

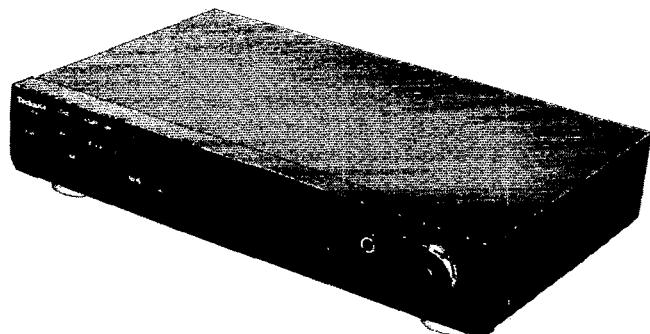
Service Manual

Stereo Synthesizer Tuner

Tuner ST-GT550

Colour

(K) Black Type



Areas

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	
(EG)	Germany and Italy	
(GC)	Asia, Latin America, Middle Near East and Africa	
(GN)	Oceania	

SPECIFICATIONS (DIN 45 500)

■ FM TUNER SECTION

Frequency range	87.50~108.00 MHz (0.05-MHz steps)
Sensitivity	1.5 μ V (IHF, usable)
S/N 30 dB	1.3 μ V (75 Ω)
S/N 26 dB	1.2 μ V (75 Ω)
S/N 20 dB	0.9 μ V (75 Ω)
IHF 46 dB stereo quieting sensitivity	28 μ V (75 Ω)
Total harmonic distortion	
MONO (NORMAL)	0.15%
STEREO (NORMAL)	0.2%
S/N	
MONO	70 dB (75 dB, IHF)
STEREO	65 dB (70 dB, IHF)
Frequency response	10 Hz~15 kHz, +0.5 dB to -1.0 dB
Alternate channel selectivity	
NORMAL \pm 400 kHz	70 dB
SUPER NARROW \pm 200 kHz	25 dB
Capture ratio	1.0 dB
Image rejection at 98 MHz	100 dB
IF rejection at 98 MHz	95 dB
Spurious response rejection at 98 MHz	100 dB
AM suppression	55 dB
Stereo separation	
1 kHz	45 dB
Carrier leak	
19 kHz	-62 dB (-68 dB, IHF)
38 kHz	-46 dB (-51 dB, IHF)
Channel balance (250 Hz~6.3 kHz)	\pm 1.0 dB
Limiting point	0.85 μ V
Bandwidth	
IF amplifier	180 kHz
FM demodulator	1000 kHz
Antenna terminals	75 Ω (unbalanced)

■ AM TUNER SECTION

Frequency range	
for (E) (EB) areas	
MW	522 kHz~1611 kHz (9-kHz steps)
LW	530 kHz~1620 kHz (10-kHz steps)
for (EG) area	
AM	144 kHz~288 kHz (9-kHz steps)
for (GC) (GN) areas	
AM	522 kHz~1611 kHz (9-kHz steps)
	530 kHz~1620 kHz (10-kHz steps)
	531 kHz~1602 kHz (9-kHz steps)
	530 kHz~1600 kHz (10-kHz steps)
Sensitivity (S/N 20 dB)	
for (E) (EB) areas	
MW (at 999 kHz)	20 μ V, 600 μ V/m
LW (at 216 kHz)	150 μ V
for (EG) (GC) (GN) areas	
AM (at 999 kHz)	20 μ V, 600 μ V/m
Selectivity (\pm 9 kHz)	
for (E) (EB) areas	
MW (at 999 kHz)	40 dB
LW (at 216 kHz)	40 dB
for (EG) (GC) (GN) areas	
AM (at 999 kHz)	40 dB
Image rejection	
for (E) (EB) areas	
MW (at 999 kHz)	40 dB
LW (at 216 kHz)	40 dB
for (EG) (GC) (GN) areas	
AM (at 999 kHz)	40 dB
IF rejection	
for (E) (EB) areas	
MW (at 999 kHz)	50 dB
LW (at 216 kHz)	50 dB
for (EG) (GC) (GN) areas	
AM (at 999 kHz)	50 dB

Technics

■ GENERAL

Output voltage	
for (E) (EB) (GC) (GN) areas	0.3 V (0.6 V, IHF)
for (EG) area	0.6 V (1.2 V, IHF)
Power consumption	9 W
Power supply	
for (E) (EB) (EG) (GN) areas	AC 50 Hz/60 Hz, 230~240 V
for (GC) area	AC 50 Hz/60 Hz, 110/127/220/240 V

Dimensions (W×H×D)

430×91.5×308 mm

Weight

2.9 kg

Notes:

1. Specifications are subject to change without notice.
Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.



■ CONTENTS

	Page		Page
●CAUTION FOR MAINS LEAD	2	●PRINTED CIRCUIT BOARD DIAGRAM	28~32
●ACCESSORIES	3	●WIRING CONNECTION DIAGRAM	33
●LOCATION OF CONTROLS	3, 4	●MEASUREMENTS AND ADJUSTMENTS	34~37
●CONNECTIONS	5, 6	●FUNCTIONS OF IC TERMINALS	38
●MANUAL TUNER OPERATION	7	●BLOCK DIAGRAM	39, 40
●ENJOYING RDS BROADCASTS	8~12	●REPLACEMENT PARTS LIST	41~44, 46
●DISASSEMBLY INSTRUCTIONS	13, 14	●CABINET PARTS LOCATION	45
●SCHEMATIC DIAGRAM	15~27	●PACKAGING	46

■ CAUTION FOR AC MAINS LEAD

(“EB” area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 5-ampere fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below. If in any doubt please consult a qualified electrician.


IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

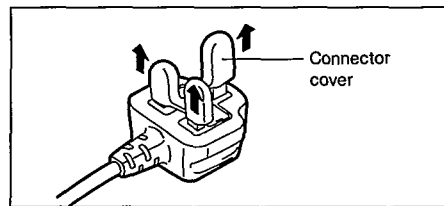
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol .

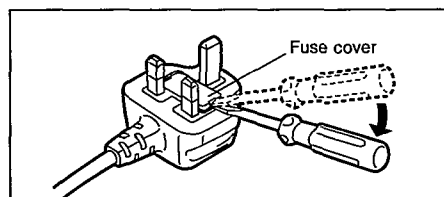
Before use

Remove the connector cover as follows.

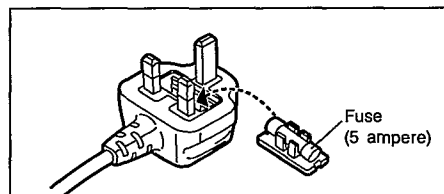


How to replace the fuse

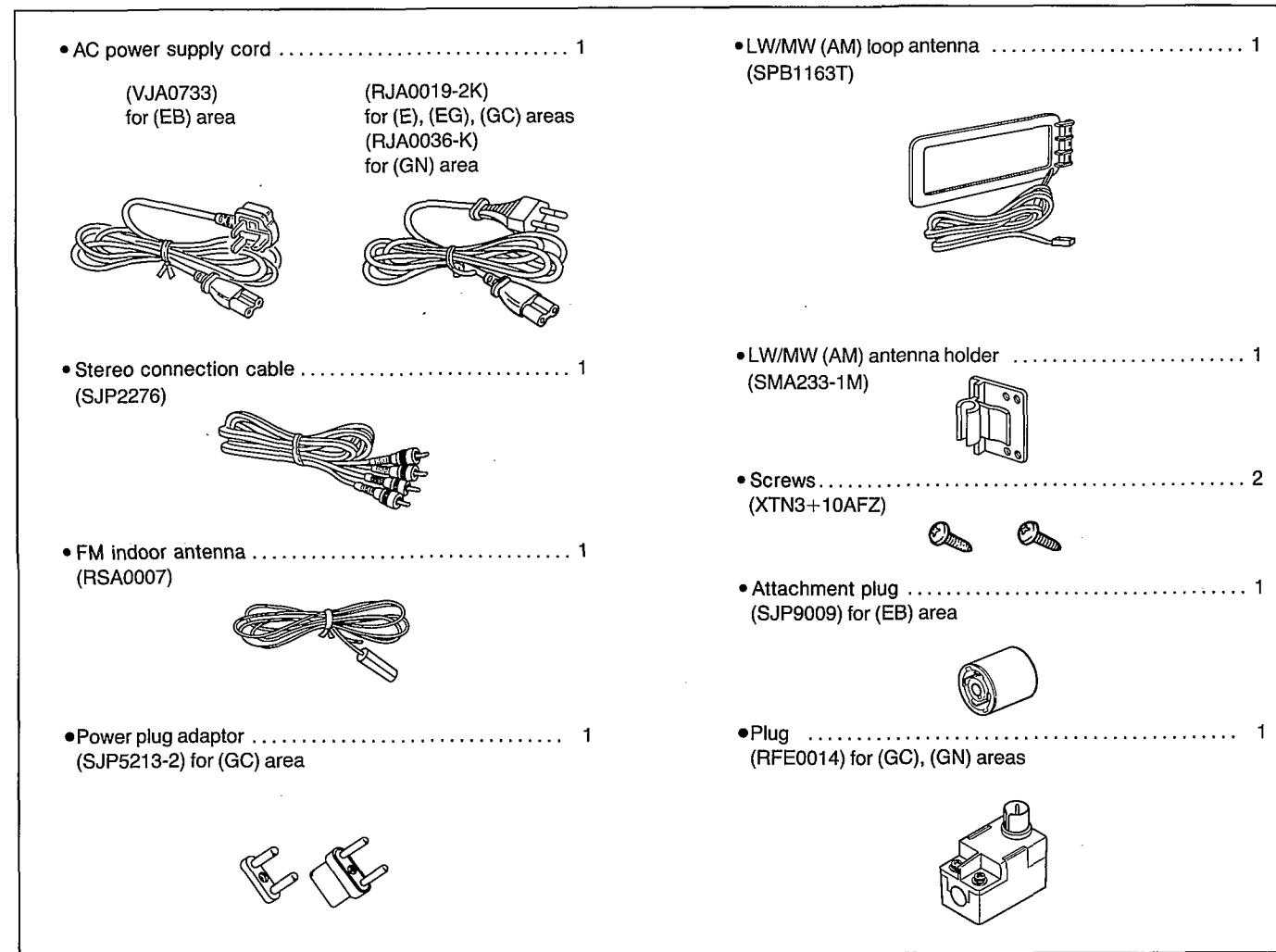
1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover.

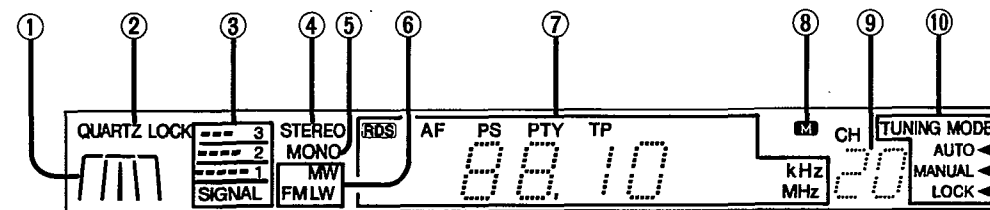


■ ACCESSORIES



■ LOCATION OF CONTROLS

• Display section



① FM IF band indicator

② Quartz-lock indicator (QUARTZ LOCK)
(See page 7.)

③ Signal-strength indicators (SIGNAL)

④ FM stereo indicator (STEREO)
(See page 7.)

⑤ FM mode indicator (MONO)

⑥ Band indicators (FM, MW, LW)
(See page 7.)

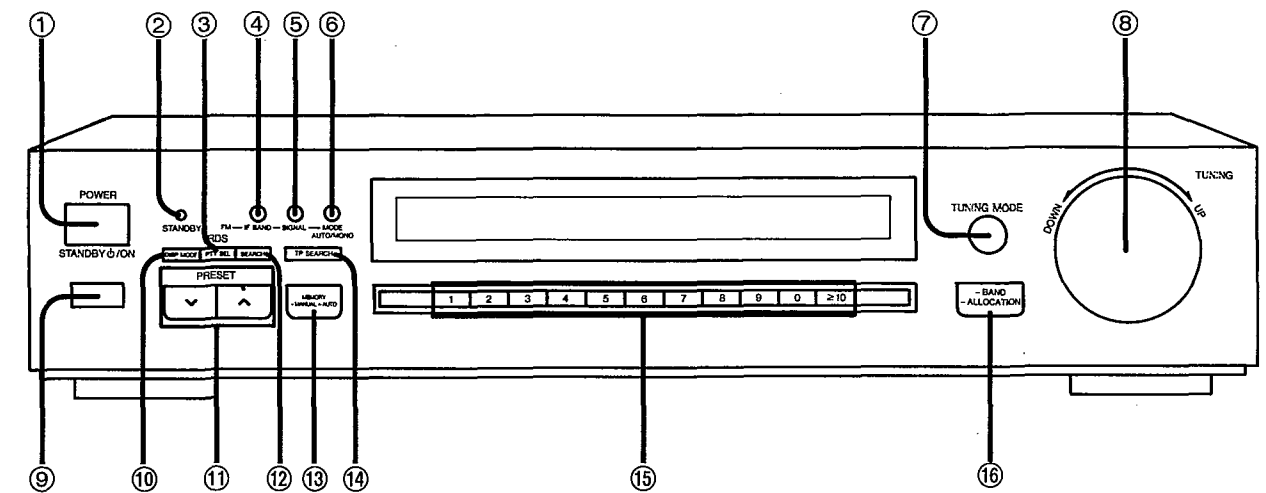
⑦ Digital frequency/FM signal-strength/RDS display
(See pages 9 and 12.)

⑧ Memory indicator (**M**)

⑨ Channel display

⑩ Tuning mode indicators (TUNING MODE)
(See page 7.)

• Control section



① Power "STANDBY / ON" switch
(POWER, STANDBY / ON)

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

② "STANDBY" indicator (STANDBY)

When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

③ PTY selector (PTY SEL)

(See page 11.)

④ FM IF band selector (IF BAND)

⑤ FM signal-strength indication button
(SIGNAL)

⑥ FM mode selector (MODE)

⑦ Tuning-mode selector (TUNING MODE)
(See page 7.)

⑧ Tuning control (TUNING)
(See page 7.)

⑨ Remote control signal sensor

When connecting a Technics amplifier with the remote control transmitter to this unit, you can operate this unit using a remote control transmitter of the amplifier.
(See the operating instructions of the amplifier.)

⑩ Display mode selector (DISP MODE)

(See pages 9 and 12.)

⑪ Preset channel buttons (PRESET)

⑫ AF/PTY search button (SEARCH)

(See pages 9 and 11.)

⑬ Memory button (MEMORY)

⑭ TP search button (TP SEARCH)

(See page 10.)

⑮ Preset-tuning buttons (1-0, ≥10)

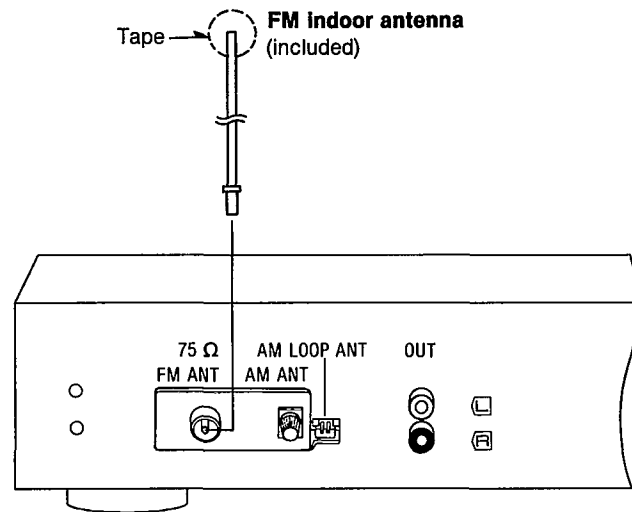
⑯ Band selector (-BAND, -ALLOCATION)

(See page 7.)

CONNECTIONS

To connect the FM antenna

FM indoor antenna (included)



Attach to a wall (using a tape) facing in the direction of best reception.

For best reception sound quality:

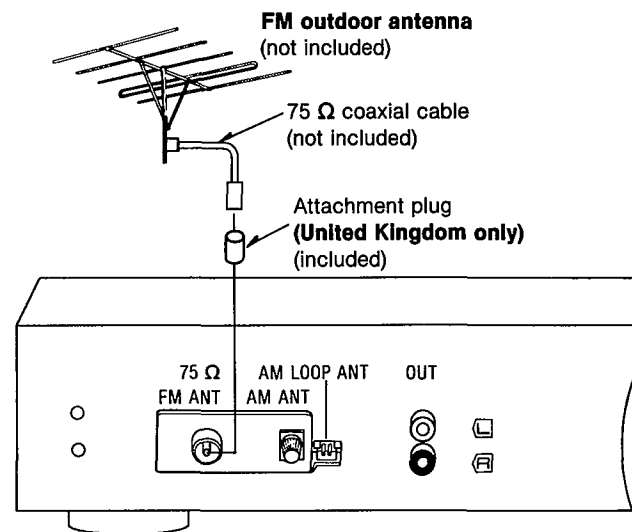
Find the optimum height and direction that gives the maximum signal reception strength.

Note:

If the FM indoor antenna does not provide satisfactory reception, an outdoor antenna should be used.

FM outdoor antenna (not included)

The outdoor antenna may be required in a mountainous region, or if this unit is located inside a reinforced-concrete building, etc. Disconnect the FM indoor antenna if an FM outdoor antenna is installed.

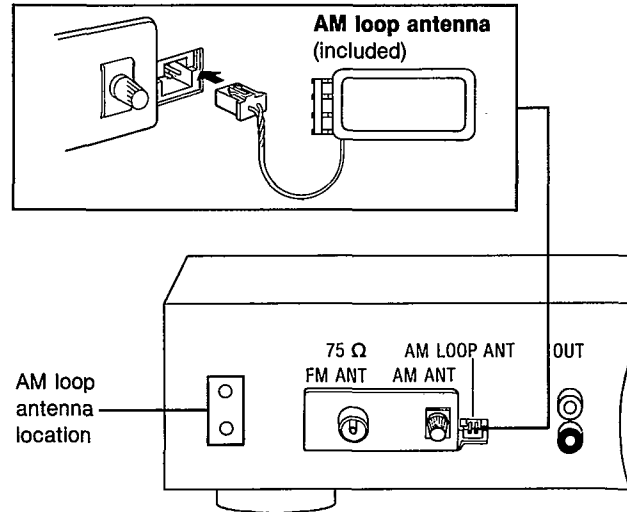


Note:

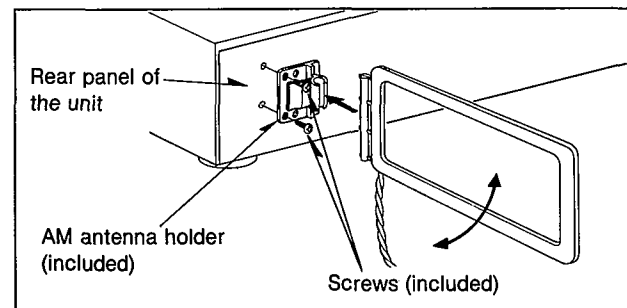
An outdoor antenna should be installed by a competent technician only.

To connect the AM (MW/LW) antenna

AM loop antenna (included)

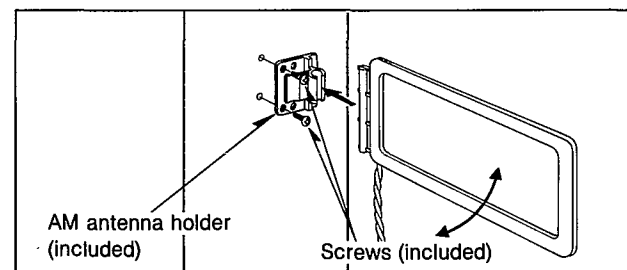


Connect the AM loop antenna to the AM loop antenna terminals, and mount it vertically to the rear panel of this unit.



When mounting the antenna to a column, a wall or a rack

Mount it vertically.

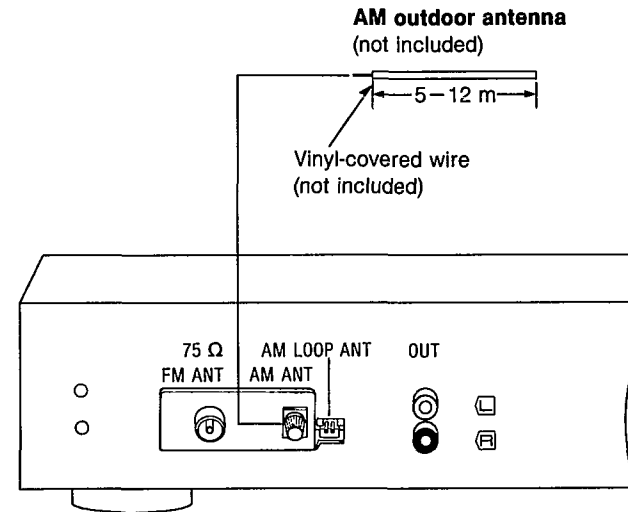


Pay attention to the following points when mounting the antenna.

- Do not mount it horizontally (Doing so will impair reception).
- Do not mount it close to power cords, speaker wires or metal surfaces (Doing so will result in noise).
- Do not mount it close to a tape deck. When the tape deck is being used, chirping or beeping sounds may result.

AM outdoor antenna (not included)

An outdoor antenna may be required in a mountainous region, or if this unit is located inside a reinforced-concrete building, etc.

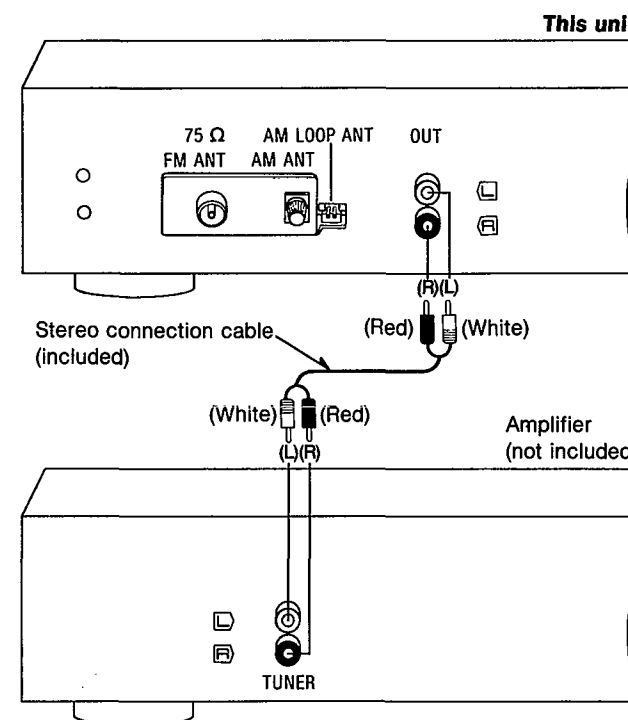


Use 5–12 m of vinyl-covered wire horizontally at the window or other convenient location.

Notes:

- Be sure to connect the AM loop antenna even when an outdoor antenna is used.
- When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

To connect with an amplifier



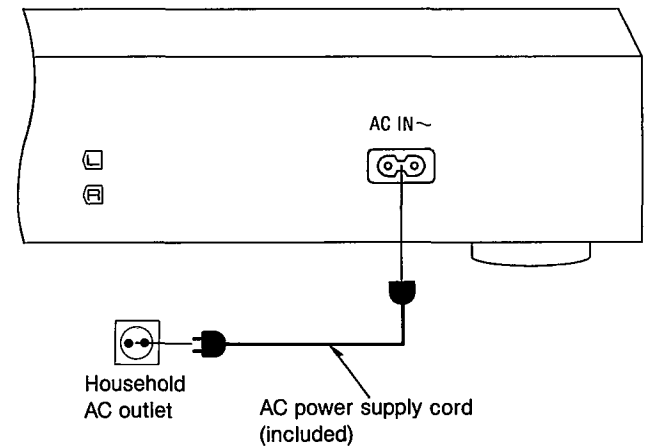
To connect the AC power supply cord

Connect the AC power supply cord (included) after all other cables are connected.

Note:

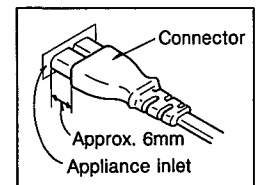
The configuration of the AC power supply cord differs according to area.

FOR UNITED KINGDOM ONLY BE SURE TO READ THE CAUTION FOR THE AC POWER SUPPLY CORD ON PAGE 2 BEFORE THE FOLLOWING CONNECTION.



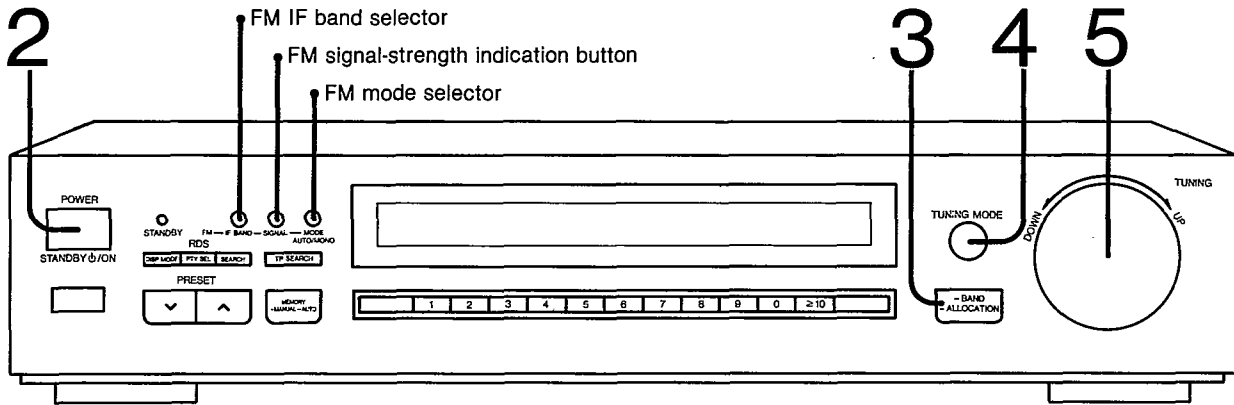
Insertion of Connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing. However there is no problem using the unit.



MANUAL TUNER OPERATION

To listen to broadcasts by using the tuning control.



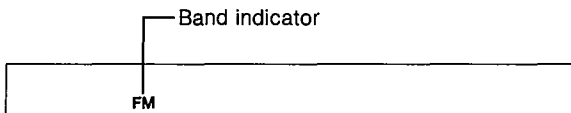
1 Switch the amplifier ON, and set it for listening to radio broadcasts.

2 Switch ON the power "STANDBY ϕ /ON" switch.

3 Press the band selector to select the desired band.

The band indicator changes in the following way each time the selector is pressed.

- For (E, EB) areas
FM \rightarrow MW \rightarrow LW
- For (EG, GC, GN) areas
FM \rightarrow AM



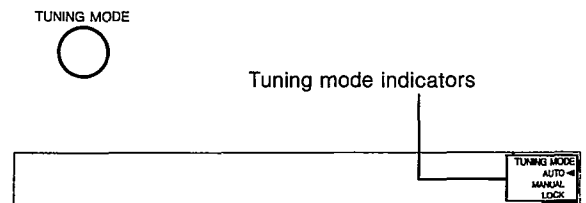
- For (E, EB) areas
FM: for FM broadcasts
MW: for MW broadcasts
LW: for LW broadcasts
- For (EG, GC, GN) areas
FM: for FM broadcasts
AM: for AM broadcasts

To change the MW frequency step:
The MW frequency step is set to 9 kHz before shipment. To change to 10 kHz per step, press and hold the band selector for 4 seconds while the "MW" of the band indicator is illuminated.

4 Press to select the desired tuning mode, "AUTO" or "MANUAL".

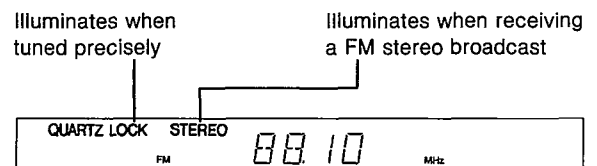
The tuning mode changes in the following way each time the selector is pressed.

- AUTO \rightarrow MANUAL \rightarrow LOCK



In "AUTO" mode, the next station, higher or lower in broadcast frequency, will be automatically tuned in. In "MANUAL" mode, the frequency will change, using the smallest step available, only as the tuning control is being turned. This will allow you to tune in all of the broadcast frequencies available in that band.

5 Turn the tuning control so as to tune to the desired frequency.



■ ENJOYING RDS BROADCASTS

What is RDS (Radio Data System)?

RDS is a multiplex broadcasting system which adds a variety of message signals to the audio signals of FM broadcasts. For example, when a number of broadcast stations are broadcasting identical programs, receiving this signal enables automatic selection of the broadcast that has the strongest signal. Another feature of

this system is that it is possible to automatically search for traffic information services, etc.

This unit can utilize the following signals among the various RDS signals.

■ RDS messages used by this unit

• PS (Program service name)	Name of the broadcast station
• PI (Program identification)	Program identification signal consisting of a program code
• AF (Alternative frequency)	List of frequencies of broadcast stations that are currently broadcasting the same programs
• TP (Traffic program identification)	Identification signal for traffic information broadcast stations
• PTY (Program type)	Identification signal for program types such as news and sport

Note:

"PTY" may not be available in some areas.
(Future function)

Functions of this unit which use RDS

■ To display the name of the broadcast station _____ (PS display)

When this unit receives a PS signal in an RDS broadcast, the name of the broadcast station is shown on the display.
(For details, refer to page 9.)

■ To listen to traffic information _____ (TP search)

When you wish to listen to traffic information, a traffic information broadcast can be searched.
(For details, refer to page 10.)

■ To listen to the broadcast station with the best signal from different stations broadcasting the same program _____ (AF search)

The AF search uses the PI and AF signals.
At times when a sufficiently strong FM broadcast signal is not received, a broadcast station that is broadcasting the same program but with a better signal can be searched.
(For details, refer to page 9.)

■ To search for a program of a particular type, such as news or sport _____ (PTY search)

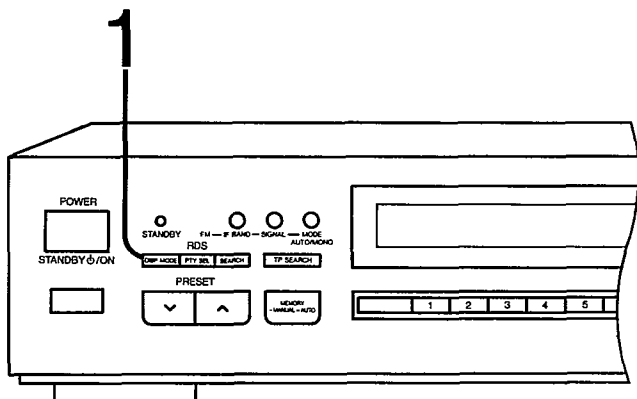
When you wish to listen to a particular type of program, a program of that type can be searched.
Furthermore, while the PTY signal is being received, the name of the type of program currently being broadcast can be shown on the display. (For details, refer to pages 11 and 12.)

Notes:

1. Even if an FM broadcast station is transmitting RDS signals, the functions of this unit may not be able to utilize these signals if the signal quality is too poor.
2. For cable-TV and radio, the frequency for the station in the antenna outlet is not the same as that of the signals in the air. Accordingly, the AF search function will not operate correctly.

Broadcast station name display—(PS display)

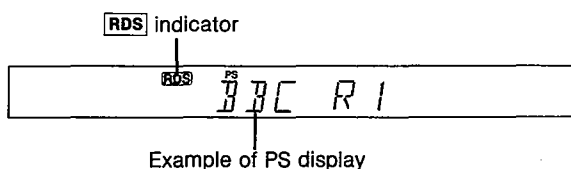
To display the name of a broadcasting station:



(When the FM station is received)

1 Press the display mode selector.

If the FM broadcast being received provides the RDS service ("RDS" indicator will illuminate), the name of the broadcast station and "PS" indicator will be shown on the display of this unit.



About the display mode selector:

The display mode changes in the following way each time the selector is pressed.

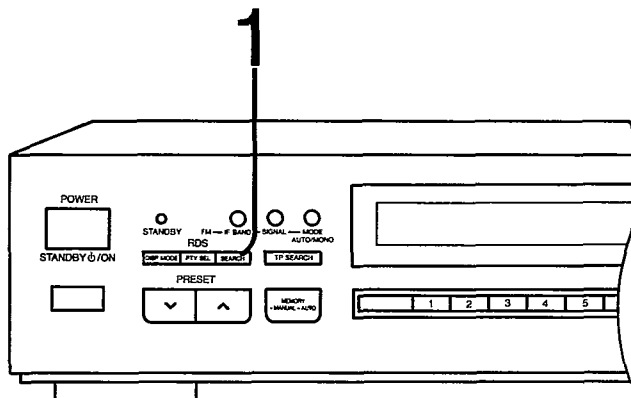
Frequency display → PS display → PTY display

(For PTY displays, refer to page 12.)

To listen to the same program from a broadcast station with a better signal—(AF search)

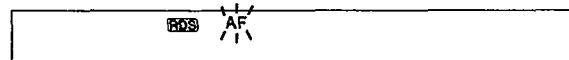
Carry out this operation while an RDS broadcast is being received.

(For the ST-GT550, carry this operation when the display shows the frequency display or the PS display.)



1 Press the AF/PTY search button.

The AF search will begin. ("AF" will flash on the display.)



When the search is completed, the broadcast station being received will be automatically changed to the station with the best signal quality.

■ If a broadcast station with a better signal quality is not found

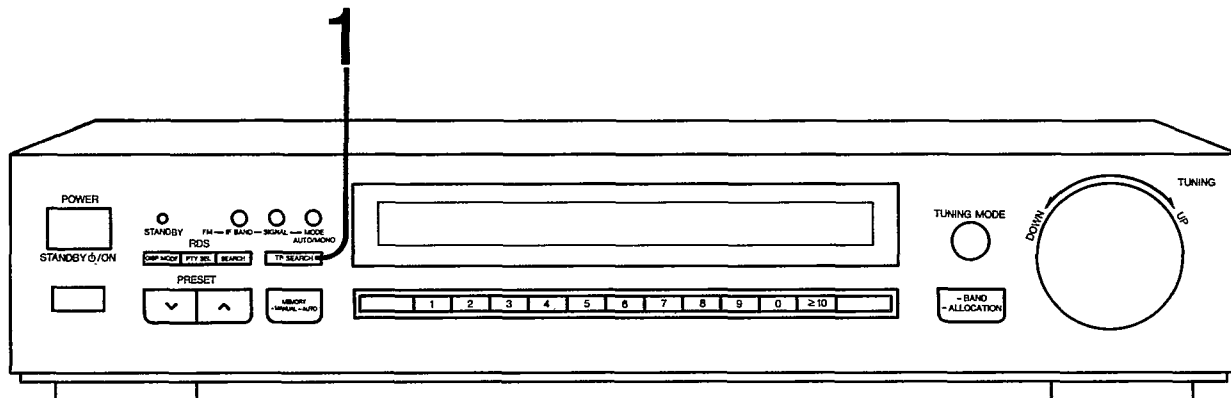
"NO AF" will be displayed for approximately 5 seconds, and the program will return to the previous broadcast station.

Note:

If the broadcast is an RDS broadcast but no AF signal is being received, the search function will not work. (When the AF/PTY search button is pressed, "NO AF" will be displayed for approximately 5 seconds, and the program will return to the previous broadcast station.)

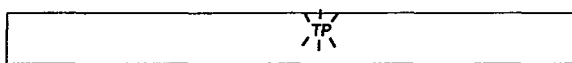
To listen to traffic information—(TP search)

- The TP search is carried out with respect to FM broadcast stations that have been preset into the memory.
- Carry out this operation while listening to an FM broadcast.



1 Press the TP SEARCH button.

The TP search will begin. ("TP" will flash on the display.)



■ When a TP service is located

"TP ON" will be displayed for approximately 5 seconds, and the broadcast station being received will be automatically changed to the station located.

To search for a different broadcast station, press the TP search button once more while "TP ON" is still displayed.

■ If a TP service is not found

"NO TP" will be displayed for approximately 5 seconds, and the program will return to the previous broadcast station.

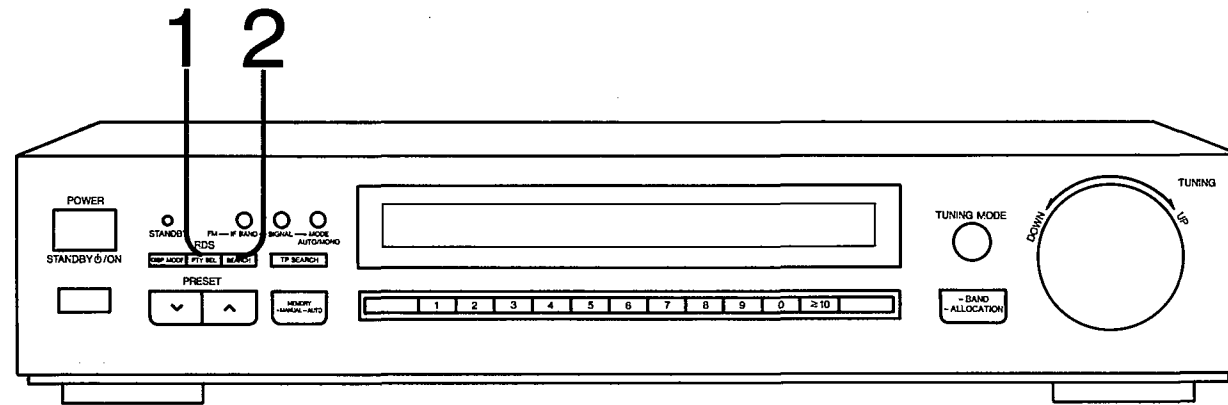
Note:

Depending on the time, some broadcast stations which output a TP signal may not be broadcasting traffic information. To search for another broadcast station, repeat the procedure step 1 above.

Note: "PTY" may not be available in some areas. (Future function)

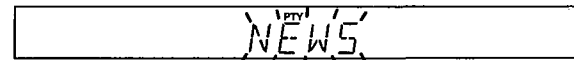
To listen to a program of a particular type, such as news or sport—(PTY search)

- The PTY search is carried out with respect to FM broadcast stations that have been preset into the memory.
- Carry out this operation while listening to an FM broadcast.



1 Press the PTY selector to select the desired program type.
(The PTY display will flash on the display.)

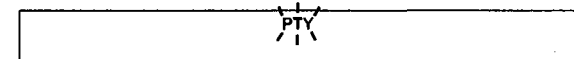
■ When the desired type of program is located
The type of program is displayed for approximately 5 seconds, and the program will automatically change to the broadcast station that has just been located.
To search for a different broadcast station, press the AF/PTY search button once more while the type of program is displayed and "PTY" is flashing.



Each time the selector is pressed, the PTY display will change in sequence. (Refer to "About the PTY display" on the following page.)

Note:
Approximately 8 seconds after the PTY display starts flashing, the display will disappear.
To select a different PTY, or when proceeding to the following step 2, be sure to perform all operations while the PTY display is flashing.

2 (While PTY display is flashing) Press the AF/PTY search button.
The PTY search will begin. ("PTY" will flash on the display.)



■ If the desired type of program is not found
"NO PTY" will be displayed for approximately 5 seconds, and the program will return to the previous broadcast station.

Most-recent memory:
The most-recent memory system "remembers" the program type last selected in step 1 above when the unit was switched OFF. For example, if "SPORT" is selected and the unit is turned OFF, when the PTY selector is pressed again at step 1, "SPORT" will be displayed.

About the PTY display

There are a total of 15 PTY displays on this unit. The display changes in order each time the PTY selector is pressed. The

table below shows the order in which the display changes, and also gives an explanation of each display.

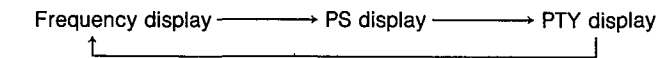
Display	Explanation
NEWS	Short accounts of facts, events and publicly expressed views, reportage and actuality.
AFFAIRS	Topical program expanding or enlarging upon the news, generally in different presentation style or concept, including documentary debate, or analysis.
INFO	Program whose purpose is to impart advice in the widest sense, including meteorological reports and forecasts, consumer affairs, medical help, etc.
SPORT	Program concerned with any aspect of sport.
EDUCATE	Program intended primarily to educate.
DRAMA	All radio plays and serials.
CULTURE	Programs concerned with any aspect of national or regional culture, including religious affairs, philosophy, social science, language, theatre, etc.
SCIENCE	Programs about the natural sciences and technology.
VARIED	Used for mainly speech-based programs, usually of a light-entertainment nature not covered by above categories. Examples are: quizzes, panel games, personality interviews, comedy and satire.
POP M	Commercial music which would generally be considered to be of current popular appeal, often featuring in current or recent record sales charts.
ROCK M	Contemporary modern music, usually written and performed by young musicians.
M.O.R. M	(Middle of the Road Music). Common term to describe music considered to be "easy-listening", as opposed to Pop, Rock or Classical. Music in this category is often, but not always, vocal, and usually of short duration (<5 min.).
LIGHT M	Classical Musical for general, rather than specialist, appreciation. Examples of music in this category are instrumental music and vocal or choral works.
CLASSICS	Performances of major orchestral works, symphonies, chamber music etc., and including Grand Opera.
OTHER M	Musical styles not fitting into any of the above categories. Particularly used for specialist music, of which Jazz, Rhythm & Blues, Folk, Country, and Reggae are examples.

After "OTHER M" is displayed, the display returns to "NEWS".

To display the name of the program type currently being listened to—(PTY display)

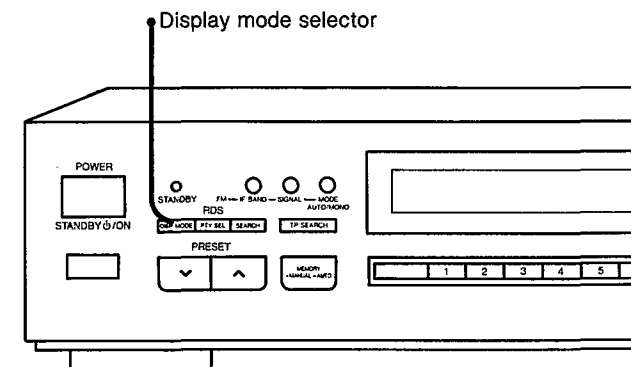
When listening to an RDS broadcast and a PTY signal is being received, the name of the program type can be displayed by pressing the display mode selector.

The display mode changes in the following way each time the selector is pressed.



("PTY" will illuminate on the display when in the PTY display mode.)

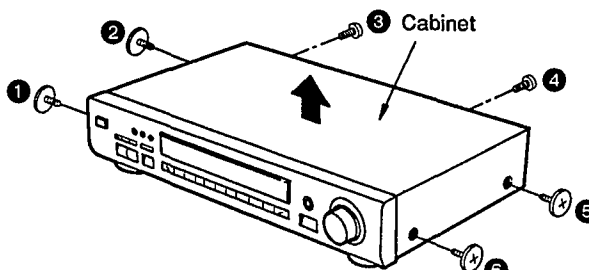
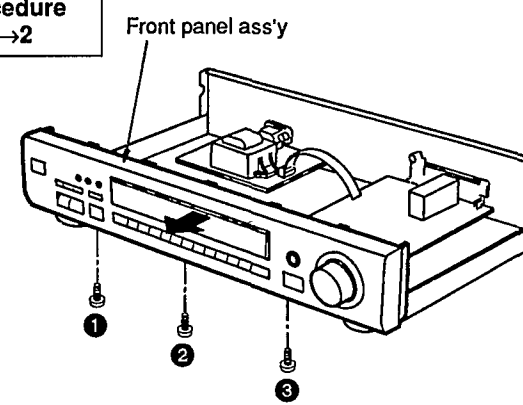
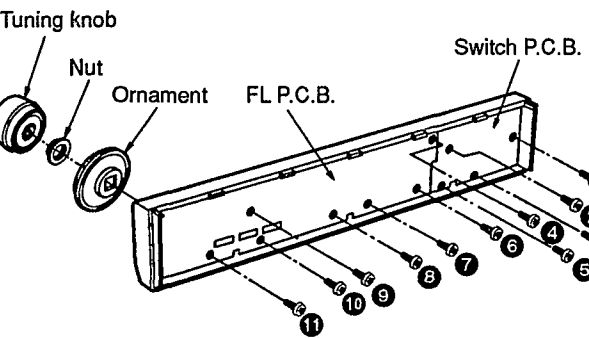
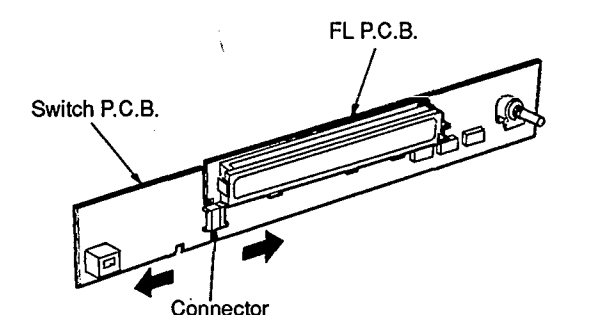
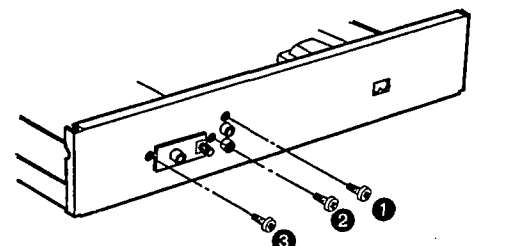
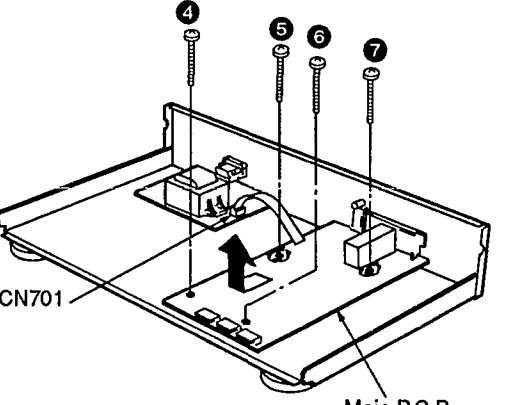
Note:
If a PTY signal is not being received, "NO PTY" will be displayed when the PTY display mode is selected.

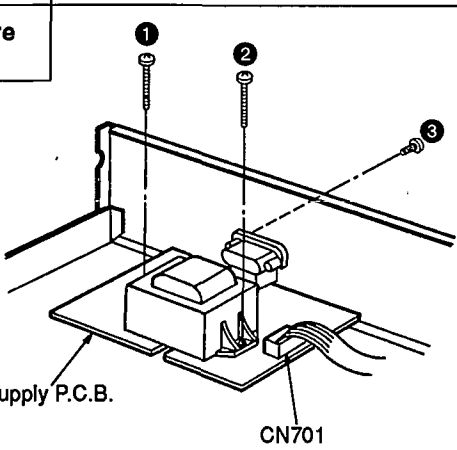


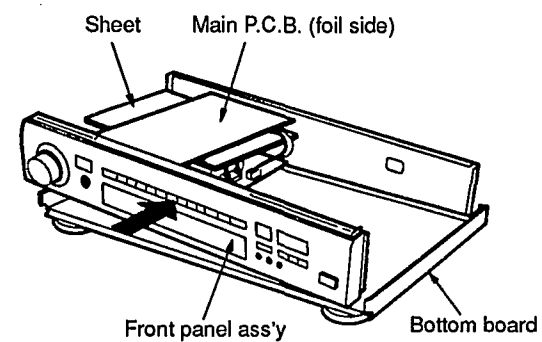
DISASSEMBLY INSTRUCTIONS

"ATTENTION SERVICER"

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

Ref. No. 1 Removal of the cabinet	Ref. No. 2 Removal of the front panel ass'y
Procedure 1  <p>● Remove the 6 screws (1~6).</p>	Procedure 1→2  <p>1. Remove the 3 screws (1~3). 2. Remove the front panel ass'y in the direction of arrow.</p>
Ref. No. 3 Removal of the FL P.C.B. and switch P.C.B.	Ref. No. 4 Removal of the main P.C.B.
Procedure 1→2→3  <p>1. Pull out the tuning knob. 2. Remove the nut. 3. Remove the ornament. 4. Remove the 11 screws (1~11).</p>  <p>5. Separate the switch P.C.B. and FL P.C.B. in the direction of arrow.</p>	Procedure 1→2→4  <p>1. Remove the 3 screws (1~3).</p>  <p>2. Remove the 1 connector (CN701). 3. Remove the 4 screws (4~7). 4. Remove the main P.C.B. in the direction of arrow.</p>

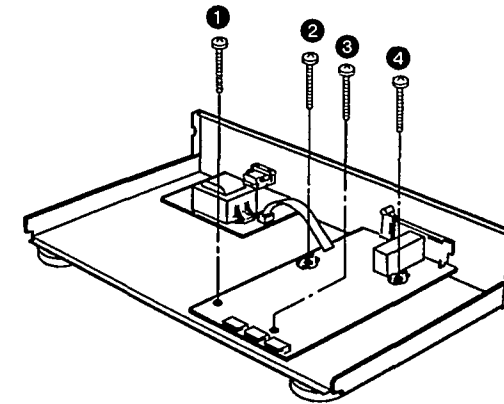
Ref. No. 5 Removal of the power supply P.C.B.	Procedure 1→5  <p>1. Remove the 1 connector (CN701). 2. Remove the 3 screws (1~3).</p>
--	---



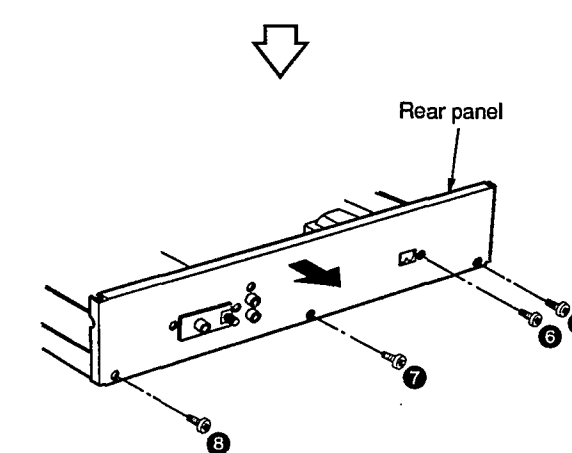
4. As shown below, turn the main P.C.B. over to face the foil pattern toward you.
5. Reinstall the front panel ass'y to the main P.C.B.
6. When checking the soldered surface of the main P.C.B. and replacing the parts, do as shown above.

HOW TO CHECK THE MAIN P.C.B.

1. Remove the cabinet (see Ref. No. 1 of the disassembly instructions).
2. Remove the front panel ass'y (see Ref. No. 2 of the disassembly instructions).



1. Remove the 4 screws (1~4).



2. Remove the 4 screws (5~8).
3. Remove the rear panel in the direction of arrow.

SCHEMATIC DIAGRAM

FL/Switch circuit for (E), (EB), (EG) areas

(Parts list on pages 41~44)

Notes:

- S901: Power "STANDBY/ON" switch (POWER, STANDBY/ON)
- S902: Preset-tuning switch (9)
- S903: Tuning mode select switch (TUNING MODE)
- S904: Display mode select switch (DISP MODE)
- S905: Preset-tuning switch (0)
- S906: Preset-tuning switch (1)
- S907: PTY select switch (PTY SEL)
- S908: Preset-tuning switch (≥ 10)
- S909: Preset-tuning switch (2)
- S910: AF/PTY search switch (SEARCH)
- S911: Band select switch (-BAND, - ALLOCATION)
- S912: Preset-tuning switch (3)
- S913: TP search switch (TP SEARCH)
- S914: FM signal-strength indication switch (SIGNAL)
- S915: Preset-tuning switch (4)
- S916: FM IF band select switch (IF BAND)
- S917: FM mode select switch (MODE)
- S918: Preset-tuning switch (5)
- S920: Memory switch (MEMORY)
- S921: Preset-tuning switch (6)
- S923: Preset channel switch (PRESET)
- S924: Preset-tuning switch (7)
- S925: Preset channel switch (PRESET)
- S927: Preset-tuning switch (8)

●Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

No mark: FM () : MW... for (E, EB) areas/AM... for (EG) area < > : LW [] : Muting

Important safety notice

Components identified by Δ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

●This schematic diagram may be modified at any time with the development of new technology.

— : Positive voltage lines (+) - - - - : Negative voltage lines (-)

●The supply part number is described alone in the replacement parts list.

Part No.	Production Part No.	Supply Part No.
Z901	RCDHC-278-E	RCDHC-278

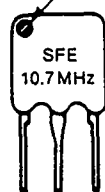
For (E), (EB), (EG), (GC), (GN) areas

Use of ceramic filters in pairs

The ceramic filters (CF101~CF104) for FM-IF circuit are available in three ranks. For this circuit, be sure to use the ceramics of the same rank in a pair.

At repairing and replacement, pay close attention to the diodes (D911, D912) for use as different diodes must be used depending on each rank of the ceramic filters.

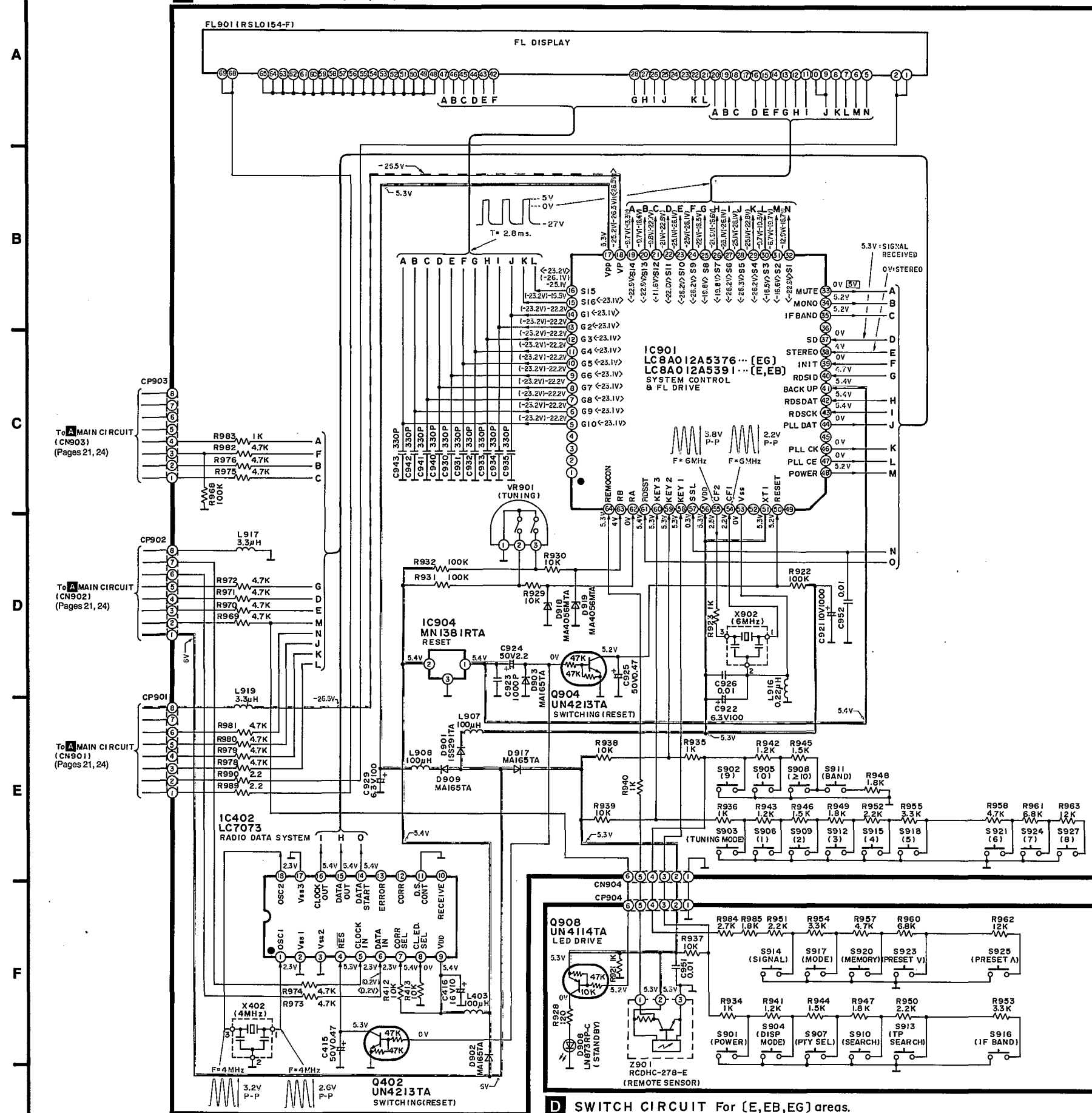
Color marking
(Red, Blue or Orange)



RANK (Color)	D911	D912	CENTER FREQUENCY
Orange	×	○	10.72 MHz
Red	○	○	10.70 MHz
Blue	○	×	10.67 MHz

Note: ○ mark: Diode is used.
× mark: Diode is not used.

FL CIRCUIT For (E, EB, EG) areas.



D SWITCH CIRCUIT For (E, EB, EG) areas.

SCHEMATIC DIAGRAM

FL/Switch/Power supply circuit for (GC), (GN) areas

(Parts list on pages 41~44)

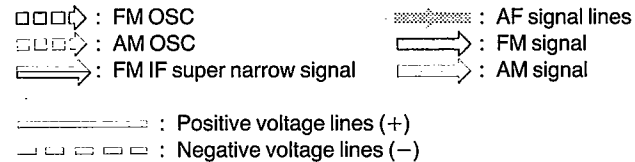
Notes:

- S701: Voltage selector switch in "240 V" position (110 V/127 V/220 V/240 V) for (GC) area
- S901: Power "STANDBY/ON" switch (POWER, STANDBY/ON)
- S902: Preset-tuning switch (9)
- S903: Tuning mode select switch (TUNING MODE)
- S904: FM IF band select switch (IF BAND)
- S905: Preset-tuning switch (0)
- S906: Preset-tuning switch (1)
- S907: FM signal-strength indication switch (SIGNAL)
- S908: Preset-tuning switch (≥ 10)
- S909: Preset-tuning switch (2)
- S910: FM mode select switch (MODE)
- S911: Band select switch (- BAND, - ALLOCATION)
- S912: Preset-tuning switch (3)
- S915: Preset-tuning switch (4)
- S918: Preset-tuning switch (5)
- S920: Memory switch (MEMORY)
- S921: Preset-tuning switch (6)
- S923: Preset channel switch (PRESET)
- S924: Preset-tuning switch (7)
- S925: Preset channel switch (PRESET)
- S927: Preset-tuning switch (8)

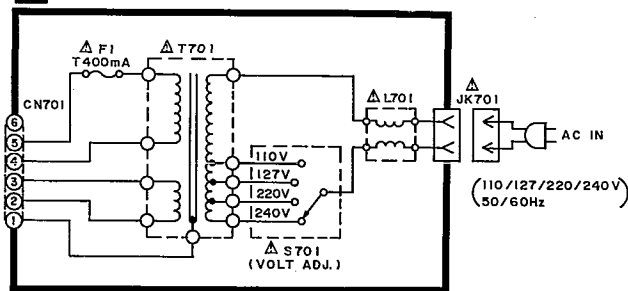
●Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
 No mark: FM (): MW...for (E, EB) areas/AM...for (GC, GN) areas
 < >: LW (): Muting

●Important safety notice
 Components identified by Δ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

●This schematic diagram may be modified at any time with the development of new technology.

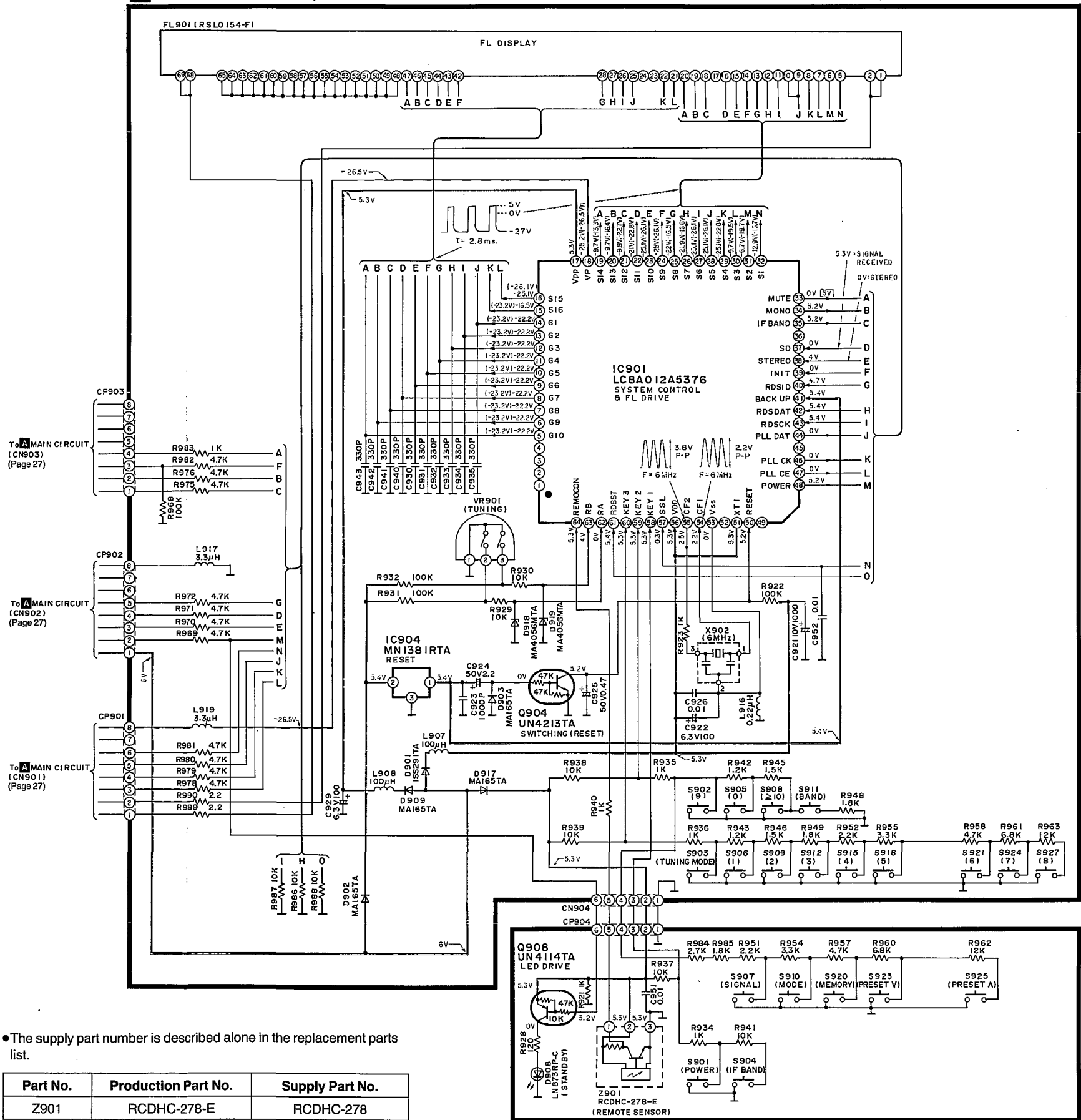


B POWER SUPPLY CIRCUIT For (GC) area.



- Caution!**
 IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with aluminum foil.
 - Ground the soldering iron.
 - Put a conductive mat on the work table.
 - Do not touch the legs of IC or LSI with the fingers directly.

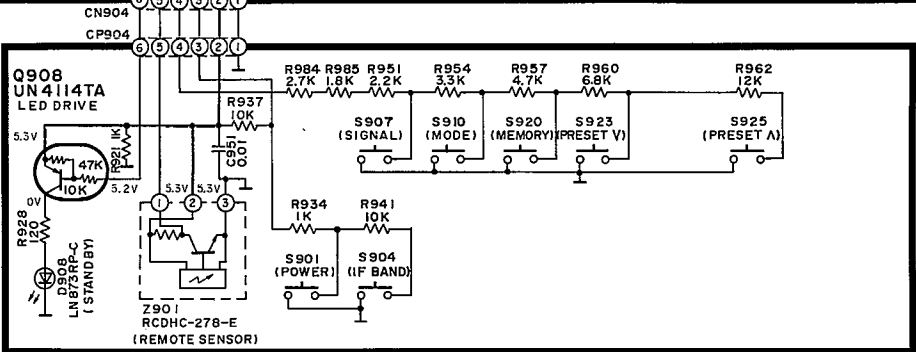
C FL CIRCUIT For (GC, GN) areas.



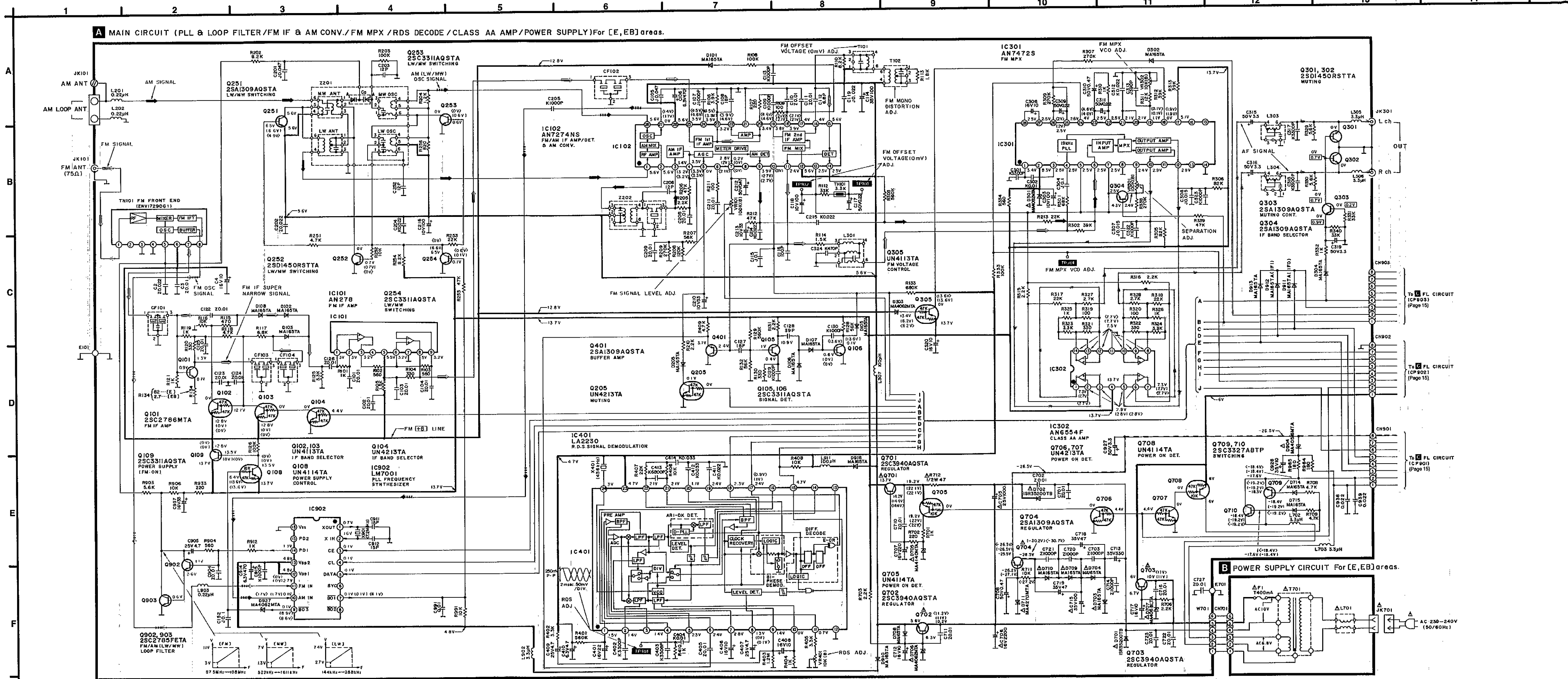
●The supply part number is described alone in the replacement parts list.

Part No.	Production Part No.	Supply Part No.
Z901	RCDHC-278-E	RCDHC-278

D SWITCH CIRCUIT For (GC, GN) areas.



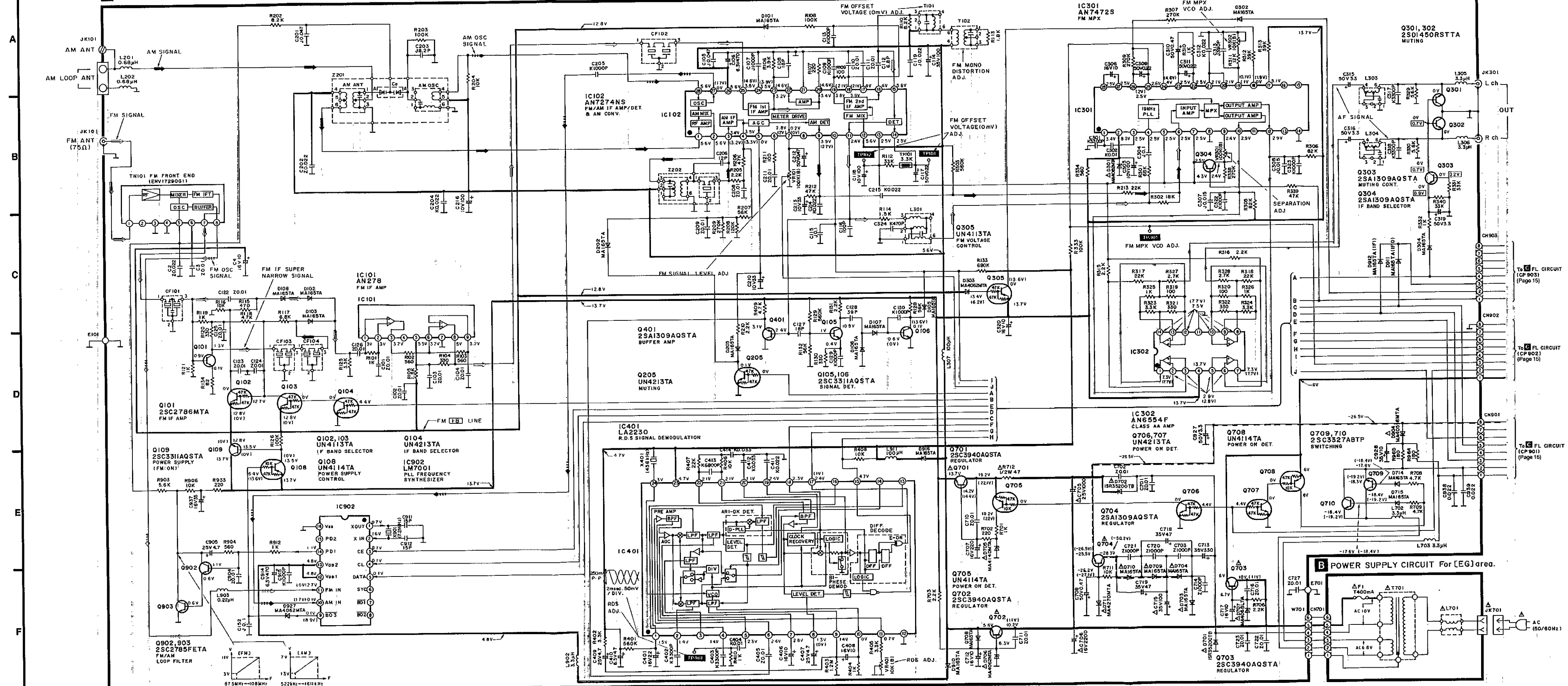
SCHEMATIC DIAGRAM • Main/Power supply circuit for (E), (EB) areas (Parts list on pages 41~44)



SCHEMATIC DIAGRAM • Main/Power supply circuit for (EG) area (Parts list on pages 41~44)

Legend: □□□ : FM OSC, ■■■ : AM OSC, → : FM signal, ⇨ : AM signal, --- : AF signal lines, --- : FM IF super narrow signal, --- : Positive voltage lines (+), --- : Negative voltage lines (-)

A MAIN CIRCUIT (PLL & LOOP FILTER / FM IF & AM CONV. / FM MPX / RDS DECODE / CLASS AA AMP / POWER SUPPLY) For [EG] area.

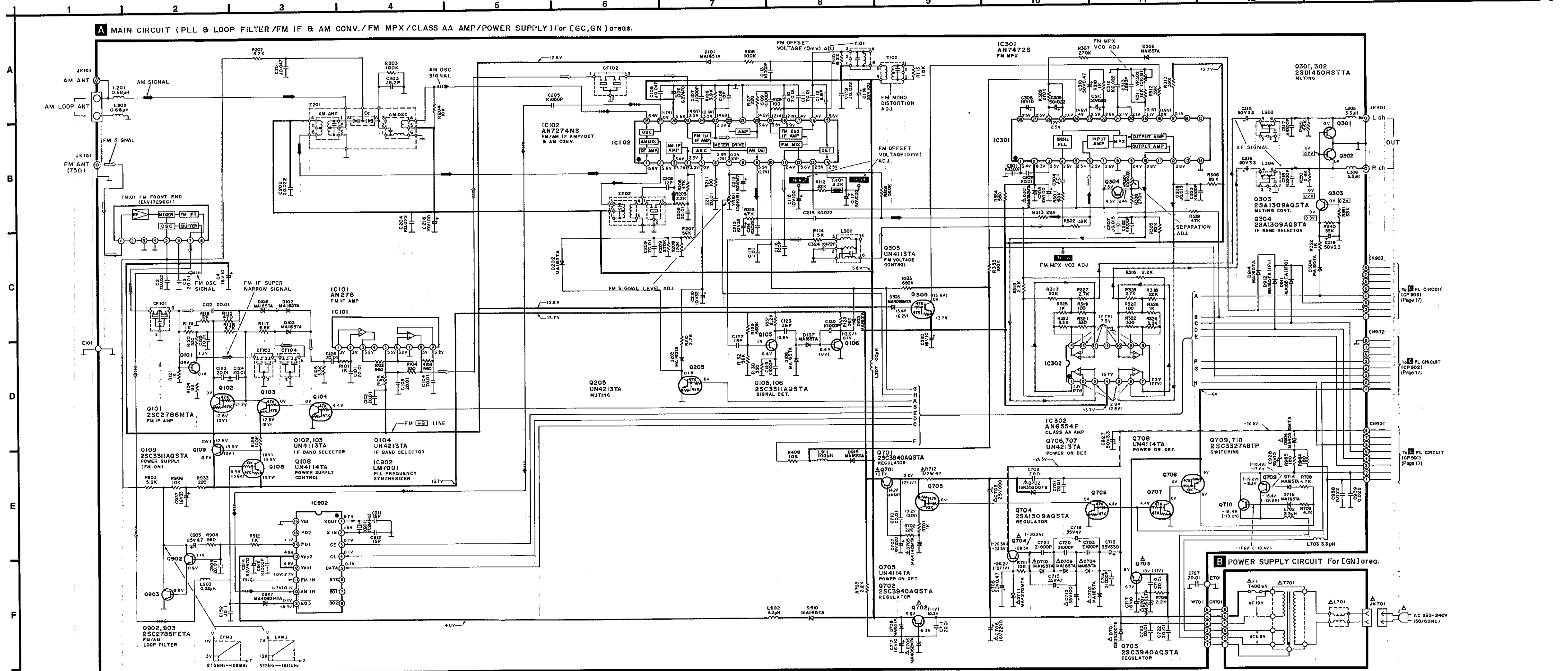


B POWER SUPPLY CIRCUIT For [EG] area.

FL CIRCUIT (CP 903) (Page 15)
FL CIRCUIT (CP 902) (Page 15)
FL CIRCUIT (CP 901) (Page 15)

SCHEMATIC DIAGRAM • Main/Power supply circuit for (GC), (GN) areas (Parts list on pages 41-44)

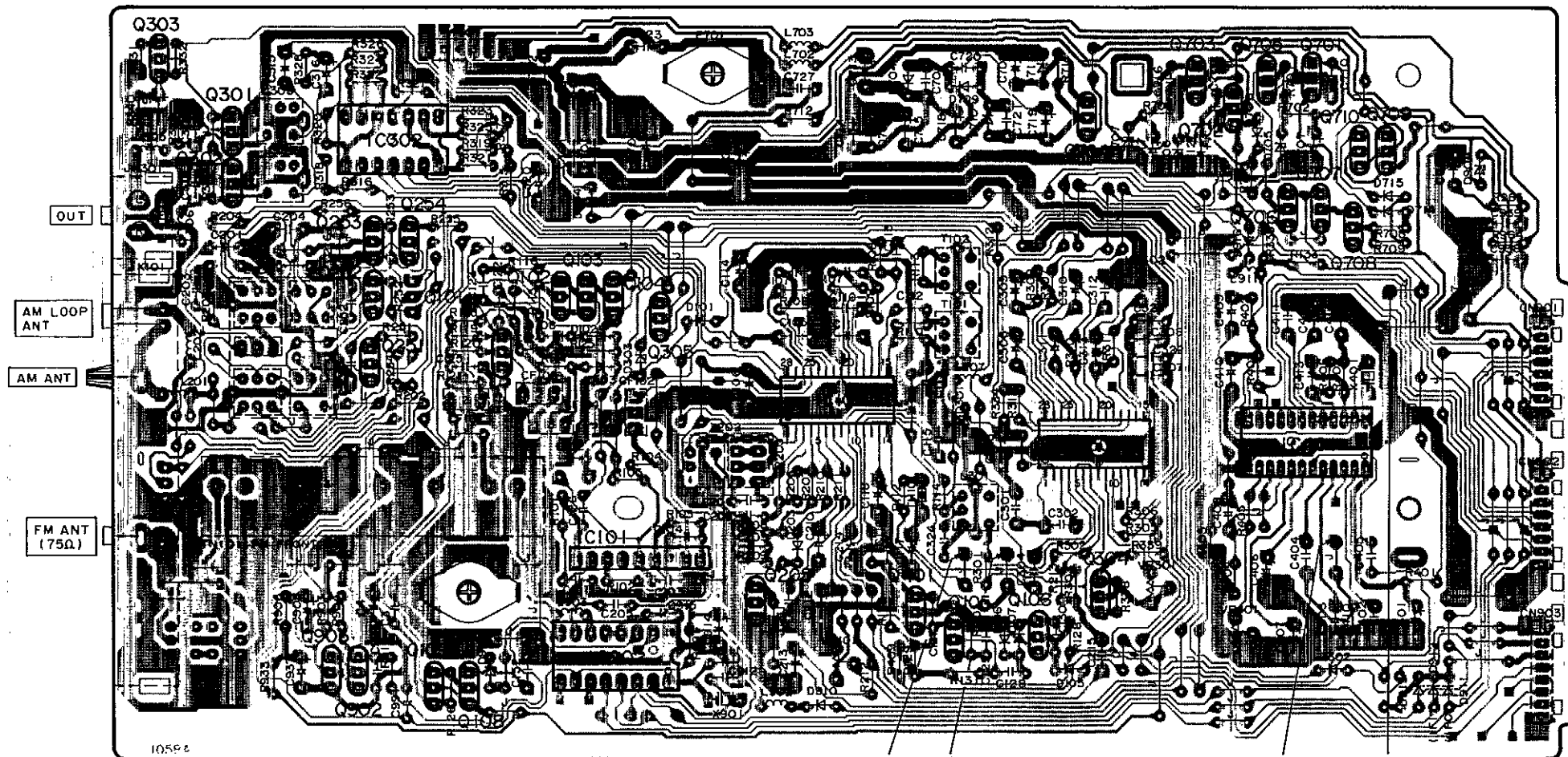
• Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester. No mark: FM (): AM (): Muting ()



PRINTED CIRCUIT BOARD DIAGRAM

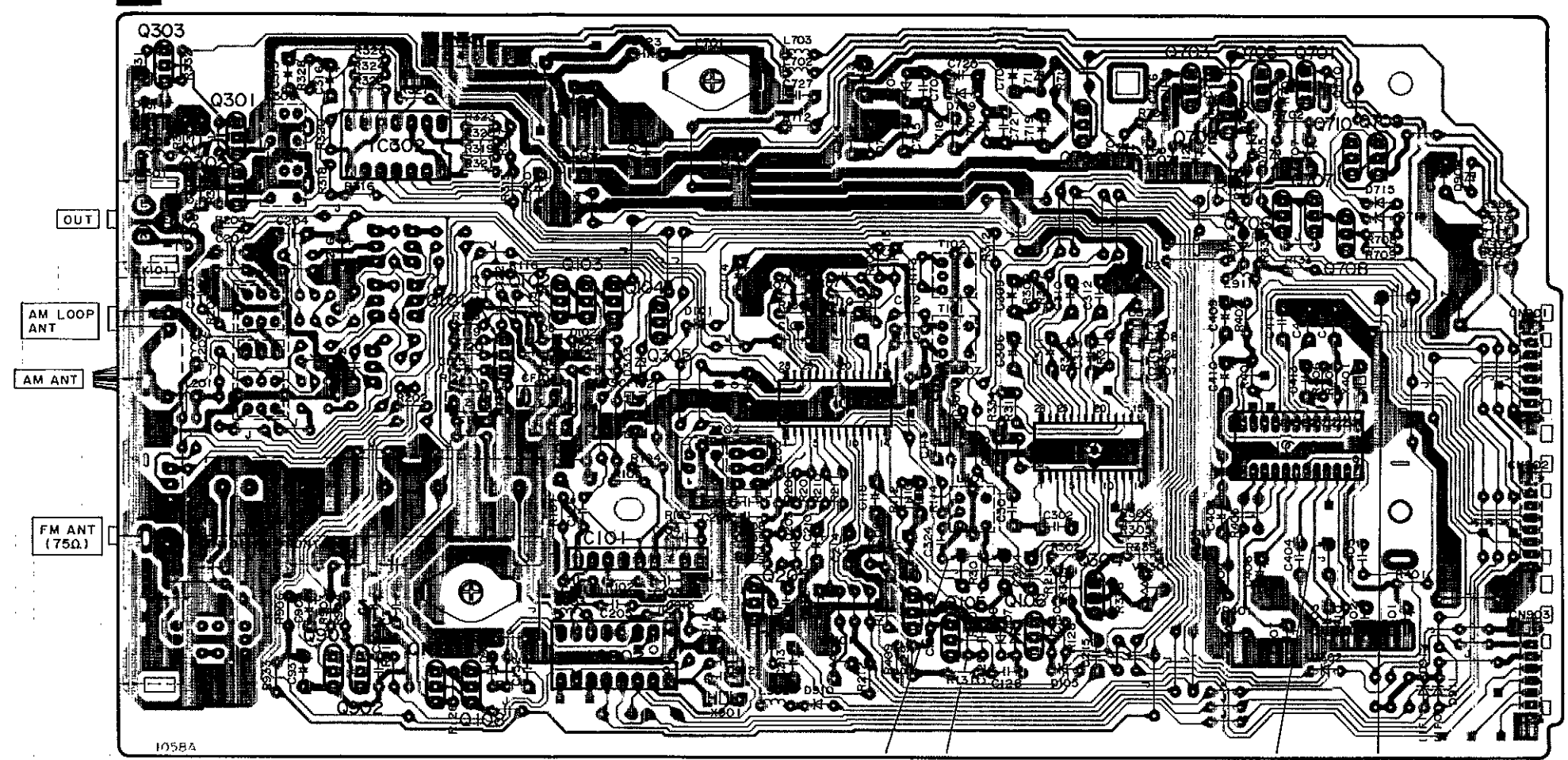
This circuit board diagram may be modified at any time with the development of new technology.

A MAIN P.C.B. For (E,EB) areas. (REP1617E-M...[E]) (REP1617F-M...[EB])



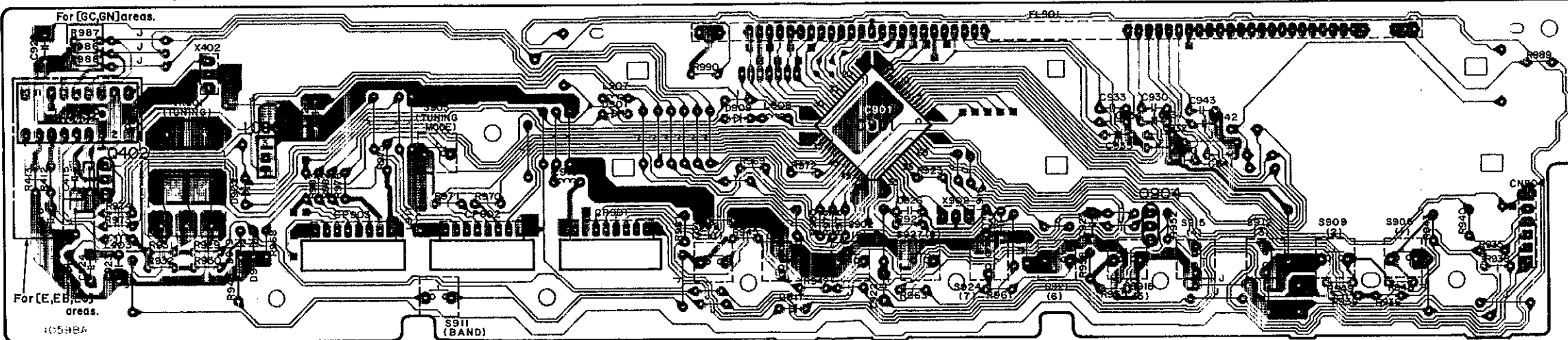
TP101 TP102 FM OFFSET VOLTAGE(0mV) ADJ. TP401 RDS ADJ. TP301 FM MPX VCO ADJ.

A MAIN P.C.B. For (EG) area. (REP1617D-M)



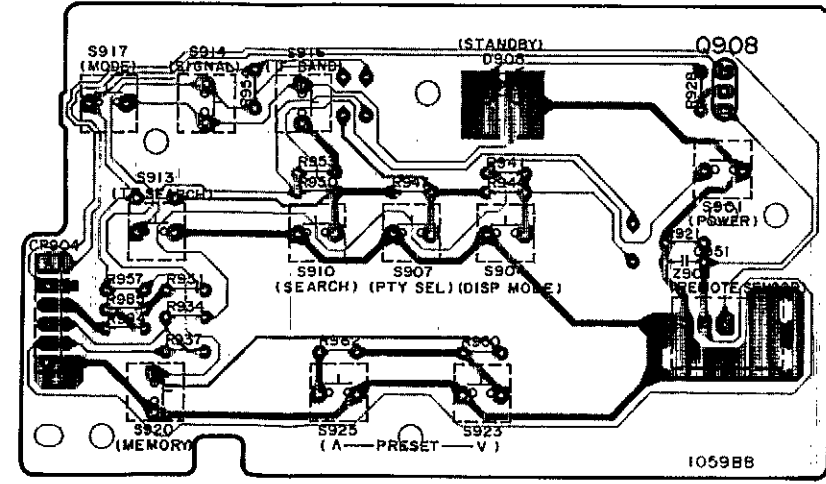
TP101 TP102 FM OFFSET VOLTAGE(0mV) ADJ. TP401 RDS ADJ. TP401 FM MPX VCO ADJ.

C FL P.C.B. (REP1618B-S...[EG]) (REP1618C-S...[GC,GN]) (REP1618D-S...[E,EB])



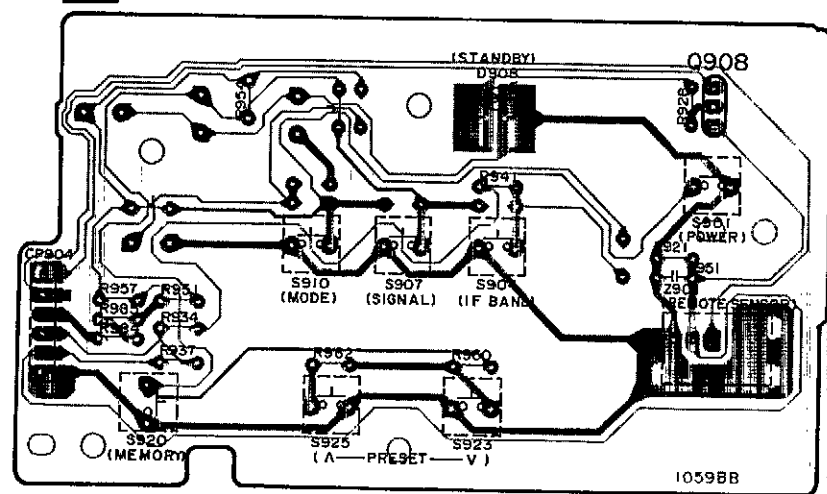
S911 (BAND)

D SWITCH P.C.B. For [E,EB,EG] areas. (REP1618B-S...[EG]) (REP1618D-S...[E,EB])



S917 (MODE) S914 (PTY SEL) S916 (DISP MON) S908 (STANDBY) S906 (POWER) S913 (SEARCH) S907 (PTYP) S904 (DISP MON) S920 (MEMORY) S925 (A-PRESET-V) S925 (A-PRESET-V)

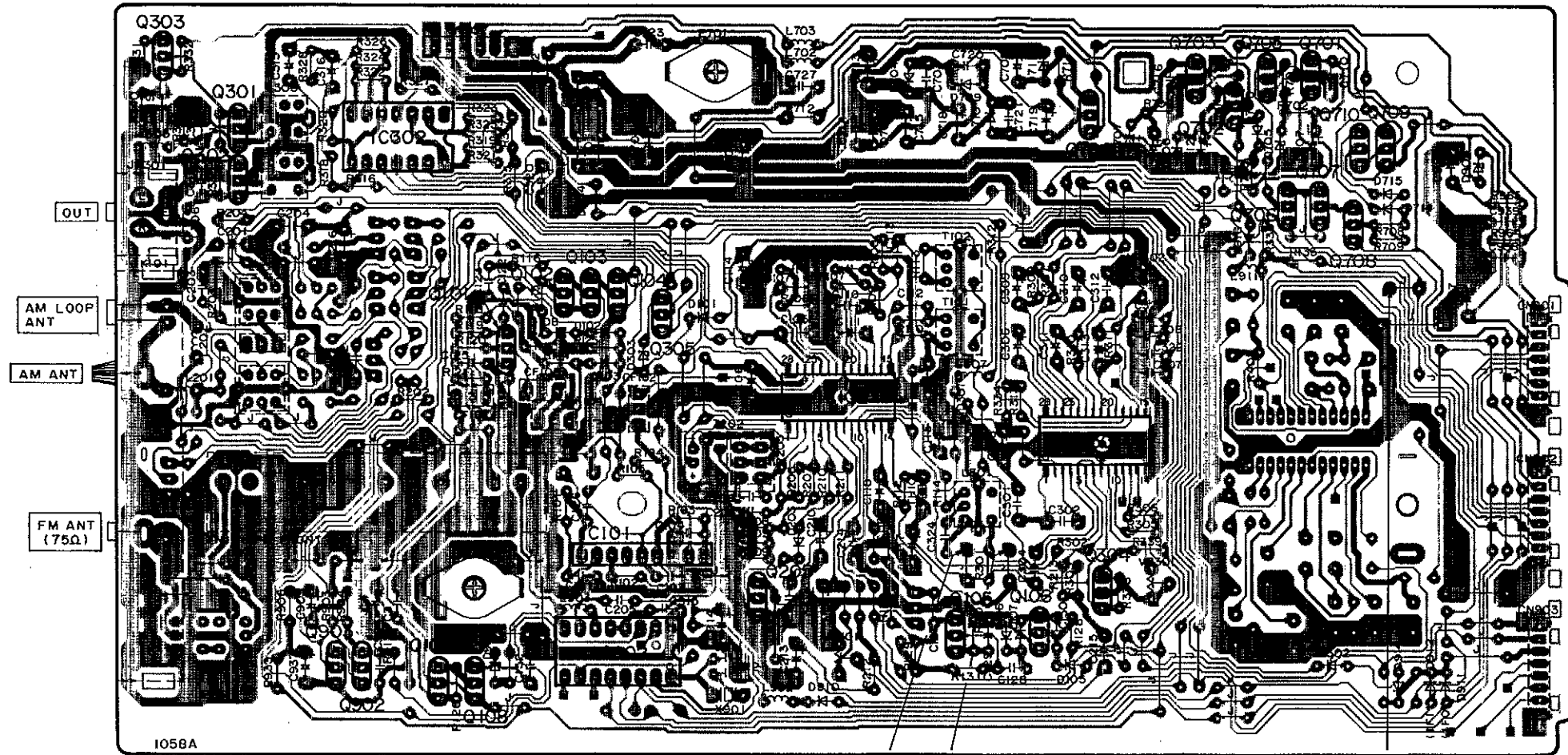
D SWITCH P.C.B. For [GC,GN] areas. (REP1618C-S)



S917 (MODE) S914 (PTY SEL) S916 (DISP MON) S908 (STANDBY) S906 (POWER) S913 (SEARCH) S907 (PTYP) S904 (DISP MON) S920 (MEMORY) S925 (A-PRESET-V) S925 (A-PRESET-V)

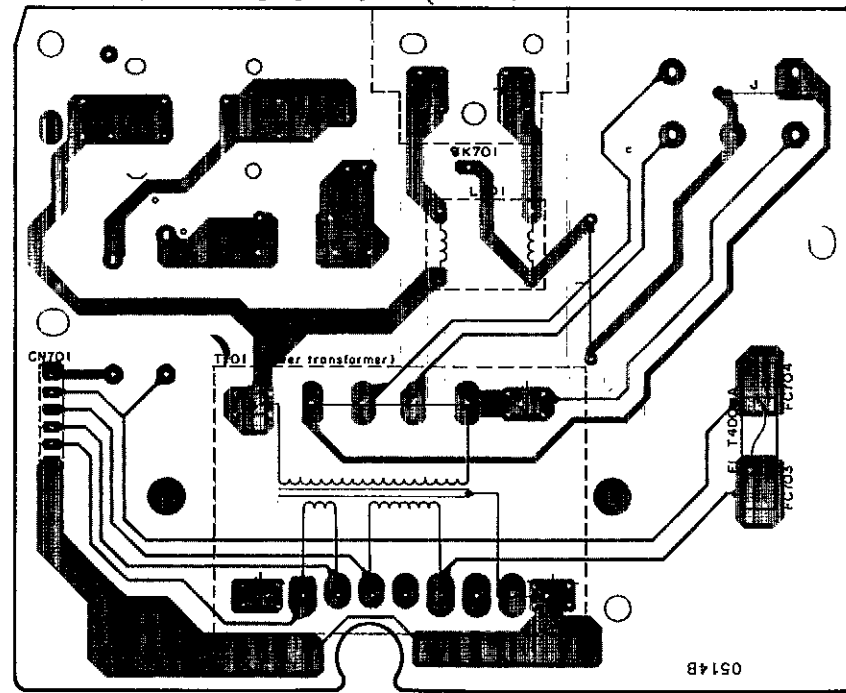
15 16 17 18 19 20 21 22 23

A MAIN P.C.B. For [GC,GN] areas. (REP1617G-M)

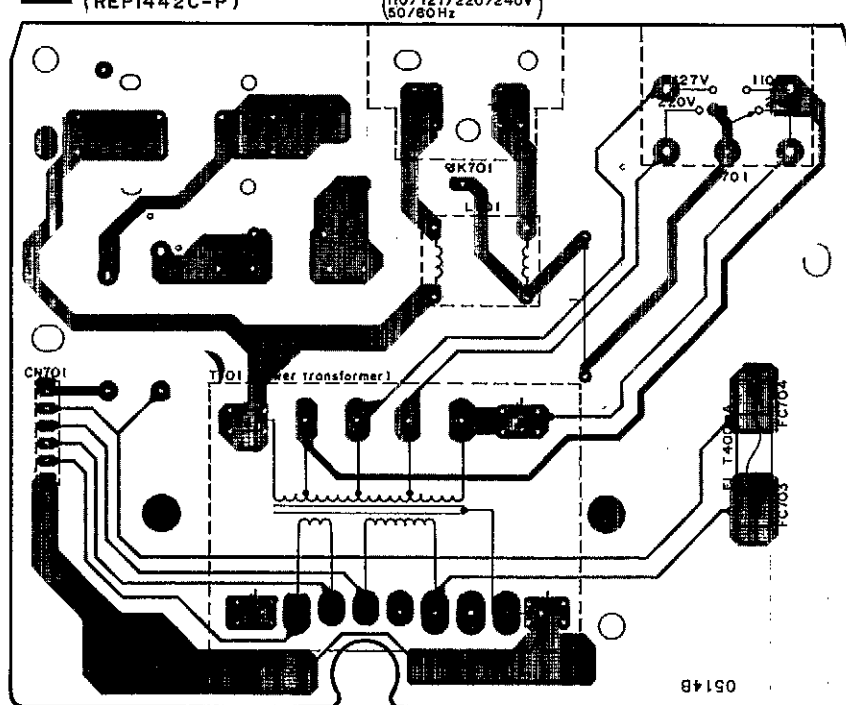


TP101 TP102
FM OFFSET VOLTAGE (0mV) ADJ.
TP103
FM MPX VCO ADJ.

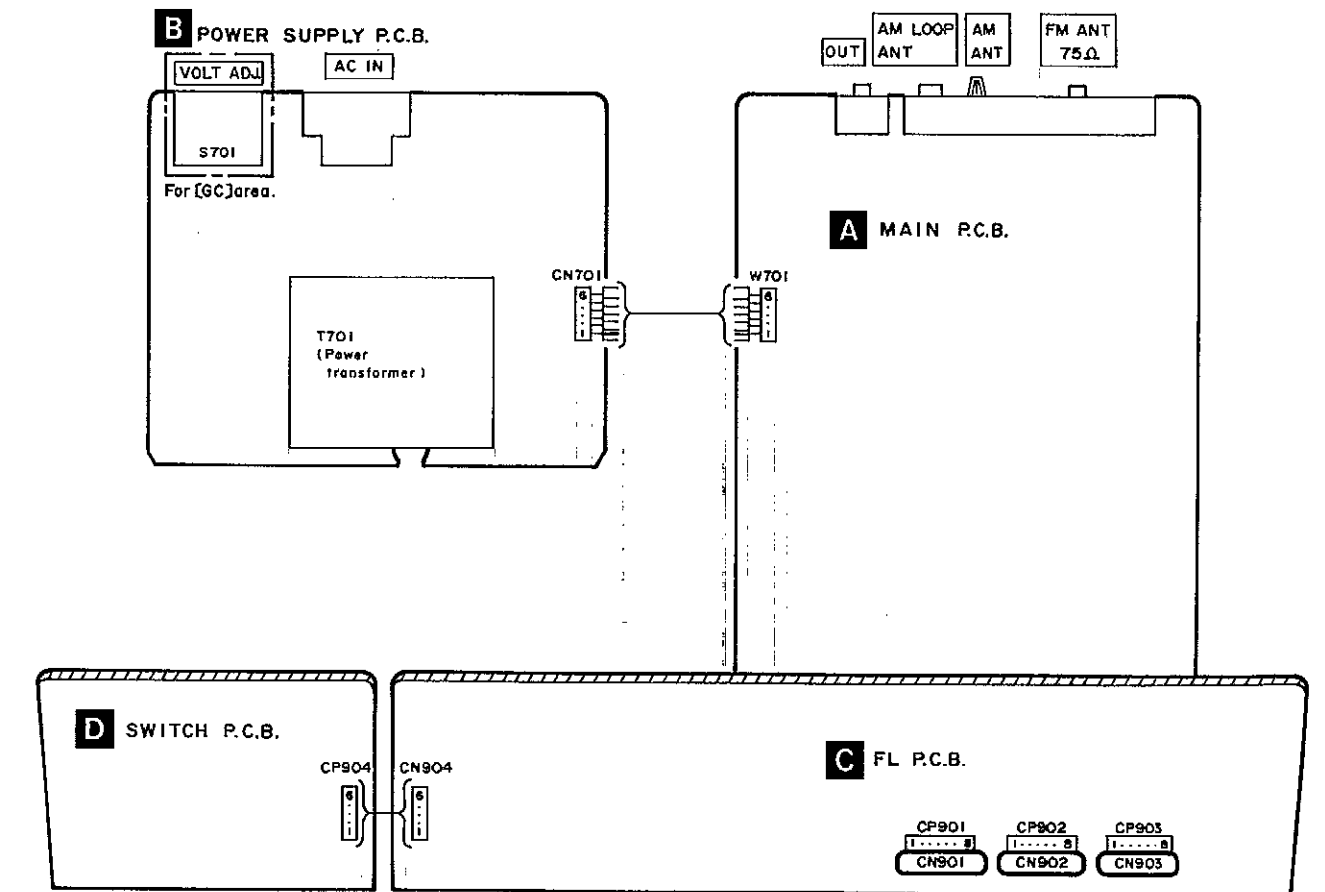
B POWER SUPPLY P.C.B. For [E,EB,EG,GN] areas. (REP1442A-P... [E,EB,EG] REP1442B-P... [GN])



B POWER SUPPLY P.C.B. For [GC] area. (REP1442C-P)



WIRING CONNECTION DIAGRAM



•Terminal guide of IC's, transistors and diodes

<p>AN7274NS AN7472S</p>	<p>LC7073</p>	<p>LA2230</p>	<p>AN6554F 14 Pin LM7001 16 Pin</p>	<p>LC8A012A5391 LC8A012A5376</p>
<p>AN278</p>	<p>MN1381RTA</p>	<p>2SC3940AQSTA</p>	<p>2SC3327ABTP</p>	<p>2SA1309AQSTA 2SC2785FETA 2SC2786MTA 2SC3311AQSTA 2SD1450RSTTA UN4113TA UN4114TA UN4213TA</p>
<p>MA165TA 1SS291TA 1SR35200TB</p>	<p>MA4140MTA MA4270MTA</p>	<p>MA4056MTA MA4062MTA MA4082MTA MA4068LTA</p>	<p>LN873RP-C</p>	

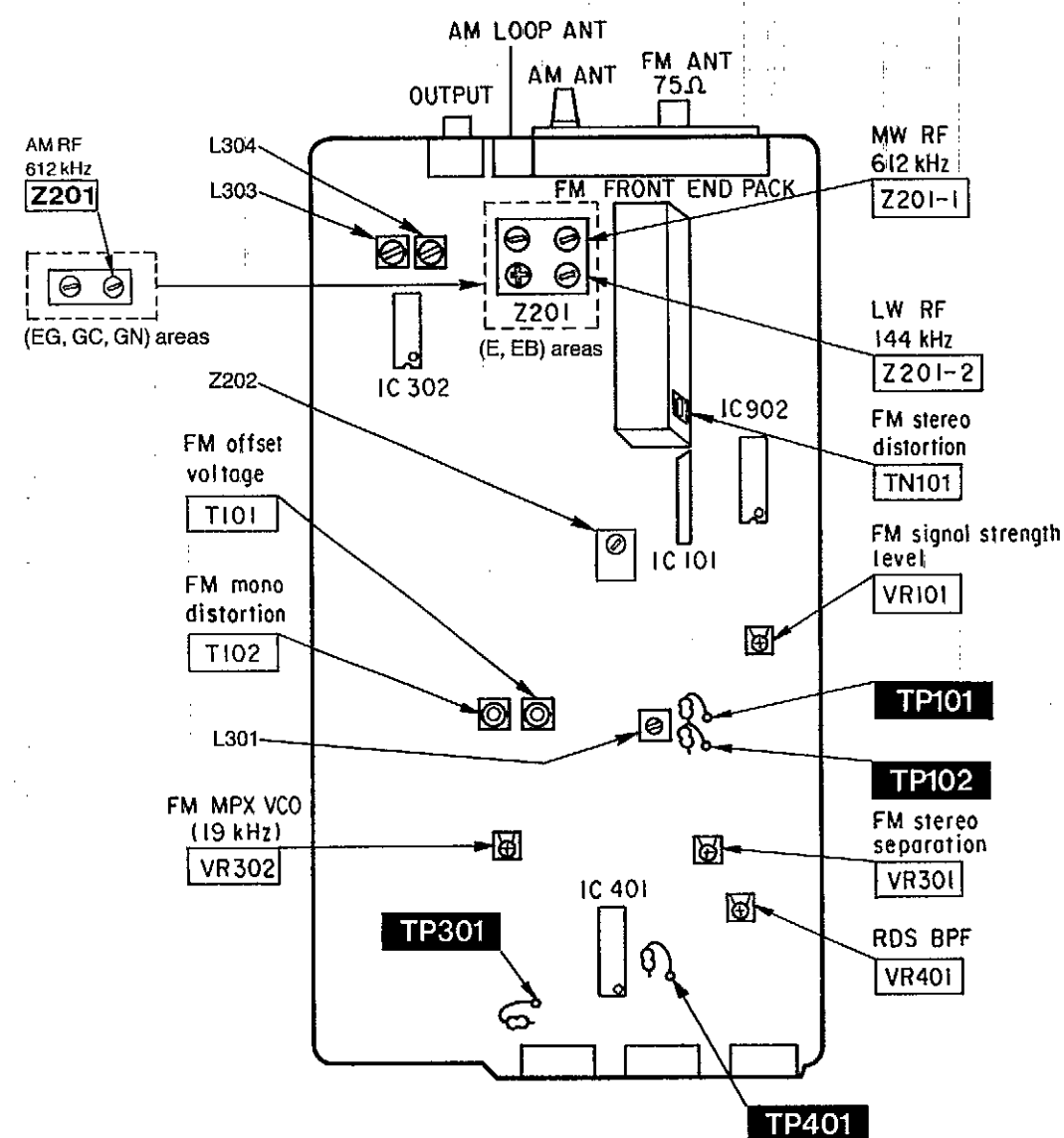
MEASUREMENTS AND ADJUSTMENTS

Equipment used

- FM signal generator (FM-SG)
- AM signal generator (AM-SG)
- Stereo modulator
- Distortion analyser
- RDS modulator
- Resistor (100 k Ω)
- Oscilloscope
- Choke coil (100 μ H)
- Frequency counter
- AC and DC electronic voltmeter (EVM)
- 75 Ω coaxial cable

Note: for Z202, L301, L303 and L304, they are supplied as adjusted parts. So, do not turn the cores of the parts.

Adjustment points



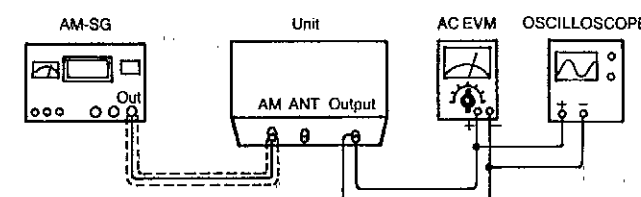
MW RF ADJUSTMENT [for (E) (EB) areas]

1. Test equipment connection is shown in figure.
2. Set the unit to "MW" mode.
3. Set the radio frequency display and signal generator to 612 kHz.
4. Adjust Z201-1 so that the output terminal is maximized.

AM SIGNAL GENERATOR CONDITION
 Modulation 30%
 Modulation frequency 400 Hz

Note:

Adjust the output from AM signal generator to a low level.



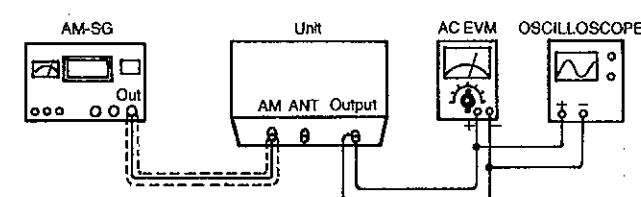
AM RF ADJUSTMENT [for (EG) (GC) (GN) areas]

1. Test equipment connection is shown in figure.
2. Set the unit to "AM" mode.
3. Set the radio frequency display and signal generator to 612 kHz.
4. Adjust Z201 so that the output terminal is maximized.

AM SIGNAL GENERATOR CONDITION
 Modulation 30%
 Modulation frequency 400 Hz

Note:

Adjust the output from AM signal generator to a low level.



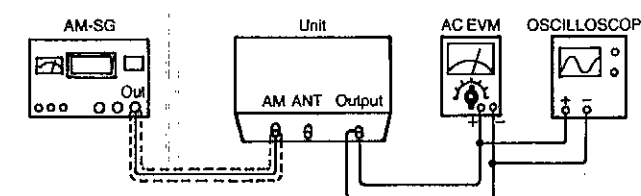
LW RF ADJUSTMENT [for (E) (EB) areas]

1. Test equipment connection is shown in figure.
2. Set the unit to "LW" mode.
3. Set the radio frequency display and signal generator to 144 kHz.
4. Adjust Z201-2 so that the output terminal is maximized.

AM SIGNAL GENERATOR CONDITION
 Modulation 30%
 Modulation frequency 400 Hz

Note:

Adjust the output from AM signal generator to a low level.

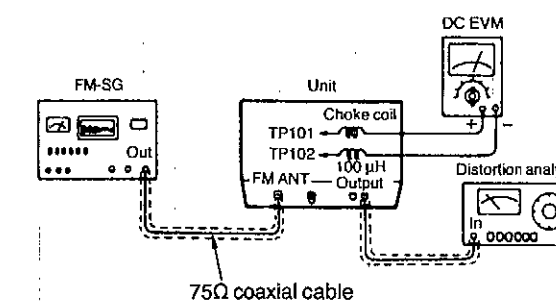


FM MONO DISTORTION/FM OFFSET VOLTAGE ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM" and "IF normal" mode.
3. Set the radio frequency display and signal generator to 100.10 MHz.
4. Adjust the core of T101 so that the voltage measured in signal mode is 0 mV (0 \pm 20 mV) in 300 mV range.
5. Adjust T102 so that the distortion factor of L-CH is minimized.
6. Repeat steps 4 and 5.
7. Make sure that the distortion factors of L-CH and R-CH are nearly the same and minimum.

Note: The adjusting screwdriver used should be made of resin.

FM SIGNAL GENERATOR CONDITION
 Modulation 100%
 Modulation frequency 1 kHz
 Output level 66 dB



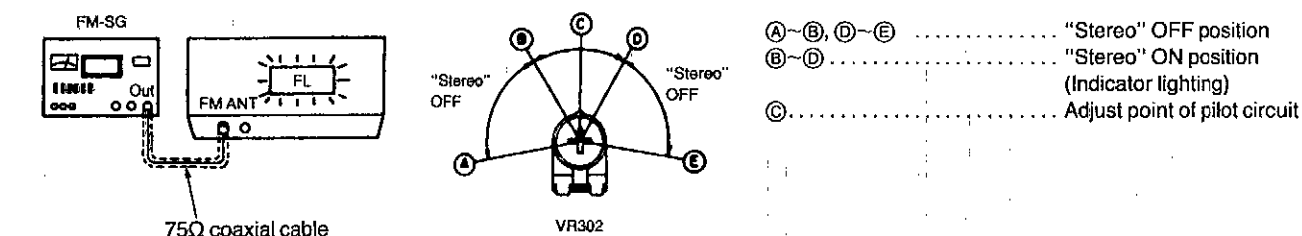
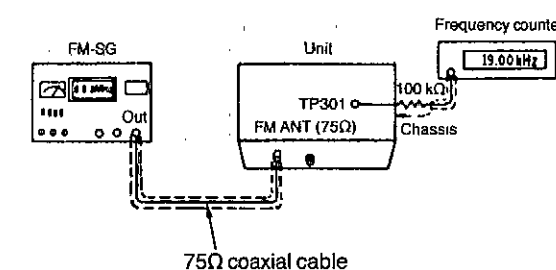
FM MPX VCO ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM" and "IF normal" mode.
3. Set the radio frequency display and signal generator to 100.50 MHz.
4. Adjust VR302 for 19 kHz \pm 30 Hz on frequency counter reading.

USING ALTERNATE SYSTEM

1. Apply stereo signal from generator or receive the stereo broadcast.
2. Adjust VR302 until stereo indicator lights up. Fix the arm of VR302 as shown in figure.

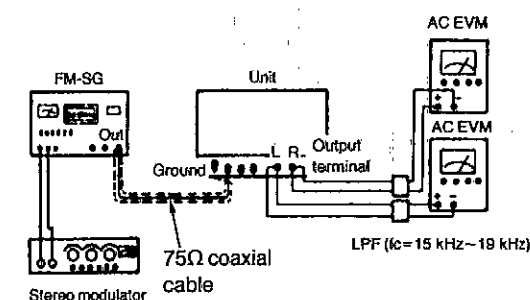
FM SIGNAL GENERATOR CONDITION
 Modulation 0%
 Modulation frequency 0 kHz
 Output level 66 dB



FM STEREO SEPARATION ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM" mode.
3. Set the radio frequency display and signal generator to 100.20 MHz.
4. Adjust VR301 so that the R-CH output is minimized when stereo modulator is in "L" (L-CH modulation) mode.

FM SIGNAL GENERATOR CONDITION
 Modulation Stereo "L" mode or "R" mode 90%, Pilot 10%
 Modulation frequency 1 kHz (Pilot 19 kHz)
 Output level 66 dB

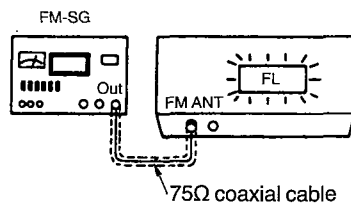


FM SIGNAL STRENGTH LEVEL ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM" and "IF normal" mode.
3. Set the radio frequency display and signal generator to **100.50 MHz**.
4. Change FL display from "frequency" to "dB" by pressing the FM signal button.
5. Adjust **VR101** so that **54 dB** is indicated. "54 dB" is indicated on the FL display.
6. Repeat steps 4, 5.

FM SIGNAL GENERATOR CONDITION

Modulation 30%
 Modulation frequency 1 kHz
 Output level 60 dB



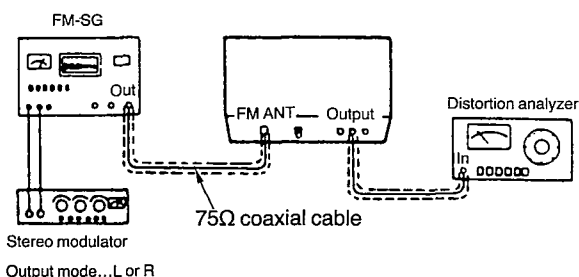
FM STEREO DISTORTION ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM" mode.
3. Set the radio frequency display and signal generator to **100.10 MHz**.
4. Adjust **TN101** so that the distortion factor of L-CH is minimized.
5. Make sure that the distortion factors of L-CH and R-CH are nearly the same and minimum.

Note: The adjusting screwdriver used should be made of resin.

FM SIGNAL GENERATOR CONDITION

Modulation "L" mode or "R" mode 90%,
 Pilot 10%
 Modulation frequency 1 kHz (Pilot 19 kHz)
 Output level 66 dB



RDS (Radio data system) BPF ADJUSTMENT

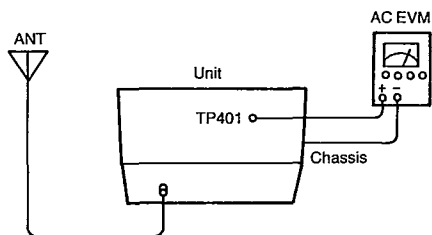
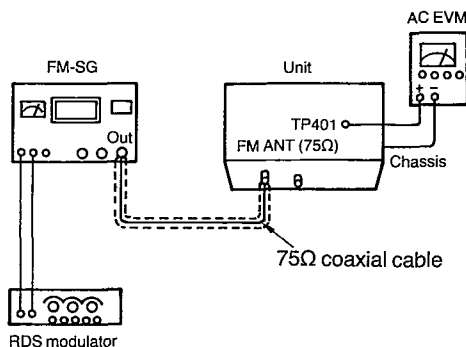
1. Test equipment connection is shown in figure.
2. Set the unit to "FM" mode.
3. Set the radio frequency display and signal generator to **100.10 MHz**.
4. Adjust **VR401** so that the **TP401** output is maximized.

FM SIGNAL GENERATOR CONDITION

Modulation 100%
 Modulation frequency 1 kHz
 RDS modulation 2.7%
 Output level 66 dB

How to make simple adjustment without using a RDS modulator

1. Tune into a FM broadcast with a RDS signal transmitted from a FM station whose electric field intensity is more than **50 dB**.
2. Adjust **VR401** to increase a bi-phase signal to a maximum.



■ FUNCTIONS OF IC TERMINALS

● IC901 (LC8A012A5391/LC8A012A5376)

Pin No.	Terminal Name	I/O	Function
1	No use	—	————
2	No use	—	————
3	No use	—	————
4	No use	—	————
5 } 14	G10 } G1	O	Grid signal output
15 • 16	S16 • S15	O	Segment signal output
17	VPP	—	Power supply for FL (+5 V)
18	VP	—	Power supply for FL (–VP)
19 } 32	S14 } S1	O	Segment signal output
33	MUTE	O	Muting signal output
34	MONO	O	Forcible monaural select signal output
35	IF BAND	O	IF BAND select signal output H: NARROW L: NORMAL
36	No use	—	————
37	SD	I	Station detector signal input
38	STEREO	I	Stereo signal input
39	INIT	I	Initial setting signal input
40	RDSID	I	RDSID signal input
41	BACK UP	I	Power failure detect signal input

Pin No.	Terminal Name	I/O	Function
42	RDSDAT	I	RDS data input
43	RDSCK	I	RDS clock input
44	PLL DAT	O	Serial data output
45	No use	—	————
46	PLL CK	O	Serial clock signal output
47	PLL CE	O	LM7001 chip enable signal output
48	POWER	O	Power control signal output
49	No use	—	————
50	RESET	I	Reset signal input
51	XT1	I	Connected to V _{DD}
52	No use	—	————
53	V _{SS}	—	Connected to GND
54	CF1	I	Connecting terminal for ceramic filter
55	CF2	O	
56	V _{DD}	I	Power supply (+5 V)
57	SSL	I	Tuning level signal input
58 } 60	KEY 1 } KEY 3	I	Key matrix signal input
61	RDS ST	I	RDS data start signal input
62	RA	I	Rotary encoda A signal input
63	RB	I	Rotary encoda B signal input
64	REMOCON	I	Remote control signal input

REPLACEMENT PARTS LIST

Notes: *Important safety notice:

 Components identified by Δ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT (S)					
IC101	AN278	I. C. FM IF AMP.		D304	MA165	DIODE	
IC102	AN7274NS	I. C. FM/AM IF AMP. & DET.		D701, 702	1SR35200TB	DIODE	Δ
IC301	AN7472S	I. C. FM MPX		D703, 704	MA165	DIODE	Δ
IC302	AN6554F	I. C. CLASS AA AMP.		D705	MA4140M	DIODE	Δ
IC401	LA2230	I. C. RDS SIGNAL DEMODULATION	(E, EB, EG)	D706	MA4062MTA	DIODE	Δ
IC402	LC7073	I. C. RADIO DATA SYSTEM	(E, EB, EG)	D707	MA4068L	DIODE	Δ
IC901	LC8A012A5391	I. C. SYSTEM CONTROL	(E, EB)	D708	MA165	DIODE	
IC901	LC8A012A5376	I. C. SYSTEM CONTROL	(EG, GC, GN)	D709, 710	MA165	DIODE	Δ
IC902	LM7001	I. C. PLL FREQ. SYNTHESIZER		D711	MA4270	DIODE	Δ
IC904	MN1381RTA	I. C. RESET		D714, 715	MA165	DIODE	
		TRANSISTOR (S)		D901	1SS291TA	DIODE	
Q101	2SC2786M	TRANSISTOR		D902, 903	MA165	DIODE	
Q102, 103	UN4113TA	TRANSISTOR		D904	MA4056MTA	DIODE	Δ
Q104	UN4213	TRANSISTOR		D908	LN873RP-C	LED	
Q105, 106	2SC3311A-Q	TRANSISTOR		D909-912	MA165	DIODE	
Q108	UN4114TA	TRANSISTOR		D913	MA165	DIODE	(E, EB)
Q109	2SC3311A-Q	TRANSISTOR		D914	MA165	DIODE	(GC, GN)
Q205	UN4213	TRANSISTOR		D916, 917	MA165	DIODE	
Q251	2SA1309A-R	TRANSISTOR	(E, EB)	D918, 919	MA4056MTA	DIODE	
Q252	2SD1450RTA	TRANSISTOR	(E, EB)	D927	MA4062MTA	DIODE	
Q253, 254	2SC3311A-Q	TRANSISTOR	(E, EB)			VARIABLE RESISTOR (S)	
Q301, 302	2SD1450RTA	TRANSISTOR		VR101	EVNDXAA00B15	V. R. FM SIGNAL LEVEL ADJ.	
Q303, 304	2SA1309A-R	TRANSISTOR		VR301	EVNDXAA00B15	V. R. FM STEREO SEPARATION	
Q305	UN4113TA	TRANSISTOR		VR302	EVNDXAA00B14	V. R. FM MPX VCO ADJ.	
Q401	2SA1309A-R	TRANSISTOR	(E, EB, EG)	VR401	EVNDXAA00B14	V. R. RDS ADJ.	(E, EB, EG)
Q402	UN4213	TRANSISTOR	(E, EB, EG)	VR901	RRVEC16B12-A	V. R. TUNING CONTROL	
Q701-703	2SC3940AQSTA	TRANSISTOR	Δ			CERAMIC FILTER (S)	
Q704	2SA1309A-R	TRANSISTOR	Δ	CF101	RLFFETNGA01L	CERAMIC FILTER	[RED]
Q705	UN4114TA	TRANSISTOR		CF101	RLFFETNGB01L	CERAMIC FILTER	[BLUE]
Q706, 707	UN4213	TRANSISTOR		CF101	RLFFETNGC01L	CERAMIC FILTER	[ORANGE]
Q708	UN4114TA	TRANSISTOR		CF102	RLFFETNGA02L	CERAMIC FILTER	[RED]
Q709, 710	2SC3327-A	TRANSISTOR		CF102	RLFFETNGB02L	CERAMIC FILTER	[BLUE]
Q902, 903	2SC2785FE	TRANSISTOR		CF102	RLFFETNGC02L	CERAMIC FILTER	[ORANGE]
Q904	UN4213	TRANSISTOR		CF103, 104	RLFFETNGA01L	CERAMIC FILTER	[RED] (E, EG, GC, GN)
Q908	UN4114TA	TRANSISTOR		CF103, 104	RLFFETNGB01L	CERAMIC FILTER	[BLUE] (E, EG, GC, GN)
		DIODE (S)		CF103, 104	RLFFETNGC01L	CERAMIC FILTER	[ORANGE] (E, EG, GC, GN)
D101-103	MA165	DIODE		CF103, 104	SVFE107M22-A	CERAMIC FILTER	(EB)
D105-108	MA165	DIODE				THERMISTOR (S)	
D202	MA165	DIODE	(EG, GC, GN)	TH101	ERTD2ZHL332T	THERMISTOR	
D203	MA165	DIODE				COMPONENT COMBINATION (S)	
D301	MA4082MTA	DIODE	Δ	TN101	ENV17290G1	FM FRONT END	
D302	MA165	DIODE		Z201	RLA2Z001-T	COMPONENT COMBINATION	(EG, GC, GN)
D303	MA4062MTA	DIODE		Z201	RLA6Z002-T	COMPONENT COMBINATION	(E, EB)

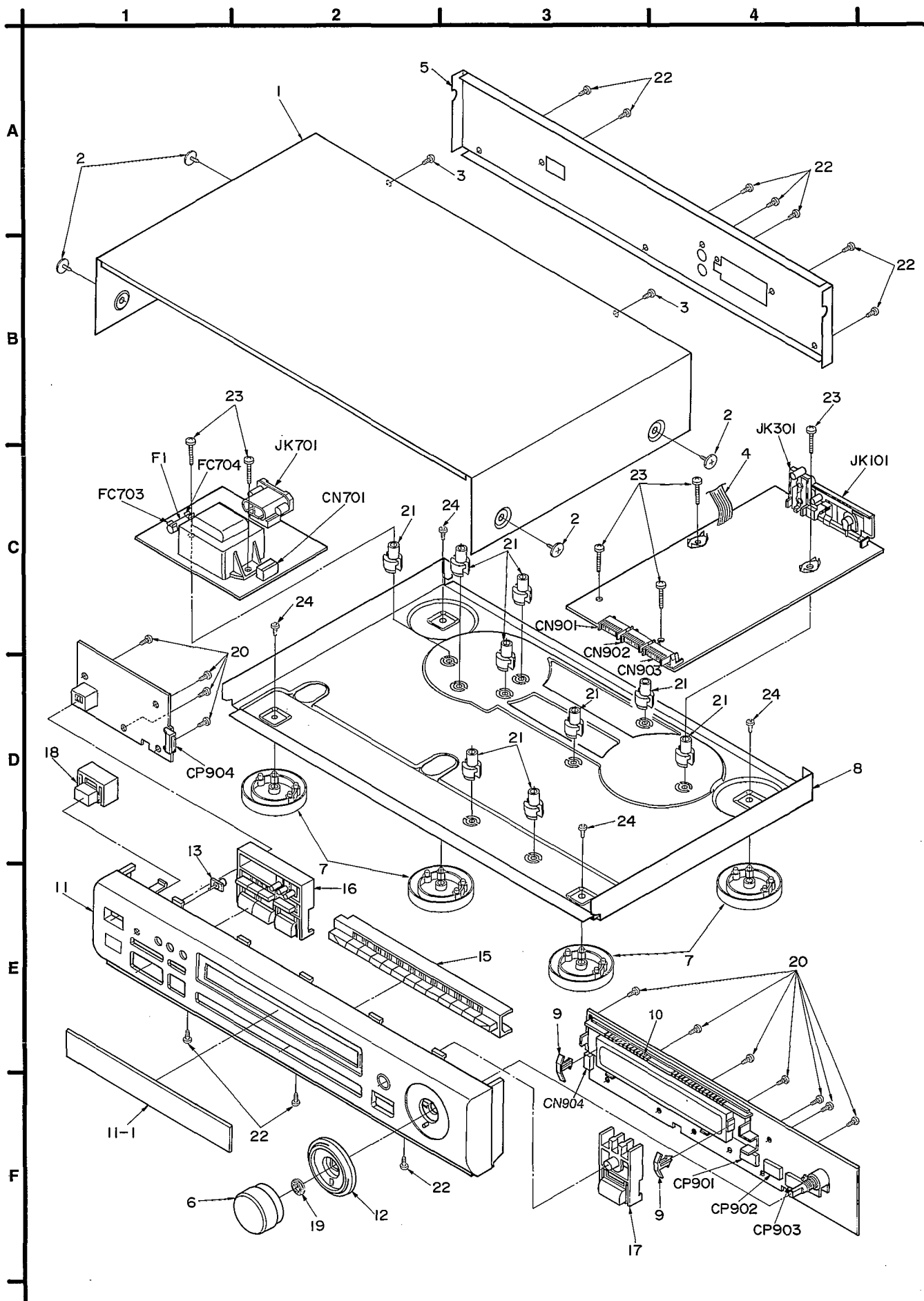
Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
Z202	RL12Z002-W	COMPONENT COMBINATION		S915	EVQ21405R	SW, PRESET-TUNING (4)	
Z901	RCDHC-278	REMOTE SENSOR		S916	EVQ21405R	SW, IF BAND	(E, EB, EG)
		COIL (S)		S917	EVQ21405R	SW, FM MODE	(E, EB, EG)
L201, 202	ELESNR68MA	COIL	(EG, GC, GN)	S918	EVQ21405R	SW, PRESET-TUNING (5)	
L201, 202	ELESNR22MA	COIL	(E, EB)	S920	EVQ21405R	SW, MEMORY	
L301	SLM1B10M-1M	COIL		S921	EVQ21405R	SW, PRESET-TUNING (6)	
L303, 304	RLM2B003-K	COIL		S923	EVQ21405R	SW, PRESET DOWN	
L305, 306	ELEXT3R3KA9	COIL		S924	EVQ21405R	SW, PRESET-TUNING (7)	
L307	ELEXT101KA9	COIL		S925	EVQ21405R	SW, PRESET UP	
L403	ELEXT101KA9	COIL	(E, EB, EG)	S927	EVQ21405R	SW, PRESET-TUNING (8)	
L701	RLQZ600M-W	COIL	Δ			CONNECTOR (S)	
L702, 703	ELEXT3R3KA9	COIL		CN701	SJT30643-V	CONNECTOR (6P)	
L902	ELEXT3R3KA9	COIL		CN901-903	RJU003K008M1	SOCKET (8P)	
L903	ELEXT22MA9	COIL		CN904	SJS50682JQH	SOCKET (6P)	
L907, 908	ELEXT101KA9	COIL		CP901-903	RJT003K008-1	CONNECTOR (8P)	
L911	ELEXT101KA9	COIL		CP904	SJT30645JQ	CONNECTOR (6P)	
L916	ELEXT22MA9	COIL				EARTH TERMINAL (S)	
L917	ELEXT3R3KA9	COIL		E101	SNE1004-1	GND PLATE	
L919	ELEXT3R3KA9	COIL		E701	SNE1004-1	GND PLATE	
		TRANSFORMER (S)				FUSE HOLDER (S)	
T101	RL14B005-Z	TRANSFORMER		FC703, 704	EYF52BC	FUSE HOLDER	
T102	RL14B006-Z	TRANSFORMER				FUSE	
T701	RTP1K4E022	POWER TRANSFORMER	Δ (E, EB, EG, GN)	F1	XBA2C04TBO	FUSE, 250V T400mA	Δ
T701	RTP1K4E024	POWER TRANSFORMER	Δ (GC)			JACK (S)	
		OSCILLATOR (S)		JK101	RJH4202M	ANTENNA TERMINAL	
X401	RSXZ456K07	OSCILLATOR (456KHz)	(E, EB, EG)	JK301	SJF3068-5N	OUTPUT TERMINAL	
X402	RVBCST4R00MT	OSCILLATOR (4MHz)	(E, EB, EG)	JK701	SJS9236	AC INLET	Δ (E, EB, EG, GC)
X901	SVQ49U722-S	OSCILLATOR (7.2MHz)		JK701	SJSD16	AC INLET	Δ (GN)
X902	EF0EC6004T4	OSCILLATOR (6MHz)				TEST POINT (S)	
		DISPLAY		TP101	ERD25V0R00T	TEST POINT	
FL901	RSLO154-F	FL DISPLAY		TP102	ERD25V0R00T	TEST POINT	
		SWITCH (ES)		TP301	ERD25V0R00T	TEST POINT	
S701	SSR187-1	SW, VOLTAGE SELECTOR	Δ (GC)	TP401	ERD25V0R00T	TEST POINT	(E, EB, EG)
S901	EVQ21405R	SW, POWER					
S902	EVQ21405R	SW, PRESET-TUNING (9)					
S903	EVQ21405R	SW, TUNING MODE					
S904	EVQ21405R	SW, IF BAND/DISP MODE					
S905	EVQ21405R	SW, PRESET-TUNING (0)					
S906	EVQ21405R	SW, PRESET-TUNING (1)					
S907	EVQ21405R	SW, PTY SELECTOR/SIGNAL					
S908	EVQ21405R	SW, PRESET-TUNING (2,10)					
S909	EVQ21405R	SW, PRESET-TUNING (2).					
S910	EVQ21405R	SW, SEARCH/MODE					
S911	EVQ21405R	SW, -BAND					
S912	EVQ21405R	SW, PRESET-TUNING (3)					
S913	EVQ21405R	SW, TP SEARCH	(E, EB, EG)				
S914	EVQ21405R	SW, SIGNAL	(E, EB, EG)				

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R255	ERDS2TJ473	1/4W 47K E, EB	R921	ERDS2TJ102	1/4W 1K
R101	ERDS2TJ102	1/4W 1K	R256	ERDS2TJ821	1/4W 820 E, EB	R922	ERDS2TJ104	1/4W 100K
R102, 103	ERDS2TJ561	1/4W 560	R301	ERDS2TJ683	1/4W 68K	R923	ERDS2TJ102	1/4W 1K
R104	ERDS2TJ331	1/4W 330	R302	ERDS2TJ393	1/4W 39K E, EB, GC, GN	R928	ERDS2EJ121	1/4W 120
R105	ERDS2TJ152	1/4W 1.5K	R302	ERDS2TJ183T	1/4W 18K EG	R929, 930	ERDS2TJ103	1/4W 10K
R106	ERDS2TJ392T	1/4W 3.9K	R303	ERDS2TJ564	1/4W 560K	R931, 932	ERDS2TJ104	1/4W 100K
R107	ERDS2TJ221	1/4W 220	R305, 306	ERDS2TJ823T	1/4W 82K	R933	ERDS2TJ221	1/4W 220
R108	ERDS2TJ104	1/4W 100K	R307	ERDS2TJ274	1/4W 270K	R934-936	ERDS2TJ102	1/4W 1K
R109	ERDS2TJ101	1/4W 100	R309	ERDS2TJ274	1/4W 270K	R937-939	ERDS2TJ103	1/4W 10K
R110	ERDS2TJ822	1/4W 8.2K	R310	ERDS2TJ102	1/4W 1K	R940	ERDS2TJ102	1/4W 1K
R112	ERDS2TJ333	1/4W 33K	R311	ERDS2TJ123	1/4W 12K	R941	ERDS2TJ122	1/4W 1.2K E, EB, EG
R113	ERDS2TJ182	1/4W 1.8K	R312, 313	ERDS2TJ393	1/4W 39K	R941	ERDS2TJ103	1/4W 10K GC, GN
R114	ERDS2TJ152	1/4W 1.5K	R315, 316	ERDS2TJ222	1/4W 2.2K	R942, 943	ERDS2TJ122	1/4W 1.2K
R115	ERDS2TJ471	1/4W 470	R317, 318	ERDS2TJ223	1/4W 22K	R944	ERDS2TJ152	1/4W 1.5K E, EB, EG
R116	ERDS2TJ103	1/4W 10K	R319, 320	ERDS2TJ101	1/4W 100	R945, 946	ERDS2TJ152	1/4W 1.5K
R117	ERDS2TJ682T	1/4W 6.8K	R321, 322	ERDS2TJ331	1/4W 330	R947	ERDS2TJ182	1/4W 1.8K E, EB, EG
R118	ERDS2TJ472	1/4W 4.7K	R323, 324	ERDS2TJ332	1/4W 3.3K	R948, 949	ERDS2TJ182	1/4W 1.8K
R119	ERDS2TJ102	1/4W 1K	R325, 326	ERDS2TJ102	1/4W 1K	R950	ERDS2TJ222	1/4W 2.2K E, EB, EG
R120	ERDS2TJ331	1/4W 330	R327, 328	ERDS2TJ272T	1/4W 2.7K	R951, 952	ERDS2TJ222	1/4W 2.2K
R121	ERDS2TJ102	1/4W 1K	R329, 330	ERDS2TJ562	1/4W 5.6K	R953	ERDS2TJ332	1/4W 3.3K E, EB, EG
R125	ERDS2TJ332	1/4W 3.3K	R331	ERDS2TJ333	1/4W 33K	R954, 955	ERDS2TJ332	1/4W 3.3K
R126	ERDS2TJ104	1/4W 100K	R332	ERDS2TJ102	1/4W 1K	R957, 958	ERDS2TJ472	1/4W 4.7K
R128	ERDS2TJ563	1/4W 56K	R333	ERDS2TJ104	1/4W 100K	R960, 961	ERDS2TJ682T	1/4W 6.8K
R129	ERDS2TJ564	1/4W 560K	R334	ERDS2TJ561	1/4W 560	R962, 963	ERDS2TJ123	1/4W 12K
R130	ERDS2TJ331	1/4W 330	R338	ERDS2TJ274	1/4W 270K	R964, 965	ERDS2TJ181T	1/4W 180
R131	ERDS2TJ222	1/4W 2.2K	R339	ERDS2TJ473	1/4W 47K	R968	ERDS2TJ104	1/4W 100K
R132	ERDS2TJ563	1/4W 56K	R340	ERDS2TJ333	1/4W 33K	R969-972	ERDS2TJ472	1/4W 4.7K
R133	ERDS2TJ684	1/4W 680K	R401	ERDS2TJ564	1/4W 560K E, EB, EG	R973, 974	ERDS2TJ472	1/4W 4.7K E, EB, EG
R134	ERDS2TJ820	1/4W 82 E, EG, GC, GN	R402	ERDS2TJ332	1/4W 3.3K E, EB, EG	R975, 976	ERDS2TJ472	1/4W 4.7K
R134	ERDS2TJ2R7T	1/4W 2.7 EB	R403	ERDS2TJ125	1/4W 1.2M E, EB, EG	R978-982	ERDS2TJ472	1/4W 4.7K
R202	ERDS2TJ822	1/4W 8.2K	R404	ERDS2TJ102	1/4W 1K E, EB, EG	R983	ERDS2TJ102	1/4W 1K
R203	ERDS2TJ104	1/4W 100K	R405	ERDS2TJ332	1/4W 3.3K E, EB, EG	R984	ERDS2TJ272T	1/4W 2.7K
R204	ERDS2TJ122	1/4W 1.2K E, EB	R406	ERDS2TJ103	1/4W 10K E, EB, EG	R985	ERDS2TJ182	1/4W 1.8K
R204	ERDS2TJ103	1/4W 10K EG, GC, GN	R407	ERDS2TJ223	1/4W 22K E, EB, EG	R986-988	ERDS2TJ103	1/4W 10K GC, GN
R205	ERDS2TJ222	1/4W 2.2K	R408	ERDS2TJ103	1/4W 10K	R989, 990	ERDS2TJ2R2T	1/4W 2.2
R206	ERDS2TJ473	1/4W 47K	R409	ERDS2TJ472	1/4W 4.7K E, EB, EG	R991	ERDS2TJ103	1/4W 10K E, EB
R207	ERDS2TJ563	1/4W 56K	R410	ERDS2TJ102	1/4W 1K E, EB, EG			
R208	ERDS2TJ124T	1/4W 120K	R412, 413	ERDS2TJ103	1/4W 10K E, EB, EG			CAPACITORS
R209	ERDS2TJ274	1/4W 270K	R701	ERDS2TJ102	1/4W 1K	C2	ECBT1E223ZF	25V 0.022U
R210	ERDS2TJ222	1/4W 2.2K	R702	ERDS2TJ221	1/4W 220	C3	ECBT1E103ZF	25V 0.01U
R211	ERDS2TJ101	1/4W 100	R703	ERDS2TJ222	1/4W 2.2K	C4	ECEA1CKA100B	16V 10U
R212	ERDS2TJ473	1/4W 47K	R706	ERDS2TJ222	1/4W 2.2K	C101-104	ECBT1E103ZF	25V 0.01U
R213	ERDS2TJ223	1/4W 22K	R708, 709	ERDS2TJ472	1/4W 4.7K	C105	ECQV1H473JM3	50V 0.047U
R251	ERDS2TJ472	1/4W 4.7K E, EB	R711	ERDS2TJ103	1/4W 10K	C106	ECA0JM471B	6.3V 470U
R252	ERDS2TJ103	1/4W 10K E, EB	R712	ERDS1FVJ470T	1/2W 47 Δ	C107	ECQB1H102JF3	50V 1000P
R253	ERDS2TJ223	1/4W 22K E, EB	R903	ERDS2TJ562	1/4W 5.6K	C108	ECBT1H180JC5	50V 18P
R254	ERDS2TJ822	1/4W 8.2K E, EB	R904	ERDS2TJ561	1/4W 560	C109	ECBT1H102KB5	50V 1000P
			R906	ERDS2TJ103	1/4W 10K	C110, 111	ECKR1H103ZF5	50V 0.01U

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C112	ECBT1H6R8KC5	50V 6.8P	C409	ECEA1EKA4R7B	25V 4.7U E, EB, EG
C113	ECBT1H102KB5	50V 1000P	C410	ECEA0JKA470B	6.3V 47U E, EB, EG
C114	ECA1VM101B	35V 100U	C411	ECFR1E223KR	25V 0.022U E, EB, EG
C115	ECQV1H104JM3	50V 0.1U	C412	ECFR1E333KR	25V 0.033U E, EB, EG
C116	ECBT1H101KB5	50V 100P	C413	ECFR1E682KR	25V 6800P E, EB, EG
C117	ECEA1HKAR22B	50V 0.22U	C414	ECFR1E333KR	25V 0.033U E, EB, EG
C118	ECEA1AKA101B	10V 100U	C415	ECEA1HKAR47B	50V 0.47U E, EB, EG
C119	ECQB1H223JF3	50V 0.022U	C416	ECEA1CKA100B	16V 10U E, EB, EG
C122-126	ECBT1E103ZF	25V 0.01U	C701, 702	ECKR1H103ZF5	50V 0.01U
C127	ECBT1H180JC5	50V 18P	C703	ECKR2H102ZF5	500V 1000P
C128	ECBT1H390J5	50V 39P	C705	ECA1EM102E	25V 1000U Δ
C129, 130	ECBT1H102KB5	50V 1000P	C706	ECA1CM222E	16V 2200U Δ
C152	ECQV1H104JM3	50V 0.1U	C707	ECA1CM221B	16V 220U
C201	ECQV1H473JM3	50V 0.047U	C708	ECEA1HKAR47B	50V 0.47U
C202	ECBT1E223ZF	25V 0.022U	C710, 711	ECBT1E103ZF	25V 0.01U
C203	ECBT1H120JC5	50V 12P E, EB	C712	ECEA1CKA100B	16V 10U
C203	ECBT1H8R2JC5	50V 8.2P EG, GC, GN	C713	ECA1VM331B	35V 330U
C204	ECFR1E223KR	25V 0.022U	C714	ECKR2H102ZF5	500V 1000P
C205	ECBT1H102KB5	50V 1000P	C715	ECA1VM101B	35V 100U Δ
C206	ECBT1H120JC5	50V 12P	C716	ECBT1E103ZF	25V 0.01U
C208, 209	ECBT1E103ZF	25V 0.01U	C717	ECEA1CKA100B	16V 10U
C210	ECEA1AKA330B	10V 33U	C718, 719	ECEA1VU470	35V 47U
C211	ECKR1H103ZF5	50V 0.01U	C720, 721	ECKR2H102ZF5	500V 1000P
C212	ECEA1HKAR47B	50V 0.47U	C722, 723	ECKR1H103ZF5	50V 0.01U
C213	ECEA1AKA330B	10V 33U	C727	ECKR1H103ZF5	50V 0.01U
C214, 215	ECFR1E223KR	25V 0.022U	C904	ECBT1E103ZF	25V 0.01U
C216	ECEA1AKA101B	10V 100U	C905	ECEA1EKA4R7B	25V 4.7U
C252	ECBT1H120JC5	50V 12P E, EB	C911, 912	ECBT1H150JC5	50V 15P
C301	ECFR1E332KR	25V 3300P	C914	ECA0JM471B	6.3V 470U
C302	ECFR1E103KR	25V 0.01U	C915	ECBT1H102KB5	50V 1000P
C303	ECEA1AKA101B	10V 100U	C921	ECA1AM102B	10V 1000U
C304	ECQV1H104JM3	50V 0.1U	C922	ECEA0JKA101B	6.3V 100U
C306	ECEA1CKA100B	16V 10U	C923	ECBT1H102KB5	50V 1000P
C307, 308	ECQB1H153JF3	50V 0.015U	C924	ECEA1HKA2R2B	50V 2.2U
C309	ECEA1HKAR22B	50V 0.22U	C925	ECEA1HKA47B	50V 0.47U
C310	ECEA1HKAR47B	50V 0.47U	C926	ECBT1E103ZF	25V 0.01U
C311	ECEA1HKAR22B	50V 0.22U	C927	ECEA1HKA3R3B	50V 3.3U
C312	ECFR1E223KR	25V 0.022U	C928	ECEA1VKA100B	35V 10U
C313	ECQP1391JZ	50V 390P	C929	ECEA0JKA101B	6.3V 100U
C315, 316	ECEA1HKA3R3B	50V 3.3U	C930-935	ECBT1H331KB5	50V 330P
C317, 318	ECFR1E332KR	25V 3300P	C937	ECEA1CKA330B	16V 33U
C319	ECEA1HKA3R3B	50V 3.3U	C938, 939	ECKT1H223ZF	50V 0.022U
C320	ECEA1CKA100B	16V 10U	C940-943	ECBT1H331KB5	50V 330P
C322, 323	ECBT1H102KB5	50V 1000P	C951, 952	ECBT1E103ZF	25V 0.01U
C324	ECBT1H471KB5	50V 470P	C991	ECBT1E103ZF	25V 0.01U E, EB
C401	ECEA1CKA220B	16V 22U E, EB, EG			
C402, 403	ECFR1E332KR	25V 3300P E, EB, EG			
C404	ECFR1E103KR	25V 0.01U E, EB, EG			
C405	ECBT1E103ZF	25V 0.01U E, EB, EG			
C406	ECEA1CKA100B	16V 10U E, EB, EG			
C407	ECEA1EKA4R7B	25V 4.7U E, EB, EG			
C408	ECEA1CKA100B	16V 10U E, EB, EG			

■ CABINET PARTS LOCATION

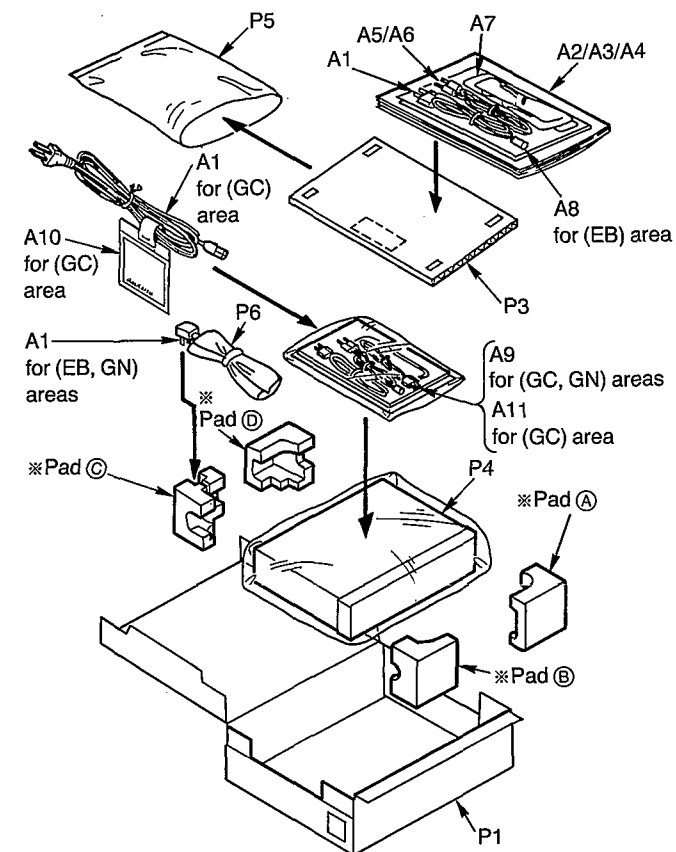


Note: The "(SF)" mark denotes the standard part.
 *[VRD]: indicates parts that are supplied by Video Recorder Division.

1084

Ref. No.	Part No.	Part Name & Description	Remarks
CABINET PARTS			
1	RKM0078-1K	CABINET	
2	SNE2129-1	SCREW	
3	XTBS3+8JFZ1	SCREW	
4	RWJ1806120KQ	FLAT CABLE (6P) (W701)	
5	RGR0148A-HI	REAR PANEL	(E)
5	RGR0148A-J	REAR PANEL	(EB, GN)
5	RGR0148A-G1	REAR PANEL	(EG)
5	RGR0148B-A1	REAR PANEL	(GC)
6	RGW0174-T	KNOB, TUNING CONTROL	
7	RKA0053-A	FOOT	
8	RMK0174-2	BOTTOM BOARD	
9	RMN0195	FL SPACER	
10	RMN0220B	FL HOLDER	
11	RFKGTGT550EK	FRONT PANEL ASS'Y	(E, EB, EG)
11	RFKGTGT550GC	FRONT PANEL ASS'Y	(GC, GN)
11-1	RKW0269B-K	FL PANEL	
12	RGR0543-S	ORNAMENT	
13	RFKNTGT650EA	PANEL LIGHT (A) ASS'Y	
15	RGU0879A-K	BUTTON, PRESET etc.	
16	RGU0880A-K	BUTTON, FUNCTION etc.	(E, EB, EG)
16	RGU0880B-K	BUTTON, FUNCTION etc.	(GC, GN)
17	RGU0881A-K	BUTTON, MODE etc.	
18	RGU0882-K	BUTTON, POWER	
19	RHN90001	NUT	
20	XTBS26+8J	SCREW	
21	SHE187-2	P. C. B. SUPPORT	
22	XTBS3+8JFZ1	SCREW	
23	XTB3+20JFZ	SCREW	
24	XTB3+6J	SCREW	
PACKING MATERIALS			
P1	RPG1591	PACKING CASE	(E, EG, GC)
P1	RPG1592	PACKING CASE	(EB)
P1	RPG1597	PACKING CASE	(GN)
P2	RPND628-1	PAD	(E, EG, GC)
P2	RPND690	PAD	(EB, GN)
P3	RPQ0164	ACCESSORY PAD	
P4	XZB50X65A02Z	PROTECTION COVER (UNIT)	
P5	XZB24X34C04	PROTECTION COVER	
P6	RPH0032	MIRROR SHEET	(EB, GN)
ACCESSORIES			
A1	RJA0019-2K	AC POWER SUPPLY CORD	△ (E, EG, GC) (SF)
A1	VJA0733	AC POWER SUPPLY CORD	△ (EB) (SF) [VRD]
A1	RJA0036-K	AC POWER SUPPLY CORD	△ (GN)
A2	RQA0013	WARRANTY CARD	(E, EB, EG)
A2	RQX7433ZA	WARRANTY CARD	(GN)

■ PACKAGING



P2: ※Pad (A) (B) (C) (D) Ass'y