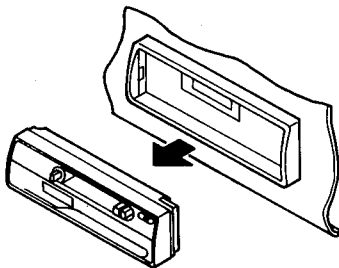
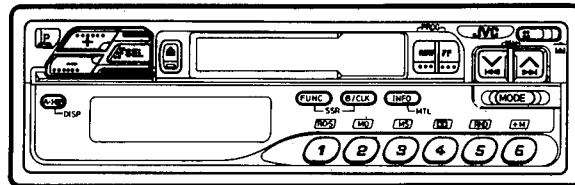


# JVC

## SERVICE MANUAL

### MULTI-CHANGER CONTROL RECEIVER

## KS-RT65R B/E/G/GE/GI



**DIGIFINE**  


#### Area Suffix


B..... U.K.  
 E..... Continental Europe  
 G..... Germany  
 GI..... Italy  
 GE..... Eastern Europe,  
 Austria and Switzerland

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## ■ Features

- Detachable Control Panel
- Radio Data System (RDS)
- High Sensitivity Tuner
- AM/FM Stereo PLL Synthesizer Tuner
- 18-Station Preset Tuning (FM-12, AM [MW/LW]-6)
- Seek/Manual Tuning
- Strong-station Sequential Memory (SSM)
- Special-preset Station Reserve (SSR)
- U-Turn Auto-Reverse Mechanism
- Metal Tape Compatible
- Dolby\* B Noise Reduction
- 4-Channel Amplifier System
- Maximum Power Output of 22 watts per channel (Front)/22 watts per channel (Rear)
- Active Hyper-Bass Sound
- Digital Clock Display
- Line Output Terminal

\* Dolby Noise Reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

## ■ Specifications

### AUDIO AMPLIFIER SECTION

Maximum Power Output: (Front) 22 W per channel  
(Rear) 22 W per channel  
Continuous Power Output (RMS): (Front) 8 W per channel into 4  $\Omega$ , 40 to 20,000 Hz at no more than 0.8% total harmonic distortion. (Rear) 8 W per channel into 4  $\Omega$ , 40 to 20,000 Hz at no more than 0.8% total harmonic distortion.  
Load Impedance: 4  $\Omega$  (4 to 8  $\Omega$  allowance)  
Tone Control Range  
Bass:  $\pm 10$  dB at 100 Hz  
Treble:  $\pm 10$  dB at 10 kHz  
Frequency Response: 40 to 20,000 Hz  
Signal-to-Noise Ratio: 70 dB  
Line-Out Level/Impedance: 0.5 V/20 k $\Omega$  load (250 nWb/m)

### RADIO SECTION

Frequency Range  
FM: 87.5 to 108.0 MHz  
AM: (MW) 522 to 1,620 kHz  
(LW) 144 to 279 kHz  
[FM Tuner]  
Usable Sensitivity: 12.1 dBf (1.1  $\mu$ V/75  $\Omega$ )  
50 dB Quieting Sensitivity: 16.3 dBf (1.8  $\mu$ V/75  $\Omega$ )  
Alternate Channel Selectivity: (400 kHz): 65 dB  
Frequency Response: 40 to 15,000 Hz  
Stereo Separation: 30 dB  
Capture Ratio: 1.5 dB  
[MW Tuner]  
Sensitivity: 20  $\mu$ V  
Selectivity: 35 dB  
[LW Tuner]  
Sensitivity: 50  $\mu$ V

### CASSETTE DECK SECTION

Wow & Flutter: 0.11% (WRMS)  
Fast-Wind Time: 100 sec. (C-60)  
Frequency Response (NR-OFF):  
50 to 18,000 Hz ( $\pm 3$  dB) (Metal/CrO<sub>2</sub> tape)  
50 to 16,000 Hz ( $\pm 3$  dB) (Normal tape)  
Signal-to-Noise Ratio (Dolby NR-ON): 60 dB  
(Dolby NR-OFF): 52 dB  
Stereo Separation: 40 dB

### GENERAL

Power Requirement  
Operating Voltage: DC 14.4 volts (11 to 16 volts allowance)  
Grounding System: Negative ground  
Dimensions (W x H x D)  
Installation Size: 178 x 50 x 151 mm  
(7-1/16" x 2" x 6")  
Panel Size: 190 x 58 x 18 mm  
(7-1/2" x 2-5/16" x 3/4")  
Gross Weight: 2.1 kg (4.7 lbs)

*Design and specifications subject to change without notice.*

# Instructions(Extracts)

## ■ Installation(IN-DASH Mounting)

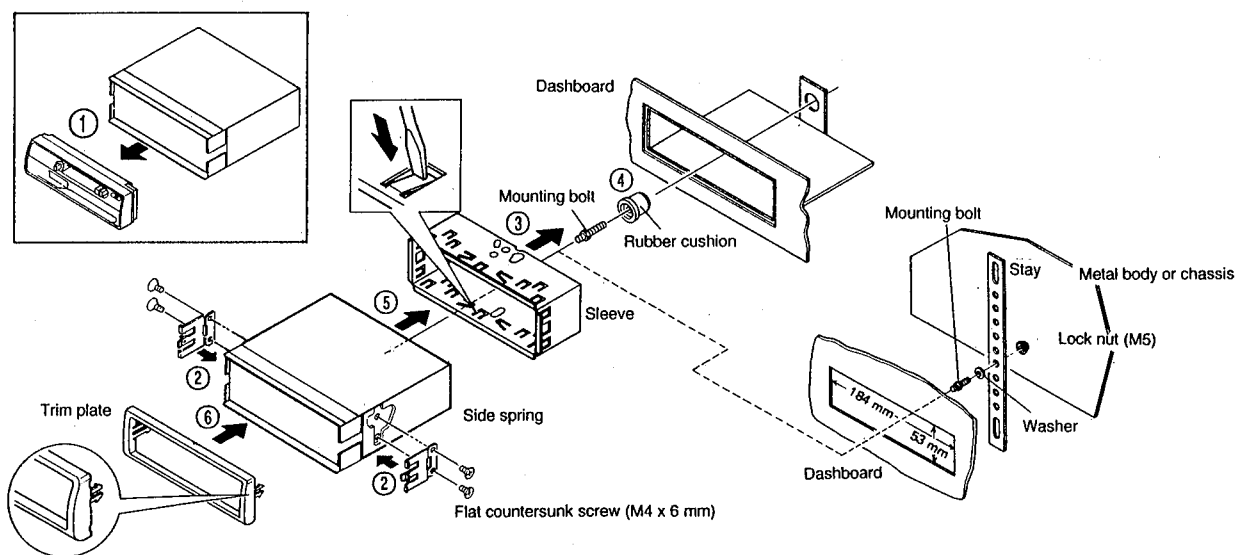
### IMPORTANT

- Before using this unit for the first time, press the Eject button fully, to reset the mechanism.

- The following illustration shows a typical installation. However, you should make adjustments corresponding to your specific car. If you have any questions or require information regarding installation kits, consult your JVC "IN-CAR ENTERTAINMENT" dealer.

- ① Slide the Control Panel Release (▲) switch to the right and remove the control panel.
- ② Attach the 2 side springs.
- ③ Install the sleeve in the dashboard.  
\* After the sleeve is correctly installed in the dashboard, bend the appropriate tabs to hold the sleeve firmly in place, as shown.
- ④ Fix the mounting bolt to the rear of the unit's body and place the rubber cushion over the end of the bolt.
- ⑤ Slide the unit into the sleeve until they are locked together.
- ⑥ Attach the trim plate.

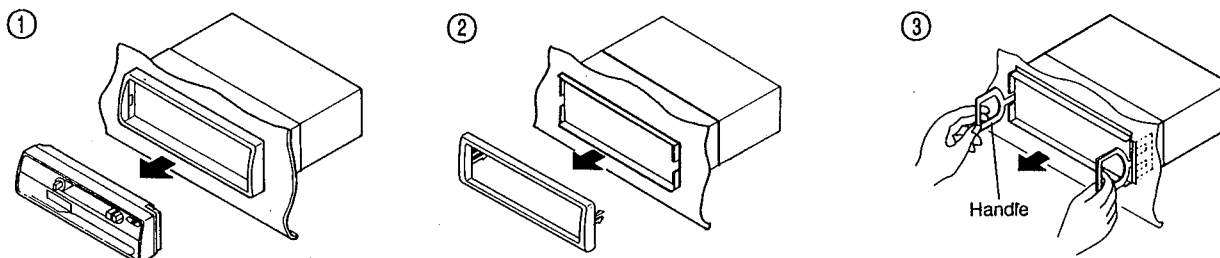
- Follow the numbers for mounting.



### Removing the unit

- Before removing the unit, release the rear section.

- ① Remove the control panel.
- ② Remove the trim plate.
- ③ Insert the 2 handles between the side springs and the sleeve, as shown. Then, while gently pulling the handles away from each other, slide out the unit.



## Electrical Connections

To prevent short circuits, we recommend that you disconnect the battery's negative terminal and make all electrical connections before installing the unit. If you are not sure how to install this unit correctly, have it installed by a qualified technician.

**Note:**  
This unit is designed for a 12-volt DC negative ground. If your vehicle does not have this system, a voltage inverter is required, which can be purchased at JVC "IN-CAR ENTERTAINMENT" dealers.

- Maximum input of the speakers should be more than 22 watts at the rear and 22 watts at the front, with an impedance of 4 to 8 ohms.

**CAUTIONS:**  
As this unit uses BTL (Balanced Transformerless) amplifier circuitry (floating ground system), please comply with the following:

1. Do NOT connect the black-lined speaker leads to a common point.
2. Do NOT connect the speaker leads to the metal body or chassis.
3. Cover the terminals of the leads that are NOT used with insulating tape, to prevent them from shorting.

- Be sure to ground this unit to the car's chassis.

### A. 4-Speaker Connections

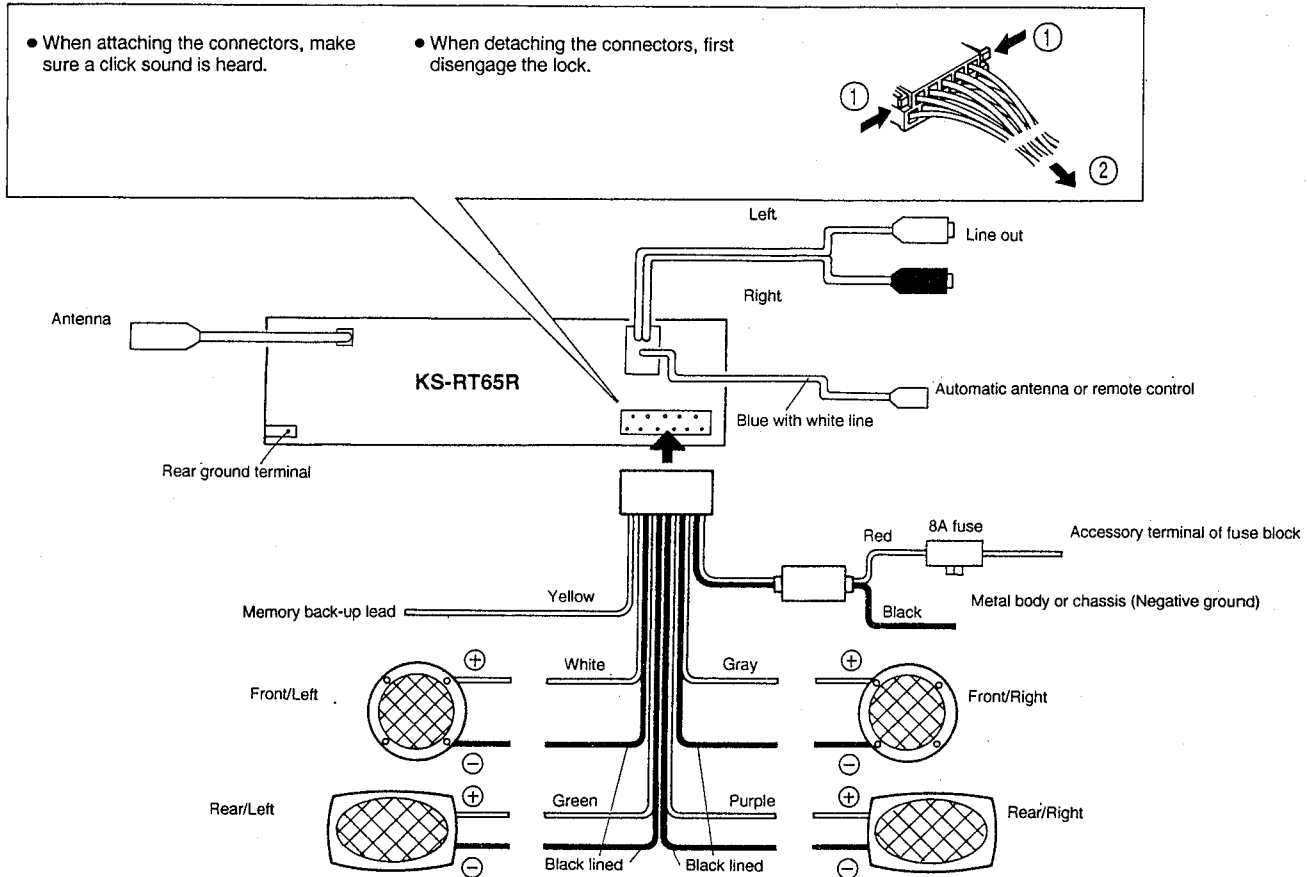


Fig a

### B. 4-Speaker connections when adding a power amplifier

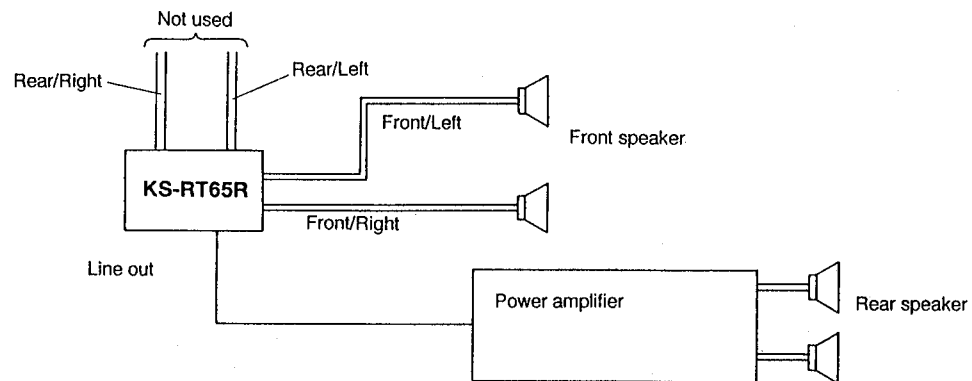


Fig b

### C. Line Terminal Connections (Line Out)

Since this unit has line-out terminals, an amplifier and other equipment can be used to upgrade your car stereo system.

- With an amplifier, connect this unit's line-out terminals to the amplifier's line-in terminals.

### D. Power Aerial (Automatic Antenna) Connections

This unit can perform automatic extension/retraction of a power aerial when the power is turned ON/OFF. The remote lead connection (blue with white lines) from the audio unit is via a separate relay to the aerial motor unit.

### E. Memory Back-Up Lead

Connect this lead to a LIVE power source (supplied even when vehicle ignition is OFF).

### F. Fader Control

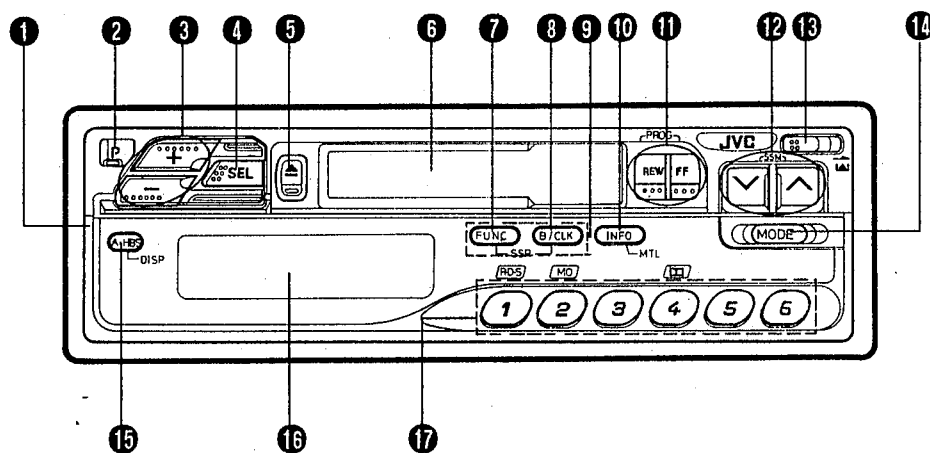
#### • When used in a 4-speaker system

Use this control to balance the volume levels of the front and rear speakers. Set Fader mode using the SEL button and press the + Level Control button to decrease the volume level of the rear speakers, and - to decrease that of the front speakers. The overall volume level can be adjusted in Volume mode. (See page 17.)

#### • When used in a 2-speaker system

Set this control to the center position ("00" is displayed).

## LOCATION OF CONTROLS



#### 1 Control panel

#### 2 POWER (P)/Attenuator (ATT) switch

POWER: Press to turn the power ON. Press for more than 1 second to turn the power OFF.

ATT: When this button is pressed during operation, the volume drops and the ATT indicator blinks. Press again to return to the original volume.

#### 3 Level Control buttons

Use to adjust the volume, bass, treble, fader and balance.

#### 4 Electronic Control Mode Select (SEL) button

#### 5 Eject (▲) button

#### 6 Cassette loading slot

#### 7 Function (FUNC) button

#### 8 Band (B)/Clock (CLK) button

#### 9 Special-preset Station Reserve. (SSR) buttons

#### 10 Traffic Information (INFO) button Metal Tape (MTL) button

#### 11 Program (PROG)/REW, FF buttons

#### 12 Tuning/SSM/Time Adjustment buttons Up frequency/Minute adjustment (▲) Down frequency/Hour adjustment (▼)

#### 13 Control Panel Release (▲) switch

#### 14 MODE button

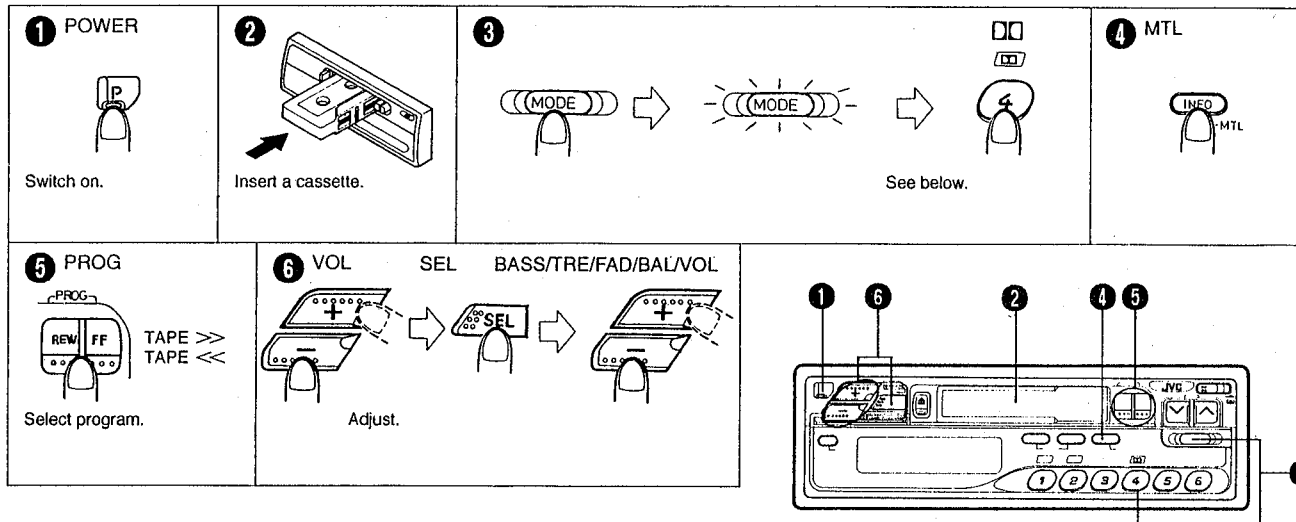
#### 15 Active Hyper-Bass Sound (A.HBS) button Display (DISP) button

#### 16 Display window

#### 17 Preset Station buttons (No.1 to No.6)

## ■ Tape operation

Operate in the order shown.



### ● DOLBY B NR button

Set the Dolby B NR (□□) button as required after the MODE button has been pressed and its red indicator is lit.

ON — (□□) indicator lights.  
 OFF — (□□) indicator goes out.

### ● Metal Tape button

Set the tape mode as required by pressing the MTL button for more than 1 second.

Metal/CrO<sub>2</sub> tape — MTL indicator lights.  
 Normal tape — MTL indicator goes out.

### How To Fast-Forward And Rewind Tapes

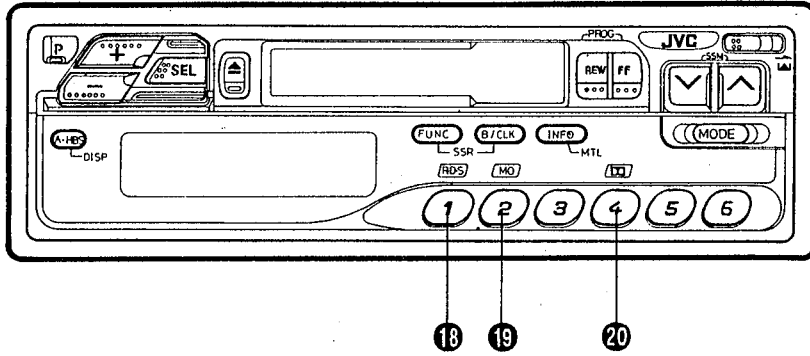
Press the FF button to fast-forward the side being played; when the tape end is detected, the tape is reversed and playback starts from the beginning of the other side.

Press the REW button to rewind the tape to its beginning, where playback restarts.

Lightly press the PROG button to start playback from the current position during fast-forward or rewind.

### Auto-Reverse Mechanism

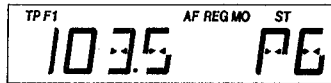
When the tape reaches its end, this mechanism automatically switches over to play back the other side. To listen to the other side of the tape during playback, press the PROG button. The change in direction can be checked in the Tape Direction indicator.



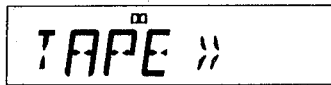
21



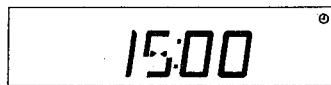
22



23



24



- Press the following buttons after the MODE button has been pressed and its red indicator is lit. Five seconds after completing the operation, the MODE button's red indicator goes out.

- 18 RDS button
- 19 MONO (MO) button
- 20 Dolby B NR (DB NR) button

- 21 Indicators (for Audio Control section)
  - Volume (VOL)
  - Bass (BASS)
  - Treble (TRE)
  - Fader (FAD)
  - Balance (BAL)
  - Attenuator (ATT)
  - Level indicator

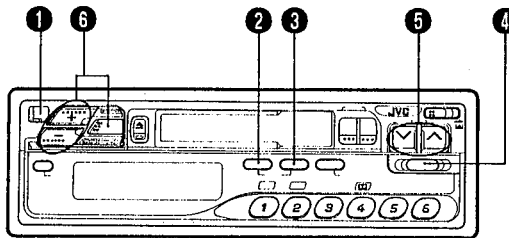
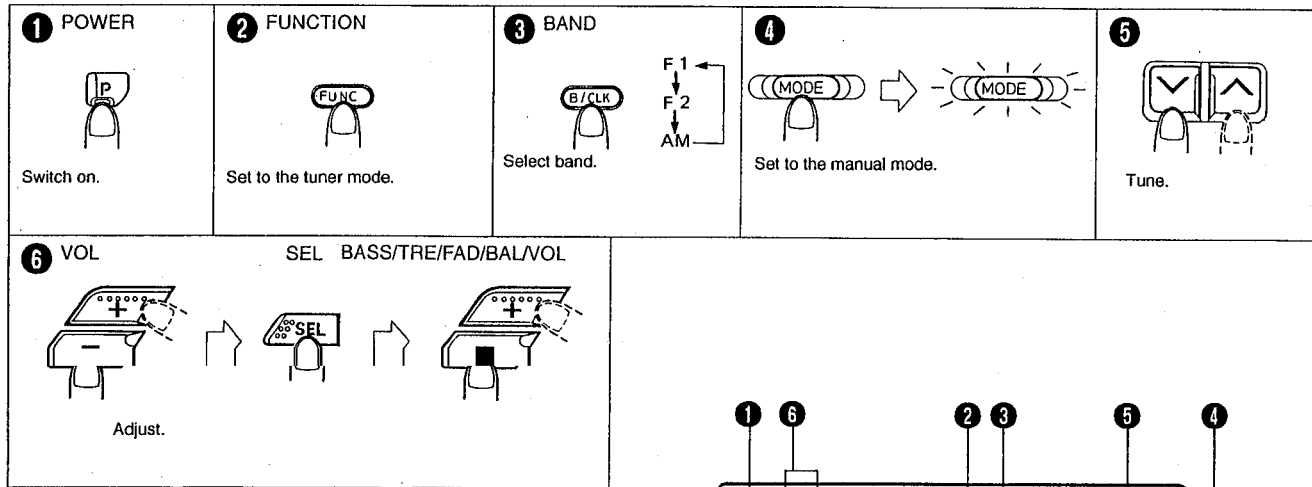
- 22 Indicators (for Tuner section)
  - Band (FM1 [F1]-FM2 [F2]-AM)
  - Radio frequency
  - Preset Station
  - Station name display
  - TP (Traffic Programme identification)
  - AF (Alternative Frequencies)
  - REG (Region)
  - FM Stereo (ST)
  - Mono (MO)
  - SSM
  - T-INFO
  - ALARM

- 23 Indicators (for Tape Deck section)
  - TAPE mode
  - Tape direction (TAPE>>, TAPE<<)
  - Dolby B (DB) NR
  - Metal (MTL)

- 24 Indicators (for other controls)
  - Time
  - (O)

## Radio Operation

Operate in the order shown.



### Manual Tuning

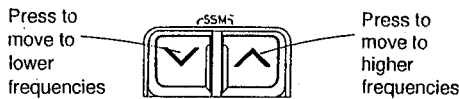
Set Manual mode using the MODE button. When the MODE button's red indicator is lit, the unit is in Manual mode. Then, by pressing the Tuning button, you can move up/down the frequency band. The band is scanned as long as either side of the button is pressed.

Frequency scan steps are as follows:

FM — in 50 kHz units  
 MW/LW — in 9 kHz units.

In AM operation, the frequency continuously moves from the MW (522 to 1,620 kHz) to LW (144 to 279 kHz) band and vice versa.

• When approx. 5 seconds have elapsed after completing manual tuning, the unit switches back to Seek mode and the MODE button's red indicator goes out.



### Seek Tuning

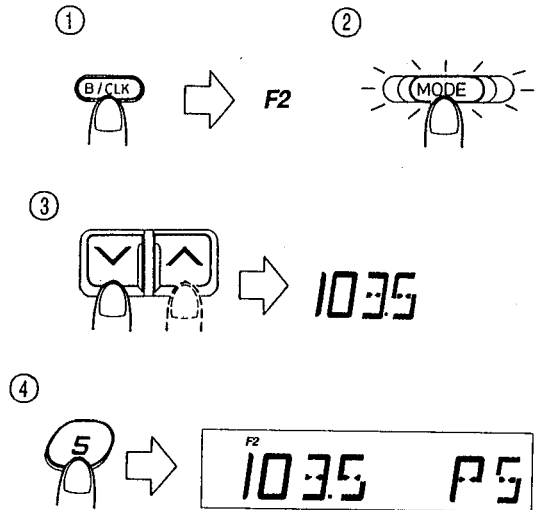
The unit is in Seek mode when the MODE button's red indicator goes out. Then, by pressing the  $\wedge$  or  $\vee$  button the unit tunes to the adjacent station with a higher or lower frequency. In AM operation, the frequency continuously moves from the MW to LW band and vice versa.

### Preset Button Tuning

#### How to Preset Stations

6 stations in each band (FM1, FM2 and AM [MW/LW]) can be preset as follows:

• Example (when presetting Preset Station button "5" of the FM2 band to an FM station at 103.5 MHz)



- ① Select the FM2 band using the Band (B) button.
- ② Set Manual mode.
- ③ Tune to the desired station.
- ④ Press Preset Station button "5" for more than 2 seconds. (When "P5" blinks in the Preset Station display, the station is preset.)



- Repeat the above procedure for the other 5 Preset Station buttons and other bands (FM1 and AM [MW/LW] ).

**Notes:**

- A previously preset station is erased when a new station is stored in memory.
- The preset stations are erased when the power supply to the memory circuit is interrupted during battery replacement, etc. When this occurs, preset the stations again.

**Preset Tuning**

- ① Select the band.
- ② Press the required Preset Station buttons (No.1 to No.6).

**Strong-Station Sequential Memory (SSM)**

This function searches for FM and AM (MW/LW) stations broadcasting strong signals. The 6 strongest stations are held in memory in the order of increasing frequency, and can be recalled with the Preset Station buttons (No.1 to No.6).

(Procedure)

- ① When the MODE button's red indicator goes out, press the SSM buttons (∨,∧) for more than 3 seconds.
- ② The strongest signals in the band you are listening to (FM1, FM2 and AM [MW/LW]) will be searched and selected automatically. These 6 stations are preset in the Preset Station buttons (No.1 to No.6), in the order of increasing frequency. (During this operation, "SSM" lights in the display.) The receiver then automatically tunes to the broadcast stored in Preset Station button "1".

**Note:**

Previously preset stations are canceled automatically when SSM is used.

**Mono Button**

When listening to FM, set the MO button to STEREO or MONO after the MODE button has been pressed and its red indicator is lit.

**Note:**

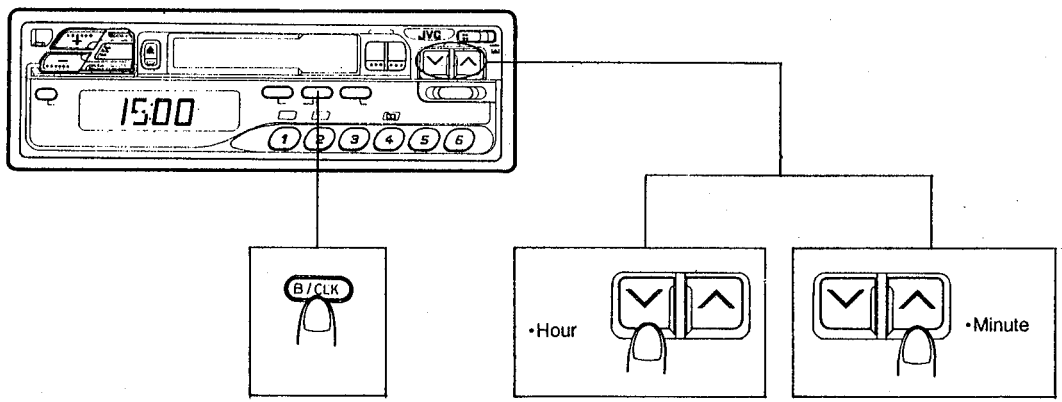
Set to MONO when a stereo FM broadcast is too noisy and cannot be heard satisfactorily.

## ■ Digital Clock Display

To select Time mode, press the CLK button for more than 1 second. When any operation button is pressed in Time mode, the display changes to indicate the source mode selected, and returns to Time mode after a few seconds. Press the CLK button again for more than 1 second to cancel Time mode.

### How To Adjust The Time

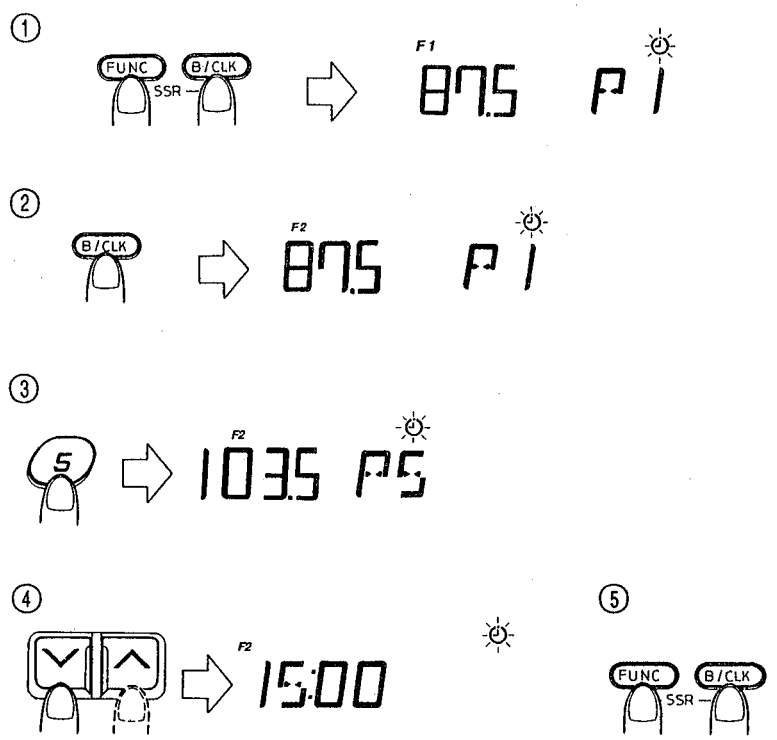
While pressing the CLK button, press the Hour Adjustment button (∨) to adjust the "hours", and press the Minute Adjustment button (∧) to adjust the "minutes".



## ■ Special-Preset Station Reserver (SSR)

The SSR (Special-preset Station Reserve) automatically tunes to any FM or AM preset program once a day, at a programmed time from any of the operating modes; tuner or tape. This function guarantees that you will not miss important information such as weather reports or traffic information, etc.

- Set the current time before using SSR. (See page 32.)
  - The station must be preset before using SSR. (See page 22.)
- Example: When setting the FM station which has been preset to Preset Station button (5) of the FM2 band to 15:00.



(Procedure)

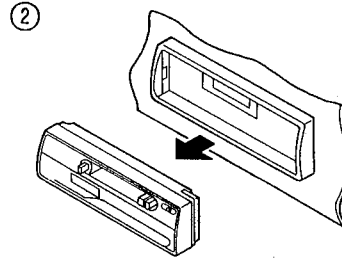
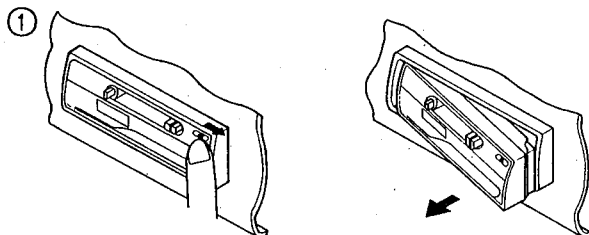
- ① While pressing the FUNC button, press the B/CLK button for more than 2 seconds to preset the program. ("⊖" indicator blinks.)
    - Perform the next operation while the "⊖" indicator is blinking.
  - ② Select the required band (i.e. FM2 in the example) using the B/CLK button.
  - ③ Select the required station (i.e. 5) which has been preset using the Preset Station button.
  - ④ Set the required time (i.e. 15:00) using the Time Adjustment buttons.
  - ⑤ Press the B/CLK button for more than 2 seconds while pressing the FUNC button, to preset SSR. (Presetting is completed when the preset band, frequency and time indicators blink and the "⊖" indicator lights.)
- If the "⊖" indicator stops blinking during presetting, perform the operation again from procedure ①.
  - While pressing the FUNC button, press the B/CLK button once to check the preset program.
  - Press the B/CLK button for more than 2 seconds while pressing the FUNC button to cancel the SSR mode. (The "⊖" indicator is goes out.)

**Notes:**

- Once SSR has been set, the start time and broadcast station are stored in the microprocessor. When changing the start time and/or broadcast station, perform procedures ① to ⑤ again.
- After setting SSR, if the preset station is changed, the renewed station data is stored as the program station of SSR.

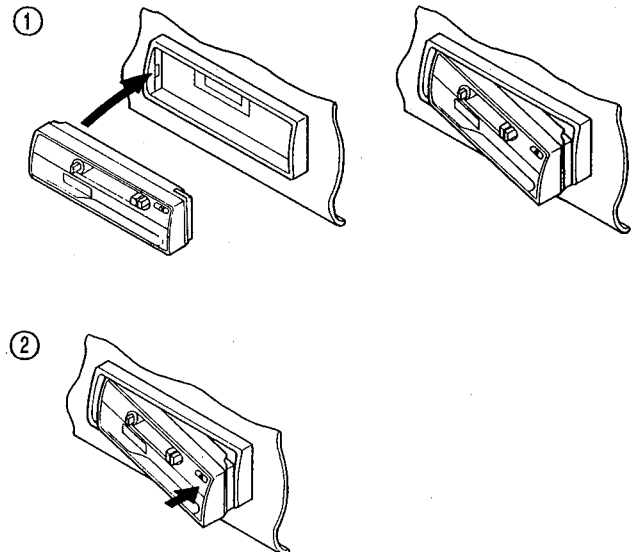
■ **To Detach The Control Panel**

- ① Slide the Control Panel Release (⏏) switch in the direction of the arrow to detach the control panel.
- ② Pull the control panel out of the main unit, as shown below.
  - Put the control panel in the provided case for protection.



■ **To Attach The Control Panel**

- ① Insert the left side of the control panel into the groove on the left side of the holder.
- ② Press the right side to set it correctly.



**Note:**

- Be careful not to damage the connector terminals when attaching/detaching the control panel or while the control panel is removed.

# 1 Location of Main Parts

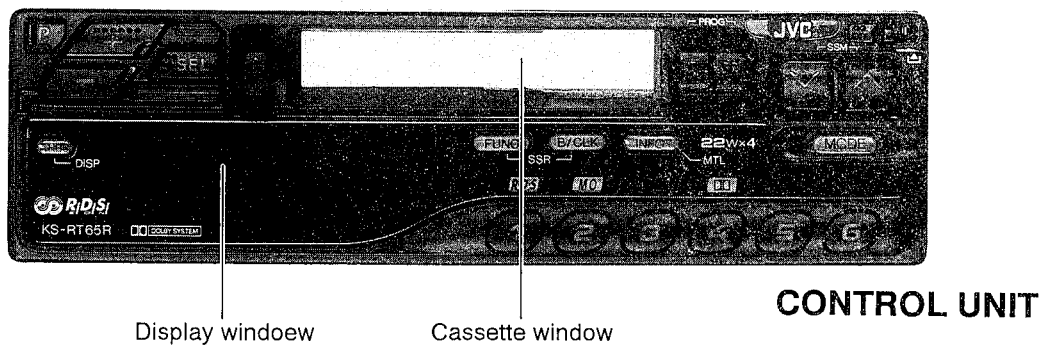
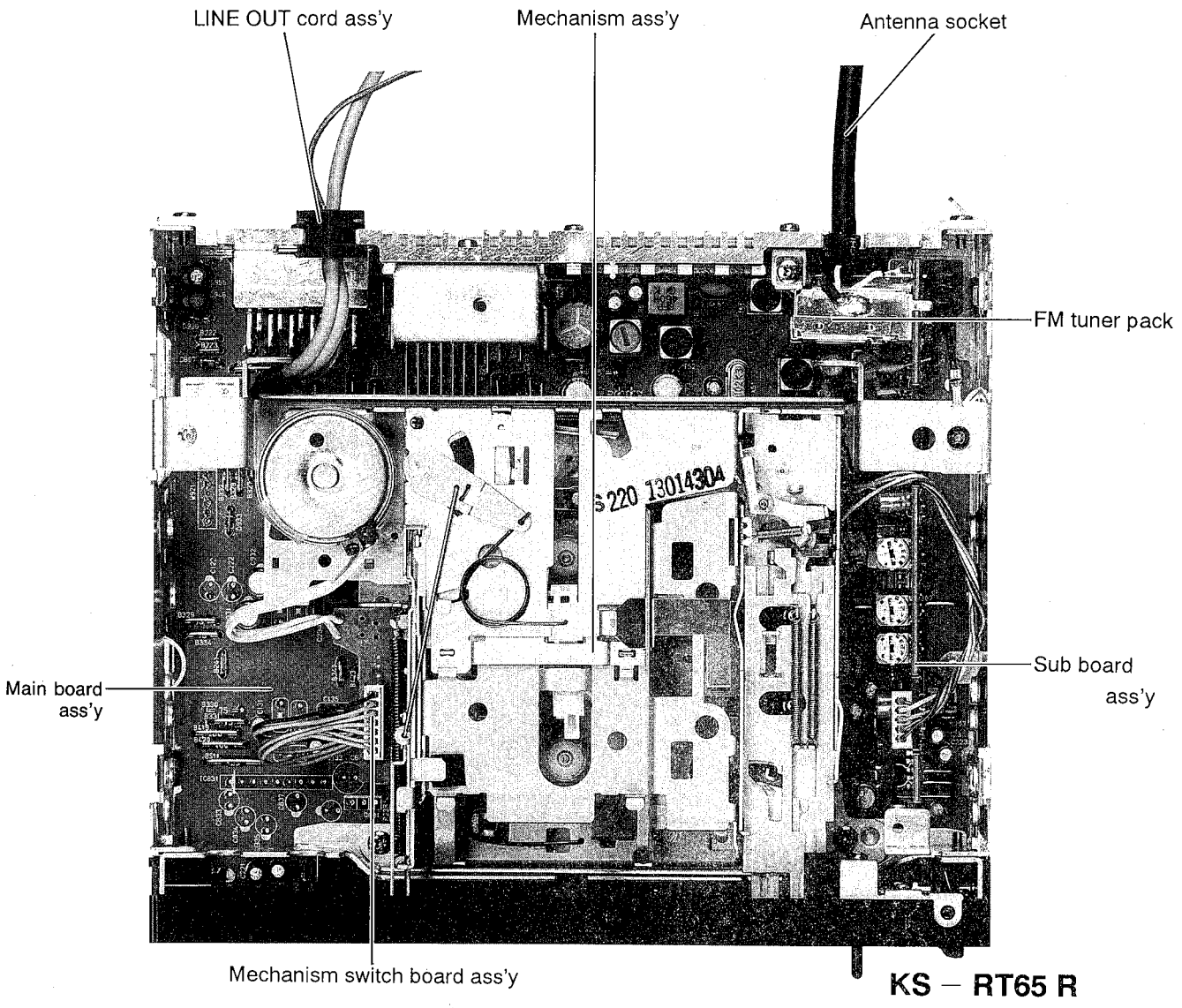


Fig 1 - 1

## 2 Removal of Main parts

### ■ Enclosure section

#### ◆ Top cover(see Fig.2-1)

1. Remove the two screws ① retaining the top cover from backward.
2. Remove the four claws A on the right and left side retaining the top cover.

#### ◆ Bottom cover(see Fig.2-1)

1. Remove the one screw ② retaining the bottom cover from backward.
2. Remove the four claws B on the right and left side retaining the bottom cover.

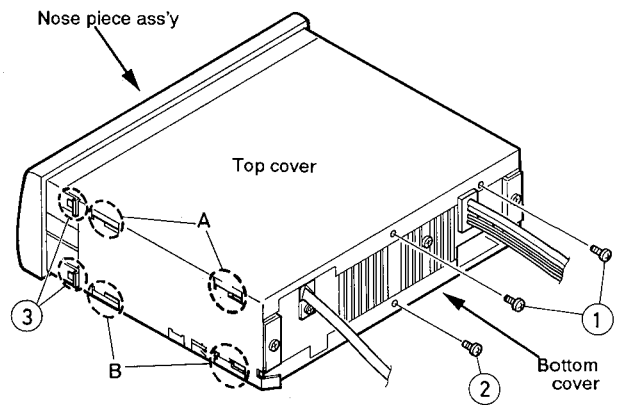


Fig. 2 - 1

#### ◆ Control unit(see Fig.2-2)

1. Remove the release switch knob by sliding to the right side.

#### ◆ nose piece ass'y(see Fig.2-1)

1. Remove the four claws C on the right and left side.
- ★ The nose piece ass'y is connected to the main p.c.board by a connector under the 『PROG』 button on the right side of the mechanism. Dismount the nose piece ass'y by pulling it in straight direction.

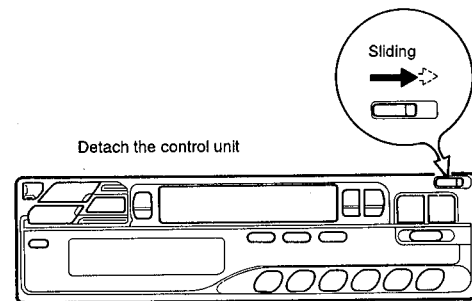


Fig. 2 - 2

#### ◆ Mechanism ass'y(see Fig.2-3)

1. Remove the four screws ④ and ⑤ retaining the mechanism ass'y.
2. Disconnect two connectors, namely, the head wire connector(CP911) from the sub p.c. board ass'y and control connector from the mechanism switch board ass'y
3. Pull out the mechanism ass'y toward the top side.

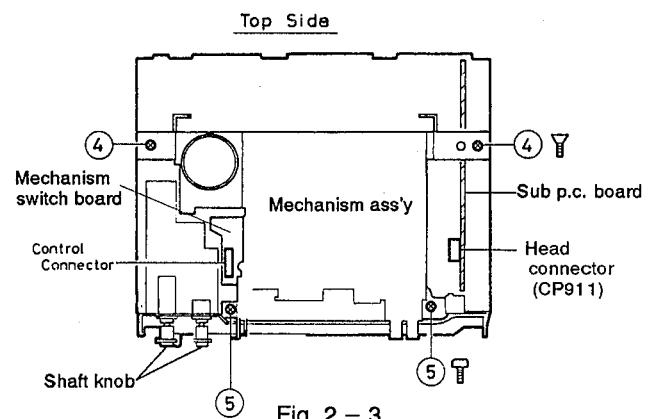


Fig. 2 - 3

◆ **SUB p. c. board ass'y(see Fig. 2-4)**

1. Remove the one screw ⑦ retaining the FM antenna cord ass'y.
2. Remove the one screw ⑧ retaining the FM tuner pack bracket.

◆ **CD DIN jack ass'y(see Fig. 2-4)**

1. Remove the two screws ⑨ retaining the CD jack ass'y.

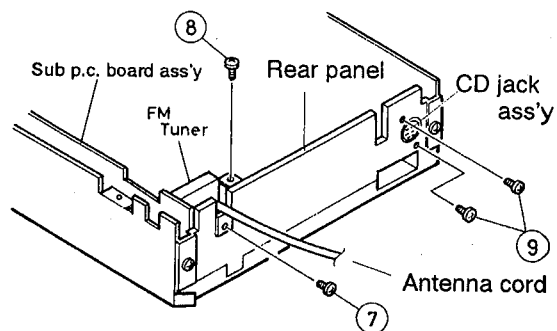


Fig. 2 – 4

◆ **Front bracket(see Fig. 2-5)**

1. Remove the two screws ⑩ retaining the front bracket.

Front Side

◆ **Main board ass'y**

1. Remove the two screws retaining the front power IC and I/O connector(11 pin).
2. Remove the one screw retaining the main board ass'y from bottom side and unsolder the main board to chassis.

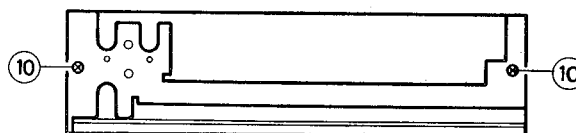


Fig. 2 – 5

◆ **Control unit(see Fig. 2-6)**

1. Remove the six screws ⑪ retaining the cover.

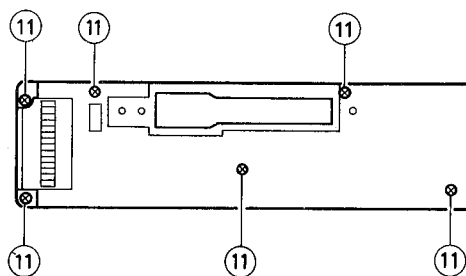


Fig. 2 – 6

## ■ Mechanism Section

### ◆ Head Removal(See Fig. 2-7 and 2-8)

1. Remove screw ① retaining the FR lever assembly.
2. Left the FR lever assembly up in the direction of the arrow and remove the FR lever assembly from the chassis slots(groove).
3. Remove the screw ② retaining the head plate.
4. Remove two screws ③ retaining the head.
5. When replacing the head make sure to adjust screws(A~D)and perform head angle and height adjustment.

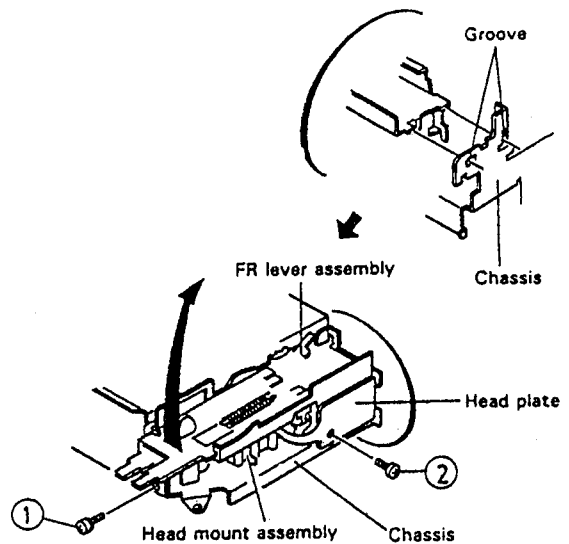


Fig. 2 – 7

### ◆ Pinch roller assembly(See Fig. 2-8)

1. Remove the nylon washers retaining the left and right pinch rollers.
2. Pull out the pinch roller.

### ◆ Motor Assembly(See Fig. 2-9)

Remove two screws(5)retaining the motor assembly.

- ※ This operation is facilitated by leaving the belt hooked on to one of the chassis protrusions.

### ◆ Belt(See Fig. 2-9)

Thread the belt as indicated in the figure when replacing the belt.

- ※ Take care to avoid contact with grease or oil when replacing the belt.

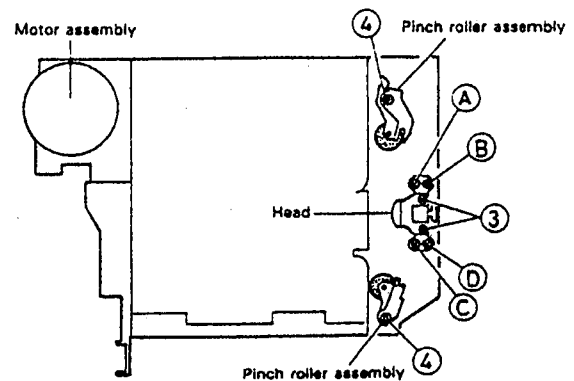


Fig. 2 – 8

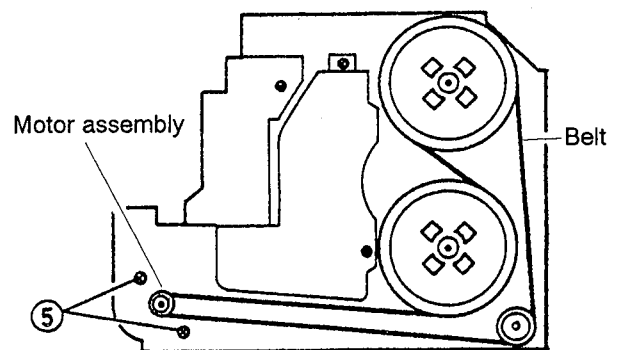


Fig. 2 – 9

### 3 Main Adjustment

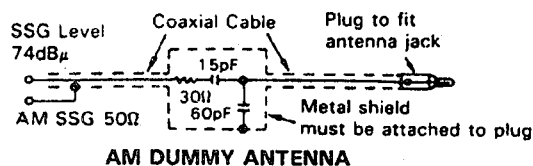
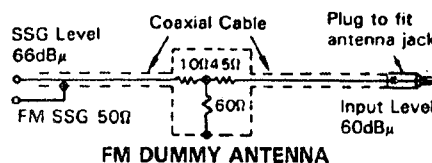
#### ■ Equipment and measuring instruments used for adjustment

- Electronic voltmeter
- Audio frequency oscillator  
(range:50~20kHz and output 0 dB with impedance of 600 Ω )
- Attenuator(impedance;600 Ω )
- Frequency counter
- AM Standard signal generator
- FM Standard signal generator
- Wow flutter meter
- Torque testing cassette gauge  
CTG – N (mechanical adjusting)  
TW – 2111A (FWD play)  
TW – 2121A (REV play)
- Standard tape  
VTT704(head azimuth adj.)  
VTT712(tape speed,wow&flutter adj.)  
VTT724(reference level )  
VTT736(playback frequency response )  
VTT721(output level)  
SCC – 1659 (mirror tape)  
MTT – 942SP (azimuth)

#### ■ Condition for measurement

- Power Supply ..... DC14.4V  
(Reduced Voltage:10.5V)
- Load ..... 4 Ω  
(Tow speaker connection)
- BASS/TRE, FADER ..... Center
- Main volume ..... Position with an output level of 2V during VTT724 playback
- Tuner section
  - **[FM]**;400Hz, 22.5kHz deviation
  - **[FM]**STEREO ;1kHz, 67.5kHz deviation, pilot signal 7.5kHz
  - **[AM]**;400Hz, 30% modulation
  - Output impedance ;50 Ω

#### ■ Dummy antenna



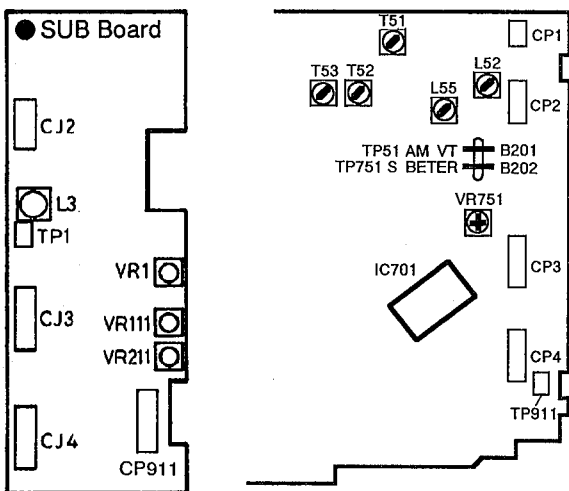
- Preset memory Initialization

Band	Preset Memory					
	M1	M2	M3	M4	M5	M6
FM(MHz)	87.5	89.9	97.9	105.9	108	87.5
AM(kHz)	144	153	522	603	1404	1620

- Manual Tuning Up/Down Frequency

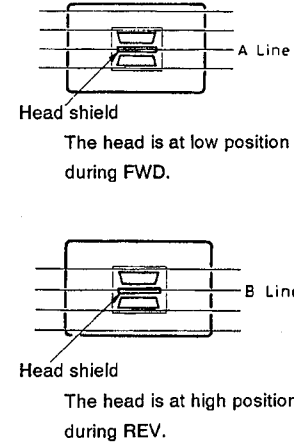
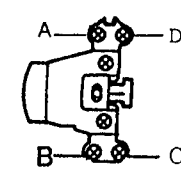
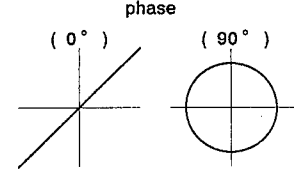
**[FM]**;50kHz Step  
**[AM]**;9kHz Step

#### ■ Location of Adjustment





## ■ Tape section adjustment

Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
1. Head azimuth adjustment	Test tape: SCC – 1659 VTT704(12.5kHz)	<p>★ In case the head and its height have been changed, it will be necessary to adjust the height of the head.</p> <p>1. Adjustment of the height of head 1)When the mirror tape SCC – 1659(2-line tape) is travelling in the FWD direction, adjust the screws A and B so that the line A is located the center of the shield plate between the head channels.</p> <p>2)When the mirror tape SCC – 1659(2-line tape) is travelling in the REV direction, adjust the screws C and D so that the line B is located the center of the shield plate between the head channels.</p> <p>2. Head azimuth 1)Adjust the screw B so that the output level becomes maximum(L-R difference level to be within 2 dB) and the phase difference becomes minimum (less than <math>90^\circ</math>) when VTT704 is travelling in the FWD direction.</p> <p>2)Adjust the screw C so that the output level become maximum (L-R difference level to be within 2-dB) and the phase difference become minimum (less than <math>90^\circ</math>) when VTT704 is travelling in the REV direction.</p> <p>3)By repeating the above adjustment steps 1) and 2),make sure that the output level and phase difference are as specified respectively .</p> <p>4)There is no need to preform bonding after adjustment.</p>	 <p>Output level: Maximum</p>  <p>Output level: Maximum</p> <p>phase ( <math>0^\circ</math> )      ( <math>90^\circ</math> )</p> 	
2. Tape speed and wow flutter confirmantion	Test tape:VTT712 (3kHz)	<p>1.Check to see if the reading of the F. counter/wow flutter meter is within 3015~3045 (FWD/REV), and less than 0.35% (JIS RMS) .</p> <p>2. In case of out of specefication, adjust the motor with a built-in volume resistor.</p>	Tape speed: 3015 ~3045Hz Wow flutter:less than0.35%	Built-in volume resistor
3.Playback frequency response confirmation	Test tape:VTT724 (1kHz) VTT736 (125Hz/1kHz/8kHz)	<p>1. Play test tape VTT724, and set the volume position at 1.4 V</p> <p>2. Play test tape VTT736 and confirm 1kHz/8kHz: <math>0 \pm 3\text{dB}</math>, 1kHz/125Hz: <math>0 \pm 3\text{dB}</math>.</p> <p>3. When 8 kHz is out of specefication, it will be necessary to read adjust the azimuth</p>	Speaker out 1kHz/125Hz : $0 \pm 3\text{dB}$ 1kHz/8kHz : $0 \pm 3\text{dB}$	

Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
4.Maximum output power confirmation	Test tape :VTT721 (1kHz) volume:maximum BASS/TRE:center	1. Confirm the rear output be more than 8.2V(17W). 2. Confirm the front output be more than 8.2V(17W) 3. Confirm that consumption current at above condition to be less than 5A. 4. Sound leakage should not occur at volume minimum. 5. Oscillation should not occur at BASS/TRE at maximum.	Output level:more than 17W(8.2V) Consumption current :less than 5A	
5. DOLBY NR level adj.	Test tape:VTT724 (1kHz) Test point : TP921	1. Playback the test tape VTT724,Adjust VR111/VT211 so that the output level at terminal TP921 is 318mV. 2. Playback the non – signal recorded portion and turn on and off the DOLBY switch repeatedly while making sure that level difference at TP921 is 8.5dB more.	DOLBY B 318mV $\pm$ 2mV	Lch :VR111 Rch :VR211

### ■ Tuner section adjustment

Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
1.Radio/Tape level difference	AM 1000 kHz, 1kHz, 30% modulation, 74dB $\mu$	Against VTT724, the output difference level to be within $-7$ to $\pm 3$ dB	within $-7$ to $\pm 3$ dB	
2.FM 0V adjustment	Test point: TP1 FM 97.9MHz, 66 dB non modulation	Adjust L50 so that the TP1 DC voltage level become 0 V when 97.9 MHz is indicated.	0 $\pm$ 10mV	L3
3.Separation adjustment	TP:AFout FM97.9MHz,66dB $\mu$ (1kHz,67.5kHz Dev. 7.5kHzDev.)	1. With signal of 97.9MHz,66dB $\mu$ supplied from the signal generator to L or R channel. 2. Adjust VR1 to minimize leak of a channel's output to other channel .	minimum	VR1
4.S meter adjustment	TP:TP751(B202) FM97.9MHz,52dB	1. Adjust VR751 so that output voltage of TP751 becomes 3.4V. ※ After adjustment of the S meter, adjust the separation.	3.4V $\pm$ 0.1V	VR751
AM 1.AM VT adjustment	TP51(B201)	1. Set to 144kHz(Preset 1) and adjust L55 so that the voltage of TP51(B201) becomes 2.5 $\pm$ 0.1V. 2. Set to 1,620kHz(Preset b) and confirm that the voltage of TP51(B201) becomes 7V or less. ※ Receiving is not necessary in the case of Items 1 and 2 above. 3. While receiving fine electric field(roughly 20dB) of 522kHz(Preset 3), adjust T51, T52 and T53 so that the output becomes maximum.	2.5V $\pm$ 0.1V  Less than 7V	

# 4 Wiring Connections

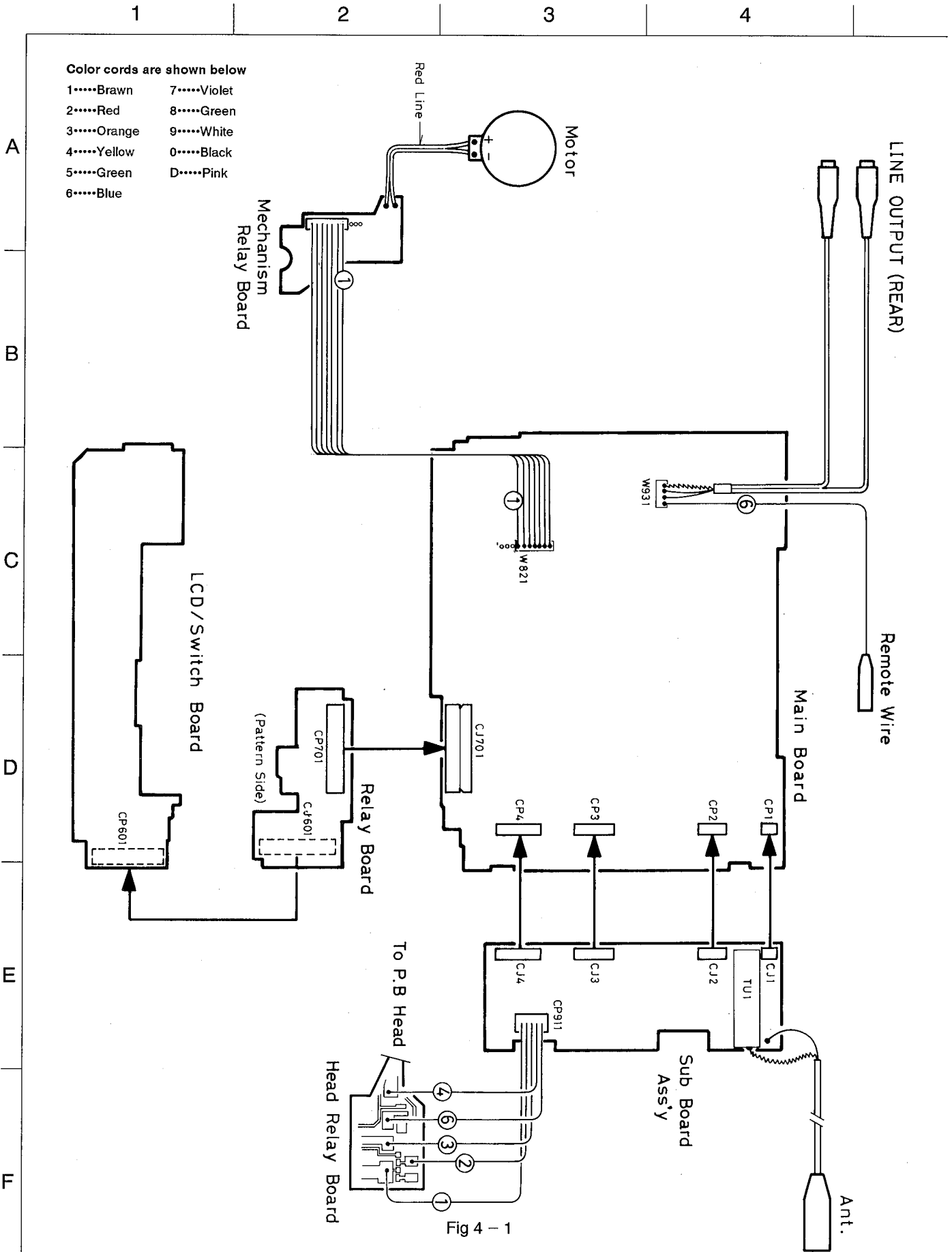
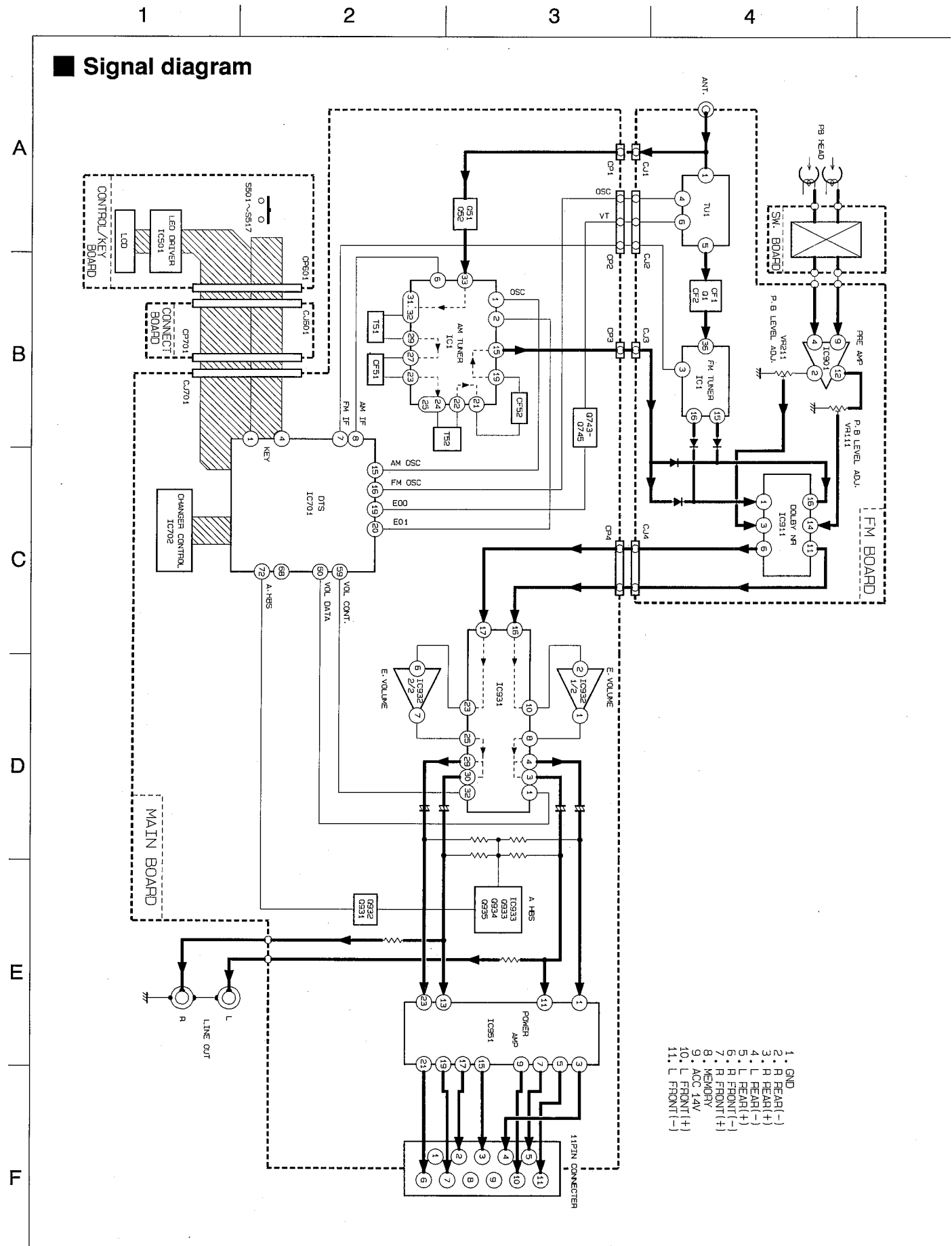


Fig 4 - 1

# 5 Block Diagram

## Signal diagram



- 1. GND
- 2. R REAR(-)
- 3. R REAR(+)
- 4. L REAR(-)
- 5. L REAR(+)
- 6. R FRONT(-)
- 7. R FRONT(+)
- 8. MEMORY
- 9. ACC 14V
- 10. L FRONT(+)
- 11. L FRONT(-)

Fig 5 - 1

## Integrated circuit diagram

### ◆ IC51 UPC2533GS AM Tuner

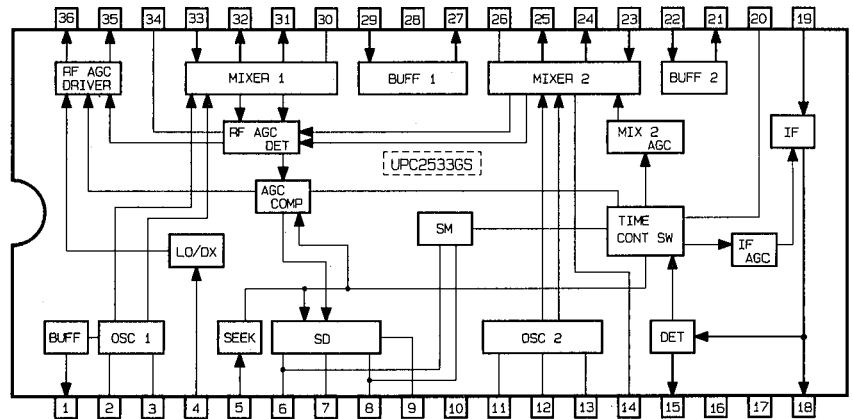
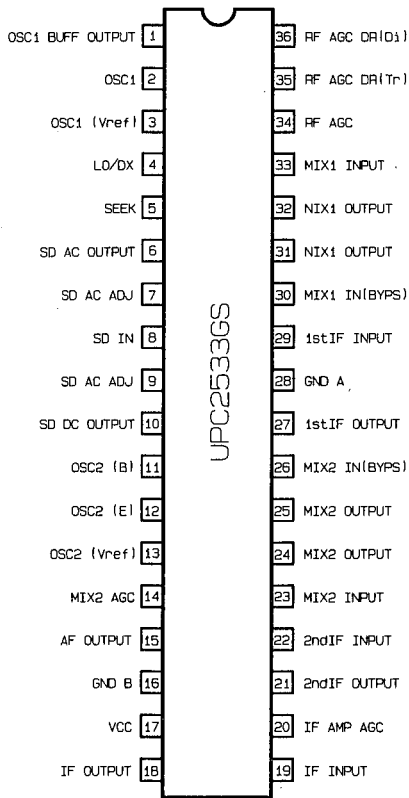


Fig. 5-2

### ◆ IC931 TEA6320T E Volume

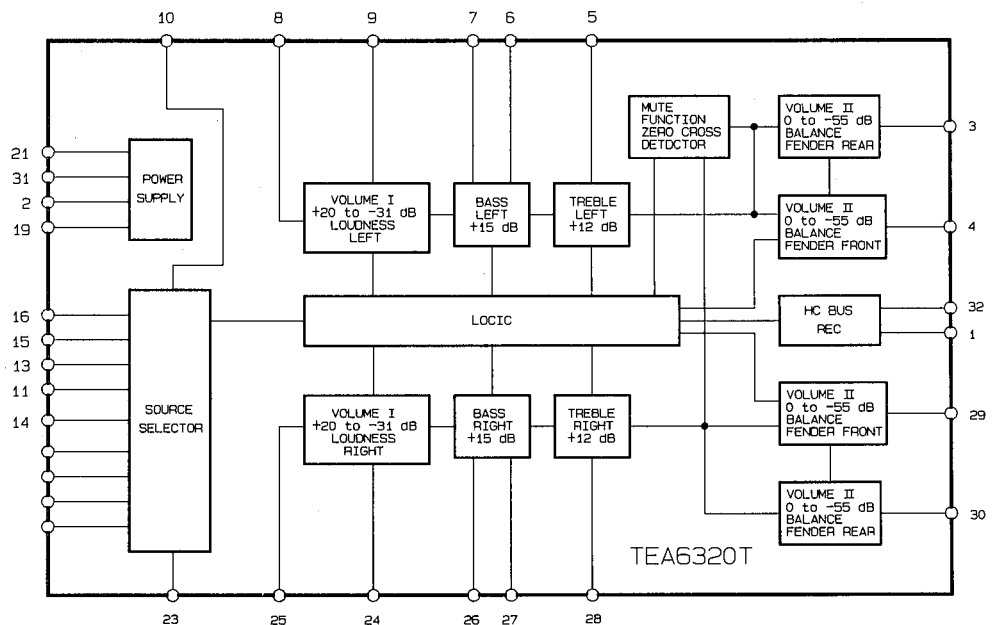
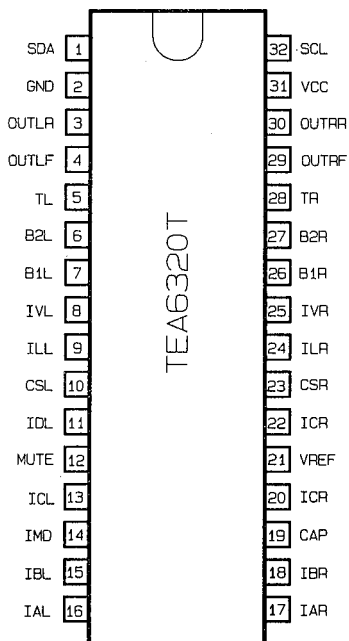


Fig. 5-3

◆ IC1 LA1862M FM Tuner

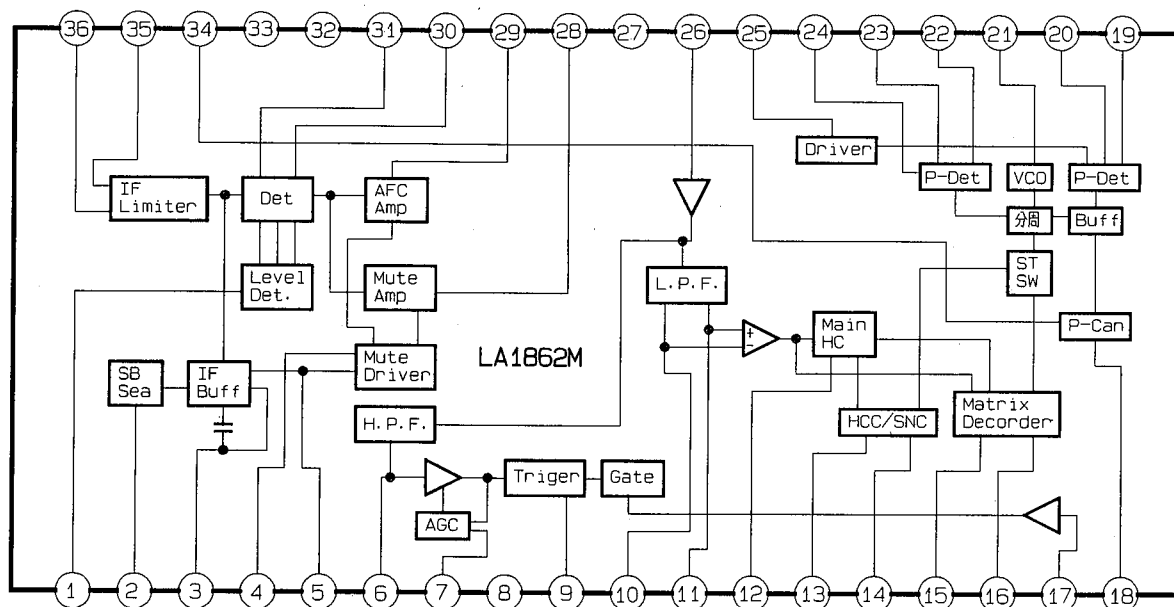


Fig. 5-4

◆ IC771 SAA6579T RDS Detector

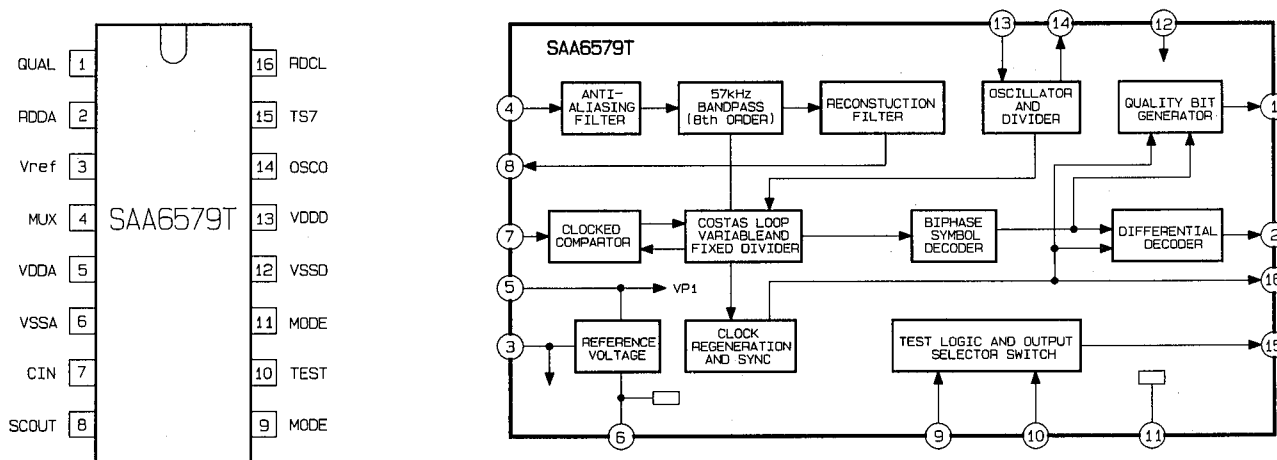


Fig. 5-5

◆ IC901 TA8162SN Head Amp.

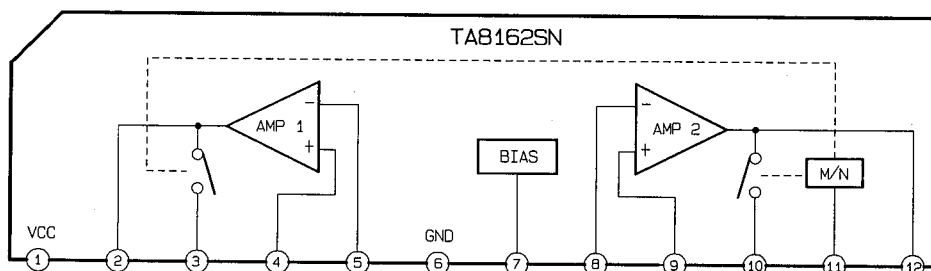


Fig. 5-6

◆ IC911 HA12135AF DOLBY NR

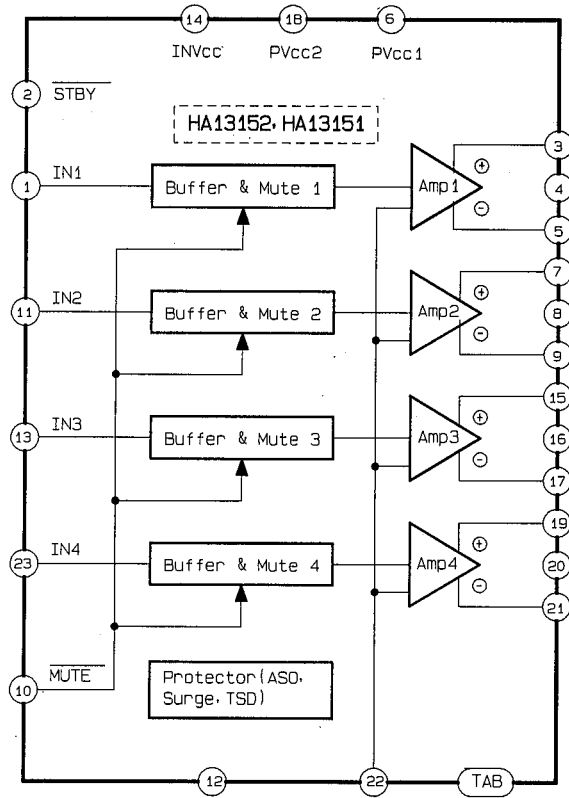


Fig. 5-7

◆ IC951 HA13152 POWER AMP

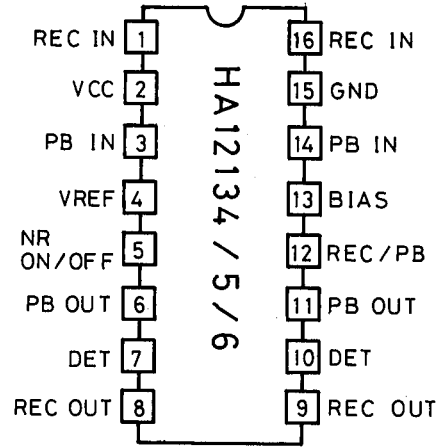


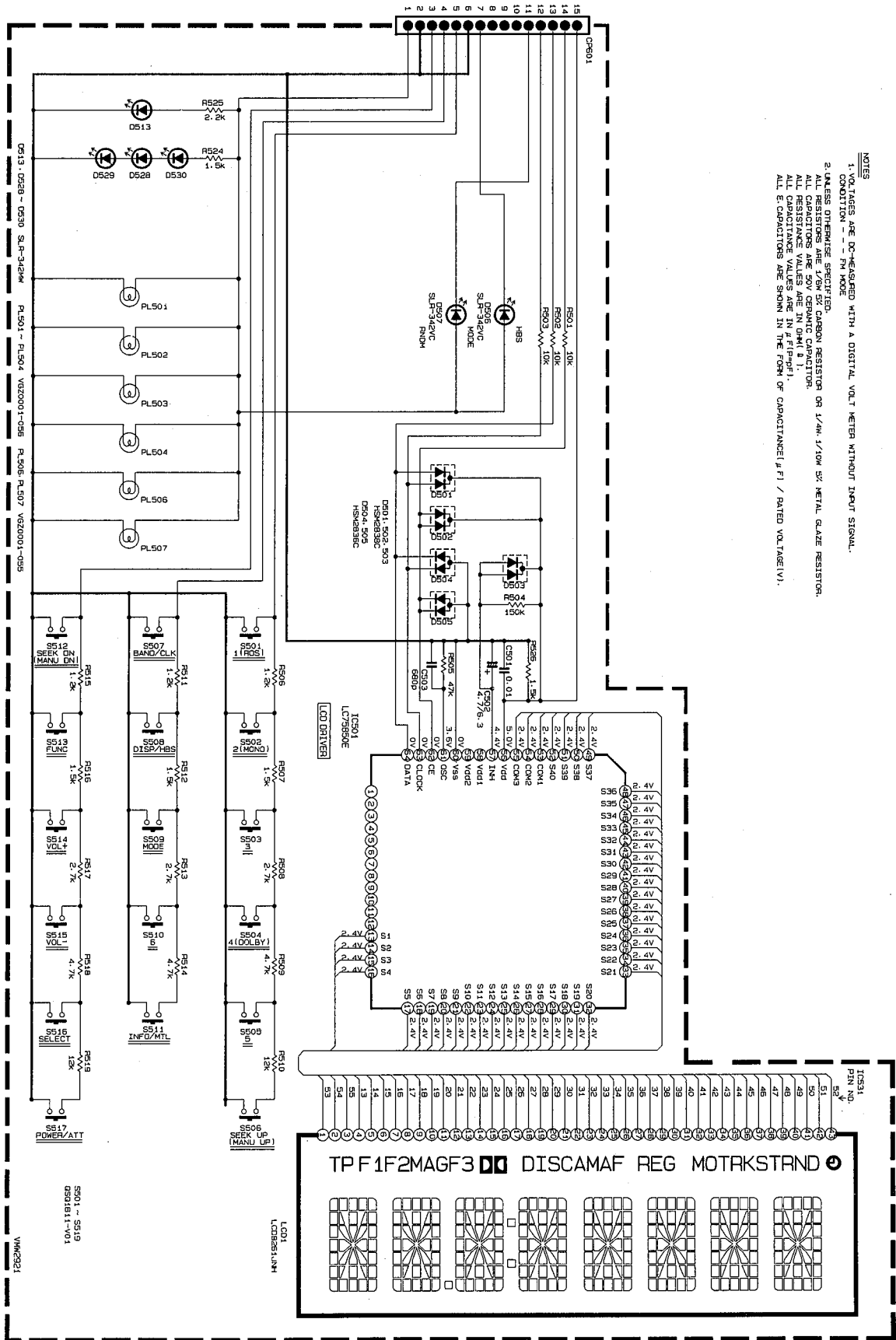
Fig. 5-8

# 6 Standard schematic diagram

1 2 3 4

## Key Display Circuit

A B C D E F



NOTES  
 1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.  
 CONNECTION - - - FM MODE  
 2. UNLESS OTHERWISE SPECIFIED:  
 ALL RESISTORS ARE 1/8W 5% CARBON RESISTOR OR 1/4W 1/10W 5% METAL GLAZE RESISTOR.  
 ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.  
 ALL CAPACITANCE VALUES ARE IN  $\mu$ F-PAPF.  
 ALL CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE // F1 / RATED VOLTAGE(V).

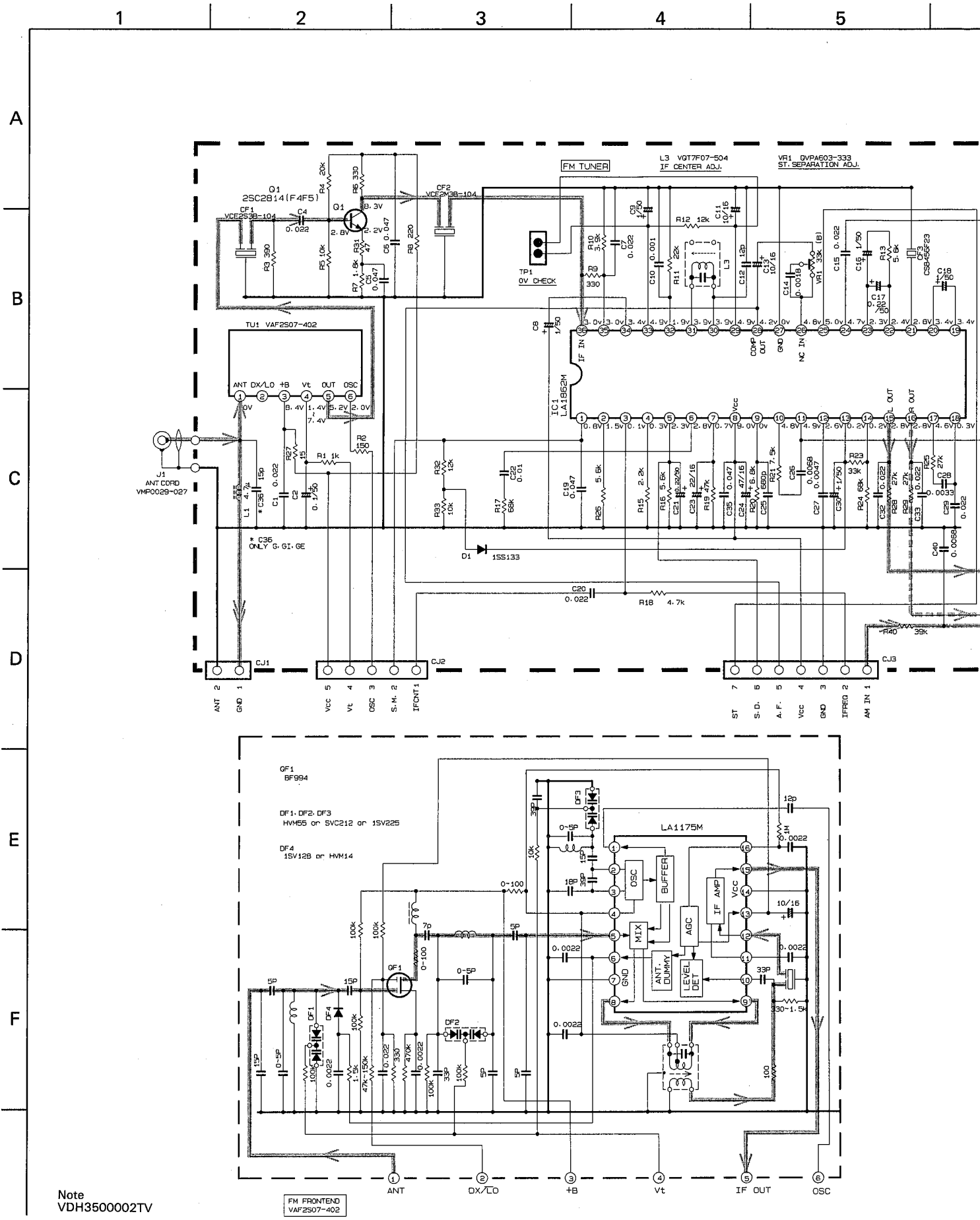
Fig. 6-1

Note VD H3500002SW





# Tuner/Head Amplifier Circuit



Note  
VD H3500002TV

FM FRONTEND  
VAF2507-402

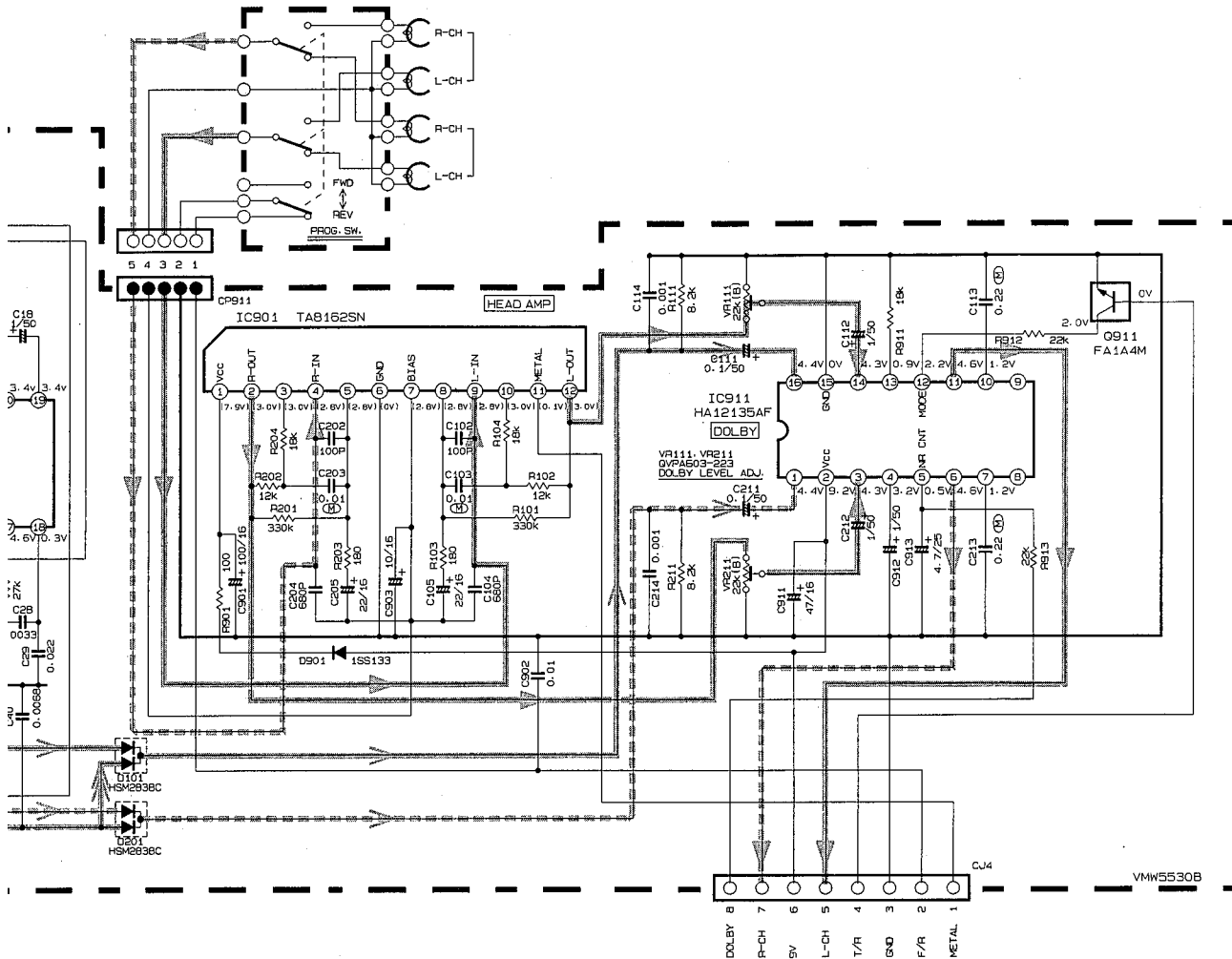
6

7

8

9

10



DIGITAL TRANSISTOR	
	47k
	47k
Q911	FA1A4M

**NOTES**

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.  
CONDITION --- FM MODE ( ) TAPE MODE
2. UNLESS OTHERWISE SPECIFIED:  
ALL RESISTORS ARE 1/8W 5% CARBON RESISTOR OR 1/4W 1/10W 5% METAL GLAZE RESISTOR.  
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.  
ALL RESISTANCE VALUES ARE IN OHM(Ω).  
ALL CAPACITANCE VALUES ARE IN μF(PμF).  
ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF) / RATED VOLTAGE(V).  
Ⓜ MYLAR CAPACITOR

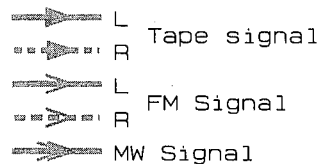


Fig. 6-2

System Control Circuit

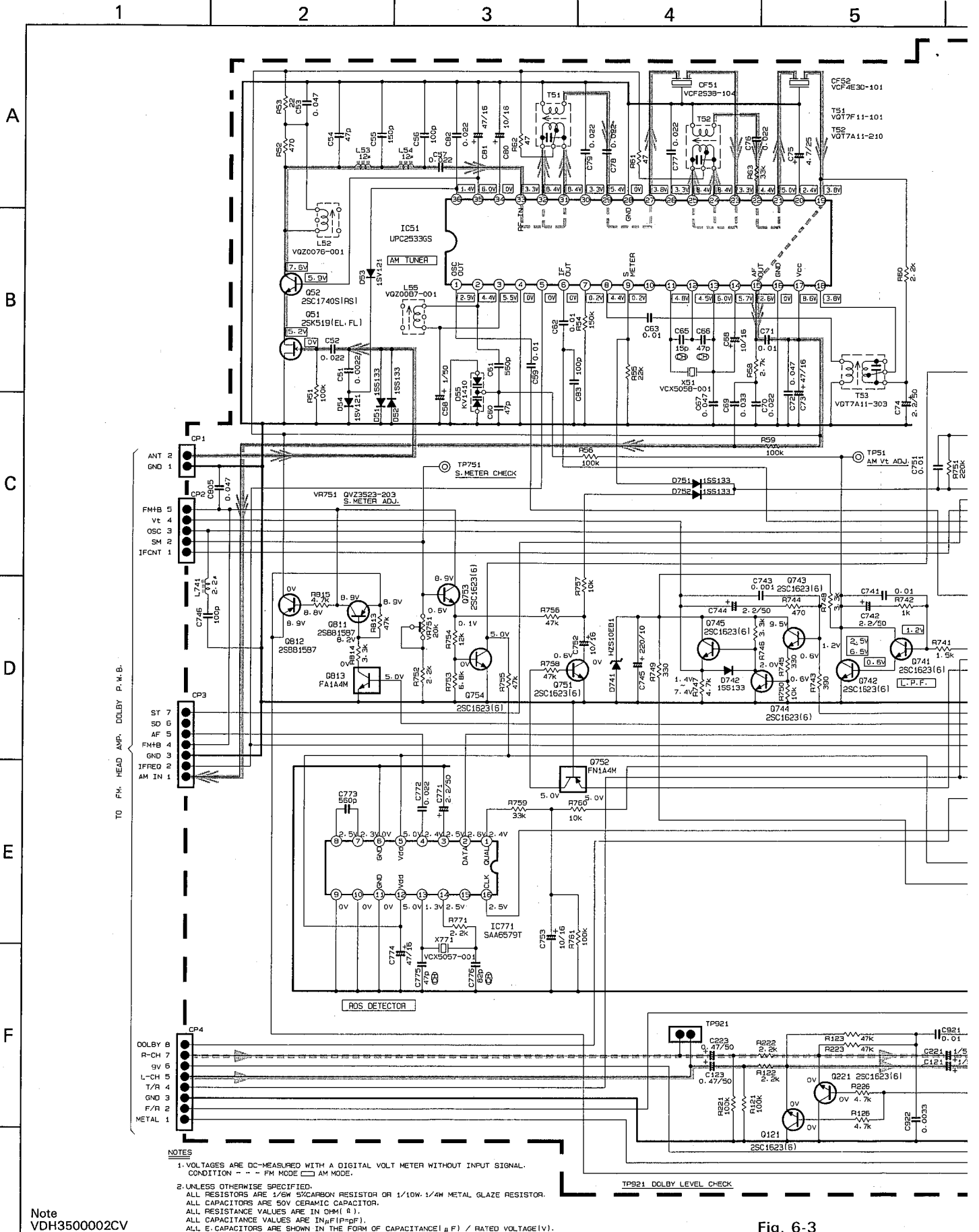


Fig. 6-3

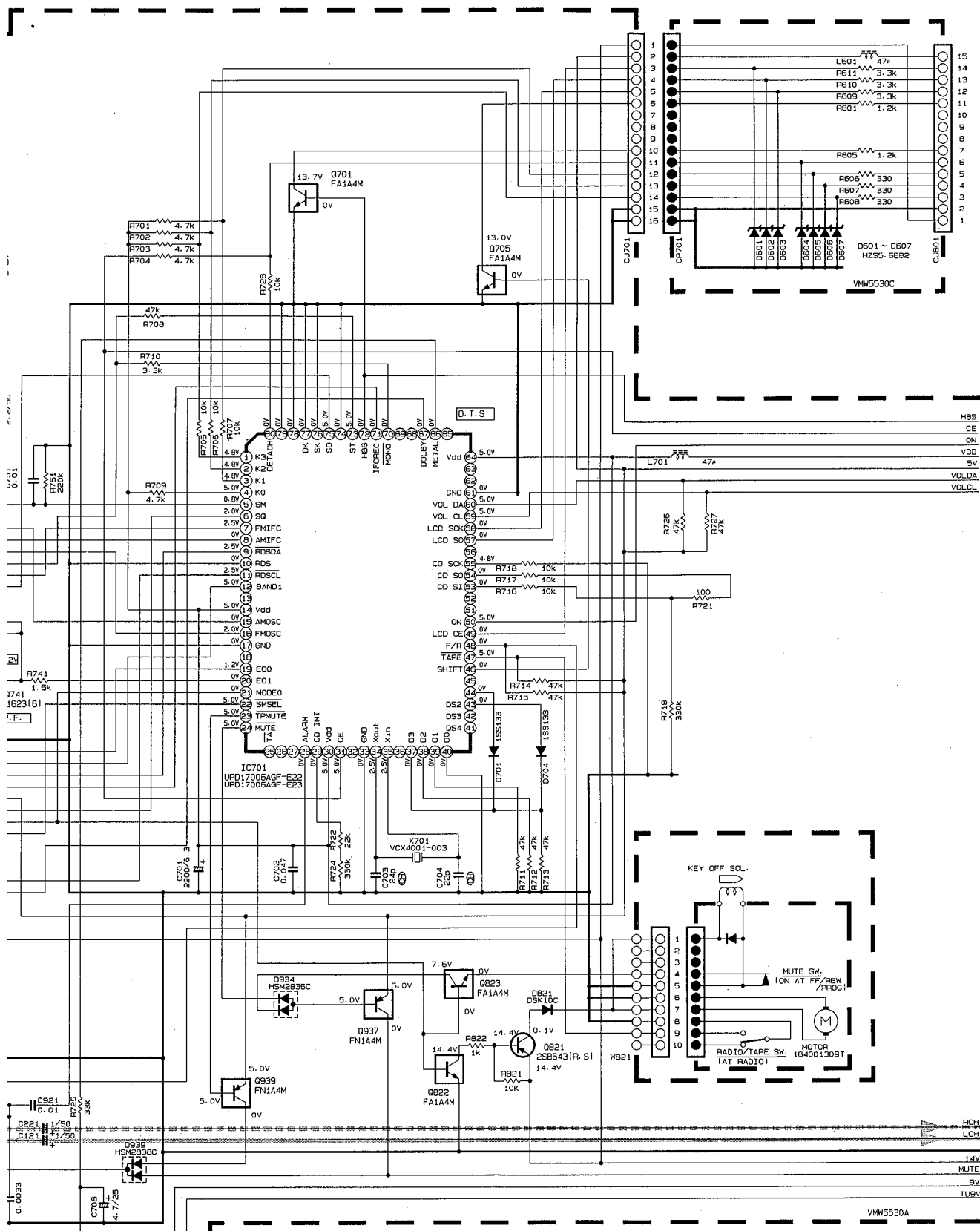
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7

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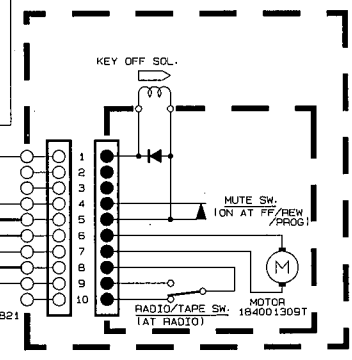
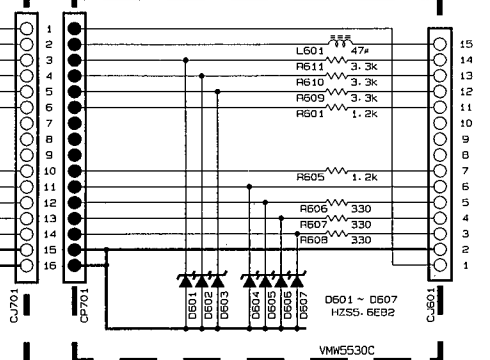
10



DIGITAL TRANSISTORS

	10k	0752	FN1A4M
	10k	0937	
	10k	0939	
	10k	0701	FA1A4M
	10k	0823	
	10k	0822	

L Tape & radio signal  
 R MW Signal  
 MW Signal



15  
14  
13  
12  
11  
10  
9  
8  
7  
6  
5  
4  
3  
2  
1

HBS  
CE  
DN  
VDD  
SV  
VCLDA  
VCLCL

RCH  
LCH  
14V  
MUTE  
9V  
TURV

VMW5530A

# Amplifier Circuit

11

12

13

14

15

1

### NOTES

- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. CONDITION - - FM MODE
- UNLESS OTHERWISE SPECIFIED:  
 ALL RESISTORS ARE 1/8W 5% CARBON RESISTOR OR 1/4W 1/10W 5% METAL GLAZE RESISTOR.  
 ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.  
 ALL RESISTANCE VALUES ARE IN OHM(Ω).  
 ALL CAPACITANCE VALUES ARE IN μF(μF) / RATED VOLTAGE(V).  
 ⊗ MYLAR CAPACITOR

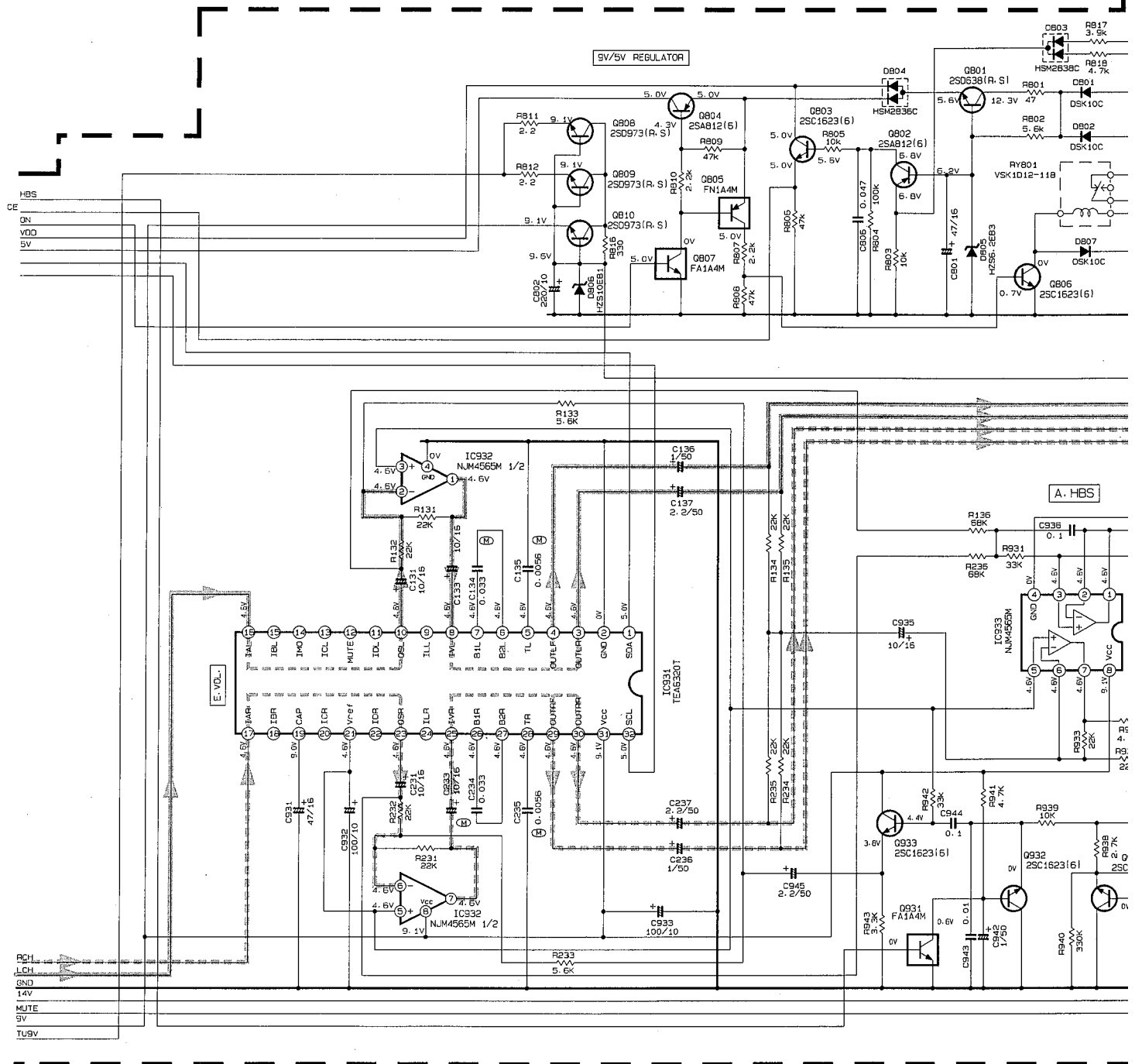


Fig. 6-4

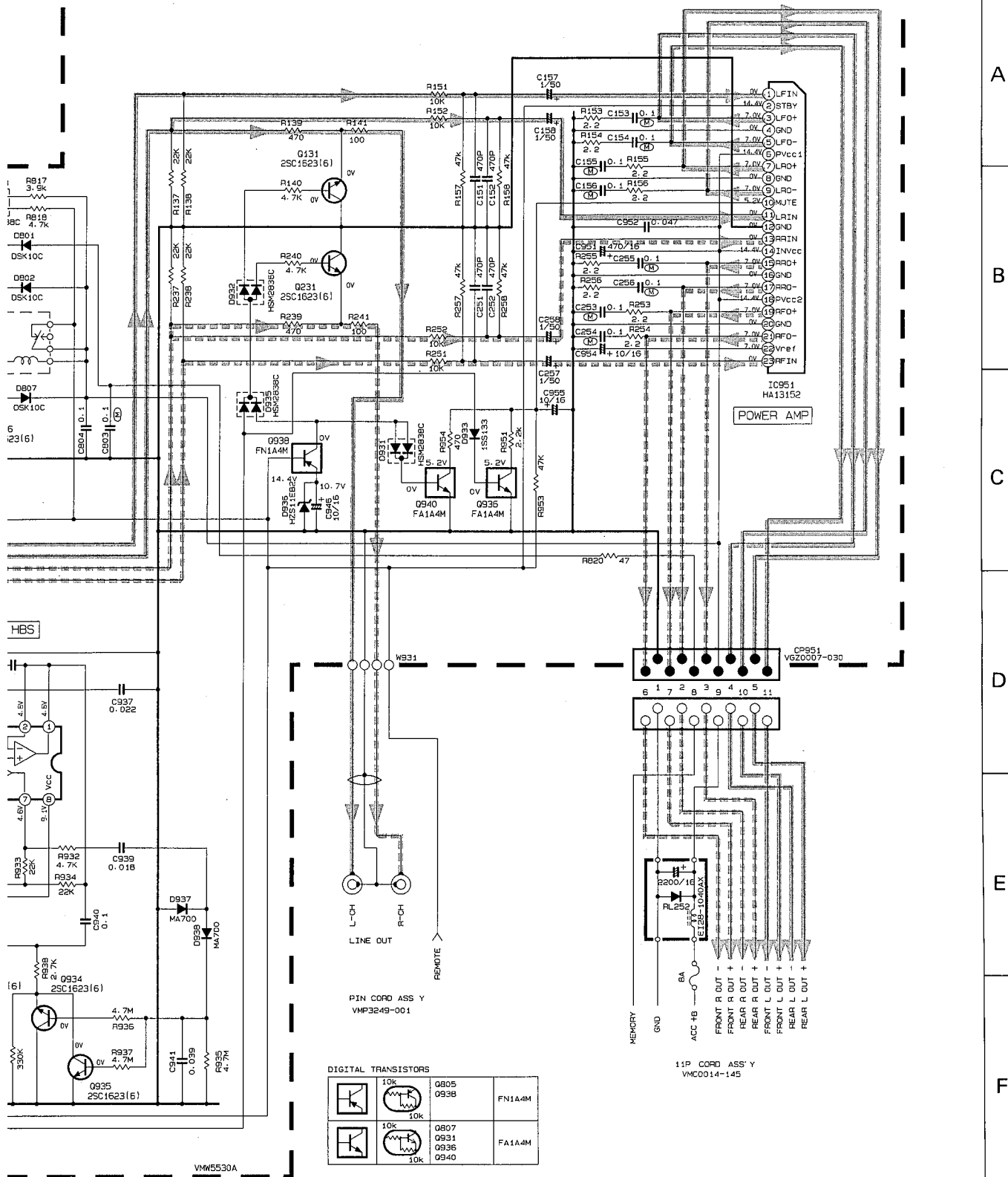
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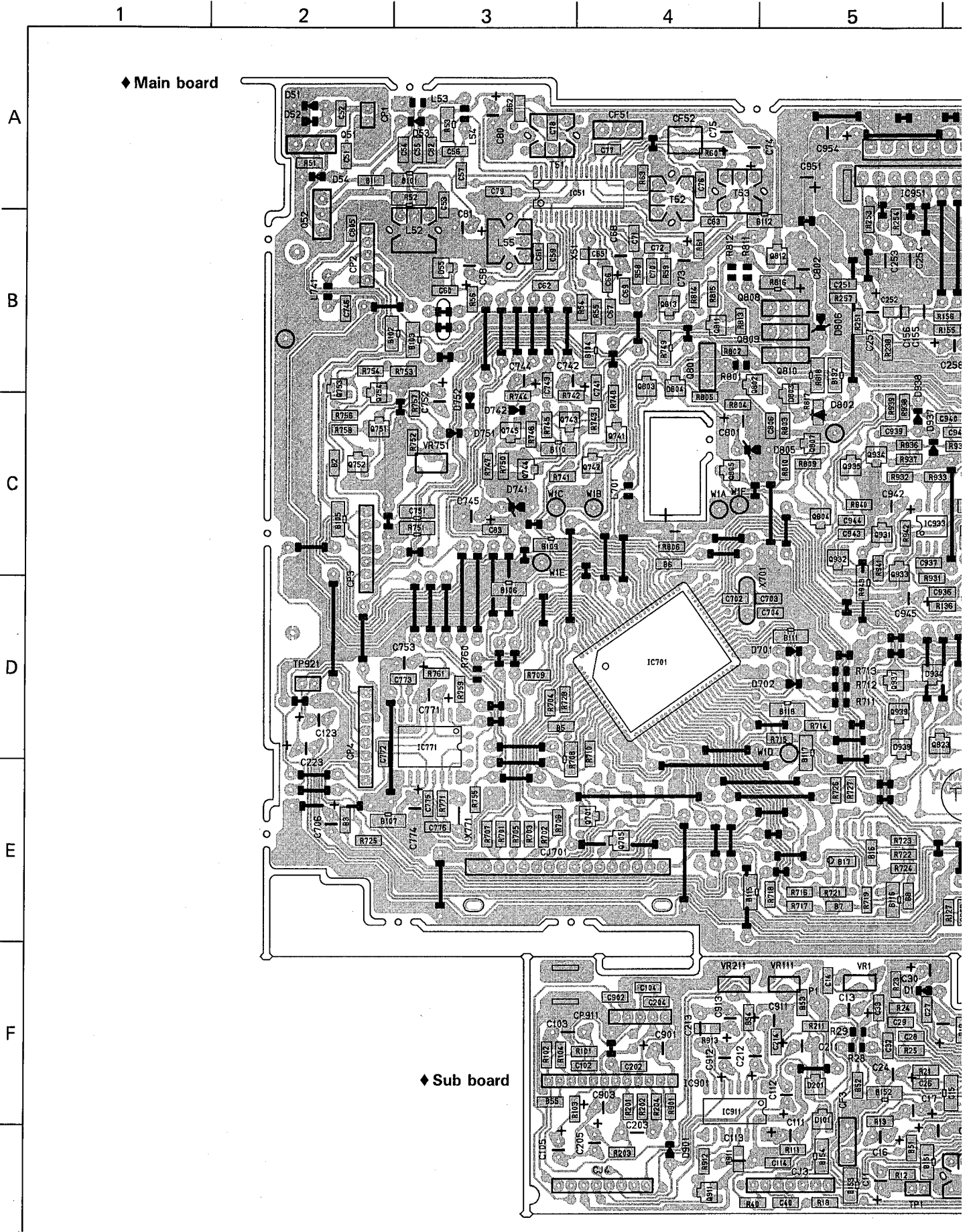
A  
B  
C  
D  
E  
F

DIGITAL TRANSISTORS

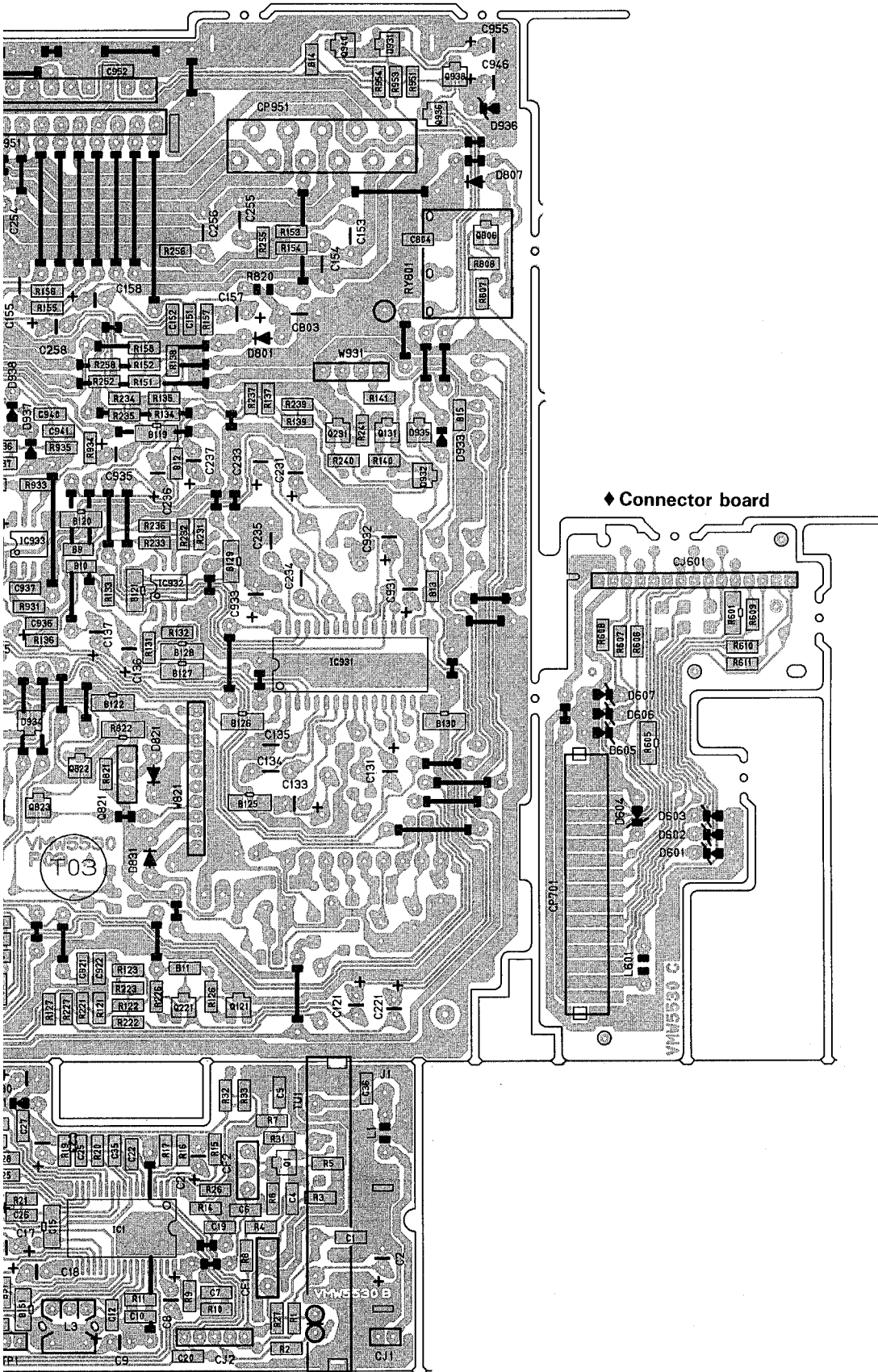
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	10k	Q938	
	10k	Q807	FA1A4M
	10k	Q931	
	10k	Q936	
	10k	Q940	

L Tape & radio signal  
R

# 7 Location of P. C. Board Parts and Parts List









● Main board parts list

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 8	QEK41HM-105	E. CAPACITOR	0MF 20% 50V	
C 9	QEK41HM-105	E. CAPACITOR	0MF 20% 50V	
C 10	NCB21HK-102AY	C. CAPACITOR	00PF 10% 50V	
C 11	QEK41CM-106	E. CAPACITOR	MF 20% 16V	
C 12	NC721CH-120AY	C. CAPACITOR	PF +50:-10% 1	
C 13	QEK41CM-106	E. CAPACITOR	MF 20% 16V	
C 14	NCB21HK-182AY	C. CAPACITOR	00PF 10% 50V	
C 15	QCY81HK-223Y	C. CAPACITOR	22MF 10% 50V	
C 16	QEK41HM-105	E. CAPACITOR	0MF 20% 50V	
C 17	QEK41HM-224	E. CAPACITOR	2MF 20% 50V	
C 18	QEK41HM-105	E. CAPACITOR	0MF 20% 50V	
C 19	NCB21HK-473AY	C. CAPACITOR	47MF 10% 25V	
C 20	NCB21HK-223AY	C. CAPACITOR	22MF 10% 50V	
C 21	QEK41HM-224	E. CAPACITOR	2MF 20% 50V	
C 22	NCB21HK-103AY	C. CAPACITOR	10MF 10% 50V	
C 23	QEK41CM-226	E. CAPACITOR	MF 20% 16V	
C 24	QEK41CM-476	E. CAPACITOR	MF 20% 16V	
C 25	NCB21HJ-681AY	C. CAPACITOR	00PF 5% 50V	
C 26	NCB21HK-682AY	C. CAPACITOR	00PF 10% 50V	
C 27	NCB21HK-472AY	C. CAPACITOR	00PF 10% 50V	
C 28	NCB21HK-332AY	C. CAPACITOR	00PF 10% 50V	
C 29	NCB21HK-223AY	C. CAPACITOR	22MF 10% 50V	
C 30	QEK41HM-105	E. CAPACITOR	0MF 20% 50V	
C 32	NCB21HK-223AY	C. CAPACITOR	22MF 10% 50V	
C 33	NCB21HK-223AY	C. CAPACITOR	22MF 10% 50V	
C 35	NCB21HK-473AY	C. CAPACITOR	47MF 10% 25V	
C 36	NCB21HJ-150AY	C. CAPACITOR	PF 5% 50V	
C 40	NCB21HK-682AY	C. CAPACITOR	00PF 10% 25V	
C 51	NCB21HK-222AY	C. CAPACITOR	00PF 10% 50V	
C 52	NCB21HK-223AY	C. CAPACITOR	22MF 10% 50V	
C 53	NCB21HK-473AY	C. CAPACITOR	47MF 10% 25V	
C 54	NCB21HJ-470AY	C. CAPACITOR	PF 5% 50V	
C 55	NCB21HJ-151AY	C. CAPACITOR	00PF 5% 50V	
C 56	NCB21HJ-101AY	C. CAPACITOR	00PF 5% 50V	
C 57	NCB21HK-223AY	C. CAPACITOR	22MF 10% 50V	
C 58	QEK41HM-105VM	E. CAPACITOR	0MF 20% 50V	
C 59	NCB21HK-103AY	C. CAPACITOR	10MF 10% 50V	
C 60	NCB21HJ-470AY	C. CAPACITOR	PF 5% 50V	
C 61	NCB21HJ-561AY	C. CAPACITOR	0PF 5% 50V	
C 62	NCB21HK-103AY	C. CAPACITOR	10MF 10% 50V	
C 65	NC721CH-150AY	C. CAPACITOR	PF +50:-10% 1	
C 66	NC721CH-470AY	C. CAPACITOR	PF +50:-10% 1	
C 67	NCB21HK-473AY	C. CAPACITOR	47MF 10% 25V	
C 68	QEK41CM-106	E. CAPACITOR	MF 20% 16V	
C 69	NCB21HK-333AY	C. CAPACITOR	33MF 10% 50V	
C 70	NCB21HK-223AY	C. CAPACITOR	22MF 10% 50V	
C 71	NCB21HK-103AY	C. CAPACITOR	10MF 10% 50V	
C 72	NCB21HK-473AY	C. CAPACITOR	47MF 10% 25V	
C 73	QEK41CM-476M	E. CAPACITOR	MF 20% 16V	
C 74	QEK41HM-225	E. CAPACITOR	2MF 20% 50V	
C 75	QEK41EM-475	E. CAPACITOR	7MF 20% 25V	
C 76	NCB21HK-223AY	C. CAPACITOR	22MF 10% 50V	
C 77	NCB21HK-223AY	C. CAPACITOR	22MF 10% 50V	
C 78	NCB21HK-223AY	C. CAPACITOR	22MF 10% 50V	

BLOCK NO. 02

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
B 1	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 2	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 3	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 4	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 5	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 6	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 7	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 9	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 10	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 11	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 12	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 13	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 14	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 16	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 17	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 51	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 52	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 53	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 54	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 55	NRSAJ-J-ORONY	MG RESISTOR	5% 1/10W	
B 101	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 102	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 103	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 104	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 105	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 106	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 107	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 109	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 110	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 111	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 112	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 115	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 116	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 117	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 118	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 119	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 120	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 121	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 122	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 125	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 126	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 127	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 128	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 129	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 130	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 132	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 151	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 152	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 153	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
B 154	NRS1J-J-ORONY	MG RESISTOR	5% 1/8W	
C 1	NCB21K-223AY	C. CAPACITOR	0.22MF 10% 50V	
C 2	QEK41EM-104	E. CAPACITOR	10MF 20% 50V	
C 4	NCB21K-223AY	C. CAPACITOR	0.22MF 10% 50V	
C 5	NCB21K-473AY	C. CAPACITOR	0.47MF 10% 25V	
C 6	NCB21K-473AY	C. CAPACITOR	0.47MF 10% 25V	
C 7	NCB21K-223AY	C. CAPACITOR	0.22MF 10% 50V	

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 79	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
C 80	QEK41CM-106	E. CAPACITOR	10MF 20% 1	
C 81	QEK41CM-476	E. CAPACITOR	47MF 20% 1	
C 82	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
C 83	NCS21HJ-101AY	C CAPACITOR	100PF 5% 5	
C 102	NCS21HK-101AY	C CAPACITOR	100PF 5% 5	
C 103	QFV41HJ-103	FILM CAPACITOR	.010MF 5% 5	
C 104	NCB21HK-681AY	C CAPACITOR	680PF 10% 50V	
C 105	QEK41CM-226	E. CAPACITOR	22MF 20% 1	
C 111	QEK41HM-104	E. CAPACITOR	1.0MF 20% 50V	
C 112	QEK41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C 113	QFV41HJ-224	FILM CAPACITOR	.22MF 5% 5	
C 114	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
C 121	QEK41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C 123	QEK41HM-474	E. CAPACITOR	47MF 20% 50V	
C 131	QEK41CM-106	E. CAPACITOR	10MF 20% 1	
C 133	QEK41CM-106	E. CAPACITOR	10MF 20% 1	
C 134	QFV41HJ-333	FILM CAPACITOR	.033MF 5% 5	
C 135	QFLA1HJ-562ZM	M. CAPACITOR	5600PF 5% 50V	
C 136	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 137	QER41HM-225	E. CAPACITOR	2.2MF 20% 50V	
C 151	NCS21HJ-471AY	C CAPACITOR	470PF 5% 5	
C 152	NCS21HJ-471AY	C CAPACITOR	470PF 5% 5	
C 153	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 5	
C 154	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 5	
C 155	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 5	
C 156	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 5	
C 158	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 159	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 202	NCS21HJ-101AY	C CAPACITOR	100PF 5% 5	
C 203	QFV41HJ-103	FILM CAPACITOR	.010MF 5% 5	
C 204	NCB21HK-681AY	C CAPACITOR	680PF 10% 50V	
C 205	QEK41CM-226	E. CAPACITOR	22MF 20% 1	
C 211	QEK41HM-104	E. CAPACITOR	.10MF 20% 50V	
C 212	QEK41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C 213	QFV41HJ-224	FILM CAPACITOR	.22MF 5% 5	
C 214	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
C 221	QEK41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C 223	QEK41HM-474	E. CAPACITOR	47MF 20% 1	
C 231	QEK41CM-106	E. CAPACITOR	10MF 20% 1	
C 233	QEK41CM-106	E. CAPACITOR	10MF 20% 1	
C 234	QFV41HJ-333	FILM CAPACITOR	.033MF 5% 5	
C 235	QFLA1HJ-562ZM	M. CAPACITOR	5600PF 5% 50V	
C 236	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 237	QER41HM-225	E. CAPACITOR	2.2MF 20% 50V	
C 251	NCS21HJ-471AY	C CAPACITOR	470PF 5% 5	
C 252	NCS21HJ-471AY	C CAPACITOR	470PF 5% 5	
C 253	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 5	
C 254	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 5	
C 255	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 5	
C 256	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 5	
C 257	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 258	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 701	VCE040J-228	E. CAPACITOR	.047MF 10% 50V	
C 702	NCB21HK-473AY	C CAPACITOR	.047MF 10% 50V	

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REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 703	NCT21CH-240	C CAPACITOR	24PF +50:-10% 1	
C 704	NCT21CH-220AY	C CAPACITOR	22PF +50:-10% 1	
C 706	QEK41EM-475	E. CAPACITOR	4.7MF 20% 25V	
C 741	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 742	QER41HM-225	E. CAPACITOR	2.2MF 20% 50V	
C 743	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
C 744	QER41HM-225	E. CAPACITOR	2.2MF 20% 50V	
C 745	QER41HM-227ZM	E. CAPACITOR	220MF 20% 10V	
C 746	NCS21HK-101AY	C CAPACITOR	100PF 5% 50V	
C 751	QCV31HK-103Z	C CAPACITOR	.010MF 10% 50V	
C 752	QER41CM-106	E. CAPACITOR	10MF 20% 16V	
C 753	QEK41CM-106	E. CAPACITOR	10MF 20% 16V	
C 771	QEK41HM-225	E. CAPACITOR	2.2MF 20% 50V	
C 772	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
C 773	NCS21HJ-561AY	C CAPACITOR	560PF 5% 50V	
C 774	QEK41CM-476	E. CAPACITOR	47MF 20% 16V	
C 775	NCT21CH-470AY	C CAPACITOR	47PF +50:-10% 1	
C 776	NCT21CH-820AY	C CAPACITOR	82PF +50:-10% 1	
C 801	QER41CM-476M	E. CAPACITOR	47MF 20% 16V	
C 802	QER41HM-227ZM	E. CAPACITOR	220MF 20% 10V	
C 803	QFV41HJ-104	FILM CAPACITOR	.10MF 5% 50V	
C 804	NCT21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
C 805	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
C 806	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
C 901	QEK41CM-107ZM	E. CAPACITOR	100MF 20% 16V	
C 902	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 903	QEK41CM-106	E. CAPACITOR	10MF 20% 16V	
C 911	QEK41CM-476	E. CAPACITOR	47MF 20% 16V	
C 912	QEK41HM-105	E. CAPACITOR	1.0MF 20% 50V	
C 913	QEK41EM-475	E. CAPACITOR	4.7MF 20% 25V	
C 921	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 922	NCB21HK-223AY	C CAPACITOR	3300PF 10% 50V	
C 931	QEK41CM-476	E. CAPACITOR	47MF 20% 16V	
C 932	QEK41HM-107ZM	E. CAPACITOR	100MF 20% 10V	
C 933	QEK41EM-107ZM	E. CAPACITOR	100MF 20% 10V	
C 935	QER41CM-106	E. CAPACITOR	10MF 20% 16V	
C 936	NCB21HK-104	C CAPACITOR	.10MF 10% 25V	
C 937	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
C 939	NCB21HK-183AY	C CAPACITOR	.018MF 10% 50V	
C 940	NCB21HK-104	C CAPACITOR	.10MF 10% 25V	
C 941	NCB21HK-393AY	C CAPACITOR	.039MF 10% 50V	
C 942	QER41HM-105VM	E. CAPACITOR	1.0MF 20% 50V	
C 943	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 944	NCB21HK-104	C CAPACITOR	.10MF 10% 25V	
C 945	QER41HM-225	E. CAPACITOR	2.2MF 20% 50V	
C 946	QER41CM-106	E. CAPACITOR	10MF 20% 16V	
C 951	QET41CM-477	E. CAPACITOR	470MF 20% 16V	
C 952	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
C 954	QEK41CM-106	E. CAPACITOR	10MF 20% 16V	
C 955	QEK41CM-106	E. CAPACITOR	10MF 20% 16V	
CF 1	VCF2S3B-104Z	C FILTER		
CF 2	VCF2M3B-104	CERAMIC FILTER		
CF 3	CSB456F23	CERA LOCK		
CF 51	VCF2S3B-104Z	C FILTER		
CF 52	VCF4E3D-101	C FILTER		

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
A IC771	SAA6579T	IC		
IC901	TA8162SN	IC		
IC911	HA1213SAFT	IC		
IC931	TEA6320T	IC		
IC932	NJM4565M	IC		
IC933	NJM4565M	IC		
IC951	HA13152	IC		
J 1	VMZ0015-014	POST PIN		
L 1	VQP0018-4R7	INDUCTOR		
L 3	VQ17F07-504	I.F.T.		
L 52	VQZ0076-001	PEAKING COIL		
L 53	VQP0018-120	INDUCTOR		
L 54	VQP0018-120	INDUCTOR		
L 55	VQZ0087-001	OSC COIL		
L 601	VQP0018-470	INDUCTOR		
L 701	VQP0018-470	INDUCTOR		
L 741	VQP0018-2R2	INDUCTOR		
Q 1	2SC2814(F4F5)HL	TRANSISTOR		
Q 51	2SK519(EL,FL)	TRANSISTOR (FET)		
Q 52	2SC1740S(R,S)	TRANSISTOR		
Q 121	2SC1623(6)	TRANSISTOR		
Q 131	2SC1623(6)	TRANSISTOR		
Q 221	2SC1623(6)	TRANSISTOR		
Q 231	2SC1623(6)	TRANSISTOR		
Q 701	FA1A4M	TRANSISTOR		
Q 705	FA1A4M	TRANSISTOR		
Q 741	2SC1623(6)	TRANSISTOR		
Q 742	2SC1623(6)	TRANSISTOR		
Q 743	2SC1623(6)	TRANSISTOR		
Q 744	2SC1623(6)	TRANSISTOR		
Q 745	2SC1623(6)	TRANSISTOR		
Q 751	2SC1623(6)	TRANSISTOR		
Q 752	2SC1623(6)	TRANSISTOR		
Q 753	2SC1623(6)	TRANSISTOR		
Q 754	2SC1623(6)	TRANSISTOR		
Q 801	2SB638(R,S)	TRANSISTOR		
Q 802	2SA812(6)	TRANSISTOR		
Q 803	2SC1623(6)	TRANSISTOR		
Q 804	2SA812(6)	TRANSISTOR		
Q 805	FN1A4MX	TRANSISTOR		
Q 806	2SC1623(6)	TRANSISTOR		
Q 807	FA1A4M	TRANSISTOR		
Q 808	2SD973	TRANSISTOR		
Q 809	2SD973	TRANSISTOR		
Q 810	2SD973	TRANSISTOR		
Q 811	2SB815B7-T-HL	TRANSISTOR		
Q 812	2SB815B7-T-HL	TRANSISTOR		
Q 813	FA1A4M	TRANSISTOR		
Q 821	2SB643	TRANSISTOR		
Q 822	FA1A4M	TRANSISTOR		
Q 823	FA1A4M	TRANSISTOR		
Q 911	FA1A4M	TRANSISTOR		
Q 931	FA1A4M	TRANSISTOR		
Q 932	2SC1623(6)	TRANSISTOR		
Q 933	2SC1623(6)	TRANSISTOR		

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
CJ 2	VMC0136-002	CONNECTOR		
CJ 1	VMC0136-005	CONNECTOR		
CJ 3	VMC0136-007	CONNECTOR		
CJ 4	VMC0136-008	CONNECTOR		
CJ601	VMC0278-001	CONNECTOR		
CJ701	VMC0232-S16	CONNECTOR		
CP 1	VMC0135-002	CONNECTOR		
CP 2	VMC0135-005	CONNECTOR		
CP 3	VMC0135-007	CONNECTOR		
CP 4	VMC0135-008	CONNECTOR		
CP701	VMC0232-Q16	CONNECTOR		
CP911	TXLL-005-M	CONNECTOR		
CP951	VGZ0007-030	FEED THROUGH		
D 1	1SS133	SI DIODE		
D 51	1SS133	SI DIODE		
D 52	1SS133	SI DIODE		
D 53	1SV121	SI DIODE		
D 54	1SV121	SI DIODE		
D 55	KV14107L	VARI. CAPACITOR		
D 101	HSM2838C	DIODE		
D 201	HSM2838C	DIODE		
D 601	HZS5.6EB2	ZENER DIODE		
D 602	HZS5.6EB2	ZENER DIODE		
D 603	HZS5.6EB2	ZENER DIODE		
D 604	HZS5.6EB2	ZENER DIODE		
D 605	HZS5.6EB2	ZENER DIODE		
D 606	HZS5.6EB2	ZENER DIODE		
D 607	HZS5.6EB2	ZENER DIODE		
D 701	1SS133	SI DIODE		
D 702	1SS133	SI DIODE		
D 741	HZS10EB1	ZENER DIODE		
D 742	1SS133	SI DIODE		
D 751	1SS133	SI DIODE		
D 752	1SS133	SI DIODE		
D 801	DSK10C-E	DIODE		
D 802	DSK10C-E	DIODE		
D 803	HSM2838C	DIODE		
D 804	HSM2836C	DIODE		
D 805	HZS6.2EB3	ZENER DIODE		
D 806	HZS10EB1	ZENER DIODE		
D 807	DSK10C-E	DIODE		
D 821	DSK10C-E	DIODE		
D 901	1SS133	SI DIODE		
D 931	HSM2838C	DIODE		
D 932	HSM2836C	DIODE		
D 933	1SS133	SI DIODE		
D 934	HSM2836C	DIODE		
D 935	HSM2838C	DIODE		
D 936	HZS11EB2	ZENER DIODE		
D 937	MA700	ZENER DIODE		
D 938	MA700	ZENER DIODE		
D 939	HSM2838C	DIODE		
IC 1	LA1862M	IC		
IC 51	UPC2533GS	IC		
IC701	UPD17086AGF-E22	IC		

BLOCK NO. 01

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 121	NRSA02J-104NY	MG RESISTOR		
R 122	NRSA02J-222NY	MG RESISTOR	100K 5% 1/10W	
R 123	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 126	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 131	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 132	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 133	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
R 134	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 135	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 136	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
R 137	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 138	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 139	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 140	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 141	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 151	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 152	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 153	NRSA02J-2R2NYM	MG RESISTOR	2.2 5% 1/10W	
R 154	NRSA02J-2R2NYM	MG RESISTOR	2.2 5% 1/10W	
R 155	NRSA02J-2R2NYM	MG RESISTOR	2.2 5% 1/10W	
R 156	NRSA02J-2R2NYM	MG RESISTOR	2.2 5% 1/10W	
R 157	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 158	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 201	NRSA02J-334NY	MG RESISTOR	330K 5% 1/10W	
R 202	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 203	NRSA02J-181NY	MG RESISTOR	180 5% 1/10W	
R 204	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
R 211	NRSA02J-822NY	MG RESISTOR	8.2K 5% 1/10W	
R 221	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 222	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 223	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 226	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 231	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 232	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 233	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
R 234	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 235	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 236	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
R 237	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 238	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 239	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 240	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 241	NRSA02J-103NY	MG RESISTOR	100 5% 1/10W	
R 251	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 252	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 253	NRSA02J-2R2NYM	MG RESISTOR	2.2 5% 1/10W	
R 254	NRSA02J-2R2NYM	MG RESISTOR	2.2 5% 1/10W	
R 255	NRSA02J-2R2NYM	MG RESISTOR	2.2 5% 1/10W	
R 256	NRSA02J-2R2NYM	MG RESISTOR	2.2 5% 1/10W	
R 257	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 601	NRS181J-123NY	MG RESISTOR	1.2K 5% 1/8W	
R 605	NRS181J-122NY	MG RESISTOR	1.2K 5% 1/8W	
R 606	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
R 607	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
Q 934	2SC1623(6)	TRANSISTOR		
Q 935	2SC1623(6)	TRANSISTOR		
Q 936	FA1A4M	TRANSISTOR		
Q 937	FN1A4MX	TRANSISTOR		
Q 938	FN1A4MX	TRANSISTOR		
Q 939	FN1A4MX	TRANSISTOR		
Q 940	FN1A4M	TRANSISTOR		
R 1	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 2	NRSA02J-151NY	MG RESISTOR	150 5% 1/10W	
R 3	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
R 4	NRSA02J-203NY	MG RESISTOR	20K 5% 1/10W	
R 5	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 6	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
R 7	NRSA02J-182NY	MG RESISTOR	1.8K 5% 1/10W	
R 8	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
R 9	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
R 10	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
R 11	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 12	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 13	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
R 15	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 16	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
R 17	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
R 18	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 19	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 20	NRSA02J-682NY	MG RESISTOR	6.8K 5% 1/10W	
R 21	NRSA02J-752NY	MG RESISTOR	7.5K 5% 1/10W	
R 23	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 24	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
R 25	NRSA02J-273NY	MG RESISTOR	27K 5% 1/10W	
R 26	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
R 27	NRSA02J-150NY	MG RESISTOR	15 5% 1/10W	
R 28	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R 29	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R 31	NRSA02J-470NY	MG RESISTOR	47 5% 1/10W	
R 32	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 33	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 40	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
R 51	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 52	NRS181J-471NY	MG RESISTOR	470 5% 1/8W	
R 53	NRS181J-220NY	MG RESISTOR	22 5% 1/8W	
R 54	NRSA02J-154NY	MG RESISTOR	150K 5% 1/10W	
R 55	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 56	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 58	NRSA02J-272NY	MG RESISTOR	2.7K 5% 1/10W	
R 59	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 60	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 61	NRSA02J-470NY	MG RESISTOR	47 5% 1/10W	
R 62	NRSA02J-470NY	MG RESISTOR	47 5% 1/10W	
R 63	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 101	NRSA02J-334NY	MG RESISTOR	330K 5% 1/10W	
R 102	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 103	NRSA02J-181NY	MG RESISTOR	180 5% 1/10W	
R 104	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
R 111	NRSA02J-822NY	MG RESISTOR	8.2K 5% 1/10W	

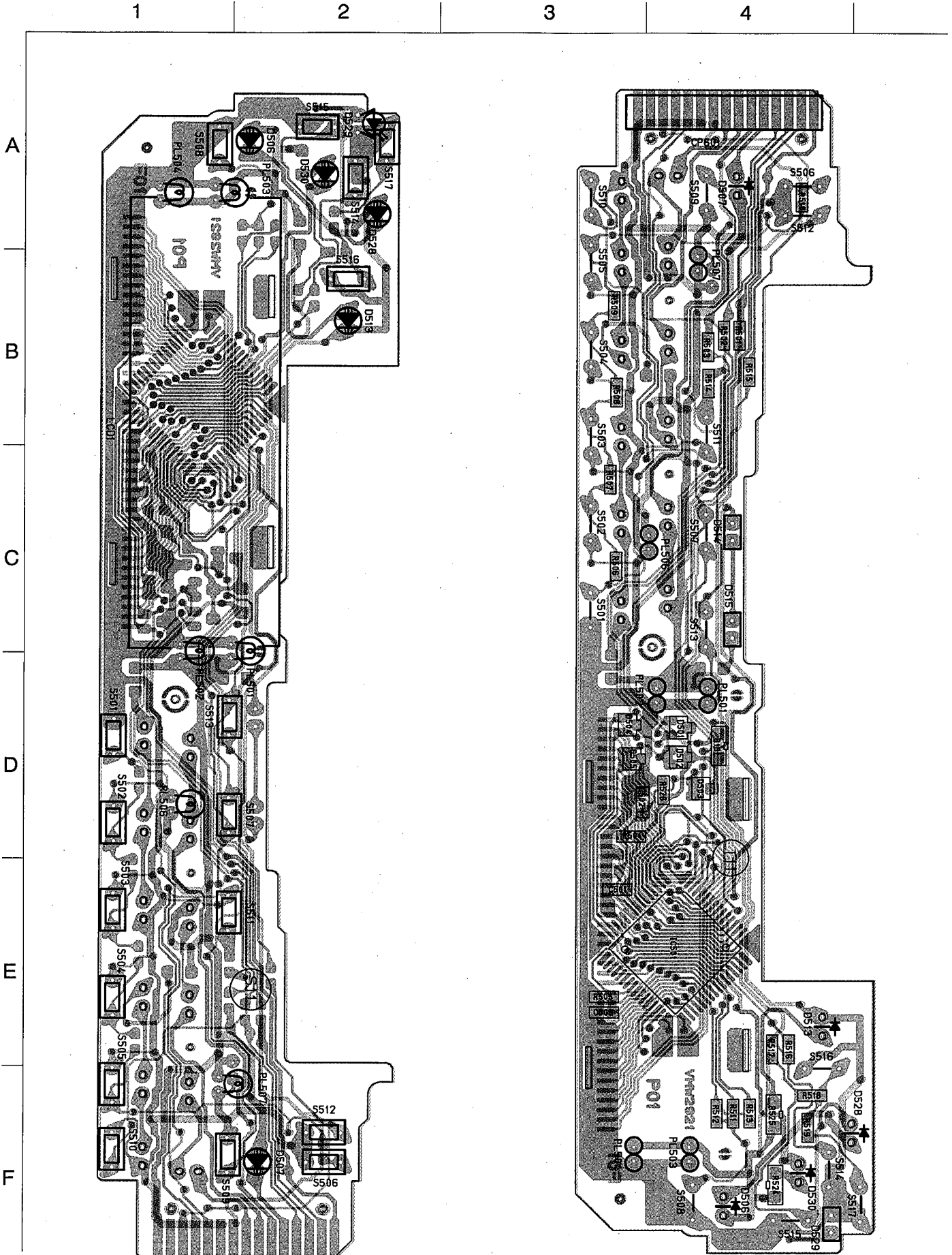
BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 804	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 805	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 806	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 807	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 808	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 809	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 810	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 811	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
R 812	QRD161J-2R2	CARBON RESISTOR	2.2 5% 1/6W	
R 813	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 814	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 815	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 816	NRS181J-331NY	MG RESISTOR	330 5% 1/8W	
R 817	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
R 818	NRS181J-472NY	MG RESISTOR	4.7K 5% 1/8W	
R 820	QRD145J-470S	CARBON RESISTOR	47 5% 1/4W	
R 821	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 822	NRS181J-102NY	MG RESISTOR	1.0K 5% 1/8W	
R 901	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
R 911	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
R 912	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 913	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 931	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 932	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 933	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 934	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 935	NRSA02J-475NY	MG RESISTOR	4.7M 5% 1/10W	
R 936	NRSA02J-475NY	MG RESISTOR	4.7M 5% 1/10W	
R 937	NRSA02J-475NY	MG RESISTOR	4.7M 5% 1/10W	
R 938	NRSA02J-272NY	MG RESISTOR	2.7K 5% 1/10W	
R 939	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 940	NRSA02J-334NY	MG RESISTOR	330K 5% 1/10W	
R 941	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 942	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 943	NRS181J-332NY	MG RESISTOR	3.3K 5% 1/8W	
R 951	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 953	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 954	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
RY801	VSK1D12-118	RELAY		
T 51	VBT7F11-101	IFT		
T 52	VBT7A11-210	IFT		
T 53	VBT7A11-303	IFT		
TP 1	VMC0075-002N	CONNECTOR		
TP921	VMC0075-002N	CONNECTOR		
TU 1	VAF2S07-402	FM FRONT END		
VR 1	QVPA603-333A	SEMI-V.RESISTOR		
VR111	QVPA603-223A	SEMI-V.RESISTOR		
VR211	QVPA603-223A	SEMI-V.RESISTOR		
VR751	QVZ3523-203AZ	V.RESISTOR		
X 51	VCKX5058-001	CRYSTAL		
X 701	VCKX4001-003	CRYSTAL		
X 774	VCKX5057-001	CRYSTAL		

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 608	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
R 609	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 610	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 611	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 701	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 702	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 703	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 704	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 705	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 706	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 707	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 708	NRS181J-473NY	MG RESISTOR	4.7K 5% 1/8W	
R 709	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 710	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 711	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 712	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 713	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R 714	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 715	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 716	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 717	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 718	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 719	NRSA02J-334NY	MG RESISTOR	330K 5% 1/10W	
R 721	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
R 722	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 724	NRSA02J-334NY	MG RESISTOR	330K 5% 1/10W	
R 725	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 726	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 744	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
R 728	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 741	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 742	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 743	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
R 745	NRSA02J-331NY	MG RESISTOR	470 5% 1/10W	
R 746	NRSA02J-332NY	MG RESISTOR	330 5% 1/10W	
R 747	NRSA02J-472NY	MG RESISTOR	3.3K 5% 1/10W	
R 748	NRSA02J-332NY	MG RESISTOR	4.7K 5% 1/10W	
R 749	NRS181J-331NY	MG RESISTOR	330 5% 1/8W	
R 750	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 751	NRS181J-224NY	MG RESISTOR	220K 5% 1/8W	
R 752	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 753	NRSA02J-682NY	MG RESISTOR	6.8K 5% 1/10W	
R 754	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 755	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 756	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 757	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 758	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 759	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 760	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R 761	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 771	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 801	QRD145J-470S	CARBON RESISTOR	47 5% 1/4W	
R 802	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
R 803	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	

### ■ Key/Display Board





● Key/Display Board Parts List

BLOCK NO. 02

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
A 510	QSQB11-V01Z	TACT SWITCH		
S 511	QSQB11-V01Z	TACT SWITCH		
S 512	QSQB11-V01Z	TACT SWITCH		
S 513	QSQB11-V01Z	TACT SWITCH		
S 514	QSQB11-V01Z	TACT SWITCH		
S 515	QSQB11-V01Z	TACT SWITCH		
S 516	QSQB11-V01Z	TACT SWITCH		
S 517	QSQB11-V01Z	TACT SWITCH		

BLOCK NO. 02

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
B 181	NRS181J-OR0NY	MG RESISTOR	5% 1/8W	
C 501	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 502	NFB20JM-475RY	T. E. CAPACITOR	4.7MF 20% 6.3V	
C 503	NGS21HJ-681AY	C. CAPACITOR	680PF 5% 50V	
CP601	VMC0259-001	CONNECTOR		
D 501	HSM2838C	DIODE		
D 502	HSM2838C	DIODE		
D 503	HSM2838C	DIODE		
D 504	HSM2836C	DIODE		
D 505	HSM2836C	DIODE		
D 506	SLR-342VCA49	LED	HBS	
D 507	SLR-342VCA49	LED	MODE	
D 513	SLR-342MWA49	LED		
D 528	SLR-342MWA49	LED		
D 529	SLR-342MWA49	LED		
D 530	SLR-342MWA49	LED		
IC501	LC75850E	IC		
LCD 1	LC08261JNH	LCD		
PL501	VGZ0001-056	LAMP		
PL502	VGZ0001-056	LAMP		
PL503	VGZ0001-056	LAMP		
PL504	VGZ0001-056	LAMP		
PL506	VGZ0001-055	LAMP		
PL507	VGZ0001-055	LAMP		
R 501	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 502	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 503	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 504	NRSA02J-154NY	MG RESISTOR	150K 5% 1/10W	
R 505	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 506	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
R 507	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 508	NRSA02J-272NY	MG RESISTOR	2.7K 5% 1/10W	
R 509	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 510	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 511	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
R 512	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 513	NRSA02J-272NY	MG RESISTOR	2.7K 5% 1/10W	
R 514	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 515	NRSA02J-122NY	MG RESISTOR	1.2K 5% 1/10W	
R 516	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 517	NRSA02J-272NY	MG RESISTOR	2.7K 5% 1/10W	
R 518	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 519	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 524	NRS181J-152NY	MG RESISTOR	1.5K 5% 1/8W	
R 525	NRS181J-222NY	MG RESISTOR	2.2K 5% 1/8W	
R 526	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
S 501	QSQB11-V01Z	TACT SWITCH		
S 502	QSQB11-V01Z	TACT SWITCH		
S 503	QSQB11-V01Z	TACT SWITCH		
S 504	QSQB11-V01Z	TACT SWITCH		
S 505	QSQB11-V01Z	TACT SWITCH		
S 506	QSQB11-V01Z	TACT SWITCH		
S 507	QSQB11-V01Z	TACT SWITCH		
S 508	QSQB11-V01Z	TACT SWITCH		
S 509	QSQB11-V01Z	TACT SWITCH		

# 8 Exploded View of Enclosure Component Parts and Parts List

1	2	3	4
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Block No. **M 1**

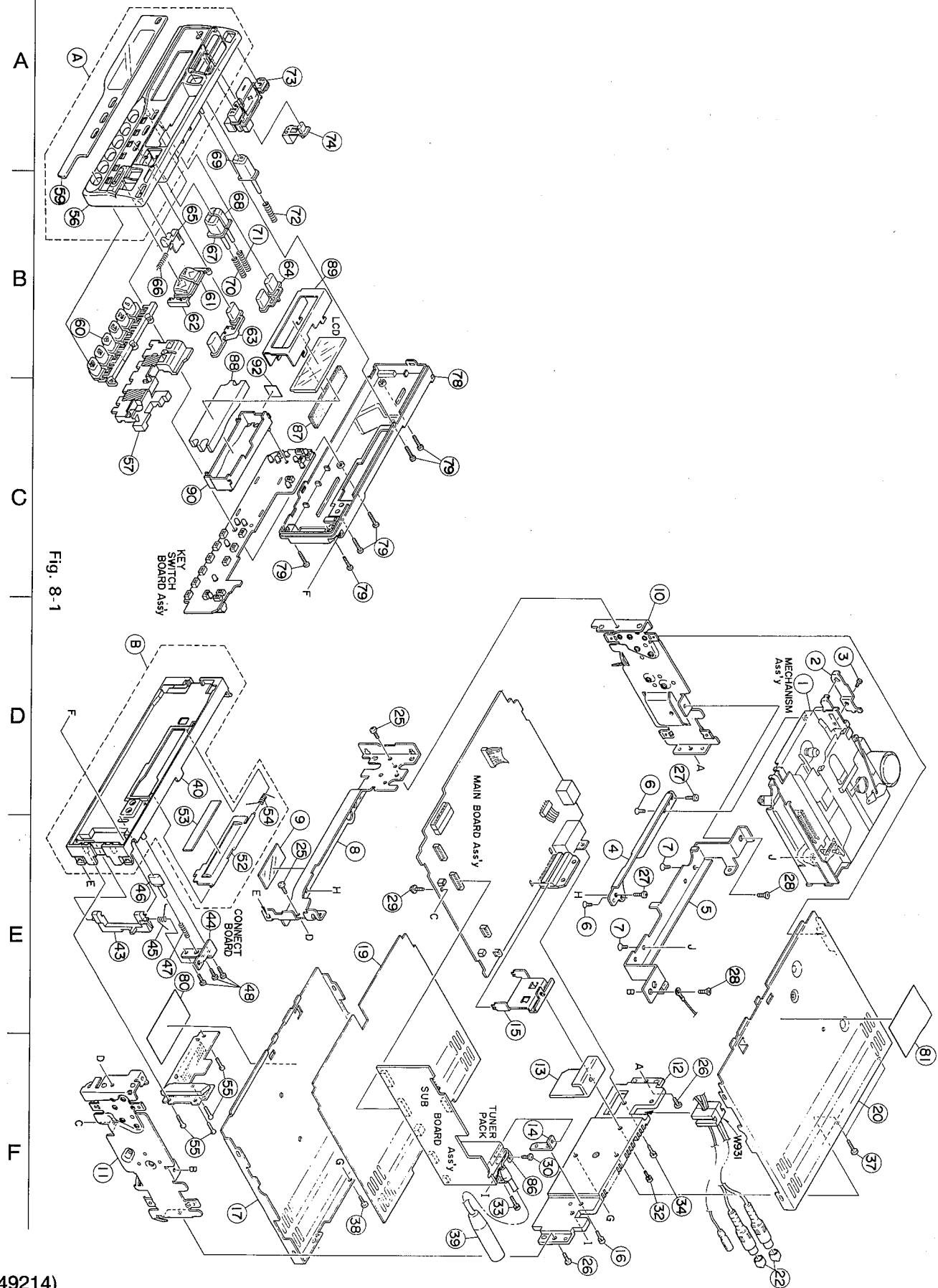


Fig. 8-1



# Enclosure Component Parts List

BLOCK NO. 11111

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
A	ZCKSRT65RK-NPA	NOSE PIECE	NO.56,59	1		
B	ZCKSRT65RK-FB	F.CHASSIS ASS'Y	NO.40,52-54,	1		
1	-----	RT30 MECHA	2CH HEAD MECHA	1		
2	VKL7226-003	EJECT LEVER		1		
3	SPSK2625Z	MINI SCREW	MECHA+EJECT LEV	1		
4	VKM3645-001	MECHA BRACKET F		1		
5	VKM3594-001	MECHA BRACKET R		1		
6	SSSP3005Z	SCREW	MECHA+M.BRACKET	2		
7	SSSP3005Z	SCREW	MECHA+M.BRACKET	2		
8	VKM3642-002	FRONT BRACKET		1		
9	VYSS1R4-040	SPACER	FRONT BRACKET	1		
10	VKL2723-001	SIDE BKT(L)		1		
11	VKL2724-002SS	SIDE BKT(R)		1		
12	VJC3260-001	REAR PANEL		1		
13	VYH7903-001	SUB HEAT SINK	POWER IC+REAR P	1		
14	VKL7276-001	BRACKET	REAR PANEL	1		
15	VKL7687-001	IC BRACKET		1		
16	LPSP2606Z	SCREW	REAR PANEL+VKL7	1		
17	VKM3352-004	BOTTOM COVER		1		
19	VMA3216-001	INSULATOR		1		
20	VKM3398-005	TOP COVER		1		
22	VYTA500-001	PIN CAP	LINE OUTX2	2		
25	SDST2606Z	SCREW	FRONT+SIDE(L,R)	2		
26	SDST2606Z	SCREW	SIDE L,R+REAR P	2		
27	SDST2606Z	SCREW	MECHA.+ FRONT B	2		
28	SSST2606Z	SCREW	M.BRACKET+SIDE	2		
29	SDST2606Z	SCREW	MAIN BARD+SIDE(	1		
30	SDST2606Z	SCREW	FM TUNER EARTH	1		
32	LPSP2610Z	SCREW	IC BKT+REAR PAN	1		
33	LPSP2606Z	SCREW	REAR PANEL+ANTE	1		
34	LPSP2606Z	SCREW	11PIN CONNECTOR	1		
37	LPSP2606Z	SCREW	TOP COVER	2		
38	LPSP2606Z	SCREW	BOTTOM COVER	1		
39	VMP0029-027	ANT CORD		1		
40	VJC2528-002	FRONT CHASSIS	NOSE ASS'Y	1		
43	VKS5438-001	LOCK LEVER		1		
44	VKL7267-001	LEVER BRACKET		1		
45	FSKW4005-002	TORSION SPRING	FOR LOCK LEVER	1		
46	VXP5252-001	RLS KNOB		1		
47	VKW3001-317	COMP.SPRING	RLS KNOB	1		
48	SDSF2006Z	SCREW	LEVER BRACKET	3		
52	VJC4145-002SS	CASSETTE LID		1		
53	FSJC4001-001	LID PLATE		1		
54	VKW4947-003	DOOR SPRING		1		
55	SPSN1755N	MINI SCREW	CONNECT BOARD	4		
56	VJG1291-001	FRONT PANEL		1		
57	ZCKSRT65RK-LENS	LIGHT LENS ASSY		1		
59	VJK2191-006	FINDER		1		
60	VXP2066-002	PRESET BUTTON		1		
61	VXP3571-001	DOWN BUTTON		1		
62	VXP3572-001	UP BUTTON		1		
63	VXP3577-007	PUSH BUTTON	A.HBS/MANU	1		
64	VXP3578-001	ILL BUTTON	FUNCTION, B/CLK	1		
65	FSXP3007-003	DETACH BUTTON	POM	1		



# 9 Exploded View of Mechanism Component Parts

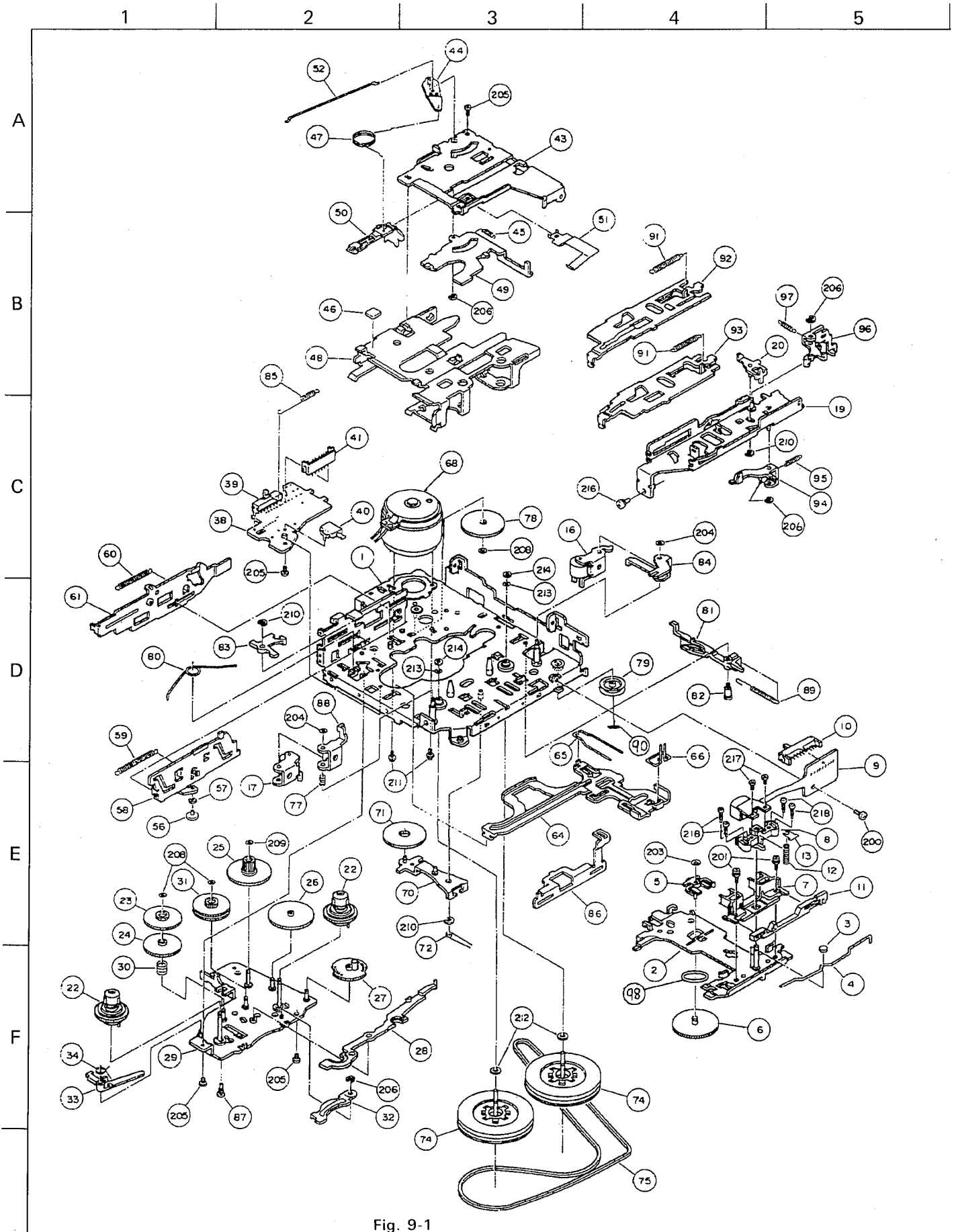


Fig. 9-1

## ● Mechanism Component Parts List

BLOCK NO. M2MM        

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	194001519T	CHASSIS ASS'Y		1		
	2	194016501T	HEAD PANEL ASY		1		
	3	19400303T	SP ROLLER		1		
	4	19400304T	P.R.SPRING		1		
	5	19400305T	P.GEAR METAL		1		
	6	19400306T	P.GEAR		1		
	7	19400312T	TAPE GUIDE U		1		
	8	19400327T	HEAD HOLDER B		1		
	9	62011702T	HEAD	P-7542-BB0571	1		
	10	64020207T	SLIDE SWITCH	SSSSA3002A	1		
	11	19400328T	SHIFT PLATE B		1		
	12	19400315T	H.G SPRING		1		
	13	9F2635010T	FASTEN WASHER		1		
	16	194004301T	P.ROLL.ARM(F)AS		1		
	17	194004302T	P.ROLL.ARM(R)AS		1		
	19	194005503T	F.R.BKT(M)ASS'Y		1		
	20	194005504T	SEESAW P(M)ASY.		1		
	22	194006302T	T.REEL ASS'Y		2		
	23	19400612T	P.GEAR (R)		1		
	24	19400613T	F.GEAR (R)		1		
	25	19400615T	P.D.GEAR		1		
	26	19400616T	E.D.GEAR		1		
	27	19400617AT	REVERSE GEAR(M)		1		
	28	19400648T	E.D.PLATE B		1		
	29	194002501T	M.G.P.SEMI-ASY.		1		
	30	19400635T	TN SPRING		1		
	31	194006312T	P.CLUTCH ASS'Y		1		
	32	194014129T	LIFT UP PLATE		1		
	33	19401464T	ANTI-REV ARM		1		
	34	19401460T	TRI ARM SPRING		1		
	38	19400704T	SW SUBSTRATE		1		
	39	64020206T	SLIDE SWITCH	SSSSA2001A	1		
	40	64020405T	PUSH SWITCH	SPVC11001A	1		
	41	68140245T	CONNECTOR	53253-0720	1		
	43	19400801T	CASE LIFTER		1		
	44	184008503T	P.E PLATE ASS'Y		1		
	45	18400820T	SPRING		1		
	46	18400875T	CUSSHION RUBBER		1		
	47	19400813T	REVERSE SP.C		1		
	48	19401410T	CASSETTE CASE M		1		
	49	19400804T	C.D PLATE B		1		
	50	19400810T	PACK SLIDER		1		
	51	19400806T	PACK PRESS.SP.		1		
	52	18400823T	P.E SPRING		1		
	56	19400901T	H.P.ROLLER(A)		1		
	57	19400902T	H.P.ROLLER(B)		1		
	58	19400903T	C.H.PUSH PLAT.M		1		
	59	19400905T	C.H.SPRING		1		
	60	19400906T	PUSH LEVER SP.		1		
	61	19400907T	PUSH LEVER M		1		
	64	19401001T	MAIN PLATE		1		
	65	19401002T	M.S.SPRING		1		
	66	19401007T	H.S.SPRING		1		
	68	194011310T	MOTOR ASS'Y	MCI-5U3LCKA	1		





BLOCK NO. M2MM   

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	70	194012504T	FR W.PLT.SEM.AS		1		
	71	19401703T	F.GEAR		1		
	72	19401704T	FR SPRING M		1		
	74	194013303T	F.L.CAPS.ASS'Y		2		
	75	19401417T	MAIN BELT		1		
	77	18400437T	P.P SPRING		1		
	78	194014123T	MAIN GEAR M		1		
	79	194014115T	MIDDLE PULLEY		1		
	80	19401403T	HEAD PANEL SP.M		1		
	81	19401405T	TRIGGER ARM(C)		1		
	82	19401406T	COLLAR SCREW(T)		1		
	83	19401408T	H.P.PUSH ARM		1		
	84	19401409T	SEESAW WRK.PLT.		1		
	85	19401412T	POWER SW.SPRING		1		
	86	194014127T	FR SLIDE PLT.M		1		
	87	19401415T	COLLAR SCREW(P)		1		
	88	19401416T	H.P.RETURN ARM		1		
	89	19401407T	T.A.SPING(C)		1		
	90	9W0225010T	P.WASHER CUT		1		
	91	19401589T	FR LEVER SPRING		2		
	92	19401590T	FF LEVER(MH)		1		
	93	19401591T	REW LEVER(MH)		1		
	94	19401503T	P.C.PLATE		1		
	95	19401504T	P.C.SPRING		1		
	96	19401505T	ROCK PLATE (M)		1		
	97	19401506T	ROCK PLATE SP.M		1		
	98	9W0540020T	HL WASHER	10 X 14 X 0.4	1		
	200	9P1220051T	S TAPPING SCREW	M2 X 5	1		
	201	9P0220051T	TAMS SCREW	M2 X 5	2		
	203	9W0640070T	HL WASHER CUT	2.1 X 4 X 0.4	1		
	204	9W0630060T	HL WASHER CUT	1.6 X 3.8 X 0.3	2		
	205	9C0420303T	S TAPPING SCREW	FOR CAMERA M2X3	4		
	206	9E0100152T	E RING	S1.5	4		
	208	9W0625030T	HL WASHER CUT	1.2 X 3 X 0.25	3		
	209	9W0630050T	HL WASHER CUT	1.6 X 3.4 X 0.3	1		
	210	9E0100202T	E RING	S2.0	3		
	211	9P0220031T	TAMS SCREW	M2 X 3	2		
	212	9W0513060T	HL WASHER	2.1 X 5 X 0.13	2		
	213	9W0520010T	HL WASHER CUT	1.85 X 3.2 X 0.	2		
	214	9W0650030T	HL WASHER CUT	1.5 X 3.2 X 0.5	2		
	216	9P0226041T	TAMS SCREW	M2.6 X 4	1		
	217	9F2720401T	SCREW	FOR HEAD	2		
	218	9F2220071T	ADJUST SCREW		4		

# 10 Packing Illustration and Parts List

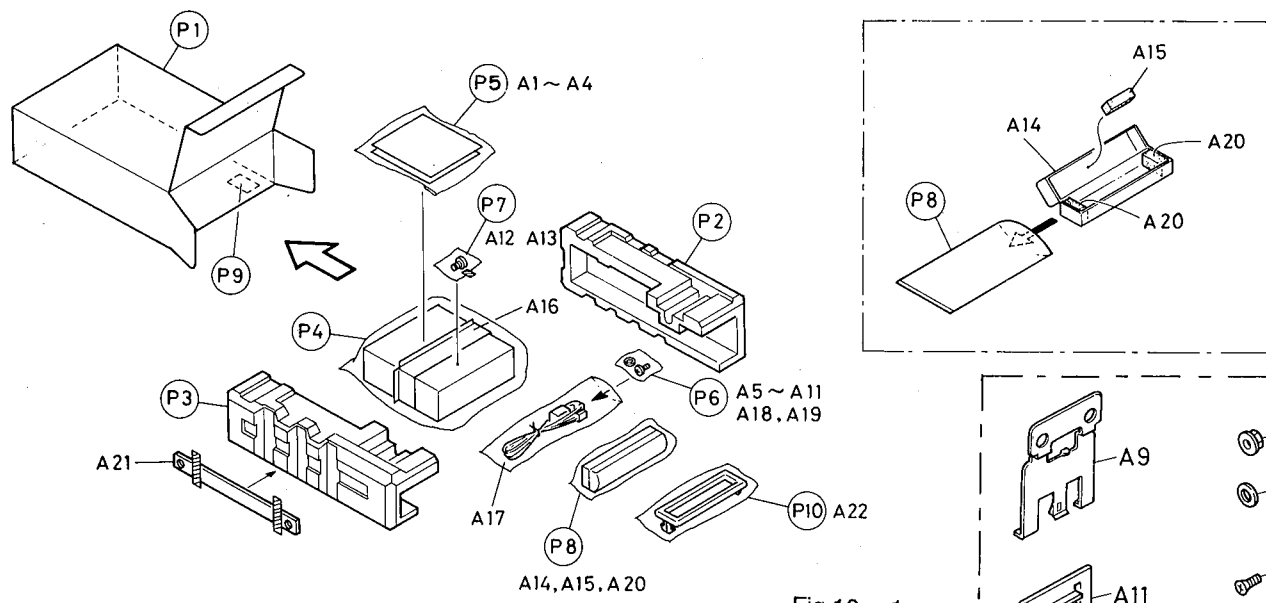
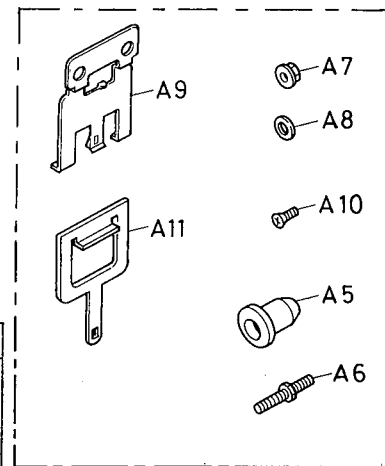


Fig 10 - 1

## ● packing Parts List

BLOCK NO. M3MM I I I						
REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
P 1	VPC3500-S004	CARTON		1		
P 2	VPH1647-201	CUSHION(L)		1		
P 3	VPH1648-201	CUSHION(R)		1		
P 4	VPE3005-066	POLY BAG	FOR SET	1		
P 5	QPG8017-02404	POLY BAG	INSTRUCTIONS	1		
P 6	QPGA008-01205	POLY BAG	SCREW KIT 1	1		
P 7	QPGA008-01205	POLY BAG	SCREW KIT 2	1		
P 8	QPGA010-03003	POLY.BAG	FOR HARD CASE	1		
P 9	VND3046-005	SERIAL TICKET		1	G	
	VND3046-001	SERIAL TICKET		1	GI,GE	
	VND3046-003	SERIAL TICKET		1	E	
	VND3046-004	SERIAL TICKET		1	B	
P 10	QPGA010-03003	POLY.BAG	FOR TRIM PLATE	1		



BLOCK NO. M3MM I I I						
REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
A 1	VNN3500-211S	INSTRUCTIONS		1		
	VNN3500-481S	INSTRUCTIONS		1	E	
	VNN3500-451S	INSTRUCTIONS		1	E	
	VNN3500-471S	INSTRUCTIONS		1	GI	
A 2	VNC2400-090	CAUTION SHEET		1		
A 3	VND3050-001	IDENTITY CARD		1		
A 4	BT20060	WARRANTY CARD		1	B	
	BT-20066A	WARRANTY CARD		1	B	
	BT-20135	WARRANTY CARD		1	G	
A 5	VK24027-002	PLUG NUT		1		
A 6	VKH4871-001	HOUNT BOLT		1		
A 7	VK24328-001	LOCK NUT	FOR M5	1		
A 8	WNS5000Z	WASHER		1		
A 9	VKY3124-001	SIDE SPRING		2		
A 10	SSSP4006Z	SCREW	FOR SIDE SPRING	4		
A 11	VKL7233-001	HOOK		2		
A 12	SPSJ1725M	MINI SCREW		1		
A 13	VND4619-005	SHEET		1		
A 14	VJB2014-001	HARD CASE		1		
A 15	VYSH118-002	SPACER		1		
A 16	VKL3732-018SS	MOUNTING SLEEVE		1		
A 17	VMC0014-145	11P CORD ASS'Y		1		
A 20	FSYH3008-002	SPACER	HARD CASE:INNER	2		
A 21	VKL5460-001	STAY		1		
A 22	FSJD2004-002	TRIM PLATE		1		
KIT 1	KSRT80RK-SCREW1	SCREW KIT 1	P6, A5-A11,	1		
KIT 2	KSRT75RK-SCREW2	SCREW KIT 2	P7, A12-A13	1		



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