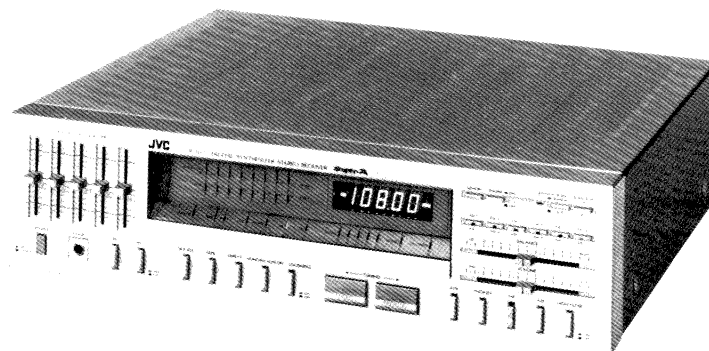


# JVC

## SERVICE MANUAL

**MODEL  
R-S77**

**DIGITAL SYNTHESIZER  
STEREO RECEIVER  
Super-A**



No. 2520  
FEB. 1980

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## Warning:

When replacing the parts marked with  $\triangle$ , be sure to use the designated parts to ensure safety.

## 1. Specifications

### FM Tuner Section (Figures are based upon IHF Standard)

|                            |                                                             |
|----------------------------|-------------------------------------------------------------|
| Tuning Range               | : *87.9 MHz — 107.9 MHz<br>(87.5—108.0 MHz for 50 KHz step) |
| Usable Sensitivity (IHF)   | : 10.3 dBf (1.8 $\mu$ V/300 $\Omega$ )                      |
| 50 dB Quieting Sensitivity |                                                             |
| Mono                       | : 14.8 dBf (3 $\mu$ V/300 $\Omega$ )                        |
| Stereo                     | : 37.2 dBf (40 $\mu$ V/300 $\Omega$ )                       |
| Distortion                 |                                                             |
| Mono                       | : 0.15 % (1 kHz)                                            |
| Stereo                     | : 0.3 % (1 kHz)                                             |
| Signal to Noise Ratio      |                                                             |
| Mono                       | : 80 dB (68 dB, DIN)                                        |
| Stereo                     | : 70 dB (62 dB, DIN)                                        |
| Selectivity                | : 80 dB, $\pm$ 400 kHz<br>(65 dB, 300 kHz, DIN)             |
| Capture Ratio              | : 1.0 dB                                                    |
| IF Rejection               | : 100 dB at 98 MHz                                          |
| Image Rejection            | : 78 dB at 98 MHz                                           |
| Stereo Separation          | : 45 dB at 1 kHz                                            |

### AM Tuner Section

|                       |                                                                          |
|-----------------------|--------------------------------------------------------------------------|
| Tuning Range          | : *530 kHz — 1620 kHz<br>(522 kHz—1611 kHz for 9 kHz step)               |
| Usable Sensitivity    | : 250 $\mu$ V/m, 50 $\mu$ V<br>(External Antenna)                        |
| Signal to Noise Ratio | : 50 dB                                                                  |
| Distortion            | : 0.5 % at 10 mV/m                                                       |
| Selectivity           | : 63 dB $\pm$ 10 kHz (60 dB $\pm$ 9 kHz, DIN)<br>(Note) *U.S.A. & CANADA |

### Amplifier Section

|                             |                                                                                                       |
|-----------------------------|-------------------------------------------------------------------------------------------------------|
| RMS Power                   | : 60 W per channel at 8 $\Omega$<br>(Both channels driven,<br>from 20 Hz to 20 kHz<br>with 0.005 %    |
| RMS Power                   | : 65 W per channel at 8 $\Omega$<br>(Both channels driven,<br>at 1 kHz)                               |
| Total Harmonic Distortion   | : 0.005 % at rated power<br>20 Hz — 20 kHz, 8 $\Omega$<br>0.001 % at rated power 1 kHz,<br>8 $\Omega$ |
| Input Sensitivity/Impedance |                                                                                                       |
| Phono                       | : 2.5 mV/47 k $\Omega$                                                                                |
| Aux                         | : 180 mV/43 k $\Omega$                                                                                |
| Tape Play                   | : 180 mV/43 k $\Omega$<br>(180 mV/43 k $\Omega$ , DIN)                                                |
| S.E.A. Graphic Equalizer    |                                                                                                       |
| Center Frequencies          | : 40 Hz, 250 Hz, 1 kHz, 5 kHz<br>and 15 kHz                                                           |
| Control Range               | : $\pm$ 12 dB                                                                                         |
| Signal to Noise Ratio       | : Phono 77 dB<br>(IHF short-circuited<br>A network)                                                   |
|                             | : (New IHF 75 dB)<br>Tape Play 98 dB<br>(New IHF 75 dB)                                               |
| Power Consumption           | : See page 24                                                                                         |

*Design and specifications subject to change without notice.*

### Dimensions and Weight

| Areas                                 | Dimensions         |                     |                    | Weight              |
|---------------------------------------|--------------------|---------------------|--------------------|---------------------|
|                                       | Height             | Width               | Depth              | Net                 |
| U.S.A., Canada & U.S. Military Market | 12.0 cm (4-23/32") | 48.0 cm (18-29/32") | 38.2 cm (15-1/16") | 10.8 kg (23.8 lbs.) |
| All Other Countries                   | 11.9 cm (4-11/16") | 45.2 cm (17-13/16") | 38.2 cm (15-1/16") | 10.6 kg (23.3 lbs.) |

## 2. Names and Their Functions

### 2-(1) Front Panel

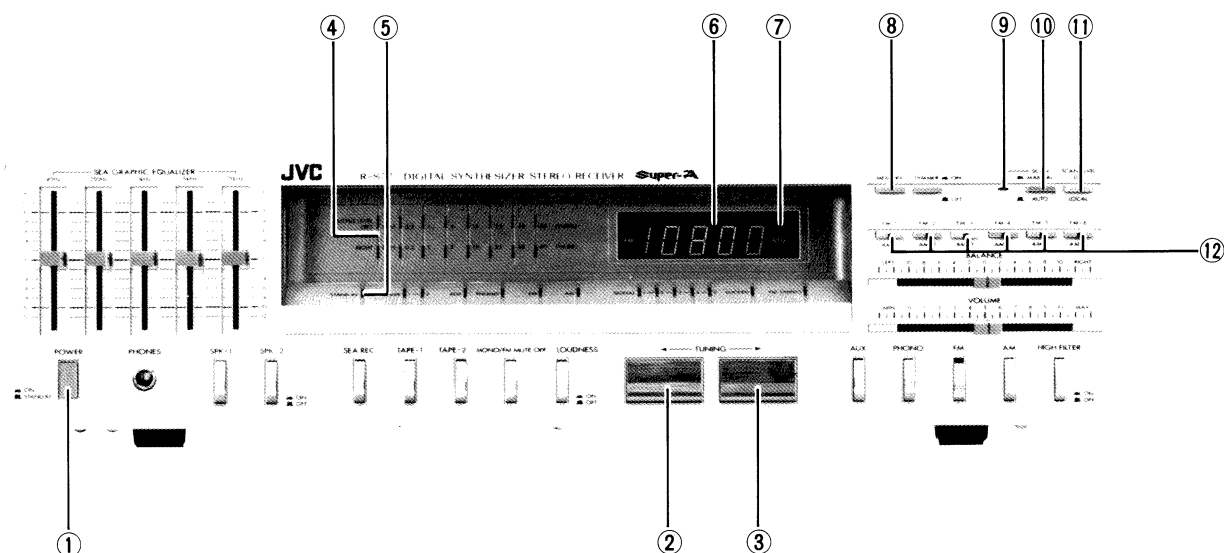


Fig. 1

#### ① POWER switch

**ON:** Press to turn the power on. During the first 3 or 4 seconds after the POWER switch is turned on, no sound will be heard until you hear the "click" of the relay operation. This is not due to any defect in the unit. The built-in power protection circuit operates to mute the switching noise for speaker protection.

**STAND BY:** When the power cord is plugged into an AC outlet, the STAND BY indicator (5) lights to show that the memory circuit is operating. As long as this indicator remains lit, the preset stations are not subject to cancellation or alteration. The preset data are maintained even in the case of a power failure or when the power cord is disconnected, if the period of non-applied power does not exceed a couple of days.

#### ②③ TUNING buttons

##### Auto tuning

**Up-scanning button:** When this button is pressed, the tuned-in frequency changes in the direction of increasing frequencies. Use this button to search the upper frequency broadcast. Scanning (Auto Tuning) stops automatically when the next FM (or AM) station is pulled in. This tuned-in frequency is displayed digitally by the frequency indicator.

Even if you continue to press this button, scanning stops at some stations that can be tuned-in, but if it is not your desired station, press the Up button again. Press the Up-scanning button and then press the Down-scanning button to select stations by down-scanning.

**Down-scanning button:** Press to tune in the direction of decreasing frequencies. Use this button to search the lower frequency station. Functions are identical with those of the up-scanning button.

**Note:** Scanning begins by pressing the Up or Down button, re-depressing it stops scanning.

#### Manual tuning

Manual tuning is possible by pressing the Auto-Manual scanning switch (10). Pressing the Up-Down-scanning buttons, the tuned-in frequency changes in 200 kHz steps for FM reception (50 kHz steps for Europe and Australia) or 10 kHz steps for AM (9 kHz steps for Europe and Australia). Tapping this button changes the tuner step by step, continuous pressing (more than 0.5 sec.) changes tuning in a high speed scanning sequence which stop when released.

#### ④ Left and right channel power indicator

These LED's indicate the output power in watts. The values in watts are indicated per channel when one pair of speakers having an impedance of exactly 8 ohms is being driven.

#### ⑤ STAND BY indicator

Lights when the POWER switch (1) is set to OFF (STAND BY).

#### ⑥ Frequency indicator

The tuned-in frequency is displayed digitally. Four digits (kHz) are displayed for AM reception and five digits (MHz) (for continental Europe) or four digits (MHz) (for U.S.A., Canada and other countries) are displayed for FM reception.

#### ⑦ MEMORY indicator

When the MEMORY button is pressed, this MEMORY indicator lights to show that the unit is ready to register the preset station to memory.

#### ⑧ MEMORY switch

Press this switch and the memory indicator will light to show that this unit is ready to receive a memory setting. (This switch is a non-lock type.) Pressing the station select button while the MEMORY indicator is lit (for about 5 sec.) makes it possible to memorize the station being received. When the MEMORY indicator is not lit, the memory function does not operate.

#### ⑨ Scanning indicator

This green indicator lights when you make auto or manual tuning with the Up or Down buttons (2), (3).

⑩ **AUTO-MANUAL SCAN switch**

Press this switch in for MANUAL tuning and press again to set to the out position for AUTO tuning.

⑪ **SCAN LEVEL switch (LOCAL, DX)**

Normally this switch is set to LOCAL so that scanning stops automatically upon receiving only those stronger signals. If you want to scan all weak signal stations, set this switch to DX.

⑫ **Station select buttons/Station indicators**

These buttons are used to select one of the preset stations or to preset the station for an individual channel. When one of these buttons is pressed, the LED indicator on the corresponding button lights to indicate which channel is in operation. If one of these buttons is pressed when the MEMORY switch (8) is pressed in, the station which is being received will be "Memorized". One of the station select buttons can be used in common for one FM station and one AM station.

If you change the mode from radio reception to any other mode including power-off and back to radio reception, the station previously selected with the station select buttons remains tuned in. However, unless the station select buttons are pressed, station indicators will not light, but the scanning indicator will light instead.

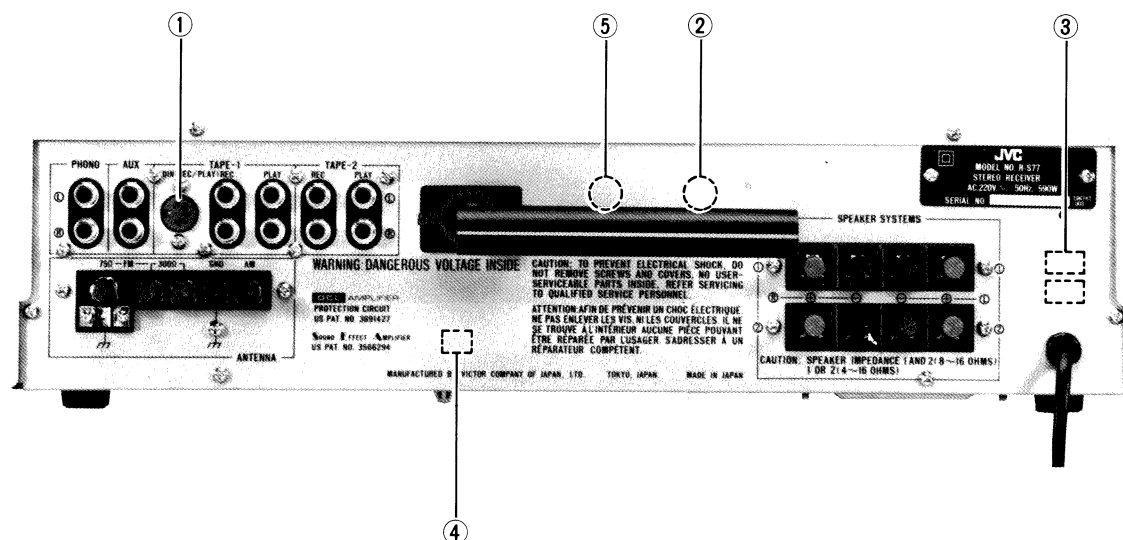
## FM/AM OPERATION

### Presetting to selected station (FM or AM)

1. Press the POWER switch to ON ( — ).
2. Press the source select switch FM (or AM) to ON ( — ).
3. Tune to a desired station by pressing the "TUNING" buttons for AUTO or MANUAL TUNING.
4. Press the MEMORY switch ( — ). (The memory indicator lights.)
5. Press one of the station select buttons ( — ).
6. Make the same pre-tuning procedure (steps 3, 4, 5) for the remaining channels. Pre-tuning is possible up to 12 different stations (6 FM stations and 6 AM stations).
7. Press the desired station select button for listening ( — ). (This indicator on the corresponding button lights to indicate which channel is in operation.)

### Listening to FM broadcasts

1. Press the POWER switch to ON ( — ).
2. Select the speaker system with the SPK-1 or SPK-2 switch.
3. Press the FM button to ON ( — ).
4. Press the desired station select button ( — ).
5. Adjust the volume and balance to your requirements and use the S.E.A. controls to obtain the tone you want to hear.



① **TAPE DIN socket (REC/PLAY)**

(Provided on sets for the Europe, Australia and U.K.)

② **Voltage selector**

(Not provided on sets for U.S.A., Canada, Europe, Australia and U.K.)

③ **AC outlet**

(Not provided on sets for Continental Europe, the United Kingdom and Australia.)

④ **AM channel spacing switch**

(Provided on sets for the U.S.A., Canada, etc. Set this switch according to AM channel spacing of your country.)

⑤ **Fuse holder**

(Not provided on sets for U.S.A., Canada, Europe, Australia and U.K.)

### Note:

- The AC outlet is not switched off by the front panel power switch. Connect it to a component which only uses power when operating, like a record turntable.



## 3. Removal Procedures

### 3-(1) Top Cover and Bottom Plates

for U.S.A., Canada and U.S. Military Market

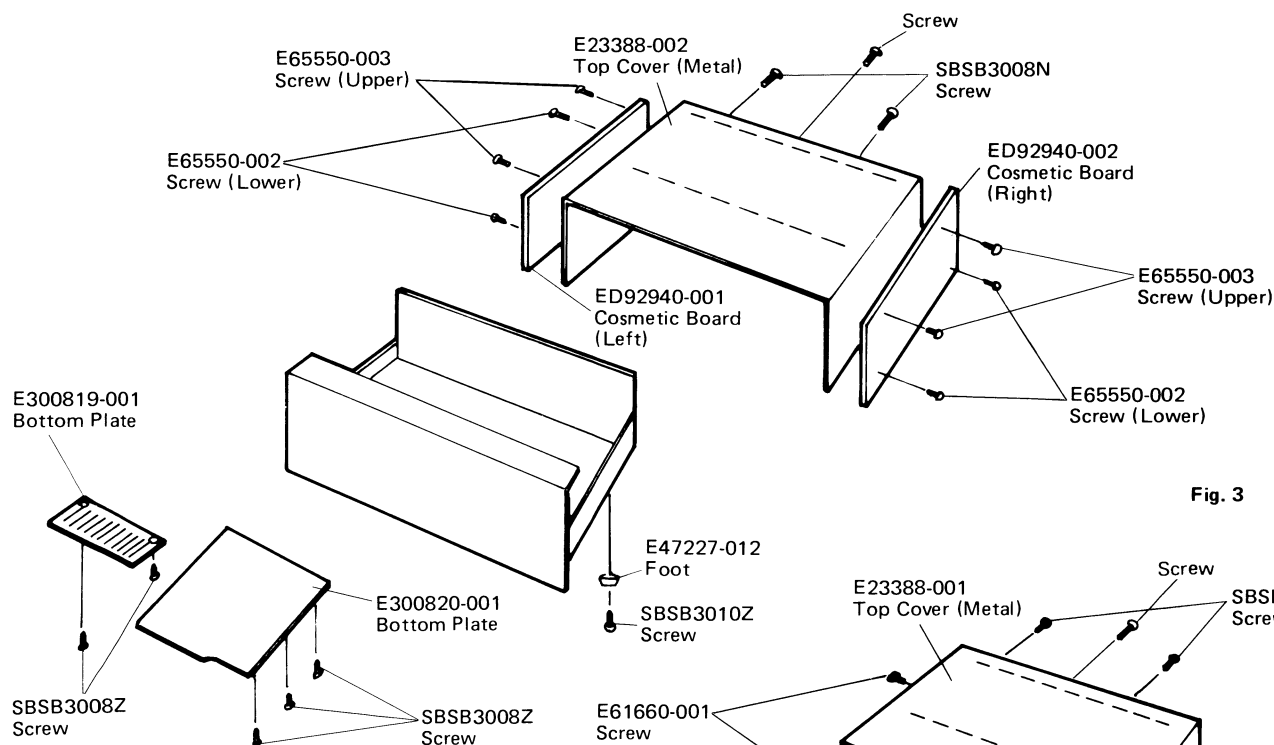


Fig. 3

for All Other Areas

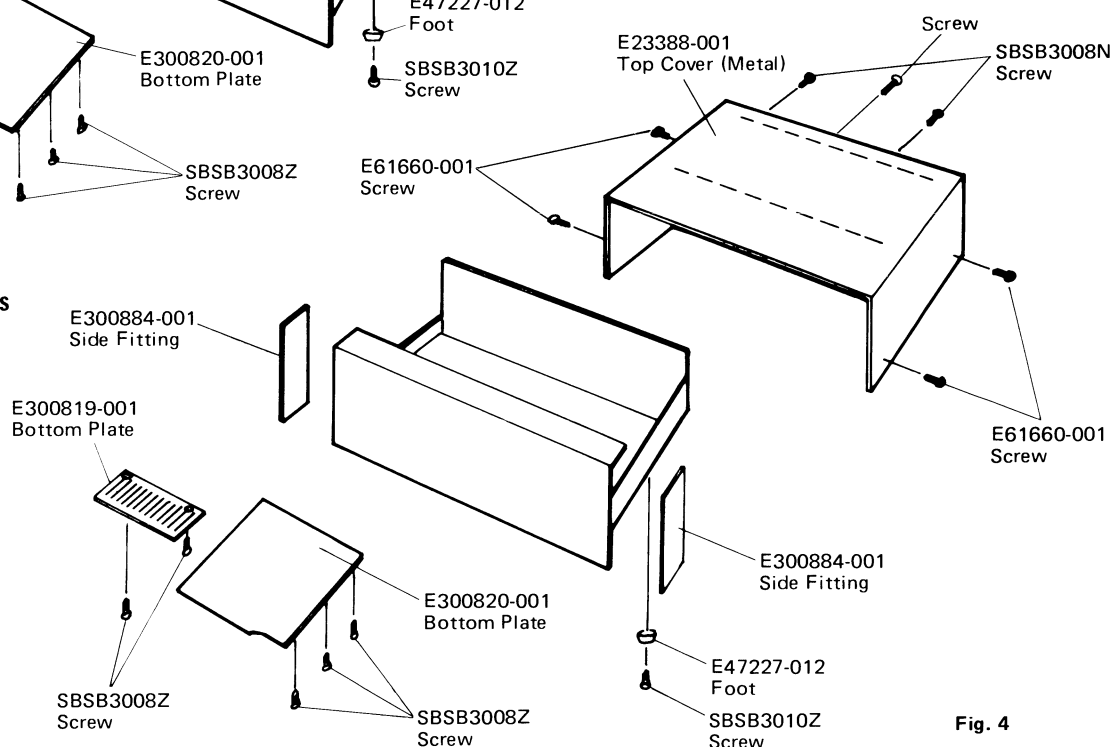


Fig. 4

### 3-(2) Power Transistors

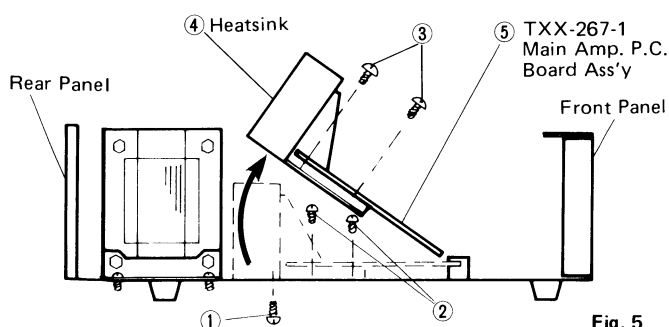


Fig. 5

#### Procedures:

- Step 1: Remove the bottom plate from chassis and 2 screws ① from heatsink ④.
- Step 2: Remove 4 screws ②.
- Step 3: Raise TXX-267 ⑤ from chassis as arrowed on Fig. 5 and then resolder the power transistor's leads.
- Step 4: Remove 4 screws ③ and heatsink from TXX-267 and then replace the power transistors.

## 4. Main Parts Location

### 4-(1) Top View

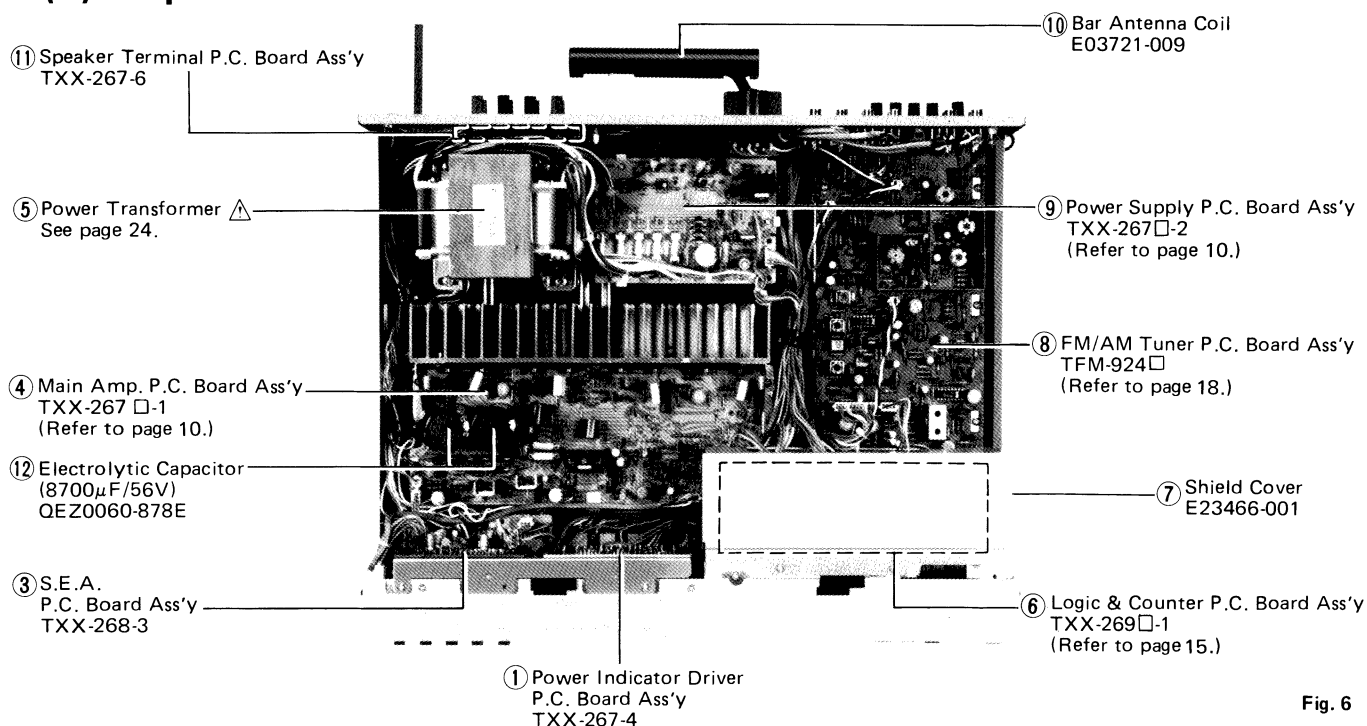


Fig. 6

### 4-(2) Front View

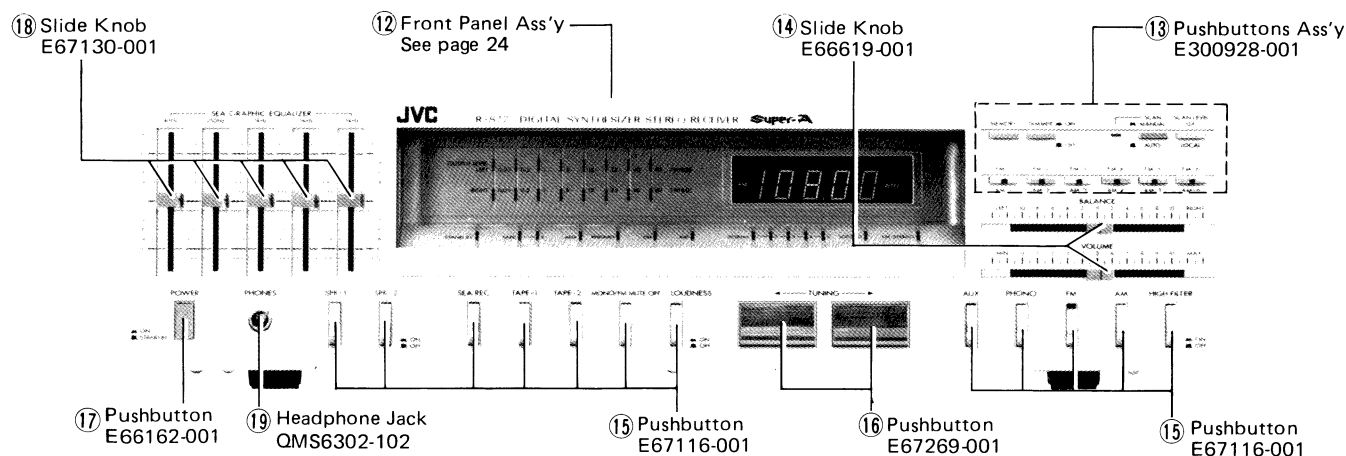


Fig. 7

### 4-(3) Rear View

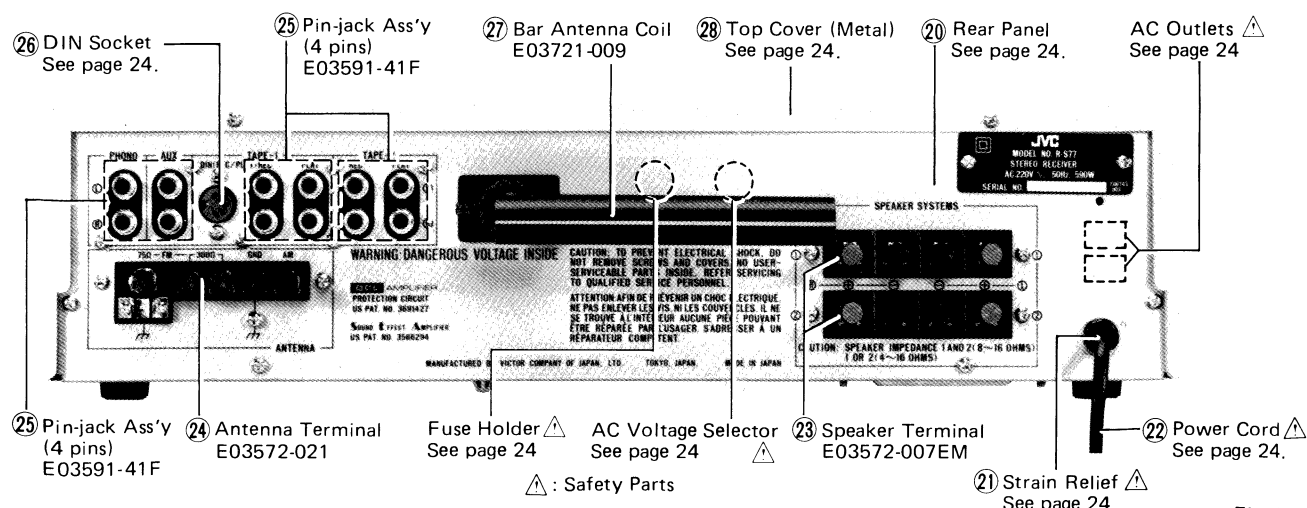


Fig. 8

## 5. Exploded View and Part Numbers

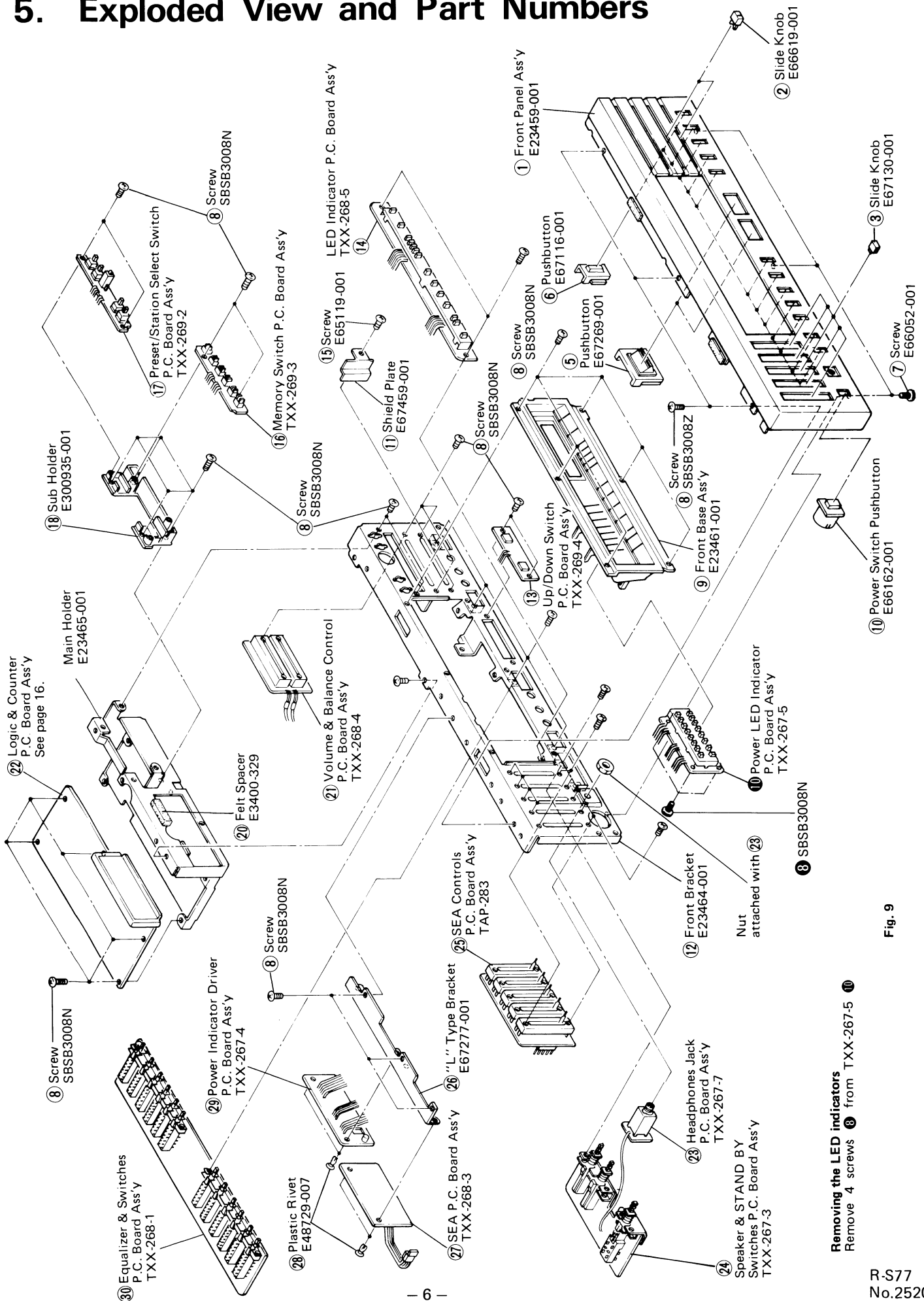


Fig. 9

Removing the LED indicators  
Remove 4 screws ⑧ from TXX-267-5 ⑩

## 6. Block Diagram of Digital Synthesizer

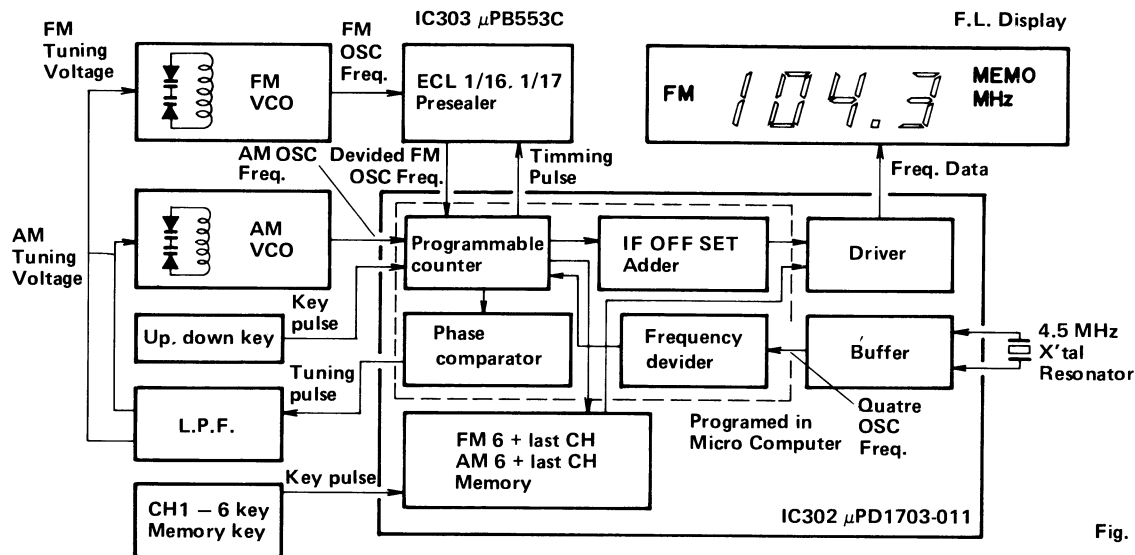


Fig. 10

## 7. Pin-plug to Pin-jack Connections Diagram

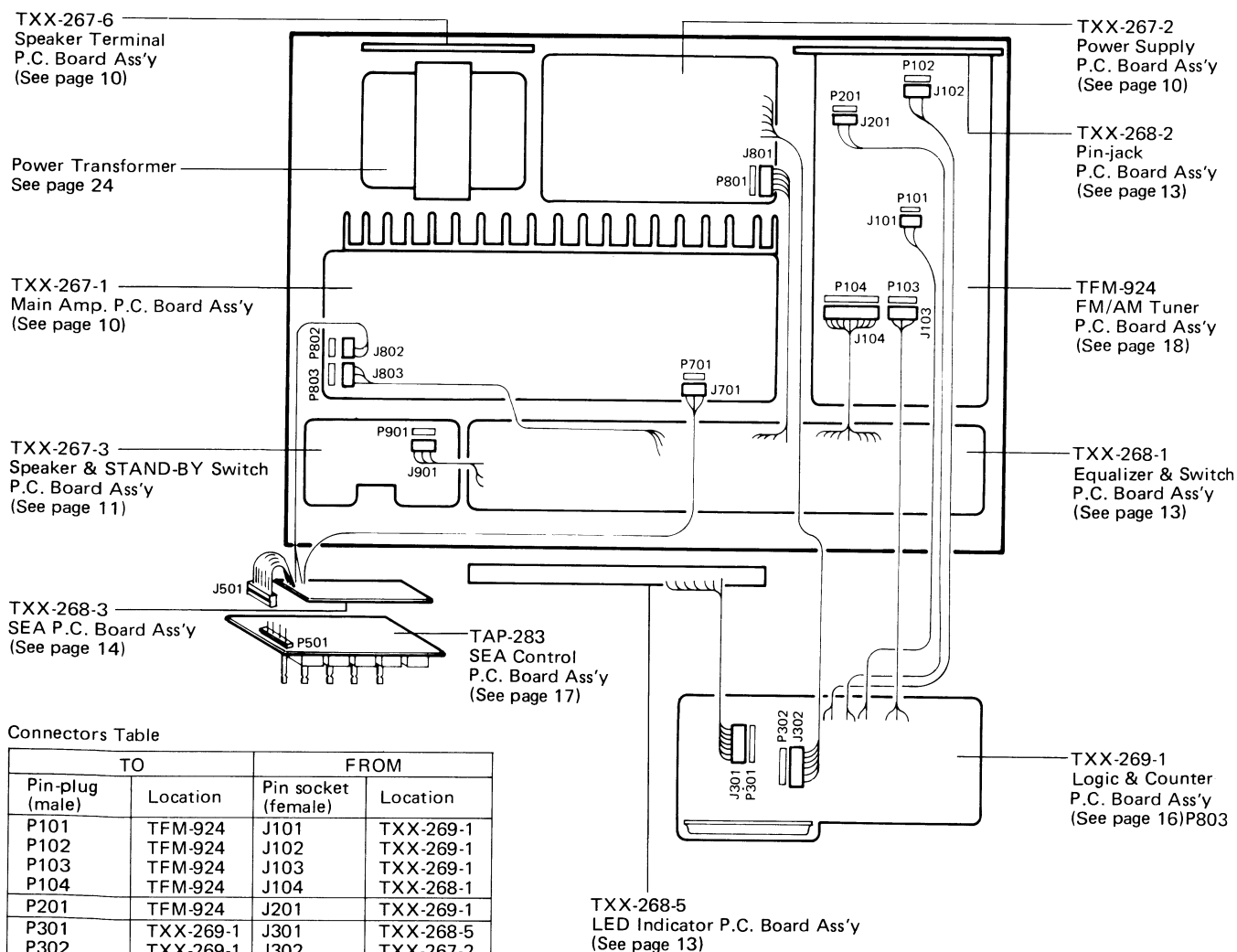
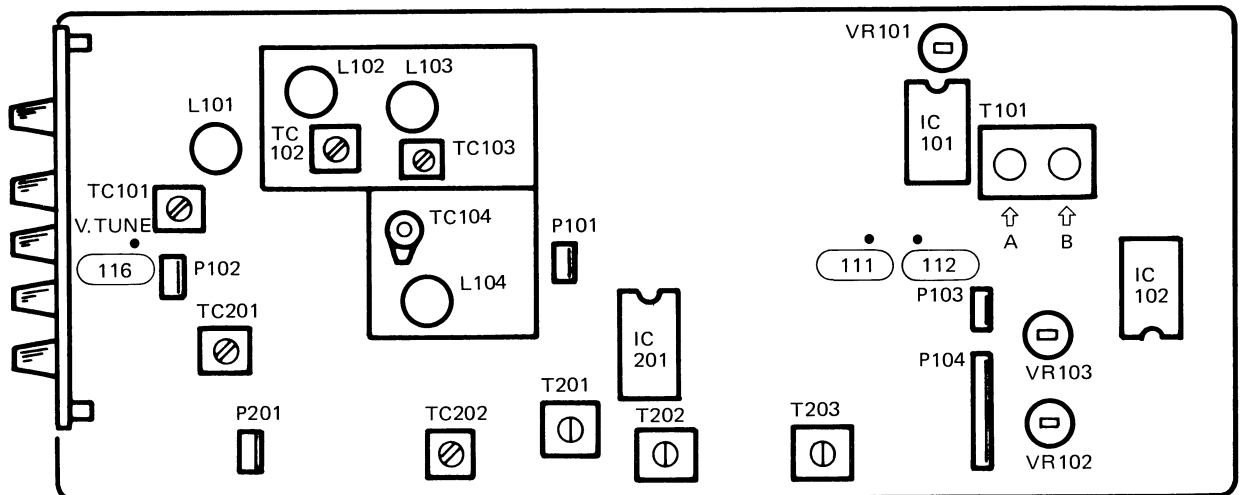


Fig. 11

Connectors Table

| TO              |           | FROM                |           |
|-----------------|-----------|---------------------|-----------|
| Pin-plug (male) | Location  | Pin socket (female) | Location  |
| P101            | TFM-924   | J101                | TXX-269-1 |
| P102            | TFM-924   | J102                | TXX-269-1 |
| P103            | TFM-924   | J103                | TXX-269-1 |
| P104            | TFM-924   | J104                | TXX-268-1 |
| P201            | TFM-924   | J201                | TXX-269-1 |
| P301            | TXX-269-1 | J301                | TXX-268-5 |
| P302            | TXX-269-1 | J302                | TXX-267-2 |
| P501            | TAP-283   | J501                | TXX-268-5 |
| P701            | TXX-267-1 | J701                | TXX-268-3 |
| P801            | TXX-267-2 | J801                | TXX-268-1 |
| P802            | TXX-267-1 | J802                | TXX-268-3 |
| P803            | TXX-267-1 | J803                | TXX-268-1 |

## 8. FM/AM Tuner Alignment Procedures



Alignment Location of TFM-924 FM/AM Tuner P.C. Board Ass'y

Fig. 12

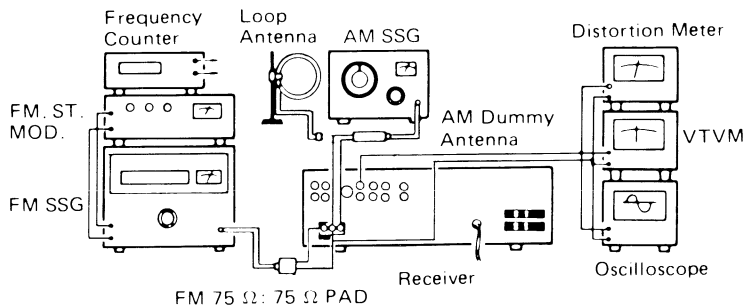


Fig. 13

### Discriminator, Distortion and Signal Gain

1. Press to FM position.
2. Connect an RF generator, 1 kHz modulation and a 75 kHz deviation to the antenna terminals on the rear panel through a dummy antenna.
3. Connect an oscilloscope, Distortion Meter and VTVM to the Rec. out jacks on the rear panel.
4. Set the RF generator to 97.9 MHz.
5. Set the Frequency Display to a 97.9 MHz.
6. Connect a DC VTVM between TP111 and 112.
7. Adjust the core indicated arrow A of T101 for DC VTVM reading of 0 (zero) mV.
8. Adjust the core indicated arrow B of T101 so that the distortion is minimized at a value less than 0.4 %.

### 8-(1) FM Section

#### Sensitivity

##### Low Frequency

1. Connect an RF generator to the antenna terminals on the rear panel through a dummy antenna.
2. Set an RF generator to 90 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of  $2 \mu\text{V}$ .
3. Connect a VTVM and an oscilloscope to the Rec. out jacks on the rear panel.
4. Set the frequency display to 89.9 MHz.
5. Adjust L104 so that "V. TUNE" TP116 indicate 3.7 V by VTVM.
6. Adjust three coils L101, L102 and L103 in the tuning gang to maximize the output.

##### High Frequency

7. Set the RF generator to 106 MHz, a modulation of 1 kHz and a deviation of 75 kHz to provide an input of  $2 \mu\text{V}$ .
8. Set the Frequency Display to 105.9 MHz.
9. Adjust TC104 so that "V. TUNE" TP116 indicate 18.0 V by VTVM.
10. Adjust the FM trimmers TC101, TC102 and TC103 in the tuning gang to maximize the output.
11. Repeat these high and low frequencies adjustment alternately until maximum sensitivity is obtained.

### Multiplex and Stereo Separation

#### Multiplex

1. Set the stereo signal generator as follows: 400 Hz modulation frequency, 7.5 kHz deviation pilot, 67.5 kHz main and sub carriers. Connect its output to the RF generator.
2. Connect an RF generator to the antenna terminals through a dummy antenna.
3. Connect a VTVM, an oscilloscope and a distortion meter to the Rec. out jacks on the rear panel.
4. Set the RF generator to 97.9 MHz and output of 1 mV.
5. Set the frequency display to 97.9 MHz.
6. Connect the frequency counter to 19 kHz Test Point (TP110).
7. Switch off the pilot signal of stereo modulator.
8. Adjust VR103 so that the frequency counter indicates 19 kHz (0 ~ -50 Hz).

#### Stereo Separation

9. Switch the selector of stereo modulator to left channel modulation.
10. Adjust VR102 so that the output of right channel is minimized.
11. Switch the selector of the modulator to right channel modulation.
12. Adjust VR102 so that the left channel is minimized.
13. Set VR102 to a average, if the separation of left and right is different.

### Muting Level

**Note:** No adjustment is necessary. However, if the check-up is required, take the following steps.

1. Release the MONO/FM MUTE OFF pushbutton during this adjustment procedures.
2. Connect a VTVM and an Oscilloscope to the Rec. out jacks on the rear panel.
3. Set the RF generator to 108 MHz, a modulation of 1 kHz and a deviation of 75 kHz, to provide an input of  $8\ \mu\text{V}$ .
4. Turn VR101 clockwise and remember the point (or position) at which the muting ceases operating.
5. Turn VR101 counterclockwise slightly so that the output level drops by 1 dB.
6. Attenuate the output of the RF generator to 2 dB from  $8\ \mu\text{V}$  of step 2 and check that the muting is still operating.

## 8-(2) AM Section

### Tracking and Sensitivity

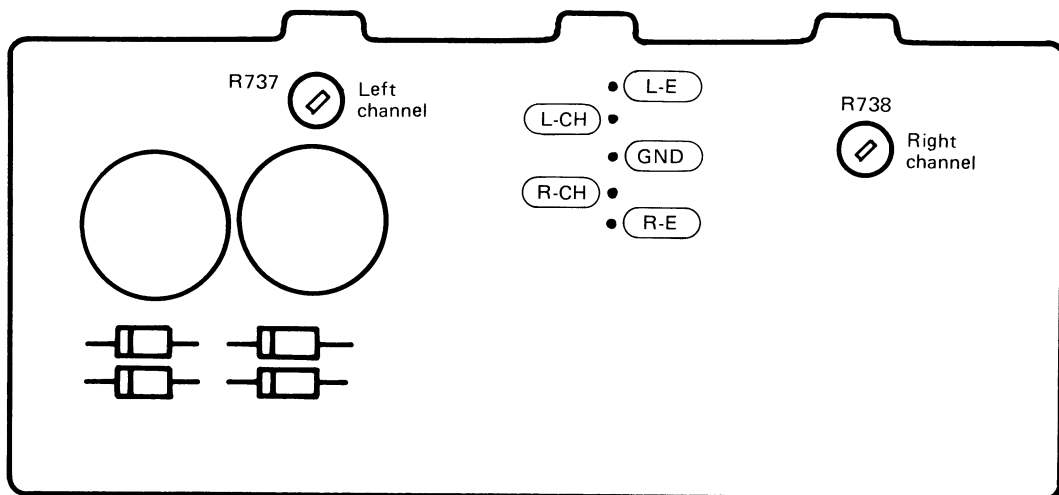
#### Low Frequency

1. Press to AM position
2. Connect the RF generator to the antenna terminals on the rear panel, set this to 600 kHz (603 kHz) with 30 % modulation at 400 Hz.
3. Connect an AC VTVM and an Oscilloscope to the Rec. Out jacks on the rear panel.
4. Set the frequency display of the unit to 600 kHz (603 kHz).
5. Adjust T201, T202, T203 and the ferrite bar antenna adjusting the coil to maximize the output signal.

#### High Frequency

6. Set the RF generator to 1400 kHz (1404 kHz) with 30 % modulation at 400 Hz.
7. Set the frequency display of the unit to 1400 kHz (1404 kHz).
8. Adjust the trimmers TC201, TC202 in the tuning gang so that the output signal is maximized.
9. Repeat these high and low frequencies adjustment procedures alternately until maximum sensitivity is obtained.

## 9. Power Amplifier Idling Current Adjustment Procedure



Adjustment Location of TXX-267 □-1 Main Amp. P.C. Board Ass'y

Fig. 14

### Precaution:

- (1) Allow the set to warm up at least 5 minutes before connecting a DC VTVM.
- (2) Must keep the heatsinks cooling to prevent overheating and consequent destruction of the semiconductor junction and set the volume control to minimum during these adjustment procedures.

( ) : for Right channel Adjustment

### Procedures:

1. Turn R737 and (R738) fully counterclockwise before the power switch on.
2. Connect a DC VTVM to the Test Point L-CH and L-E (R-CH and R-E).
3. Adjust R737 (R738) for DC VTVM reading of 5 mV.

# 10. Printed Circuit Board Ass'y and Parts List

## 10-(1) TXX-267 Main Amp., Power Supply and Other Functions Split P.C.Board Ass'y

The number of TXX-267 ☐ P.C. Board Ass'y varies according to the area employed. Refer to page 24.

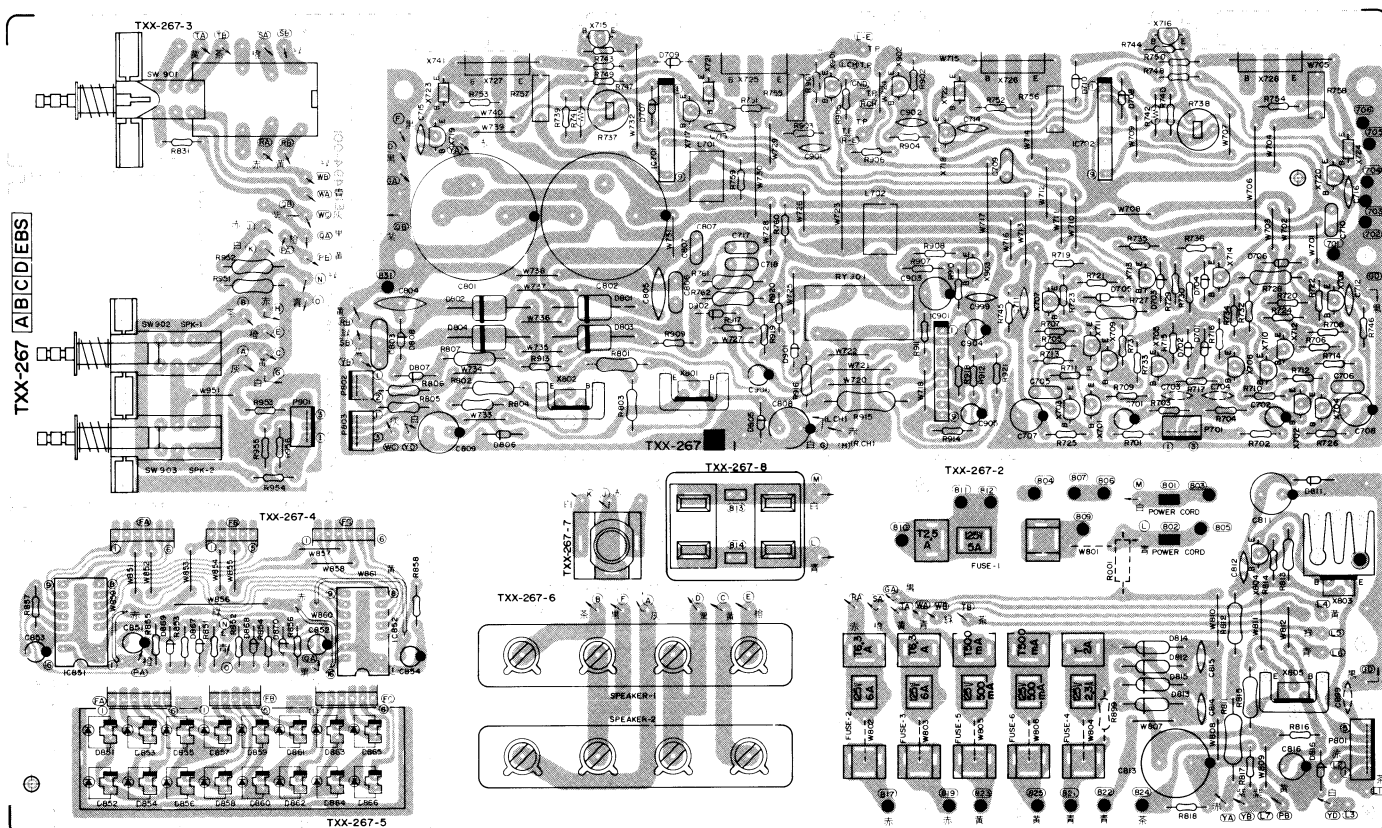


Fig. 15

Each Individual P.C. Board Location

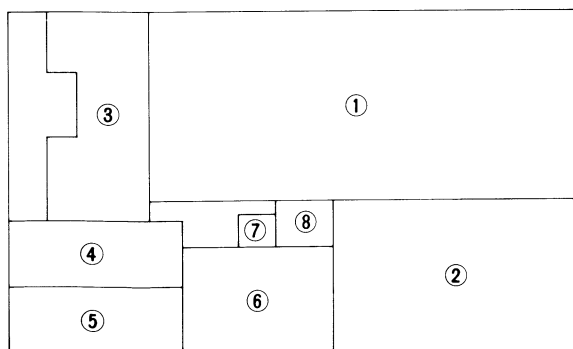


Fig. 16

Note (1):

The specific symbols (赤, 黒, 白, ... etc.) on a surface of above P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly of P.C. Board at the factory.

- ① TXX-267 ☐ -1: Main Amp. P.C. Board Ass'y
- ② TXX-267 ☐ -2: Power Supply P.C. Board Ass'y
- ③ TXX-267-3 : Speaker STAND-BY Switch P.C. Board Ass'y
- ④ TXX-267-4 : Power Indicator Driver P.C. Board Ass'y
- ⑤ TXX-267-5 : Power Indicator LED P.C. Board Ass'y
- ⑥ TXX-267-6 : Speaker Terminal P.C. Board Ass'y
- ⑦ TXX-267-7 : Headphones P.C. Board Ass'y
- ⑧ TXX-267 ☐ -8: AC Fuse & Outlet P.C. Board Ass'y

Note (2):

In ☐ should be indicated an area code according to the table below before placing an order.

| Areas                                  | P.C. Board                                      |
|----------------------------------------|-------------------------------------------------|
| U.S.A.                                 | TXX-267 <input type="checkbox"/> A -1, -2, -8   |
| Canada                                 | TXX-267 <input type="checkbox"/> B -1, -2, -8   |
| U.K.                                   | TXX-267 <input type="checkbox"/> EBS -1, -2, -8 |
| Australia & Europe                     | TXX-267 <input type="checkbox"/> D -1, -2, -8   |
| U.S. Military Market & Other Countries | TXX-267 <input type="checkbox"/> C -1, -2, -8   |

### Transistors

| Item No. | Part Number   | Rating |         | Description |         |
|----------|---------------|--------|---------|-------------|---------|
|          |               | Pc     | fT      | Silicon     | Maker   |
| X701     | 2SC1775AV(F1) | 0.2 W  | 200 MHz | Silicon     | Hitachi |
| X702     | 2SC1775AV(F1) | "      | "       | "           | "       |
| X703     | 2SC1775AV(F1) | "      | "       | "           | "       |
| X704     | 2SC1775AV(F1) | "      | "       | "           | "       |
| X705     | 2SC1775AV(F)  | "      | "       | "           | "       |

### Transistors

| Item No. | Part Number  | Rating |         | Description |         |
|----------|--------------|--------|---------|-------------|---------|
|          |              | Pc     | fT      | Silicon     | Maker   |
| X706     | 2SC1775AV(F) | 0.2 W  | 200 MHz | Silicon     | Hitachi |
| X707     | 2SA949(O,Y)  | 3 W    | 120 MHz | "           | Toshiba |
| X708     | 2SA949(O,Y)  | "      | "       | "           | "       |
| X709     | 2SA949(O,Y)  | "      | "       | "           | "       |
| X710     | 2SA949(O,Y)  | "      | "       | "           | "       |



## Transistors

| Item No. | Part Number   | Rating |         | Description |         |
|----------|---------------|--------|---------|-------------|---------|
|          |               | Pc     | fT      | Silicon     | Maker   |
| X711     | 2SA1029(C)    | 0.2 W  | 200 MHz | "           | Hitachi |
| X712     | 2SA1029(C)    | "      | "       | "           | "       |
| X713     | 2SC2229(O,Y)  | 0.8 W  | 120 MHz | "           | Toshiba |
| X714     | 2SC2229(O,Y)  | "      | "       | "           | "       |
| X715     | 2SC2546(E)    | 0.4 W  | 90 MHz  | "           | Hitachi |
| X716     | 2SC2546(E)    | "      | "       | "           | "       |
| X717     | 2SC1775AV(F)  | 0.2 W  | 200 MHz | "           | "       |
| X718     | 2SC1775AV(F)  | "      | "       | "           | "       |
| X719     | 2SA872AV(E)   | 0.3 W  | 120 MHz | "           | "       |
| X720     | 2SA872AV(E)   | "      | "       | "           | "       |
| X721     | 2SD669A(B,C)  | 20 W   | 140 MHz | "           | "       |
| X722     | 2SD669A(B,C)  | "      | "       | "           | "       |
| X723     | 2SB649A(B,C)  | "      | "       | "           | "       |
| X724     | 2SB649A(B,C)  | "      | "       | "           | "       |
| X725     | 2SD845LB(R,O) | 120 W  | 20 MHz  | "           | Toshiba |
| X726     | 2SD845LB(R,O) | "      | "       | "           | "       |
| X727     | 2SB755LB(R,O) | "      | "       | "           | "       |
| X728     | 2SB755LB(R,O) | "      | "       | "           | "       |
| X801     | 2SD313V(D,E)  | 30 W   | 8 MHz   | "           | Sanyo   |
| X802     | 2SB507V(D,E)  | "      | "       | "           | "       |
| X803     | 2SD313V(D,E)  | "      | "       | "           | "       |
| X804     | 2SC1775AV(F)  | 0.2 W  | 200 MHz | "           | Hitachi |
| X805     | 2SD313V(D,E)  | 30 W   | 8 MHz   | "           | Sanyo   |
| X901     | 2SC1775AV(F)  | 0.2 W  | 200 MHz | "           | Hitachi |
| X902     | 2SC1775AV(F)  | "      | "       | "           | "       |
| X903     | 2SA872AV(F)   | 0.3 W  | 120 MHz | "           | "       |

## Integrated Circuits

| Item No. | Part Number | Rating |  | Description |            |
|----------|-------------|--------|--|-------------|------------|
|          |             | Pc     |  | I.C.        | Maker      |
| IC701    | VC5022      | 0.5 W  |  | "           | Toyo Dengu |
| IC702    | VC5022      |        |  | "           | "          |
| IC851    | BA684       |        |  | "           | "          |
| IC852    | BA684       |        |  | "           | "          |
| IC901    | TA 7317P    |        |  | "           | Toshiba    |

## Diodes

| Item No. | Part Number  | Rating | Description     |              |
|----------|--------------|--------|-----------------|--------------|
|          |              |        | Silicon         | Maker        |
| D701     | 1S2076-31    |        | "               | Hitachi      |
| D702     | 1S2076-31    |        | "               | "            |
| D703     | 1S2076-31    |        | "               | "            |
| D704     | 1S2076-31    |        | "               | "            |
| D705     | 1S2076-31    |        | "               | "            |
| D706     | 1S2076-31    |        | "               | "            |
| D707     | 1S2076-31    |        | "               | "            |
| D708     | 1S2076-31    |        | "               | "            |
| D709     | 1S2076-31    |        | "               | "            |
| D710     | 1S2076-31    |        | "               | "            |
| D801     | 30D2FA-S     |        | "               | Nihon Inter. |
| D802     | 30D2FA-S     |        | "               | "            |
| D803     | 30D2FA-S     |        | "               | "            |
| D804     | 30D2FA-S     |        | "               | "            |
| D805     | RD30EB3      |        | Silicon (Zener) | NEC          |
| D806     | RD30EB3      |        | "               | "            |
| D807     | RD15EB3      |        | "               | "            |
| D808     | RD15EB3      |        | "               | "            |
| D811     | RD13EB3      |        | "               | "            |
| D812     | ERB12-02RKL1 |        | Silicon         | Fuji         |
| D813     | ERB12-02RKL1 |        | "               | "            |
| D814     | ERB12-02RKL1 |        | "               | "            |
| D815     | ERB12-02RKL1 |        | "               | "            |
| D816     | RD6, 2EB3    |        | Silicon (Zener) | NEC          |
| D851     | SLB-26GG     |        | LED             | Toyo Dengu   |
| D852     | SLB-26GG     |        | "               | "            |
| D853     | SLB-26GG     |        | "               | "            |
| D854     | SLB-26GG     |        | "               | "            |

## Diodes

| Item No. | Part Number | Rating | Description |            |
|----------|-------------|--------|-------------|------------|
|          |             |        | LED         | Maker      |
| D855     | SLB-26GG    |        | "           | Toyo Dengu |
| D856     | SLB-26GG    |        | "           | "          |
| D857     | SLB-26GG    |        | "           | "          |
| D858     | SLB-26GG    |        | "           | "          |
| D859     | SLB-26GG    |        | "           | "          |
| D860     | SLB-26GG    |        | "           | "          |
| D861     | SLB-26GG    |        | "           | "          |
| D862     | SLB-26GG    |        | "           | "          |
| D863     | SLB-26GG    |        | "           | "          |
| D864     | SLB-26GG    |        | "           | "          |
| D865     | SLB-26GG    |        | "           | "          |
| D866     | SLB-26GG    |        | "           | "          |
| D867     | 1S2076-31   |        | Silicon     | Hitachi    |
| D868     | 1S2076-31   |        | "           | "          |
| D869     | 1S2076-31   |        | "           | "          |
| D870     | 1S2076-31   |        | "           | "          |
| D901     | 1S2076-31   |        | "           | "          |
| D902     | 1S2076-31   |        | "           | "          |

## Coils

| Item No. | Part Number | Rating | Description |
|----------|-------------|--------|-------------|
| L701     | E04059-1R0  |        | Choke Coil  |
| L702     | E04059-1R0  |        | "           |

## Capacitors

| Item No. | Part Number  | Rating        |       | Description  |   |
|----------|--------------|---------------|-------|--------------|---|
|          |              |               |       |              |   |
| C701     | QET61HR-475Z | 4.7 $\mu$ F   | 50 V  | Electrolytic | " |
| C702     | QET61HR-475Z | "             | "     |              |   |
| C705     | QFM31HK-392Z | 3900 pF       | "     | Mylar        | " |
| C707     | QET61CR-107Z | 100 $\mu$ F   | 16 V  |              |   |
| C708     | QET61CR-107Z | "             | "     | Electrolytic | " |
| C709     | QFM31HK-272Z | 2700 pF       | 50 V  |              |   |
| C710     | QFM31HK-272Z | "             | "     | Mylar        | " |
| C711     | QCS31HJ-120Z | 12 pF         | "     |              |   |
| C712     | QCS31HJ-120Z | "             | "     | Ceramic      | " |
| C713     | QCS22HJ-470  | 47 pF         | 500 V |              |   |
| C714     | QCS22HJ-470  | "             | "     | "            | " |
| C715     | QCS22HJ-470  | "             | "     |              |   |
| C716     | QCS22HJ-470  | "             | "     | Mylar        | " |
| C717     | QFM31HK-473Z | 0.047 $\mu$ F | 50 V  |              |   |
| C718     | QFM31HK-473Z | "             | "     | Electrolytic | " |
| C801     | QE20060-878E | 8700 $\mu$ F  | 56 V  |              |   |
| C802     | QE20060-878E | "             | "     | Mylar        | " |
| C803     | QFM32AK-104  | 0.1 $\mu$ F   | 100 V |              |   |
| C804     | QCE22HP-103  | 0.01 $\mu$ F  | 500 V | "            | " |
| C805     | QCE22HP-103  | "             | "     |              |   |
| C806     | QFM32AK-473  | 0.047 $\mu$ F | 100 V | Mylar        | " |
| C807     | QFM32AK-473  | "             | "     |              |   |
| C808     | QET51VR-227  | 220 $\mu$ F   | 35 V  | Electrolytic | " |
| C809     | QET51VR-227  | "             | "     |              |   |
| C811     | QET51CR-227  | "             | 16 V  | "            | " |
| C812     | QCF31HP-103Z | 0.01 $\mu$ F  | 50 V  |              |   |
| C813     | QET51CR-228  | 2200 $\mu$ F  | 16 V  | Ceramic      | " |
| C814     | QCF31HP-223Z | 0.022 $\mu$ F | 50 V  |              |   |
| C815     | QCF31HP-223Z | "             | "     | Electrolytic | " |
| C816     | QET61AR-227Z | 220 $\mu$ F   | 10 V  |              |   |
| C851     | QET61ER-106Z | 10 $\mu$ F    | 25 V  | "            | " |
| C852     | QET61ER-106Z | "             | "     |              |   |
| C853     | QET61HR-225Z | 2.2 $\mu$ F   | 50 V  | "            | " |
| C854     | QET61HR-225Z | "             | "     |              |   |
| C901     | QCF31HP-223Z | 0.022 $\mu$ F | "     | Ceramic      | " |
| C902     | QCF31HP-223Z | "             | "     |              |   |
| C903     | QET61HR-226Z | 22 $\mu$ F    | "     | Electrolytic | " |
| C904     | QET61AR-107Z | 100 $\mu$ F   | 10 V  |              |   |
| C905     | QET61CR-226Z | 22 $\mu$ F    | 16 V  | "            | " |
| C906     | QET61HR-105Z | 1 $\mu$ F     | 50 V  |              |   |
| C999     | QCF31HP-102Z | 1000 pF       | "     | Ceramic      | " |

## Resistors

| Item No. | Part Number   | Rating |       | Description      |
|----------|---------------|--------|-------|------------------|
| R001     | QRC121K-275EM | 2.7 MΩ | 1/2 W | Composition      |
| R701     | QRD141J-222SY | 2.2 kΩ | 1/4 W | Carbon           |
| R702     | QRD141J-222SY | "      | "     | "                |
| R703     | QRD141J-473SY | 47 kΩ  | "     | "                |
| R704     | QRD141J-473SY | "      | "     | "                |
| R705     | QRD149J-102S  | 1 kΩ   | "     | Carbon           |
| R706     | QRD149J-102S  | "      | "     | "                |
| R707     | QRD149J-102S  | "      | "     | "                |
| R708     | QRD149J-102S  | "      | "     | "                |
| R709     | QRD149J-220S  | 22 Ω   | "     | "                |
| R710     | QRD149J-220S  | "      | "     | "                |
| R711     | QRD149J-220S  | "      | "     | "                |
| R712     | QRD149J-220S  | "      | "     | "                |
| R713     | QRD149J-150S  | 15 Ω   | "     | "                |
| R714     | QRD149J-150S  | "      | "     | "                |
| R715     | QRD149J-301S  | 300 Ω  | "     | "                |
| R716     | QRD149J-301S  | "      | "     | "                |
| R717     | QRD141J-223SY | 22 kΩ  | "     | Carbon           |
| R719     | QRD149J-220S  | 22 Ω   | "     | Carbon           |
| R720     | QRD149J-220S  | "      | "     | "                |
| R721     | QRD149J-100S  | 10 Ω   | "     | "                |
| R722     | QRD149J-100S  | "      | "     | "                |
| R723     | QRD149J-100S  | "      | "     | "                |
| R724     | QRD149J-100S  | "      | "     | "                |
| R725     | QRD141J-132SY | 1.3 kΩ | "     | Carbon           |
| R726     | QRD141J-132SY | "      | "     | "                |
| R727     | QRG017J-822S  | 8.2 kΩ | 1 W   | Oxide Metal Film |
| R728     | QRG017J-822S  | "      | "     | "                |
| R729     | QRD149J-181S  | 180 Ω  | 1/4 W | Carbon           |
| R730     | QRD149J-181S  | "      | "     | "                |
| R731     | QRD149J-561S  | 560 Ω  | "     | "                |
| R732     | QRD149J-561S  | "      | "     | "                |
| R733     | QRD129J-473   | 47 kΩ  | 1/2 W | Carbon           |
| R734     | QRD141J-473SY | "      | 1/4 W | Carbon           |
| R735     | QRD149J-181S  | 180 Ω  | "     | Carbon           |
| R736     | QRD149J-181S  | "      | "     | "                |
| R737     | QVZ3501-471   | 470 Ω  | "     | Variable         |
| R738     | QVZ3501-471   | "      | "     | "                |
| R739     | QRD141J-471SY | "      | 1/4 W | Carbon           |
| R740     | QRD141J-471SY | "      | "     | "                |
| R741     | SdT35         | 350 Ω  | 1 W   | Thermistor       |
| R742     | SdT35         | "      | "     | "                |
| R743     | QRD141J-391SY | 390 Ω  | 1/4 W | Carbon           |
| R744     | QRD141J-391SY | "      | "     | "                |
| R745     | QRD141J-243SY | 24 kΩ  | "     | "                |
| R746     | QRD141J-243SY | "      | "     | "                |
| R747     | QRD149J-122S  | 1.2 kΩ | "     | Carbon           |
| R748     | QRD149J-122S  | "      | "     | "                |
| R749     | QRD149J-101S  | 100 Ω  | "     | "                |
| R750     | QRD149J-101S  | "      | "     | "                |
| R751     | QRD149J-100S  | 10 Ω   | "     | "                |
| R752     | QRD149J-100S  | "      | "     | "                |
| R753     | QRD149J-100S  | "      | "     | "                |
| R754     | QRD149J-100S  | "      | "     | "                |
| R755     | QRM054K-R22   | 0.22 Ω | 5 W   | Metal Plate      |
| R756     | QRM054K-R22   | "      | "     | "                |
| R757     | QRM054K-R22   | "      | "     | "                |
| R758     | QRM054K-R22   | "      | "     | "                |
| R759     | QRD149J-4R7S  | 4.7 Ω  | 1/4 W | Carbon           |
| R760     | QRD149J-4R7S  | "      | "     | "                |
| R761     | See page 24   | 10 Ω   | 1 W   | Oxide Metal Film |
| R762     | See page 24   | "      | "     | "                |
| R801     | QRG017J-680S  | 68 Ω   | "     | "                |
| R802     | QRG017J-680S  | "      | "     | "                |
| R803     | QRD129J-472   | 4.7 kΩ | 1/2 W | Carbon           |

## Resistors

| Item No. | Part Number   | Rating |       | Description      |
|----------|---------------|--------|-------|------------------|
| R804     | QRD129J-472   | 4.7 kΩ | 1/2 W | Carbon           |
| R805     | QRD129J-151   | 150 Ω  | "     | "                |
| R806     | QRD129J-151   | "      | "     | "                |
| R807     | QRG017J-152S  | 1.5 kΩ | 1 W   | Oxide Metal Film |
| R811     | QRG027J-680   | 68 Ω   | 2 W   | "                |
| R812     | QRG017J-330S  | 33 Ω   | 1 W   | "                |
| R813     | QRD129J-392   | 3.9 kΩ | 1/2 W | Carbon           |
| R814     | QRD149J-101S  | 100 Ω  | 1/4 W | "                |
| R815     | QRD129J-6R8   | 6.8 Ω  | 1/2 W | "                |
| R816     | QRD149J-102S  | 1 kΩ   | 1/4 W | "                |
| R817     | QRD141J-821SY | 820 Ω  | "     | Carbon           |
| R818     | QRD141J-682SY | 6.8 kΩ | "     | "                |
| R831     | QRD141J-471SY | 470 Ω  | "     | "                |
| R852     | QRD141J-332SY | 3.3 kΩ | "     | "                |
| R853     | QRD141J-390SY | 39 Ω   | "     | "                |
| R854     | QRD141J-390SY | "      | "     | "                |
| R855     | QRD141J-103SY | 10 kΩ  | "     | "                |
| R856     | QRD141J-103SY | "      | "     | "                |
| R857     | QRD141J-473SY | 47 kΩ  | "     | "                |
| R858     | QRD141J-473SY | "      | "     | "                |
| R899     | See page 24   | 2.7 Ω  | 1/2 W | "                |
| R901     | QRD141J-222SY | 2.2 kΩ | 1/4 W | "                |
| R902     | QRD141J-222SY | "      | "     | "                |
| R903     | QRD141J-102SY | 1 kΩ   | "     | "                |
| R904     | QRD141J-102SY | "      | "     | "                |
| R905     | QRD141J-123SY | 12 kΩ  | "     | "                |
| R906     | QRD141J-123SY | "      | "     | "                |
| R907     | QRD141J-103SY | 10 kΩ  | "     | "                |
| R908     | QRD141J-332SY | 3.3 kΩ | "     | "                |
| R909     | QRD141J-683SY | 68 kΩ  | "     | "                |
| R910     | QRD141J-563SY | 56 kΩ  | "     | "                |
| R911     | QRD141J-183SY | 18 kΩ  | "     | "                |
| R912     | QRD141J-683SY | 68 kΩ  | "     | "                |
| R913     | QRD141J-153SY | 15 kΩ  | "     | "                |
| R914     | QRD141J-204SY | 200 kΩ | "     | "                |
| R915     | QRG027J-681   | 680 Ω  | 2 W   | Oxide Metal Film |
| R916     | QRD129J-271   | 270 Ω  | 1/2 W | Carbon           |
| R917     | QRD141J-223SY | 22 kΩ  | 1/4 W | Carbon           |
| R918     | QRD141J-104SY | 100 kΩ | "     | "                |
| R919     | QRD141J-104SY | "      | "     | "                |
| R920     | QRD141J-104SY | "      | "     | "                |
| R921     | QRD141J-563SY | 56 kΩ  | "     | "                |
| R951     | QRG017J-221S  | 220 Ω  | 1 W   | Oxide Metal Film |
| R952     | QRG017J-221S  | "      | "     | "                |
| R953     | QRD141J-332SY | 3.3 kΩ | 1/4 W | Carbon           |
| R954     | QRD141J-332SY | "      | "     | "                |
| R955     | QRD141J-681SY | 680 Ω  | "     | "                |
| R956     | QRD141J-681SY | "      | "     | "                |

## Others

| Item No.   | Part Number  | Rating | Description       |
|------------|--------------|--------|-------------------|
| J901       | QMC0437-001  |        | AC Outlet         |
| P701       | QMS6302-102  |        | Headphones Jack   |
| P801       | QMV5005-003  |        | 3-pins Plug Ass'y |
| P802       | QMV5005-005  |        | 5-pins Plug Ass'y |
| P802       | QMV5005-002  |        | 2-pins Plug Ass'y |
| P803       | QMV5005-003  |        | 3-pins Plug Ass'y |
| P901       | QMV5005-003  |        | "                 |
|            | E67275-001   |        | L-Bracket         |
| SW901      | QSP0020-001E |        | Push Switch       |
| RY901      | ESK6D24-213  |        | Relay Switch      |
|            | E03572-007EM |        | Speaker Terminal  |
|            | E300932-001  |        | LED Holder        |
|            | E300934-001  |        | Heat-sink         |
|            | E60171-003   |        | "                 |
| SW902, 903 | QSP0229-019  |        | Push Switch       |

## 10-(2) TXX-268 Equalizer, S.E.A. and Other Functions Split P.C.Board Ass'y

The number of TXX-268 ☐ P.C. Board Ass'y varies according to the area employed.

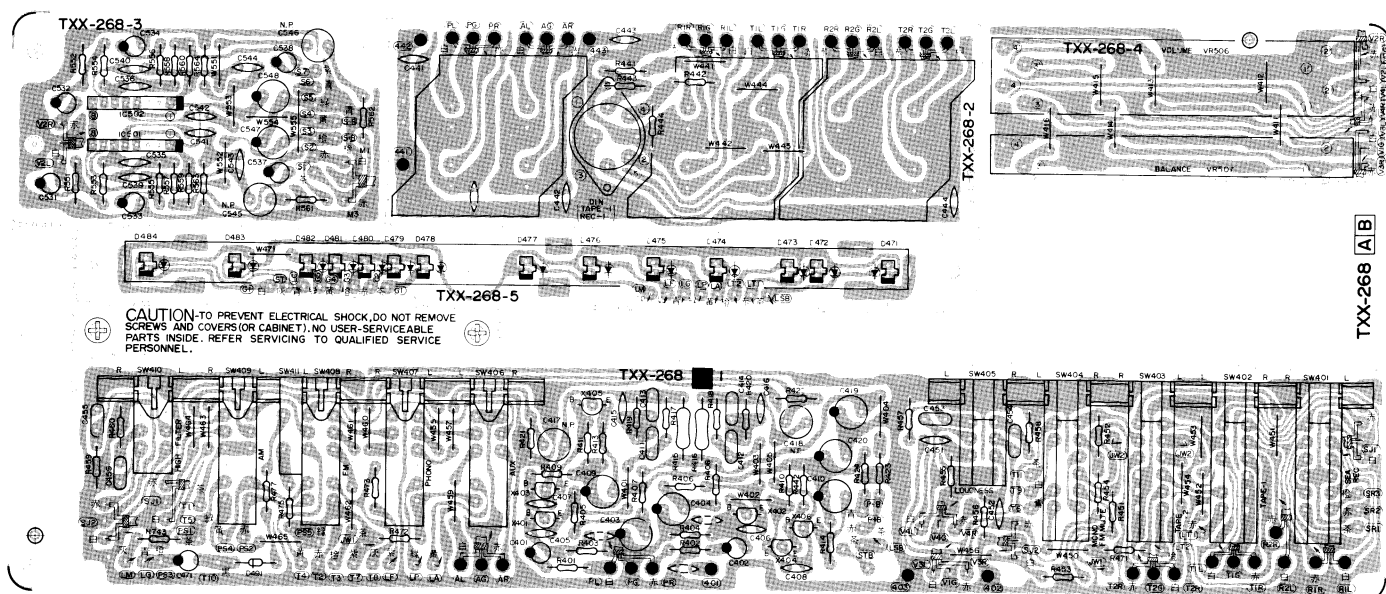


Fig. 17

### Each Individual P.C. Board Location

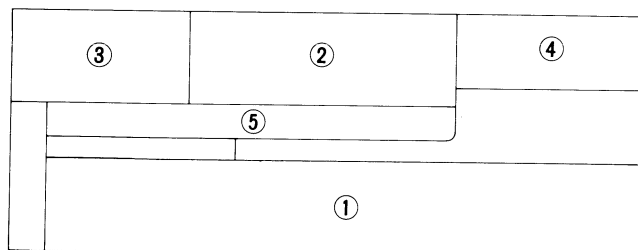


Fig. 18

#### Note (1):

The specific symbols (赤, 黒, 白, ... etc.) on a surface of above P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly of P.C. Board at the factory.

- ① TXX-268-1 : Equalizer and Switch P.C. Board Ass'y
- ② TXX-268 ☐ -2: Pin-jack P.C. Board Ass'y
- ③ TXX-268-3 : S.E.A. (Sound Effect Amp.) P.C. Board Ass'y
- ④ TXX-268-4 : Balance Control P.C. Board Ass'y
- ⑤ TXX-268-5 : LED Indicator P.C. Board Ass'y

#### Note (2):

In ☐ should be indicated an area code according to table below before placing an order.

| Areas                                                    | P.C. Board Ass'y                      |
|----------------------------------------------------------|---------------------------------------|
| U.S.A., Canada, U.S. Military Market and Other Countries | TXX-268 <input type="checkbox"/> A -2 |
| U.K., Australia and Europe                               | TXX-268 <input type="checkbox"/> B -2 |

### Transistors

| Item No. | Part Number  | Rating |         | Description |         |
|----------|--------------|--------|---------|-------------|---------|
|          |              | Pc     | fT      |             | Maker   |
| X401     | 2SA872AV(E)  | 0.3 W  | 120 MHz | Silicon     | Hitachi |
| X402     | 2SA872AV(E)  | "      | "       | "           | "       |
| X403     | 2SC1775AV(F) | 0.2 W  | 200 MHz | "           | "       |
| X404     | 2SC1775AV(F) | "      | "       | "           | "       |
| X405     | 2SD438(D,E)  | 0.75 W | 100 MHz | "           | Sanyo   |
| X406     | 2SD438(D,E)  | "      | "       | "           | "       |

### Integrated Circuits

| Item No. | Part Number | Rating |  | Description |         |
|----------|-------------|--------|--|-------------|---------|
|          |             | Pc     |  |             | Maker   |
| IC501    | HA 1457     | 0.5 W  |  | IC          | Hitachi |
| IC502    | HA 1457     | "      |  | "           | "       |

### Diodes

| Item No. | Part Number | Rating | Description |            |
|----------|-------------|--------|-------------|------------|
|          |             |        |             | Maker      |
| D471     | SLB-26UR    |        | LED         | Toyo Dengu |
| D472     | SLB-26GG    |        | "           | "          |
| D473     | SLB-26GG    |        | "           | "          |
| D474     | SLB-26UR    |        | "           | "          |
| D475     | SLB-26UR    |        | "           | "          |
| D476     | SLB-26UR    |        | "           | "          |
| D477     | SLB-26UR    |        | "           | "          |
| D478     | SLB-26UR    |        | "           | "          |
| D479     | SLB-26UR    |        | "           | "          |
| D480     | SLB-26UR    |        | "           | "          |
| D481     | SLB-26UR    |        | "           | "          |
| D482     | SLB-26UR    |        | "           | "          |
| D483     | SLB-26GG    |        | "           | "          |
| D484     | SLB-26UR    |        | "           | "          |
| D491     | 1S2076-31   |        | Silicon     | Hitachi    |
| D499     | 1S2076-31   |        | "           | "          |

## Capacitors

| Item No. | Part Number  | Rating         |       | Description  |
|----------|--------------|----------------|-------|--------------|
| C401     | QET61HR-475Z | 4.7 $\mu$ F    | 50 V  | Electrolytic |
| C402     | QET61HR-475Z | "              | "     | "            |
| C403     | QET60JR-227Z | 220 $\mu$ F    | 6.3 V | "            |
| C404     | QET60JR-227Z | "              | "     | "            |
| C405     | QCS31HJ-101Z | 100 pF         | 50 V  | Ceramic      |
| C406     | QCS31HJ-101Z | "              | "     | "            |
| C407     | QCS31HJ-470Z | 47 pF          | "     | "            |
| C408     | QCS31HJ-470Z | "              | "     | "            |
| C409     | QET60JR-227Z | 220 $\mu$ F    | 6.3 V | Electrolytic |
| C410     | QET60JR-227Z | "              | "     | "            |
| C411     | QFM31HK-153Z | 0.015 $\mu$ F  | 50 V  | Mylar        |
| C412     | QFM31HK-153Z | "              | "     | "            |
| C413     | QFM31HK-472Z | 4700 pF        | "     | "            |
| C414     | QFM31HK-472Z | "              | "     | "            |
| C415     | QCS31HJ-471Z | 470 pF         | "     | Ceramic      |
| C416     | QCS31HJ-471Z | "              | "     | "            |
| C417     | QEZ0046-105  | 1 $\mu$ F      | "     | Electrolytic |
| C418     | QEZ0046-105  | "              | "     | "            |
| C419     | QET61HR-476Z | 47 $\mu$ F     | "     | "            |
| C420     | QET61HR-476Z | "              | "     | "            |
| C441     | QCF31HP-223Z | 0.022 $\mu$ F  | "     | Ceramic      |
| C442     | QCF31HP-103Z | 0.01 $\mu$ F   | "     | "            |
| C443     | QCF31HP-103Z | "              | "     | "            |
| C444     | QCF31HP-103Z | "              | "     | "            |
| C451     | QCS31HJ-271Z | 270 pF         | "     | "            |
| C452     | QCS31HJ-271Z | "              | "     | "            |
| C453     | QFM31HK-273  | 0.027 $\mu$ F  | "     | Mylar        |
| C454     | QFM31HK-273  | "              | "     | "            |
| C455     | QFM31HK-822  | 0.0082 $\mu$ F | "     | "            |
| C456     | QFM31HK-822  | "              | "     | "            |
| —        | —            | —              | —     | —            |
| C531     | QET61HR-475Z | 4.7 $\mu$ F    | 50 V  | "            |
| C532     | QET61HR-475Z | "              | "     | "            |
| C533     | QET61AR-476Z | 47 $\mu$ F     | 10 V  | "            |
| C534     | QET61AR-476Z | "              | "     | "            |
| C535     | QCS31HJ-101Z | 100 pF         | 50 V  | Ceramic      |
| C536     | QCS31HJ-101Z | "              | "     | "            |
| C537     | QET61AR-476Z | 47 $\mu$ F     | 10 V  | Electrolytic |
| C538     | QET61AR-476Z | "              | "     | "            |
| C539     | QCS31HJ-820Z | 82 pF          | 50 V  | Ceramic      |
| C540     | QCS31HJ-820Z | "              | "     | "            |
| C541     | QCS31HJ-560Z | 56 pF          | "     | "            |
| C542     | QCS31HJ-560Z | "              | "     | "            |
| C543     | QCS31HJ-271Z | 270 pF         | "     | "            |
| C544     | QCS31HJ-271Z | "              | "     | "            |
| C545     | QEZ0046-475  | 4.7 $\mu$ F    | "     | Electrolytic |
| C546     | QEZ0046-475  | "              | "     | "            |
| C547     | QET61ER-476Z | 47 $\mu$ F     | 25 V  | "            |
| C548     | QET61ER-476Z | "              | "     | "            |

## Resistors

| Item No. | Part Number   | Rating         |          | Description                                                                                                                                                             |
|----------|---------------|----------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| R413     | QRD141J-331SY | 330 $\Omega$   | 1/4 W    | Carbon                                                                                                                                                                  |
| R414     | QRD141J-331SY | "              | "        | "                                                                                                                                                                       |
| R415     | QRG017J-222S  | 2.2 k $\Omega$ | 1 W      | Oxide Metal Film                                                                                                                                                        |
| R416     | QRG017J-222S  | "              | "        | "                                                                                                                                                                       |
| R417     | QRD141J-224SY | 220 k $\Omega$ | 1/4 W    | Carbon                                                                                                                                                                  |
| R418     | QRD141J-224SY | "              | "        | "                                                                                                                                                                       |
| R419     | QRD141J-153SY | 15 k $\Omega$  | "        | "                                                                                                                                                                       |
| R420     | QRD141J-153SY | "              | "        | "                                                                                                                                                                       |
| R421     | QRD141J-224SY | 220 k $\Omega$ | "        | "                                                                                                                                                                       |
| R422     | QRD141J-224SY | "              | "        | "                                                                                                                                                                       |
| R423     | QRD149J-560S  | 56 $\Omega$    | "        | <div style="display: flex; align-items: center;"> <div style="margin-right: 5px;"> <math>\triangle</math><br/> <math>\triangle</math> </div> TXX-268B-2<br/>only </div> |
| R424     | QRD149J-560S  | "              | "        |                                                                                                                                                                         |
| R441     | QRD141J-334SY | 330 k $\Omega$ | "        |                                                                                                                                                                         |
| R442     | QRD141J-334SY | "              | "        |                                                                                                                                                                         |
| R443     | QRD141J-104SY | 100 k $\Omega$ | "        | "                                                                                                                                                                       |
| R444     | QRD141J-104SY | "              | "        | "                                                                                                                                                                       |
| R451     | QRD141J-332SY | 3.3 k $\Omega$ | "        | "                                                                                                                                                                       |
| R452     | QRD141J-332SY | "              | "        | "                                                                                                                                                                       |
| R453     | QRD141J-332SY | "              | "        | "                                                                                                                                                                       |
| R454     | QRD141J-332SY | "              | "        | "                                                                                                                                                                       |
| R455     | QRD141J-564SY | 560 k $\Omega$ | "        | "                                                                                                                                                                       |
| R456     | QRD141J-564SY | "              | "        | "                                                                                                                                                                       |
| R457     | QRD141J-223SY | 22 k $\Omega$  | "        | "                                                                                                                                                                       |
| R458     | QRD141J-223SY | "              | "        | "                                                                                                                                                                       |
| R459     | QRD141J-564SY | 560 k $\Omega$ | "        | "                                                                                                                                                                       |
| R460     | QRD141J-564SY | "              | "        | "                                                                                                                                                                       |
| R471     | QRD141J-681SY | 680 $\Omega$   | "        | "                                                                                                                                                                       |
| R472     | QRD141J-102SY | 1 k $\Omega$   | "        | "                                                                                                                                                                       |
| R473     | QRD141J-102SY | "              | "        | "                                                                                                                                                                       |
| R474     | QRD141J-102SY | "              | "        | "                                                                                                                                                                       |
| R475     | QRD141J-221SY | 220 $\Omega$   | "        | "                                                                                                                                                                       |
| —        | —             | —              | —        | —                                                                                                                                                                       |
| —        | —             | —              | —        | —                                                                                                                                                                       |
| R506     | QVT9C2B-5G5E  | 150 k(B)       | Variable | Variable                                                                                                                                                                |
| R507     | QVT6C2W-6F5   | 250 k(W)       |          |                                                                                                                                                                         |
| R551     | QRD141J-184SY | 180 k $\Omega$ | 1/4 W    | Carbon                                                                                                                                                                  |
| R552     | QRD141J-184SY | "              | "        | "                                                                                                                                                                       |
| R553     | QRD141J-102SY | 1 k $\Omega$   | "        | "                                                                                                                                                                       |
| R554     | QRD141J-102SY | "              | "        | "                                                                                                                                                                       |
| R555     | QRD141J-222SY | 2.2 k $\Omega$ | "        | "                                                                                                                                                                       |
| R556     | QRD141J-222SY | "              | "        | "                                                                                                                                                                       |
| R557     | QRD141J-682SY | 6.8 k $\Omega$ | "        | "                                                                                                                                                                       |
| R558     | QRD141J-682SY | "              | "        | "                                                                                                                                                                       |
| R559     | QRD141J-103SY | 10 k $\Omega$  | "        | "                                                                                                                                                                       |
| R560     | QRD141J-103SY | "              | "        | "                                                                                                                                                                       |
| R561     | QRD141J-562SY | 5.6 k $\Omega$ | "        | "                                                                                                                                                                       |
| R562     | QRD141J-562SY | "              | "        | "                                                                                                                                                                       |
| R563     | QRD141J-102SY | 1 k $\Omega$   | "        | "                                                                                                                                                                       |
| R564     | QRD141J-102SY | "              | "        | "                                                                                                                                                                       |

## Resistors

| Item No. | Part Number   | Rating         |       | Description |
|----------|---------------|----------------|-------|-------------|
| R401     | QRD141J-222SY | 2.2 k $\Omega$ | 1/4 W | Carbon      |
| R402     | QRD141J-222SY | "              | "     | "           |
| R403     | QRD141J-563SY | 56 k $\Omega$  | "     | "           |
| R404     | QRD141J-563SY | "              | "     | "           |
| R405     | QRD141J-271SY | 270 $\Omega$   | "     | "           |
| R406     | QRD141J-271SY | "              | "     | "           |
| R407     | QRD141J-224SY | 220 k $\Omega$ | "     | "           |
| R408     | QRD141J-224SY | "              | "     | "           |
| R409     | QRD141J-473SY | 47 k $\Omega$  | "     | "           |
| R410     | QRD141J-473SY | "              | "     | "           |
| R411     | QRD141J-392SY | 3.9 k $\Omega$ | "     | "           |
| R412     | QRD141J-392SY | "              | "     | "           |

## Others

| Item No. | Part Number | Rating | Description          |
|----------|-------------|--------|----------------------|
| TP104    | EWS01B-001  |        | 11-pins Socket Ass'y |
| TP301    | EWS01B-013  |        | 8-pins Socket Ass'y  |
| TP501    | EWS017-016  |        | 7-pins Socket Ass'y  |
| TP701    | EWS013-046  |        | 3-pins Socket Ass'y  |
| TP801    | EWS015-024  |        | 5-pins Socket Ass'y  |
| TP802    | EWS012-031  |        | 2-pins Socket Ass'y  |
| TP803    | EWS013-036  |        | 3-pins Socket Ass'y  |
| TP901    | EWS013-037  |        |                      |
|          | E03591-42D  |        | 4-pins Jack Ass'y    |
|          | E03623-003  |        | DIN Socket           |
|          |             |        | (TXX-268B-2)         |
| (S)      | E300930-001 |        | LED Holder           |

## 10-(3) TXX-269 Logic and Counter P.C.Board Ass'y

The number of TXX-269 ☐ P.C. Board Ass'y varies according to the area employed.

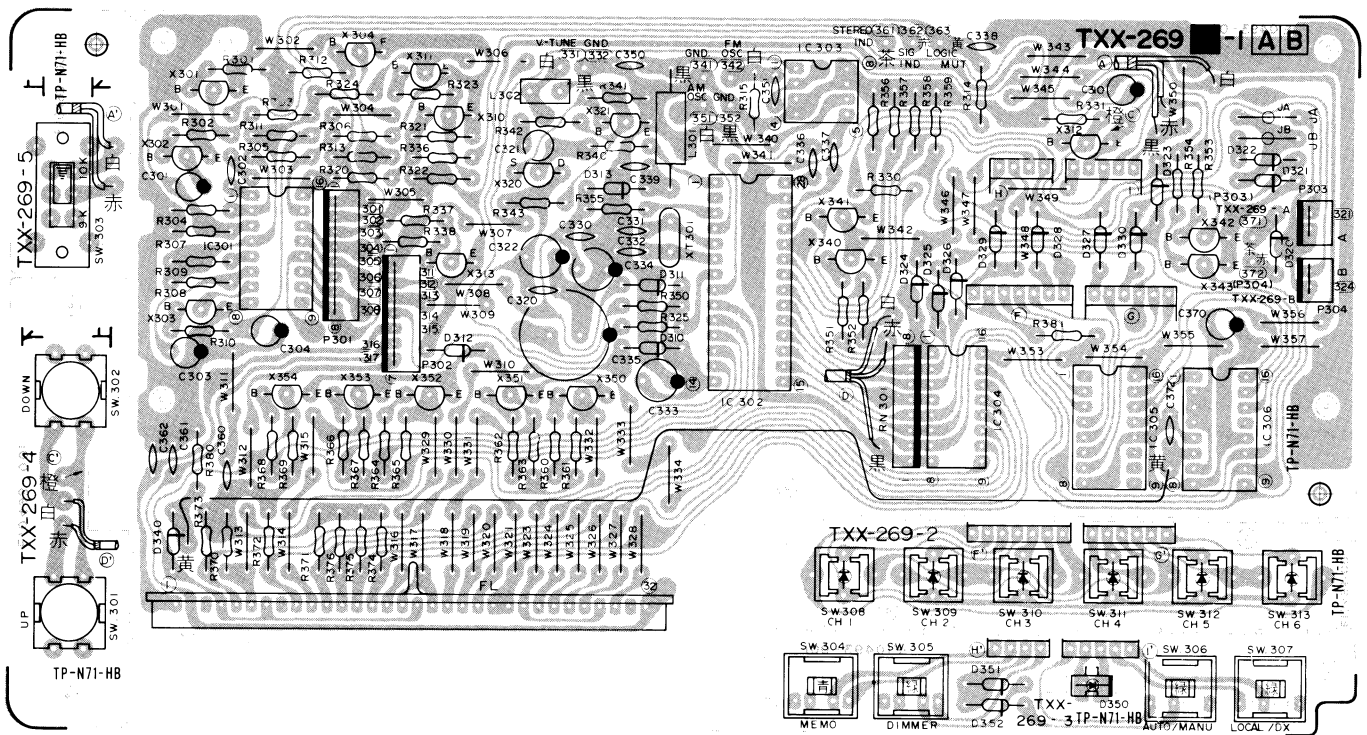


Fig. 19

Each Individual P.C. Board Location

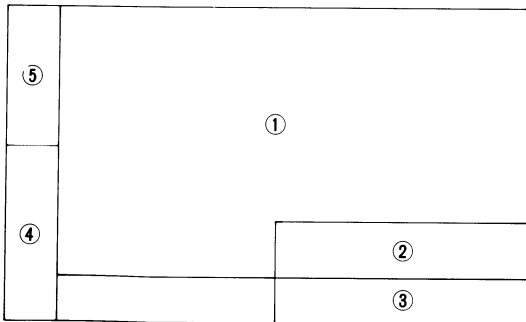


Fig. 20

### Note (1):

The specific symbols (赤, 黒, 白, ... etc.) on a surface of above P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly of P.C. Board at the factory.

### Transistors

| Item No. | Part Number   | Rating |         | Description |         |
|----------|---------------|--------|---------|-------------|---------|
|          |               | Pc     | fT      |             | Maker   |
| X301     | 2SC458(C,D)   | 0.2 W  | 230 MHz | Silicon     | Hitachi |
| X302     | 2SC458(C,D)   | "      | "       | "           | "       |
| X303     | 2SC458(C,D)   | "      | "       | "           | "       |
| X304     | 2SC458(C,D)   | "      | "       | "           | "       |
| X310     | 2SC458(C,D)   | "      | "       | "           | "       |
| X311     | 2SC458(C,D)   | "      | "       | "           | "       |
| X312     | 2SA1029(C,D)  | "      | 200 MHz | "           | "       |
| X313     | 2SA1029(C,D)  | "      | "       | "           | "       |
| X320     | 2SK105(F)     | 0.25 W | "       | F.E.T.      | NEC     |
| X321     | 2SC458(D)     | 0.2 W  | 230 MHz | Silicon     | Hitachi |
| X340     | 2SC458(C,D)   | "      | "       | "           | "       |
| X341     | 2SC458(C,D)   | "      | "       | "           | "       |
| X342     | 2SC458(C)     | "      | "       | "           | "       |
| X343     | 2SC458(C)     | "      | "       | "           | "       |
| X350     | 2SA872AV(D,E) | 0.3 W  | 120 MHz | "           | "       |

- ① TXX-269 ☐ -1: Logic and Counter P.C. Board Ass'y
- ② TXX-269-2 : Preset/Station Select Switch P.C. Board Ass'y
- ③ TXX-269-3 : Memory Switch P.C. Board Ass'y
- ④ TXX-269-4 : Up/Down Switch P.C. Board Ass'y
- ⑤ TXX-269-5 : 9 kHz/10 kHz Select Switch P.C. Board Ass'y

### Note (2):

In ☐ should be indicated an area code according to table below before placing an order.

| Areas                                       | P.C. Board Ass'y                    |
|---------------------------------------------|-------------------------------------|
| U.S.A., Canada and U.S. Military Market     | TXX-269 <input type="checkbox"/> -1 |
| U.K., Australia, Europe and Other Countries | TXX-269 <input type="checkbox"/> -1 |

### Transistors

| Item No. | Part Number   | Rating |         | Description |         |
|----------|---------------|--------|---------|-------------|---------|
|          |               | Pc     | fT      |             | Maker   |
| X351     | 2SA872AV(D,E) | 0.3 W  | 120 MHz | Silicon     | Hitachi |
| X352     | 2SA872AV(D,E) | "      | "       | "           | "       |
| X353     | 2SA872AV(D,E) | "      | "       | "           | "       |
| X354     | 2SA872AV(D,E) | "      | "       | "           | "       |

### Integrated Circuits

| Item No. | Part Number  | Rating |  | Description |         |
|----------|--------------|--------|--|-------------|---------|
|          |              | Pc     |  |             | Maker   |
| IC301    | LB1405       |        |  | IC          | Sanyo   |
| IC302    | UPD1703C-011 |        |  | "           | NEC     |
| IC303    | UPB553AC     |        |  | "           | "       |
| IC304    | TC5066BP     |        |  | "           | Toshiba |
| IC305    | HD74LS42P    |        |  | "           | Hitachi |
| IC306    | TC4035BP     |        |  | "           | Toshiba |

## Diodes

| Item No. | Part Number | Rating | Description | Maker     |
|----------|-------------|--------|-------------|-----------|
| D310     | 1S2076-31   |        | Silicon     | Hitachi   |
| D311     | 1S2076-31   |        | "           | "         |
| D312     | 1S2076-31   |        | "           | "         |
| D313     | 1S2076-31   |        | "           | "         |
| D320     | 1S2076-31   |        | "           | "         |
| D321     | 1S2076-31   |        | "           | "         |
| D322     | 1S2076-31   |        | "           | "         |
| D323     | 1S2076-31   |        | "           | "         |
| D324     | 1S2076-31   |        | "           | "         |
| D325     | 1S2076-31   |        | "           | "         |
| D326     | 1S2076-31   |        | "           | "         |
| D327     | 1S2076-31   |        | "           | "         |
| D328     | 1S2076-31   |        | "           | "         |
| D329     | 1S2076-31   |        | "           | "         |
| D330     | 1S2076-31   |        | "           | "         |
| D340     | 1S2076-31   |        | "           | "         |
| D350     | SLB-26GG    |        | LED         | ToyoDengu |
| D351     | 1S2076-31   |        | Silicon     | Hitachi   |
| D352     | 1S2076-31   |        | "           | "         |

## Coils

| Item No. | Part Number  | Rating | Description |
|----------|--------------|--------|-------------|
| L301     | E03695-001   |        | Choke Coil  |
| L302     | E03522-391KY |        | "           |

## Capacitors

| Item No. | Part Number  | Rating             | Description  |
|----------|--------------|--------------------|--------------|
| C301     | QET61ER-106Z | 10 $\mu$ F 25 V    | Electrolytic |
| C302     | QCS31HJ-470Z | 47 pF 50 V         | Ceramic      |
| C303     | QET61HR-105Z | 1 $\mu$ F "        | Electrolytic |
| C304     | QET61ER-106Z | 10 $\mu$ F 25 V    | "            |
| C310     | QET51CR-226  | 22 $\mu$ F 16 V    | "            |
| C320     | QCF31HP-223Z | 0.022 $\mu$ F 50 V | Ceramic      |
| C321     | QEZ0046-105  | 1 $\mu$ F "        | Electrolytic |
| C322     | QET61HR-476Z | 47 $\mu$ F "       | "            |
| C330     | QCF31HP-223Z | 0.022 $\mu$ F "    | Ceramic      |
| C331     | QCS21HJ-220  | 22 pF "            | "            |
| C332     | QCS21HJ-220  | " "                | "            |
| C333     | QET51CR-476  | 47 $\mu$ F 16 V    | Electrolytic |
| C334     | QET51CR-476  | " "                | "            |
| C335     | QET50JR-228H | 2200 $\mu$ F 6.3 V | "            |
| C336     | QCF31HP-102Z | 1000 pF 50 V       | Ceramic      |
| C337     | QCF31HP-102Z | " "                | "            |
| C338     | QCF31HP-223Z | 0.022 $\mu$ F "    | "            |
| C339     | QCF21HP-223  | " "                | "            |
| C350     | QCF31HP-223Z | " "                | "            |
| C351     | QCS31HJ-330Z | 33 pF "            | "            |
| C360     | QET51VR-107  | 100 $\mu$ F 35 V   | Electrolytic |
| C361     | QFM31HK-223  | 0.022 pF 50 V      | Mylar        |
| C362     | QFM31HK-223  | " "                | "            |
| C370     | QET51ER-106  | 10 $\mu$ F 25 V    | Electrolytic |
| C372     | QCS21HJ-330  | 33 pF 50 V         | Ceramic      |

## Resistors

| Item No. | Part Number   | Rating              | Description |
|----------|---------------|---------------------|-------------|
| R301     | QRD141J-333SY | 33 k $\Omega$ 1/4 W | Carbon      |
| R302     | QRD141J-333SY | " "                 | "           |
| R303     | QRD141J-223SY | 22 k $\Omega$ "     | "           |
| R304     | QRD141J-562SY | 5.6 k $\Omega$ "    | "           |
| R305     | QRD141J-563SY | 56 k $\Omega$ "     | "           |
| R306     | QRD141J183SY  | 18 k $\Omega$ "     | "           |

## Resistors

| Item No. | Part Number   | Rating              | Description |
|----------|---------------|---------------------|-------------|
| R307     | QRD141J-153SY | 15 k $\Omega$ 1/4 W | Carbon      |
| R308     | QRD141J-271SY | 270 $\Omega$ "      | "           |
| R309     | QRD141J-153SY | 15 k $\Omega$ "     | "           |
| R310     | QRD141J-104SY | 100 k $\Omega$ "    | "           |
| R311     | QRD141J-224SY | 220 k $\Omega$ "    | "           |
| R312     | QRD141J-473SY | 47 k $\Omega$ "     | "           |
| R313     | QRD141J-222SY | 2.2 k $\Omega$ "    | "           |
| R314     | QRD141J-103SY | 10 k $\Omega$ "     | "           |
| R315     | QRD141J-470SY | 47 $\Omega$ "       | "           |
| R320     | QRD141J-123SY | 12 k $\Omega$ "     | "           |
| R321     | QRD141J-123SY | " "                 | "           |
| R322     | QRD141J-273SY | 27 k $\Omega$ "     | "           |
| R323     | QRD141J-223SY | 22 k $\Omega$ "     | "           |
| R324     | QRD141J-473SY | 47 k $\Omega$ "     | "           |
| R325     | QRD141J-103SY | 10 k $\Omega$ "     | "           |
| R330     | QRD141J-103SY | " "                 | "           |
| R331     | QRD141J-271SY | 270 $\Omega$ "      | "           |
| R336     | QRD141J-332SY | 3.3 k $\Omega$ "    | "           |
| R337     | QRD141J-271SY | 270 $\Omega$ "      | "           |
| R338     | QRD141J-153SY | 15 k $\Omega$ "     | "           |
| R340     | QRD141J-472SY | 4.7 k $\Omega$ "    | "           |
| R341     | QRD141J-331SY | 330 $\Omega$ "      | "           |
| R342     | QRD141J-332SY | 3.3 k $\Omega$ "    | "           |
| R343     | QRD141J-682SY | 6.8 k $\Omega$ "    | "           |
| R350     | QRD141J-102SY | 1 k $\Omega$ "      | "           |
| R351     | QRD141J-105SY | 1 M $\Omega$ "      | "           |
| R352     | QRD141J-105SY | " "                 | "           |
| R353     | QRD141J-475SY | 4.7 M $\Omega$ "    | "           |
| R354     | QRD141J-185SY | 1.8 M $\Omega$ "    | "           |
| R355     | QRD141J-225SY | 2.2 M $\Omega$ "    | "           |
| R356     | QRD141J-223SY | 22 k $\Omega$ "     | "           |
| R357     | QRD141J-223SY | " "                 | "           |
| R358     | QRD141J-223SY | " "                 | "           |
| R359     | QRD141J-223SY | " "                 | "           |
| R360     | QRD141J-123SY | 12 k $\Omega$ "     | "           |
| R361     | QRD141J-104SY | 100 k $\Omega$ "    | "           |
| R362     | QRD141J-123SY | 12 k $\Omega$ "     | "           |
| R363     | QRD141J-104SY | 100 k $\Omega$ "    | "           |
| R364     | QRD141J-123SY | 12 k $\Omega$ "     | "           |
| R365     | QRD141J-104SY | 100 k $\Omega$ "    | "           |
| R366     | QRD141J-123SY | 12 k $\Omega$ "     | "           |
| R367     | QRD141J-104SY | 100 k $\Omega$ "    | "           |
| R368     | QRD141J-123SY | 12 k $\Omega$ "     | "           |
| R369     | QRD141J-104SY | 100 k $\Omega$ "    | "           |
| R370     | QRD141J-154SY | 150 k $\Omega$ "    | "           |
| R371     | QRD141J-154SY | " "                 | "           |
| R372     | QRD141J-154SY | " "                 | "           |
| R373     | QRD141J-154SY | " "                 | "           |
| R374     | QRD141J-154SY | " "                 | "           |
| R375     | QRD141J-154SY | " "                 | "           |
| R376     | QRD141J-154SY | " "                 | "           |
| R380     | QRD141J-104SY | 100 k $\Omega$ "    | "           |
| R381     | QRD141J-331SY | 330 $\Omega$ "      | "           |

## Others

| Item No. | Part Number | Rating             | Description             |
|----------|-------------|--------------------|-------------------------|
| P301     | QMV5005-008 |                    | 8-pins Plug Ass'y       |
| P302     | QMV5005-007 |                    | 7-pins Plug Ass'y       |
| P303     | QMV5005-002 |                    | 2-pins Plug Ass'y       |
| P304     | QMV5005-002 |                    | "                       |
| FL301    | ELU0001-003 |                    | Fluorescent Display     |
| RN301    | ERGS7XK-473 |                    | Resistor Network        |
| SW301    | ESP0001-003 |                    | Tact Switch             |
| SW302    | ESP0001-003 |                    | "                       |
| SW303    | QSS2201-002 | AM Channel Spacing | Slide Switch (TXX-269A) |
| SW304    | QSP0410-003 |                    | Push Switch             |

#### Others

| Item No. | Part Number  | Rating | Description          |
|----------|--------------|--------|----------------------|
| SW305    | QSP0410-004  |        | Push Switch          |
| SW306    | QSP0410-001  |        | "                    |
| SW307    | QSP0410-001  |        | "                    |
| SW308    | ESP0010-R01A |        | Test Switch with LED |
| SW309    | ESP0010-R01A |        | "                    |
| SW310    | ESP0010-R01A |        | "                    |
| SW311    | ESP0010-R01A |        | "                    |
| SW312    | ESP0010-R01A |        | "                    |
| SW313    | ESP0010-R01A |        | "                    |
| D350     |              |        |                      |

#### Others

| Item No. | Part Number | Rating | Description       |
|----------|-------------|--------|-------------------|
| TP101    | EWS012-027  |        | SKT Wire Ass'y    |
| TP102    | EWS012-028  |        | "                 |
| TP103    | EWS014-028  |        | "                 |
| TP201    | EWS012-029  |        | "                 |
| XT301    | E03737-010  |        | X'tal (4.5 MHz)   |
|          | EWR34A-20NN |        | Flat Cable Ass'y  |
|          | EWR35A-20NN |        | "                 |
|          | EWR36A-15NN |        | "                 |
|          | EWR37A-15NN |        | "                 |
|          | EWS012-030  |        | Socket Wire Ass'y |
|          | E67276-001  |        | LED Holder        |

### 10-(4) TAP-283 S.E.A. Control P.C.Board Ass'y

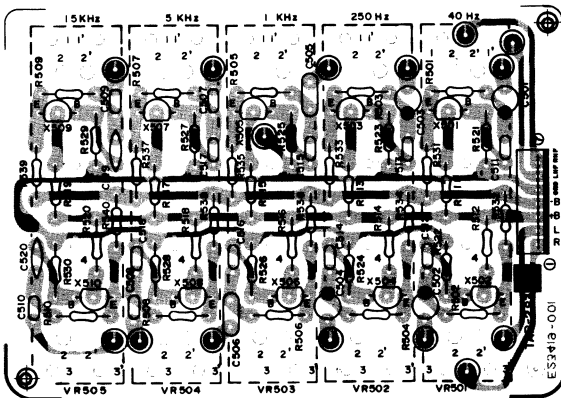


Fig. 21

#### Transistors

| Item No. | Part Number  | Rating |         | Description |         |
|----------|--------------|--------|---------|-------------|---------|
|          |              | Pc     | fT      | Silicon     | Maker   |
| X501     | 2SC1775AV(F) | 0.2 W  | 200 MHz | Silicon     | Hitachi |
| X502     | 2SC1775AV(F) | "      | "       | "           | "       |
| X503     | 2SC1775AV(F) | "      | "       | "           | "       |
| X504     | 2SC1775AV(F) | "      | "       | "           | "       |
| X505     | 2SC1775AV(F) | "      | "       | "           | "       |
| X506     | 2SC1775AV(F) | "      | "       | "           | "       |
| X507     | 2SC1775AV(F) | "      | "       | "           | "       |
| X508     | 2SC1775AV(F) | "      | "       | "           | "       |
| X509     | 2SC1775AV(F) | "      | "       | "           | "       |
| X510     | 2SC1775AV(F) | "      | "       | "           | "       |

#### Capacitors

| Item No. | Part Number  | Rating        |      | Description  |
|----------|--------------|---------------|------|--------------|
| C501     | QET61HR-475Z | 4.7 $\mu$ F   | 50 V | Electrolytic |
| C502     | QET61HR-475Z | "             | "    | "            |
| C503     | QET61HR-474Z | 0.47 $\mu$ F  | "    | "            |
| C504     | QET61HR-474Z | "             | "    | "            |
| C505     | QFM31HK-124Z | 0.12 $\mu$ F  | "    | Mylar        |
| C506     | QFM31HK-124Z | "             | "    | "            |
| C507     | QFM31HK-273Z | 0.027 $\mu$ F | "    | "            |
| C508     | QFM31HK-273Z | "             | "    | "            |
| C509     | QFM31HK-562Z | 5600 pF       | "    | "            |
| C510     | QFM31HK-562Z | "             | "    | "            |
| C511     | QFM31HK-223Z | 0.022 $\mu$ F | "    | "            |
| C512     | QFM31HK-223Z | "             | "    | "            |
| C513     | QFM31HK-822Z | 8200 pF       | "    | "            |
| C514     | QFM31HK-822Z | "             | "    | "            |
| C515     | QFM31HK-332Z | 3300 pF       | "    | "            |
| C516     | QFM31HK-332Z | "             | "    | "            |
| C517     | QFM31HK-102Z | 1000 pF       | "    | "            |
| C518     | QFM31HK-102Z | "             | "    | "            |
| C519     | QCS21HJ-681  | 680 pF        | "    | Ceramic      |
| C520     | QCS21HJ-681  | "             | "    | "            |

#### Resistors

| Item No. | Part Number   | Rating         |       | Description      |
|----------|---------------|----------------|-------|------------------|
| R501     | QRD141J-122SY | 1.2 k $\Omega$ | 1/4 W | Carbon           |
| R502     | QRD141J-122SY | "              | "     | "                |
| R503     | QRD141J-122SY | "              | "     | "                |
| R504     | QRD141J-122SY | "              | "     | "                |
| R505     | QRD141J-122SY | "              | "     | "                |
| R506     | QRD141J-122SY | "              | "     | "                |
| R507     | QRD141J-122SY | "              | "     | "                |
| R508     | QRD141J-122SY | "              | "     | "                |
| R509     | QRD141J-122SY | "              | "     | "                |
| R510     | QRD141J-122SY | "              | "     | "                |
| R511     | QRD141J-391SY | 390 $\Omega$   | "     | "                |
| R512     | QRD141J-391SY | "              | "     | "                |
| R513     | QRD141J-391SY | "              | "     | "                |
| R514     | QRD141J-391SY | "              | "     | "                |
| R515     | QRD141J-391SY | "              | "     | "                |
| R516     | QRD141J-391SY | "              | "     | "                |
| R517     | QRD141J-391SY | "              | "     | "                |
| R518     | QRD141J-391SY | "              | "     | "                |
| R519     | QRD141J-391SY | "              | "     | "                |
| R520     | QRD141J-391SY | "              | "     | "                |
| R521     | QRD141J-134SY | 130 k $\Omega$ | "     | "                |
| R522     | QRD141J-134SY | "              | "     | "                |
| R523     | QRD141J-913SY | 91 k $\Omega$  | "     | "                |
| R524     | QRD141J-913SY | "              | "     | "                |
| R525     | QRD141J-513SY | 51 k $\Omega$  | "     | "                |
| R526     | QRD141J-513SY | "              | "     | "                |
| R527     | QRD141J-333SY | 33 k $\Omega$  | "     | "                |
| R528     | QRD141J-333SY | "              | "     | "                |
| R529     | QRD141J-243SY | 24 k $\Omega$  | "     | "                |
| R530     | QRD141J-243SY | "              | "     | "                |
| R531     | QRD141J-682SY | 6.8 k $\Omega$ | "     | "                |
| R532     | QRD141J-682SY | "              | "     | "                |
| R533     | QRD141J-682SY | "              | "     | "                |
| R534     | QRD141J-682SY | "              | "     | "                |
| R535     | QRD141J-682SY | "              | "     | "                |
| R536     | QRD141J-682SY | "              | "     | "                |
| R537     | QRD141J-682SY | "              | "     | "                |
| R538     | QRD141J-682SY | "              | "     | "                |
| R539     | QRD141J-682SY | "              | "     | "                |
| R540     | QRD141J-682SY | "              | "     | "                |
| VR501    | QVZ5010-002   |                |       | Variable (40 Hz) |
| VR502    | QVZ5010-002   |                |       | " (250 Hz)       |
| VR503    | QVZ5010-002   |                |       | " (1 kHz)        |
| VR504    | QVZ5010-002   |                |       | " (5 kHz)        |
| VR505    | QVZ5010-002   |                |       | " (15 kHz)       |

#### Other

| Item No. | Part Number | Rating | Description    |
|----------|-------------|--------|----------------|
|          | QMV5005-007 |        | Pin Plug Ass'y |



## 10-(5) TFM-924 FM/AM Tuner P.C.Board Ass'y

The number of TFM-924 ☐ P.C. Board Ass'y varies according to the area employed.

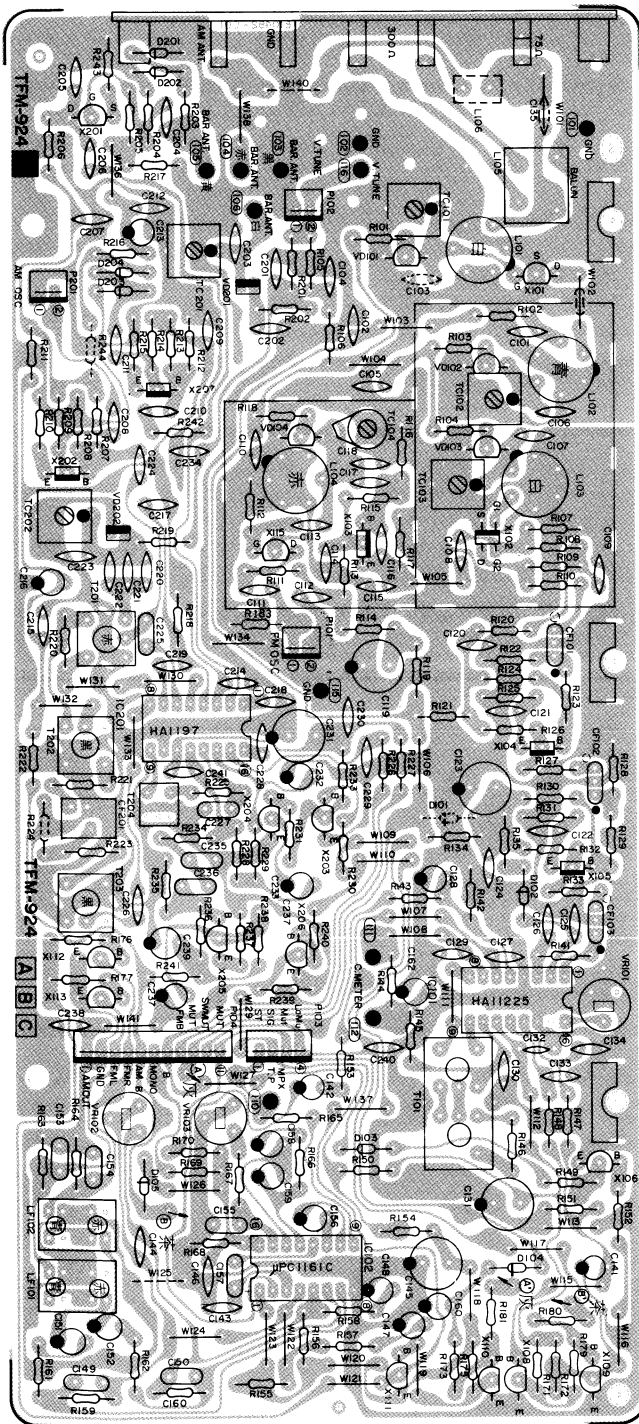


Fig. 22

### Note (1):

In ☐ should be indicated an area code ( A or B ) according to the table shown below.

| Areas                      | P.C. Board Ass'y                   |
|----------------------------|------------------------------------|
| Australia, U.K. and Europe | TFM-924 <input type="checkbox"/> B |
| All Other Countries        | TFM-924 <input type="checkbox"/> A |

### Note (2):

The specific symbols ( 赤 , 黒 , 白 , ... etc.) on a surface of above P.C. Board are actually unrelated to the repair service and are significant denotement in order to process the proper assembly of P.C. Board at the factory.

### Transistors

| Item No. | Part Number  | Rating |         | Description |         |
|----------|--------------|--------|---------|-------------|---------|
|          |              | Pc     | fT      |             | Maker   |
| X101     | 2SK168(E,F)  | 0.2 W  | 940 MHz | F.E.T.      | Hitachi |
| X102     | 3SK73(GR)    | 0.3 W  |         | "           | Toshiba |
| X103     | 2SC535(B)    | 0.1 W  |         | Silicon     | Hitachi |
| X104     | 2SC535(B,C)  | "      |         | "           | "       |
| X105     | 2SC535(B,C)  | "      | "       | "           | "       |
| X106     | 2SC458(C,D)  | 0.2 W  | 230 MHz | "           | "       |
| X108     | 2SC458(C,D)  | "      | "       | "           | "       |
| X109     | 2SC458(C,D)  | "      | "       | "           | "       |
| X110     | 2SC458(C,D)  | "      | "       | "           | "       |
| X111     | 2SA1029(C,D) | "      | 200 MHz | "           | "       |
| X112     | 2SD655(E,F)  | 0.5 W  | 250 MHz | "           | "       |
| X113     | 2SD655(E,F)  | "      | "       | "           | "       |
| X115     | 2SK165(E)    | 0.2 W  | 230 MHz | F.E.T.      | "       |
| X201     | 2SK105(H)    | 0.25 W |         | "           | NEC     |
| X202     | 2SC461(B,C)  | 0.2 W  | "       | Silicon     | Hitachi |
| X203     | 2SC458(C,D)  | "      | "       | "           | "       |
| X204     | 2SC458(C,D)  | "      | "       | "           | "       |
| X205     | 2SC458(C,D)  | "      | "       | "           | "       |
| X206     | 2SD655(E,F)  | 0.5 W  | 250 MHz | "           | "       |
| X207     | 2SC461(B,C)  | 0.2 W  | 230 MHz | "           | "       |

### Integrated Circuits

| Item No. | Part Number | Rating |  | Description |         |
|----------|-------------|--------|--|-------------|---------|
|          |             | Pc     |  | IC          | Maker   |
| IC101    | HA11225     | 0.59 W |  | IC          | Hitachi |
| IC102    | UPC1161C    |        |  | "           | NEC     |
| IC201    | HA1197      | 0.45 W |  | "           | Hitachi |

### Diodes

| Item No. | Part Number | Rating | Description   |         |
|----------|-------------|--------|---------------|---------|
|          |             |        |               | Maker   |
| D102     | 1S2076-31   |        | Silicon       | Hitachi |
| D103     | 1S2076-31   |        | "             | "       |
| D104     | 1S2076-31   |        | "             | "       |
| D105     | 1S2076-31   |        | "             | "       |
| D201     | 1S2076-31   |        | "             | "       |
| D202     | 1S2076-31   |        | "             | "       |
| D203     | 1S2076-31   |        | "             | "       |
| D204     | 1S2076-31   |        | "             | "       |
| VD101    | 1SV55       |        | V. Cap. Diode | "       |
| VD102    | 1SV55       |        | "             | "       |
| VD103    | 1SV55       |        | "             | "       |
| VD104    | 1SV55       |        | "             | "       |
| VD201    | KV1226      |        | "             | Toko    |
| VD202    | KV1226      |        | "             | "       |



## Coils & Transformers

| Item No. | Part Number | Rating | Description             |
|----------|-------------|--------|-------------------------|
| L101     | E03477-060  |        | RF Coil                 |
| L102     | E03477-061  |        | "                       |
| L103     | E03477-060  |        | "                       |
| L104     | E03477-050  |        | "                       |
| L105     | E03177-005  |        | Balun Coil              |
| T101     | E03793-001  |        | FM Detector Transformer |
| T201     | E03079-45   |        | AM OSC                  |
| T202     | E03062-42   |        | AM IFT                  |
| T203     | E03062-42   |        | "                       |
| T204     | E03062-39   |        | "                       |

## Filters

| Item No. | Part Number | Rating | Description |
|----------|-------------|--------|-------------|
| CF101    | PC022       |        | Ceramic     |
| CF102    | PC022       |        | "           |
| CF103    | PC022       |        | "           |
| CF201    | E03613-021  |        | "           |
| LF101    | E03427-020  |        | "           |
| LF102    | E03427-020  |        | "           |

## Capacitors

| Item No. | Part Number  | Rating        |      | Description  |
|----------|--------------|---------------|------|--------------|
| C101     | QCF31HP-103Z | 0.01 $\mu$ F  | 50 V | Ceramic      |
| C102     | QCF31HP-103Z | "             | "    | "            |
| C104     | QCF31HP-223Z | 0.022 $\mu$ F | "    | "            |
| C105     | QCF31HP-223Z | "             | "    | "            |
| C106     | QCS31HJ-5R0Z | 5 pF          | "    | "            |
| C107     | QCS31HJ-5R0Z | "             | "    | "            |
| C108     | QCT25UJ-330Z | 33 pF         | "    | "            |
| C109     | QCF31HP-223Z | 0.022 $\mu$ F | 50 V | "            |
| C110     | QCF31HP-103Z | 0.01 $\mu$ F  | "    | "            |
| C111     | QCF31HP-103Z | "             | "    | "            |
| C112     | QCF31HP-103Z | "             | "    | "            |
| C113     | QCT25CH-2R0Z | 2 pF          | "    | "            |
| C114     | QCF31HP-103Z | 0.01 $\mu$ F  | 50 V | "            |
| C115     | QCT25UJ-150Z | 15 pF         | "    | "            |
| C116     | QCT25UJ-220Z | 22 pF         | "    | "            |
| C117     | QCT25UJ-100Z | 10 pF         | "    | "            |
| C119     | QET51CR-227  | 220 $\mu$ F   | 16 V | Electrolytic |
| C120     | QCF31HP-223Z | 0.022 $\mu$ F | 50 V | Ceramic      |
| C121     | QCF31HP-223Z | "             | "    | "            |
| C122     | QCF31HP-223Z | "             | "    | "            |
| C123     | QET61CR-476Z | 47 $\mu$ F    | 16 V | Electrolytic |
| C124     | QCF31HP-223Z | 0.022 $\mu$ F | 50 V | Ceramic      |
| C125     | QCF31HP-223Z | "             | "    | "            |
| C126     | QCF31HP-223Z | "             | "    | "            |
| C127     | QCS21HJ-330  | 33 pF         | "    | "            |
| C128     | QET61HR-225Z | 2.2 $\mu$ F   | "    | Electrolytic |
| C129     | QCF31HP-223Z | 0.022 $\mu$ F | "    | Ceramic      |
| C130     | QCF31HP-223Z | "             | "    | "            |
| C131     | QET51CR-227  | 220 $\mu$ F   | 16 V | Electrolytic |
| C132     | QCC21EM-473  | 0.047 $\mu$ F | 25 V | "            |
| C133     | QCF31HP-223Z | 0.022 $\mu$ F | 50 V | Ceramic      |
| C134     | QCF31HP-223Z | "             | "    | "            |
| C142     | QET61CR-226Z | 22 $\mu$ F    | 16 V | Electrolytic |
| C143     | QCS31HJ-471Z | 470 pF        | 50 V | Ceramic      |
| C144     | QCS31HJ-101Z | 100 pF        | "    | "            |
| C145     | QET51CR-227  | 220 $\mu$ F   | 16 V | Electrolytic |
| C146     | QCF31HP-223Z | 0.022 $\mu$ F | 50 V | Ceramic      |

## Capacitors

| Item No. | Part Number  | Rating        |      | Description                   |
|----------|--------------|---------------|------|-------------------------------|
| C147     | QET61ER-106Z | 10 $\mu$ F    | 25 V | Electrolytic                  |
| C148     | QET61ER-106Z | "             | "    | "                             |
| C149     | QFM31HJ-102Z | 1000 pF       | 50 V | Mylar (TFM-924B)              |
| C149     | QFM31HJ-152Z | 1500 pF       | "    | " (TFM-924A)                  |
| C150     | QFM31HJ-102Z | 1000 pF       | "    | " (TFM-924B)                  |
| C150     | QFM31HJ-152Z | 1500 pF       | "    | " (TFM-924A)                  |
| C151     | QET61HR-225Z | 2.2 $\mu$ F   | "    | Electrolytic                  |
| C152     | QET61HR-225Z | "             | "    | "                             |
| C153     | QFM31HK-182Z | 1800 pF       | "    | Mylar (TFM-924B)              |
| C153     | QFM31HK-272Z | 2700 pF       | "    | " (TFM-924A)                  |
| C154     | QFM31HK-182Z | 1800 pF       | "    | " (TFM-924B)                  |
| C154     | QFM31HK-272Z | 2700 pF       | "    | " (TFM-924A)                  |
| C155     | QFP31HJ-471  | 470 pF        | "    | "                             |
| C156     | QEB51HM-224  | 0.22 $\mu$ F  | "    | Low Leak Current Electrolytic |
| C157     | QFM31HK-473Z | 0.047 $\mu$ F | "    | Mylar                         |
| C158     | QEB51EM-335  | 3.3 $\mu$ F   | 25 V | Low Leak Current Electrolytic |
| C159     | QEB51HM-105  | 1 $\mu$ F     | 50 V | "                             |
| C160     | QEB51EM-475  | 4.7 $\mu$ F   | 25 V | "                             |
| C162     | QEB51HM-684  | 0.68 $\mu$ F  | 50 V | "                             |
| C201     | QCF31HP-223Z | 0.022 $\mu$ F | "    | Ceramic                       |
| C202     | QCF31HP-223Z | "             | "    | "                             |
| C203     | QCS31HJ-5R0Z | 5 pF          | "    | "                             |
| C204     | QCF31HP-223Z | 0.022 $\mu$ F | "    | "                             |
| C205     | QCS31HJ-470Z | 47 pF         | "    | "                             |
| C206     | QCF31HP-223Z | 0.022 $\mu$ F | "    | "                             |
| C207     | QCF31HP-223Z | "             | "    | "                             |
| C208     | QCF31HP-223Z | "             | "    | "                             |
| C209     | QCF31HP-223Z | "             | "    | "                             |
| C210     | QCF31HP-223Z | "             | "    | "                             |
| C211     | QCF31HP-223Z | "             | "    | "                             |
| C212     | QCF31HP-223Z | "             | "    | "                             |
| C213     | QET61HR-105Z | 1 $\mu$ F     | "    | Electrolytic                  |
| C214     | QCF31HP-223Z | 0.022 $\mu$ F | "    | Ceramic                       |
| C215     | QCF31HP-223Z | "             | "    | "                             |
| C216     | QET61CR-476Z | 47 $\mu$ F    | 16 V | Electrolytic                  |
| C217     | QCS31HJ-470Z | 47 pF         | 50 V | Ceramic                       |
| C218     | QCF31HP-223Z | 0.022 $\mu$ F | "    | "                             |
| C219     | QCF31HP-223Z | "             | "    | "                             |
| C220     | QCS31HJ-271Z | 270 pF        | "    | "                             |
| C221     | QCS31HJ-181Z | 180 pF        | "    | "                             |
| C222     | QCS31HJ-100Z | 10 pF         | "    | "                             |
| C223     | QCT25UJ-180Z | 18 pF         | "    | "                             |
| C224     | QCS31HJ-101Z | 100 pF        | 50 V | "                             |
| C225     | QFM31HK-103Z | 0.01 $\mu$ F  | "    | Mylar                         |
| C226     | QCF31HP-223Z | 0.022 $\mu$ F | "    | Ceramic                       |
| C227     | QFM31HK-102Z | 1000 pF       | "    | Mylar                         |
| C228     | QCC31EM-473Z | 0.047 $\mu$ F | 25 V | "                             |
| C229     | QCF31HP-223Z | 0.022 $\mu$ F | 50 V | Ceramic                       |
| C230     | QCF31HP-223Z | "             | "    | "                             |
| C231     | QET61CR-107Z | 100 $\mu$ F   | 16 V | Electrolytic                  |
| C232     | QET61HR-105Z | 1 $\mu$ F     | 50 V | "                             |
| C233     | QET61ER-106Z | 10 $\mu$ F    | 25 V | "                             |
| C234     | QCF31HP-223Z | 0.022 $\mu$ F | 50 V | Ceramic                       |
| C235     | QFM31HK-472Z | 4700 pF       | "    | Mylar                         |
| C236     | QFM31HK-333Z | 0.033 $\mu$ F | "    | "                             |
| C237     | QET61HR-105Z | 1 $\mu$ F     | "    | Electrolytic                  |
| C238     | QCF31HP-103Z | 0.01 $\mu$ F  | "    | Ceramic                       |
| C239     | QET61CR-476Z | 47 $\mu$ F    | 16 V | Electrolytic                  |
| C240     | QCF31HP-223Z | 0.022 $\mu$ F | 50 V | Ceramic                       |
| C241     | QCF31HP-223Z | "             | "    | "                             |
| TC101    | QAT2001-001  |               |      | Trimmer                       |
| TC102    | QAT2001-001  |               |      | "                             |
| TC103    | QAT2001-001  |               |      | "                             |
| TC104    | QAT3001-005  |               |      | "                             |
| TC201    | QAT2001-005  |               |      | "                             |
| TC202    | QAT2001-005  |               |      | "                             |

## Resistors

| Item No. | Part Number   | Rating |       | Description |
|----------|---------------|--------|-------|-------------|
| R101     | QRD141J-473SY | 47 kΩ  | 1/4 W | Carbon      |
| R102     | QRD141J-221SY | 220 Ω  | "     | "           |
| R103     | QRD141J-473SY | 47 kΩ  | "     | "           |
| R104     | QRD141J-473SY | "      | "     | "           |
| R105     | QRD141J-222SY | 2.2 kΩ | "     | "           |
| R106     | QRD141J-103SY | 10 kΩ  | "     | "           |
| R107     | QRD141J-222SY | 2.2 kΩ | "     | "           |
| R108     | QRD141J-563SY | 56 kΩ  | "     | "           |
| R109     | QRD141J-391SY | 390 Ω  | "     | "           |
| R110     | QRD141J-470SY | 47 Ω   | "     | "           |
| R111     | QRD141J-102SY | 1 kΩ   | "     | "           |
| R112     | QRD141J-105SY | 1 MΩ   | "     | "           |
| R113     | QRD141J-101SY | 100 Ω  | "     | "           |
| R114     | QRD141J-470SY | 47 Ω   | "     | "           |
| R115     | QRD141J-103SY | 10 kΩ  | "     | "           |
| R116     | QRD141J-103SY | "      | "     | "           |
| R117     | QRD141J-122SY | 1.2 kΩ | "     | "           |
| R118     | QRD141J-473SY | 47 kΩ  | "     | "           |
| R119     | QRD141J-221SY | 220 Ω  | "     | "           |
| R120     | QRD149J-220S  | 22 Ω   | "     | " ⚠         |
| R121     | QRD149J-220S  | "      | "     | " ⚠         |
| R122     | QRD141J-681SY | 680 Ω  | "     | "           |
| R123     | QRD141J-101SY | 100 Ω  | "     | "           |
| R124     | QRD141J-392SY | 3.9 kΩ | "     | "           |
| R125     | QRD141J-561SY | 560 Ω  | "     | "           |
| R126     | QRD141J-391SY | 390 Ω  | "     | "           |
| R127     | QRD141J-101SY | 100 Ω  | "     | "           |
| R128     | QRD141J-681SY | 680 Ω  | "     | "           |
| R129     | QRD141J-101SY | 100 Ω  | "     | "           |
| R130     | QRD141J-392SY | 3.9 kΩ | "     | "           |
| R131     | QRD141J-102SY | 1 kΩ   | "     | "           |
| R132     | QRD141J-391SY | 390 Ω  | "     | "           |
| R133     | QRD141J-101SY | 100 Ω  | "     | "           |
| R134     | QRD141J-221SY | 220 Ω  | "     | "           |
| R135     | QRD141J-103SY | 10 kΩ  | "     | "           |
| R141     | QRD141J-391SY | 390 Ω  | "     | "           |
| R142     | QRD141J-473SY | 47 kΩ  | "     | "           |
| R143     | QRD141J-123SY | 12 kΩ  | "     | "           |
| R144     | QRD141J-561SY | 560 Ω  | "     | "           |
| R145     | QRD141J-273SY | 27 kΩ  | "     | "           |
| R146     | QRD141J-332SY | 3.3 kΩ | "     | "           |
| R147     | QRD141J-222SY | 2.2 kΩ | "     | "           |
| R148     | QRD141J-563SY | 56 kΩ  | "     | "           |
| R149     | QRD141J-473SY | 47 kΩ  | "     | "           |
| R150     | QRD149J-330S  | 33 Ω   | "     | " ⚠         |
| R151     | QRD141J-563SY | 56 kΩ  | "     | "           |
| R152     | QRD141J-333SY | 33 kΩ  | "     | "           |
| R153     | QRD141J-563SY | 56 kΩ  | "     | "           |
| R154     | QRD149J-220S  | 22 Ω   | "     | " ⚠         |
| R155     | QRD141J-223SY | 22 kΩ  | "     | "           |
| R156     | QRD141J-223SY | "      | "     | "           |
| R157     | QRD141J-103SY | 10 kΩ  | "     | "           |
| R158     | QRD141J-103SY | "      | "     | "           |
| R159     | QRD141J-473SY | 47 kΩ  | "     | "           |
| R160     | QRD141J-473SY | "      | "     | "           |
| R161     | QRD141J-332SY | 3.3 kΩ | "     | "           |
| R162     | QRD141J-332SY | "      | "     | "           |
| R163     | QRD141J-682SY | 6.8 kΩ | "     | "           |
| R164     | QRD141J-682SY | "      | "     | "           |
| R165     | QRD141J-271SY | 270 Ω  | "     | "           |
| R166     | QRD141J-102SY | 1 kΩ   | "     | "           |
| R167     | QRD141J-163SY | 16 kΩ  | "     | "           |
| R168     | QRD141J-223SY | 22 kΩ  | "     | "           |
| R169     | QRD141J-333SY | 33 kΩ  | "     | "           |
| R170     | QRD141J-333SY | "      | "     | "           |
| R171     | QRD141J-103SY | 10 kΩ  | "     | "           |
| R172     | QRD141J-472SY | 4.7 kΩ | "     | "           |

## Registers

| Item No. | Part Number   | Rating |       | Description |
|----------|---------------|--------|-------|-------------|
| R173     | QRD141J-223SY | 22 kΩ  | 1/4 W | Carbon      |
| R175     | QRD141J-223SY | "      | "     | "           |
| R176     | QRD141J-563SY | 56 kΩ  | "     | "           |
| R177     | QRD141J-563SY | "      | "     | "           |
| R179     | QRD141J-223SY | 22 kΩ  | "     | "           |
| R180     | QRD141J-223SY | "      | "     | "           |
| R181     | QRD141J-224SY | 220kΩ  | "     | "           |
| R202     | QRD141J-103SY | 10 kΩ  | "     | "           |
| R203     | QRD141J-102SY | 1 kΩ   | "     | "           |
| R204     | QRD141J-105SY | 1 MΩ   | "     | "           |
| R205     | QRD141J-824SY | 820 kΩ | "     | "           |
| R206     | QRD141J-561SY | 560 Ω  | "     | "           |
| R207     | QRD141J-334SY | 330 kΩ | "     | "           |
| R208     | QRD141J-683SY | 68 kΩ  | "     | "           |
| R209     | QRD141J-102SY | 1 kΩ   | "     | "           |
| R210     | QRD141J-221SY | 220 Ω  | "     | "           |
| R211     | QRD141J-221SY | "      | "     | "           |
| R212     | QRD141J-683SY | 68 kΩ  | "     | "           |
| R213     | QRD141J-334SY | 330 kΩ | "     | "           |
| R214     | QRD141J-562SY | 5.6 kΩ | "     | "           |
| R215     | QRD141J-331SY | 330 Ω  | "     | "           |
| R216     | QRD141J-561SY | 560 Ω  | "     | "           |
| R217     | QRD141J-104SY | 100 kΩ | "     | "           |
| R218     | QRD141J-152SY | 1.5 kΩ | "     | "           |
| R219     | QRD141J-473SY | 47 kΩ  | "     | "           |
| R220     | QRD141J-102SY | 1 kΩ   | "     | "           |
| R221     | QRD141J-221SY | 220 Ω  | "     | "           |
| R222     | QRD149J-101S  | 100 Ω  | "     | " ⚠         |
| R223     | QRD141J-561SY | 560 Ω  | "     | "           |
| R225     | QRD141J-331SY | 330 Ω  | "     | "           |
| R226     | QRD141J-562SY | 5.6 kΩ | "     | "           |
| R227     | QRD149J-101S  | 100 Ω  | "     | " ⚠         |
| R228     | QRD141J-103SY | 10 kΩ  | "     | "           |
| R229     | QRD141J-103SY | "      | "     | "           |
| R230     | QRD141J-563SY | 56 kΩ  | "     | "           |
| R231     | QRD141J-563SY | "      | "     | "           |
| R233     | QRD141J-103SY | 10 kΩ  | "     | "           |
| R234     | QRD141J-472SY | 4.7 kΩ | "     | "           |
| R235     | QRD141J-823SY | 82 kΩ  | "     | "           |
| R236     | QRD141J-274SY | 270 kΩ | "     | "           |
| R237     | QRD141J-102SY | 1 kΩ   | "     | "           |
| R238     | QRD141J-152SY | 1.5 kΩ | "     | "           |
| R239     | QRD141J-563SY | 56 kΩ  | "     | "           |
| R240     | QRD141J-103SY | 10 kΩ  | "     | "           |
| R241     | QRD141J-221SY | 220 Ω  | "     | "           |
| R242     | QRD141J-472SY | 4.7 kΩ | "     | "           |
| VR101    | QVP4A0B-473   | 47 kΩ  |       | Variable    |
| VR102    | QVP4A0B-474   | 470 kΩ |       | "           |
| VR103    | QVP4A0B-472   | 4.7 kΩ |       | "           |

## Others

| Item No. | Part Number | Rating | Description        |
|----------|-------------|--------|--------------------|
|          | E03572-021  |        | Antenna Terminal   |
|          | E300847-001 |        | Shield Plate       |
|          | E300848-001 |        | "                  |
|          | E65396-001  |        | Ground Plate       |
|          | QMV5005-002 |        | 2-pins Plug Ass'y  |
|          | QMV5005-004 |        | 4-pins Plug Ass'y  |
|          | QMV5005-011 |        | 11-pins Plug Ass'y |

## 11. Accessories List

| Item No. | Part Number   | Description                          | Q'ty |
|----------|---------------|--------------------------------------|------|
| 1        | E30580-827A   | Instruction Book                     | 1    |
| 2        | See next page | Warranty Card                        | 1    |
| 3        | E03614-004    | FM Antenna                           | 1    |
| 4        | BT20042       | Service Procedures (for U.S.A. only) | 1    |
| 5        | E41202-2      | Envelope for Instruction Book        | 1    |

## 12. Packing Materials and Part Numbers

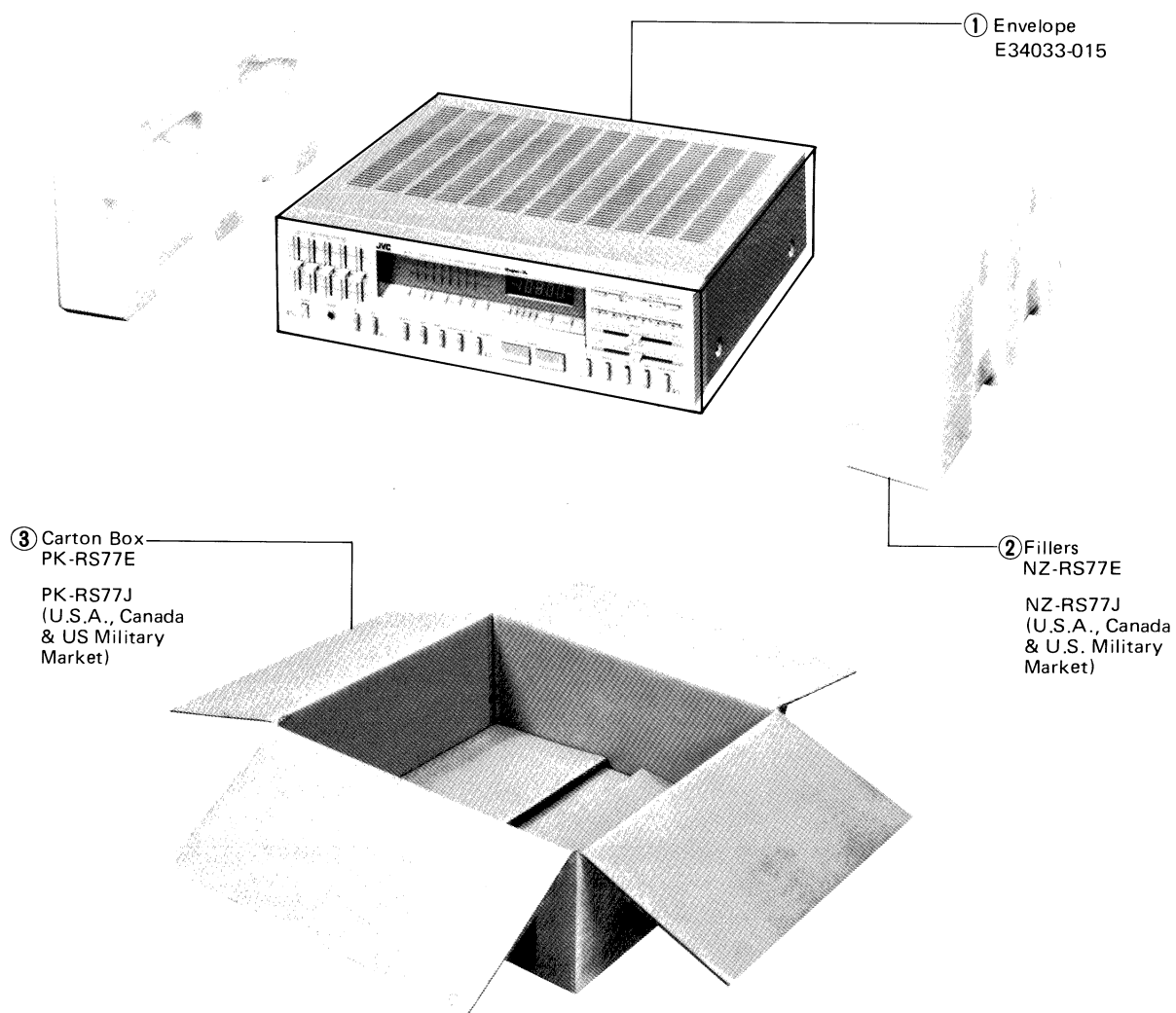


Fig. 23

**Section A: Power Transformer and Voltage Selector**

TXX-267C-2 POWER TRANSFORMER  
 33.3V RED, 0V 3A BLK, 33.3V RED, 9V 0.45A WHT, 0V YLW, 120V GRN, 120V ORG, 110V RED, 0V BRN, 1.5V YLW, 0V 0.1A BRN, 1.5V YLW, 1.5V YLW, TH FUSE

VOLTAGE SELECTOR CONNECTION  
 110V, 120V, 220V, 240V

AC 110V, 120V T5A  
 AC 220V, 240V T2.5A  
 50/60Hz

TXX-267C-8 AC OUTLET

**Section B: Tuner & PLL Logic Section**

TFM-924  
 TXX-269 P301  
 TXX-268-5  
 TXX-268-1  
 TXX-268-2  
 TXX-268-3  
 TXX-268-4  
 TXX-268-5

**Section C: AC Power Supply Section**

TXX-267EBS-2 POWER TRANSFORMER  
 33.3V RED, 0V 3A BLK, 33.3V RED, 9V 0.45A WHT, 0V YLW, 120V GRN, 120V ORG, 110V RED, 0V BRN, 1.5V YLW, 0V 0.1A BRN, 1.5V YLW, 1.5V YLW, TH FUSE

TXX-267-3 POWER SWITCH  
 TXX-267-4  
 TXX-267-5

**Section D: Tape and Sea Center Frequency**

TAP-283 SEA CENTER FREQUENCY  
 40Hz, 250Hz, 1KHz, 5KHz, 15KHz  
 VR501a, VR502a, VR503a, VR504a, VR505a  
 250K, 250K, 250K, 250K, 250K  
 C501, C502, C503, C504, C505, C506, C507, C508, C509, C510, C511, C512, C513, C514, C515, C516, C517, C518, C519, C520, C521, C522, C523, C524, C525, C526, C527, C528, C529, C530, C531, C532, C533, C534, C535, C536, C537, C538, C539, C540, C541, C542, C543, C544, C545, C546, C547, C548, C549, C550, C551, C552, C553, C554, C555, C556, C557, C558, C559, C560, C561, C562, C563, C564, C565, C566, C567, C568, C569, C570, C571, C572, C573, C574, C575, C576, C577, C578, C579, C580, C581, C582, C583, C584, C585, C586, C587, C588, C589, C590, C591, C592, C593, C594, C595, C596, C597, C598, C599, C600, C601, C602, C603, C604, C605, C606, C607, C608, C609, C610, C611, C612, C613, C614, C615, C616, C617, C618, C619, C620, C621, C622, C623, C624, C625, C626, C627, C628, C629, C630, C631, C632, C633, C634, C635, C636, C637, C638, C639, C640, C641, C642, C643, C644, C645, C646, C647, C648, C649, C650, C651, C652, C653, C654, C655, C656, C657, C658, C659, C660, C661, C662, C663, C664, C665, C666, C667, C668, C669, C670, C671, C672, C673, C674, C675, C676, C677, C678, C679, C680, C681, C682, C683, C684, C685, C686, C687, C688, C689, C690, C691, C692, C693, C694, C695, C696, C697, C698, C699, C700, C701, C702, C703, C704, C705, C706, C707, C708, C709, C710, C711, C712, C713, C714, C715, C716, C717, C718, C719, C720, C721, C722, C723, C724, C725, C726, C727, C728, C729, C730, C731, C732, C733, C734, C735, C736, C737, C738, C739, C740, C741, C742, C743, C744, C745, C746, C747, C748, C749, C750, C751, C752, C753, C754, C755, C756, C757, C758, C759, C760, C761, C762, C763, C764, C765, C766, C767, C768, C769, C770, C771, C772, C773, C774, C775, C776, C777, C778, C779, C780, C781, C782, C783, C784, C785, C786, C787, C788, C789, C790, C791, C792, C793, C794, C795, C796, C797, C798, C799, C800, C801, C802, C803, C804, C805, C806, C807, C808, C809, C810, C811, C812, C813, C814, C815, C816, C817, C818, C819, C820, C821, C822, C823, C824, C825, C826, C827, C828, C829, C830, C831, C832, C833, C834, C835, C836, C837, C838, C839, C840, C841, C842, C843, C844, C845, C846, C847, C848, C849, C850, C851, C852, C853, C854, C855, C856, C857, C858, C859, C860, C861, C862, C863, C864, C865, C866, C867, C868, C869, C870, C871, C872, C873, C874, C875, C876, C877, C878, C879, C880, C881, C882, C883, C884, C885, C886, C887, C888, C889, C890, C891, C892, C893, C894, C895, C896, C897, C898, C899, C900, C901, C902, C903, C904, C905, C906, C907, C908, C909, C910, C911, C912, C913, C914, C915, C916, C917, C918, C919, C920, C921, C922, C923, C924, C925, C926, C927, C928, C929, C930, C931, C932, C933, C934, C935, C936, C937, C938, C939, C940, C941, C942, C943, C944, C945, C946, C947, C948, C949, C950, C951, C952, C953, C954, C955, C956, C957, C958, C959, C960, C961, C962, C963, C964, C965, C966, C967, C968, C969, C970, C971, C972, C973, C974, C975, C976, C977, C978, C979, C980, C981, C982, C983, C984, C985, C986, C987, C988, C989, C990, C991, C992, C993, C994, C995, C996, C997, C998, C999, C1000

**Parts List:**

|                                     |                             |       |                   |       |          |       |             |          |              |          |              |
|-------------------------------------|-----------------------------|-------|-------------------|-------|----------|-------|-------------|----------|--------------|----------|--------------|
| TXX-267                             | TXX-268                     | SW001 | MAIN POWER        | SW405 | LOUDNESS | SW901 | POWER       | D701~710 | IS2076-31    | X401,402 | 2SA872AV(E)  |
| -1 SuperA AMP C.B. Assy             | -1 Switch EQ AMP C.B. Assy  | SW401 | SEA REC           | SW406 | AUX      | SW902 | SPK-1       | D801~804 | 30D2FA-S     | X403,404 | 2SC1775AV(F) |
| -2 Fuse, Power Supply C.B. Assy     | -2 Pin Jack C.B. Assy       | SW402 | TAPE-1            | SW407 | PHONO    | SW903 | SPK-2       | D805,806 | RD30EB3      | X405,406 | 2SD438D(E)   |
| -3 SPK. Stand by Switch C.B. Assy   | -3 SEA AMP C.B. Assy        | SW403 | TAPE-2            | SW408 | FM       | J901  | HEAD PHONES | D807,808 | RD15EB3      | X501~510 | 2SC1775AV(F) |
| -4 Power Indicator Driver C.B. Assy | -4 Volume Balance C.B. Assy | SW404 | MONO, FM MUTE OFF | SW409 | AM       |       |             | D811     | ERB12-02RKL1 | X701~704 | 2SC1775AV(F) |
| -5 Power Indicator LED C.B. Assy    | -5 LED Indicator C.B. Assy  |       |                   | SW410 |          |       |             |          |              |          |              |

| P.C. Board Ass'y | Description                                                        | Page |
|------------------|--------------------------------------------------------------------|------|
| TXX-267          | Main Amp., Power Supply and Other Functions Split P.C. Board Ass'y | 10   |
| TXX-268          | Equalizer, S.E.A. and Other Functions Split P.C. Board Ass'y       | 13   |
| TXX-269          | Logic and Counter P.C. Board Ass'y                                 | 15   |
| TAP-283          | S.E.A. Control P.C. Board Ass'y                                    | 17   |
| TFM-924          | FM/AM Tuner P.C. Board Ass'y                                       | 18   |

The design and contents are subject to change without notice.

**F**

R-S77  
No.2520



## C



**C**

**Notes:**

- R-S77  
No.2520



# 14. Parts List with Specified Numbers for Designated Areas

| Page | Item No. | Description                                                                                                                                 | U.S.A. and Canada                                          | U.K.                    | Australia and Europe                            | U.S. Military Market and Other Countries |
|------|----------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------|-------------------------------------------------|------------------------------------------|
| 5    | 4-(1)    | Power Transformer                                          | E03077-57B (U.S.A.)<br>E03077-57D (Canada)                 | E03077-57EBS            | E03077-57E                                      | E03077-57C                               |
| 5    | 4-(3)    | Voltage Selector                                           | —                                                          | —                       | —                                               | QSR0085-001U                             |
| 5    | 4-(3)    | Fuse Holder                                                | —                                                          | —                       | —                                               | QMG0301-003                              |
|      |          | Fuses — Primary  (Fuse-1)                                  | QMF61U1-5R0 (5.0 A, U.S.A.)<br>QMF60R1-5R0 (5.0 A, Canada) | QMF51A2-2R5LBS (T2.5 A) | QMF51A2-2R5L (T2.5 A)                           | QMF51A2-2R5L (T2.5 A)                    |
|      |          | — Secondary-1  (Fuse-2, 3)                                 | QMF61U1-6R0 (6.0A, U.S.A.)<br>QMF60R1-6R0 (6.0 A, Canada)  | QMF51A2-6R3SBS (T6.3 A) | QMF51A2-6R3S (T6.3 A)                           | QMF51A2-5R0S (T5.0 A)                    |
|      |          | —2  (Fuse-4)                                               | QMF60R1-2R3 (2.3 A, Canada)                                | QMF51A2-2R0LBS (T2.0 A) | QMF51A2-2R0L (T2.0 A)                           | —                                        |
|      |          | —3  (Fuse-5, 6)                                            | QMF60R1-R50 (0.5 A, Canada)                                | QMF51A2-R50LBS (T0.5 A) | QMF51A2-R50L (T0.5 A)                           | —                                        |
| 5    | 4-(3)    | Power Cord                                                 | QMP1200-200                                                | QMP9017-008BS           | QMP2560-244 (Australia)<br>QMP3900-200 (Europe) | QMP7600-250                              |
| 5    | 4-(3)    | Cord Stopper (Power)                                       | QHS3876-162                                                | QHS3876-162BS           | QHS3876-162                                     | QHS3876-162                              |
| 10   |          | AC Outlet                                                  | QMC0437-001                                                | —                       | —                                               | QMC0437-001                              |
| 13   |          | Main Amp., Power Supply & Other Function P.C. Board Ass'y  | TXX-267A (U.S.A.)<br>TXX-267B (Canada)                     | TXX-267EBS              | TXX-267D                                        | TXX-267C                                 |
| 15   |          | Equalizer, S.E.A. & Other Function P.C. Board Ass'y                                                                                         | TXX-268A                                                   | TXX-268B                | TXX-268B                                        | TXX-268A                                 |
|      |          | Logic & Counter P.C. Board Ass'y                                                                                                            | TXX-269A                                                   | TXX-269B                | TXX-269B                                        | TXX-269A                                 |
| 18   |          | FM/AM Tuner P.C. Board Ass'y                                                                                                                | TFM-924A                                                   | TFM-924B                | TFM-924B                                        | TFM-924A                                 |
|      |          | Front Panel Ass'y                                                                                                                           | EFP-RS77J                                                  | EFP-RS77E               | EFP-RS77E                                       | EFP-RS77J                                |
| 4    | 3-(1)    | Top Cover (Metal)                                                                                                                           | E23469-001                                                 | E23469-002              | E23469-002                                      | E23469-001 (U.S. Military Market)        |
| 4    | 3-(1)    | Cosmetic Board (L)                                                                                                                          | ED92944-001                                                | —                       | —                                               | E23469-002 (Other Countries)             |
| 4    | 3-(1)    | Cosmetic Board (R)                                                                                                                          | ED92944-002                                                | —                       | —                                               | ED92944-001 (U.S. Military Market)       |
| 5    | 4-(3)    | Rear Panel                                                                                                                                  | E23467-001                                                 | E23467-002              | E23467-002                                      | ED92944-002 (U.S. Military Market)       |
| 5    | 4-(3)    | Siemens Plug                                                                                                                                | —                                                          | —                       | —                                               | E23467-001                               |
| 24   | 12       | Warranty Card                                                                                                                               | BT20032B (U.S.A.)<br>BT20025C (Canada)                     | BT20013C                | BT20029B (Australia)                            | E04056                                   |
| 12   | R761,2   | Resistor                                                                                                                                    | QRX017J-100S                                               | QRZ0049-100             | QRZ0049-100                                     | BT20032B (U.S. Military Market)          |
| 13   | R899     | Carbon Resistor                                                                                                                             | QRD129J-2R7 (U.S.A.)                                       | —                       | —                                               | QRX017J-100S                             |
|      |          |                                                                                                                                             |                                                            |                         |                                                 | QRD129J-2R7                              |

 Safety Parts

## Power Specifications

| Areas              | Line Voltage & Frequency                   | Power Consumption |
|--------------------|--------------------------------------------|-------------------|
| U.S.A. and Canada  | AC 120 V, 60 Hz                            | 280 W 350 VA      |
| Europe             | AC 220 V~, 50 Hz                           | 590 W             |
| Australia and U.K. | AC 240 V~, 50 Hz                           | 590 W             |
| Other Areas        | AC 110/120/220/240 V~ Selectable, 50/60 Hz | 590 W             |