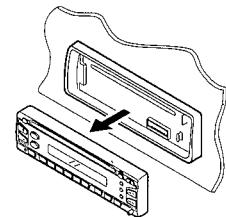
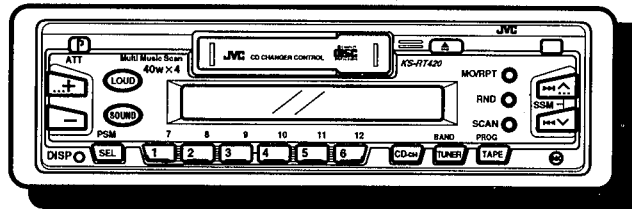


# JVC

## SERVICE MANUAL

### CASSETTE CAR RECEIVER

## KS-RT420 C/J



#### Area Suffix

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

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**CAUTION**

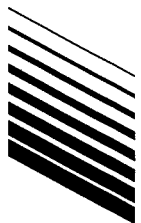
Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of performing repair of this system.

# 2. 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.

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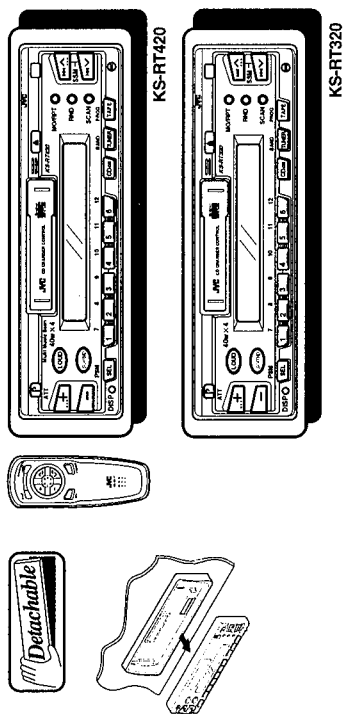
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CASSETTE RECEIVER KS-RT420/KS-RT320

RECEPTOR-REPRODUCTOR DE CASSETTE  
KS-RT420/KS-RT320

RADIOCASSETTE KS-RT420/KS-RT320



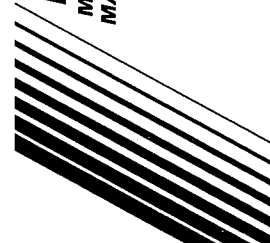
For installation and connections, refer to the separate manual.  
Para la instalación y las conexiones, referase al manual independiente.  
Pour l'installation et les raccordements, se référer au manuel séparé.

**For Customer Use:**  
Enter below the Model No. and Serial No. which are located on the top or bottom of the cabinet. Retain this information for future reference.

Model No. \_\_\_\_\_  
Serial No. \_\_\_\_\_

J version

**INSTRUCTIONS**  
**MANUAL DE INSTRUCCIONES**  
**MANUEL D INSTRUCTIONS**



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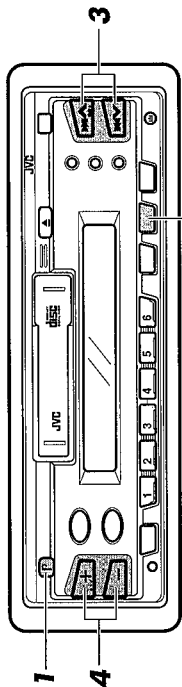
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**BEFORE USE**

- \* **For safety....**  
Do not raise the volume level too much, as this will block outside sounds, making driving dangerous.  
Stop the car before performing any complicated operations.
- \* **Temperature inside of the car...**  
If the car has been parked for a long time in hot or cold weather, wait until the temperature in the car becomes normal before operating the unit.

**RADIO OPERATION**

**Listening to the radio**



- 1** Switch on.
- 2** BAND TUNER FM 1 → FM 2 → FM 3 → AM Select the band.

FM1, FM2, FM3 have the same frequency range and up to 6 stations can be preset in each band.

- 3** Press to seek up.  
Tune. Use manual or seek tuning to find a station (see page 7).  
Press to seek down.

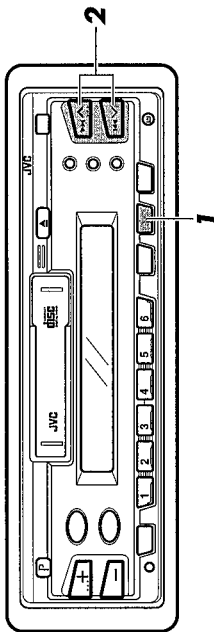
- 4** Adjust volume.

**Note:**  
Power (P)/Attenuator (ATT) button. ATT: When this button is pressed during operation, the volume drops and the ATT indicator blinks. Press again to return to the original volume.  
Power (P): Press to turn the power ON. Press for more than 1 second to turn the power OFF.

## Storing the stations in memory automatically

### 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.



**1** BAND TUNER  
 FM 1 → FM 2 → FM 3  
 Select the band.  
 (FM1, FM2 or FM3)

**2** SSM  
 Press the SSM buttons (S, S, M) together for more than 2 seconds.

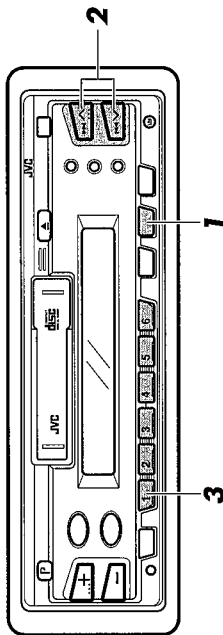
- The strongest signals in the band you are listening to (FM1, FM2 or FM3) will be searched and selected automatically. Six stations are preset in the Preset Station buttons (No. 1 to No. 6), in the order of increasing frequency. (During this operation, "SSM" lights in the display.) The unit then automatically tunes to the broadcast stored in Preset Station button "1".

## Storing the desired stations in memory

### Manual Station Preset

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

- Example (when presetting Preset Station button "1" of the FM1 band to an FM station at 88.3 MHz)



**1** BAND TUNER  
 Select the FM1 band using the Band (BAND) button.

**2** SSM  
 Use manual or seek tuning to find a station that you want to store in memory (see page 7).

**3** Preset Station button "1" for more than 2 seconds.  
 (When "1" blinks in the Preset Station display, the station is preset.)

- Repeat the above procedure for the other 5 Preset Station buttons and other bands (FM2, FM3 and AM).

#### Notes:

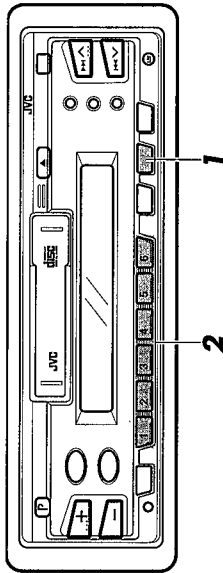
- A previously preset station is erased when a new station is stored in memory.
- The preset stations are erased when the power supply to the memory circuit is interrupted during battery replacement, etc. When this occurs, preset the stations again.

ENGLISH



## Receiving the preset stations

### Preset Station Tuning



- 1 FM 1 → FM 2 → FM 3 → AM Select the band.

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

### Manual Tuning

To set the Manual mode, press and hold the tuning button (↔ or ∨). The "M" indicator blinks. Press the tuning button to tune to the desired frequency.

Frequency scan steps are as follows:

- FM — in 200 kHz (or 50 kHz) units
- AM — in 10 kHz (or 9 kHz) units
- About 5 seconds after completing manual tuning, the unit switches back to Seek mode and the "M" indicator goes out.

### Seek Tuning

Press the ↗ or ∨ button; the unit tunes to higher or lower frequencies. When a broadcast is received, tuning stops automatically and the broadcast can be heard.

### Scan Tuning



When the Scan button is pressed, automatic scanning starts towards the higher frequencies. Each time a broadcast is received, the displayed frequency blinks and it is monitored for approx. 5 seconds. If you want to listen to the tuned frequency, press the Scan button again to turn automatic scanning off.



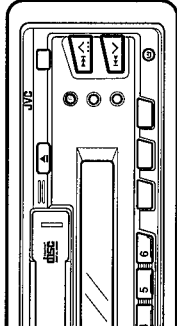
## When an FM stereo broadcast is noisy

### Mono Button

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

### Antenna Noise

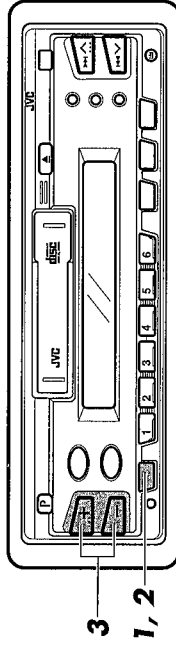
If you can hear static noise when listening to either AM or FM, check for loose antenna connections.



## Using this unit in an area other than North or South America

### To Change The Intervals Between Channels

When this unit is purchased, 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, adjust as follows:



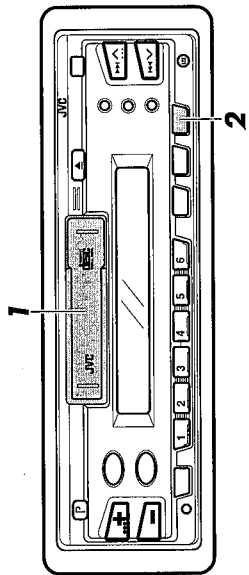
- 1 Press the PSM button for more than 2 seconds.

- 2 Select the "AREA" mode.

- 3 Set the "AREA 2" mode.
  - Performing this procedure sets the channel intervals to 9 kHz for AM and 50 kHz (Manual mode), 100 kHz (Seek mode) for FM.
  - To change back to the original intervals, repeat the above procedures. In procedure 3, press the "1" button to set to the "AREA 1" mode.

# TAPE OPERATION

## Listening to a tape



**1** Insert a cassette.

**2** Select program (tape direction).

**Notes:**

- Do not touch the highly-polished head with any metallic or magnetic tools.
- Never play dirty or dusty tapes since they will greatly degrade the sound and performance of your unit. Always keep your tapes clean.
- Cassettes can be inserted/ejected even when the power is OFF.

### Ignition Key-Off Release (Key-On Play) Mechanism

When the ignition key is turned OFF, the "key-OFF release" mechanism automatically releases the tape from the magnetic head, then enters Standby mode. When the ignition is turned ON, Playback mode automatically restarts.

### Auto-Reverse Mechanism

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

ENGLISH

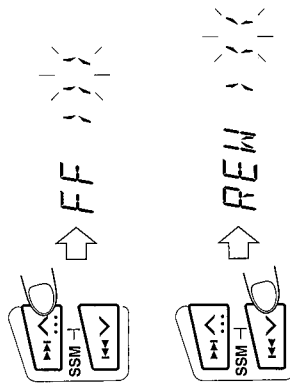


## How To Fast-Forward And Rewind Tapes (KS-RT420)

Press the ►►► button for more than 1 second to fast-forward the side being played; when the tape end is detected, the tape is reversed and playback starts from the beginning of the other side. Press the ◄◄◄ button for more than 1 second to rewind the tape to its beginning, where playback restarts. Press the PROG button to start playback from the current position during fast-forward or rewind.

## How To Fast-Forward And Rewind Tapes (KS-RT320)

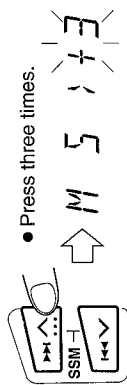
Press the ►►► button to fast-forward the side being played; when the tape end is detected, the tape is reversed and playback starts from the beginning of the other side. Press the ◄◄◄ button to rewind the tape to its beginning, where playback restarts. Press the PROG button to start playback from the current position during fast-forward or rewind.



## Multi Music Scan Operation (KS-RT420 only)

This function enables you to automatically start playback from the beginning of a specified tune (by skipping over a maximum of 9 tunes), in forward or reverse. During play, press the ►►► or ◄◄◄ button once for each tune you wish to skip.

- Example (When skipping forward to the 3rd tune)



- When the beginning of the specified tune is detected, the indication number goes out and tape playback starts.
- During scanning, when the tape is rewound to its beginning in Rewind mode, playback starts from the beginning of that side. When the tape reaches its end in Fast-Forward mode, it is reversed and played from the beginning of the other side.

**Notes:**

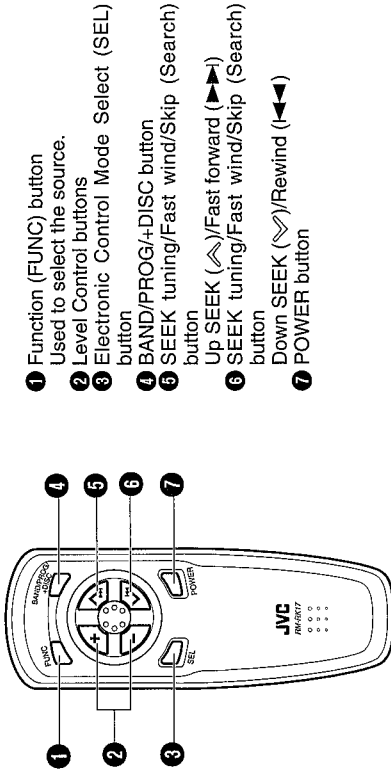
- In the following cases, the Multi Music Scan function mechanisms may not operate correctly. These are NOT malfunctions; use the mechanisms to suitably accommodate the materials and situations.
  - Tapes with tunes having long pianissimo passages (very quiet parts) or non-recorded portions during tunes.
  - Tapes with tunes recorded at low recording levels.
  - Tapes with short non-recorded sections.
  - Tapes with high level noise or humming between tunes.

# REMOTE CONTROLLER (KS-RT420 only)



The following operations can be performed using the remote controller.

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

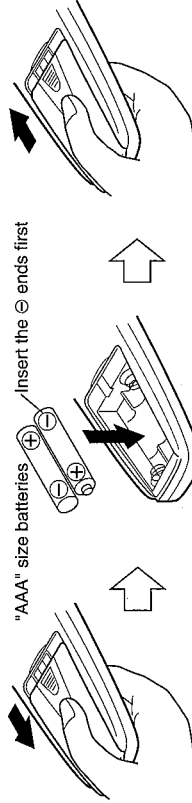


- 1 Function (FUNC) button  
Used to select the source.
- 2 Level Control buttons
- 3 Electronic Control Mode Select (SEL) button
- 4 BAND/PROG/+DISC button
- 5 SEEK tuning/Fast wind/Skip (Search) button  
Up SEEK (↗)/Fast forward (▶▶)  
Down SEEK (↘)/Rewind (◀◀)
- 6 SEEK tuning/Fast wind/Skip (Search) button
- 7 POWER button

### Battery replacement

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

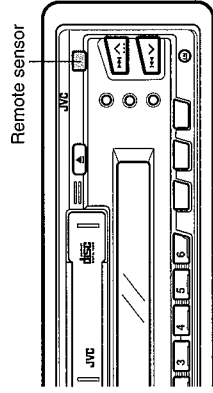
- Installing batteries in the remote controller.



### Using The Remote Controller

To use the remote controller, 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 controller.



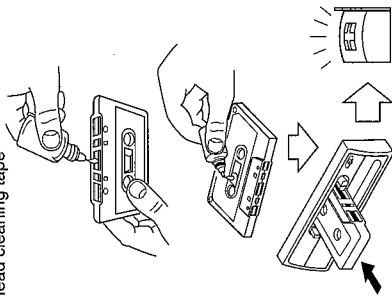
## ENGLISH



### For use as long as possible

#### Cleaning The Head

- Head cleaning tape



Heads are important as they pick up sound. When they become dirty, the following symptoms become noticeable:

- The sound quality is reduced.
- The sound level is decreased.
- The sound can be heard intermittently. (Sound drop occurs.)

These are NOT malfunctions. However, before these symptoms appear, clean the heads after every 10 hours of use using a wet-type head cleaning tape, available from an audio store. For more details, refer to the Instructions of the Head Cleaning Tape.

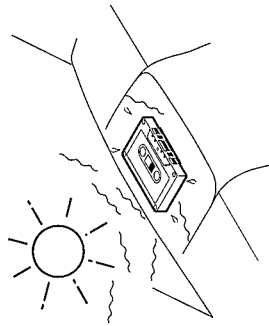
#### Tape Care Hints

It is very important to keep your tapes clean. Always return them to their storage boxes after playback.

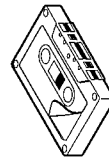
Never store tapes in direct sunlight, high humidity or extremely hot temperatures. Never play dirty, dusty tapes or the tapes with peeling labels---they can damage the unit.

Slack tape in a cassette can cause trouble by becoming entangled with the mechanism.

- Always remove cassettes from the loading slot when not listening to them, as the tape may become slack.



#### Incorrect



#### Note:

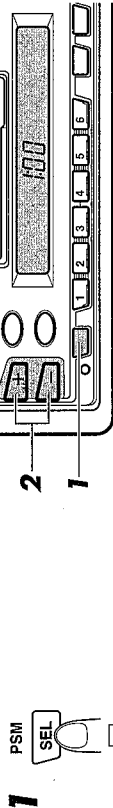
Your unit requires very little attention, but you will be assured of top performance only if you follow above notes.

# CLOCK ADJUSTMENT

## Selecting The Clock Display

Each time the DISP button is pressed, the display is switched between the listening mode and the clock mode.

### How to adjust the clock



Press the PSM button for more than 2 seconds to select the "CLK ADJ" mode.

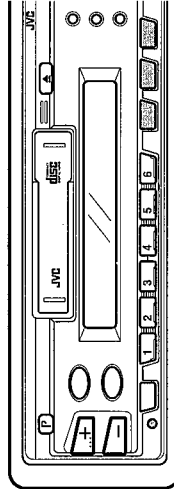
- 1 Select
- 2 Adjust.
  - Minute
  - Hour

# OTHER FUNCTIONS

## Selecting the desired source with the power off

### One Touch Operation

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

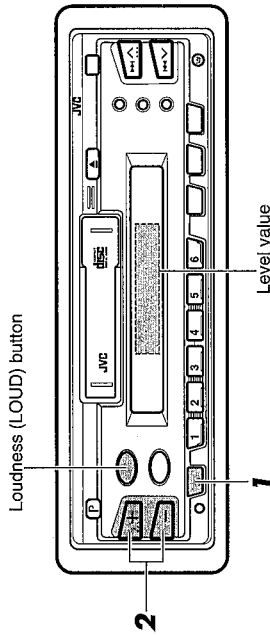


Function mode	Operations
CD	Place a CD in the CD changer connected to this unit and press this button to start CD play.
BAND TUNER	When this button is pressed, the tuner is engaged.
PROG TAPE	When this button is pressed with a tape loaded, tape playback begins.

- Pressing the DISP button switches on the power and after displaying the clock mode for 5 seconds, switches it off.

# Adjusting the sound characteristics

## Audio Level Control



1. Select the control mode with the SEL button.
2. Adjust the level with the level control buttons.

Electronic control mode	1  Select.	2  Adjust.	Adjust.
<i>VOL</i> Volume		Decreases (00 - 50)	Boosts
<i>BAS</i> Bass		Decreases (-6) - (+6)	Boosts
<i>TRE</i> Treble		Decreases (-6) - (+6)	Boosts
<i>FAD</i> Fader		Rear (R6 - F6)	Front
<i>BAL</i> Balance		Left (L6 - R6)	Right

## Fader Control

- When used in a 4-speaker system Use this control to balance the volume levels of the front and rear speakers.
- When used in a 2-speaker system Set this control to the center position ("00" is displayed).

## Loudness Control

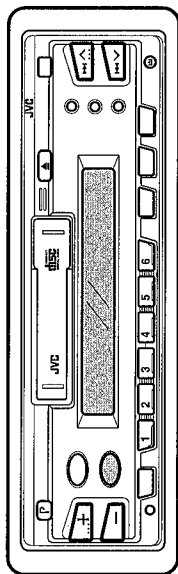
At low volumes, the human ear is less sensitive to low and high frequencies. When the volume is low, set the loudness control to ON to boost these frequencies and produce well-balanced sound.





## Selecting the sound characteristics suitable to the music genre

### Sound Control Memory (factory preset)



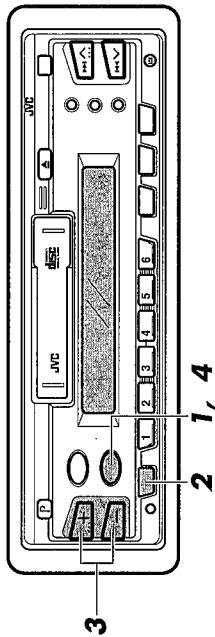
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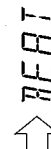

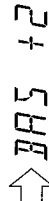
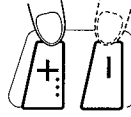


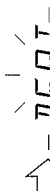


## Changing the sound setting as required


### Sound Control Memory (user preset)

The Sound mode's preset values can be changed to suit your tastes. (Example: To emphasize bass sound with beat mode levels 2 to 5.)



- 1**   Press the **SOUND** button to select the mode to be changed (Beat, Soft, Pop).
- 2**   (within 5 seconds) Press the **SEL** button to select the sound characteristics to be changed (Bass, Treble, Loudness).
- 3**   (within 5 seconds) Set the desired level with the level control button.
- 4**   (within 5 seconds) Press the **SOUND** button to store the set level in memory, 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, repeat the above procedure using the level value for the Sound control memory (factory preset) as a reference.

Sound mode		Preset level value		
		Bass	Treble	Loudness
SCM OFF	Off	00	00	On
BEAT	Beat For music with a heavy beat, such as rock or disco music.	+2	00	On
SOFT	Soft For quiet background music.	+1	-3	Off
POP	Pop For light music including popular and vocal music.	+4	+1	Off



### Setting each mode to suit your needs

#### Preferred Setting Mode (PSM) Control

The PSM has been set at the factory, but it can be set to suit your needs.

1. Press the PSM button for more than 2 seconds to set the PSM. Press the PSM button to select each mode.
2. Set the desired mode with the level control buttons (+, -).

1 Select.	2 Set.		Factory-preset settings
	Hour	Minute	
CLK ADJ Clock adjustment	Hour	Minute	1:00
BEEP (KS-RT420 only) Beep	Off	On	On
AREA Area	AREA 1	AREA 2	AREA 1

- Beep: When the BEEP setting is on, pressing operation buttons other than (+) or (-) will play an electronic "beep" sound.

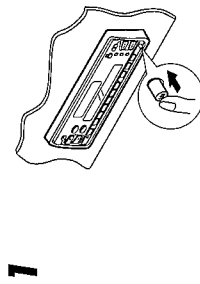
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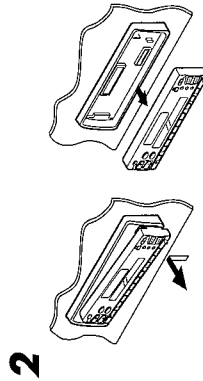
### When leaving the car

#### How To Detach The Control Panel

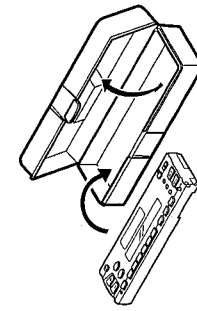
Before detaching the control panel, be sure to turn off the power.



1 Press the Control Panel Release (⏏) button to detach the control panel.

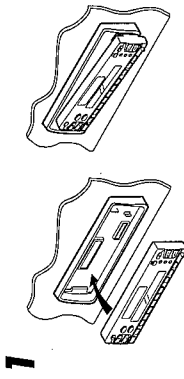


2 Lift and pull the control panel out of the main unit, as shown.

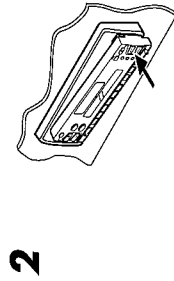


3 Put the control panel in the provided case for protection.

#### 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.

#### 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.

**Note:**

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

## Using the other equipment

### CD CHANGER OPERATION



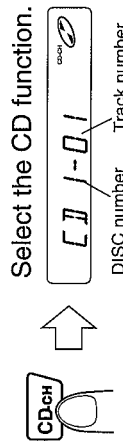
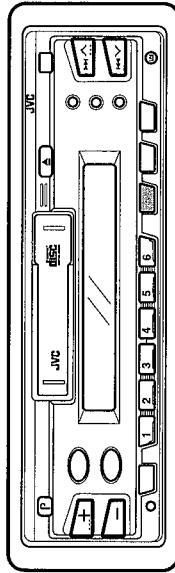
ENGLISH

#### PRECAUTIONS

- This unit is for the control of a JVC CD Automatic Changer (to be purchased separately).
- For correct usage, refer to the instructions of the CD Automatic Changer.
- When there are no discs in the CD changer's magazine or the discs are inserted upside down, "NO DISC" will be shown in the display. If this happens, remove the magazine and set the discs correctly.
- When "RESET 1 - RESET 8" is shown in the display of the unit, confirm that the cord is connected and press the RESET button of the CD Changer.

### Playing all tracks

#### Playing Compact Discs



Select the CD function.

DISC number Track number

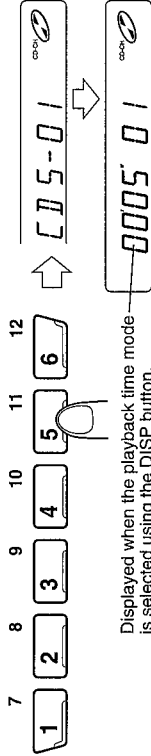
- When all tracks on the first disc have been played, the second disc starts automatically from the first track.



### Selecting a disc

#### Disc Selection

Example: (To specify disc 5)



Displayed when the playback time mode is selected using the DISP button.

#### Direct disc selection

Press the disc number button that corresponds to the desired disc (press it quickly to select No. 1 through No. 6 or for more than 1 second to select No. 7 through No. 12). The disc number and track number light and CD play starts.



- **Disc select button (Using the remote controller) (KS-RT420 only)**

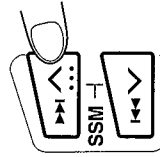
Press the Disc Select button (+ DISC) to select the required disc.

Example: when the third disc is currently playing...

Each time the + DISC button is pressed, the 4th, 5th, 6th ... and 1st disc will be selected in sequence.

### Skipping to the beginning of a track

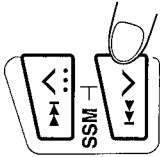
#### Skip Playback



- 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.

- \* When Disc Select and Skip operations are performed in sequence, the required track from a designated disc can be selected.



# TROUBLESHOOTING

What appears to be trouble is not always serious. First make sure....

Symptoms	Causes	Remedies
* <b>Cassette tape can't be loaded.</b>	—	Press the <b>▲</b> button and insert once again.
* <b>Cassette tape gets hot.</b>	It is loaded in the wrong way. This is not a malfunction.	Insert the cassette with the exposed tape facing right. —
* <b>Tape sound is at very low level and sound quality is degraded.</b>	The tape head is dirty.	Clean it regularly with a head cleaning tape.
* <b>Sound is sometimes interrupted.</b>	The cord connection is incorrect.	Confirm the cord connections.
* <b>Sound cannot be heard from the speakers.</b>	The volume control is turned to the minimum level. The cord connection is incorrect.	Adjust it to the optimum level. Confirm the cord connections.
* <b>Auto tuning doesn't work.</b>	Broadcast signal strength is too weak.	Tune to stations manually.
* <b>"NO DISC" is displayed.</b>	CDs aren't set in the magazine. CDs are inserted incorrectly.	Insert CDs into the magazine. Make sure they are correctly inserted.
* <b>"RESET 8" is displayed.</b>	This unit isn't connected to a CD changer correctly.	Connect this unit to it correctly and press the reset button of CD changer.
* <b>"RESET 1—RESET 7" is displayed.</b>	—	Press the reset button of CD changer.

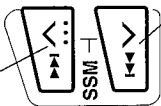
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## Locating a required position on the disc

### Search Playback

Keep pressed for fast-forward searching.



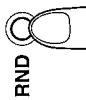
- The required position can be located using fast-forward or reverse search during playback.
- Hold down the button to commence searching. (The search speed increases the longer the button is pressed.)
- Since a low sound level can be heard (approx. one quarter of playback), monitor the sound and release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

Keep pressed for fast-reverse searching.

## Playing back tracks at random

### Random Playback

Each time the RND button is pressed, the mode changes from Random 1 (the RND indicator lights) to Random 2 (the RND indicator blinks) to Clear.



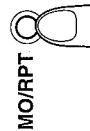
Random 1 : Randomly plays all tracks on the current disc once, then on each of the following discs in order.

Random 2 : Randomly selects and plays tracks from all of the CDs in the loaded magazine.

## Playing back tracks repeatedly

### Repeat Playback

Each time the RPT button is pressed, the mode changes from RPT 1 (the RPT indicator lights) to RPT 2 (the RPT indicator blinks) to Clear mode, in this order.



RPT 1 : Single track repeat  
The current or specified track will be played back repeatedly.

RPT 2 : All-tracks repeat of one disc  
All tracks on the current or specified CD will be played back repeatedly.

# SPECIFICATIONS

## AUDIO AMPLIFIER SECTION

Maximum Power Output: (Front) 40 watts per channel (Rear) 40 watts per channel  
 Continuous Power Output (RMS): (Front) 16 watts per channel into 4 Ω, 40 to 20,000 Hz at no more than 0.8% total harmonic distortion.  
 (Rear) 16 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/Impedance: 1.0 V/20 kΩ load (250 mWb/m)

## 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

## CASSETTE DECK SECTION

Wow & Flutter: 0.11% (WRMS)

Fast-Wind Time: 100 sec. (C-60)

Frequency Response: 50 to 16,000 Hz (±3 dB)

Signal-to-Noise Ratio: 54 dB

Stereo Separation: 40 dB

## GENERAL

Power Requirement

Operating Voltage: DC 14.4 volts

(11 to 16 volts allowance)

Grounding System: Negative ground

Dimensions (W x H x D) Installation Size: 182 x

52 x 150 mm (7-3/16" x 2-1/16" x 5-15/16")

Panel Size: 188 x 58 x 14 mm (7-7/16" x

2-5/16" x 5/8")

Gross Weight: 2.0 kg (4.5 lbs) (KS-RT420)

1.9 kg (4.2 lbs) (KS-RT320)

Design and specifications subject to change without notice.

If a kit is necessary for your car, consult your telephone directory for the nearest car audio speciality shop.

ENGLISH

Muchas gracias por haber comprado este producto de JVC. Tenga a bien leer detenidamente este manual de instrucciones antes de la operación de la unidad, para asegurarse de que la entiende perfectamente y para obtener una larga vida de servicio de la misma.

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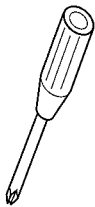
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# JVC

## KS-RT420 KS-RT320

### Installation/Connection Manual



J version  
VNC2400-120S

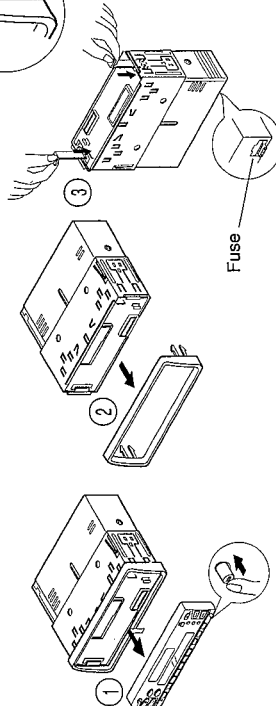
**ENGLISH**

• This unit is designed to operate with 12 volts DC, NEGATIVE ground electrical systems only.

## INSTALLATION (IN-DASH MOUNTING)

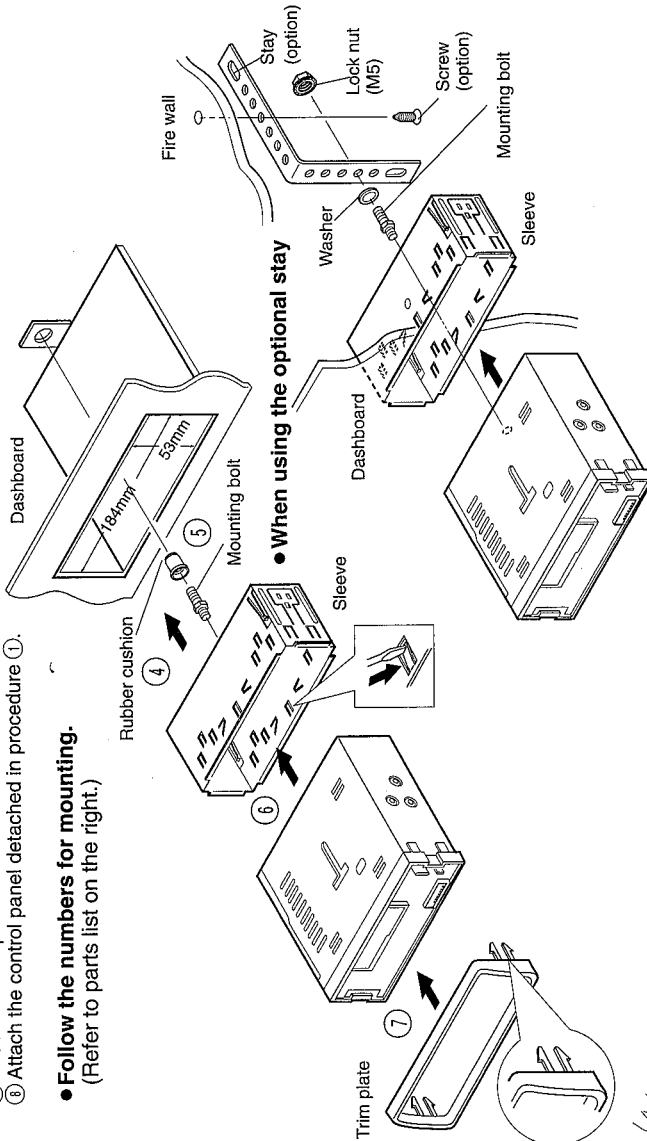
• The following illustration shows a typical installation. However, you should make adjustments corresponding to your specific car. If you have any questions or require information regarding installation kits, consult your JVC car audio dealer or a company supplying kits.

- ① **Before mounting:** Press the Control Panel Release (▶) button to detach the control panel.
- ② Remove the trim plate.
- ③ Stand the unit on end and insert the 2 handles between the unit and the sleeve as shown. Disengage the sleeve lock and remove the sleeve.



**Note:**  
When you stand the unit on end, be careful not to damage the fuse on the bottom.

- ④ 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.
- 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.
- ⑧ Attach the control panel detached in procedure ①.



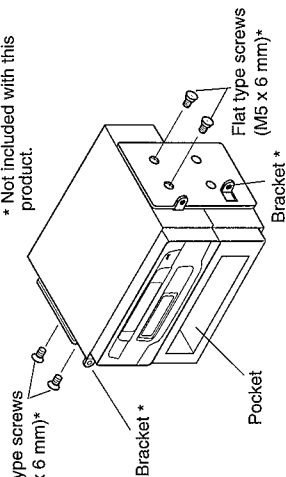
• **Follow the numbers for mounting.**  
(Refer to parts list on the right.)

• **When using the optional stay**

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

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

\* Not included with this product.



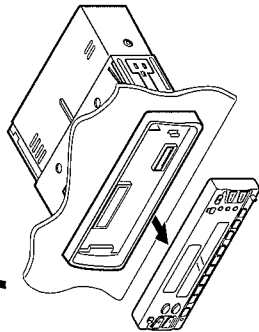
**Note:**

• When installing the unit on the mounting bracket, make sure to use the 6 mm-long screws. If longer screws are used, they could damage the unit.

**Removing the unit**

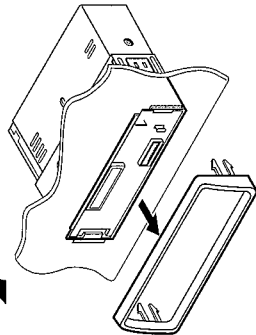
• Before removing the unit, release the rear section.

**1**



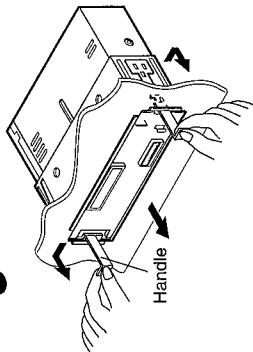
Remove the control panel.

**2**



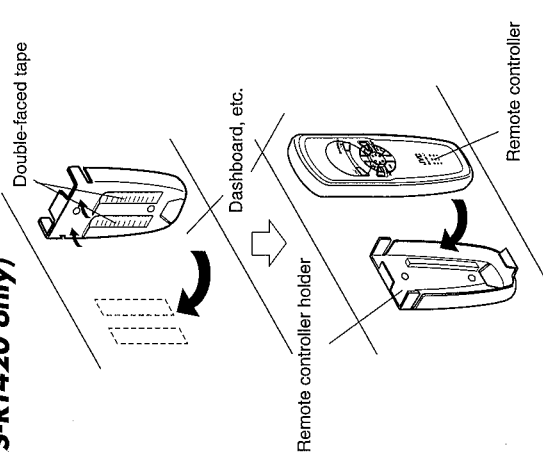
Remove the trim plate.

**3**



Insert the 2 handles into the slots, as shown. Then, while gently pulling the handles away from each other, slide out the unit. **(Be sure to keep the handles after installing it.)**

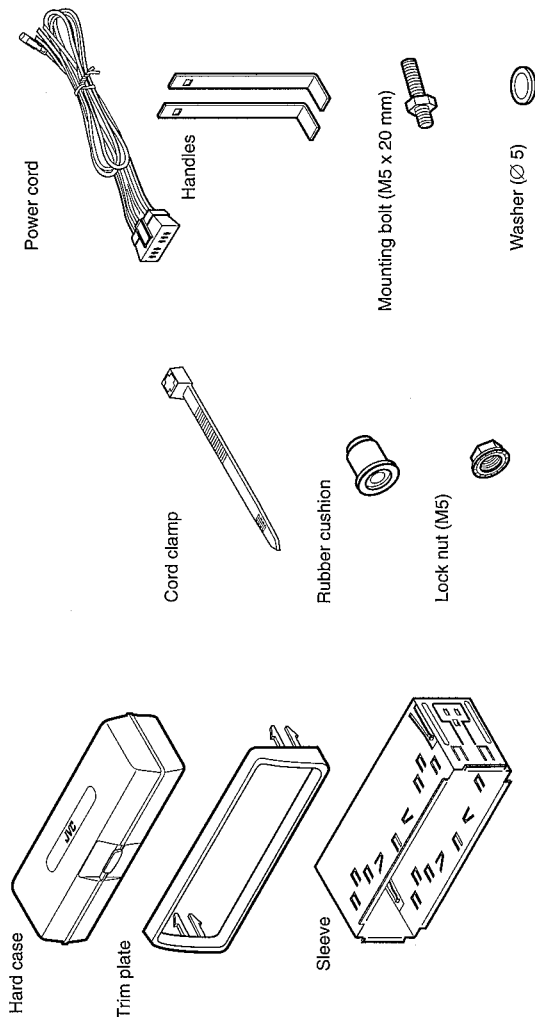
**Installation (Remote controller (KS-RT420 only))**



• Wipe clean the place where the double-faced tape is to be attached before attaching it.

**Parts list for installation and connection**

The following parts are provided with this unit. After checking them, please set them correctly.



**A.4-Speaker Connections**

**ENGLISH**  
**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.

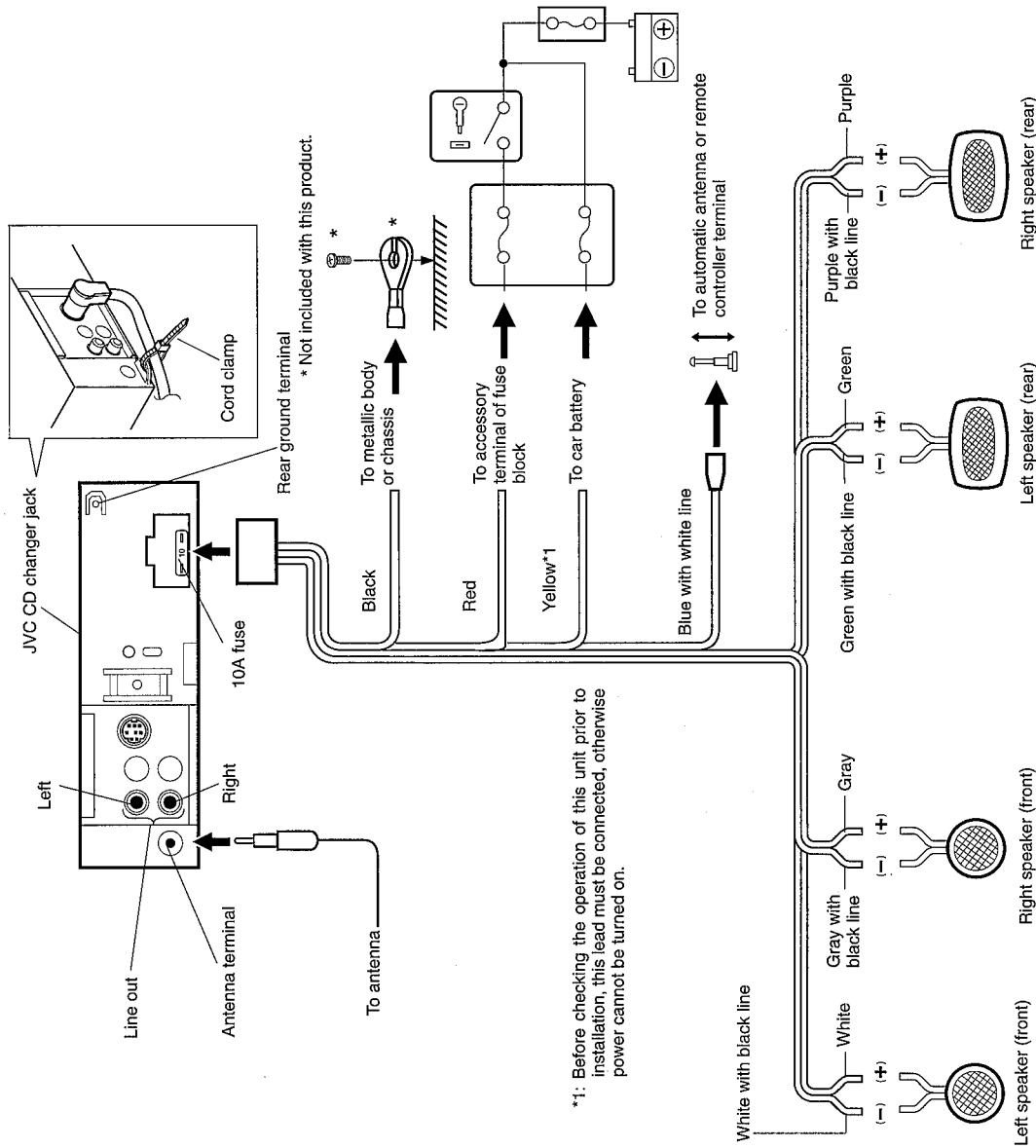
**Note:**

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.

- Replace the fuse with one of the specified rating. If the fuse blows frequently, consult your JVC car audio dealer.
- 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** (See connection diagram below.) 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.
- Maximum input of the speakers should be more than 40 watts at the rear and 40 watts at the front, with an impedance of **4 to 8 ohms**.
- **Be sure to ground this unit to the car's chassis.**

**TROUBLESHOOTING**

- **The fuse blows.**
  - \* Is the REMOTE output lead pinched in chassis, causing a short-circuit?
- **Power cannot be turned on.**
  - \* Is the yellow lead connected?
- **No sound from the speakers.**
  - \* Is the speaker output lead short-circuited?
- **Sound is distorted.**
  - \* Is the speaker output lead grounded?
  - \* Are the "-" terminals of L and R speakers grounded in common?
- **Unit becomes hot.**
  - \* Is the speaker output lead grounded?
  - \* Are the "-" terminals of L and R speakers grounded in common?



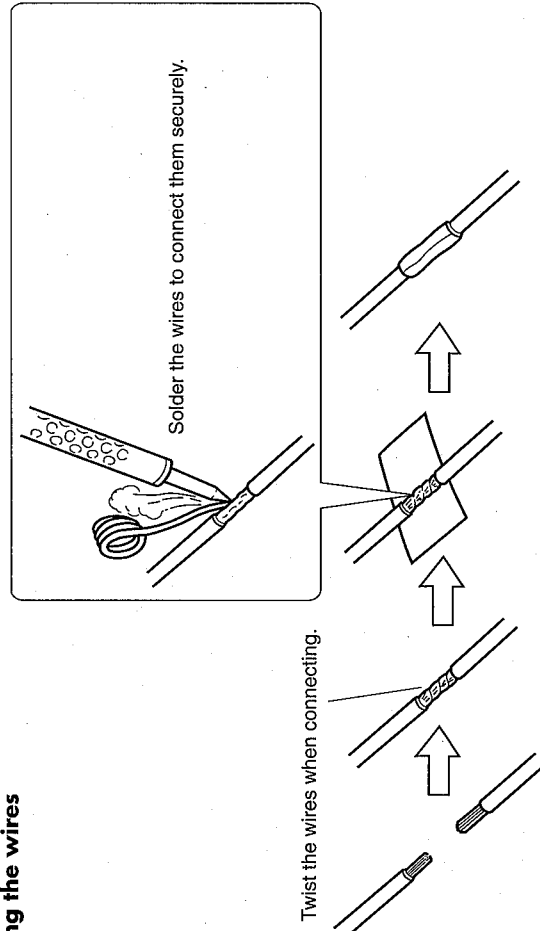
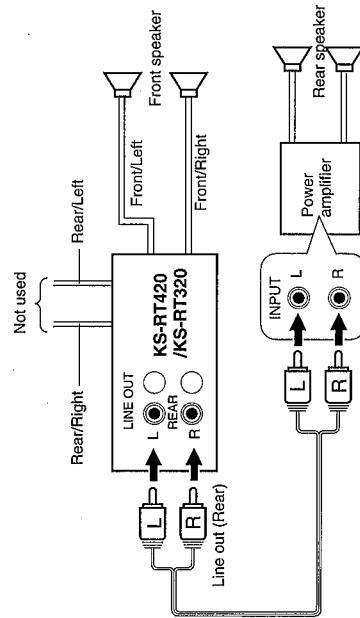


**Connecting the wires**

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

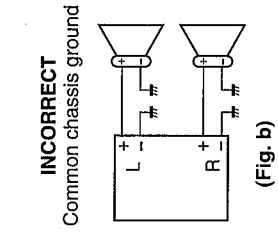
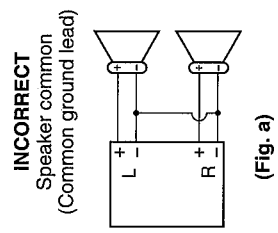
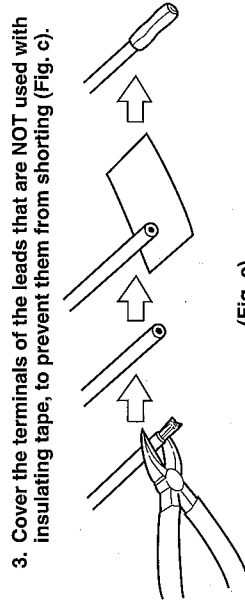
Since this unit has line-out terminals, an amplifier and other equipment can be used to upgrade your car stereo system.

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



**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 (Fig. a).
2. Do NOT connect the speaker leads to the metal body or chassis (Fig. b).



**C. Automatic Antenna Connections**

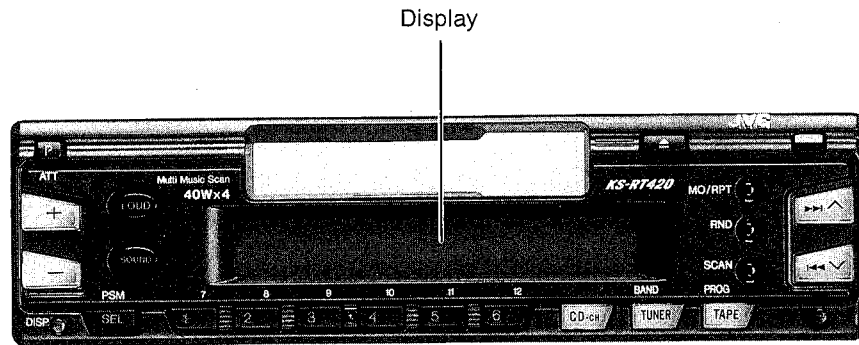
To use the automatic antenna, connect its remote lead (blue with white line) terminal. For details of installation, see the automatic antenna's Instruction Manual.

**D. Memory Back-Up Lead**

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

# 1 Location of main parts

## ◆ Control unit



## ◆ Main unit(bottom side view)

Fig. 1 - 1

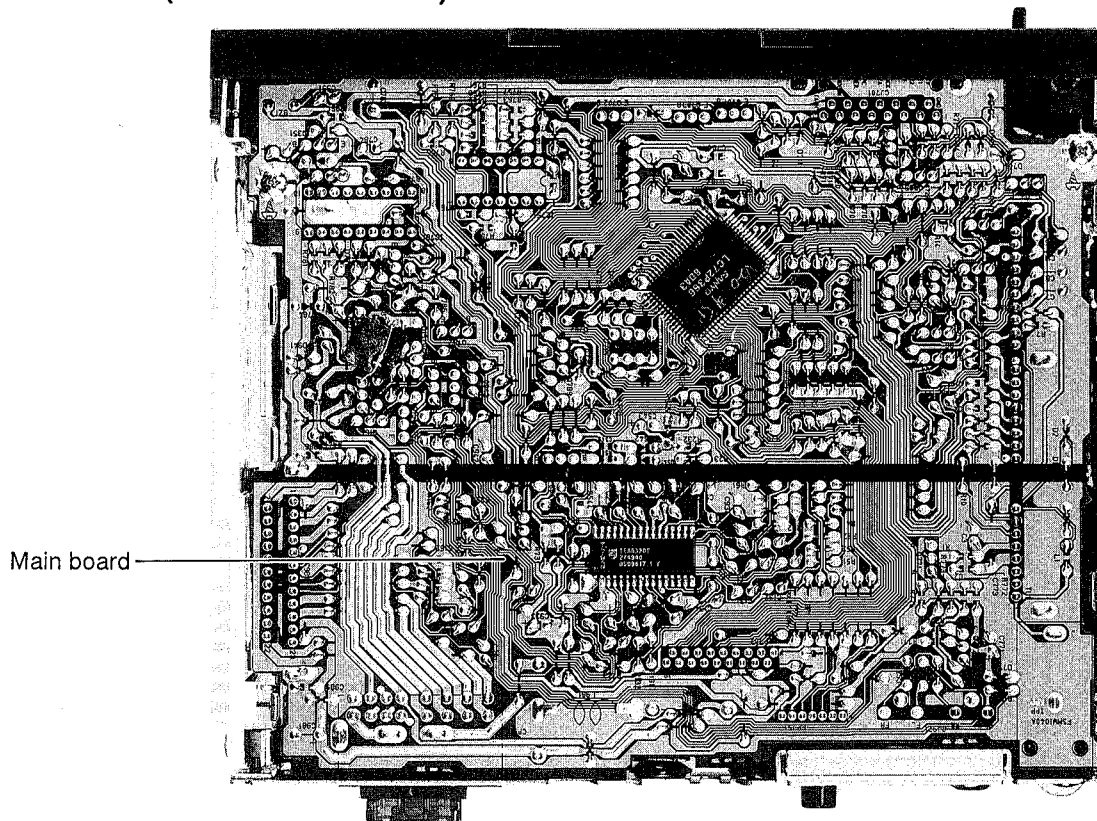


Fig. 1 - 2

## ◆ Control unit (inside view)

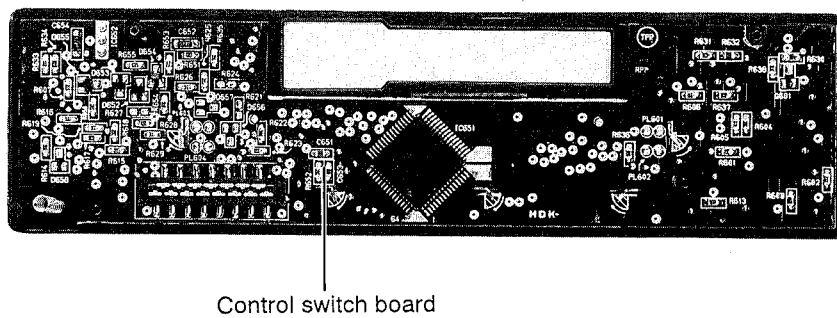


Fig. 1 - 3

◆ Main board unit (top side view)

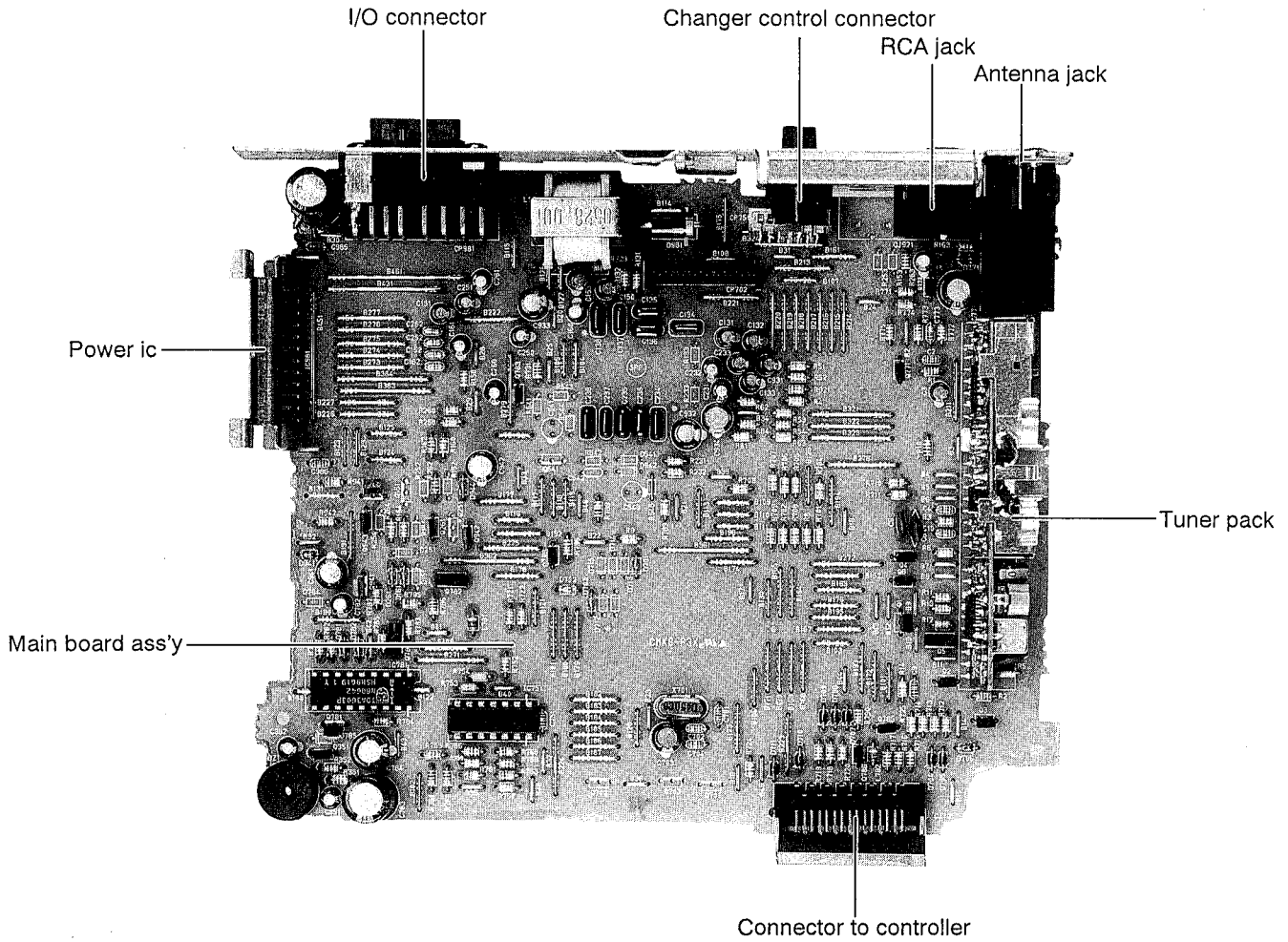


Fig. 1 - 4

◆ Cassette mechanism unit (top view)

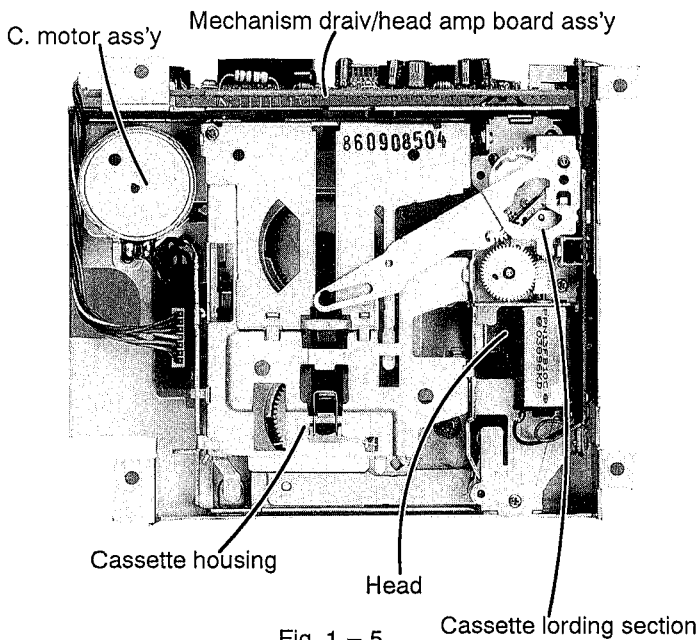


Fig. 1 - 5

◆ Cassette mechanism unit (bottom view)

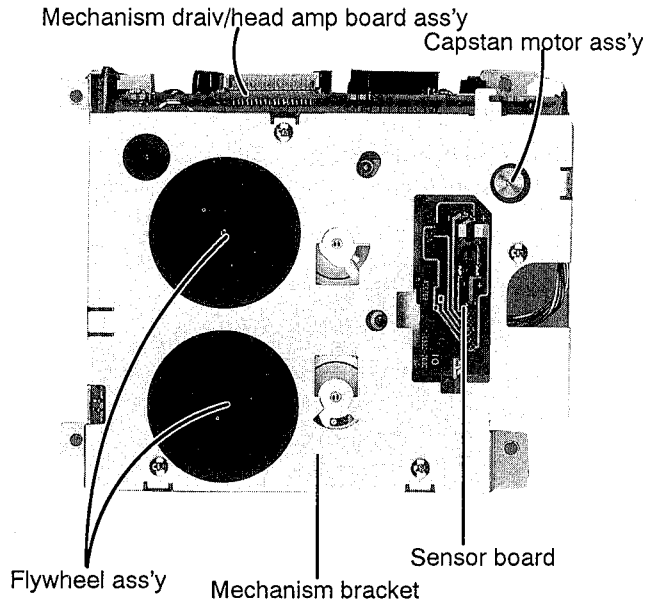


Fig. 1 - 6

## 2 Removal of main parts

### ■ Enclosure section

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

Slide the Release slide knob in the direction of arrow to detach the front panel unit.

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

Disengage 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)

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. 2-4~2-5)

1. Remove two screws ④ retaining the rear panel to the chassis.
2. Remove one screw ② retaining the IC to the heat sink.
3. Remove two 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 connector CP702 connecting the main P.C.B. assembly and mechanism assembly.
5. Remove two screws ① to remove the heat sink.

#### ◆ Removing the rear panel (See Fig. 2-4)

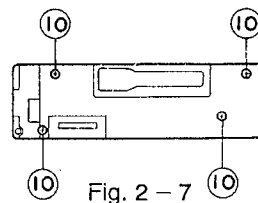
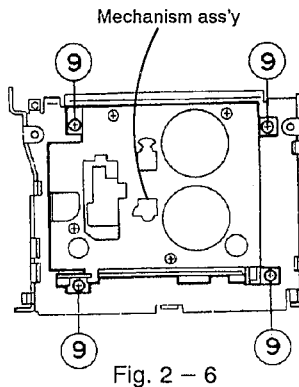
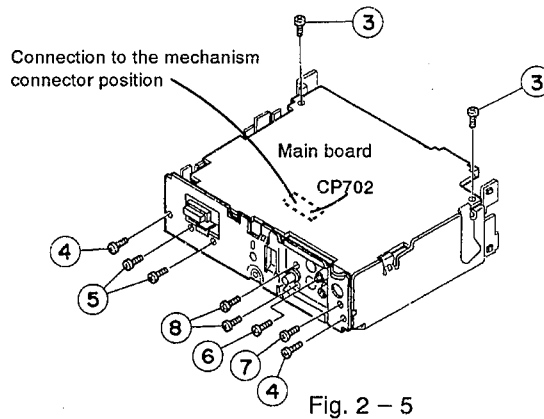
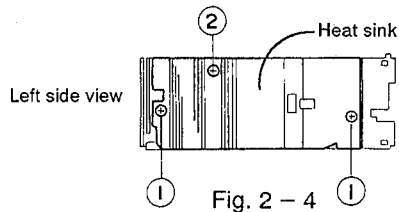
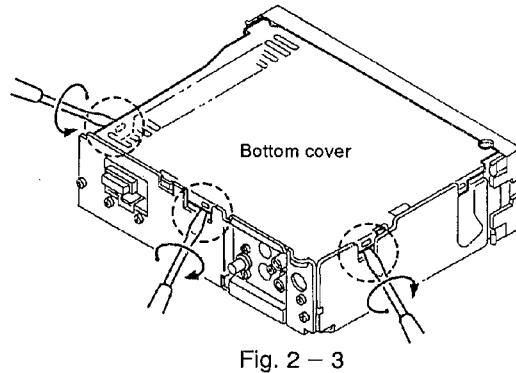
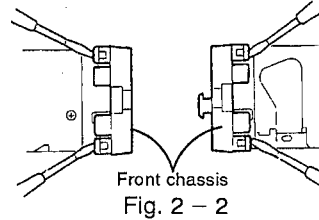
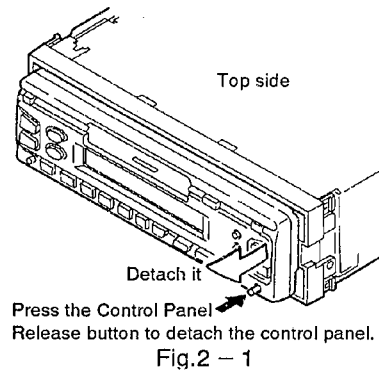
Remove six screws retaining the jacks or the like.  
 Remove two screws ⑤ to remove the 16-pin jack.  
 Remove one screw ⑥ to remove the line-out jack.  
 Remove one screw ⑦ to remove the antenna jack.  
 Remove two screws ⑧ to remove the changer controller jack.

#### ◆ Mechanism assembly (See Fig. 2-5)

Remove four mechanism mounting screws ⑨ retaining the top cover.

#### ◆ Front panel unit. (See Fig. 2-5)

Remove four screws ⑩ retaining the rear cover.



## ■ Mechanism section

### ◆ Removing the head relay PCB

1. Desolder the lead wires of the loading motor at the 2 positions shown (red, black). (Fig. 2-8)
2. Desolder the lead wires of the head at the 3 positions shown (red, yellow, black). (Fig. 2-8)
3. Remove the three screws ① securing the head relay PCB. (Fig. 2-8)
4. Shift the interlocking section ② securing the head relay PCB in the direction shown by the arrow A to remove the PCB. (Fig. 2-8)

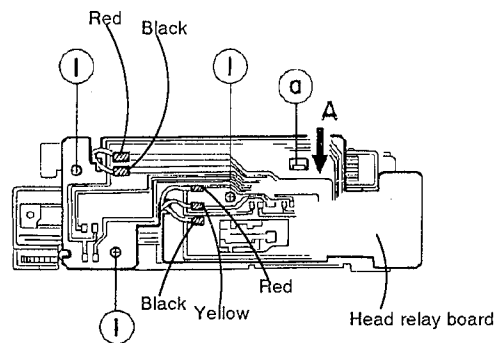


Fig. 2 - 8

### ◆ Removing the load arm assembly

1. Using tweezers, detach the Mylar washer ③ securing the load arm assembly and pull out the load arm assembly. (Fig. 2-9)
- Note: When reassembling, be sure to use a new Mylar washer.
2. Shift the load arm assembly counterclockwise. (Fig. 2-9)
  3. Remove the load arm assembly from the catch (K). (Fig. 2-9)

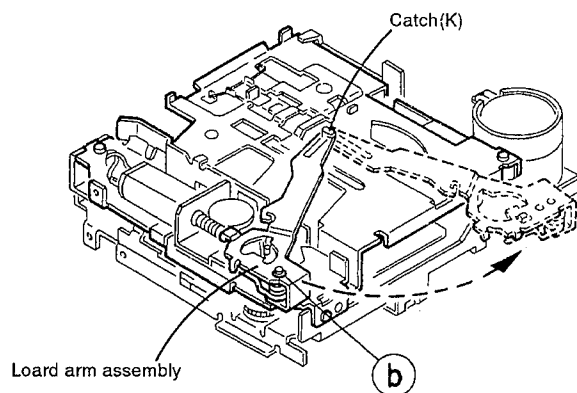


Fig. 2 - 9

### ◆ Removing the cassette holder and holder arm assembly

1. Remove the head relay PCB.
2. Remove the load arm assembly.
3. Apply DC 6 V to the lead wire of the loading motor assembly and turn the load gear assembly to the position shown in Fig. 2-10.
4. Remove the screw ② securing the cassette holder and holder arm assembly. (Fig. 2-10)
5. Shift the cassette holder and the holder arm assembly in the direction shown by the arrow B and remove them from the interlocking section ③ of the sub chassis assembly. (Fig. 2-10)

### ◆ Removing the sub chassis assembly

1. Remove the head relay PCB.
2. Remove the load arm assembly.
3. Remove the cassette holder and holder arm assembly.
4. Remove the two screws ③ and ④ securing the sub chassis assembly. (Fig. 2-10)

Note: When removing the sub chassis assembly, the mode gear may become detached. In this case, set it back to the original position.

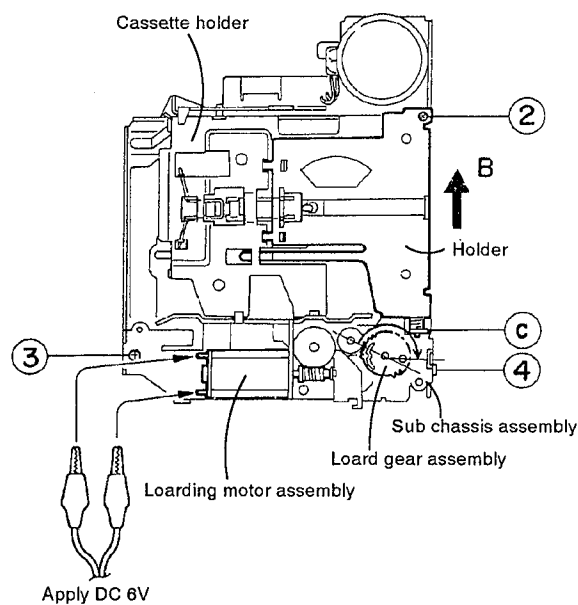


Fig. 2 - 10

◆ **Removing the play head** (Fig. 2-11)

1. Remove the head relay PCB.
2. Remove the load arm assembly.
3. Remove the cassette holder and holder arm assembly.
4. Remove the sub chassis assembly.
5. Disengage the spring holding the play head down.
6. Remove the two screws ⑤ securing the play head.

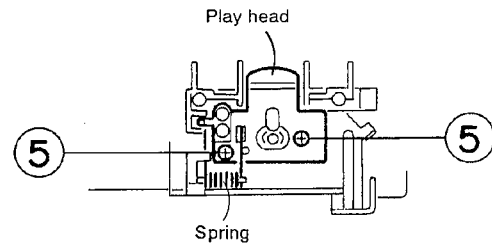


Fig. 2 – 11

◆ **Removing the pinch roller assembly**

(Figs. 2-12 and 13)

1. Remove the head amp PCB.
2. Remove the load arm assembly.
3. Remove the cassette holder and holder arm assembly.
4. Remove the sub chassis assembly.
5. Detach the Mylar washers ④ at the two positions securing the right and left pinch roller assemblies.

Note: When reassembling, be sure to use new Mylar washers. Also, make sure that grease is not adhering to the pinch rollers.

6. Pull out the pinch rollers.

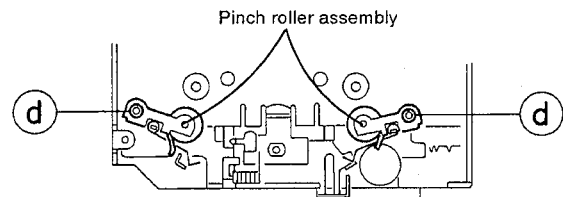


Fig. 2 – 12

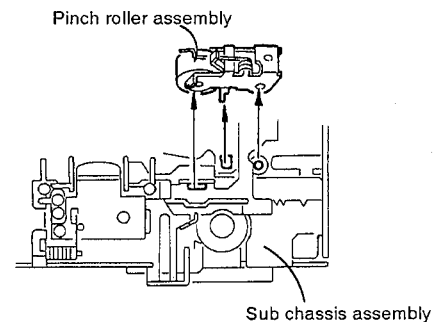


Fig. 2 – 13

◆ **Removing the reel disk assembly** (Fig. 2-14)

1. Remove the head amp PCB.
2. Remove the load arm assembly.
3. Remove the cassette holder and holder arm assembly.
4. Remove the sub chassis assembly.
5. Detach the Mylar washer ⑥ from the tip by first pressing down the reel feather to expose it.

Note: When reassembling, be sure to use a new Mylar washer.

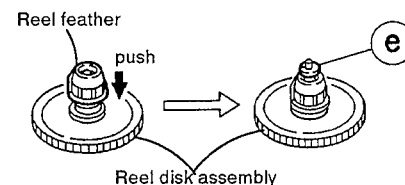


Fig. 2 – 14

### ◆ Removing the head plate (Figs. 2-15 and 16)

1. Remove the head amp PCB.
2. Remove the load arm assembly.
3. Remove the cassette holder and holder arm assembly.
4. Remove the sub chassis assembly.
5. Remove the right and left pinch roller assembly.
6. From the rear of the head plate, detach the Mylar washer (f) and the washer pressing the forward/reverse plate down. (Fig. 2-15)
7. Remove the screw (6) fixing the metal detection lever and removal spring as shown in Fig. 2-15.
8. Remove the head plate.
9. Pull out the mode gear. (Fig. 2-16)

Note: When installing the mode gear, set it to the arrow mark.

### ◆ Removing the flywheel assembly (Fig. 2-16)

1. Remove the head relay PCB.
2. Remove the load arm assembly.
3. Remove the cassette holder and the holder arm assembly.
4. Remove the sub chassis assembly.
5. Remove the head plate.
6. Disengage the main belt from the flywheel assembly. (Fig. 2-15)
7. Remove E washers (g) at the two positions which secure the capstan shaft away from the surface. (Fig. 2-16)
8. Pull out the flywheel assembly from the rear.

### ◆ Removing the reel disk PCB

1. Remove the head relay PCB.
2. Remove the load arm assembly.
3. Remove the cassette holder and the holder arm assembly.
4. Remove the sub chassis assembly.
5. Straighten the curved tab (h) securing the reel disk PCB. (Fig. 2-17)
6. Remove the two screws (7) fixing the reel disc PCB. (Fig. 2-17)
7. Remove the reel disk PCB.

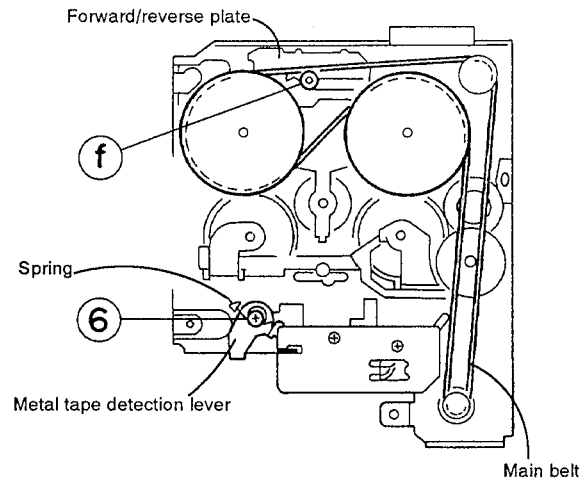


Fig. 2 - 15

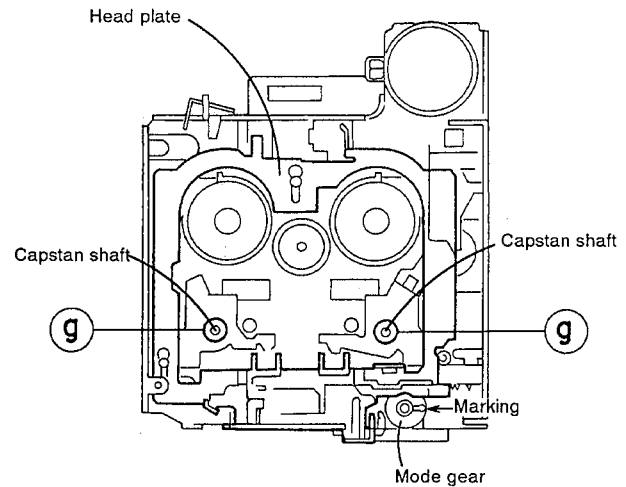


Fig. 2 - 16

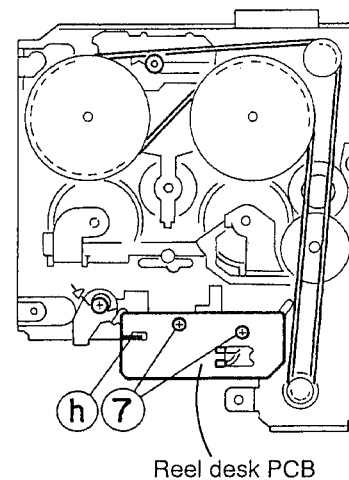


Fig. 2 - 17

◆ **Removing the loading motor assembly**

1. Remove the head relay assembly.
  2. Remove the load arm assembly.
  3. Remove the Mylar washer ① fixing the worm gear.  
(Fig.2-18)
- Note: When reassembling, be sure to use a new Mylar washer.
4. Remove the screw ⑧ fixing the loading motor assembly.  
(Fig. 2-18)
  5. Remove the two screws ⑨ fixing the loading motor assembly.  
(Fig. 2-18)

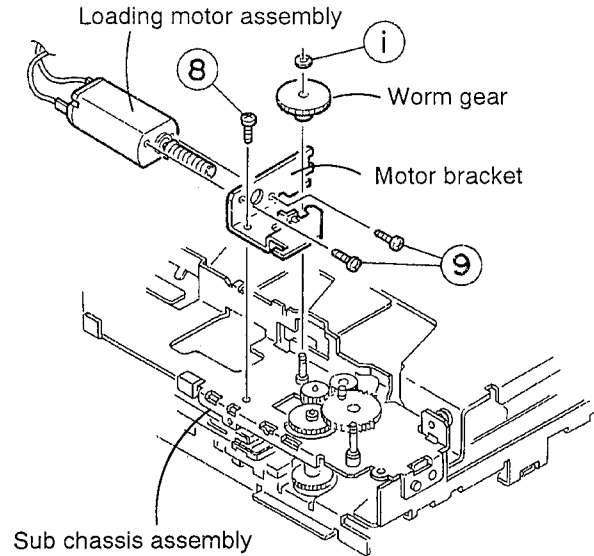


Fig. 2 - 18

● **(Procedures for reassembling)**

1. Insert the mode gear into the sub chassis assembly.
  2. Install the sub chassis assembly and secure it with the two screws ③ and ④ as shown in (Fig. 2-19).
- Note: The set arm assembly and the mode gear should be positioned as shown in Fig. 2-19.

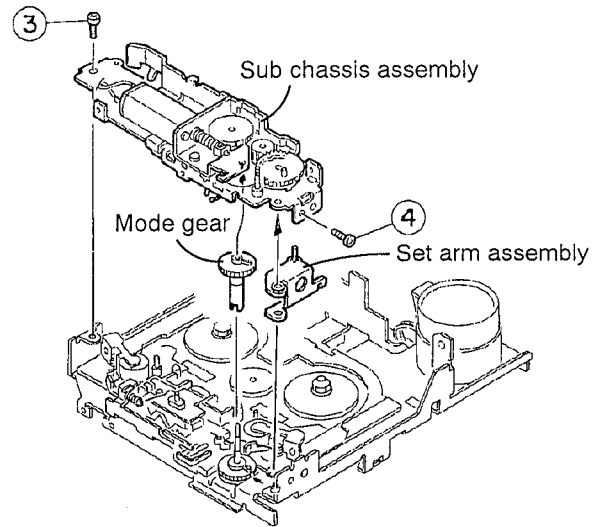


Fig. 2 - 19

3. Attach the cassette holder as shown in Fig. 2-20. In this case, first pass the tab of the section ① through the mechanism ②, then attach the cassette holder in the direction shown by the arrow.

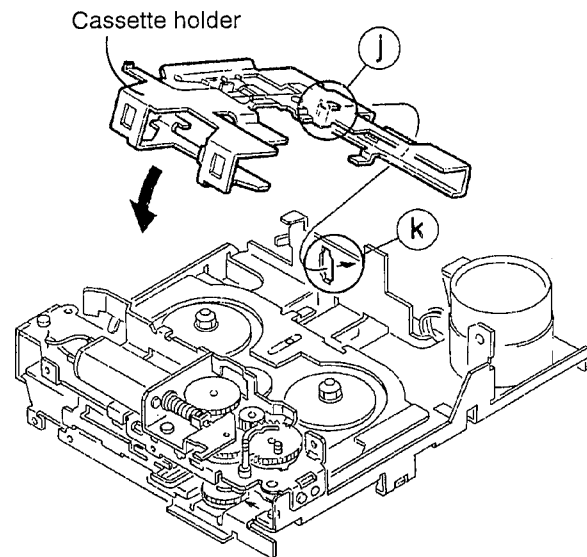


Fig. 2 - 20



4. Set the catch (K) to the holder arm assembly as shown in Fig. 2-21.

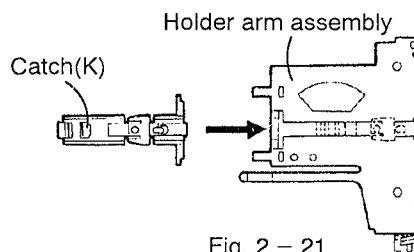


Fig. 2 - 21

5. While attaching the holder arm assembly to the cassette holder, insert the shaft of the holder arm assembly into the interlocking section © of the sub chassis assembly as shown in Fig. 2-22.

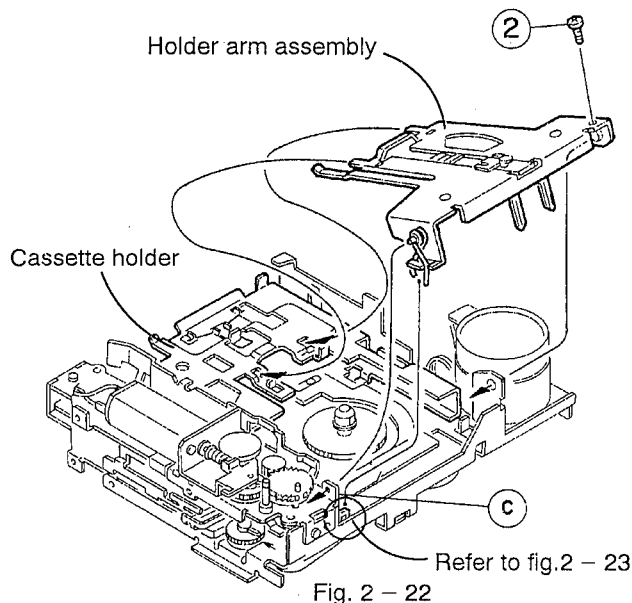


Fig. 2 - 22

6. Install the spring attached to the holder arm assembly shaft over the set arm assembly as shown in Fig. 2-23.

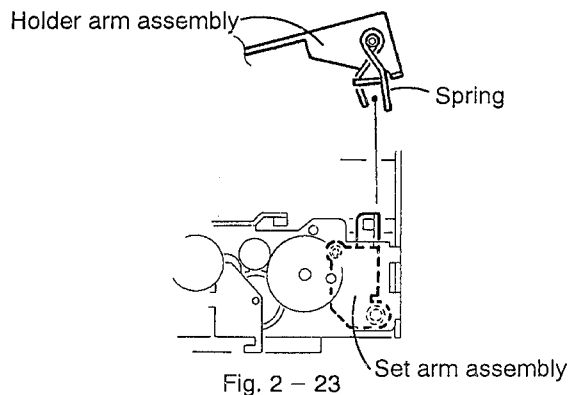


Fig. 2 - 23

7. After the holder arm assembly is installed, secure it with the screw ②. (Fig. 2-22)

8. After the installation, apply DC 6 V to the lead wires of the loading motor assembly to locate the load gear assembly as shown in Fig. 2-24.

9. Install the load arm assembly.

10. Install the head relay PCB.

Note: Install it so that the side switch lever of the head relay PCB is set in the PCB stay hook of the sub chassis assembly. (Fig. 2-25a)

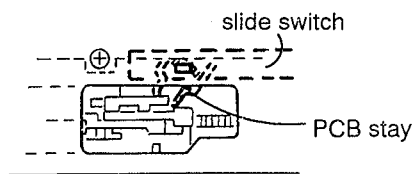


Fig. 2 - 25a

11. Solder the loading motor and head lead wires to the head relay PCB, respectively. (Fig. 2-25)

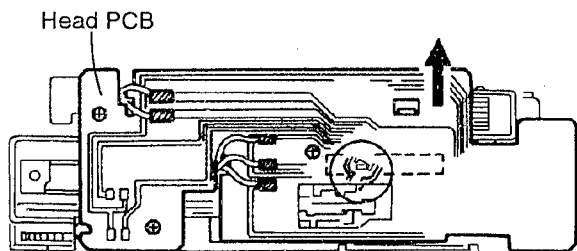


Fig. 2 - 25

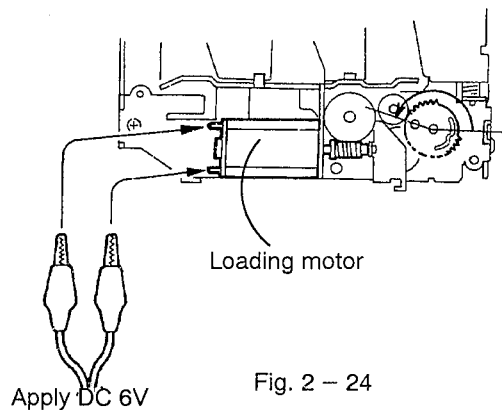


Fig. 2 - 24

### 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 mater
- Torqu testing cassette gauge  
CTG – N (mechanical adjusting)  
TW – 2111A (FWD play)  
TW – 2121A (REV play)
- Standard tape  
VT712 or VTT712(tape speed,wow&flutter adj.)  
VT724 or VTT724(reference level )  
VT738 or VTT736(playback frequency response )  
VT721 or VTT721 (output level)  
VT703 or VTT703 (azimuth) (10kHz part only)

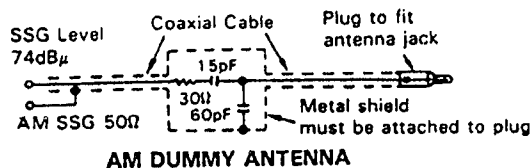
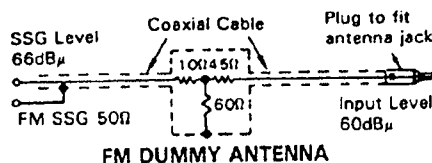
#### ■ Condition for measurement

- Power Supply ..... DC14.4V  
(Reduced Voltage:10.5V)
- Load ..... 4 Ω  
(4- speakers connection)
- BASS/TRE, FADER ..... Indication 0
- Main volume ..... Position with an output level of 2V during VTT721 playback

#### ■ 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

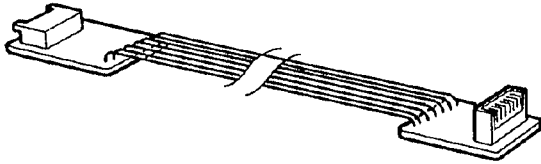
## ■ Information for using a Car Stereo service jig (for adjustment and checking)

- ◆ For 1995 and 1996, we're advancing efforts to make our extension cords common for all Car Stereo products.

Please use this type of extension cord as follows.

- ◆ 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- KSRT002- 18P (18 pin extension cord)

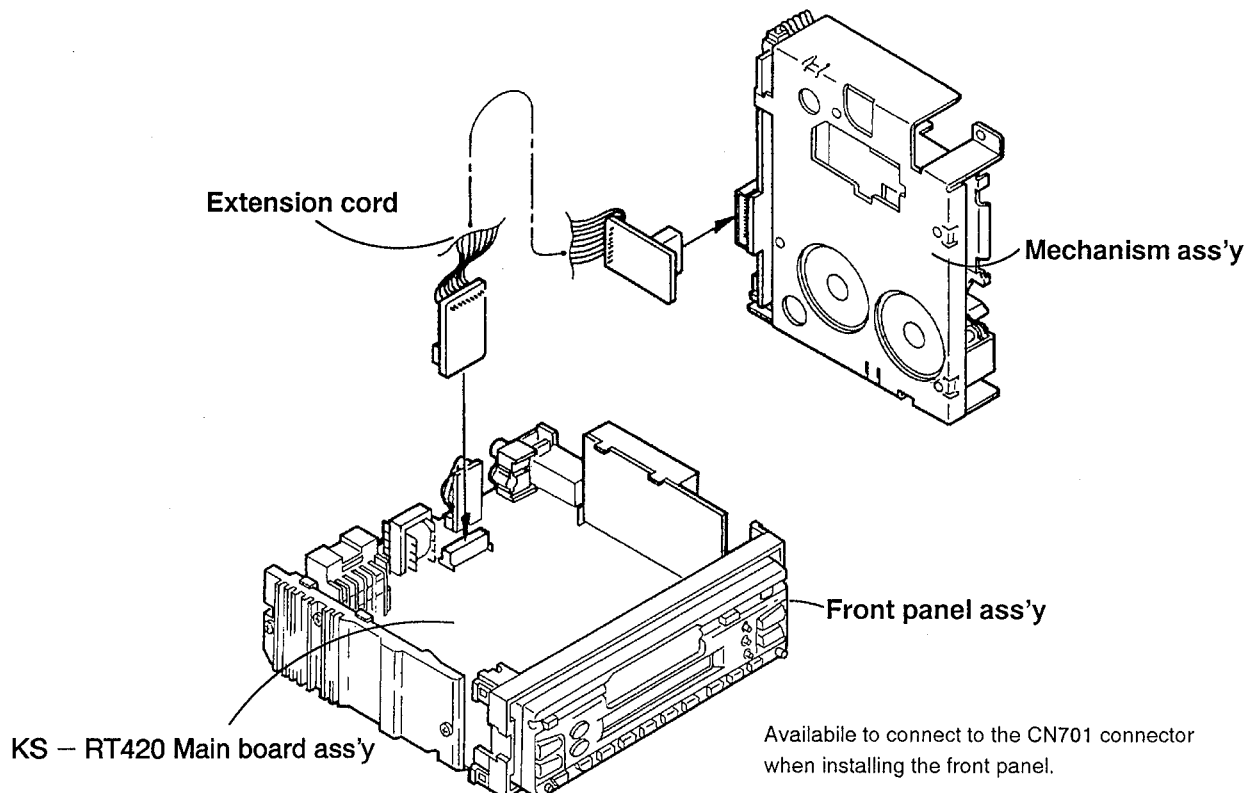
For connection between mechanism assembly and main PCB assembly.

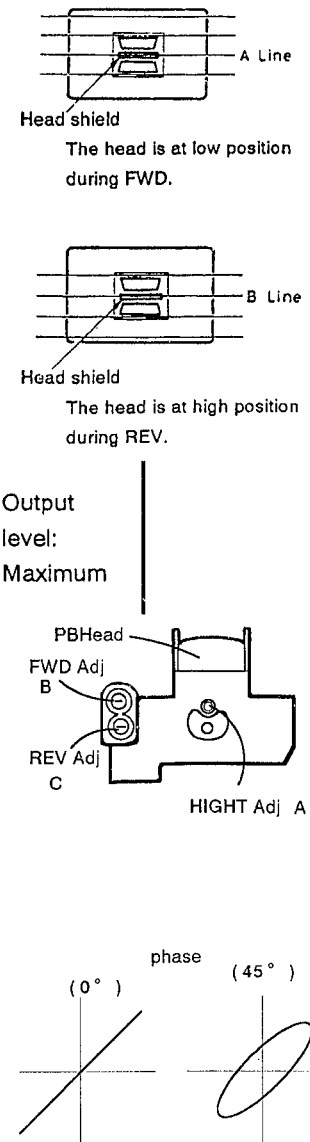
Check for mechanism-driving section such as motor, etc.

- ◆ Disassembly method (Refer to method to remove main parts)

1. Remove the bottom cover.
2. Remove the front panel assembly.
3. Remove the top cover. (Remove the screws at each side of heat sink and rear panel.)
4. Install the front panel (whose assembly was removed in step 2) to the main unit.
5. Confirm that current is being carried by connecting an extension cord jig.

- ◆ Connection diagram



Item	Conditions	Adjustment and Confirmation methods	S.Values	Adjust
<p>1. Head azimuth adjustment</p>	<p>Test tape: SCC - 1659 VT703(10kHz)</p>	<p>◆ Head height adjustment ※ Adjust the azimuth directly. When you adjust the height using a mirror tape, remove the cassette housing from the mechanism chassis. After installing the cassette housing, perform the azimuth adjustment.</p> <ol style="list-style-type: none"> <li>1. Load the SCC-1659 mirror tape. Adjust with height adjustment screw A and azimuth adjustment screw B so that line A of the mirror tape runs in the center between Lch and Rch in the reverse play mode.</li> <li>2. After switching from REV to FWD then to REV, check that the head position set in procedure 1 is not changed. (If the position has shifted, adjust again and check.)</li> <li>3. Adjust with azimuth adjustment screw B so that line B of the mirror tape runs in the center between Lch and Rch in the forward play mode.</li> </ol> <p>◆ Head azimuth adjustment</p> <ol style="list-style-type: none"> <li>1. Load VTT724 (VT724) (1 kHz) and play it back in the reverse play mode. Set the Rch output level to max.</li> <li>2. Load VTT703 (VT703) (10 kHz) and play it back in the forward play mode. Adjust the Rch and Lch output levels to max. with azimuth adjustment screw B. In this case, the phase difference should be within 45°</li> <li>3. Engage the reverse mode and adjust the output level to max. with azimuth adjustment screw C. (The phase difference should be 45° or more.)</li> <li>4. When switching between forward and reverse modes, the difference between channels should be within 3 dB. (Between FWD L and R, REV L and R)</li> <li>5. When VTT721 (VT721) (315 Hz) is played back, the level difference between channels should be within 1.5 dB.</li> </ol>	<p>S.Values</p>	<p>Adjust</p>  <p>The diagrams illustrate the head position during forward (FWD) and reverse (REV) play. The top diagram shows the head at a low position during FWD, with line A of the mirror tape centered between Lch and Rch. The middle diagram shows the head at a high position during REV, with line B centered. The bottom diagram is a schematic of the output level adjustment circuit, showing the PBHead, FWD Adj B, REV Adj C, and HIGHT Adj A. Below the schematic are two phase diagrams: one for 0° showing a straight line, and one for 45° showing an oval.</p>
<p>2. Tape speed and wow flutter confirmation</p>	<p>Test tape:VTT712 (3kHz)</p>	<ol style="list-style-type: none"> <li>1. Check to see if the reading of the F. counter/wow flutter meter is within 3015~3045(FWD/REV), and less than 0.35% (JIS RMS).</li> <li>2. In case of out of specification, adjust the motor with a built-in volume resistor.</li> </ol>	<p>Tape speed: 3015 ~3045Hz Wow flutter:less than0.35%</p>	<p>Built-in volume resistor</p>
<p>3. Playback frequency response confirmation</p>	<p>Test tape:VTT724 (1kHz) VTT739 (63Hz/1kHz/10kHz)</p>	<ol style="list-style-type: none"> <li>1. Play test tape VTT724, and set the volume position at 2 V</li> <li>2. Play test tape VTT739 and confirm 1kHz/10kHz: - 1 ± 3dB, 1kHz/63Hz: 0 ± 3dB.</li> <li>3. When 10 kHz is out of specification, it will be necessary to read adjust the azimuth</li> </ol>	<p>Speaker out 1kHz/63Hz :0 ± 3dB 1kHz/10kHz : - 1 ± 3dB</p>	

# 4 Wiring connections

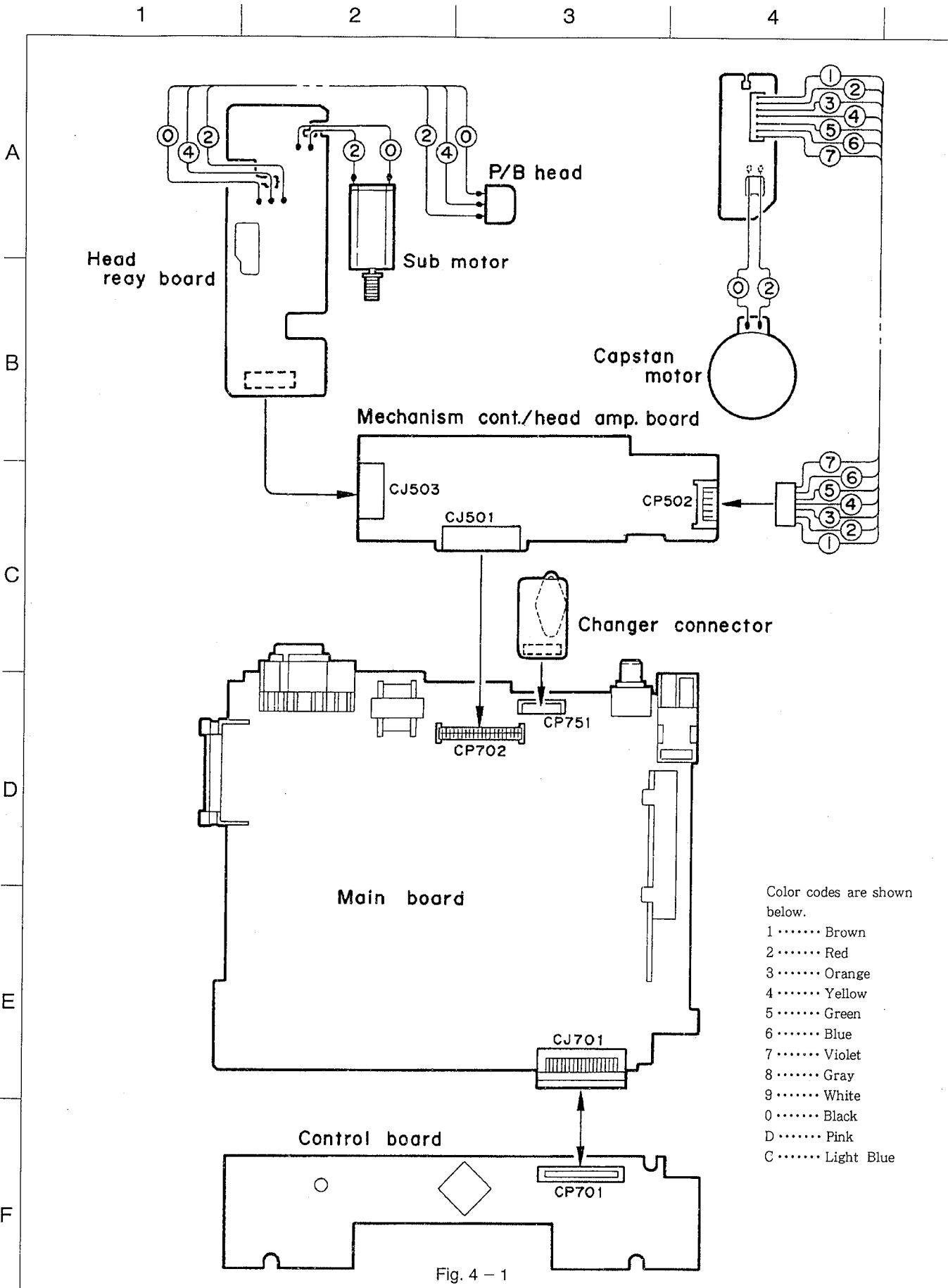


Fig. 4 - 1

# 5 Block diagram ■ Integrated circuits

## ◆ IC931 (TEA6320T) E.volume

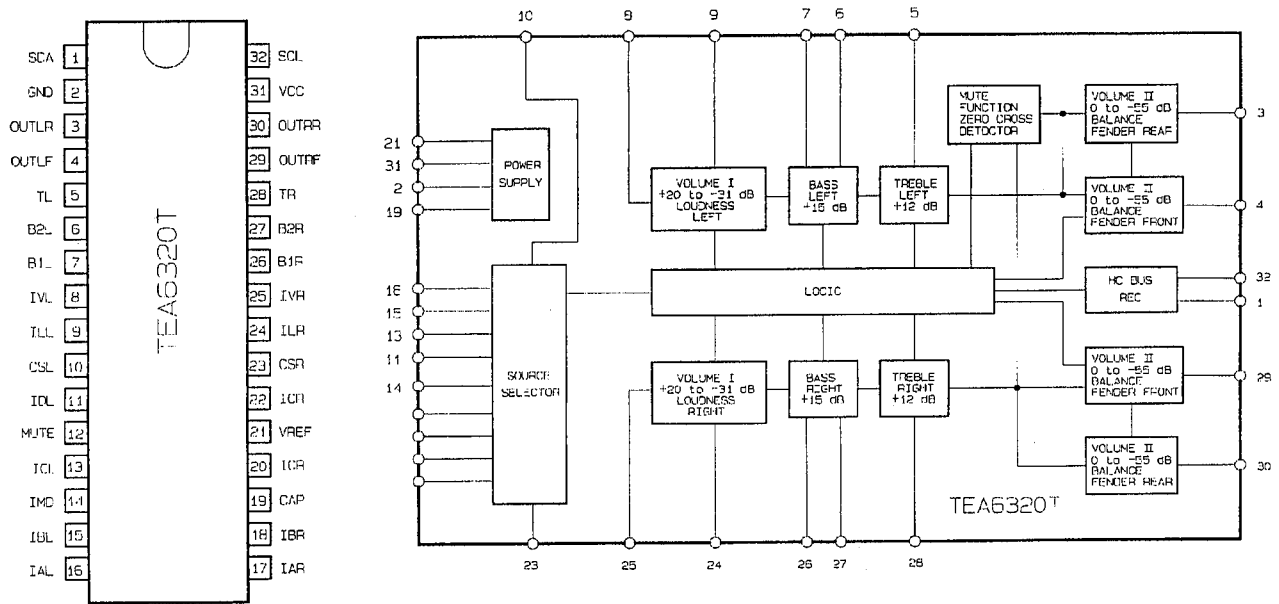


Fig. 5 - 1

## ◆ IC651 (LC75823E) LCD driver

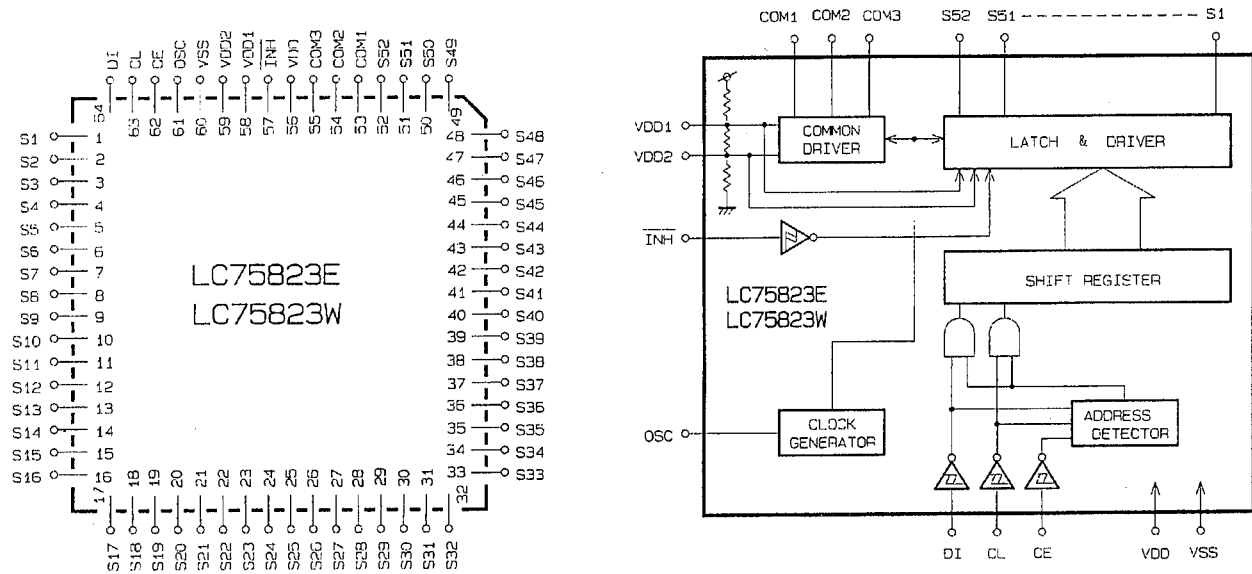


Fig. 5 - 2

◆ IC781(TDA3603P)

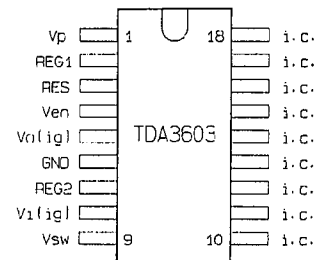
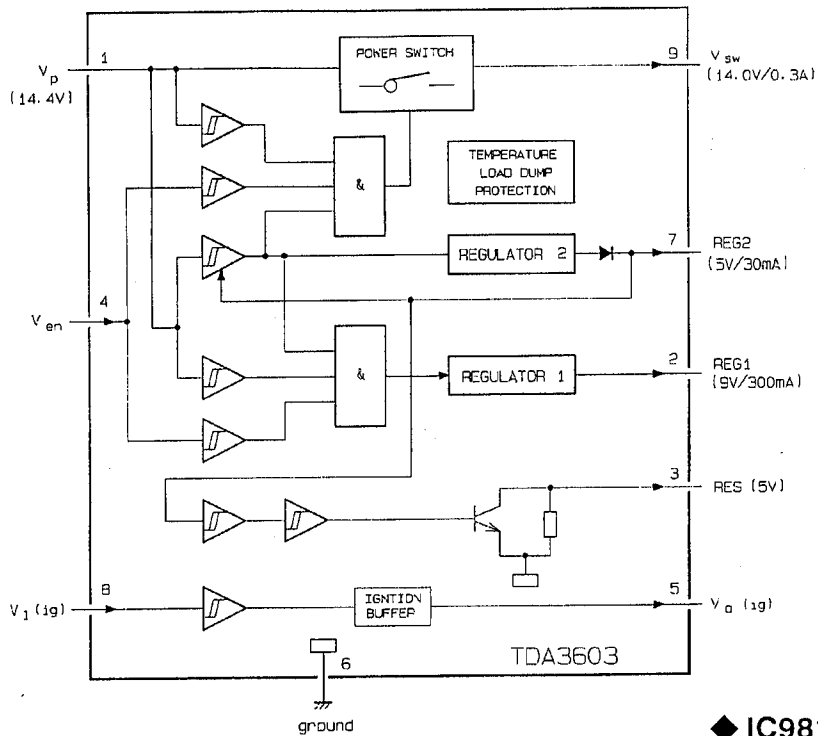


Fig. 5 - 3

◆ IC751(HD74HC126P)

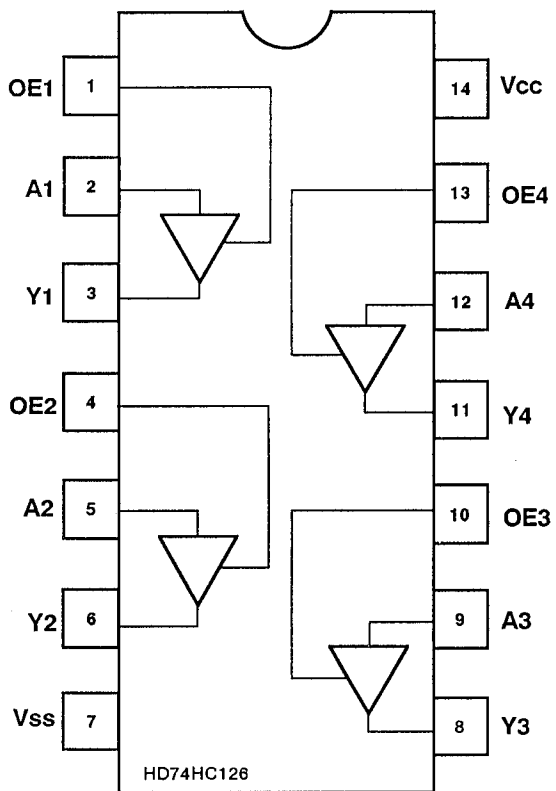


Fig. 5 - 4

◆ IC981(TDA8567Q) Power amp.

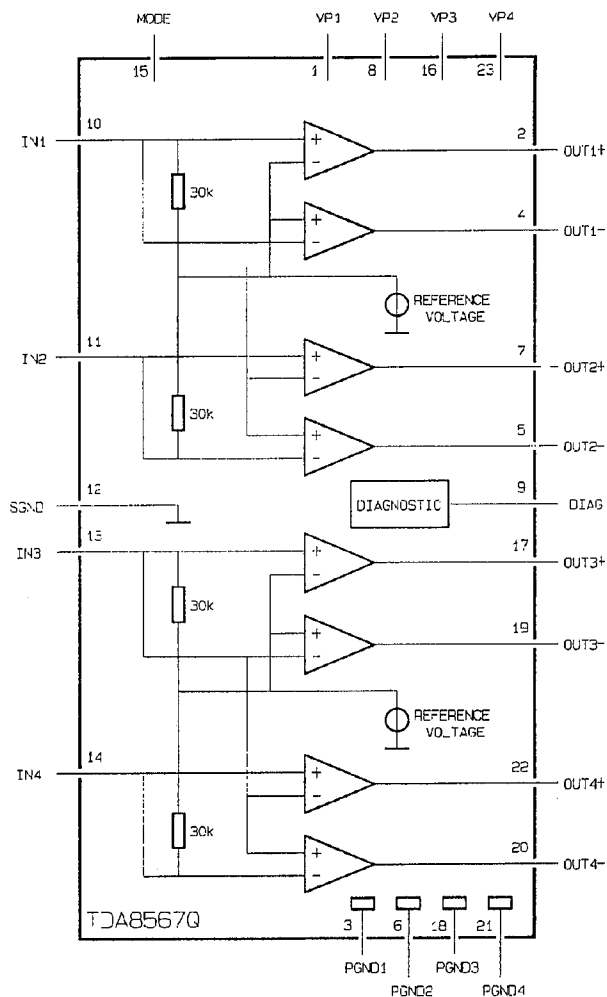


Fig. 5 - 5

■ Circuit diagram

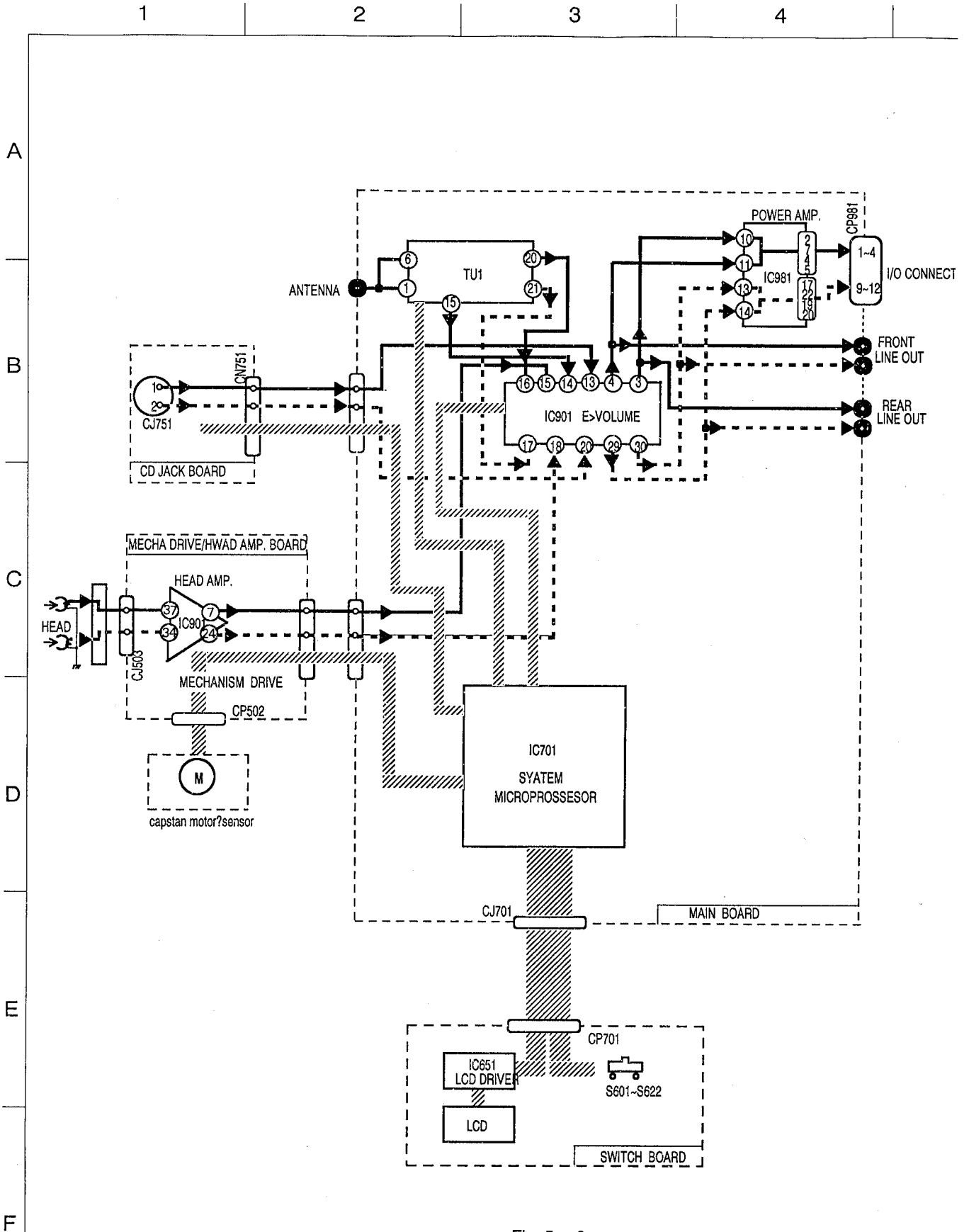


Fig. 5 - 6



# 6 Standard schematic diagram

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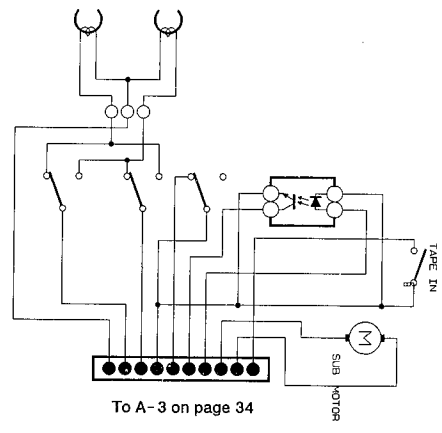
4

## ■ Cassette mechanism circuit

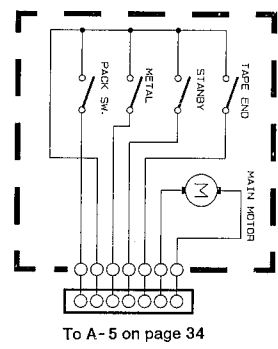
A

B

C



D



E

F

Fig. 6-1

**Cassette amplifier circuit**

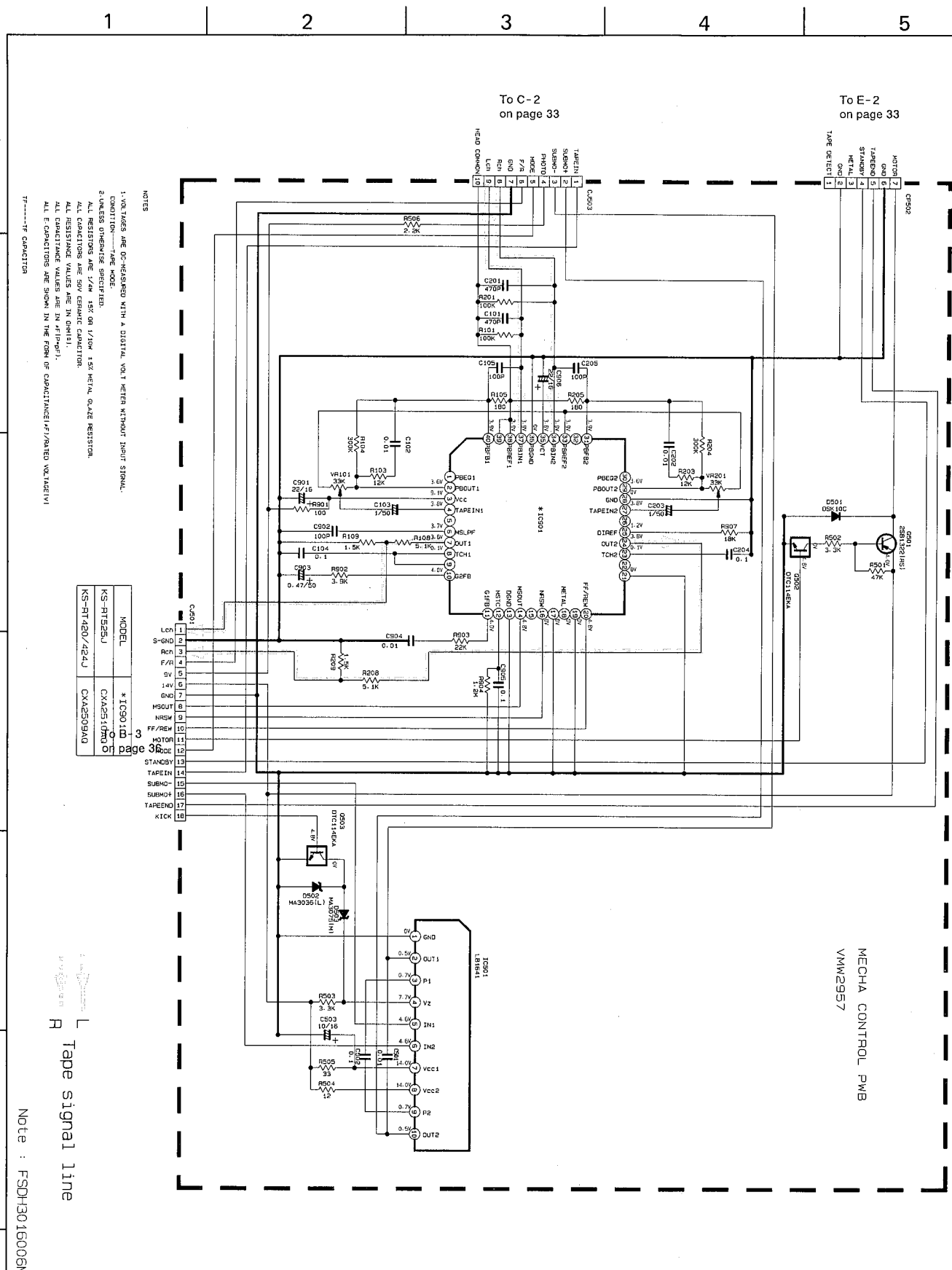
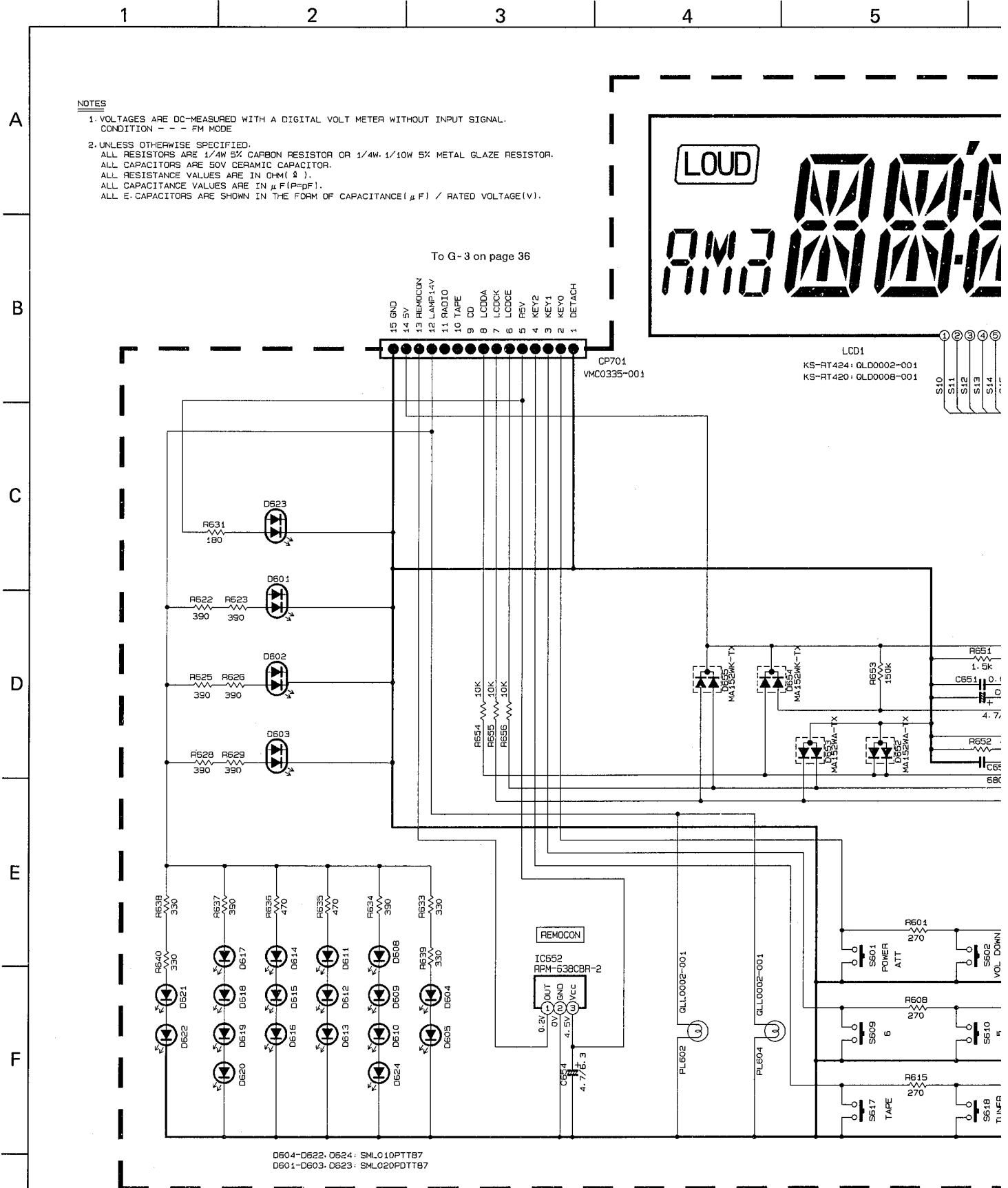


Fig. 6-2



# LCD driver/key switch circuit



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

To G-3 on page 36

D604-D622, D624: SML010PTT87  
 D601-D603, D623: SML020PDTT87

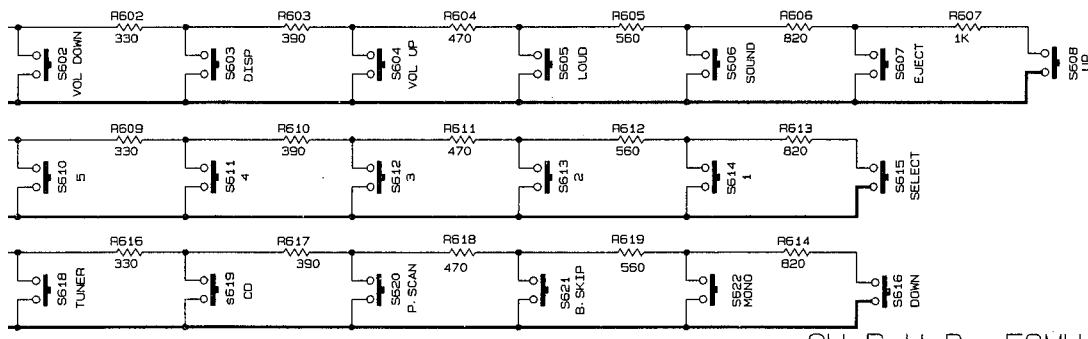
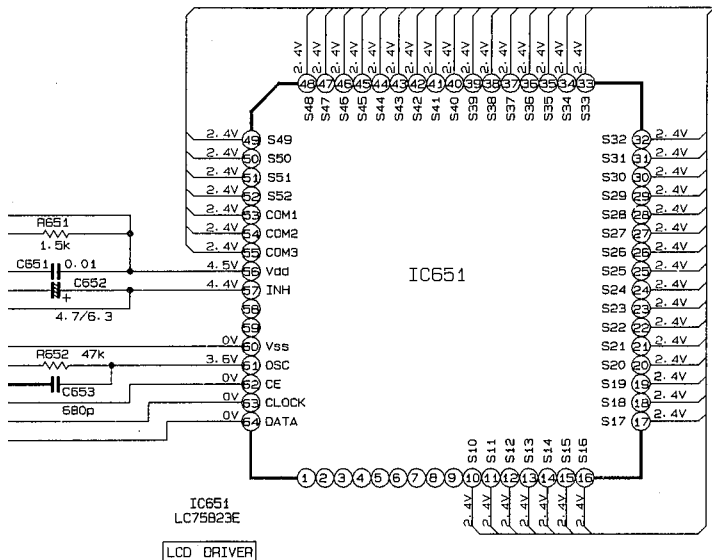
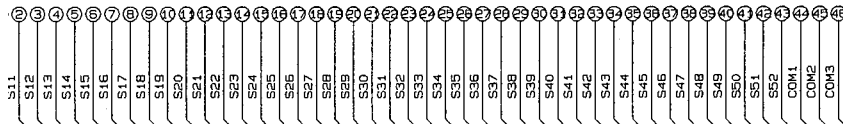
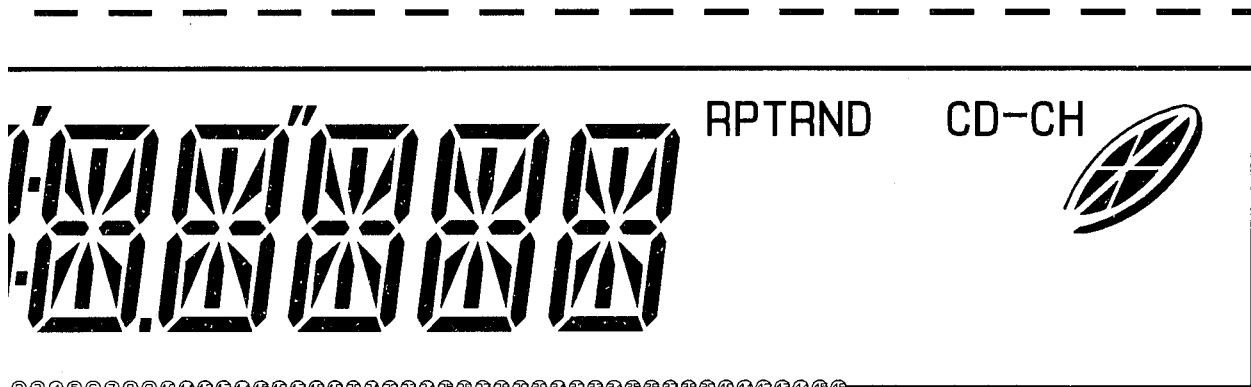
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9

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S601-S622 0504B11-V09

SW. P. W. B. FSMW1039

fig. 6-3

Radio/system control circuit

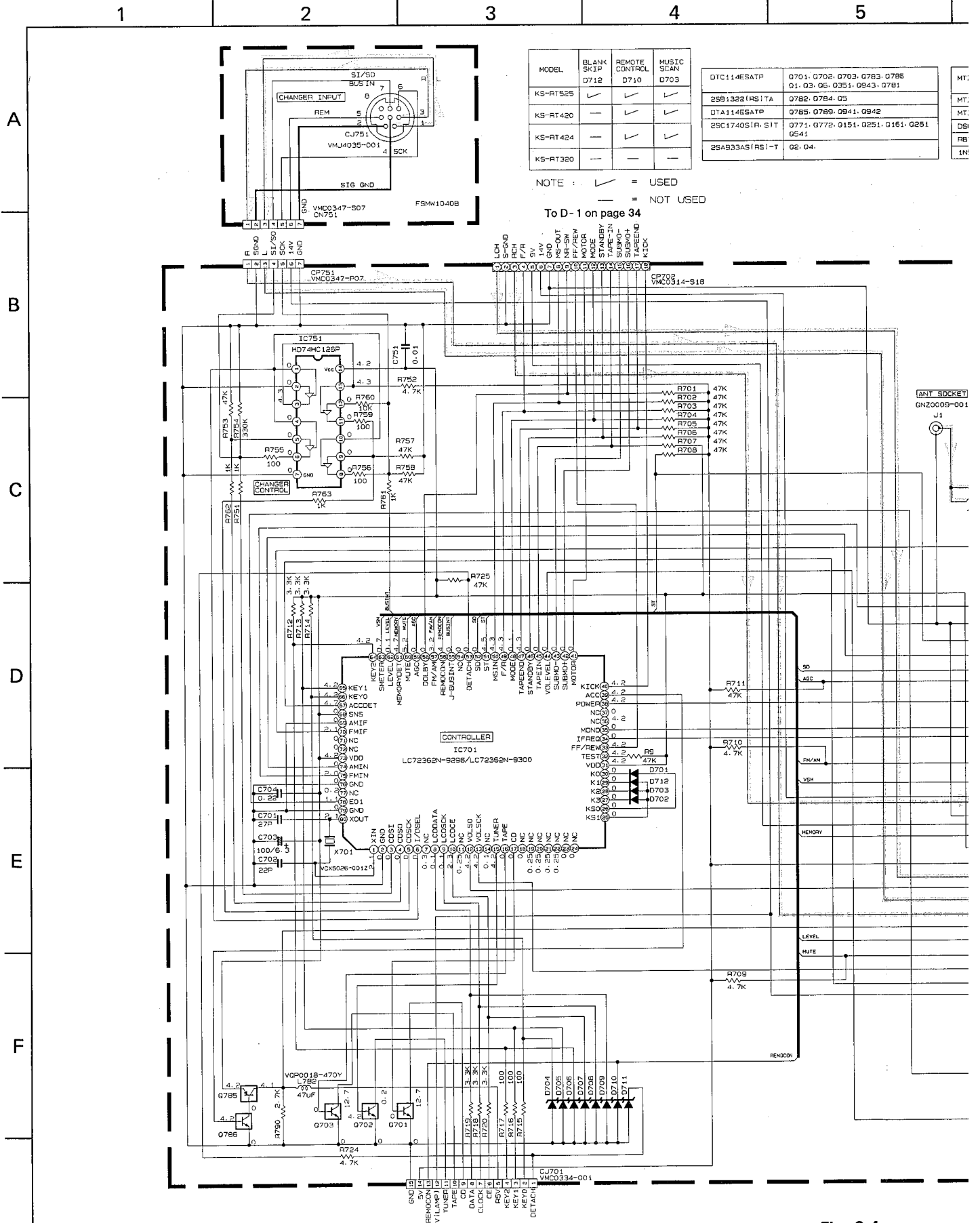


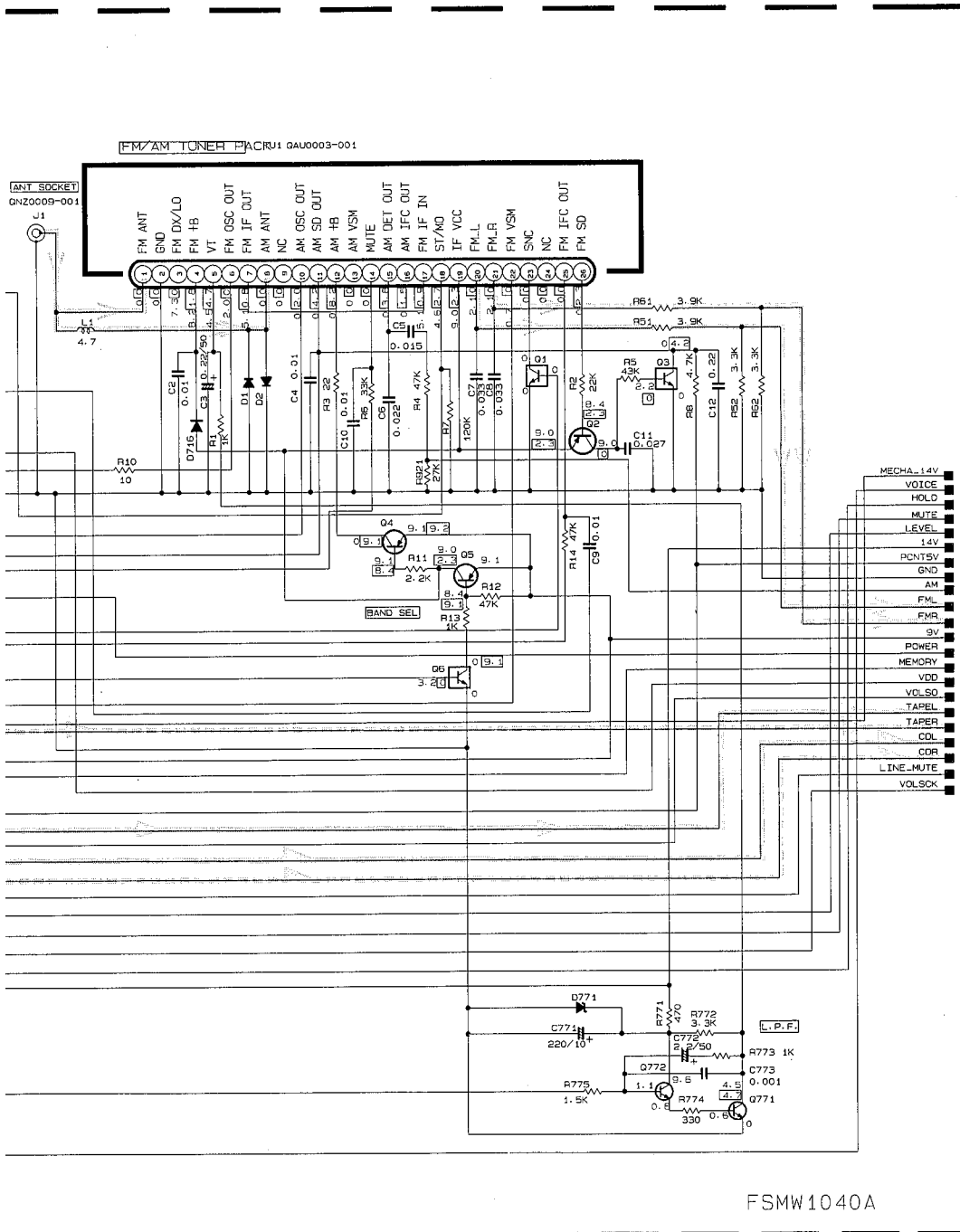
Fig. 6-4

Note FSDH3018008TW

MTZ6-2JCT-77	D704, D705, D706, D707, D708 D709, L 10, D711
MTZ10JAT-77	D771
MTZ11JBT-77	D941
DSK10C-ET1	D784
RB7210T-77	D541, D542, D781
IN5401TM	D981

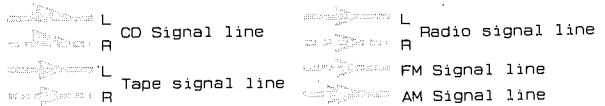
NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. CONDITION - - - FM MODE. (AM MODE [ ])
2. UNLESS OTHERWISE SPECIFIED:  
ALL RESISTORS ARE 1/6W 5% CARBON RESISTOR.  
ALL CAPACITORS ARE 50V 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).  
ALL DIODES ARE 1SS119-041  
- - - MYLAR CAPACITOR

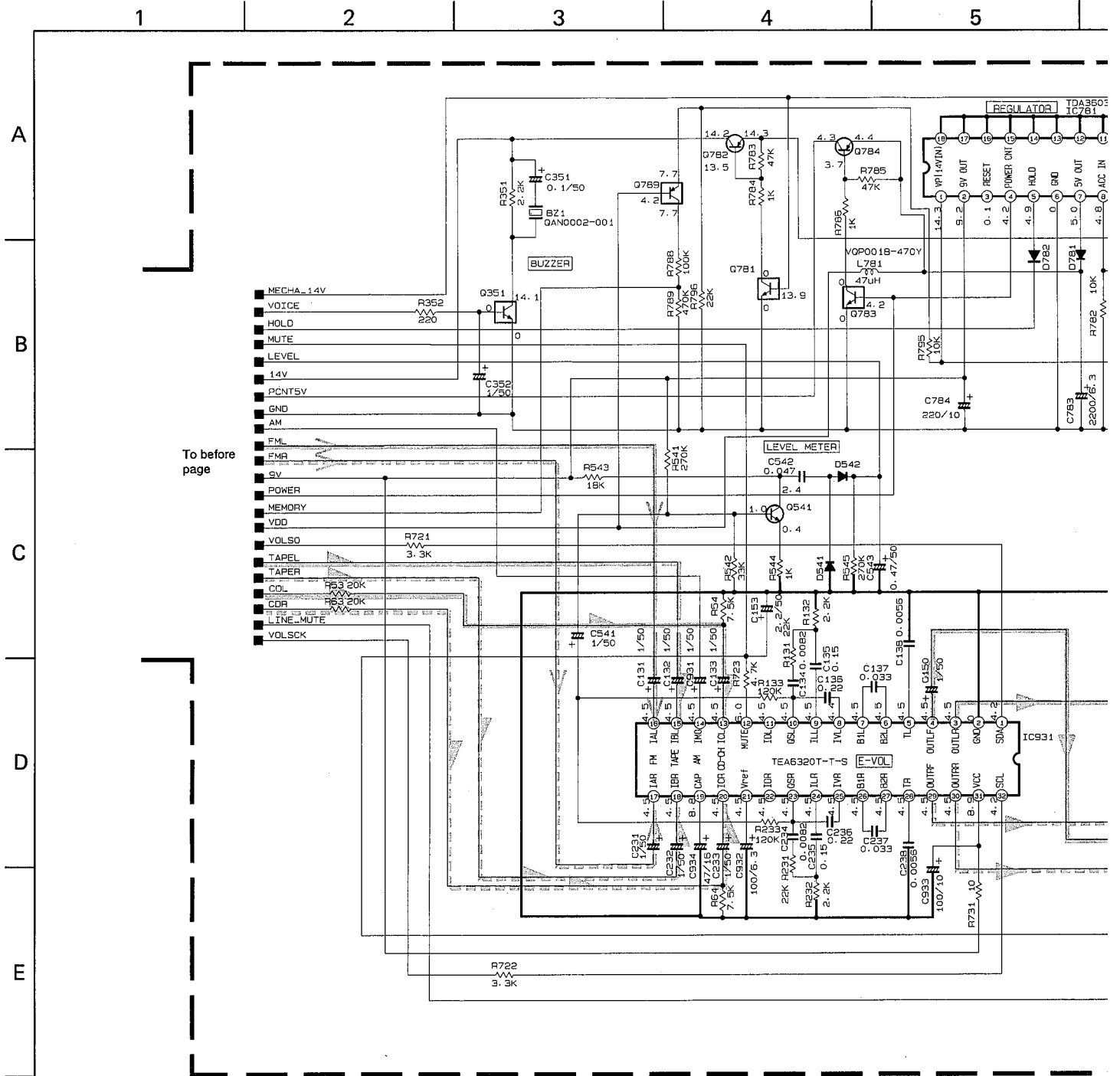


To next page

FSMW1040A



# Power amplifier circuit



To before page

### NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. CONDITION - - - FM MODE.
2. UNLESS OTHERWISE SPECIFIED.
  - ALL RESISTORS ARE 1/6W 5% CARBON RESISTOR.
  - ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.
  - ALL RESISTANCE VALUES ARE IN OHM( $\Omega$ ).
  - ALL CAPACITANCE VALUES ARE IN  $\mu$ F(P=pF).
  - ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE( $\mu$ F) / RATED VOLTAGE(V).
  - ALL DIODES ARE 1SS119-041.
  - - - MYLAR CAPACITOR

REMARK	FRONT LINE OUT
MODEL	R153, R152, 0151, R154, D151 R253, R252, 0251, R254, D251
KS-RT525	✓
KS-RT420	—
KS-RT424	—
KS-RT320	—

NOTE : ✓ = USED  
— = NOT USED





# 7 Location of p. c. board parts and parts list

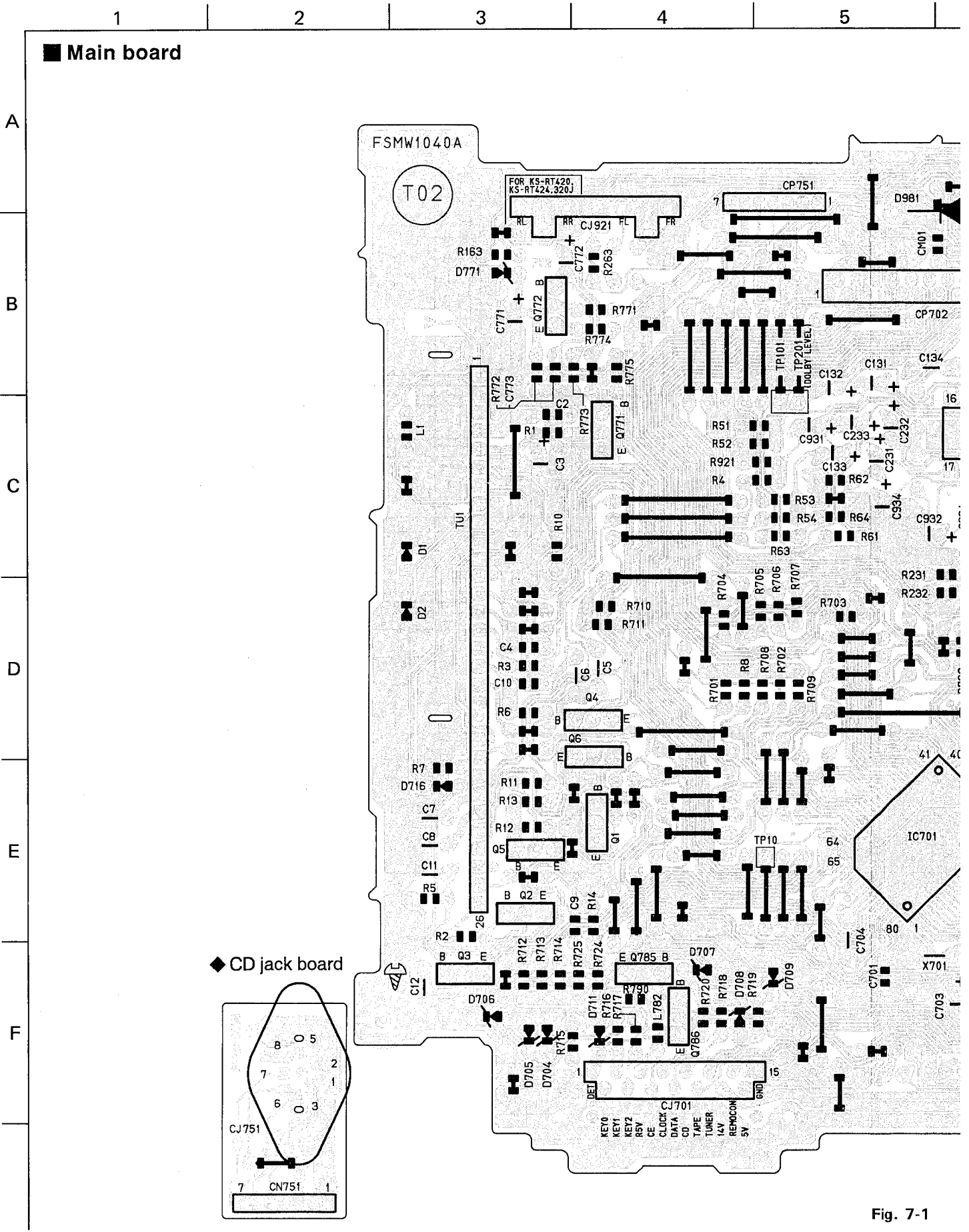


Fig. 7-1

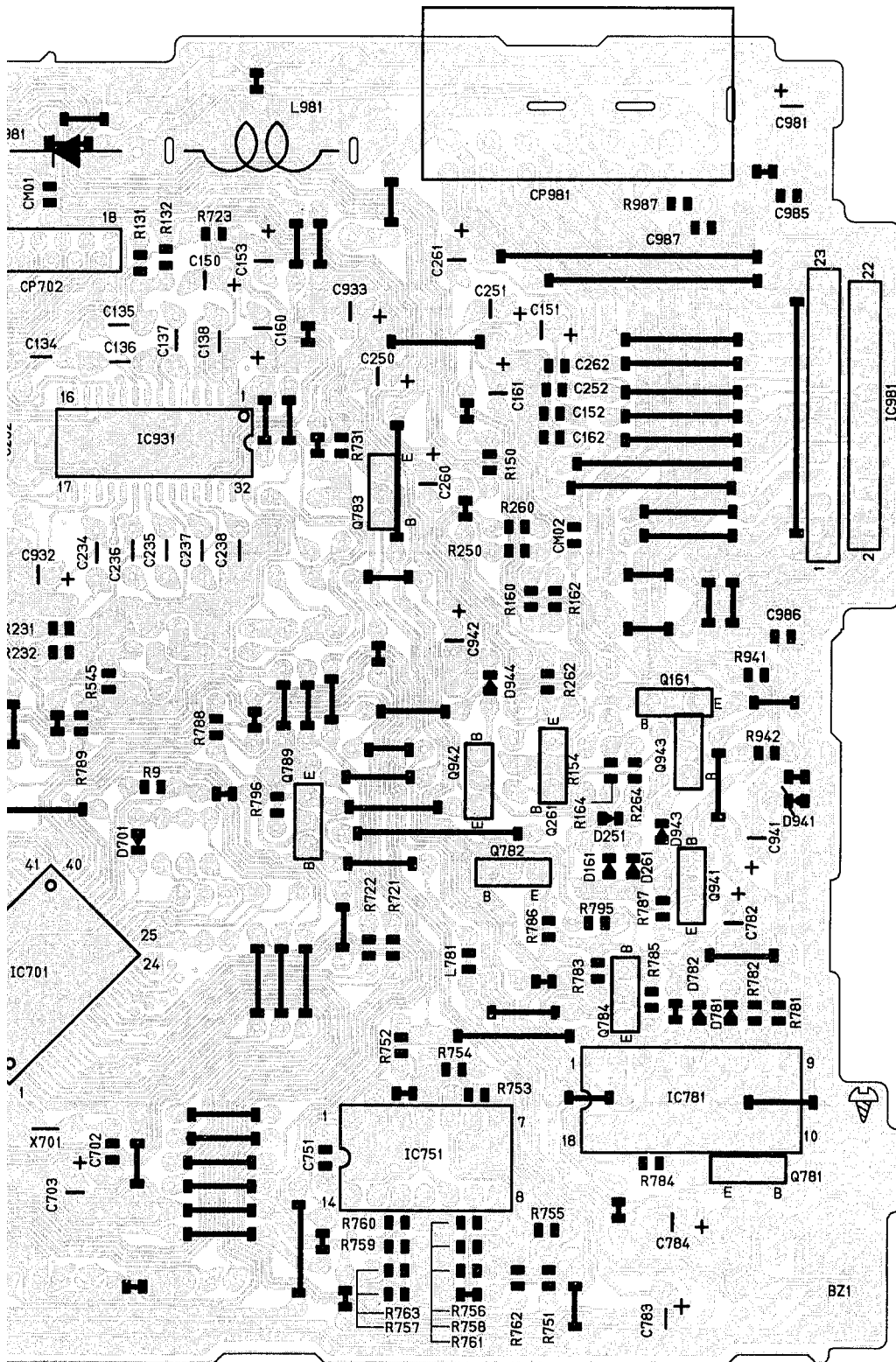
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● Main board parts list

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
A 932	QERF0JM-107Z	E-CAPACITOR	100MF 20% 6.3V	
C 933	QERF1AM-107ZM	E-CAPACITOR	100MF 20% 10V	
C 934	QER41CM-476M	E-CAPACITOR	47MF 20% 16V	
C 941	QER41CM-476M	E-CAPACITOR	47MF 20% 16V	
C 942	QER41CM-476M	E-CAPACITOR	47MF 20% 16V	
C 981	QEZ0337-228	E-CAPACITOR	2200MF	
C 985	QCVB1CM-103Y	C-CAPACITOR	.010MF 20% 16V	
C 986	QCVB1CM-103Y	C-CAPACITOR	.010MF 20% 16V	
C 987	QCVB1CM-103Y	C-CAPACITOR	.010MF 20% 16V	
C 1701	VMC0334-001	CONNECTOR	TO FRONT PANEL	
C 1751	VMJ4035-001	MINI DIN JACK		
C 1921	VMJ3022-001	PIN JACK		
CM 02	QCFB1H7-104Y	C-CAPACITOR	.10MF +80%-20%	
CN751	VMC0347-507	CONNECTOR	TO MECHA	
CP702	VMC0314-S18	CONNECTOR	TO CD-CH	
CP751	VMC0347-P07	CONNECTOR		
CP981	QNZ0002-001	16P CONNECTOR		
D 1	1SS119-041	DIODE		
D 2	1SS119-041	DIODE		
D 161	1SS119-041	DIODE	REAR	
D 261	1SS119-041	DIODE	REAR	
D 701	1SS119-041	DIODE	FM IFC	
D 702	1SS119-041	DIODE	BEEP	
D 703	1SS119-041	DIODE	MS	
D 704	MTZ6-2JC	DIODE		
D 705	MTZ6-2JC	DIODE		
D 706	MTZ6-2JC	DIODE		
D 707	MTZ6-2JC	DIODE		
D 708	MTZ6-2JC	DIODE		
D 709	MTZ6-2JC	DIODE		
D 710	MTZ6-2JC	DIODE		
D 711	MTZ6-2JC	DIODE		
D 716	1SS119-041	DIODE		
D 771	MTZ10JAT-77	ZENER DIODE		
D 781	RB721Q	S-B-DIODE		
D 782	1SS119-041	DIODE		
D 784	DSK10C-E	SI DIODE		
D 941	MTZ11JB	ZENER DIODE		
D 943	1SS119-041	DIODE		
D 944	1SS119-041	DIODE		
D 981	1N5401TM	DIODE		
IC701	LC72362N-9296	IC		
IC751	HD74HC126P	IC		
IC781	TDA3603P-S	IC	CD-CH REGULATOR	
IC931	TEA6320T	IC		
IC981	TDA8567Q	IC		
J 1	QNZ0009-001	CAR ANT JACK		
L 1	VQP0018-4R7	INDUCTOR		
L 781	VQP0018-470	INDUCTOR		
L 782	VQP0018-470	INDUCTOR		
L 981	QQR0528-001	CHOKE COIL		
Q 1	DTC114ESTP	TRANSISOR		
Q 2	2SA933AS(RS)-T	TRANSISOR		
Q 3	DTC114ESTP	TRANSISOR		
Q 4	2SA933AS(RS)-T	TRANSISOR		

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
BZ 1	QAN0002-001	BUZZER		
C 2	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V	
C 3	QERF1HM-224ZM	C-CAPACITOR	.22MF 5% 50V	
C 4	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V	
C 5	QCC11EK-153ZV	C-CAPACITOR	.015MF 10% 25V	
C 6	QCC11EM-223V	C-CAPACITOR	.022MF 10% 25V	
C 7	QCC11EK-333Z	C-CAPACITOR	.033MF 10% 25V	
C 8	QCC11EK-333Z	C-CAPACITOR	.033MF 10% 25V	
C 9	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V	
C 10	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V	
C 11	QCC11EK-273Z	C-CAPACITOR	.027MF 10% 25V	
C 12	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C 131	QER41HM-105VM	E-CAPACITOR	FM	
C 132	QER41HM-105VM	E-CAPACITOR	TAPE	
C 133	QER41HM-105VM	E-CAPACITOR	CD	
C 134	QFLA1HJ-822ZM	M-CAPACITOR	8200PF 5% 50V	
C 135	QFV11HJ-154AZM	TF CAPACITOR	.15MF 5% 50V	
C 136	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C 137	QFV11HJ-333AZM	TF CAPACITOR	.033MF 5% 50V	
C 138	QFLA1HJ-562ZM	M-CAPACITOR	5600PF 5% 50V	
C 150	QER41HM-105VM	E-CAPACITOR	FRONT	
C 151	QER41HM-105VM	E-CAPACITOR	FRONT	
C 152	QCB81HK-471Y	C-CAPACITOR	REAR	
C 153	QER41HM-225	E-CAPACITOR	2.2MF 20% 50V	
C 160	QER41HM-105VM	E-CAPACITOR	REAR	
C 161	QER41HM-105VM	E-CAPACITOR	FRONT	
C 162	QCB81HK-471Y	C-CAPACITOR	REAR	
C 231	QER41HM-105VM	E-CAPACITOR	FM	
C 232	QER41HM-105VM	E-CAPACITOR	TAPE	
C 233	QER41HM-105VM	E-CAPACITOR	CD	
C 234	QFLA1HJ-822ZM	M-CAPACITOR	8200PF 5% 50V	
C 235	QFV11HJ-154AZM	TF CAPACITOR	.15MF 5% 50V	
C 236	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C 237	QFV11HJ-333AZM	TF CAPACITOR	.033MF 5% 50V	
C 238	QFLA1HJ-562ZM	M-CAPACITOR	5600PF 5% 50V	
C 250	QER41HM-105VM	E-CAPACITOR	FRONT	
C 251	QER41HM-105VM	E-CAPACITOR	FRONT	
C 252	QCB81HK-471Y	C-CAPACITOR	REAR	
C 260	QER41HM-105VM	E-CAPACITOR	REAR	
C 261	QER41HM-105VM	E-CAPACITOR	REAR	
C 262	QCB81HK-471Y	C-CAPACITOR	REAR	
C 351	QERF1HM-104ZM	E-CAPACITOR	.10MF 20% 50V	
C 352	QERF1HM-104ZM	E-CAPACITOR	.10MF 20% 50V	
C 701	QCT30UJ-270	C-CAPACITOR	27PF 5% 50V	
C 702	QCT05CH-220	C-CAPACITOR	22PF 5% 50V	
C 703	QERF0JM-107Z	E-CAPACITOR	100MF 20% 6.3V	
C 704	QFV41HJ-224	TF CAPACITOR	.22MF 5% 50V	
C 751	QCVB1CM-103Y	E-CAPACITOR	.010MF 20% 16V	
C 771	QERF1AM-227Z	E-CAPACITOR	220MF 20% 10V	
C 772	QER41HM-225	E-CAPACITOR	2.2MF 20% 50V	
C 773	QCB81HK-102Y	C-CAPACITOR	1000PF 10% 50V	
C 782	QERF1HM-104ZM	E-CAPACITOR	.10MF 20% 50V	
C 783	QETNOJM-228Z	E-CAPACITOR	2200MF 20% 6.3V	
C 784	QERF1AM-227Z	E-CAPACITOR	220MF 20% 10V	
C 931	QER41HM-105VM	E-CAPACITOR	AM	

BLOCK NO. 01

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 704	GRD161J-473	C-RESISTOR	MODE	
	R 705	GRD161J-473	C-RESISTOR	TAPEEND	
	R 706	GRD161J-473	C-RESISTOR	STANDBY	
	R 707	GRD161J-473	C-RESISTOR	TAPEIN	
	R 708	GRD161J-473	C-RESISTOR	ST/MONO	
	R 709	GRD161J-472	C-RESISTOR	4.7K 5% 1/6W	
	R 710	GRD161J-472	C-RESISTOR	4.7K 5% 1/6W	
	R 711	GRD161J-473	C-RESISTOR	47K 5% 1/6W	
	R 712	GRD167J-332	C-RESISTOR	KEY2	
	R 713	GRD167J-332	C-RESISTOR	KEY1	
	R 714	GRD167J-332	C-RESISTOR	KEY1	
	R 715	GRD161J-101	C-RESISTOR	100 5% 1/6W	
	R 716	GRD161J-101	C-RESISTOR	100 5% 1/6W	
	R 717	GRD161J-101	C-RESISTOR	100 5% 1/6W	
	R 718	GRD167J-332	C-RESISTOR	3.3K 5% 1/6W	
	R 719	GRD167J-332	C-RESISTOR	3.3K 5% 1/6W	
	R 720	GRD167J-332	C-RESISTOR	3.3K 5% 1/6W	
	R 721	GRD167J-332	C-RESISTOR	3.3K 5% 1/6W	
	R 722	GRD167J-332	C-RESISTOR	3.3K 5% 1/6W	
	R 723	GRD161J-472	C-RESISTOR	4.7K 5% 1/6W	
	R 724	GRD161J-472	C-RESISTOR	4.7K 5% 1/6W	
	R 725	GRD161J-473	C-RESISTOR	47K 5% 1/6W	
	R 754	GRD161J-334	C-RESISTOR	330K 5% 1/6W	
	R 755	GRD161J-101	C-RESISTOR	100 5% 1/6W	
	R 756	GRD161J-101	C-RESISTOR	100 5% 1/6W	
	R 757	GRD161J-473	C-RESISTOR	47K 5% 1/6W	
	R 758	GRD161J-473	C-RESISTOR	47K 5% 1/6W	
	R 759	GRD161J-101	C-RESISTOR	100 5% 1/6W	
	R 760	GRD161J-103	C-RESISTOR	10K 5% 1/6W	
	R 761	GRD161J-102	C-RESISTOR	1.0K 5% 1/6W	
	R 762	GRD161J-102	C-RESISTOR	1.0K 5% 1/6W	
	R 763	GRD161J-102	C-RESISTOR	1.0K 5% 1/6W	
	R 771	GRD161J-471	C-RESISTOR	470 5% 1/6W	
	R 772	GRD167J-332	C-RESISTOR	3.3K 5% 1/6W	
	R 773	GRD161J-102	C-RESISTOR	1.0K 5% 1/6W	
	R 774	GRD161J-331	C-RESISTOR	330 5% 1/6W	
	R 775	GRD161J-152	C-RESISTOR	1.5K 5% 1/6W	
	R 781	GRD161J-203	C-RESISTOR	20K 5% 1/6W	
	R 782	GRD161J-103	C-RESISTOR	10K 5% 1/6W	
	R 783	GRD161J-473	C-RESISTOR	47K 5% 1/6W	
	R 784	GRD161J-102	C-RESISTOR	1.0K 5% 1/6W	
	R 785	GRD161J-473	C-RESISTOR	47K 5% 1/6W	
	R 786	GRD161J-102	C-RESISTOR	1.0K 5% 1/6W	
	R 787	GRD161J-470	C-RESISTOR	47 5% 1/6W	
	R 788	GRD161J-104	C-RESISTOR	100K 5% 1/6W	
	R 789	GRD161J-474	C-RESISTOR	470K 5% 1/6W	
	R 790	GRD161J-272	C-RESISTOR	2.7K 5% 1/6W	
	R 795	GRD161J-103	C-RESISTOR	10K 5% 1/6W	
	R 796	GRD161J-233	C-RESISTOR	22K 5% 1/6W	
	R 921	GRD161J-273	C-RESISTOR	27K 5% 1/6W	
	R 941	GRD161J-102	C-RESISTOR	1.0K 5% 1/6W	
	R 942	GRD161J-481	C-RESISTOR	680 5% 1/6W	
	R 987	GRD161J-101	C-RESISTOR	100 5% 1/6W	
	TU 1	GAU0003-001	FM/AM TUNER PAC		
	X 701	VCX5026-001Z	CRYSTAL		

BLOCK NO. 01

A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	Q 51	2SB1322(RS)	TRANSISTOR		
	Q 6	DTC114ESTP	TRANSISTOR	REAR	
	Q 161	2SC1740S(R-S)	TRANSISTOR	REAR	
	Q 261	2SC1740S(R-S)	TRANSISTOR		
	Q 351	DTC114ESTP	TRANSISTOR		
	Q 771	2SC1740S(R-S)	TRANSISTOR		
	Q 772	2SC1740S(R-S)	TRANSISTOR		
	Q 781	DTC114ESTP	TRANSISTOR		
	Q 782	2SB1322(RS)	TRANSISTOR		
	Q 783	DTC114ESTP	TRANSISTOR		
	Q 784	2SB1322(RS)	TRANSISTOR		
	Q 785	DTA114ES	TRANSISTOR		
	Q 786	DTC114ESTP	TRANSISTOR		
	Q 789	DTA114ES	TRANSISTOR		
	Q 941	DTA114ES	TRANSISTOR		
	Q 942	DTA114ES	TRANSISTOR		
	Q 943	DTC114ESTP	TRANSISTOR		
	R 1	GRD161J-102	C-RESISTOR	1.0K 5% 1/6W	
	R 2	GRD161J-223	C-RESISTOR	22K 5% 1/6W	
	R 3	GRD161J-220	C-RESISTOR	22 5% 1/6W	
	R 4	GRD161J-473	C-RESISTOR	47K 5% 1/6W	
	R 5	GRD161J-433	C-RESISTOR	43K 5% 1/6W	
	R 6	GRD161J-333	C-RESISTOR	33K 5% 1/6W	
	R 7	GRD161J-124	C-RESISTOR	120K 5% 1/6W	
	R 8	GRD161J-472	C-RESISTOR	4.7K 5% 1/6W	
	R 9	GRD161J-473	C-RESISTOR	47K 5% 1/6W	
	R 10	GRD161J-100	C-RESISTOR	10 5% 1/6W	
	R 11	GRD161J-222	C-RESISTOR	2.2K 5% 1/6W	
	R 12	GRD161J-473	C-RESISTOR	47K 5% 1/6W	
	R 13	GRD161J-102	C-RESISTOR	1.0K 5% 1/6W	
	R 14	GRD161J-473	C-RESISTOR	47K 5% 1/6W	
	R 51	GRD161J-392	C-RESISTOR	3.9K 5% 1/6W	
	R 52	GRD167J-332	C-RESISTOR	3.3K 5% 1/6W	
	R 53	GRD161J-203	C-RESISTOR	20K 5% 1/6W	
	R 54	GRD161J-752	C-RESISTOR	7.5K 5% 1/6W	
	R 61	GRD161J-392	C-RESISTOR	3.9K 5% 1/6W	
	R 62	GRD167J-332	C-RESISTOR	3.3K 5% 1/6W	
	R 63	GRD161J-203	C-RESISTOR	20K 5% 1/6W	
	R 64	GRD161J-752	C-RESISTOR	7.5K 5% 1/6W	
	R 131	GRD161J-223	C-RESISTOR	22K 5% 1/6W	
	R 132	GRD161J-222	C-RESISTOR	2.2K 5% 1/6W	
	R 150	GRD161J-103	C-RESISTOR	FRONT	
	R 160	GRD161J-103	C-RESISTOR	REAR	
	R 161	GRD161J-103	C-RESISTOR	REAR	
	R 162	GRD161J-821	C-RESISTOR	REAR	
	R 163	GRD161J-101	C-RESISTOR	REAR	
	R 164	GRD161J-222	C-RESISTOR	REAR	
	R 231	GRD161J-222	C-RESISTOR	22K 5% 1/6W	
	R 232	GRD161J-222	C-RESISTOR	2.2K 5% 1/6W	
	R 250	GRD161J-103	C-RESISTOR	FRONT	
	R 260	GRD161J-103	C-RESISTOR	REAR	
	R 261	GRD161J-103	C-RESISTOR	REAR	
	R 262	GRD161J-821	C-RESISTOR	REAR	
	R 263	GRD161J-101	C-RESISTOR	REAR	
	R 264	GRD161J-222	C-RESISTOR	REAR	
	R 351	GRD161J-102	C-RESISTOR	1.0K 5% 1/6W	
	R 352	GRD161J-221	C-RESISTOR	220 5% 1/6W	
	R 701	GRD161J-473	C-RESISTOR	DOLBY	
	R 702	GRD161J-473	C-RESISTOR	MSIN	
	R 703	GRD161J-473	C-RESISTOR	F/R	

■ Mechanism board (Head amp./mecha. drive board)

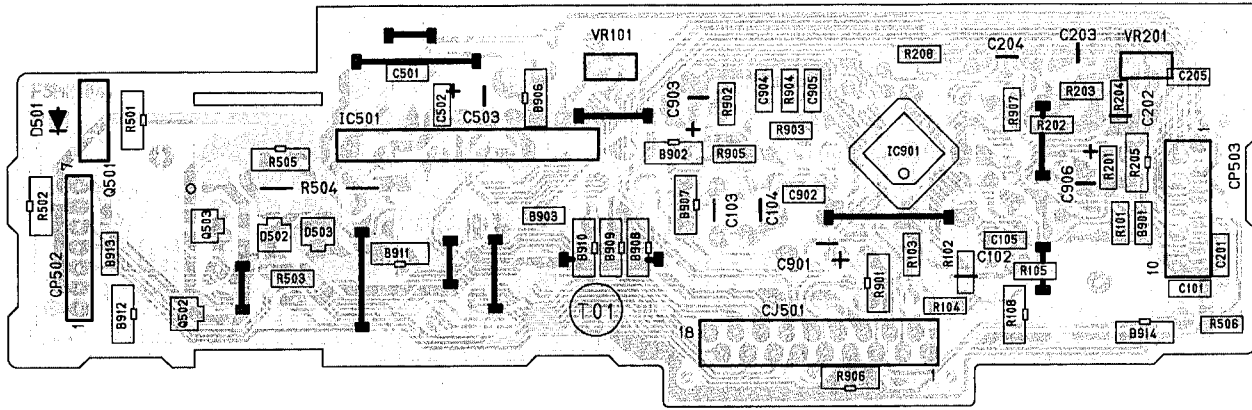


Fig. 7-2

● Mechanism board parts list

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
B 901	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
B 902	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 903	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
B 906	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 907	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 908	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 909	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 910	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 911	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 912	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
B 913	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
B 914	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
C 101	NCS21HJ-471AY	C. CAPACITOR	470PF 5% 50V	
C 102	QEV11HJ-103AZM	TF CAPACITOR	.010MF 5% 50V	
C 103	QEP11HM-105ZM	NP E. CAPACITOR	1.0MF 20% 50V	
C 104	QEV11HJ-104AZM	TF CAPACITOR	.10MF 5% 50V	
C 105	NCS21HJ-470AY	C. CAPACITOR	47PF 5% 50V	
C 201	NCS21HJ-471AY	C. CAPACITOR	470PF 5% 50V	
C 202	QEV11HJ-103AZM	TF CAPACITOR	.010MF 5% 50V	
C 203	QEP11HM-105ZM	NP E. CAPACITOR	1.0MF 20% 50V	
C 204	QEV11HJ-104AZM	TF CAPACITOR	.10MF 5% 50V	
C 205	NCS21HJ-470AY	C. CAPACITOR	47PF 5% 50V	
C 501	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 502	NCB21HK-104	C. CAPACITOR	.10MF 10% 25V	
C 503	QEKF1CM-106Z	E. CAPACITOR	10MF 20% 16V	
C 901	QER61CM-226ZM	E. CAPACITOR	22MF 20% 16V	
C 902	NCS21HJ-101AY	C. CAPACITOR	100PF 5% 50V	
C 903	QEKF1HM-474ZM	E. CAPACITOR	.47MF 20% 50V	
C 904	NCB21HK-103AY	C. CAPACITOR	.010MF 10% 50V	
C 905	NCB21HK-104	C. CAPACITOR	.10MF 10% 25V	
C 906	QEKF1CM-226ZM	E. CAPACITOR	22MF 20% 16V	
CJ501	VMC0314-P18	CONNECTOR		
CJ503	VMC0314-P10	CONNECTOR		
CP502	VMC0075-R07	CONNECTOR		
D 501	DSK10C-E	SI. DIODE		
D 502	MA3036(L)X	ZENER DIODE		
D 503	MA3075(W)X	ZENER DIODE		
IC501	LB1641	IC		
IC901	CXA2509AG	IC		
Q 501	2SB1522(RS)	T. TRANSISTOR		
Q 502	DTC114EKA-X	TRANSISTOR		
Q 503	DTC114EKA-X	TRANSISTOR		
R 101	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 103	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 104	NRSA02J-304NY	MG RESISTOR	300K 5% 1/10W	
R 105	NRSA02J-181NY	MG RESISTOR	180 5% 1/10W	
R 108	NRS181J-512NY	MG RESISTOR	5.1K 5% 1/8W	
R 109	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 201	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
R 203	NRSA02J-123NY	MG RESISTOR	12K 5% 1/10W	
R 204	NRSA02J-304NY	MG RESISTOR	300K 5% 1/10W	
R 205	NRS181J-181NY	MG RESISTOR	180 5% 1/8W	
R 208	NRSA02J-512NY	MG RESISTOR	5.1K 5% 1/10W	
R 209	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
R 501	NRS181J-473NY	MG RESISTOR	47K 5% 1/8W	
R 502	NRS181J-332NY	MG RESISTOR	3.3K 5% 1/8W	
R 503	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
R 504	QRL036J-120	OMF RESISTOR	12 5% 1/3W	
R 505	NRS181J-330NY	MG RESISTOR	33 5% 1/8W	
R 506	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
R 901	NRS181J-101NY	MG RESISTOR	100 5% 1/8W	
R 902	NRSA02J-392NY	MG RESISTOR	3.9K 5% 1/10W	
R 903	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
R 904	NRSA02J-125NY	MG RESISTOR	1.2M 5% 1/10W	
R 905	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W	
R 906	NRS181J-103NY	MG RESISTOR	10K 5% 1/8W	
R 907	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
VR101	QVPA603-333A	SEMI.V.RESISTOR	1	
VR201	QVPA603-333A	SEMI.V.RESISTOR	1	





● Switch board parts list

BLOCK NO. 02		BLOCK NO. 02		BLOCK NO. 02	
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 651	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 652	NEF20JM-475RY	TE E CAPACITOR	4.7MF 20% 6.3V	
	C 653	NCB21HK-681AY	C CAPACITOR	680PF 10% 50V	
	C 654	NEF20JM-475RY	TE E CAPACITOR	4.7MF 20% 6.3V	
	CP701	VMC0335-001	PANEL CONNECTOR		
	D 601	SML-020PDTT87	LED		
	D 602	SML-020PDTT87	LED		
	D 603	SML-020PDTT87	LED		
	D 604	SML-010PTT87	LED		
	D 605	SML-010PTT87	LED		
	D 608	SML-010PTT87	LED		
	D 609	SML-010PTT87	LED		
	D 610	SML-010PTT87	LED		
	D 611	SML-010PTT87	LED		
	D 612	SML-010PTT87	LED		
	D 613	SML-010PTT87	LED		
	D 614	SML-010PTT87	LED		
	D 615	SML-010PTT87	LED		
	D 616	SML-010PTT87	LED		
	D 617	SML-010PTT87	LED		
	D 618	SML-010PTT87	LED		
	D 619	SML-010PTT87	LED		
	D 620	SML-010PTT87	LED		
	D 621	SML-010PTT87	LED		
	D 622	SML-010PTT87	LED		
	D 623	SML-020PDTT87	LED		
	D 624	SML-010PTT87	LED		
	D 652	MA152WA-TX	DIODE		
	D 653	MA152WA-TX	DIODE		
	D 654	MA152WK-TX	DIODE		
	D 655	MA152WK-TX	DIODE		
	IC651	LC75823E	IC		
	IC652	RPM-638CBR-L	IC		
	LCD 1	QLD0008-001	LCD		
	PL602	QLL0002-001	LAMP		
	PL604	QLL0002-001	LAMP		
	R 601	NRSA02J-271NY	MG RESISTOR	270 5% 1/10W	
	R 602	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R 603	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 604	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
	R 605	NRSA02J-561NY	MG RESISTOR	560 5% 1/10W	
	R 606	NRSA02J-821NY	MG RESISTOR	820 5% 1/10W	
	R 607	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 608	NRSA02J-271NY	MG RESISTOR	270 5% 1/10W	
	R 609	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R 610	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 611	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
	R 612	NRSA02J-561NY	MG RESISTOR	560 5% 1/10W	
	R 613	NRSA02J-821NY	MG RESISTOR	820 5% 1/10W	
	R 614	NRSA02J-821NY	MG RESISTOR	820 5% 1/10W	
	R 615	NRSA02J-271NY	MG RESISTOR	270 5% 1/10W	
	R 616	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R 617	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 618	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
	R 619	NRSA02J-561NY	MG RESISTOR	560 5% 1/10W	

BLOCK NO. 02		BLOCK NO. 02		BLOCK NO. 02	
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 622	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 625	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 625	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 626	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 628	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 629	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 631	NRSA02J-181NY	MG RESISTOR	180 5% 1/10W	
	R 633	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R 634	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 635	NRS181J-471NY	MG RESISTOR	470 5% 1/8W	
	R 636	NRS181J-471NY	MG RESISTOR	470 5% 1/8W	
	R 637	NRSA02J-391NY	MG RESISTOR	390 5% 1/10W	
	R 638	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R 639	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R 640	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R 651	NRSA02J-152NY	MG RESISTOR	1.5K 5% 1/10W	
	R 652	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 653	NRSA02J-154NY	MG RESISTOR	150K 5% 1/10W	
	R 654	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 655	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 656	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	S 601	QS04H11-V09Y	TACT SWITCH		
	S 602	QS04H11-V09Y	TACT SWITCH		
	S 603	QS04H11-V09Y	TACT SWITCH		
	S 604	QS04H11-V09Y	TACT SWITCH		
	S 605	QS04H11-V09Y	TACT SWITCH		
	S 606	QS04H11-V09Y	TACT SWITCH		
	S 607	QS04H11-V09Y	TACT SWITCH		
	S 608	QS04H11-V09Y	TACT SWITCH		
	S 609	QS04H11-V09Y	TACT SWITCH		
	S 610	QS04H11-V09Y	TACT SWITCH		
	S 611	QS04H11-V09Y	TACT SWITCH		
	S 612	QS04H11-V09Y	TACT SWITCH		
	S 613	QS04H11-V09Y	TACT SWITCH		
	S 614	QS04H11-V09Y	TACT SWITCH		
	S 615	QS04H11-V09Y	TACT SWITCH		
	S 616	QS04H11-V09Y	TACT SWITCH		
	S 617	QS04H11-V09Y	TACT SWITCH		
	S 618	QS04H11-V09Y	TACT SWITCH		
	S 619	QS04H11-V09Y	TACT SWITCH		
	S 620	QS04H11-V09Y	TACT SWITCH		
	S 621	QS04H11-V09Y	TACT SWITCH		
	S 622	QS04H11-V09Y	TACT SWITCH		

# 8 Exploded view of enclosure assembly and parts list

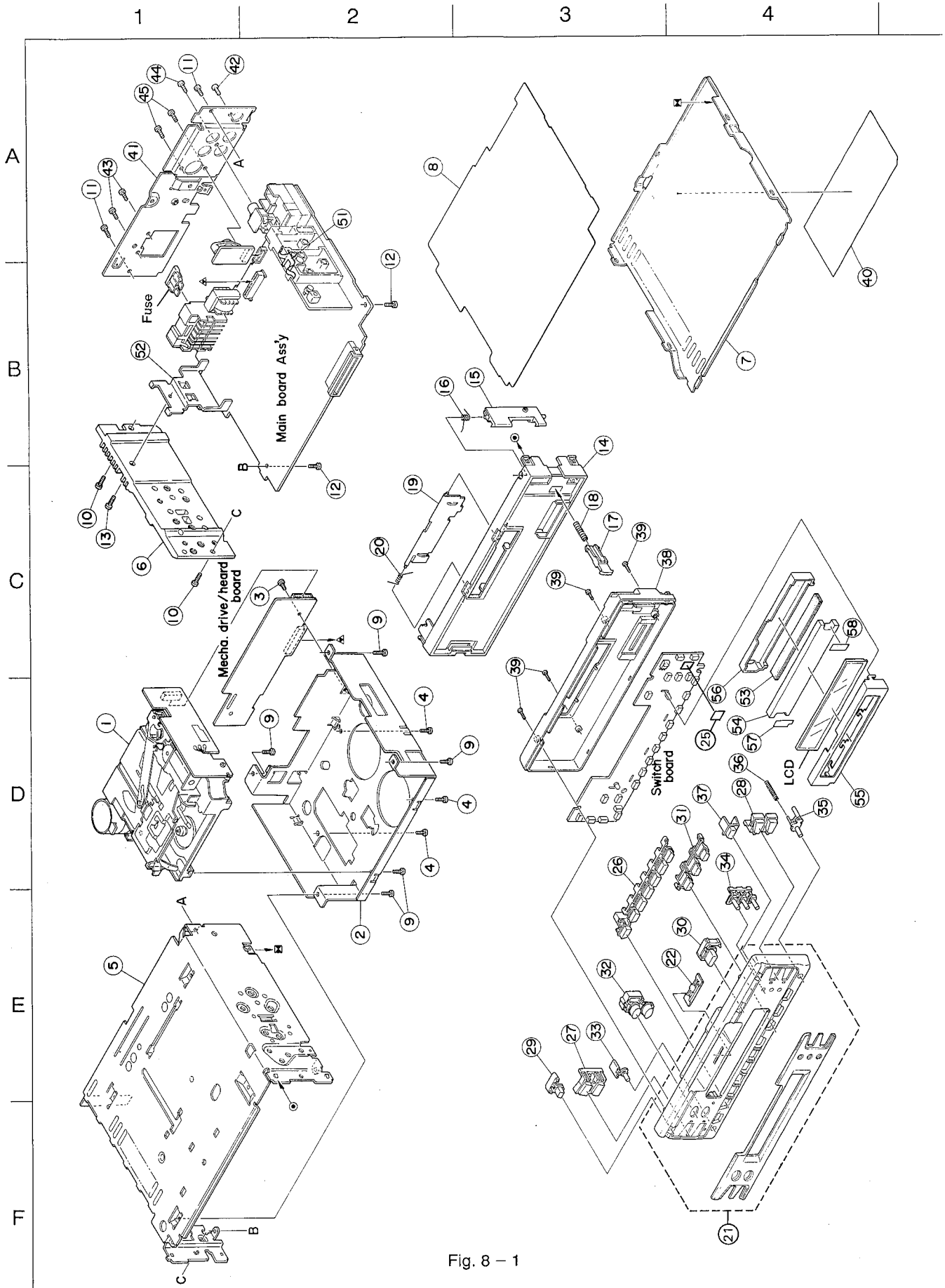


Fig. 8 - 1

## ● Enclosure parts list

BLOCK NO. M1MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	-----	CASSETTE MECHA		1		
	2	FSKM2003-003	MECHA BRACKET		1		
	3	FSKZ4004-001	SCREW	PCB+MECHA	1		
	4	FSKZ4004-001	SCREW	MECHA+M.BKT	4		
	5	FSJC1029-002	TOP CHASSIS		1		
	6	FSMH3001-001	SIDE PANEL		1		
	7	FSKM3007-001	BOTTOM COVER		1		
	8	FSMA3004-001	INSULATOR		1		
	9	SDST2604Z	SCREW	CHASSIS+MECHA B	1		
	10	SDST2608Z	SCREW	CHASSIS+SIDE PA	1		
	11	SDST2606Z	SCREW	CHASSIS+REAR BK	1		
	12	SDST2606Z	SCREW	CHASSIS+MAIN PW	1		
	13	SDST2608Z	SCREW	SIDE PANEL+IC B	1		
	14	FSJC2009-002	FRONT CHASSIS		1		
	15	FSKS3004-001	LOCK LEVER		1		
	16	FSKW4005-003	TORSION SPRING		1		
	17	FSXP3026-001	RLS KNOB		1		
	18	FSKW3002-004	COMP. SPRING		1		
	19	FSJC4003-010	CASSETTE LID		1		
	20	VKW4947-003	DOOR SPRING		1		
	21	FSJD3010-00C	FINDER ASS'Y		1		
	22	FSJK3006-001	LIGHT LENS		1		
	25	FSYH4036-008	SPACER	D, FUNC+U/D BTN	1		
	26	FSXP2022-001	PRESET BUTTON	1/2/3/4/5/6	1		
	27	FSXP3036-001	+/- BUTTON		1		
	28	FSXP3037-001	UP/DOWN BUTTON		1		
	29	FSXP3033-001	POWER BUTTON		1		
	30	FSXP3034-001	EJECT BUTTON		1		
	31	FSXP2023-003	D.FUNC BUTTON	CD/TUNER/TAPE	1		
	32	FSXP3038-003	SND/CRUISE BUT		1		
	33	FSXP4001-001	DISPLAY BUTTON		1		
	34	FSXP3039-001	PUSH BUTTON	MONO/RND/SCAN	1		
	35	FSXP3035-001	DETACH BUTTON		1		
	36	FSKW3002-008	COMP. SPRING	FOR DETACH BUTT	1		
	37	FSJK4007-001	REMOTE LENS		1		
	38	FSJC1026-002	REAR COVER		1		
	39	SPSF1780M	MINI SCREW	F.PANEL+REAR CO	1		
	40	FSYN3017-006	NAME PLATE		1		
	41	FSKM3008-001	REAR BRACKET		1		
	42	SDST2606Z	SCREW	REAR BKT+ANT JA	1		
	43	SDSP2606Z	SCREW	REAR BKT+15P CN	2		
	44	SDSF3006Z	SCREW	REAR BKT+PIN JA	1		
	45	SDSF2608Z	SCREW	REAR BKT+CD IN	2		
	51	VMA4652-001SS	SHIELD PLATE		1		
	52	FSKL4013-001	IC BRACKET		1		
	53	VMZ0147-001	LCD CONNECTOR		1		
	54	FSJK3008-002	LCD LENS		1		
	55	FSYH3011-001	LCD CASE		1		
	56	VKS3750-002	LENS CASE		1		
	57	FSYT4004-001	BLIND (L)		1		
	58	FSYT4005-001	BLIND (R)		1		
	FUSE	QMFZ021-100-J1	FUSE		1		

# 9 Exploded view of mechanism assembly and parts list

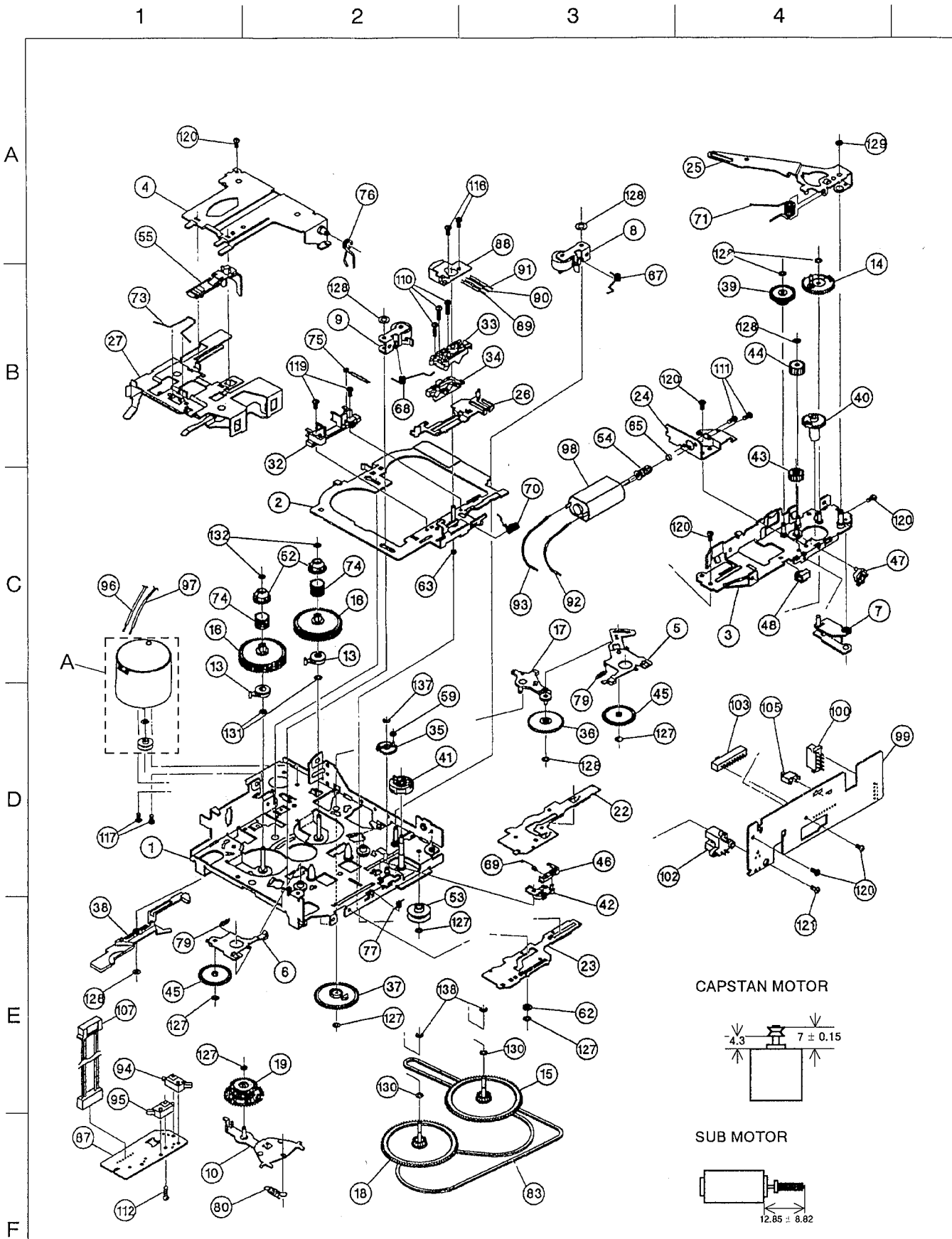


Fig. 9 - 1

## ● Mechanism assembly parts list

BLOCK NO. M2MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	100367057S-SA1	DC MOTOR		1		
	1	1-0522-6001S	CHASSIS ASS'Y		1		
	2	1-0522-6002S	HEAD PLATE ASSY		1		
	3	1-0522-6003S	SUB CHASSIS ASY		1		
	4	X-0522-1004S	HOLDER ARM ASSY		1		
	5	X-0522-1006S	T.U.ARM(F)ASS'Y		1		
	6	X-0522-1007S	T.U.ARM(R)ASS'Y		1		
	7	X-0522-1010S	SET ARM ASS'Y		1		
	8	X-0522-1019S	PINCH ARM(F)ASY		1		
	9	X-0522-1020S	PINCH ARM(R)ASY		1		
	10	X-0522-1022S	FR ARM ASS'Y		1		
	13	X-0522-2008S	DETECT ARM ASSY		2		
	14	X-0522-2010S	LOAD GEAR ASS'Y		1		
	15	X-0522-2016-2S	FLYWHEEL ASY(FJ)		1		
	16	X-0522-2018S	REEL TABLE ASSY		2		
	17	X-0522-2020S	REDUCT.GEAR ARM		1		
	18	X-0522-2021-2S	FLYWHEEL ASY(RJ)		1		
	19	X-0052-2001S	F.R. GEAR ASS'Y		1		
	22	1-0522-1008S	DIR.PLATE		1		
	23	1-0522-1009S	FF/REW PLATE		1		
	24	1-0522-1012S	MOTOR BKT		1		
	25	1-0522-1013S	LOAD ARM		1		
	26	1-0522-1014S	SHIFT CAM LINK		1		
	27	1-0522-1017S	CASSETTE HOLDER		1		
	32	1-0522-2001S	TAPE GUIDE		1		
	33	1-0522-2002S	HEAD BKT		1		
	34	1-0522-2003S	HEAD SHIFT CAM		1		
	35	1-0522-2004-03S	SELECT GEAR		1		
	36	1-0522-2005S	REDUCTION GEAR		1		
	37	1-0522-2006S	DETECT GEAR		1		
	38	1-0522-2007S	DETECTOR		1		
	39	1-0052-2012S	WORM GEAR		1		
	40	1-0522-2011S	MODE GEAR		1		
	41	1-0522-2012S	MODE GEAR(2)		1		
	42	1-0522-2013S	GEAR LATCH		1		
	43	1-0522-2014S	IDLE GEAR(1)		1		
	44	1-0522-2015S	IDLE GEAR(2)		1		
	45	1-0522-2017S	TU GEAR		2		
	46	1-0522-2019S	RACHET		1		
	47	1-0522-2022S	SW ACTUATER		1		
	48	1-0522-2024S	PWB STAY		1		
	52	1-0052-2004S	REEL DRIVER		2		
	53	1-0052-2006S	IDLE PULLEY		1		
	54	1-0052-2010S	WORM		1		
	55	1-0052-2032S	CATCH(K)		1		
	59	1-0522-3005S	SELECT GEAR COL		1		
	62	1-0052-3028S	H.B. ROLLER(L)		1		
	63	1-0052-3029S	H.B. ROLLER(S)		1		
	65	1-0522-3026S	WORM COLLAR		1		
	67	1-0522-4001S	PINCH ARM(F)SPG		1		
	68	1-0522-4002S	PINCH ARM(R)SPG		1		
	69	1-0522-4003S	GEAR LATCH SPG		1		
	70	1-0522-4004S	HEAD SPG		1		
	71	1-0522-4006S	LOAD ARM SPG		1		

BLOCK NO. M2MM [ ] [ ] [ ] [ ]

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	73	1-0522-4008S	CATCH SPG		1		
	74	1-0522-4010S	REEL DRIVER SPG		2		
	75	1-0522-4011S	DASH SPG		1		
	76	1-0522-4014S	HOLDER ARM SPG		1		
	77	1-0522-4016S	HOLD SPG		1		
	79	1-0522-4017S	TU ARM SPG		2		
	80	1-0522-4015S	FR ARM SPG		1		
	83	1-0052-5022S	BELT		1		
	87	1-0522-7002S	REEL PWB		1		
	88	1-0522-7003S	2CH HEAD	P-7742-HG	1		
	89	1-0522-7004S	HEAD WIRE(A)		1		
	90	1-0522-7005S	HEAD WIRE(B)		1		
	91	1-0522-7006S	HEAD WIRE(C)		1		
	92	1-0052-7082-0S	SUB MOTOR WIRE	RED	1		
	93	1-0052-7082-2S	SUB MOTOR WIRE	BLACK	1		
	94	1-0522-7010S	LEAF SW	MLS-2	1		
	95	1-0522-7011S	LEAF SW	MLS-4	1		
	96	1-0522-7013S	MOTOR WIRE	RED	1		
	97	1-0522-7014S	MOTOR WIRE	BLACK	1		
	98	1-0522-7018S	SUB MOTOR	PPN13EB10C	1		
	99	1-0522-7022S	HEAD PWB(JV)		1		
	100	1-0522-7024S	CONNECTOR 10P	TKC-F10X-K1	1		
	102	X-0052-7040S	PHOTO COUPLER		1		
	103	1-0036-7007-1S	SLIDE SW	SLD-32-710S	1		
	105	1-0056-7011S	SW	SW-112-5	1		
	107	1-0052-7013S	JOINT WIRE (7P)		1		
	110	1-0522-5003S	AZIMUTH SCREW		3		
	111	1-0052-5023S	+MOTOR SCREW	M2X2.5	2		
	112	1-0101-5006S	+SCREW PLAIN	M1.7X7	2		
	116	1-0522-5005S	SPECIAL SCREW(2		2		
	117	2-1032-0022-C2S	+MACHINE SCREW	M2X2.2	2		
	119	1-0522-5006S	SPECIAL SCREW(3		2		
	120	2-1332-0030-C1S	+SCREW PLAIN#3S	M2X3	6		
	121	2-1382-0050-C2S	+PLAIN B-TYPE#3	M2X5	1		
	127	2-1812-0030-D2S	POLY WASHER(S)	1.2X3X0.25	6		
	128	2-1816-0032-D2S	POLY WASHER(S)	1.6X3.2X0.25	7		
	129	2-1816-0032-52S	PSW-S	1.6X3.2X0.5	1		
	130	2-1821-0032-D1S	PSW	2.1X3.2X0.25	2		
	131	2-1821-0040-D1S	POLY WASHER	2.1X4X0.25	2		
	132	1-0053-5005S	LMW-S	1.5X3.2X0.25	2		
	137	2-1711-5040-16S	E RING	1.5	1		
	138	2-1711-6032-96S	E RING		2		

# 10 Illustration of packing and parts list

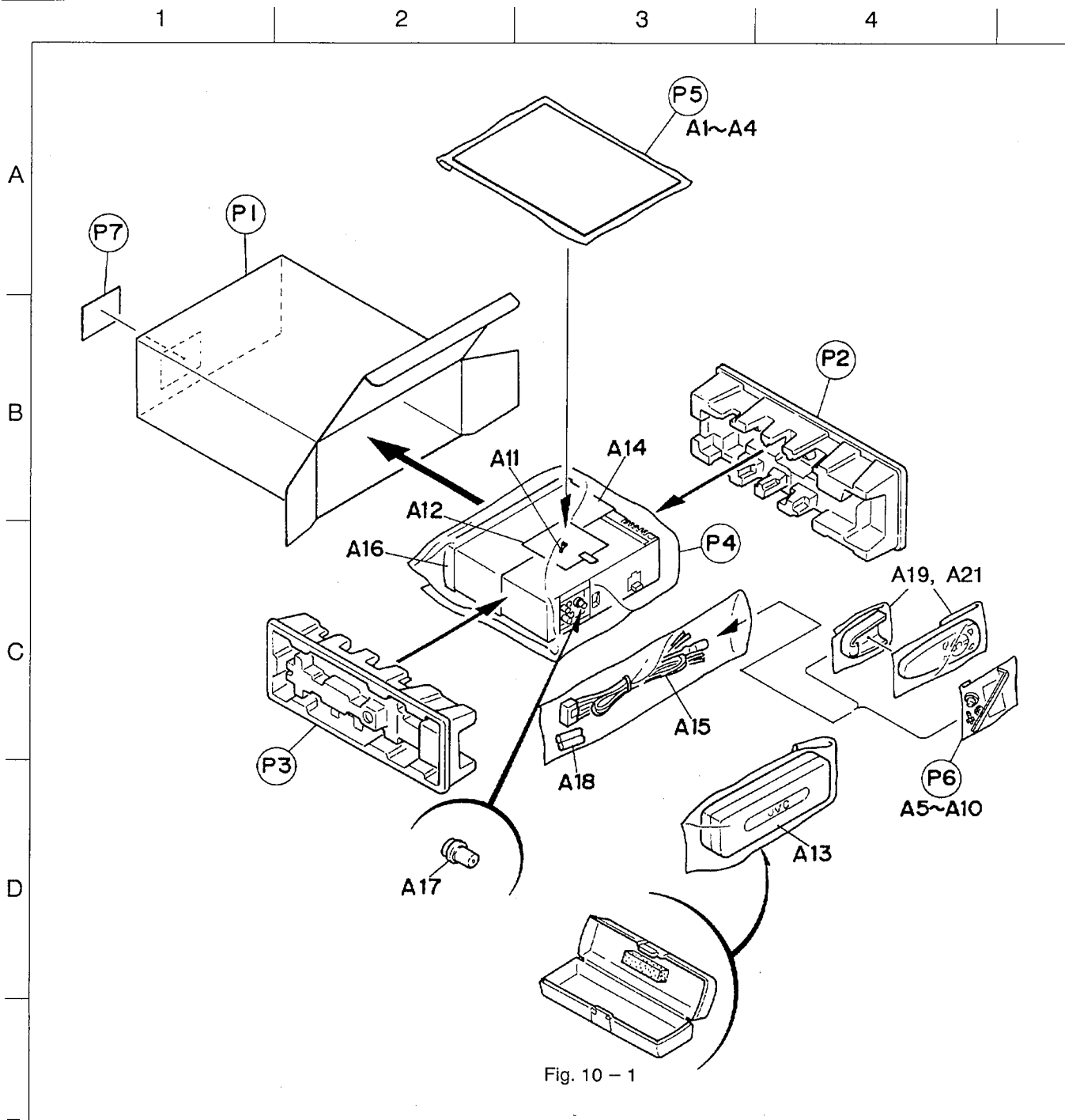


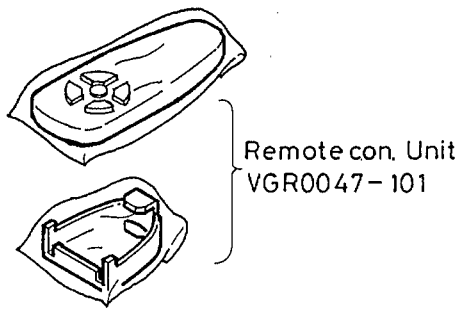
Fig. 10 - 1

● Packing parts list

BLOCK NO. M3MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	P 1	FSPE3001-026	CARTON		1		
	P 2	FSPH1009-001	PAPER CUSHION L	LEFT SIDE	1		
	P 3	FSPH1010-001	PAPER CUSHION R	RIGHT SIDE	1		
	P 4	VPE3005-066	POLY BAG	FOR SET	1		
	P 5	QPGA017-02505	POLY BAG	FOR INSTRUCTION	1		
	P 6	QPGA008-01205	POLY BAG	FOR SCREW KIT	1		
	P 7	-----	CARTON LABEL	CARTON(CODE39)	1		

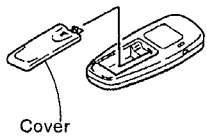
● Accessories parts



Remote con. Unit  
VGR0047-101



Battery  
R03BPA-2ST



Battery cover  
HTR0021-72PW  
(SERVICE ONLY)

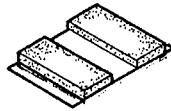


MINI DIN CAP  
VYTA510-001

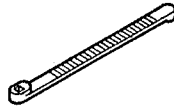
◆ SCREW KIT 1



Hook  
FSKL4010-002



Double Face  
VYTT682-001



Wire Holder  
E308918-001



Plug Nut  
VKZ4027-202



Mount Bolt  
VKH4871-001

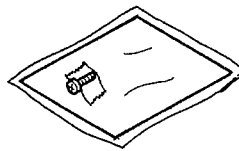


Lock Nut  
VKZ4328-001

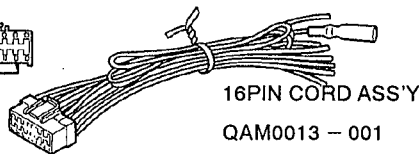


Washer  
WNS5000Z

◆ SCREW KIT 2



Screw  
SPSJ1725M  
Sheet  
VND4619-005



16PIN CORD ASSY  
QAM0013-001

● Accessories parts list

BLOCK NO. M3MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	FSUN3017-631S	INSTRUCTIONS		1		
	A 2	VNC2400-124S	INSTALL MANUAL		1		
	A 3	BT-51009-2S	WARRANTY CARD		1	J	
	A 4	BT-52001-3S	WARRANTY CARD		1	C	
	A 4	BT-20137	WARRANTY CARD		1	J	
	A 5	BT-20071B	WARRANTY CARD		1	C	
	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	WNS5000Z	WASHER		1		
	A 9	FSKL4010-002	HOOK		2		
	A 10	E308918-001	TIE BAND (T18S)		1		
	A 11	SPSF1780M	MINI SCREW	THEFT PREVENTIO	1		
	A 12	FSYA4001-001	SHEET		1		
	A 13	FSJB3001-00A	HARD CASE ASSY		1		
	A 14	FSKM2004-001	MOUNTING SLEEVE		1		
	A 15	QAM0013-001	16P CORD ASSY		1		
	A 16	FSJD2019-002	TRIM PLATE		1		
	A 17	VYTA510-001	MINI DIN CAP		1		
	A 18	R03BPA-2ST	BATTERY	UM-4 (PANASONIC)	2		
	A 19	VGR0047-101	REMOCON UNIT	RM-RK17	1		
	A 20	VYTT682-001SS	DOUBLE FACE		1		
	A 21	HTR0021-72PW	REMOCON B.CPVER	SERVICE ONLY	1		
	KIT 1	KSRT420K-SCRRW1	SCREW PARTS KIT	A5-A10.A20.P6	1		
	KIT 2	KSRT320K-SCREW2	SCREW PARTS KIT	A11-A12	1		



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AUDIO PRODUCTS DIVISION 10-1, 1-chome, Ohwatari-machi, Maebashi-city, Japan