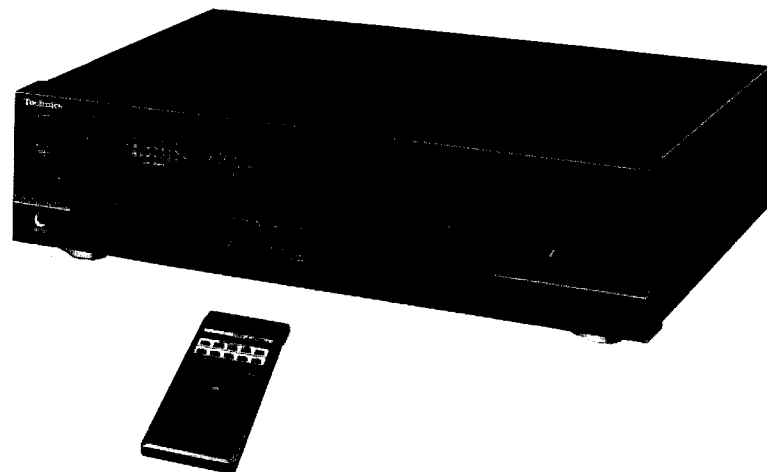


# Service Manual

Receiver

SA-R177

**QUARTZ** Synthesizer  
AM/FM Stereo Receiver



Color

(K)... Black Type

Area

| Country Code | Area          | Color |
|--------------|---------------|-------|
| (G)          | Third Region. | (K)   |
| (GN)         | Oceania.      | (K)   |

## SPECIFICATIONS (DIN 45 500)

### ■ AMPLIFIER SECTION

|   |   |
|---|---|
| <b>Power output</b>                             |   |
| DIN 1kHz  | 2 × 50 W (8 Ω)                                |
| <b>40 Hz~20 kHz continuous power output</b>     |   |
| both channels driven                            | 2 × 40 W (8 Ω)                                |
| <b>Total harmonic distortion</b>                |   |
| rated power at 40 Hz~20 kHz                     | 0.3 % (8 Ω)                                   |
| half power at 1 kHz                             | 0.07 % (8 Ω)                                  |
| <b>intermodulation distortion</b>               |   |
| rated power at 60 Hz: 7 kHz = 4:1, SMPTE, 8 Ω   | 0.5 %   |
| <b>Power bandwidth</b>                          |   |
| both channels driven, -3 dB                     | 10 Hz~40 kHz (8 Ω)                            |
| <b>Damping factor</b>                           | 20 (8Ω)                                       |
| <b>Input sensitivity and impedance</b>          |   |
| PHONO   | 3 mV/47 kΩ                                    |
| CD, VCR 1, TAPE/VCR 2                           | 200 mV/22 kΩ                                  |
| <b>PHONO maximum input voltage (1 kHz, RMS)</b> | 150 mV  |
| <b>S/N</b>                                      |   |
| rated power (8Ω)                                |   |
| PHONO   | 70 dB (IHF, A: 80 dB)                         |
| CD, VCR 1, TAPE/VCR 2                           | 80 dB (IHF, A: 90 dB)                         |
| <b>Frequency response</b>                       |   |
| PHONO   | RIAA standard curve<br>±0.8 dB (30 Hz~15 kHz) |
| CD, VCR 1, TAPE/VCR 2                           | 10 Hz~70 kHz (±3 dB)                          |
| <b>5 band graphic equalizer</b>                 |   |
| 80 Hz, -10 dB~+10 dB                            |   |
| 250 Hz, -10 dB~+10 dB                           |   |
| 1 kHz, -10 dB~+10 dB                            |   |
| 4 kHz, -10 dB~+10 dB                            |   |
| 12.5 kHz, -10 dB~+10 dB                         |   |
| <b>Loudness control (volume at -30 dB)</b>      | 50 Hz, +9 dB                                  |
| <b>Output voltage</b>                           |   |
| VCR 1, TAPE/VCR 2 REC OUT                       | 200 mV  |
| <b>Channel balance, 250 Hz~6,300 Hz</b>         | ±1 dB   |
| <b>Channel separation</b>                       | 55 dB   |

|  |              |
|--|--------------|
| <b>Headphones output level and impedance</b> | 430 mV/330 Ω |
| <b>Load impedance</b>                        |              |
| A or B                                       | 8 Ω~16 Ω     |
| A and B                                      | 8 Ω~16 Ω     |

### ■ FM TUNER SECTION

|  |                             |
|--|-----------------------------|
| <b>Frequency range</b>                       | 87.50~108.00 MHz            |
| <b>Sensitivity</b>                           |                             |
| S/N 30 dB                                    | 1.5 μV (75 Ω)               |
| S/N 26 dB                                    | 1.3 μV (75 Ω)               |
| S/N 20 dB                                    | 1.2 μV (75 Ω)               |
| <b>IHF usable sensitivity</b>                | 1.5 μV (IHF/58, 75 Ω)       |
| <b>IHF 46 dB stereo quieting sensitivity</b> | 22 μV/75 Ω                  |
| <b>Total harmonic distortion</b>             |                             |
| MONO   | 0.2 %                       |
| STEREO                                       | 0.3 %                       |
| <b>S/N</b>                                   |                             |
| MONO   | 60 dB (75 dB, IHF)          |
| STEREO                                       | 58 dB (71 dB, IHF)          |
| <b>Frequency response</b>                    | 20 Hz~15 kHz, +1 dB ~ -2 dB |
| <b>Alternate channel selectivity</b>         | 65 dB                       |
| <b>Capture ratio</b>                         | 1.0 dB                      |
| <b>Image rejection at 98 MHz</b>             | 40 dB                       |
| <b>IF rejection at 98 MHz</b>                | 70 dB                       |
| <b>Spurious response rejection at 98 MHz</b> | 70 dB                       |
| <b>AM suppression</b>                        | 50 dB                       |
| <b>Stereo separation</b>                     |                             |
| 1 kHz  | 40 dB                       |
| 10 kHz                                       | 30 dB                       |
| <b>Carrier leak</b>                          |                             |
| 19 kHz                                       | -30 dB (-35 dB, IHF)        |
| 38 kHz                                       | -45 dB (-50 dB, IHF)        |
| <b>Channel balance (250 Hz~6,300 Hz)</b>     | ±1.5 dB                     |
| <b>Limiting point</b>                        | 1.2 μV                      |

# Technics

Matsushita Electric Industrial Co., Ltd.  
Central P.O. Box 288, Osaka 530-01, Japan

**Bandwidth**  
**IF amplifier** 180 kHz  
**FM demodulator** 1000 kHz  
**Antenna terminals** 75 Ω (unbalanced)

**AM TUNER SECTION**

**Frequency range** 522 kHz~1611 kHz (9-kHz steps)  
 530 kHz~1620 kHz (10-kHz steps)  
**Sensitivity (S/N 20 dB)** 20 μV, 330 μV/m  
**Selectivity at 999 kHz** 55 dB  
**Image rejection at 999 kHz** 40 dB  
**IF rejection (at 999 kHz)** 55 dB

**GENERAL**

**Power consumption** 250 W  
**Power supply**  
 For Oceania AC 50 Hz/60 Hz, 240 V  
 For Third Region AC 50 Hz/60 Hz, 110 V/127 V/220 V/240 V  
**Dimensions (W × H × D)** 430 × 114 × 300 mm  
 (16-15/16" × 4-1/2" × 11-13/16")  
**Weight** 6.3 kg (13.9 lb.)

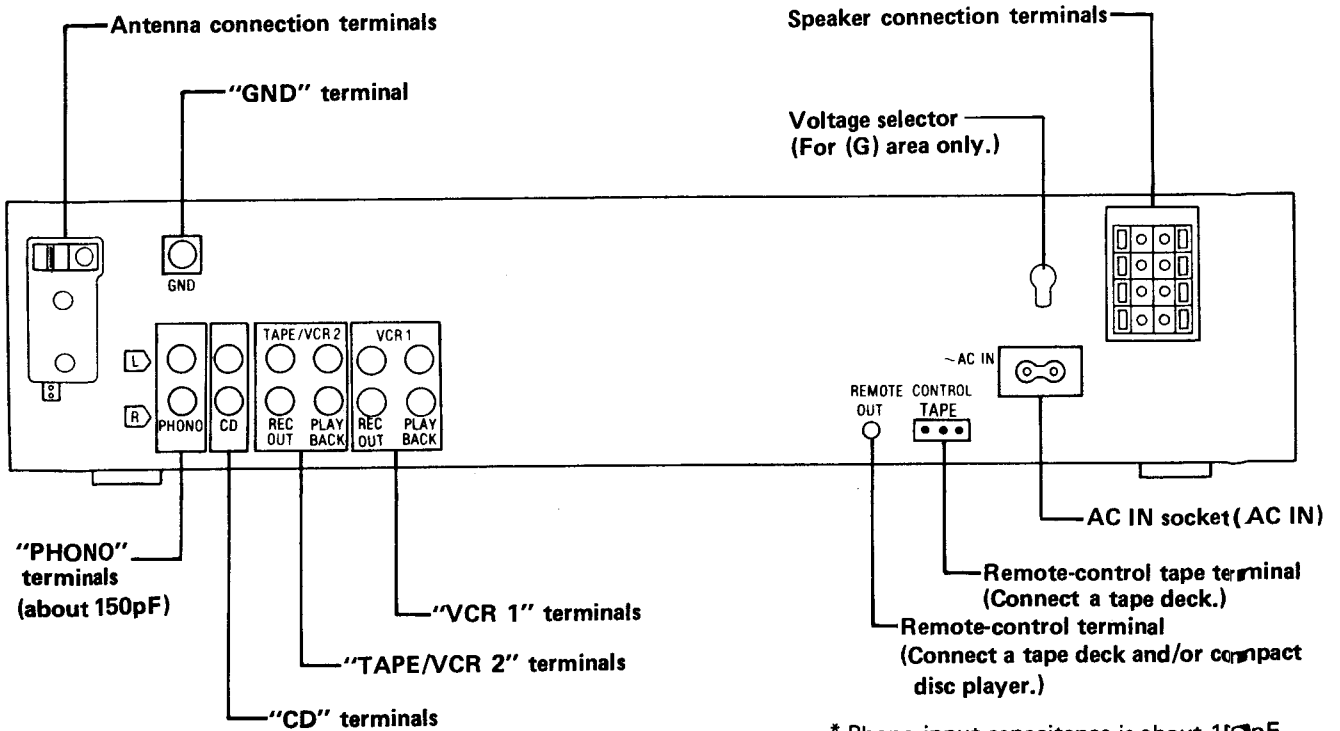
**Note:**  
 Total harmonic distortion is measured by the digital spectrum analyzer.

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**CONNECTIONS TO EQUIPMENT**



\* Phono input capacitance is about 150pF.

## BEFORE USE

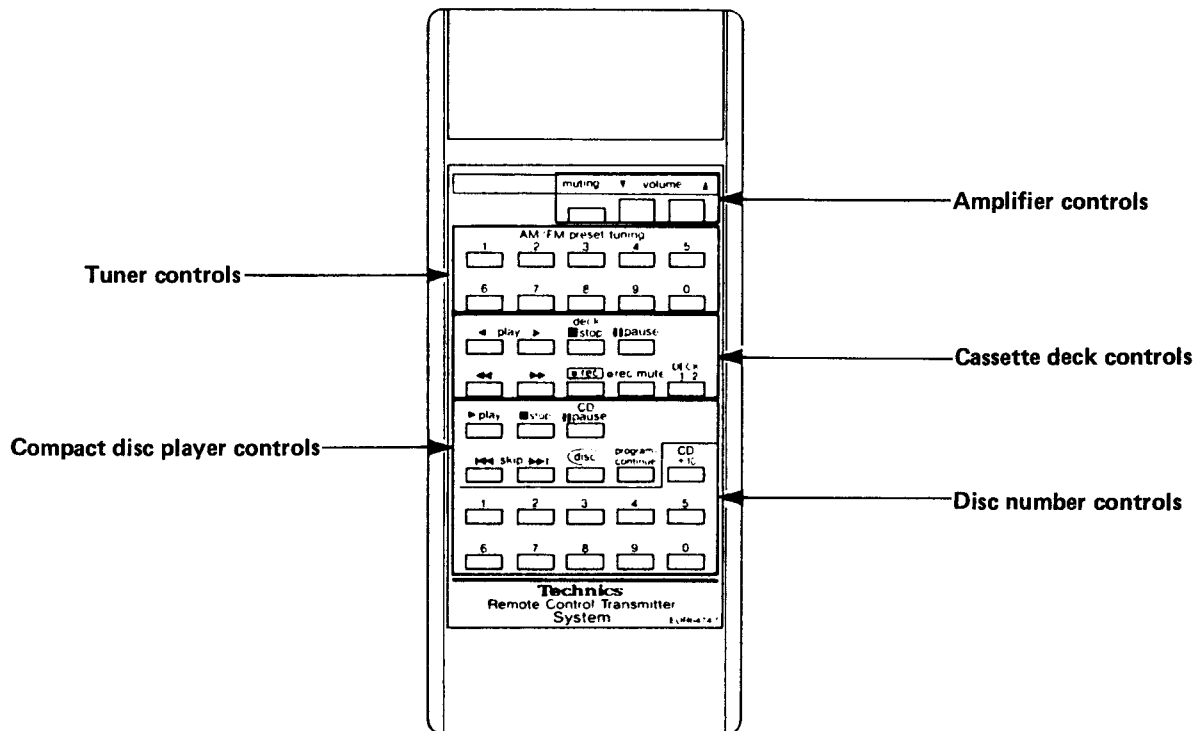
Be sure to disconnect the mains cord before adjusting the voltage selector.

Use a minus (–) screwdriver to set the voltage selector (on the rear panel) to the voltage setting for the area in which the unit will be used.

(If the power supply in your area is 117 V or 120 V, set to the "127 V" position.)

Note that this unit will be seriously damaged if this setting is not made correctly. (There is no voltage selector for some countries; the correct voltage is already set.)

## REMOTE-CONTROL OPERATION

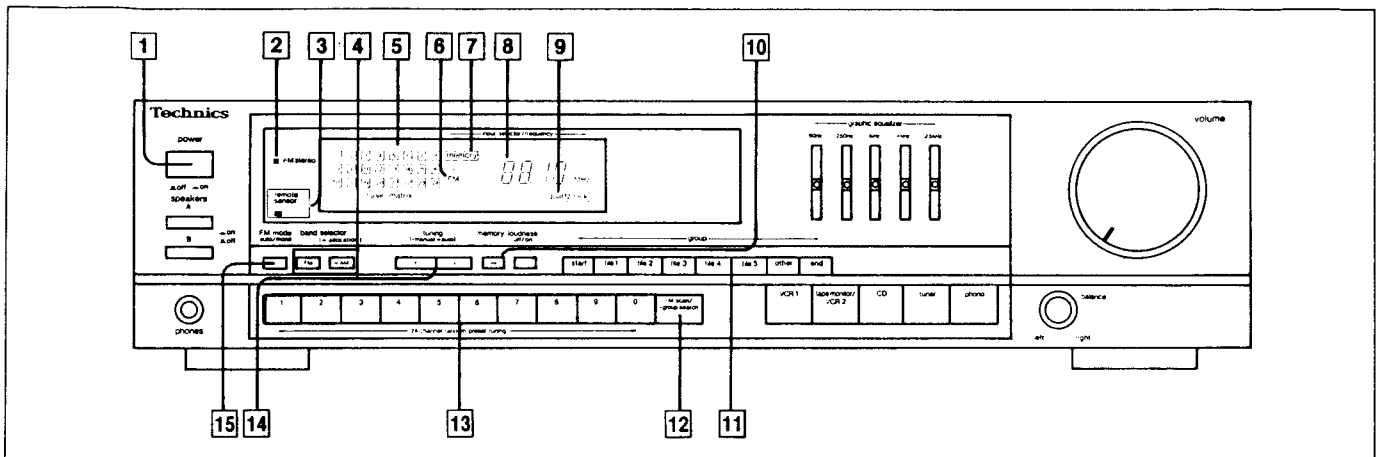


## ACCESSORIES

- |   |                                     |  |  |
|---|-------------------------------------|--|--|
| • FM indoor antenna (1)<br>(SSA269M)                | • AM loop antenna (1)<br>(SPB1162T) | • AM antenna holders (2)<br>(SMA233-1M)<br>(SMA231M) | • AC power supply cord (1)<br>(RJA0004) . . . . . (G)<br>(SJA173) . . . . . (GN) |
| • Remote-control transmitter (1)<br>(EUR64747)      | • Screws (2)<br>(XTN3+10AFZ)        | • Batteries (2)<br>(UM-4NEP/2S)                      | • Connection cable for remote-control (1)<br>(SJP2257T)                          |
| • Flat cable for remote-control (1)<br>(SWKST11M-1) |                                     |  |  |

## FRONT PANEL CONTROLS AND FUNCTIONS

### Tuner section



#### 1 Power switch (power)

#### 2 FM stereo indicator (FM stereo)

This indicator automatically illuminates when an FM stereo broadcast is being received.

##### Note:

It will not illuminate if the FM mode selector is set to the monaural mode.

#### 3 Remote-control signal receptor (remote sensor)

Receives the signals from the remote-control transmitter.

#### 4 Band selectors (band selector)

**FM:** Press this button to listen to an FM broadcast.

**AM:** Press this button to listen to an AM broadcast.

**allocation:** When the AM button is pressed for about 4 seconds, the AM frequency step will change to 10 kHz per step. (This unit is set to 9 kHz before shipment.) In order to return to the original frequency indications, press this button for about 4 seconds again.

#### 5 Preset channel matrix display (tuner matrix)

When an entry is made to the memory, the figure's outer frame illuminates.

The outer frame of the "channel" now being received flashes continuously.

#### 6 Band indicators (AM/FM)

Indicates the selected band.

#### 7 Memory indicator (memory)

This indicator illuminates when the memory button is pressed.

#### 8 Audio input selector/frequency display (input selector/frequency)

Displays the selected source or broadcast frequency.

#### 9 Quartz-lock indicator (quartz lock)

This indicator illuminates when the unit is tuned precisely to a broadcast station.

#### 10 Memory button (memory)

This button is used when presetting broadcast station frequencies into memory.

#### 11 Group registration buttons (group)

These buttons are used to assign memory presets to the desired group or to select the desired group.

#### 12 Music-scan/group-search button (-M. scan/ - group search)

This button is used to scan the memory presets within a group (for about three seconds each) or to search for the desired group.

#### 13 Preset-tuning buttons (1-0) (24 channel random preset tuning)

These buttons are used to preset broadcast frequencies into the memory of this unit, and to recall the desired preset stations.

#### 14 Tuning buttons (tuning)

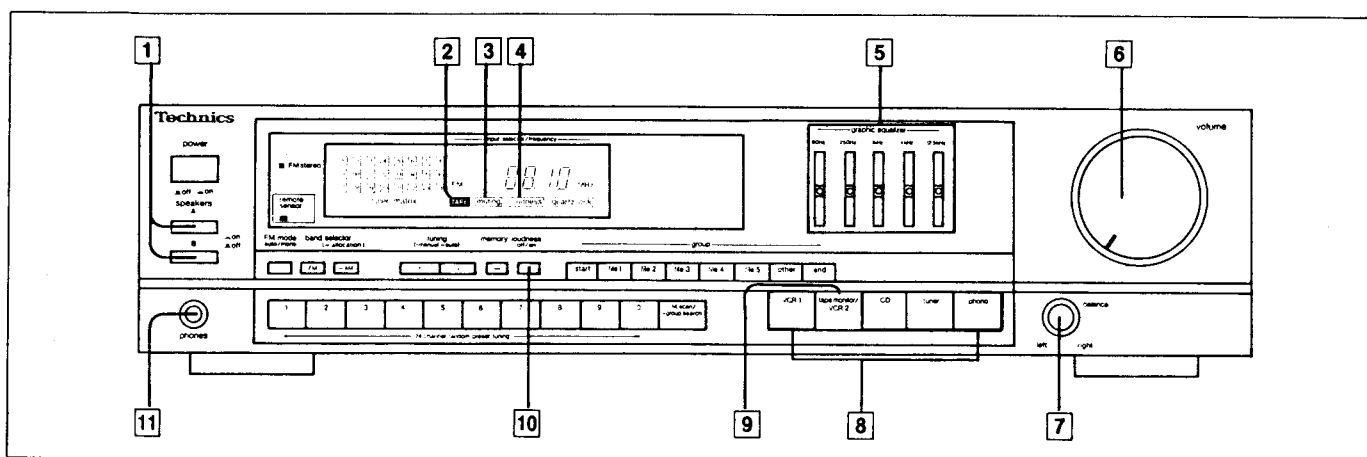
These buttons are used for tuning to the desired broadcast station. If the button is pressed momentarily and then released, the frequency will change at intervals of 0.05 MHz for FM and 9 kHz (or 10 kHz) for AM.

#### 15 FM mode selector (FM mode)

This unit automatically switches to the stereo mode when an FM stereo broadcast is received. This selector is used to select the mode (stereo or monaural) of FM broadcast signals.



## Amplifier section



### 1 Speaker selectors (speakers)

These selectors are used to select the speaker system(s) (A and/or B).

### 2 Tape indicator (TAPE)

This indicator will illuminate when the tape-monitor switch is pressed.

### 3 Muting indicator (muting)

This indicator will illuminate when the muting button (on the remote-control transmitter) is pressed.

To cancel the muting function without using the remote-control transmitter, press and hold the "phono" input selector of this unit for about 5 seconds.

#### Note:

The unit will switch to the phono mode.

### 4 Loudness indicator (loudness)

This indicator will illuminate when the loudness button is pressed.

### 5 Equalization controls (graphic equalizer)

These controls are used to adjust the levels within each frequency band. The levels can be varied over a range of +10 dB ~ -10 dB.

### 6 Volume control/indicator (volume)

### 7 Balance control (balance)

### 8 Input selector buttons

(phono/tuner/CD/tape monitor/VCR 2)

These buttons are used to select the sound source to be heard, such as a disc, radio broadcasts, etc. The selected sound source is shown on the audio input selector/frequency display.

(VCR1, tape monitor/VCR2, CD, tuner, phono)

### 9 Tape-monitor/VCR 2 switch

Press this button to listen to a tape or a second VCR.

No other source selected by an input selector can be heard while the tape indicator is illuminated. To listen to some other source, press this switch once again.

### 10 Loudness switch (loudness)

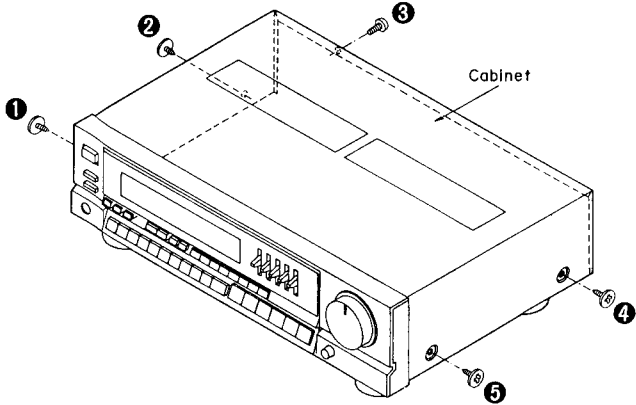
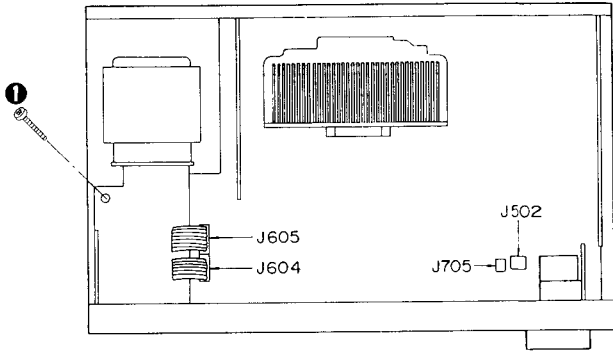
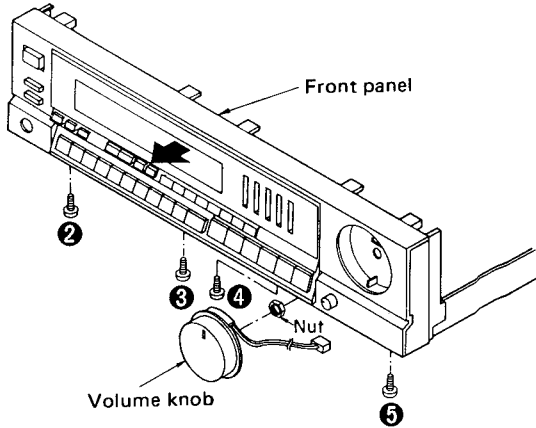
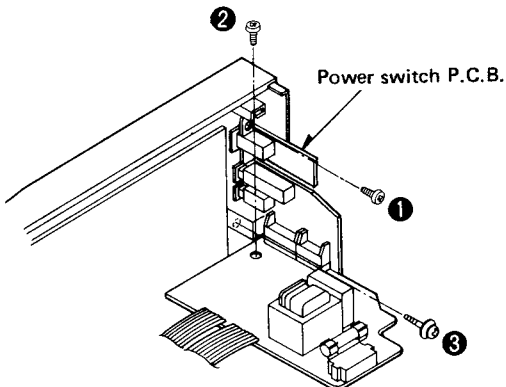
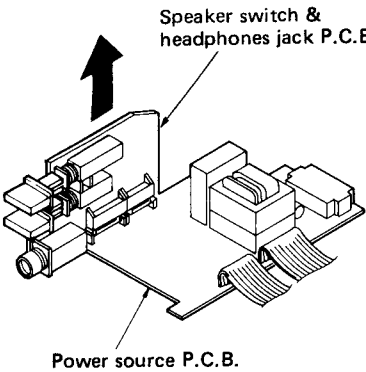
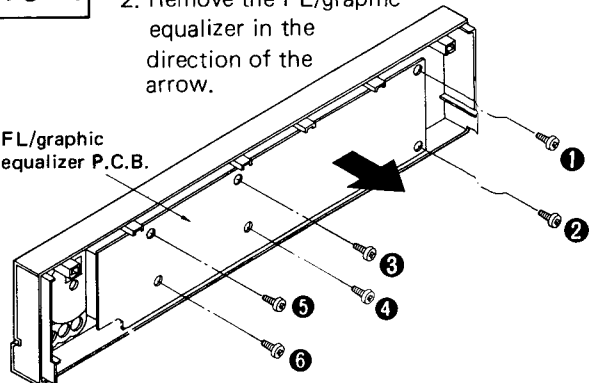
Set to the "on" position (the loudness indicator will illuminate); when listening to music at low volume. Auditory perception of sound in the low frequency range falls off at low volume, but when the switch is in this position, this deficiency is compensated for, so that the full impact of the musical performance can be enjoyed.

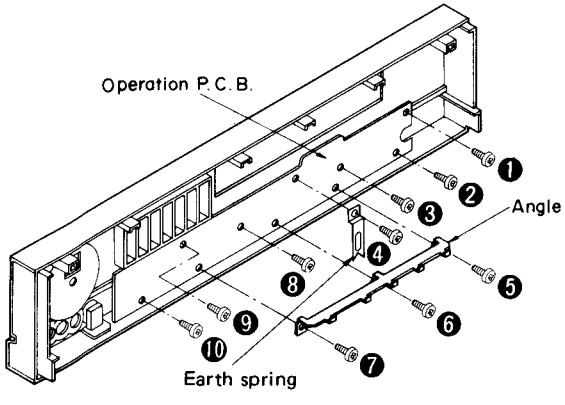
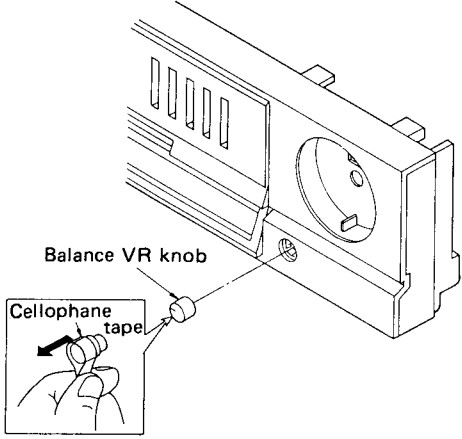
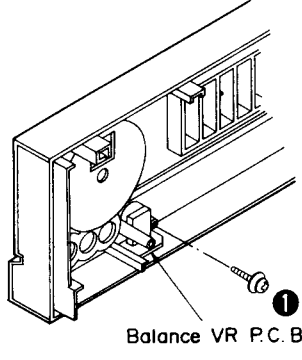
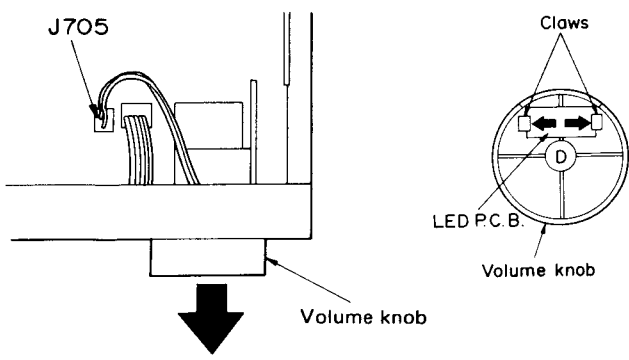
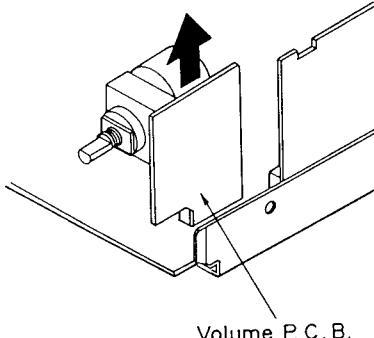
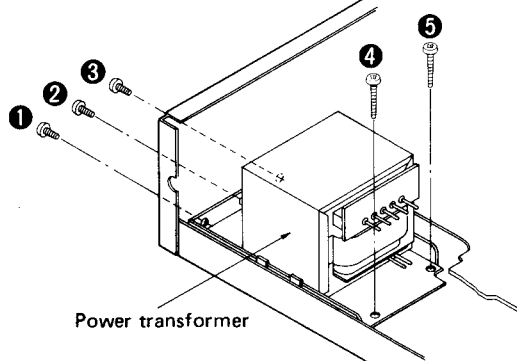
### 11 Headphone jack (phones)

## DISASSEMBLY INSTRUCTIONS

### "ATTENTION SERVICER"

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

|   |   |   |   |
|---|---|---|---|
| <p><b>Ref. No.</b><br/>1</p>  | <p><b>Removal of the cabinet</b></p>  | <p><b>Ref. No.</b><br/>2</p>  | <p><b>Removal of the front panel</b></p>  |
| <p><b>Procedure</b><br/>1</p>   | <p>● Remove the 5 screws ( ① ~ ⑤ ).</p>   | <p><b>Procedure</b><br/>1 → 2</p>   | <p>1. Remove the 1 screw ( ① ).<br/>2. Remove the 1 connector (J705).<br/>3. Remove the 3 flat cables (J502, J604, J605).</p> |
|    |   |  <p>4. Remove the volume knob and nut.<br/>5. Remove the 4 screws ( ② ~ ⑤ ).<br/>6. Pull out the front panel in the direction of the arrow.</p> |   |
| <p><b>Ref. No.</b><br/>3</p>  | <p><b>Removal of the power switch P.C.B., speaker switch &amp; headphones jack P.C.B. and power source P.C.B.</b></p>                 |   |   |
| <p><b>Procedure</b><br/>1 → 2 → 3</p>   | <p>1. Remove the 3 screws ( ① ~ ③ ).<br/>2. Remove the speaker switch &amp; headphones jack P.C.B. in the direction of the arrow.</p> | <p><b>Ref. No.</b><br/>4</p>  |   |
|  |   | <p><b>Procedure</b><br/>1 → 2 → 3 → 4</p> <p>1. Remove the 6 screws ( ① ~ ⑥ ).<br/>2. Remove the FL/graphic equalizer in the direction of the arrow.</p>  |   |
|  |   |   |   |

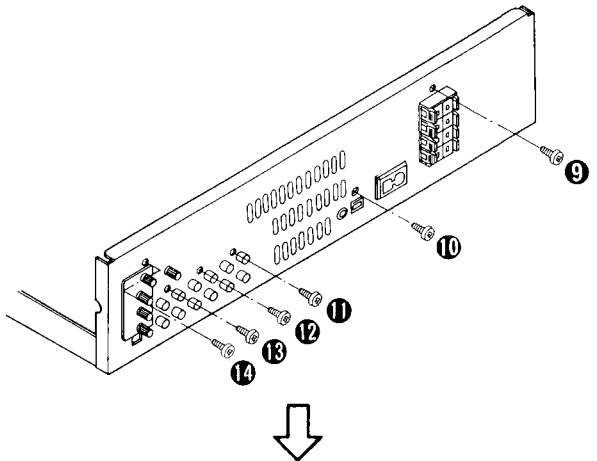
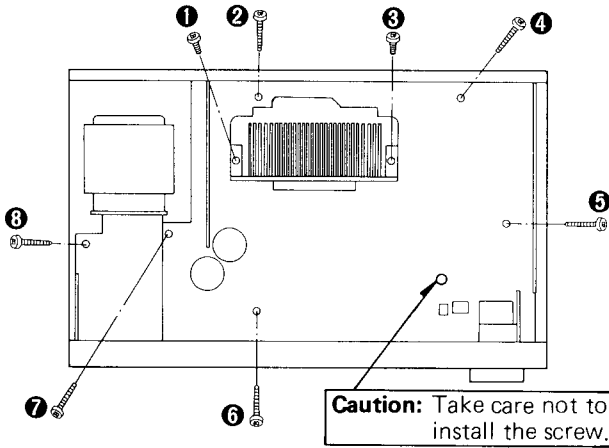
|   |   |  |  |
|---|---|--|--|
| <p><b>Ref. No.</b><br/>5</p>  | <p><b>Removal of the operation P.C.B.</b></p>   | <p><b>Ref. No.</b><br/>6</p>   | <p><b>Removal of the balance VR P.C.B.</b></p>                         |
| <p><b>Procedure</b><br/>4 → 5</p>   | <p>● Remove the 10 screws ( ❶ ~ ❿ ).</p>  | <p><b>Procedure</b><br/>4 → 6</p>  | <p>1. Remove the balance VR knob.<br/>2. Remove the 1 screw ( ❶ ).</p> |
|    |   |    |  |
| <p><b>Ref. No.</b><br/>7</p>  | <p><b>Removal of the LED P.C.B.</b></p>   |   |  |
| <p><b>Procedure</b><br/>1 → 7</p>   | <p>1. Remove the 1 connector (J705).<br/>2. Pull out the volume knob in the direction of the arrow.<br/>3. Release the 2 claws.</p> |  |  |
|  |   |  |  |
| <p><b>Ref. No.</b><br/>8</p>  | <p><b>Removal of the volume P.C.B.</b></p>  | <p><b>Ref. No.</b><br/>9</p>   | <p><b>Removal of the power transformer</b></p>                         |
| <p><b>Procedure</b><br/>1 → 2 → 8</p>   | <p>● Pull out the volume P.C.B. in the direction of the arrow.</p>  | <p><b>Procedure</b><br/>1 → 2 → 9</p>  | <p>● Remove the 5 screws ( ❶ ~ ❺ ).</p>                                |
|  |   |  |  |

Ref. No.  
10

**Removal of the main P.C.B., tuner P.C.B. and speaker terminal P.C.B.**

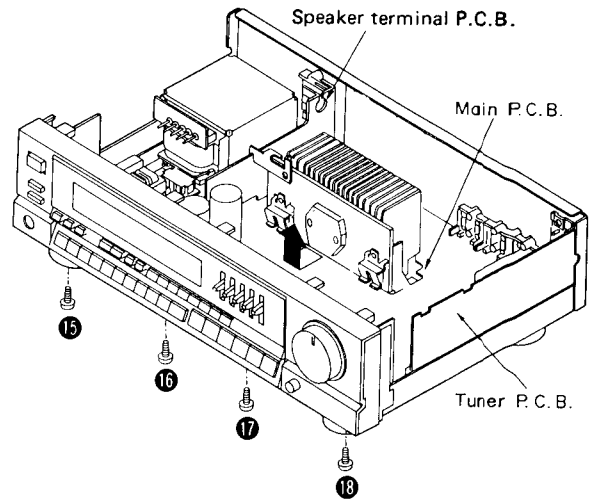
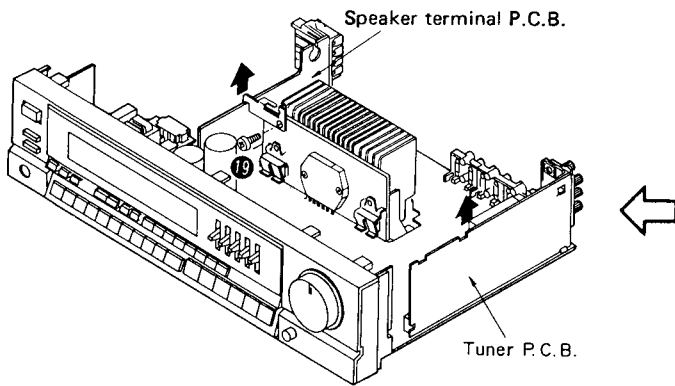
Procedure  
1 → 10

1. Remove the 18 screws ( ① ~ ⑱ ).



3. Remove the main P.C.B. in the direction of the arrow.

4. Remove the tuner P.C.B. in the direction of the arrow.

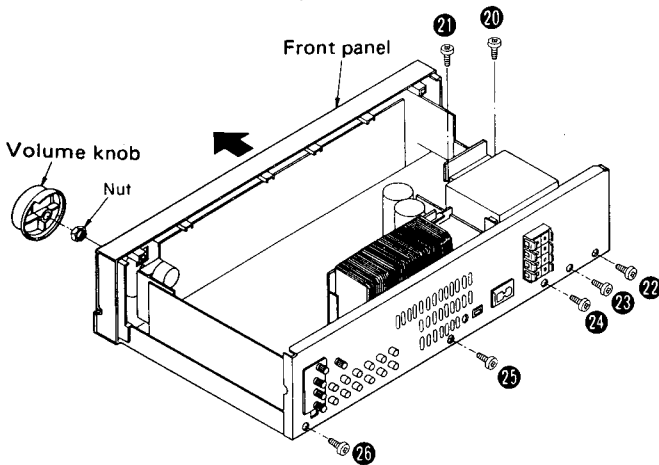


5. Remove the 1 screw ( ⑲ ).

6. Remove the speaker terminal P.C.B. in the direction of the arrow.

**How to check the main P.C.B.**

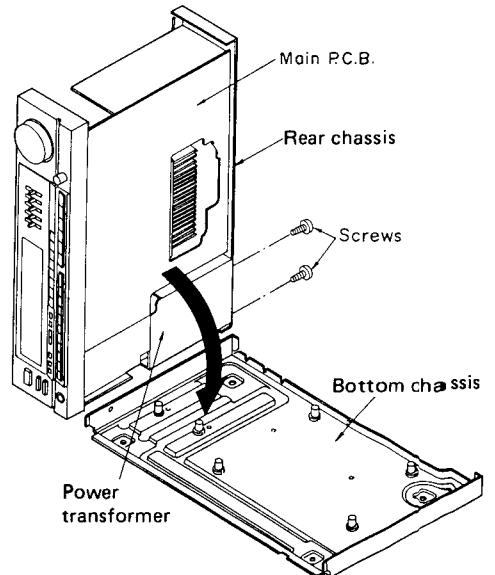
1. Remove the 11 screws ( ① ~ ⑧ , ⑯ ~ ⑱ ) in above figure.
2. Remove the volume knob and nut.
3. Remove the front panel.
4. Remove the 7 screws ( ⑳ ~ ⑲ ).

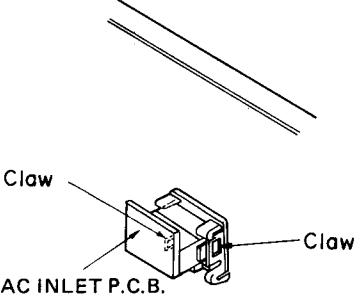
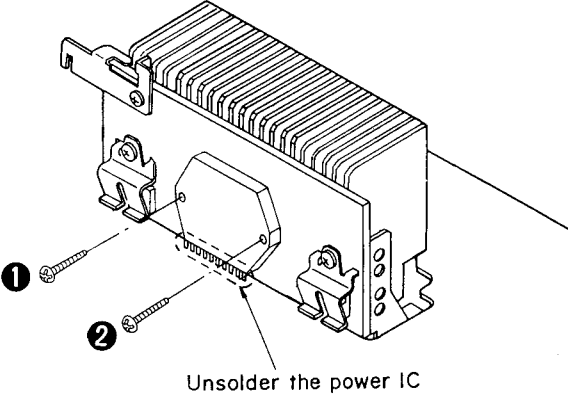


5. Remove the bottom chassis.

6. Reinstall the power transformer to the rear chassis.

7. Reinstall the front panel to the main P.C.B.



| Ref. No.<br>11  | Removal of the AC INLET P.C.B.   | Ref. No.<br>12  | Removal of the power IC  |
|---|--|---|--|
| <b>Procedure</b><br>1 → 10 → 11   | <ul style="list-style-type: none"> <li>● Release the 2 claws.</li> </ul> | <b>Procedure</b><br>1 → 10 → 12   | <ol style="list-style-type: none"> <li>1. Unsolder the power IC.</li> <li>2. Remove the 2 screws ( ❶ , ❷ ).</li> </ol> |
|  <p>The diagram shows a perspective view of the AC INLET P.C.B. with two metal claws on its sides. Labels 'Claw' point to each of the two claws, and 'AC INLET P.C.B.' points to the main component. Two parallel lines above the component indicate the direction to pull the claws outwards for removal.</p> |  |  <p>The diagram shows a power IC mounted on a heat sink. Two screws, labeled ❶ and ❷, are shown being removed from the top of the IC. A label 'Unsolder the power IC' points to the bottom of the IC. A note below the diagram provides additional instructions.</p> <p><b>Note:</b> When mounting the power IC, apply silicon terminal compound (SZZ0L15) to the rear of the power IC.</p> |  |

## PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

### Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

## BEFORE REPAIR

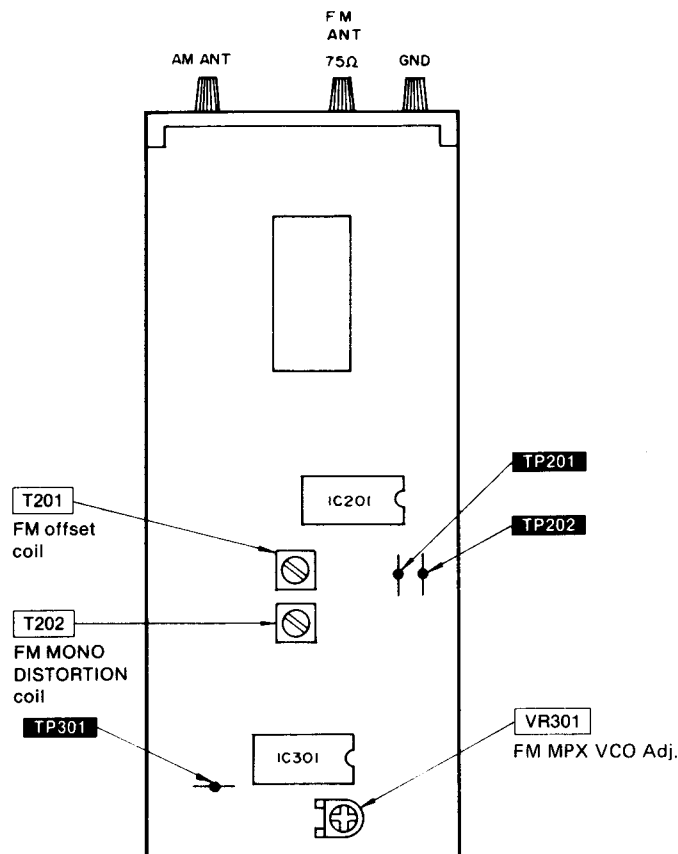
- (1) Turn off the power supply. Using a 10 $\Omega$ , 5W resistor connect both ends of power supply capacitors (C701, C702, 4700 $\mu$ F) in order to discharge the voltage.
- (2) Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50Hz/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage 110V/127V/220V/240V.

| Power supply voltage     | AC110V      | AC127V      | AC220V     | AC240V     |
|--------------------------|-------------|-------------|------------|------------|
| Consumed current 50/60Hz | 170 ~ 470mA | 150 ~ 450mA | 60 ~ 260mA | 50 ~ 250mA |

## MEASUREMENTS AND ADJUSTMENTS

**Note:** For Z202 (AM-IFT), and Z201 (AM ANT and OSC coil), they are supplied as adjusted parts. So, do not turn the cores of the parts. It is not necessary to adjust the AM circuit.

### ADJUSTMENT POINTS



● FM ADJUSTMENT

**Control positions and equipment used**

- FM signal generator (FM-SG).
- Distortion analyser
- Oscilloscope
- DC electronic voltmeter (EVM)
- Frequency counter
- Choke coil (100μH)
- Resistor (100kΩ)

**FM MONO DISTORTION ADJUSTMENT**

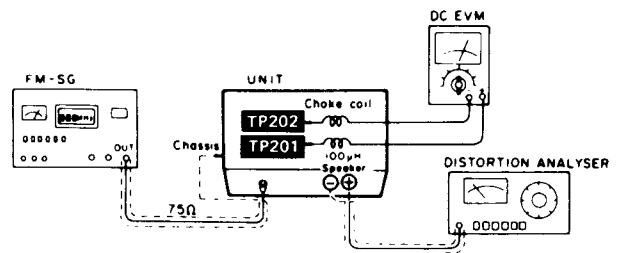
1. Test equipment connection is shown in figure.
2. Set the unit to "FM" position.
3. Set the radio frequency display and signal generator to 100.10 MHz.
4. Adjust T201 core so that voltage measured in signal mode is 0 mV (0±20mV) in 300 mV range.
5. Adjust T202 so that the distortion factor of Lch is minimized.
6. Repeat steps 4 and 5 a few times.
7. Make sure that the distortion factors of Lch and Rch are nearly the same with each other to minimum.

**Note:**

The adjusting screwdriver used should be made of resin.

**FM SIGNAL GENERATOR CONDITION**

Modulation .....100%  
 Modulation frequency.....1 kHz (MONO)  
 Output level.....66 dB

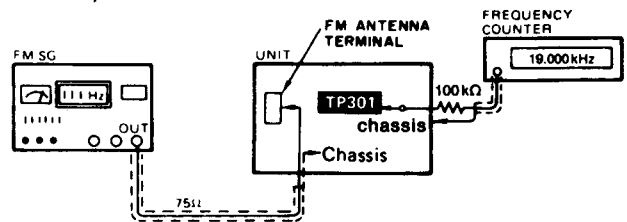


**FM MPX VCO ADJUSTMENT**

1. Test equipment connection is shown in figure.
2. Set the unit to "FM auto" position.
3. Place the radio frequency display and signal generator setting to 100.10 MHz.
4. Adjust VR301 for 19.00±0.03 kHz on frequency counter reading.

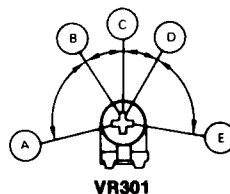
**FM SIGNAL GENERATOR CONDITION**

Modulation .....0% (non-modulation)  
 Output level.....66 dB



★ **USING ALTERNATE SYSTEM**

1. Apply stereo signal from generator or receive the stereo broadcast.
2. Adjust VR301 until stereo indicator lights up. Cement arm of VR301 as shown in figure.



- Ⓐ - Ⓑ    Ⓓ - Ⓔ : Stereo OFF position
- Ⓑ - Ⓓ    : Stereo ON position (indicator lighting)
- Ⓒ : Adjust point of pilot circuit

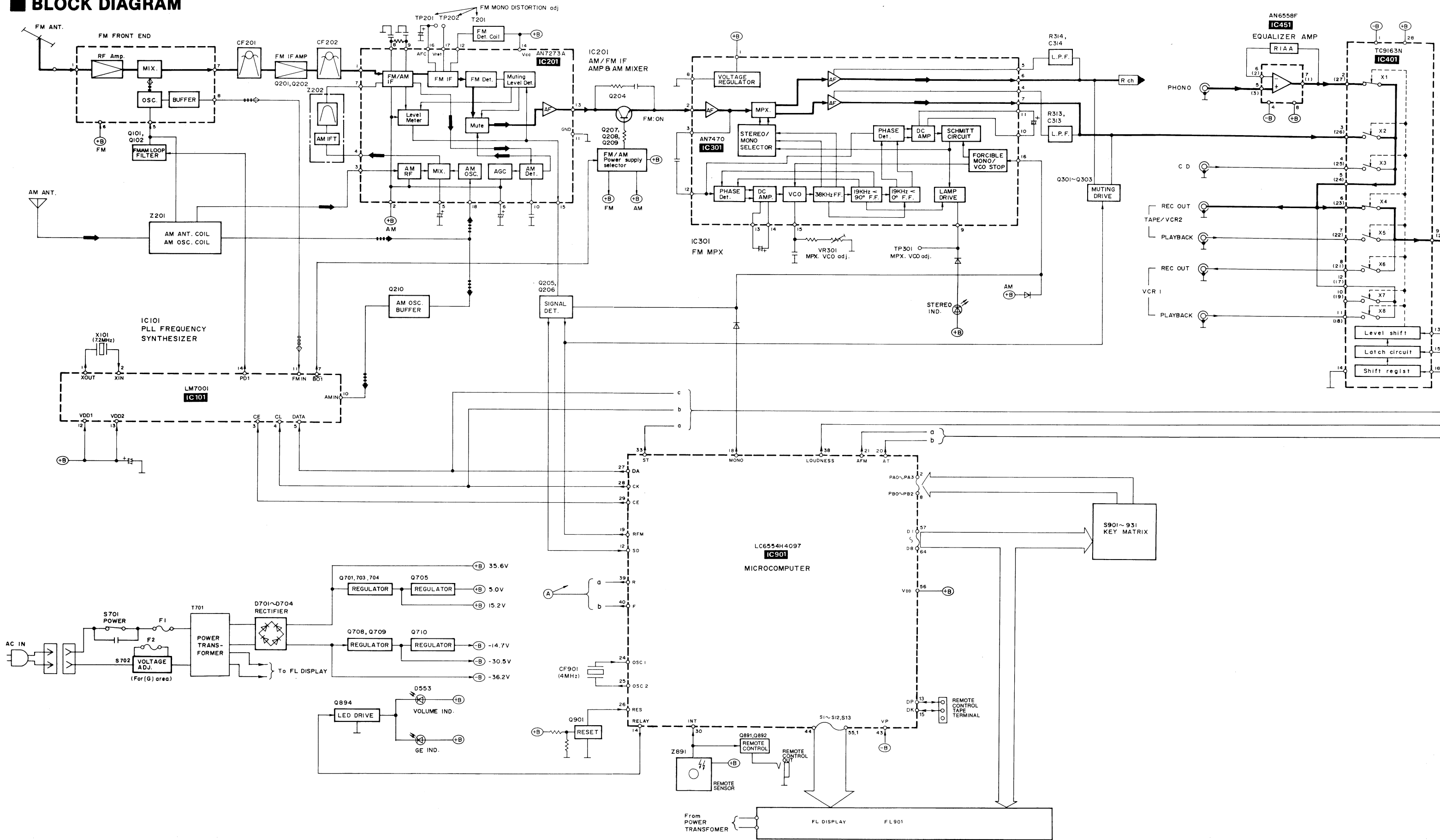
## ■ TERMINAL FUNCTION OF IC

### • IC901 (LC6554H4097): Microcomputer

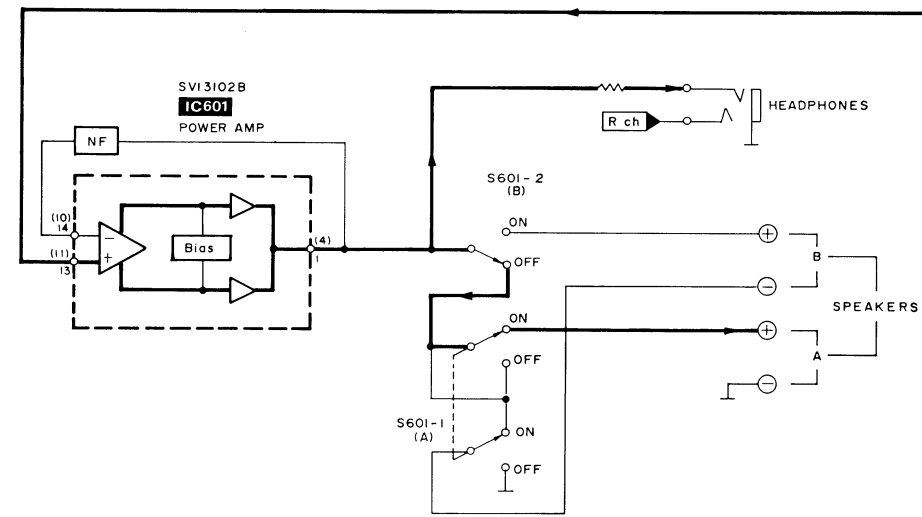
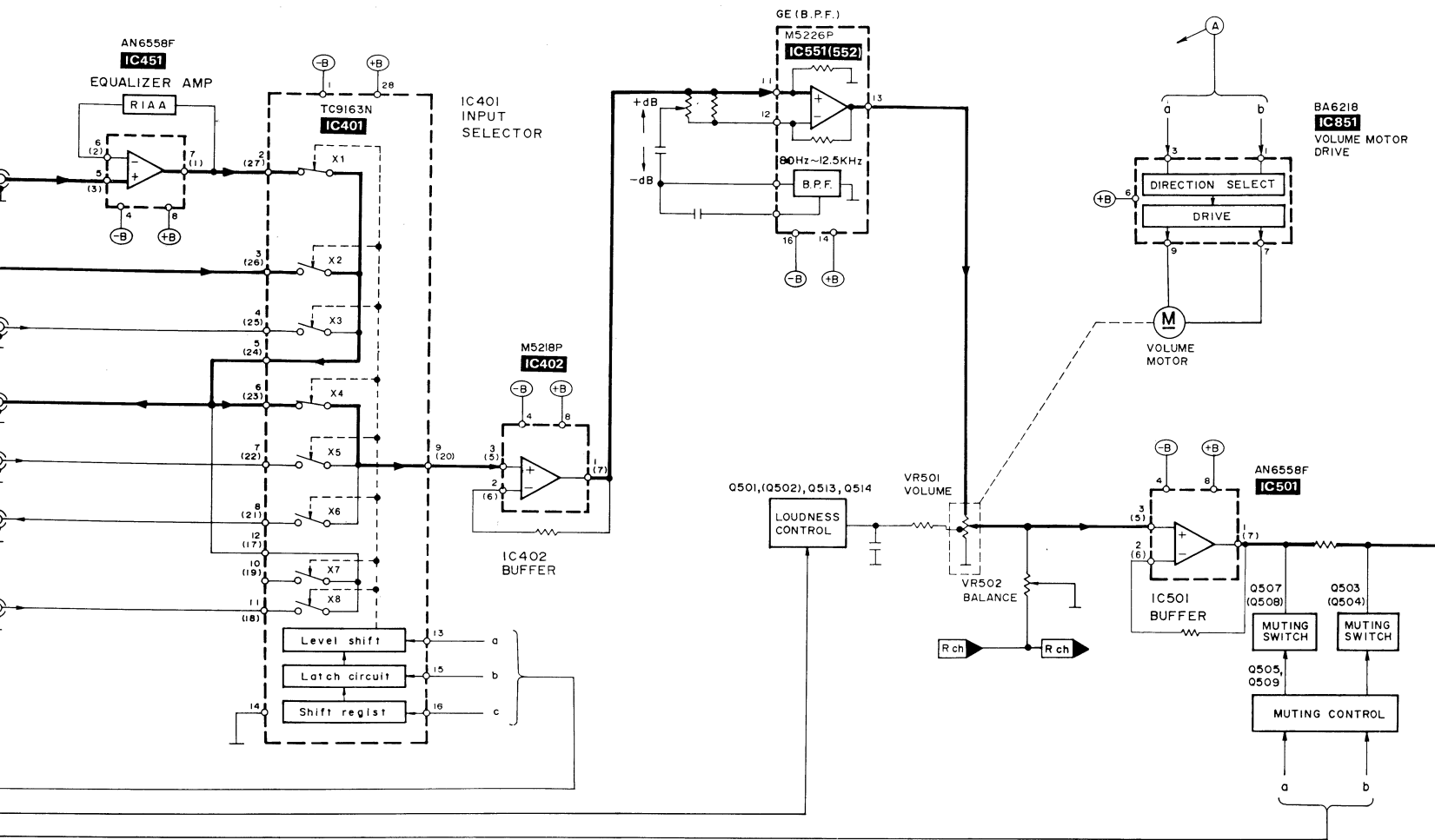
| Pin No.     | Mark                         | I/O Division | Function                                       | Pin No. | Mark     | I/O Division | Function                                    |
|-------------|------------------------------|--------------|--|---------|----------|--------------|---|
| 1           | S13                          | O            | Segment signal output                          | 33      | ST       | O            | Level shift control output                  |
| 2<br>3<br>5 | PA0<br>PA3                   | I            | Key return signal input                        | 34      | AF MODE  | —            | Not used, connected to GND                  |
| 6<br>7<br>8 | PB0<br>PB2                   | I            |  | 35      | VA       |              |   |
|             |                              |              | 36   | Vs      |          |              |   |
|             |                              |              | 37   | Vc      |          |              |   |
| 9           | STAND BY                     | I            | Power supply terminal                          | 38      | LOUDNESS | O            | Loudness ON/OFF signal output               |
| 10          | OFF                          | I            | Power ON/OFF det. terminal<br>(Not used, open) | 39      | R        | O            | Volume motor drive output                   |
| 11          | STEREO                       | I            | Stereo signal det. terminal                    | 40      | F        |              |   |
| 12          | SD                           | I            | Received signal det. terminal                  | 41      | NC       | —            | Not used, connected to GND                  |
| 13          | DP                           | I/O          | Cassette deck control terminal                 | 42      | NC       |              |   |
| 14          | RELAY                        | O            | Relay control output                           | 43      | Vp       | I            | Power supply terminal<br>(negative voltage) |
| 15          | DK                           | I            | Cassette deck control terminal                 | 44      | S1       | O            | Segment signal output                       |
| 16          | START                        | —            | Not used, connected to GND                     |         |          |              |   |
| 17          | STOP                         | —            | Not used, open                                 |         |          |              |   |
| 18          | MONO                         | O            | FM AUTO/MONO select signal output              |         |          |              |   |
| 19          | RFM                          | O            | Muting control output for tuner circuit        | 55      | S12      |              |   |
| 20          | AT                           | O            | Muting control output for amplifier circuit    |         |          |              |   |
| 21          | AFM                          | O            | Muting control output for amplifier circuit    | 56      | VDD      | I            | Power supply terminal<br>(positive voltage) |
| 22          | TP                           | —            | Not used, connected to GND                     |         |          |              |   |
| 23          | Vss                          | —            | Ground terminal                                | 57      | D1       | O            | Digit signal and key scan signal output     |
| 24          | OSC1                         | I            | Oscillator terminal                            |         |          |              |   |
| 25          | OSC2                         | O            |  |         |          |              |   |
| 26          | RES                          | I            | Reset signal input                             |         |          |              |   |
| 27          | PF0/DA                       | O            | Serial data output                             | 64      | D8       |              |   |
| 28          | PF1/CK                       | O            | Clock signal terminal for serial data          |         |          |              |   |
| 29          | PF2/CE                       | I/O          | Chip enable terminal                           |         |          |              |   |
| 30          | PF3/ $\overline{\text{INT}}$ | I            | Remote control input                           |         |          |              |   |
| 31          | D1                           | —            | Not used, connected to GND                     |         |          |              |   |
| 32          | CK                           | —            | Not used, connected to GND                     |         |          |              |   |



# BLOCK DIAGRAM

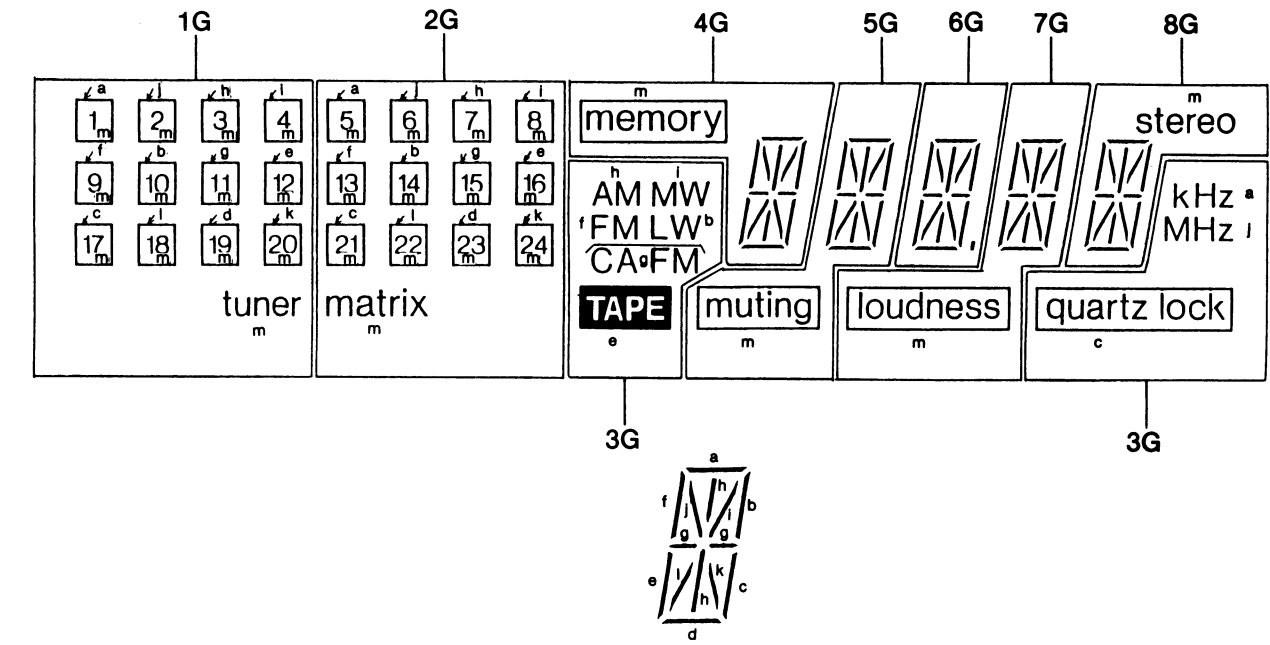


INTERNAL CONNECTION OF FL



**Note:**  
 ●→ FM Signal  
 ○○○○→ FM OSC  
 ●→ AM Signal  
 ○○○○→ AM OSC  
 \* ( ) indicates Pin No. of right channel.

Grid assignment diagram



Pin connection

|            |     |     |     |     |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----|-----|-----|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| PIN NO.    | 1   | 2   | 3   | 4   | 5 | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  |
| CONNECTION | N P | F 2 | N P | N P | m | N P | 8 G | N P | N P | 7 G | N P | N P | 6 G | N P | 5 G | N P | N P | 4 G | N P | 3 G | N P | 2 G |

|            |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |
|------------|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|
| PIN NO.    | 23  | 24  | 25  | 26  | 27  | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40  | 41  | 42  | 43  | 44  |
| CONNECTION | N P | 1 G | N P | N P | N P | a  | j  | h  | i  | f  | b  | g  | e  | c  | l  | d  | k  | N P | N P | N P | F 1 | N P |

Anode connecton table

|   | 1G                            | 2G                              | 3G          | 4G     | 5G     | 6G  | 7G       | 8G     |
|---|-------------------------------|---------------------------------|-------------|--------|--------|-----|----------|--------|
| a | □ 1                           | □ 5                             | KHz         | a      | a      | a   | a        | a      |
| b | □ 10                          | □ 14                            | LW          | b      | b      | b   | b        | b      |
| c | □ 17                          | □ 21                            | quartz lock | c      | c      | c   | c        | c      |
| d | □ 19                          | □ 23                            | -           | d      | d      | d   | d        | d      |
| e | □ 12                          | □ 16                            | TAPE        | e      | e      | e   | e        | e      |
| f | □ 9                           | □ 13                            | FM          | f      | f      | f   | f        | f      |
| g | □ 11                          | □ 15                            | CAFM        | g      | g      | g   | g        | g      |
| h | □ 3                           | □ 7                             | AM          | h      | h      | h   | h        | h      |
| i | □ 4                           | □ 8                             | MW          | i      | i      | i   | i        | i      |
| j | □ 2                           | □ 6                             | MHz         | j      | j      | j   | j        | j      |
| k | □ 20                          | □ 24                            | -           | k      | k      | k   | k        | k      |
| l | □ 18                          | □ 22                            | -           | l      | l      | l   | l        | l      |
| m | 1-4<br>9-12<br>17-20<br>tuner | 5-8<br>13-16<br>21-24<br>matrix | -           | memory | muting | D.P | loudness | stereo |

# SCHEMATIC DIAGRAM

(Parts list on pages 35 ~ 40)

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

**Note 1:**

- **S601-1, S601-2** : Speaker selectors.  
S601-1: A S601-2: B
- **S701** : Power "on/off" switch.
- **S702** : Voltage selector switch. (For (G) area.)
- **S901 ~ S910** : Preset-tuning (1-0) switches.  
[S901 : CH1, S902 : CH2, S903 : CH3,  
S904 : CH4, S905 : CH5, S906 : CH6,  
S907 : CH7, S908 : CH8, S909 : CH9,  
S910 : CH0]
- **S911** : Music-scan/group-search switch.
- **S912** : FM mode selector.
- **S913, S914** : Band selectors.  
S913 : FM, S914 : AM
- **S915, S916** : Tuning switches.  
S915 : ▼ (DOWN), S916 : ▲ (UP)
- **S917** : Memory switch.
- **S918** : Loudness switch.
- **S919 ~ S926** : Group registration switches.  
[S919 : start, S920 : rock, S921 : jazz  
S922 : classic, S923 : easy, S924 : news  
S925 : other, S926 : end]
- **S927 ~ S929, S931** : Input selector switches.  
[S927 : phono, S928 : tuner, S929 : CD,  
S931 : VCR1]
- **S930** : Tape-monitor/VCR 2 switch.

- **Signal line**
- : FM OSC      → : FM signal
- ▣▣▣▣ : AM OSC      → : AM signal
- ▨▨▨▨ : Phono signal      → : AF signal (Lch)
- : Positive voltage lines
- - - : Negative voltage lines

- **Important safety notice:**  
Components identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts. Indicated voltage values are 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 internal impedance of the DC circuit tester.
- All voltage values shown in circuitry are DC voltage in FM signal (Stereo signal) reception mode.
- Figures in ( ) Stand for DC-voltage in AM signal reception mode.

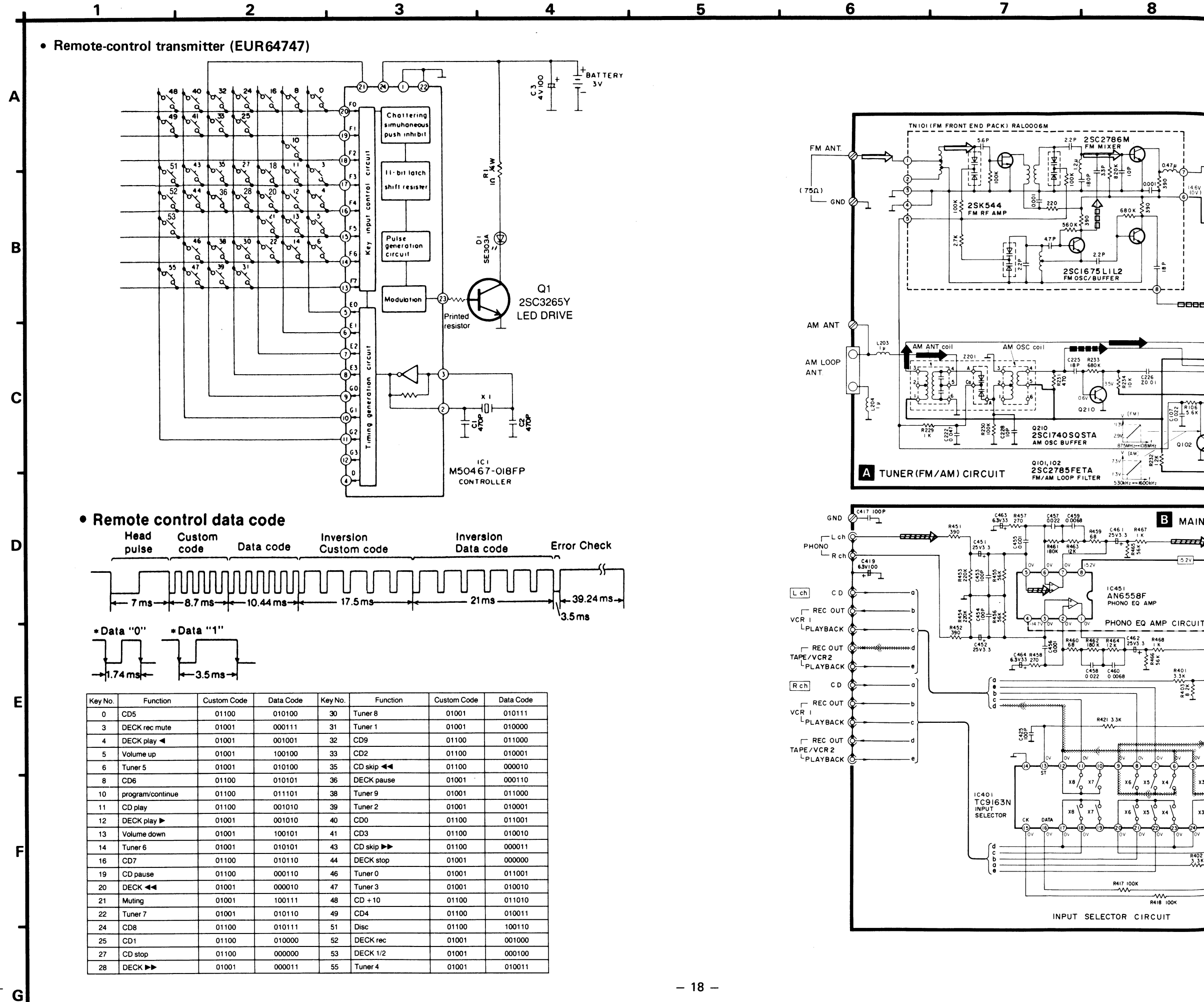
- \* **Caution!**  
IC and LSI are sensitive to static electricity.  
Secondary trouble can be prevented by taking care during repair.
- \* Cover the parts boxes made of plastics with aluminum foil.
- \* Ground the soldering iron.
- \* Put a conductive mat on the work table.
- \* Do not touch the legs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

**Note2:**

● **Use of ceramic filters in pairs**  
The ceramic filters (CF201, CF202) 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 (D914, D915) for use as different diodes must be used depending on each rank of the ceramic filters.

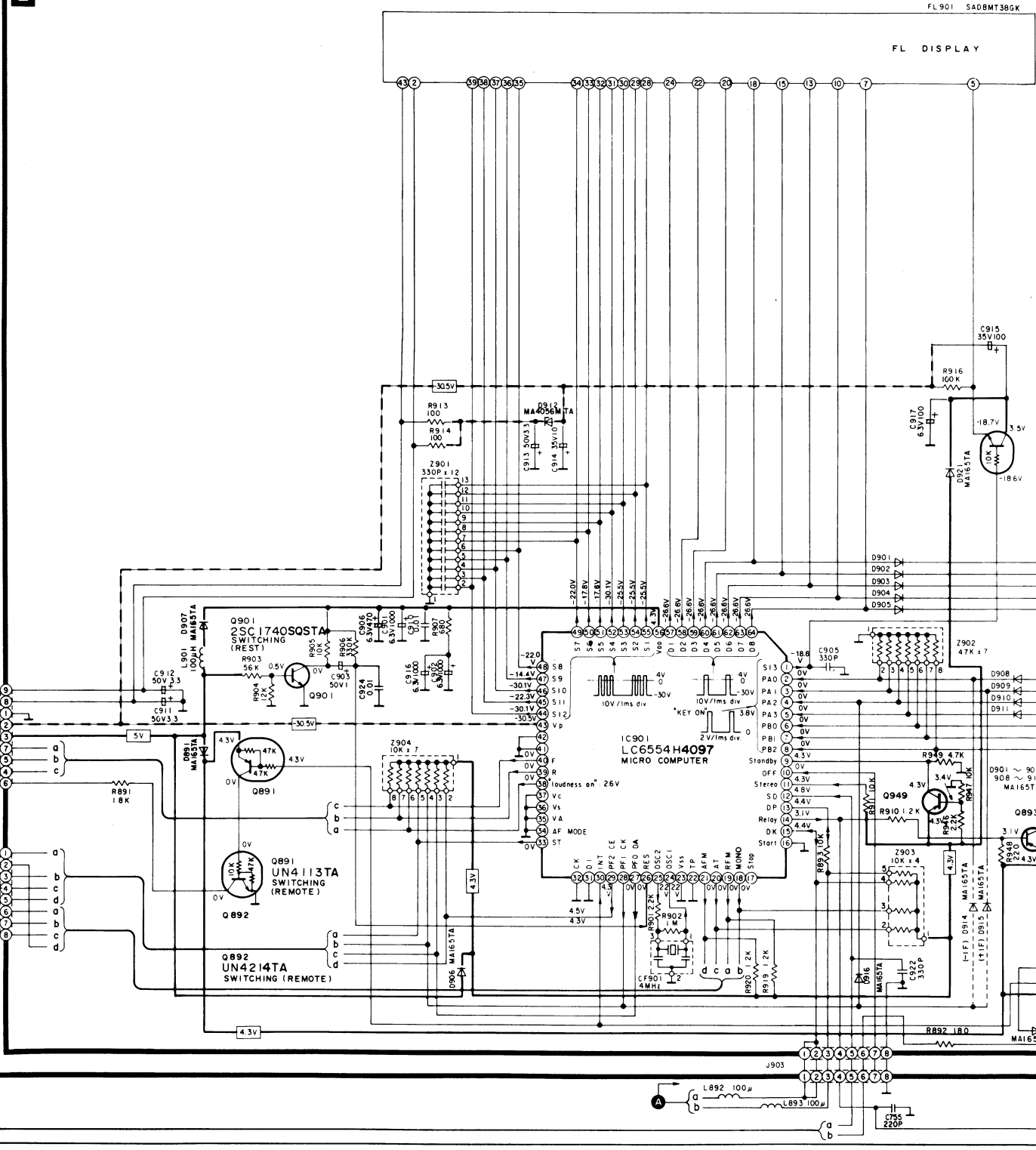
| Color marking (Blue, Red or Orange) | RANK (Color) | D914 | D915 | CENTER FREQUENCY |
|-------------------------------------|--------------|------|------|------------------|
| Blue                                | Blue         | ○    | ×    | 10.675MHz        |
| Red                                 | Red          | ×    | ×    | 10.700MHz        |
| Orange                              | Orange       | ×    | ○    | 10.725MHz        |

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

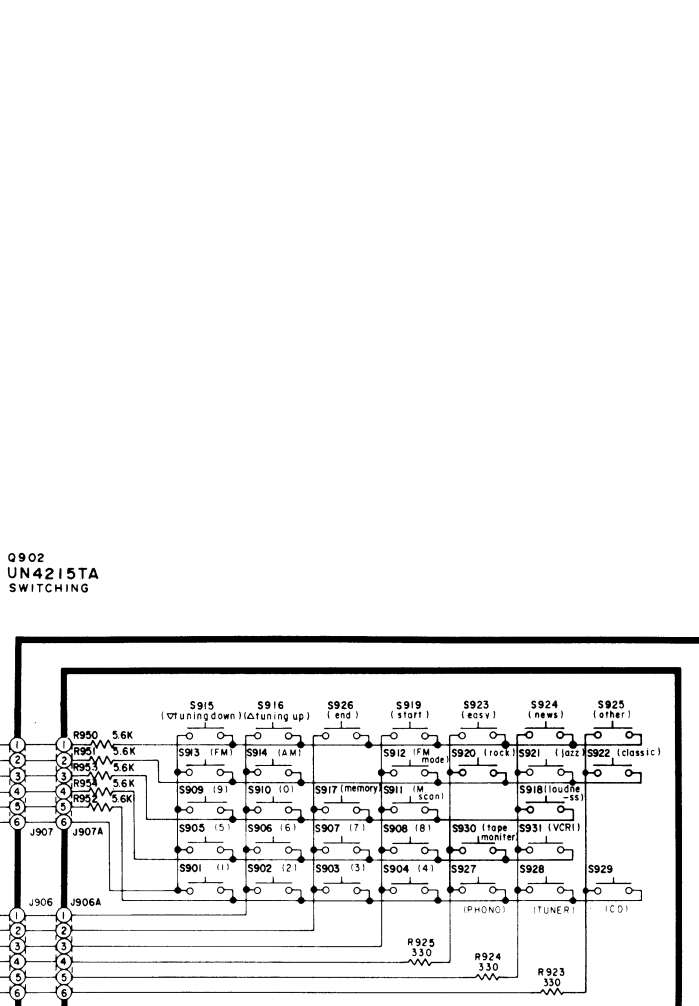




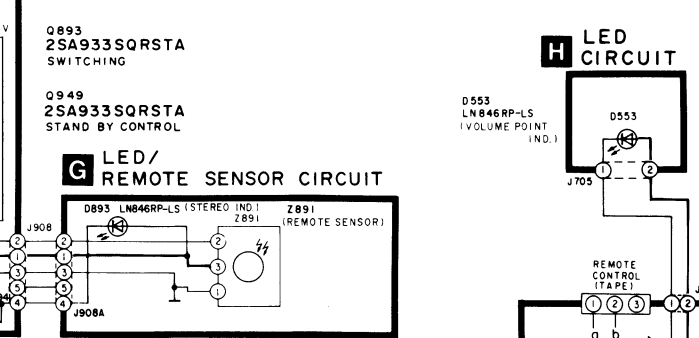
**E** FL METER DRIVE/GRAPHIC EQUALIZER AMP CIRCUIT SYSTEM CONTROL CIRCUIT



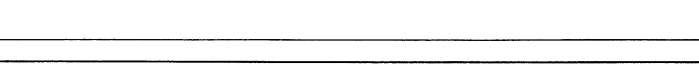
**F** OPERATION SWITCH CIRCUIT



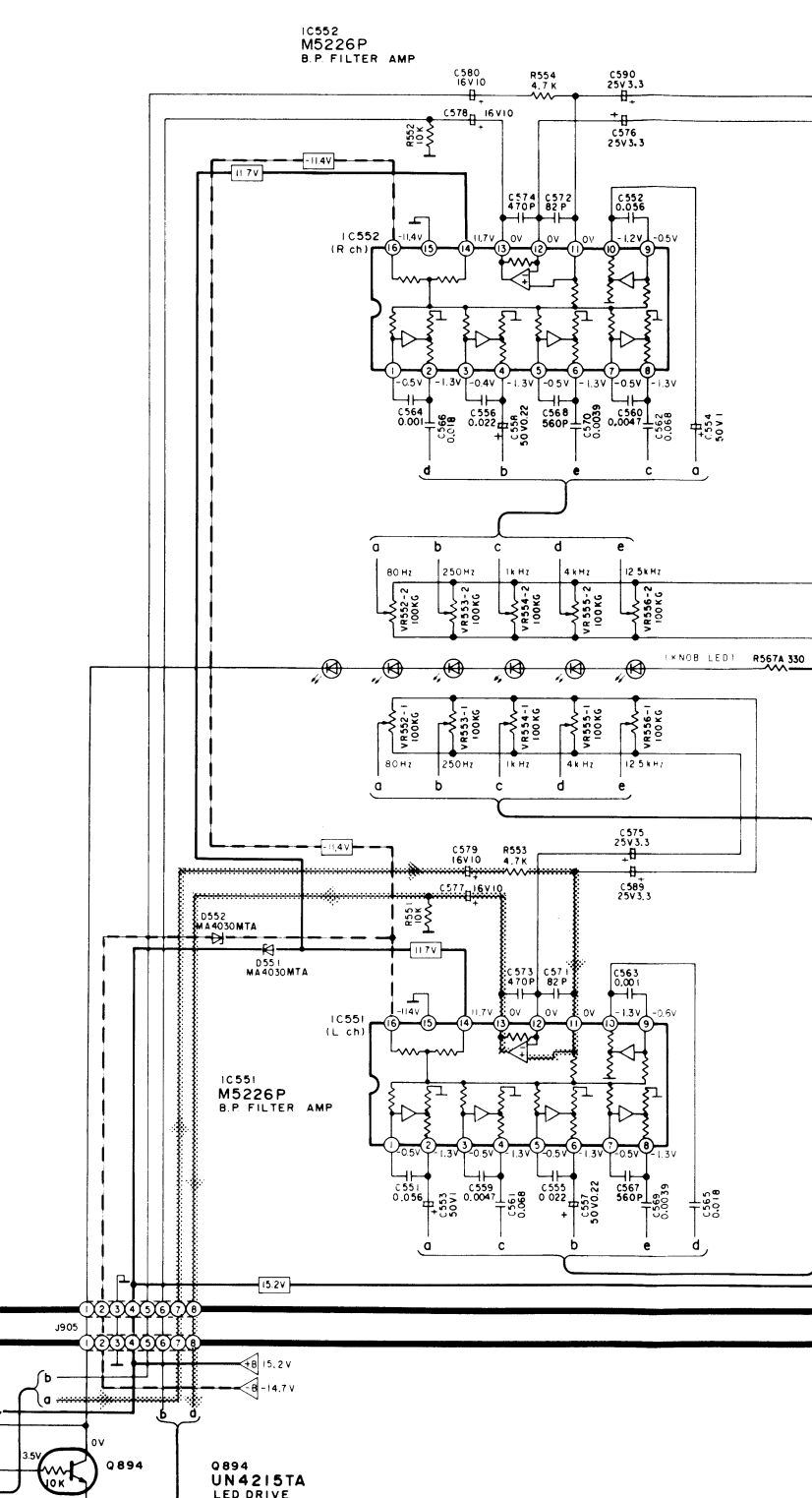
**G** LED/REMOTE SENSOR CIRCUIT

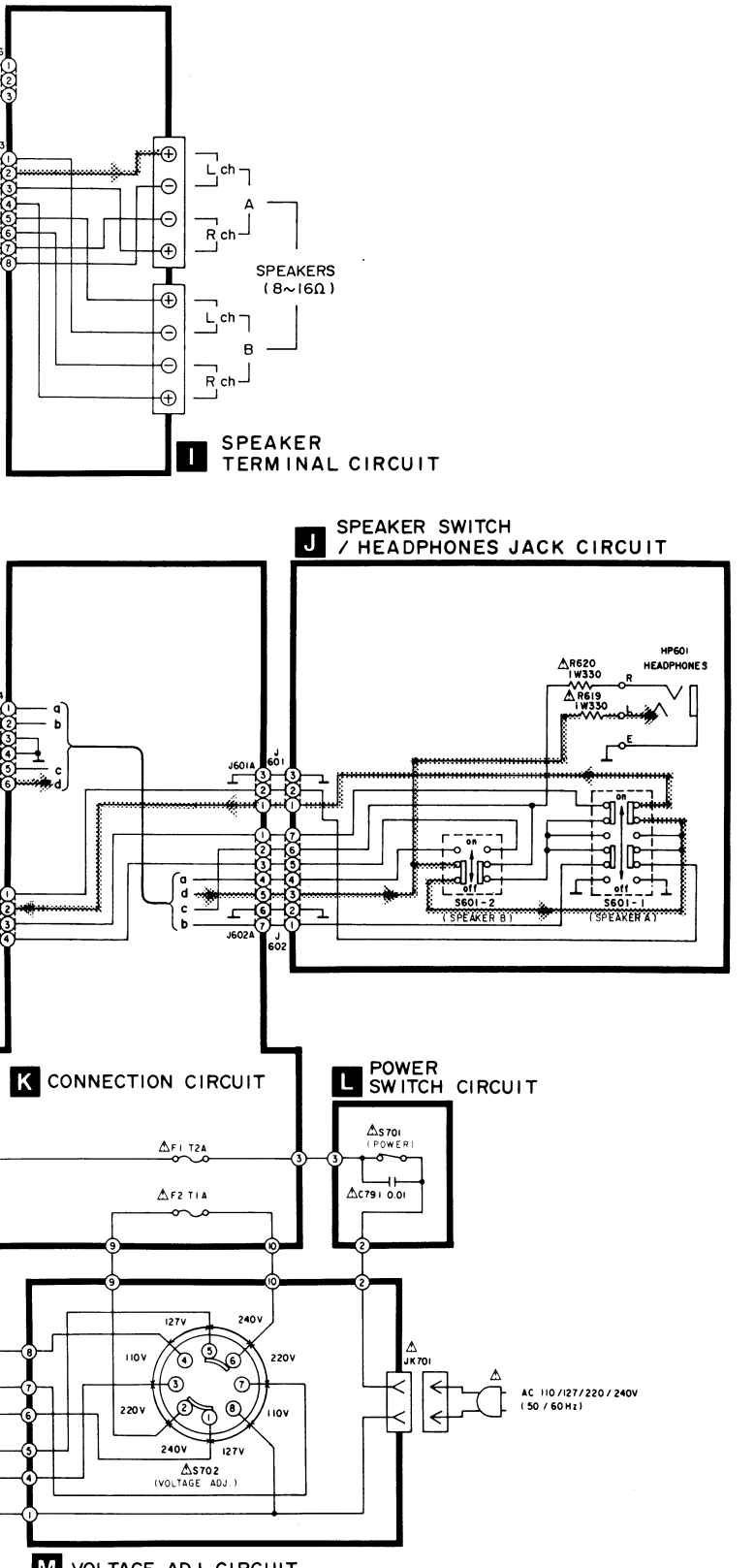
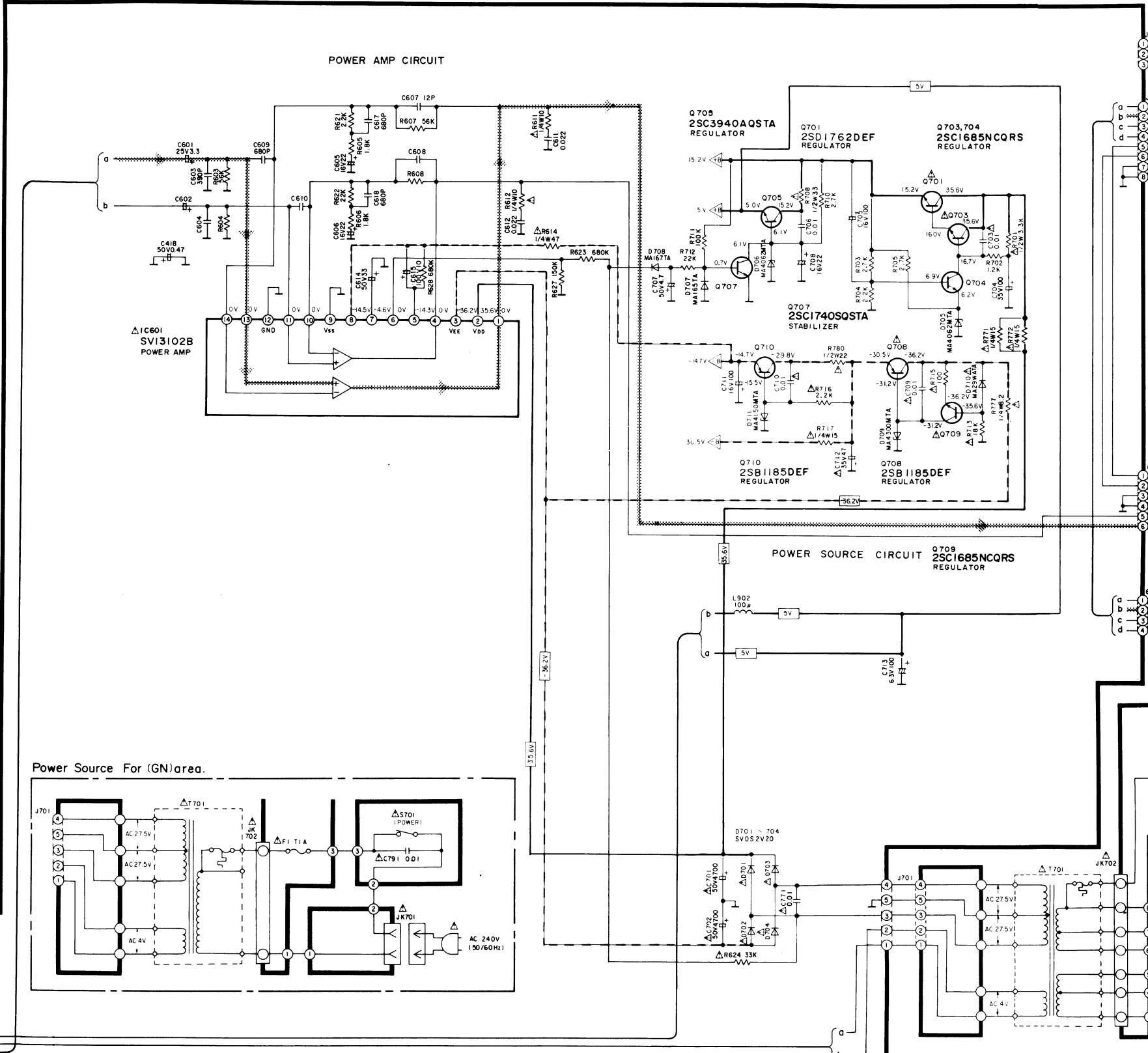
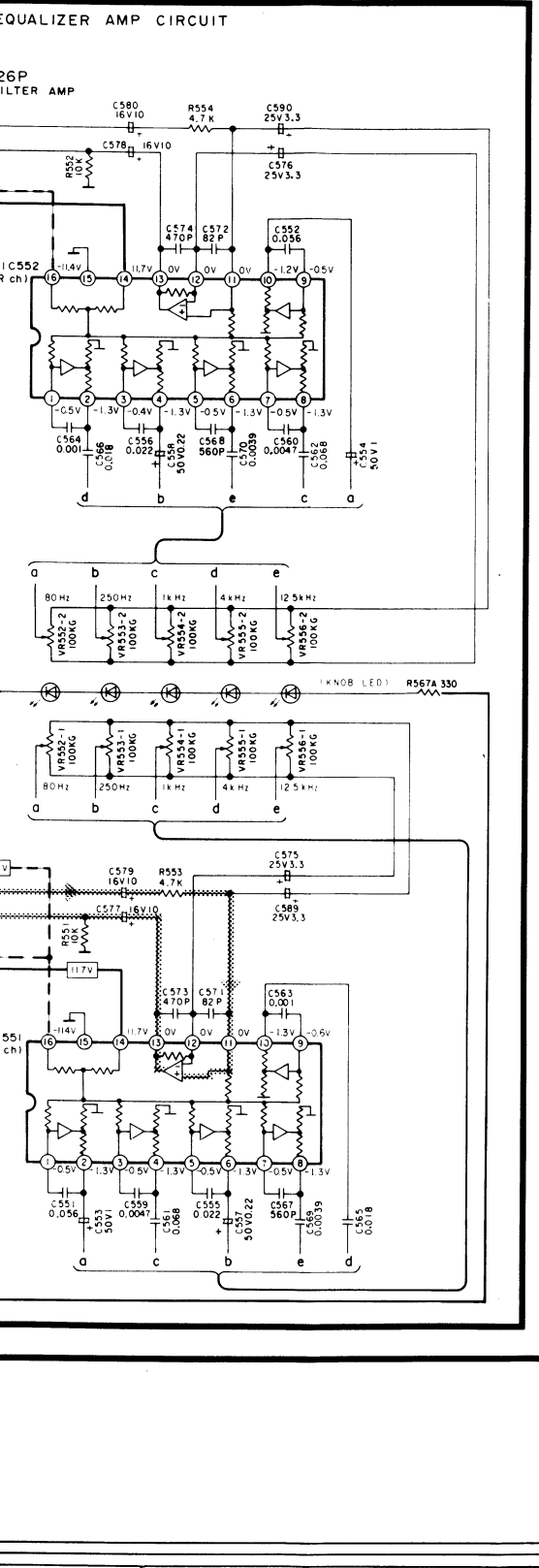


**H** LED CIRCUIT



**GRAPHIC EQUALIZER AMP CIRCUIT**

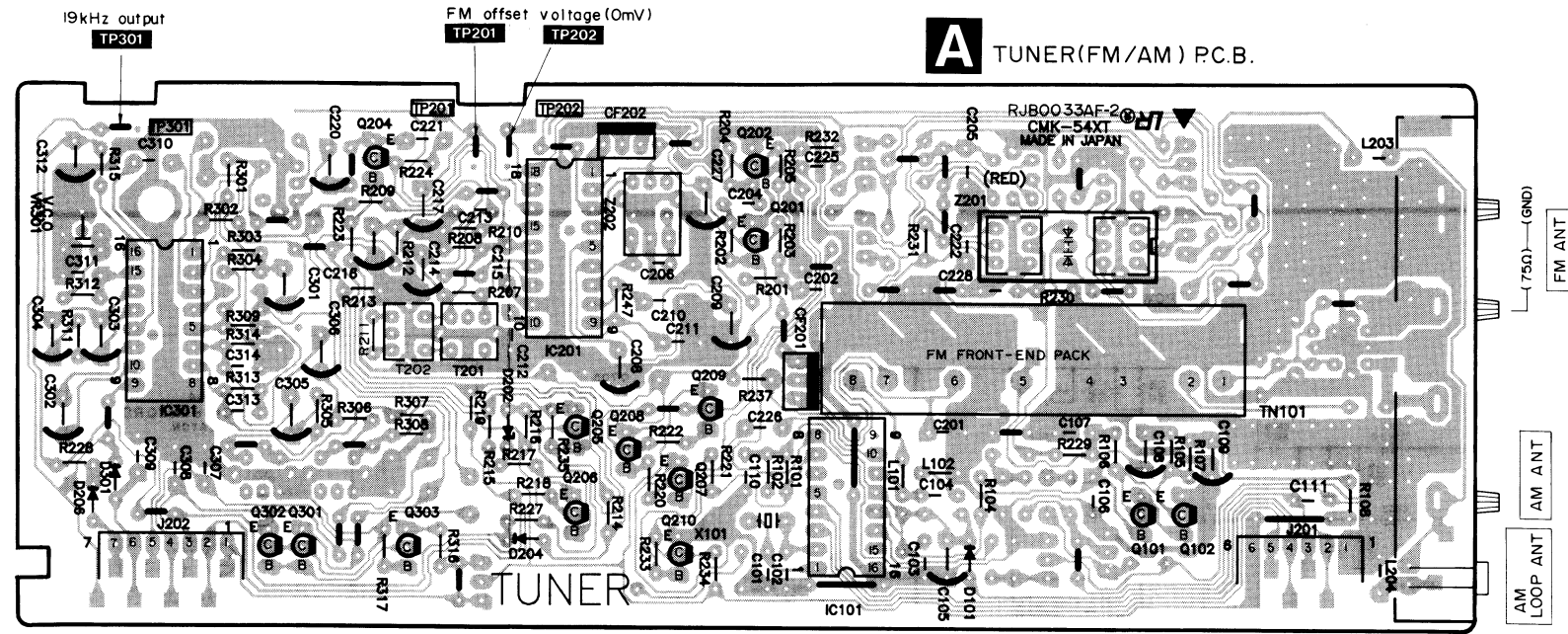
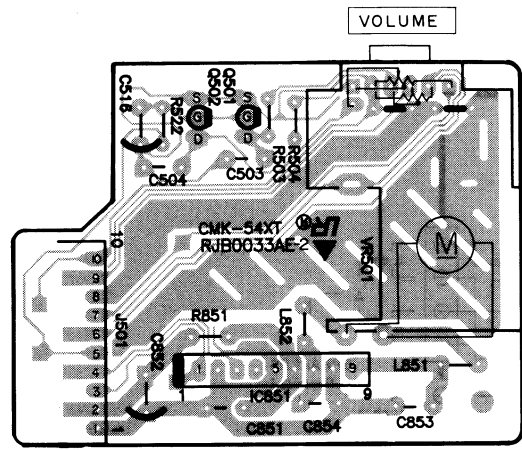






PRINTED CIRCUIT BOARDS

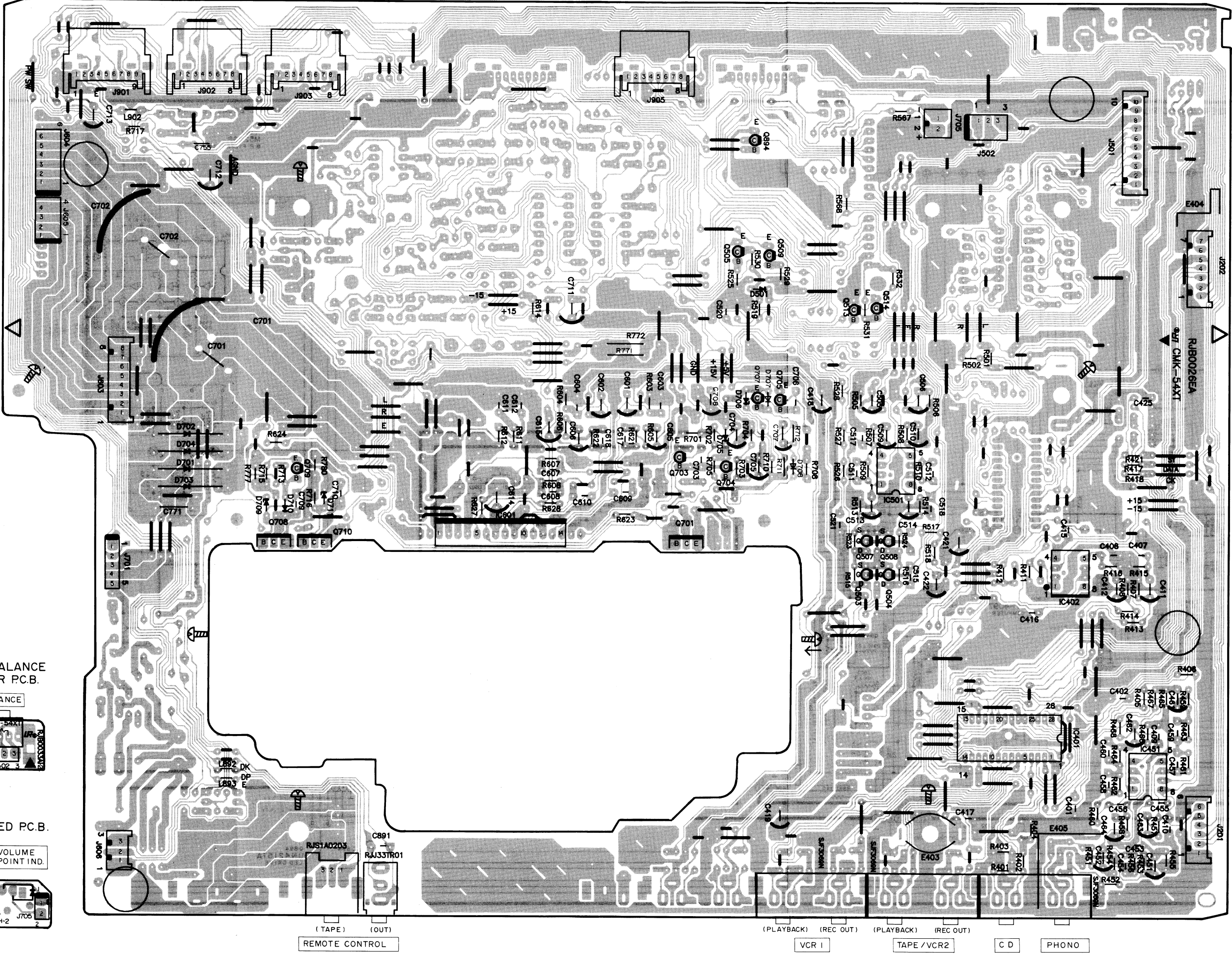
**D** VOLUME / MOTOR DRIVE P.C.B.



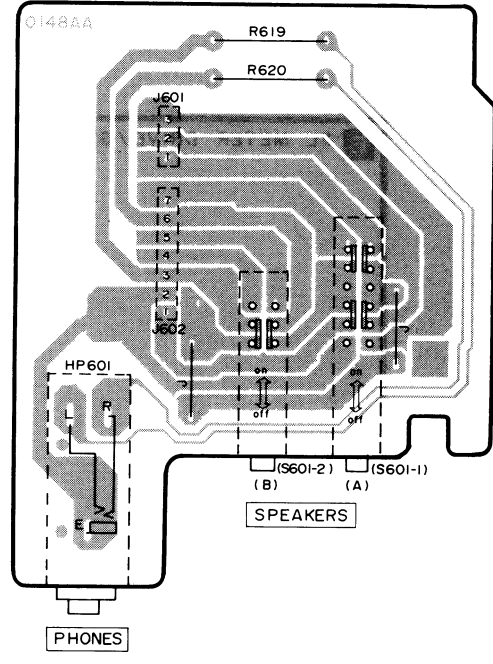
**A** TUNER (FM/AM) P.C.B.



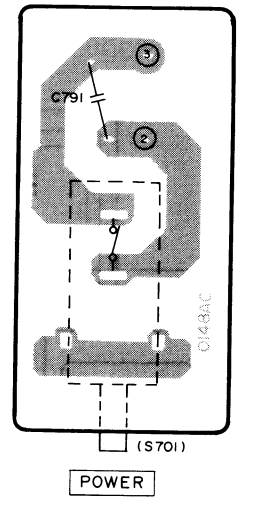
**B** MAIN P.C.B.



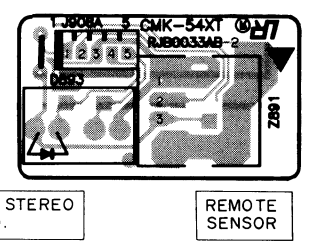
**J** SPEAKER SWITCH / HEADPHONES JACK P.C.B.



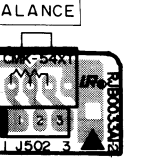
**L** POWER SWITCH P.C.B.



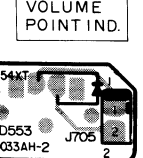
**G** LED / REMOTE SENSOR P.C.B.



BALANCE VR P.C.B.

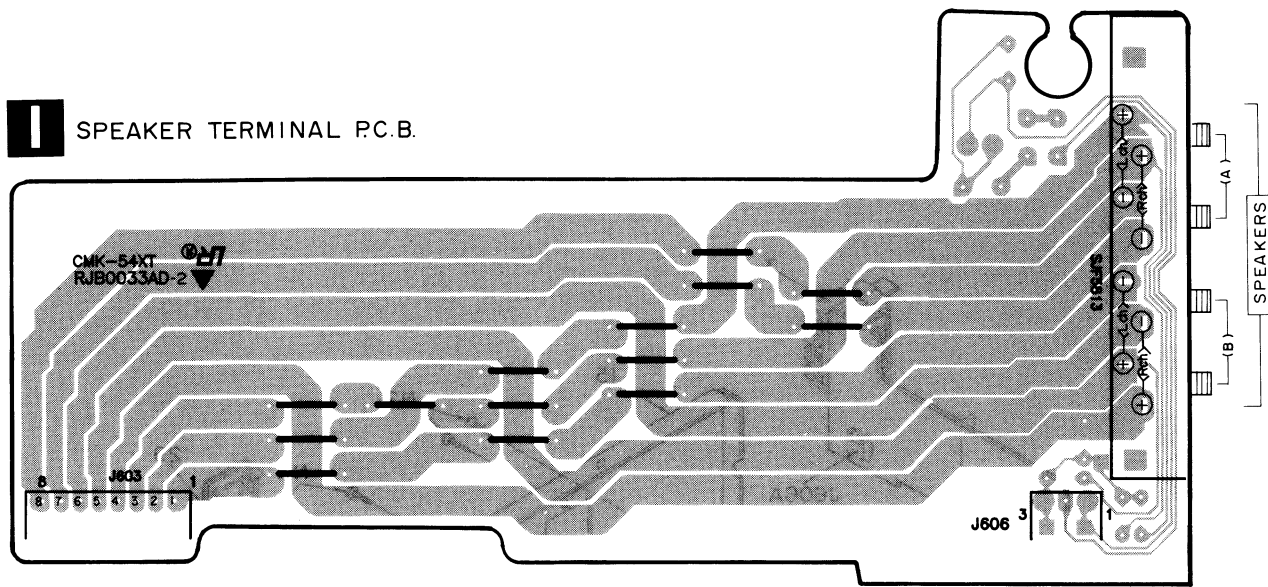


LED P.C.B.

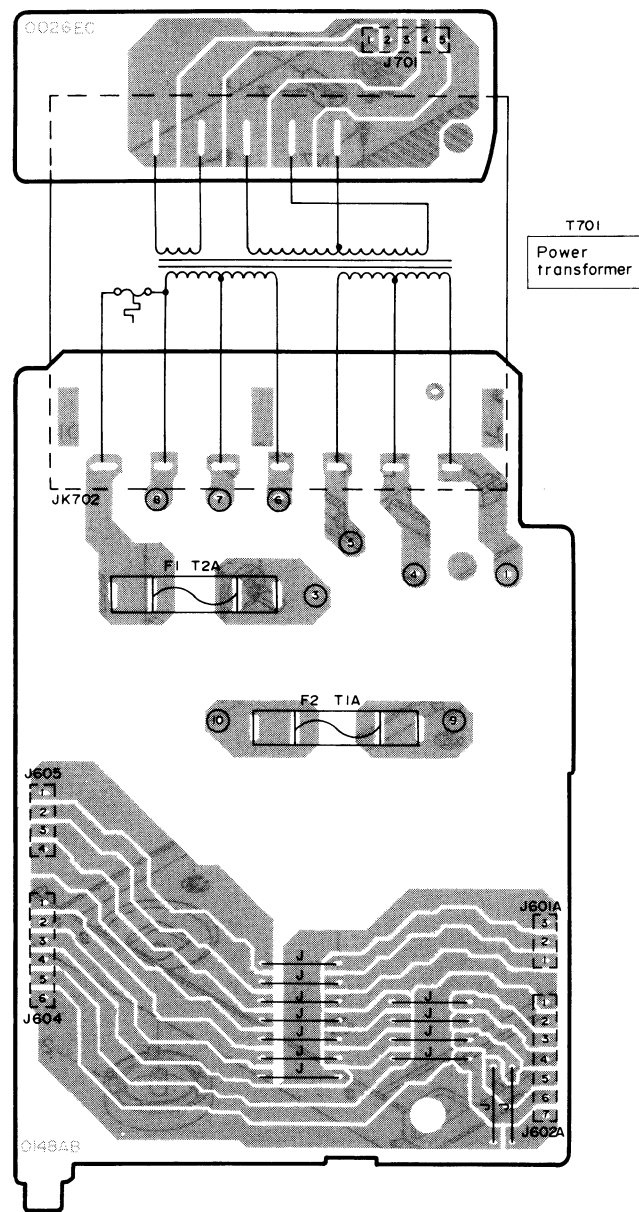
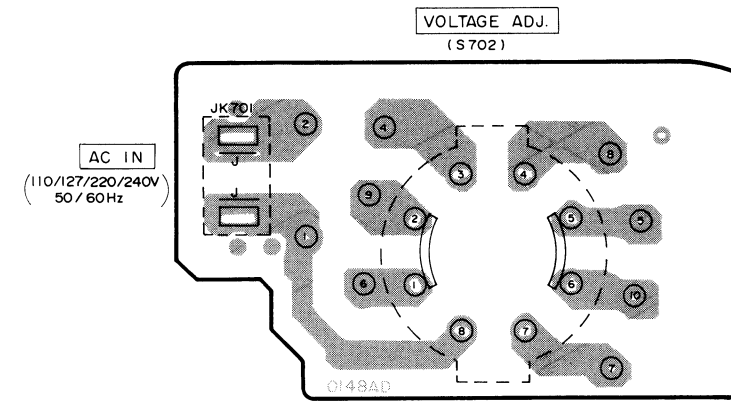




**I** SPEAKER TERMINAL P.C.B.

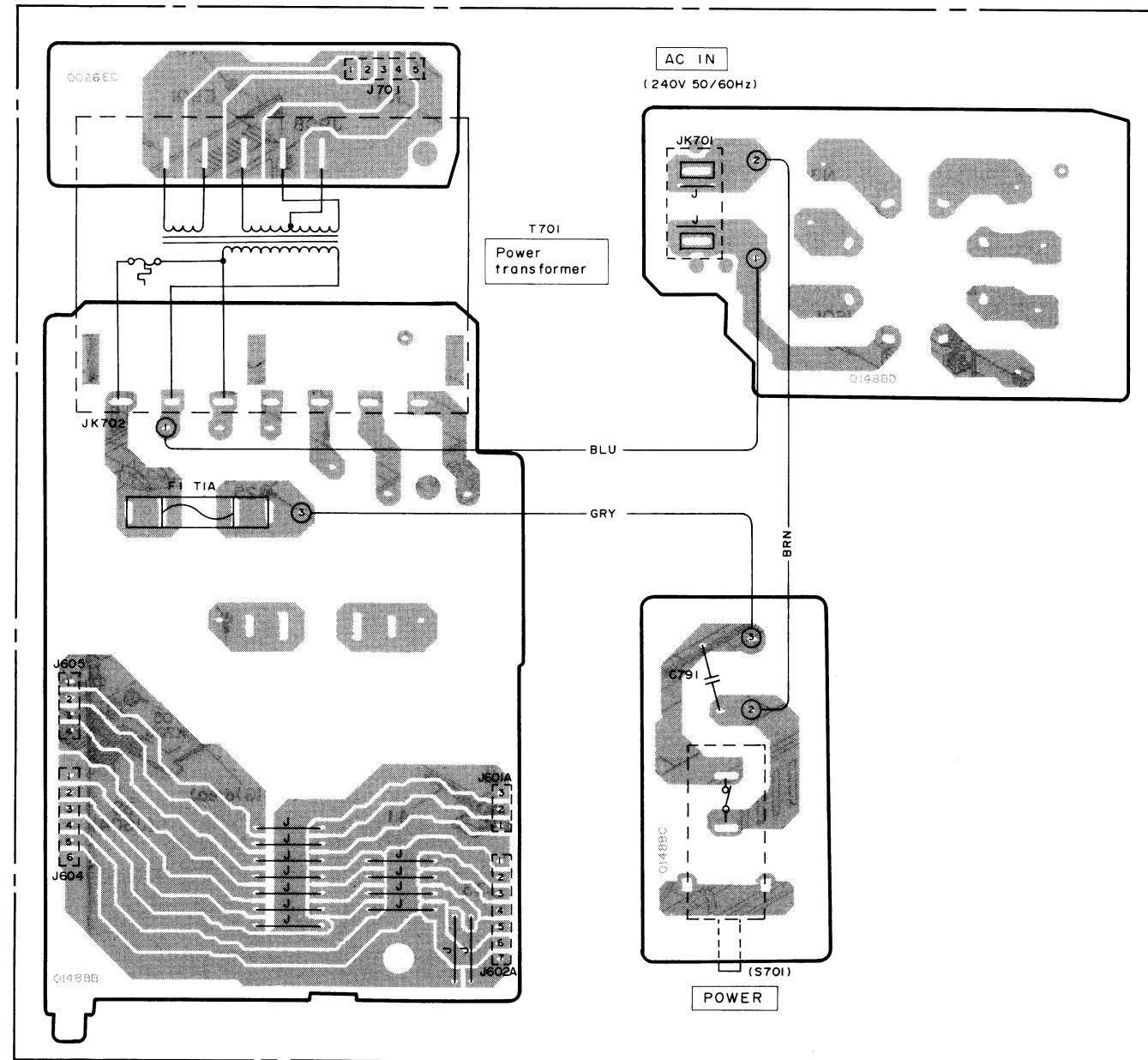


**M** VOLTAGE ADJ. P.C.B.



**K** CONNECTION P.C.B.

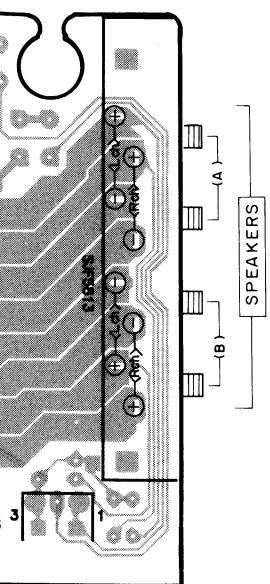
Power Source For (GN) area.



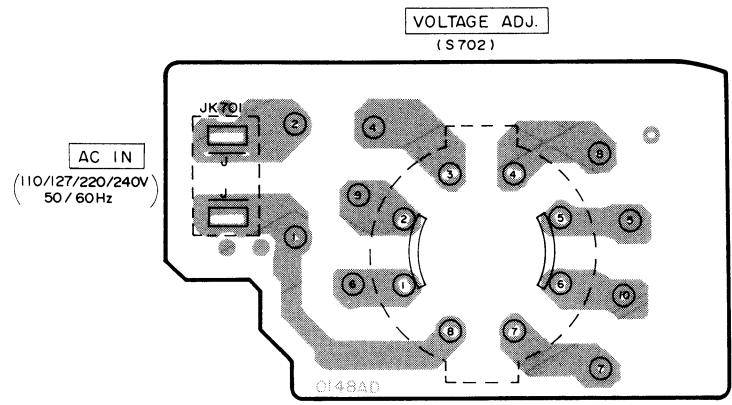
• Remote

• Terminal

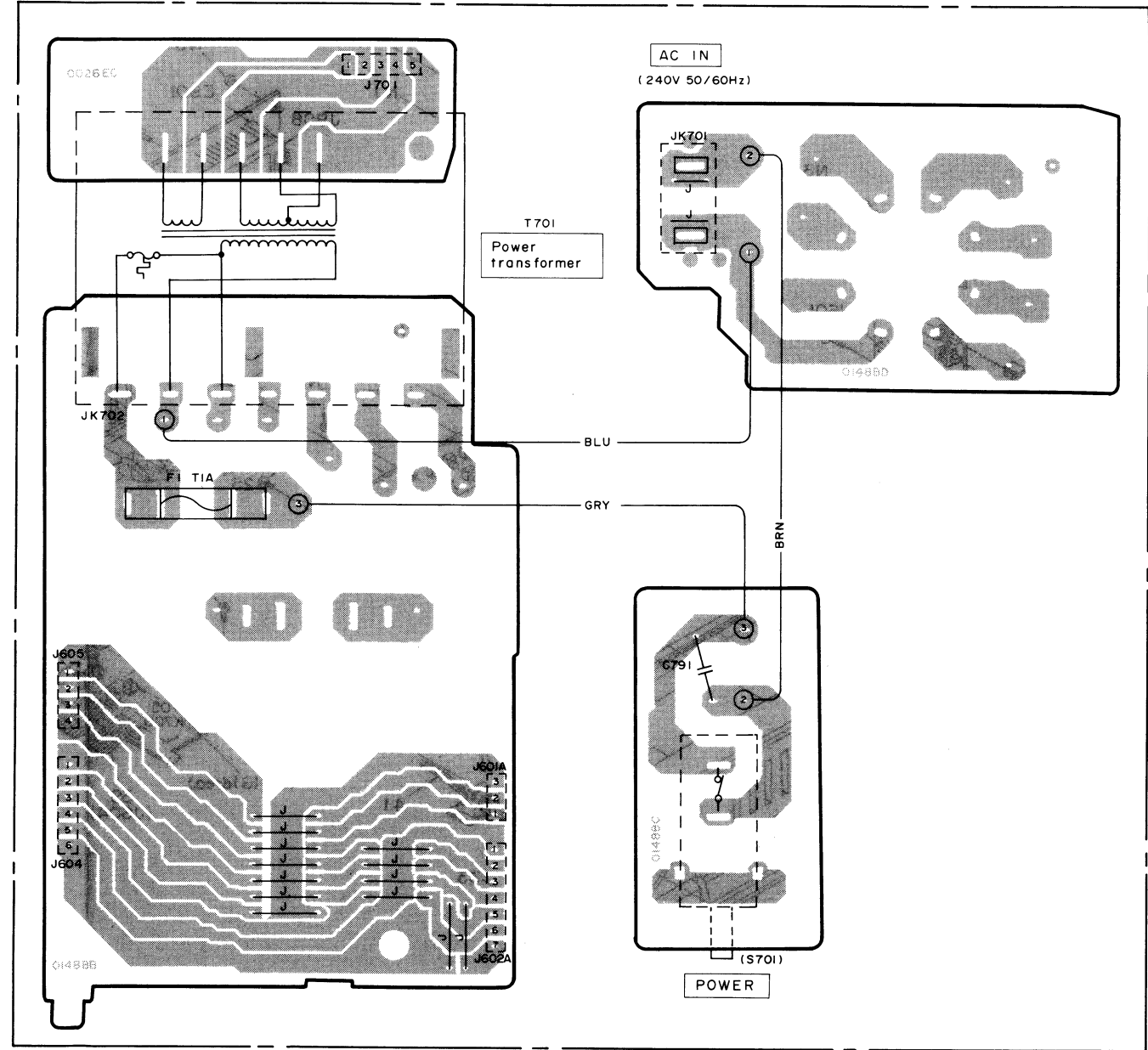
M52  
AN6  
LM7  
AN7



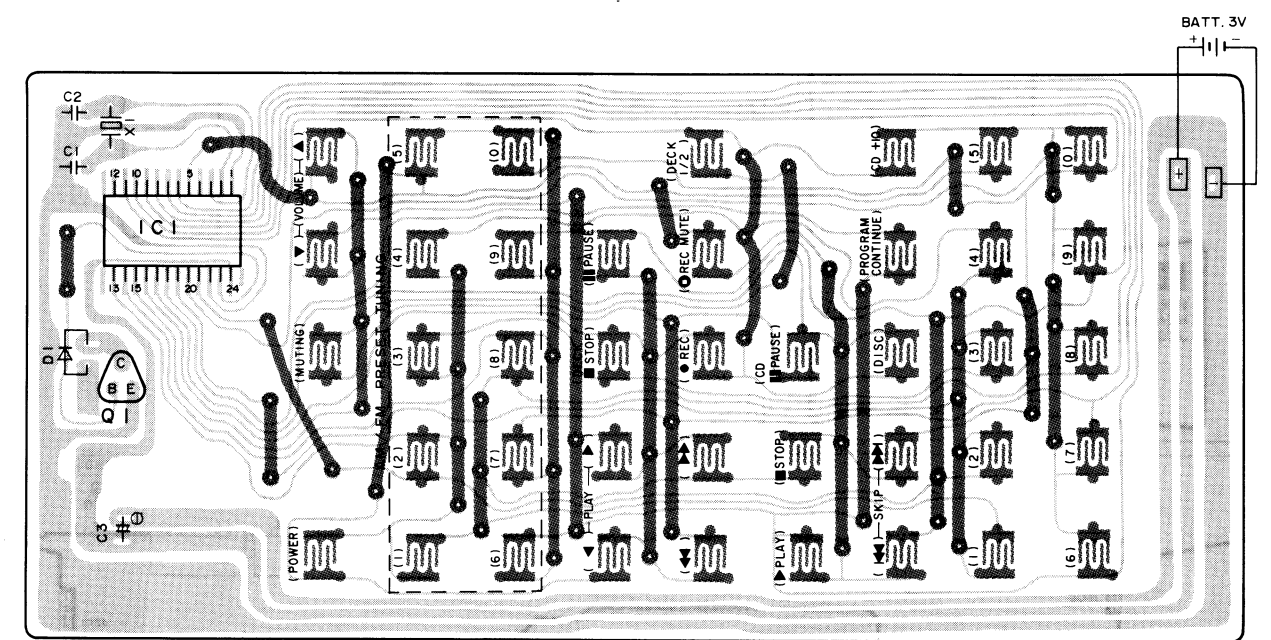
**M** VOLTAGE ADJ. PC.B.



Power Source For (GN) area.



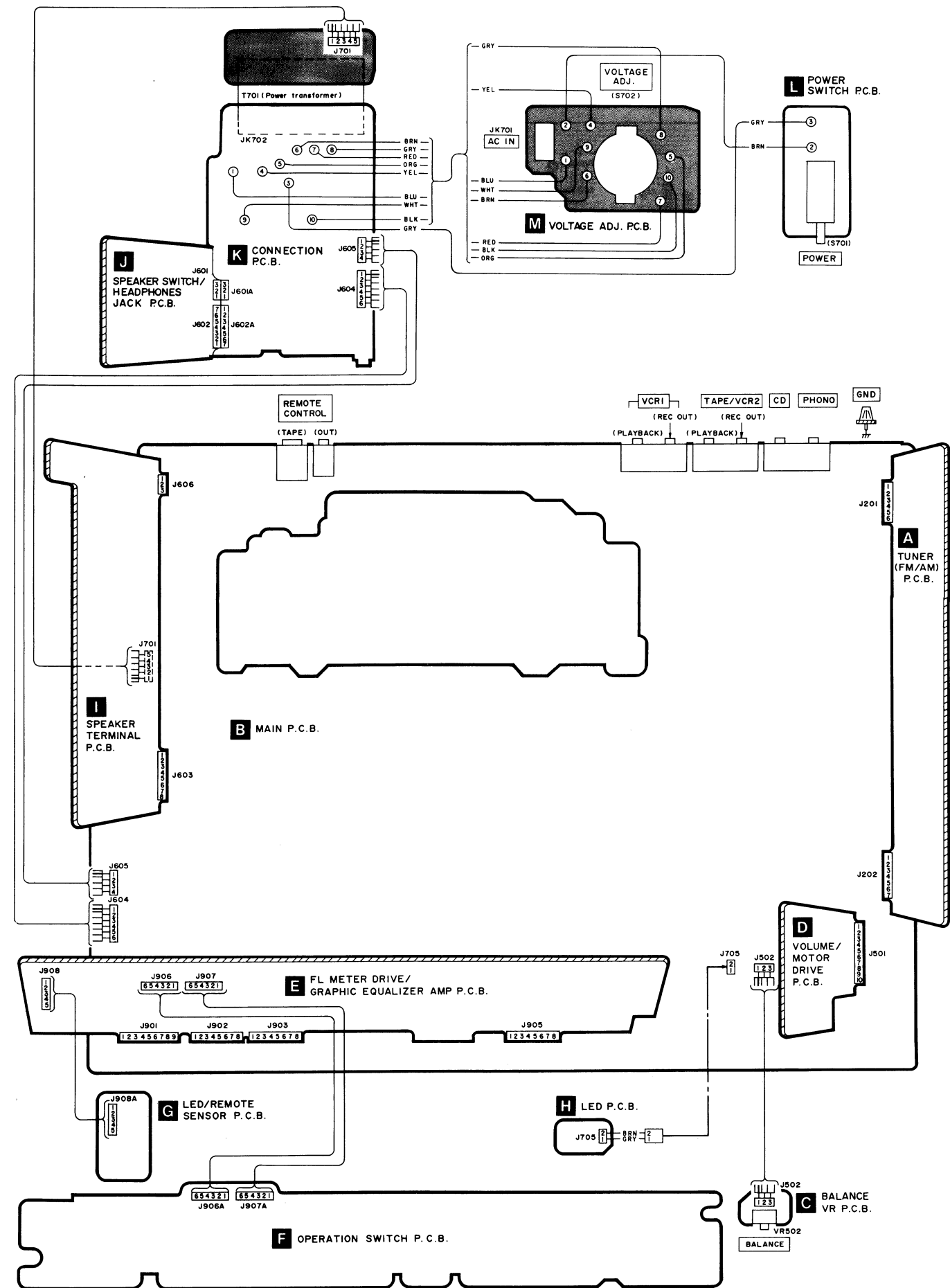
• Remote-control transmitter (EUR64747)



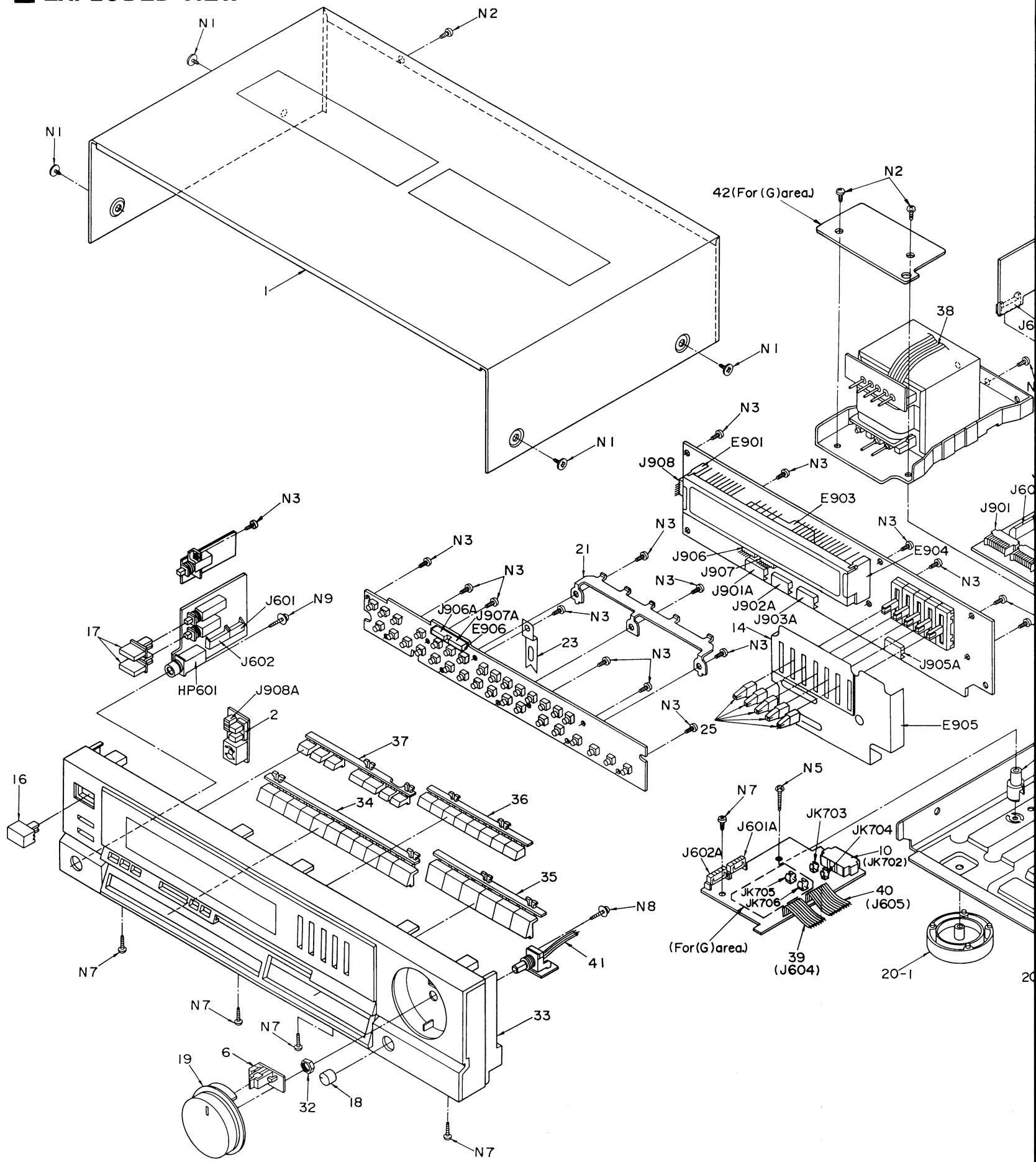
• Terminal guide of IC's, transistors and diodes

|              |   |                              |                          |  |        |         |       |         |        |        |       |         |        |        |        |  |  |  |   |
|--------------|---|------------------------------|--------------------------|--|--------|---------|-------|---------|--------|--------|-------|---------|--------|--------|--------|--|--|--|---|
|              | LC6554H4097 (64 PIN)  | SVI3102B (14 PIN)            | BA6218 (9 PIN)           |  |        |         |       |         |        |        |       |         |        |        |        |  |  |  |   |
|              | <table border="1"> <tr> <td>M5218P</td> <td>8 PIN</td> <td>M5226P</td> <td>16 PIN</td> </tr> <tr> <td>AN6558F</td> <td>8 PIN</td> <td>AN7273A</td> <td>18 PIN</td> </tr> <tr> <td>LM7001</td> <td>8 PIN</td> <td>TC9163N</td> <td>28 PIN</td> </tr> <tr> <td>AN7470</td> <td>16 PIN</td> <td></td> <td></td> </tr> </table> | M5218P                       | 8 PIN                    | M5226P   | 16 PIN | AN6558F | 8 PIN | AN7273A | 18 PIN | LM7001 | 8 PIN | TC9163N | 28 PIN | AN7470 | 16 PIN |  |  | 2SC1685NCQRS<br>2SA933SQRSTA<br>2SC1740SQSTA<br>2SC3940AQSTA | 2SC2785FETA<br>2SC2787LTA<br>2SD1450QRSTA |
| M5218P       | 8 PIN   | M5226P                       | 16 PIN                   |  |        |         |       |         |        |        |       |         |        |        |        |  |  |  |   |
| AN6558F      | 8 PIN   | AN7273A                      | 18 PIN                   |  |        |         |       |         |        |        |       |         |        |        |        |  |  |  |   |
| LM7001       | 8 PIN   | TC9163N                      | 28 PIN                   |  |        |         |       |         |        |        |       |         |        |        |        |  |  |  |   |
| AN7470       | 16 PIN  |                              |                          |  |        |         |       |         |        |        |       |         |        |        |        |  |  |  |   |
| UN4113TA<br> | UN4211TA<br>  | 2SB1185DEF<br>2SD1762DEF<br> | UN4215TA<br>UN4214TA<br> | MA165TA<br>MA29WATA<br>MA167TA<br>SVDS2V20<br> |        |         |       |         |        |        |       |         |        |        |        |  |  |  |   |
|              | MA4056MTA<br>MA4062MTA<br>MA4150MTA<br>MA4300MTA<br>MA4030MTA<br>MA4110MTA  | LN846RP-LS<br>               |                          |  |        |         |       |         |        |        |       |         |        |        |        |  |  |  |   |

### WIRING CONNECTION DIAGRAM



### EXPLODED VIEW



EXPLODED VIEW

VER  
TCH P.C.B.

(S701)  
ER

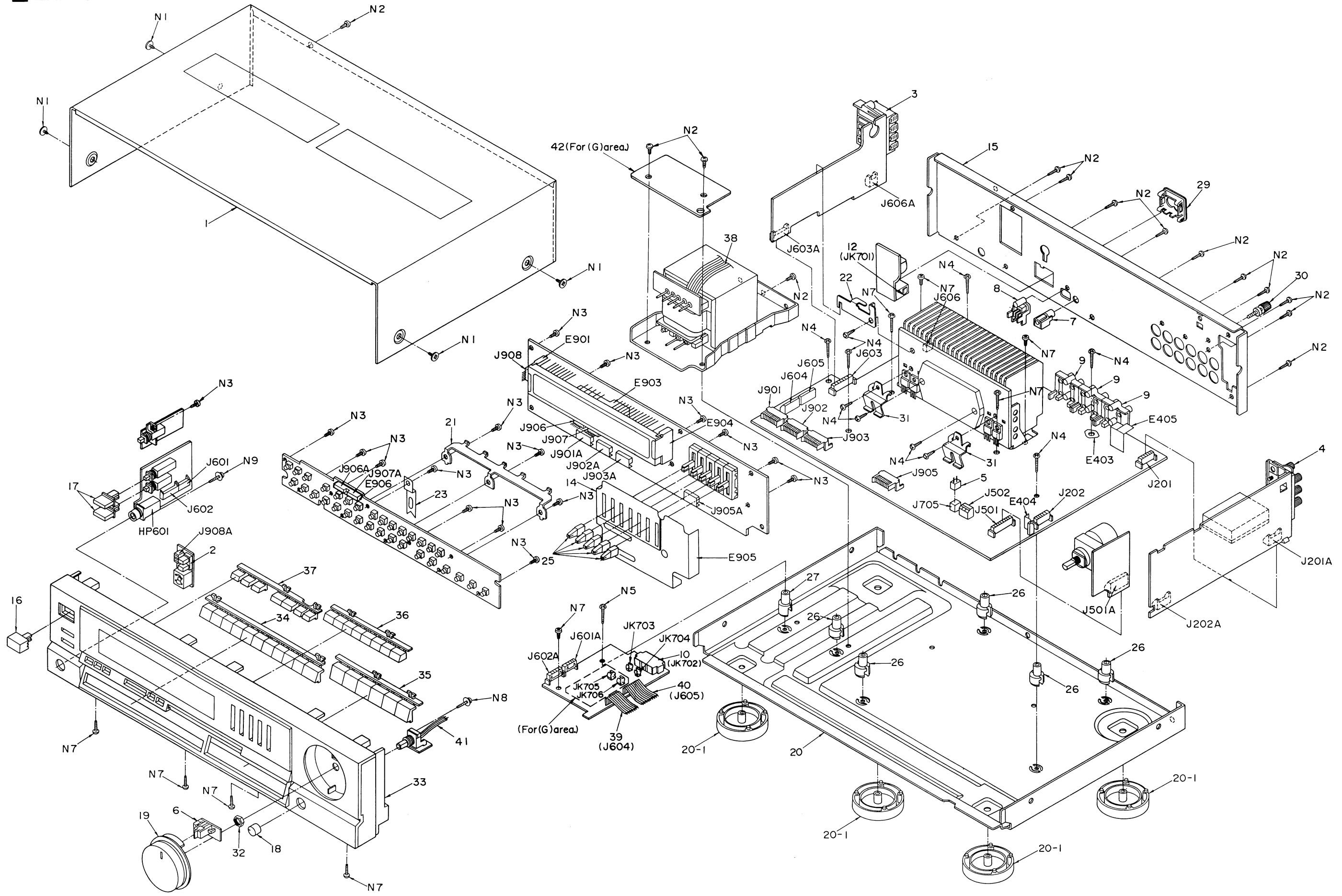
GND

J201  
**A**  
TUNER  
(FM/AM)  
P.C.B.

J202

J501

BALANCE  
R P.C.B.



## REPLACEMENT PARTS LIST

**Notes :** \* Important safety notice:

Components identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

\* 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.

\* Remote Control Ass'y:

Supply period for three years from termination of production.

| Ref. No. | Part No.     | Part Name & Description  | Remarks       | Ref. No. | Part No.    | Part Name & Description | Remarks       |
|----------|--------------|--------------------------|---------------|----------|-------------|-------------------------|---------------|
|          |              | CABINET AND CHASSIS      |               | 42       | RMZ0043     | INSULATOR               | (G)           |
|          |              |                          |               |          |             | SCREWS                  |               |
| 1        | RGMO026A-K   | CABINET BODY             |               | N1       | RHD30003    | SCREW                   |               |
| 2        | RMR0116      | SPACER                   |               | N2       | XTBS3+8JFZ1 | SCREW                   |               |
| 3        | SJF5813      | TERMINAL (SP)            |               | N3       | XTBS26+8J   | SCREW                   |               |
| 4        | SJF8402N     | TERMINAL (ANT)           |               | N4       | XTB3+16JFZ  | SCREW                   |               |
| 5        | SJS5215      | CONNECTOR                |               | N5       | XTB3+20JFZ  | SCREW                   | (GN)          |
| 6        | SJS5217      | CONNECTOR                |               | N5       | XYN3+C8FZ   | SCREW                   | (G)           |
| 7        | RJJ33TR01    | JACK                     |               | N7       | XTB3+8JFZ   | SCREW                   |               |
| 8        | RJS1A0203-0  | CONNECTOR                |               | N8       | XTWS3+8T    | SCREW                   |               |
| 9        | SJF3069N     | TERMINAL LINE OUT/IN     |               | N9       | XTW3+8T     | SCREW                   |               |
| 10       | SJS305-1     | SOCKET (JK702)           | (GN)          |          |             | ACCESSORIES             |               |
| 10       | SJS702-1     | SOCKET (JK702)           | (G)           | A1       | RQT0109G    | INSTRUCTION MANUAL      |               |
| 12       | SJS9231-1B   | AC INLET (JK701)         | (G) $\Delta$  | A2       | RJA0004     | AC. CORD                | (G) $\Delta$  |
| 12       | SJS9234B     | AC INLET (JK701)         | (GN) $\Delta$ | A2       | SJA173      | AC. CORD                | (GN) $\Delta$ |
| 13       | VJF0756      | FUSES HOLDER (JK703-706) |               | A3       | SPB1162T    | AM ANTENNA              |               |
| 14       | RGK0095      | ORNAMENT                 |               | A4       | SSA269M     | FM ANTENNA              |               |
| 15       | RGRO016D-A   | REAR PANEL               | (G)           | A5       | SJP2257T    | CONNECTION CABLE        |               |
| 15       | RGRO016E-A   | REAR PANEL               | (GN)          | A6       | SJP9215     | AC PLUG ADAPTOR         | (G)           |
| 16       | RGU0030      | BUTTON, POWER            |               | A7       | SWKST11M-1  | FLAT CABLE              |               |
| 17       | RGU0101      | BUTTON, SPEAKER          |               |          |             | PACKING MATERIAL        |               |
| 18       | RGW0020      | BUTTON, BALANCE          |               | P1       | RPG0134     | CARTON BOX              |               |
| 19       | RGW0021      | KNOB, VOLUME             |               | P2       | RPN0120A    | PAD, FRONT              |               |
| 20       | RFKJAR477P-K | CHASSIS ASS'Y            |               | P3       | RPN0120B    | PAD, REAR               |               |
| 20-1     | RKA0009-1    | FOOT                     |               | P4       | SPSD152     | PAD                     |               |
| 21       | FMA0067      | BRACKET                  |               | P5       | SPP719      | PROTECTION BAG          |               |
| 22       | FMA0068      | BRACKET                  |               |          |             |                         |               |
| 23       | FMC0018      | SPRING                   |               |          |             |                         |               |
| 25       | SBDK22-1     | KNOB                     |               |          |             |                         |               |
| 26       | SHE185-2     | BRACKET                  |               |          |             |                         |               |
| 27       | SHE187-2     | BRACKET                  |               |          |             |                         |               |
| 29       | SJS9231A     | AC INLET COVER           | (G)           |          |             |                         |               |
| 29       | SJS9234A     | AC INLET COVER           | (GN)          |          |             |                         |               |
| 30       | SNE2123      | GND TERMINAL             |               |          |             |                         |               |
| 31       | SUS894-1     | SPRING                   |               |          |             |                         |               |
| 32       | XNS7         | NUT                      |               |          |             |                         |               |
| 33       | RFKGAR177G-K | FRONT PANEL ASS'Y        |               |          |             |                         |               |
| 34       | RGU0097A     | BUTTON, PRESET           |               |          |             |                         |               |
| 35       | RGU0098B     | BUTTON, INPUT            |               |          |             |                         |               |
| 36       | RGU0099B     | BUTTON, GROUP            |               |          |             |                         |               |
| 37       | RGU0100C     | BUTTON, MODE             |               |          |             |                         |               |
| 38       | FWJ1805160KK | FLAT CABLE               |               |          |             |                         |               |
| 39       | FWJ1806070QK | FLAT CABLE (J604)        |               |          |             |                         |               |
| 40       | FWJ1804070QK | FLAT CABLE (J605)        |               |          |             |                         |               |
| 41       | FWJ1803080QK | FLAT CABLE               |               |          |             |                         |               |

| Ref. No.  | Part No.     | Part Name & Description   | Remarks | Ref. No.  | Part No.     | Part Name & Description | Remarks  |
|-----------|--------------|---------------------------|---------|-----------|--------------|-------------------------|----------|
|           |              | INTEGRATED CIRCUITS       |         | D301      | MA165TA      | DIODE                   |          |
| IC101     | LM7001       | IC, PLL FREQ. SYNTHESIZER |         | D501      | MA165TA      | DIODE                   |          |
| IC201     | AN7273A      | IC, FM/AM IF AMP&MIXER    |         | D551, 552 | MA4030MTA    | DIODE                   |          |
| IC301     | AN7470       | IC, FM MPX                |         | D553      | LN846RP-LS   | DIODE                   |          |
| IC401     | TC9163N      | IC, INPUT SELECTOR        |         | D701-704  | SVDS2V20     | DIODE                   | △        |
| IC402     | M5218P       | IC, BUFFER AMP            |         | D705, 706 | MA4062MTA    | DIODE                   |          |
| IC451     | AN6558F      | IC, PHONO EQ. AMP         |         | D707      | MA165TA      | DIODE                   |          |
| IC501     | AN6558F      | IC, BUFFER AMP            |         | D708      | MA167TA      | DIODE                   |          |
| IC551     | M5226P       | IC, B. P. F.              |         | D709      | MA4300MTA    | DIODE                   |          |
| IC552     | M5226P       | IC, B. P. F.              |         | D710      | MA29WATA     | DIODE                   | △        |
| IC601     | SV13102B     | IC, POWER AMP             | △       | D711      | MA4150MTA    | DIODE                   |          |
| IC851     | BA6218       | IC, MOTOR DRIVE           |         | D891      | MA165TA      | DIODE                   |          |
| IC901     | LC6554H4097  | IC, MICRO COMPUTER        |         | D893      | LN846RP-LS   | DIODE                   |          |
|           |              | TRANSISTORS               |         | D894      | MA165TA      | DIODE                   |          |
| Q101, 102 | 2SC2785FETA  | TRANSISTOR                |         | D901-911  | MA165TA      | DIODE                   |          |
| Q201, 202 | 2SC2787LTA   | TRANSISTOR                |         | D912      | MA4056MTA    | DIODE                   |          |
| Q204, 205 | 2SC1740SQSTA | TRANSISTOR                |         | D914      | MA165TA      | DIODE                   | (BLUE)   |
| Q206      | 2SA933SQRSTA | TRANSISTOR                |         | D915      | MA165TA      | DIODE                   | (ORANGE) |
| Q207      | 2SC1740SQSTA | TRANSISTOR                |         | D916      | MA165TA      | DIODE                   |          |
| Q208, 209 | 2SA933SQRSTA | TRANSISTOR                |         | D921      | MA165TA      | DIODE                   |          |
| Q210      | 2SC1740SQSTA | TRANSISTOR                |         |           |              | VARIABLE RESISTORS      |          |
| Q301, 302 | 2SD1450QRSTA | TRANSISTOR                |         | VR301     | EVNDXAA00B53 | V. R, MPX VCO ADJ       |          |
| Q303      | 2SA933SQRSTA | TRANSISTOR                |         | VR501     | EUWMN0F20B15 | V. R, VOLUME            |          |
| Q501, 502 | 2SJ40CDTA    | TRANSISTOR                |         | VR502     | EVJ01CF01G15 | V. R, BALANCE           |          |
| Q503, 504 | 2SK381CDTA   | TRANSISTOR                |         | VR552     | EVBJAJ15G15  | V. R, G. E. 80HZ        |          |
| Q505      | 2SA933SQRSTA | TRANSISTOR                |         | VR553     | EVBJAJ15G15  | V. R, G. E. 250HZ       |          |
| Q507, 508 | 2SK381CDTA   | TRANSISTOR                |         | VR554     | EVBJAJ15G15  | V. R, G. E. 1KHZ        |          |
| Q509      | 2SA933SQRSTA | TRANSISTOR                |         | VR555     | EVBJAJ15G15  | V. R, G. E. 4KHZ        |          |
| Q513, 514 | UN4211TA     | TRANSISTOR                |         | VR556     | EVBJAJ15G15  | V. R, G. E. 12. 5KHZ    |          |
| Q701      | 2SD1762DEF   | TRANSISTOR                | △       |           |              | COMPONENT COMBINATIONS  |          |
| Q703, 704 | 2SC1685NCQRS | TRANSISTOR                | △       | Z201      | RLA2Z001-T   | COMPONENT COMBINATION   |          |
| Q705      | 2SC3940AQSTA | TRANSISTOR                |         | Z202      | SLI7Z101-T   | COMPONENT COMBINATION   |          |
| Q707      | 2SC1740SQSTA | TRANSISTOR                |         | Z891      | A1QH3029H0   | COMPONENT COMBINATION   |          |
| Q708      | 2SB1185DEF   | TRANSISTOR                | △       | Z901      | EXFP12331MF  | COMPONENT COMBINATION   |          |
| Q709      | 2SC1685NCQRS | TRANSISTOR                | △       | Z902      | EXBF8E473J   | COMPONENT COMBINATION   |          |
| Q710      | 2SB1185DEF   | TRANSISTOR                |         | Z903      | EXBF5E103J   | COMPONENT COMBINATION   |          |
| Q891      | UN4113TA     | TRANSISTOR                |         | Z904      | EXBF8E103J   | COMPONENT COMBINATION   |          |
| Q892      | UN4214TA     | TRANSISTOR                |         |           |              | COILS                   |          |
| Q893      | 2SA933SQRSTA | TRANSISTOR                |         | L101      | RLQZPR47KT-Y | COIL                    |          |
| Q894      | UN4215TA     | TRANSISTOR                |         | L102      | RLQZP1R2KT-Y | COIL                    |          |
| Q901      | 2SC1740SQSTA | TRANSISTOR                |         | L203, 204 | ELEPK1R0MA   | COIL                    |          |
| Q902      | UN4215TA     | TRANSISTOR                |         | L851, 852 | RLQZP1R0KT-Y | COIL                    |          |
| Q949      | 2SA933SQRSTA | TRANSISTOR                |         | L892, 893 | RLQZP101KT-Y | COIL                    |          |
|           |              | DIODES                    |         | L901      | RLQZP101KT-Y | COIL                    |          |
| D101      | MA165TA      | DIODE                     |         | L902      | ELEPK101KA   | COIL                    |          |
| D202      | MA4110MTA    | DIODE                     |         |           |              |                         |          |
| D204      | MA165TA      | DIODE                     |         |           |              |                         |          |
| D206      | MA165TA      | DIODE                     |         |           |              |                         |          |

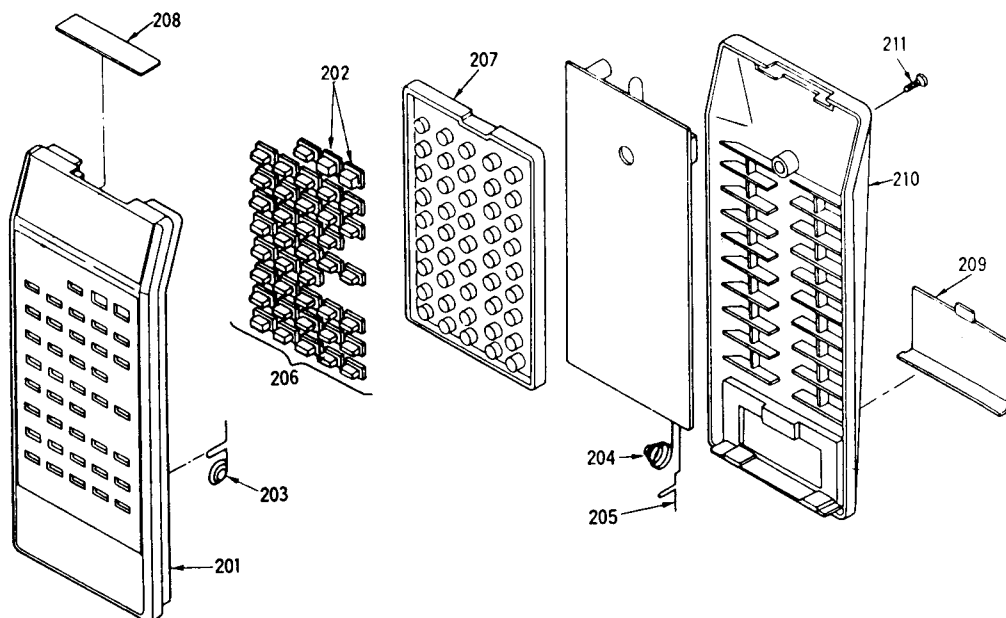


| Ref. No.   | Part No.     | Part Name & Description     | Remarks | Ref. No.  | Part No.    | Part Name & Description | Remarks |
|------------|--------------|-----------------------------|---------|-----------|-------------|-------------------------|---------|
|            |              | TRANSFORMERS                |         | S913      | EVQB005R    | SW, FM                  |         |
|            |              |                             |         | S914      | EVQB005R    | SW, AM                  |         |
|            |              |                             |         | S915      | EVQB005R    | SW, TUNING DOWN         |         |
| T201       | SL14B511-Z   | IFT                         |         | S916      | EVQB005R    | SW, TUNING UP           |         |
| T202       | SL14B513-Z   | IFT                         |         | S917      | EVQB005R    | SW, MEMORY              |         |
| T701       | RTP1N5E003-V | POWER TRANSFORMER           | (G) △   | S918      | EVQB005R    | SW, LOUDNESS            |         |
| T701       | RTP1N5B003-V | POWER TRANSFORMER           | (GN) △  | S919      | EVQB005R    | SW, START               |         |
|            |              | FILTERS                     |         | S920      | EVQB005R    | SW, ROCK                |         |
|            |              |                             |         | S921      | EVQB005R    | SW, JAZZ                |         |
| CF201, 202 | RLFETNGM02LA | C. F. (RED 10.700MHZ)       |         | S922      | EVQB005R    | SW, CLASSIC             |         |
| CF201, 202 | RLFETNGM02LB | C. F. (BLUE 10.675MHZ)      |         | S923      | EVQB005R    | SW, EASY                |         |
| CF201, 202 | RLFETNGM02LC | C. F. (ORANGE 10.725MHZ)    |         | S924      | EVQB005R    | SW, NEWS                |         |
| CF901      | EFOFC4004A4  | CERAMIC FILTER              |         | S925      | EVQB005R    | SW, OTHER               |         |
|            |              | OSCILLATOR                  |         | S926      | EVQB005R    | SW, END                 |         |
|            |              |                             |         | S927      | EVQB005R    | SW, PHONO               |         |
| X101       | SVQ49U722T-S | OSCILLATOR                  |         | S928      | EVQB005R    | SW, TUNER               |         |
|            |              | DISPLAY TUBE                |         | S929      | EVQB005R    | SW, CD                  |         |
|            |              |                             |         | S930      | EVQB005R    | SW, TAPE MONITOR/VCR2   |         |
| FL901      | SAD8MT38GK   | DISPLAY TUBE                |         | S931      | EVQB005R    | SW, VCR 1               |         |
|            |              | FUSES                       |         |           |             | CONNECTOR AND SOCKET    |         |
|            |              |                             |         | J201      | SJS50678JQ  | SOCKET (6P)             |         |
| F1         | XBA2C10TB0   | FUSE                        | (GN) △  | J201A     | SJT30645JQ  | CONNECTOR (6P)          |         |
| F1         | XBA2C20TB0   | FUSE                        | (G) △   | J202      | SJS50778JQ  | SOCKET (7P)             |         |
| F2         | XBA2C10TB0   | FUSE                        | (G) △   | J202A     | SJT30745JQ  | CONNECTOR (7P)          |         |
|            |              | JACK                        |         | J501      | SJS51078JQ  | SOCKET (10P)            |         |
|            |              |                             |         | J501A     | SJT31045JQ  | CONNECTOR (10P)         |         |
| HP601      | SJJ146B      | HEADPHONES                  |         | J502      | SJT30343-V  | CONNECTOR (3P)          |         |
|            |              | FRONT END PACK ASS'Y        |         | J601      | SJT30345JQ  | CONNECTOR (3P)          |         |
|            |              |                             |         | J601A     | SJS50378JQ  | SOCKET (3P)             |         |
| TN101      | RAL0006      | FM FRONT END PACK           |         | J602      | SJT30745JQ  | CONNECTOR (7P)          |         |
|            |              | SWITCHES                    |         | J602A     | SJS50778JQ  | SOCKET (7P)             |         |
|            |              |                             |         | J603      | SJS50878JQ  | SOCKET (8P)             |         |
| S601       | SSH2137      | SW, SPEAKER SELECTOR        |         | J603A     | SJT30845JQ  | CONNECTOR (8P)          |         |
| S701       | ESB8249V     | SW, POWER                   | △       | J604      | SJT30643-V  | CONNECTOR (6P)          |         |
| S702       | ESE37263     | SW, VOLTAGE SELECTOR        | (G) △   | J605      | SJT30443-V  | CONNECTOR (4P)          |         |
| S901       | EVQB005R     | SW, PRESET TUNING 1         |         | J606      | SJS50378JQ  | SOCKET (3P)             |         |
| S902       | EVQB005R     | SW, PRESET TUNING 2         |         | J606A     | SJT30345JQ  | CONNECTOR (3P)          |         |
| S903       | EVQB005R     | SW, PRESET TUNING 3         |         | J705      | SJT3213     | CONNECTOR (2P)          |         |
| S904       | EVQB005R     | SW, PRESET TUNING 4         |         | J901A     | RJT003K009M | CONNECTOR (9P)          |         |
| S905       | EVQB005R     | SW, PRESET TUNING 5         |         | J901      | RJU003K009M | SOCKET (9P)             |         |
| S906       | EVQB005R     | SW, PRESET TUNING 6         |         | J902A     | RJT003K008M | CONNECTOR (8P)          |         |
| S907       | EVQB005R     | SW, PRESET TUNING 7         |         | J902      | RJU003K008M | SOCKET (8P)             |         |
| S908       | EVQB005R     | SW, PRESET TUNING 8         |         | J903A     | RJT003K008M | CONNECTOR (8P)          |         |
| S909       | EVQB005R     | SW, PRESET TUNING 9         |         | J903      | RJU003K008M | SOCKET (8P)             |         |
| S910       | EVQB005R     | SW, PRESET TUNING 0         |         | J905A     | RJT003K008M | CONNECTOR (8P)          |         |
| S911       | EVQB005R     | SW, MUSIC SCAN/GROUP SEARCH |         | J905      | RJU003K008M | SOCKET (8P)             |         |
| S912       | EVQB005R     | SW, FM MODE                 |         | J906, 907 | SJT30648BB  | CONNECTOR (6P)          |         |
|            |              |                             |         | J908      | SJT30549BB  | CONNECTOR (5P)          |         |
|            |              |                             |         | J906A     | SJS50681BB  | SOCKET (6P)             |         |
|            |              |                             |         | J907A     | SJS50681BB  | SOCKET (6P)             |         |
|            |              |                             |         | J908A     | SJS50581BB  | SOCKET (5P)             |         |

| Ref. No. | Part No.    | Part Name & Description    | Remarks | Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|-------------|----------------------------|---------|----------|--------------|-------------------------|---------|
|          |             | SHIELD PLATES              |         | Q1       | ZSC3265Y     | TRANSISTOR              |         |
|          |             |                            |         | D1       | SE303A       | L. E. D                 |         |
| E403     | SNE1004     | P. C. B. HOLDER            |         | X1       | CSB420PB6    | OSCILATOR               |         |
| E404     | SME103-6    | P. C. B. HOLDER            |         | R1       | ERDS2TJ1R0   | C. RESISTOR 1/4W 1      |         |
| E405     | SMC6379     | PHONO SHIELD PLATE         |         | C1, 2    | ECUV1H471KCG | C. CAPACITOR 50V 470P   |         |
| E901     | RMA0080     | FL HOLDER                  |         | C3       | ECEA0GK101   | E. CAPACITOR 4V 100U    |         |
| E903     | SUW3123-1   | FL HOLDER                  |         | 201      | UR64VCS906   | UPPER CABINET           |         |
| E904     | RMA0080     | FL HOLDER                  |         | 202      | SBCUV98RM8K1 | BUTTON                  |         |
| E905     | RSC0035     | G. E. SHIELD PLATE         |         | 203      | UR64TD374    | BATTERY TERMINAL (+,-)  |         |
| E906     | SMC6466     | LED SHIELD PLATE           |         | 204      | UR64TD373    | BATTERY TERMINAL (-)    |         |
|          |             | REMOTE CONTROL UNIT        |         | 205      | UR64TD372    | BATTERY TERMINAL (+)    |         |
|          |             |                            |         | 206      | SBCUV98RM8K2 | BUTTON                  |         |
| RC1      | EUR64747    | REMOTE CONTROL ASS' Y      |         | 207      | UR64CT369    | RUBBER                  |         |
|          |             | ** REMOTE CONTROL PARTS ** |         | 208      | UR52SB327    | PLATE                   |         |
|          |             |                            |         | 209      | UR64EC366    | BATTERY COVER           |         |
| IC1      | M50467018FP | INTEGRATED CIRCUIT         |         | 210      | UR64CS365    | LOWER CABINET           |         |
|          |             |                            |         | 211      | XTS26+10GFZ  | SCREW                   |         |

## EXPLODED VIEW

• Remote-control transmitter





## RESISTORS & CAPACITORS

Notes : \* Capacity value are in microfarads ( $\mu\text{F}$ ) 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        | R311      | ERDS2TJ102T  | 1/4W 1K          | R614      | ERD25FVJ470T | 1/4W 47 $\Delta$   |
| R101, 102 | ERDS2TJ103T | 1/4W 10K         | R312      | ERDS2TJ153T  | 1/4W 15K         | R619, 620 | ERG1ANJP331S | 1W 330 $\Delta$    |
| R104      | ERDS2TJ102T | 1/4W 1K          | R313, 314 | ERDS2TJ473T  | 1/4W 47K         | R621, 622 | ERDS2TJ222T  | 1/4W 2.2K          |
| R105      | ERDS2TJ561T | 1/4W 560         | R315, 316 | ERDS2TJ103T  | 1/4W 10K         | R623      | ERDS2TJ684T  | 1/4W 680K          |
| R106      | ERDS2TJ562T | 1/4W 5.6K        | R317      | ERDS2TJ473T  | 1/4W 47K         | R624      | ERDS2TJ223T  | 1/4W 22K $\Delta$  |
| R107      | ERDS2TJ103T | 1/4W 10K         | R401, 402 | ERDS2TJ332T  | 1/4W 3.3K        | R627      | ERDS2TJ154T  | 1/4W 150K          |
| R108      | ERDS2TJ151T | 1/4W 150         | R403, 404 | ERDS2TJ822T  | 1/4W 8.2K        | R628      | ERDS2TJ684T  | 1/4W 680K          |
| R201      | ERDS2TJ332T | 1/4W 3.3K        | R405, 406 | ERDS2TJ470T  | 1/4W 47          | R701      | ERDS1FVJ332T | 1/2W 3.3K $\Delta$ |
| R202      | ERDS2TJ824T | 1/4W 820K        | R407, 408 | ERDS2TJ104T  | 1/4W 100K        | R702      | ERDS2TJ122T  | 1/4W 1.2K          |
| R203      | ERDS2TJ122T | 1/4W 1.2K        | R411, 412 | ERDS2TJ104T  | 1/4W 100K        | R703      | ERDS2TJ272T  | 1/4W 2.7K          |
| R204      | ERDS2TJ824T | 1/4W 820K        | R413, 414 | ERDS2TJ102T  | 1/4W 1K          | R704      | ERDS2TJ222T  | 1/4W 2.2K          |
| R205      | ERDS2TJ391T | 1/4W 390         | R415, 416 | ERDS2TJ473T  | 1/4W 47K         | R705      | ERDS2TJ272T  | 1/4W 2.7K          |
| R207      | ERDS2TJ822T | 1/4W 8.2K        | R417, 418 | ERDS2TJ104T  | 1/4W 100K        | R708      | ERDS1FVJ330T | 1/2W 33 $\Delta$   |
| R208      | ERDS2TJ102T | 1/4W 1K          | R421      | ERDS2TJ332T  | 1/4W 3.3K        | R710      | ERDS2TJ272T  | 1/4W 2.7K          |
| R209      | ERDS2TJ471T | 1/4W 470         | R451, 452 | ERDS2TJ391T  | 1/4W 390         | R711      | ERDS2TJ104T  | 1/4W 100K          |
| R210      | ERDS2TJ332T | 1/4W 3.3K        | R453, 454 | ERDS2TJ224T  | 1/4W 220K        | R712      | ERDS2TJ223T  | 1/4W 22K           |
| R211      | ERDS2TJ222T | 1/4W 2.2K        | R455, 456 | ERDS2TJ563T  | 1/4W 56K         | R713      | ERDS2TJ183T  | 1/4W 18K $\Delta$  |
| R212      | ERDS2TJ153T | 1/4W 15K         | R457, 458 | ERDS2TJ271T  | 1/4W 270         | R715      | ERDS2TJ101T  | 1/4W 100 $\Delta$  |
| R213      | ERDS2TJ104T | 1/4W 100K        | R459, 460 | ERDS2TJ680T  | 1/4W 68          | R716      | ERDS2TJ222T  | 1/4W 2.2K $\Delta$ |
| R214      | ERDS2TJ824T | 1/4W 820K        | R461, 462 | ERDS2TJ184T  | 1/4W 180K        | R717      | ERD25FVJ150T | 1/4W 15 $\Delta$   |
| R215      | ERDS2TJ822T | 1/4W 8.2K        | R463, 464 | ERDS2TJ123T  | 1/4W 12K         | R771, 772 | ERD2FCG150P  | 1/4W 15 $\Delta$   |
| R216      | ERDS2TJ563T | 1/4W 56K         | R465, 466 | ERDS2TJ563T  | 1/4W 56K         | R777      | ERD25FVJ8R2T | 1/4W 8.2 $\Delta$  |
| R217      | ERDS2TJ223T | 1/4W 22K         | R467, 468 | ERDS2TJ102T  | 1/4W 1K          | R780      | ERDS1FVJ220T | 1/2W 22 $\Delta$   |
| R218      | ERDS2TJ123T | 1/4W 12K         | R501, 502 | ERDS2TJ222T  | 1/4W 2.2K        | R851      | ERDS1FVJ2R2T | 1/2W 2.2 $\Delta$  |
| R219      | ERDS2TJ562T | 1/4W 5.6K        | R503, 504 | ERDS2TJ103T  | 1/4W 10K         | R891      | ERDS2TJ182T  | 1/4W 1.8K          |
| R220      | ERDS2TJ103T | 1/4W 10K         | R505, 506 | ERDS2TJ104T  | 1/4W 100K        | R892      | ERDS2TJ181T  | 1/4W 180           |
| R221      | ERDS2TJ104T | 1/4W 100K        | R507, 508 | ERDS2TJ562T  | 1/4W 5.6K        | R893      | ERDS2TJ103T  | 1/4W 10K           |
| R222      | ERDS2TJ473T | 1/4W 47K         | R509, 510 | ERDS2TJ563T  | 1/4W 56K         | R901      | ERDS2TJ222T  | 1/4W 2.2K          |
| R223      | ERDS2TJ154T | 1/4W 150K        | R513, 514 | ERDS2TJ393T  | 1/4W 39K         | R902      | ERDS2TJ105T  | 1/4W 1M            |
| R224      | ERDS2TJ101T | 1/4W 100         | R515, 516 | ERDS2TJ222T  | 1/4W 2.2K        | R903      | ERDS2TJ563T  | 1/4W 56K           |
| R227      | ERDS2TJ104T | 1/4W 100K        | R517, 518 | ERDS2TJ563T  | 1/4W 56K         | R904      | ERDS2TJ123T  | 1/4W 12K           |
| R228      | ERDS2TJ123T | 1/4W 12K         | R519      | ERDS2TJ682T  | 1/4W 6.8K        | R905      | ERDS2TJ103T  | 1/4W 10K           |
| R229      | ERDS2TJ102T | 1/4W 1K          | R522      | ERDS2TJ153T  | 1/4W 15K         | R906      | ERDS2TJ334T  | 1/4W 330K          |
| R230      | ERDS2TJ104T | 1/4W 100K        | R523, 524 | ERDS2TJ222T  | 1/4W 2.2K        | R907      | ERDS2TJ681T  | 1/4W 680           |
| R231      | ERDS2TJ471T | 1/4W 470         | R525      | ERDS2TJ473T  | 1/4W 47K         | R910      | ERDS2TJ122T  | 1/4W 1.2K          |
| R232      | ERDS2TJ122T | 1/4W 1.2K        | R526      | ERDS2TJ563T  | 1/4W 56K         | R911      | ERDS2TJ103T  | 1/4W 10K           |
| R233      | ERDS2TJ684T | 1/4W 680K        | R527      | ERDS2TJ683T  | 1/4W 68K         | R913, 914 | ERDS2TJ101T  | 1/4W 100           |
| R234      | ERDS2TJ103T | 1/4W 10K         | R528      | ERDS2TJ822T  | 1/4W 8.2K        | R916      | ERDS2TJ104T  | 1/4W 100K          |
| R235      | ERDS2TJ471T | 1/4W 470         | R529      | ERDS2TJ104T  | 1/4W 100K        | R919, 920 | ERDS2TJ122T  | 1/4W 1.2K          |
| R237      | ERDS2TJ221T | 1/4W 220         | R530      | ERDS2TJ392T  | 1/4W 3.9K        | R923-925  | ERDS2TJ331T  | 1/4W 330           |
| R247      | ERDS2TJ103T | 1/4W 10K         | R531, 532 | ERDS2TJ153T  | 1/4W 15K         | R946      | ERDS2TJ222T  | 1/4W 2.2K          |
| R301      | ERDS2TJ473T | 1/4W 47K         | R551, 552 | ERDS2TJ103T  | 1/4W 10K         | R947      | ERDS2TJ103T  | 1/4W 10K           |
| R302      | ERDS2TJ151T | 1/4W 150         | R553, 554 | ERDS2TJ472T  | 1/4W 4.7K        | R948      | ERDS2TJ221T  | 1/4W 220           |
| R303, 304 | ERDS2TJ223T | 1/4W 22K         | R567A     | ERDS2TJ331T  | 1/4W 330         | R949      | ERDS2TJ472T  | 1/4W 4.7K          |
| R305, 306 | ERDS2TJ332T | 1/4W 3.3K        | R567, 568 | ERDS2TJ331T  | 1/4W 330         | R950-954  | ERDS2TJ562T  | 1/4W 5.6K          |
| R307, 308 | ERDS2TJ104T | 1/4W 100K        | R603, 604 | ERDS2TJ563T  | 1/4W 56K         |           |              | CAPACITORS         |
| R309      | ERDS2TJ274T | 1/4W 270K        | R605, 606 | ERDS2TJ182T  | 1/4W 1.8K        |           |              |                    |
|           |             |                  | R607, 608 | ERDS2TJ563T  | 1/4W 56K         |           |              |                    |
|           |             |                  | R611, 612 | ERD25FVJ100T | 1/4W 10 $\Delta$ | C101, 102 | ECBT1H150JC5 | 50V 15P            |

| Ref. No.  | Part No.     | Values & Remarks | Ref. No.  | Part No.     | Values & Remarks | Ref. No.  | Part No.    | Values & Remarks |
|-----------|--------------|------------------|-----------|--------------|------------------|-----------|-------------|------------------|
| C103      | ECBT1H102KB5 | 50V 0.001U       | C461, 462 | ECEA1EK3R3B  | 25V 3.3U         | C891      | ECFTD392KXL | 25V0.0039U       |
| C104      | ECBT1H181KB5 | 50V 180P         | C463, 464 | ECEAOJK330B  | 6.3V 33U         | C901, 902 | ECEAOJU102B | 6.3V 1000U       |
| C105      | ECEAOJU221B  | 6.3V 220U        | C503, 504 | ECFTD333KXL  | 25V 0.033U       | C903      | ECEA1HK010B | 50V 1U           |
| C106      | ECKT1H103ZF  | 50V 0.01U        | C505, 506 | ECEA1EK3R3B  | 25V 3.3U         | C905      | ECKT1H331KB | 50V 330P         |
| C107      | ECKT1H223ZF  | 50V 0.022U       | C509, 510 | ECEA1CK220B  | 16V 22U          | C906      | ECEAOJU471B | 6.3V 470U        |
| C108      | ECEA25M4R7B  | 25V 4.7U         | C511, 512 | ECCR1H120K5  | 50V 12P          | C910      | ECKT1H103ZF | 50V 0.01U        |
| C109      | ECEA1CU330B  | 16V 33U          | C513, 514 | ECEA1EK3R3B  | 25V 3.3U         | C911-913  | ECEA1HK3R3B | 50V 3.3U         |
| C110, 111 | ECBT1H102KB5 | 50V 0.001U       | C515      | ECKT1H103ZF  | 50V 0.01U        | C914      | ECEA1VK100B | 35V 10U          |
| C201, 202 | ECKT1H103ZF  | 50V 0.01U        | C516      | ECEA1EK3R3B  | 25V 3.3U         | C915      | ECEA1VU101E | 35V 100U         |
| C204      | ECBT1H470J5  | 50V 47P          | C517, 518 | ECKT1H103ZF  | 50V 0.01U        | C916      | ECEAOJU102B | 6.3V 1000U       |
| C205      | ECKT1H223ZF  | 50V 0.022        | C520, 521 | ECKT1H103ZF  | 50V 0.01U        | C917      | ECEAOJU101B | 6.3V 100U        |
| C206      | ECBT1H150JC5 | 50V 15P          | C551, 552 | ECFTD563KXL  | 25V 0.056U       | C922      | ECKT1H331KB | 50V 330P         |
| C208      | ECEAOJU101B  | 6.3V 100U        | C553, 554 | ECEA1HK010B  | 50V 1U           | C924      | ECKT1H103ZF | 50V 0.01U        |
| C209      | ECEA1EK100B  | 25V 10U          | C555, 556 | ECFTD223KXL  | 25V 0.022U       |           |             |                  |
| C210-212  | ECKT1H223ZF  | 50V 0.022U       | C557, 558 | ECEA1HKR22B  | 50V 0.22U        |           |             |                  |
| C213      | ECBT1H101KB5 | 50V 100P         | C559, 560 | ECFTD472KXL  | 25V0.0047U       |           |             |                  |
| C214      | ECEA1CK100B  | 16V 10U          | C561, 562 | ECFTD683KXL  | 25V 0.068U       |           |             |                  |
| C215      | ECKT1H103ZF  | 50V 0.01U        | C563, 564 | ECFTD102KXL  | 25V 0.001U       |           |             |                  |
| C216      | ECEA1CK100B  | 16V 10U          | C565, 566 | ECFTD183KXL  | 25V 0.018U       |           |             |                  |
| C217      | ECEA1HK010B  | 50V 1U           | C567, 568 | ECKT1H561KB  | 50V 560P         |           |             |                  |
| C220      | ECEA1CK100B  | 16V 10U          | C569, 570 | ECFTD392KXL  | 25V0.0039U       |           |             |                  |
| C221      | ECFTD183KXL  | 25V 0.018U       | C571, 572 | ECCR1H820K5  | 50V 82P          |           |             |                  |
| C222      | ECQM1H473KV3 | 50V 0.047U       | C573, 574 | ECKT1H471KB  | 50V 470P         |           |             |                  |
| C225      | ECBT1H180J   | 50V 18P          | C575, 576 | ECEA1EK3R3B  | 25V 3.3U         |           |             |                  |
| C226      | ECKT1H103ZF  | 50V 0.01U        | C577-580  | ECEA1CK100B  | 16V 10U          |           |             |                  |
| C227      | ECEA1CK100B  | 16V 10U          | C589, 590 | ECEA1EK3R3B  | 25V 3.3U         |           |             |                  |
| C228      | ECBT1H100J   | 50V 10P          | C601, 602 | ECEA1EK3R3B  | 25V 3.3U         |           |             |                  |
| C301      | ECEA1CU101B  | 16V 100U         | C603, 604 | ECKT1H391KB  | 50V 390P         |           |             |                  |
| C302      | ECEA1HKR47B  | 50V 0.47U        | C605, 606 | ECEA1CK220B  | 16V 22U          |           |             |                  |
| C303      | ECEA1HK010B  | 50V 1U           | C607, 608 | ECCR1H120K5  | 50V 12P          |           |             |                  |
| C304-306  | ECEA1HK3R3B  | 50V 3.3U         | C609, 610 | ECKT1H681KB  | 50V 680P         |           |             |                  |
| C307, 308 | ECFTD153KXL  | 25V 0.015U       | C611, 612 | ECKT1H223ZF  | 50V 0.022U       |           |             |                  |
| C309      | ECKT1H223ZF  | 50V 0.022U       | C614      | ECEA1HU330B  | 50V 33U          |           |             |                  |
| C310      | ECFTD473KXL  | 25V 0.047U       | C615      | ECEA2AJ100B  | 100V 10U         |           |             |                  |
| C311      | ECQP1471JZ3  | 100V 470P        | C617, 618 | ECKT1H681KB  | 50V 680P         |           |             |                  |
| C312      | ECEA1VK4R7B  | 35V 4.7U         | C701, 702 | ECES1HJ472H  | 50V 4700U Δ      |           |             |                  |
| C313, 314 | ECBT1H181KB5 | 50V 180P         | C703      | ECKT1H103ZF  | 50V 0.01U Δ      |           |             |                  |
| C401, 402 | ECKT1H103ZF  | 50V 0.01U        | C704      | ECEA1VU101B  | 35V 100U         |           |             |                  |
| C407, 408 | ECBT1H101KB5 | 50V 100P         | C705      | ECEA1CU101B  | 16V 100U         |           |             |                  |
| C409, 410 | ECKT1H103ZF  | 50V 0.01U        | C706      | ECKT1H103ZF  | 50V 0.01U        |           |             |                  |
| C411, 412 | ECEA1EK3R3B  | 25V 3.3U         | C707      | ECEA1HK4R7B  | 50V 4.7U         |           |             |                  |
| C415, 416 | ECKT1H103ZF  | 50V 0.01U        | C708      | ECEA1CK220B  | 16V 22U          |           |             |                  |
| C417      | ECBT1H101KB5 | 50V 100P         | C709, 710 | ECKT1H103ZF  | 50V 0.01U Δ      |           |             |                  |
| C418      | ECEA1HKR47B  | 50V 0.47U        | C711      | ECEA1CU101B  | 16V 100U         |           |             |                  |
| C419      | ECEAOJU101B  | 6.3V 100U        | C712      | ECEA1VU470B  | 35V 47U Δ        |           |             |                  |
| C421, 422 | ECEA1CK220B  | 16V 22U          | C713      | ECEAOJU101B  | 6.3V 100U        |           |             |                  |
| C425      | ECBT1H101KB5 | 50V 100P         | C755      | ECBT1H221KBY | 50V 220P         |           |             |                  |
| C451, 452 | ECEA1EK3R3B  | 25V 3.3U         | C771      | ECKW2H103PE  | 500V 0.01U Δ     |           |             |                  |
| C453, 454 | ECBT1H101KB5 | 50V 100P         | C791      | ECKWNS103ZVS | 250V 0.01U Δ     |           |             |                  |
| C455, 456 | ECBT1H102KB5 | 50V 0.001U       | C851      | ECFTD104KXL  | 25V 0.1U         |           |             |                  |
| C457, 458 | ECFTD223KXL  | 25V 0.022U       | C852      | ECEAOJU101B  | 6.3V 100U        |           |             |                  |
| C459, 460 | ECFTD682KXL  | 25V0.0068U       | C853, 854 | ECFTD104KXL  | 25V 0.1U         |           |             |                  |