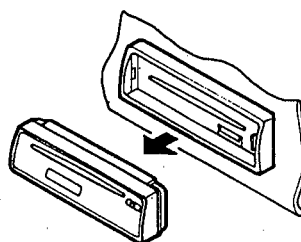
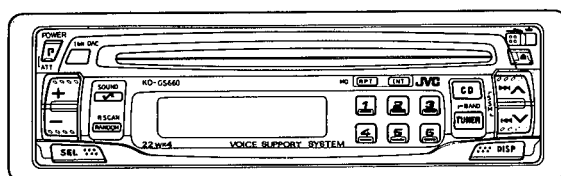


JVC

SERVICE MANUAL

CD RECEIVER

KD-GS660_{C/J}



COMPACT
disc
DIGITAL AUDIO

Area Suffix

C..... Canada
J..... U.S.A

Contents

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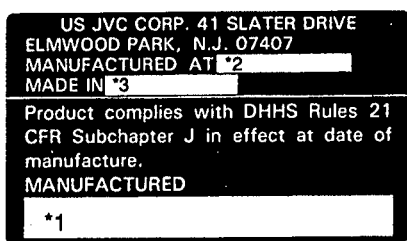
■ Safety Precautions

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.

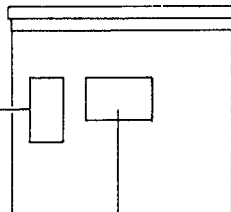
Identification And Certification Labels



Notes:

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

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



NAME/RATING PLATE

FEATURES

- Detachable Control Panel
- Voice Support System
(KD-GS660 only)
- "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 k Ω load (Full scale)
 Output Impedance: 1 k Ω

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 μ V/75 Ω)
 50 dB Quieting Sensitivity: 16.3 dBf (1.8 μ V/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 μ V
 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: 1.9 kg (4.2 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

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:

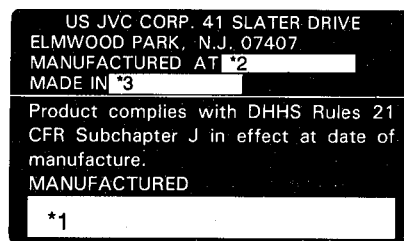
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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.

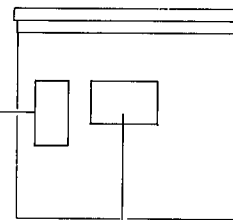
Identification And Certification Labels



Notes:

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

Bottom panel of the main unit



NAME/RATING PLATE

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.



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.

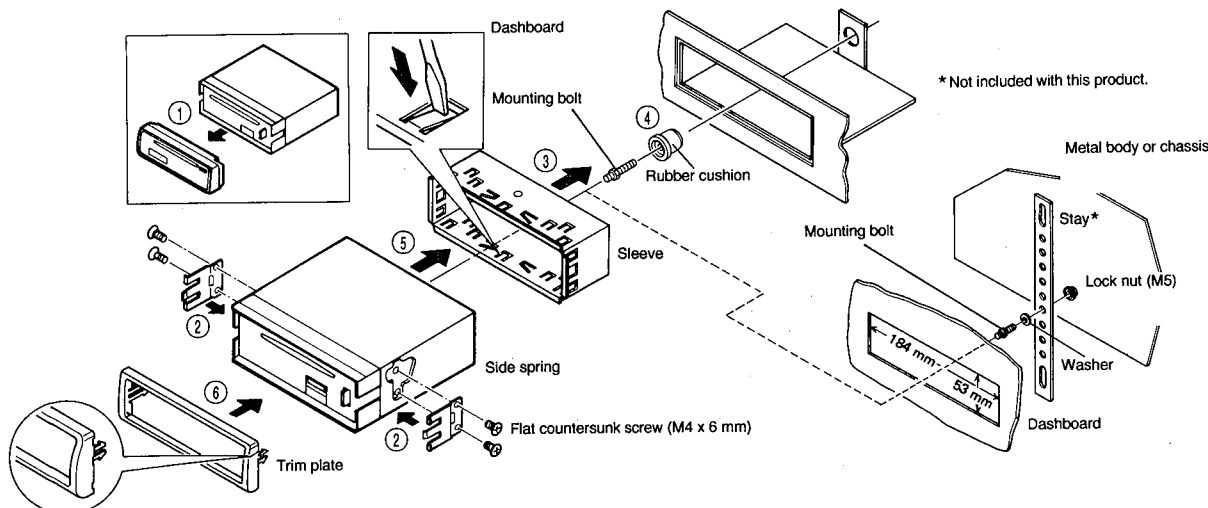
- Adjust the volume so that you can hear sounds outside the car.

INSTALLATION (IN-DASH MOUNTING)

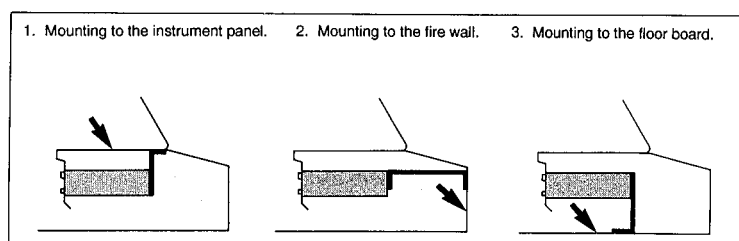
- The following illustration shows a typical installation. However, you should make adjustments corresponding to your specific car. If you have any questions or require information regarding installation kits, consult your JVC car audio dealer or a company supplying kits.

- ① Slide the Control Panel Release (⬆) 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.

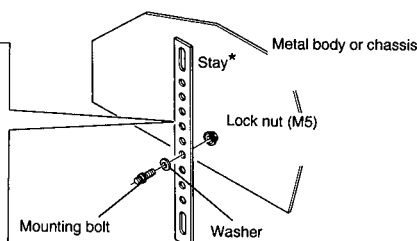
- Follow the numbers for mounting.



• Examples for use of the back stay:



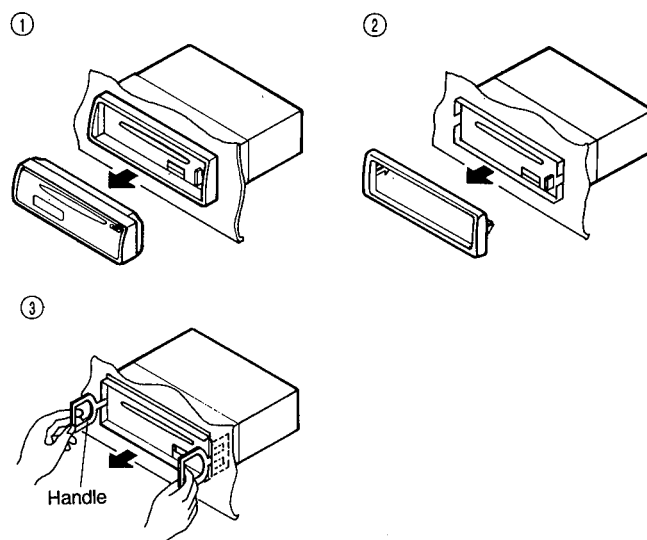
* Not included with this product.



Removing the unit

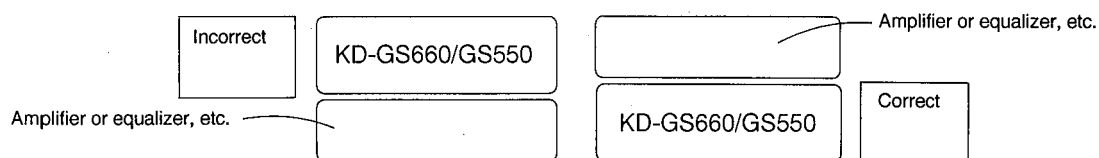
• Before removing the unit, release the rear section.

- 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.

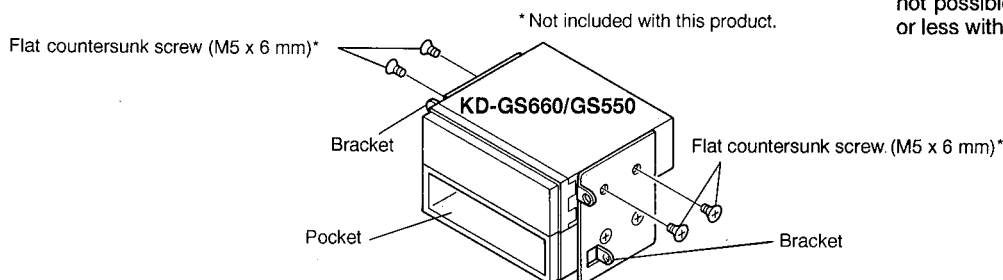


When installing the unit without using the sleeve.

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

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:

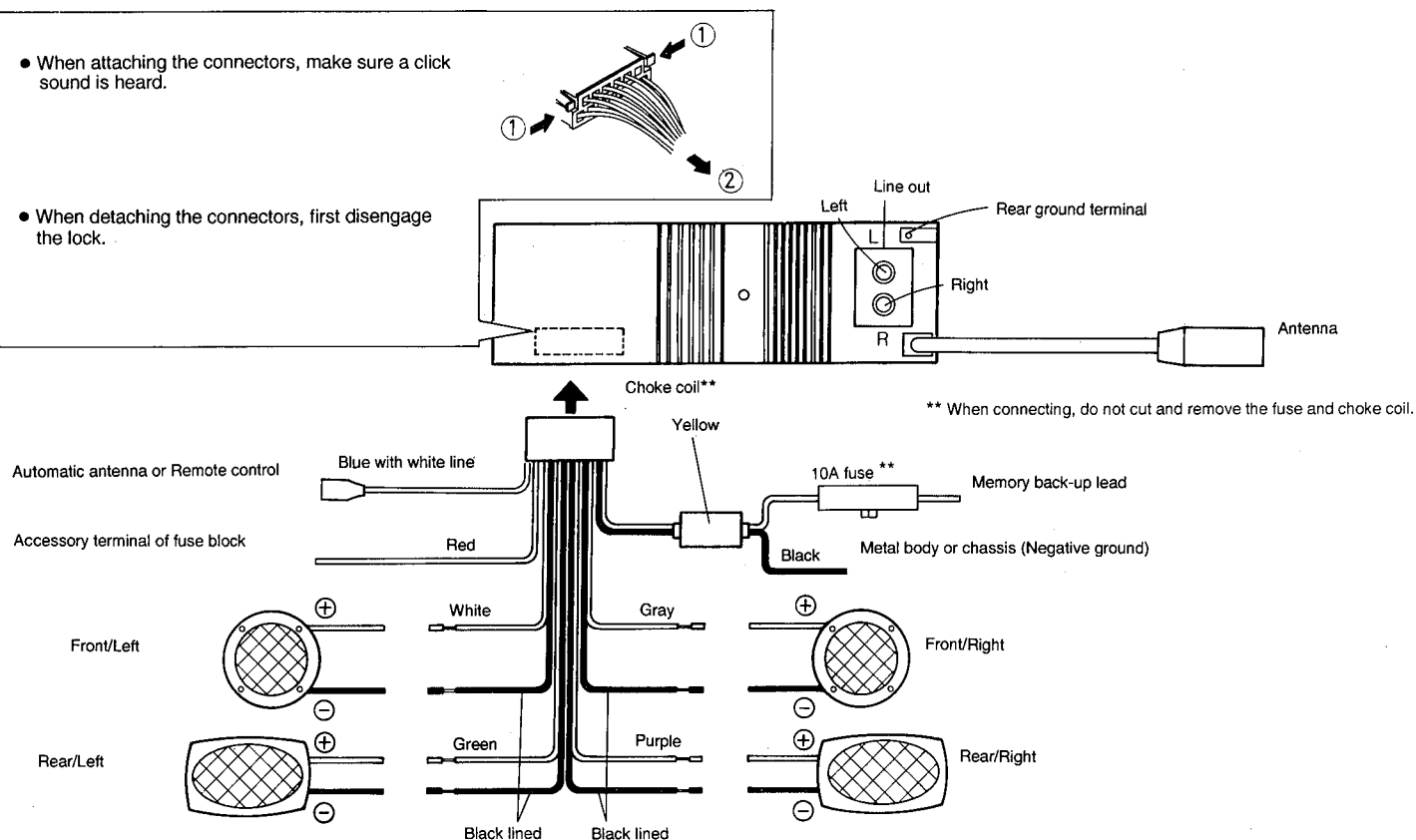
1. Do NOT connect the black-lined speaker leads to a common point.
2. Do NOT connect the speaker leads to the metal body or chassis.
3. Cover the terminals of the leads that are NOT used with insulating tape, to prevent them from shorting.

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

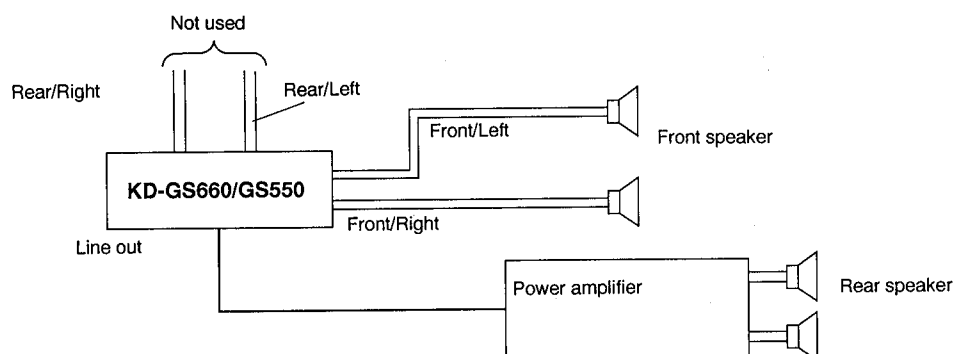
A. 4-Speaker Connections

- When attaching the connectors, make sure a click sound is heard.

- When detaching the connectors, first disengage the lock.



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.

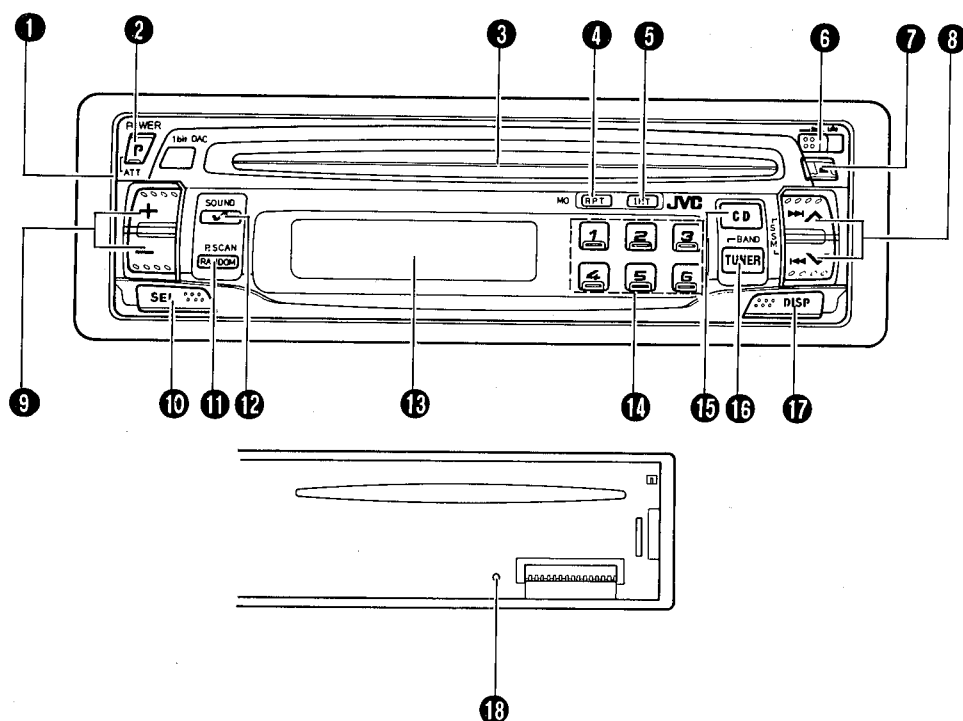
E. Memory Back-Up Lead

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 18.)
- When used in a 2-speaker system
Set this control to the center position ("00" is displayed).

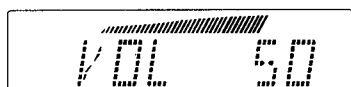
LOCATION OF CONTROLS



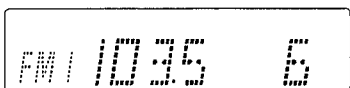
- 1 Control panel
- 2 POWER (P)/Attenuator (ATT) switch
POWER: Press to turn the power ON. Press for more than 1 second to turn the power OFF.
ATT: When this button is pressed during operation, the volume drops and the ATT indicator blinks. Press again to return to the original volume.
- 3 CD loading slot
- 4 MONO (MO) button
Repeat (RPT) button
- 5 Intro (INT) button
- 6 Control Panel Release (Δ) switch
- 7 Eject (Δ) button

- 8 Tuning/SSM/Time Adjustment/Skip (search) buttons
Down frequency/Hour adjustment (∇)/(left arrow)
Up frequency/Minute adjustment ($\wedge$)/(right arrow)
- 9 Level Control buttons
- 10 Electronic Control Mode Select (SEL) button
- 11 Preset Scan (P. SCAN) button
RANDOM button
- 12 SOUND button
- 13 Display window
- 14 Preset Station buttons (No. 1 to No. 6)
Track Number buttons (No.1 to No.6)
- 15 CD mode button
- 16 Tuner (TUNER) mode button
BAND button
- 17 Display (DISP) button
- 18 Microcomputer Reset button

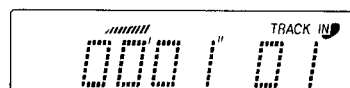
19



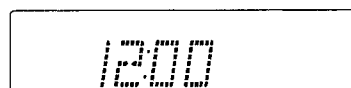
20



21



22



19 Indicators (for Audio Control section)

Volume (VOL)
 Bass (BAS)
 Treble (TRE)
 Fader (FAD)
 Balance (BAL)
 Loudness (LOUD)
 Attenuator (ATT)
 VOICE (0/1/2/3) (KD-GS660 only)
 Level value
 Level indicator
 BEAT
 SOFT
 POP
 OFF

20 Indicators (for Tuner section)

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

21 Indicators (for CD section)

LOAD

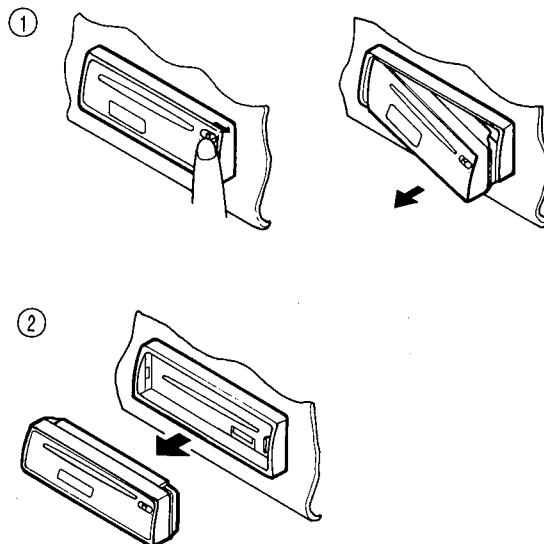
 PLAY
 TRACK
 Track number
 RPT
 RND
 INT
 EJECT
 NO DISC

22 Indicators (for other controls)

Time

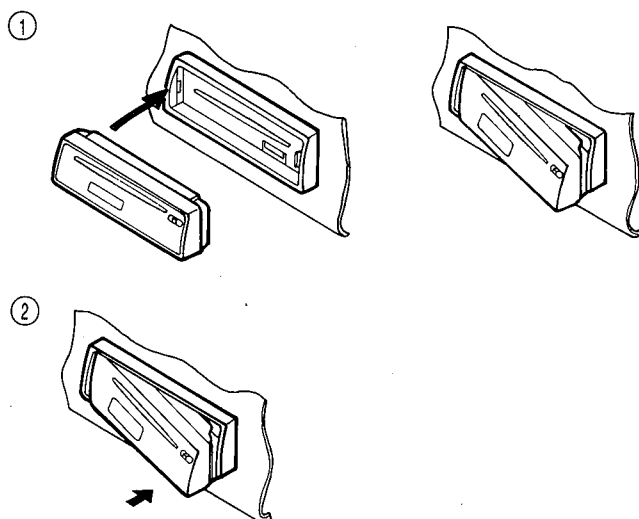
How To Detach The Control Panel

- 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.

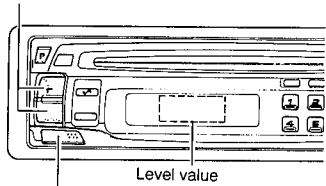
	Function mode	Operations
	CD	When this button is pressed with a CD loaded, CD playback begins.
	TUNER	When this button is pressed, the tuner is engaged.

Audio Level Control

Control del nivel de audio

Commande de niveau audio

Level control buttons



Electronic control mode select button (SEL)

Electronic control mode			
<i>VOL</i> Volume		(00 – 50) Decreases	(00 – 50) Boosts
<i>BAS</i> Bass		(–06) – (00) Decreases	(00) – (+06) Boosts
<i>TRE</i> Treble		(–06) – (00) Decreases	(00) – (+06) Boosts
<i>FAD</i> Fader		(R05 – 00) Rear	(00 – F05) Front
<i>BAL</i> Balance		(L06 – 00) Left	(00 – R06) Right
<i>LOUD</i> Loudness		Off	On
<i>VOICE</i> Voice support volume (KD-GS660 only)		(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.

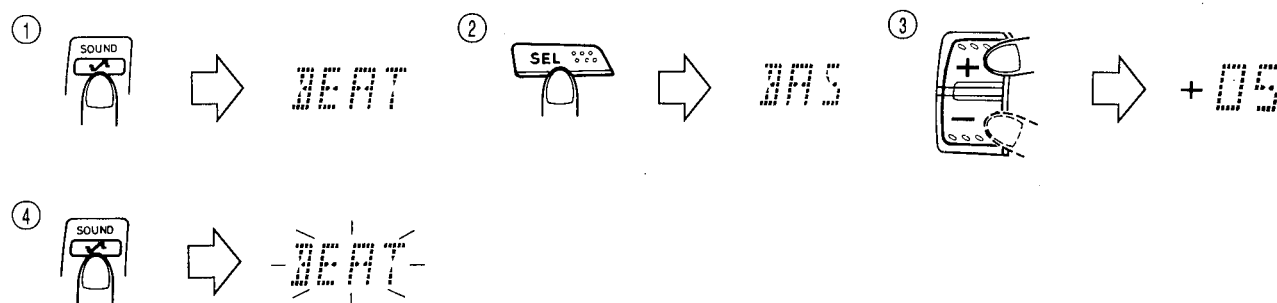
Sound Mode Button

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

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

(KD-GS660 only)

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 18).
- This system responds as shown in the table below.

Principal operations/Operación principal/Fonctionnement principal

Button	Command	Radio operation	CD operation
P (POWER)	on off ATT (Attenuator)	HELLO SEE YOU Pi ↔ Bi	HELLO SEE YOU Pi ↔ Bi
SOUND		BEAT (Ritmo/Rythme) → SOFT (Suave/Léger) → POP (Pop/Pop) ← OFF (Desactivada/Arrêt) ← (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	on/off	MONAURAL ON/OFF		—			
DISP		Pi		Pi			
SEL		BASS → TREBLE → FADER → BALANCE → LOUDNESS → VOICE → VOLUME → BASS →					
Position	Bass	Treble	Fader	Balance	Loudness	Voice	Volume
+ CENTER —	— CENTER —	— CENTER —	— CENTER —	— CENTER —	ON OFF	LEVEL 3 LEVEL 2 LEVEL 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.

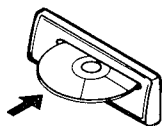
Do NOT put discs where they will be exposed to direct sunlight or in places subject to high temperatures and humidity. Avoid leaving discs in your car.

Maintenance Of Discs

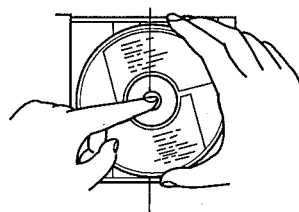
- When fingerprints or dirt adhere to a disc, wipe it clean with a soft, dry cloth, from the inside toward the edge. If it is difficult to clean, wipe the disc with a cloth moistened with water.
- Do NOT use record cleaners, benzene, alcohol or anti-static agents.

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.)

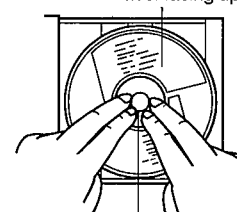


Press down on the center holder.



Lift it out without touching the recorded surface.

Insert with the label facing up.



Gently push the disc to insert it.

Correct



Incorrect



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  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  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  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:

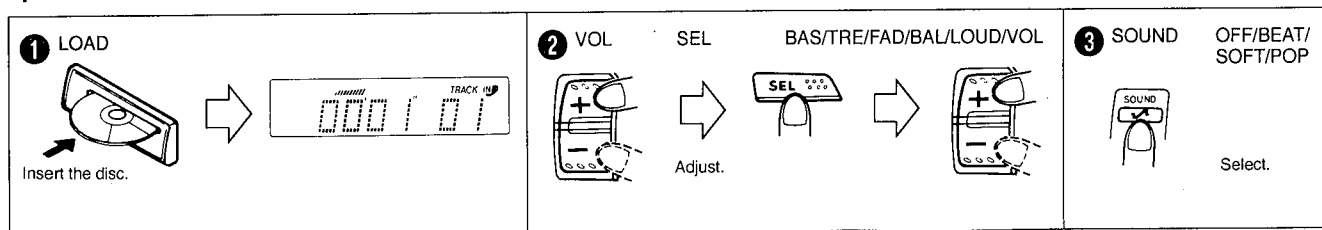
NEVER use 8 cm (3-3/16") compact discs (CD singles) with this unit. (If used, such discs CANNOT be ejected.)

PLAYING COMPACT DISCS

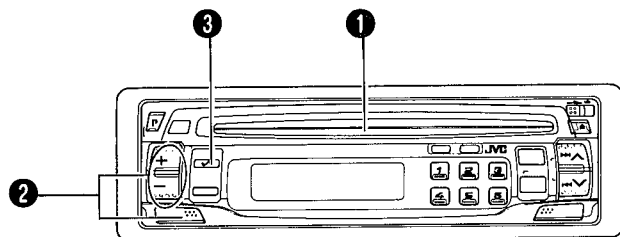
How To Play All Tracks

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

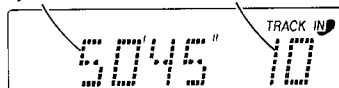
Operate in the order shown.



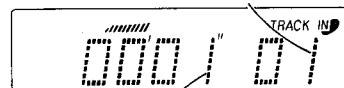
* When the vehicle's ignition is turned ON.



Total playback time. Total number of tracks (tunes).



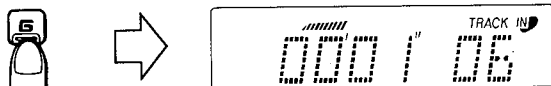
Track (tune) number.



Displays elapsed playback time of each tune being played back.

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.

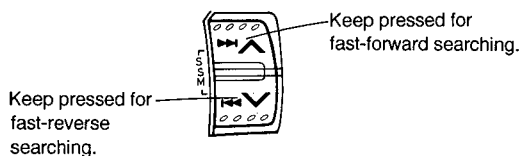
How to listen to the previous track...

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

Search Playback

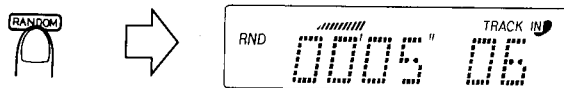
(How to locate a required position on the disc.)

- 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.



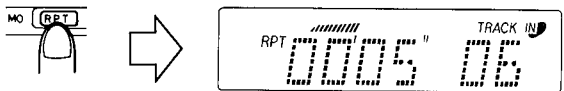
Random Playback

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

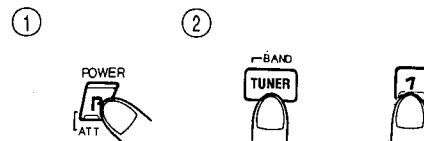
When the INT button is pressed, the first 15 seconds of each track are played sequentially. During INTRO play, the current Track No. blinks in the display. When you want to start playback, press the INT button again.



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:

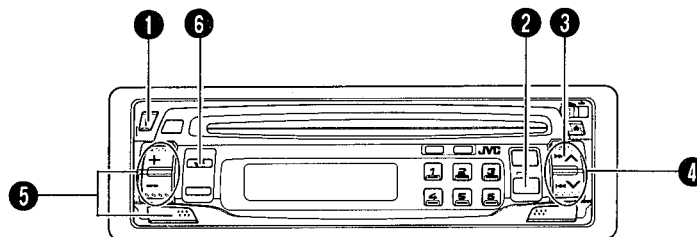
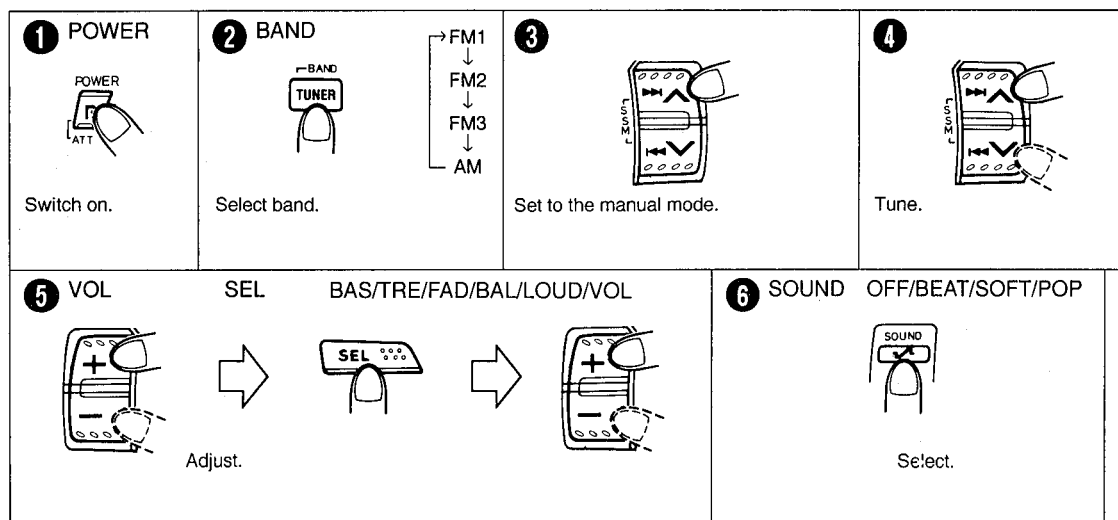


- Switch the power ON.
- While pressing the BAND button... Press Preset Station button 1 for more than 3 seconds.
 - Switching is completed when "AREA" appears in the display.

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.

Operate in the order shown.



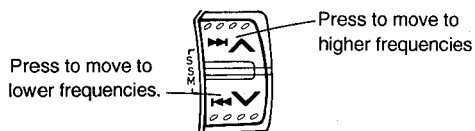
Manual Tuning

Set Manual mode by pressing the tuning button (▲ or ▼) 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

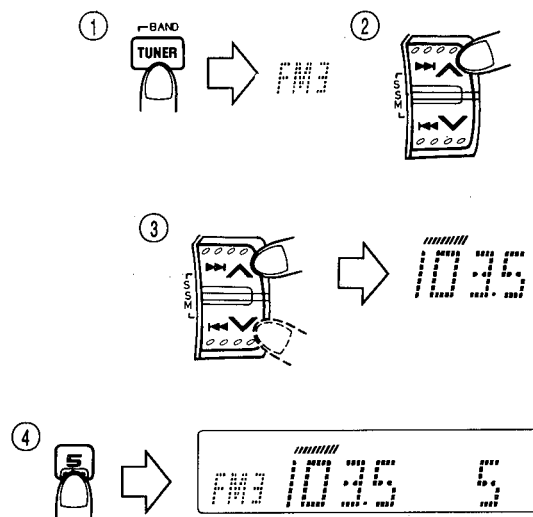
Press the ▲ or ▼ button; the unit enters the seek tuning mode and tunes to higher or lower frequencies. When a broadcast is received, tuning stops automatically and the broadcast can be heard.

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:

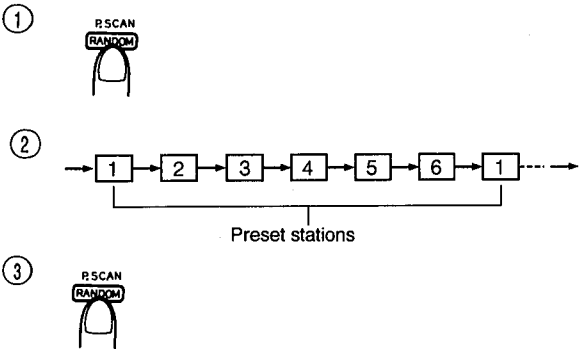
- A previously preset station is erased when a new station is stored in memory.
- The preset stations are erased when the power supply to the memory circuit is interrupted during battery replacement, etc. When this occurs, preset the stations again.

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 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 (⋤, ⋥) 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:

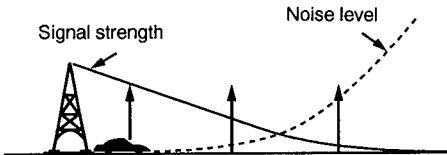
Set to mono when a stereo FM broadcast is too noisy and cannot be heard satisfactorily.

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.



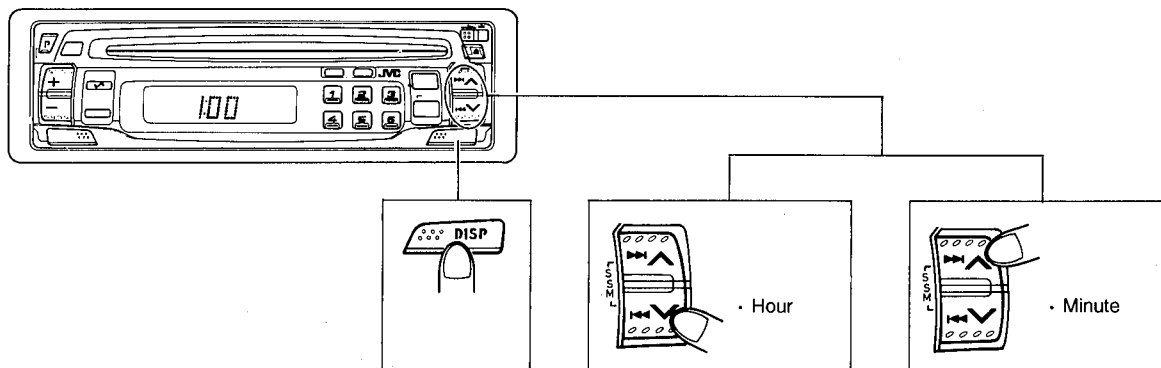
	A	B	C
Signal strength	Strong	Not so strong	Weak
Auto blend	Stereo	Blend	Mono
Auto high-cut	—	➡	(Operates)

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 (↖) to adjust the "hours", and press the Minute Adjustment button (↗) to adjust the "minutes".



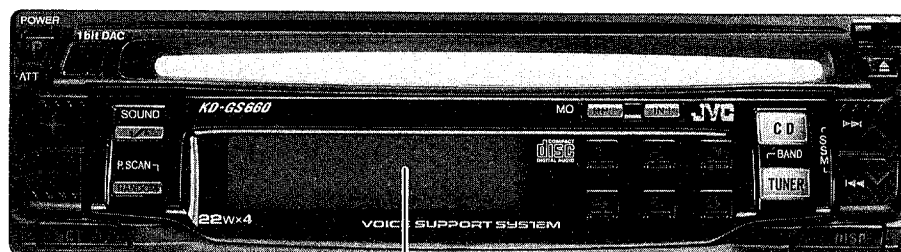
MAINTENANCE

• 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.

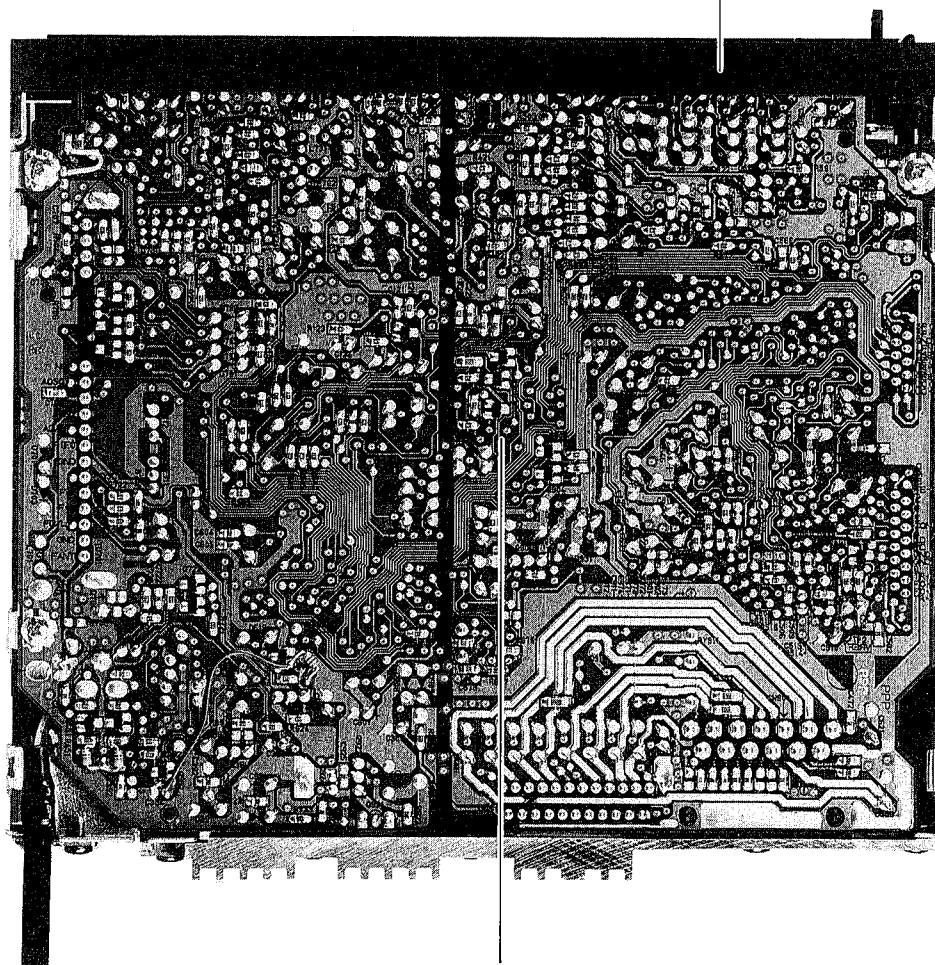
1 Location of main parts

◆ Front panel ass'y



LCD indicator section

◆ Bottom side view

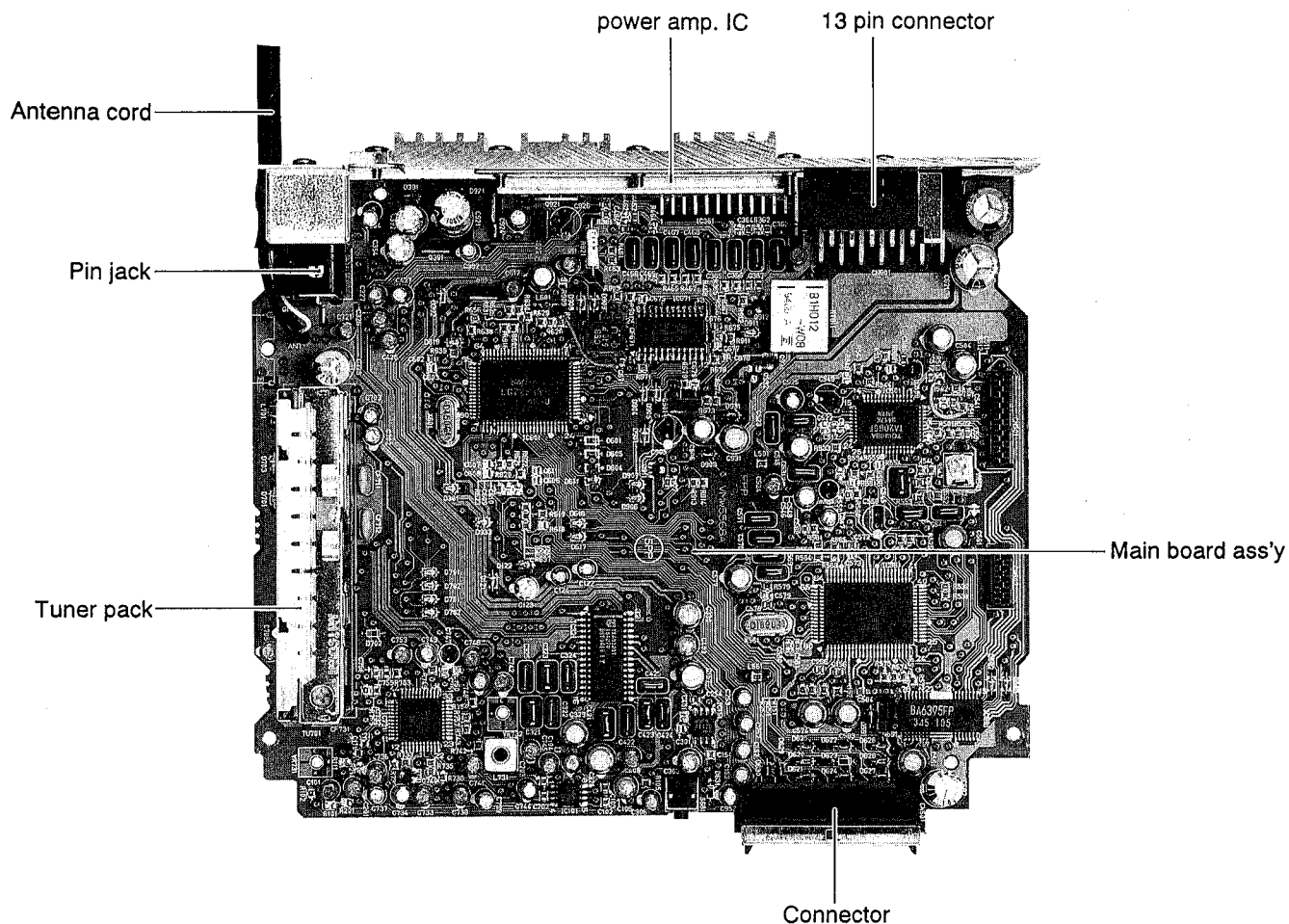


Front chassis ass'y

Main board ass'y(bottom side)

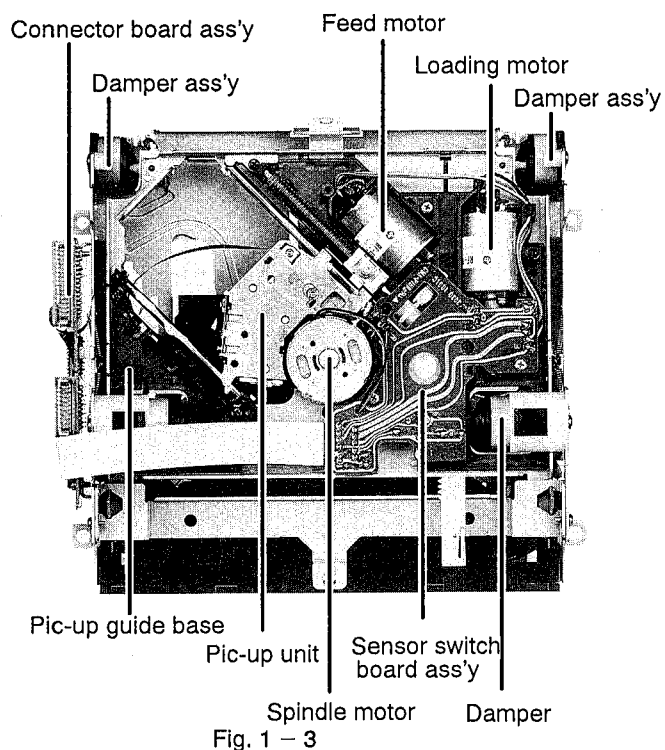
Fig. 1 - 1

◆ Main board ass'y(Top side)

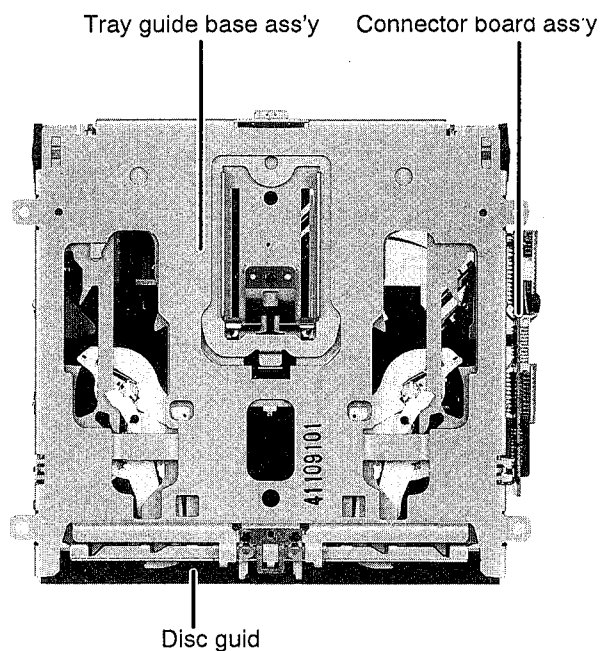


◆ Mechanism ass'y

Bottom view



Top view



2 Removal of Main Parts

■ Encosuer 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.

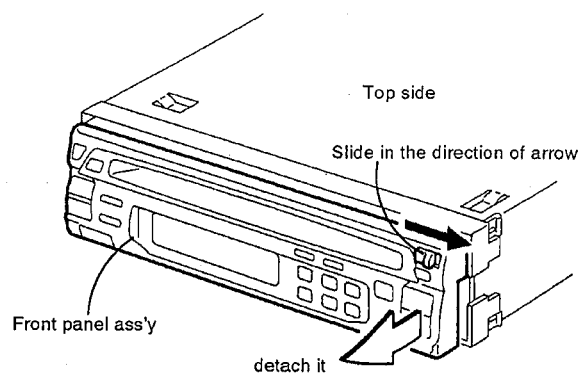


Fig. 2 - 1

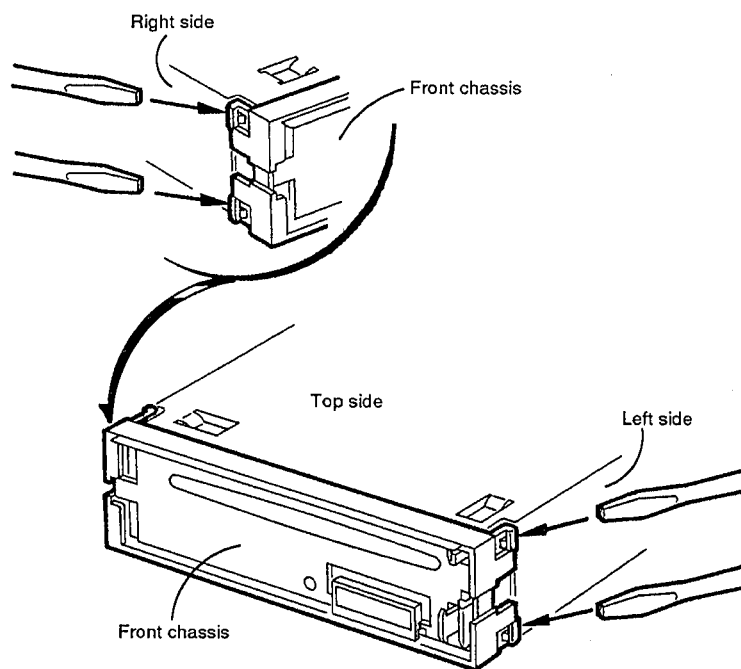


Fig. 2 - 2

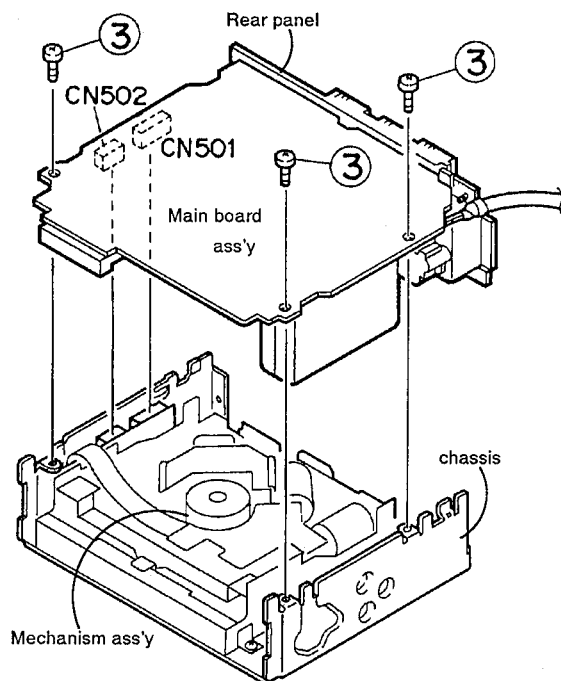


Fig. 2 - 4

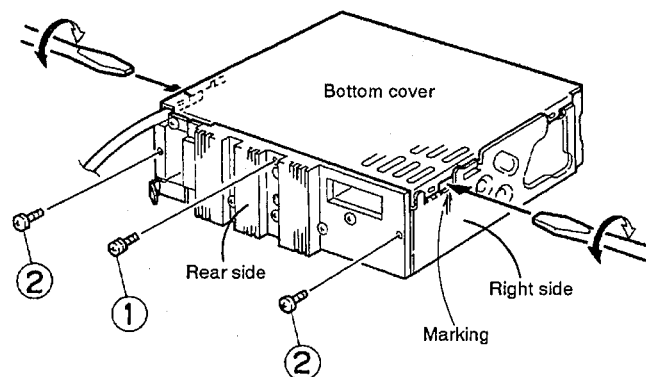


Fig. 2 - 3

◆ **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.

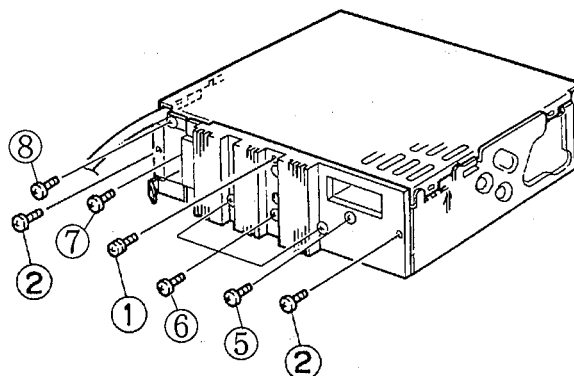


Fig. 2 - 5

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

Remove four mechanism assembling screws ④ retaining the top cover.

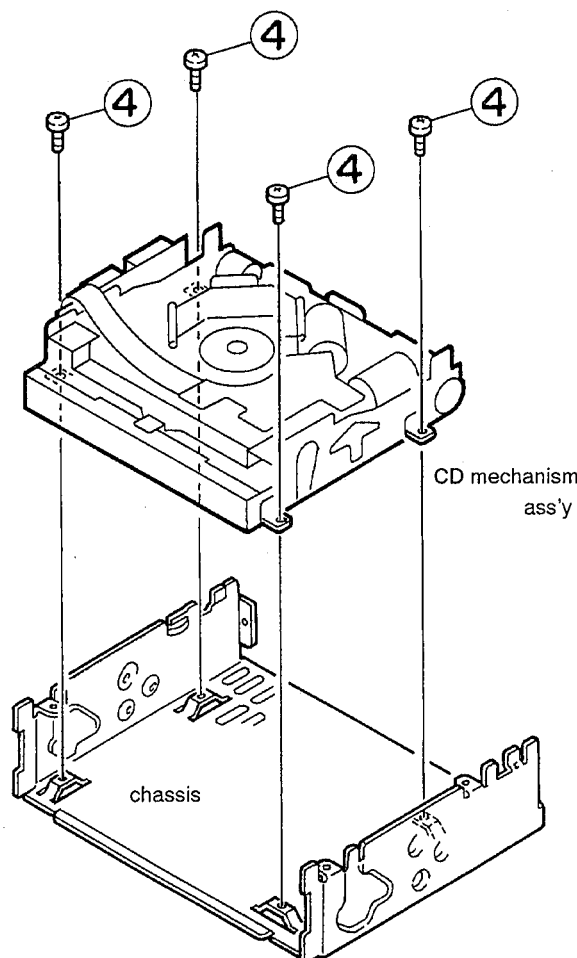


Fig. 2 - 6

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 ④ to remove it together with the shaft holder.
4. Loosen screw ② retaining pickup shaft ④ at the other end. Remove two screws ③ retaining pickup shaft ⑤.
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 ④ and ③ 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.

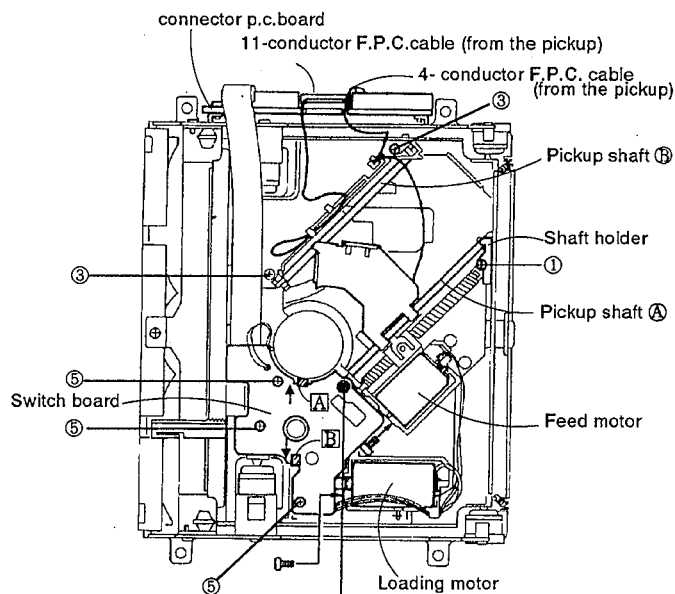


Fig. 2-7

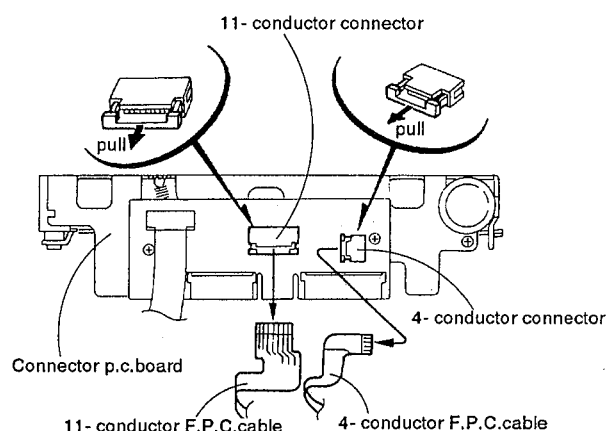


Fig. 2-8

When feeding the F.P.C. cable through the holder after replacement of the pickup is complete, insert a thin film together with the cable to help it slide along the film in the direction of the arrow, then set it as shown in Fig. 2-9.

If you fail to set it by following this procedure, disassemble the mechanism, then reassemble it.

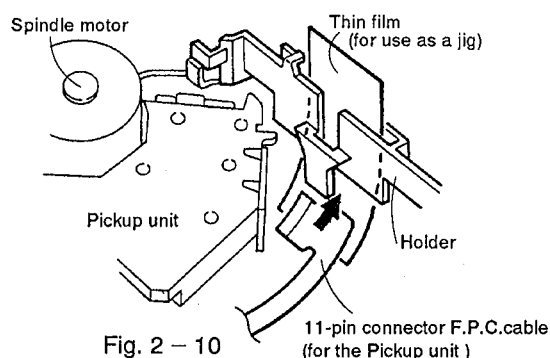


Fig. 2-10

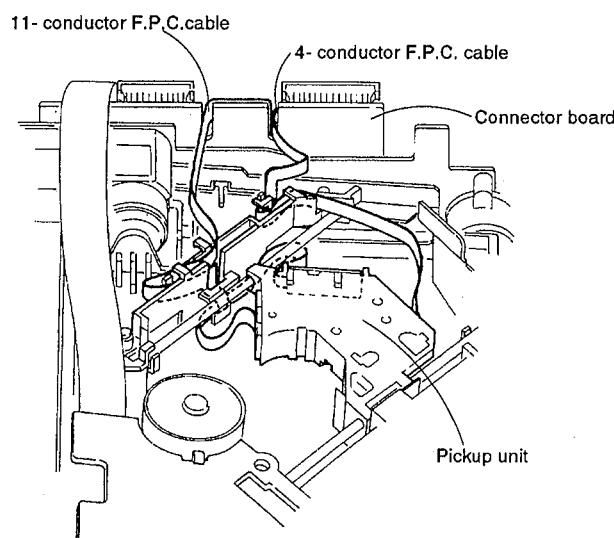


Fig. 2-9

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

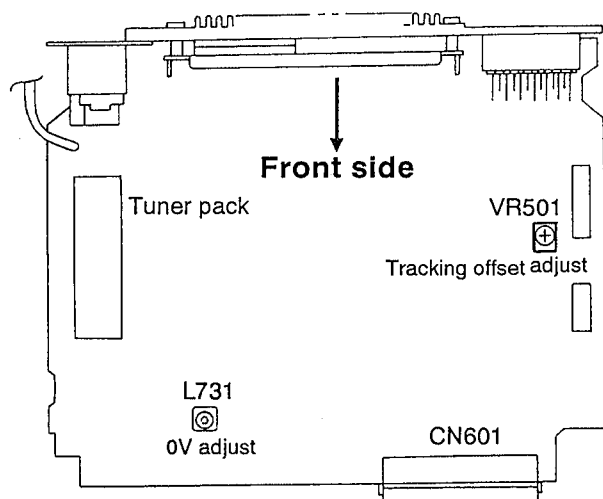


Fig.3 - 1

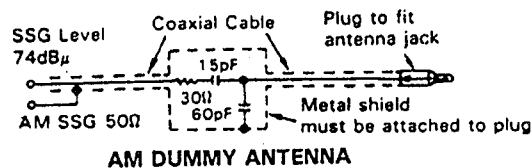
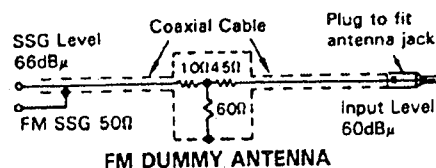
■ Condition for measurement

- 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,
pilotsignal 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

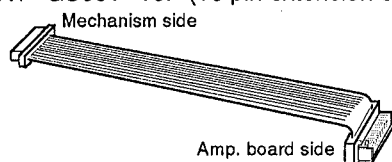
- [FM]**;200kHz Step
- [AM]**;10kHz Step

■ 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.

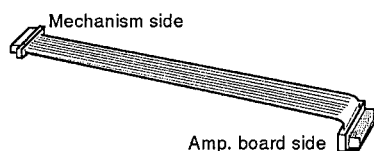
◆ Extension cords

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.

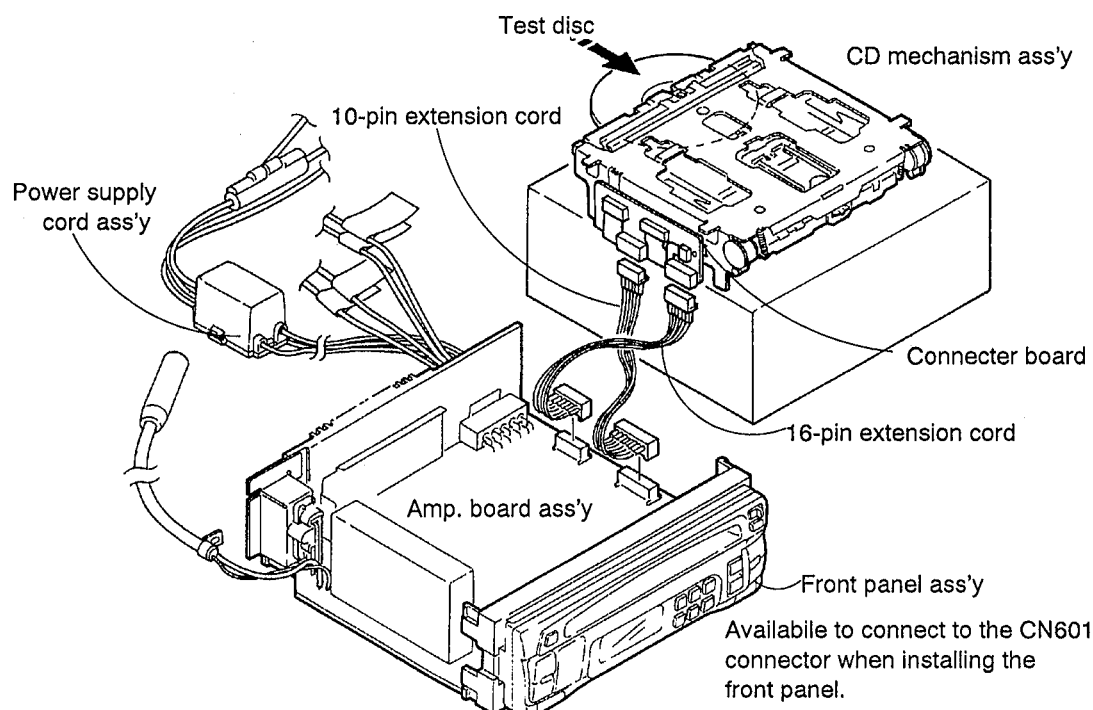
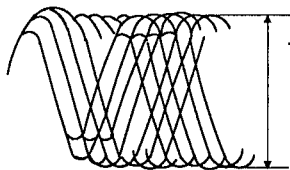
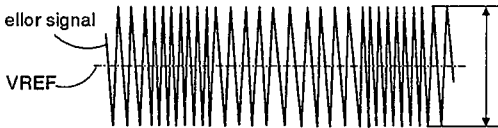


Fig. 3 - 2

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.	
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 Adjust the waveform becomes vertically symmetrical to the reference voltage value of servo	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

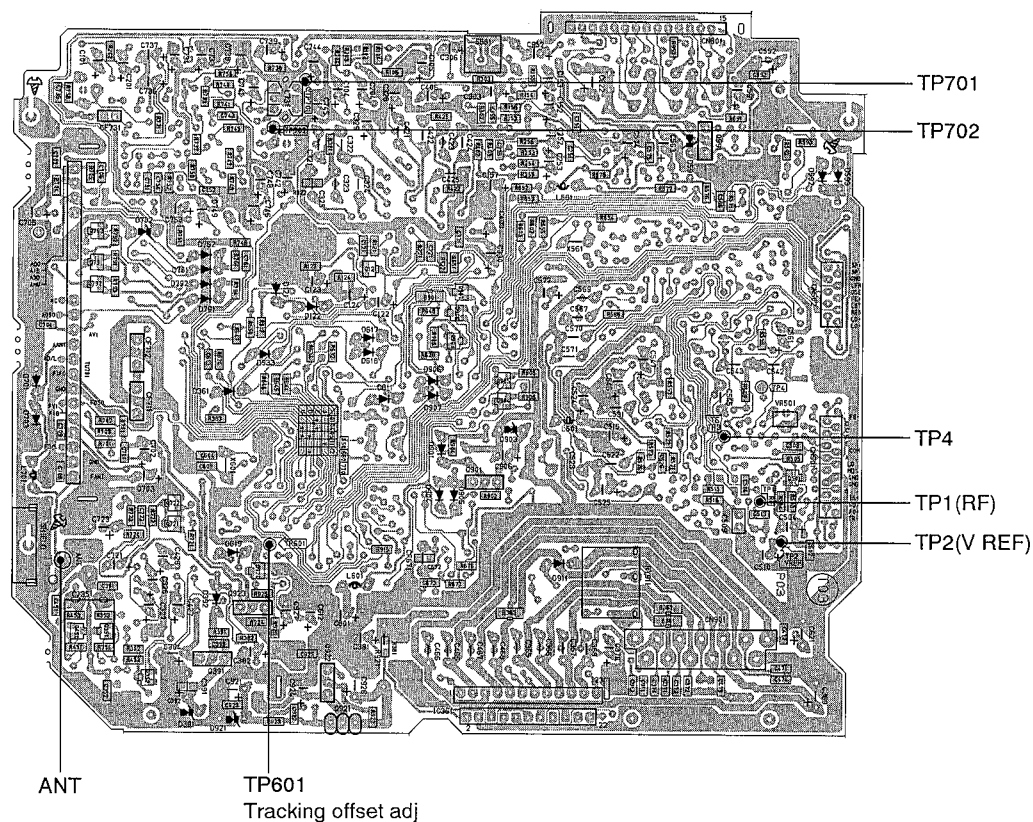


Fig.3 – 3

Tuner section adjustment

(Each condition of input level is shown by EMF value (open load value) of SSG under using dummy 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 μ (1kHz,67.5kHz Dev, 7.5kHz Dev)	1. With signal of 97.9MHz,52dB μ 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 μ ,ST indication appears. 2. When input is 0dB μ ,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 μ	
4. FMstereo separation	97.9MHz,1kHz 67.5kHz dev. pilot 7.5kHz,66dB μ	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 μ	Output difference level between modulation ON/OFF to be more than 50dB.	more than 50dB	

4 Block diagram

Integrated circuit

◆ IC501 (TA2065F) RF & Servo

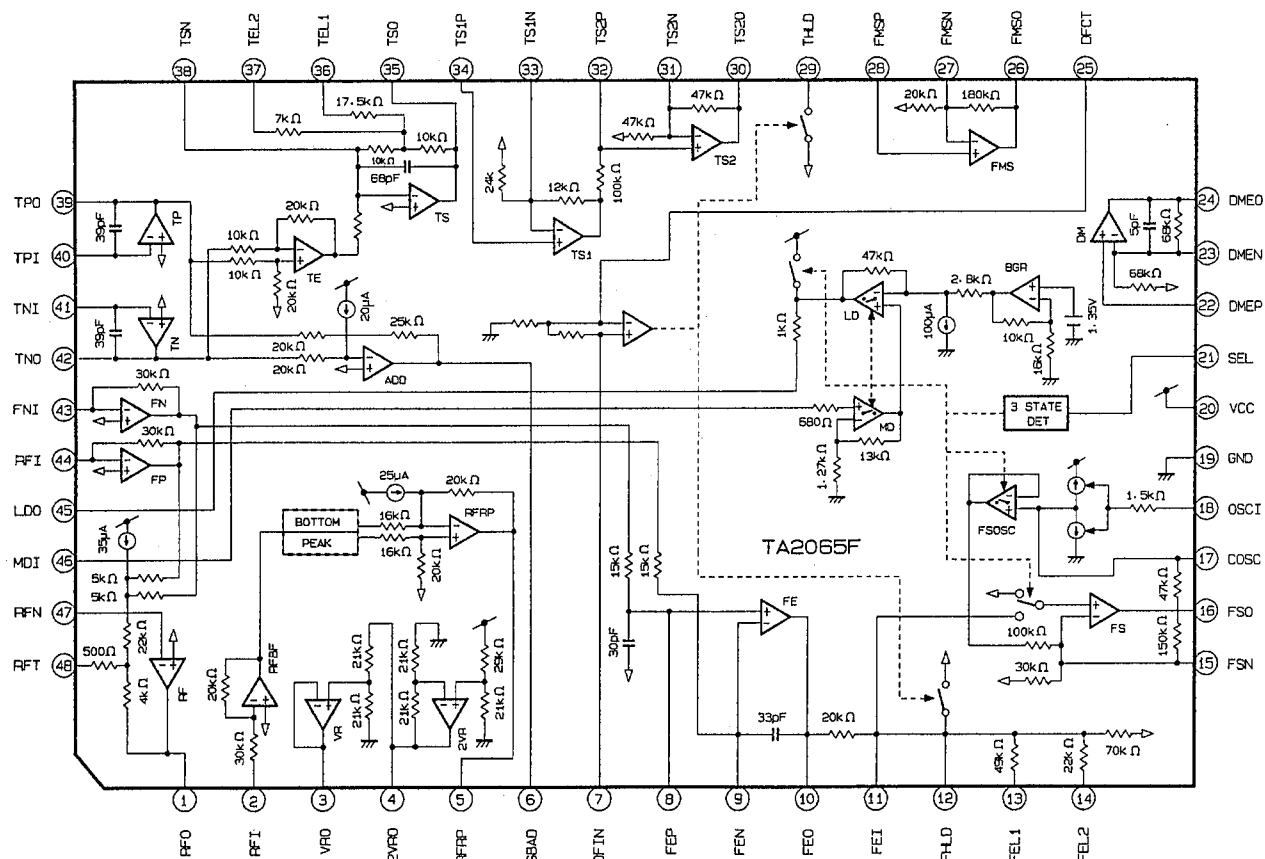


Fig. 4 - 1

◆ IC591 (BA6395FP) Servo driver

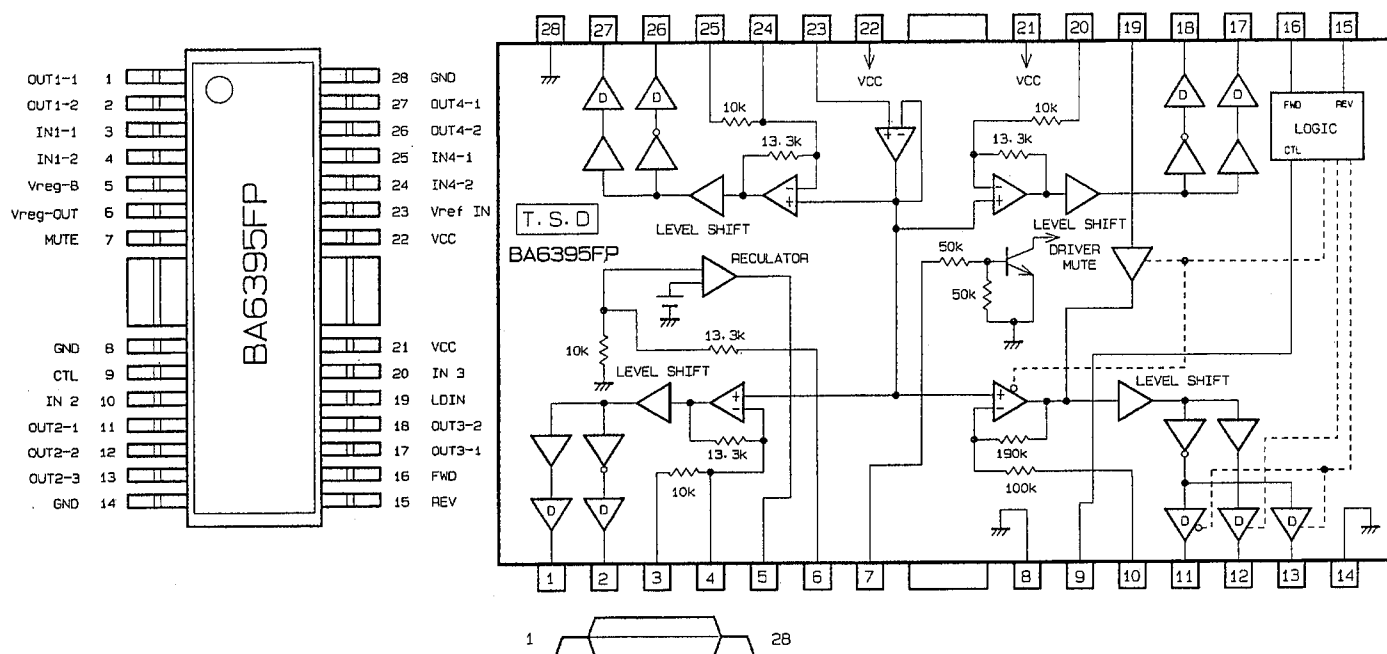


Fig. 4 - 2

◆ IC321 (TEA6320T) E . Volume

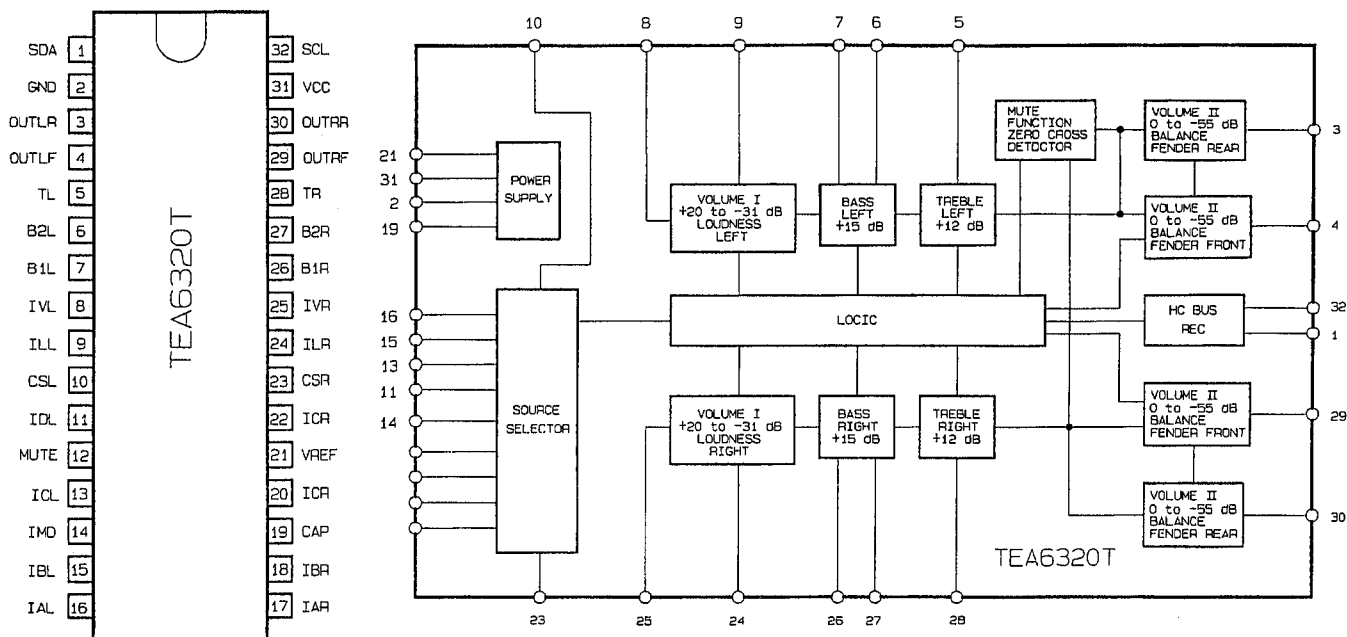


Fig.4 - 3

◆ IC561 (TC9284BF) DATA Control

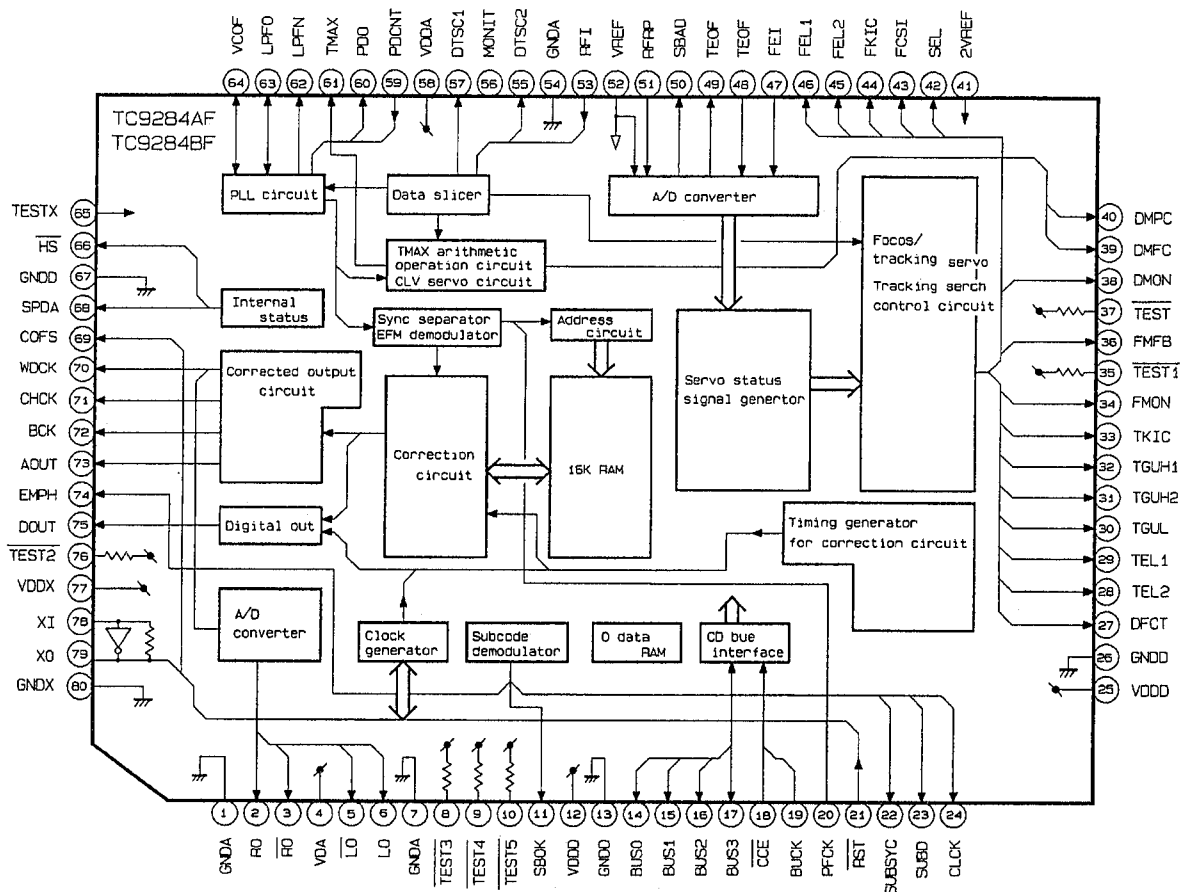


Fig.4 - 4

◆ IC731 (LA1867M) FM IF

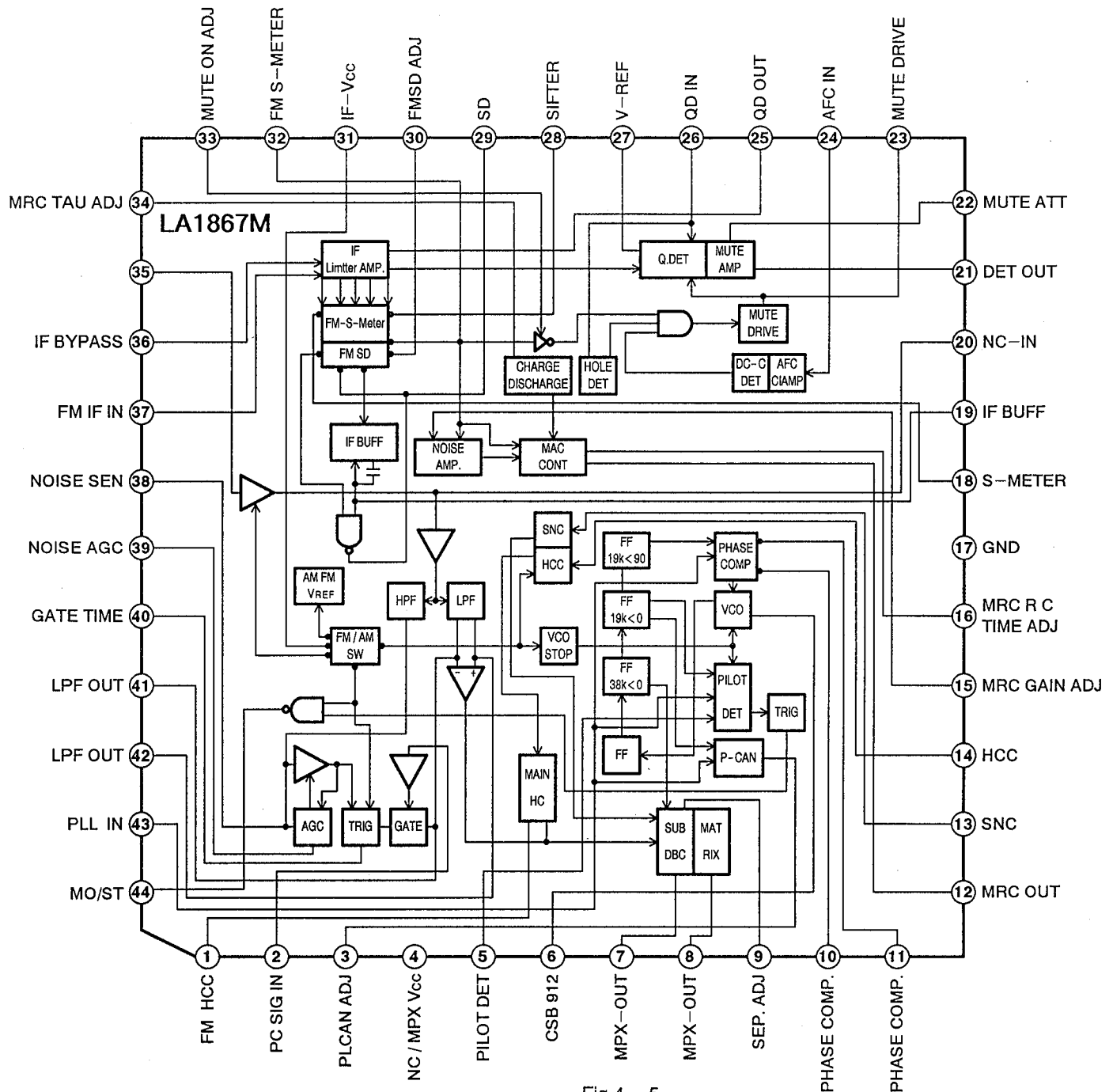


Fig.4 - 5

◆ IC101 (NJM4565M) Radio buffer

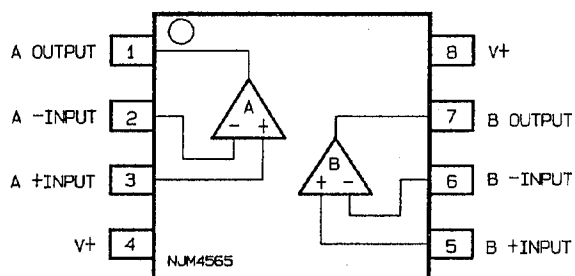


Fig. 4 - 6

◆ IC951 (LC7582E) LCD driver

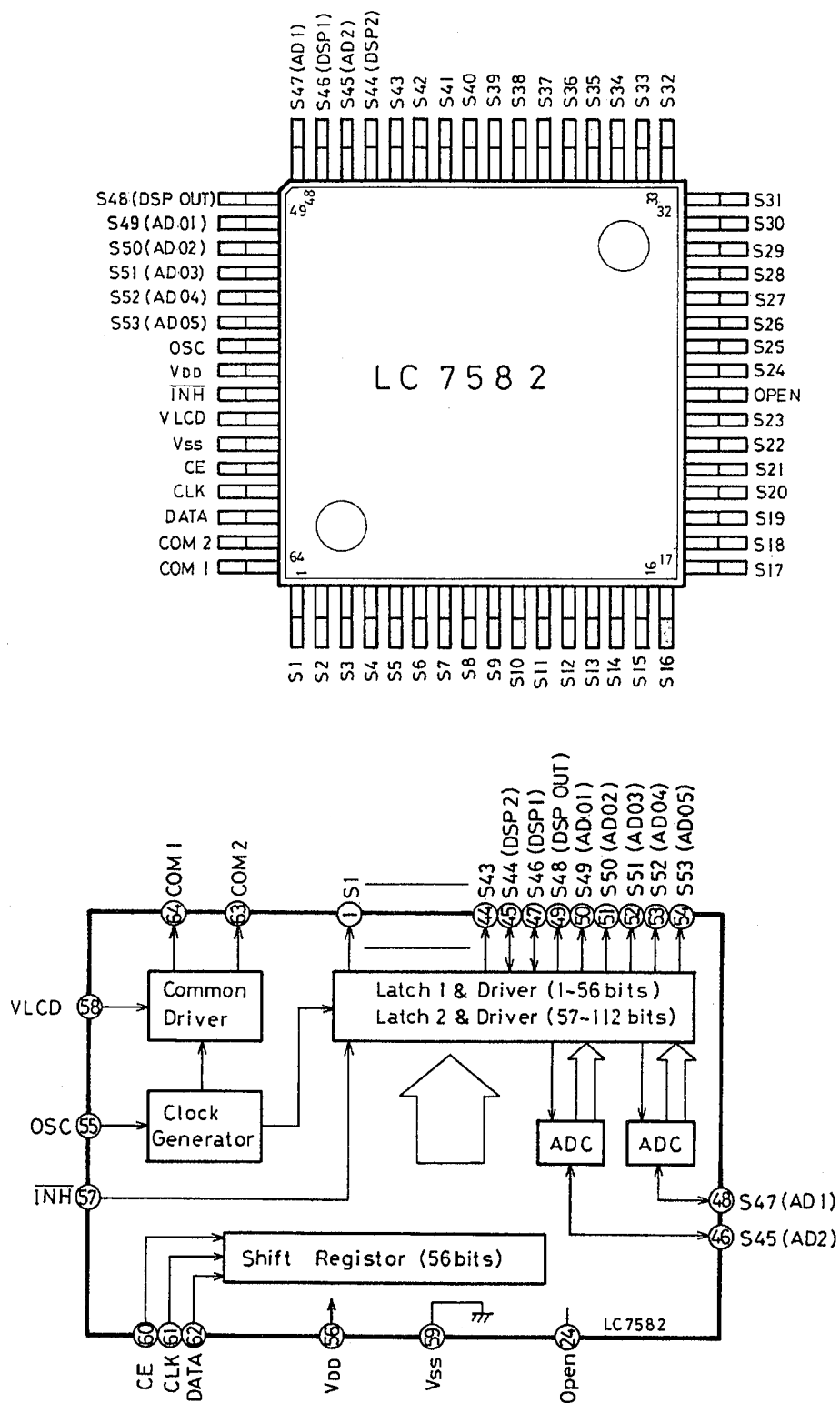


Fig. 4 - 7

◆ IC361 (HA13152) Power amp.

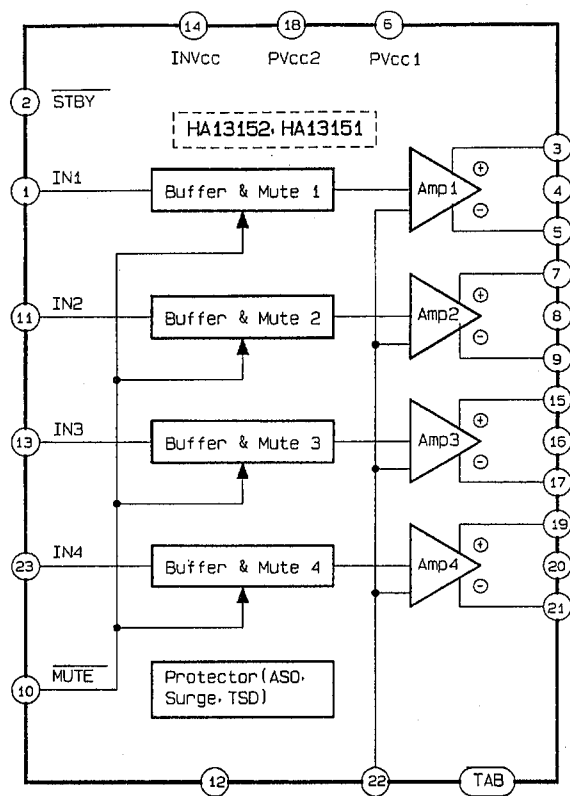


Fig. 4 – 8

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	

Signal diagram

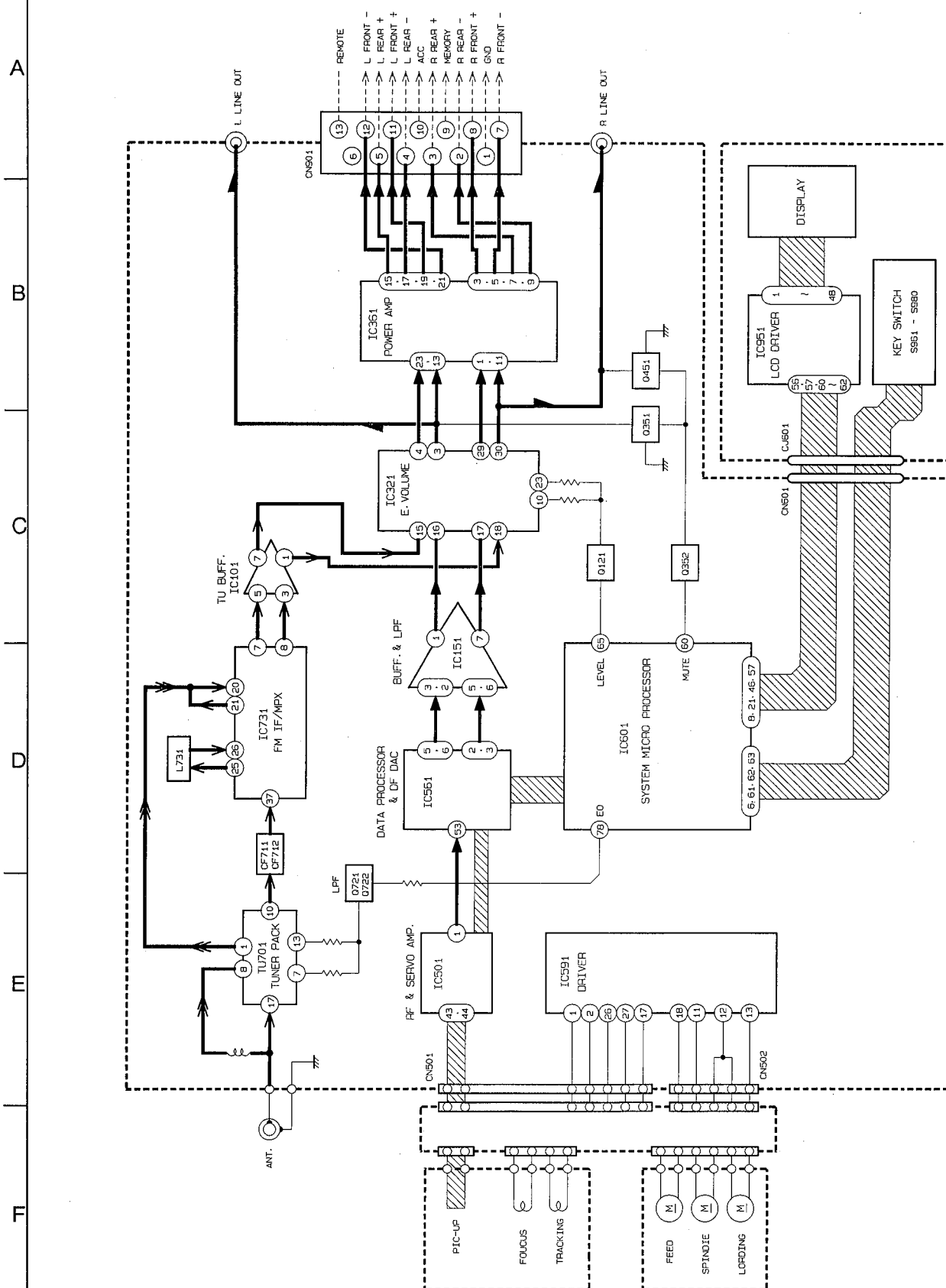


Fig. 4 - 9

5 Wiring connection

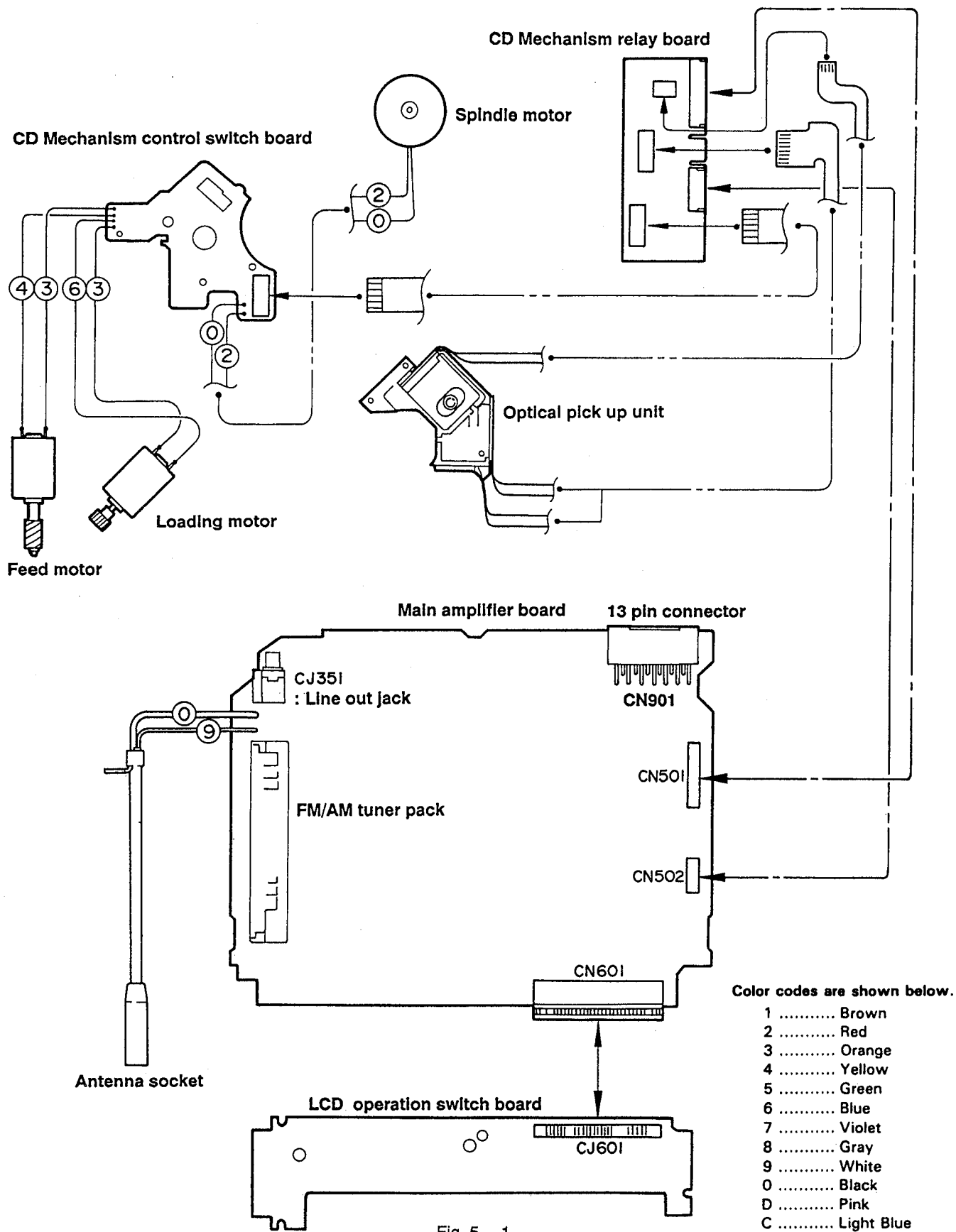
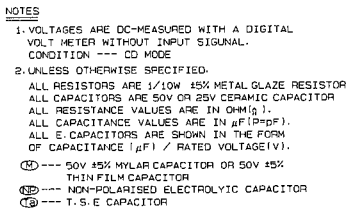
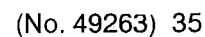


Fig. 5 - 1

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F

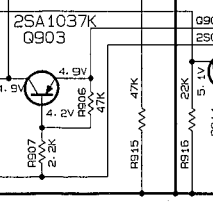
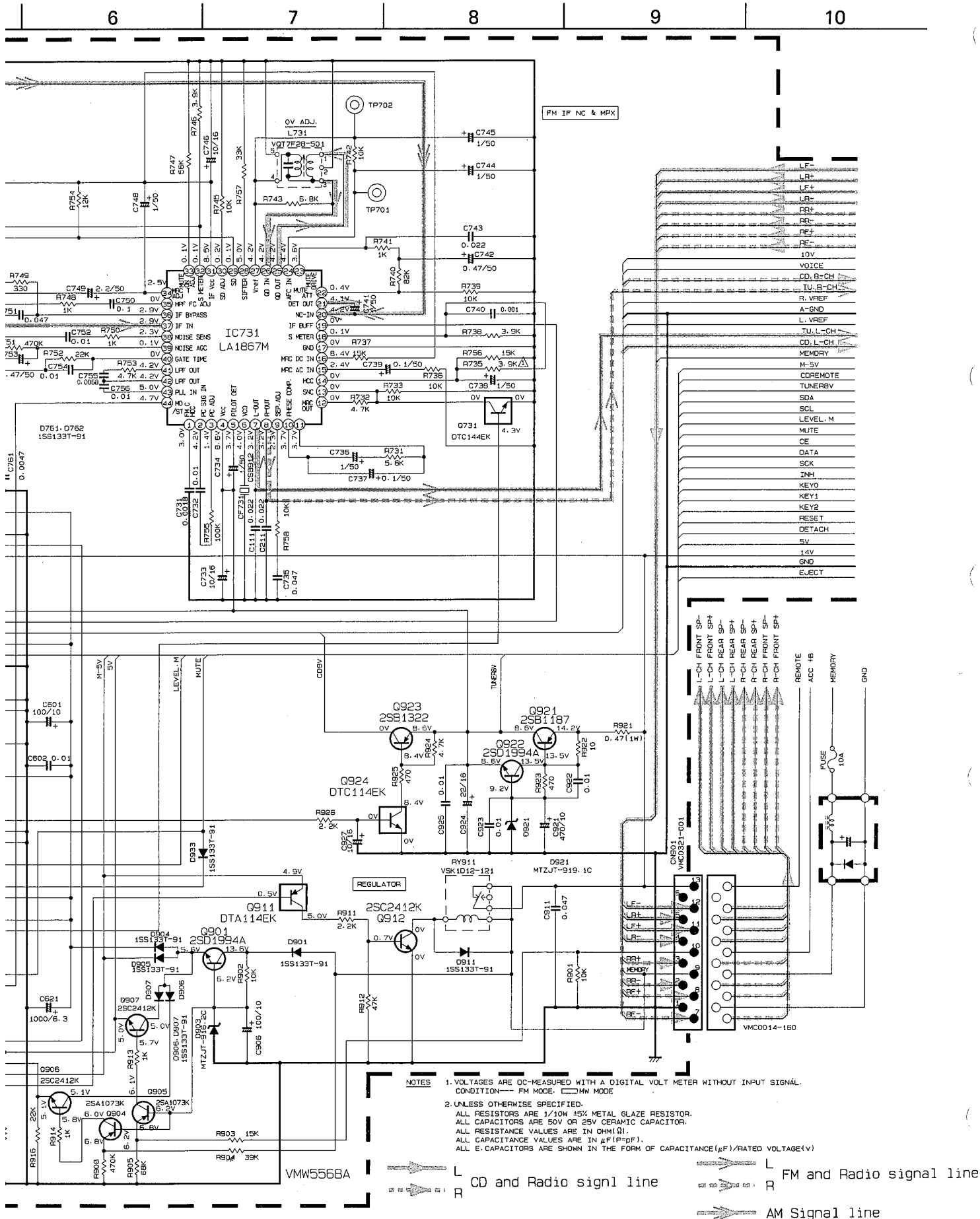


Fig. 6-2



Note
VDH3556001AV

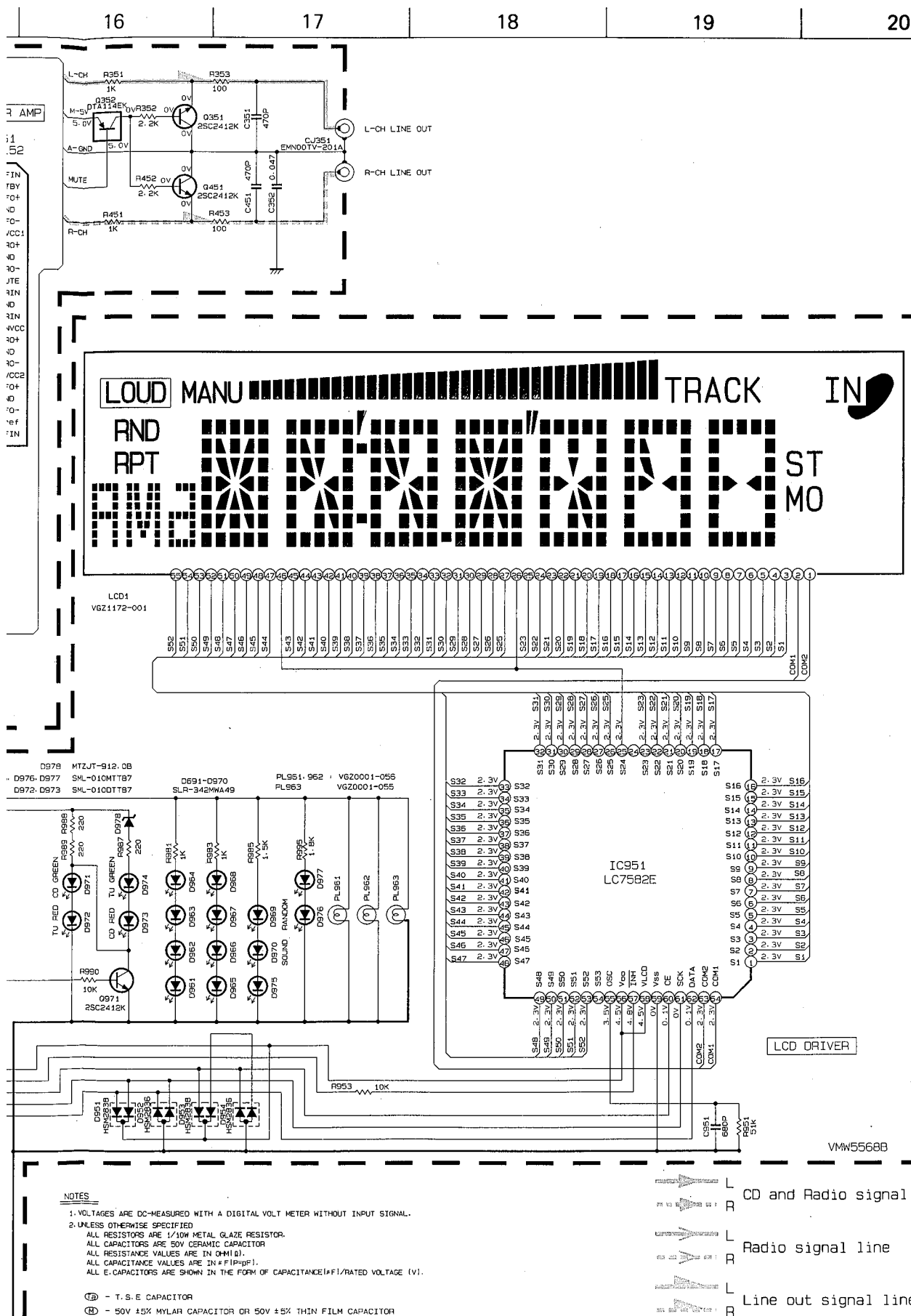


Fig. 6-3

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

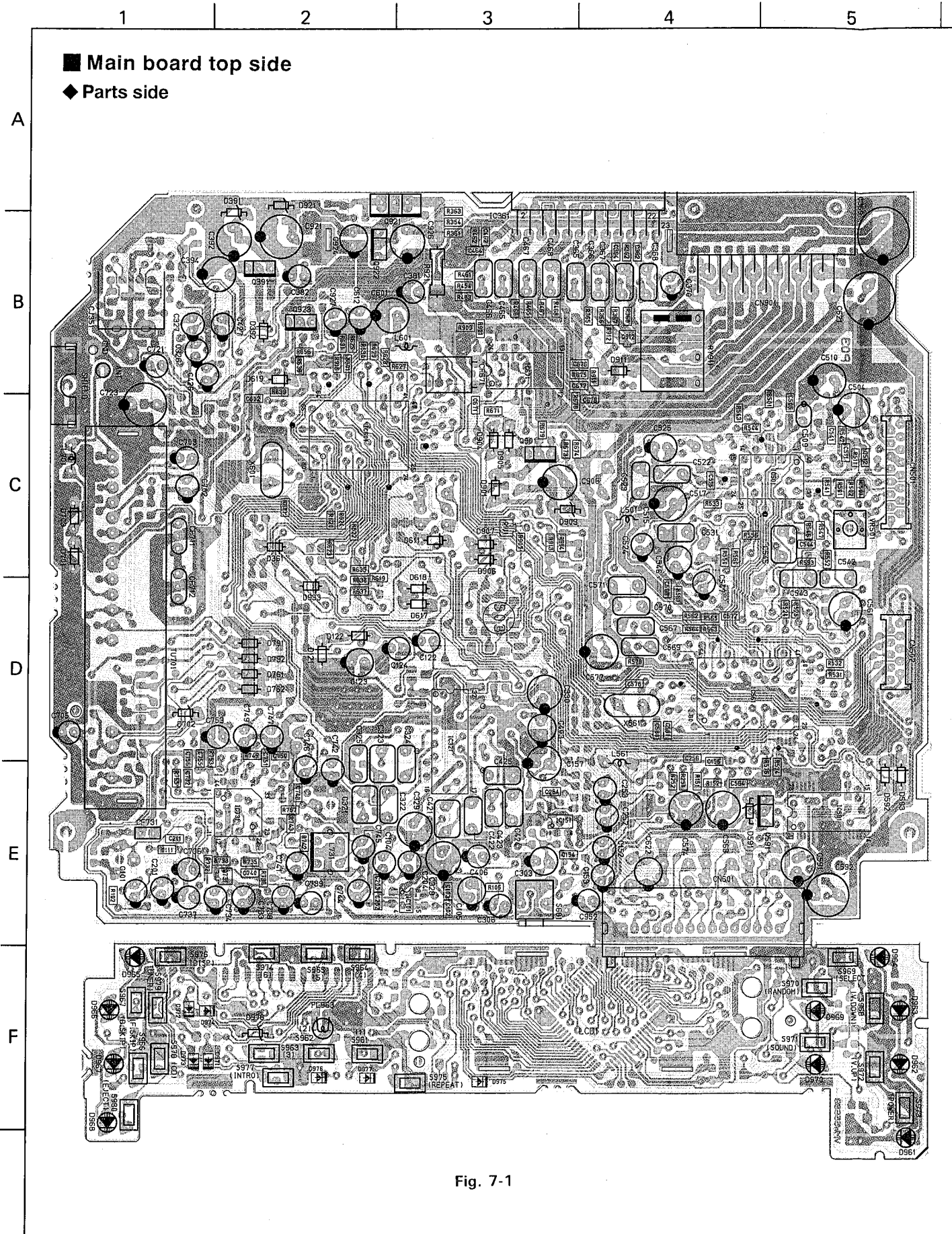


Fig. 7-1

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10

◆ Bottom side

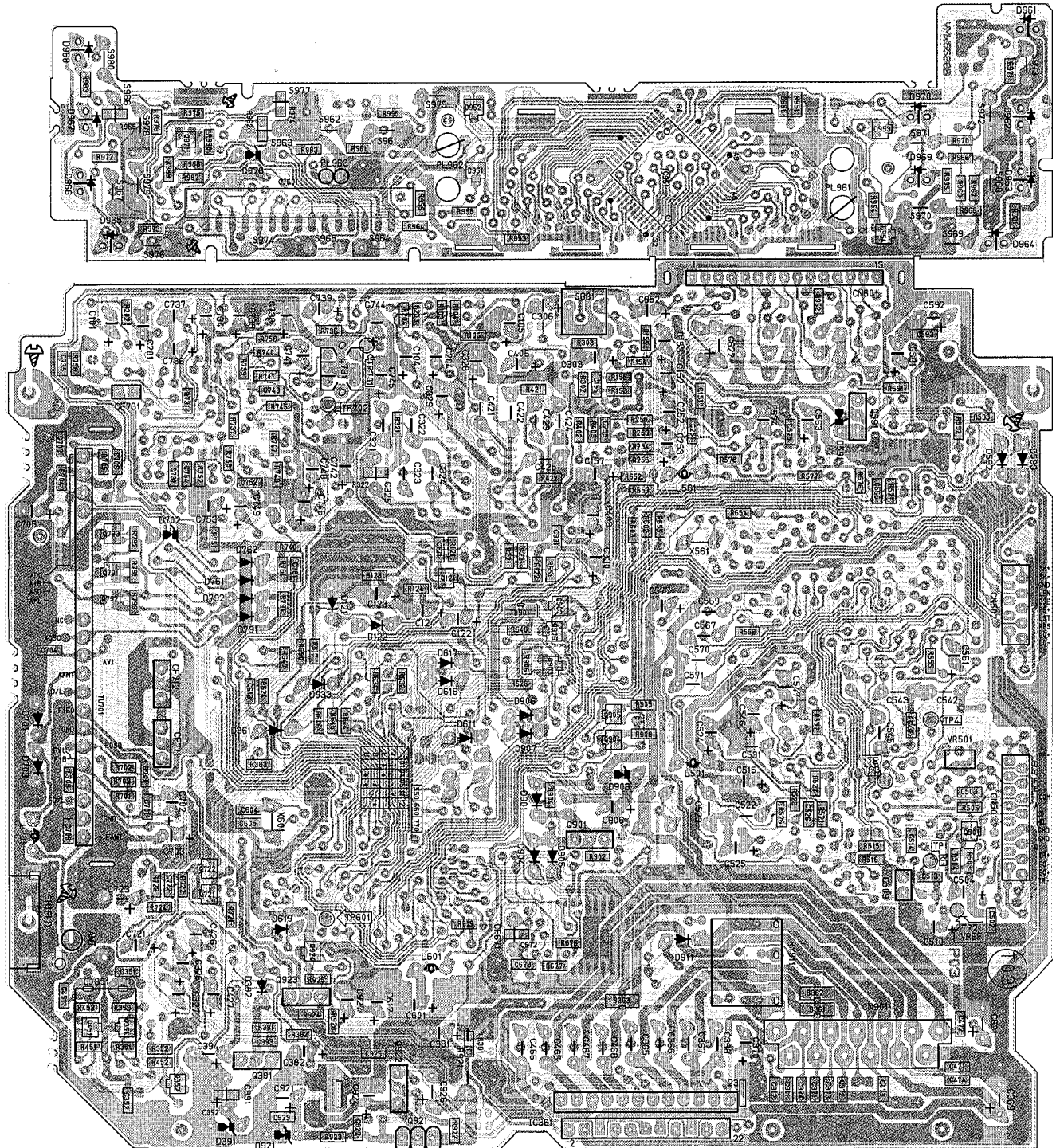


Fig. 7-2

Main board parts list

BLOCK NO. 01				
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
A 1	UNP0039-026	ANT CORD	ANT	
B 361	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 362	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 363	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 601	NRS021J-ORONY	MG RESISTOR	5% 1/10W	
B 701	NRS021J-ORONY	MG RESISTOR	5% 1/10W	
B 901	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
C 101	QEK41HM-105	E-CAPACITOR	1.0MF 20% 50V	
C 102	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 103	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 104	QEK41HM-474	E-CAPACITOR	47MF 20% 50V	
C 105	QEKFOJM-476ZN	E-CAPACITOR	47MF 20% 6.3V	
C 111	NCB21HK-223AY	C CAPACITOR	0.022MF 10% 25V	
C 121	NCT21CH-330AY	C CAPACITOR	33PF +50:-10% 1	
C 122	QERF1HM-474ZM	E-CAPACITOR	47MF 20% 50V	
C 123	QERFOJM-476ZN	E-CAPACITOR	47MF 20% 6.3V	
C 124	QERF1HM-474ZM	E-CAPACITOR	47MF 20% 50V	
C 151	NCS21HJ-471AY	C CAPACITOR	470PF 5% 50V	
C 152	QEK41EM-475	E-CAPACITOR	4.7MF 20% 25V	
C 153	QEK41EM-475	E-CAPACITOR	4.7MF 20% 25V	
C 154	NCS21HJ-181AY	C CAPACITOR	180PF 5% 50V	
C 155	NCS21HJ-181AY	C CAPACITOR	180PF 5% 50V	
C 156	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 157	QEK41EM-475	E-CAPACITOR	4.7MF 20% 25V	
C 201	QEK41HM-105	E-CAPACITOR	1.0MF 20% 50V	
C 202	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 203	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 204	QEK41HM-474	E-CAPACITOR	4.7MF 20% 50V	
C 211	NCB21HK-223AY	C CAPACITOR	0.022MF 10% 25V	
C 221	NCT21CH-330AY	C CAPACITOR	33PF +50:-10% 1	
C 231	NCS21HJ-471AY	C CAPACITOR	470PF 5% 50V	
C 232	QEK41EM-475	E-CAPACITOR	4.7MF 20% 25V	
C 253	QEK41EM-475	E-CAPACITOR	4.7MF 20% 25V	
C 254	NCS21HJ-181AY	C CAPACITOR	180PF 5% 50V	
C 255	NCS21HJ-181AY	C CAPACITOR	180PF 5% 50V	
C 256	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 303	QEKFOJM-476ZN	E-CAPACITOR	47MF 20% 6.3V	
C 306	QEK41HM-105	E-CAPACITOR	1.0MF 20% 50V	
C 331	QEV41HJ-224	FILM CAPACITOR	22MF 5% 50V	
C 332	QELA1HJ-822ZM	M-CAPACITOR	8200PF 5% 50V	
C 333	QEV41HJ-224	FILM CAPACITOR	22MF 5% 50V	
C 334	QEV41HJ-333	FILM CAPACITOR	0.033MF 5% 50V	
C 325	QELA1HJ-562ZM	M-CAPACITOR	5600PF 5% 50V	
C 326	QEK41HM-225	E-CAPACITOR	2.2MF 20% 50V	
C 327	QEK41HM-225	E-CAPACITOR	2.2MF 20% 50V	
C 328	QEK41CM-476	E-CAPACITOR	47MF 20% 16V	
C 329	QEK41CM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 330	QEK41CM-107ZN	E-CAPACITOR	100MF 20% 16V	
C 331	NCB21HK-103AY	C CAPACITOR	0.010MF 10% 50V	
C 351	NCS21HJ-471AY	C CAPACITOR	470PF 5% 50V	
C 352	NCB21HK-473AY	C CAPACITOR	0.047MF 10% 25V	
C 362	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
C 364	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
C 365	QEV41HJ-104ZM	FILM CAPACITOR	1.0MF 5% 50V	
C 366	QEV41HJ-104ZM	FILM CAPACITOR	1.0MF 5% 50V	

Main board parts list

BLOCK NO. 02				
REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
A 367	QFV41HJ-104ZM	FILM CAPACITOR	1.0MF 5% 50V	
C 368	QFV41HJ-104ZM	FILM CAPACITOR	1.0MF 5% 50V	
C 369	QET41CM-477	E-CAPACITOR	470MF 20% 16V	
C 370	QEK41CM-106	E-CAPACITOR	10MF 20% 16V	
C 371	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 372	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 373	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 374	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 381	QEK41EM-475	E-CAPACITOR	4.7MF 20% 25V	
C 382	QEK41HM-225	E-CAPACITOR	2.2MF 20% 50V	
C 391	NCB21HK-103AY	C CAPACITOR	0.010MF 10% 50V	
C 392	QET41CM-107	E-CAPACITOR	100MF 20% 16V	
C 394	QET41CM-107	E-CAPACITOR	100MF 20% 16V	
C 403	QEKFOJM-476ZN	E-CAPACITOR	47MF 20% 6.3V	
C 406	QEK41HM-105	E-CAPACITOR	1.0MF 20% 50V	
C 421	QFV41HJ-224	FILM CAPACITOR	22MF 5% 50V	
C 422	QFV41HJ-822ZM	M-CAPACITOR	8200PF 5% 50V	
C 423	QFV41HJ-224	FILM CAPACITOR	22MF 5% 50V	
C 424	QFV41HJ-333	FILM CAPACITOR	0.033MF 5% 50V	
C 425	QELA1HJ-562ZM	M-CAPACITOR	5600PF 5% 50V	
C 426	QEK41HM-225	E-CAPACITOR	2.2MF 20% 50V	
C 427	QEK41HM-225	E-CAPACITOR	2.2MF 20% 50V	
C 451	NCS21HJ-471AY	C CAPACITOR	470PF 5% 50V	
C 462	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
C 464	NCS21HJ-221AY	C CAPACITOR	220PF 5% 50V	
C 465	QFV41HJ-104ZM	FILM CAPACITOR	1.0MF 5% 50V	
C 466	QFV41HJ-104ZM	FILM CAPACITOR	1.0MF 5% 50V	
C 467	QFV41HJ-104ZM	FILM CAPACITOR	1.0MF 5% 50V	
C 468	QFV41HJ-104ZM	FILM CAPACITOR	1.0MF 5% 50V	
C 471	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 472	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 473	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 474	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 501	NCT21CH-471AY	C CAPACITOR	470PF +50:-10%	
C 502	NCB21HK-103AY	C CAPACITOR	0.010MF 10% 50V	
C 503	NCB21HK-103AY	C CAPACITOR	0.010MF 10% 50V	
C 504	QEK41HM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 505	NCB21HK-103AY	C CAPACITOR	0.010MF 10% 50V	
C 509	QEE41VM-335B	TS-E-CAPACITOR	3.3MF 20% 35V	
C 510	QEK41HM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 511	NCT21CH-7R0AY	C CAPACITOR	7.0PF +50:-10%	
C 512	NCT21CH-470AY	C CAPACITOR	47PF +50:-10% 1	
C 513	NCB21HK-104	C CAPACITOR	1.0MF 10% 25V	
C 514	NCB21HK-103AY	C CAPACITOR	0.010MF 10% 50V	
C 515	QEK41HM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 516	NCB21HK-103AY	C CAPACITOR	0.010MF 10% 50V	
C 522	QFV81HJ-223	FILM CAPACITOR	0.022MF 5% 50V	
C 523	QFV41HJ-104ZM	FILM CAPACITOR	1.0MF 5% 50V	
C 524	QEK41EM-475	E-CAPACITOR	4.7MF 20% 25V	
C 525	QEK41CM-106	E-CAPACITOR	10MF 20% 16V	
C 526	NCS21HJ-681AY	C CAPACITOR	680PF 5% 50V	
C 531	QFLA1HJ-822ZM	M-CAPACITOR	8200PF 5% 50V	
C 541	NCT21CH-330AY	C CAPACITOR	33PF +50:-10% 1	
C 542	QFV81HJ-183	FILM CAPACITOR	0.018MF 5% 50V	
C 543	QFV11HJ-563AZM	FILM CAPACITOR	0.056MF 5% 50V	

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 737	QEK41HM-104	E-CAPACITOR	.10MF 20% 50V	
C 738	QEK41HM-105	E-CAPACITOR	.10MF 20% 50V	
C 739	QEK41HM-104	E-CAPACITOR	.10MF 20% 50V	
C 740	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
C 741	QEK41HM-105	E-CAPACITOR	.10MF 20% 50V	
C 742	QEK41HM-474	E-CAPACITOR	.47MF 20% 50V	
C 743	NCB21HK-223AY	C CAPACITOR	.022MF 10% 25V	
C 744	QEK41HM-105	E-CAPACITOR	.10MF 20% 50V	
C 745	QEK41HM-105	E-CAPACITOR	.10MF 20% 50V	
C 746	QEK41CM-106	E-CAPACITOR	10MF 20% 16V	
C 748	QEK41HM-105	E-CAPACITOR	.10MF 20% 50V	
C 749	QEK41HM-225	E-CAPACITOR	2.2MF 20% 50V	
C 750	NCB21HK-104	C CAPACITOR	.10MF 10% 25V	
C 751	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
C 752	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 753	QEK41HM-474	E-CAPACITOR	.47MF 20% 50V	
C 754	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 755	NCB21HK-682AY	C CAPACITOR	6800PF 10% 50V	
C 756	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 761	NCB21HK-472AY	C CAPACITOR	4700PF 10% 50V	
C 906	QEK41CM-106	E-CAPACITOR	100MF 20% 10V	
C 911	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
C 921	QET41AM-477	E-CAPACITOR	470MF 20% 10V	
C 922	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 923	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 924	QEK41CM-226	E-CAPACITOR	22MF 20% 16V	
C 925	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 927	QEK41CM-106	E-CAPACITOR	10MF 20% 16V	
C 951	NCS21HJ-681AY	C CAPACITOR	680PF 5% 50V	
C 952	QEK41CM-106	E-CAPACITOR	10MF 20% 16V	
C 671	CSB40PBL	CERA LOCK		
CF711	VCF2M3B-103	CERAMIC FILTER		
CF712	VCF2M3B-103	CERAMIC FILTER		
CF731	CSB912JF104	CERA ROCK		
CJ351	EMN00TV-201A	PIN JACK		
CJ601	VMC0320-001	CONNECTOR		
CN501	VMC0314-S16	CONNECTOR		
CN502	VMC0314-S16	CONNECTOR		
CN601	VMC0319-001	CONNECTOR		
CN901	VMC0321-001	13PIN CONN		
D 121	1SS133T-91	SI DIODE		
D 122	1SS133T-91	SI DIODE		
D 361	1SS133T-91	SI DIODE		
D 391	MT2JT-9110C	ZENER DIODE		
D 392	1SS133T-91	SI DIODE		
D 591	DSK10C-E	DIODE		
D 592	1SS133T-91	SI DIODE		
D 593	1SS133T-91	SI DIODE		
D 611	1SS133T-91	SI DIODE		
D 617	1SS133T-91	SI DIODE		
D 618	1SS133T-91	SI DIODE		
D 619	1SS133T-91	SI DIODE		
D 701	1SS133T-91	SI DIODE		
D 703	1SS133T-91	SI DIODE		
D 761	1SS133T-91	SI DIODE		

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 544	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 545	QFV41HJ-224	FILM CAPACITOR	.22MF 5% 50V	
C 546	QEK41CM-226	E-CAPACITOR	22MF 20% 16V	
C 547	QEK41HM-104	E-CAPACITOR	.10MF 20% 50V	
C 561	QEK41HM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 563	QEK41AM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 564	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 566	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 567	QFV71HJ-103	FILM CAPACITOR	.010MF 5% 50V	
C 568	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
C 569	QFV71HJ-103	FILM CAPACITOR	.010MF 5% 50V	
C 570	QFLA1HJ-352ZM	M-CAPACITOR	3300PF 5% 50V	
C 571	QFLA1HJ-352ZM	M-CAPACITOR	3300PF 5% 50V	
C 572	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 574	QEK41AM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 575	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 577	QEK41AM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 578	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 580	NCT21CH-100AY	C CAPACITOR	10PF +50% -10% 1	
C 581	NCT21CH-100AY	C CAPACITOR	10PF +50% -10% 1	
C 591	QEK41AM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 592	QET41AM-477	E-CAPACITOR	470MF 20% 10V	
C 593	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 601	QEK41AM-107ZN	E-CAPACITOR	100MF 20% 10V	
C 602	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 604	NCT21CH-220AY	C CAPACITOR	22PF +50% -10% 1	
C 605	NCT21CH-350AY	C CAPACITOR	33PF +50% -10% 1	
C 612	QEK41CM-106	E-CAPACITOR	10MF 20% 16V	
C 613	NCB21HK-223AY	C CAPACITOR	.022MF 10% 25V	
C 621	QETC0JM-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	.033MF 10% 25V	
C 677	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
C 678	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
C 701	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
C 702	QEK41HM-104	E-CAPACITOR	.10MF 20% 50V	
C 703	QEK41CM-106	E-CAPACITOR	10MF 20% 16V	
C 704	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
C 705	QEK41CM-106	E-CAPACITOR	10MF 20% 16V	
C 706	NCB21HK-123AY	C CAPACITOR	.012MF 10% 50V	
C 707	NCB21HK-333AY	C CAPACITOR	.033MF 10% 25V	
C 708	NCS21HC-4R0AY	C CAPACITOR	4.0PF 50V	
C 709	NCS21HJ-121AY	C CAPACITOR	120PF 5% 50V	
C 721	QEK41HM-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	QEK41CM-106	E-CAPACITOR	10MF 20% 16V	
C 734	QEK41HM-105	E-CAPACITOR	.10MF 20% 50V	
C 735	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
C 736	QEK41HM-105	E-CAPACITOR	1.0MF 20% 50V	

BLOCK NO. 01

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
D 762	1SS133T-91	SI DIODE			
D 791	1SS133T-91	SI DIODE			
D 792	1SS133T-91	SI DIODE			
D 901	1SS133T-91	SI DIODE			
D 903	MTZJT-916-2C	ZENER DIODE			
D 904	1SS133T-91	SI DIODE			
D 905	1SS133T-91	SI DIODE			
D 906	1SS133T-91	SI DIODE			
D 907	1SS133T-91	SI DIODE			
D 911	1SS133T-91	SI DIODE			
D 921	MTZJT-919-1C	ZENER DIODE			
D 933	1SS133T-91	SI DIODE			
D 951	HSM2838C	DIODE			
D 952	HSM2836C	DIODE			
D 953	HSM2838C	DIODE			
D 954	HSM2836C	DIODE			
D 961	SLR-342MWA49	LED			
D 962	SLR-342MWA49	LED			
D 963	SLR-342MWA49	LED			
D 964	SLR-342MWA49	LED			
D 965	SLR-342MWA49	LED			
D 966	SLR-342MWA49	LED			
D 967	SLR-342MWA49	LED			
D 968	SLR-342MWA49	LED			
D 969	SLR-342MWA49	LED			
D 970	SLR-342MWA49	LED			
D 971	SML-010MTT87	LED			
D 972	SML-010MTT87	LED			
D 973	SML-010MTT87	LED			
D 974	SML-010MTT87	LED			
D 975	SML-010MTT87	LED			
D 976	SML-010MTT87	LED			
D 977	SML-010MTT87	LED			
D 978	MTZJ-2-0B	ZENER DIODE			
IC101	NJM4565M	IC	LPF		
IC151	NJM4565M	IC			
IC321	TEA6320T	IC	E VOLUME		
IC361	HA13152	IC	POWER AMP		
IC501	TA2065F	IC	RF/SERVO		
IC561	TC9284BF	IC	DATA CONT		
IC591	BA6393FP-T1	IC	SERVO DRIVER		
IC601	LC72362-8935	IC	SYSTEM CONTROL		
IC671	UPD7758AGT-705	IC	VOICE		
IC731	LA1867M	IC			
IC951	LC7582E	IC			
L 501	VGP0015-4R7Z	INDUCTOR			
L 561	VGP0015-4R7Z	INDUCTOR			
L 701	VGP0015-4R7Z	INDUCTOR			
L 731	VGT7F28-501	IFT			
PL961	VG70001-056	LAMP			
PL962	VG70001-056	LAMP			
PL963	VG70001-055	LAMP			
Q 121	2SC2412KK1	TRANSISTOR			
Q 351	2SC2412KK1	TRANSISTOR			
Q 352	DTA114EK	TRANSISTOR			

BLOCK NO. 02

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
Q 391	2SD1994A(R-S)TA	TRANSISTOR			
Q 451	2SC2412KK1	TRANSISTOR			
Q 501	2SA1037K(R)	TRANSISTOR			
Q 591	2SB1322(RS)	TRANSISTOR			
Q 721	2SC2412KK1	TRANSISTOR			
Q 722	2SC2412KK1	TRANSISTOR			
Q 731	DT144EK	TRANSISTOR			
Q 791	2SB1197K(Q,R)	TRANSISTOR			
Q 792	2SA1037K(R)	TRANSISTOR			
Q 793	DT114EK	TRANSISTOR			
Q 901	2SD1994A(R-S)TA	TRANSISTOR			
Q 903	2SA1037K(R)	TRANSISTOR			
Q 904	2SA1037K(R)	TRANSISTOR			
Q 905	2SA1037K(P)	TRANSISTOR			
Q 906	2SC2412KK1	TRANSISTOR			
Q 907	2SC2412KK1	TRANSISTOR			
Q 911	DTA114EK	TRANSISTOR			
Q 912	2SC2412KK1	TRANSISTOR			
Q 921	2SB1187(F,G)	TRANSISTOR			
Q 922	2SD1994A(R-S)TA	TRANSISTOR			
Q 923	2SB1322(RS)	TRANSISTOR			
Q 924	DT114EK	TRANSISTOR			
Q 971	2SC2412KK1	TRANSISTOR			
R 102	NRSA02J-104NY	MG RESISTOR			
R 103	NRSA02J-103NY	MG RESISTOR			
R 104	NRSA02J-822NY	MG RESISTOR			
R 105	NRSA02J-223NY	MG RESISTOR			
R 106	NRSA02J-223NY	MG RESISTOR			
R 121	NRSA02J-103NY	MG RESISTOR			
R 122	NRSA02J-223NY	MG RESISTOR			
R 123	NRSA02J-223NY	MG RESISTOR			
R 124	NRSA02J-563NY	MG RESISTOR			
R 151	NRSA02J-123NY	MG RESISTOR			
R 152	NRSA02J-123NY	MG RESISTOR			
R 153	NRSA02J-153NY	MG RESISTOR			
R 154	NRSA02J-153NY	MG RESISTOR			
R 155	NRSA02J-153NY	MG RESISTOR			
R 156	NRSA02J-153NY	MG RESISTOR			
R 202	NRSA02J-104NY	MG RESISTOR			
R 203	NRSA02J-103NY	MG RESISTOR			
R 204	NRSA02J-822NY	MG RESISTOR			
R 221	NRSA02J-103NY	MG RESISTOR			
R 251	NRSA02J-123NY	MG RESISTOR			
R 252	NRSA02J-123NY	MG RESISTOR			
R 253	NRSA02J-153NY	MG RESISTOR			
R 254	NRSA02J-153NY	MG RESISTOR			
R 255	NRSA02J-153NY	MG RESISTOR			
R 256	NRSA02J-153NY	MG RESISTOR			
R 302	NRSA02J-223NY	MG RESISTOR			
R 303	NRSA02J-223NY	MG RESISTOR			
R 321	NRSA02J-183NY	MG RESISTOR			
R 322	NRSA02J-222NY	MG RESISTOR			
R 351	NRSA02J-102NY	MG RESISTOR			
R 352	NRSA02J-222NY	MG RESISTOR			
R 353	NRSA02J-101NY	MG RESISTOR			

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 354	NRSA02J-682NY	MG RESISTOR	6.8K 5% 1/10W	
R 361	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 362	NRSA02J-823NY	MG RESISTOR	82K 5% 1/10W	
R 363	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
R 365	NRSA02J-472NY	MG RESISTOR	2.2 5% 1/10W	
R 366	NRSA02J-472NY	MG RESISTOR	2.2 5% 1/10W	
R 367	NRSA02J-472NY	MG RESISTOR	2.2 5% 1/10W	
R 368	NRSA02J-472NY	MG RESISTOR	2.2 5% 1/10W	
R 381	NRSA02J-273NY	MG RESISTOR	27K 5% 1/10W	
R 382	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 383	NRSA02J-473NY	MG RESISTOR	1.2K 5% 1/10W	
R 391	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
R 402	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 403	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 421	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
R 422	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 451	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 452	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 453	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
R 454	NRSA02J-682NY	MG RESISTOR	6.8K 5% 1/10W	
R 461	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 462	NRSA02J-823NY	MG RESISTOR	82K 5% 1/10W	
R 463	NRSA02J-393NY	MG RESISTOR	39K 5% 1/10W	
R 465	NRSA02J-472NY	MG RESISTOR	2.2 5% 1/10W	
R 466	NRSA02J-472NY	MG RESISTOR	2.2 5% 1/10W	
R 467	NRSA02J-472NY	MG RESISTOR	2.2 5% 1/10W	
R 468	NRSA02J-472NY	MG RESISTOR	2.2 5% 1/10W	
R 501	NRSA02J-224NY	MG RESISTOR	220K 5% 1/10W	
R 502	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 503	NRSA02J-470NY	MG RESISTOR	47 5% 1/10W	
R 504	NRSA02J-470NY	MG RESISTOR	47 5% 1/10W	
R 505	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 511	NRSA02J-273NY	MG RESISTOR	27K 5% 1/10W	
R 515	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 516	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 517	NRSA02J-272NY	MG RESISTOR	2.7K 5% 1/10W	
R 521	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
R 522	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 523	NRSA02J-181NY	MG RESISTOR	180 5% 1/10W	
R 524	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 525	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 527	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W	
R 531	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 532	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 533	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 541	NRSA02J-274NY	MG RESISTOR	270K 5% 1/10W	
R 542	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 543	NRSA02J-272NY	MG RESISTOR	2.7K 5% 1/10W	
R 544	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 546	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 547	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 549	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
R 550	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 552	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 553	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 555	NRSA02J-223NY	MG RESISTOR	2.2M 5% 1/10W	
R 556	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 557	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W	
R 560	NRSA02J-474NY	MG RESISTOR	470K 5% 1/10W	
R 561	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 562	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 563	NRSA02J-154NY	MG RESISTOR	150K 5% 1/10W	
R 564	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 565	NRSA02J-225NY	MG RESISTOR	2.2M 5% 1/10W	
R 566	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
R 571	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 574	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 575	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 576	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 577	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 578	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W	
R 579	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W	
R 591	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
R 592	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 593	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
R 601	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 602	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 603	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 617	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
R 619	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 620	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
R 621	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
R 622	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
R 623	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 624	NRSA02J-513NY	MG RESISTOR	51K 5% 1/10W	
R 625	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 626	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 627	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 628	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 629	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 630	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 631	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 632	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 634	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
R 635	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 636	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 637	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 638	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
R 639	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 644	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 645	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 646	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 647	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 648	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 650	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 651	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 652	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
R 653	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
R 654	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
R 655	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 656	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W	
R 671	NRSA02J-105NY	MG RESISTOR	1.0M 5% 1/10W	
R 673	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
R 674	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 675	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
R 676	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
R 677	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	

BLOCK NO. 01

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R 907	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 908	NRSA02J-474NY	MG RESISTOR	470K 5% 1/10W	
R 911	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 912	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
R 913	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 914	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
R 915	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	

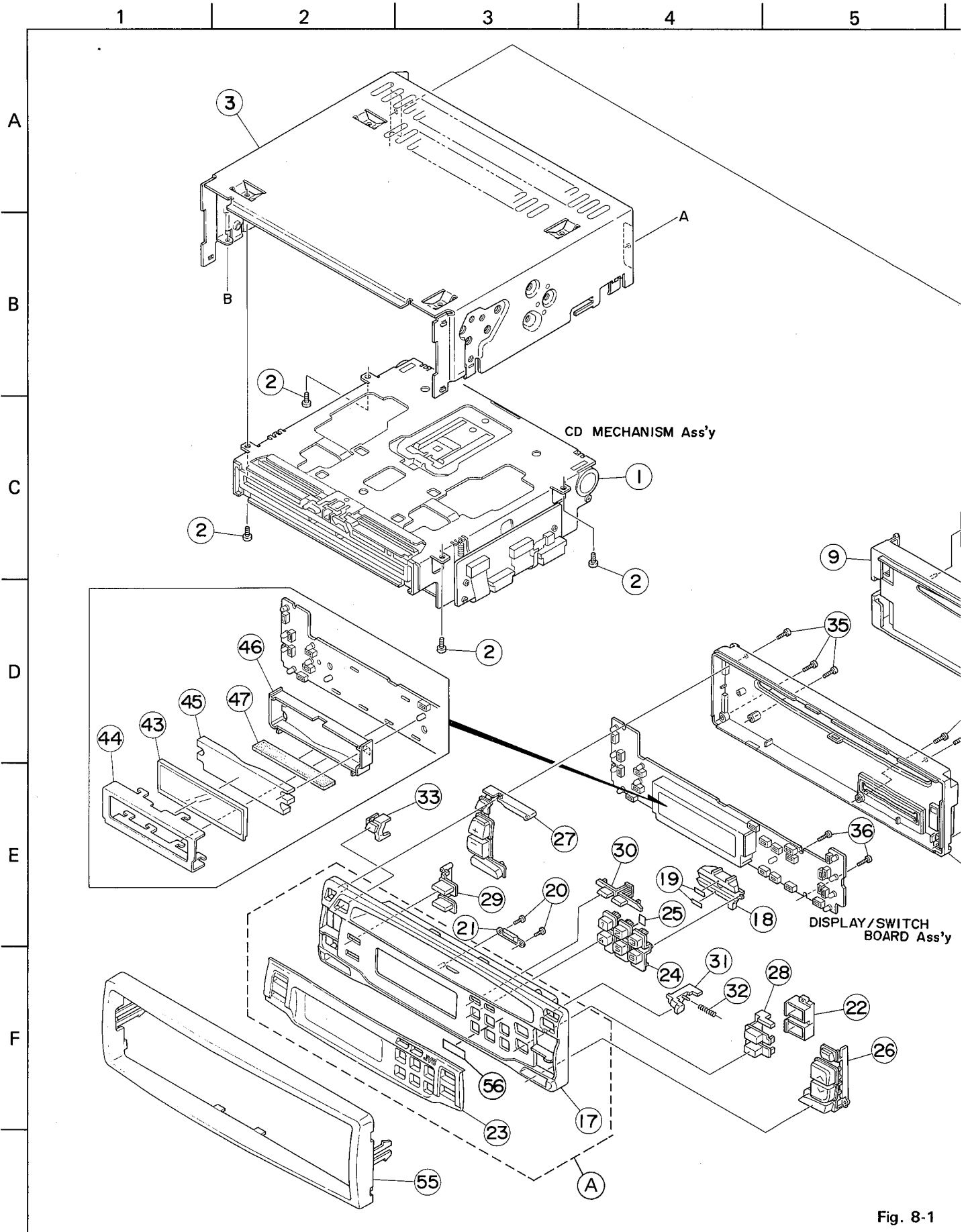
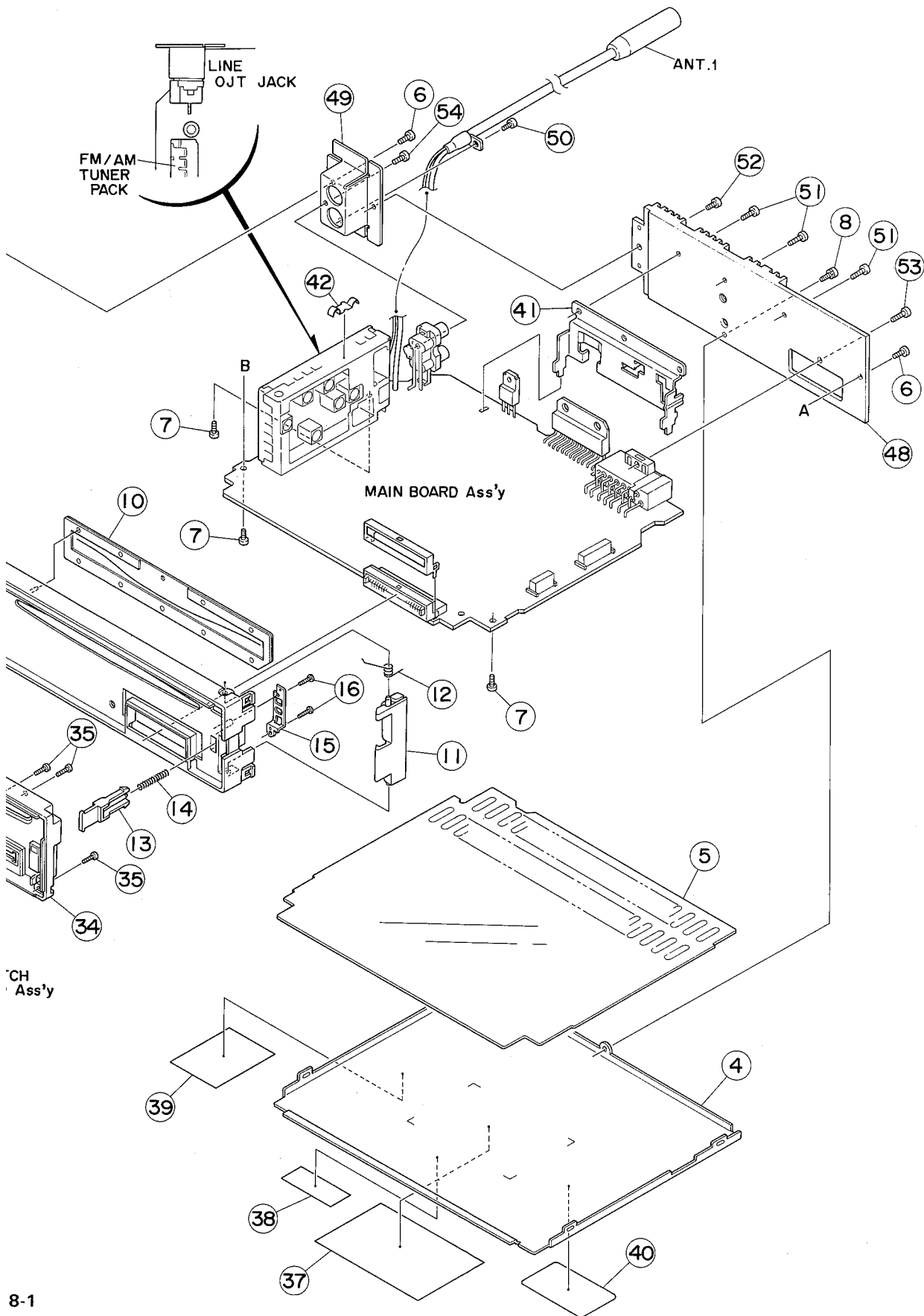
8**Exploded view of enclosure assembly and parts list**Block No. **M**

Fig. 8-1

M 1

6	7	8	9	10
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● Enclosure assembly parts list

BLOCK NO. M1MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	ZCKDGS660J-NPA	NOSE PIECE	NO.17,23,56	1		
	1	-----	CD MECHA		1		
	2	SDST2604Z	SCREW	MECHANISM	4		
	3	VKL1423-001	CHASSIS		1		
	4	VKM3798-003	BOTTOM COVER		1		
	5	VMA3218-001	INSULATOR		1		
	6	SDST2606Z	SCREW	REAR PAREL	2		
	7	SDST2606Z	SCREW	MAIN BOARD+SIDE	3		
	8	LPSP2608Z	SCREW	REAR SIDE BOTTO	1		
	9	VJC2535-002	FRONT CHASSIS	NOSE ASS'Y	1		
	10	VYTA514-001	BLIND(C)		1		
	11	FSKS3002-001	LOCK LEVER		1		
	12	FSKW4005-003	TORSION SPRING	FOR LOCK LEVER	1		
	13	FSXP3018-001	RLS KNOB		1		
	14	VKW3001-320	COMP.SPRING	RLS KNOB	1		
	15	FSKL4008-001	HOLD PLATE		1		
	16	SPSN1755N	MINI SCREW	HOLD PLATE	2		
	17	VJG1323-001	FRONT PANEL		1		
	18	FSJK3001-002	LIGHT LENS		1		
	19	VYSS1R2-055	SPACER		2		
	20	SPSN1755N	MINI SCREW	LENS	2		
	21	VJK3654-002	LENS		1		
	22	VKS3705-002	LED HOLDER		1		
	23	VJK2198-002	FINDER		1		
	24	VXP2099-001	PRESET BUTTON		1		
	25	VYTT666-001	SEAL	FOR PRESET BUTT	1		
	26	VXP1005-003	UP DOWN BUTTON		1		
	27	VXP1006-002	+/- BUTTON		1		
	28	VXP2100-003	D.FUNC BUTTON	CD/TUNE	1		
	29	FSXP3019-004	PUSH BUTTON		1		
	30	VXP3690-002	PUSH BUTTON	A.HBS/MANU	1		
	31	FSXP3020-001	DETACH BUTTON		1		
	32	VKW3001-321	COMP. SPRING	DETACH BUTTON	1		
	33	VJK4438-002	REMOCON LENS		1		
	34	VJG1324-001	REAR COVER		1		
	35	SPSN1780N	MINI SCREW	FRONT+REAR	6		
	36	SPSN1780N	MINI SCREW	SWITCH BOARD	2		
	37	VYN3556-S001SA	NAME PLATE		1	J	
	38	E407097-002	HYATT L.LABEL		1		
	39	VND4922-001	CAUTION LABEL		1		
	40	VND5008-001	FCC LABEL(4)		1	J	
	41	VKM3827-001	IC BRACKET		1		
	42	VMA4631-002	SHIELD PLATE		1		
	43	VGL1172-001	LCD		1		
	44	VKM3796-001	LCD CASE		1		
	45	VJK3622-003	LCD LENS		1		
	46	VKS3647-004	LENS CASE		1		
	47	VMZ0124-002	LCD CONNECTOR		1		
	48	VJC3267-002	REAR PANEL		1		
	49	VKM3826-001	JACK BRACKET		1		
	50	SDST2606Z	SCREW	ANTENNA	1		
	51	SDSP2608Z	SCREW	IC BRACKET	3		
	52	SDST2606Z	SCREW	REAR BRACKET	1		
	53	SDSP2608Z	SCREW	130IN JACK	1		
	54	SPSF3008Z	SCREW	JACK BRACKET	1		
	55	FSJD2004-003	TRIM PLATE		1		
	56	VYSS1R2-056	SPACER		1		

9 Exploded view of mechanism assembly and parts list

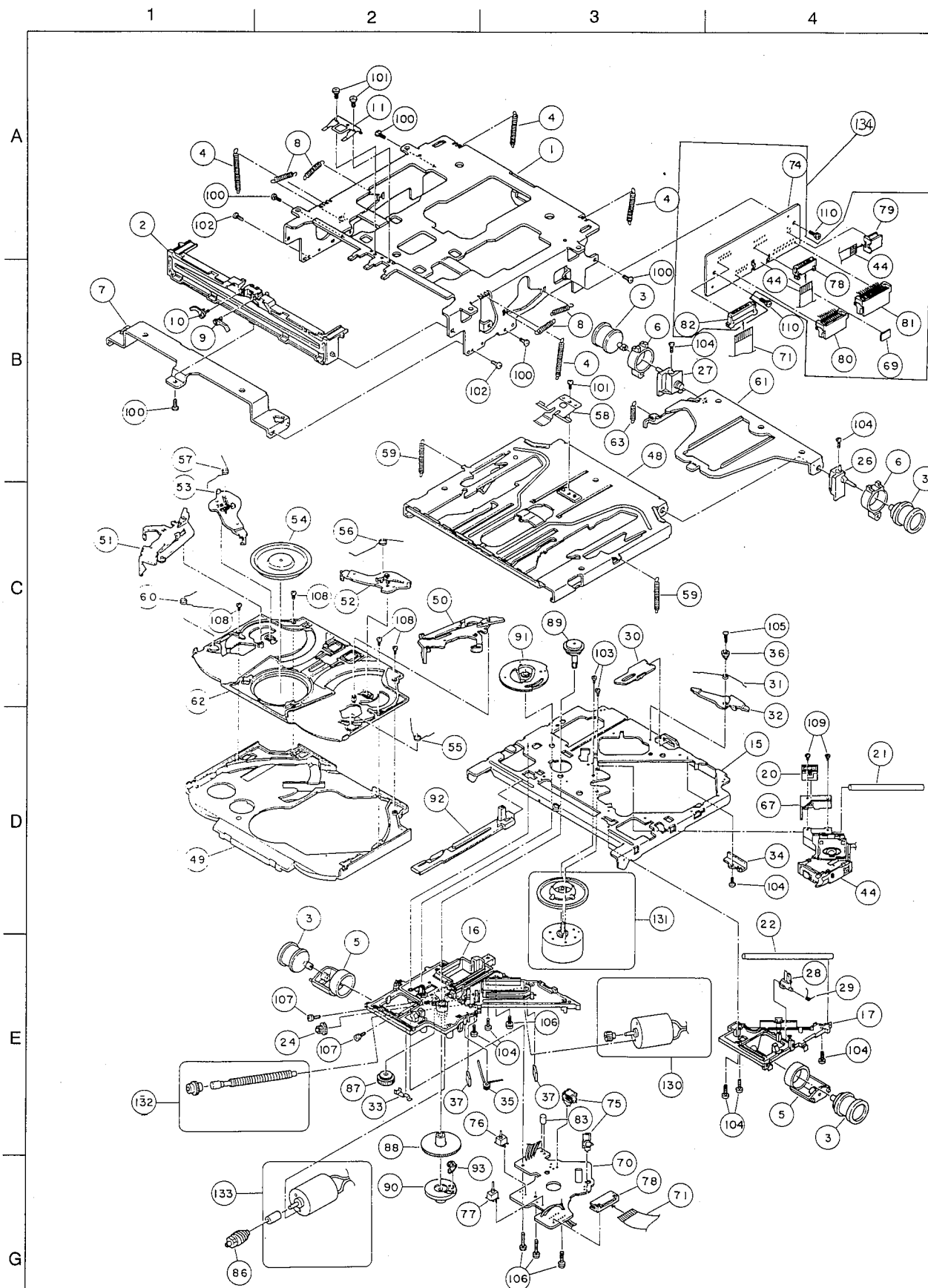


Fig. 9 - 1

● Mechanism assembly parts list

BLOCK NO. M2MM

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

BLOCK NO. M2MM

A	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	77	64020415T	SW.		1		
	78	681402156T	CONNECTOR		2		
	79	681402158T	CONNECTOR		1		
	80	68150225T	CONNECTOR		1		
	81	68150226T	CONNECTOR		1		
	82	68170211T	CONNECTOR		1		
	83	68210102T	E. CAPACITOR		1		
	86	30301101T	LOADING GEAR(A)		1		
	87	30301102T	LOADING GEAR(B)		1		
	88	30301103T	LOADING GEAR(C)		1		
	89	30301104T	LOADING GEAR(D)		1		
	90	30301105T	L CLUTCH DISC		1		
	91	30301108T	CAM GEAR		1		
	92	30301109T	LOAD.GEAR PLATE		1		
	93	30301110T	SELECT LEVER		1		
	100	9B1220051T	TAPPING SCREW	M2 X 5	5		
	101	9C0420253T	TAPPENG SCREW	M2 X 2.5	3		
	102	9P0420041T	SCREW(M2 X 4)	M2 X 4	2		
	103	9C0117223T	SCREW	M1.7 X 2.2	2		
	104	9C2220603T	TAP.SCREW	M2 X 6	8		
	105	9C3720803T	TAP.SCREW	M2 X 8	1		
	106	9C3920013T	TAP.SCREW	M2 X 11	4		
	107	9P0220041T	TAMS SCREW	M2 X 4	2		
	108	9C3817403T	TAP.SCREW	M1.7 X 4	4		
	109	9C0117225T	CAMERA SCREW		2		
	110	9P1220051T	S TAPPING SCREW	2 X 5	2		
	130	303005301T	FEED MOTOR ASY.		1		
	131	303005302T	SPIN.MOTOR ASY		1		
	132	303005303T	FEED SCREW ASY.		1		
	133	303011301T	LOAD.MOTOR ASY.		1		
	134	303010301T	CONECT PWB ASSY		1		

10 Packing illustration and parts list

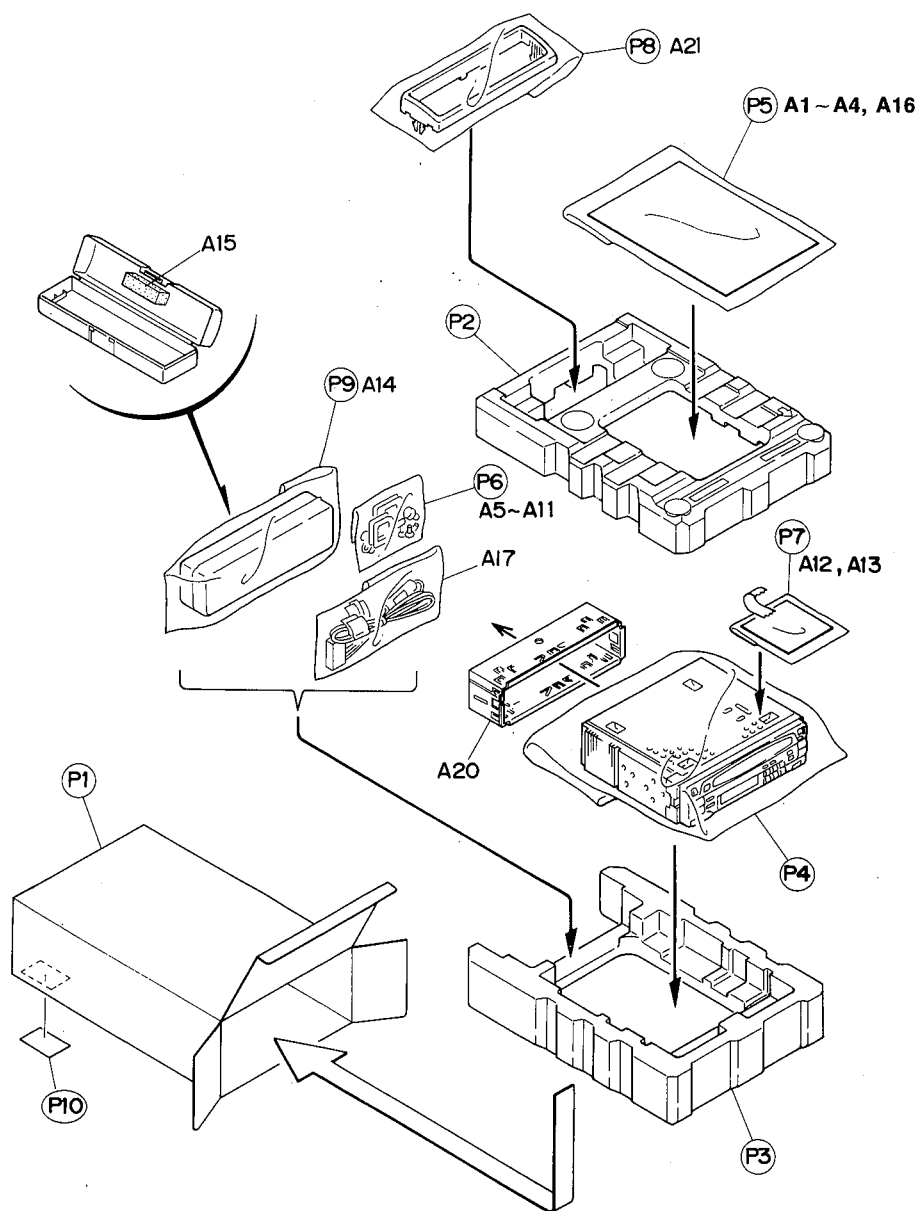


Fig. 10 - 1

● Packing parts list

BLOCK NO. M3MM

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
P 1	VPC3556-S001	CARTON		1		
P 2	FSPH1003-001	CUSHION(TOP)	TOP SIDE	1		
P 3	FSPH1004-001	CUSHION(BOTTOM)	BOTTOM SIDE	1		
P 4	VPE3005-066	POLY BAG	FOR SET	1		
P 5	QPGA017-02505	POLY BAG	INSTRUCTIONS	1		
P 6	QPGA008-01205	POLY BAG	SCREW KIT	1		
P 8	QPGA010-03003	POLY.BAG	TRIM PLATE	1		
P 9	QPGA010-03003	POLY.BAG	FOR HARD CASE	1		
P 10	-----	CARTON LABEL	CARTON(CODE39)	1		

Accessories

BLOCK NO. **M3MM** ☐ ☐ ☐

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	VNN3555-631S	INSTRUCTIONS		1		
	A 2	VNC2400-090	CAUTION SHEET		1		
	A 3	BT-20059D	WARRANTY CARD	J	1		
		BT-20025M	WARRANTY CARD	C	1		
	A 4	BT-20071B	SVC CENTER LIST	C	1		
		BT-20137	SERVICE NETWORK	J	1		
	A 5	VKZ4027-002	PLUG NUT		1		
	A 6	VKH4871-001	MOUNT BOLT		1		
	A 7	VKZ4328-001	LOCK NUT	FOR M5	1		
	A 8	Q03091-116	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	VJB2014-002	HARD CASE		1		
	A 15	VYSH118-002	SPACER		1		
	A 16	VNC2400-098	CAUTION SHEET		1		
	A 17	VMC0014-160	13P CORD ASS'Y		1		
	A 20	VKM3819-001	MOUNTING SLEEVE		1		
	A 21	FSJD2004-003	TRIM PLATE		1		
	KIT 1	KDGS550K-SCREW	SCREW PARTS KIT	P5,A5-A11,	1		
	KIT 2	KSRT75RK-SCREW2	SCREW PARTS KIT	P7,A12-A13	1		

JVC

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