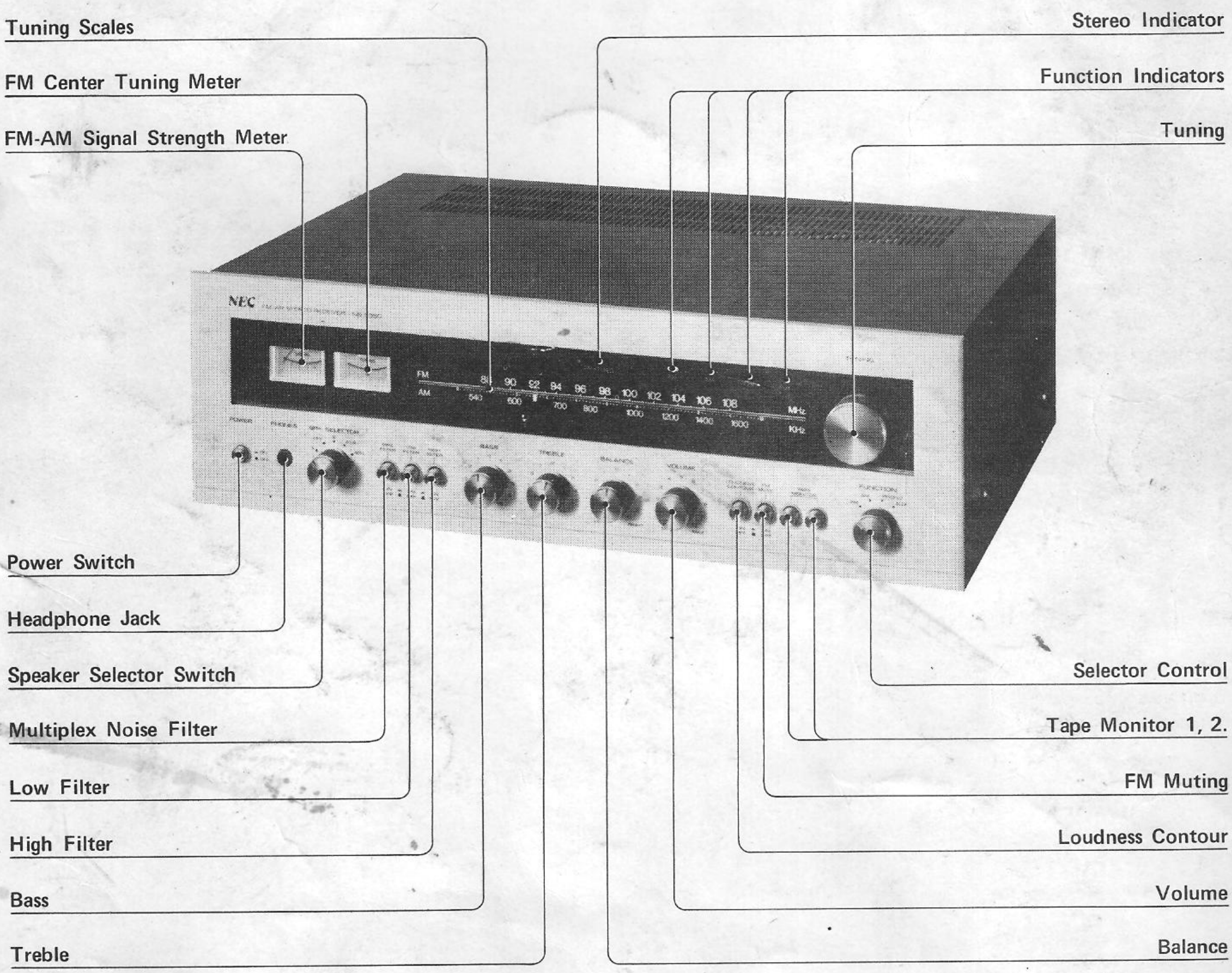
NEC

MODEL
NS-5350E

FM/AM STEREO RECEIVER SERVICE MANUAL

SER. NO. 4009

Better Service
Better Reputation
Better Profit



Nippon Electric Co.,Ltd.
TOKYO, JAPAN

SPECIFICATIONS

AMPLIFIER SECTION

1 kHz continous power both channel driven	8 Ω 2 x 35 W
	4 Ω 2 x 40 W
20 Hz - 20 kHz continous power both channel driven	8 Ω 2 x 30 W
	4 Ω 2 x 33 W
Power band width (both channel driven at 8 Ω)	10 Hz ~ 50 kHz –3 dB
Total hermonic distortion (rated power at 1 kHz, 8 Ω)	0.1 %
Intermodulation distortion (rated power at 250 Hz : 8000 Hz = 4 ; 1, 8 Ω)	0.7 %
Damping factor	40
Input sensitivity and impedance	
Phono	2.5 mV/47 kΩ
AUX, Tape 1 and playback	100 mV/47 kΩ
Tape, Rec./Play input	250 mV/120 kΩ
S/N rated power	
Phono (IHFA)	70 dB
AUX (IHFA)	80 dB
Frequency response	
AUX	10 Hz ~ 50 kHz +1 dB, –2 dB
Phono	30 Hz ~ 15 kHz
	(deviation from standard PIAA curve ±2 dB)
Tone control	
Bass	50 Hz –12 dB ~ +12 dB
Treble	10 kHz –12 dB ~ +12 dB
Loudness control (Volume at –40 dB)	100 Hz +8 dB
	10 kHz +3 dB
High filter	10 kHz –9 dB
Low filter	50 Hz –9 dB
Output voltage	
Tape –1, 2 Rec. output	100 mV
Tape 1, Rec./Play output	30 mV

FM TUNER SECTION

Frequency range	88 ~ 108 MHz
Sensitivity ±75 kHz deviation	
S/N 30 dB 300 Ω	1.8 μV
30 dB noise and distortion	1.9 μV (IHF)
Total harmonic distortion (400 Hz ±75 kHz deviation)	
Stereo	1.0 %
Mono	0.5 %
S/N at ±75 kHz deviation	
Mono	68 dB
Frequency response	20 Hz ~ 13 kHz ±2 dB
Alternate channel selectivity	70 dB
Capture ratio	1.5 dB
Image rejection at 106 MHz	70 dB

I.F rejection at 90 MHz	80 dB
Spurious response at 98 MHz	90 dB
AM suppression	58 dB
Stereo separation	
1 kHz	40 dB
10 kHz	25 dB
Leak carrier	−40 dB
Limiting Point	1.5 μV
Multiplex noise filter loss	1 kHz 10 dB
	5 kHz 20 dB

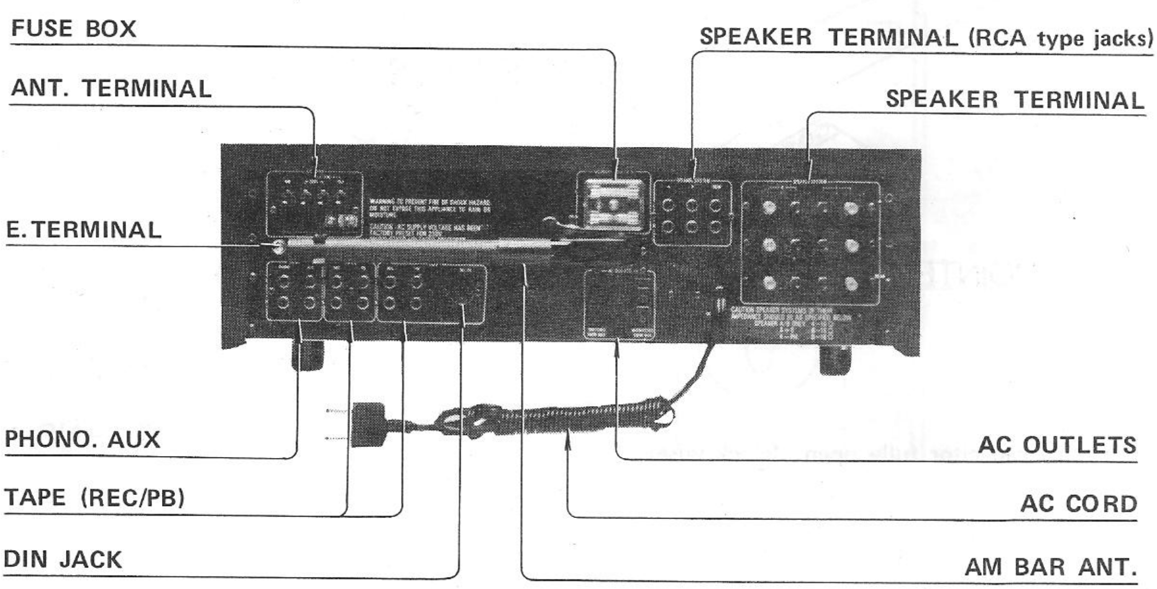
AM TUNER SECTION

Frequency range	530 kHz ~ 1605 kHz
Sensitivity (S/N 20 dB)	200 μV/m
Selectivity ±10 kHz	40 dB
Image rejection at 1400 kHz	40 dB
I.F rejection at 600 kHz	35 dB

GENERAL

Power consumption	105 W
Semiconductors	
transistors	31
FET	3
diodes	22
IC	6
Power supply	115 V/200 V/230 V, 50 Hz/60 Hz
Dimensions	476(W) x 142(H) x 323(D) mm
Weight	12.7 kg.

REAR CONNECTIONS VIEW

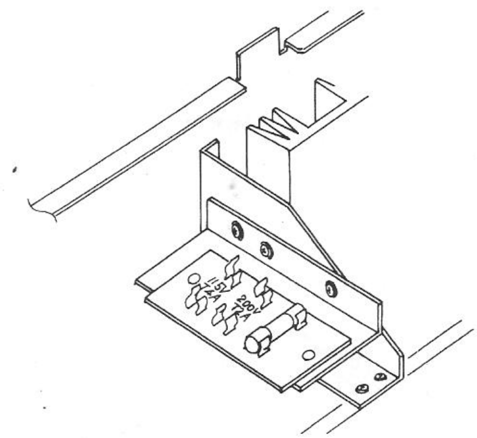


VOLTAGE CHANGING METHOD

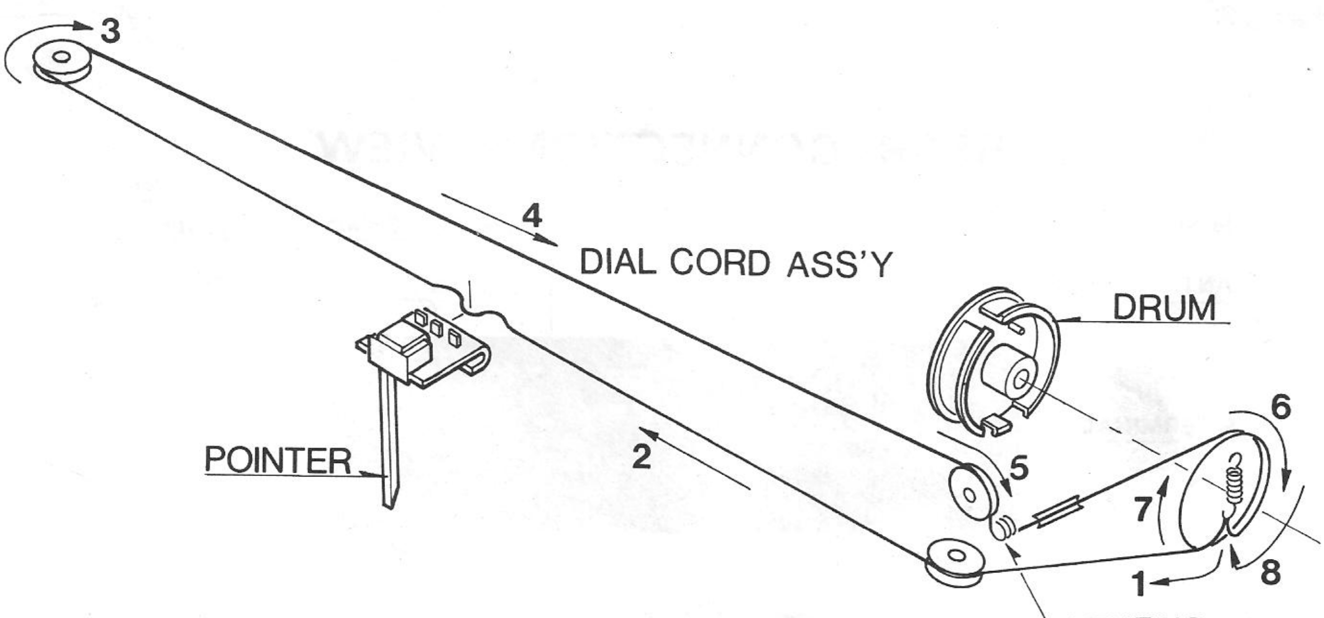
Your's receiver/amplifier model NS-5350E is set for AC 230V by our factory before shipping.
When operating the set other than 230V area, you will have to change to a suitable voltage following the below steps.

1. Remove AC line cord from line voltage socket.
2. Remove four bonnet mounting screws located bonnet both sides and one tapping screw located rear panel.
3. Remove bonnet from chassis so that you will find suitable fuse position on the fuse mounting board as illustrated.
4. Remove fuse marked 230V at the fuse mounting board and reinsert the fuse to your desired voltage.

NOTE: For 115V fuse position, use only 4A T rating fuse.



DIAL STRINGING



NOTE: Tuning capacitor fully open (clock wise)

AMPLIFIER ALIGNMENT

CAUTION: THIS SYSTEM IS A NEC PRECISION HIGH - FIDELITY INSTRUMENT. IT SHOULD BE SERVICED ONLY BY QUALIFIED PERSONNEL - TRAINED IN THE REPAIR OF TRANSISTOR EQUIPMENT AND PRINTED CIRCUITRY'

Because its products are subject to continuous improvement, NEC reserves the right to modify any design or specification without notice and without incurring any obligation.

TEST EQUIPMENT REQUIRED:

The following instruments are necessary to test and align the amplifier.

1. Suggested alignment equipments

   AM Signal Generator
   FM Signal Generator
   IF Sweep Generator (10.7MHz and 455 kHz)
   FM Stereo Signal Generator
   Oscilloscope
   Distortion Meter
   Output Meter (VTVM)
   DC VTVM
   300Ω coupler
   Loop Antenna

2. AM IF alignment (Function Selector in AM Position)

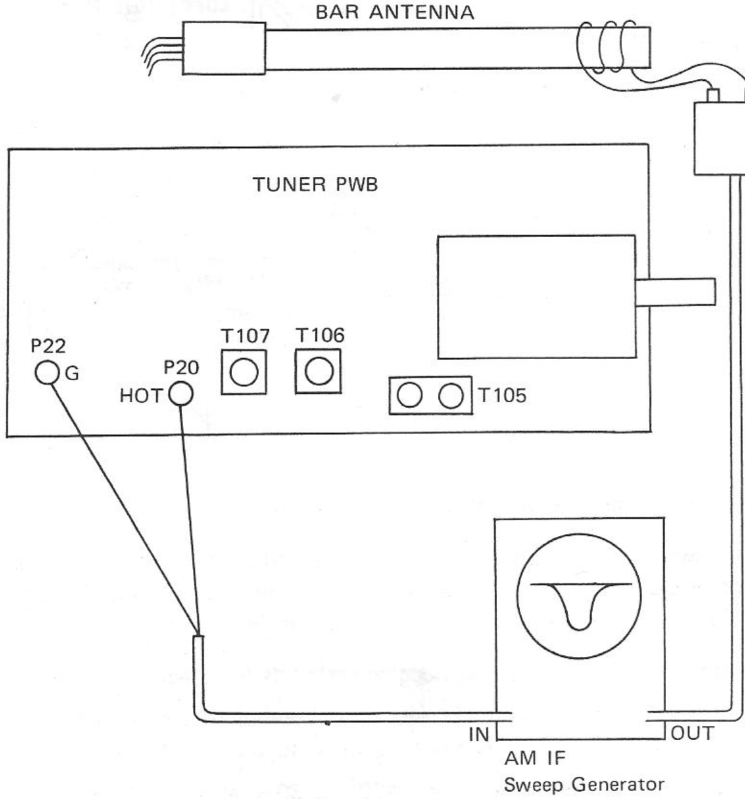


Fig.-1

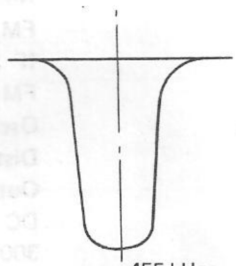
Set FUNCTION SELECTOR switch to AM position, bass, treble and balance controls at mechanical center. Volume control must be zero position.
TUNING control must be placed at highest dial scale edge.

a. Connect sweep generator scope output cable to BAR. Antenna. Connect sweep generator scope input cable to P20 and P22 (ground) as shown in the Fig. 1.

b. Adjust sweep signal output level and scope input sensitivity for normal display on the scope.

c. Adjust cores T105, T106 and T107 for maximum amplitude and symmetry.
It is may be necessory to the lower sweep signal output prevent over amplifier stages.

d. Repeat alignment until amplitude and symmetry are obtained as shown in the Fig.1.

Connector frequency	Radio dial setting	Indication	Adjustment	Remark
455 kHz Sweep Generator	Tuning gang full open (High End)	Scope	T105 T106 T107	Maxmum Hight Symmetrie 

AM RF ALIGNMENT (selector AM position)

connection

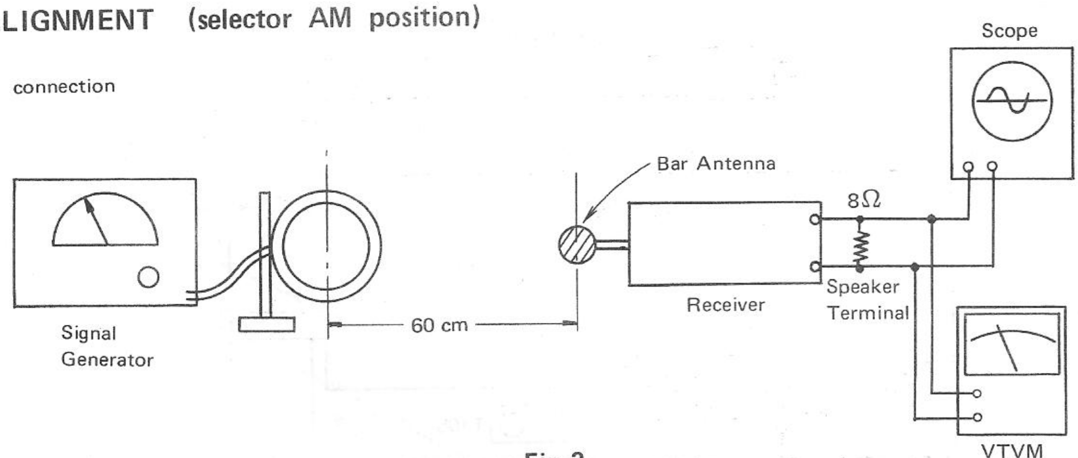


Fig.-2

NOTE: AM IF alignment must be performed before starting this procedure.

Set FUNCTION SELECTOR switch to AM position, bass, treble and balance controls at mechanical center. Volume control may be adjusted for proper output level to the speaker dummy load (250 mW). Speaker dummy load connections for both LEFT and RIGHT channel must be provided as shown in the Fig.2.

a. Set dial pointer for correct start position on the dial (logging scale left hand edge).

b. Set signal generator loop antenna to couple with the set ferrite antenna as shown in Fig.2. As the alternative, a short wire may be connected to the set AM external antenna terminal to pick up the signal.

c. Set the signal generator frequency 520 kHz, modulation 400 Hz, 30%, also dial lowest point.

d. Adjust oscillator coil L105 for miximum output reading on the VTVM.

e. Set signal generator frequency at 1640 kHz, also the set dial at highest point.

f. Adjust oscillator trimmer TC6 for maximum output reading on the VTVM or Scope.

g. Repeat steops (d) and (f) several times until accurate TUNING has been reached on the set dial.

h. Adjust antenna coil on the ferrite bar at 600 kHz for miximum output on the VTVM or Scope.

i. Adjust antenna trimmer TC5 at 1400 kHz for maximum output on the VTVM or Scope.

j. Repeat Steops (h) and (i) several times until both coil and trimmer has been adjusted for best sensitivity.

k. Check the dial edge frequencies, if the set covers 520 kHz and 1640 kHz.

Setp	S.G Frequency	Pointer Position	Adjustment	Remarks
1	520kHz	Low end of dial	OSC coil L105	Adjust for maximum output level on meter.
2	1640kHz	High end of dial	OSC trimmer TC6.	Adjust for maximum output level on meter. Repeat steps 1 and 2.
3	600kHz	600kHz	Bar antenna	Adjust for maximum output level on meter.
4	1400kHz	1400kHz	Antenna trimmer	Adjust for maximum output level on meter. Repeat steps 3 and 4.

FM IF & DISCRIMINATOR ALIGNMENT: (Fig.-3)

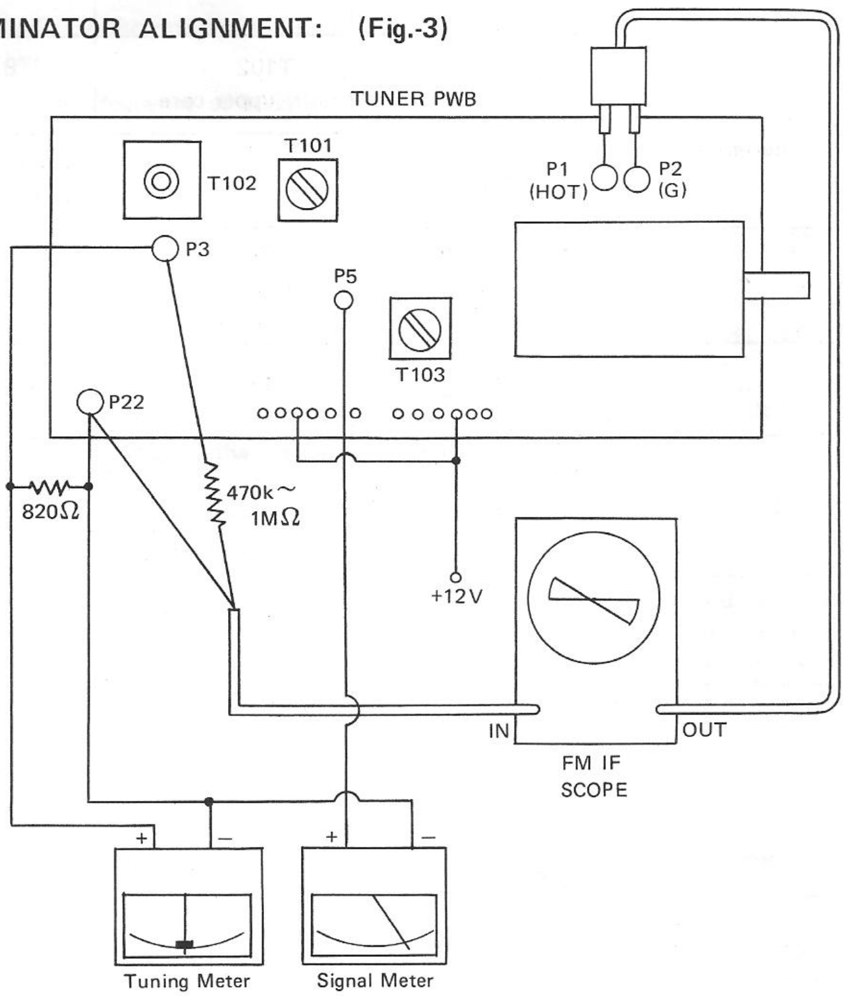


Fig.-3

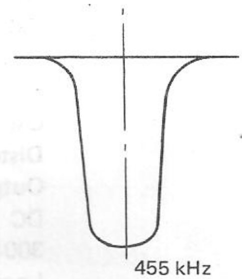
Set FUNCTION SELECTOR switch to AM position, bass, treble and balance controls at mechanical center. Volume control must be zero position.
TUNING control must be placed at highest dial scale edge.

a. Connect sweep generator scope output cable to BAR. Antenna. Connect sweep generator scope input cable to P20 and P22 (ground) as shown in the Fig. 1.

b. Adjust sweep signal output level and scope input sensitivity for normal display on the scope.

c. Adjust cores T105, T106 and T107 for maximum amplitude and symmetry.
It is may be necessary to the lower sweep signal output prevent over amplifier stages.

d. Repeat alignment until amplitude and symmetry are obtained as shown in the Fig.1.

Connector frequency	Radio dial setting	Indication	Adjustment	Remark
455 kHz Sweep Generator	Tuning gang full open (High End)	Scope	T105 T106 T107	Maxmum Hight Symmetrie  455 kHz

AM RF ALIGNMENT (selector AM position)

connection

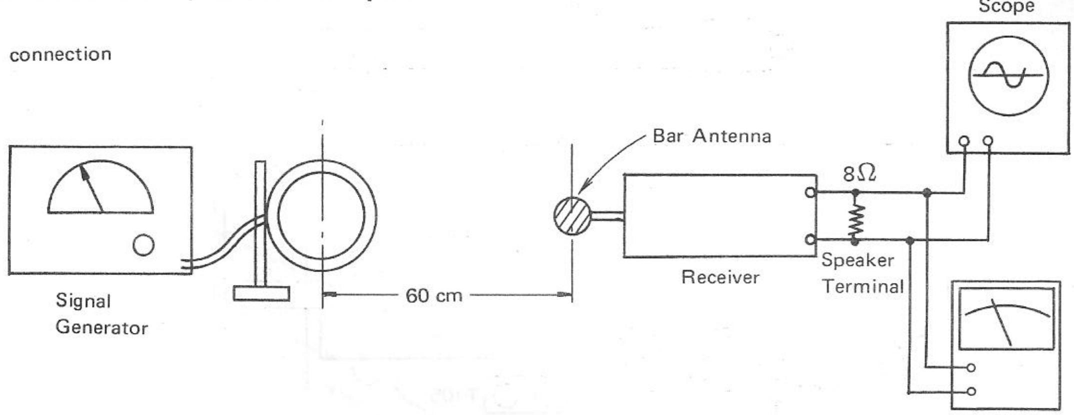


Fig.-2

NOTE: AM IF alignment must be performed before starting this procedure.

Set FUNCTION SELECTOR switch to AM position, bass, treble and balance controls at mechanical center. Volume control may be adjusted for proper output level to the speaker dummy load (250 mW). Speaker dummy load connections for both LEFT and RIGHT channel must be provided as shown in the Fig.2.

a. Set dial pointer for correct start position on the dial (logging scale left hand edge).

b. Set signal generator loop antenna to couple with the set ferrite antenna as shown in Fig.2. As the alternative, a short wire may be connected to the set AM external antenna terminal to pick up the signal.

c. Set the signal generator frequency 520 kHz, modulation 400 Hz, 30%, also dial lowest point.

d. Adjust oscillator coil L105 for miximum output reading on the VTVM.

Set FUNCTION SELECTOR switch to FM position, bass, treble and balance controls at mechanical center. Volume control must be set at zero position.
TUNING control must be placed at highest dial scale edge.

a. Connect sweep generator scope output cable to the set, at the P1 and P2.

b. Connect sweep generator scope input cable at the test point P3 and P22 (ground) as shown in the Fig. 3.

c. Adjust sweep signal output level and scope input sensitivity for normal display on the scope.

d. Adjust cores of T1, T101 and T102 for maximum amplitude and symmetric band pass characteristic.

e. Reconnect these points P1 and P2, and the scope input cable from P3.

f. Adjust core of T107 for the best spread of "s" curve as shown in the Fig. 3B.

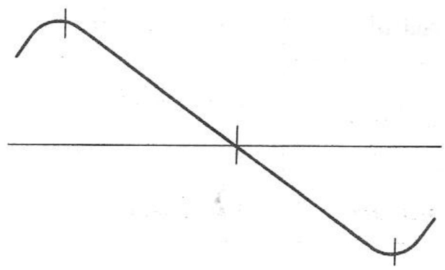


Fig.-3B

Generator Frequency	Radio dial setting	Indicator	Adjustment	Remark
10.7MHz Sweep Generator	Point of non Interference	Scope	T102 upper core	Best Linearity of S-Curve
		Tuning Meter	"	Adjust tuning meter should be become center.
"	"	Scope	T101 T102 Bottom core	Max. Height of S-Curve
"	"	Signal Meter	T103	Max. Swing of Signal Meter

FM FRONT END ALIGNMENT:

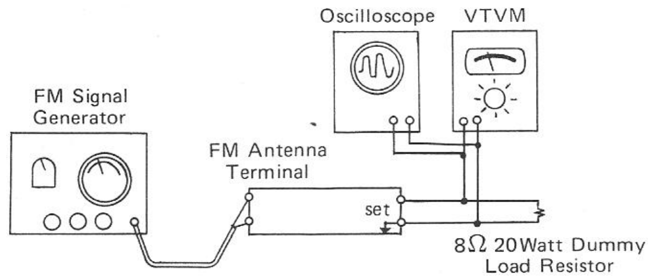


Fig.-4

NOTE: FM IF & DISCRIMINATOR alignment must be complete before starting this procedure.

Set FUNCTION SELECTOR switch to FM position, bass, treble, balance control at mechanical center. Volume control may be adjusted for proper output level to the speaker dummy load (250 mW).

a. Set dial pointer for correct start position on the dial (logging scale left hand edge).

b. Connect FM signal generator output cable to the FM ANTENNA terminals, and also the speaker dummy load for both LEFT and RIGHT channels must be provided as shown in the Fig.4.

c. Set the signal generator frequency at 87.0MHz, FM modulation 400Hz, 30%, also the set TUNING dial at 90MHz.

NOTE: Keep the signal generator output level as low as possible to prevent overloading the set.

d. Adjust oscillator coil L2 for maximum output level on VTVM. This coil may be spreaded or compressed with an insulated core driver.

e. Set the signal generator frequency at 106MHz FM, and the set TUNING dial at 109.0MHz.

f. Adjust oscillator trimmer TC4 for maximum output level on the VTVM.

g. Repeat steps (e) and (f) several times, until accurate TUNING has been reached on the set dial.

h. Set the signal generator frequency at 90MHz, and adjust RF coils LR1, LR2 and ANT. coil LA for maximum sensitivity.
These coils may be spreaded or compressed with an insulated core driver.

i. Set the signal generator frequency at 106MHz, and adjust RF trimmer TC1 and ANT trimmer TC2 and TC3 for maximum sensitivity.

j. Repeat steps (h) and (i) several times until these coils and trimmers has been adjusted for the best sensitivity.

k. Check the dial edge frequencies, if the set covers 87.0MHz and 109.0MHz.

Step	S.G Frequency	Pointer position	Adjustment	Remarks
1	87.0MHz 60dB	Low end of dial	OSC coil L2	Adjust for maximum output level on meter. AFC: ON
2	109MHz 60dB	High end of dial	OSC trimmer TC4	Adjust for maximum output level on meter. AFC: ON
3	90MHz	90MHz	ANT coil LA and RF coil LR1, LR2	Adjust for maximum output level on meter.
4	106MHz	106MHz	ANT trimmer TC1 and RF trimmer TC2 and TC3	Adjust for maximum output level on meter.

FM MPX ALIGNMENT (selector: FM position)

* FM signal generator : 98MHz
* receiver : synchronized to generator
* Modulation connection { 1kHz ± 67.5kHz Deviation; Pilot ± 7.5kHz Deviation }

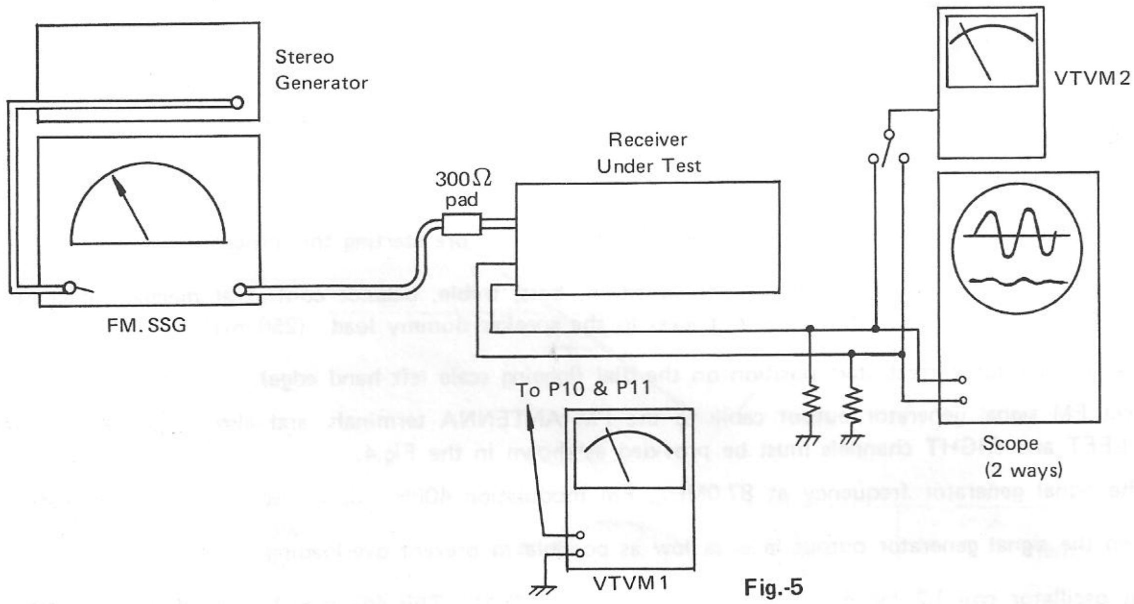


Fig.-5

NOTE: FM IF and RF alignment must be complete before to start this procedure. Misalignment of FM IF causes serious trouble in this procedure.

Set FUNCTION SELECTOR switch to FM-STEREO position, bass, treble, balance controls at mechanical center. Volume control may be adjusted for proper output level to the speaker dummy load (250–500mW).

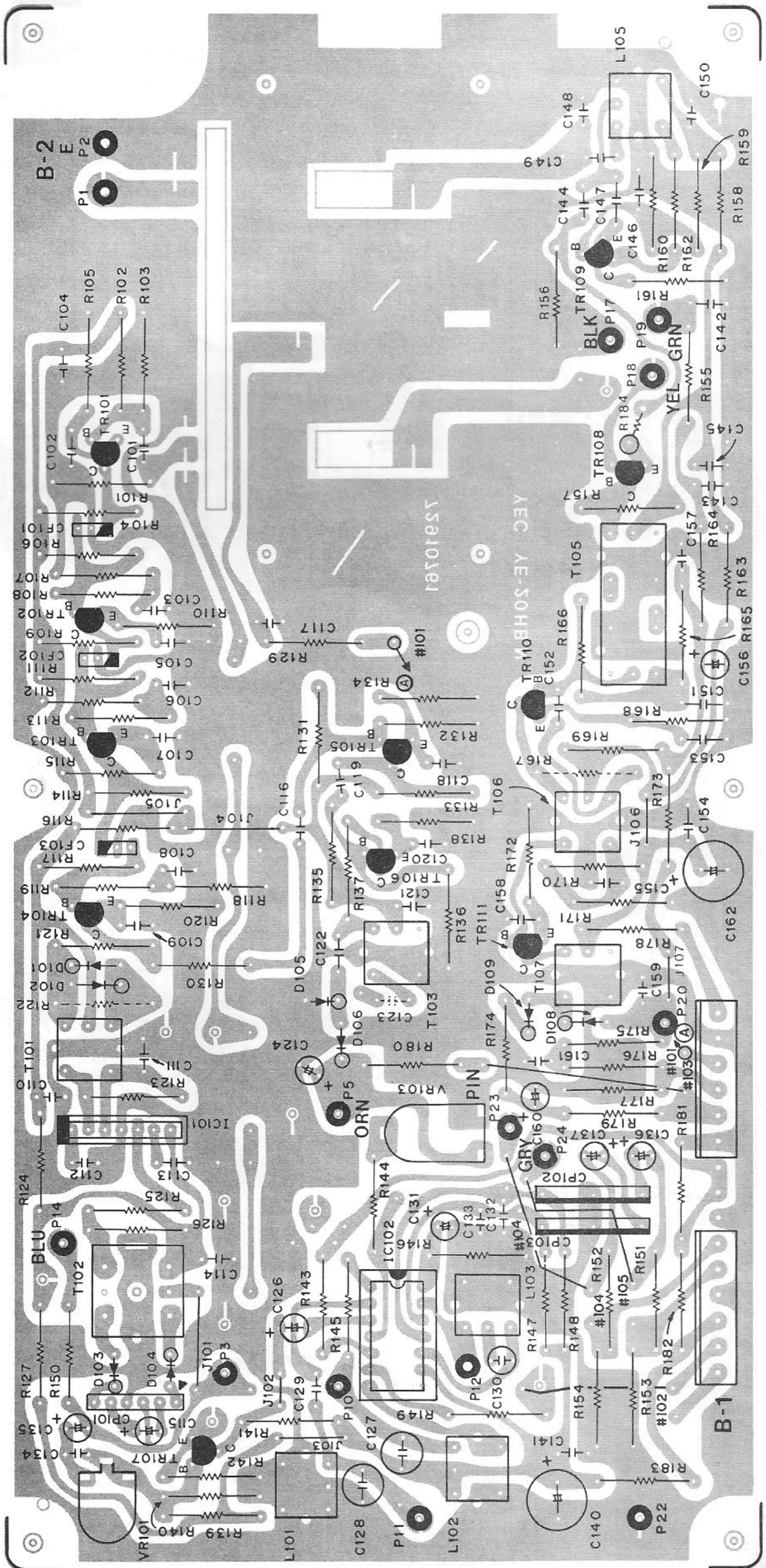
a. Connections of FM signal generator, stereo signal generator and external audio signal generator are as shown in the Fig. 5.
Connections of speaker output dummy load with channel selector switch, VTVM and oscilloscope are as shown in the Fig. 5.

NOTE: If the stereo generator is provided with internal 1kHz composite signal, external audio generator is unnecessary.

Generator output	SG modulation	VTVM connection	Adjustment	Remark
1mV	Pilot = ON L, R = OFF	P10 test point	L101/L102	Max reading on VTVM (1)
1mV	Pilot = ON L, R = OFF	P11 test point	L103	Max reading on VTVM (1)
1mV	Pilot = ON L = ON, R = OFF	----	L103	Max separation on VTVM (2) and scope
1mV	Pilot = ON L = ON, R = OFF	----	VT101	Max separation on VTVM (2) and scope
1mV	Pilot = ON L = OFF, R = ON	----	----	Approx. same separation as L channel
4μV	Pilot = ON L = ON, R = OFF	----	VR103	Set the point where separation starts

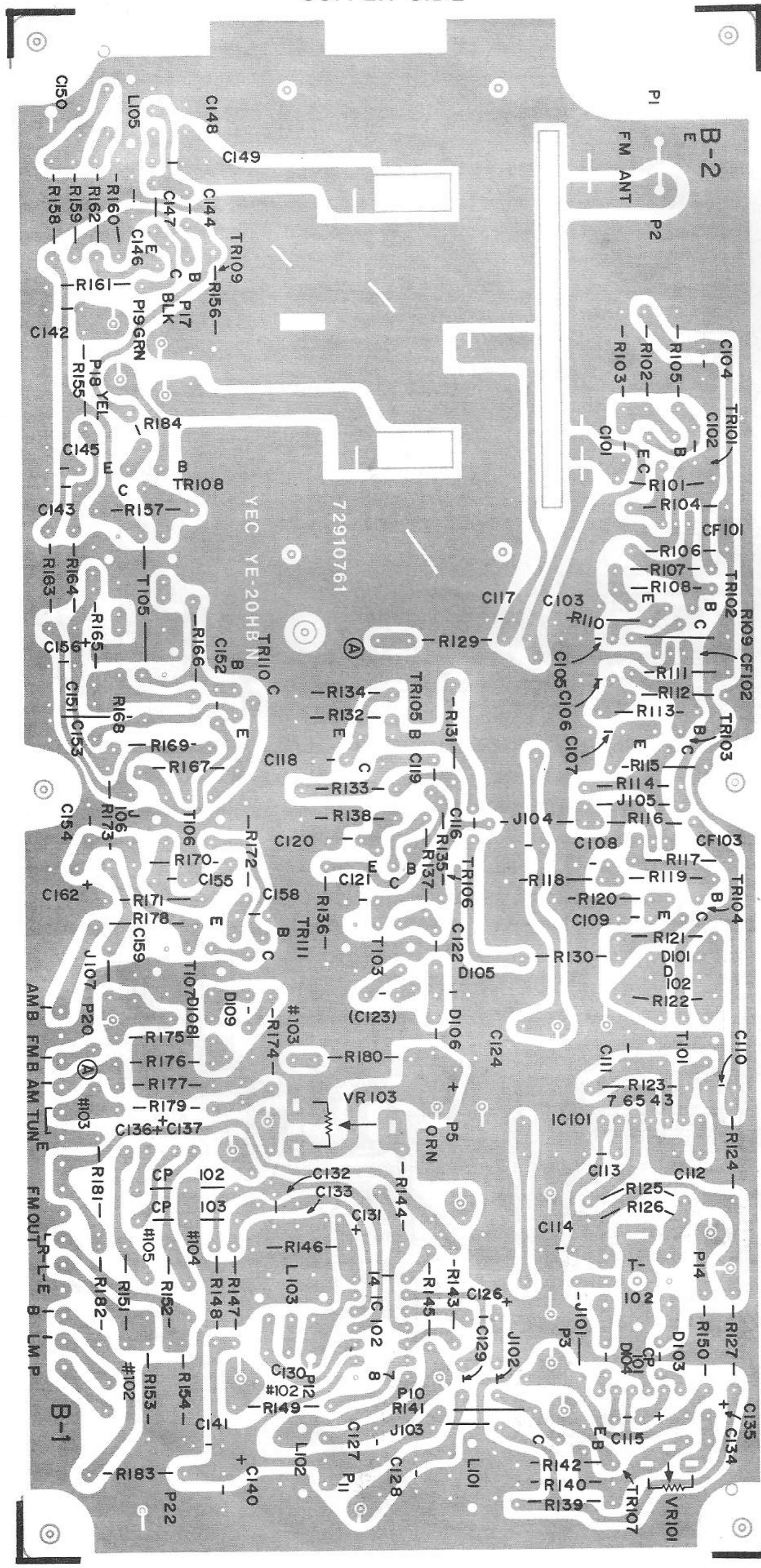
TUNER PWB UNIT ASS'Y

–MOUNTING SIDE–



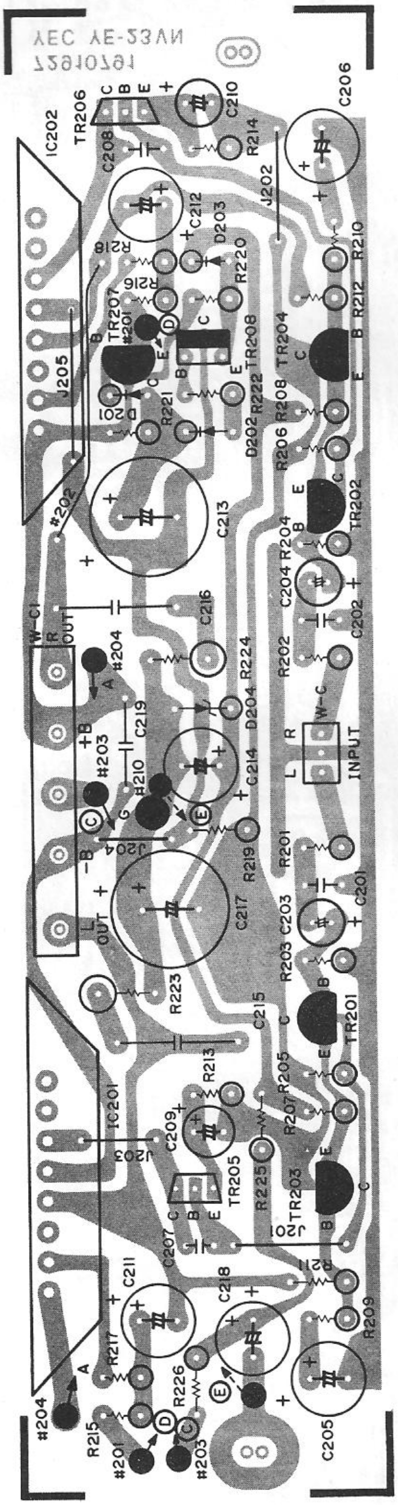
TUNER PWB UNIT ASSY

-COPPER SIDE-

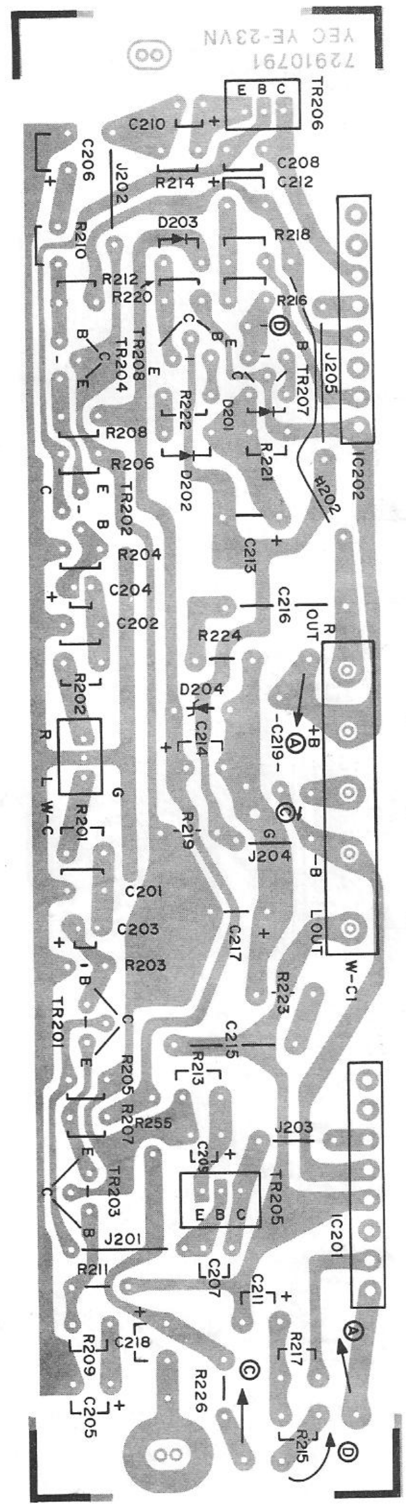


MAIN AMP UNIT ASS'Y

–MOUNTING SIDE–

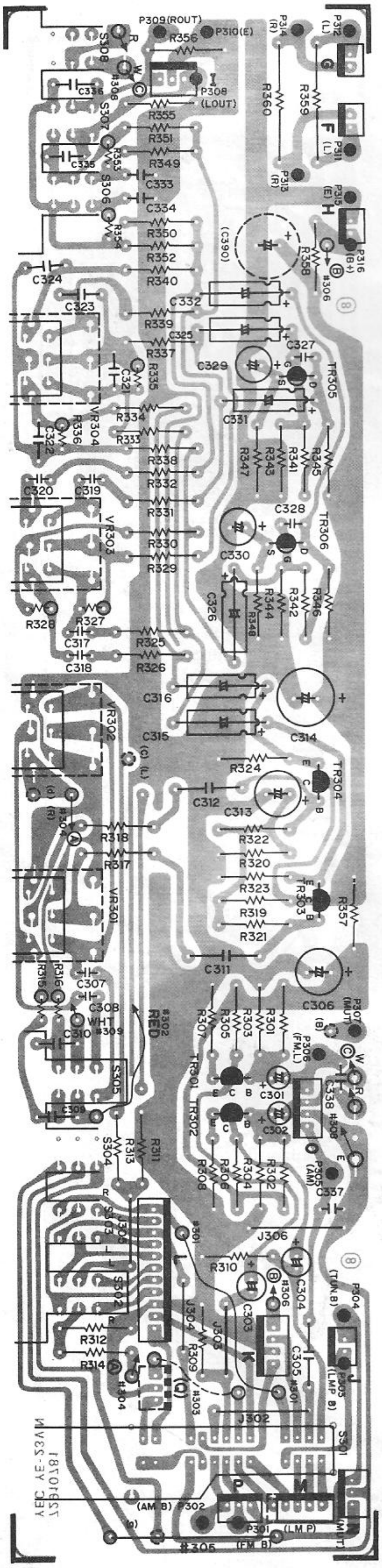


–COPPER SIDE–

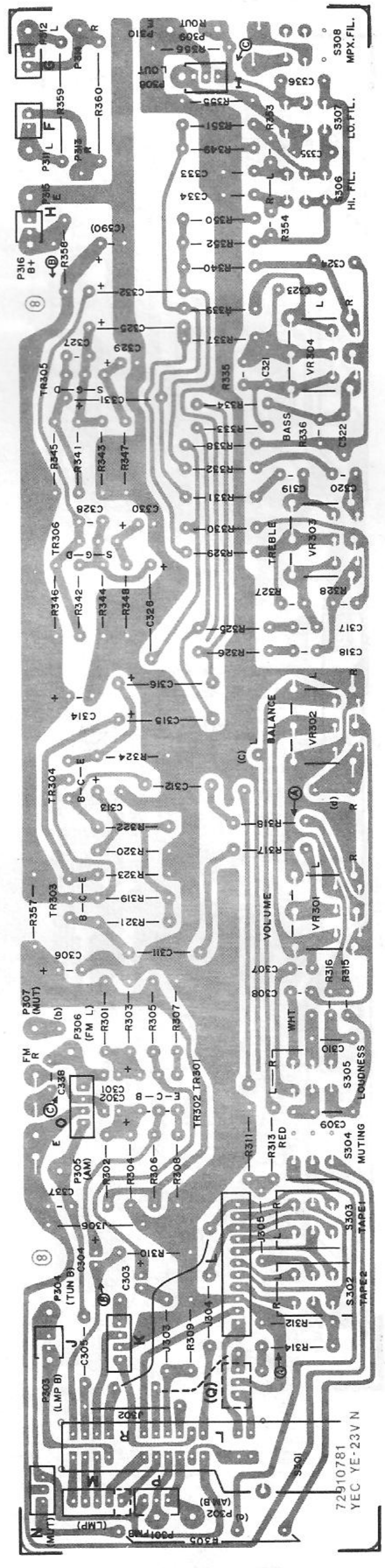


CONTROL PWB UNIT ASS'Y

-MOUNTING SIDE-

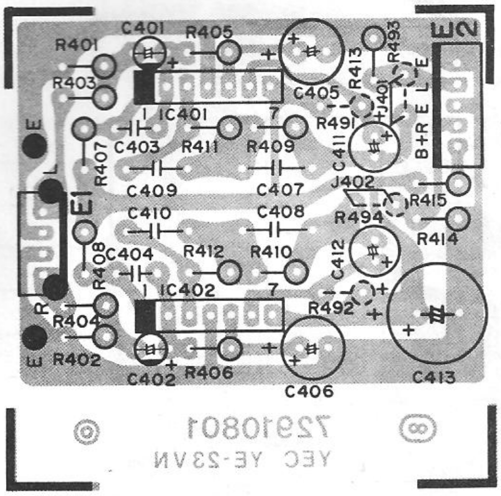


-COPPER SIDE-

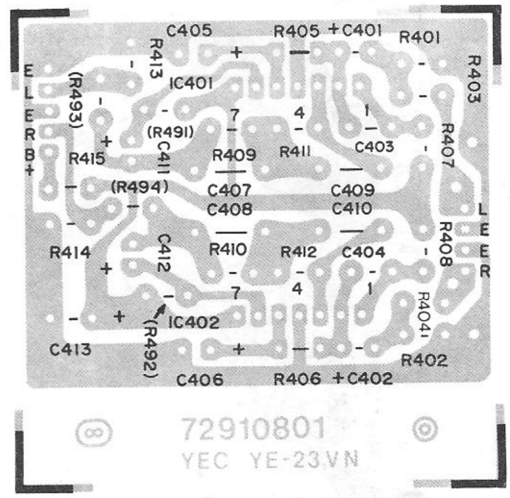


EQ PWB UNIT ASS'Y

-MOUNTING SIDE-

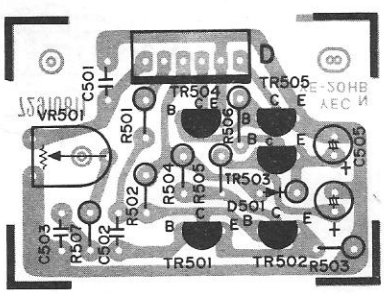


-COPPER SIDE-

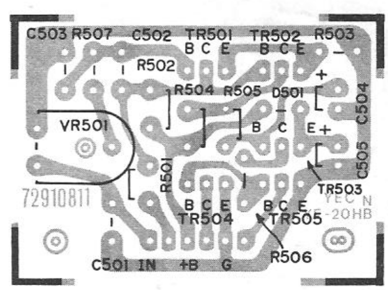


MUTING PWB UNIT ASS'Y

-MOUNTING SIDE-

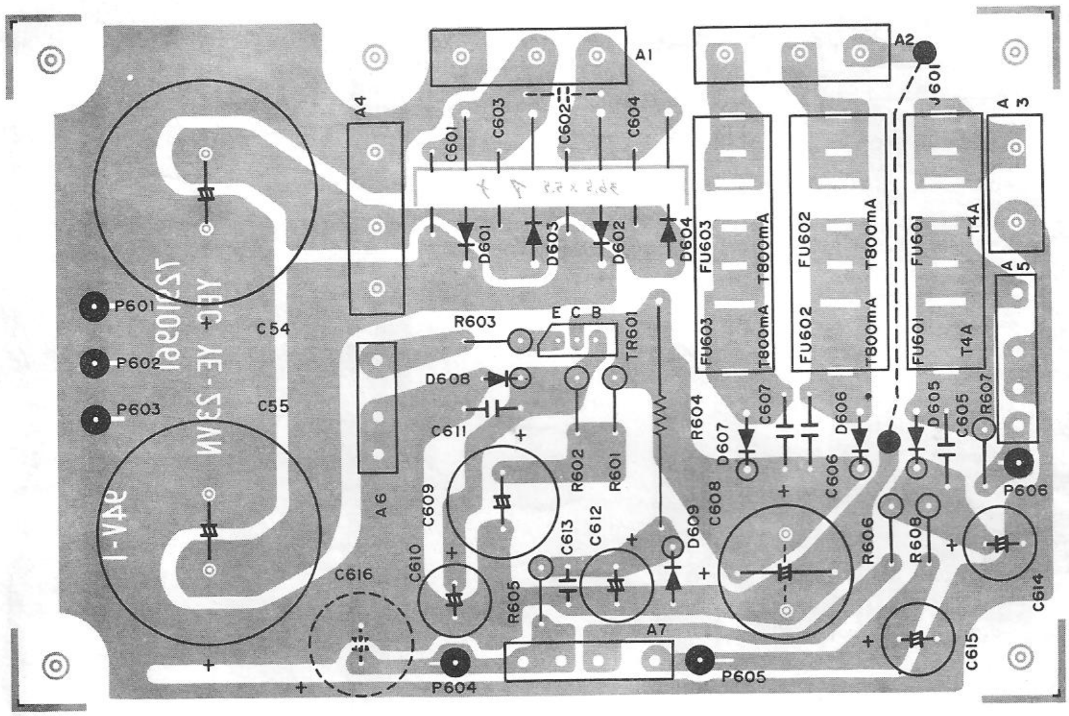


-COPPER SIDE-



POWER PWB UNIT ASS'Y

—MOUNTING SIDE—



REPLACEMENT PARTS LIST

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS

SEMICONDUCTORS

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS
	TR503	35003306	Transistor, 2SA-641F	1	
	TR201 ~ 204	35003905	Transistor, 2SA-640E	4	
	TR101 ~ 111	35045806	Transistor, 2SC-839F	11	
	TR501, 502, 504, 505	35047218	Transistor, 2SC-945R	4	
	TR301 ~ 304	35048306	Transistor, 2SC-900F	4	
	TR208	35900503	Transistor, 2SA-673C	1	
	TR601	35940412	Transistor, 2SC-1098L	1	
		35940411	Transistor, 2SC-1098K	or	
		35940413	Transistor, 2SC-1098M	or	
	TR205, 206	35943525	Transistor, 2SC-1628O	2	
	TR207	35943605	Transistor, 2SC-1222E	1	
	TR305, 306	35990503	FET. 2SK-44C	2	

DIODES

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS
	D201, 202, 203, 501	36001522	Diode, 1S-953	4	
	D103, 104	36002513	Diode, 2OA90	2	
	D102, 105, 106, 108 109, 101	36002514	Diode (Ge), 1K-90	6	
	D609	36003039	Diode ZENER RD12EB	1	
	D605, 606, 607	36107065	Rectifier (Si), F14A	3	
	D608	36902014	Diode, RD-36EC	1	
	D601 ~ 604	36902015	Rectifier (Si), GH3Z	4	
	D204	36902016	Diode ZENER RD15EB	1	

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS

INTEGRATED CIRCUIT

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS
	IC101	37901002	IC, μPC577H	1	
	IC102	37901003	IC, μPC554C	1	
IC201, 202	IC201, 202	37901009	IC, S-40W	2	
	IC401, 402	37902007	IC, TA7122AP	2	

CAPACITOR

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS
	C601 ~ 607	42011025	C. Ceramic 500 V 0.01 μF	7	
	C219	42011521	C. Ceramic 500 V 4700 pF	1	
	C101	42110921	C. Ceramic 50 V 4700 pF	1	
	C104, 110 ~ 113, 117, 119, 122, 142, 164, 165, 222, 337, 501, 503, 51, 52, 53, 611, 613	42110925	C. Ceramic 50 V 0.01 μF	21	
	C102, 103, 105 ~ 109, 114, 118, 120, 121, 141, 143, 146, 150, 151, 153, 155, 157, 502	42110929	C. Ceramic 50 V 0.02 μF	20	
	C145, 154, 158, 57	42110933	C. Ceramic 50 V 0.047 μF	4	
	C152	42331001	C. Ceramic 50 V 1 pF	1	
	C207, 208	42331027	C. Ceramic 50 V 18 pF	2	
	C403, 404	42331037	C. Ceramic 50 V 47 pF	2	
	C611	42331060	C. Ceramic 50 V 18 pF	1	
	C327, 328	42331069	C. Ceramic 50 V 100 pF	2	
	C201, 202	42331071	C. Ceramic 50 V 150 pF	2	
	C416, 417, 418, 419	42331073	C. Ceramic 50 V 220 pF	4	
	C148	42335060	C. Ceramic 50 V 18 pF 10 %	1	
	C149	42407164	C. Mica 50 V 430 pF 5 %	1	
	C134	42701015	C. Mylar 50 V 2200 pF	1	
	C144	42701017	C. Mylar 50 V 4700 pF	1	
	C159	42701018	C. Mylar 50 V 6800 pF	1	
	C147, 161	42701019	C. Mylar 50 V 0.01 μF	2	
	C129	42701023	C. Mylar 50 V 0.047 μF	1	
	C319, C320	42754558	C. Mylar 50 V 0.0039 μF	2	
	C132, 133, 317, 318, 338	42754558	C. Mylar 50 V 0.0056 μF	5	
	C333, 334	42754563	C. Mylar 50 V 0.01 μF	2	
	C309, 310, 335, 336	42754568	C. Mylar 50 V 0.027 μF	4	

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS
	C323, 324	42754569	C. Mylar 50 V 0.033 μF	2	
	C407, 408	42754570	C. Mylar 50 V 0.039 μF	2	
	C321, 322	42754571	C. Mylar 50 V 0.047 μF	2	
	C305	42754575	C. Mylar 50 V 0.1 μF	1	
	C215, 216, 311, 312	42754579	C. Mylar 50 V 0.22 μF	4	
	C167	42910004	C. Ceramic 12 V 0.5 μF	1	
	C56	42940009	C. Ceramic 4700 p VDE	1	
	C409, 410	42970030	C. Poly 50 V 10000 pF 5 %	2	
	C307, 308	42973031	C. Poly 150 V 130 pF 5 %	2	
	C130	42973060	C. Poly 150 V 2200 pF 5 %	1	
	C127, 128	42973076	C. Poly 150 V 10000 pF 5 %	2	
	C209, 210, 329, 330, 405, 406	43011004	C. Ceramic 6.3 V 100 μF	6	
	C205, 206	43011005	C. Ceramic 6.3 V 220 μF	2	
	C615	43011019	C. Ceramic 10 V 470 μF	1	
	C115, 126, 135	43011028	C. Elec. 16 V 10 μF	3	
	C218, 306, 313	43011032	C. Elec. 16 V 100 μF	3	
	C140, 162, 612	43011033	C. Elec. 16 V 220 μF	3	
	C214	43011034	C. Elec. 16 V 330 μF	1	
	C614	43011035	C. Elec. 16 V 470 μF	1	
	C411, 412	43011043	C. Elec. 25 V 10 μF	2	
	C165	43011054	C. Elec. 35 V 3.3 μF	1	
	C136, 137, 504, 505	43011055	C. Elec. 35 V 4.7 μF	4	
	C211, 212, 413	43011059	C. Elec. 35 V 470 μF	3	
	C314	43011060	C. Elec. 35 V 100 μF	1	
	C301, 302	43011065	C. Elec. 50 V 0.47 μF	2	
	C124, 203, 204	43011066	C. Elec. 50 V 1 μF	3	
	C131, 156, 160, 303, 304	43011067	C. Elec. 50 V 2.2 μF	5	
	C220, 221, 610	43011073	C. Elec. 50 V 47 μF	3	
	C217, 609	43011075	C. Elec. 50 V 220 μF	2	
	C325, 326, 331, 332	43021067	C. Elec. 50 V 2.2 μF	4	
	C315, 316	43021068	C. Elec. 50 V 3.3 μF	2	
	C401, 402	43515053	C. Tantalum 16 V 4.7 μF	2	
	C213	43910005	C. Elec. 100 V 47 μF	1	
	C54, 55	43910008	C. Elec. 42 V 6800 μF	2	
	C608	43970036	C. Elec. 50 V 1000 μF	1	

RESISTOR

	R55, 56	40102017	R. Carbon 22 H 10 % ¼ W	2	

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PART NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS
	R137	40102125	R. Carbon 10 H 5 % ¼ W	2	
	R149	40102137	R. Carbon 33 H 5 % ¼ W	1	
	R145	40102139	R. Carbon 39 H 5 % ¼ W	1	
	R116, 124, 129	40102145	R. Carbon 68 H 5 % ¼ W	3	
	R183	40102147	R. Carbon 82 H 5 % ¼ W	1	
	R101, 123, 162, 329, 330	40102149	R. Carbon 100 H 5 % ¼ W	5	
	R134	40102159	R. Carbon 270 H 5 % ¼ W	1	
	R104, 109, 114, 317, 318	40102161	R. Carbon 330 H 5 % ¼ W	5	
	R108, 113, 119	40102163	R. Carbon 390 H 5 % ¼ W	3	
	R163	40102165	R. Carbon 470 H 5 % ¼ W	1	
	R168, 178	40102167	R. Carbon 560 H 5 % ¼ W	2	
	R138	40102169	R. Carbon 680 H 5 % ¼ W	1	
	R158, 325, 326	40102171	R. Carbon 820 H 5 % ¼ W	3	
	R105, 110, 115, 121, 125, 172	40102173	R. Carbon 1 k 5 % ¼ W	6	
	R133, 176, 307, 308	40102175	R. Carbon 1.2 k 5 % ¼ W	4	
	R142, 174	40102177	R. Carbon 1.5 k 5 % ¼ W	2	
	R120, 156, 161, 179, 331, 332, 347, 348	40102181	R. Carbon 2.2 k 5 % ¼ W	8	
	R358	40102183	R. Carbon 2.7 k 5 % ¼ W	1	
	R126, 337, 338, 351, 352	40102185	R. Carbon 3.3 k 5 % ¼ W	5	
	R175, 320	40102187	R. Carbon 3.9 k 5 % ¼ W	2	
	R146, 151, 152	40102189	R. Carbon 4.7 k 5 % ¼ W	3	
	R140, 147, 148, 150, 165, 177, 357	40102191	R. Carbon 5.6 k 5 % ¼ W	7	
	R323, 324	40102193	R. Carbon 6.8 k 5 % ¼ W	2	
	R103, 141, 303, 304	40102195	R. Carbon 8.2 k 5 % ¼ W	4	
	R107, 112, 118, 153, 154, 171, 305, 306, 313, 314, 333, 334, 345, 346	40102197	R. Carbon 10 k 5 % ¼ W	14	
	R130	40102199	R. Carbon 12 k 5 % ¼ W	1	
	R117, 136, 155, 339, 340	40102201	R. Carbon 15 k 5 % ¼ W	5	
	R160	40102203	R. Carbon 18 k 5 % ¼ W	1	
	R143, 159, 166, 170, 180	40102205	R. Carbon 22 k 5 % ¼ W	5	
	R132, 157	40102207	R. Carbon 27 k 5 % ¼ W	2	
	R102, 165, 319	40102209	R. Carbon 33 k 5 % ¼ W	3	
	R106, 135, 139, 173	40102211	R. Carbon 39 k 5 % ¼ W	4	

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS
	R111, 181	40102215	R. Carbon 56 k 5 % ¼ W	2	
	R301, 302	40102219	R. Carbon 82 k 5 % ¼ W	2	
	R309, 310, 349, 350, 355, 356	40102221	R. Carbon 100 k 5 % ¼ W	6	
	R131, 169, 311, 312, 321, 322	40102227	R. Carbon 180 k 5 % ¼ W	6	
	R182, 343, 344	40102237	R. Carbon 470 k 5 % ¼ W	3	
	R341, 342	40102243	R. Carbon 820 k 5 % ¼ W	2	
	R51, 52	40102723	R. Carbon 120 k 5 % ¼ W	2	
	R53, 54	40102731	R. Carbon 270 k 5 % ¼ W	2	
	R226	40112113	R. Carbon 3.3 H 5 % ¼ W	1	
	R606	40112119	R. Carbon 5.6 H 5 % ¼ W	1	
	R605	40112125	R. Carbon 10 H 5 % ¼ W	1	
	R607	40112129	R. Carbon 15 H 5 % ¼ W	1	
	R608	40112133	R. Carbon 22 H 5 % ¼ W	1	
	R184, 503, 603	40112143	R. Carbon 56 H 5 % ¼ W	3	
	R209, 210, 213, 214, 219	40112149	R. Carbon 100 H 5 % ¼ W	5	
	R415	40112169	R. Carbon 680 H 5 % ¼ W	1	
	R225, 403, 404	40112173	R. Carbon 1 k 5 % ¼ W	3	
	R601	40112175	R. Carbon 1.2 k 5 % ¼ W	1	
	R220	40112181	R. Carbon 2.2 k 5 % ¼ W	1	
	R205, 206	40112183	R. Carbon 2.7 k 5 % ¼ W	2	
	R602	40112185	R. Carbon 3.3 k 5 % ¼ W	1	
	R215 ~ 218, 501, 506	40112189	R. Carbon 4.7 k 5 % ¼ W	6	
	R201, 202, 222	40112191	R. Carbon 5.6 k 5 % ¼ W	3	
	R411, 412	40112193	R. Carbon 6.8 k 5 % ¼ W	2	
	R207, 208, 504	40112201	R. Carbon 15 k 5 % ¼ W	3	
	R315, 316	40112203	R. Carbon 18 k 5 % ¼ W	2	
	R211, 212	40112205	R. Carbon 22 k 5 % ¼ W	2	
	R413, 414, 505, 507	40112213	R. Carbon 47 k 5 % ¼ W	4	
	R203, 204	40112215	R. Carbon 56 k 5 % ¼ W	2	
	R409, 410	40112217	R. Carbon 68 k 5 % ¼ W	2	
	R221, 327, 328, 335, 336, 401, 402, 405, 406	40112221	R. Carbon 100 k 5 % ¼ W	9	
	R353, 354, 407, 408	40112243	R. Carbon 820 k 5 % ¼ W	4	
	R502	40112245	R. Carbon 1 M 5 % ¼ W	1	
	R359, 360	40342657	R. Metal 220 H 5 % 2 W	2	
	R604	40930007	R. Metal 680 H 5 % 2 W	1	
	R223, 224	40930008	R. Metal 4.7 H 10 % 2 W	2	
	VR101	41950030	R. Variable 10 p B5KH	1	

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS
	VR501	41950066	R. Variable 500 K.B	1	
	VR301	41950113	R. Variable 250 KH (B)	1	
	VR302	41950114	R. Variable 250 KH (MN)	1	
	VR303, 304	41950115	R. Variable 100 KH (B)	2	
	VR103	41950123	R. Variable 10 p-B100KH	1	

COILS AND TRANSFORMERS

102		45006067	Trans. Power	1	
	L105	60750038	OSC, Coil	1	
	T106	60801009	IFT	1	
	T107	60802011	IFT	1	
	T103	60828002	IFT	1	
	T101	60828102	IFT	1	
	T102	60830001	IFT	1	
	T105	61131001	Filter, Ceramic 455 kHz	1	
	CF101, 102, 103	61136006	Filter, Ceramic 10.7 MHz	3	
		61601007	Balan	1	
107		61903013	Bar Antenna Ass'y	1	
	L101, 102	61905003	Trans. 19 kHz	2	
	L103	61905004	Trans. 38 kHz	1	

ELECTRICAL PARTS

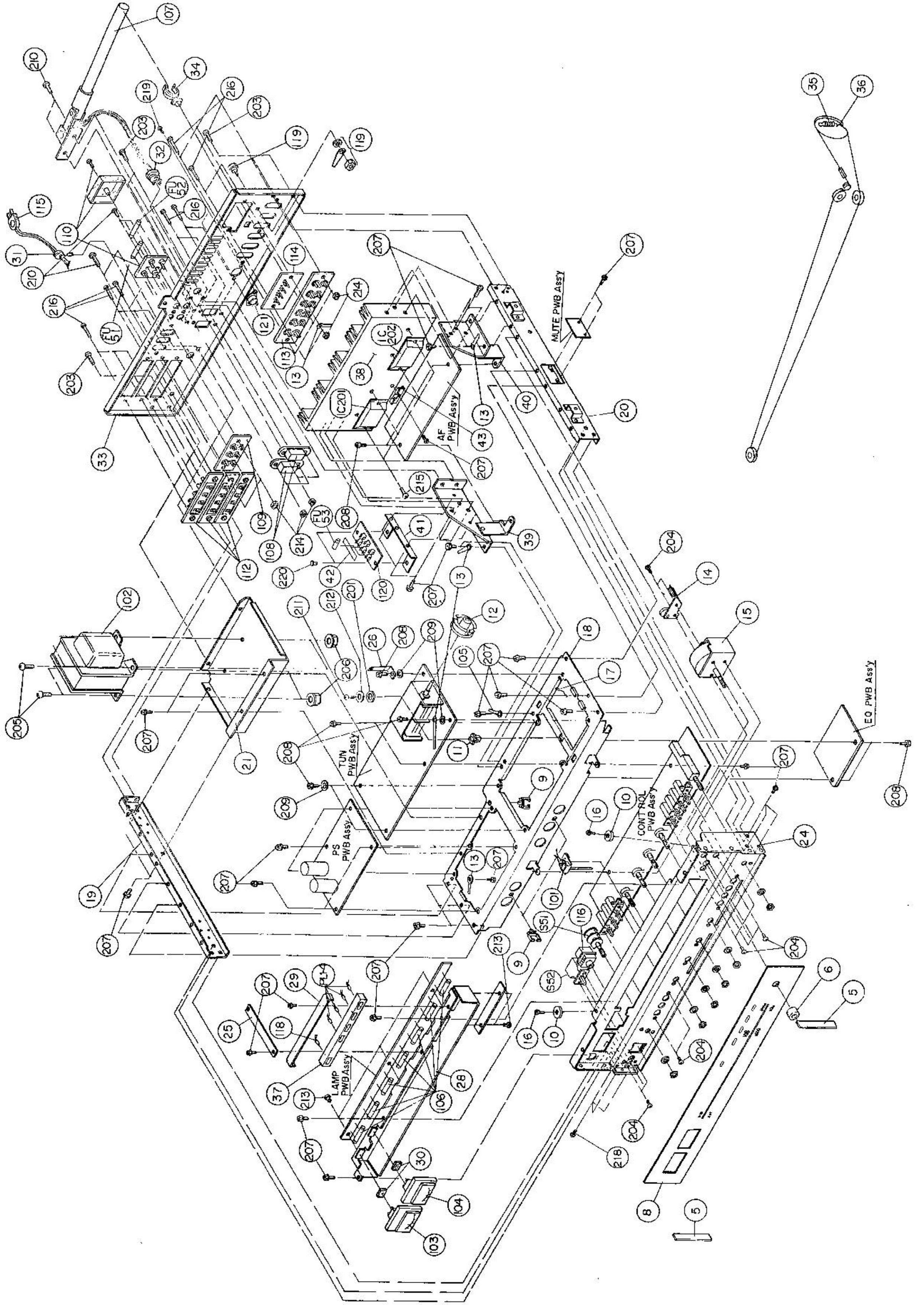
		34401103	FM-TUNER	1	
	Fu602, 603	66681010	Fuse, 800 mA	2	
Fu51, 52	Fu51, 52	66901010	Fuse, 4A	2	
106		67900108	Pilot Lamp	7	
PL1 ~ 4	PL1 ~ 4	67901075	Pilot Lamp	4	
118		67901077	Pilot Lamp 6.3 V 50 mA	1	
101		67901111	Dial Pointer	1	
103		67950160	Meter Tuning	1	
104		67950161	Meter	1	
108		70521017	AC, Socket, UL	2	
121		70901011	Socket 5 p	1	
	CP102, 103	39052003	C.R. Printed PAC M505F	2	
	CP101	39053001	C.R. Printed PAC B6RD0214	1	
115		79759072	Line Cord	1	
119		79795015	E. Terminal	1	
S51		65901026	Switch, Rotary	1	
113		71903025	Terminal 12 p	1	

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARKS
112		71903017	Terminal Board	3	
109		71902035	Terminal 6 p	1	
		65902026	Switch, Slide	1	
		65904043	Push Switch	1	
		65904044	Push Switch	1	
S52		65904049	Switch, Power	1	
Fu53		66671005	Fuse, 2 A	1	
Fu52, 51		66671016	Fuse, 4 A	2	
		71205023	Fuse Holder	6	
120		71902016	Holder, Fuse 3 p	1	
		71903012	Fuse Holder	14	
110		71903013	Fuse Holder	1	
114		71905014	Terminal Board, ANT	1	
		87085101	TUN PWB UNIT Ass'y	1	
		87085201	Main AMP Unit Ass'y	1	
		87085401	EQ PWB UNIT Ass'y	1	
		87085501	CON PWB UNIT Ass'y	1	
		87085601	Muting PWB UNIT Ass'y	1	
		87085701	Lamp PWB UNIT Ass'y	1	
		87102301	Power PWB UNIT Ass'y	1	

MECHANICAL PARTS

35		11403382	Spring	1	
31		11420632	Clamper Cord	1	
36		11622821	Eyelet	1	
32		18280881	Wire Clamper	1	
9		18281041	Clamper	3	
16		18281391	Pulley dia 18	3	
34		18281761	ANT Clamper	1	
37		18401831	Lamp Holder	1	
13		18504221	Lug	5	
29		18507821	Bracket Lamp Catch	1	
14		18507851	Bracket Pulley Mount	1	
15		18507881	Tuning Spindle	1	
16		18507951	Pulley Spindle	2	
17		18507961	Drum Clamper	1	
28		18507811	Reflector, Light	1	
38		18508342	Heat Sink	1	

MECHANICAL ASSEMBLY EXPLODED VIEW



EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMAR
39		18508353	Bracket-L	1	
40		18508372	Bracket-R	1	
12		18401561	Dial Drum	1	
41		18509511	Bracket, Fuse Mount	1	
21		18509631	Bracket, Trans. Mount	1	
30		18601571	Cushion, Sheet	2	
5		18601591	Plate, Heat Reflectors	2	
6		18601611	Collar	1	
25		18601671	Clamper	1	
26		18601691	ANT. Clamper	1	
		18850641	Special Washer	1	
201		18851371	Special Screw	1	
		18851821	Special Screw	4	
203		18852251	Special Screw	8	
		18852611	Special Washer	4	
204		23850871	Special Screw	11	
		24850201	Washered Screw	8	
205		24850321	Washered Screw	4	
206		24850971	Flanged Nut	4	
207		24851541	Screw, F.T x 3 x 6 x 15 BF	49	
220		24851801	Push Rivet	2	
208		24852441	Screw, P.T x 3 x 8 x 15 BF	10	
209		24852561	Washer, Special	4	
8		18705281	Dial Scake	1	
11		18281481	Insulator	1	
18		18508292	Chassis-Base	1	
19		18508441	Chassis side L	1	
20		18508451	Chassis side R	1	
24		18508512	Sub Chassis	1	
43		18509171	PWB Bracket Mount	1	
105		71905013	Terminal	1	
116		70905090	Jack Head Phone	1	

PACKING MATERIALS AND ACCESSORIES

42		18752901	Label, Fuse	1	
		18801381	Bag, Polyethylene	1	
		18802642	Filler	2	
		18802661	Bag, Polyethylene	1	
		18802861	Carton Box	1	
		78970861	Label, NS-5350E	1	

EXPLODED VIEW SYMBOL NO.	SCHEMATIC DIAGRAM SYMBOL NO.	PARTS NO.	DESCRIPTION	Q'TY PER UNIT	REMARK
		74900009	TAB	15	
		78910501	Instruction Book	1	

KNOBS

		18453501	Knob, TUN	1	
		18453521	Knob, Volume	6	
		18453681	Push Button, A	7	
		18453701	Push Button, B	1	

CABINET

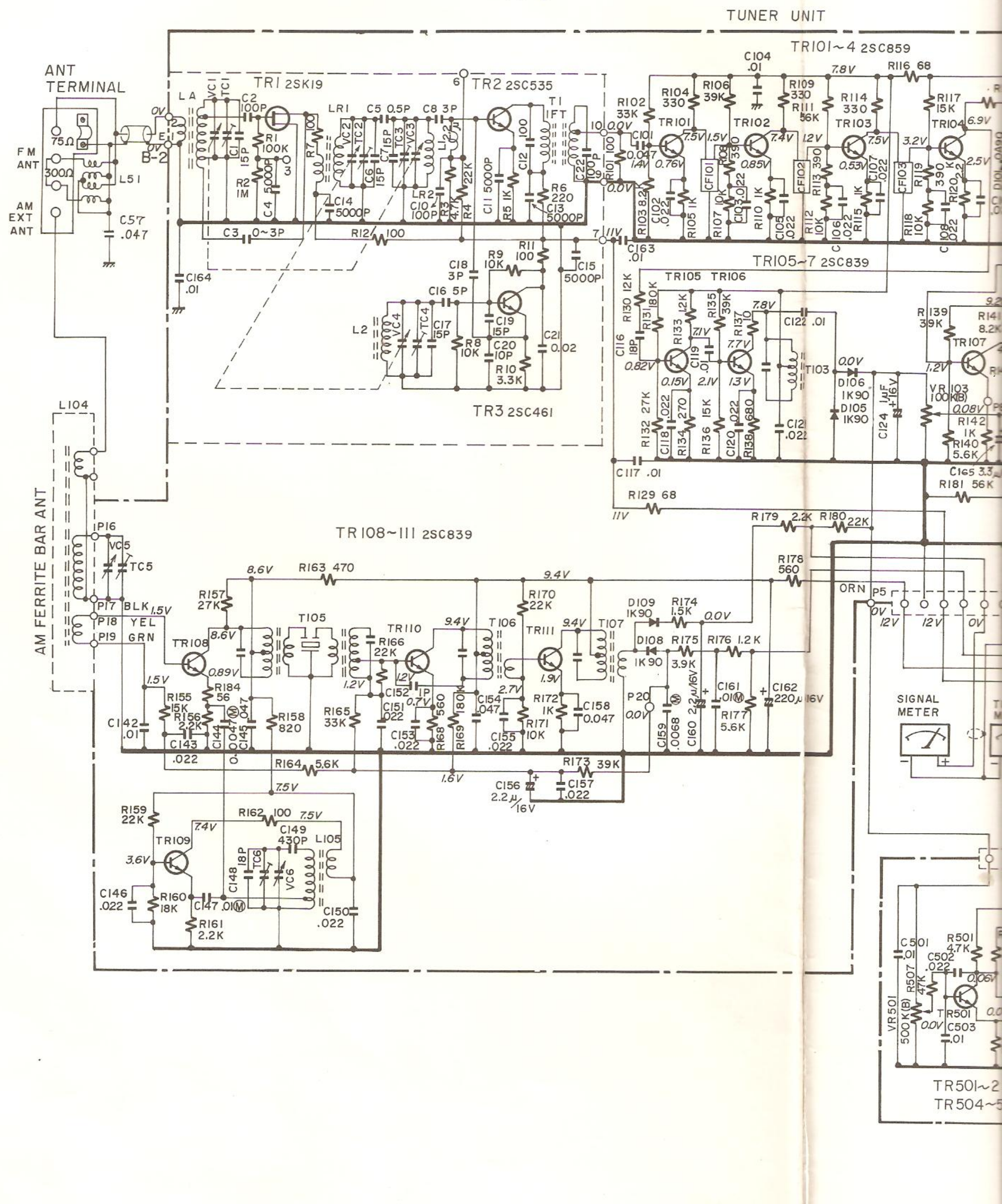
		18353411	Cabinet	1	
33		18509501	Rear Panel	1	
		18705261	Front Panel	1	
		18508431	Cover Bottom	1	
		18281451	Foot	4	

CIRCUIT DIAGRAM

MODEL NS-5350E

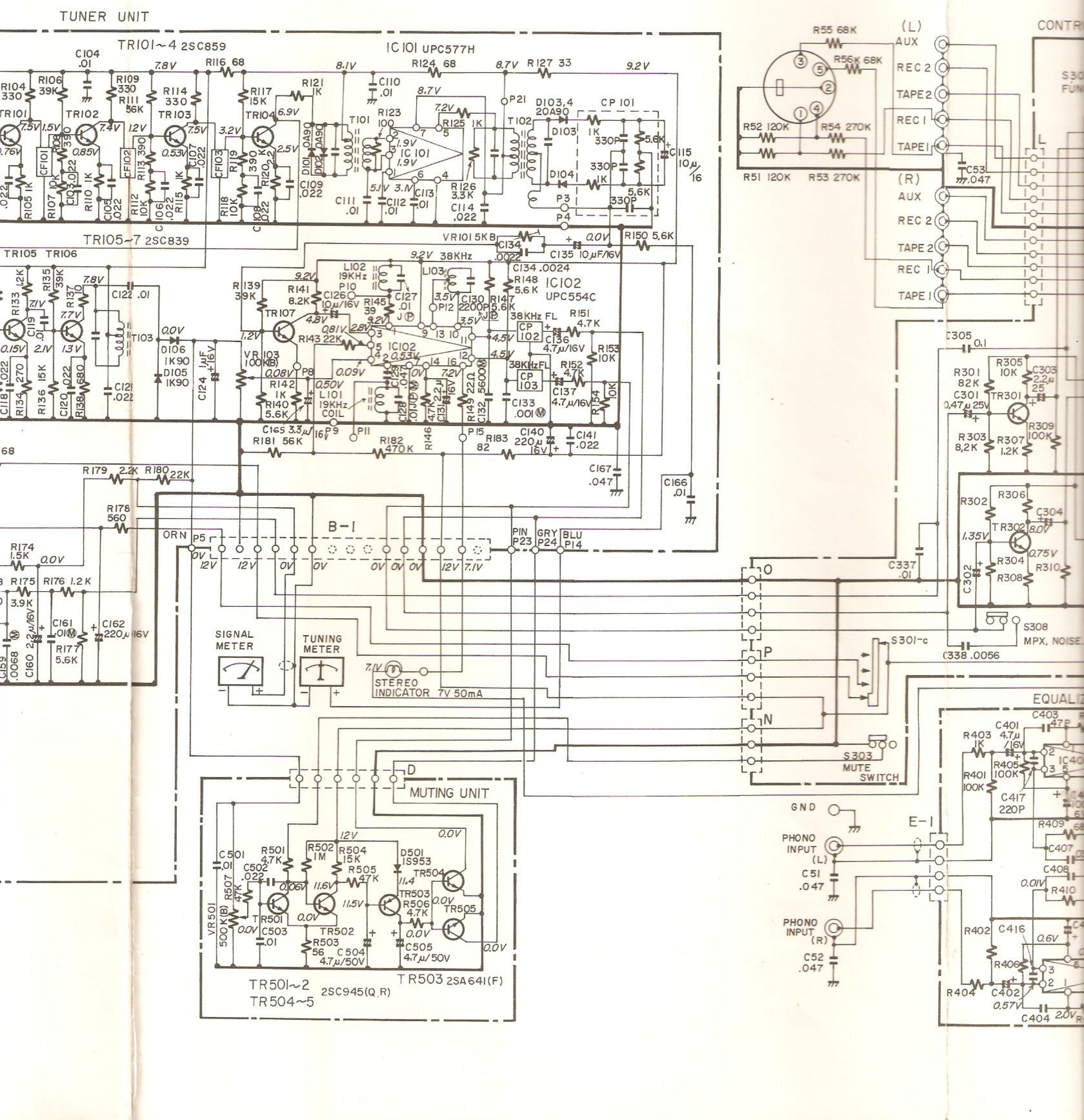
Juan Bertolini C.

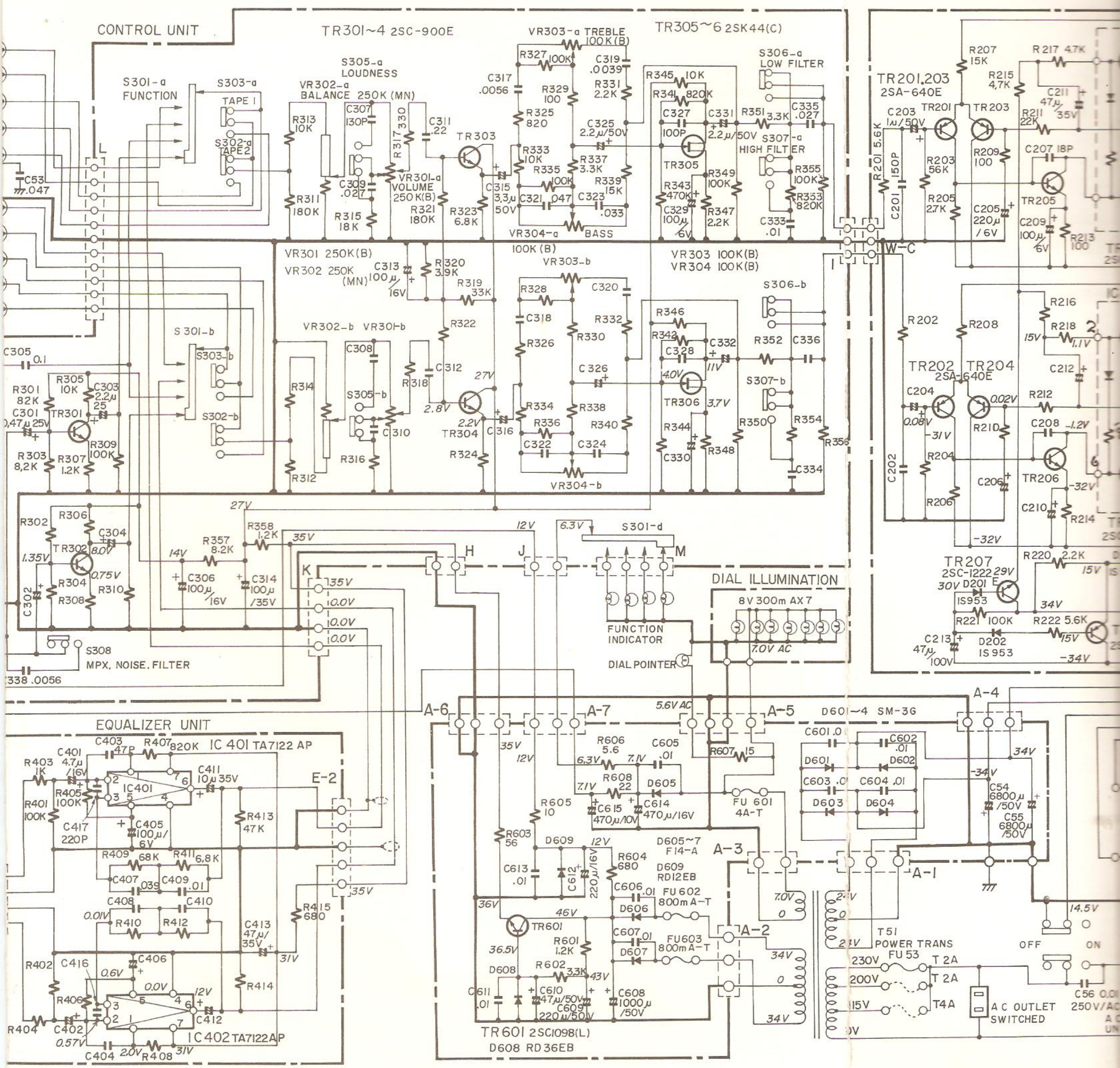
AM/FM STEREO RECEIV



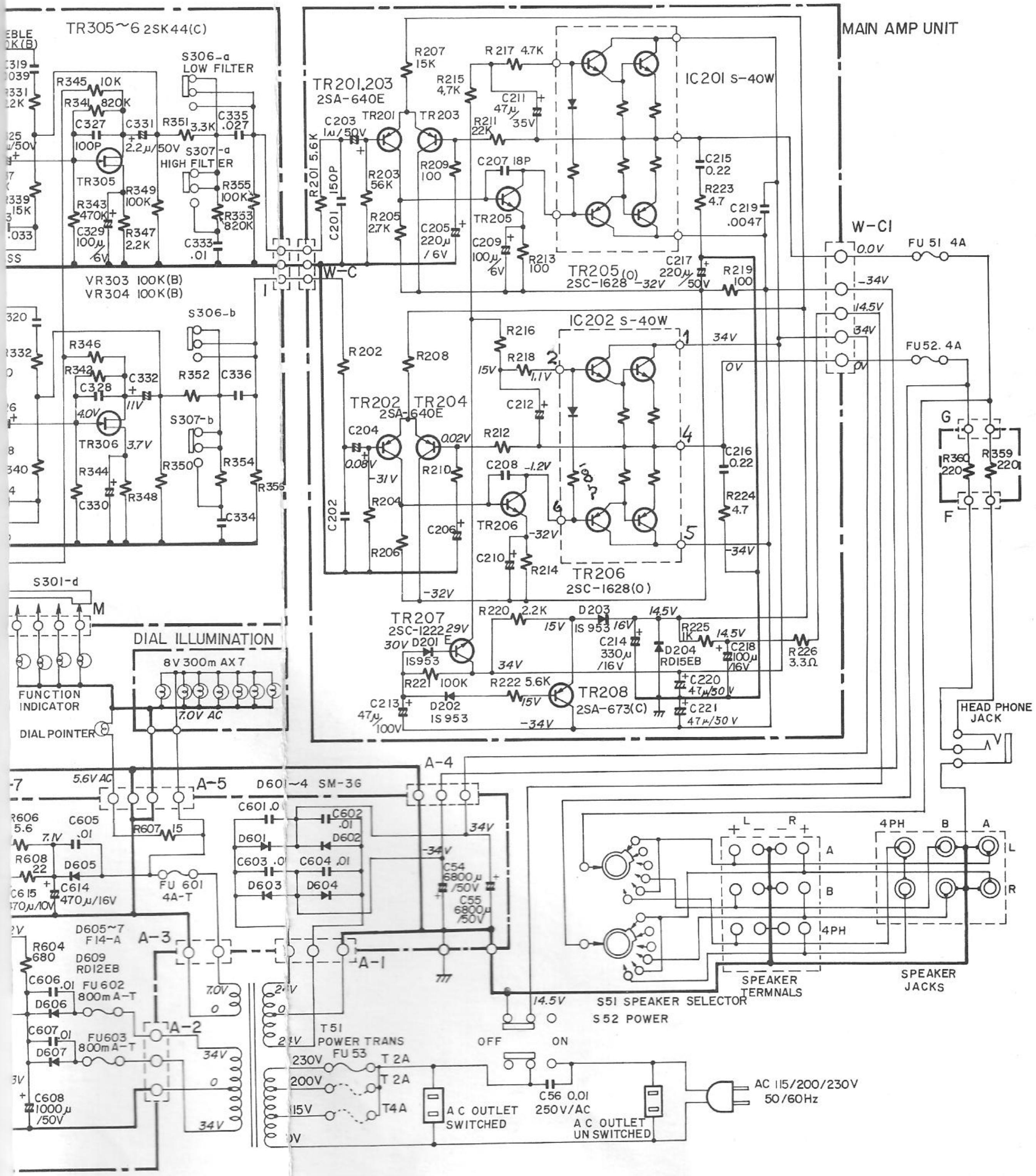
Printed in Japan
78970861

M/FM STEREO RECEIVER





CONTROL UNIT
TR301~4 2SC-900E
TR305~6 2SK44(C)
S301-a FUNCTION
S303-a TAPE 1
S302-a TAPE 2
S305-a LOUDNESS
VR302-a BALANCE 250K (MN)
VR301-a VOLUME 250K(B)
VR303-a TREBLE 100K(B)
VR304-a BASS 100K (B)
S306-a LOW FILTER
S307-a HIGH FILTER
VR301 250K(B)
VR302 250K (MN)
VR303 100K(B)
VR304 100K(B)
S308 MPX. NOISE. FILTER
TR201,203 2SA-640E
TR202 TR204 2SA-640E
TR207 2SC-1222
DIAL ILLUMINATION
8V 300m AX7
FUNCTION INDICATOR
DIAL POINTER
EQUALIZER UNIT
IC 401 TA7122 AP
IC 402 TA7122AP
D601~4 SM-3G
D605~7 F14-A
D609 RD12EB
TR601 2SC1098(L)
D608 RD36EB
FU 601 4A-T
FU 602 800m A-T
FU603 800m A-T
T51 POWER TRANS
FU 53
A C OUTLET SWITCHED
OFF
ON



TR305~6 2SK44(C)
S306-a LOW FILTER
S307-a HIGH FILTER
VR303 100K(B)
VR304 100K(B)
S306-b
S307-b
MAIN AMP UNIT
TR201,203 2SA-640E
IC201 S-40W
IC202 S-40W
TR202 TR204 2SA-640E
TR205(0) 2SC-1628
TR206 2SC-1628(0)
TR207 2SC-1222
TR208 2SA-673(C)
W-C
W-C1
FU51 4A
FU52. 4A
S301-d
DIAL ILLUMINATION
8V 300m AX7
FUNCTION INDICATOR
DIAL POINTER
A-5
A-4
A-3
A-2
A-1
D601~4 SM-3G
D605~7 F14-A
D609 RD12EB
FU 601 4A-T
FU602 800mA-T
FU603 800mA-T
T51 POWER TRANS
FU 53
A C OUTLET SWITCHED
A C OUTLET UN SWITCHED
C56 0.01 250V/AC
AC 115/200/230V 50/60Hz
S51 SPEAKER SELECTOR
S52 POWER
OFF
ON
SPEAKER TERMNALS
SPEAKER JACKS
HEAD PHONE JACK
4PH