k(J)	2
3-R11	ER212883	Carbon RD1/4 4.7k(J)	2
3-R12	ER212016	Carbon RD1/4 150(J)	2
3-R13	ER357412	Carbon RD1/4 220(J)	2
3-R14	ER380913	Carbon RD1/4 33(J)	2
3-R15	ER357412	Carbon RD1/4 220(J)	2
3-R16, 17	ER556064	Metal Plate MPC71F2 5W 0.47 (K)	4
3-R18	ER306887	Carbon RD1/4 15k(J)	2
3-R19	ER379596	Carbon RD1/4 16k(J)	2
3-R20	ER452542	Carbon RD1/2 10(J)(Insu. Type)	2
3-R21	ER556795	Carbon RD1/2 33(J)(Insu. Type)	2
3-R22, 23	ER304290	Carbon RD1/4 10(J)	4

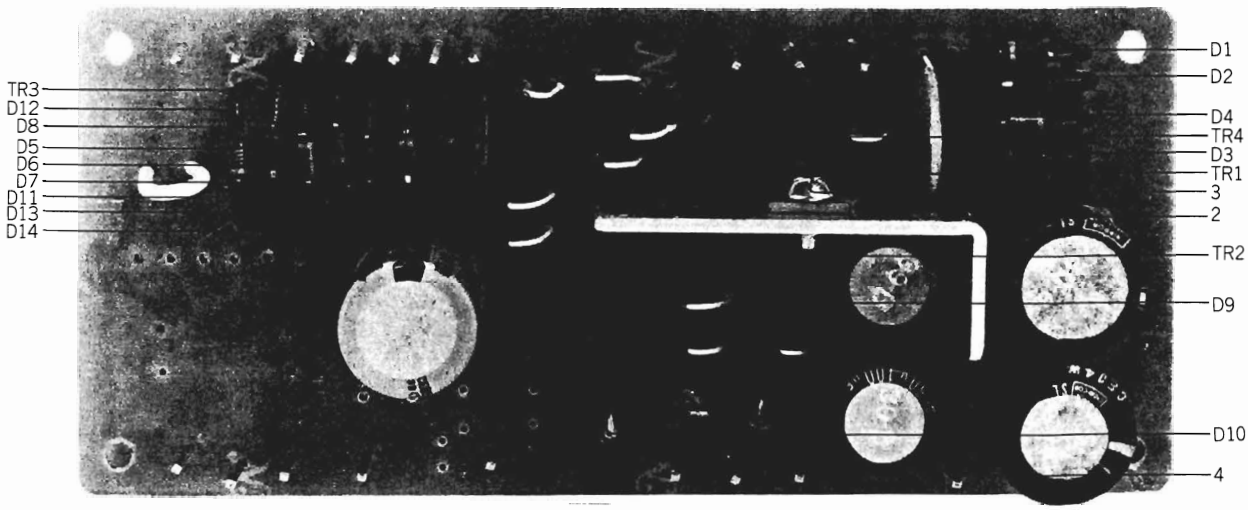
FIG. 4 PHOTO OF EQ. P.C. BOARD (96-5004) BLOCK



EQ. P.C. BOARD (96-5004) BLOCK

Symbol No.	Parts No.	Description	Q'ty
4-1x	BA563117	EQ. P.C. Board Comp. (96-5004)	1
4-TR1, 2	ET539987	Transistor 2SC1312 (F) (G)	4
4-2	EJ539662	Wrapping Post 1x17	15
		Capacitor, Vertical Type	
4-C1	EC483142	Elect. 2.2μF 50WV NL	2
4-C2	EC346735	Elect. 47μF 50WV	2
4-C3	EC476324	VFM 30PF(J) 50WV	2
4-C4	EC450527	Elect. 4.7μF 25WV	2
4-C5	EC220994	Elect. 10μF 25WV	2
4-C6	EC517138	Elect. 10μF 25WV NL	2
4-C7	EC250683	Mylar 0.0022μF(J) 50WV	2
4-C8	EC380621	Mylar 0.0068μF(J) 50WV	2
4-C9	EC336216	VFM 330PF(J) 50WV	2
4-C10	EC329850	VFM 220PF(J) 50WV	2
		Resistor, Stopper Type	
4-R1	ER211320	Carbon RD1/4 1.5k(J)	2
4-R2	ER443878	Carbon RD1/4 240k(J)	2
4-R3	ER211465	Carbon RD1/4 1k(J)	2
4-R4	ER357570	Carbon RD1/4 150k(J)	2
4-R5	ER306887	Carbon RD1/4 15k(J)	2
4-R6	ER379473	Carbon RD1/4 30k(J)	2
4-R7	ER212016	Carbon RD1/4 150(J)	2
4-R8	ER371946	Carbon RD1/4 2k(J)	2
4-R9	ER357535	Carbon RD1/4 39k(J)	2
4-R10	ER392850	Carbon RD1/4 390k(J)	2
4-R11	ER324202	Carbon RD1/4 5.1k(J)	2
4-R12	ER380755	Carbon RD1/4 6.2k(J)	2
4-R13	ER419556	Carbon RD1/4 43k(J)	2

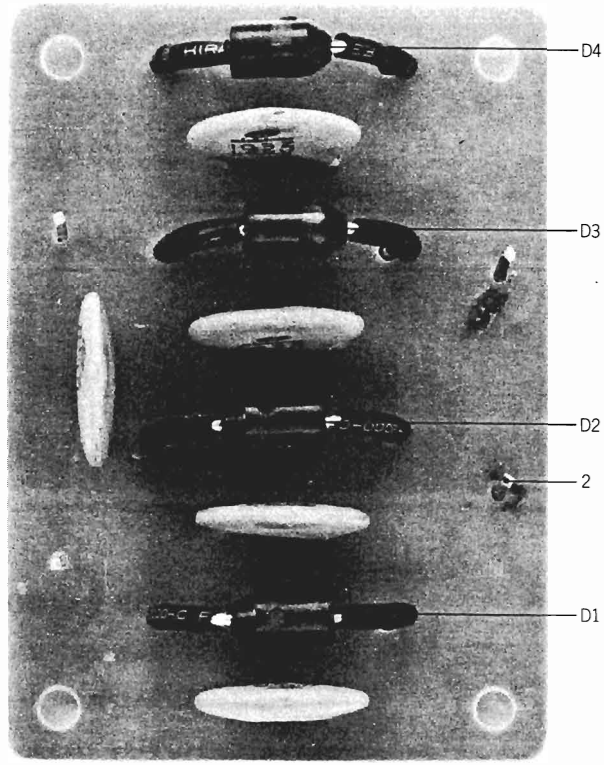
FIG. 5 PHOTO OF REGULATOR P.C. BOARD (98-5084) BLOCK



REGULATOR P.C. BOARD (98-5084) BLOCK

Symbol No.	Parts No.	Description	Q'ty
5-1x	BA570407	Regulator P.C. Board Comp. (98-5084)	1
5-TR1	ET557998	Transistor 2SC313 (E) (F)	1
5-TR2	ET517994	Transistor 2SC945(P)(Q)(R)(K)	1
5-TR3	ET539122	Transistor 2SA733(P)(Q)(R)	1
5-TR4	ET517994	Transistor 2SC945(P)(Q)(R)(K)	1
5-D1 to 8	ED224526	Silicon Diode 10D1	8
5-D9	ED539976	Zener Diode WZ-130	1
5-D10	ED562814	Zener Diode BZ-120	1
5-D11 to 14	ED224526	Silicon Diode 10D1	4
5-2	AA545117	Heat-sink	1
5-3	ZS447772	Tapping Screw #2 3x6 (BR)	1
5-4	EJ539662	Wrapping Post 1x17	19
5-5x	EJ558022	Hookup Terminal (T Type) T-4410	5
		Capacitor, Vertical Type	
5-C1	EC551160	Ceramic NB821YZ 0.01μF (Z) 1.4kWV	1
5-C2, 3	EC403468	Elect. 330μF 50WV	2
5-C4	EC321221	Elect. 100μF 50WV	1
5-C5	EC557627	Ceramic DB203YZ 0.01μF (Z) 50WV	1
5-C6	EC321221	Elect. 100μF 50WV	1
5-C7	EC220127	Elect. 100μF 16WV	1
5-C8	EC336148	Elect. 1000μF 16WV	1
		Resistor, Stopper Type	
5-R1	ER212883	Carbon RD1/4 4.7k(J)	1
5-R2	ER362441	Carbon RD1/4 1.8k(J)	1
5-R3	ER349828	Carbon RD1/4 20k(J)	1
5-R4	ER306887	Carbon RD1/4 15k(J)	1
5-R5	ER559034	Metal Oxide Film 2W 330(K)	1
5-R6	ER536984	Carbon RD1/2 4.7 (J) (Insu. Type)	1
5-R7, 8	ER336442	Carbon RD1/4 10k(J)	2
5-R9	ER212264	Carbon RD1/4 22k(J)	2
5-R10	ER306887	Carbon RD1/4 15k(J)	1
5-R11	ER212264	Carbon RD1/4 22k(J)	2
5-R12	ER346601	Carbon RD1/4 47k(J)	1

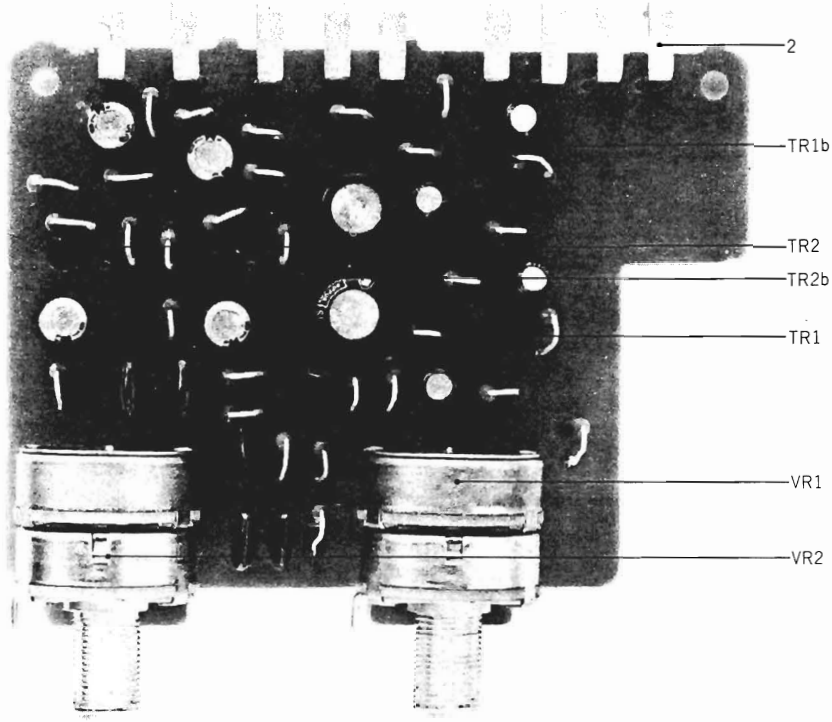
FIG. 6 PHOTO OF RECTIFIER P.C. BOARD (98-5010) BLOCK



RECTIFIER P.C. BOARD (98-5010) BLOCK

Symbol No.	Parts No.	Description	Q'ty
6-1x	BA560676	Rectifier P.C. Board Comp. (98-5010)	1
6-D1 to 4	ED558033	Silicon Diode HIFI 400V 3A (Special)	4
6-2	EJ539662	Wrapping Post 1x17	4
6-C1 to 5	EC551160	Ceramic/C. NB821YZ 0.01μF(Z) 1.4kWV	5

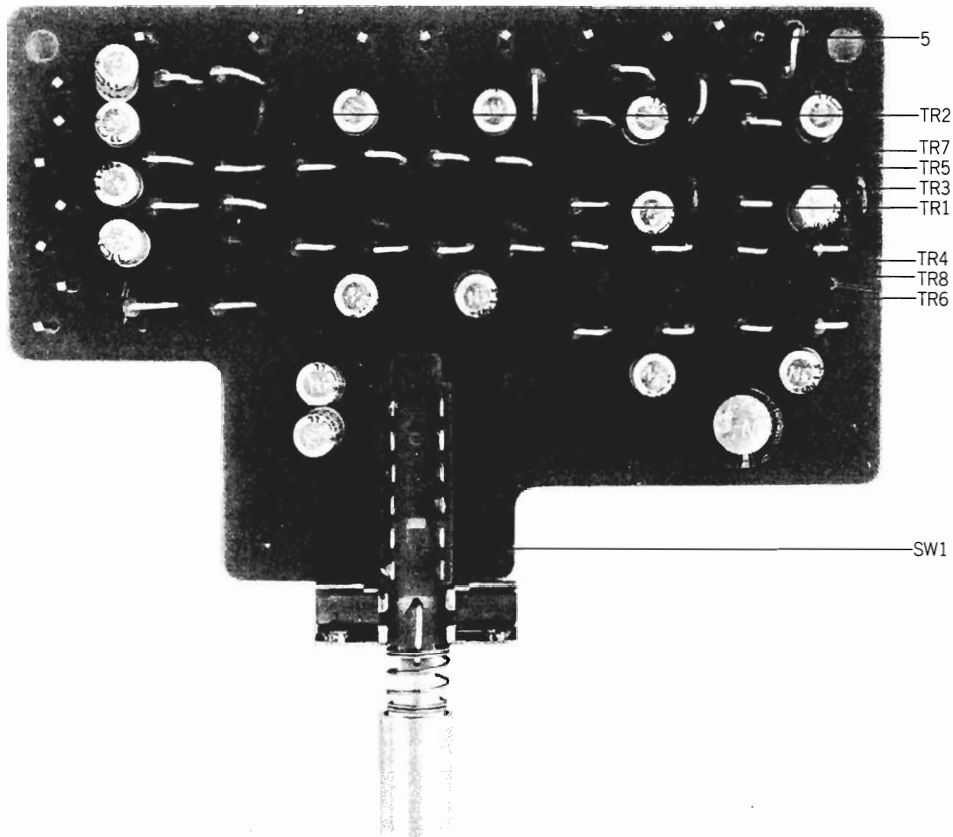
FIG. 7 PHOTO OF TONE P.C. BOARD (96-5006) BLOCK



TONE P.C. BOARD (96-5006) BLOCK

Symbol No.	Parts No.	Description	Q'ty
7-1x	BA562994	Tone P.C. Board Comp. (96-5006)	1
7-TR1, 2	ET539987	Transistor 2SC1312 (F) (G)	4
7-VR1, 2	EV555941	Co-axial 2-throw Vol. (w/click) V24L5GPHN 100kΩx2 1 kB	2
7-2	EJ539673	Wrapping Terminal T5290	9
		Capacitor, Vertical Type	
7-C1	EC338501	Elect. 1μF 50WV	2
7-C2	EC346206	Elect. 47μF 50WV	2
7-C3	EC338501	Elect. 1μF 50WV	2
7-C4	EC379721	Mylar 0.0012μF(J) 50WV	2
7-C5, 6	EC379214	Mylar 0.047μF(J) 50WV	4
7-C7, 8	EC346590	Elect. 4.7μF 50WV	4
		Resistor, Stopper Type	
7-R1	ER211465	Carbon RD1/4 1k(J)	2
7-R2	ER423753	Carbon RD1/4 1.2M(J)	2
7-R3	ER371946	Carbon RD1/4 2k(J)	2
7-R4	ER361607	Carbon RD1/4 300(J)	2
7-R5	ER336442	Carbon RD1/4 10k(J)	2
7-R6	ER362485	Carbon RD1/4 330k(J)	2
7-R7	ER212681	Carbon RD1/4 330(J)	2
7-R8	ER346994	Carbon RD1/4 18k(J)	2
7-R9	ER336442	Carbon RD1/4 10k(J)	2
7-R10	ER430007	Carbon RD1/4 1.5M(J)	2
7-R11	ER213030	Carbon RD1/4 5.6k(J)	2
7-R12	ER306843	Carbon RD1/4 1.2k(J)	2
7-R13	ER347038	Carbon RD1/4 270(J)	2
7-R14	ER211667	Carbon RD1/4 100(J)	2
7-R15	ER211465	Carbon RD1/4 1k(J)	2

FIG. 8 PHOTO OF REMOTE P.C. BOARD (96-5003) BLOCK



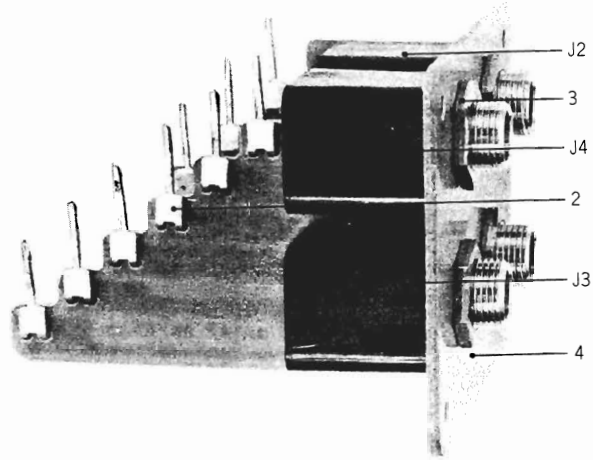
REMOTE P.C. BOARD (96-5003) BLOCK

Symbol No.	Parts No.	Description	Q'ty
8-1x	BA562983	Remote P.C. Board Comp. (96-5003)	1
8-TR1 to 8	ET539987	Transistor 2SC1312 (F) (G)	8
8-SW1	ES562781	Push SW. 1FS-4U-8	1
8-J3	EJ557910	Socket CS289	1
8-2x	ZS379405	ISO Screw, binding head 3x6	2
8-3x	ZS371856	ISO Screw, binding head 3x5	2
8-4x	AZ545534	Remote SW. Mt. Angle	1
8-5	EJ539662	Wrapping Post 1x17	15
		Capacitor, Vertical Type	
8-C1	EC479621	Elect. 1μF 50WV NL	1
8-C2	EC399690	VFM 33PF(J) 50WV	1
8-C3, 4	EC479621	Elect. 1μF 50WV NL	2
8-C5	EC476324	VFM 30PF(J) 50WV	1
8-C6, 7, 8	EC479621	Elect. 1μF 50WV NL	3
8-C9	EC399690	VFM 33PF(J) 50WV	1
8-C10, 11	EC479621	Elect. 1μF 50WV NL	2
8-C12	EC476324	VFM 30PF(J) 50WV	1
8-C13 to 16	EC479621	Elect. 1μF 50WV NL	4
8-C17	EC476324	VFM 30PF(J) 50WV	1
8-C18 to 20	EC479621	Elect. 1μF 50WV NL	3
8-C21	EC476324	VFM 30PF(J) 50WV	1
8-C22	EC479621	Elect. 1μF 50WV NL	1
8-C23	EC455354	Elect. 100μF 35WV	1

Symbol No.	Parts No.	Description	Q'ty
		Resistor, Stopper Type	
8-R1	ER380711	Carbon RD1/4 220k(J)	1
8-R2	ER211757	Carbon RD1/4 100k(J)	1
8-R3	ER304290	Carbon RD1/4 10(J)	1
8-R4	ER336442	Carbon RD1/4 10k(J)	1
8-R5	ER380711	Carbon RD1/4 220k(J)	1
8-R6	ER211757	Carbon RD1/4 100k(J)	1
8-R7, 8	ER336442	Carbon RD1/4 10k(J)	2
8-R9	ER380711	Carbon RD1/4 220k(J)	1
8-R10	ER211757	Carbon RD1/4 100k(J)	1
8-R11	ER304290	Carbon RD1/4 10(J)	1
8-R12	ER336442	Carbon RD1/4 10k(J)	1
8-R13	ER380711	Carbon RD1/4 220k(J)	1
8-R14	ER211757	Carbon RD1/4 100k(J)	1
8-R15, 16	ER336442	Carbon RD1/4 10k(J)	2
8-R17	ER211667	Carbon RD1/4 100(J)	1
8-R18	ER211465	Carbon RD1/4 1k(J)	1
8-R19	ER404087	Carbon RD1/4 160k(J)	1
8-R20	ER430007	Carbon RD1/4 1.5M(J)	1
8-R21	ER362441	Carbon RD1/4 1.8k(J)	1
8-R22	ER213096	Carbon RD1/4 510(J)	1
8-R23	ER357570	Carbon RD1/4 150k(J)	1
8-R24	ER211757	Carbon RD1/4 100k(J)	1
8-R25	ER304290	Carbon RD1/4 10(J)	1
8-R26	ER336442	Carbon RD1/4 10k(J)	1
8-R27	ER211465	Carbon RD1/4 1k(J)	1
8-R28	ER404087	Carbon RD1/4 160k(J)	1
8-R29	ER430007	Carbon RD1/4 1.5M(J)	1
8-R30	ER362441	Carbon RD1/4 1.8k(J)	1
8-R31	ER213096	Carbon RD1/4 510(J)	1
8-R32	ER357570	Carbon RD1/4 150k(J)	1
8-R33	ER211757	Carbon RD1/4 100k(J)	1
8-R34	ER304290	Carbon RD1/4 10(J)	1
8-R35	ER336442	Carbon RD1/4 10k(J)	1

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

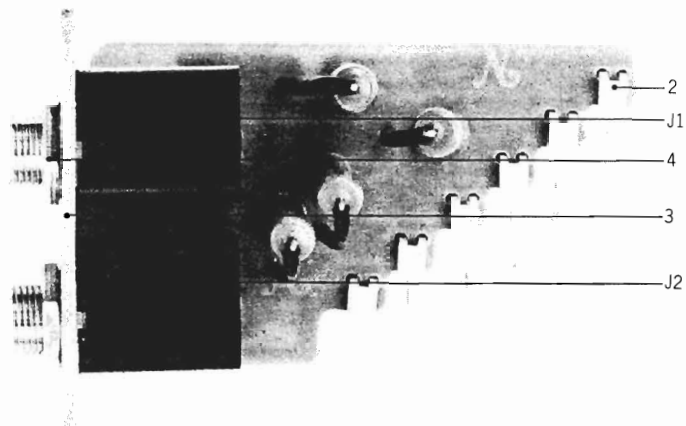
FIG. 9 PHOTO OF MIC, DUB P.C. BOARD (98-5059, 98-5013) BLOCK



MIC, DUB P.C. BOARD (98-5059, 98-5013) BLOCK

Symbol No.	Parts No.	Description	Q'ty
9-1x	BA563016	Mic, Dub P.C. Board Comp. (98-5059, 98-5013)	1
9-J1, 2	EJ391094	Mic. Jack 2PMJ1P	2
9-J3, 4	EJ391083	Mic. Jack 3PMJ1P	2
9-2	EJ550012	Wrapping Terminal T5280	9
9-3	ZW270191	E Jack Nut	4
9-4	AZ549112	Jack Mt. Plate	1

FIG. 10 PHOTO OF HP P.C. BOARD (98-5012) BLOCK



HP P.C. BOARD (98-5012) BLOCK

Symbol No.	Parts No.	Description	Q'ty
10-1x	BA560531	HP P.C. Board Comp. (98-5012)	1
10-J1, 2	EJ437321	Jack, 3P Molded 3PMJ1P	2
10-2	EJ550012	Wrapping Terminal T5280	6
10-3	AZ544836	Phone Jack Mt. Plate	1
10-4	ZW270191	E Jack Nut	2
10-R1 to 4	ER559034	Metal Oxide Film/R. 2W 3 30Ω (K)	4

FIG. 11 PHOTO OF LOUDNESS P.C. BOARD (96-5005) BLOCK

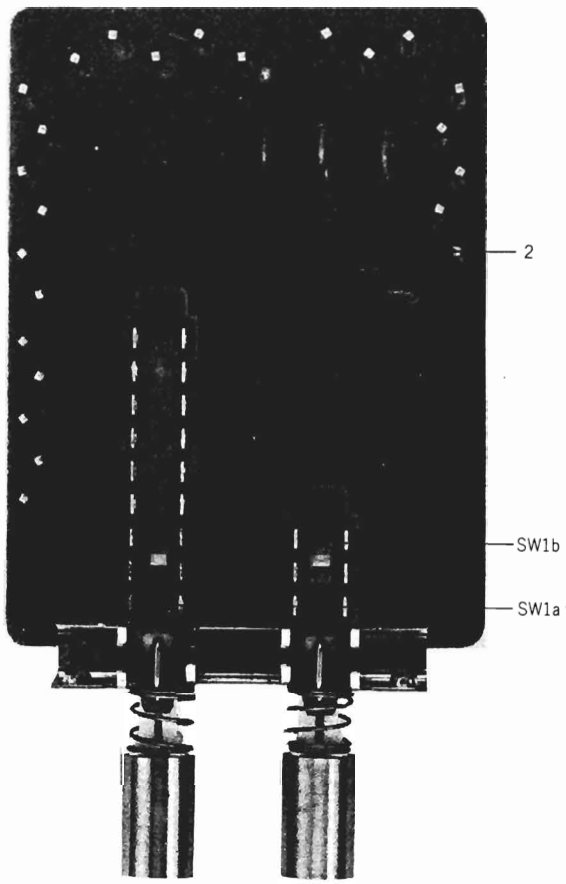
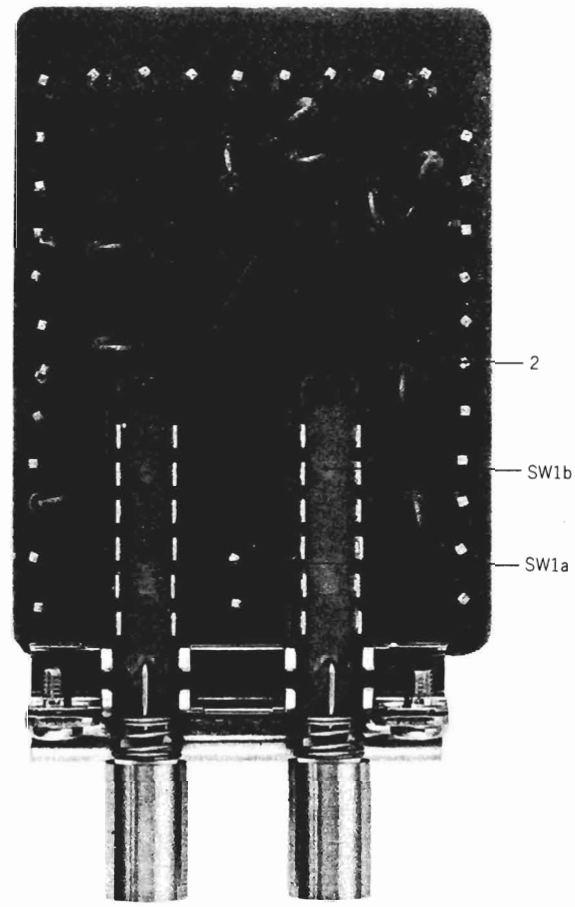


FIG. 12 PHOTO OF TAPE P.C. BOARD (96-5001) BLOCK



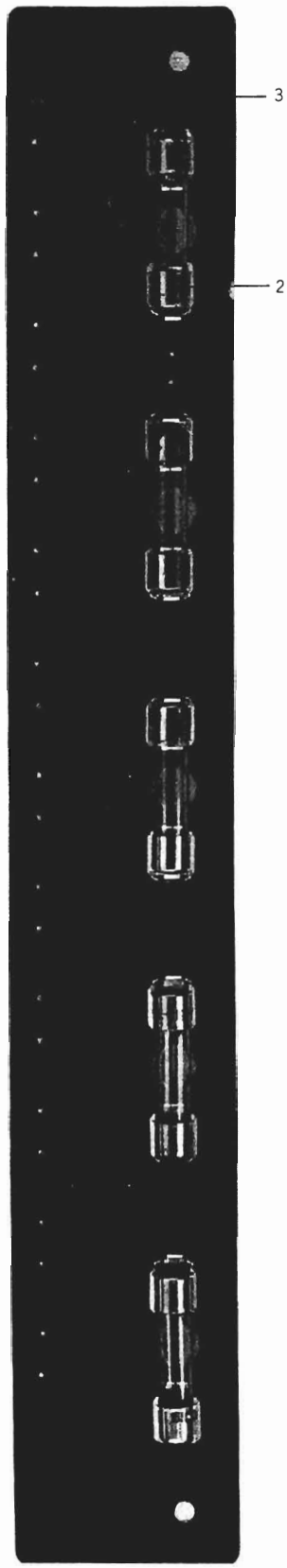
LOUDNESS P.C. BOARD (96-5005) BLOCK

Symbol No.	Parts No.	Description	Q'ty
11-1x	BA563005	Loudness P.C. Board Comp. (96-5005)	1
11-SW1	ES591131	Push SW. 2FT-0001 FF-2020	1
11-2	EJ539662	Wrapping Post 1x17	24
		Capacitor, Vertical Type	
11-C1	EC368335	Mylar 0.022μF(J) 50WV	2
11-C2	EC389237	VFM 200PF(J) 50WV	2
		Resistor, Stopper Type	
11-R1	ER346994	Carbon RD1/4 18k(J)	2
11-R2	ER357570	Carbon RD1/4 150k(J)	2

TAPE P.C. BOARD (96-5001) BLOCK

Symbol No.	Parts No.	Description	Q'ty
12-1x	BA563027	Tape P.C. Board Comp. (96-5001)	1
12-SW1	ES551272	Push SW. 2FS-8U-70	1
12-2	EJ539662	Wrapping Post 1x17	32
12-C1 to 8	EC557616	Ceramic/C. UFD06B 390PF(K) 50WV	8
		Resistor, Stopper Type	
12-R1 to 8	ER371946	Carbon RD1/4 2k(J)	8
12-R9, 10	ER336442	Carbon RD1/4 10k(J)	2

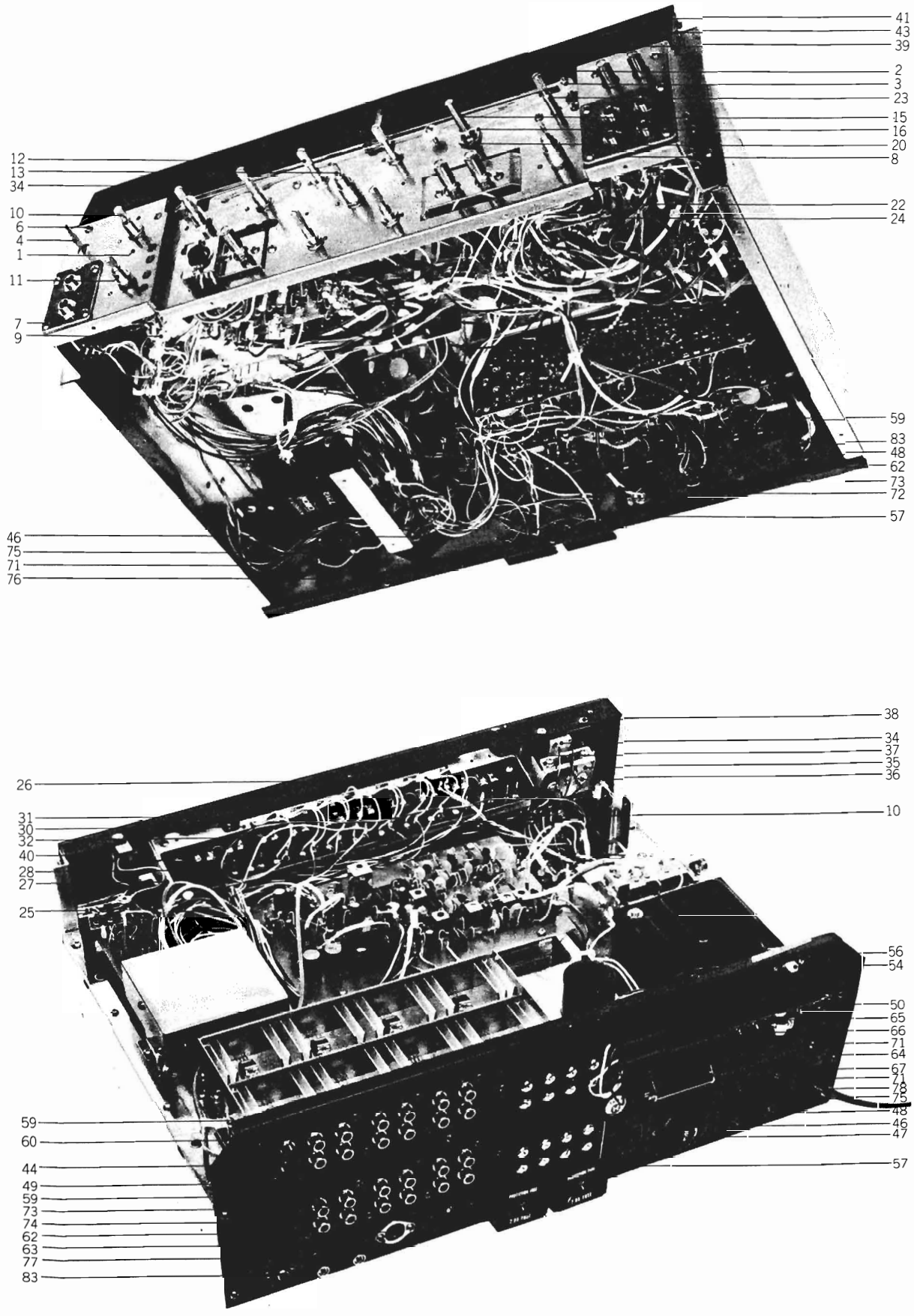
FIG. 13 PHOTO OF LAMP P.C. BOARD (97-5008) BLOCK



LAMP P.C. BOARD (97-5008) BLOCK

Symbol No.	Parts No.	Description	Q'ty
13-1x	BA562274	Lamp P.C. Board Comp. (97-5008)	1
13-2	EJ514822	Fuse Holder, P.C. Board S-N5051	10
13-3	EJ539662	Wrapping Post 1x17	17

FIG. 14 PHOTO OF FRONT CHASSIS/REAR PANEL BLOCK

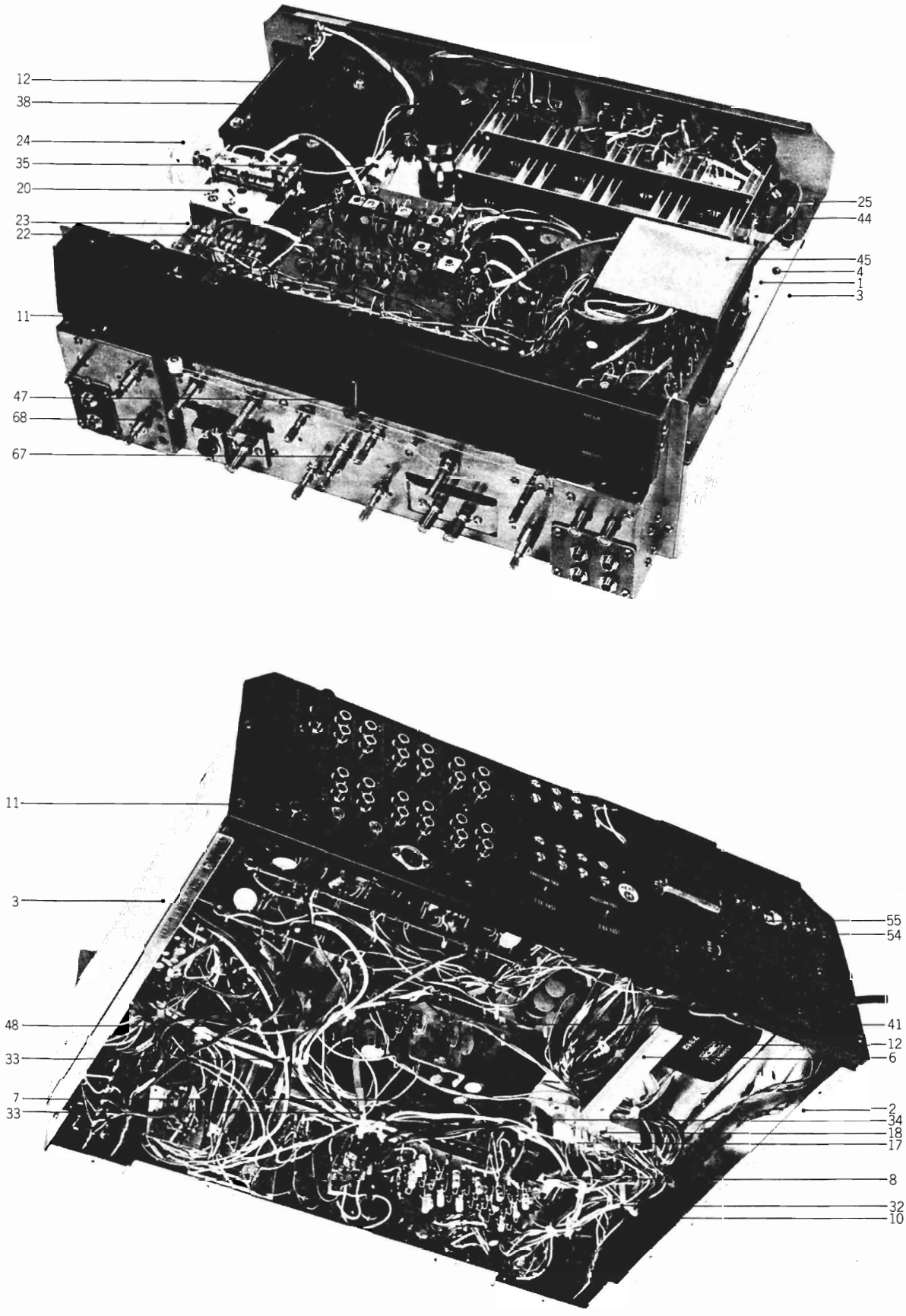


FRONT CHASSIS/REAR PANEL BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
	FRONT CHASSIS BLOCK			
14-1	AZ547942	Front Chassis, w/chassis L,R	96-5018	1
14-2	ZS530684	Roller Screw B (L=13)	91-5010	3
14-3	MR530662	Roller B (D=10)	91-5009	4
14-4	ES468448	Lever SW. SDD4LFJO (LPS60122FJ00)	25-4-12	1
14-5x	EC551160	Ceramic/C. 0.01μF(Z) 1.4kWV	24-5-55	2
14-6	ZS371856	ISO Screw, binding head 3x5		12
14-7	ZS447772	Tapping Screw #2 3x6 (BR)		8
14-8	EZ585731	Mic, Dub Spacer	96-5040	1
14-9	MZ229138	Wire Bundle Holder N-108	2-35-1	9
14-10	ES561914	Rotary SW. SR32N 3-8-2 25KC	25-7-34	1
14-11	ES561925	Rotary SW. SR32N 2-8-4 25KC	25-7-32	1
14-12	EV562768	Vol. V16L4N 2B 200kΩ	36-6-4	4
14-13	EV562770	Co-axial 2-throw Vol. V24L5GN 2BL 250kΩx4	36-23-7	1
14-14x	ER364983	Carbon/R. RD1/4 18k(J) (Insu. Type)	35-9-5	2
14-15	MS530752	Tuning Shaft	91-5018	1
14-16	AA530741	Tuning Metal	91-5017	1
14-17x	ZW260122	Washer (Nylon) D6.1x10x1t		2
14-18x	BF530763	Flywheel	91-5019	1
14-19x	ZS462936	ISO Set Screw, hexagon socket 3x5 (Cup/p)		1
14-20	ZW539583	Nut M11		1
14-21x	ZW539594	Washer (SPC) D11.2x16x0.5t		1
14-22	AZ545545	Selector SW. Mt. Angle	97-5020	1
14-23	ES561936	Rotary SW. Y7-17-5	25-7-37	1
14-24	ES557763	Rotary SW. SR26N 5-15-5 35KH	25-6-63	1
14-25	AZ547907	Push SW. Mt. Plate	96-5020	1
	SCALE MT. CHASSIS BLOCK			
14-26	AZ548188	Scale Plate Mt. Chassis	96-5021	1
14-27	AA530785	Lamp Case	91-5021	1
14-28	ZS447772	Tapping Screw #2 3x6 (BR)		15
14-29x	EL539684	Fuse Type Lamp 8V 0.3A	28-2-27	6
14-30	AA548201	Lamp Holder	96-5023	1
14-31	AZ548190	Lamp Holder Case	96-5022	1
14-32	EL550045	Cord Lamp 8V 50MA (ST. IND.)	28-2-30	7
14-33x	SM531336	Illumination Plate, Pointer	91-5065	1
14-34	EM539685	Tuning Meter KL-218L-26	46-1-68	1
14-35	AA530820	Meter Case	91-5025	1
14-36	EJ367986	Fuse Holder 1P AC125V 5A	40-1-8	1
14-37	AA530818	Meter Mt. Angle	91-5024	1
14-38	ZS379405	ISO Screw, binding head 3x6		3
14-39	EM558044	Indicator (2-4ch)	28-2-31	1
14-40	AA544926	Indicator Support	96-5045	1
14-41	AA548212	Scale Plate A	96-5024	1
14-42x	AA548256	Scale Plate B (J)	96-5024	1
14-43	EJ556143	Canoe Clip (Large)	2-7-35	2
	REAR PANEL BLOCK			
14-44	SP548166	Rear Panel A	96-5025	1
14-45x	SP548245	Rear Panel B (CSA)	96-5025	1
14-46	EJ233370	Socket (Volt. Selector) S-18010	40-2-3	1
14-47	ZW552611	ISO Screw, pan head 3x8 (Black)		11
14-48	EJ539785	Consent, Speaker (2-throw)	31-1-96	2
14-49	ZS570385	ISO Tap-tight Screw (pan) 3x8 (Black)		16
14-50	AA510625	Antenna Terminal Plate 5P	32-1-29	1
14-51x	ZW348107	ISO Nut M3		5
14-52x	ZW273802	Toothed Lock Washer M3		3
14-53x	ZW273778	Earth Lug M3		1
14-54	ES320016	Slide SW. MFS-201NB	25-3-21	1
14-55x	ER211320	Carbon/R. RD1/4 1.5k(J) (Stop. Type)	35-10-1	2
14-56	ZW562015	ISO Screw, binding head 2x4 (Black)		2
14-57	EJ539796	Fuse Holder 2P	40-1-29	2
14-58x	ZS447772	Tapping Screw #2 3x6 (BR)		4
14-59	EJ539763	Wrapping Pin Jack B 4P	31-1-106	5
14-60	EJ551340	Wrapping Pin Jack B 6P	31-1-102	1
14-61x	ER428567	Solid/R. RC1/2 2.2M(K)	35-5-4	1
14-62	EJ299305	Jack, 5P Din	31-1-1	1
14-63	ZS447761	Tapping Screw #2 3x6 (BR) (Black)		4
14-64	AA530910	Antenna Channel	91-5029	1
14-65	AA562803	Bar Antenna	55-1-19	1
14-66	AA378268	Antenna Support	AA-5552	1
14-67	ZS379451	ISO Screw, round head 4x50		1
14-68x	ZW273914	Spring Washer M4		2
14-69x	ZW556132	ISO Nut M4		1
14-70x	ZW551373	Washer (Nylon) D4.2x8x0.5t		2
14-71	EZ382263	Strain Relief SR-4K-4	2-7-12	2
14-72	AZ544950	Volume Retaining Parts	98-5049	1
14-73	EV557897	Vol. V16L4N B 1kΩ	36-6-2	1
14-74	ZW552622	ISO Screw, pan head 3x6 (Black)		2
14-75	EJ378944	Socket, AC U/L S-1 9122	31-1-47	2
14-76	AA530908	Socket Nut	91-5028	2
14-77	EZ486257	Metal Terminal T-10	32-1-27	2
14-78	EW540112	AC Cord (CUL) 2.5M	26-3-19	1
14-79x	EW524845	AC Cord (J) 2.5M	26-3-31	1
14-80x	EW486797	Power Supply Cord (WG)	26-3-26	1
14-81x	EW315448	Australia Cord (3 core)	26-3-11	1
14-82x	EZ246936	Strain Relief SR-6W-1 (WG, 3 core)	2-7-8	1
14-83	EJ354936	1P Pin-Jack	31-1-32	1
14-84x	EF575223	Fuse 5A 250V	39-1-50	1

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

FIG. 15 PHOTO OF ASSEMBLY BLOCK



ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
15-1	AZ548032	Main Chassis, w/sub chassis	96-5009	1
15-2	AA532056	Side Plate Left	94-5002	1
15-3	AA532067	Side Plate Right	94-5003	1
15-4	ZS447772	Tapping Screw #2 3x6 (BR)		61
15-5x	ZW273778	Earth Lug M3		2
15-6	AA532078	Reinforcement Angle A	94-5004	1
15-7	AZ530695	Reinforcement Angle	91-5011	1
15-8	AZ548111	P.C. Board Support 3	96-5031	1
15-9x	ZS371856	ISO Screw, binding head 3x5		2
15-10	AA548065	Insulator Plate	96-5013	1
15-11	ZS447761	Tapping Screw #2 3x6 (BR) (Black)		12
15-12	BT562724	Power Trans. AS-960T-1	38-4-257	1
15-13x	BT592222	Power Trans. AS-960T-2 (CSA)	38-4-291	1
15-14x	ZW273914	Spring Washer M4		4
15-15x	ZW444251	ISO Nut M4		4
15-16x	ZW273881	Earth Lug M4		1
15-17	EJ550067	Lug Plate 4P T-5305	33-5-5	3
15-18	ZS447805	Tapping Screw #2 3x12(BR)		3
15-19x	EJ254970	Lug Plate KP1L1	33-3-3	1
15-20	AF562735	Front End FB-112U12 or 21	57-2-29	1
15-21x	AF562825	Front End FB-112J14 (J)	57-2-30	1
15-22	AZ548021	Front End P.C. Board	96-5007	1
15-23	AZ548054	Front End Retaining Base	96-5011	1
15-24	MR530706	Pulley	91-5012	1
15-25	ZS321298	ISO Screw, binding head 3x8		9
15-26x	ZG549011	Tuning Spring	91-5094	1
15-27x	AZ548133	Roller Mt. Angle	96-5035	1
15-28x	MR530662	Roller B (D=10)	91-5009	1
15-29x	MR530651	Roller A (D=14)	91-5008	2
15-30x	ZW530673	Roller Screw A (L=9)	91-5010	1
15-31x	ZS530684	Roller Screw B (L=13)	91-5010	1
15-32	EJ551057	Wire Clip 220-JD481010-0021	2-7-27	3
15-33	EJ557717	Wire Clip 0017	2-7-26	2
15-34	EJ514607	Wire Clip 220-JD485210-01 (Nylon)	2-7-18	1
15-35	EJ557728	Wire Clip 0128	2-7-19	3
15-36x	EJ510333	Wire Clip 220-JD481610-0104 (Nylon)	2-7-17	2
15-37x	EJ551035	Wrapping Terminal 4P T5251	32-1-36	3
15-38	EC555996	Elect./C. 3300μF 63WV (Lug Type)	24-10-84	1
15-39x	ER452777	Carbon/R. RD1/4 160kΩ(J) (Insu. Type)	35-9-5	2
15-40x	ER364994	Carbon/R. RD1/4 39kΩ(J)	35-9-5	2
15-41	EJ514034	PC Support	2-7-20	16
15-42x	EZ545602	P.C. Board Support	97-5038	2
15-43x	EZ548100	P.C. Board Support 2 (Small)	96-5030	1
15-44	AZ548098	Heat-sink Mt. Plate	96-5017	2
15-45	AZ547356	SQ Shield	97-5050	1
15-46x	AA530627	IF P.C. Board Mt. Plate	91-5005	2
15-47	AA530954	Dial Pointer	91-5039	1
15-48	MZ229138	Wire Bundle Holder N-108	2-35-1	10
15-49x	EF563703	Fuse 2A 250V	39-1-50	4
15-50x	EF562691	Fuse 2.5A 250V	39-1-50	1
15-51x	EF575223	Fuse 5A 250V	39-1-50	1
15-52x	EF563657	Fuse 3A 250V	39-1-50	1
15-53x	EF575932	Fuse 0.8A 250V	39-1-50	1
15-54	AA539537	Fuse Holder Cover 2P	2-34-78	2
15-55	ZS552622	ISO Screw, pan head 3x6		2
15-56x	MZ598318	Fuse P.C. Board Mt. Base (CSA)	98-5101	1
15-57x	ZS325495	Tapping Screw #2 3x6		5
15-58x	EA598320	Fuse P.C. Board (CSA)	98-5102	1
15-59x	EJ539662	Wrapping Post 1x17	32-1-48	7
15-60x	EJ592064	Fuse Holder, P.C. Board H0006 (CSA)	40-1-36	14
15-61x	ES379405	ISO Screw, binding head 3x6		2
15-62x	MZ598498	Heat-sink Barrier (CSA)	96-5052	1
15-63x	MZ229138	Wire Bundle Holder N-108 (CSA)	2-35-1	3
15-64x	MZ259233	Wire Band C (CSA)	3A-745	1
15-65x	ZW273881	Earth Lug M4		1
15-66x	ER428567	Solid/R. RC1/2 2.2M(K)	35-5-4	1
15-67	AA531371	Stop Collar 2 (L=12.5)	91-5074	2
15-68	AA531360	Stop Collar 1 (L=2.5)	91-5074	1

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

FIG. 16 PHOTO OF FINAL ASSEMBLY BLOCK

FINAL ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
		FRONT PANEL BLOCK		
16-1	SP547918	Front Panel	96-5027	1
16-2	AA541517	Side Molding A (Right)	91-5082	1
16-3	AA541528	Side Molding B (Left)	91-5082	1
16-4	AA531156	Side Fitting A (Right)	91-5046	1
16-5	AA531167	Side Fitting B (Left)	91-5046	1
16-6x	ZS447805	Tapping Screw #2 3x12 (BR)		6
16-7	AA531044	Front Plate 7	91-5044	1
16-8	AA531145	Fitting 2	91-5045	2
16-9x	AA530976	Cushion, Retaining Plate	91-5043	2
16-10x	ZS447840	Tapping Screw #2 3x8 (BR)		2
16-11	AA545905	Push Button Bush	98-5061	5
		ASSEMBLY BLOCK		
16-12x	SP533430	Bottom Plate	94-5035	1
16-13x	ZS447772	Tapping Screw #2 3x6 (BR)		9
16-14x	SA377190	Rubber Foot, LM	LM-404	4
16-15x	ZW419646	Washer (SPC) D4.5x9.8x0.5t		4
16-16x	ZS463375	Tapping Screw #2 4x15 (Truss)		4
16-17	ZW526577	Collar B, Jack	MC-5006	6
16-18x	ZW406416	Tapping Screw #2 3x8 countersunk		3
16-19x	ZS447840	Tapping Screw #2 3x8 (BR)		2
16-20	SK531213	Tuning Knob	91-5050	1
16-21x	ZS446422	ISO Set Screw, hexagon socket 4x8 (cup/p.)		1
16-22	SK531314	Power Knob	91-5060	1
16-23	SK547964	Selector Knob	98-5080	4
16-24	SK531224	Push Button Knob	91-5051	5
16-25	SK531281	Single Knob	91-5057	2
16-26	SK548144	Balance Knob	96-5029	4
16-27	SK548076	Main Volume Knob	96-5014	1
16-28	BC533452	Cabinet	94-5038	1
16-29	ZW548010	Spot Facing Washer	MU-6028	4
16-30	ZS552824	ISO Screw, binding head 4x18		4
16-31x	ZW562757	Washer D4.3x11x0.8t		4
16-32	AA545894	Remote Jack Cover	98-5062	1
16-33x	EJ552778	Short Pin Plug P0107	42-1-65	2
16-34x	AA560092	FM Antenna AFM-1B (5003-03)	55-1-18	1
16-35x	AA560081	FM Antenna AFM-1A (5003-04) (J)	55-1-18	1
16-36x	EF562544	Fuse 6A 125V	39-1-47	1
16-37x	EF563657	Fuse 3A 250V	39-1-50	1
16-38x	EF562680	Fuse 5A 125V	39-1-47	1
16-39x	EF562691	Fuse 2.5A 250V	39-1-50	1

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

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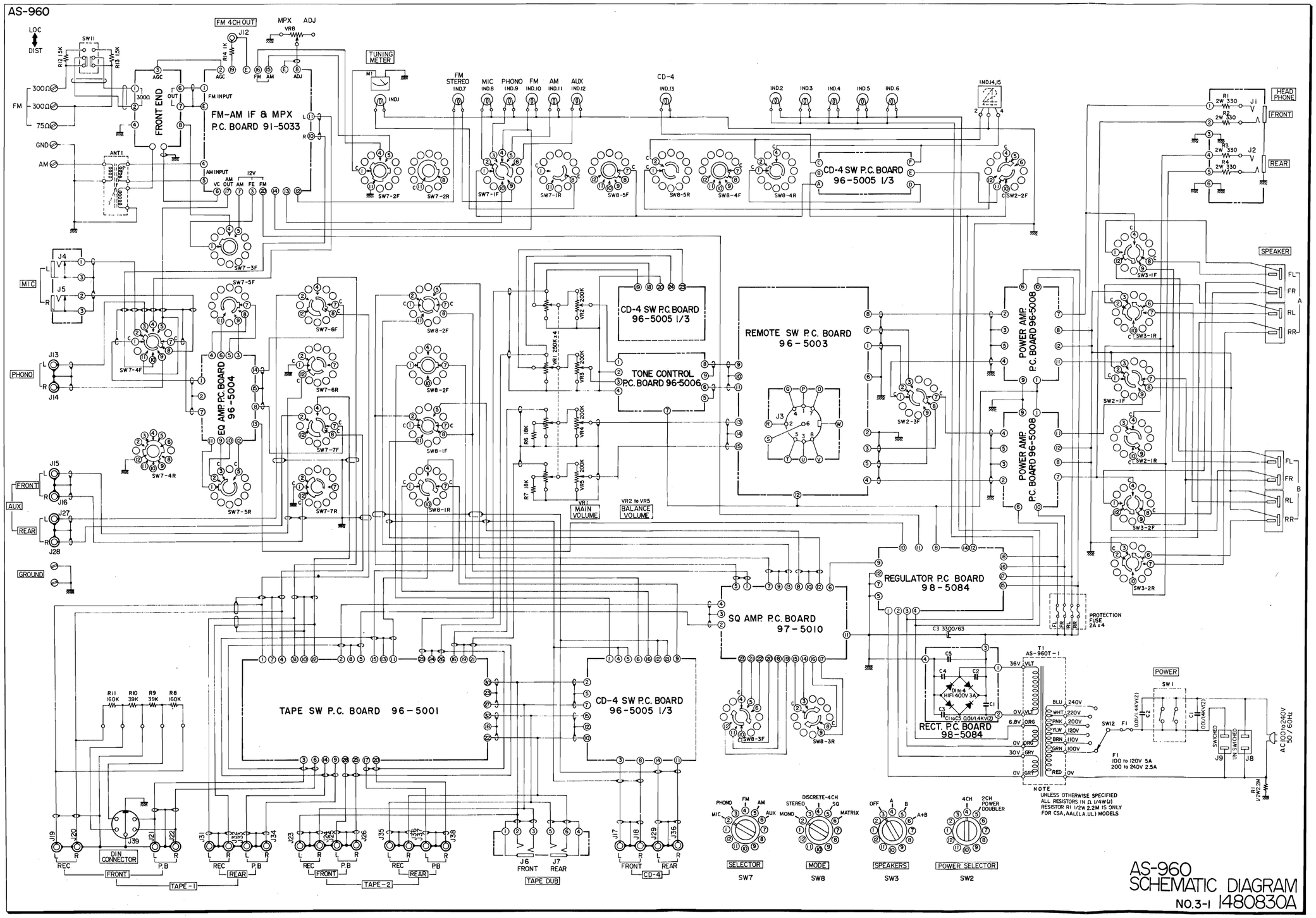
SECTION 3

SCHEMATIC DIAGRAM

AS-960

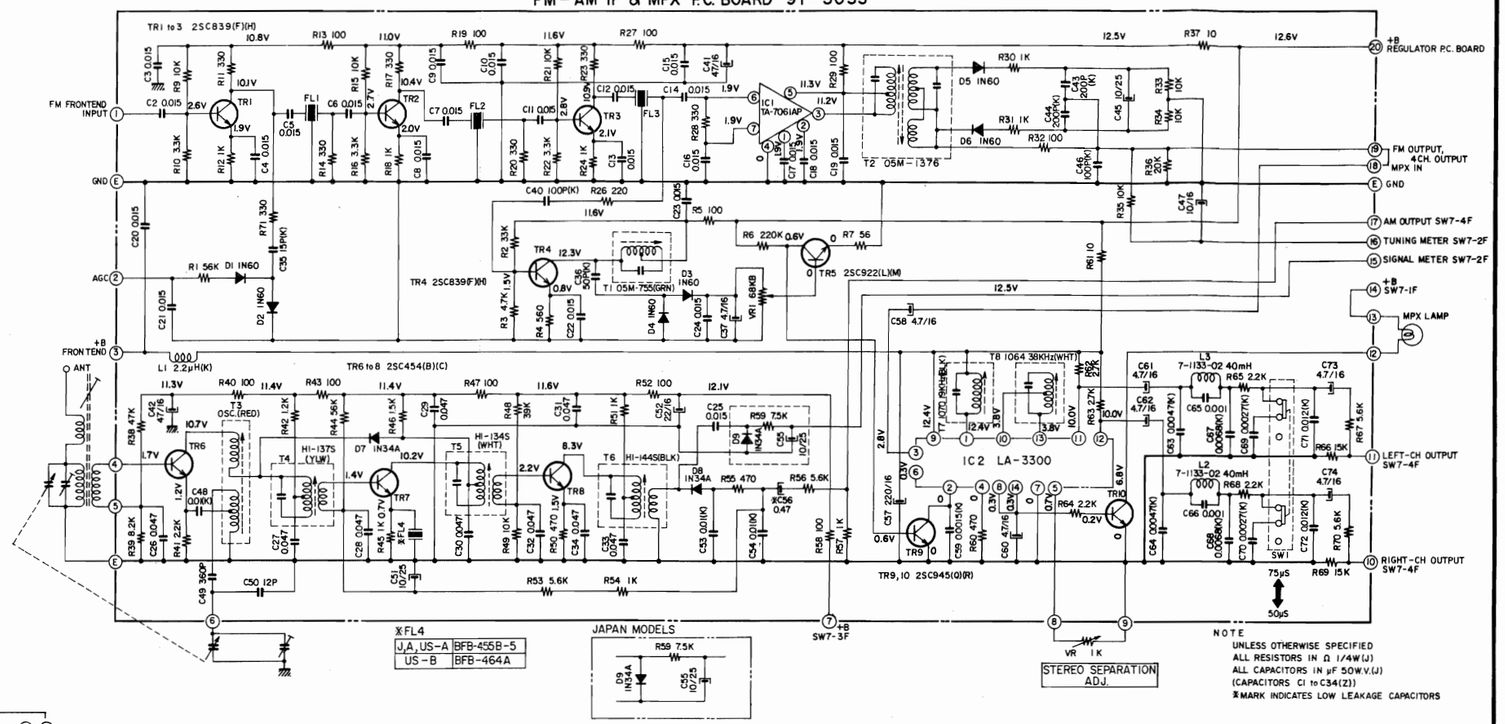


AS-960 SCHEMATIC DIAGRAM

NO.3-1 1480830A

AS-960

FM-AM IF & MPX P.C. BOARD 91-5033

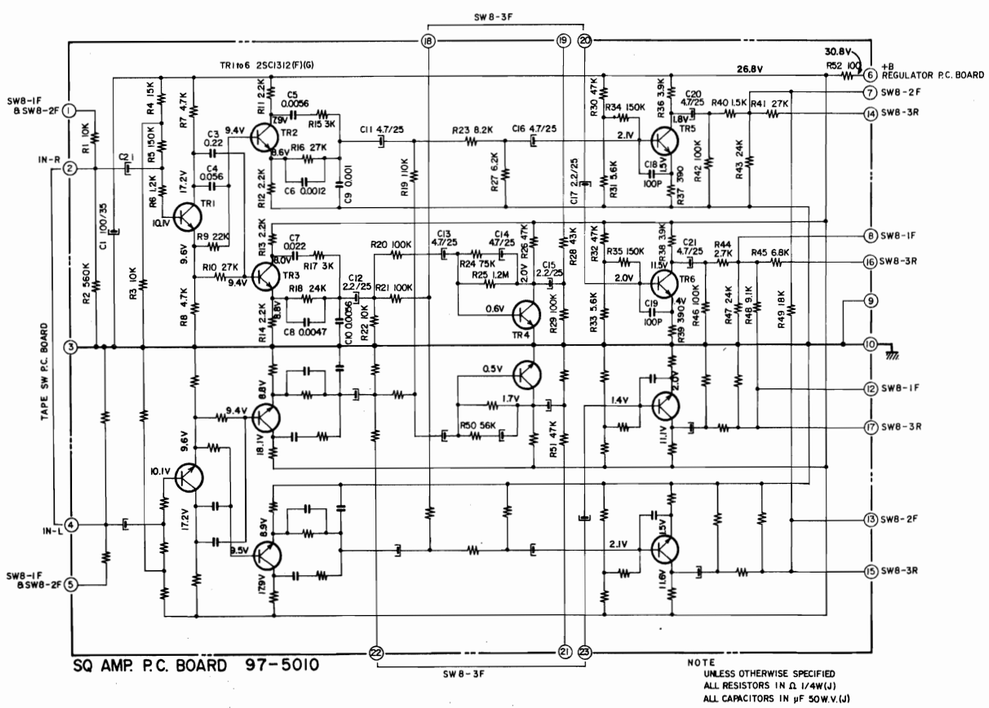


※FL4

J,A,US-A	BFB-455B-5
US-B	BFB-464A

JAPAN MODELS

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)
(CAPACITORS C1 to C34(Z))
※MARK INDICATES LOW LEAKAGE CAPACITORS



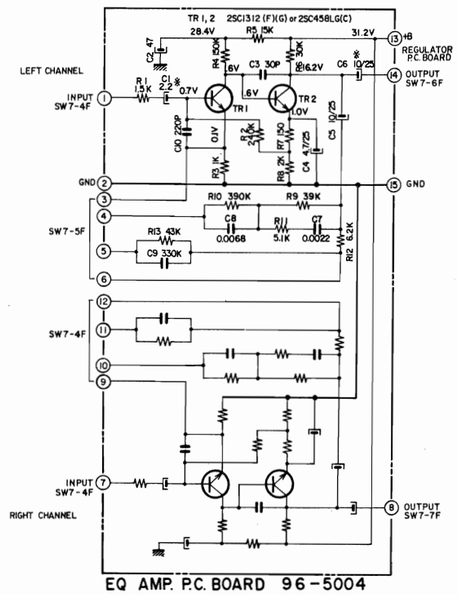
SQ AMP. P.C. BOARD 97-5010

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)

AS-960 SCHEMATIC DIAGRAM

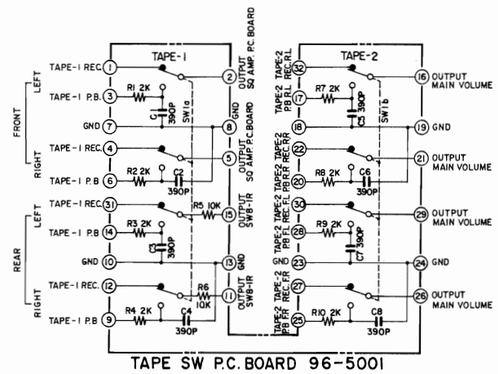
NO.3-2 148083IA 2C

AS-960



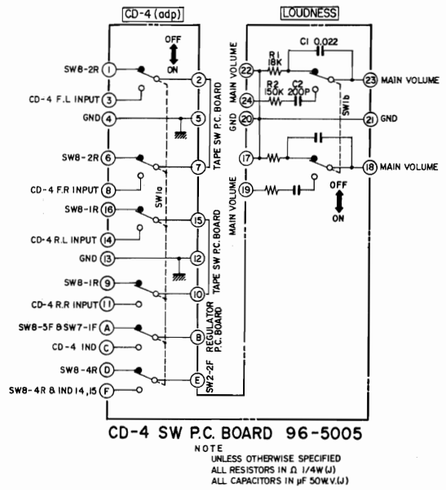
EQ AMP. P.C. BOARD 96-5004

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)
※ INDICATES LOW LEAK AGE CAPACITORS



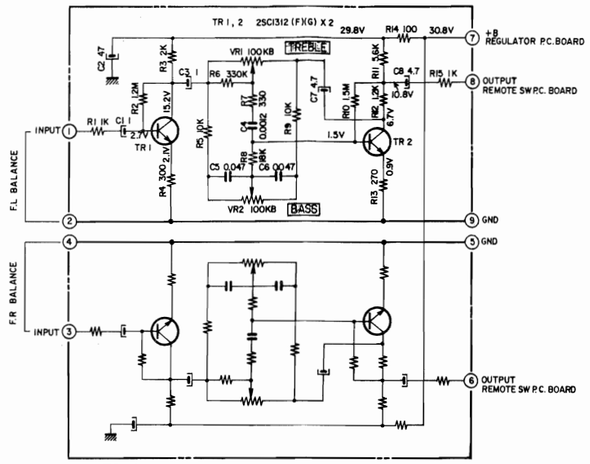
TAPE SW P.C. BOARD 96-5001

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(K)



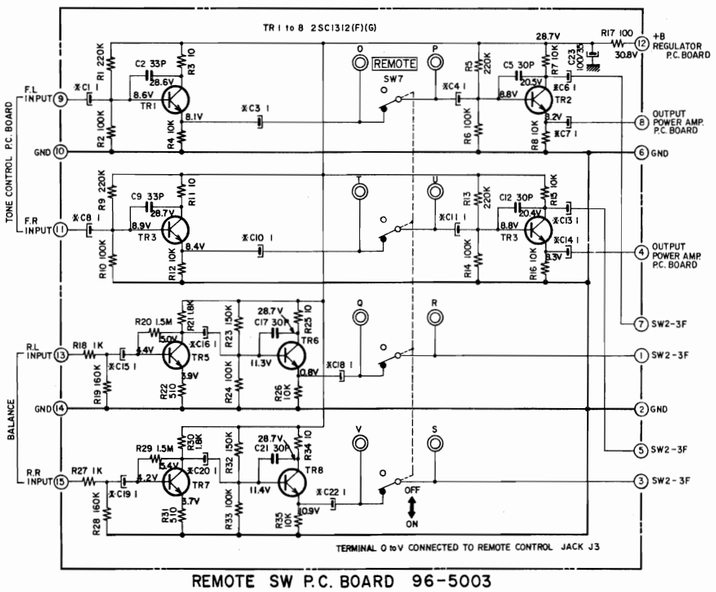
CD-4 SW P.C. BOARD 96-5005

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)



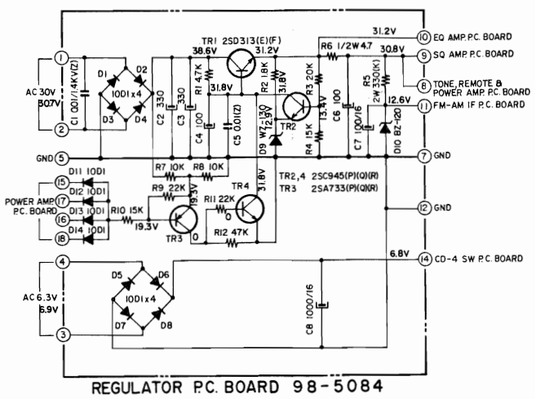
TONE CONTROL P.C. BOARD 96-5006

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)



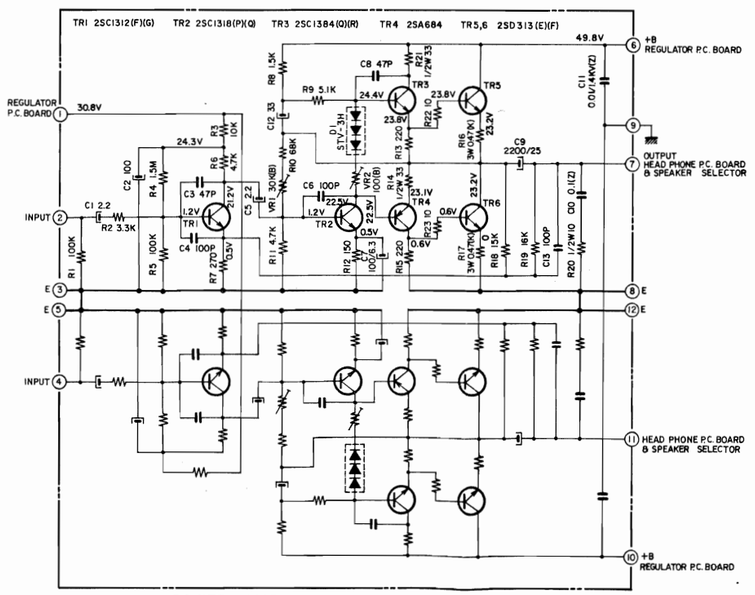
REMOTE SW P.C. BOARD 96-5003

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)



REGULATOR P.C. BOARD 98-5084

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)



POWER AMP. P.C. BOARD 96-5008

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50W.V.(J)

AS-960 SCHEMATIC DIAGRAM

NO.3-3 1480832A 2C