

ST-S570ES

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

General

Circuit System	FM stereo, FM/AM super-heterodyne tuner PLL quartz-locked digital synthesizer system
Power requirements	U.K. model: 240 V AC (or 220 V AC adjustable by authorized Sony person- nel), 50/60 Hz AEP, Germany, Italian model : 220 - 230 V AC (or 240 V AC adjustable by authorized Sony personnel), 50/60 Hz
Power consumption	11 watts
Dimension	Approx. 430 x 85 x 345 mm (w/h/d) (17 x 3 3/8 x 13 5/8 inches)
Weight	Approx. 3.8 kg (8 lb 7 oz)
Accessories Supplied	Connecting Cord (1) AM loop antenna (1) Remote control cord (4-pin) (1)

FM tuner

Tuning range	87.5-108 MHz
Intermediate frequency	10.7 MHz
Sensitivity	mono S/N 26 dB 10.3 dBf, 0.9 μ V/75 ohms stereo S/N 46 dB 38.5 dBf, 23 μ V/75 ohms
Usable sensitivity	10.3 dBf, 0.9 μ V/75 ohms (IHF)
Signal-to-noise ratio	at 40 kHz deviation 80 dB (mono) 76 dB (stereo)
Harmonic distortion	WIDE 0.04% (mono) 0.05% (stereo) NARROW 0.06% (mono) 0.08% (stereo)
Separation at 1 kHz	60 dB
Selectivity	at 400 kHz WIDE 80 dB NARROW 90 dB at 300 kHz WIDE 45 dB NARROW 70 dB
Output	at 40 kHz deviation 400 mV (for UK model) 600 mV (for AEP, Germany, Italian model)

AM tuner

Tuning range	EXCEPT Italian model MW: 531-1602 kHz (9 kHz step) LW: 153-279 kHz (1 kHz step) Italian models MW: 522-1611 kHz (9 kHz step) LW: 144-288 kHz (1 kHz step)
Intermediate frequency	450 kHz
Usable sensitivity	250 μ V/m 30 μ V/m
MW	AM loop antenna External antenna
LW	AM loop antenna External antenna
Signal-to-noise ratio	54 dB
Harmonic distortion	0.3%
Selectivity	at 9 kHz: 50 dB

Design and specifications subject to change without notice.

FM STEREO/FM-AM TUNER
SONY®

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Features

Precise Tuning with the large knob

The detected revolution of the tuning knob is under digital-control so that you can tune in the correct frequency and stored station easily.

This system employs a variable muting function that adjusts itself to the rotation speed of the TUNING knob and changes the muting time. This function realizes a feeling which is very close to that of an analog type tuner.

Direct comparator technology

An employed PLL IC allows the comparison frequency to be as high as the channel spacing frequency, thus eliminating the tendency of a low comparison frequency to slip into the audio range and degrade the signal-to-noise ratio.

RDS (Radio Data System) Service Reception Function (for Customers of ST-S570ES).

Among the various RDS services, the following functions are available.

PS (Program Service name), CT (Clock Time) and PTY (PTY alarm), TP (Traffic Program identification) and TA (Traffic Announcement) service, PI (Program Identification) and AF (Alternative Frequency list) services.

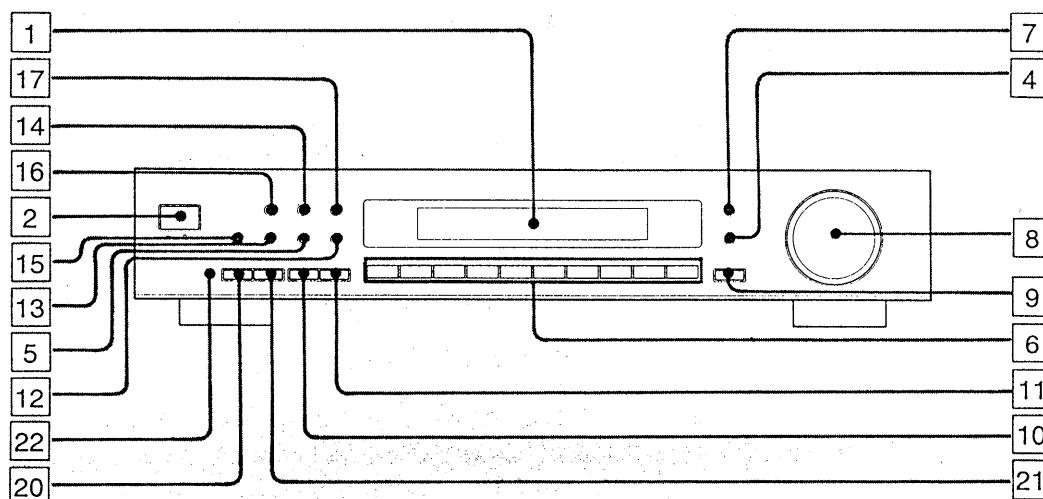
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 GENERAL

This section is extracted from instruction manual.

Parts Identification



Refer to the pages indicated in ● for the items which do not include explanation.

- 1 Display window ●
- 2 POWER switch
- 3 CAL TONE (calibrating tone) button (for ST-S770ES/S333ESG only)
Press this button to obtain a 400 Hz, 50% modulated signal for adjusting the recording level on a cassette deck. "CAL" will appear when a 400 Hz calibrating tone signal is provided. To deactivate the calibrating tone circuit, press the button again.
- 4 TUNE MODE (tuning mode) button
- 5 MUTING button ●
- 6 PRESET buttons ●
- 7 TUNING/PRESET button ●
- 8 TUNING/CHARACTER knob
- 9 SHIFT button ●
- 10 MEMORY button ●
- 11 Band selector ●
- 12 FM MODE button

Auto Stereo: Normally, select this mode (by making the HI-BLEND and MONO indicators disappear from the display window) when you tune in a strong FM broadcast.

HI-BLEND: Select this position when the high-frequency sound is noisy in the FM band. The high-frequency noise will be reduced, but this lowers the stereo effect.

MONO: Select this position when you tune in a very weak or noisy FM station. Although the sound will come out in monaural the noise will be greatly reduced.

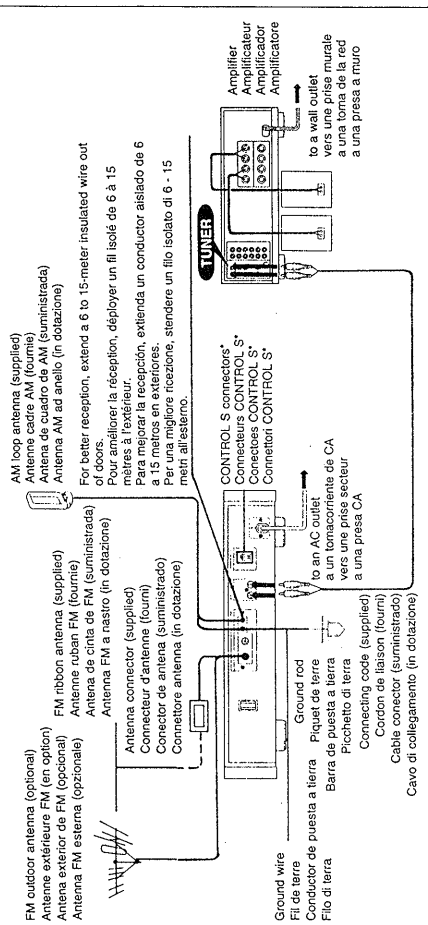
- 13 IF (intermediate frequency) BAND button
To prevent inter-station interference, press this button. The NARROW indicator appears on the display and the selectivity is improved.
- 14 DISPLAY button ●
- 15 RF MODE button
- 16 CHARACTER button ●
- 17 DISPLAY MODE button ●
- 20 AF button
- 21 RDS button
- 22 WAIT indicator ●

Connections

Notes on Connections

- Connect the AC power cord last. Make sure power is off. Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for left channel (L).
- Fully insert cable connectors into jacks. Loose connections may cause hum or noise.
- Keep the speaker cords, connecting cord and power cord away from the AM loop antenna or antenna lead-in of the tuner to avoid possible noise pickup.

Connection Diagram



- **CONTROL S connector (with the supplied remote control cord)**
IN: Connect to the CONTROL S OUT connector of other Sony equipment for whole audio system remote control.
OUT: Connect to the CONTROL S IN connector of other Sony equipment for whole audio system remote control.

Note on the CONTROL-S input

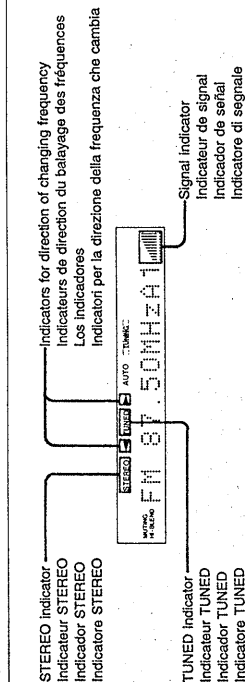
Note on the CONTROL-S input: To remote control this unit through a receiver or amplifier, connect the input on this unit to the CONTROL-S output on a Sony receiver or amplifier, with a CONTROL-S cord. When this connection is used, only remote commands sent through the receiver or amplifier will be executed. The remote sensor on this unit will not function.

For customers supplied with the AC plug adaptor

When the AC plug is unsuitable for the type of AC outlet in your country, use the supplied AC plug adaptor.

Broadcast Reception

Indication on the display



STEREO indicator: Lights when an FM stereo program is tuned in.

Signal indicator: Indicates the signal strength of the station being received.

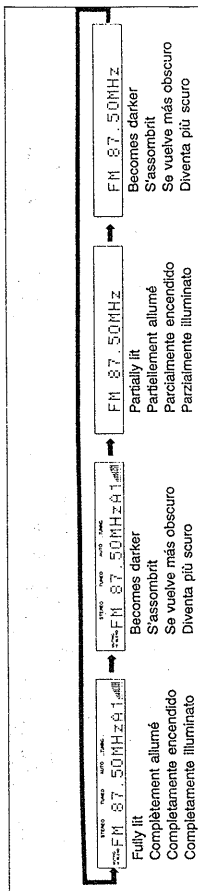
TUNED indicator : Lights when a station is tuned in accurately.

Direction indicators:
 ▲ : Lights when the frequency or the preset number increases.

▼ : Lights when the frequency or the preset number decreases.

Switching of the indication area in the display window

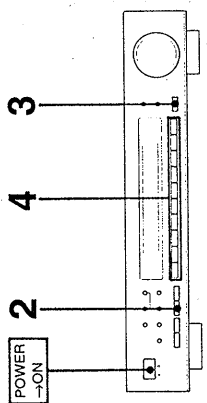
Each time the DISPLAY MODE button is pressed, the indication will change in the following manner.



If you operate the any buttons or TUNING knob at not fully lit, the display will be fully lit for 4 seconds.

Broadcast Reception

Storing station frequency into memory



A total of 30 FM/AM stations in any band can be memorized.

- 1 Press MEMORY.**
"MEMORY" appears in the window.
- 2 Press TUNE MODE.**
"AUTO" appears and the tuner will automatically search for tuned stations and store them in the memory.
Scanning starts from the lowest frequency in the FM band and the received stations are automatically stored sequentially from code A-1.
 - RDS mode: Only RDS stations are stored.
 - RDS TP mode: Only RDS TP stations are stored.

Storing one station at a time

- 1 Tune in the desired station.**
- 2 Press MEMORY.**
"MEMORY" appears in the window.
- 3 Press SHIFT** to select the memory page A, B, or C.
- 4 Select a preset number** with the PRESET button.

Repeat the above steps for each station to be stored in memory.

Broadcast Reception

Receiving RDS (Radio Data System) Service

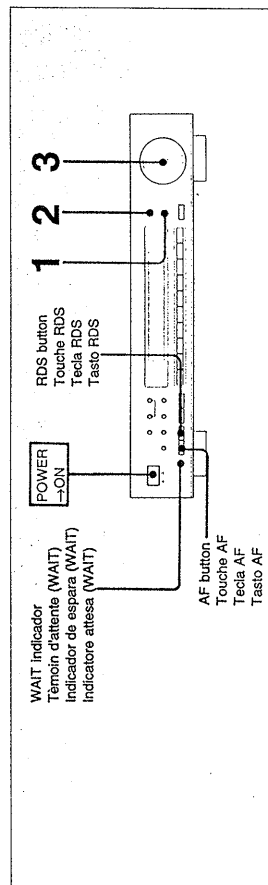
Some FM stations have started RDS services which is a method to display certain information with the program. By setting the tuner in the RDS mode, you can:

- display the station name and time ... PS (Program Service name), CT (Clock Time) display service
- receive emergency announcements ... PTY (Program Type) display service
- receive traffic information announcements ... TP (Traffic Program Identification) /TA (Traffic Announcement) service

Also, you can receive better frequency for your station ... PI (Program Identification) and AF (Alternative Frequency list)

To receive display service

When listening to an FM program,
Press RDS so that "RDS" appears in the window.
If the station you are receiving is an RDS station, "RDS Service" appears and the station name will be displayed.



If the station you are receiving is not an RDS station, "No RDS Signal" will be displayed. In such case,

- 1 Press TUNE MODE** so that "AUTO" appears in the window.
- 2 Press TUNING/PRESET** so that "TUNING" appears.
- 3 Turn the TUNING knob.**

The tuner will search for other RDS station and first station name will be displayed.

Broadcast Reception

Each time you press **DISPLAY**, the display will change as follows:

Note:

- "No Time DATA" will appear for stations without CT service. If it appears for CT stations, time will appear within 1 minute.
- If you have previously stored the station name, it will be cancelled when receiving an RDS station.
- Whenever there is an emergency announcement in any station, "PTY ALARM" will blink.

To return to normal FM reception
Press RDS twice so that "RDS" goes off.

Receiving traffic information ... TP
(Traffic Program Identification) service

When listening to an FM program,

Press RDS twice so that "RDS TP" appears in the window.

Whenver a traffic announcement starts at any station, "TA" will appear in the window. (It will appear in RDS mode also.)

If the station you are receiving does not have TP service, follow steps 1-3 above.

The tuner will search for other TP stations. Whenever a traffic announcement starts at any station, "TA" will appear in the window.

To return to normal FM reception

Press RDS so that "RDS TP" goes off.

Broadcast Reception

Receiving the clearest station ... PI (Program Identification) /AF (Alternative Frequency list)

If the reception of the FM program you are listening to is weak, the tuner will search for a better frequency in your area of the same program.

- 1 Press RDS so that "RDS"(or "RDS TP") appears in the window.

If the station you are receiving is an RDS station, "RDS Service" will be displayed. If the station you are receiving is not an RDS station, follow steps 1-3 on the previous page.

- 2 Press **AF**.
The tuner will search for and display its alternative frequency list (other frequencies of the same program) and then stop at the frequency of a stronger signal ("AF 1").

If there are no stronger alternative frequencies, "No AF list" will appear and return to the original frequency.

If the WALT indicator lights up

If the WAIT indicator lights up in some countries, the WAIT indicator will light up while the tuner is searching for alternative frequencies. In such case, wait 1 minute after step 1 and then press AF. (If you press AF while the indicator is blinking, the tuner might not search for the strongest signal station.)

Once the search is done, the tuner will memorize the alternative frequencies in the order of the strongest signals.

If you want to receive another alternative frequency, you can press AF and choose other better frequencies that the tuner displays. ("AF 2" "AF 3" ...)

To return to normal FM reception

Press RDS so that "RDS" (or "RDS TP") goes off.

Broadcast Reception

Usable letters and symbols

When the TUNING/CHARACTER knob is turned to the right, a blinking cursor appears first and you can select a blank space. As you continue to turn the TUNING/CHARACTER knob, letters and symbols will appear in the following order.

To call up a previous character, turn the TUNING/CHARACTER knob to the left.

[illegible]

To check the station frequency of a stored station

For ST-S570ES:

Press the DISPLAY button. This button can be used for switching between the indications of frequencies and memos as well as for indications of digital signal strength (on the FM bands only).

For ST-S770ES:

Each time you press **DISPLAY**, the frequency and memo will appear alternatively.

To preset station names of 20 stations automatically, see p.24.

SECTION 2 ADJUSTMENTS

- Refer to Adjustment Location on page

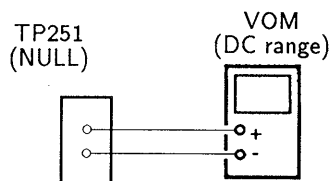
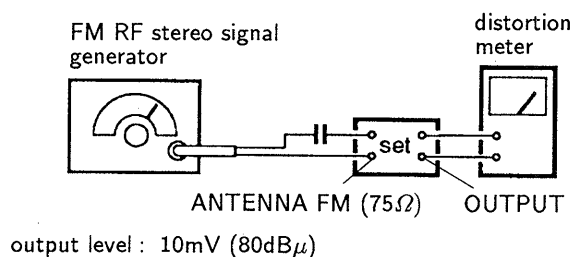
Note : As a front-end (FE101, 421 etc.) is difficult to repair if faulty, replace it with new one.

FM SECTION

- Standard Setting of FM Stereo RF Signal Generator.

STEREO STANDARD SIGNAL	MONAURAL STANDARD SIGNAL
Carrier frequency : 98MHz Modulation : Audio 1kHz, 40kHz deviation Subchannel 38kHz, 40kHz deviation Pilot 19kHz, 7.5kHz deviation	98MHz 1kHz, 40kHz deviation

FM Discriminator Adjustment (NULL and MONO Distortion)

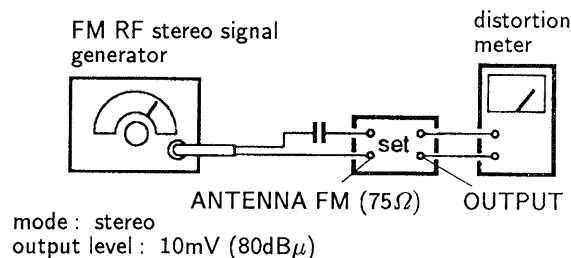


Procedure :

1. Tune the set to 98MHz.
2. Adjust T252 for 0V reading on the VOM.
..... NULL
3. Adjust T253 for a minimum reading on the distortion meter. MONO Distortion
4. Repeat the adjustments of 2 and 3 several times.

Note : When replacing the ceramic filter, perform this alignment.

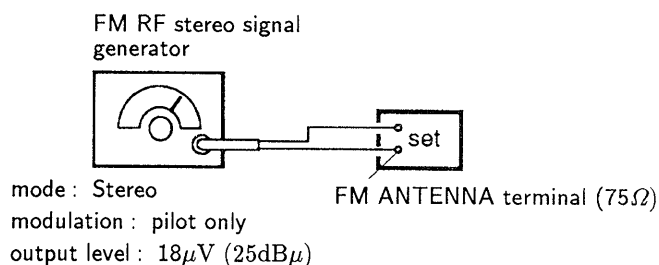
FM Stereo Distortion Adjustment



Procedure :

1. Tune the set to 98MHz.
2. Adjust IFT in FE101 for a minimum reading on the distortion meter.

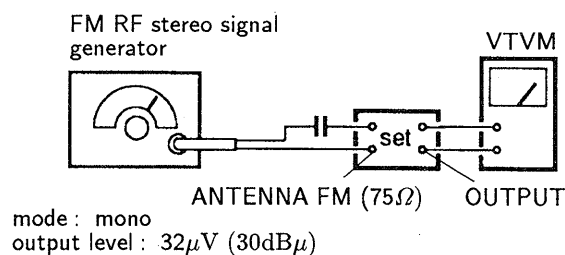
FM Stereo Indication Lighting Level Adjustment



Procedure :

1. Tune the set to 98MHz.
2. Adjust RV251 to the place where "STEREO", "TUNED" indication lights.

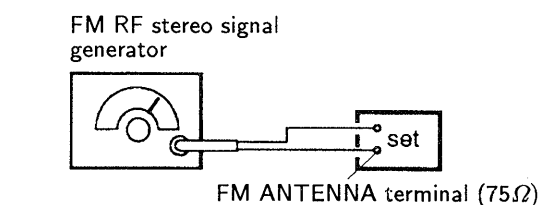
FM Muting Level Adjustment



Procedure :

1. Tune the set to 98MHz.
2. Push the MUTING switch and put on the light the "MUTING" indicator in the fluorescent display.
3. Set SSG output level to $32\mu\text{V}$ (30dB μ).
4. Adjust RV252 so that the reading of VTVM becomes within $25\mu\text{V}$ (28dB μ) – $40\mu\text{V}$ (32dB μ).

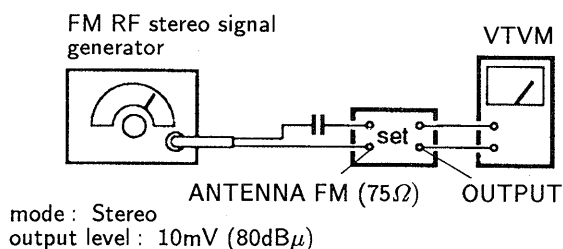
FM Signal Level Adjustment



Procedure :

1. Tune the set to 98MHz.
2. Push the display button to change the display mode for signal strength indication.
3. Adjust RV221 to the place where level 10 in the signal strength bar indicator lights and "75dB" indication lights on fluorescent tube.

FM Stereo Separation Adjustment



Procedure :

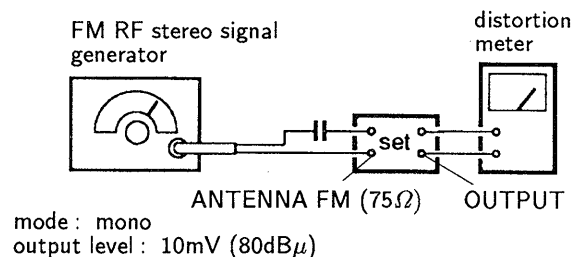
FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV301 minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV301 for minimum reading.

L-CH Stereo separation : Ⓐ – Ⓑ

R-CH Stereo separation : Ⓒ – Ⓓ

The separation of both channels should be equal.

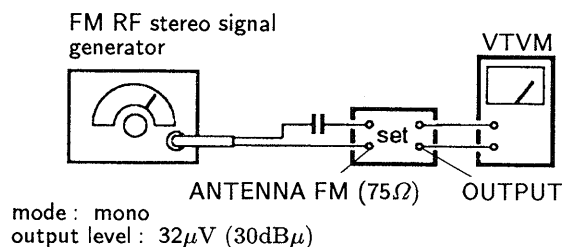
FM Narrow Distortion Adjustment



Procedure :

1. Tune the set to 98MHz.
2. Push the IF BAND switch and put on the light the "NARROW" indicator in the fluorescent display.
3. Adjust RV232 for a minimum reading on the distortion meter.

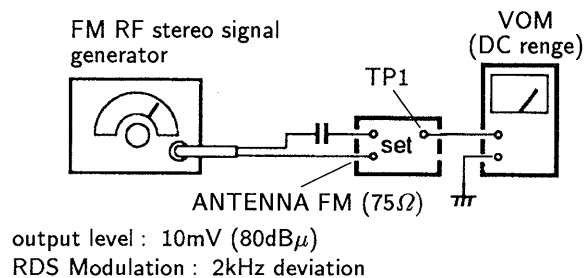
FM Narrow Gain Adjustment



Procedure :

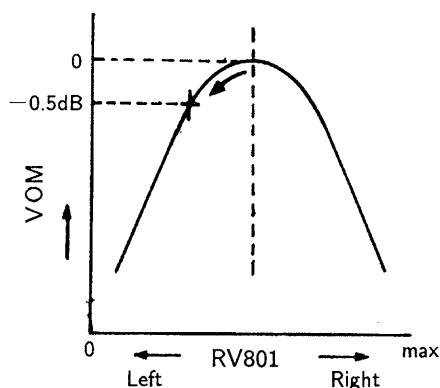
1. Tune the set to 98MHz.
2. Push the IF BAND switch and put on the light the "NARROW" indicator in the fluorescent display.
3. Set SSG output level to $32\mu\text{V}$ (30dB μ).
4. Adjust RV231 so that the reading on VTVM becomes within $25\mu\text{V}$ (28dB μ) – $40\mu\text{V}$ (32dB μ).

RDS, BPF Adjustment



Procedure :

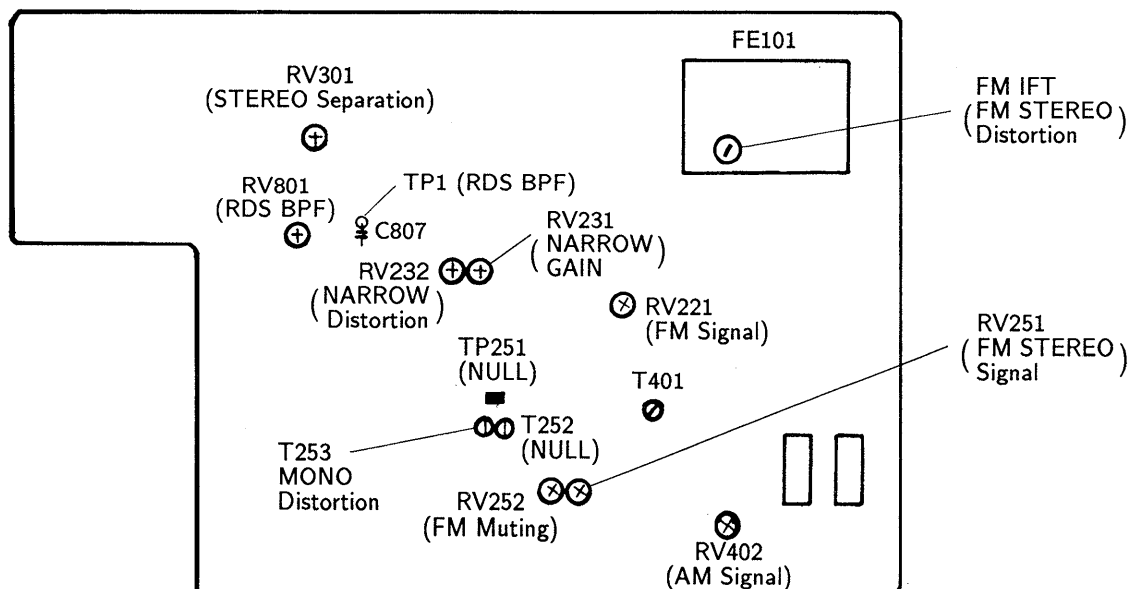
1. Turn RV801 to counterclockwise (left) and set the level below 0.5dB than maximum reading on the VOM. (refer to below drawing.)



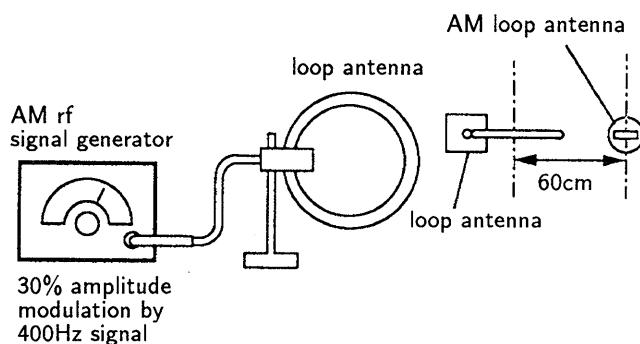
Adjustment Location

- TUNER BOARD -

(Component Side)

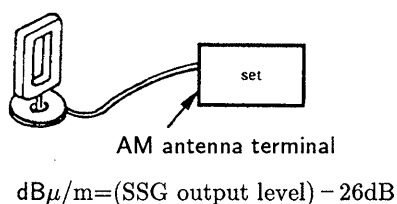


AM SECTION



Carrier frequency : 216kHz (LW Band)

AM loop antenna



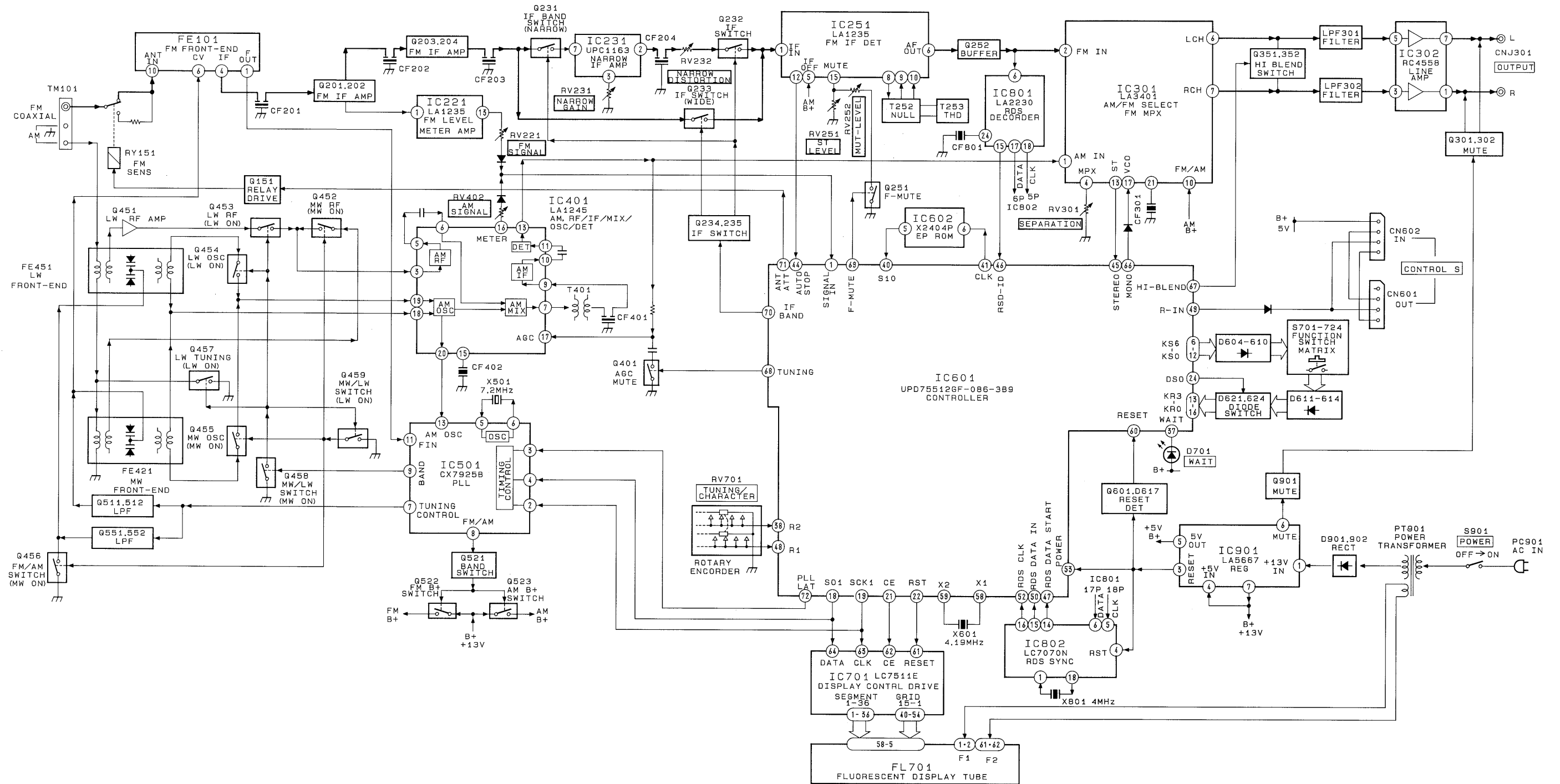
AM Signal Level Adjustment

Procedure :

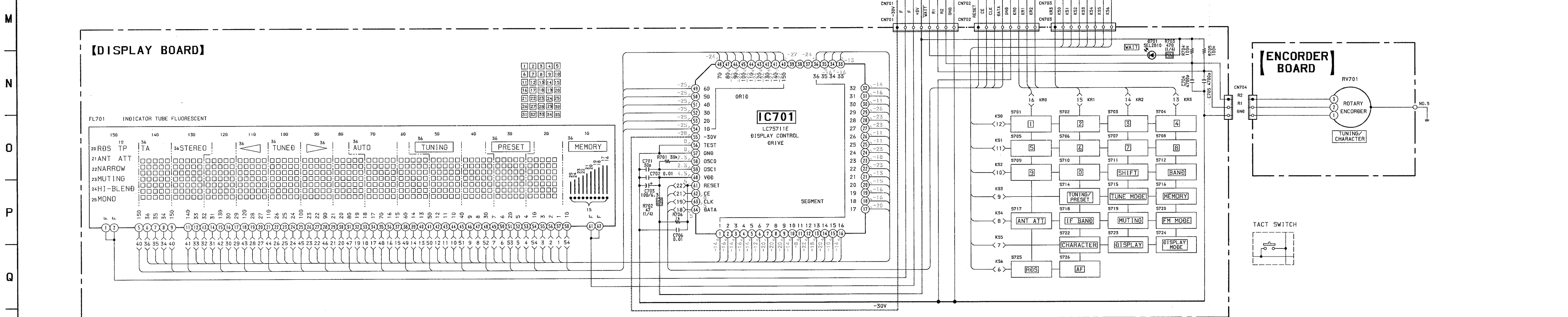
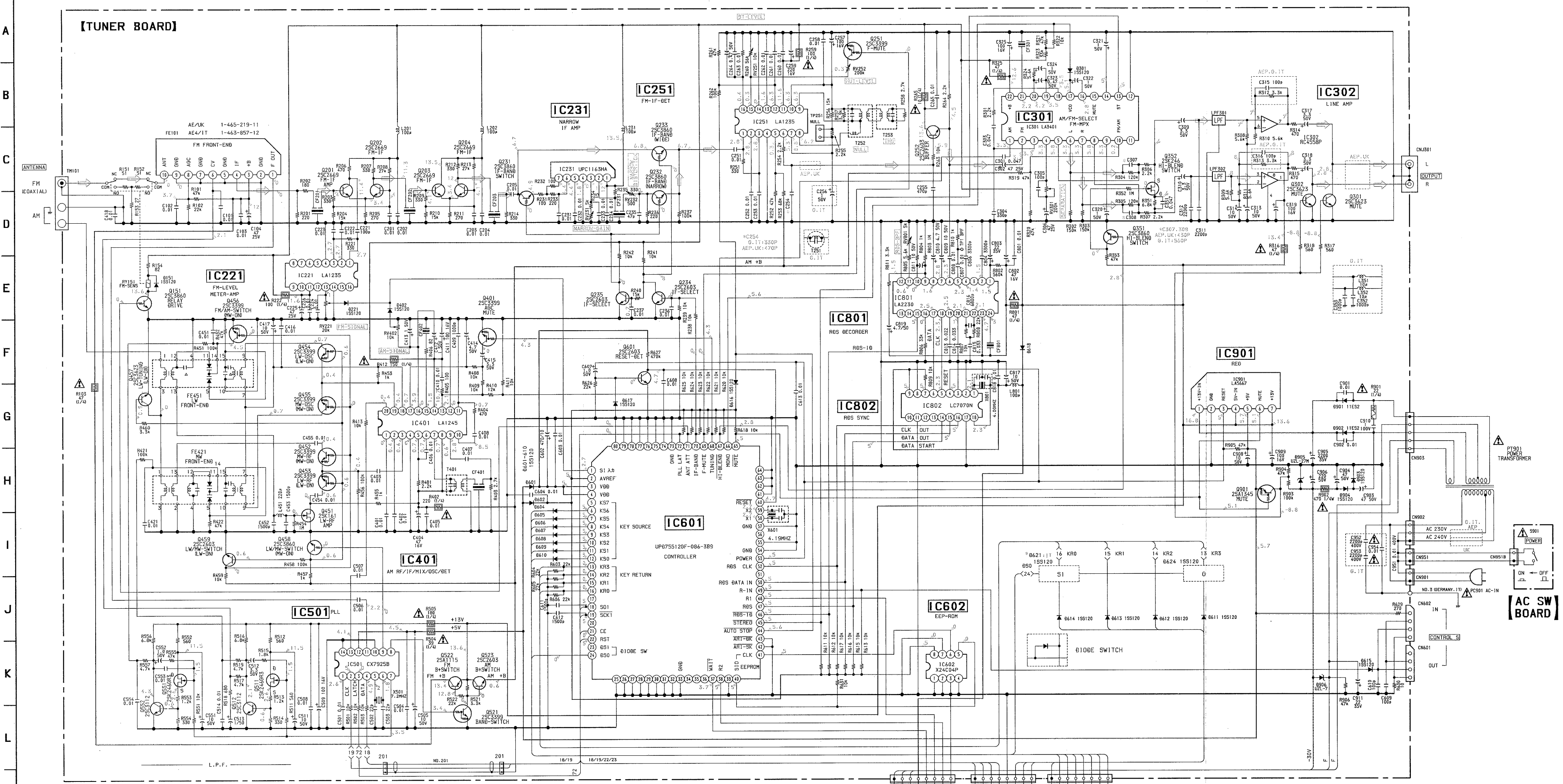
1. Set SSG output level so that antenna input level of the set becomes 5.0mV (74dBμ/m).
2. Adjust RV402 to the place where level 10 in the signal strength indicator turns from dark to light.

SECTION 3 DIAGRAMS

3-1. BLOCK DIAGRAM



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24



Note on Schematic Diagram :

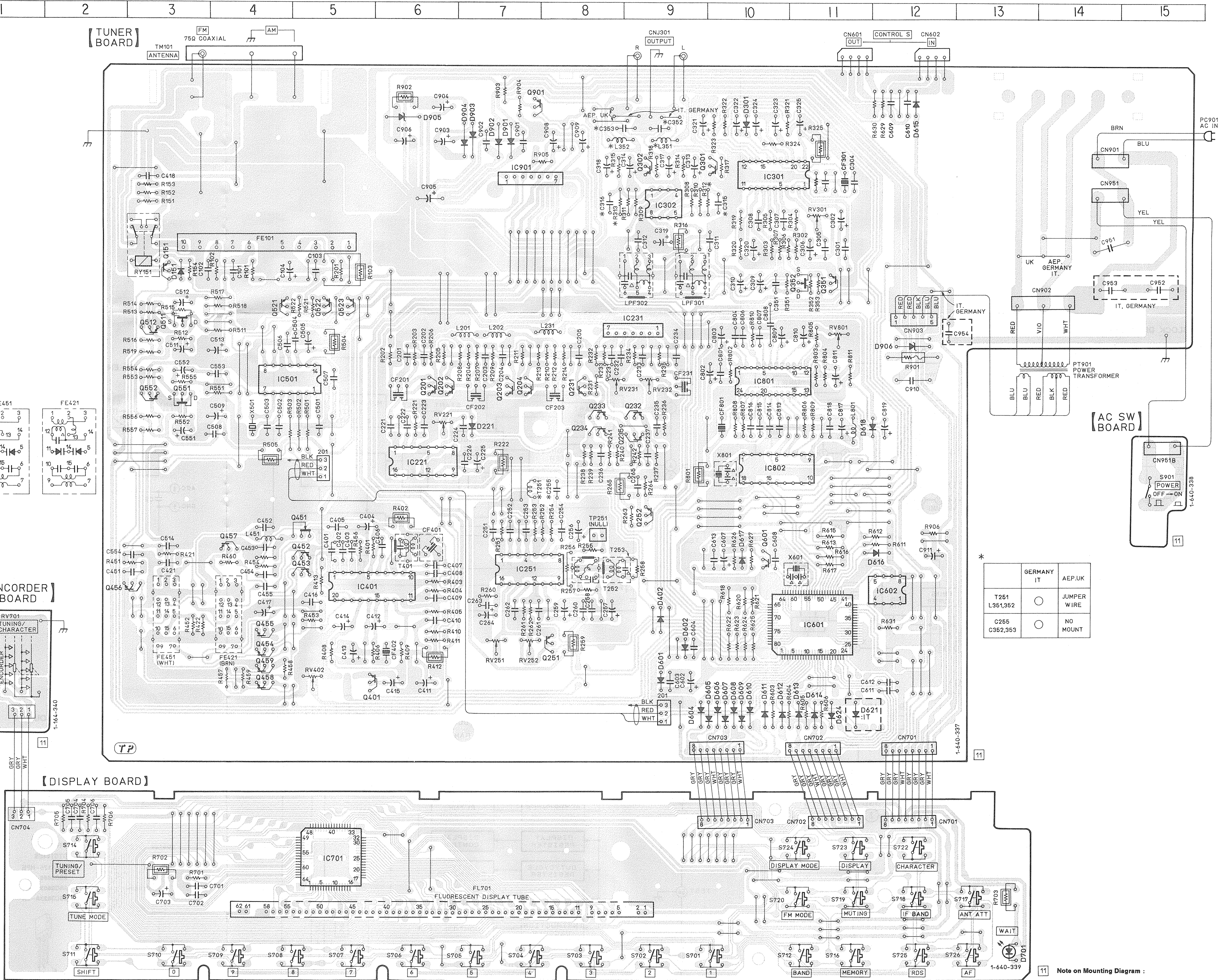
- All capacitors are in μF unless otherwise noted. pF: μF μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{2}$ W or less unless otherwise specified.
- Δ : internal component.
- $\square$: nonflammable resistor.
- $\square$: fusible resistor.

Note : The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

$\square$: B + Line.
 $\square$: B - Line.
 $\square$: adjustment for repair.
 $\square$: Voltage and waveforms are dc with respect to ground under no-signal(detuned) conditions.
 $\square$: no mark : FM
 $\square$: Voltages are taken with a VOM (input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
 $\square$: Signal path.
 $\square$: FM

• Semiconductor Location

Ref. No.	Location
D151	D-3
D221	E-7
D301	B-10
D402	H-9
D501	H-9
D602	H-9
D604	I-9
D605	I-10
D606	I-10
D607	I-10
D608	I-10
D609	I-10
D610	I-10
D611	I-10
D612	I-10
D613	I-11
D614	I-11
D615	B-12
D616	O-12
D617	O-10
D618	I-11
D621	I-11
D624	I-11
D701	L-13
D901	B-7
D902	B-7
D903	B-7
D904	B-7
D905	B-6
D906	D-12
IC221	F-6
IC231	D-9
IC251	O-7
IC301	B-10
IC302	O-9
IC401	O-9
IC501	O-11
IC601	O-11
IC701	O-12
IC801	F-10
IC802	F-10
IC901	B-7
Q151	D-3
Q201	F-6
Q202	F-6
Q203	F-6
Q204	F-7
Q231	F-7
Q232	F-7
Q233	F-7
Q234	F-7
Q235	F-7
Q251	H-8
Q252	H-8
Q301	B-10
Q302	B-9
Q351	D-11
Q352	D-11
Q401	I-5
Q451	O-5
Q452	O-5
Q453	O-5
Q454	H-4
Q455	H-4
Q456	G-2
Q457	G-4
Q458	I-4
Q459	H-4
Q511	D-3
Q512	D-3
Q521	D-4
Q522	D-5
Q523	D-5
Q551	F-3
Q601	G-10
Q901	B-7



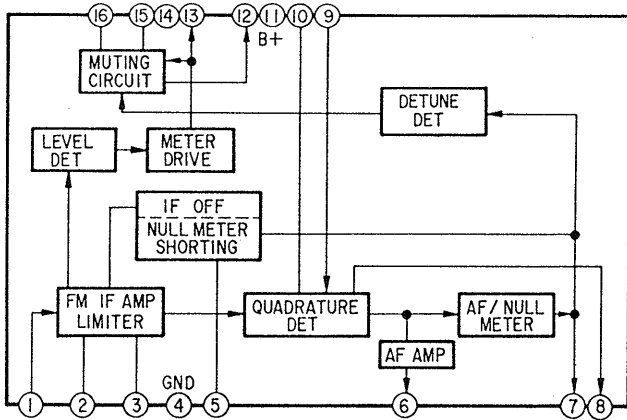
	GERMANY	IT	AEP,UK
T251			JUMPER WIRE
C255			NO MOUNT

Note on Mounting Diagram :

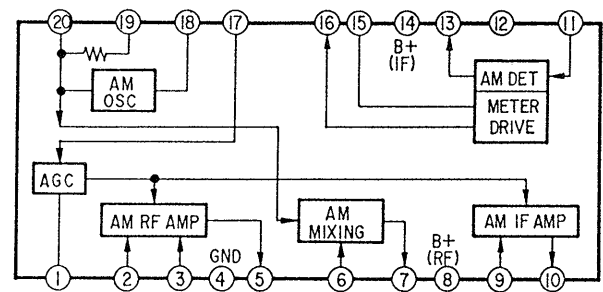
- : Parts extracted from the component side.
- : Indicates side identified with part number.
- : Pattern on the side which is seen.

3-4. IC BLOCK DIAGRAMS

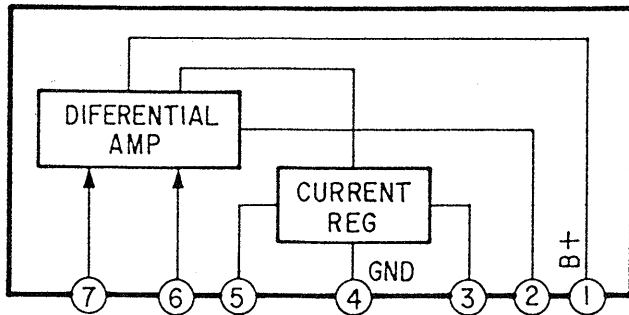
IC221, IC251 LA1235



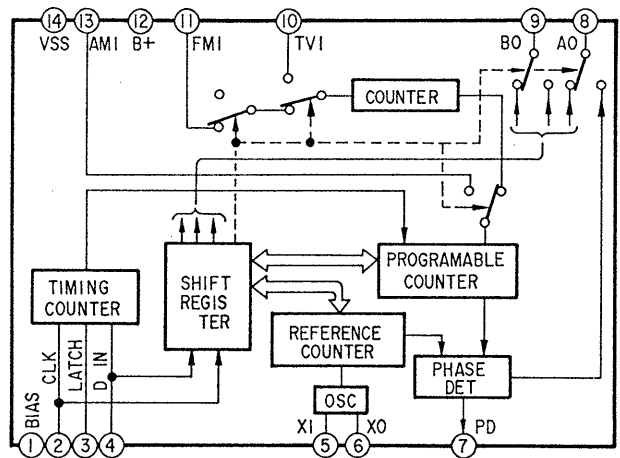
IC401 LA1245



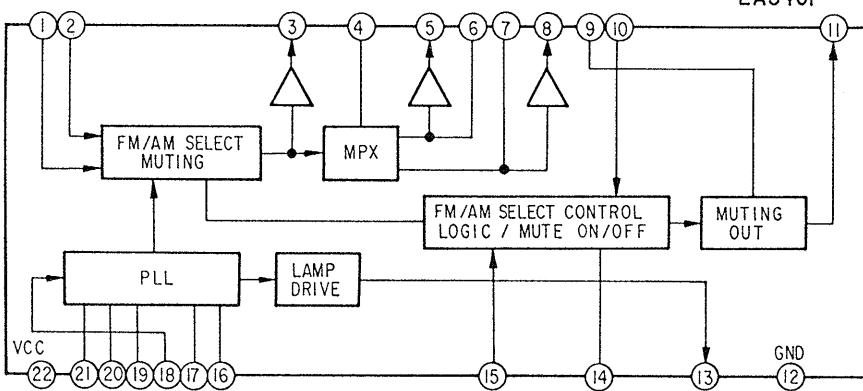
IC231 μ PC1163HA



IC501 CX7925B

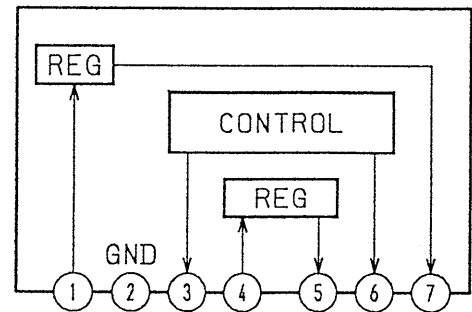


IC301 LA3401



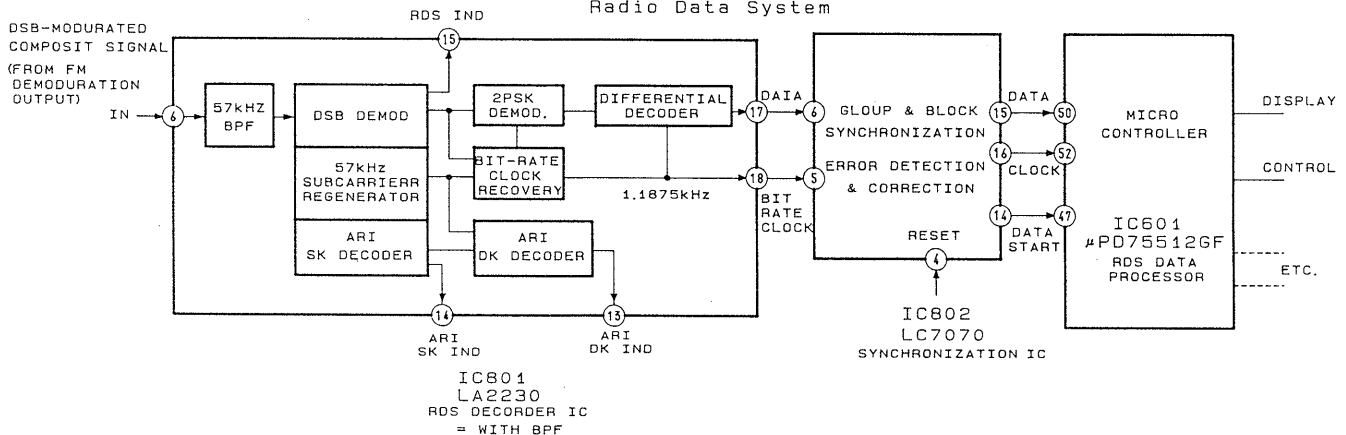
LA3401

IC901 LA5667



IC601 μ PD75512GF, IC802 LC7070, IC801 LA2230

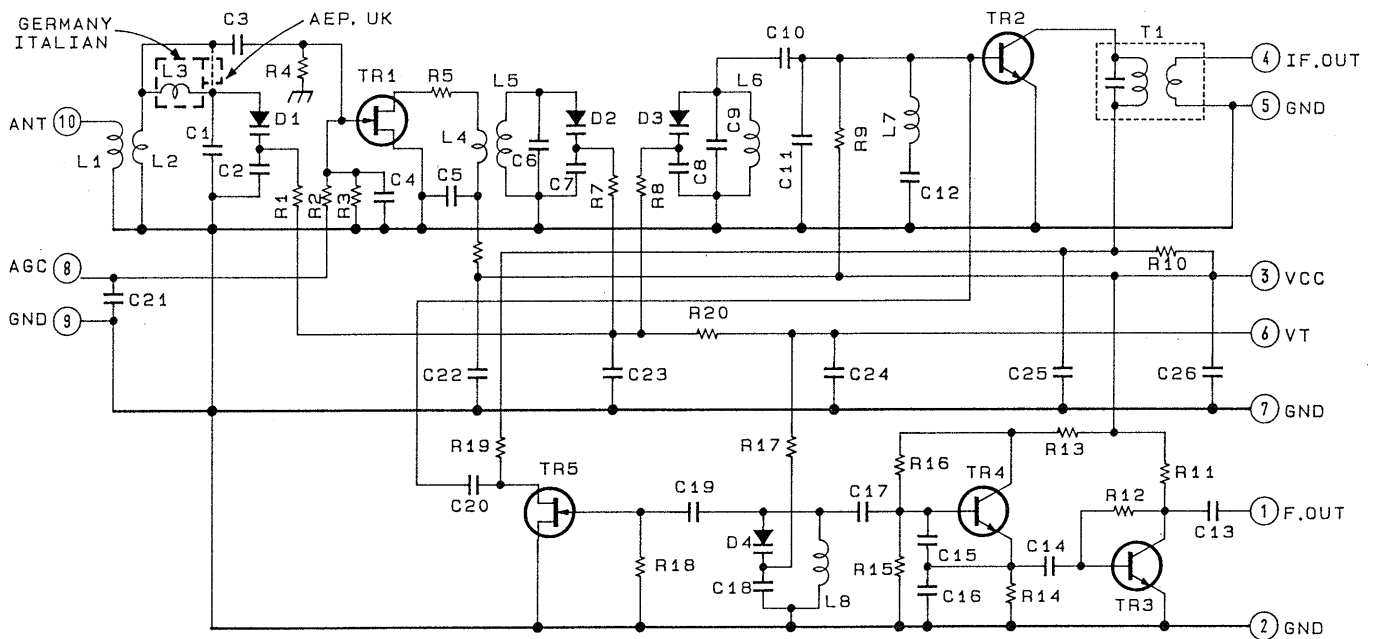
RDS DECODER IC's
Radio Data System



The block diagram illustrates the internal architecture of the M.V. GENERATION TIMING & CONTROL system. The components and their interconnections are as follows:

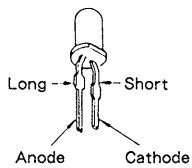
- Power and Test Pins:** Vcc (8), Vss (4), SDA (5), SCL (6), A2 (3), A1 (2), A0 (1), and TEST (7) are shown on the left side.
- START STOP LOGIC:** Receives SDA and SCL signals and provides a START CYCLE signal to the M.V. GENERATION TIMING & CONTROL block.
- SLAVE ADDRESS REGISTER COMPARATOR:** Receives SDA and SCL signals and provides LOAD and INC signals to the WORD ADDRESS COUNTER.
- CONTROL LOGIC:** Receives SDA and SCL signals and provides LOAD and INC signals to the WORD ADDRESS COUNTER.
- WORD ADDRESS COUNTER:** Receives LOAD and INC signals and provides R/W and CK signals to the DATA REGISTER.
- M.V. GENERATION TIMING & CONTROL:** Receives the START CYCLE signal and provides a 64-bit signal to the E PROM.
- E PROM 64x64:** Receives a 64-bit signal from the M.V. GENERATION TIMING & CONTROL block and provides a 64-bit signal to the VDEC block.
- VDEC:** Receives a 64-bit signal from the E PROM and provides an 8-bit signal to the DATA REGISTER.
- DATA REGISTER:** Receives an 8-bit signal from the VDEC block and provides a DOUT signal to the DOUT ACK block.
- DOUT ACK:** Receives the DOUT signal and provides a signal to the TEST pin.

3-5. FM FRONT-END (FE101)

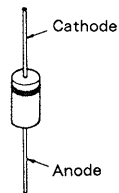


3-6. SEMICONDUCTOR LEAD LAYOUTS

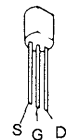
SEL2810A-C



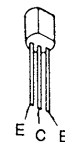
10ES2



2SK246GR3



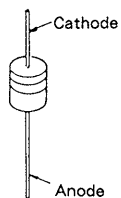
2SC3112B



1SS120

HZS7B2L

HZS27-2L



DTC114TS

DTC144ES

2SA1175-HFE

2SC2689-0Y

2SC2603-EF

2SC3623A-LK



2SK161-YGR



SECTION 4

EXPLODED VIEWS

NOTE :

- -XX, -X mean standardized parts, so they may have some differences from the original one.

- Color Indication of Appearance Parts
Example :

KNOB, BALANCE (WHITE)...(RED)

Parts color Cabinet's color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.

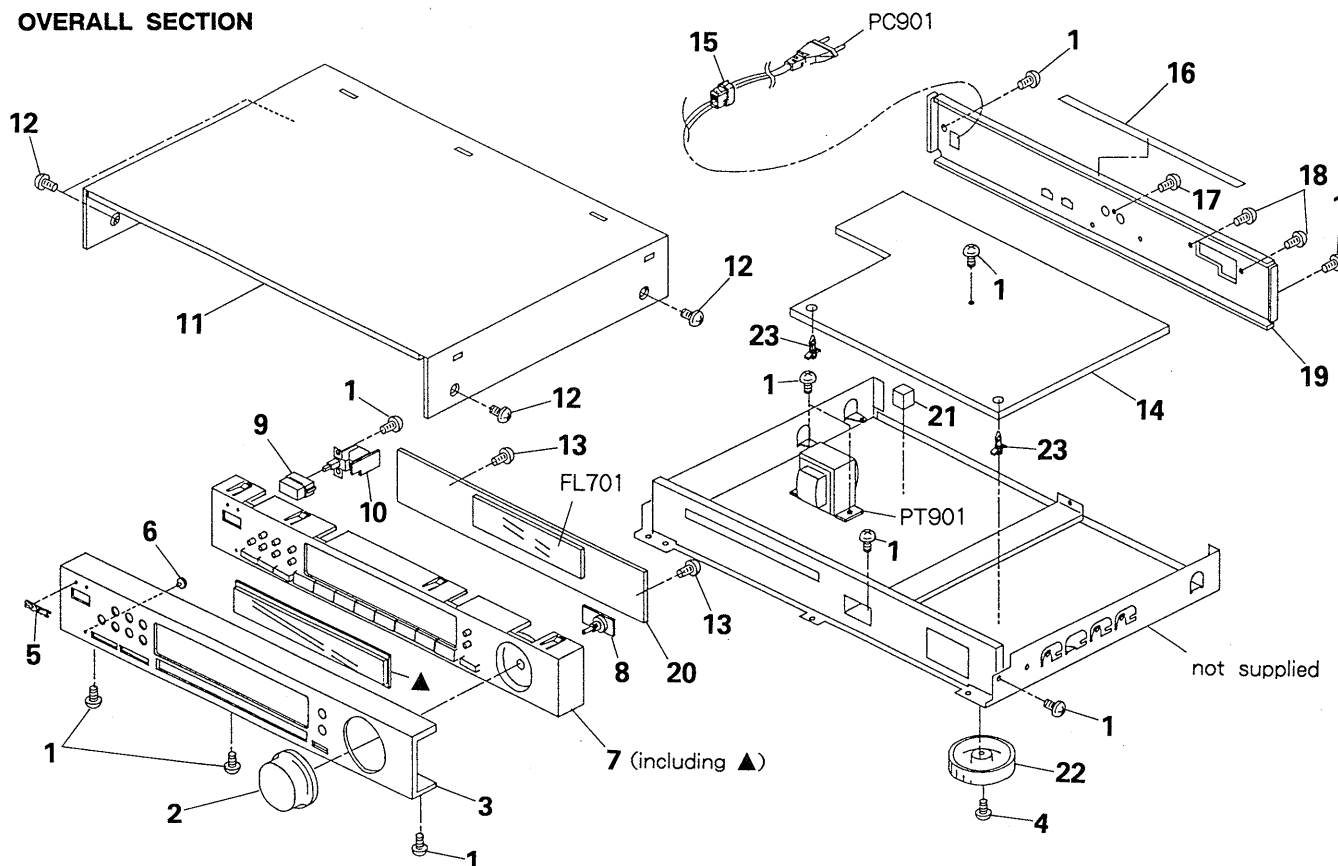
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

G : Germany model

IT : Italian model

OVERALL SECTION



Ref. No.	Part No.	Description	Remark
1	7-682-547-09	SCREW +BV 3X6, S TIGHT	
2	4-945-871-01	KNOB (DIA. 50)	
3	4-945-865-01	PANEL, FRONT (AEP, G. IT)	
	4-945-865-21	PANEL, FRONT (UK)	
4	7-682-548-09	SCREW +BVTT 3X8 (S)	
5	4-908-848-01	EMBLEM, SONY	
6	4-931-646-01	LENS, LED	
7	X-4941-723-1	PANEL (BASE) ASSY	
8	* 1-640-340-11	ENCODER BOARD	
9	3-354-912-01	KNOB, POWER	
10	* 1-640-338-11	AC SW BOARD	
11	4-923-420-71	CASE	
12	3-704-366-01	SCREW (CASE) (M3X8)	
13	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	

Ref. No.	Part No.	Description	Remarks
14	* A-4345-287-A	TUNER BOARD, COMPLETE (AEP)	
	* A-4345-288-A	TUNER BOARD, COMPLETE (G)	
	* A-4345-289-A	TUNER BOARD, COMPLETE (UK)	
	* A-4345-290-A	TUNER BOARD, COMPLETE (IT)	
15	* 3-703-244-00	BUSHING (2104), CORD	
16	* 4-926-828-11	PLATE, LIGHT INTERCEPTION	
17	7-621-849-00	SCREW (BV/RING)	
18	3-704-242-01	SCREW, TERMINAL, + BVTP CLAW	
19	* 4-935-817-11	PANEL, BACK	
20	* A-4345-294-A	DISPLAY BOARD, COMPLETE	
21	* 4-915-430-01	CUSHION (B), P	
22	X-3304-944-1	FOOT ASSY	
23	* 4-924-098-31	HOLDER, PC BOARD	
PC901	△ 1-574-383-11	CORD, POWER (AEP, G, IT)	
	△ 1-574-384-11	CORD, POWER (UK)	
PT901	△ 1-450-406-11	TRANSFORMER, POWER	
FL701	1-519-643-11	INDICATOR TUBE, FLUORESCENT	

DISPLAY

ENCODER

TUNER

SECTION 5
ELECTRICAL PARTS LIST

NOTE :

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

G: Germany model

IT: Italian model

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...
- CAPACITORS:
uF: μ F
- COILS
uH: μ H

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	* A-4345-294-A	DISPLAY BOARD, COMPLETE *****				< VARIABLE RESISTOR >	
	* 1-640-340-11	ENCODER BOARD *****		RV701	1-466-336-11	ENCODER, ROTARY (TUNING, CHARACTER)	
	* 4-945-292-01	HOLDER, INDICATION TUBE < CAPACITOR >				< SWITCH >	
C701	1-102-962-00	CERAMIC 30PF 5% 50V		S701	1-554-303-21	SWITCH, TACTILE (1)	
C702	1-101-004-00	CERAMIC 0.01uF 50V		S702	1-554-303-21	SWITCH, TACTILE (2)	
C703	1-126-177-11	ELECT 100uF 20% 10V		S703	1-554-303-21	SWITCH, TACTILE (3)	
C704	1-161-377-00	CERAMIC 0.0047uF 30% 16V		S704	1-554-303-21	SWITCH, TACTILE (4)	
C705	1-161-377-00	CERAMIC 0.0047uF 30% 16V		S705	1-554-303-21	SWITCH, TACTILE (5)	
C706	1-161-379-00	CERAMIC 0.01uF 20% 25V		S706	1-554-303-21	SWITCH, TACTILE (6)	
		< CONNECTOR >		S707	1-554-303-21	SWITCH, TACTILE (7)	
CN701	* 1-564-342-11	PIN, CONNECTOR 8P		S708	1-554-303-21	SWITCH, TACTILE (8)	
CN702	* 1-564-342-61	PIN, CONNECTOR 8P		S709	1-554-303-21	SWITCH, TACTILE (9)	
CN703	* 1-564-342-11	PIN, CONNECTOR 8P		S710	1-554-303-21	SWITCH, TACTILE (0)	
		< DIODE >		S711	1-554-303-21	SWITCH, TACTILE (SHIFT)	
D701	8-719-301-52	DIODE SEL2810A-C (WAIT)		S712	1-554-303-21	SWITCH, TACTILE (BAND)	
		< INDICATOR >		S714	1-554-303-21	SWITCH, TACTILE (TUNING/PRESET)	
FL701	1-519-643-11	INDICATOR TUBE, FLUORESCENT		S715	1-554-303-21	SWITCH, TACTILE (TUNE MODE)	
		< IC >		S716	1-554-303-21	SWITCH, TACTILE (MEMORY)	
IC701	8-759-823-57	IC LC75711E		S717	1-554-303-21	SWITCH, TACTILE (ANT ATT)	
		< RESISTOR >		S718	1-554-303-21	SWITCH, TACTILE (IF BAND)	
R701	1-249-436-11	CARBON 39K 5% 1/4W		S719	1-554-303-21	SWITCH, TACTILE (MUTING)	
R702	Δ 1-249-401-11	CARBON 47 5% 1/4W		S720	1-554-303-21	SWITCH, TACTILE (FM MODE)	
R703	Δ 1-249-413-11	CARBON 470 5% 1/4W		S722	1-554-303-21	SWITCH, TACTILE (CHARACTER)	
R704	1-249-441-11	CARBON 100K 5% 1/4W		S723	1-554-303-21	SWITCH, TACTILE (DISPLAY)	
R705	1-249-441-11	CARBON 100K 5% 1/4W		S724	1-554-303-21	SWITCH, TACTILE (DISPLAY MODE)	
R706	1-249-417-11	CARBON 1K 5% 1/4W		S725	1-554-303-21	SWITCH, TACTILE (RDS)	
				S726	1-554-303-21	SWITCH, TACTILE (AF)	

					* A-4345-287-A	TUNER BOARD, COMPLETE (AEP)	
					* A-4345-288-A	TUNER BOARD, COMPLETE (G)	
					* A-4345-289-A	TUNER BOARD, COMPLETE (UK)	
					* A-4345-290-A	TUNER BOARD, COMPLETE (IT)	

TUNER

AC SW

Ref. No.	Part No.	Description	Remark			
	* 1-640-338-11	AC SW BOARD				

	4-352-844-01	PIN, LEAD, COATING (UK, IT)				
	* 4-911-383-01	HEAT SINK				
	7-682-548-09	SCREW +B 3X8				
		< CAPACITOR >				
C101	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C102	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C103	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C104	1-124-910-11	ELECT	47uF	20%	50V	
C201	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C202	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C203	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C204	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C205	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C221	1-162-282-31	CERAMIC	100PF	10%	50V	
C222	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C223	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C224	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C225	1-124-910-11	ELECT	47uF	20%	50V	
C226	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C231	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C232	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C233	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C234	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C235	1-162-215-31	CERAMIC	47PF	5%	50V	
C236	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C237	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C251	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C252	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C253	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C254	1-110-335-11	MYLAR	100PF	5%	50V (AEP, UK)	
C254	1-110-341-11	MYLAR	330PF	5%	50V (G, IT)	
C255	1-130-467-00	MYLAR	470PF	5%	50V (G, IT)	
C256	1-126-044-11	ELECT	1uF	20%	50V	
C257	1-126-023-11	ELECT	100uF	20%	16V	
C258	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C259	1-126-024-11	ELECT	220uF	20%	16V	
C260	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C261	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C262	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C263	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C264	1-126-043-11	ELECT	0.47uF	20%	50V	
C265	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C301	1-136-161-00	FILM	0.047uF	5%	50V	
C302	1-124-910-11	ELECT	47uF	20%	50V	
C303	1-136-161-00	FILM	0.047uF	5%	50V	
C304	1-162-288-31	CERAMIC	330PF	10%	50V	

Ref.No.	Part No.	Description	Remark			
C305	1-110-335-11	MYLAR	100PF	5%	50V	
C306	1-124-910-11	ELECT	47uF	20%	50V	
C307	1-104-293-11	POLYSTYRENE	430PF	5%	50V (AEP, UK)	
C307	1-104-296-11	POLYSTYRENE	560PF	5%	50V (G, IT)	
C308	1-104-293-11	POLYSTYRENE	430PF	5%	50V (AEP, UK)	
C308	1-104-296-11	POLYSTYRENE	560PF	5%	50V (G, IT)	
C309	1-123-382-00	ELECT	3.3uF	20%	100V	
C310	1-123-382-00	ELECT	3.3uF	20%	100V	
C311	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C312	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C313	1-126-059-11	ELECT	10uF	20%	50V	
C314	1-126-059-11	ELECT	10uF	20%	50V	
C315	1-110-335-11	MYLAR	100PF	5%	50V (AEP, G, IT)	
C316	1-110-335-11	MYLAR	100PF	5%	50V (AEP, G, IT)	
C317	1-123-382-00	ELECT	3.3uF	20%	100V	
C318	1-123-382-00	ELECT	3.3uF	20%	100V	
C319	1-126-023-11	ELECT	100uF	20%	16V	
C320	1-126-044-11	ELECT	1uF	20%	50V	
C321	1-126-044-11	ELECT	1uF	20%	50V	
C322	1-126-044-11	ELECT	1uF	20%	50V	
C323	1-126-043-11	ELECT	0.47uF	20%	50V	
C324	1-126-044-11	ELECT	1uF	20%	50V	
C325	1-126-023-11	ELECT	100uF	20%	16V	
C351	1-136-161-00	FILM	0.047uF	5%	50V	
C352	1-130-471-00	MYLAR	0.001uF	5%	50V (G, IT)	
C353	1-130-471-00	MYLAR	0.001uF	5%	50V (G, IT)	
C401	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C402	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C403	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C404	1-124-910-11	ELECT	47uF	20%	50V	
C405	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C406	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C407	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C408	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C409	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C410	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C411	1-126-023-11	ELECT	100uF	20%	16V	
C412	1-126-044-11	ELECT	1uF	20%	50V	
C413	1-126-044-11	ELECT	1uF	20%	50V	
C414	1-126-163-11	ELECT	4.7uF	20%	50V	
C415	1-123-382-00	ELECT	3.3uF	20%	100V	
C416	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C417	1-126-059-11	ELECT	10uF	20%	50V	
C418	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C421	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C451	1-161-379-00	CERAMIC	0.01uF	20%	25V	

TUNER

AC SW

Ref. No.	Part No.	Description			Remark
C452	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C453	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C454	1-161-379-00	CERAMIC	0.01uF	20%	25V
C455	1-161-379-00	CERAMIC	0.01uF	20%	25V
C501	1-161-379-00	CERAMIC	0.01uF	20%	25V
C502	1-102-959-00	CERAMIC	22PF	5%	50V
C503	1-102-959-00	CERAMIC	22PF	5%	50V
C504	1-161-379-00	CERAMIC	0.01uF	20%	25V
C505	1-126-059-11	ELECT	10uF	20%	50V
C506	1-161-379-00	CERAMIC	0.01uF	20%	25V
C507	1-161-379-00	CERAMIC	0.01uF	20%	25V
C508	1-161-379-00	CERAMIC	0.01uF	20%	25V
C509	1-126-023-11	ELECT	100uF	20%	16V
C511	1-126-059-11	ELECT	10uF	20%	50V
C512	1-123-382-00	ELECT	3.3uF	20%	100V
C513	1-126-044-11	ELECT	1uF	20%	50V
C514	1-161-379-00	CERAMIC	0.01uF	20%	25V
C551	1-126-059-11	ELECT	10uF	20%	50V
C552	1-126-044-11	ELECT	1uF	20%	50V
C553	1-136-153-00	FILM	0.01uF	5%	50V
C554	1-161-379-00	CERAMIC	0.01uF	20%	25V
C602	1-124-997-11	ELECT	470uF	20%	10V
C603	1-161-379-00	CERAMIC	0.01uF	20%	25V
C604	1-161-379-00	CERAMIC	0.01uF	20%	25V
C607	1-126-044-11	ELECT	1uF	20%	50V
C608	1-161-379-00	CERAMIC	0.01uF	20%	25V
C609	1-162-282-31	CERAMIC	100PF	10%	50V
C610	1-162-282-31	CERAMIC	100PF	10%	50V
C611	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C612	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C613	1-161-379-00	CERAMIC	0.01uF	20%	25V
C801	1-161-379-00	CERAMIC	0.01uF	20%	25V
C802	1-124-910-11	ELECT	47uF	20%	50V
C803	1-126-049-11	ELECT	22uF	20%	50V
C804	1-161-327-00	CERAMIC	0.0033uF	30%	16V
C806	1-161-327-00	CERAMIC	0.0033uF	30%	16V
C807	1-161-379-00	CERAMIC	0.01uF	20%	25V
C808	1-161-379-00	CERAMIC	0.01uF	20%	25V
C809	1-126-059-11	ELECT	10uF	20%	50V
C810	1-126-163-11	ELECT	4.7uF	20%	50V
C811	1-126-059-11	ELECT	10uF	20%	50V
C813	1-136-157-00	FILM	0.022uF	5%	50V
C814	1-136-159-00	FILM	0.033uF	5%	50V
C815	1-136-159-00	FILM	0.033uF	5%	50V
C816	1-161-329-00	CERAMIC	0.0068uF	30%	16V
C817	1-126-059-11	ELECT	10uF	20%	50V
C818	1-161-379-00	CERAMIC	0.01uF	20%	25V
C819	1-126-163-11	ELECT	4.7uF	20%	50V
C901	1-101-004-00	CERAMIC	0.01uF		50V

Ref. No.	Part No.	Description			Remark
C902	1-101-004-00	CERAMIC	0.01uF		50V
C903	1-126-051-11	ELECT	47uF	20%	50V
C904	1-126-051-11	ELECT	47uF	20%	50V
C905	1-124-602-00	ELECT	2200uF	20%	35V
C906	1-126-053-11	ELECT	220uF	20%	50V
C908	1-126-059-11	ELECT	10uF	20%	50V
C909	1-126-023-11	ELECT	100uF	20%	16V
C910	1-130-789-00	FILM	1uF	5%	100V
C911	1-126-049-11	ELECT	22uF	20%	50V
C951	△ 1-161-744-00	CERAMIC	0.01uF		400V
C952	△ 1-161-742-00	CERAMIC	0.0022uF	20%	400V (G, 1T)
C953	△ 1-161-742-00	CERAMIC	0.0022uF	20%	400V (G, 1T)
C954	1-101-004-00	CERAMIC	0.01uF		50V (G, 1T)
< FILTER >					
CF201	1-567-389-11	FILTER, CERAMIC			
CF202	1-567-389-11	FILTER, CERAMIC			
CF203	1-567-389-11	FILTER, CERAMIC			
CF231	1-567-107-71	FILTER, CERAMIC			
CF301	1-567-250-11	OSCILLATOR, CERAMIC			
CF401	1-527-826-00	FILTER, CERAMIC			
CF402	1-527-981-00	FILTER, CERAMIC			
CF801	1-577-075-11	OSCILLATOR, CERAMIC			
< CONNECTOR >					
CN601	1-564-980-11	PIN, CONNECTOR 4P (CONTROL OUT)			
CN602	1-564-980-11	PIN, CONNECTOR 4P (CONTROL IN)			
CN701	* 1-564-342-11	PIN, CONNECTOR 8P			
CN702	* 1-564-342-61	PIN, CONNECTOR 8P			
CN703	* 1-564-342-11	PIN, CONNECTOR 8P			
CN901	* 1-564-321-00	PIN, CONNECTOR 2P			
CN902	* 1-564-687-11	PIN, CONNECTOR 3P			
CN903	* 1-560-063-00	PIN, CONNECTOR 5P			
CN951	1-564-321-00	PIN, CONNECTOR 2P			
CN951B	1-690-122-51	REED (WITH CONNECTOR) (2 CORE)			
CNJ301	1-568-250-21	JACK, PIN 2P (OUTPUT)			
< DIODE >					
D151	8-719-912-20	DIODE 1SS120			
D221	8-719-912-20	DIODE 1SS120			
D301	8-719-912-20	DIODE 1SS120			
D402	8-719-912-20	DIODE 1SS120			
D601	8-719-912-20	DIODE 1SS120			
D602	8-719-912-20	DIODE 1SS120			
D604	8-719-912-20	DIODE 1SS120			
D605	8-719-912-20	DIODE 1SS120			
D606	8-719-912-20	DIODE 1SS120			
D607	8-719-912-20	DIODE 1SS120			

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

TUNER

AC SW

Ref. No.	Part No.	Description	Remark
D608	8-719-912-20	DIODE 1SS120	
D609	8-719-912-20	DIODE 1SS120	
D610	8-719-912-20	DIODE 1SS120	
D611	8-719-912-20	DIODE 1SS120	
D612	8-719-912-20	DIODE 1SS120	
D613	8-719-912-20	DIODE 1SS120	
D614	8-719-912-20	DIODE 1SS120	
D615	8-719-912-20	DIODE 1SS120	
D616	8-719-912-20	DIODE 1SS120	
D617	8-719-912-20	DIODE 1SS120	
D618	8-719-912-20	DIODE 1SS120	
D621	8-719-912-20	DIODE 1SS120 (IT)	
D624	8-719-912-20	DIODE 1SS120	
D901	8-719-200-82	DIODE 11ES2	
D902	8-719-200-82	DIODE 11ES2	
D903	8-719-912-20	DIODE 1SS120	
D904	8-719-912-20	DIODE 1SS120	
D905	8-719-934-18	DIODE HZS27-2L	
D906	8-719-933-47	DIODE HZS7B2L	
< FRONT END >			
FE101	1-463-857-11	FRONT END (FM) (G, IT)	
FE101	1-465-219-11	FRONT END (AEP, UK)	
FE421	1-236-462-11	ENCAPSULATED COMPONENT	
FE451	1-236-463-11	ENCAPSULATED COMPONENT	
< IC >			
IC221	8-759-812-35	IC LA1235	
IC231	8-759-111-72	IC uPC1163HA	
IC251	8-759-812-35	IC LA1235	
IC301	8-759-801-80	IC LA3401	
IC302	8-759-945-58	IC RC4558P	
IC401	8-759-812-45	IC LA1245	
IC501	8-757-925-20	IC CX-7925B	
IC601	8-759-153-09	IC uPD75512GF-086-3B9	
IC602	8-759-720-89	IC X24C04P	
IC801	8-759-823-61	IC LA2230	
IC802	8-759-823-62	IC LC7070N	
IC901	8-759-820-09	IC LA5667	
< COIL >			
L201	1-410-521-11	INDUCTOR 100uH	
L202	1-410-521-11	INDUCTOR 100uH	
L231	1-410-521-11	INDUCTOR 100uH	
L351	1-410-509-11	INDUCTOR 10uH (G, IT)	
L352	1-410-509-11	INDUCTOR 10uH (G, IT)	
L451	1-410-336-11	INDUCTOR 220uH	
L801	1-410-521-11	INDUCTOR 100uH	

Ref. No.	Part No.	Description	Remark
< FILTER >			
LPF301	1-235-164-00	FILTER, LOW PASS	
LPF302	1-235-164-00	FILTER, LOW PASS	
< TRANSISTOR >			
Q151	8-729-904-39	TRANSISTOR DTC114TS	
Q201	8-729-230-XX	TRANSISTOR 2SC26690Y	
Q202	8-729-230-XX	TRANSISTOR 2SC26690Y	
Q203	8-729-230-XX	TRANSISTOR 2SC26690Y	
Q204	8-729-230-XX	TRANSISTOR 2SC26690Y	
Q231	8-729-904-39	TRANSISTOR DTC114TS	
Q232	8-729-904-39	TRANSISTOR DTC114TS	
Q233	8-729-904-39	TRANSISTOR DTC114TS	
Q234	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q235	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q251	8-729-900-89	TRANSISTOR DTC144ES	
Q252	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q301	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q302	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q351	8-729-904-39	TRANSISTOR DTC114TS	
Q352	8-729-202-67	TRANSISTOR 2SK246GR3	
Q401	8-729-900-89	TRANSISTOR DTC144ES	
Q451	8-729-231-21	TRANSISTOR 2SK161-YGR-TPE4	
Q452	8-729-900-89	TRANSISTOR DTC144ES	
Q453	8-729-900-89	TRANSISTOR DTC144ES	
Q454	8-729-900-89	TRANSISTOR DTC144ES	
Q455	8-729-900-89	TRANSISTOR DTC144ES	
Q456	8-729-900-89	TRANSISTOR DTC144ES	
Q457	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q458	8-729-904-39	TRANSISTOR DTC114TS	
Q459	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q511	8-729-202-67	TRANSISTOR 2SK246GR3	
Q512	8-729-201-84	TRANSISTOR 2SC3112B	
Q521	8-729-900-89	TRANSISTOR DTC144ES	
Q522	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q523	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q551	8-729-202-67	TRANSISTOR 2SK246GR3	
Q552	8-729-201-84	TRANSISTOR 2SC3112B	
Q601	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q901	8-729-900-65	TRANSISTOR DTA144ES	
< RESISTOR >			
R101	1-259-468-11	CARBON 47K 5% 1/6W	
R102	1-259-460-11	CARBON 22K 5% 1/6W	
R103	△ 1-249-401-11	CARBON 47 5% 1/4W	
R151	1-259-397-11	CARBON 51 5% 1/6W	
R152	1-259-397-11	CARBON 51 5% 1/6W	

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

TUNER

AC SW

Ref. No.	Part No.	Description	Remark		
R153	1-259-390-11	CARBON	27	5%	1/6W
R154	1-259-402-11	CARBON	82	5%	1/6W
R201	1-259-412-11	CARBON	220	5%	1/6W
R202	1-259-410-11	CARBON	180	5%	1/6W
R203	1-259-416-11	CARBON	330	5%	1/6W
R204	1-259-456-11	CARBON	15K	5%	1/6W
R205	1-259-414-11	CARBON	270	5%	1/6W
R206	1-259-420-11	CARBON	470	5%	1/6W
R207	1-259-416-11	CARBON	330	5%	1/6W
R208	1-259-462-11	CARBON	27K	5%	1/6W
R209	1-259-416-11	CARBON	330	5%	1/6W
R210	1-259-456-11	CARBON	15K	5%	1/6W
R211	1-259-414-11	CARBON	270	5%	1/6W
R212	1-259-416-11	CARBON	330	5%	1/6W
R213	1-259-462-11	CARBON	27K	5%	1/6W
R214	1-259-416-11	CARBON	330	5%	1/6W
R221	1-259-416-11	CARBON	330	5%	1/6W
R222	△ 1-249-405-11	CARBON	100	5%	1/4W
R231	1-259-404-11	CARBON	100	5%	1/6W
R232	1-259-404-11	CARBON	100	5%	1/6W
R233	1-259-412-11	CARBON	220	5%	1/6W
R234	1-259-384-11	CARBON	15	5%	1/6W
R235	1-259-416-11	CARBON	330	5%	1/6W
R236	1-259-412-11	CARBON	220	5%	1/6W
R237	1-259-476-11	CARBON	100K	5%	1/6W
R238	1-259-452-11	CARBON	10K	5%	1/6W
R239	1-259-452-11	CARBON	10K	5%	1/6W
R240	1-259-456-11	CARBON	15K	5%	1/6W
R241	1-259-452-11	CARBON	10K	5%	1/6W
R242	1-259-452-11	CARBON	10K	5%	1/6W
R251	1-259-416-11	CARBON	330	5%	1/6W
R252	1-259-468-11	CARBON	47K	5%	1/6W
R253	1-259-472-11	CARBON	68K	5%	1/6W
R254	1-259-436-11	CARBON	2.2K	5%	1/6W
R255	1-259-436-11	CARBON	2.2K	5%	1/6W
R256	1-259-456-11	CARBON	15K	5%	1/6W
R257	1-259-442-11	CARBON	3.9K	5%	1/6W
R258	1-259-438-11	CARBON	2.7K	5%	1/6W
R259	△ 1-249-405-11	CARBON	100	5%	1/4W
R260	1-259-470-11	CARBON	56K	5%	1/6W
R261	1-259-468-11	CARBON	47K	5%	1/6W
R262	1-259-476-11	CARBON	100K	5%	1/6W
R263	1-259-452-11	CARBON	10K	5%	1/6W
R264	1-259-436-11	CARBON	2.2K	5%	1/6W
R265	△ 1-249-393-11	CARBON	10	5%	1/4W
R301	1-259-436-11	CARBON	2.2K	5%	1/6W
R302	1-259-480-11	CARBON	150K	5%	1/6W
R303	1-259-480-11	CARBON	150K	5%	1/6W
R304	1-259-478-11	CARBON	120K	5%	1/6W

Ref. No.	Part No.	Description	Remark		
R305	1-259-478-11	CARBON	120K	5%	1/6W
R306	1-259-436-11	CARBON	2.2K	5%	1/6W
R307	1-259-436-11	CARBON	2.2K	5%	1/6W
R308	1-259-446-11	CARBON	5.6K	5%	1/6W
R309	1-259-446-11	CARBON	5.6K	5%	1/6W
R310	1-259-446-11	CARBON	5.6K	5%	1/6W
R311	1-259-446-11	CARBON	5.6K	5%	1/6W
R312	1-259-440-11	CARBON	3.3K	5%	1/6W (AEP, G, 1T)
R313	1-259-440-11	CARBON	3.3K	5%	1/6W (AEP, G, 1T)
R314	1-259-420-11	CARBON	470	5%	1/6W
R315	1-259-420-11	CARBON	470	5%	1/6W
R316	△ 1-249-401-11	CARBON	47	5%	1/4W
R317	1-259-422-11	CARBON	560	5%	1/6W
R318	1-259-422-11	CARBON	560	5%	1/6W
R319	1-259-468-11	CARBON	47K	5%	1/6W
R320	1-259-468-11	CARBON	47K	5%	1/6W
R321	1-259-468-11	CARBON	47K	5%	1/6W
R322	1-259-452-11	CARBON	10K	5%	1/6W
R323	1-259-464-11	CARBON	33K	5%	1/6W
R324	1-259-446-11	CARBON	5.6K	5%	1/6W
R325	△ 1-249-401-11	CARBON	47	5%	1/4W
R351	1-259-448-11	CARBON	6.8K	5%	1/6W
R352	1-259-500-11	CARBON	1M	5%	1/6W
R353	1-259-468-11	CARBON	47K	5%	1/6W
R401	1-259-436-11	CARBON	2.2K	5%	1/6W
R402	△ 1-249-409-11	CARBON	220	5%	1/4W
R403	1-259-438-11	CARBON	2.7K	5%	1/6W
R404	1-259-420-11	CARBON	470	5%	1/6W
R405	1-259-404-11	CARBON	100	5%	1/6W
R406	1-259-402-11	CARBON	82	5%	1/6W
R408	1-259-452-11	CARBON	10K	5%	1/6W
R409	1-259-452-11	CARBON	10K	5%	1/6W
R410	1-259-454-11	CARBON	12K	5%	1/6W
R411	1-259-452-11	CARBON	10K	5%	1/6W
R412	△ 1-249-407-11	CARBON	150	5%	1/4W
R413	1-259-452-11	CARBON	10K	5%	1/6W
R421	1-259-476-11	CARBON	100K	5%	1/6W
R422	1-259-468-11	CARBON	47K	5%	1/6W
R451	1-259-476-11	CARBON	100K	5%	1/6W
R452	1-259-468-11	CARBON	47K	5%	1/6W
R453	1-259-428-11	CARBON	1K	5%	1/6W
R454	1-259-500-11	CARBON	1M	5%	1/6W
R455	1-259-428-11	CARBON	1K	5%	1/6W
R456	1-259-476-11	CARBON	100K	5%	1/6W
R457	1-259-428-11	CARBON	1K	5%	1/6W
R458	1-259-476-11	CARBON	100K	5%	1/6W
R459	1-259-452-11	CARBON	10K	5%	1/6W
R460	1-259-440-11	CARBON	3.3K	5%	1/6W
R501	1-259-452-11	CARBON	10K	5%	1/6W

Note: The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

TUNER

AC SW

Ref. No.	Part No.	Description	Remark
R502	1-259-452-11	CARBON	10K 5% 1/6W
R503	1-259-452-11	CARBON	10K 5% 1/6W
R504	△ 1-249-400-11	CARBON	39 5% 1/4W
R505	△ 1-249-408-11	CARBON	180 5% 1/4W
R511	1-259-422-11	CARBON	560 5% 1/6W
R512	1-259-422-11	CARBON	560 5% 1/6W
R513	1-259-430-11	CARBON	1. 2K 5% 1/6W
R514	1-259-416-11	CARBON	330 5% 1/6W
R515	1-259-434-11	CARBON	1. 8K 5% 1/6W
R516	1-259-448-11	CARBON	6. 8K 5% 1/6W
R517	1-259-444-11	CARBON	4. 7K 5% 1/6W
R518	1-259-424-11	CARBON	680 5% 1/6W
R519	1-259-444-11	CARBON	4. 7K 5% 1/6W
R521	1-259-440-11	CARBON	3. 3K 5% 1/6W
R522	1-259-460-11	CARBON	22K 5% 1/6W
R551	1-259-452-11	CARBON	10K 5% 1/6W
R552	1-259-422-11	CARBON	560 5% 1/6W
R553	1-259-430-11	CARBON	1. 2K 5% 1/6W
R554	1-259-416-11	CARBON	330 5% 1/6W
R555	1-259-468-11	CARBON	47K 5% 1/6W
R556	1-259-448-11	CARBON	6. 8K 5% 1/6W
R557	1-259-444-11	CARBON	4. 7K 5% 1/6W
R603	1-259-460-11	CARBON	22K 5% 1/6W
R604	1-259-460-11	CARBON	22K 5% 1/6W
R605	1-259-460-11	CARBON	22K 5% 1/6W
R606	1-259-460-11	CARBON	22K 5% 1/6W
R611	1-259-452-11	CARBON	10K 5% 1/6W
R612	1-259-452-11	CARBON	10K 5% 1/6W
R613	1-259-452-11	CARBON	10K 5% 1/6W
R615	1-259-452-11	CARBON	10K 5% 1/6W
R616	1-259-452-11	CARBON	10K 5% 1/6W
R617	1-259-452-11	CARBON	10K 5% 1/6W
R618	1-259-452-11	CARBON	10K 5% 1/6W
R620	1-259-452-11	CARBON	10K 5% 1/6W
R621	1-259-452-11	CARBON	10K 5% 1/6W
R622	1-259-452-11	CARBON	10K 5% 1/6W
R623	1-259-452-11	CARBON	10K 5% 1/6W
R624	1-259-452-11	CARBON	10K 5% 1/6W
R625	1-259-452-11	CARBON	10K 5% 1/6W
R626	1-259-460-11	CARBON	22K 5% 1/6W
R627	1-259-492-11	CARBON	470K 5% 1/6W
R629	1-259-414-11	CARBON	270 5% 1/6W
R630	1-259-380-11	CARBON	10 5% 1/6W
R631	1-259-452-11	CARBON	10K 5% 1/6W
R801	△ 1-249-401-11	CARBON	47 5% 1/4W
R802	1-259-494-11	CARBON	560K 5% 1/6W
R803	1-259-500-11	CARBON	1M 5% 1/6W
R804	1-259-428-11	CARBON	1K 5% 1/6W
R805	1-259-446-11	CARBON	5. 6K 5% 1/6W

Ref. No.	Part No.	Description	Remark
R806	1-259-464-11	CARBON	33K 5% 1/6W
R807	1-259-452-11	CARBON	10K 5% 1/6W
R808	1-259-460-11	CARBON	22K 5% 1/6W
R809	1-259-452-11	CARBON	10K 5% 1/6W
R810	1-259-428-11	CARBON	1K 5% 1/6W
R811	1-259-440-11	CARBON	3. 3K 5% 1/6W
R901	△ 1-212-865-00	FUSIBLE	22 5% 1/4W F
R902	△ 1-249-413-11	CARBON	470 5% 1/4W
R903	1-259-476-11	CARBON	100K 5% 1/6W
R904	1-259-468-11	CARBON	47K 5% 1/6W
R905	1-259-468-11	CARBON	47K 5% 1/6W
R906	1-259-468-11	CARBON	47K 5% 1/6W
< VARIABLE RESISTOR >			
RV221	1-237-460-11	RES. ADJ. CARBON 20K (FM SIGNAL)	
RV231	1-237-458-21	RES. ADJ. CARBON 5K (NARROW GAIN)	
RV232	1-237-455-11	RES. ADJ. CARBON 500 (NARROW DISTORTION)	
RV251	1-237-459-11	RES. ADJ. CARBON 10K (STEREO LEVEL)	
RV252	1-237-463-11	RES. ADJ. CARBON 200K (MUTING LEVEL)	
RV301	1-237-463-11	RES. ADJ. CARBON 200K (SEPARATION)	
RV402	1-237-459-11	RES. ADJ. CARBON 10K (AM SIGNAL)	
RV801	1-237-458-21	RES. ADJ. CARBON 5K (RDS BPF)	
< RELAY >			
RY151	1-515-614-11	RELAY (ANT ATT)	
< SWITCH >			
S901	1-572-267-51	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)	
< TRANSFORMER >			
T251	1-235-126-00	ENCAPSULATED COMPONENT (G. IT)	
T252	1-404-845-11	COIL, DISCRI (PRIMARY) (NULL)	
T253	1-404-846-11	COIL, DISCRI (SECONDARY) (THD)	
T401	1-404-326-00	TRANSFORMER, IF	
< TERMINAL >			
TM101	1-537-155-11	TERMINAL BOARD (ANTENNA)	
< TEST PIN >			
TP251	* 1-565-513-11	PIN, CONNECTOR 2P (NULL)	
< VIBRATOR >			
X501	1-567-826-21	VIBRATOR, CRYSTAL (7.2MHz)	
X601	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	
X801	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	

PC901 ⚠ 1-574-383-11 CORD, POWER (AEP, G, IT)
PC901 ⚠ 1-574-384-11 CORD, POWER (UK)
PT901 ⚠ 1-450-406-11 TRANSFORMER, POWER

ACCESSORY & PACKING MATERIAL

1-501-374-11 ANTENNA, LOOP
1-558-233-11 CORD (WITH CONNECTOR) (SIRCS) 4P
1-558-271-11 CORD, CONNECTION
3-703-845-01 LABEL (N) (U/C), MAIN CAUTION (UK)

3-753-233-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH,
SPANISH, ITALIAN) (AEP, UK, IT)
3-753-233-41 MANUAL, INSTRUCTION (GERMAN, DUTCH,
SWEDISH, PORTUGUESE) (AEP, G)

* 4-930-835-01 CUSHION
* 4-935-823-21 INDIVIDUAL CARTON

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.