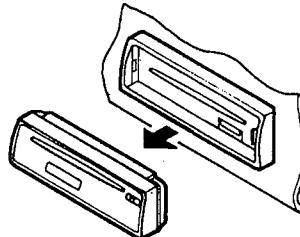
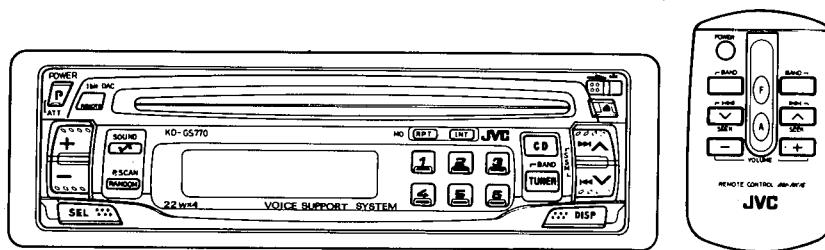


# JVC

## SERVICE MANUAL

### CD RECEIVER

### KD-GS770C/J



**COMPACT  
disc  
DIGITAL AUDIO**

<b>Area Suffix</b>
C..... Canada
J..... U.S.A

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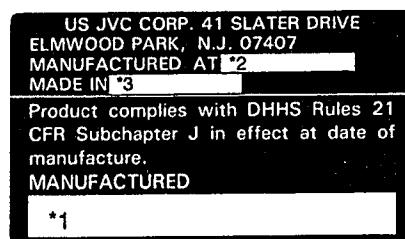
# ■ Safety Precautions

## J (USA) Only

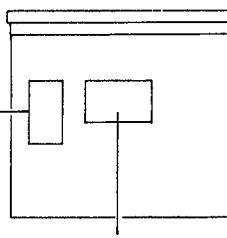
### Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER: Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION: Do not open the bottom cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
4. CAUTION: The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when unloading cartridge and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
6. CAUTION: The laser is able to function, if safety switches are out of function. The laser light is invisible, avoid exposure, do not disassemble the laser unit, but replace the complete unit.

### Identification And Certification Labels



Bottom panel of the main unit  
Parte inferior de la unidad principal  
*Panneau inférieur de l'appareil principal*



NAME/RATING PLATE

Notes:

- \*1 The date of manufacture.
- \*2 The ID code of manufacturing plant.
- \*3 Marking of country origin.

**FEATURES**

- Detachable Control Panel
- Voice Support System
- Wireless Remote Control
- "Direct-in" disc loading system
- Direct Access Play/Skip Play/Search Play/  
Repeat Play/Random Play/Intro Play
- AM/FM Stereo PLL Synthesizer Tuner
- 24-Station Preset Tuning (FM-18, AM-6)
- Preset Scan/Seek/Manual Tuning
- 4-Channel Amplifier System
- Maximum Power Output of 22 watts per  
channel (Front)/22 watts per channel (Rear)
- One Touch Operation
- Sound Control Memory
- Digital Clock Display
- Line Output Terminal

**SPECIFICATIONS****CD PLAYER SECTION**

Type: Compact disc player  
 Signal Detection System: Non-contact optical pickup  
 (semiconductor laser)  
 Number of Channels: 2 channels (stereo)  
 Frequency Response: 5 to 20,000 Hz  
 Dynamic Range: 95 dB  
 Signal-to-Noise Ratio: 97 dB  
 Wow & Flutter: Less than measurable limit

**AUDIO AMPLIFIER SECTION**

Maximum Power Output: (Front) 22 watts per channel  
 (Rear) 22 watts per channel  
 Continuous Power Output (RMS): (Front) 8 watts per  
 channel into 4 Ω, 40 to 20,000 Hz at no more than  
 0.8% total harmonic distortion. (Rear) 8 watts per  
 channel into 4 Ω, 40 to 20,000 Hz at no more than  
 0.8% total harmonic distortion.  
 Load Impedance: 4 Ω (4 to 8 Ω allowance)  
 Tone Control Range  
 Bass: ±10 dB at 100 Hz  
 Treble: ±10 dB at 10 kHz  
 Frequency Response: 40 to 20,000 Hz  
 Signal-to-Noise Ratio: 70 dB  
 Line-Out Level: 1.5 V/20 kΩ load (Full scale)  
 Output Impedance: 1 kΩ

**RADIO SECTION**

Frequency Range  
 FM: 87.5 to 107.9 MHz  
 (with channel interval set to 200 kHz)  
 87.5 to 108.0 MHz  
 (with channel interval set to 50 kHz)  
 AM: 530 to 1,710 kHz  
 (with channel interval set to 10 kHz)  
 531 to 1,602 kHz  
 (with channel interval set to 9 kHz)  
 [FM Tuner]  
 Usable Sensitivity: 11.3 dBf (1.0 μV/75 Ω)  
 50 dB Quieting Sensitivity: 16.3 dBf (1.8 μV/75 Ω)  
 Alternate Channel Selectivity: (400 kHz): 65 dB  
 Frequency Response: 40 to 15,000 Hz  
 Stereo Separation: 35 dB  
 Capture Ratio: 1.5 dB  
 [AM Tuner]  
 Sensitivity: 20 μV  
 Selectivity: 35 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: 182 x 52 x  
 159 mm (7-3/16" x 2-1/16" x 6-5/16")  
 Panel Size: 189 x 58 x 14 mm (7-1/2" x 2-5/16" x  
 5/8")  
 Gross Weight: 2.0 kg (4.5 lbs)

*Design and specifications subject to change without  
 notice.*

# ■ Instructions

Thank you for purchasing a JVC product. Please read all instructions carefully before operation, to ensure your complete understanding and to obtain a longer service life from the unit.

## CONTENTS

Features .....	3
Specifications .....	3
Important information .....	4
Precautions .....	5
Installation (In-dash mounting) .....	5
Electrical connections .....	7
Location of controls .....	8
Concerning compact discs .....	12
Playing compact discs .....	13
Radio operation .....	14
Digital clock display .....	17
Maintenance .....	17

### INFORMATION (For U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

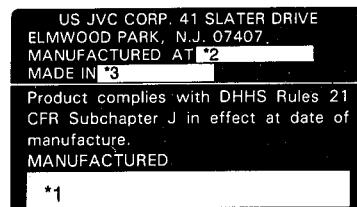
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### IMPORTANT FOR LASER PRODUCTS (For U.S.A. only)

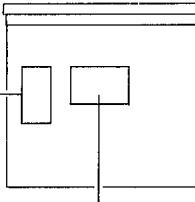
#### Precautions

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the top cover. There are no user-serviceable parts inside. Leave all servicing to qualified service personnel.
4. **CAUTION:** This CD player uses invisible laser radiation, however, is equipped with safety switches to prevent radiation emission when unloading CDs. It is dangerous to defeat the safety switches.
5. **CAUTION:** Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### Identification And Certification Labels



Bottom panel of the main unit



#### Notes:

- \*1 The date of manufacture.
- \*2 The ID code of manufacturing plant.
- \*3 Marking of country origin.

### IMPORTANT INFORMATION

1. This unit is designed to operate with 12 volts DC, NEGATIVE ground electrical systems only.
2. Replace the fuse with one of the specified rating. If the fuse blows frequently, consult your JVC car audio dealer.
3. If noise is a problem...  
This unit incorporates a noise filter in the power circuit. However, with some vehicles, clicking or other unwanted noise may occur. If this happens, connect the unit's rear ground terminal to the car's chassis using shorter and thicker cords, such as copper braiding or gauge wire. If noise still persists, consult your JVC car audio dealer.

#### Antenna Noise

If you can hear static noise when listening to either AM or FM, check for loose antenna connections.

**Microcomputer Reset Button**

After completing installation and all connections, press this button (using a ball-point pen, etc.) to reset the built-in microcomputer. Use this button only when the power supply is interrupted, such as after replacing the car's battery, when the microcomputer does not function correctly due to noise, or when this unit's buttons do not operate normally.



Microcomputer reset button

**Mistracking**

Mistracking may occur when driving on extremely rough roads. Although this will not damage the unit or the CD, it can be annoying. We recommend that you stop playback and wait until the road conditions have improved, before restarting the unit.

**PRECAUTIONS****1. Avoid Installing In The Following Places**

- Where exposed to direct sunlight, near a heater, or in extremely hot places.
- Where exposed to water or excessive humidity.
- Where exposed to dust.

**2. Car's Internal Temperature**

Before listening to CDs after your car has been parked for some time in low or high temperatures, wait until the temperature inside the car stabilizes.

**3. Condensation**

In the following cases, moisture may condense on the lens, a critical part of the CD player, making the CD signal unreadable:

- When a heater has just been turned on.
- When humidity is high.

In these cases, unload the CD and wait for 1 or 2 hours with the power switched ON to let the moisture dry.

**4. Volume Setting**

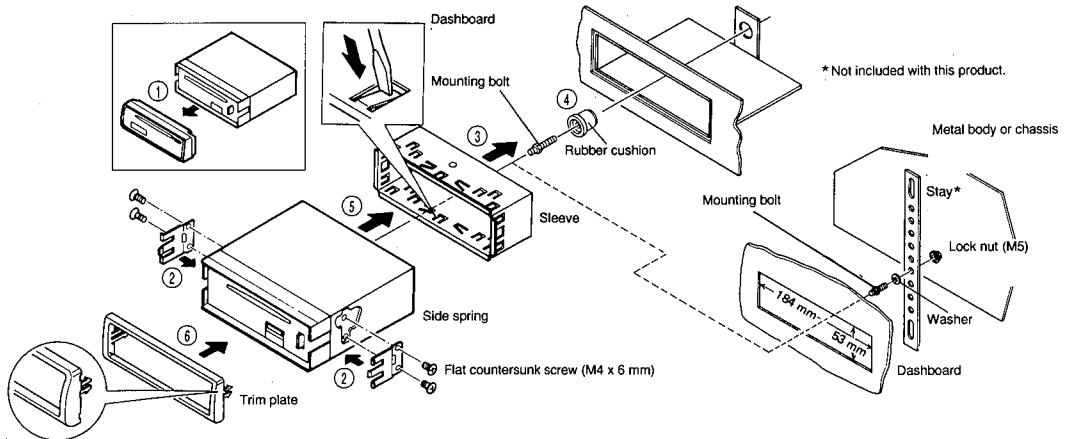
- CDs produce very little noise compared with analog sources. If the volume level is adjusted for these sources, the speakers may be damaged by the sudden increase in the output level. Therefore, lower the volume before operation and adjust it as required during playback.
- Adjust the volume so that you can hear sounds outside the car.

**INSTALLATION (IN-DASH MOUNTING)**

- 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 car audio dealer or a company supplying kits.

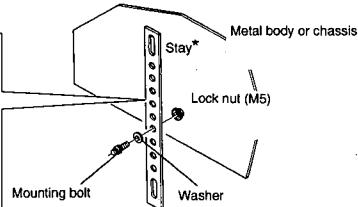
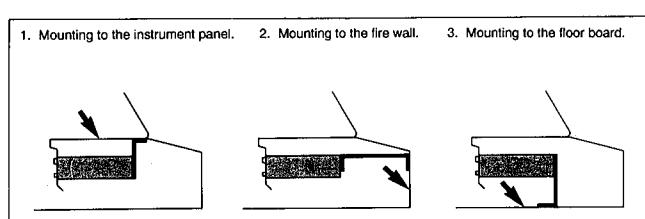
- ① Slide the Control Panel Release ( $\Delta$ ) switch to the right and remove the control panel.
- ② Attach the 2 side springs.
- ③ Install the sleeve in the dashboard.
- ④ After the sleeve is correctly installed in the dashboard, bend the appropriate tabs to hold the sleeve firmly in place, as shown.
- ⑤ Fix the mounting bolt to the rear of the unit's body and place the rubber cushion over the end of the bolt.
- ⑥ Slide the unit into the sleeve until they are locked together.
- ⑦ Attach the trim plate.

- Follow the numbers for mounting.



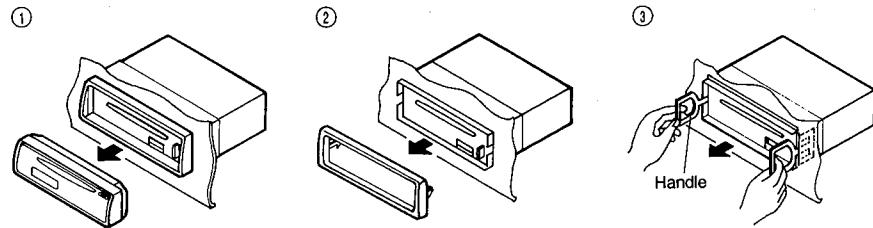
- Examples for use of the back stay:

\* Not included with this product.



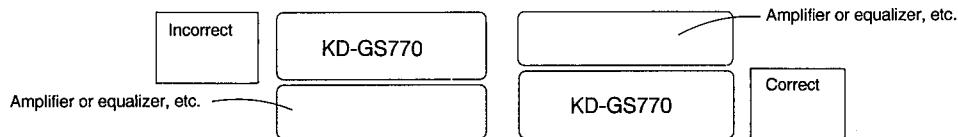
### Removing the unit

- 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.



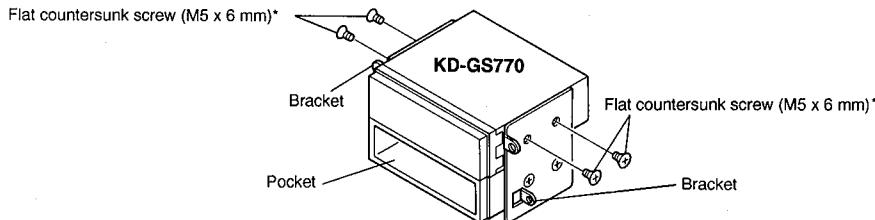
### Installing With Other Equipment

When installing this unit with other equipment, make sure it is positioned under them so its temperature does not rise.



### When installing the unit without using the sleeve.

In a Toyota for example, first remove the car radio and install the CD receiver in its place.



\* Not included with this product.

### Notes:

1. When installing the unit on the mounting bracket, be sure to use the 6 mm-long screws. If longer screws are used, they could damage the unit.
2. This unit should be installed horizontally. If not possible, install it at an inclination of 20° or less with respect to the front panel.

## 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 car audio dealers.

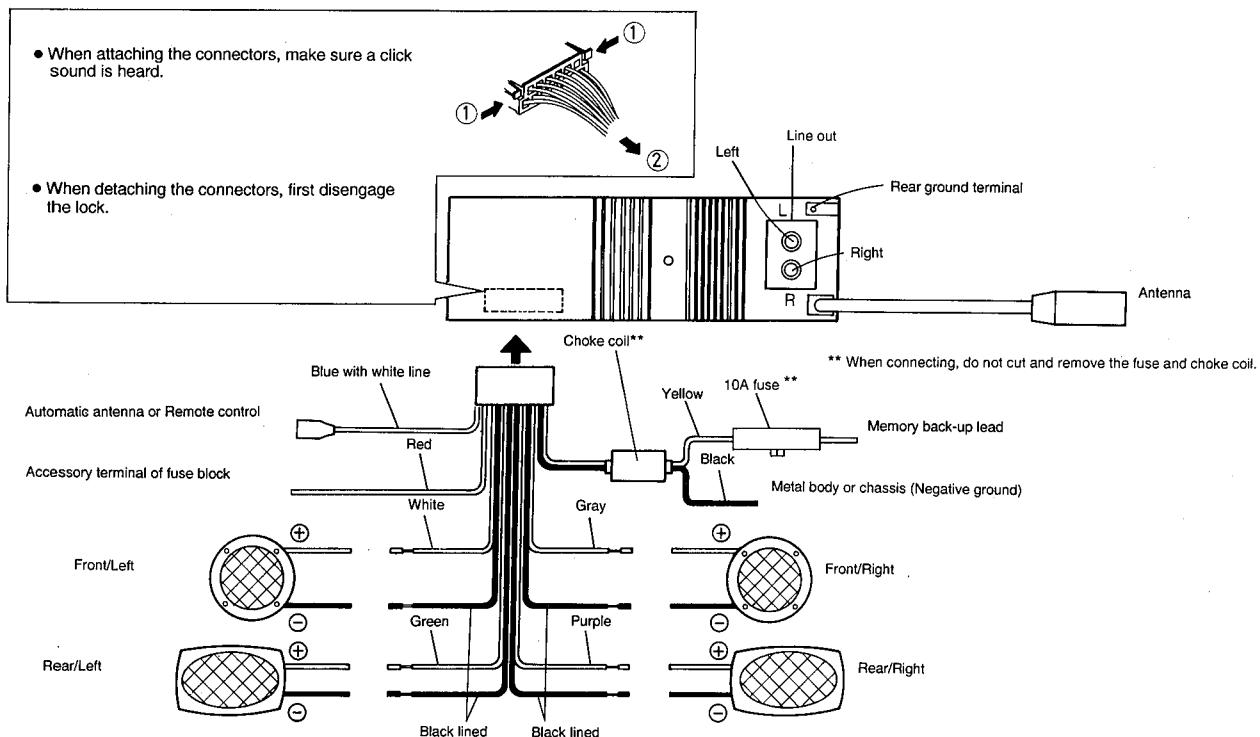
- Maximum input of the speakers should be more than 22 watts at the rear and 22 watts at the front, with an impedance of 4 to 8 ohms.

### CAUTIONS:

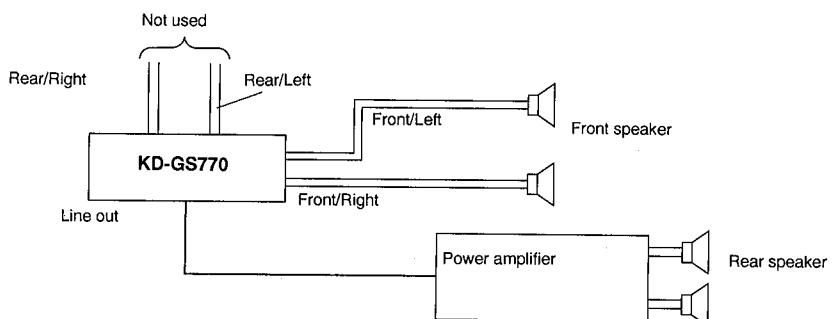
As this unit uses BTL (Balanced Transformerless) amplifier circuitry (floating ground system), please comply with the following:

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



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



**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. Automatic Antenna Connections**

To use the automatic antenna, connect its remote lead (blue with white lines) terminal. For details of installation, see the automatic antenna's Instruction Manual.

**E. Memory Back-Up Lead**

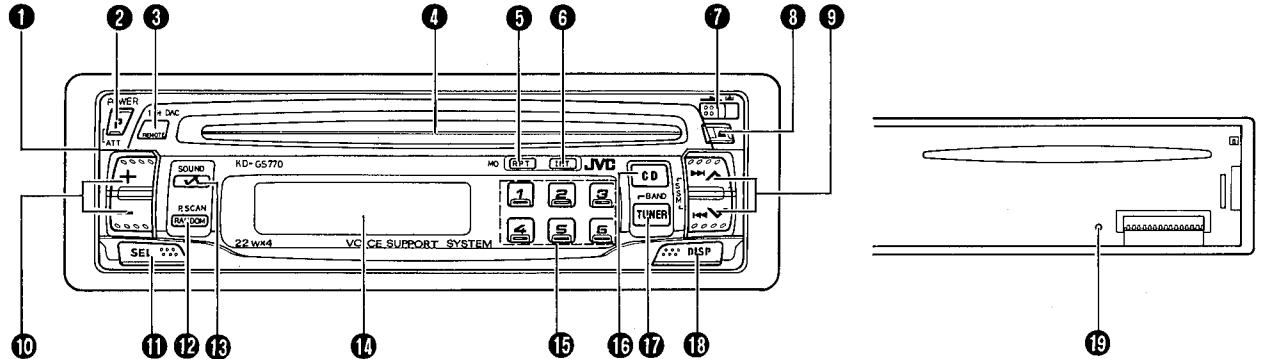
Connect this lead to a LIVE power source (supplied even when vehicle ignition is OFF).

**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 20.)

**• When used in a 2-speaker system**

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

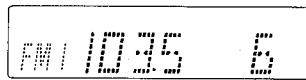
**LOCATION OF CONTROLS**

- 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 Remote Sensor section
- ④ CD loading slot
- ⑤ MONO (MO) button  
Repeat (RPT) button
- ⑥ Intro (INT) button
- ⑦ Control Panel Release ( $\Delta$ ) switch
- ⑧ Eject ( $\Delta$ ) button
- ⑨ Tuning/SSM/Time Adjustment/Skip (search) buttons  
Down frequency/Hour adjustment ( $\searrow$ )/( $\leftarrow\leftarrow$ )  
Up frequency/Minute adjustment ( $\nearrow$ )/( $\rightarrow\rightarrow$ )
- ⑩ Level Control buttons
- ⑪ Electronic Control Mode Select (SEL) button
- ⑫ Preset Scan (P. SCAN) button  
RANDOM button
- ⑬ SOUND button
- ⑭ Display window
- ⑮ Preset Station buttons (No. 1 to No. 6)  
Track Number buttons (No. 1 to No. 6)
- ⑯ CD mode button
- ⑰ Tuner (TUNER) mode button  
BAND button
- ⑱ Display (DISP) button
- ⑲ Microcomputer Reset button

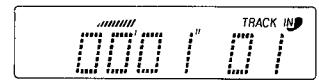
⑩



⑪



⑫



⑬



- ⑩ Indicators (for Audio Control section)  
 Volume (VOL)  
 Bass (BAS)  
 Treble (TRE)  
 Fader (FAD)  
 Balance (BAL)  
 Loudness (LOUD)  
 Attenuator (ATT)  
 VOICE (0/1/2/3)  
 Level value  
 Level indicator  
 BEAT  
 SOFT  
 POP  
 OFF

- ⑪ Indicators (for Tuner section)  
 Band (FM1-FM2-FM3-AM)  
 Radio frequency  
 Preset Station  
 Manual (MANU)  
 Mono (MO)  
 FM Stereo (ST)  
 SSM  
 AREA

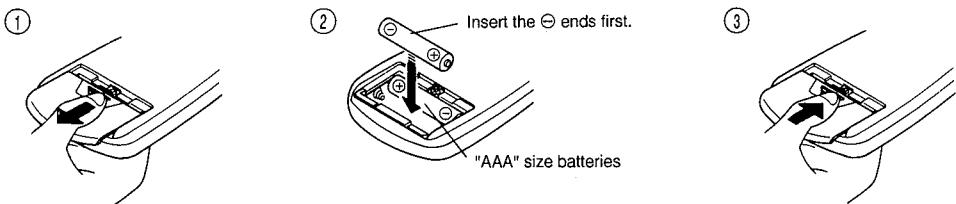
- ⑫ Indicators (for CD section)  
 LOAD  
 PLAY  
 TRACK  
 Track number  
 RPT  
 RND  
 INT  
 EJECT  
 NO DISC  
 ⑬ Indicators (for other controls)  
 Time

### Remote Control unit

- Installing batteries in the remote control unit.

#### Battery replacement

When the remote control operation becomes unstable or the distance from which remote control is possible becomes shorter, replace the batteries with new ones.

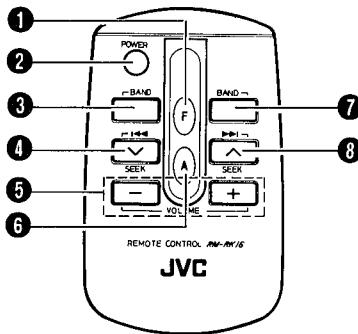


### Using the remote control unit

To use the remote control unit, point it at the remote sensor and press the buttons gently and firmly. Do not expose the remote sensor to strong light (direct sunlight or artificial lighting) and make sure that there are no obstacles between the remote sensor and the remote control unit.

#### The following operations can be performed using the remote control unit.

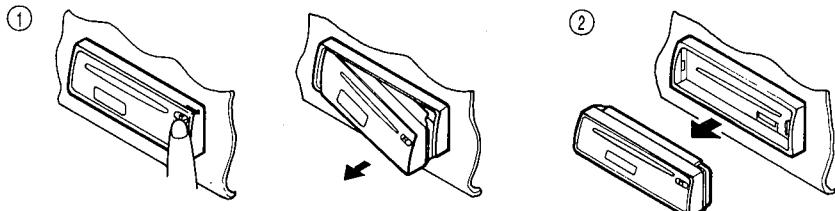
- Check the functions of the operation buttons carefully and operate them correctly.



- 1 Function (F) button  
Used to select the source.
- 2 POWER button
- 3 BAND button
- 4 SEEK tuning/Skip (Search) button  
Down SEEK (▽)/(◀◀)
- 5 VOLUME level control buttons (-/+)
- 6 Attenuator (A) button
- 7 BAND button
- 8 SEEK tuning/Skip (Search) button  
Up SEEK (△)/(▶▶)

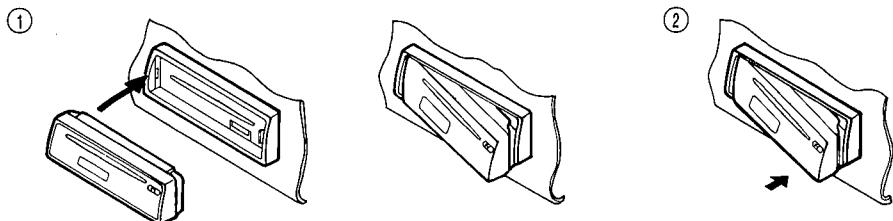
### How To Detach The Control Panel

- 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.



### How 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.

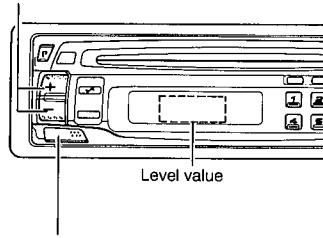
**One Touch Operation**

Even when the power is off, pressing the button shown below switches on the power and selects the source.

	Function mode	Operations
	CD	When this button is pressed with a CD loaded, CD playback begins.
	TUNER	When this button is pressed, the tuner is engaged.

**Audio Level Control**

## Level control buttons



Electronic control mode select button (SEL)

**Control del nivel de audio****Commande de niveau audio**

Electronic control mode			
<b>VOL</b>	Volume	(00 – 50)	Decreases (00 – 50) Boosts
<b>BAS</b>	Bass	(-06) – (00)	Decreases (00) – (+06) Boosts
<b>TRE</b>	Treble	(-06) – (00)	Decreases (00) – (+06) Boosts
<b>FAD</b>	Fader	(R05 – 00)	Rear (00 – F05) Front
<b>BAL</b>	Balance	(L06 – 00)	Left (00 – R06) Right
<b>LOUD</b>	Loudness	Off	On
<b>VOICE</b>	Voice support volume	(0 – 3)	Decreases (0 – 3) Boosts

**Loudness Control**

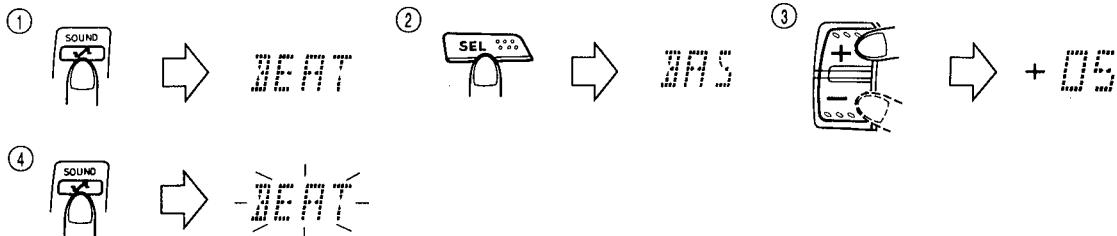
At low volumes, the human ear is less sensitive to low and high frequencies. When the volume is low, set the loudness control to ON to boost these frequencies and produce well-balanced sound.

**Sound Mode Button**

Sound mode		Preset level value		
		Bass	Treble	Loudness
<b>OFF</b>	Off	(flat characteristics)	00	00
<b>BEAT</b>	Beat	For music with a heavy beat, such as rock or disco music.	+02	00
<b>SOFT</b>	Soft	For quiet background music.	+01	-03
<b>POP</b>	Pop	For light music including popular and vocal music.	+04	+01

### Sound Control Memory

The Sound mode's preset values can be changed to suit your tastes.  
(Example: To emphasize bass sound in the Beat mode)



① Press the SOUND button to select the mode to be changed (Beat, Soft, Pop).

② Press the SEL button within 5 seconds to select the sound characteristics to be changed (Bass, Treble, Loudness).

③ Set the desired level with the level control button (within 5 seconds).

④ To store the set level in memory, press the SOUND button within 5 seconds and hold it for more than 2 seconds. (The mode indication blinks when the level has been stored in memory.)

\* To change other preset values, repeat the above procedure.

\* To restore the preset value, press the Microcomputer reset button.

### Voice Support System

The system responds in English with a voice message, according operation. (e.g. When the power is turned on, the unit responds "HELLO".)

- Adjust the volume for the Voice Support System with the audio level control (refer to page 20).
- This system responds as shown in the table below.

### Principal operations

Button/	Command/	Radio operation/	CD operation/
P (POWER)	on off ATT (Attenuator/	HELLO SEE YOU Pi ↔ Bi	HELLO SEE YOU Pi ↔ Bi
SOUND		BEAT → SOFT → POP ↑ OFF ← (MEMORY when storing the set level in memory/	
TUNER		FM1, FM2, FM3, AM	—
CD		—	CD PLAY (Pi Pi Pi with no disc)
1 - 6		PRESET 1 - 6 MEMORY 1 - 6	Pi

Button/	Command/	Radio operation/	CD operation/
▲ (Eject (Loading		—	Bi/Pi
►► ▲	Pi	SSM	Pi
◀◀ ▼	Bi		Bi
P. SCAN	on	PRESET 1 - 6	—
	off	PRESET 1 - 6	—
RANDOM RPT INT	on/off	— —	RANDOM/OFF REPEAT/OFF INTRO/OFF
MONO (MO)	on/off	MONAURAL ON/OFF	—
DISP	Pi	Pi	Pi

SEL	BASS → TREBLE → FADER → BALANCE → LOUDNESS → VOICE → VOLUME → BASS → ....
-----	---

Position	Bass	Treble	Fader	Balance	Loudness	Voice	Volume
+	CENTER	CENTER	CENTER	CENTER	ON	LEVEL LEVEL LEVEL OFF	3 2 1 —
-	—	—	—	—	OFF		

## CONCERNING COMPACT DISCS

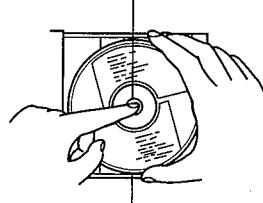
- Use only CDs with the following mark:



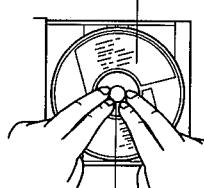
### Notes On Handling Discs

Be sure to keep the discs in their cases. If discs are piled on top of one another without their cases, they may be damaged. Do NOT put discs where they will be exposed to direct sunlight or in places subject to high temperatures and humidity. Avoid leaving discs in your car.

Press down on the center holder.



Insert with the label facing up.



Lift it out without touching the recorded surface. Gently push the disc to insert it.

### Maintenance Of Discs

- When fingerprints or dirt adhere to a disc, wipe it clean with a soft, dry cloth; from the inside toward the edge. If it is difficult to clean, wipe the disc with a cloth moistened with water.
- Do NOT use record cleaners, benzine, alcohol or anti-static agents.

Correct



Incorrect

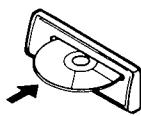


### Loading Discs

Insert a disc (label up) into the loading slot. (When the disc is inserted part-way, it is drawn in and play starts automatically.)

#### Notes:

- This unit is equipped with a two-disc insertion prevention mechanism; when disc insertion is interrupted, the next disc is NOT inserted immediately afterwards. In this case, wait a short period of time or press the EJECT (▲) button to release this mechanism, and insert the disc again.
- When a disc is loaded upside down, "EJECT" is shown in the display and the disc is automatically ejected.



**Unloading Discs**

To unload a disc, press the ( $\Delta$ ) button; the CD pops out allowing disc removal.

- When removing discs, avoid touching the recorded surface.

**Note:**

- CD loading/unloading is possible even after the vehicle's ignition is turned OFF.

\* Disc eject prohibit mode  
Even if the ( $\Delta$ ) button is pressed while the unit is in this mode, it is impossible to take out a disc.

To engage this mode, while pressing the CD button, press the ( $\Delta$ ) button for 2 seconds or more. The "EJECT" blinks when this function is effective. To release this function, repeat the procedure above. The "EJECT" lights up, showing that the disc can be taken out.

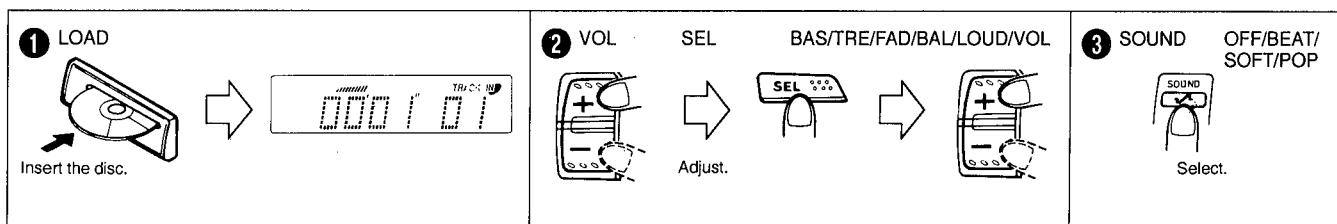
**CAUTION:**

NEVER use 8 cm (3-3/16") compact discs (CD singles) with this unit. (If used, such discs CANNOT be ejected.)

**PLAYING COMPACT DISCS****How To Play All Tracks**

The following example shows a CD containing 10 tracks with a total playback time of 50 minutes, 45 seconds.

Operate in the order shown.

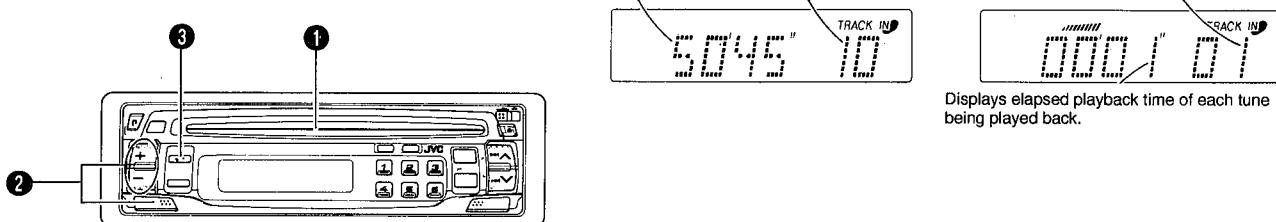


\* When the vehicle's ignition is turned ON.

Total playback time.

Total number of tracks (tunes).

Track (tune) number.

**Direct Access Playback**

When the numbered button of a required track (1 to 6) is pressed, that track is played back immediately.



**Skip Playback**

- During playback, you can easily skip to the beginning of the previous, current, or next track, and playback will start again from there.

**How to listen to the next track...**

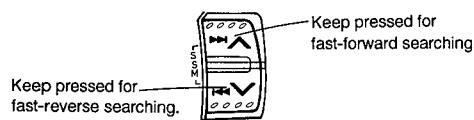
Press the (▶▶) button once to skip to the beginning of the next track.

**How to listen to the previous track...**

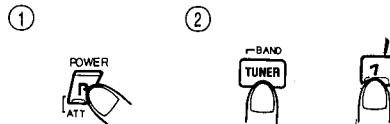
Press the (◀◀) button once to skip to the beginning of the current track, then again to skip to the previous track.

**Search Playback****(How to locate a required position on the disc.)**

- The required position can be located using fast-forward or reverse search during playback.
- Hold down the button to commence searching. (The search speed increases the longer the button is pressed.)
- Since a low sound level can be heard (approx. one quarter of playback), monitor the sound and release the button when the required position is located.

**RADIO OPERATION****To Change The Intervals Between Channels**

When this unit is shipped, the channel intervals are set to 10 kHz for AM and 200 kHz for FM. If the unit is used in an area other than North or South America, switch as follows:



- Switch the power ON.
  - While pressing the BAND button... Press Preset Station button 1 for more than 3 seconds.
- Switching is completed when "AREA" appears in the display.

Performing this procedure sets the channel intervals to 9 kHz for AM and 50 kHz (Manual mode), 100 kHz (Seek mode) for FM.

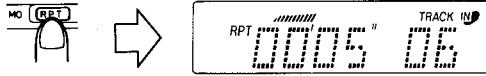
To switch back to the original intervals, repeat the above operation.

**Random Playback**

This unit's microcomputer can automatically select tracks on a disc in random order. Press the RANDOM button during playback to start random play. Pressing it again cancels the mode.

**Repeat Playback**

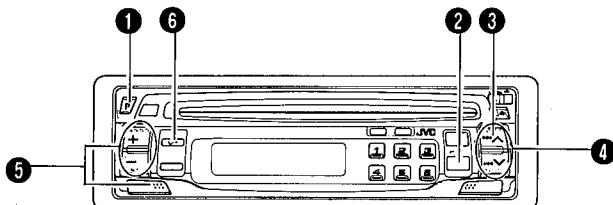
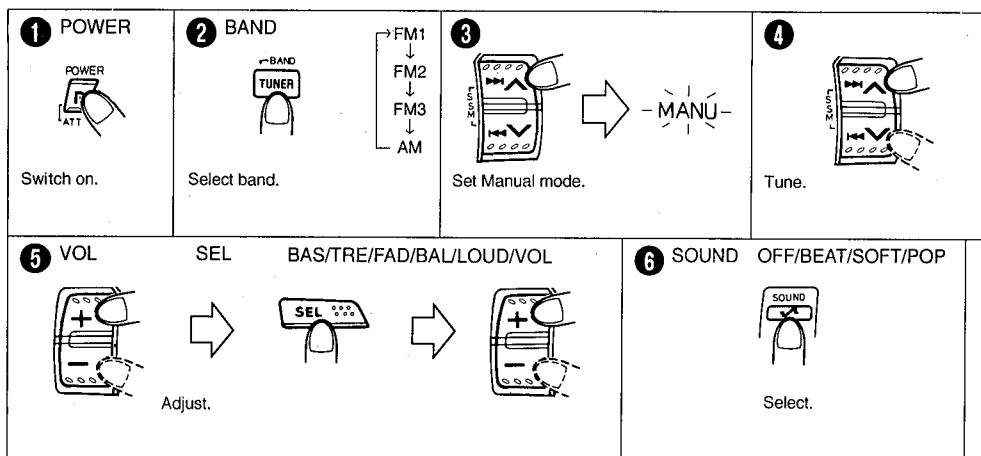
When the RPT button is pressed, the current track is played again. Press RPT again to cancel repeat playback. The RPT indication goes out and all-tracks playback is resumed.

**Intro Scan**

When the INT button is pressed, the first 15 seconds of each track are played sequentially. During INTRO play, the current Track No. blinks in the display. When you want to start playback, press the INT button again.



Operate in the order shown.

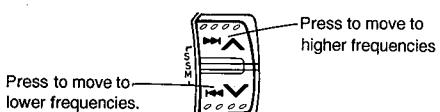


### Manual Tuning

Set Manual mode by pressing the tuning button ( $\wedge$  or  $\vee$ ) for more than 1 second. When the MANU indicator is blinking, the unit is in Manual mode. Press the Tuning button, to move up/down the frequency band. Scanning continues as long as either side of the button is pressed.

Frequency scan steps are as follows:  
FM — in 200 kHz/50 kHz units  
AM — in 10 kHz/9 kHz units

- About 5 seconds after completing manual tuning, the unit switches back to Seek mode and the MANU indicator goes out.



### Seek Tuning

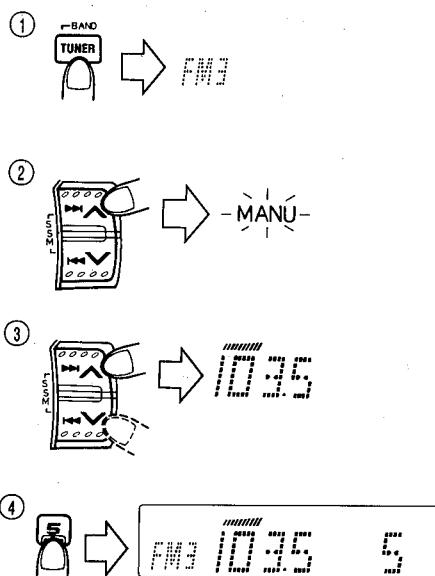
Press the  $\wedge$  or  $\vee$  button; the unit enters the seek tuning mode and tunes to higher or lower frequencies. When a broadcast is received, tuning stops automatically and the broadcast can be heard.

### Preset Button Tuning

#### How to Preset Stations

6 stations in each band (FM1, FM2, FM3 and AM) can be preset as follows:

- Example (when presetting Preset Station button "5" of the FM3 band to an FM station at 103.5 MHz)



- ① Select the FM3 band using the BAND button.
- ② Set Manual mode.
- ③ Tune to the desired station.
- ④ Press Preset Station button "5" for more than 2 seconds. (When "5" 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, FM2 and AM).

**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).

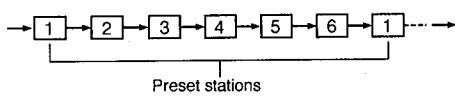
**Preset Scan Button Tuning**

This function makes it possible to automatically scan preset FM and AM stations.

①



②



③



- ① Press the P. SCAN button.
- ② Scanning is performed in the order of the preset stations in each frequency band (FM1, FM2, FM3 and AM). Each preset station is heard for approx. 5 seconds.
- ③ When the required station is heard, press the P. SCAN button again.

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

This function searches for FM 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 Press the SSM buttons ( $\nwarrow$ ,  $\nearrow$ ) for more than 3 seconds.

- ② The strongest signals in the band you are listening to (FM1, FM2 or FM3) will be searched and selected automatically. Six 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 unit 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.

**Note:**

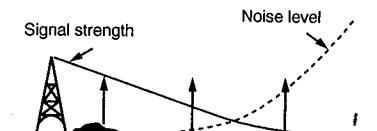
Set to mono when a stereo FM broadcast is too noisy and cannot be heard satisfactorily.

**FM Pulse Noise Suppressor**

This unit has built-in circuitry to effectively eliminate engine noise picked up by the antenna, etc. in the form of FM pulses, for a more favorable FM reception.

**Automatic FM Noise Suppressor (AFNS)**

This unit incorporates an automatic FM noise suppression circuit to ensure satisfactory reception of FM broadcasts when a vehicle is moving and signal strengths are continuously fluctuating.



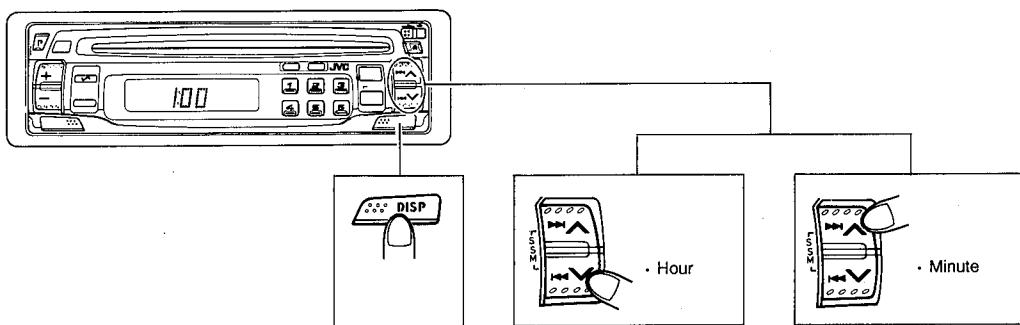
Signal strength	A	B	C
Auto blend	Stereo	Blend	Mono
Auto high-cut	-	→ (Operates)	

## DIGITAL CLOCK DISPLAY

To select Time mode, press the DISP button. 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 DISP button again to cancel Time mode.

### How To Adjust The Time

Make sure the display is in Time mode, then, while pressing the DISP button, press the Hour Adjustment button ( $\swarrow$ ) to adjust the "hours", and press the Minute Adjustment button ( $\nearrow$ ) to adjust the "minutes".



## MAINTENANCE

### • Cleaning The Connector

If the control panel is frequently detached, a poor connection may occur with the control panel holder. To minimize this possibility, periodically wipe the connector with a cotton swab or cloth moistened with alcohol, being careful not to damage the connector terminals.

## 1 Location of main parts

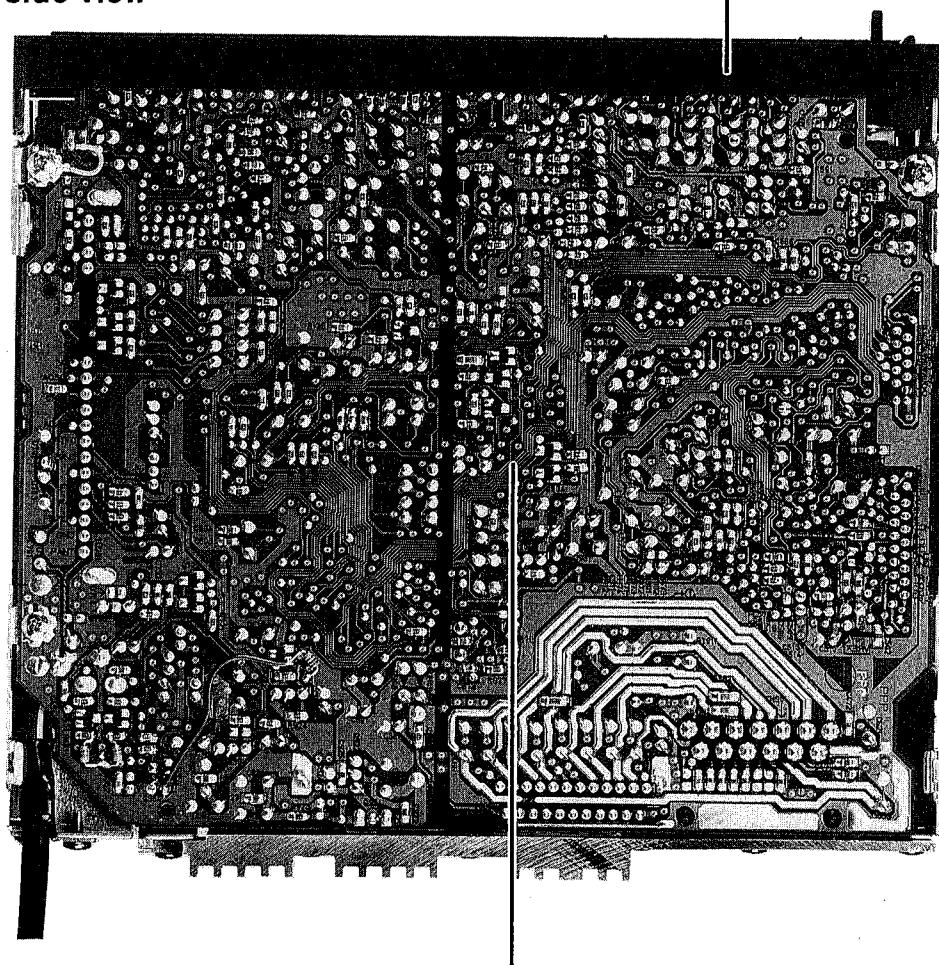
### ◆ Front panel ass'y



LCD indicator section

Front chassis ass'y

### ◆ Bottom side view



Main board ass'y( bottom side)

Fig. 1 - 1

### ◆ Main board ass'y(Top side)

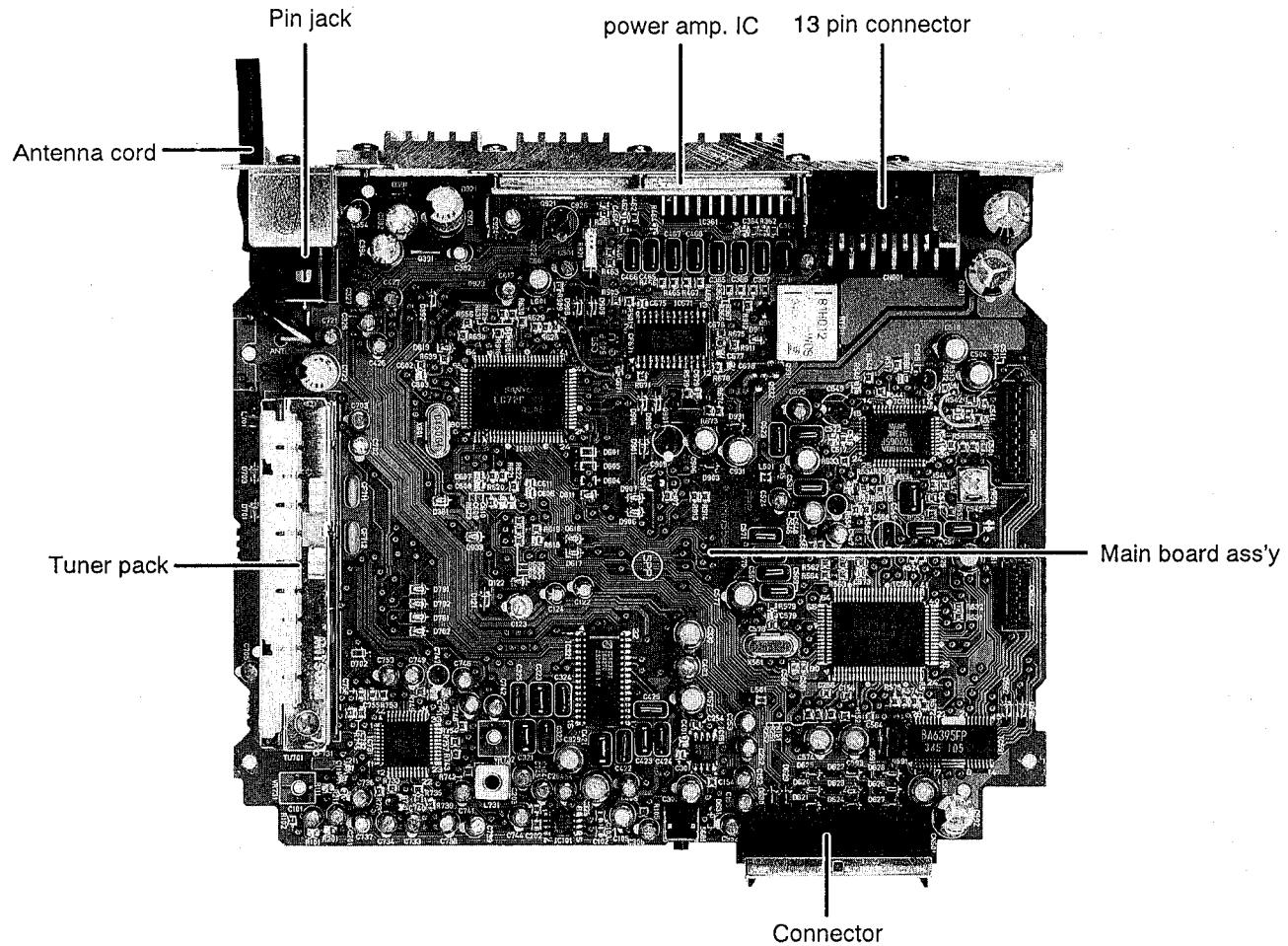


Fig. 1 - 2

### ◆ Mechanism ass'y

#### Bottom view

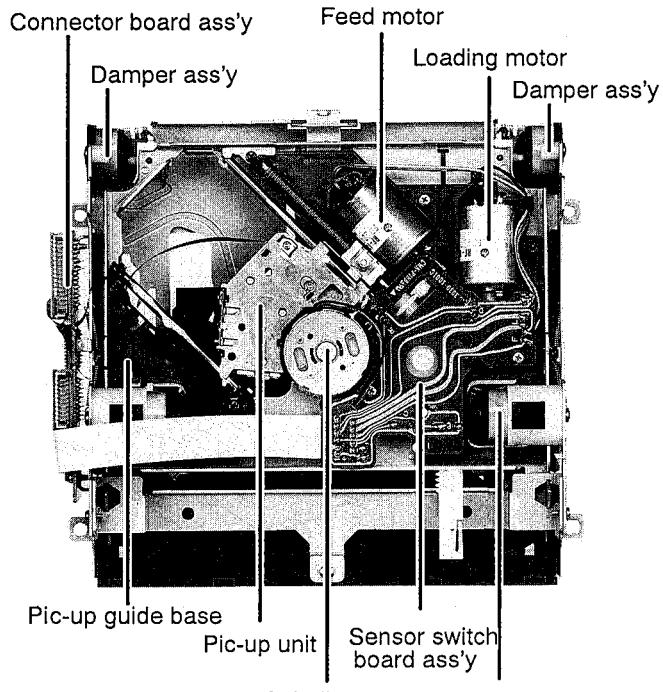


Fig. 1 - 3

#### Top view

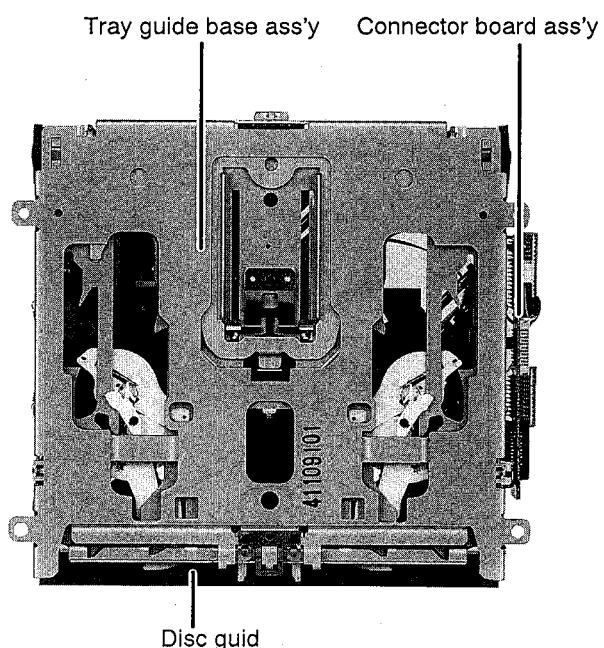


Fig. 1 - 4

## 2 Removal of Main Parts

### ■ Enclosure section

#### ◆ Detaching the front panel unit (See Fig. 2-1)

Slide the Eject slide knob in the direction of arrows to detach the front panel unit.

#### ◆ Removing the front chassis (See Fig. 2-2)

Remove the four tabs in the right and left sides of unit and pull the front chassis forward to remove it.

#### ◆ Removing the bottom cover (See Fig. 2-3)

1. Remove one screw ① retaining the bottom cover from rear side.
2. Turn the unit upside down, then insert and turn the screwdriver to remove the bottom cover.

#### ◆ Removing the main P.C.B. assembly (with rear panel) (See Fig. 2-3)

1. Remove two screws ① retaining the bottom cover from rear side.
2. Remove one screw ② retaining the rear panel to the chassis.
3. Remove three screws ③ retaining the amp. P.C.B. assembly.
4. Lift up the main P.C.B. assembly to remove it. At this time, remove the connectors CN501 and CN502 connecting the main P.C.B. assembly and mechanism assembly.

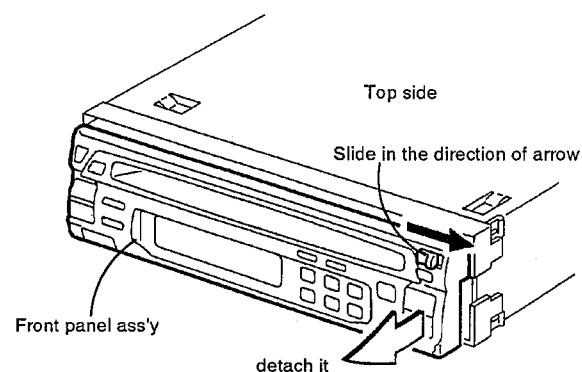


Fig. 2-1

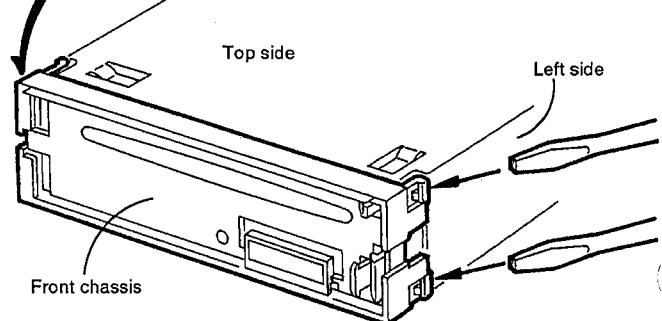
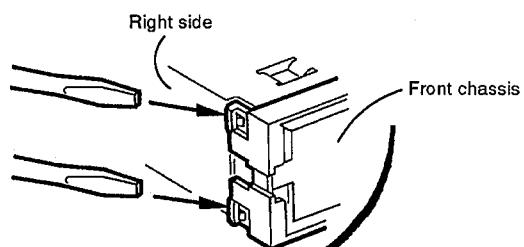


Fig. 2-2

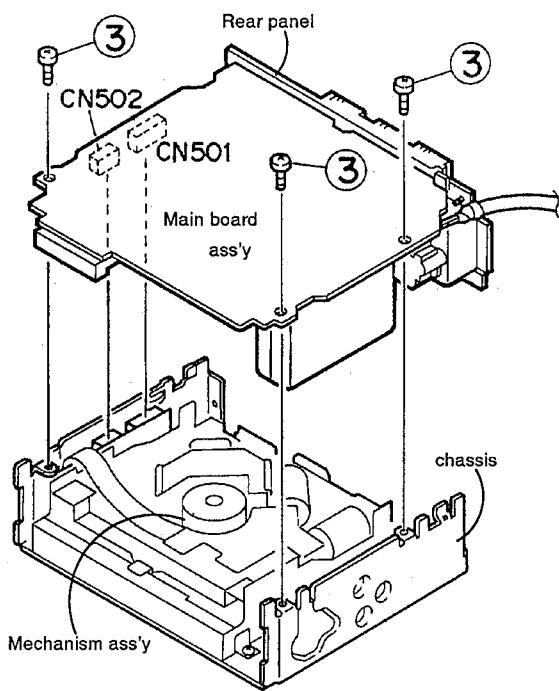


Fig. 2-4

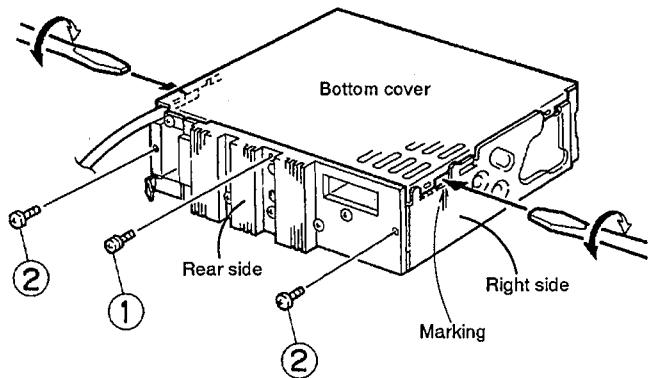


Fig. 2-3

◆ **Removing the rear panel** (See Fig. 2-5)

Remove three screws ⑥ to remove the IC bracket..  
 Remove one screw ⑤ to remove the 13-pin jack.  
 Remove one screw ⑦ to remove the line-out jack.  
 Remove one screw ⑧ to remove the antenna jack.

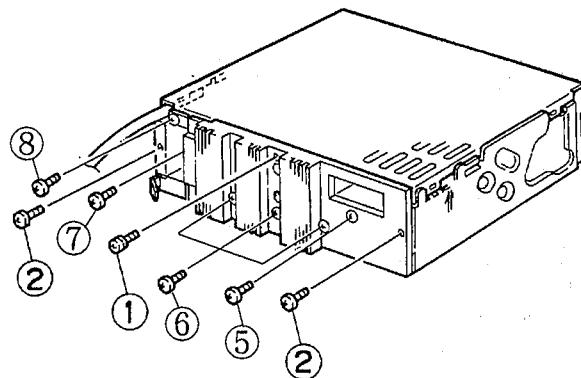


Fig. 2 - 5

◆ **Mechanism assembly** (See Fig. 2-6)

Remove four mechanism assembling screws ④ retaining the top cover.

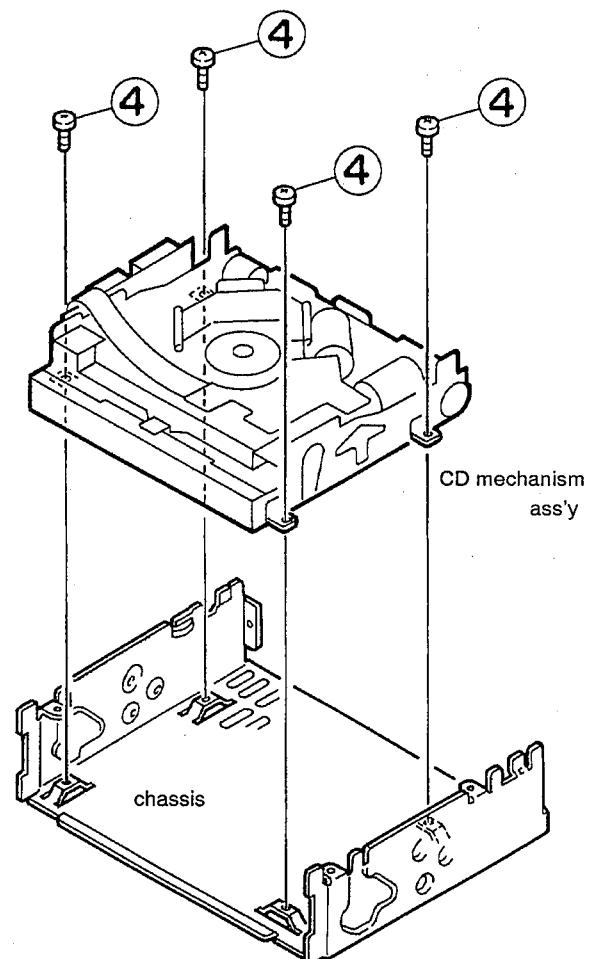


Fig. 2 - 6

## ■ Mechanism section

### ◆ Removing the CD pickup

1. Remove the bottom plate.
2. Remove the CD mechanism assembly.
3. Place the CD mechanism assembly to expose the bottom side upward. Remove screw ① retaining pickup shaft A to remove it together with the shaft holder.
4. Loosen screw ② retaining pickup shaft A at the other end. Remove two screws ③ retaining pickup shaft B.
5. Disconnect the 11-conductor F.P.C. cable and the 4-conductor F.P.C. cable, respectively, from the CD mechanism control relay P.C. board.
6. Take the CD pickup unit out of the CD mechanism assembly.

### ● Cautions for removal and assembly

1. To disconnect the 11-conductor and 4-conductor F.P.C. cables, first pull the connectors in the directions of arrows as shown in Fig. 2-8.

2. When reassembling, arrange the 11-conductor and 4-conductor F.P.C. cables as shown in Figs. 2-8 to 2-10.

### ◆ Removing the feed motor and the loading motor assembly

1. Remove three screws ⑤ retaining the switch P.C. board from the CD mechanism assembly.
2. Push two hooks A and B retaining the switch P.C. board in the respective direction of arrows to disengage the P.C. board from the hooks.
3. Remove screw ⑩ retaining the feed motor.
4. Remove screw ⑪ retaining the loading motor.
5. Lift the switch P.C. board slightly upward and unsolder the blue and pink wires connected to the feed motor from the switch P.C. board.
6. Unsolder the red and black wires connected to the loading motor from the switch P.C. board.

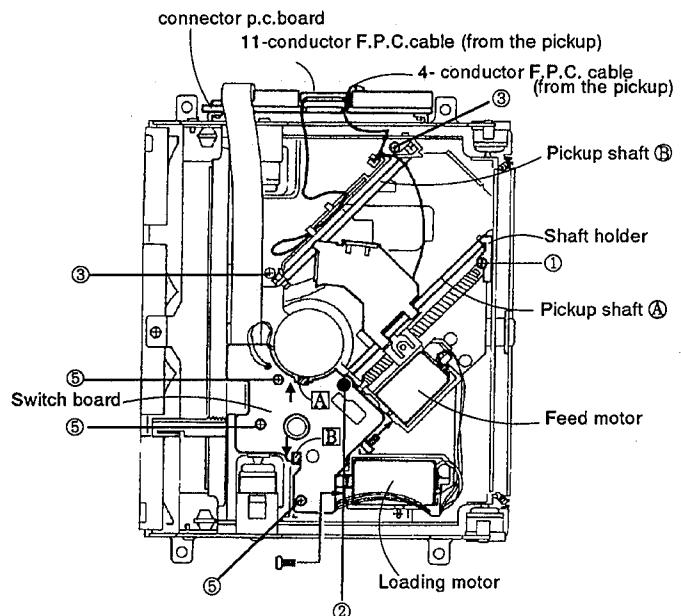


Fig. 2-7

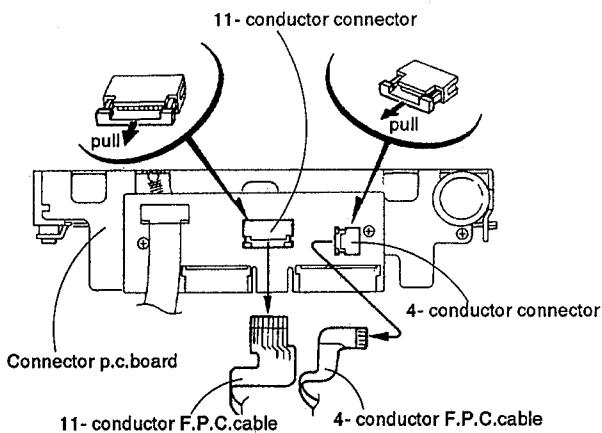


Fig. 2-8

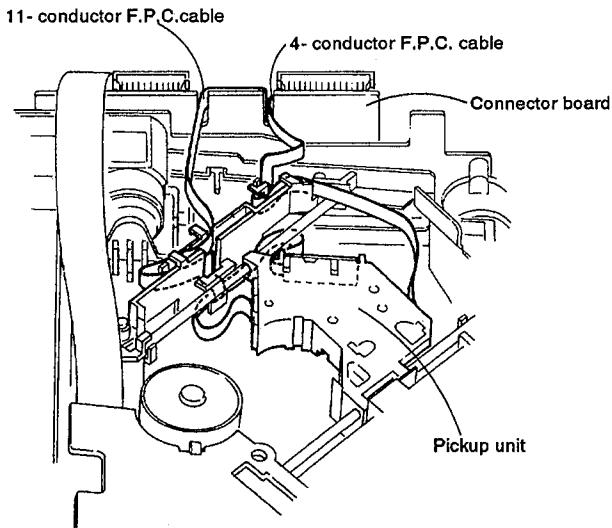
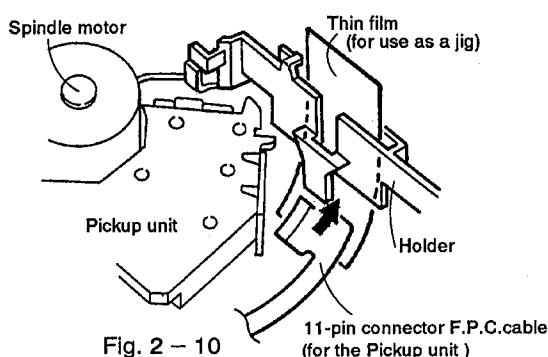


Fig. 2-9



### 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
- Extension cord jig  
EXT - GS001 - 16P  
EXT - GS001 - 10P
- Standard disc  
JVC : CTS - 1000

or

MTD - D1

#### ■ Location of Adjustment

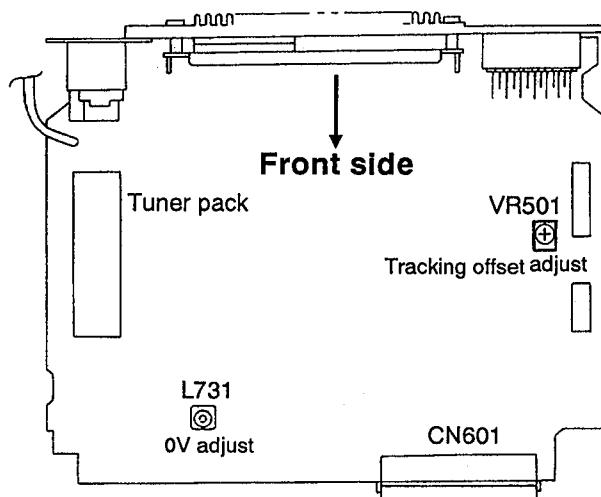


Fig.3 - 1

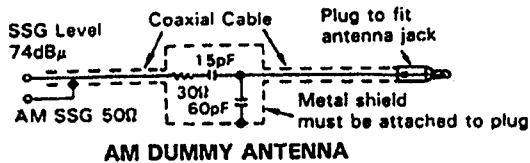
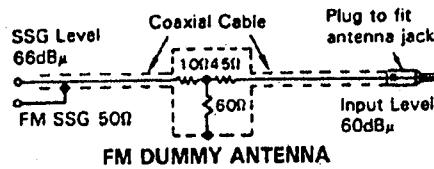
#### ■ Condition for measurement

- Power Supply ..... DC14.4V  
(Reduced Voltage:10.5V)
- Load ..... 4 Ω  
(4-speaker connection)
- BASS/TRE, FADER ..... Center

#### ■ Tuner section

- **FM**;400Hz, 22.5kHz deviation(MONO)
- **FM** STEREO ;1kHz, 67.5kHz deviation,  
pilot signal 7.5kHz, 66dB μ V
- **AM**;400Hz, 30% modulation ,74dB μ V
- 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	107.9	87.5
AM(kHz)	530	600	1000	1500	1710	530

- Manual Tuning Up/Down Frequency

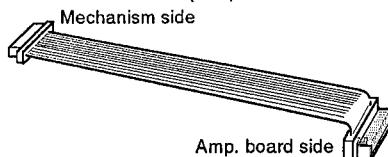
**FM**;200kHz Step  
**AM**;10kHz Step

## ■ Information for using a Car CD Player service jig (for adjustment and checking)

◆ As a U-shape type top cover is employed, this type of extension cord is needed to check operation of the mechanism assembly after disassembly.

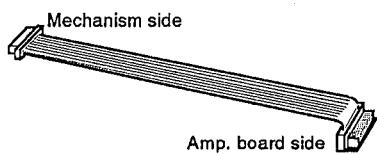
◆ Extension cords

EXT-GS001-16P (16 pin extension cord)



For connection between mechanism assembly and main PCB assembly.  
Check for mechanism-driving section such as motor, solenoid, etc.

EXT-GS001-10P (10 pin extension cord)



For connection between mechanism assembly and main PCB assembly.  
Check for head signal section.

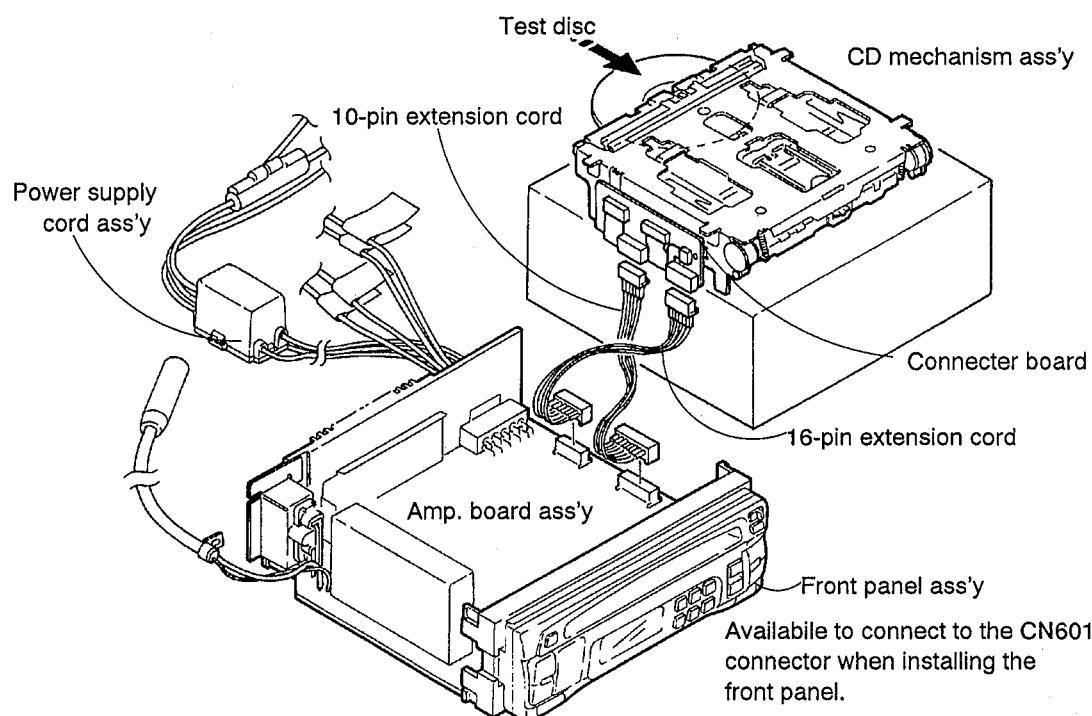
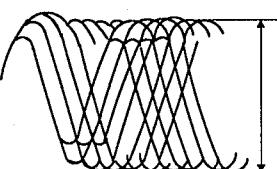


Fig. 3 - 2

## ■ CD section

Items	Conditions	Adjustment and Confirmation procedure	Standard Value	Adjusting
1. Jitter check	Measuring instrument Oscilloscope Test point TP1: Hot side TP2: GND side	Connect the jitter meter between TP1 and TP2 and when test disc (track 1) is played, confirm that the meter reading is 26n-sec or less.	26n-sec or less	
2. RF level (eye pattern) check	Measuring instrument Oscilloscope	Connect the oscilloscope between TP1 and TP2 and when test disc (track 1) is played, confirm that peak-to-peak value of oscilloscope waveform is within 1.3V +0.3V.  Eye-pattern waveform	within 1.3V +0.3V.	
		 The maximum value of this waveform should be in the range of specifications and the waveform should be clear		
3. Tracking offset adjustment	Measuring instrument Oscilloscope TP2:oscilloscope ground side (VREF level) TP3:oscilloscope hot side  Note1 The oscilloscope input should be DC-coupled. Note 2 Adjust VR501 so that the waveform becomes vertically symmetrical to the reference voltage of servo.	1. Connect the oscilloscope between TP2(VREF) and TP3(TE). 2. Play test disc (track 1). 3. Connect pin 64 (TP601) of IC601 ((microprocessor) to the GND 4. Short circuit between TP4 and TP2 during CD play. 5. Since the waveform of tracking error signal displayed by the oscilloscope goes up and down when VR501 has been adjusted, Adjust VR501 so that the center of the waveform amplitude becomes a reference voltage value of servo(VREF).  Tracking offset waveform	Adjust the center of waveform amplitude to the reference voltage value of servo(VREF).  Note 3 VREF: Ground level on the oscilloscope	VR501
4. Play output level checking	Measuring equipment Electronic voltage meter	When test disc (track 1) is played, check that the output level is 1.45V +0.3V (with 20-kohm load).	1.45V ± 0.3V	
5. Outermost circumference		Directly access the outer circumference track 31, check that play is performed normally and that abnormalities including sound skipping do not occur.		
6. Operation checking from outer to inner circumference		Skip from the outer circumference track to track 1 and check the time until play starts. Normally it is less than 10 seconds.	Less than 10 seconds	

## ■ Location of test point

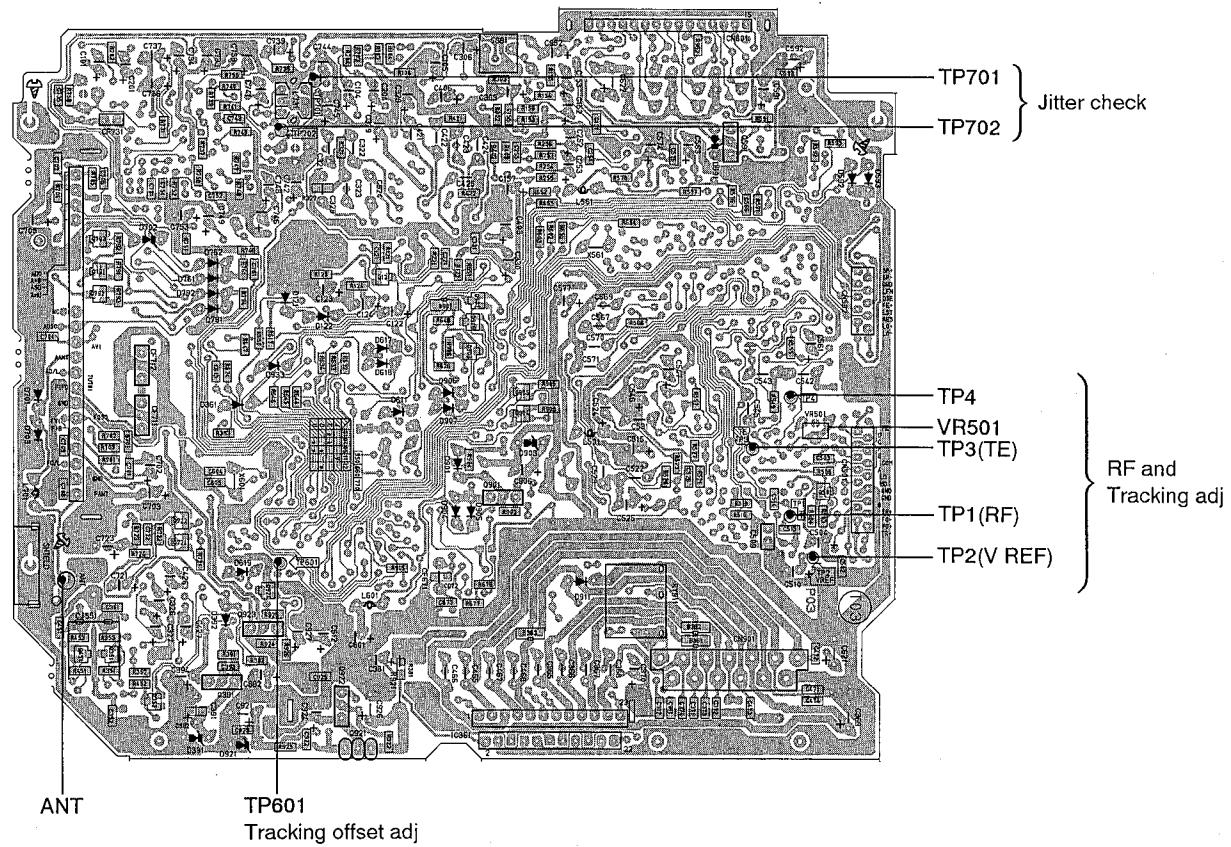


Fig.3 - 3

## ■ Tuner section adjustment

(Each condition of input level is shown by EMF value (open load value) of SSG under using dummey antenna.)

Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
1.FM 0V adjustment	Test point: R24 FM 97.9MHz, 66 dB non modulation	Adjust L731 so that the TP(between TP701 and TP702) DC voltage level become 0 V when 97.9 MHz is indicated.	0 ± 10mV	L731
2.BLEND level	TP:AFout FM97.9MHz,52dB $\mu$ (1kHz,67.5kHz Dev, 7.5kHz Dev)	1. With signal of 97.9MHz,52dB $\mu$ supplied from the signal generator to L or R channel. 2.Check the speaker output level of the other channel more than 20dB and signal levels of the two channels are balanced.	More than 20dB	
3.FM stereo indication sensitivity	97.9MHz,1kHz, 67.5kHz dev. pilot 7.5kHz dev.	1. When input is 16dB $\mu$ ,ST indication appears. 2. When input is 0dB $\mu$ ,ST indication disappears. 3. By pushing MONO button when receiving stereo signal ,indication should change from ST to MO and signal become mono.	ON:16dB $\mu$	
4. FMstero separation	97.9MHz,1kHz 67.5kHz dev. pilot 7.5kHz,66dB $\mu$	1. Separation to be more than 24dB. 2. The left / right difference to be within 3dB.	More than 24dB	
5. FM S/N ratio	97.9MHz,66dB $\mu$	Output difference level between modulation ON/OFF to be more than 50dB.	more than 50dB	

## 4 Block diagram

### ■ Integrated circuit

#### ◆ IC501 (TA2065F) RF & Servo

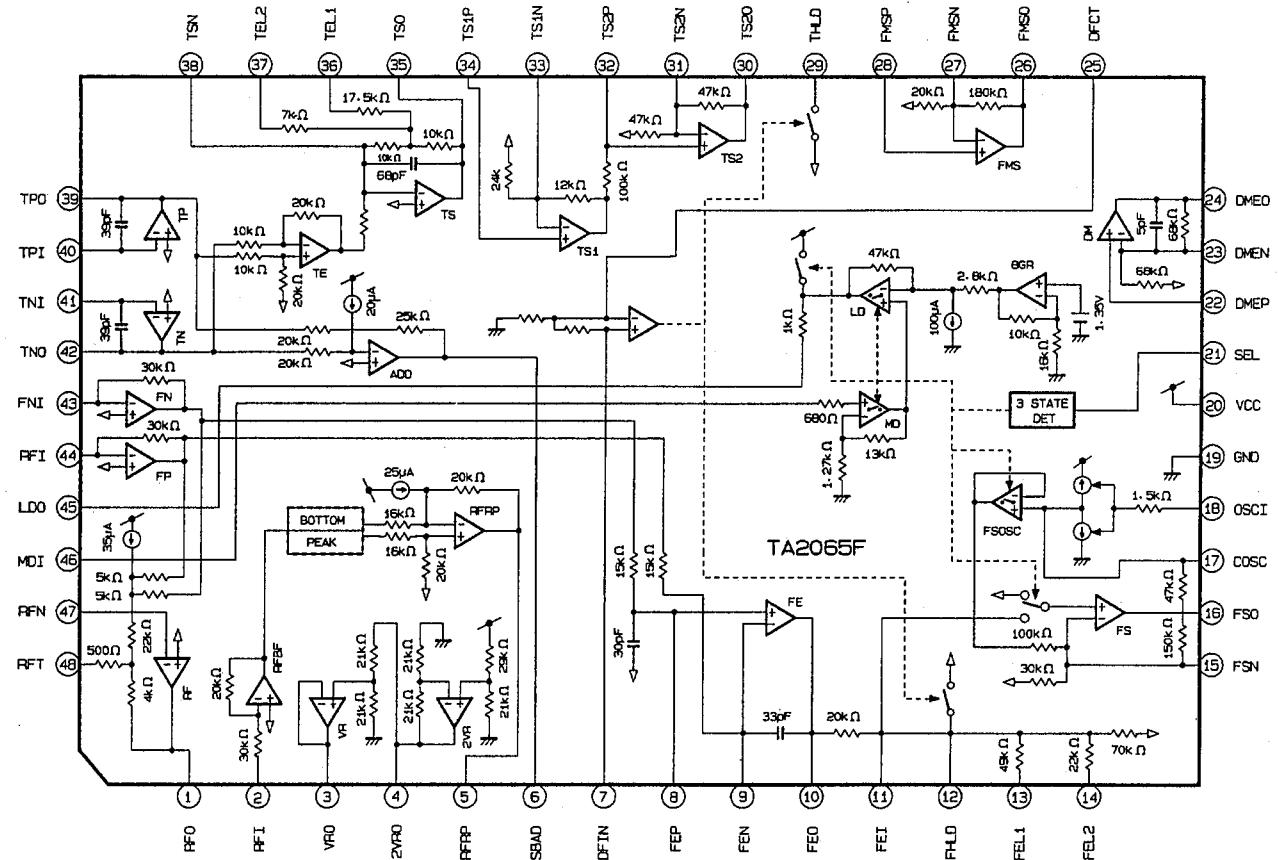


Fig. 4 - 1

#### ◆ IC591 (BA6395FP) Servo driver

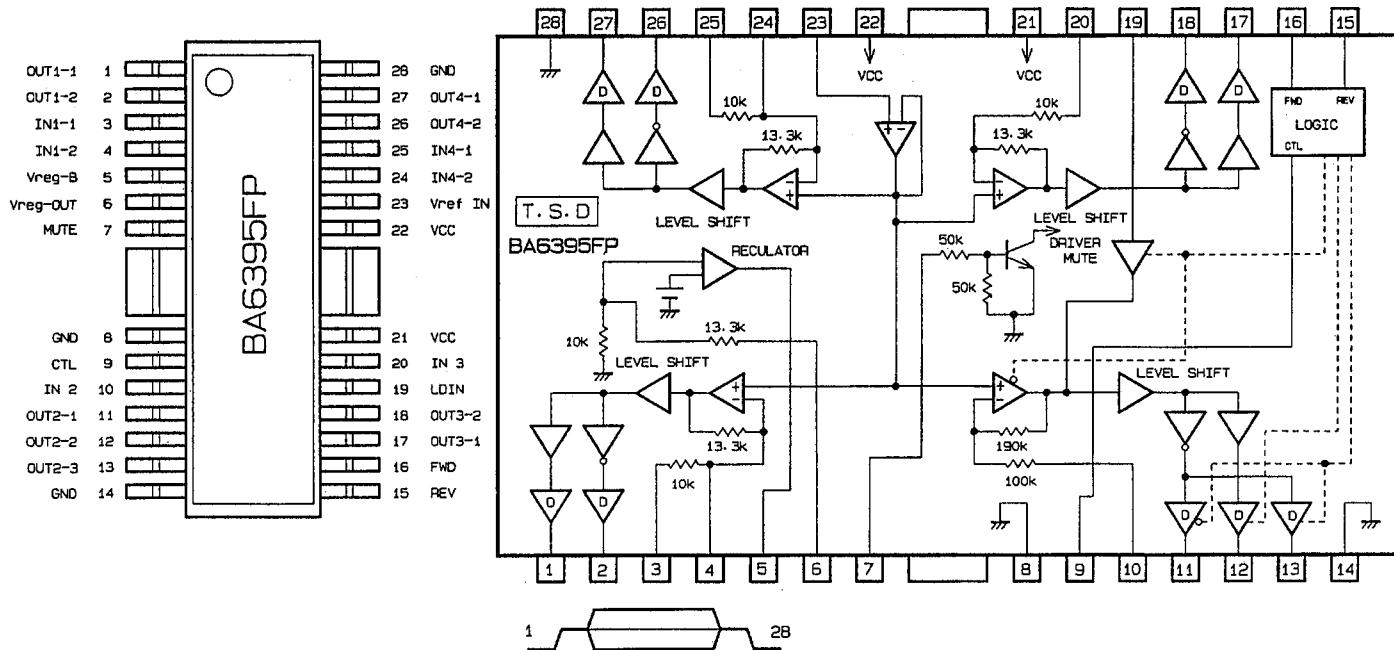


Fig. 4 - 2

◆ IC321 (TEA6320T) E . Volume

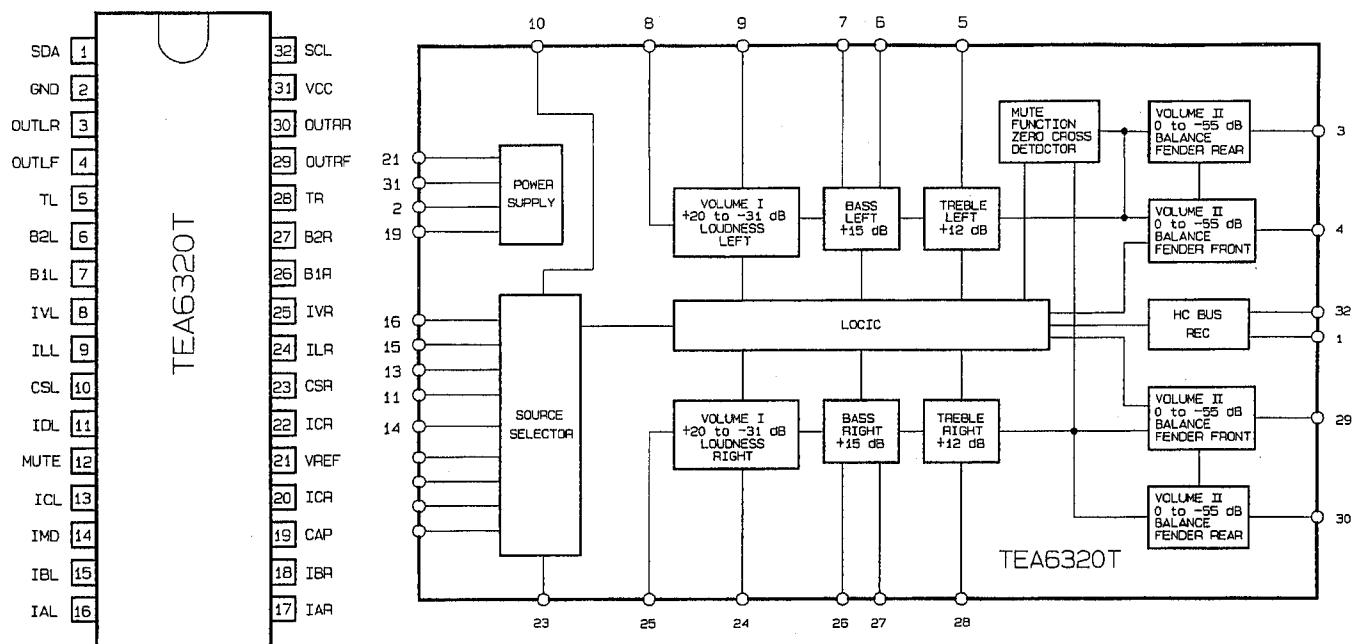


Fig.4 – 3

◆ IC561 (TC9284BF) DATA Control

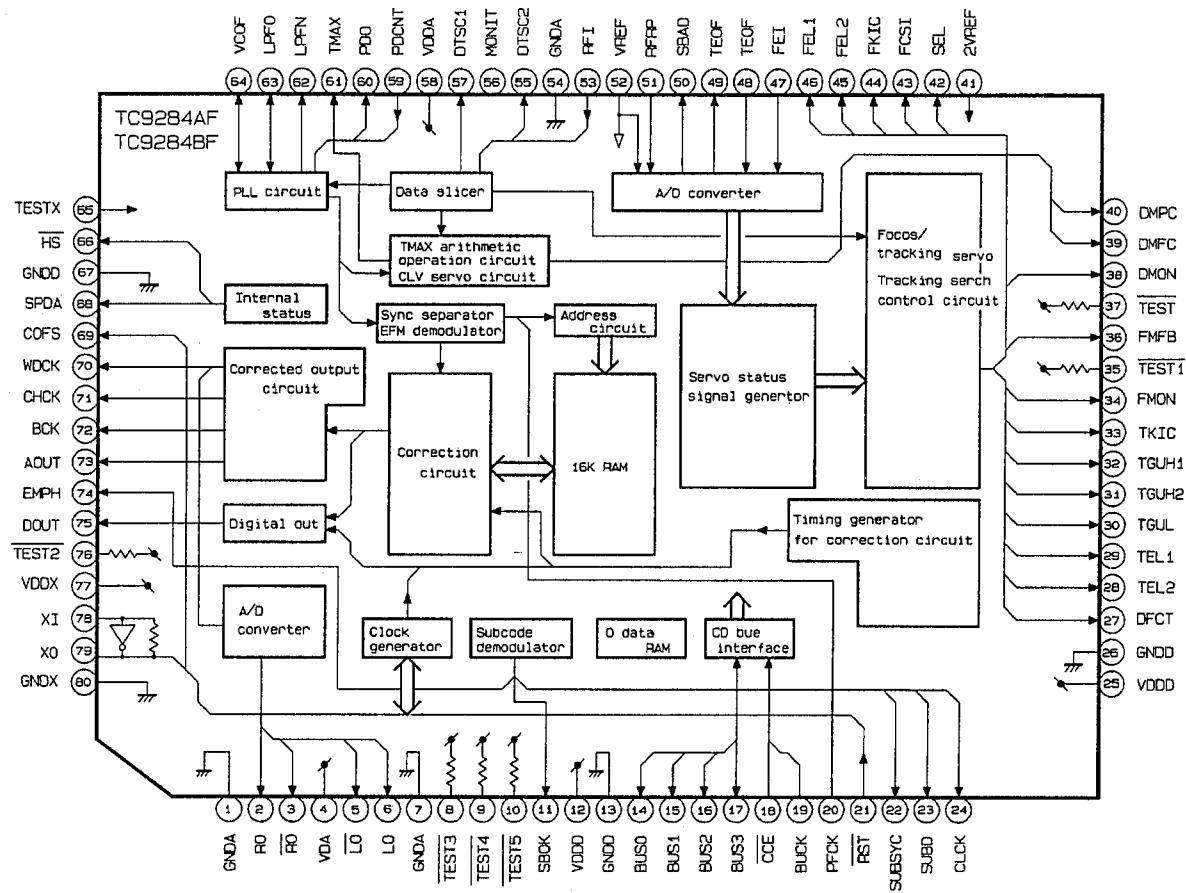


Fig.4 – 4

## ◆ IC731 (LA1867M) FM IF

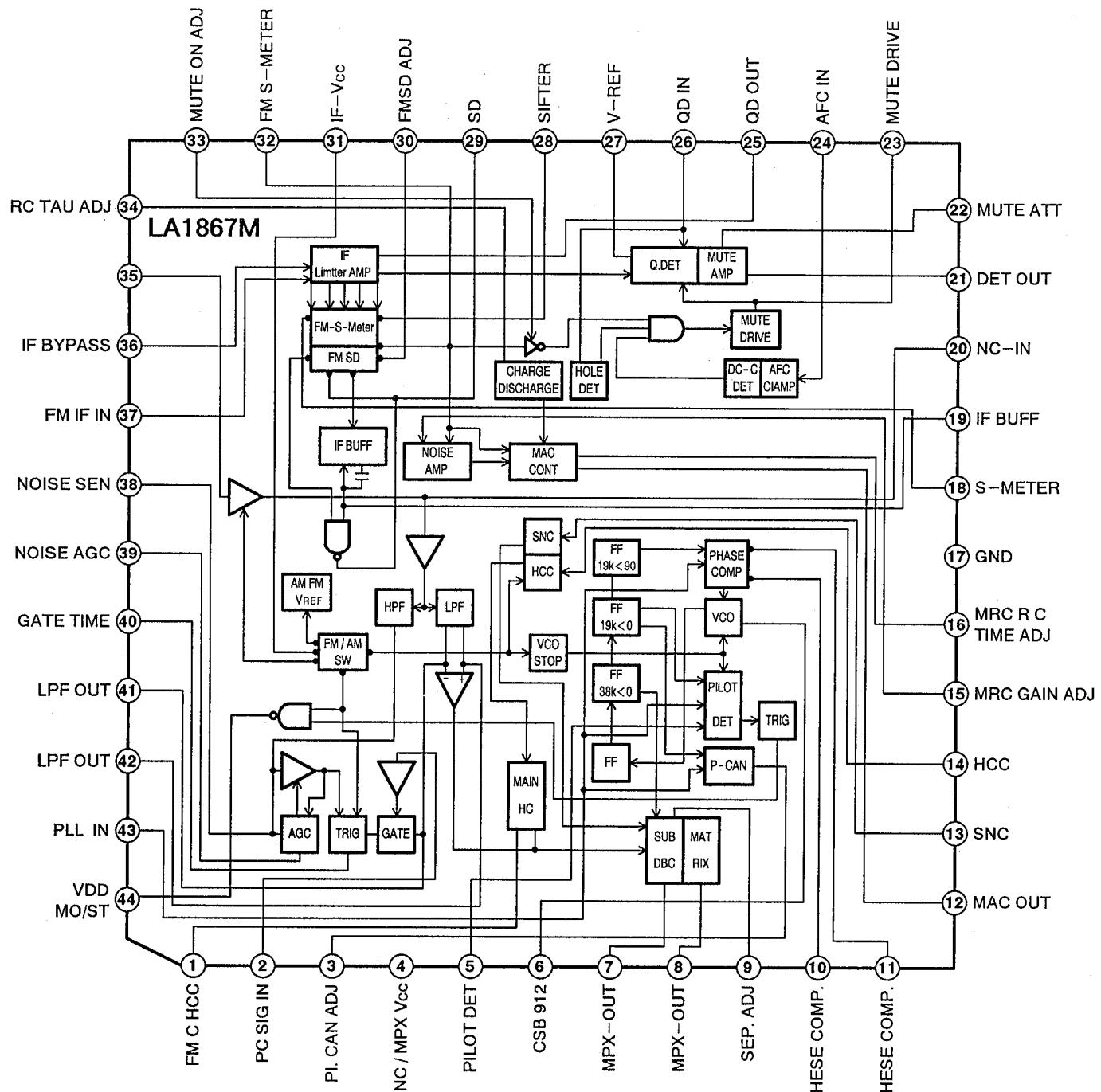


Fig.4 - 5

## ◆ IC101 (NJM4565M) Radio buffer

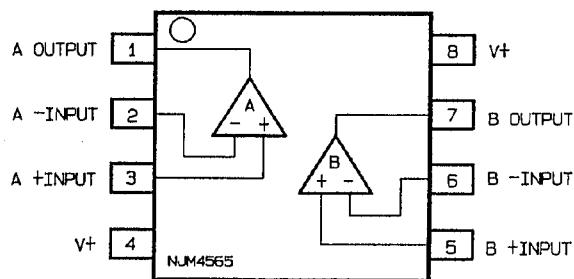


Fig. 4 - 6

◆ IC951 (LC7582E) LCD driver

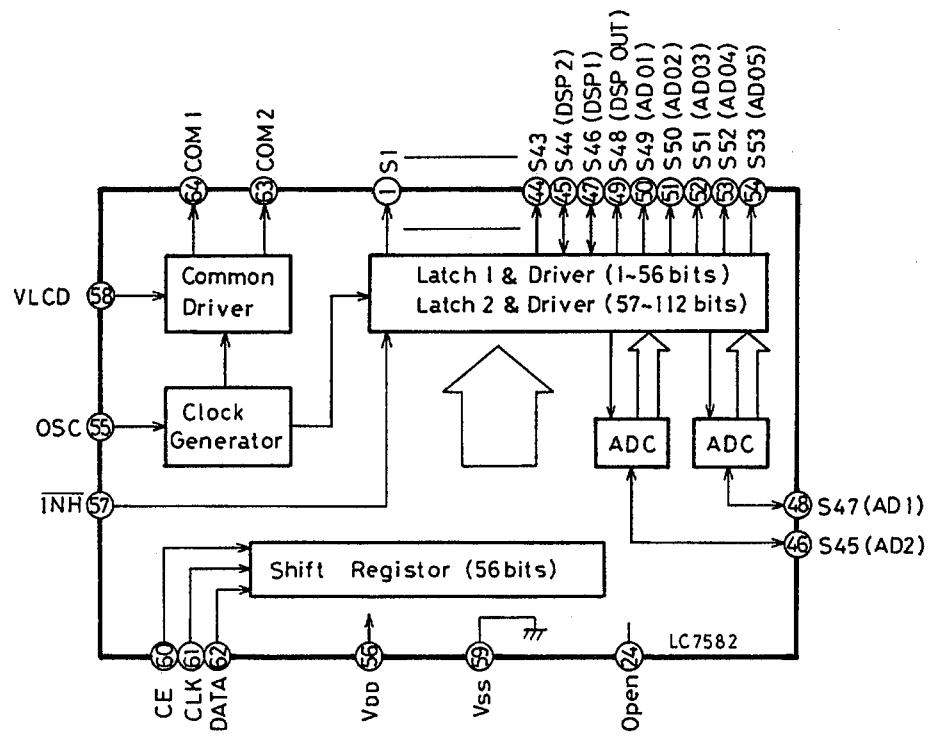
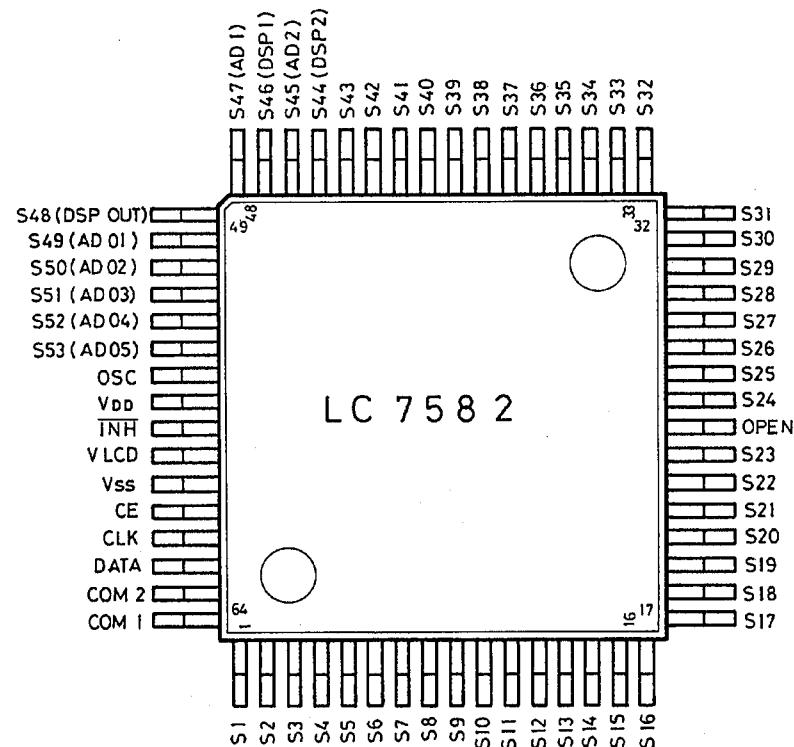


Fig. 4 - 7

◆ IC361 (HA13152) Power amp.

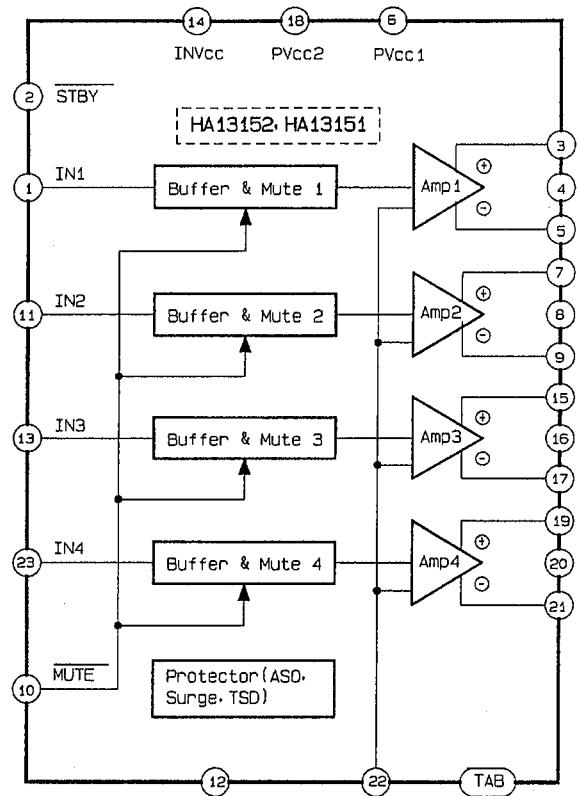


Fig. 4 - 8

## ■ Description of pin function

### ◆ IC601 (LC72362) System microprocessor

No.	Pin cord	Description		No.	Pin cord	Description	
1	Xin	4.5 MHz crystal oscillator connection pin		41	BAND 2	MW/LW band select signal output	H
2	GND			42	BAND 1	FM/AM band select signal output	H
3	E.VOLUME IN	Electronic volume data input		43	AGC	AGC control signal output	H
4	E.VOLUME SO	Electronic volume data output		44			
5	E.VOLUME SC	Electronic volume clock output		45	RESR	Microcomputer reset pin	L
6	EJECT	Eject key input	L	46	P.SAVE 1	Power save detection 1	L
7	GND			47	SD	SD (station detector) signal input	H
8	LCD SO	LCD driver data output		48	MO/ST	Mono control signal output; H; Stereo signal input: L	
9	LCD SCK	LCD driver clock output		49	REST	Rest switch detection	L
10	CCE	Chip enable signal output to TC9284	L	50	L.FINISH	Loading complete switch detection	L
11	BUS 0	Data output 0 to TC9284		51	L.START	Loading start switch detection	H
12	BUS 1	Data output 1 to TC9284		52	DISC SELECT	8 cm disc selection detected	L
13	BUS 2	Data output 2 to TC9284		53	VOISE REST	UPD7758 reset signal	L
14	BUS 3	Data output 3 to TC9284		54	DETACH	Front panel detach detection	H
15	BUCK	Communication clock output to TC9284		55	REMOCON	Remote control signal input	
16	LSI REST	Reset signal output to TC9284	L	56	P.SAVE 2	Power save detection 2	L
17	LM 0	Loading motor control signal output (fwd)	H	57	LCD CE	Chip enable signal output to LCD driver	L
18	LM 1	Loading motor control signal output (rev)	H	58	CD ON	CD power control signal output	H
19	CD REMOTE	CD play remote output	H	59	RELAY	Power relay control signal output	L
20	TUNER	Tuner ON remote output	H	60	MUTE	Voice muting control signal output	L
21	INH	LCD inhibit output (LCD display ON/OFF)	H	61	KEY 0	Key AD input pin 0	
22				62	KEY 1	Key AD input pin 1	
23	KS 3	Initial setting output pin 3		63	KEY 2	Key AD input pin 2	
24	KS 2	Initial setting output pin 2		64	KEY 3	Key AD input pin 3	
25	KS 1	Initial setting output pin 1		65	LEVEL . IND.	Level meter AD input pin	
26	KS 0	Initial setting output pin 0		66	SM	S meter (signal intensity) signal input	
27	K 3	Initial setting input pin 3		67			
28	K 2	Initial setting input pin 2		68	SENS	Power reduction sense pin	L
29	K 1	Initial setting input pin 1		69	AM IF COUNT	AM IF count signal input	
30	K 0	Initial setting input pin 0		70	FM IF COUNT	FM IF count signal input	
31	Vdd	Power supply		71			
32	BUSY	UPD7758 voice output detection input	L	72			
33	START	UPD7758 voice output start input	L	73	Vdd	Power supply pin	
34	I 5	Data output 5 to UPD7758		74	AM OSC	AM local oscillator signal input	
35	I 4	Data output 4 to UPD7758		75	FM OSC	FM local oscillator signal input	
36	I 3	Data output 3 to UPD7758		76	GND	Ground pin	
37	I 2	Data output 2 to UPD7758		77			
38	I 1	Data output 1 to UPD7758		78	ERROR OUT	PLL error signal output	
39	I 0	Data output 0 to UPD7758		79	GND		
40	IF RQ	IF count request output	H	80	X out	4.5 MHz crystal oscillator connection pin	

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## ■ Signal diagram

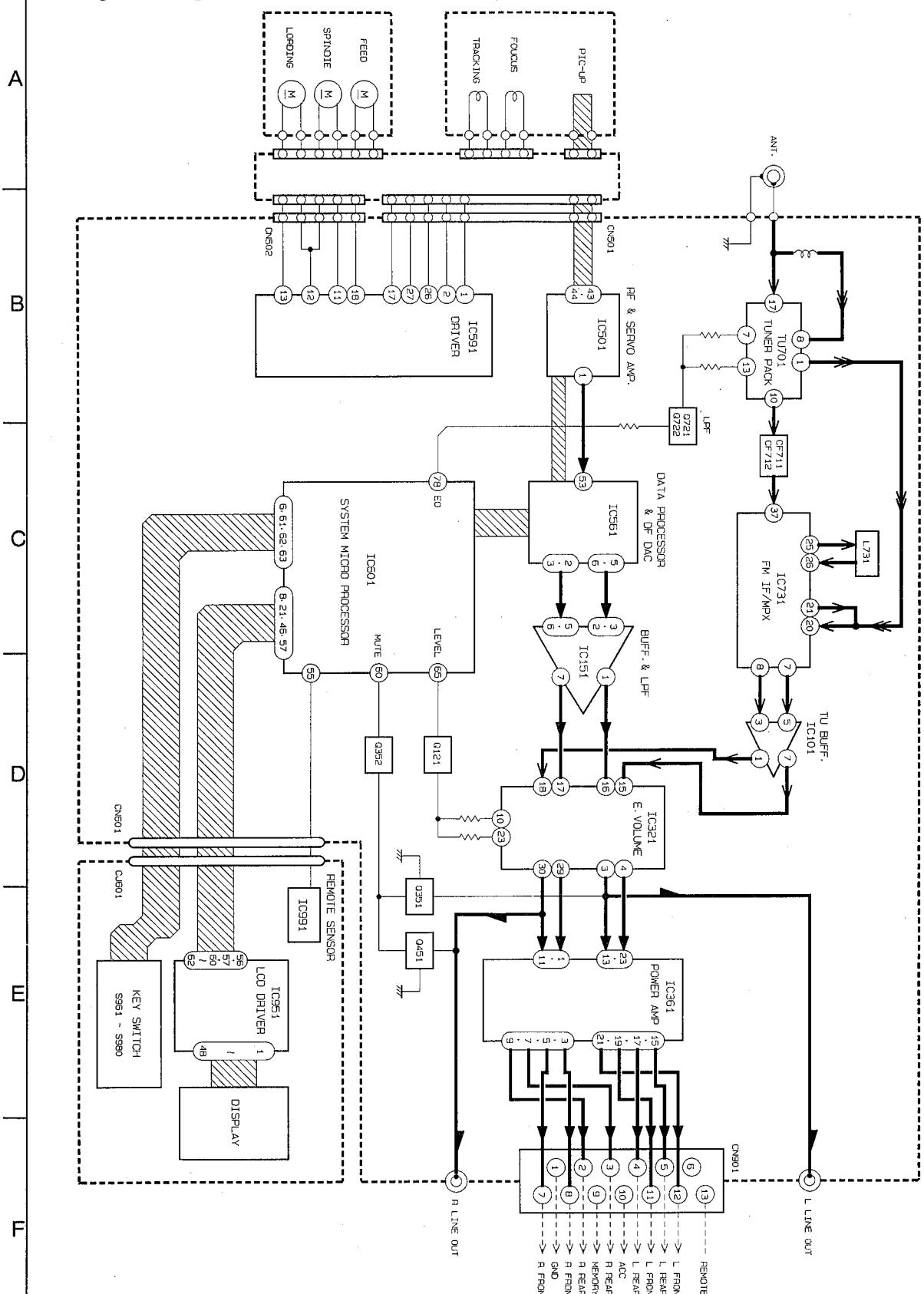


Fig. 4 - 9

## 5 Wiring connection

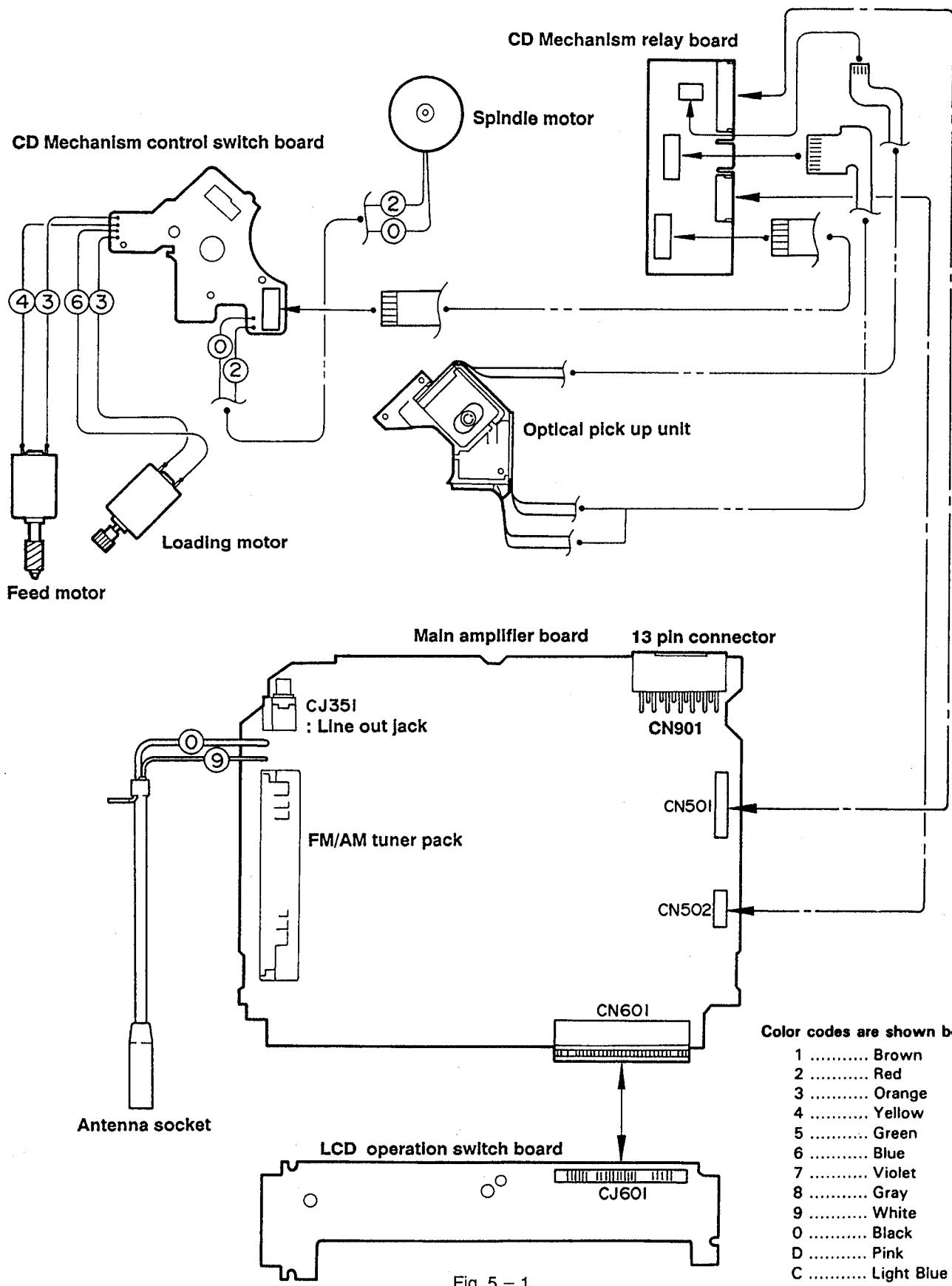
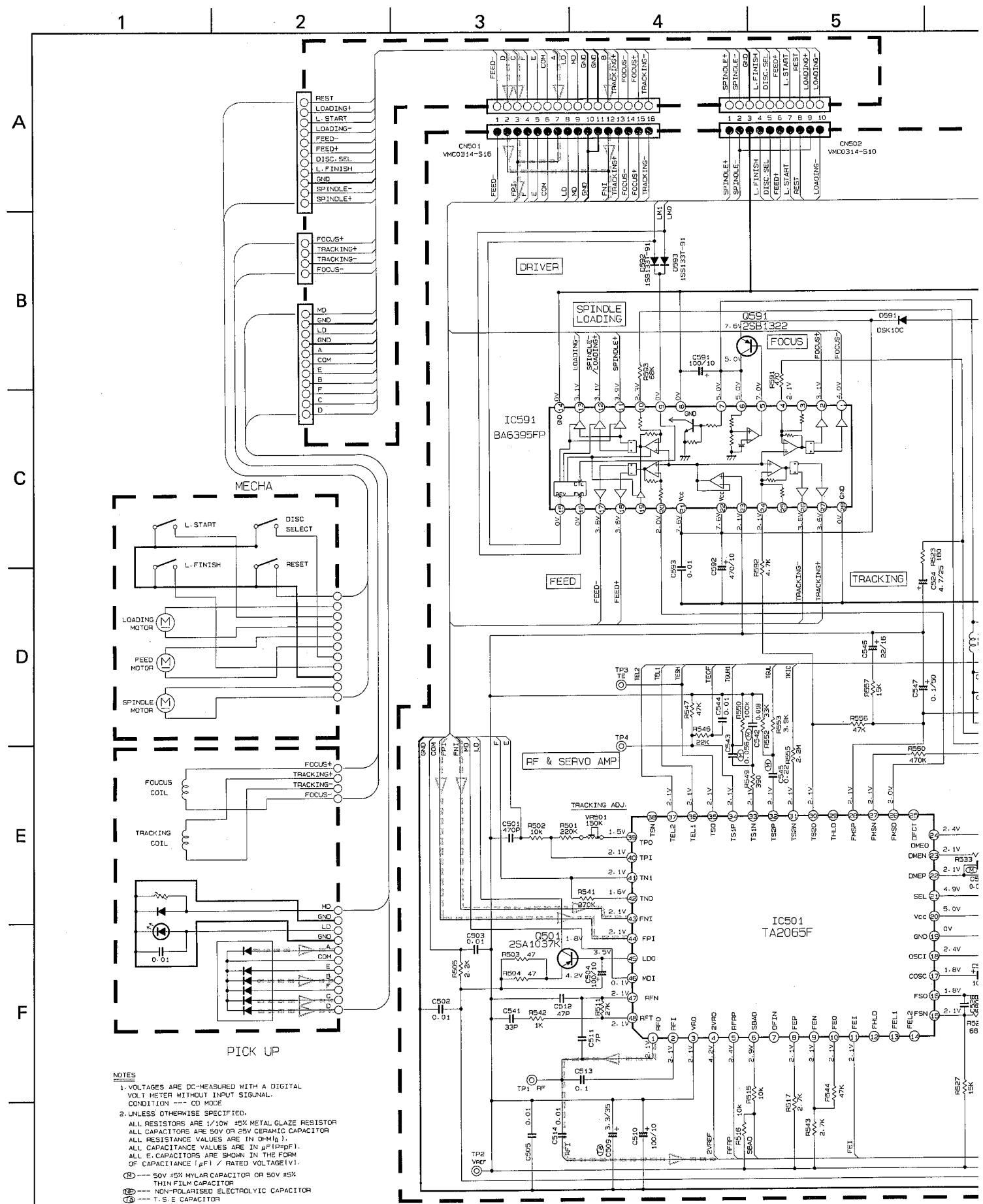


Fig. 5 - 1



## 6 Standard schematic diagram ■ CD amplifier section



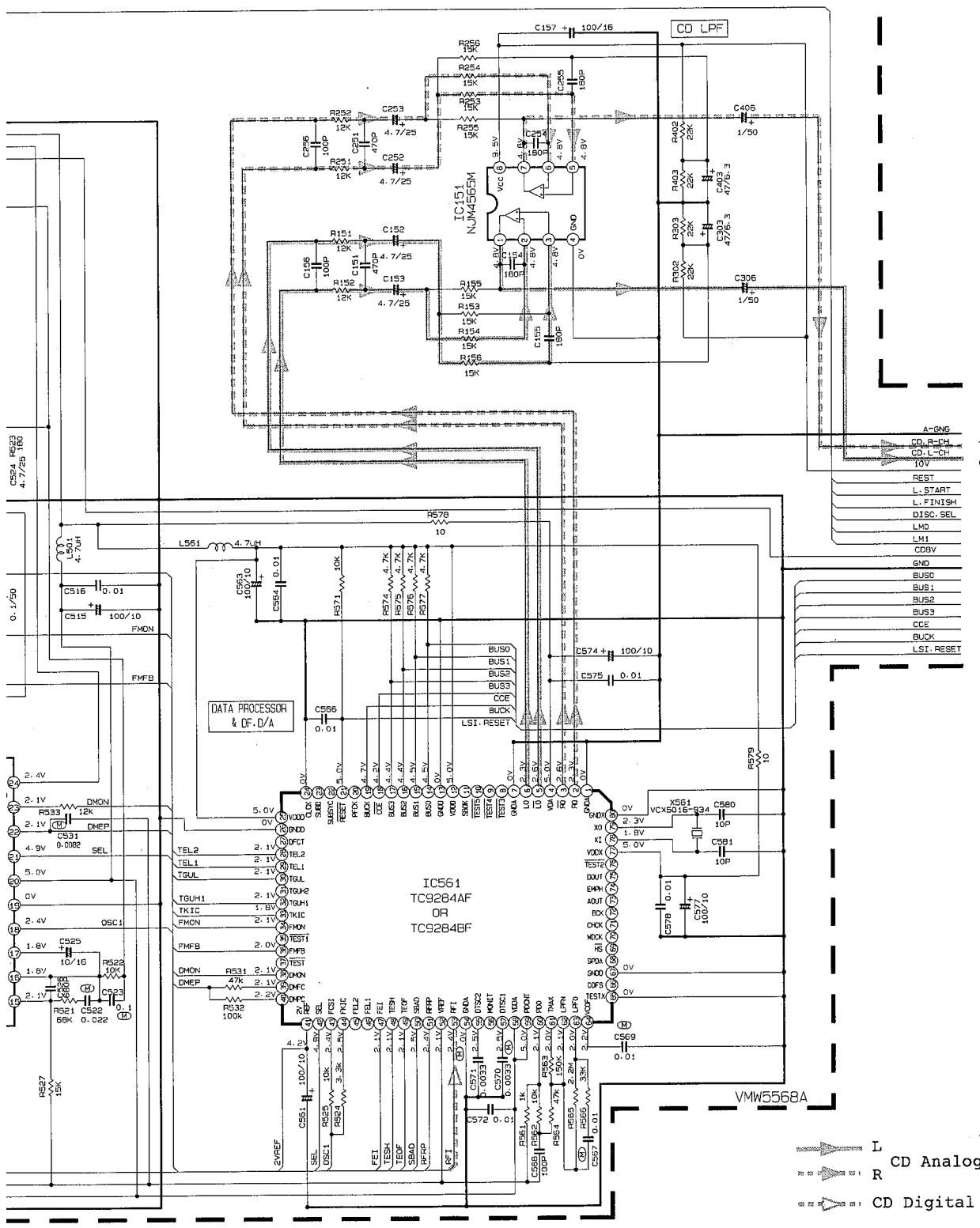
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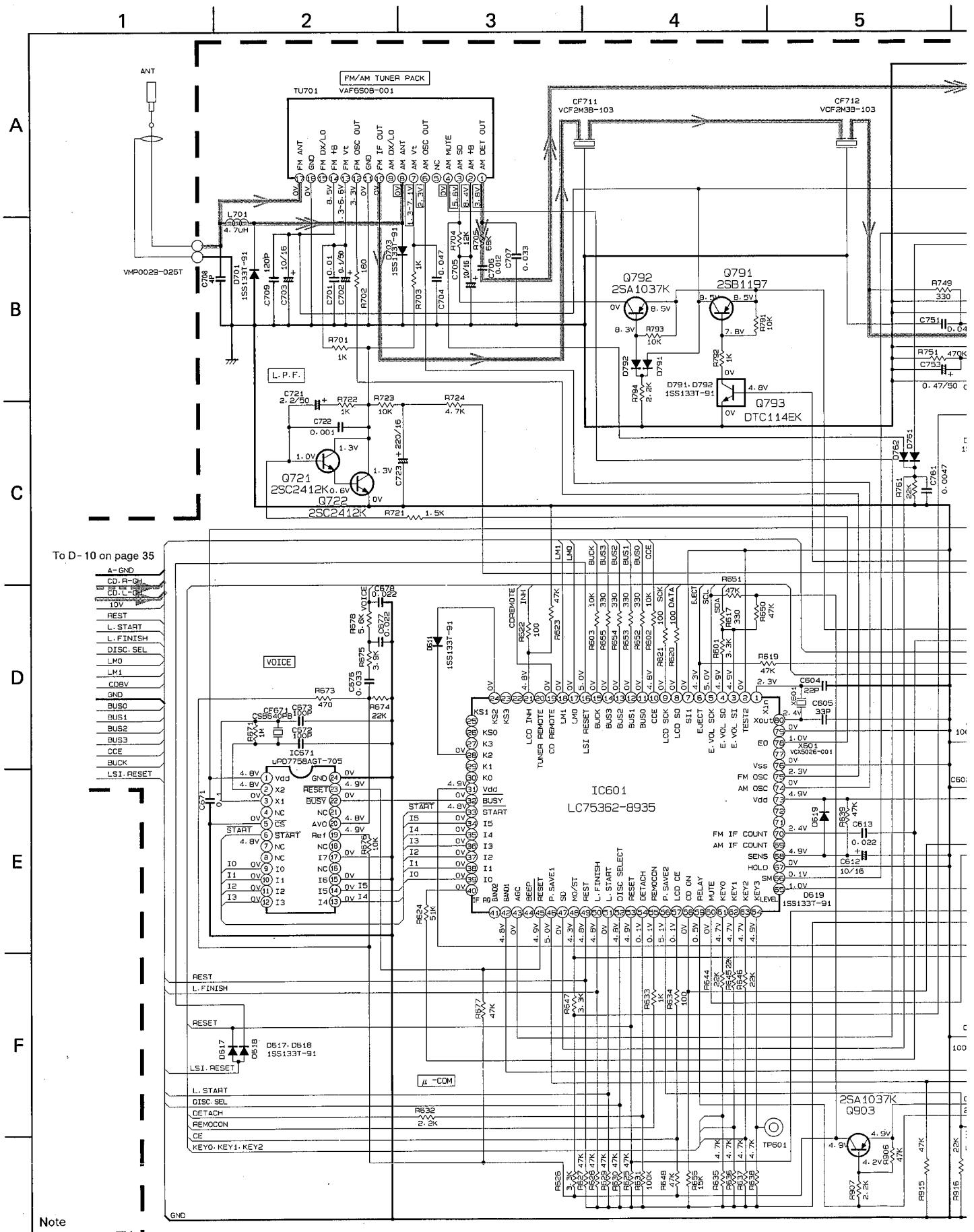
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## ■ System control/tuner section



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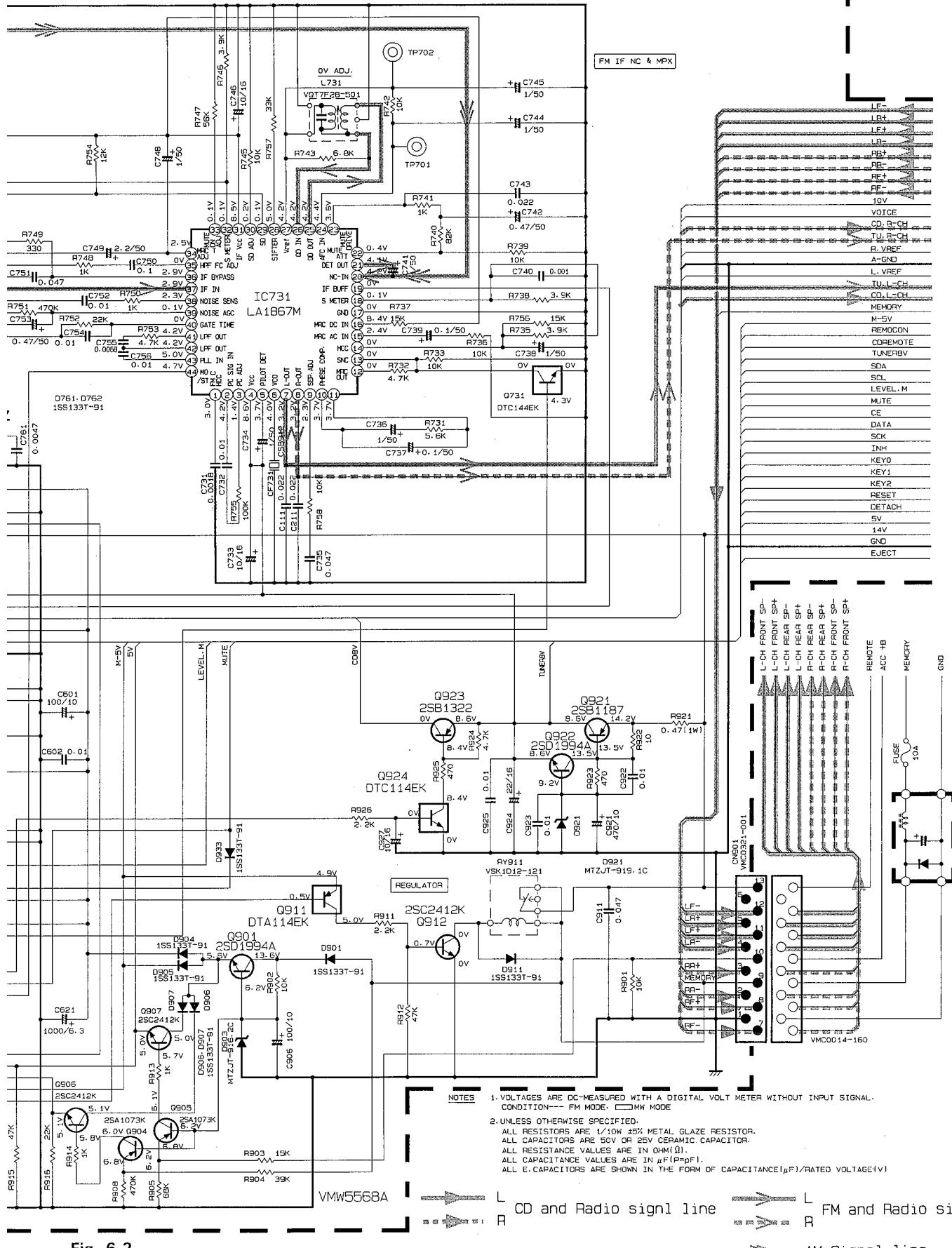


Fig. 6-2

NOTES  
 1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.  
 2. UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTORS ARE 1/10W ±5% METAL GLAZE RESISTOR.  
 ALL CAPACITORS ARE 50V OR 25V CERAMIC CAPACITOR.  
 ALL RESISTANCE VALUES ARE IN OHM (Ω).  
 ALL CAPACITANCE VALUES ARE IN μF (P-pF).  
 ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V)

CD and Radio signal line      L      FM and Radio signal line  
 R      AM Signal line

## ■ Power amplifier/Indicator section

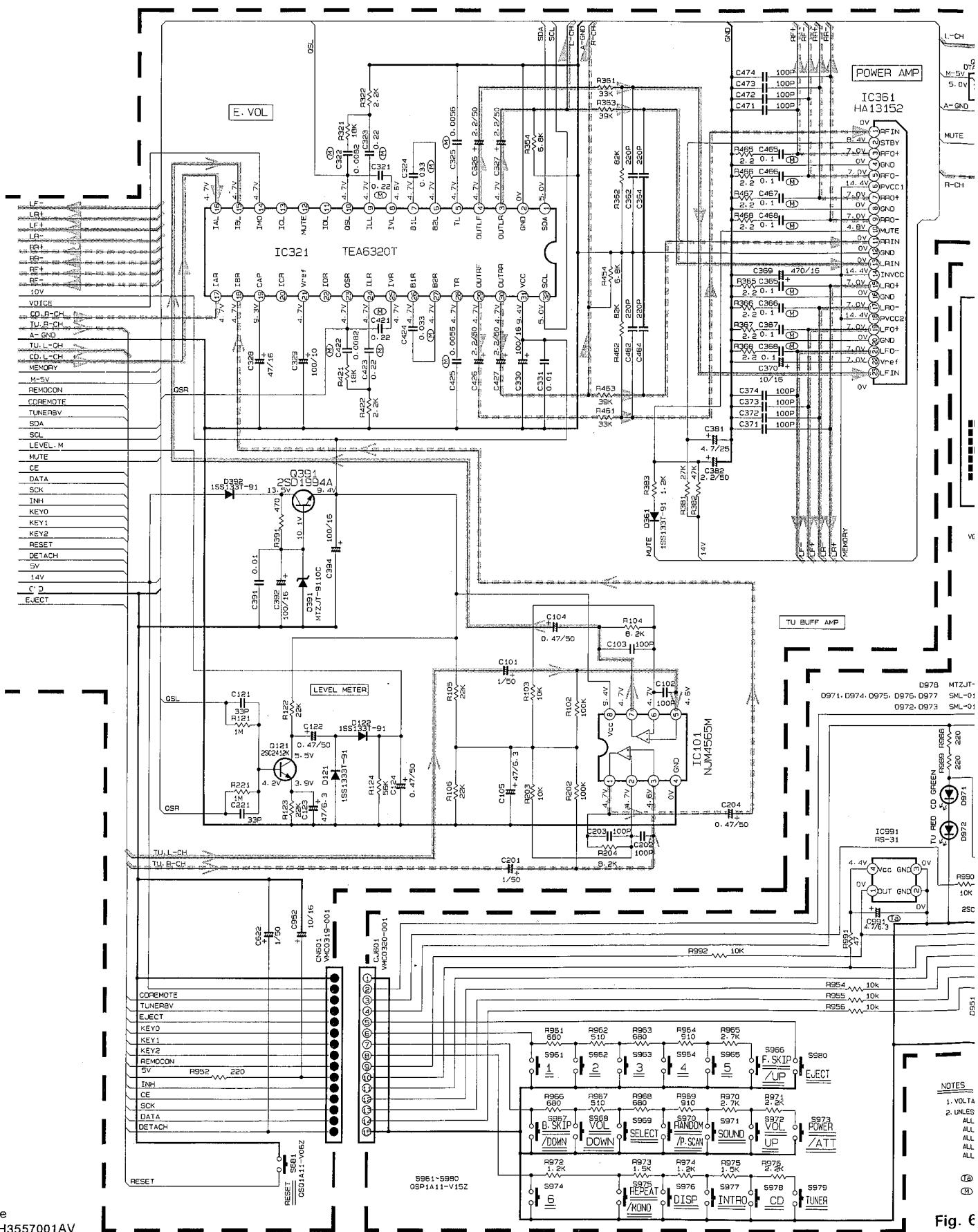
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Note  
VDH3557001AV

Fig. 6

- NOTES  
 1. VOLTA  
 2. UNLES  
 ALL  
 ALL  
 ALL  
 ALL  
 ALL  
 (a)  
 (b)

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17

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19

20

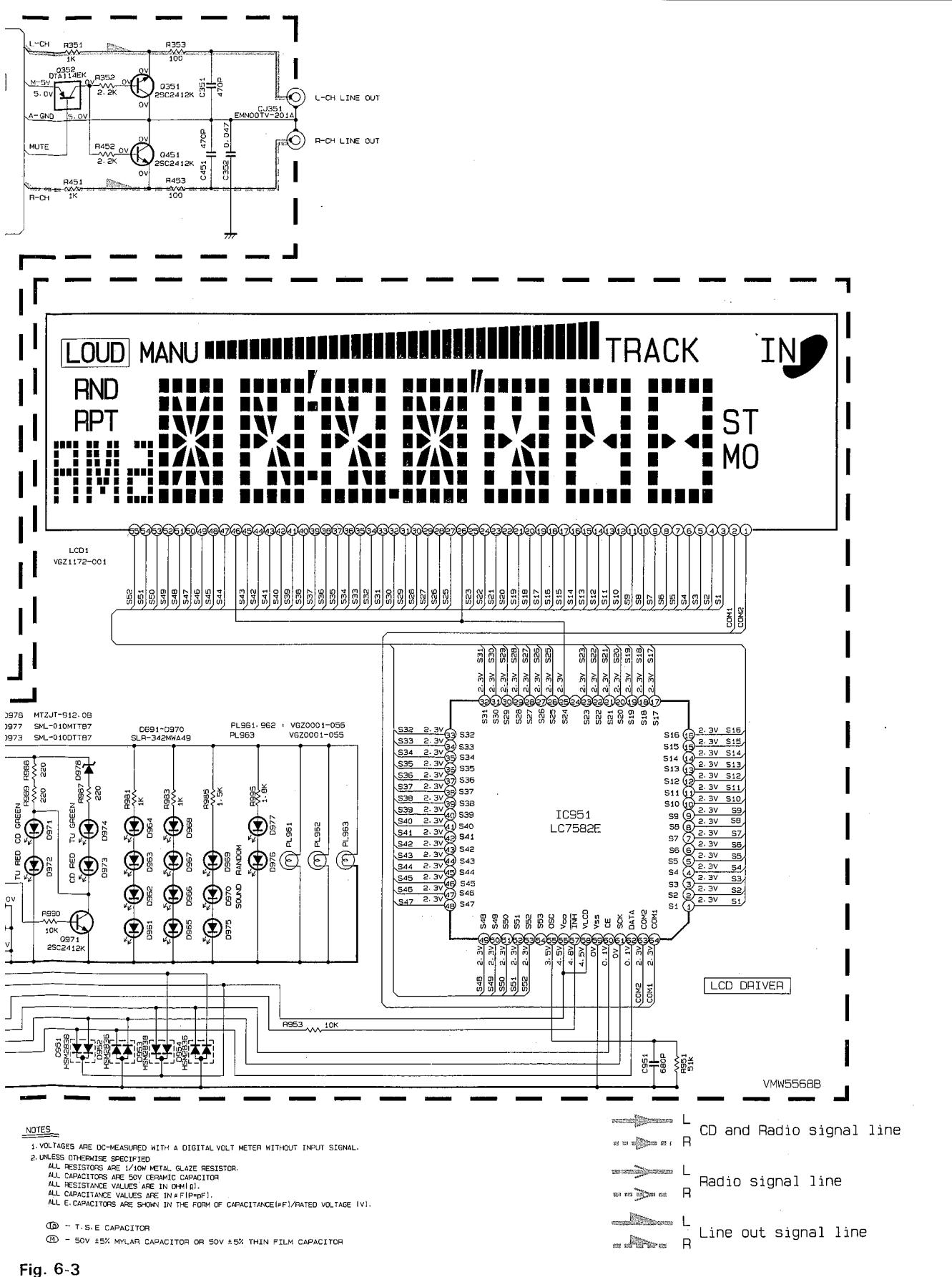


Fig. 6-3

## ■ Tuner pack circuit (TU1)

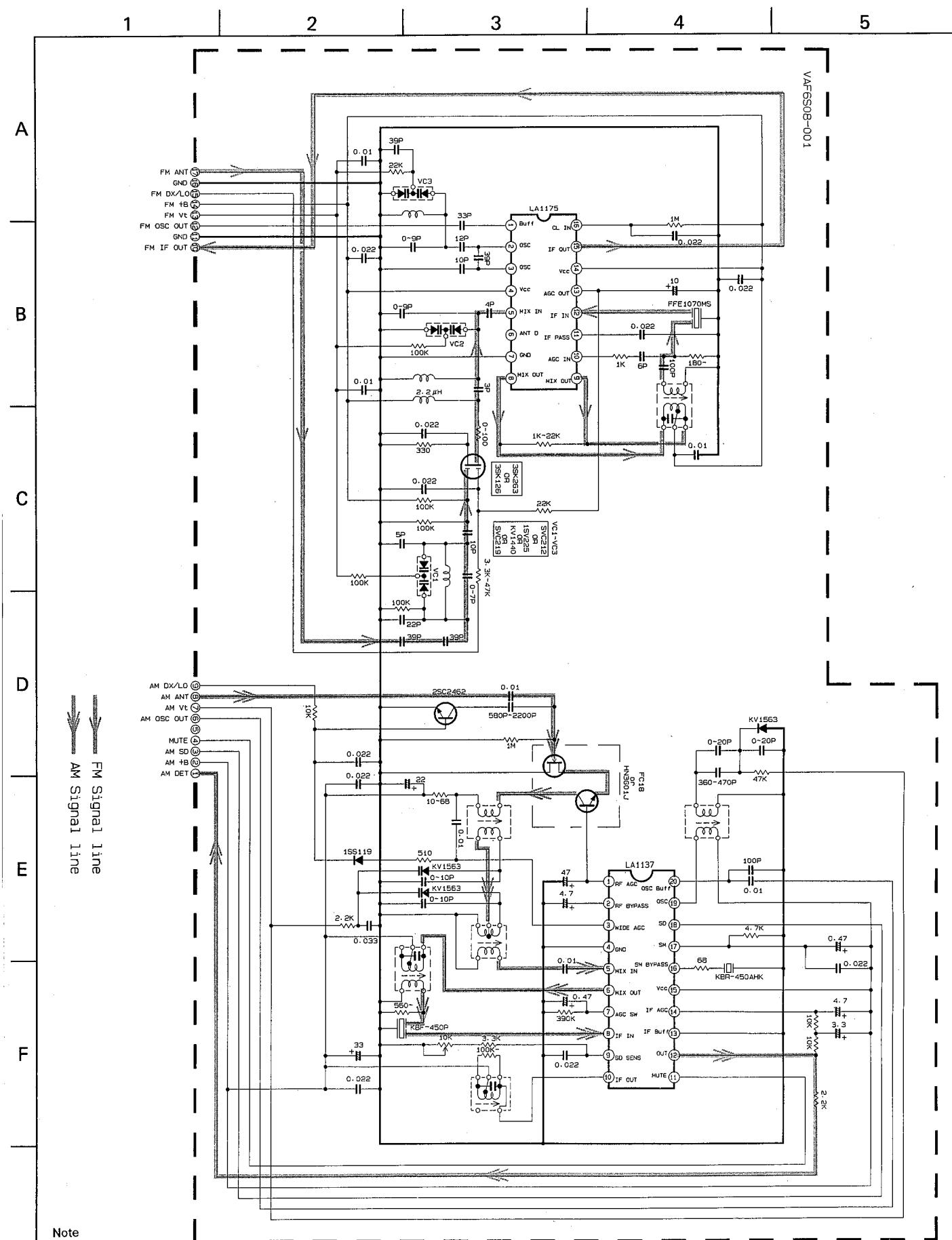


Fig. 6-4



## 7 Location of P. C. board parts and parts list

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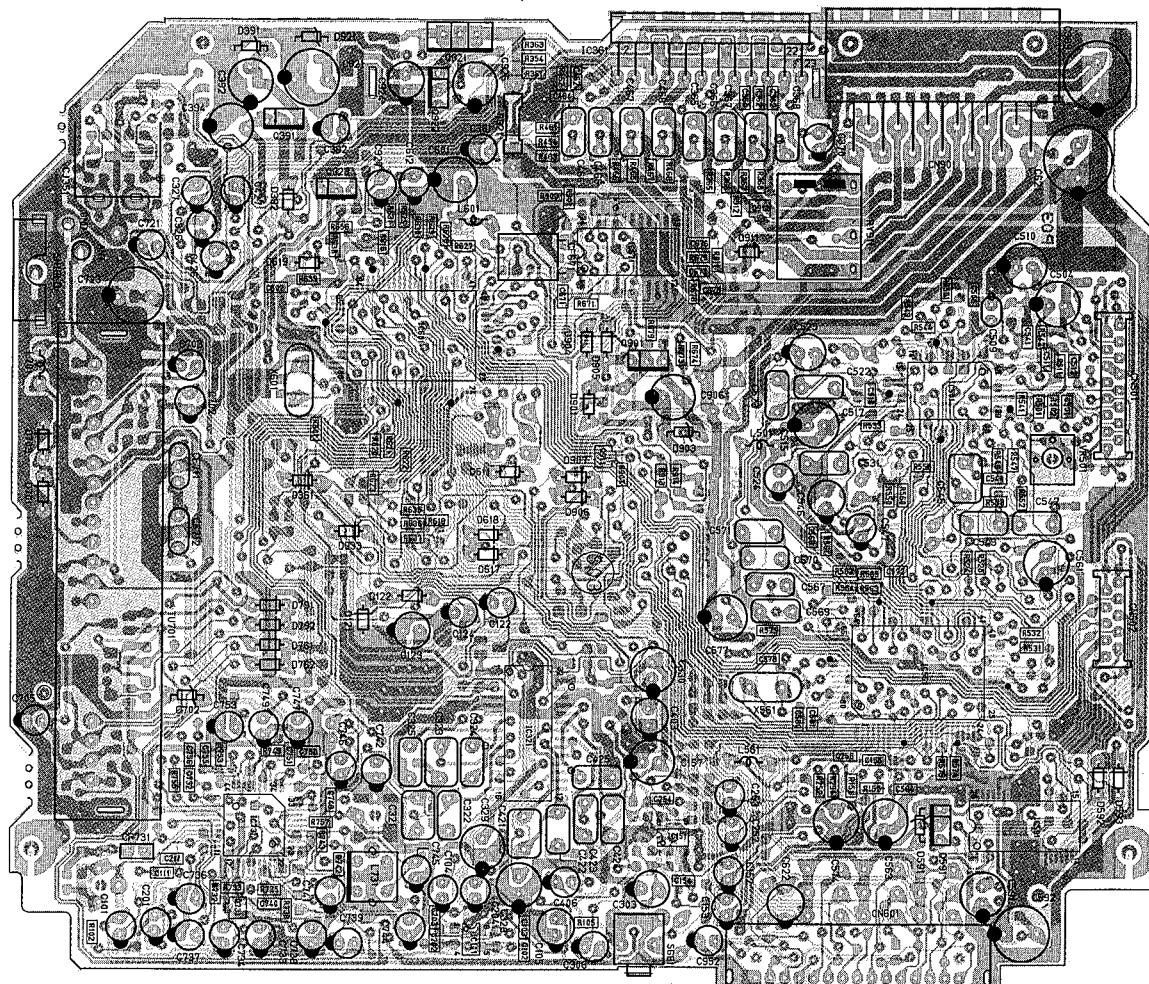
5

■ Main board top side

◆ Parts side

A

◆ Main board



B

C

D

E

F

◆ Key board

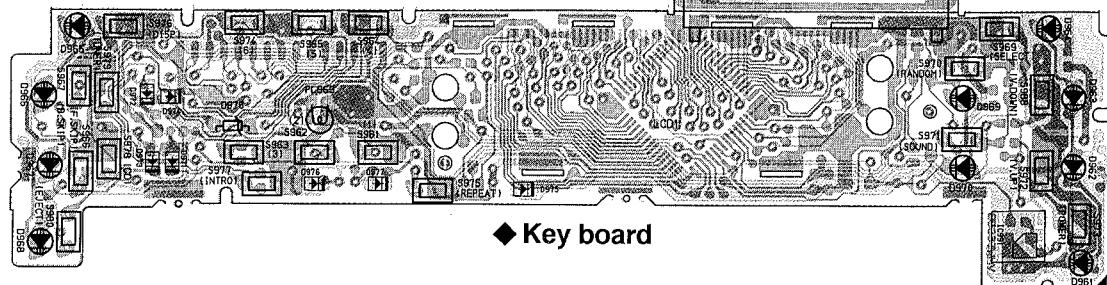


Fig. 7-1

6

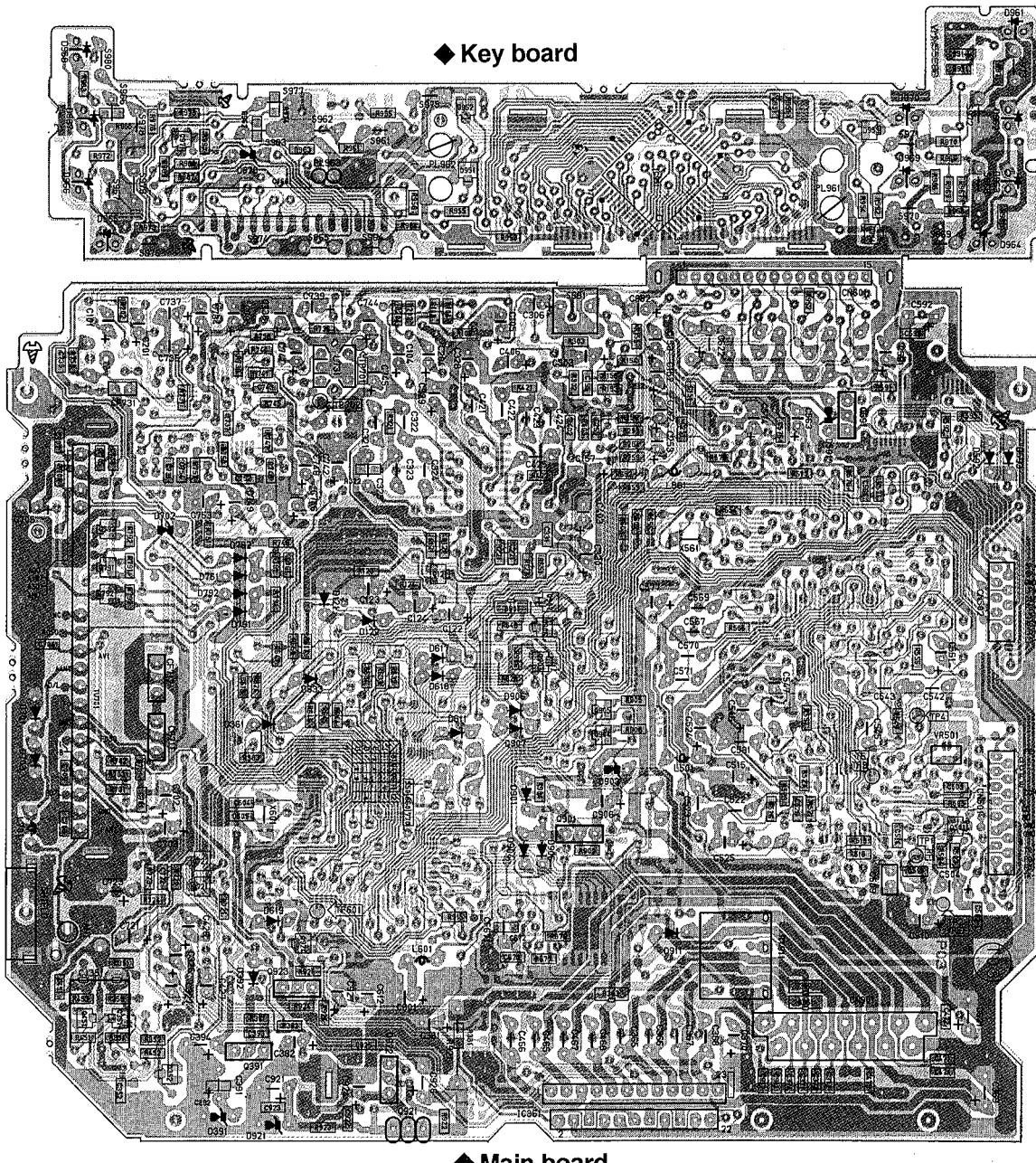
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◆ Bottom side



◆ Main board

Fig. 7-2



## BLOCK NO. 0111111

## BLOCK NO. 0111111

A REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 545	QFV41HJ-224	FILM CAPACITOR	-22MF 5% 50V	
C 546	QEKF41CM-226	E-CAPACITOR	22MF 20% 16V	
C 547	QEKF41H-104	E-CAPACITOR	.10MF 20% 50V	
C 548	QEKF1AM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 549	QEKF1AM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 564	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 565	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 566	NCS21HJ-103	FILM CAPACITOR	.010MF 5% 50V	
C 567	QFV71HJ-101AY	C CAPACITOR	.010MF 5% 50V	
C 568	NCS21HJ-101AY	FILM CAPACITOR	.010MF 5% 50V	
C 569	QFLA1HJ-103	FILM CAPACITOR	.010MF 5% 50V	
C 570	QFLA1HJ-3322M	M-CAPACITOR	3300PF 5% 50V	
C 571	QFLA1HJ-3322M	M-CAPACITOR	3300PF 5% 50V	
C 572	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 574	NCB21HK-103AY	E-CAPACITOR	100MF 20% 10V	
C 575	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 577	QEKF1AM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 578	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 580	NCT21CH-100AY	C CAPACITOR	.010F 50:-10% 1	
C 581	NCT21CH-100AY	C CAPACITOR	.010F 50:-10% 1	
C 591	QEKF1AM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 592	QEKF1AM-477	E-CAPACITOR	470MF 20% 10V	
C 593	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 601	QEKF1AM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 602	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 604	NCT21CH-220AY	C CAPACITOR	.022F +50:-10% 1	
C 605	NCT21CH-330AY	C CAPACITOR	33PF +50:-10% 1	
C 612	QEKF41CM-106	E-CAPACITOR	10MF 20% 16V	
C 613	NCB21HK-223AY	C CAPACITOR	.022NF 10% 25V	
C 621	QETCO1N-108ZN	E-CAPACITOR	1000MF 20% 6.3V	
C 622	QET41HM-105	E-CAPACITOR	1.0MF 20% 50V	
C 671	NCB21HK-104	C CAPACITOR	.10MF 10% 25V	
C 672	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 673	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 676	NCB21HK-333AY	C CAPACITOR	.033NF 10% 25V	
C 677	NCB21HK-223AY	C CAPACITOR	.022NF 10% 50V	
C 678	NCB21HK-223AY	C CAPACITOR	.022NF 10% 50V	
C 701	NCB21HK-103AY	C CAPACITOR	.010NF 10% 50V	
C 702	QEKF41HM-104	E-CAPACITOR	.010NF 20% 50V	
C 703	QEKF41CM-106	E-CAPACITOR	1.0MF 20% 16V	
C 704	NCS21HJ-473AY	C CAPACITOR	.047MF 10% 25V	
C 705	QEKF41CM-106	E-CAPACITOR	10NF 20% 16V	
C 706	NCB21HK-123AY	C CAPACITOR	.01MF 10% 50V	
C 707	NCS21HJ-333AY	C CAPACITOR	.033NF 10% 25V	
C 708	NCS21HC-470AY	C CAPACITOR	.010F 50V	
C 709	NCS21HJ-121AY	C CAPACITOR	1.20PF 5% 50V	
C 721	QEKF41HM-225	E-CAPACITOR	2.2MF 20% 50V	
C 722	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
C 723	QET41CM-227	E-CAPACITOR	220MF 20% 16V	
C 731	NCB21HK-182AY	C CAPACITOR	1800PF 10% 50V	
C 732	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 733	QEKF41CM-106	E-CAPACITOR	10MF 20% 16V	
C 734	QEKF41HM-105	E-CAPACITOR	1.0MF 20% 50V	
C 735	NCB21HK-473AY	C CAPACITOR	.04MF 10% 25V	
C 736	QEKF41HM-105	E-CAPACITOR	1.0MF 20% 50V	
C 737	QEKF41HM-104	E-CAPACITOR	.10MF 20% 50V	

## BLOCK NO. [Q1] [I] [II]

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX		PARTS NO.	PARTS NAME	REMARKS	BLOCK NO. [Q1] [I] [II]
D 762	ISS133T-91	SI DIODE					Q 352	DTA114EK	TRANSISTOR	
D 791	ISS133T-91	SI DIODE					Q 391	2SD1994A(R,S)TA	TRANSISTOR	
D 792	ISS133T-91	SI DIODE					Q 451	2SC2412KK1	TRANSISTOR	
D 901	ISS133T-91	SI DIODE					Q 501	2SA1037K(R)	TRANSISTOR	
D 903	M7JT-916.2C	ZENER DIODE					Q 591	2SB1322(KS)	TRANSISTOR	
D 904	ISS133T-91	SI DIODE					Q 721	2SC2412KK1	TRANSISTOR	
D 905	ISS133T-91	SI DIODE					Q 722	2SC2412KK1	TRANSISTOR	
D 906	ISS133T-91	SI DIODE					Q 731	DTC144EK	TRANSISTOR	
D 907	ISS133T-91	SI DIODE					Q 791	2SB1197K(Q,R)	TRANSISTOR	
D 911	ISS133T-91	SI DIODE					Q 792	2SA1037K(R)	TRANSISTOR	
D 921	MT7JT-919.1C	ZENER DIODE					Q 793	DTC114EK	TRANSISTOR	
D 933	ISS133T-91	SI DIODE					Q 901	2SD1994A(R,S)TA	TRANSISTOR	
D 951	HSM2838C	DIODE					Q 903	2SA1037K(R)	TRANSISTOR	
D 952	HSM2838C	DIODE					Q 904	2SA1037K(R)	TRANSISTOR	
D 953	HSM2838C	DIODE					Q 905	2SA1037K(R)	TRANSISTOR	
D 954	HSM2838C	DIODE					Q 906	2SC2412KK1	TRANSISTOR	
D 961	SLR-34.2MVA49	LED					Q 907	2SC2412KK1	TRANSISTOR	
D 962	SLR-34.2MVA49	LED					Q 911	DTA114EK	TRANSISTOR	
D 963	SLR-34.2MVA49	LED					Q 912	2SC2412KK1	TRANSISTOR	
D 964	SLR-34.2MVA49	LED					Q 921	2SB1187(F,G)	TRANSISTOR	
D 965	SLR-34.2MVA49	LED					Q 922	2SD1994A(R,S)TA	TRANSISTOR	
D 966	SLR-34.2MVA49	LED					Q 923	2SB1322(RS)	TRANSISTOR	
D 967	SLR-34.2MVA49	LED					Q 924	DTC114EK	TRANSISTOR	
D 968	SLR-34.2MVA49	LED					Q 971	2SC2412KK1	TRANSISTOR	
D 969	SLR-34.2MVA49	LED					R 102	NRSA02J-104NY	MG RESISTOR	
D 970	SLR-34.2MVA49	LED					R 103	NRSA02J-103NY	MG RESISTOR	
D 971	SML-010MT87	LED					R 104	NRSA02J-822NY	MG RESISTOR	8.2K 5% 1/10W
D 972	SML-010DT87	LED					R 105	NRSA02J-823NY	MG RESISTOR	22K 5% 1/10W
D 973	SML-010DT87	LED					R 106	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W
D 974	SML-010MT87	LED					R 121	NRSA02J-105NY	MG RESISTOR	1.0M 5% 1/10W
D 975	SML-010MT87	LED					R 122	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W
D 976	SML-010MT87	LED					R 123	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W
D 977	SML-010MT87	LED					R 124	NRSA02J-163NY	MG RESISTOR	56K 5% 1/10W
D 978	MTJ-2.0B	ZENER DIODE					R 151	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W
IC101	NJM4565M	IC					R 152	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W
IC151	NJM4565M	IC					R 153	NRSA02J-153NY	MG RESISTOR	
IC321	TEA6320T	IC					R 154	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W
IC361	HA3152	IC					R 155	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W
IC501	TA2065F	IC					R 156	NRSA02J-104NY	MG RESISTOR	15K 5% 1/10W
IC561	TC2284BF	IC					R 202	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W
IC591	BA6395FP-T1	IC					R 203	NRSA02J-105NY	MG RESISTOR	10K 5% 1/10W
IC601	LC7362-8735	IC					R 204	NRSA02J-822NY	MG RESISTOR	8.2K 5% 1/10W
IC671	UPD7758AGT-705	IC					R 221	NRSA02J-105NY	MG RESISTOR	1.0M 5% 1/10W
IC731	LA1867M	IC					R 251	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W
IC7582E	LC7582E	IC					R 252	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W
IC991	RS-31	REMOCON SENSOR					R 254	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W
L 501	VQP0015-4R7Z	INDUCTOR					R 255	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W
L 561	VQP0015-4R7Z	INDUCTOR					R 302	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W
L 701	VQT7F28-501	IFT					R 303	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W
PL961	VG10001-056	LAMP					R 321	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W
PL963	VG10001-055	LAMP					R 322	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W
Q 121	2SC2412KK1	TRANSISTOR					R 351	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W
Q 351	2SC2412KK1	TRANSISTOR					R 352	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W







8

## Exploded view of enclosure assembly and parts list Block No. M

1

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3

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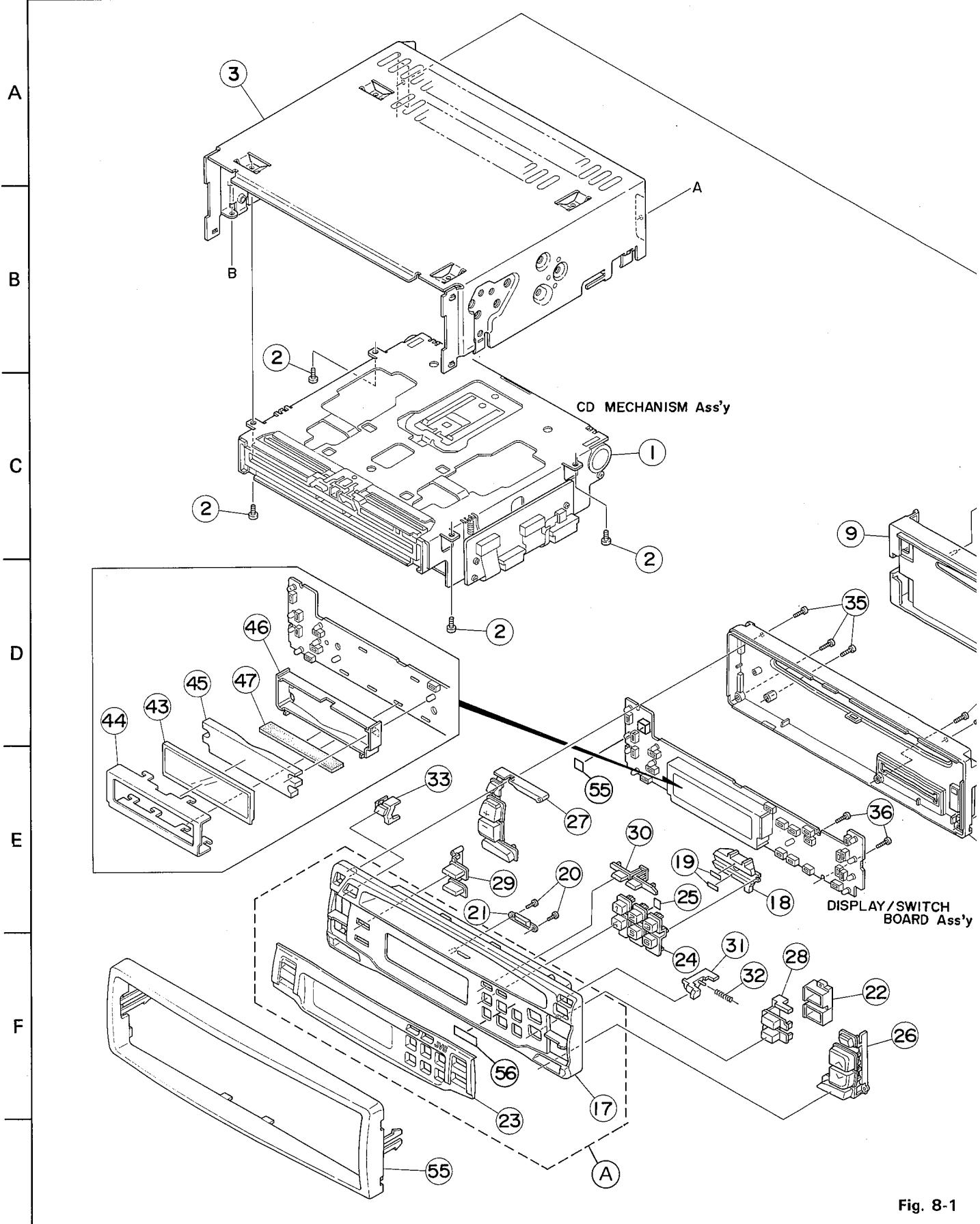


Fig. 8-1

M 1

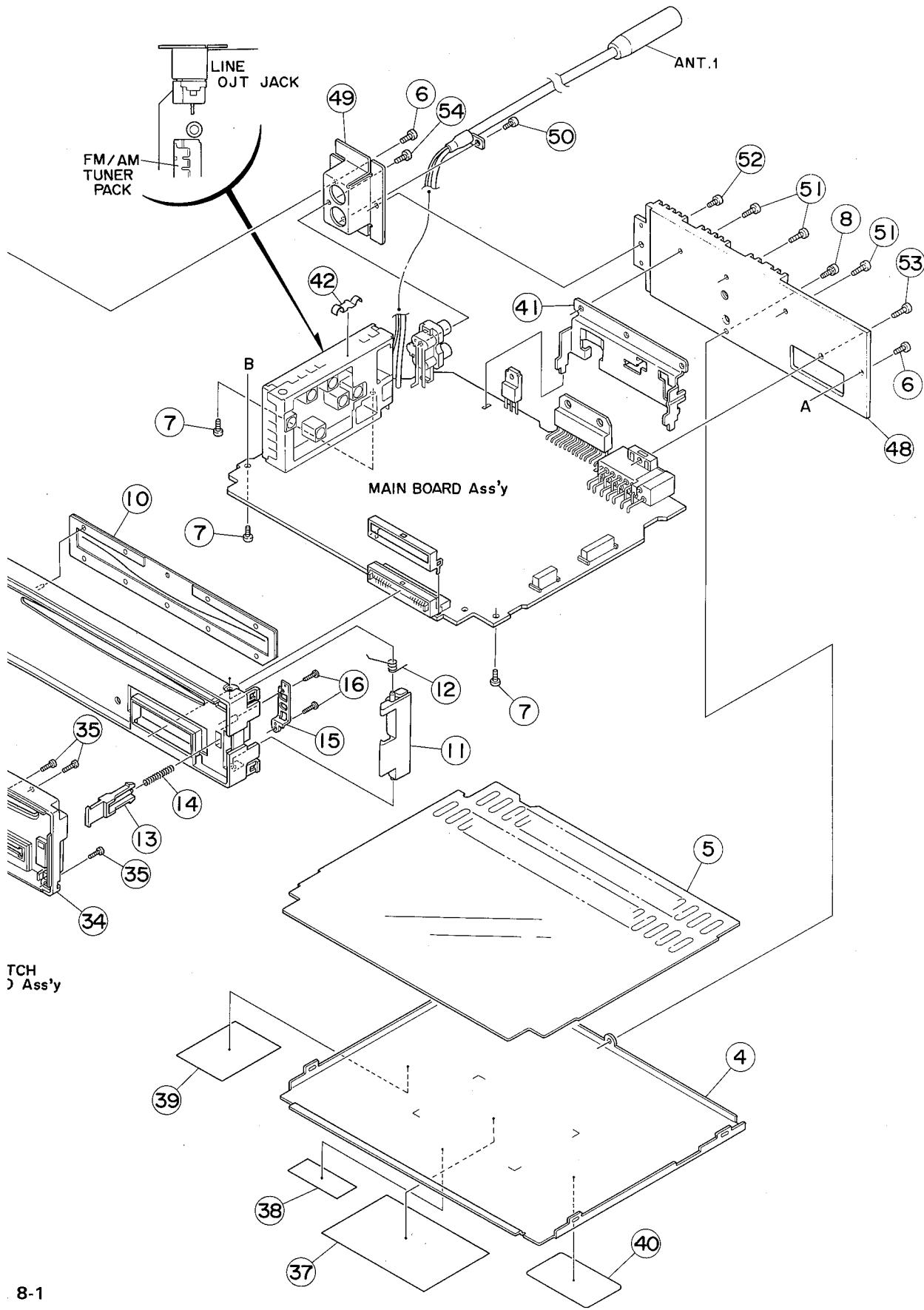
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● Enclosure assembly parts list

BLOCK NO. M1MM

A	REF.	PARTS NO.	PARTS NAME	REMARKS	Q'TY	SUFFIX	CLR
	A 1 2 3 4	ZCKDGS770J-NPA ----- SDST2604Z VKL1423-001 VKM3798-003	NOSE PIECE CD MECHA SCREW CHASSIS BOTTOM COVER	NO. 17, 23, 56	1 1 4 1 1		
	5 6 7 8 9	VMA3218-001 SDST2606Z SDST2606Z LPSP2608Z VJC2535-002	INSULATOR SCREW SCREW SCREW FRONT CHASSIS	REAR+SIDE(L,R) MAIN BOARD+SIDE REAR SIDE BOTTO	1 2 3 1 1		
	10 11 12 13 14	VYTA514-001 FSKS3002-001 FSKW4005-003 FSXP3018-001 VKW3001-320	BLIND(C) LOCK LEVER TORSION SPRING RLS KNOB COMP.SPRING	FOR LOCK LEVER RLS KNOB	1 1 1 1 1		
	15 16 17 18 19	FSKL4008-001 SPSN1755N VJG1323-001 FSJK3001-002 VYSS1R2-055	HOLD PLATE MINI SCREW FRONT PANEL LIGHT LENS SPACER	HOLD PLATE	1 2 1 1 2		
	20 21 22 23 24	SPSN1755N VJK3654-002 VKS3705-002 VJK2198-003 VXP2099-001	MINI SCREW LENS LED HOLDER FINDER PRESET BUTTON	FOR LENS	2 1 1 1 1		
	25 26 27 28 29	VYTT666-001 VXP1005-003 VXP1006-002 VXP2100-003 FSXP3019-004	SEAL UP DOWN BUTTON +/- BUTTON D.FUNC BUTTON PUSH BUTTON	FOR PRESET BUTT CD/TUNE RANDOM	1 1 1 1 1		
	30 31 32 33 34	VXP3690-002 FSXP3020-001 VKW3001-321 VJK4438-001 VJG1324-001	PUSH BUTTON DETACH BUTTON COMP. SPRING REMOCON LENS REAR COVER	MONO/RPT DETACH BUTTON	1 1 1 1 1		
	35 36 37 38 39	SPSN1780N SPSN1780N VYN3557-S001SA E407097-002 VND4922-001	MINI SCREW MINI SCREW NAME PLATE HYATT L.LABEL CAUTION LABEL	FRONT+REAR KEY BOARD J ONLY	6 2 1 1 1		
	40 41 42 43 44	VND5008-001 VKM3827-001 VMA4631-002 VGL1172-001 VKM3796-001	FCC LABEL(4) IC BRACKET SHIELD PLATE LCD LCD CASE		1 1 1 1 1		
	45 46 47 48 49	VJK3622-003 VKS3647-004 VMZ0124-001E VJC3267-002 VKM3826-001	LCD LENS LENS CASE LCD CONNECTOR REAR PANEL JACK BRACKET		1 1 1 1 1		
	50 51 52 53 54	SDST2606Z SDSP2608Z SDST2606Z SDSP2608Z SPSF3008Z	SCREW SCREW SCREW SCREW SCREW	FOR ANTENNA FOR IC BRACKET FOR JACK BRACKE FOR 13PIN JACK	1 3 1 1 1		
	55 56	VYTT661-001 VYSS1R2-056	SHEET SPACER	FOR REMOCON SEN FOR FINDER	1 1		

## 9 Exploded view of mechanism assembly and parts list

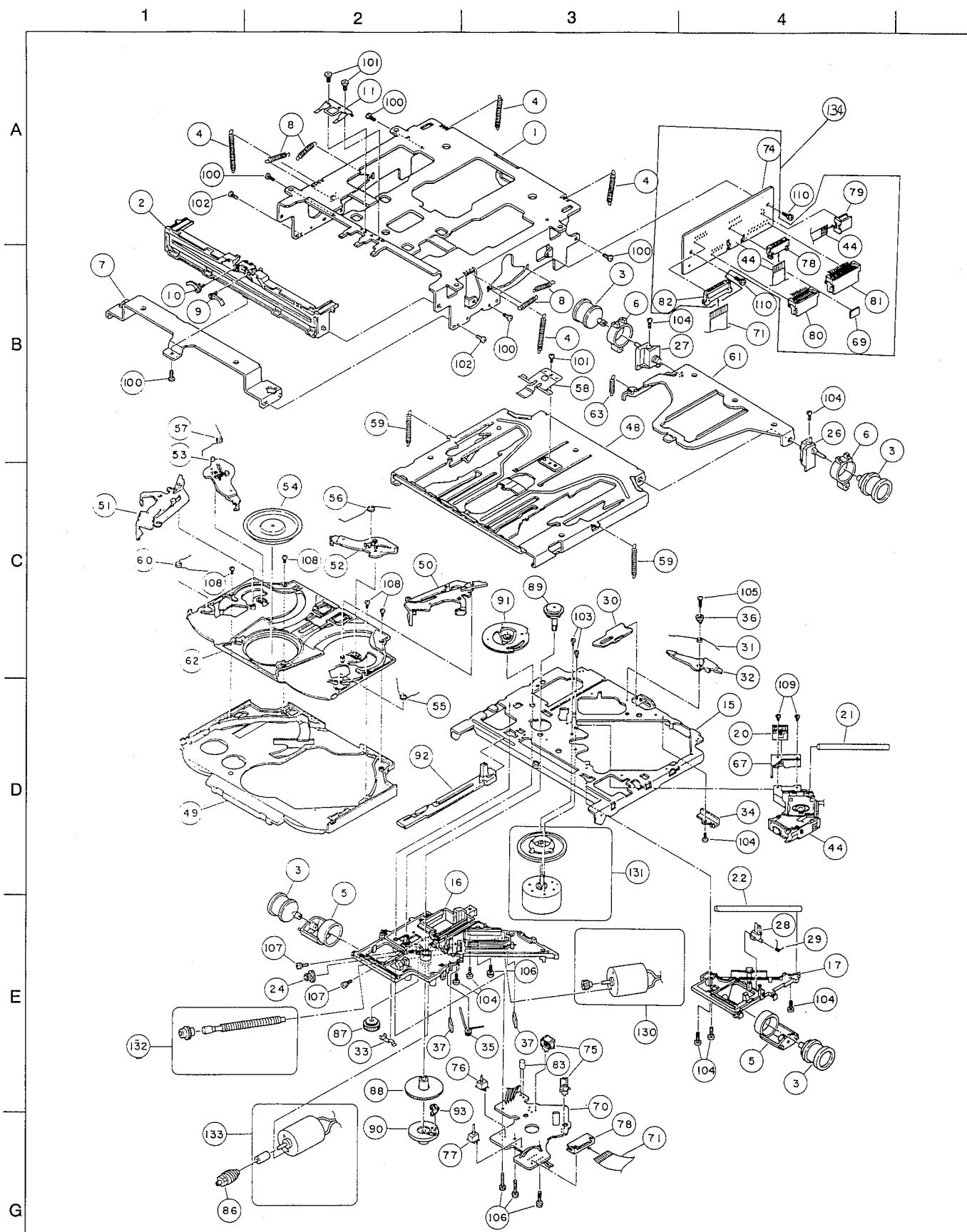


Fig. 9 – 1

## ● Mechanism assembly parts list

BLOCK NO. M2MM|||||

△ REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1 30300101T 2 30300102T 3 30300104T 4 30300105T 5 30300108T	FRAME DISC GUIDE DAMPER HANG UP SP.A DAMPER BKT.(F)		1 1 4 4 2		
	6 30300109T 7 30300110T 8 30300111T 9 30300113T 10 30300114T	DAMPER BKT.(R) TTB GUIDE BKT. LEVEL SPRING DISC STOPPER R DISC STOPPER L		2 1 4 1 1		
	11 30300115T 15 30300501T 16 30300502T 17 30300503T 20 30300506T	DS SPRING PLATE T T BASE FEED MOTOR BASE PICK UP GUIDE B NUT		1 1 1 1 1		
	21 30300507T 22 30300508T 24 30300510T 26 30300512T 27 30300513T	PU SHAFT(A) PU SHAFT(B) PU GEAR(B) T GID.BAS.BKT(R T GID.BAS.BKT(L		1 1 1 1 1		
	28 30300514T 29 30300515T 30 30300516T 31 30300517T 32 30300518T	T GUIDE B.STPR. TGB STPR.SPRING CLASPER CLASPER SPRING CLASPER ARM		1 1 1 1 1		
	33 30300519T 34 30300520T 35 30300521T 36 30300522T 37 30300523T	SW.PLATE SHAFT HOLDER THRUST SPRING COLLAR CUSHION RUBBER		1 1 1 1 2		
	44 OPTIMA-60B2 48 30300601T 49 30300602T 50 30300604T 51 30300605T	PICK-UP TRAY GUIDE BASE CD TRAY BASE SELECT ARM(R) SELECT ARM(L)	OPTIMA-60MZ	1 1 1 1 1		
	52 30300619T 53 30300620T 54 30300608T 55 30300609T 56 30300621T	STOPPER(R)A STOPPER(L)A CLAMPER S ARM(R)SPRING STOPPER(R)SP.A		1 1 1 1 1		
	57 30300622T 58 30300612T 59 30300613T 60 30300614T 61 30300616T	STOPPER(L)SP.A CLAMP SP.PLATE TAG SPRING S ARM(L)SPRING CLAMPER ARM		1 1 2 1 1		
	62 30300618T 63 30300617T 67 30300701T 69 19500834T 70 30301001T	CD TRAY COVER A C ARM SPRING NUT HOLDER FFC TAPE SW.PCB		1 1 1 1 1		
	71 30301003T 74 30301006T 75 64020413T 76 64020414T	F-FFC CONNECTOR PCB(J DETECTOR SW SW.		1 1 2 1		





