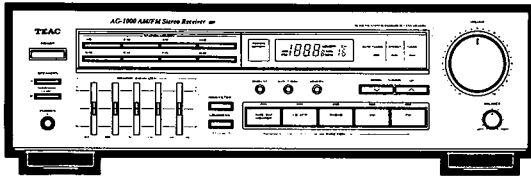




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TEAC®



SERVICE MANUAL

AG-1000

AM/FM Stereo Receiver

NOTES

- PC boards shown viewed from parts side.
- Parts marked with * require longer delivery time.
- The mechanical parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components refer to the appropriate parts list and ensure exact replacement.
- Parts of [] mark can be used only with the version designated.
[J]: JAPAN [US]: U. S. A. [C]: CANADA [GE]: GENERAL EXPORT
[E]: EUROPE [UK]: U. K. [A]: AUSTRALIA

SPECIFICATIONS

Amplifier Section

Output Power

100 watts per channel minimum RMS, both channels driven into 8 ohms from 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion

Input Sensitivity/Impedance

PHONO: 2.5 mV/47 kohms
CD/VCR, TAPE/DAT: 150 mV/33 kohms

Frequency Response

20 Hz ~ 20 kHz ± 1 dB (PHONO)
10 Hz ~ 70 kHz +1, -3 dB (CD/VCR, TAPE/DAT)

Total Harmonic Distortion

0.03 %

Signal-to-Noise Ratio (IHF A Network)

PHONO: 68 dB
CD/VCR, TAPE/DAT: 88 dB

Graphic Equalizer

Center Frequencies 83, 300, 1k, 3.3k, and 12 kHz: ± 12 dB

FM Tuner Section

Tuning Range

87.50 MHz ~ 108.0 MHz (100 kHz steps)

Usable Sensitivity (IHF)

Mono 12 dBf

50dB Quieting Sensitivity:

20 dBf

AM Suppression Ratio (1kHz)

60 dB

Capture Ratio

1.5 dB

Channel Selectivity

65 dB ± 400 kHz (IHF)

Image Rejection

55 dB (at 98 MHz)

Harmonic Distortion (1kHz)

Mono 0.2 %/Stereo 0.4 %

Stereo separation (1kHz)

40 dB

Signal-to-Noise Ratio

Mono 75 dB/Stereo 68 dB

AM Tuner Section

Tuning Range

530 kHz ~ 1,710 kHz (10 kHz steps)

Usable Sensitivity

50 dB/m at 1,050 kHz

Selectivity

43 dB ± 10 kHz

Harmonic Distortion

0.7 % at 1,050 kHz, 85 dB/m

Signal-to-Noise Ratio

50 dB at 1,050 kHz, 85 dB/m

General

Power Requirements

120 V AC, 60 Hz 3.5 A

Dimensions (W x H x D)

435 x 132 x 350 mm (17-1/8" x 5-3/16" x 13-3/4")

Weight (net)

9.5 kg (21 lbs.)

Standard Accessories

AM Loop antenna x1, Remote Control Unit (UR-200) x1, FM T-shape Antenna x1, Battery ("AAA", "R03", UM-4)x2, Remote Control Cable x2, Matching Transformer (For 300 Ω to 75 Ω conversion)

ADJUSTMENTS AND CHECKS

AM OSC. TRACKING ADJUSTMENT

1. Set the unit to "AM" position.
2. Place the radio frequency display to 1,710 kHz.
3. Adjust L201 core so that voltage measured is 8.0V.

AM RF ADJUSTMENT

1. Test equipment connections are shown in fig. 1.
2. Set the unit to "AM" position.
3. Place radio frequency and signal generator setting to 1,400kHz.
4. Adjust C251 for maximum output.
5. Place radio frequency and signal generator setting to 600kHz.
6. Adjust L202 for maximum output.
7. Repeat steps 3, 4, 5, 6.

AM SIGNAL GENERATOR CONDITION

Modulation.....30%
 Modulation frequency.....400Hz

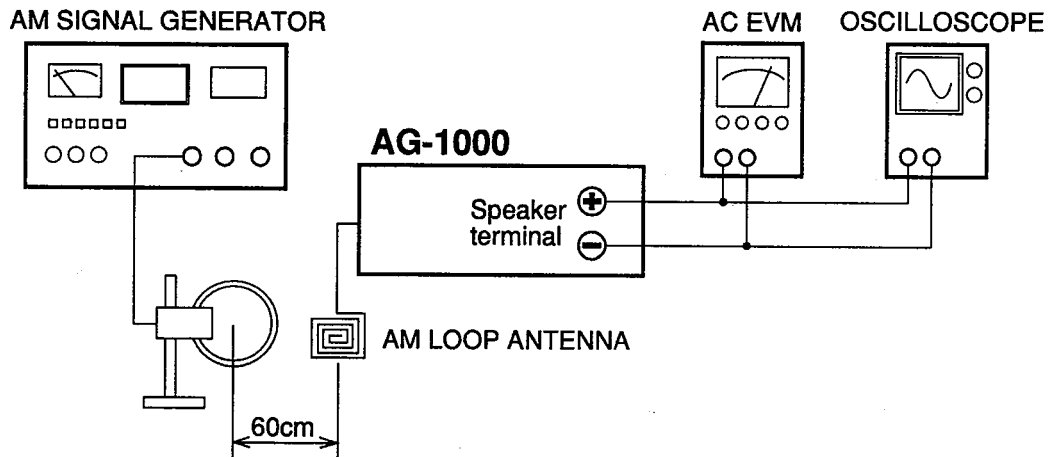


Fig. 1

AM TUNED LED ON LEVEL ADJUSTMENT

1. Place radio frequency and signal generator setting to 1,050kHz.
2. Adjust R250 so that tuned LED is light.

AM SIGNAL GENERATOR CONDITION

Output level65dB/m

FM MONO DISTORTION ADJUSTMENT

1. Test equipment connections are shown in fig. 2.
2. Set the unit to "FM" position.
3. Place the radio frequency and signal generator setting to 98.0MHz.
4. Adjust L102 core so that voltage measured in signal mode is 0mV(0 ±30mV) in 1V range.

FM SIGNAL GENERATOR CONDITION

Modulation.....100%(75kHz dev.)
Modulation frequency.....1kHz
Output level.....65dBf

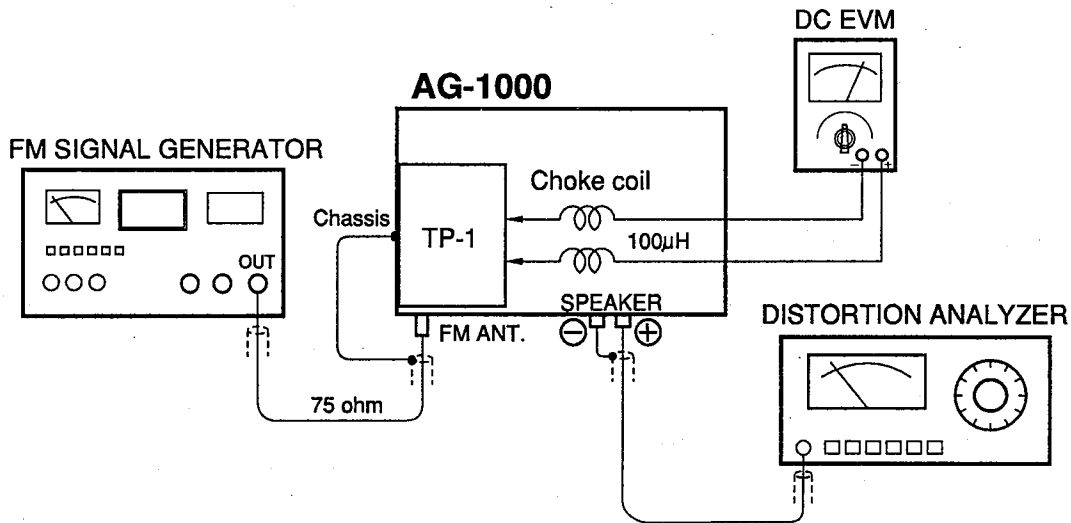


Fig. 2

FM STEREO SEPARATION ADJUSTMENT

1. Test equipment connections are shown in fig. 3.
2. Set the unit to "FM STEREO" position.
3. Place the radio frequency and signal generator setting to 98.0MHz.
4. Adjust R352 so that R channel output is minimized when stereo modulator is in "L" (L channel modulation) mode.

FM SIGNAL GENERATOR CONDITION

Modulation..... "L" mode or "R" mode 45%, Pilot 10%
Modulation frequency.....1kHz, Pilot(19kHz)
Output level.....65dBf

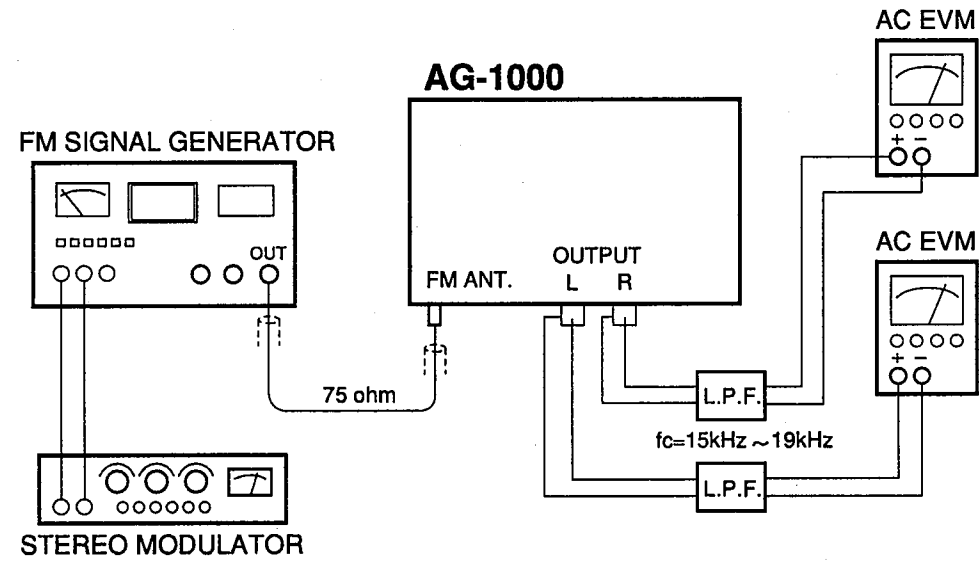


Fig. 3

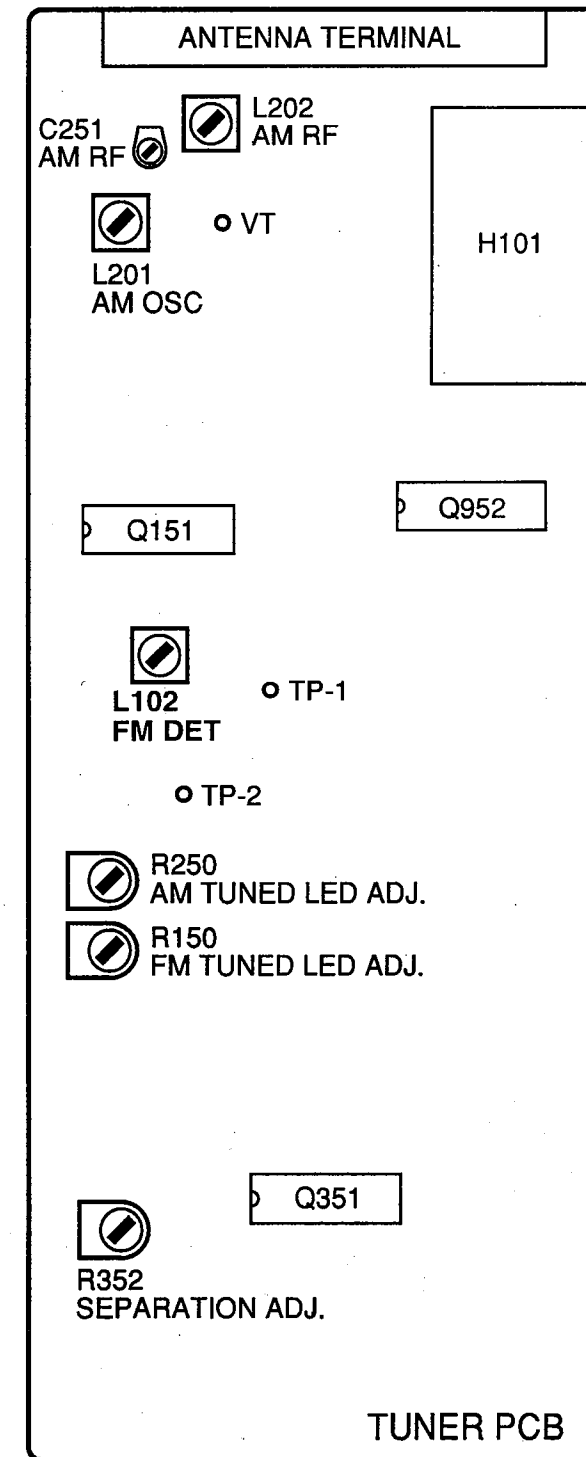
FM TUNED LED ON LEVEL ADJUSTMENT

1. Place the radio frequency and signal generator setting to 98.0MHz.
2. Adjust R150 so that tuned LED is light.

FM SIGNAL GENERATOR CONDITION

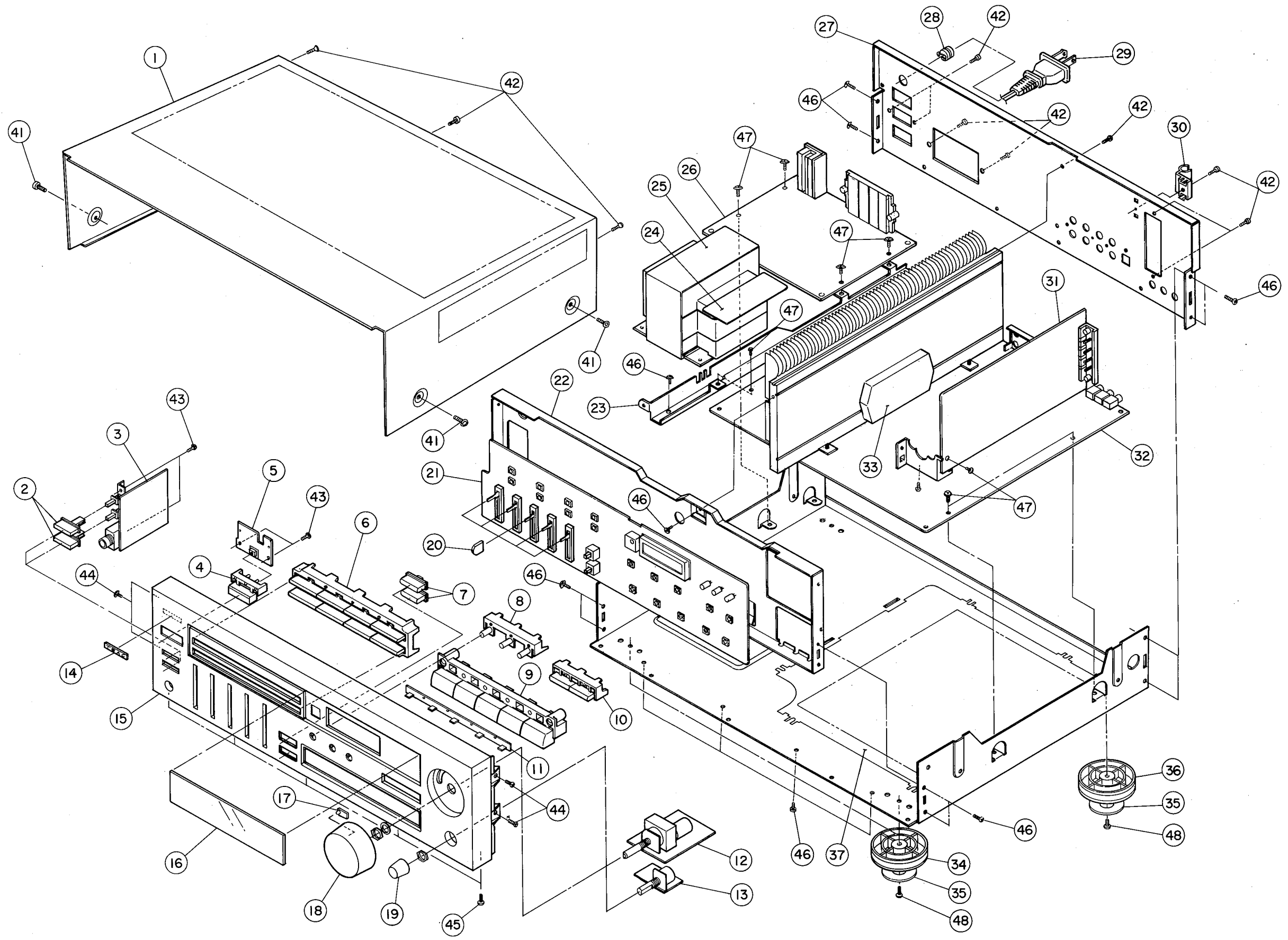
Output level25dBf

ADJUSTMENTS AND TEST POINTS



EXPLODED VIEW AND PARTS LIST

EXPLODED VIEW



EXPLODED VIEW

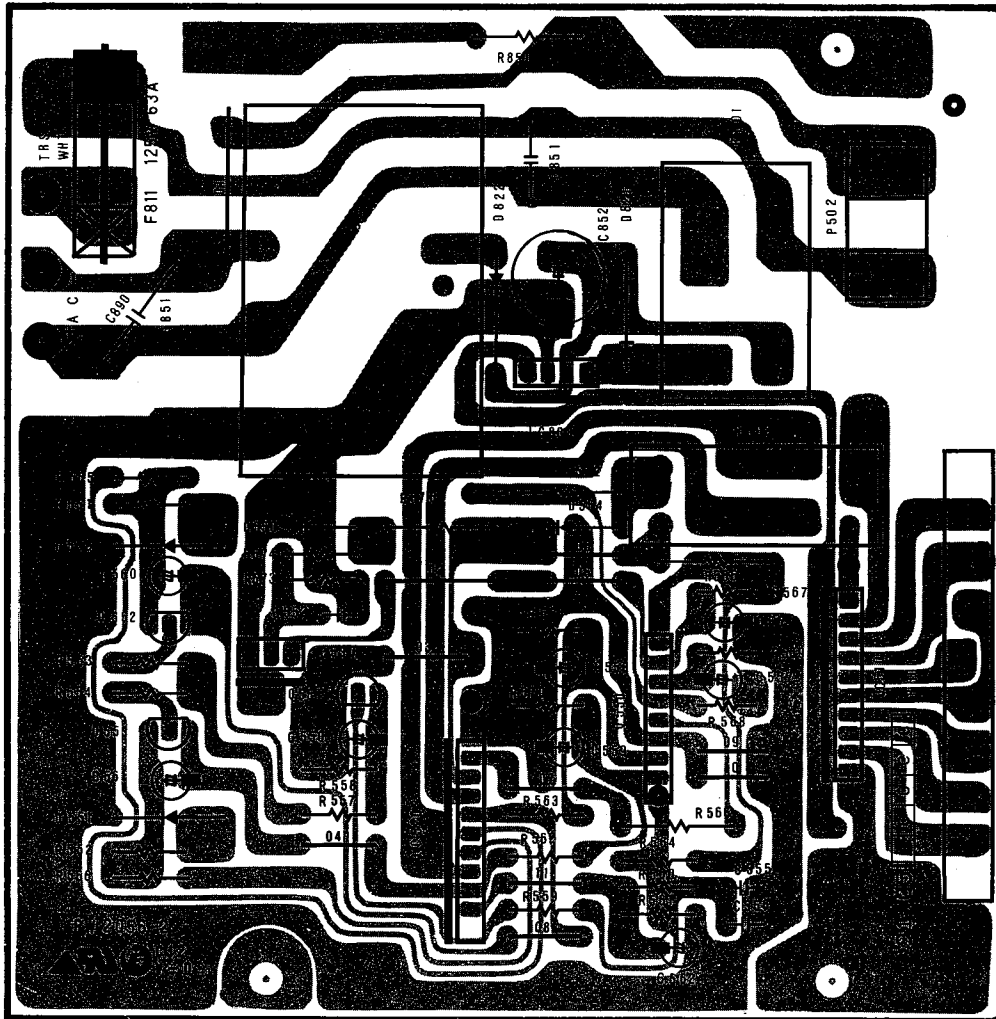
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
1	*9A03317700	TOP COVER	
2	9A02704300	KNOB, SPEAKER	
3	*9A03321600	SPK SW PCB ASSY, PW2056-3	
4	9A02704800	KNOB, POWER SW	
5	*9A03321900	POWER S/W PCB ASSY, PW2056-6	
6	9A02704700	KNOB, PRESET	
7	9A02704400	KNOB, LOUDNESS	
8	9A02704900	KNOB, MODE	
9	9A02705000	KNOB, FUNCTION	
10	9A03307700	KNOB, TUNING	
11	*9A02705500	INDICATOR, FUNCTION	
12	*9A03321700	MAIN V/R PCB ASSY, PW2056-4	
13	*9A03321800	BALANCE V/R PCB ASSY, PW2056-5	
14	*9A02966100	NAME PLATE	
15	*9A03323900	FRONT COVER ASSY	
16	*9A03317500	PLATE, ORNAMENT	
17	*9A03322000	LED PCB ASSY, PW2056-7	
18	9A02966000	KNOB, MAIN VOL. ASSY	
19	9A02705100	KNOB, BALANCE	
20	9A02705200	KNOB, GRAPHIC EQ	
21	*9A03321200	DTS/EQ KEY PCB ASSY, PW2051	
22	*9A03317900	BRACKET	
23	*9A03318000	PCB BRACKET	
24	*9A03322100	FUSE PCB ASSY, PW2070 [US]	
	*9A03349300	TRANS PCB ASSY, PW2055-2 [C]	
25	△ 9A03317200	POWER TRANS., KPW2129B [US,C]	
26	*9A03321500	POWER PROTECTOR PCB ASSY, PW2056-2	
27	*9A03317800	REAR PANEL,	
28	*9A02705900	BUSHING, POWER CORD	
29	△ *9A03307200	POWER CORD, AC 125V/15A [US]	
	△ *9A02702400	POWER CORD, AC 125V/15A [C]	
30	*9A02706700	LOOP ANTENNA HOLDER A	
31	*9A03321400	TUNER PCB ASSY, PW2056-1	
32	*9A03322300	MAIN PCB ASSY, PW2055-1 [US]	
	*9A03322310	MAIN PCB ASSY, PW2055-1 [C]	
33	△ 9A03316200	IC., STK4231V	
34	9A02967100	FOOT, FRONT	
35	*9A02707100	CUSHION, FOOT	
36	9A02707200	FOOT, REAR	
37	*9A03324200	BOTTOM COVER	
41	*9A02691900	SCREW, PBTB 4X8 SBN	
42	*9A02692000	SCREW, PBTB 3X10 SBN	
43	*9A02692300	SCREW, BTB 3X10 SZN	
44	*9A03316100	SCREW, BTBW 3X6 SZN	
45	*9A02703700	SCREW, PSTB 3X8	
46	*9A02692100	SCREW, BTB 3X6 SZN	
47	*9A02692600	SCREW, BTBW 3X8 SZN	
48	*9A02692200	SCREW, BTB 3X8 SZN	

[US]: U.S.A. [C]: CANADA

Parts marked with * require longer delivery time.

PC BOARDS AND PARTS LIST

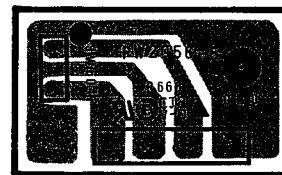
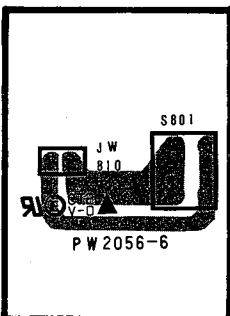
POWER PROTECTOR PCB ASSY



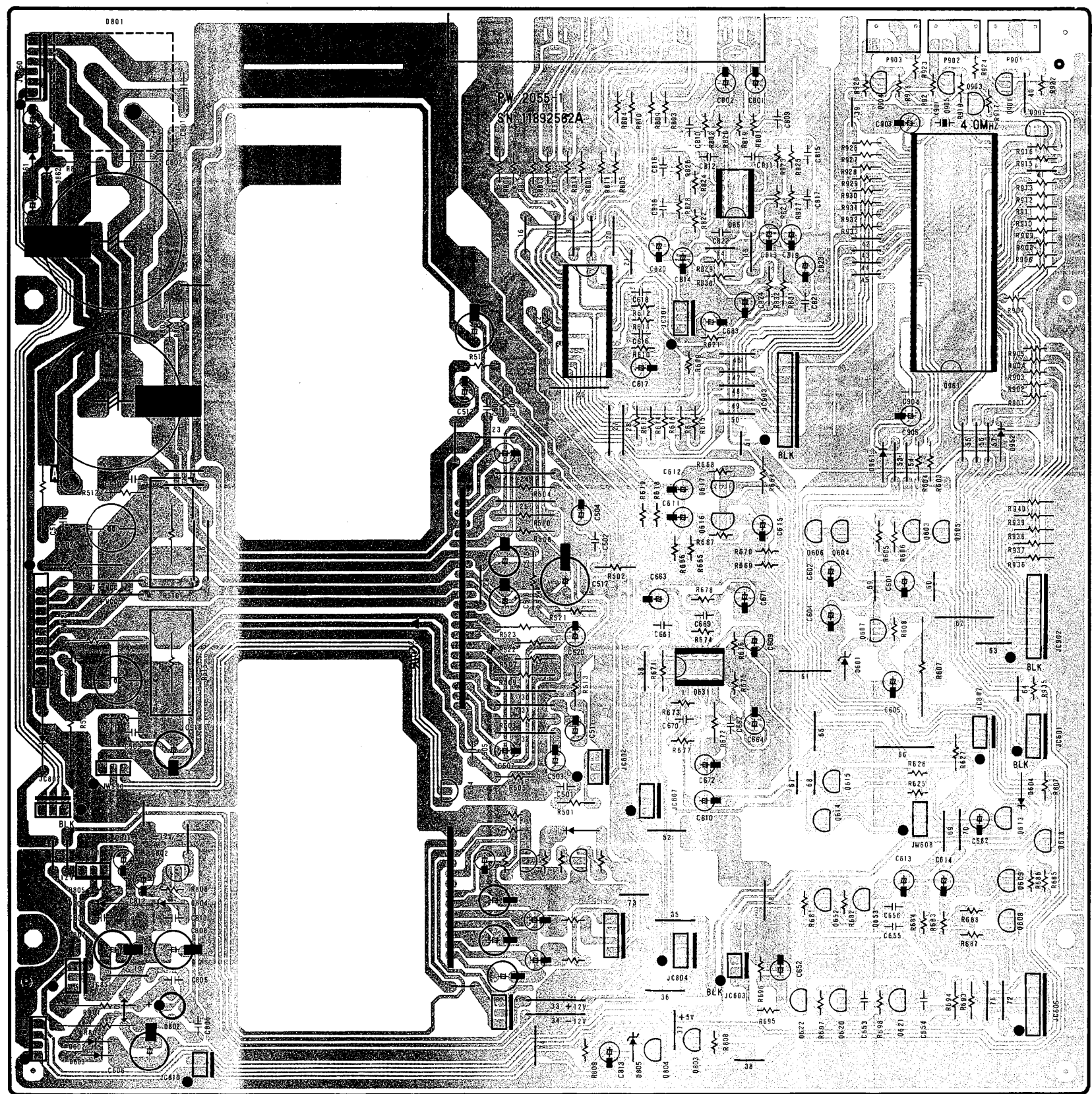
POWER S/W PCB ASSY

LED PCB ASSY

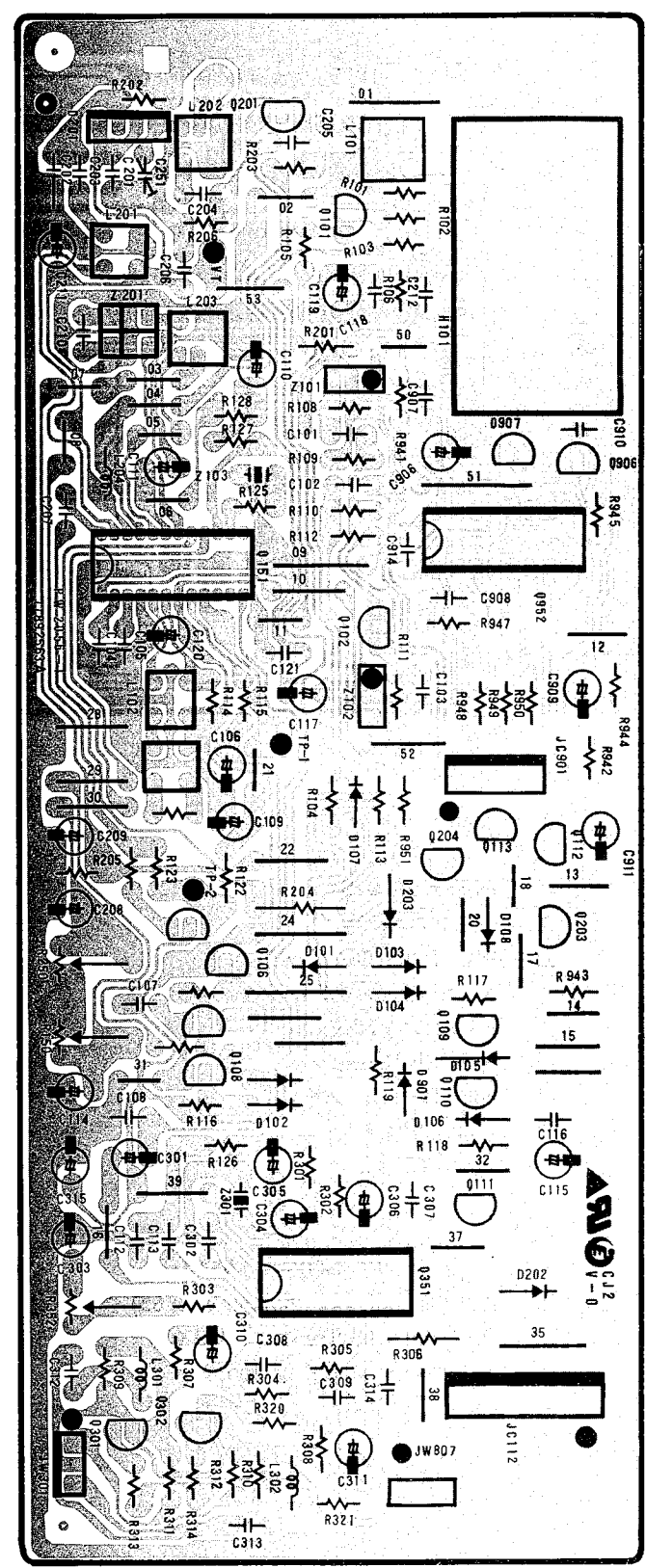
BALANCE V/R PCB ASSY



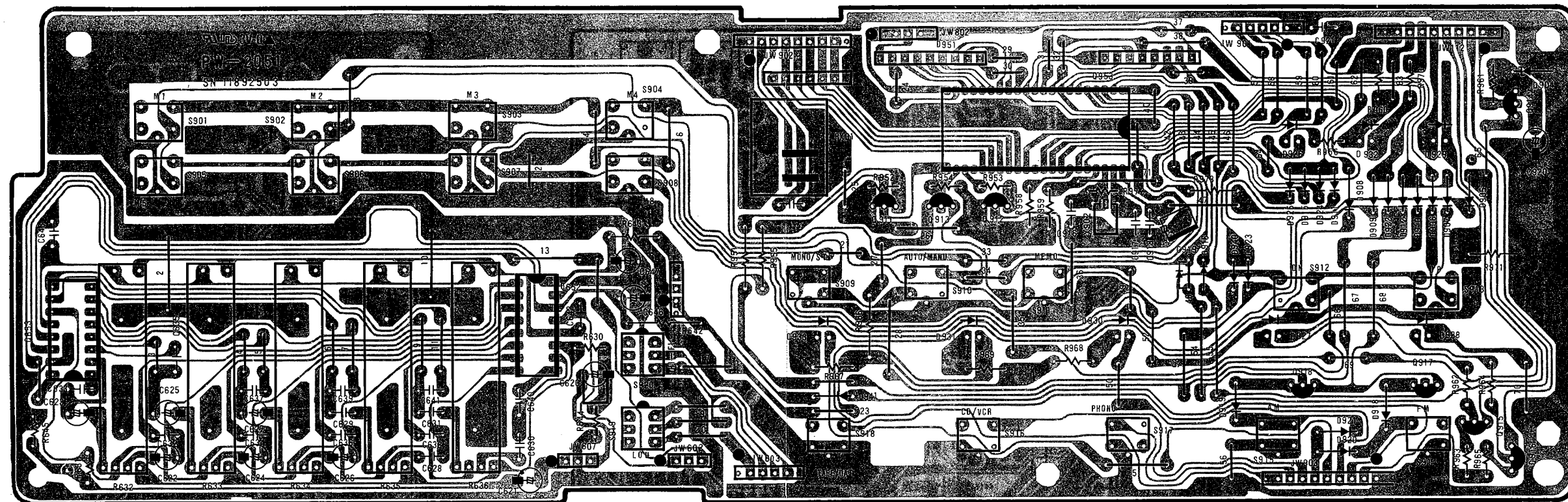
MAIN PCB ASSY



TUNER PCB ASSY



DTS/EQ KEY PCB ASSY



AG - 1000

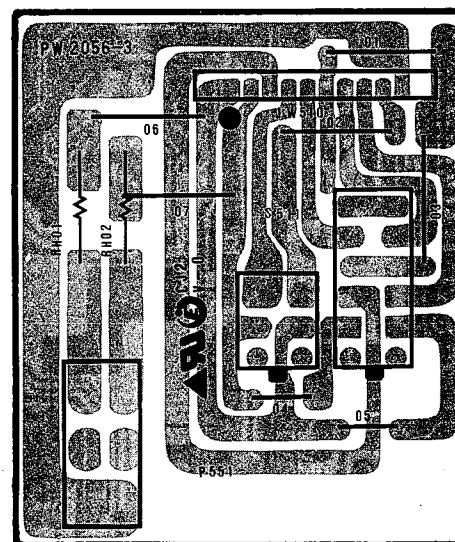
Remove

- (1) Q914 KTC1815Y
- (2) C920 47uF/25V
- (3) D904 Diode 05AZ6.2V
- (4) R961 Resistor 1.5K
- (5) Jumper Wire 65
- (6) Q913 KRA2204
- (7) R966 Resistor 33K
- (8) Jumper Wire 27
- (9) Jumper Wire 35

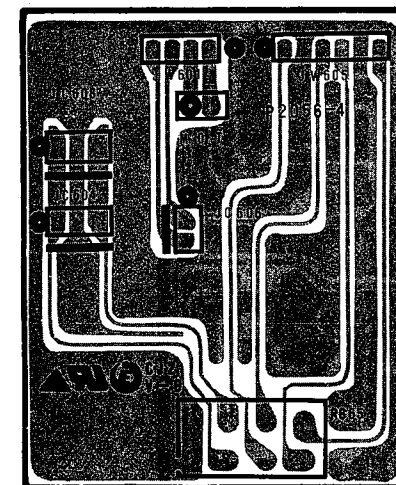
Add

- (1) Jumper Wire 91 (D905 - JW112 ①)
 - (2) R999 Resistor 240 (Jumper Wire 35)
 - (3) Jumper Wire 92 (R999 - Q953 ②)
- () : Parts mounting position

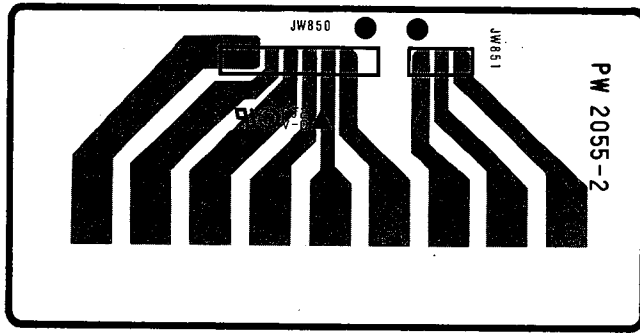
SPK SW PCB ASSY



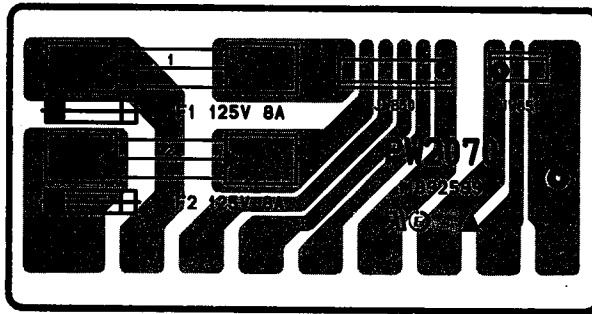
MAIN V/R PCB ASSY



POWER TRANS. PCB ASSY(CANADA)



FUSE PCB ASSY(U.S.A.)



POWER PROTECTOR PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*9A03321500	POWER P. PCB ASSY,PW2056-2
Q550	9A02699200	IC., TA7317P
Q551	9A02694500	TR., KTA970GR
Q552,553	9A02694600	TR., KTC2240GR
D550	9A02964700	ZENER DIODE, MTZ6.2C
D551,552	9A02696500	SILICON DIODE, IN4002
D554,821	9A02696600	SILICON DIODE, IN4148
D822	9A02696500	SILICON DIODE, IN4002
R565,566	△ 9A03319900	R., METAL OXIDE 1/2W 18K
R572	△ 9A03320100	R., METAL OXIDE 1W 620
R575	△ 9A03319900	R., METAL OXIDE 1/2W 18K
R851	△ 9A02722600	R., CARBON 1/2W 3.3M
C851	△ 9A02710400	C., CERAMIC 0.01UF/250V
C852	△ 9A02722400	C., ELECT. 1000UF/25V
C890	△ 9A02735900	C., AC250V 0.1MF
RL01	9A02700300	RELAY, VS-12M UL/CSA
RL02	9A02700400	RELAY, SM323D24
F811	△ 9A03316500	FUSE, 6.3A 125V UL/CSA
F811A	9A02724900	FUSE HOLDER
P501	9A02701000	JACK BOARD, SPEAKER
P502	9A03317000	AC OUTLET
T851	9A03317300	TRANS., REMO-CON.

POWER S/W PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*9A03321900	PWR S/W PCB ASSY,PW2056-6
S801	9A02700200	TACT SWITCH

LED PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*9A03322000	LED PCB ASSY,PW2056-7
D606	9A02729400	DIODE, EMITTING KLR113E

BALANCE V/R PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*9A03321800	BAL. V/R PCB ASSY,PW2056-5
R666	9A02710100	VR., RK1631170-100KBX1

MAIN PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*9A03322300	MAIN PCB ASSY,PW2055-1 [US]
	*9A03322310	MAIN PCB ASSY,PW2055-1 [C]
Q554	9A02694000	TR., KTC1815-Y
Q603,604	9A02693700	TR., KTA562TM-Y
Q605,606	9A02694200	TR., KTC1959-Y
Q607	9A02695000	TR., KTC2235-Y
Q608,609	9A02694100	TR., KTC1815-Y
Q613-617	9A02694100	TR., KTC1815-Y
Q618,622	9A02696100	TR., BRT KRA2211
Q620,621	9A02694100	TR., KTC1815-Y
Q652,653	9A02694100	TR., KTC1815-Y
Q801	9A02695600	TR., 2SD2058-Y
Q802	9A02694300	TR., KTA966A-Y
Q803,804	9A02694100	TR., KTC1815-Y
Q901,902	9A02694100	TR., KTC1815-Y
Q903	9A02693800	TR., KTA1015-Y
Q904,905	9A02694100	TR., KTC1815-Y
Q515Z	*9A03323700	HEAT SINK ASSY
Q515	9A03316200	IC., STK4231V
Q631	9A02698300	IC., TA75558P
or	9A02698400	IC., KIA75558P
or	9A02698200	IC., TA75559P
Q651	9A02698600	IC., LC7818
Q951	9A02699000	IC., LC6554H-4330
QB51	9A02698300	IC., TA75558P
or	9A02698400	IC., KIA75558P
or	9A02698200	IC., TA75559P
D601,863	9A02964700	ZENER DIODE, MTZ6.2C
D602,603	9A02696500	SILICON DIODE, IN4002
D604	9A02696600	SILICON DIODE, IN4148
D801	9A03305600	DIODE, BRIDGE D5FB20
D802	9A02697200	DIODE, BRIDGE W02M
or	9A02697300	DIODE, BRIDGE W02RL
D803,804	9A02964800	ZENER DIODE, MTZ15A
D805,861	9A02964700	ZENER DIODE, MTZ6.2C
D862	9A02964900	ZENER DIODE, MTZ22B
D951,952	9A02696600	SILICON DIODE, IN4148
X901	9A02693200	RESONATOR, CST4.0 MGW
R509,510	△ 9A02736800	R., METAL OXIDE 1/2W 4.7K
R515,516	△ 9A03319600	R., CEMENT 5W 0.27
R517-520	△ 9A03320000	R., METAL OXIDE 1W 4.7
R523,524	△ 9A03320000	R., METAL OXIDE 1/2W 1K
R801,802	△ 9A02719200	R., FUSE RNFI4A3A109J
R803,804	△ 9A02712400	R., CARBON 1/2W 12K
R805,806	△ 9A02713000	R., CARBON 1/2W 1K
C801,802	△ 9A02711000	C., CERAMIC 0.01UF/500V
C803,804	△ 9A03319700	C., ELECT. 10000UF/75V
C807,808	△ 9A02722400	C., ELECT. 1000UF/25V
L501,502	9A03317400	AIR COIL, KRFJ009 1.0 20T
P901,903	9A02701100	JACK, MINI HTJ035-08E1
PB01	9A02700900	JACK, BOARD RCA KJB-1102

TUNER PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*9A03321400	TUNER PCB ASSY,PW2056-1
Q101	9A02694100	TR., KTC1815-Y
Q102	9A02964300	TR., KTC1923-Y
Q106,111	9A02695900	TR., BRT KRA2204
Q108-110	9A02696200	TR., BRT KRC1204
Q112	9A02696300	TR., BRT KRC1207
Q113,204	9A02696000	TR., BRT KRA2207
Q201	9A02694800	TR., FET KTK161-GR
Q203	9A02696300	TR., BRT KRC1207
Q301,302	9A02694100	TR., KTC1815-Y
Q906,907	9A02694100	TR., KTC1815-Y
Q151	9A02965000	IC., LA1266
Q351	9A02965100	IC., LA3401
Q952	9A02699300	IC., TC9172P PLL
D101-108	9A02696600	SILICON DIODE, IN4148
D201	9A02697000	DIODE, K1236Z-2.3.4
D202,203	9A02696600	SILICON DIODE, IN4148
D901	9A02696600	SILICON DIODE, IN4148
L101	9A02703100	TRANS., BALUN FM
L102	9A02965700	COIL, SIF KRFD223
L201	9A02703200	COIL, AM OSC KRFE508
L202	9A02703300	COIL, AM RF KRFE509
L203	9A02703400	COIL, AM DET KRFE510
L204	9A02965900	PEAKING COIL, KRF4102K
L301,302	9A02703000	PEAKING COIL, 5MH
R150,352	9A02968900	R., SEMI VARIABLE 200KB
R250	9A02968800	R., SEMI VARIABLE 50KB
C251	9A02710500	C., VARIABLE 20PF/50V
H001	9A02699400	FM TUNER PACK, KCF201H
P101	9A03316800	ANT. TERMINAL, AK4-1043
Z101,102	9A02693000	FILTER, SFE10.7MS-2A
Z103	9A02964100	FILTER, CERAMIC BFU450C4N
Z201	9A02693100	RESONATOR, SFZ450F
Z301	9A02964200	RESONATOR, CSB456F11

SPK SW PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*9A03321600	SPK SW PCB ASSY,PW2056-3
RH01,02	9A03319900	R., METAL OXIDE 1W 330
P551	9A02701200	HEAD PHON JACK
S511	9A03316600	SWITCH, PUSH SPUL21*2T

MAIN V/R PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*9A03321700	MAIN V/R PCB ASSY,PW2056-4
R665	9A02710200	VR., RK16312MA-100KBX2

DTS/EQ KEY PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*9A03321200	DTS/EQ KEY PCB ASSY,PW-2051
Q911,912	9A02694100	TR., KTC1815-Y
Q915,916	9A02693800	TR., KTA1015-Y
Q917,918	9A02695900	TR., BRT KRA2204
Q652,653	9A03316300	IC., M5226P
Q953	9A02699100	IC., TC9303AN-022
D905-912	9A02696600	SILICON DIODE, IN4148
D915,916	9A02696600	SILICON DIODE, IN4148
D918-921	9A02696600	SILICON DIODE, IN4148
D922,925	9A02696600	SILICON DIODE, IN4148
D926-933	9A02693500	DIODE, EMITTING KLA113
D933A	9A02966800	BUSHING, LED
D940,941	9A02696600	SILICON DIODE, IN4148
D951	9A02693400	FL UNIT, FG710HI
D951A	9A02707000	CUSHION, FL UNIT
D961	9A02696600	SILICON DIODE, IN4148
R632-636	9A02969000	VR., SLIDE 100KW
RX01	9A02699700	RX-MODULE, SBX1610-52
RX01	9A02699600	RX-MODULE, RX GPIU501X
RX01	9A02699800	RX-MODULE, GPIU701R
X902	9A02700500	CRYSTAL, 7.2MHZ
S901-918	9A02700200	TACT SWITCH
S919,920	9A02700000	TACT SWITCH, KPT220ID

POWER TRANS PCB ASSY

REF.NO.	PARTS NO.	DESCRIPTION
	*9A03349300	POWER TRANS PCB ASSY,PW2055-2

FUSE PCB ASSY

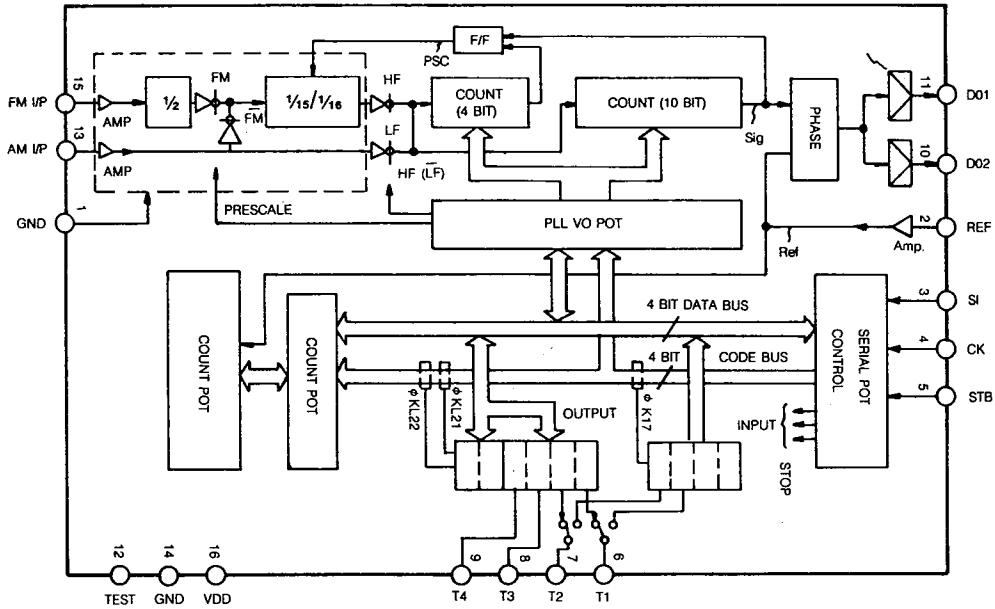
REF.NO.	PARTS NO.	DESCRIPTION
	*9A03322100	FUSE PCB ASSY,PW2070
U114	*9A03318900	FUSE PCB PW2070
FA,2A	9A03317100	FUSE HOLDER

INCLUDED ACCESORIES

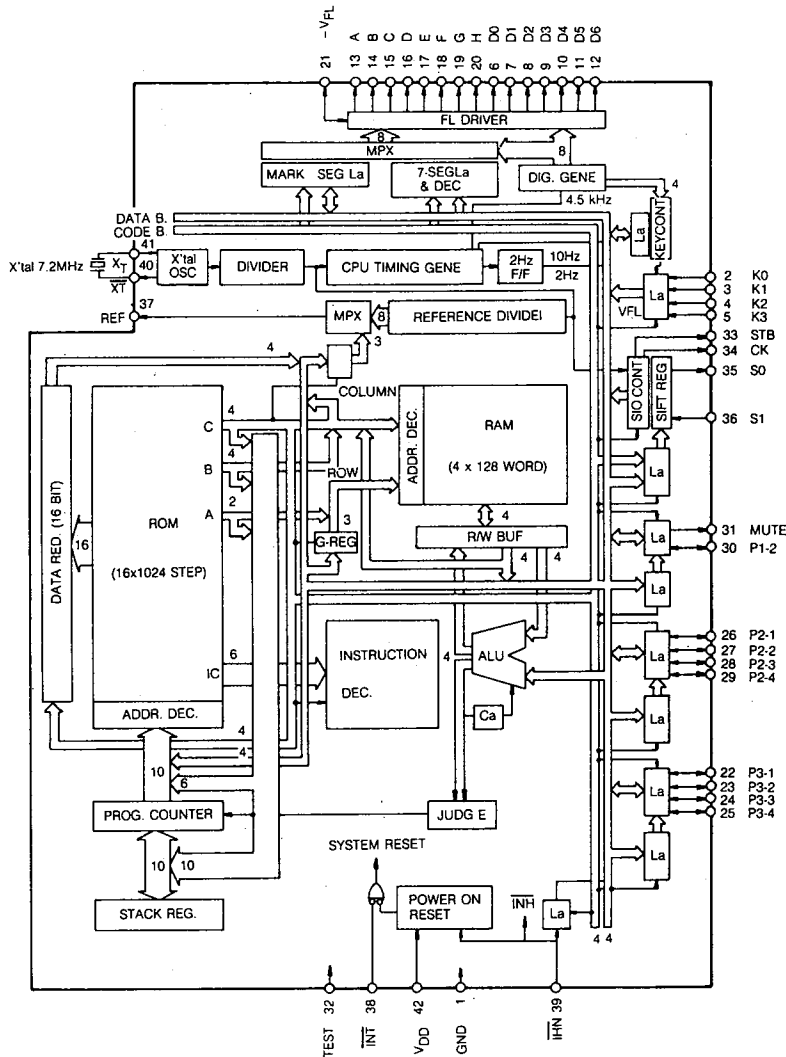
REF.NO.	PARTS NO.	DESCRIPTION
	*9A02957800	OWNER'S MANUAL, AG-1000
	*9A03324600	ANTENNA ASSY
	*9A02728800	REMOTE CONTROL UNIT, UR-200

IC BLOCK DIAGRAMS

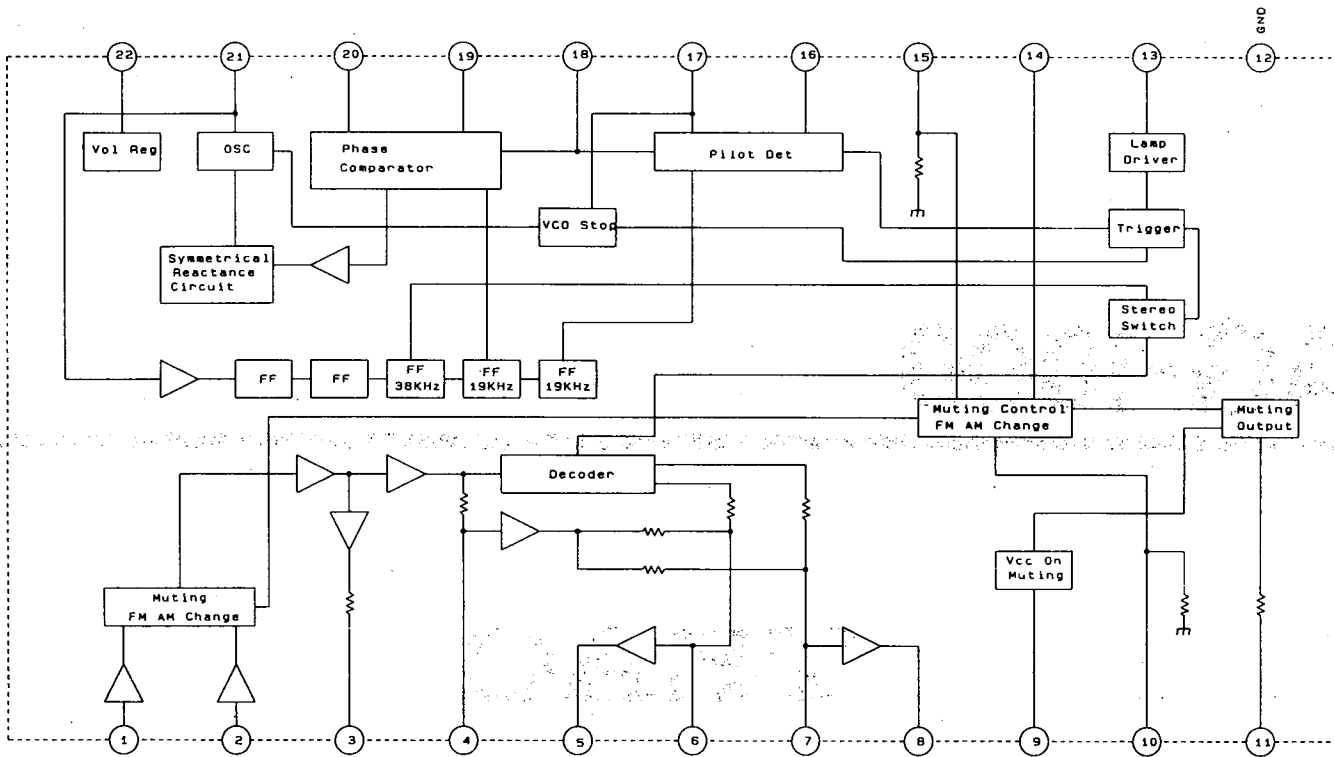
TC9172P



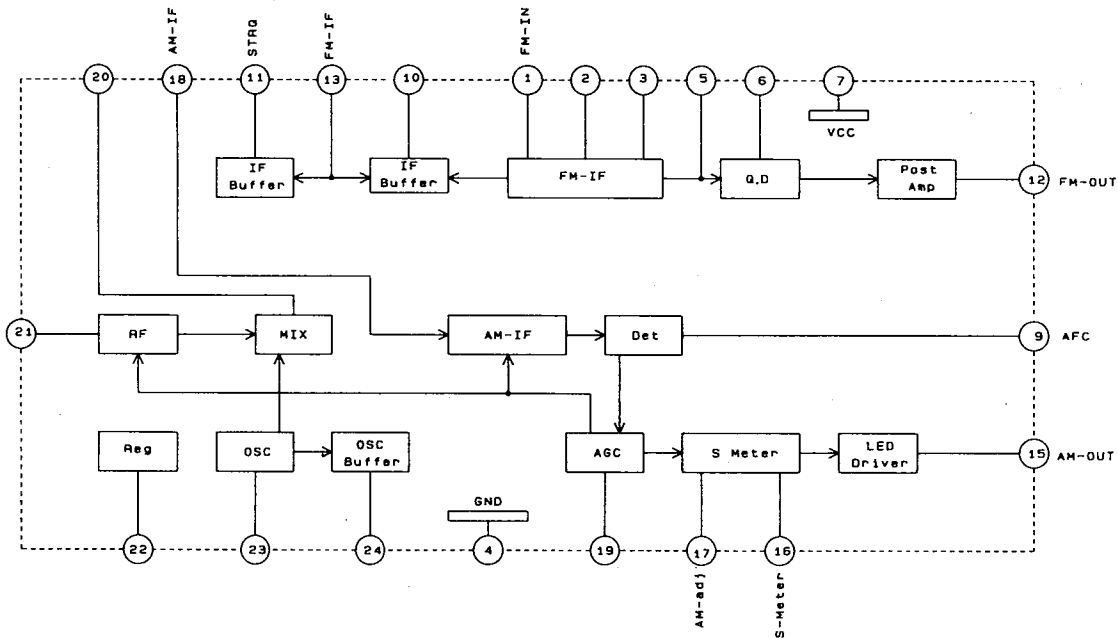
TC9303AN



LA3401



LA1266



AG-1000

TEAC®

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