

# JVC

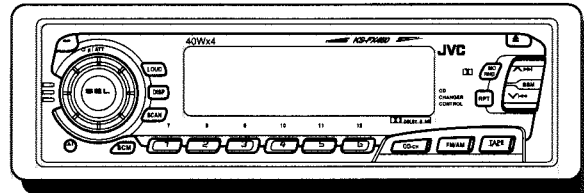
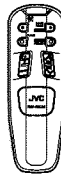
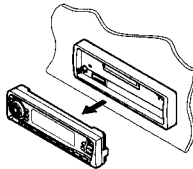
# SERVICE MANUAL

## CASSETTE RECEIVER

# KS-FX450

### Area Suffix


J ---- Northern America  
U ---- Other area



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## Safety precaution

 **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.

# Instructions



CASSETTE RECEIVER

KS-FX450

RECEPTOR-REPRODUCTOR DE CASSETTE KS-FX450

RADIOCASSETTE

KS-FX450

ENGLISH

ESPAÑOL

FRANÇAIS

**Having TROUBLE with operation?  
Please reset your unit**

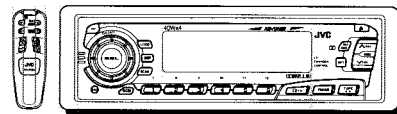
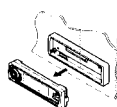
Refer to page of How to reset  
Still having trouble??

USA ONLY

**Call 1-800-252-5722**

<http://www.jvcservice.com>

We can help you!



For installation and connections, refer to the separate manual.  
Para la instalación y las conexiones, refiérase al manual separado.  
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. \_\_\_\_\_

FSUN3112-631  
[J]



EN, SP, FR

1199MNMMDWJES

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

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

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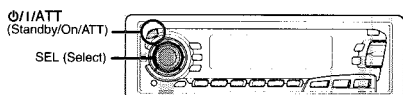
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### How to reset your unit

Press and hold both the SEL (Select) and  $\phi$ /I/ATT (Standby/On/ATT) buttons at the same time for several seconds.

This will reset the built-in microcomputer.

**NOTE:** Your preset adjustments — such as preset channels or sound adjustments — will also be erased.



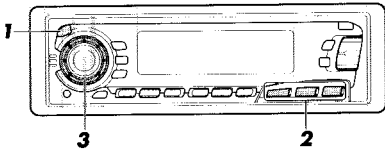
### BEFORE USE

- \* 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 the car...**  
If you have parked the car for a long time in hot or cold weather, wait until the temperature in the car becomes normal before operating the unit.

## BASIC OPERATIONS

ENGLISH



**Note:**  
When you use this unit for the first time, set the built-in clock correctly. (See page 19.)

**1** Turn on the power. "HELLO" appears on the display.

**Note on One-Touch Operation:**  
When you select a source in step 2 below, the power automatically comes on. You do not have to press this button to turn on the power.

**2** Select the source.

To operate the tuner, see pages 5 – 9.  
To operate the cassette deck, see pages 10 – 13.  
To operate the CD changer, see pages 25 – 27.  
To operate the external component, see page 28.

**3** Adjust the volume. Volume level appears

Volume level indicator

**4** Adjust the sound as you want (see pages 14 – 18).

**To drop the volume in a moment**  
Press  $\odot$ /I/ATT briefly while listening to any source. "ATT" starts flashing on the display, and the volume level will drop in a moment.

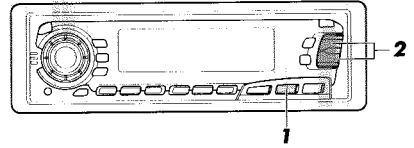
**To resume the previous volume level**, press the button briefly again.

**To turn off the power**  
Press  $\odot$ /I/ATT for more than 1 second.

## RADIO OPERATIONS

### Listening to the radio

ENGLISH



**1** Select the band (FM1, FM2, FM3 or AM). You can select any one of FM1, FM2, and FM3 to listen to an FM station.

F1 → F2 → F3 → AM  
(FM1) (FM2) (FM3)

Audio (see page 21) or volume level indicator Selected band (or clock time: see page 19) appears

**2** Start searching a station. While searching stations, "SEEK" appears on the display. When a station is received, searching stops.

To search stations of higher frequencies

To search stations of lower frequencies

**To stop searching before a station is received**, press the same button you have pressed for searching.

**To tune in a particular frequency without searching:**

- 1 Press FM/AM repeatedly to select the band (FM or AM).
- 2 Press and hold  $\blacktriangle$  or  $\blacktriangleright$  until "MANU (Manual)" starts flashing on the display. Now you can manually change the frequency while "MANU" is flashing.
- 3 Press  $\blacktriangle$  or  $\blacktriangleright$  repeatedly until the frequency you want is reached.
  - If you hold down the button, the frequency keeps changing until you release the button.

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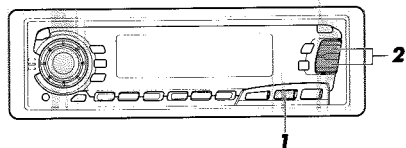
## Storing stations in memory

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You can use one of the following two methods to store broadcasting stations in memory.

- Automatic preset of FM stations: SSM (Strong-station Sequential Memory)
- Manual preset of both FM and AM stations

**FM station automatic preset: SSM**  
You can preset 6 local FM stations in each FM band (FM1, FM2 and FM3).



**1** Select the FM band number (FM1, FM2 or FM3) you want to store FM stations into.

F1 → F2 → F3 → AM  
(FM1) (FM2) (FM3)

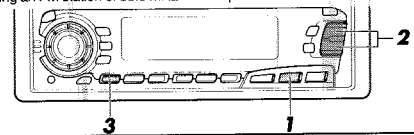
**2** Press and hold both buttons for more than 2 seconds.

"SSM" appears, then disappears when automatic preset is over.

Local FM stations with the strongest signals are searched and stored automatically in the band number you have selected (FM1, FM2 or FM3). These stations are preset in the number buttons — No. 1 (lowest frequency) to No. 6 (highest frequency).  
When automatic preset is over, the station stored in number button 1 will be automatically tuned in.

### Manual preset

You can preset up to 6 stations in each band (FM1, FM2, FM3 and AM) manually.  
EXAMPLE: Storing an FM station of 88.3 MHz into the preset channel number 1 of the FM1 band



**1** Select the FM1 band.

**2** Tune into a station of 88.3 MHz. See page 5 to tune into a station.

**3** Press and hold the number button (in this example, 1) for more than 2 seconds.

Selected band, preset number and "MEMO" flash alternately for a while.

**4** Repeat the above procedure to store other stations into other preset channel numbers.

**Notes:**

- A previously preset station is erased when a new station is stored in the same preset channel number.
- Preset stations are erased when the power supply to the memory circuit is interrupted (for example, during battery replacement). If this occurs, preset the stations again.

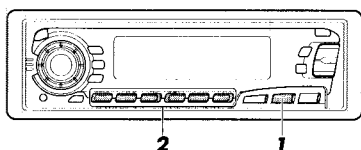
ENGLISH

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ENGLISH

### Tuning into a preset station

You can easily tune into a preset station. Remember that you must store stations first. If you have not stored them yet, see pages 6 and 7.



**1** Select the band (FM1, FM2, FM3 or AM) you want.



→ F1 → F2 → F3 → AM  
(FM1) (FM2) (FM3)

**2**

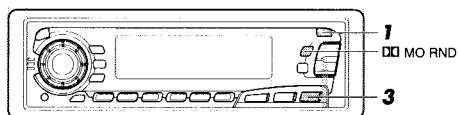


Select the number (1 – 6) for the preset station you want.

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## TAPE OPERATIONS

### Listening to a tape



**1** Open the control panel.

**2**

1. Insert a cassette into the cassette compartment.  
The unit turns on and tape play starts automatically.
2. Close the control panel by hand.

• When one side of the tape reaches its end during play, the other side of the tape automatically starts playing. (Auto Reverse)

**Note on One-Touch Operation:**  
When a cassette is already in the cassette compartment, pressing TAPE ◀▶ turns on the unit and starts tape play automatically.

**3**



Select the tape direction.  
Each time you press the button, the tape direction changes alternately – forward (FWD PLAY) and reverse (REV. PLAY).

#### To play back tapes recorded with the Dolby B NR

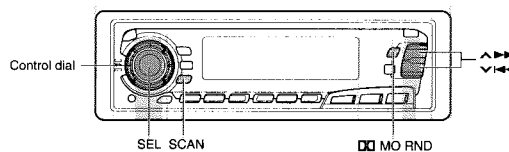
Press MO RND (Dolby NR/Monaural/Random) to set the Dolby B NR\* system. The MO indicator lights up, and "DOLBY B" appears on the display for several seconds. To cancel the Dolby B NR, press the same button again.

\* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
"DOLBY" and the double-D symbol MO are trademarks of Dolby Laboratories Licensing Corporation.

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### Other convenient tuner functions



#### Scanning broadcast stations

When you press SCAN while listening to the radio, station scanning starts. Each time a broadcast is tuned in, scanning stops for about 5 seconds (SCAN flashes on the display), and you can check what program is now being broadcast.

If you want to listen to that program, press the same button again to stop scanning.

#### Selecting FM reception sound

When an FM stereo broadcast is hard to receive:

Press MO RND (Dolby NR/Monaural/Random) while listening to an FM stereo broadcast. The MONO indicator lights up on the display. The sound you hear becomes monaural but reception will be improved.



Lights up when receiving an FM broadcast in stereo.

To restore the stereo effect, press the same button again.

#### Changing the AM/FM channel intervals

When using this unit in an area other than North or South America:

When this unit is shipped from the factory, the channel intervals are set to 10 kHz for AM and 200 kHz for FM. You can change the channel intervals by following the procedure below.

• See also "Changing the general settings (PSM)" on page 20.

1. Press and hold SEL (Select) for more than 2 seconds so that one of the PSM items appears on the display.
2. Select "AREA" with ▲▶▶ or ▼◀◀.
3. Rotate the control dial clockwise.  
"AREA EU" appears and the channel intervals are set to 9 kHz for AM and 50 kHz (for manual tuning) / 100 kHz (for searching) for FM.

To reset to the factory setting, follow the above step 1 and 2, then rotate the control dial counterclockwise in step 3 ("AREA US" appears on the display).

AREA EU: Select this when used in an area other than North and South America.  
AREA US: Select this when used in North or South America.

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ENGLISH

#### To stop play and eject the cassette

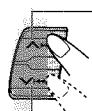
Press ▲.

Tape play stops, the control panel opens, then the cassette automatically ejects from the cassette compartment.

If you change the source to FM, AM or CD changer, the tape play also stops (without ejecting the cassette this time).

• You can also eject the cassette with the unit turned off.

#### To fast-forward and rewind a tape



• Press ▲▶▶ for more than 1 second to fast-forward the tape.  
When the tape reaches its end, the tape is reversed and playback starts from the beginning of the other side.

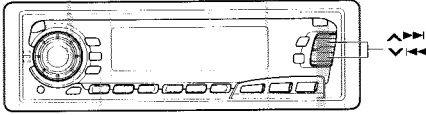
• Press ▼◀◀ for more than 1 second to rewind the tape.  
When the tape reaches its end, playback of the same side starts.

To stop fast forward and rewind at any position on the tape, press TAPE ◀▶.  
Tape play starts from that position on the tape.

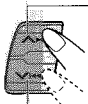
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**Finding the beginning of a tune**

Multi Music Scan allows you to automatically start playback from the beginning of a specified tune. You can specify up to 9 tunes ahead of or before the current tune.



**During playback**



To locate a tune ahead of the current tune on the tape

To locate a tune before the current tune on the tape

Specify where (how many tunes ahead of or before the current tune) the tune you want is located.



Each time you set the tune, the number changes up to ±9.

When the beginning of the specified tune is located, playback starts automatically.

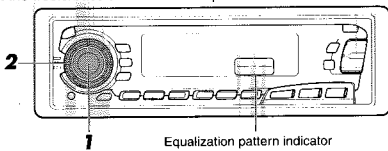
**Notes:**

- While locating a specified tune:
  - If the tape is rewound to its beginning, playback starts from the beginning of that side.
  - If the tape is fast-forwarded to the end, it is reversed and played from the beginning of the other side.
- In the following cases, the Multi Music Scan function may not operate correctly:
  - Tapes with tunes having long pianissimo passages (very quiet parts) or non-recorded portions between tunes.
  - Tapes with short non-recorded sections.
  - Tapes with high level of noise or humming between tunes.
  - The Dolby NR setting does not match. For example, if Dolby B NR is on and the tape was recorded with no Dolby NR.

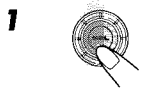
**SOUND ADJUSTMENTS**

**Adjusting the sound**

You can adjust the treble/bass sound and the speaker balance.



Equalization pattern indicator



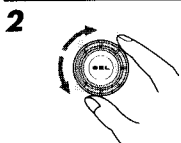
Select the item you want to adjust.



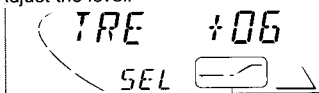
Indication	To do:	Range
BAS (Bass)	Adjust the bass	-06 (min.) — +06 (max.)
TRE (Treble)	Adjust the treble	-06 (min.) — +06 (max.)
FAD (Fader)*	Adjust the front and rear speaker balance	R06 (rear only) — F06 (front only)
BAL (Balance)	Adjust the left and right speaker balance	L06 (left only) — R06 (right only)
VOL (Volume)	Adjust the volume	00 (min.) — 50 (max.)

**Note:**

\* If you are using a two-speaker system, set the fader level to "00."



Adjust the level.



Equalization pattern changes as you adjust the bass or treble.

**Note:** Normally the control dial works for volume adjustment. So you do not have to select "VOL" to adjust the volume level.

**Other convenient tape functions**

**Skipping the blank portions on the tape**

You can skip blank portions between the tunes. (Blank Skip)  
When this function is on, the unit skips blank portions of 15 seconds or more, fast-forwards to the next tunes, then starts playing it.

• See also "Changing the general settings (PSM)" on page 20.

- Press and hold SEL (Select) for more than 2 seconds so that one of the PSM items appears on the display.
- Select "B SKIP (Blank Skip)" with  $\blacktriangle$  or  $\blacktriangleleft$ .
- Select the desired mode with the control dial.

The Blank Skip mode alternates between on and off.

ON  $\leftrightarrow$  OFF

**Note:**

When the tape reaches its end while fast-forwarding, the tape direction will be changed automatically.

**Playing the current tune repeatedly**

You can play the current tune repeatedly. (Repeat Play)



Each time you briefly press RPT (Repeat) while playing a tape, Repeat Play turns on and off alternately.



Lights up when Repeat Play is turned on.

**Notes:**

- In the following cases, Blank Skip and Repeat Play may not operate correctly:
  - Tapes with tunes having long pianissimo passages (very quiet parts) or non-recorded portions during tunes.
  - Tapes with short non-recorded sections.
  - Tapes with high level noise or humming between tunes.
  - The Dolby NR setting does not match. For example, if Dolby B NR is on and the tape was recorded with no Dolby NR.

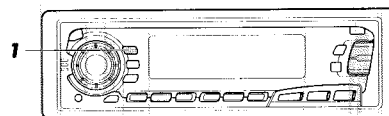
**Prohibiting cassette ejection**

You can prohibit the cassette ejection and can "lock" a cassette in the cassette compartment. Press and hold TAPE  $\blacktriangle$  and  $\blacktriangleleft$ /ATT for more than 2 seconds. "NO EJECT" flashes on the display for about 5 seconds, and the cassette is "locked."

To cancel the prohibition and "unlock" the cassette, press and hold TAPE  $\blacktriangle$  and  $\blacktriangleleft$ /ATT for more than 2 seconds again. "EJECT OK" flashes for about 5 seconds, and this time the cassette is "unlocked."

**Turning on/off the loudness function**

The human ear is less sensitive to low and high frequencies at low volumes. The loudness function can boost these frequencies to produce well-balanced sound at low volume level.



Turn on or off the loudness function.

Each time you press LOUD, the loudness function turns on and off alternately.



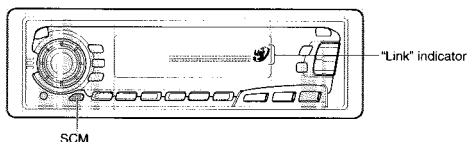
## Using the Sound Control Memory

You can select and store a preset sound adjustment suitable to each playback source. (Advanced SCM)

### Selecting and storing the sound modes

Once you select a sound mode, it is stored in memory, and will be recalled every time you select the same source. A sound mode can be stored each of the following sources — FM1, FM2, FM3, AM, tape, and external components.

- If you do not want to store the sound mode separately for each playback source, but want to use the same sound mode for all the sources, see "Canceling Advanced SCM" on page 21.



Select the sound mode you want.

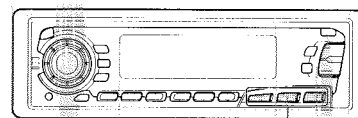
Each time you press the button, the sound mode changes as follows:

→ SCM OFF → BEAT → SOFT → POP

- If the "Link" indicator is lit on the display (with "SCM LINK" set to "LINK ON" — see page 21), the selected sound mode can be stored in memory for the current source, and the effect applies to the current source.
- If the "Link" indicator is NOT lit on the display (with "SCM LINK" set to "LINK OFF"), the selected sound mode effect applies to any source.

Indication	For:	Preset values		
		Bass	Treble	Loudness
SCM OFF	(Flat sound)	00	00	On
BEAT	Rock or disco music	+02	00	On
SOFT	Quiet background music	+01	-03	Off
POP	Light music	+04	+01	Off

## Recalling the sound modes



Source buttons



Select the source while the "Link" indicator is lit on the display.

The "Link" indicator starts flashing, and the sound mode stored in memory for the selected source is recalled.



Sound mode indicator

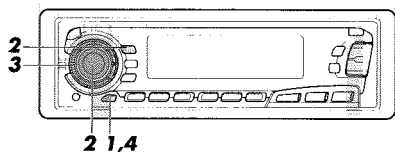
Equalization pattern of the selected sound mode appears.

### Notes:

- You can adjust each sound mode to your preference, and store it in memory. If you want to adjust and store your original sound mode, see "Storing your own sound adjustments" on page 18.
- To adjust the bass and treble reinforcement levels or to turn on/off the loudness function temporarily, see pages 14 and 15. (Your adjustments will be canceled if another source is selected.)

## Storing your own sound adjustments

You can adjust the sound modes (BEAT, SOFT, POP; see page 16) to your preference and store your own adjustments in memory.



**1** Call up the sound mode you want to adjust. See page 16 for details.

**2** To adjust the bass or treble sound level  
Select "BAS" or "TRE."

To turn on or off the loudness function  
See page 15 for details.

**3** Adjust the bass or treble level.  
See page 14 for details.

**4** Press and hold SCM (Sound Control Memory) until the sound mode you have selected flashes on the display.  
Your setting is stored in memory.

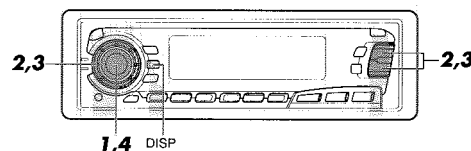
**5** Repeat the same procedure to store other settings.

### To reset to the factory settings

Repeat the same procedure and reassign the preset values listed in the table on page 16.

## OTHER MAIN FUNCTIONS

### Setting the clock



**1** Press and hold SEL (Select) for more than 2 seconds so that one of the PSM items appears on the display.

**2** Set the hour.  
1 Select "CLOCK H (Hour)" if not shown on the display.  
2 Adjust the hour.

**3** Set the minute.  
1 Select "CLOCK M (Minute)."  
2 Adjust the minute.

**4** Finish the setting.

### To check the current clock time (changing the display mode)

Press DISP repeatedly. Each time you press the button, the display mode changes as follows:

During tuner operation: Band ←→ Clock	During tape operation: TAPE ←→ Clock
During CD changer operation: Disc number ←→ Clock	During external component operation: Clock appears and disappears alternately.

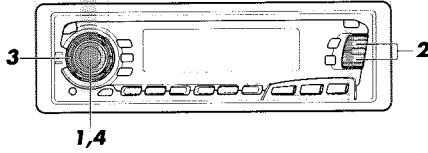
- If the unit is not in use when you press DISP, the power turns on, the clock time is shown for 5 seconds, then the power turns off.



## Changing the general settings (PSM)

You can change the items listed on the next page by using the PSM (Preferred Setting Mode) control.

### Basic Procedure



- 1** Press and hold SEL (Select) for more than 2 seconds so that one of the PSM items appears on the display.
- 2** Select the PSM item you want to adjust. (See page 21.)
- 3** Select or adjust the PSM item selected above.
- 4** Finish the setting.



### Selecting the dimmer mode

When you turn on the car head lights, the display automatically dims (Auto Dimmer). When shipped from the factory, Auto Dimmer mode is activated.

- AUTO: Activates Auto Dimmer.
- ON: Always dims the display.
- OFF: Cancels Auto Dimmer.

1. Press and hold SEL (Select) for more than 2 seconds so that one of the PSM items appears on the display.
2. Select "DIMMER" with  $\blacktriangle\blacktriangleright$  or  $\blacktriangleleft\blacktriangleleft$ .
3. Select the desired mode with the control dial.

The dimmer mode changes as follows:



#### Note on Auto Dimmer:

Auto Dimmer equipped with this unit may not work correctly on some vehicles, particularly on those having a control dial for dimming. In this case, set the dimmer mode to "ON" or "OFF".

### Selecting the external component to use

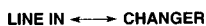
You can connect the external component to the CD changer jack on the rear using the Line Input Adaptor KS-U57 (not supplied).

To use the external component as the playback source through this unit, you need to select which component — CD changer or external component — to use. When shipped from the factory, CD changer is selected as the external component.

- LINE IN: To use the external component other than CD changer.
- CHANGER: To use the CD changer.

1. Change the source to FM, AM or tape with FM/AM or TAPE  $\blacktriangleleft\blacktriangleright$ .
2. Press and hold SEL (Select) for more than 2 seconds so that one of the PSM items appears on the display.
3. Select "LINE IN" with  $\blacktriangle\blacktriangleright$  or  $\blacktriangleleft\blacktriangleleft$ .
4. Select the desired mode with the control dial.

The external component selecting mode changes as follows:



#### Note:

For connecting the Line Input Adaptor KS-U57 and the external component, refer to the Installation/Connection Manual (separate volume).



1	2	3		Factory-preset settings	See page
	Select	Set			
CLOCK H	Hour adjustment	Back	Advance	0:00	19
CLOCK M	Minute adjustment	Back	Advance		
SCM LINK	Sound control memory linkage	LINK OFF	LINK ON	LINK ON	below
LEVEL	Level display	AUDIO 1 ↑ OFF	AUDIO 2 ↔ ↓	AUDIO 2	below
DIMMER	Dimmer	AUTO ↑ ON	OFF ↓	AUTO	22
AREA	Channel interval	AREA US	AREA EU	AREA US	9
B. SKIP	Blank skip	OFF	ON	OFF	13
LINE IN*	External component	CHANGER	LINE IN	CHANGER	28

- \* Displayed only when one of the following sources is selected — FM, AM and tape.
- Press SEL (select) when the setting is complete.

### Canceling Advanced SCM

You can cancel the Advanced SCM (Sound Control Memory), and unlink the sound modes and the playback sources.

When shipped from the factory, a different sound mode can be stored in memory for each source so that you can change the sound modes simply by changing the sources.

- LINK ON: Advanced SCM (different sound modes for different sources)
- LINK OFF: Conventional SCM (one sound mode for all sources)

1. Press and hold SEL (Select) for more than 2 seconds so that one of the PSM items appears on the display.
  2. Select "SCM LINK" with  $\blacktriangle\blacktriangleright$  or  $\blacktriangleleft\blacktriangleleft$ .
  3. Select the desired mode with the control dial.
- The SCM LINK mode changes as follows: **LINK ON ↔ LINK OFF**

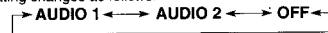
### Selecting the level display

You can select the level display according to your preference.

When shipped from the factory, "AUDIO 2" is selected.

- AUDIO 1: Shows the audio level indicator and the equalization pattern indicator.
- AUDIO 2: Alternates "AUDIO 1" setting and illumination display.
- OFF: Erases the audio level indicator and the equalization pattern indicator.

1. Press and hold SEL (Select) for more than 2 seconds so that one of the PSM items appears on the display.
  2. Select "LEVEL" with  $\blacktriangle\blacktriangleright$  or  $\blacktriangleleft\blacktriangleleft$ .
  3. Select the desired mode with the control dial.
- The level display setting changes as follows:



## Detaching the control panel

You can detach the control panel when leaving the car.

When detaching or attaching the control panel, be careful not to damage the connectors on the back of the control panel and on the panel holder.

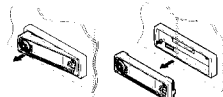
### How to detach the control panel

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

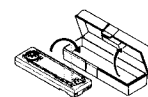
- 1** Unlock the control panel.



- 2** Pull the control panel out of the unit.

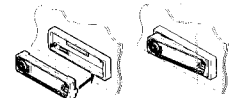


- 3** Put the detached control panel into the provided case.



### How to attach the control panel

- 1** Insert the right side of the control panel into the groove on the panel holder.

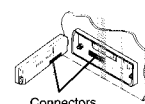


- 2** Press the left side of the control panel to fix it to the panel holder.



#### Note on cleaning the connectors:

If you frequently detach the control panel, the connectors will deteriorate. To minimize this possibility, periodically wipe the connectors with a cotton swab or cloth moistened with alcohol, being careful not to damage the connectors.



Connectors

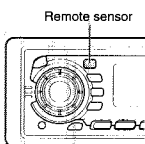


## REMOTE OPERATIONS

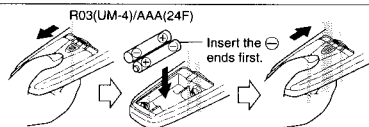
ENGLISH

Before using the remote controller:

- Aim the remote controller directly at the remote sensor on the main unit. Make sure there is no obstacle in between.
- Do not expose the remote sensor to strong light (direct sunlight or artificial lighting).

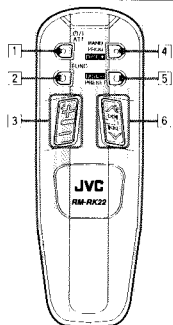


### Installing the batteries



When the controllable range or effectiveness of the remote controller decreases, replace the batteries – R03(UM-4)/AAA(24F).

### Using the remote controller



- 1 Functions the same as the  $\text{O/I/ATT}$  button on the main unit.
- 2 Selects the source. Each time you press FUNC (Function), the source changes.
- 3 Functions the same as the control dial on the main unit.
- 4 Functions as the BAND button while listening to the radio. Each time you press the button, the band changes.
  - Functions as the DISC + button while listening to the CD changer. Each time you press the button, the disc number increases, and selected disc starts playing.
  - Functions as the PROG button while listening to a tape. Each time you press the button, the tape direction changes alternately.
- 5 Functions as the PRESET button while listening to the radio. Each time you press the button, the preset station number increases, and selected station is tuned in.
  - Functions as the DISC - button while listening to the CD changer. Each time you press the button, the disc number decreases, and selected disc starts playing.
- 6 Searches stations while listening to the radio.
  - Functions as the fast forward or rewind buttons or Multi Music Scan buttons while listening to a tape.
  - Fast-forwards or reverses the track if pressed and held while listening to the CD.
  - Skips to the beginning of the next tracks or go back to the beginning of the current (or previous tracks) if pressed briefly while listening to the CD.

**Note:**  
• This button does not function for the preferred [6] setting mode adjustment.

## CD CHANGER OPERATIONS

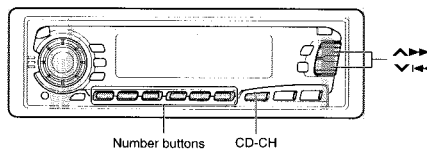
ENGLISH

We recommend that you use one of the CH-X series with your unit. If you have another CD automatic changer, consult your JVC car audio dealer for connections. For example, if your CD automatic changer is one of the KD-MK series, you need a cord (KS-U15K) for connecting it to this unit.

Before operating your CD automatic changer:

- Refer also to the Instructions supplied with your CD changer.
- If no discs are in the magazine of the CD changer or the discs are inserted upside down, "NO DISC" will appear on the display. If this happens, remove the magazine and set the discs correctly.
- If "RESET 1 - RESET 0" appears on the display, something is wrong with the connection between this unit and the CD changer. If this happens, check the connection, connect the connecting cord(s) firmly if necessary, then press the reset button of the CD changer.

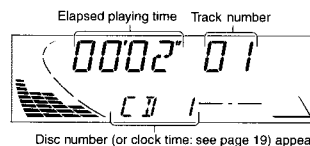
### Playing CDs



Number buttons CD-CH



Select the CD automatic changer. Playback starts from the first track of the first disc. All tracks of all discs are played back.



Disc number (or clock time: see page 19) appears.

**Note on One-Touch Operation:**  
When you press CD-CH, the power automatically comes on. You do not have to press  $\text{O/I/ATT}$  to turn on the power.



### To fast-forward or reverse the track

ENGLISH

Press and hold  $\text{FF}$ , while playing a CD, to fast-forward the track.



Press and hold  $\text{REW}$ , while playing a CD, to reverse the track.

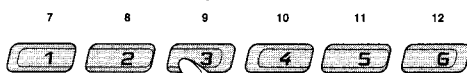
### To go to the next tracks or the previous tracks

Press  $\text{FF}$  briefly, while playing a CD, to go ahead to the beginning of the next track. Each time you press the button consecutively, the beginning of the next tracks is located and played back.



Press  $\text{REW}$  briefly, while playing a CD, to go back to the beginning of the current track. Each time you press the button consecutively, the beginning of the previous tracks is located and played back.

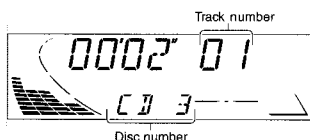
### To go to a particular disc directly



Press the number button corresponding to the disc number to start its playback (while the CD changer is playing).

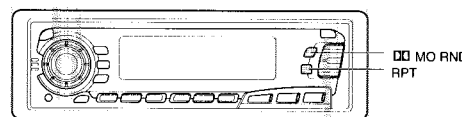
- To select a disc number from 1 - 6: Press 1 (7) - 6 (12) briefly.
- To select a disc number from 7 - 12: Press and hold 1 (7) - 6 (12) for more than 1 second.

Ex. When disc number 3 is selected



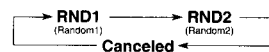
### Selecting CD playback modes

ENGLISH



#### To play back tracks at random (Random Play)

Each time you press  $\text{MO RND}$  (Dolby NR/Monaural/Random) while playing a CD, CD random play mode changes as follows:



Mode	RND Indicator	Plays at random
RND1	Lights	All tracks of the current disc, then the tracks of the next disc, and so on.
RND2	Flashes	All tracks of all discs inserted in the magazine.

#### To play back tracks repeatedly (Repeat Play)

Each time you press  $\text{RPT}$  (Repeat) while playing a CD, CD repeat play mode changes as follows:

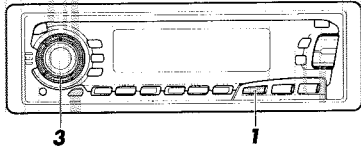


Mode	RPT Indicator	Plays repeatedly
RPT1	Lights	The current track (or specified track).
RPT2	Flashes	All tracks of the current disc (or specified disc).

**EXTERNAL COMPONENT OPERATIONS**

**Playing an external component**

You can connect the external component to the CD changer jack on the rear using the Line Input Adaptor KS-U57 (not supplied).

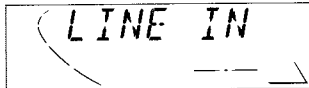


**Preparations:**

- For connecting the Line Input Adaptor KS-U57 and the external component, refer to the Installation/Connection Manual (separate volume).
- Before operating the external component using the following procedure, select the external input correctly. (See "Selecting the external component to use" on page 22.)



Select the external component.



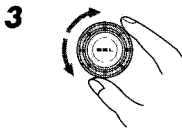
- If "LINE IN" does not appear on the display, see page 22 and select the external input ("LINE IN").

\*Displayed only when one of the following sources is selected — FM, AM and tape.

**Note on One-Touch Operation:**

When you press CD-CH, the power automatically comes on. You do not have to press  $\odot$ /I/ATT to turn on the power.

**2** Turn on the connected component and start playing the source.



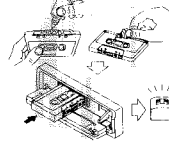
Adjust the volume.

**MAINTENANCE**

**To extend the lifetime of the unit**

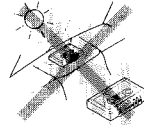
This unit requires very little attention, but you will be able to extend the life of the unit if you follow the instructions below.

**To clean the heads**



- Clean the heads after every 10 hours of use using a wet-type head cleaning tape (available at an audio store). When the head becomes dirty, you may realize the following symptoms:
  - Sound quality is reduced.
  - Sound level decreases.
  - Sound drops out.
- Do not play dirty or dusty tapes.
- Do not touch the highly-polished head with any metallic or magnetic tools.

**To keep the tape clean**



- Always store the tapes to their storage cases after use.
- Do not store tapes in the following places:
  - Subject to direct sunlight
  - With high humidity
  - At extremely hot temperatures

**CAUTIONS:**

- Do not play the tapes with peeling labels; otherwise, they can damage the unit.
- Tighten tapes to remove slack since loose tape may become entangled with the mechanism.
- Do not leave a cassette in the cassette compartment after use, as the tape may become slack.

The function below is also provided to ensure the longer life of this unit.

**Ignition key-off Release/Ignition key-on play**

- When you turn off the ignition key with a cassette in the compartment, the unit automatically releases the tape from its head.
- When you turn on the ignition key with a cassette in the compartment, playback automatically starts.

**! TROUBLESHOOTING**

What appears to be trouble is not always serious. Check the following points before calling a service center.

Symptoms	Causes	Remedies
• A cassette tape cannot be inserted.	You have tried to insert a cassette in the wrong way.	Insert the cassette with the exposed tape facing right.
• Cassette tapes become hot.	This is not a malfunction.	—
• Tape sound is at very low level and sound quality is degraded.	The tape head is dirty.	Clean it with a head cleaning tape.
• Sound is sometimes interrupted.	Connections are not good.	Check the cords and connections.
• Sound cannot be heard from the speakers.	The volume is turned to the minimum level.	Adjust it to the optimum level.
	Connections are incorrect.	Check the cords and connections.
• SSM (Strong-station Sequential Memory) automatic preset does not work.	Signals are too weak.	Store stations manually.
• Static noise while listening to the radio.	The antenna is not connected firmly.	Connect the antenna firmly.
• "NO DISC" appears on the display.	No CD is in the magazine.	Insert CDs into the magazine.
	CDs are inserted incorrectly.	Insert them correctly.
• "RESET 8" appears on the display.	This unit is not connected to a CD changer correctly.	Connect this unit and the CD changer correctly and press the reset button of the CD changer.
• "RESET 1 - RESET 7" appears on the display.	—	Press the reset button of the CD changer.
• This unit does not work at all. • The CD changer does not work at all.	The built-in microcomputer may function incorrectly due to noise, etc.	Press and hold both the SEL (Select) and $\odot$ /I/ATT (Standby/On/ATT) buttons at the same time for several seconds. (The clock setting and preset stations stored in memory are erased.) (See page 2.)

**SPECIFICATIONS**

**AUDIO AMPLIFIER SECTION**

Maximum Power Output:  
 Front: 40 W per channel  
 Rear: 40 W per channel  
 Continuous Power Output (RMS):  
 Front: 16 W per channel into 4  $\Omega$ , 40Hz to 20,000 Hz at no more than 0.8% total harmonic distortion.  
 Rear: 16 W per channel into 4  $\Omega$ , 40Hz to 20,000 Hz at no more than 0.8% total harmonic distortion.

Load Impedance: 4  $\Omega$  (4  $\Omega$  to 8  $\Omega$  allowance)  
 Tone Control Range  
 Bass:  $\pm$ 10 dB at 100 Hz  
 Treble:  $\pm$ 10 dB at 10 kHz  
 Frequency Response: 40 Hz to 20,000 Hz  
 Signal-to-Noise Ratio: 70 dB  
 Line-Out Level/Impedance:  
 2.0 V/20 k $\Omega$  load (250 nWb/m)

**TUNER SECTION**

Frequency Range  
 FM: 87.5 MHz to 107.9 MHz (with channel interval set to 200 kHz)  
 87.5 MHz to 108.0 MHz (with channel interval set to 50 kHz)  
 AM: 530 kHz to 1,710 kHz (with channel interval set to 10 kHz)  
 531 kHz to 1,602 kHz (with channel interval set to 9 kHz)

**[FM Tuner]**

Usable Sensitivity: 11.3 dBf (1.0  $\mu$ V/75  $\Omega$ )  
 50 dB Quieting Sensitivity:  
 16.3 dBf (1.8  $\mu$ V/75  $\Omega$ )  
 Alternate Channel Selectivity (400 kHz):  
 65 dB  
 Frequency Response: 40 Hz to 15,000 Hz  
 Stereo Separation: 35 dB  
 Capture Ratio: 1.5 dB

**[AM Tuner]**

Sensitivity: 20  $\mu$ V  
 Selectivity: 35 dB

**CASSETTE DECK SECTION**

Wow & Flutter: 0.11% (WRMS)  
 Fast-Wind Time: 100 sec. (C-60)  
 Frequency Response (Dolby NR-OFF):  
 30 Hz to 16,000 Hz (Normal tape)  
 Signal-to-Noise Ratio: (Normal tape)  
 (Dolby NR-ON): 65 dB  
 (Dolby NR-OFF): 56 dB  
 Stereo Separation: 40 dB

**GENERAL**

Power Requirement  
 Operating Voltage: DC 14.4 V (11 V to 16 V allowance)  
 Allowable Working Temperature:  
 0°C to +40°C (32°F to 104°F)  
 Grounding System: Negative ground  
 Dimensions (W x H x D)  
 Installation Size:  
 182 mm x 52 mm x 150 mm  
 (7-3/16" x 2-1/16" x 5-15/16")  
 Panel Size: 188 mm x 58 mm x 14 mm  
 (7-7/16" x 2-5/16" x 5/8")  
 Mass: 1.3 kg (2.9 lbs) (excluding accessories)

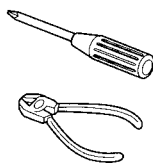
Design and specifications subject to change without notice.

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

# JVC KS-FX450

## Installation/Connection Manual Manual de instalación/conexión Manuel d'installation/raccordement

FSUN3112-T631  
[J]



1199NMMDWJES  
EN, SP, FR

### ENGLISH

- This unit is designed to operate on 12 volts DC, NEGATIVE ground electrical systems.

## 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 **LA** (Control Panel Release button) to detach the control panel.

**2** Remove the trim plate.

**3** Remove the sleeve after disengaging the sleeve locks.

① Stand the unit.

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

② Insert the 2 handles between the unit and the sleeve, as illustrated, to disengage the sleeve locks.

③ Remove the sleeve.

**Note:** Be sure to keep the handles for future use after installing the unit.

**4** Install the sleeve into the dashboard.

\* After the sleeve is correctly installed in the dashboard, bend the appropriate tabs to hold the sleeve firmly in place, as illustrated.

**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** Do the required electrical connections explained on the back of this instructions.

**7** Slide the unit into the sleeve until it is locked.

**8** Attach the trim plate so that the projection on the trim plate is fixed to the left side of the unit.

**9** Attach the control panel.

### ESPAÑOL

- Esta unidad está diseñada para funcionar con 12 voltios de CC, con sistemas eléctricos de masa NEGATIVA.

## INSTALACION (MONTAJE EN EL TABLERO DE INSTRUMENTOS)

- La siguiente ilustración muestra una instalación típica. Sin embargo usted deberá efectuar los ajustes correspondientes a su automóvil. Si tiene alguna pregunta o necesita información acerca de las herramientas para instalación, consulte con su concesionario de JVC de equipos de audio para automóviles o a una compañía que suministra tales herramientas.

**1 Antes de instalar:** Presione **LA** (botón de liberación del panel de control) para desmontar el panel de control.

**2** Retire la placa de guarnición.

**3** Retire la cubierta después de desenganchar los retenes de la cubierta.

① Ponga la unidad vertical.

**Note:** Al poner la unidad vertical, tenga cuidado de no dañar el fusible provisto en la parte posterior.

② Inserte las dos asas entre la unidad y la cubierta tal como en la ilustración y desenganche los retenes de la cubierta.

③ Retire la cubierta.

**Note:** Después de instalar la unidad, asegúrese de guardar las asas para uso futuro.

**4** Instale la cubierta en el tablero de instrumentos.

\* Después de que la cubierta esté correctamente instalada en el tablero de instrumentos, doble las lengüetas correspondientes para sostener la cubierta firmemente en su lugar, tal como se muestra.

**5** Fije el perno de montaje en la parte trasera del cuerpo de la unidad y coloque el cojín de goma sobre el extremo del perno.

**6** Realice las conexiones eléctricas requeridas en base a las explicaciones que figuran en la parte de atrás de estas instrucciones.

**7** Deslice la unidad dentro de la cubierta hasta que se bloquee.

**8** Coloque la placa de guarnición de manera que el saliente de la misma quede colocado en el lateral izquierdo de la unidad.

**9** Coloque el panel de control.

### FRANÇAIS

- Cet appareil est conçu pour fonctionner sur des sources de courant continu de 12 volts à masse NEGATIVE.

## INSTALLATION (MONTAGE DANS LE TABLEAU DE BORD)

- L'illustration suivante est un exemple d'installation typique. Cependant, vous devez faire les ajustements correspondant à votre voiture particulière. Si vous avez des questions ou avez besoin d'information sur des kits d'installation, consultez votre revendeur d'autoradios JVC ou une compagnie d'approvisionnement.

**1 Avant le montage:** Appuyez sur **LA** (touche de libération du panneau de commande) pour détacher le panneau de commande.

**2** Retirer la plaque d'assemblage.

**3** Libérer les verrous du manchon et retirer le manchon.

① Poser l'appareil à la verticale.

**Remarque:** Lorsque vous mettez l'appareil à la verticale, faire attention de ne pas endommager le fusible situé sur le fond.

② Insérer les 2 poignées entre l'appareil et le manchon comme indiqué pour désengager les verrous de manchon.

③ Retirer le manchon.

**Remarque:** S'assurer de garder les poignées pour une utilisation ultérieure, après l'installation de l'appareil.

**4** Installer le manchon dans le tableau de bord.

\* Après installation correcte du manchon dans le tableau de bord, plier les bonnes pattes pour maintenir fermement le manchon en place, comme montré.

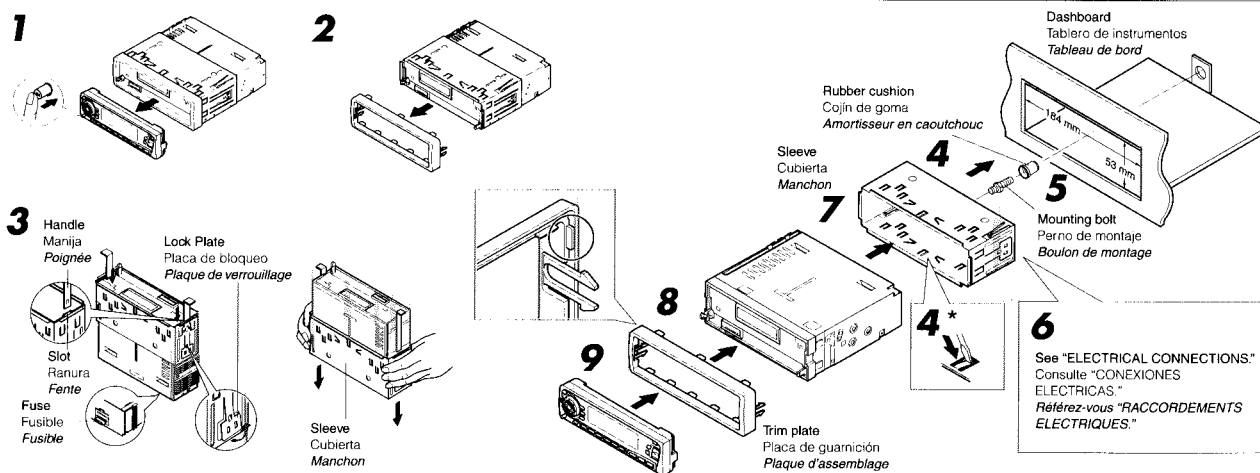
**5** Monter le boulon de montage sur l'arrière du corps de l'appareil puis passer l'amortisseur en caoutchouc sur l'extrémité du boulon.

**6** Réalisez les connexions électriques expliquées au dos de cette page.

**7** Faites glisser l'appareil dans le manchon jusqu'à ce qu'il soit verrouillé.

**8** Attachez la plaque d'ajustage de façon que la projection de la plaque soit fixée sur le côté gauche de l'appareil.

**9** Remonter le panneau de commande.



## TROUBLESHOOTING

- The fuse blows.**
  - Are the red and black leads connected correctly?
- 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?

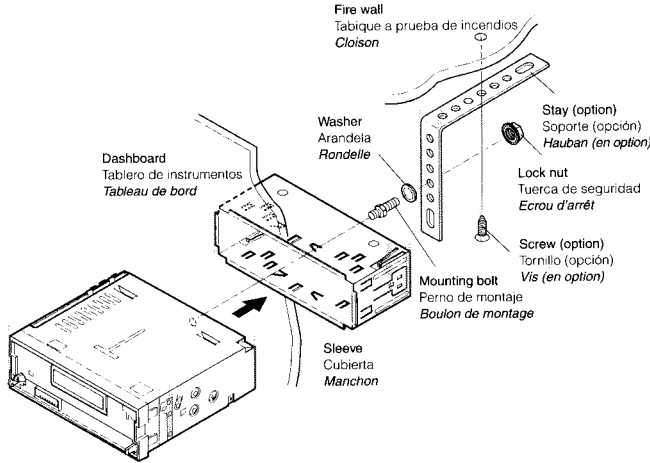
## LOCALIZACION DE AVERIAS

- El fusible se quema.**
  - ¿Están los conductores rojo y negro correctamente conectados?
- No es posible conectar la alimentación.**
  - ¿Está el cable amarillo conectado?
- No sale sonido de los altavoces.**
  - ¿Está el cable de salida del altavoz cortocircuitado?
- El sonido presenta distorsión.**
  - ¿Está el cable de salida del altavoz conectado a masa?
  - ¿Están los terminales "-" de los altavoces L y R conectados a una masa común?
- La unidad se calienta.**
  - ¿Está el cable de salida del altavoz conectado a masa?
  - ¿Están los terminales "-" de los altavoces L y R conectados a una masa común?

## EN CAS DE DIFFICULTÉS

- Le fusible saute.**
  - Les fils rouge et noir sont-ils raccordés correctement?
- L'appareil ne peut pas être mise sous tension.**
  - Le fil jaune est-elle raccordée?
- Pas de son des haut-parleurs.**
  - Le fil de sortie de haut-parleur est-il court-circuité?
- Le son est déformé.**
  - Le fil de sortie de haut-parleur est-il à la masse?
  - Les bornes "-" des haut-parleurs gauche et droit sont-elles mises ensemble à la masse?
- L'appareil devient chaud.**
  - Le fil de sortie de haut-parleur est-il à la masse?
  - Les bornes "-" des haut-parleurs gauche et droit sont-elles mises ensemble à la masse?

- When using the optional stay
- Cuando emplea un soporte opcional
- Lors de l'utilisation du hauban en option



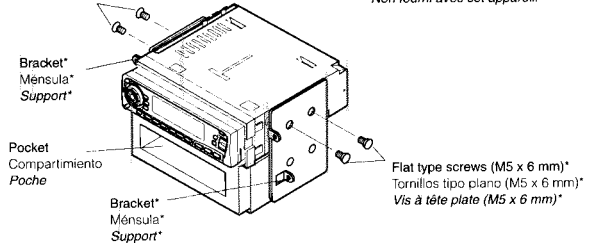
- When installing the unit without using the sleeve
- Instalación de la unidad sin utilizar la cubierta
- Lors de l'installation de l'appareil sans utiliser de manchon

In a Toyota for example, first remove the car radio and install the unit in its place.  
 En un Toyota por ejemplo, primero extraiga la radio del automóvil y luego instale la unidad en su lugar.

Par exemple dans une Toyota, retirer d'abord l'autoradio et installer l'appareil à la place.

Flat type screws (M5 x 6 mm)\*  
 Tornillos tipo plano (M5 x 6 mm)\*  
 Vis à tête plate (M5 x 6 mm)\*

\* Not included with this unit.  
 \* No suministrado con esta unidad.  
 \* Non fourni avec cet appareil.



**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.

**Nota:** Cuando instala la unidad en la ménsula de montaje, asegúrese de utilizar los tornillos de 6 mm de longitud. Si se utilizan tornillos más largos, éstos pueden dañar la unidad.

**Remarque:** Lors de l'installation de l'appareil sur le support de montage, s'assurer d'utiliser des vis d'une longueur de 6 mm. Si des vis plus longues sont utilisées, elles peuvent endommager l'appareil.

**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.)

**Extracción de la unidad**

- Antes de extraer la unidad, libere la sección trasera.

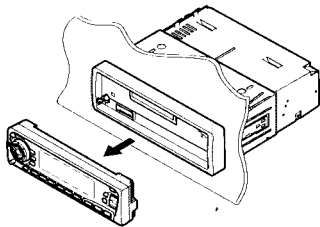
- 1 Extraiga el panel de control.
- 2 Retire la placa de guarnición.
- 3 Inserte las 2 manijas entre las ranuras, como se muestra. Luego, separe gentilmente las manijas y extraiga la unidad. (Asegúrese de conservar las manijas después de instalarlo.)

**Retrait de l'appareil**

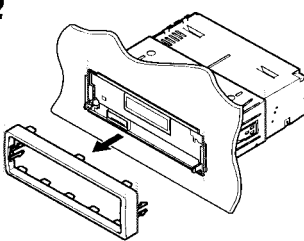
- Avant de retirer l'appareil, libérer la section arrière.

- 1 Retirer le panneau de commande.
- 2 Retirer la plaque d'assemblage.
- 3 Introduire les deux poignées dans les fentes, comme montré. Puis, tout en tirant doucement les poignées écartées, faire glisser l'appareil pour le sortir. (S'assurer de conserver les poignées après l'installation de l'appareil.)

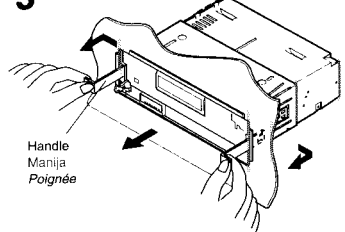
1



2



3



**Parts list for installation and connection**

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

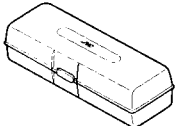
**Lista de piezas para instalación y conexión**

Con esta unidad se suministran las siguientes piezas. Después de inspeccionarlas, colóquelas correctamente.

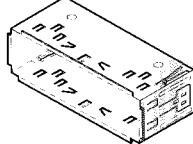
**Liste des pièces pour l'installation et raccordement**

Les pièces suivantes sont fournies avec cet appareil. Après vérification, veuillez les placer correctement.

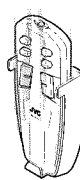
Hard case  
 Estuche duro  
 Etui de transport



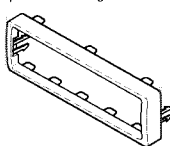
Sleeve  
 Cubierta  
 Manchon



Remote controller and holder  
 Control remoto y soporte  
 Télécommande et support



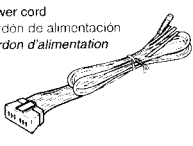
Trim plate  
 Placa de guarnición  
 Plaque d'assemblage



Batteries  
 Pilas  
 Piles

R03(UM-4)/AAA(24F)

Power cord  
 Corden de alimentación  
 Cordon d'alimentation



Handles  
 Manijas  
 Poignées



Washer (ø5)  
 Arandela (ø5)  
 Rondelle (ø5)



Lock nut (M5)  
 Tuerca de seguridad (M5)  
 Ecrou d'arrêt (M5)



Mounting bolt (M5 x 20 mm)  
 Perno de montaje (M5 x 20 mm)  
 Boulon de montage (M5 x 20 mm)

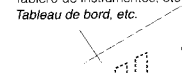


Rubber cushion  
 Cojin de goma  
 Amortisseur en caoutchouc

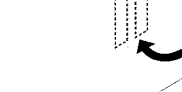


**Installation : Remote Controller**  
**Instalación : Control remoto**  
**Installation : Télécommande**

Dashboard, etc.  
 Tablero de instrumentos, etc.  
 Tableau de bord, etc.

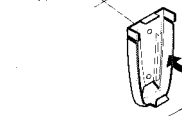


Double-faced tape (not included with this unit)  
 Cinta adhesiva de ambos lados (no suministrado con esta unidad)  
 Bande double face (non fourni avec cet appareil)



Holder  
 Soporte  
 Support

Remote controller  
 Control remoto  
 Télécommande



- Before attaching the double-faced tape, wipe and clean the place where you plan to attach it.
- Antes de adherir la cinta de doble cara, limpie el sitio de instalación con un paño.
- Avant d'attacher la bande double face, essuyez et nettoyez l'emplacement où vous projettez de l'attacher.

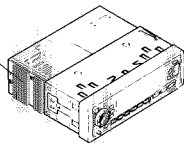
**ENGLISH**  
**ELECTRICAL CONNECTIONS**

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 to operate only on **12 volts DC, NEGATIVE ground electrical systems**. 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.**
- The heat sink becomes very hot after use. Be careful not to touch it when removing this unit.

Heat sink  
Sumidero térmico  
Dissipateur de chaleur



**ESPAÑOL**  
**CONEXIONES ELECTRICAS**

Para evitar cortocircuitos, recomendamos que desconecte el terminal negativo de la batería y que efectúe todas las conexiones eléctricas antes de instalar la unidad. Si usted no está seguro de cómo instalar correctamente la unidad, hágala instalar por un técnico cualificado.

**Nota:**  
Esta unidad está diseñada para funcionar con **12 voltios de CC, con sistemas eléctricos de masa NEGATIVA** solamente. Si su vehículo no posee este sistema, será necesario un inversor de tensión, que puede ser adquirido en los concesionarios de JVC de equipos de audio para automóviles.

- Reemplace el fusible por uno con la corriente especificada. Si el fusible se quemase frecuentemente consulte con su concesionario de JVC de equipos de audio para automóviles.
- Si el ruido fue un problema...
- Esta unidad tiene un filtro de ruido en el circuito de alimentación. Sin embargo, en algunos vehículos, pueden producirse chasquidos u otros ruidos indeseados. En tal caso conecte el **terminal de tierra posterior** (ver diagrama de conexión abajo) del receptor al chasis del automóvil, utilizando cordones más gruesos y cortos tales como alambre de cobre trenzado o de grueso calibre. Si el ruido persiste, consulte a su concesionario de JVC de equipos de audio para automóvil.
- La entrada máxima de los altavoces traseros debe ser mayor de 40 vatios y la de los delanteros de 40 vatios, con una impedancia de **4 a 8 ohmios**.
- **Asegúrese de conectar esta unidad a tierra en el chasis del automóvil.**
- El sumidero térmico estará muy caliente después del uso. Asegúrese de no tocarlo al desmontar esta unidad.

**FRANÇAIS**  
**RACCORDEMENTS ELECTRIQUES**

Pour éviter tout court-circuit, nous vous recommandons de débrancher la borne négative de la batterie et d'effectuer tous les raccordements électriques avant d'installer l'appareil. Si l'on n'est pas sûr de pouvoir installer correctement cet appareil, le faire installer par un technicien qualifié.

**Remarque:**  
Cet appareil est conçu pour fonctionner sur des sources de courant continu de 12 volts à masse **NEGATIVE** seulement. Si votre véhicule n'offre pas ce type d'alimentation, il vous faut un convertisseur de tension, que vous pouvez acheter chez un revendeur d'autoradios JVC.

- Remplacer le fusible par un de la valeur précisée. Si le fusible saute souvent, consulter votre revendeur d'autoradios JVC.
- Si le bruit est un problème...
- Cet appareil incorpore un filtre de bruit dans le circuit d'alimentation. Cependant, avec certains véhicules, quelques claquements ou autres bruits non désirés risquent de se produire. Si cela arrive, raccorder la **borne de masse arrière** de l'appareil au châssis de la voiture (voir le schéma de raccordement ci-dessous) en utilisant des cordons les plus gros et les plus courts possibles telle qu'une barre de cuivre ou une tresse. Si le bruit persiste, consulter votre revendeur d'autoradios JVC.
- La puissance admissible des haut-parleurs doit être supérieure à 40 watts à l'arrière et à 40 watts l'avant, avec une impédance de **4 à 8 ohms**.
- **S'assurer de raccorder la mise à la masse de cet appareil au châssis de la voiture.**
- Le radiateur devient très chaud après usage. Faire attention de ne pas le toucher en retirant cet appareil.

**A Typical Connections / Conexiones típicas / Raccordements typiques**

**Before connecting:** Check the wiring in the vehicle carefully not to fail in connecting this unit. Incorrect connection may cause a serious damage to this unit.

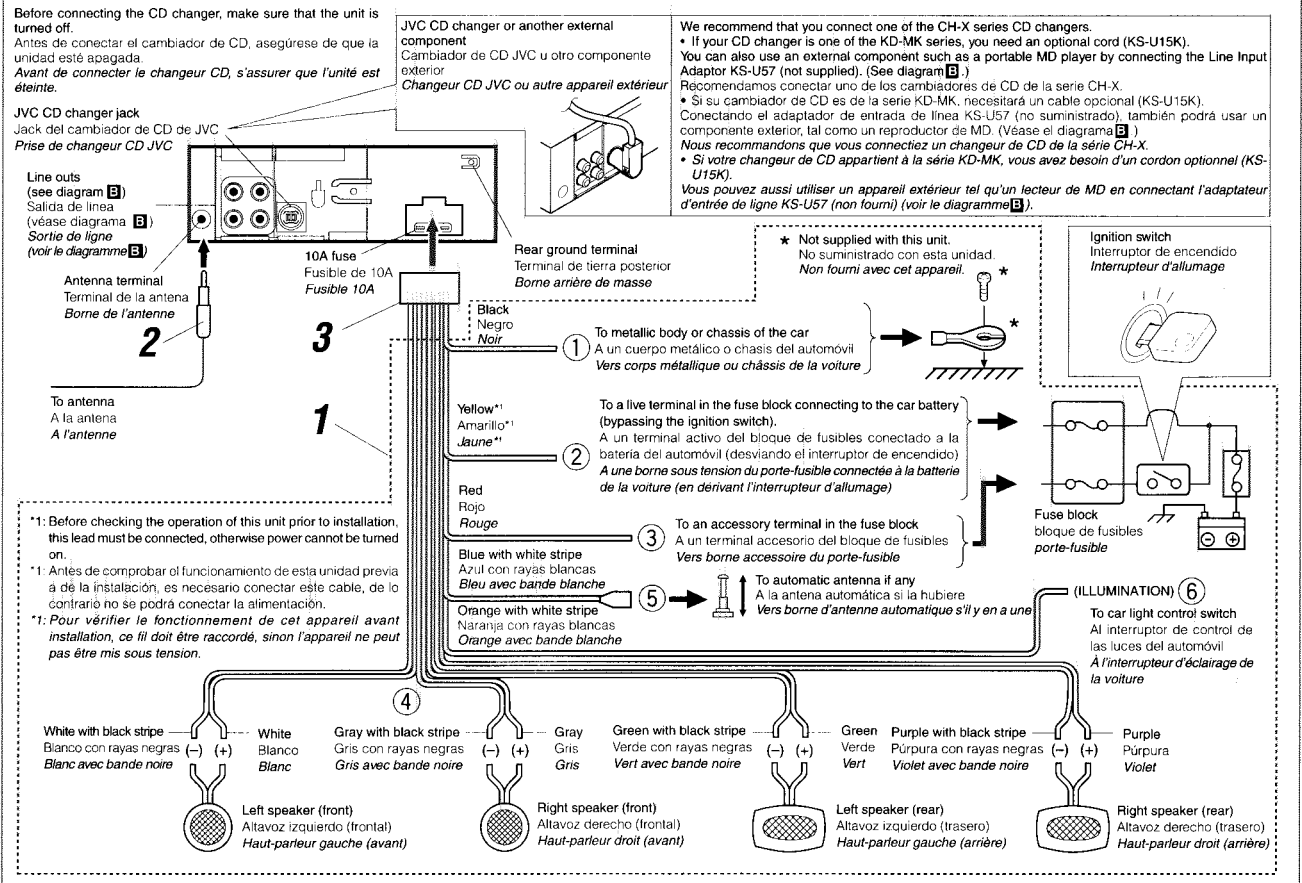
- 1 Connect the colored leads of the power cord to the car battery, speakers and automatic antenna (if any) in the following sequence.
  - ① Black: ground
  - ② Yellow: to car battery (constant 12V)
  - ③ Red: to an accessory terminal
  - ④ Others: to speakers
  - ⑤ Blue with white stripe: to automatic antenna (200mA max.)
  - ⑥ Orange with white stripe: to car light control switch
- 2 Connect the antenna cord.
- 3 Finally connect the wiring harness to the unit.

**Antes de la conexión:** Verifique atentamente el conexionado del vehículo para no cometer errores al conectar esta unidad. Una conexión incorrecta podría producir daños graves en la unidad.

- 1 Conecte los conductores de color del cable de alimentación a la batería del automóvil, altavoces y antena automática (si la hubiere) en la secuencia siguiente.
  - ① Negro: a tierra
  - ② Amarillo: a la batería del automóvil (12V constantes)
  - ③ Rojo: a un terminal de accesorio
  - ④ Otros: a los altavoces
  - ⑤ Azul con rayas blancas: a la antena automática (máx. 200mA)
  - ⑥ Naranja con rayas blancas: al interruptor de control de las luces del automóvil
- 2 Conecte el cable de antena.
- 3 Por último, conecte a la unidad el cableado preformado.

**Avant de commencer la connexion:** vérifiez attentivement le câblage du véhicule pour ne pas connecter incorrectement cet appareil. Une connexion incorrecte peut endommager sérieusement l'appareil.

- 1 Connectez les fils de couleur du cordon d'alimentation à la batterie de la voiture, aux enceintes et à l'antenne automatique (s'il y en a une) dans l'ordre suivant.
  - ① Noir: a la masse
  - ② Jaune: a la batterie de la voiture (12V constant)
  - ③ Rouge: à la prise accessoire
  - ④ Autres fils: aux enceintes
  - ⑤ Bleu à bandes blanches: à l'antenne automatique (200mA max.)
  - ⑥ Orange avec bande blanche: à l'interrupteur d'éclairage de la voiture
- 2 Connectez le cordon d'antenne.
- 3 Finalement, connectez le faisceau de fils à l'appareil.



**PRECAUTIONS on power supply and speaker connections:**

- DO NOT connect the speaker leads of the power cord to the car battery; otherwise, the unit will be seriously damaged.
- Connect the black lead (ground), yellow lead (to car battery, constant 12V), and red lead (to an accessory terminal) correctly.
- BEFORE connecting the speaker leads of the power cord to the speakers, check the speaker wiring in your car.
  - If the speaker wiring in your car is as illustrated in Fig. 1 and Fig. 2 below, DO NOT connect the unit using that original speaker wiring. If you do, the unit will be seriously damaged. Redo the speaker wiring so that you can connect the unit to the speakers as illustrated in Fig. 3.
  - If the speaker wiring in your car is as illustrated in Fig. 3, you can connect the unit using the original speaker wiring in your car.
  - If you are not sure of the speaker wiring of your car, consult your car dealer.

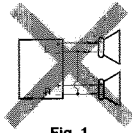


Fig. 1

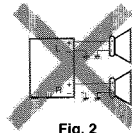


Fig. 2

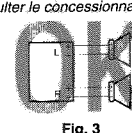


Fig. 3

**PRECAUCIONES sobre las conexiones de la fuente de alimentación y de los altavoces:**

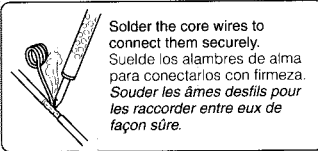
- NO conecte los conductores de altavoz del cable de alimentación a la batería de automóvil, pues podrían producirse graves daños en la unidad.
- Conecte correctamente el conductor negro (a tierra), el conductor amarillo (a la batería del automóvil, 12V constantes), y el conductor rojo (a un terminal de accesorio).
- ANTES de conectar a los altavoces los conductores de altavoz del cable de alimentación, verifique el conexionado de altavoz de su automóvil.
  - Si el conexionado de altavoz de su automóvil es como se indica en las Figs. 1 y 2 de abajo, NO conecte la unidad utilizando ese conexionado de altavoz original. Si lo hace, se producirán daños graves en la unidad. Vuelva a efectuar el conexionado de altavoz de manera que pueda conectar la unidad a los altavoces de la manera indicada en la Fig. 3.
  - Si el conexionado de altavoz de su automóvil es como se indica en la Fig. 3, podrá conectar la unidad utilizando el conexionado de altavoz original de su automóvil.
  - Si tiene dudas sobre el conexionado de altavoz de su automóvil, consulte con su concesionario.

**PRECAUTIONS sur l'alimentation et la connexion des enceintes:**

- NE CONNECTEZ PAS les fils d'enceintes du cordon d'alimentation à la batterie; sinon, l'appareil serait sérieusement endommagé.
- Connectez correctement le fil noir (à la masse), le fil jaune (à la batterie de la voiture, 12V constant) et le fil rouge (à la prise accessoire).
- AVANT de connecter les fils d'enceintes du cordon d'alimentation aux enceintes, vérifiez le câblage des enceintes de votre voiture.
  - Si le câblage des enceintes de votre voiture est réalisé comme montré sur la Fig. 1 ou Fig. 2 ci-dessous, NE CONNECTEZ PAS l'appareil en utilisant ce câblage original d'enceintes. Si vous le faites, l'appareil sera sérieusement endommagé. Recommencez le câblage des enceintes de façon que vous puissiez connecter l'appareil aux enceintes comme montré sur la Fig. 3.
  - Si le câblage des enceintes de votre voiture est comme montré sur la Fig. 3, vous pouvez connecter l'appareil en utilisant ce câblage original d'enceintes pour votre voiture.
  - Si vous n'êtes pas sûrs du câblage d'enceintes de votre voiture, consultez le concessionnaire de votre voiture.

**Connecting the leads / Conexión de los conductores / Raccordement des fils**

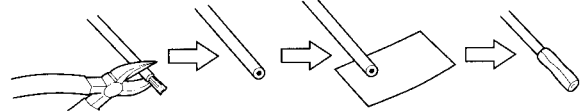
Twist the core wires when connecting. Retuerza los alambres de alma para conectarlos. Torsader les âmes des fils en les raccordant.



Solder the core wires to connect them securely. Suelde los alambres de alma para conectarlos con firmeza. Souder les âmes des fils pour les raccorder entre eux de façon sûre.

**CAUTION / PRECAUCION / PRECAUTION:**

- To prevent short-circuit, cover the terminals of the UNUSED leads with insulating tape.
- Para evitar cortocircuitos, cubra los cables NO UTILIZADOS con cinta aislante.
- Pour éviter les court-circuits, couvrir les bornes des fils qui ne sont PAS utilisés avec de la bande isolante



**B Connections Adding Other Equipment / Conexiones para añadir otros equipos / Raccordement pour ajouter d'autres appareils**

You can connect an amplifier and other equipment to upgrade your car stereo system.

- Connect the remote lead (blue with white stripe) to the remote lead of the other equipment so that it can be controlled through this unit.
- For amplifier only:
  - Connect this unit's line-out terminals to the amplifier's line-in terminals.
  - Disconnect the speakers from this unit, connect them to the amplifier. Leave the speaker leads of this unit unused. (Cover the terminals of these unused leads with insulating tape, as illustrated above.)

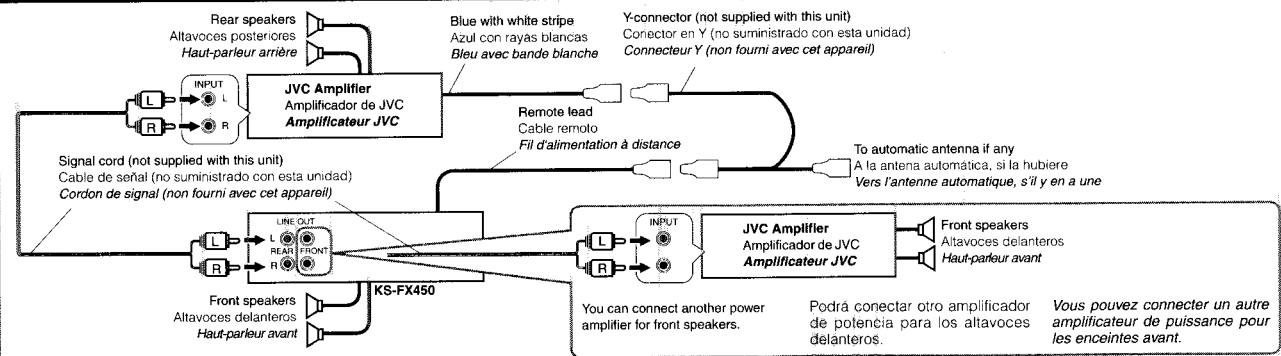
Usted podrá conectar un amplificador y otros equipos para mejorar el sistema estereo de su automóvil.

- Conecte el conductor remoto (azul con rayas blancas) al conductor remoto del otro equipo para poderlo controlar a través de esta unidad.
- Sólo para el amplificador:
  - Conecte los terminales de salida de línea de esta unidad con los terminales de entrada de línea del amplificador.
  - Desconecte los altavoces de esta unidad y conéctelos al amplificador. Los cables de los altavoces de esta unidad quedan sin usar. (Cubra los terminales de estos cables sin usar con cinta aislante, tal comose indica en la figura de arriba.)

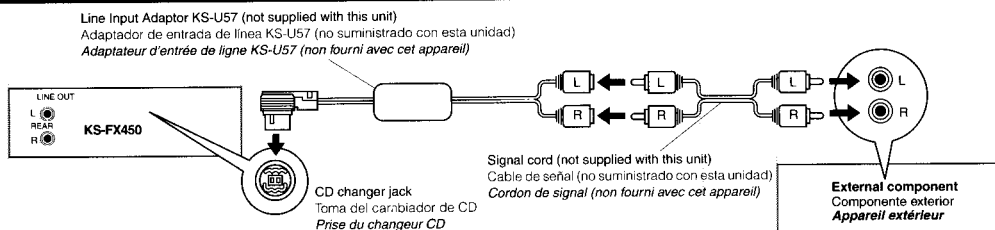
Vous pouvez connecter un amplificateur ou autre appareil pour améliorer votre système autoradio.

- Connectez le fil de commande à distance (bleu avec bande blanche) au fil de commande à distance de l'autre appareil de façon qu'il puisse être commandé via cet appareil.
- Pour l'amplificateur seulement:
  - Raccordez les bornes de sortie ligne de cet appareil aux bornes d'entrée ligne de l'amplificateur.
  - Déconnectez les enceintes de cet appareil et connectez-les à l'amplificateur. Laissez les fils d'enceintes de cet appareil inutilisés. (Recouvrez les extrémités de ces fils inutilisés avec de la bande isolante comme montré ci-dessus.)

**Amplifier / Amplificador / Amplificateur**

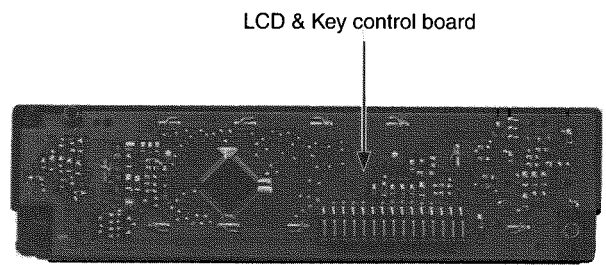
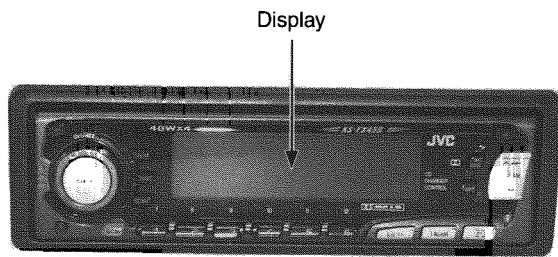


**External component / Componente exterior / Appareil extérieur**

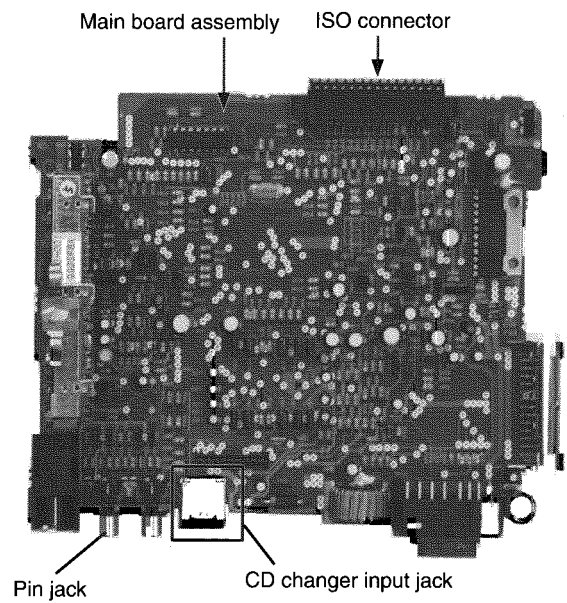
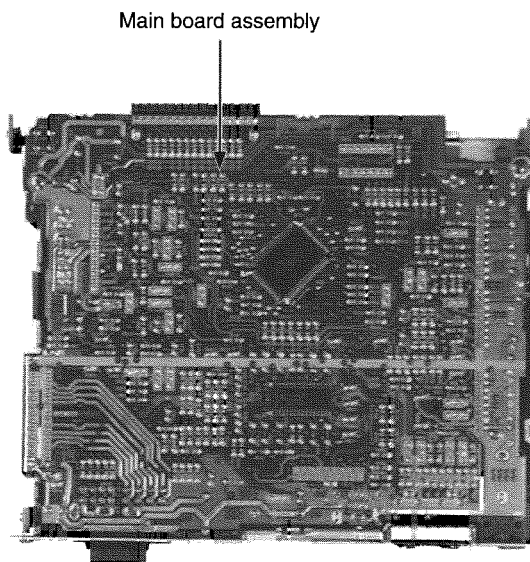


# Location of main parts

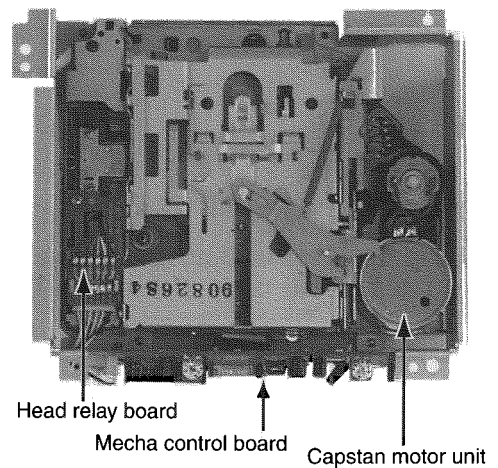
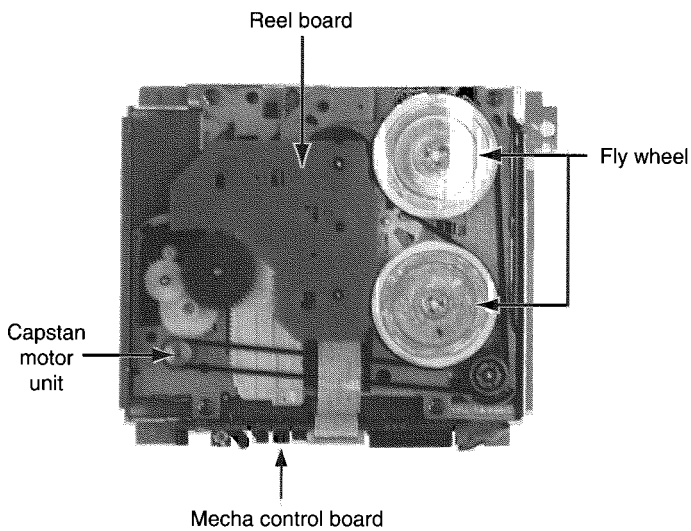
## ■ Control unit



## ■ Main unit



## ■ Cassette mechanism



## Disassembly method

### ■ Removing the front panel unit

(See Fig.1)

1. Press the release switch and remove the front panel unit in the direction of the arrow.



Fig.1

### ■ Removing the front chassis (See Fig.2~3)

1. Remove the two screws **A** attaching the front chassis.
2. Insert a screwdriver to the two joints **a** on the side of the front chassis, two joints **b** on the right side and one joint **c** from upside, then detach the front chassis toward the front side.

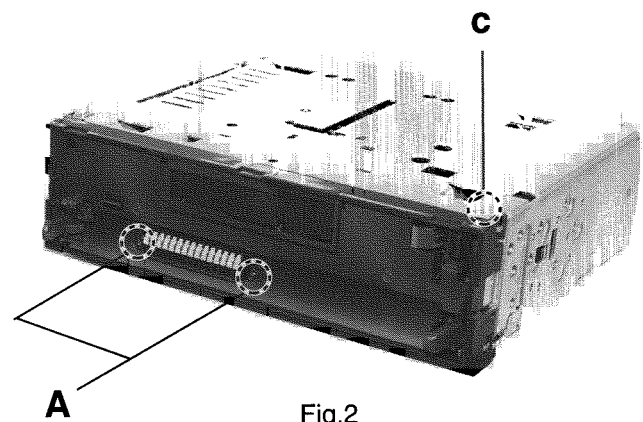


Fig.2

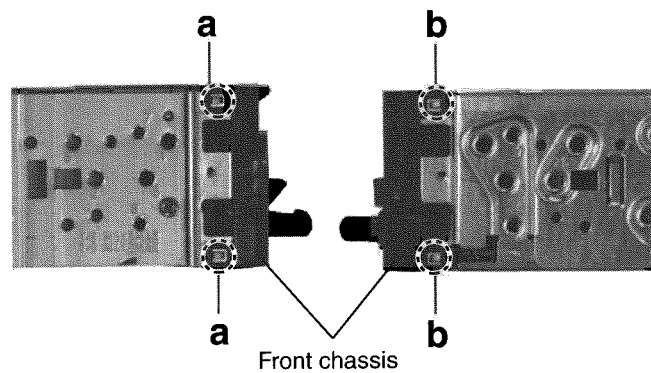


Fig. 3

### ■ Removing the heat sink (See Fig.4)

1. Remove the three screws **B** attaching the heat sink on the left side of the body, and remove the heat sink.

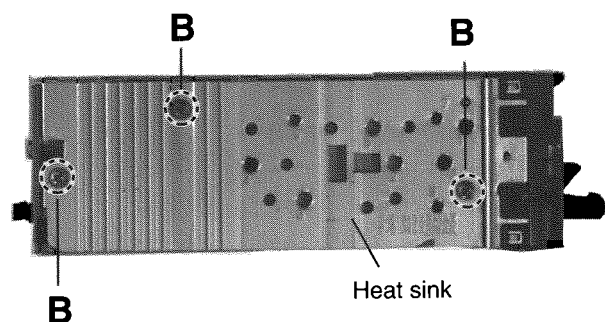


Fig. 4



■ **Removing the bottom cover (See Fig.5)**

1. Turn the body upside down.
2. Insert a screwdriver to the two joints **d** and two joints **e** on both sides of the body and the joint **f** on the back of the body, then detach the bottom cover from the body.

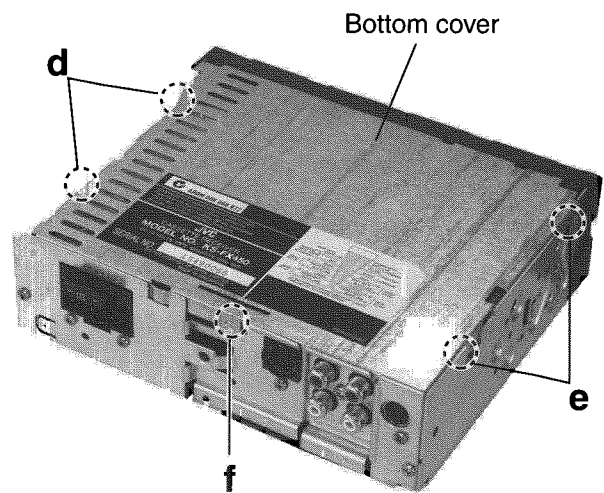


Fig. 5

■ **Removing the rear panel (See Fig.6 )**

1. Remove the front chassis.
2. Remove the heat sink.
3. Remove the bottom cover.
4. Remove the six screws **B** attaching the rear panel and one screw **C** attaching the pine jack on the back of the body.

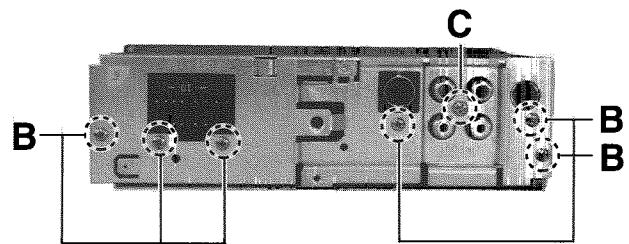


Fig. 6

■ **Removing the main amplifier board assembly (See Fig.7)**

1. Remove the front chassis.
2. Remove the bottom cover.
3. Remove the rear panel.
4. Remove the two screws **D** attaching the main amplifier board assembly on the top cover.
5. Disconnect connector CP701 on the main amplifier board assembly from the cassette mechanism assembly.

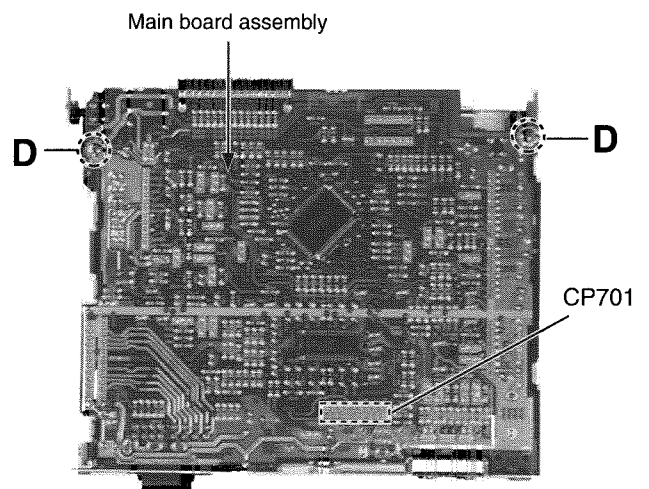
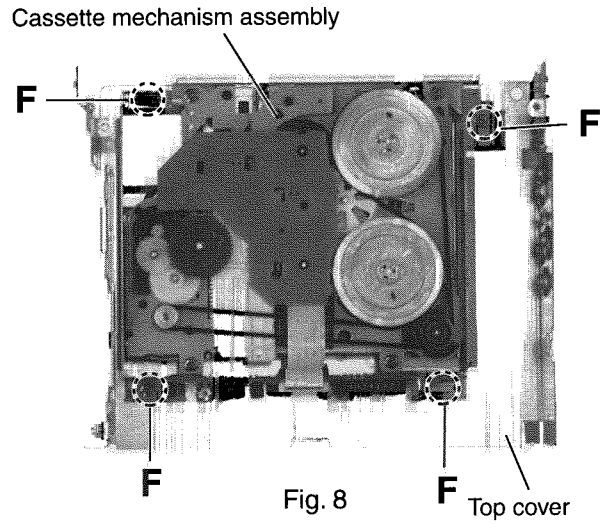


Fig. 7

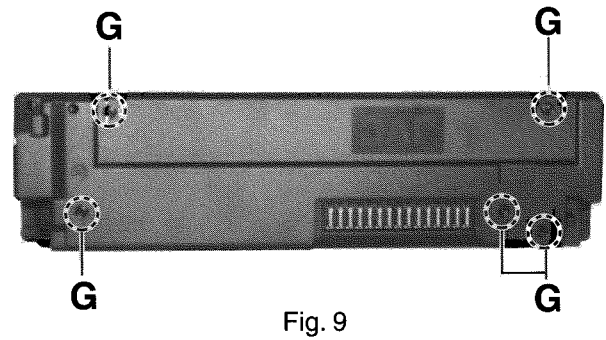
■ **Removing the Cassette mechanism assembly**  
(See Fig.8)

1. Remove the front chassis.
2. Remove the bottom cover.
3. Remove the main amplifier board assembly.
4. Remove the fore screws **F** attaching the cassette mechanism assembly from the top cover.

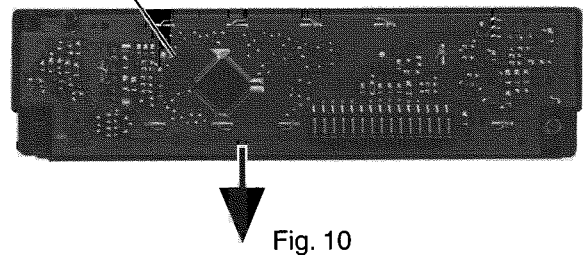


■ **Removing the LCD & key control board**  
(See Fig.9 and 10 )

1. Remove the front panel unit from the main body.
2. Remove the five screws **G** attaching the rear cover on the back of the front panel unit.
3. Remove the LCD & key control board from the front panel unit.



LCD & key control board



**<Removal of the cassette mechanism>**

**■ Removing the mecha control P.W.B.  
(See Fig.1 and 2)**

1. For the 6pin harness extending from connector CN402 on the mecha control P.W.B, disconnect it from the head relay P.W.B.
2. Disconnect the card wire from connector CN403 on the mecha control P.W.B.
3. Remove the screw A attaching the mecha control P.W.B.
4. Move the tab a as shown in Fig.2 and remove the mecha control P.W.B. while moving it in the direction of the arrow.

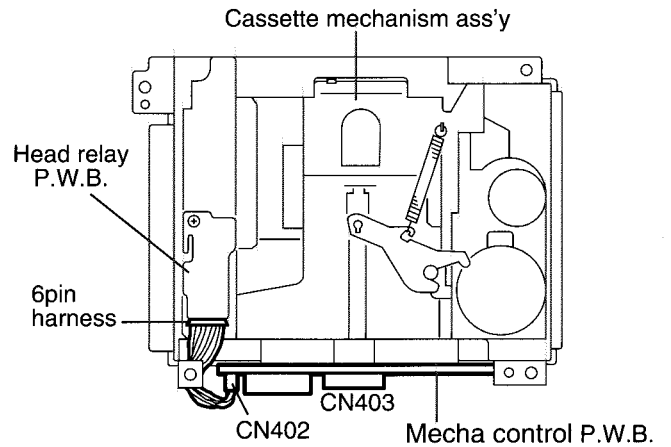


Fig.1

**■ Removing the cassette mechanism assembly (See Fig.1 to 3)**

1. Disconnect the 6pin harness from connector CN402 and the card wire from CN403 on the mecha control P.W.B. (Refer to Fig.1 and 2).
2. Remove the four screws B on the bottom of the cassette mechanism.

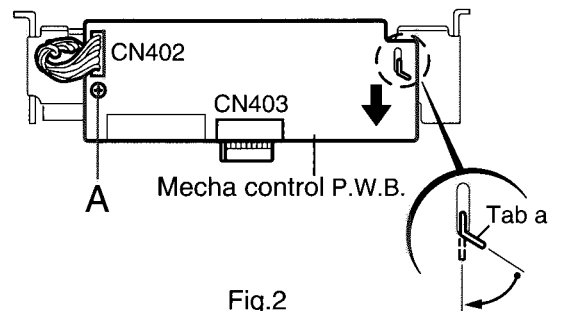


Fig.2

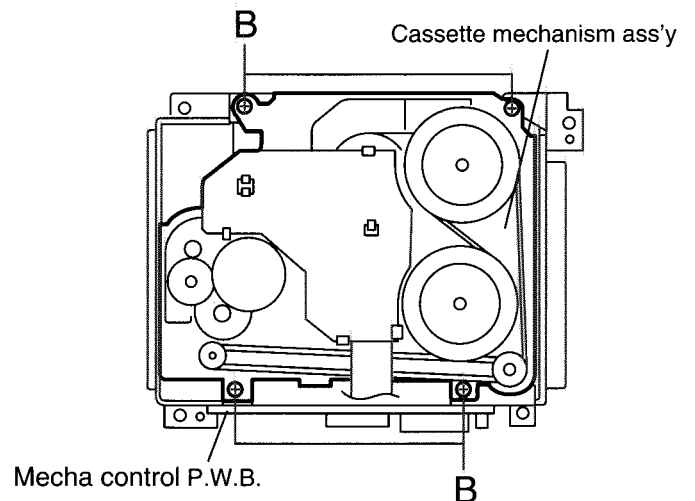


Fig.3

**■ Removing the head relay P.W.B.**  
(See Fig.4)

1. Unsolder the soldering b on the head relay P.W.B.
2. Remove the screw C attaching the head relay P.W.B.
3. Remove the head relay P.W.B. in the direction of the arrow while releasing the two joints c.

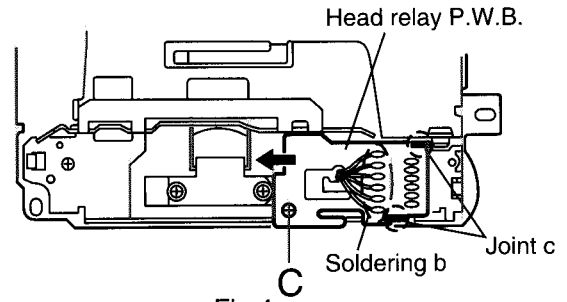


Fig.4

**■ Removing the load arm (See Fig.5)**

1. Remove the E washer attaching the load arm using a pincette or something like that and remove the spring d.
2. Move the part of the load arm marked ※ upwards to release it from the axis of rotation. Then rotate the load arm in the direction of the arrow to remove it from the cach.

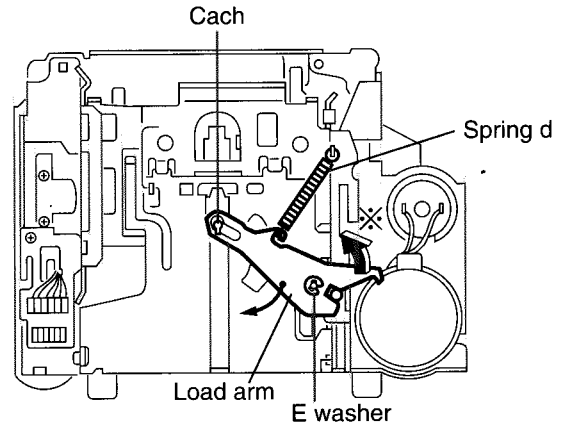


Fig.5

**■ Removing the sub chassis (See Fig.6)**

- Prior to performing the following procedure, remove the head relay P.W.B.

1. Remove the screw D attaching the sub chassis.
2. Push the tab e in the direction of the arrow to detach the one side of the sub chassis. Then release the sub chassis from the tab f.

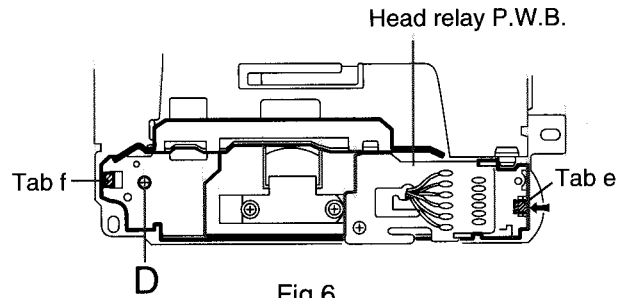


Fig.6

**■ Removing the cassette holder and the holder arm in the eject mode**  
(See Fig.7 and 8)

- Prior to performing the following procedure, remove the head relay P.W.B., the load arm and the sub chassis.

1. Remove the screw E attaching the reinforce bracket.
2. Remove the reinforce bracket.
3. Push the tab g fixing the cassette holder in the direction of the arrow and open the cassette holder and the holder arm upward until they stop at an angle of 45 degrees. Move the two joints h to the side and remove the cassette holder and the holder arm from the shaft.

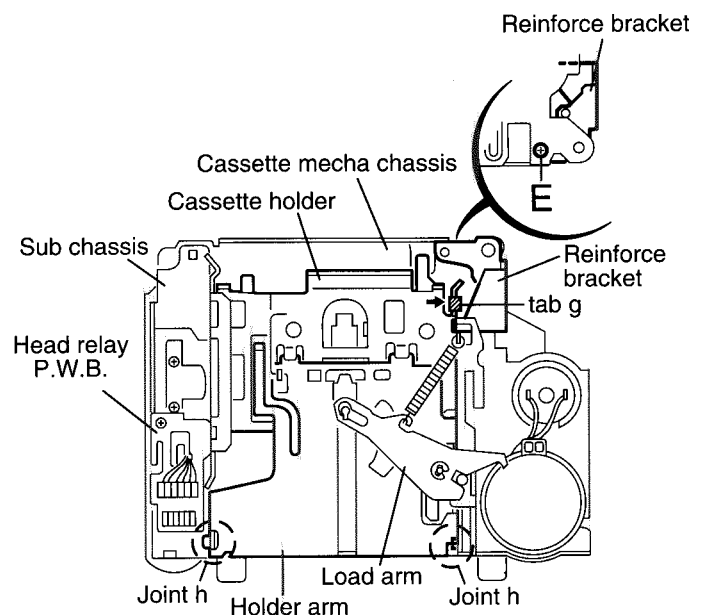


Fig.7

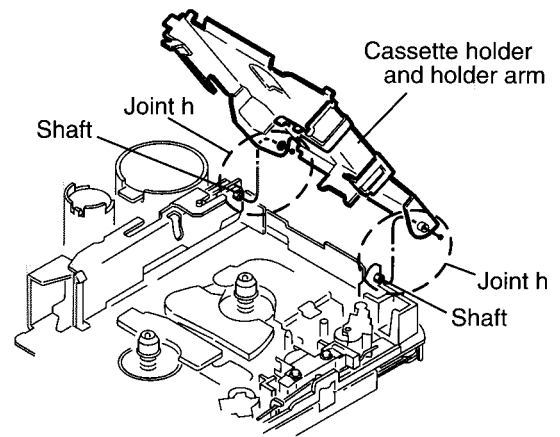


Fig.8

**■ Removing the play head (See Fig.9)**

• Prior to performing the following procedure, remove the head relay P.W.B. and the sub chassis.

1. Remove the two screws F attaching the play head (The spring under the play head comes off at the same time).

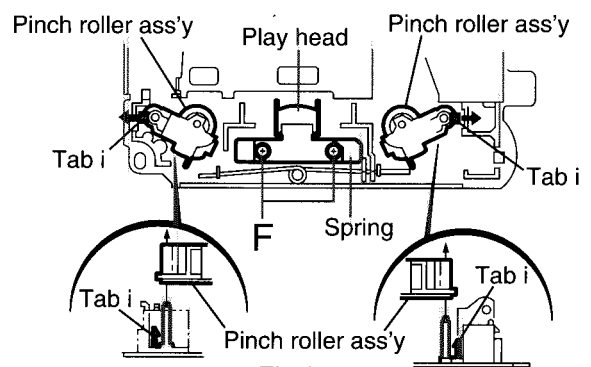


Fig.9

**■ Removing the pinch roller ass'y (See Fig.9)**

• Prior to performing the following procedure, remove the head relay P.W.B. and the sub chassis.

1. Push each tab i in the direction of the arrow and pull out the pinch rollers on both sides.

**■ Removing the reel disc P.W.B. (See Fig.10)**

1. Unsolder the soldering j on the reel disc P.W.B.
2. Push the seven tabs k on the bottom of the cassette mechanism assembly in the direction of the arrow.

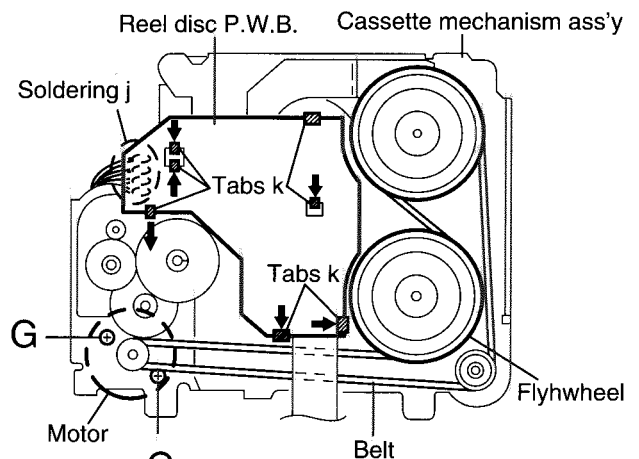


Fig.10

**■ Removing the motor and the sub motor (See Fig.10 and 11)**

1. Unsolder the two soldering l of the motor and the sub motor.
2. Release the sub motor from the three tabs m. Push the sub motor upward and pull it out.
3. Remove the belt on the bottom of the cassette mechanism assembly and remove the two screws G attaching the motor.

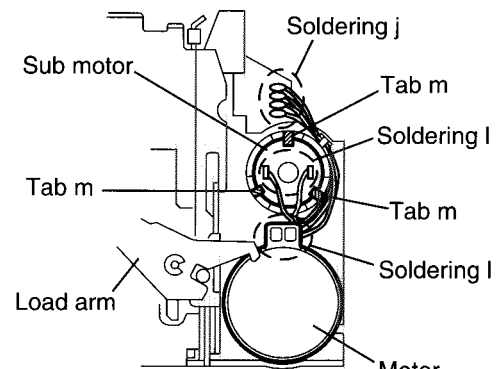


Fig.11

**ATTENTION:** The motors can be detached before removing the load arm.

■ **Removing the flywheel**

(See Fig.10 and 12)

1. Prior to performing the following procedure, remove the head relay P.W.B, the load arm, the sub chassis, the cassette holder, the holder arm and the reel disc P.W.B.
2. Remove the belt on the bottom of the cassette mechanism ass'y.
3. Remove the slit washer attaching the flywheel on the upper side of the cassette mechanism ass'y and pull out the flywheel downward. Then remove another flywheel in the same way.

ATTENTION: When reassembling, make sure to use a new slit washer.

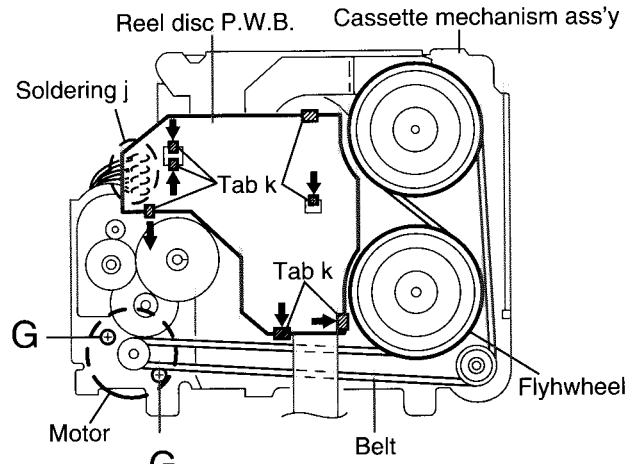


Fig.10

■ **Removing the reel disc ass'y( I )**

(See Fig.12 to 14)

- Prior to performing the following procedure, remove the head relay P.W.B, the load arm, the sub chassis, the cassette holder and the holder arm.
1. Disengage the part n inside of the reel driver which engages with the shaft, using a pincette or something like that. Then remove the reel driver from the shaft.
  2. Remove the reel driver spring and the reel table.

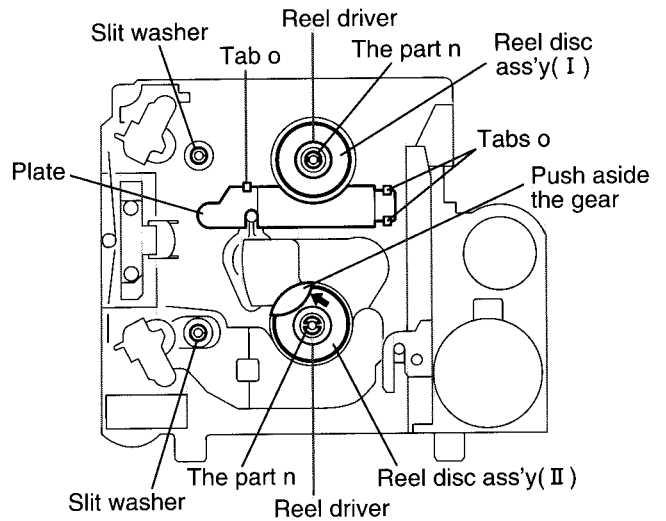


Fig.12

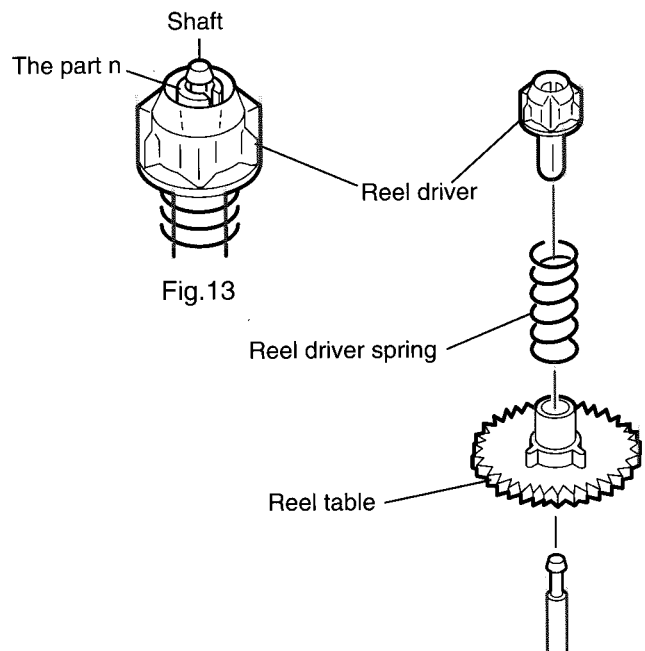


Fig.13

Fig.14

## Adjustment method

### ■ Test instruments required for adjustment

1. Digital oscilloscope(100MHz)
2. Frequency Counter meter
3. Electric voltmeter
4. Wow & flutter meter
5. Test Tapes

MC-109C ..... For TAPA CURL confirmation  
(without Padd type)

VT724 .....For DOLBY level measurement

VT739 ..... For playback frequency measurement

VT712 .... For wow flutter & tape speed measurement

VT703 ..... For head azimuth measurement

6. Torque gauge ..... Cassette type for CTG-N  
(mechanism adjustment)

### ■ Measuring conditions(Amplifier section)

Power supply voltage ..... DC14.4V (10.5 - 16V)

Load impedance ..... 4 (2Speakers connection)

Line out ..... 20k

### ■ Standard volume position

Balance and Bass,Treble volume .Fader

:Center(Indication"0")

Loudness,Dolby NR,Sound,Cruise:Off

Volume position is about 2V at speaker output with following conditions. Playback the test tape VT721.

AM mode            1000kHz/62dB,INT/400Hz,30%  
modulation signal on receiving.

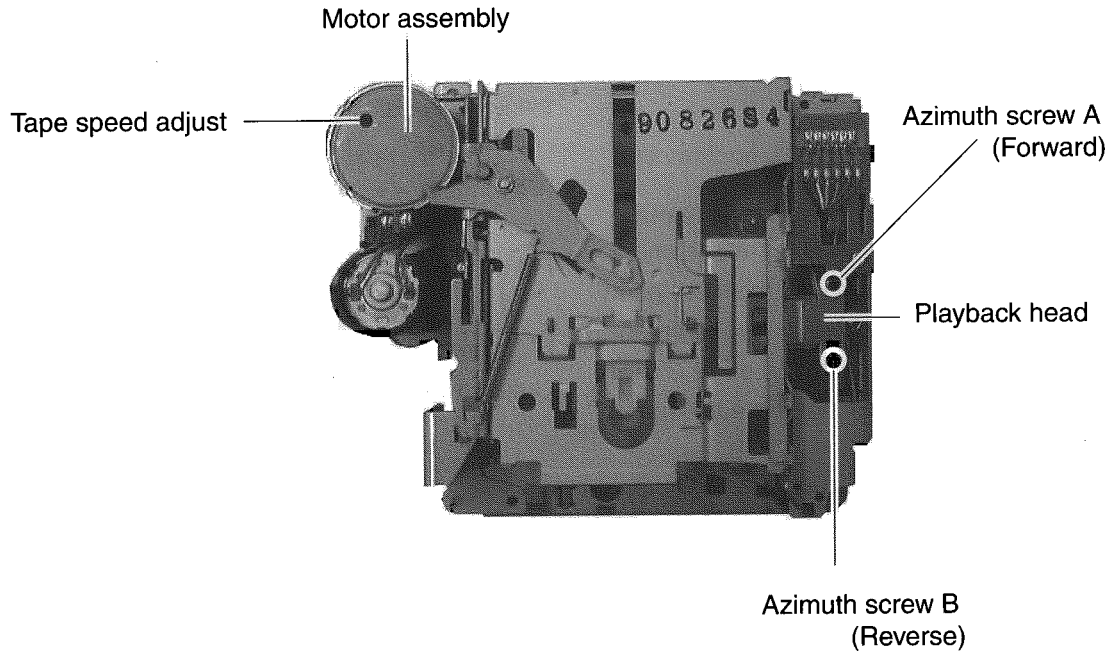
FM mono mode    97.5MHz/66dB,INT/400Hz,22.5kHz  
deviation pilot off mono

FM stereo mode   1kHz,67.5kHz dev. pilot7.5kHz dev.

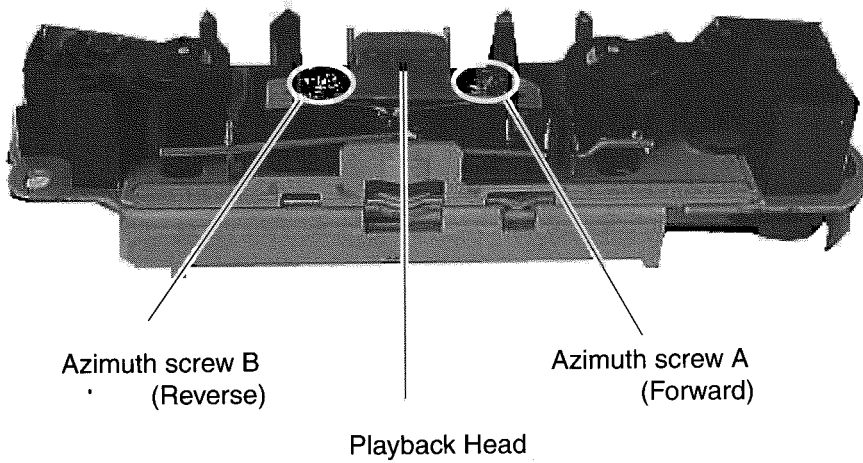
Output level      0dB(1 V,50 /open terminal)

■ Arrangement of adjusting & test points

Cassette mechanism  
(Surface)



Head section view





### ■Information for using a car audio service jig

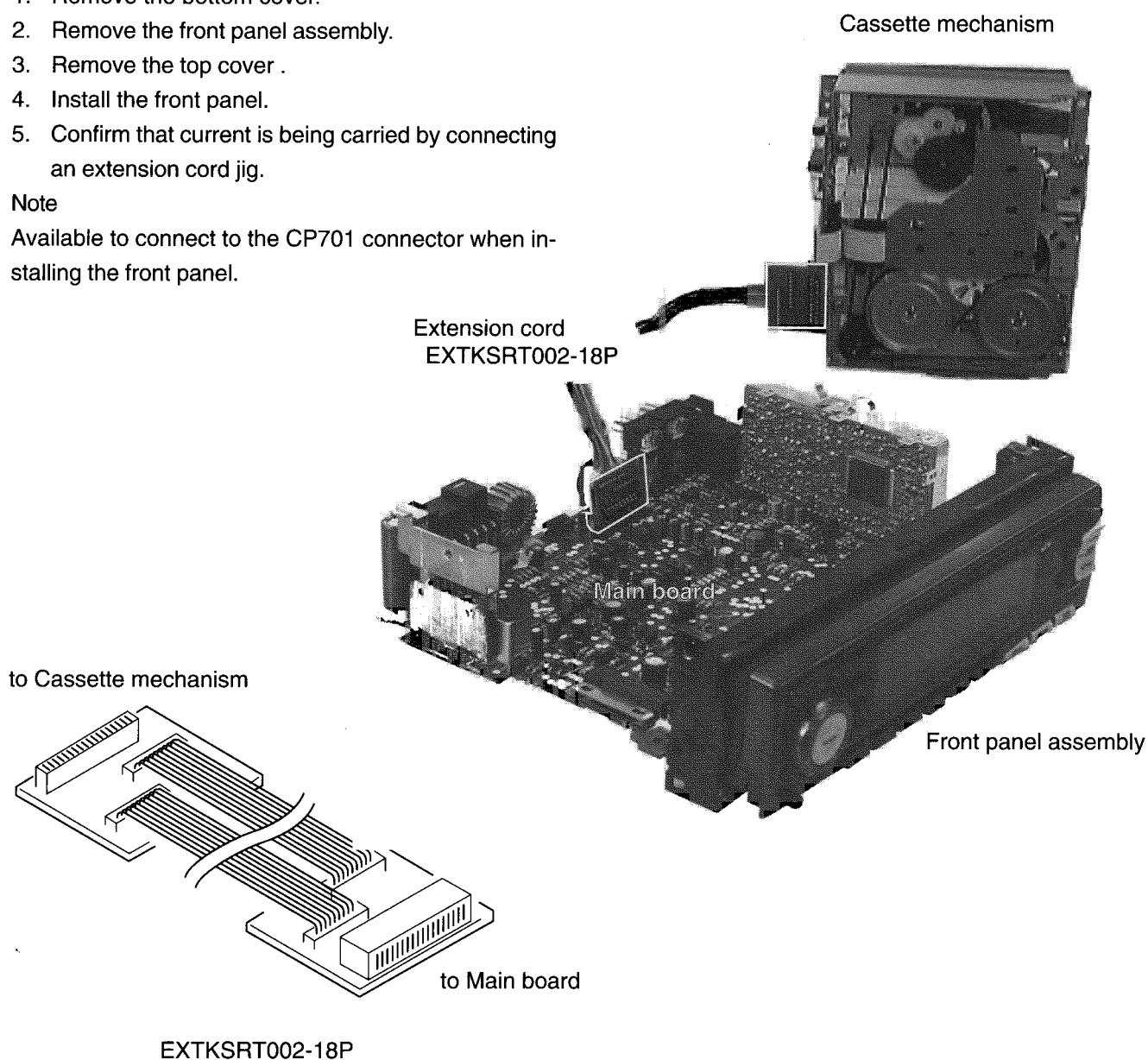
1. We're advancing efforts to make our extension cords common for all car audio products.  
Please use this type of extension cord as follows.
2. As a U-shape type top cover is employed, this type of extension cord is needed to check operation of the mechanism assembly after disassembly.
3. Extension cord : EXTKSRT002-18P ( 18 pin extension cord ) For connection between mechanism assembly and main board assembly.  
Check for mechanism driving section such as motor ,etc..

### ■Disassembly method

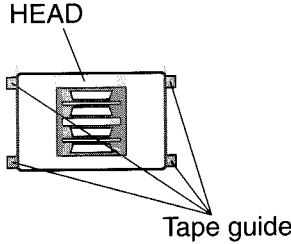
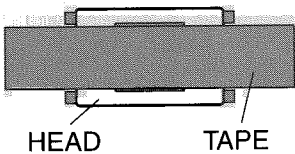
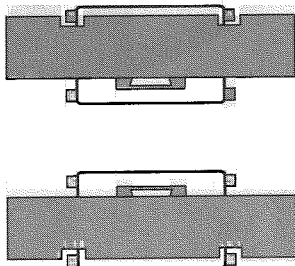
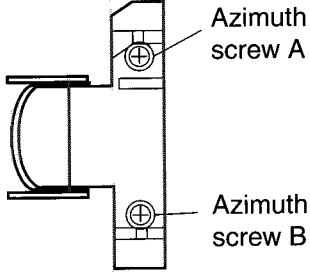
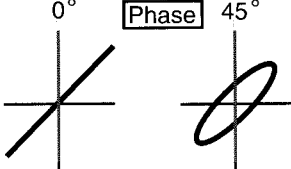
1. Remove the bottom cover.
2. Remove the front panel assembly.
3. Remove the top cover .
4. Install the front panel.
5. Confirm that current is being carried by connecting an extension cord jig.

#### Note

Available to connect to the CP701 connector when installing the front panel.



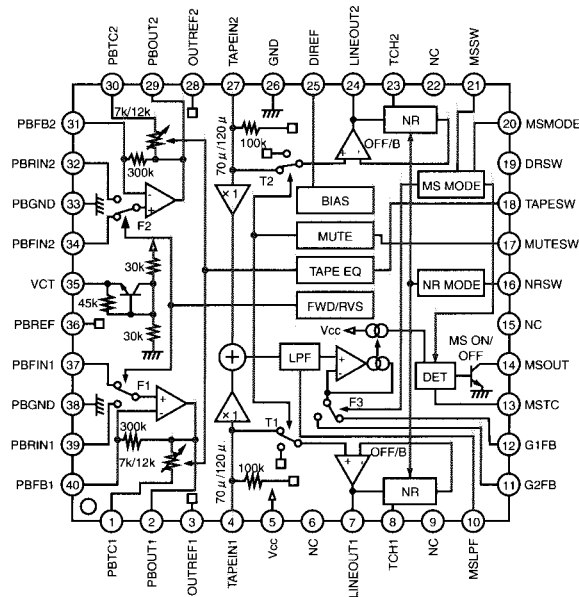
■ Mechanism adjustment section

Item	Adjusting & Confirmation Methods	Adjust	Std. Value
<p>1. Tape running adjustment</p> <p>2. Azimuth adjustment confirmation</p>	<p>a) At Forward playmode, using mirror tape, make adjustment with Azimuth screw A and Azimuth screw B, without curl of 4 parts of head tape guide.</p> <p>b) At Reverse play mode, using mirror tape, make adjustment with Azimuth screw A and Azimuth screw B, without tape curl of 4 parts of head guide.</p> <p>c) At Forward / Reverse play mode, make confirmation of no tape curl of 4 parts of head tape guide.</p> <p>a) At forward play mode, make adjustment of peak of Lch / Rch output with Azimuth screw A. * For Oscilloscope litharge corrugation, set 45° as standard.</p> <p>b) At Reverse play mode, make adjustment of peak of Lch / Rch output with Azimuth screw B. * For Oscilloscope litharge corrugation, set 45° as standard.</p> <p>c) With AC volt meter confirm the difference of output for 4ch between Lch / Rch at forward play mode and Lch / Rch Reverse play mode being within 3.0dB.</p> <p>d) After operation, make confirmation of Lch / Rch azimuth output being within 1.0dB from adjustment value.</p> <div style="text-align: center;">  </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <p>OK</p>  <p>HEAD TAPE</p> </div> <div style="text-align: center;"> <p>Tape curl NG</p>  </div> </div>	<div style="text-align: center;">  </div> <div style="text-align: center; margin-top: 20px;"> <p>0° Phase 45°</p>  </div>	
<p>2. Tape Speed and Wow &amp; Flutter</p>	<p>1. Check to see if the reading of the frequency counter &amp; Wow flutter meter is within 2940-3090 Hz( FWD/REV ), and less than 0.35% ( JIS RMS ).</p> <p>2. In case of out of specification, adjust the motor with a built-in volume resistor .</p>	<p>Built-in volume resistor</p>	<p>Tape Speed 2940-3090Hz Wow&amp;Flutter Less than 0.35% (JIS RMS)</p>
<p>3. Playback Frequency response</p>	<p>1. Play the test tape ( VT724 : 1kHz ) back and set the volume position at 2V .</p> <p>2. Play the test tape ( VT739 )back and confirm 0±3dB at 1kHz/ 10kHz and -4+2dB at 1kHz/63Hz.</p> <p>3. When 10kHz is out of specification, it will be necessary to read adjust the azimuth.</p>		<p>Speaker out 1kHz/10kHz : 0dB±3dB, 63Hz/1kHz : -4dB+2dB,</p>

# Description of major ICs

## ■ CXA2560Q (IC401) : Dolby B type noise reduction system with play back equalizer amp.

### 1. Pin layout & block diagram



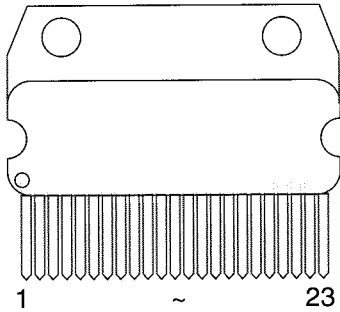
### 2. Pin function

Pin No.	Symbol	I/O	Function
1	PBTC1	-	Playback equalizer amplifier capacitance
2	PBOUT1	O	Playback equalizer amplifier output
3	OUTREF1	O	Output reference
4	TAPEIN1	I	TAPE input
5	Vcc	-	Power supply
6	NC	-	
7	LINEOUT1	O	Line output
8	TCH1	-	Time constant for the HLS
9	NC	-	
10	MSLPF	-	Cut-off frequency adjustment of the music sensor LPF
11	G2FB	-	Music signal interval detection
12	G1FB	-	Music signal interval detection
13	MSTC	-	Time constant for detecting music signal interval
14	MSOUT	O	Music sensor out
15	NC	-	No use
16	NRSW	I	Dolby NR control
17	MUTESW	I	Mute function control
18	TAPESW	I	Playback equalizer amplifier control
19	DRSW	I	Head select control
20	MSMODE	I	Music sensor mode control
21	MSSW	I	Music sensor control
22	NC	-	
23	TCH2	-	Time constant for the HLS
24	LINEOUT2	O	Line output

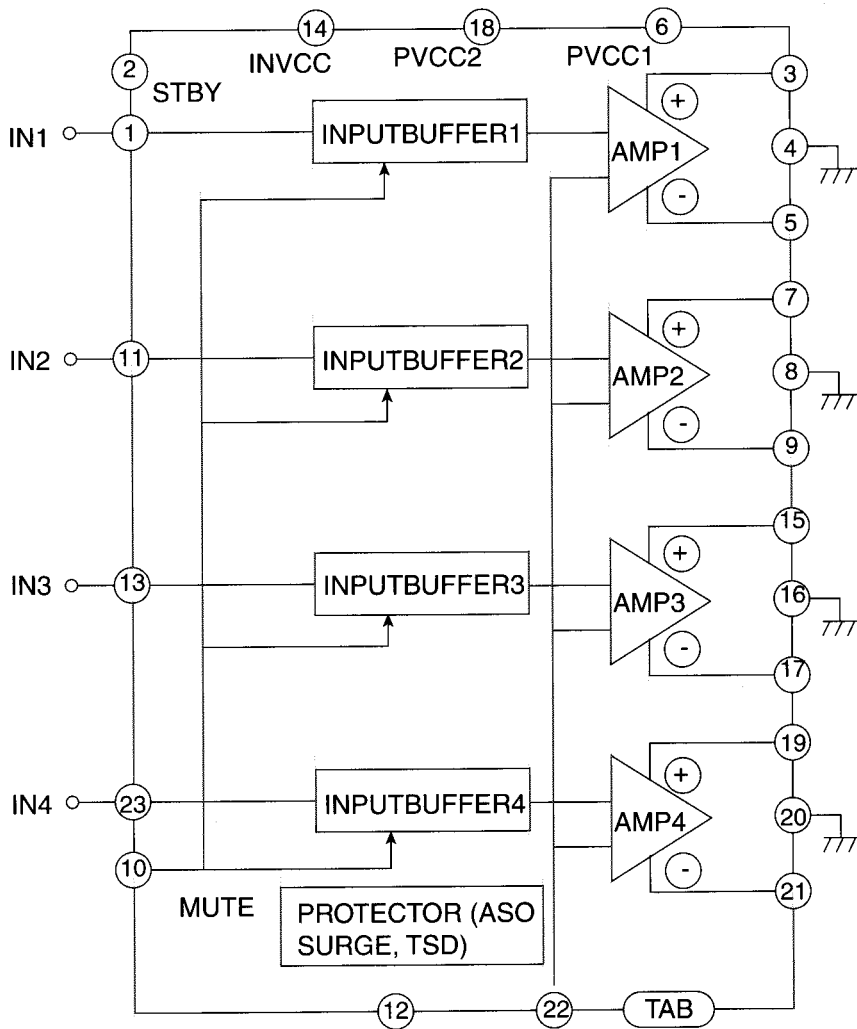
Pin No.	Symbol	I/O	Function
25	DIREF	-	Resistance for setting the reference
26	GND	-	Ground
27	TAPEIN2	I	TAPE input
28	OUTREF2	O	Output reference
29	PBOUT2	O	Playback equalizer amplifier output
30	PBTC2	-	Playback equalizer amplifier capacitance
31	PBFB2	I	Playback equalizer amplifier feedback
32	PBRIN2	I	Playback equalizer amplifier input
33	PBGND	-	Playback equalizer amplifier ground
34	PBFIN2	I	Playback equalizer amplifier input
35	VCT	O	Center
36	PBREF	O	Playback equalizer amplifier reference
37	PBFIN1	I	Playback equalizer amplifier input
38	PBGND	-	Playback equalizer amplifier ground
39	PBRIN1	I	Playback equalizer amplifier input
40	PBFB1	I	Playback equalizer amplifier feedback

■ HA13158A (IC301) : Power amp

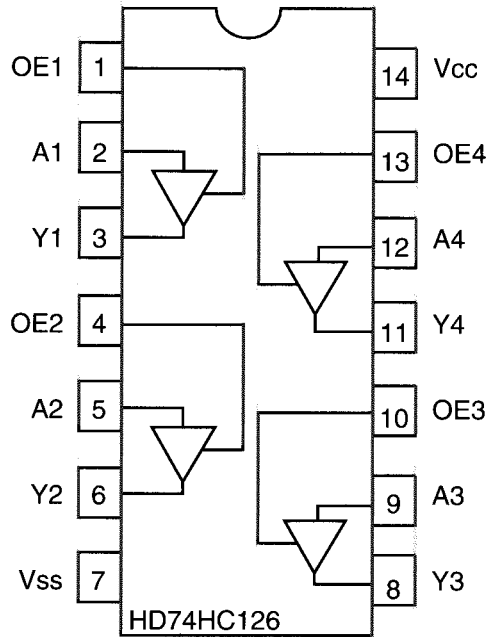
1. Pin layout



2. Block diagram

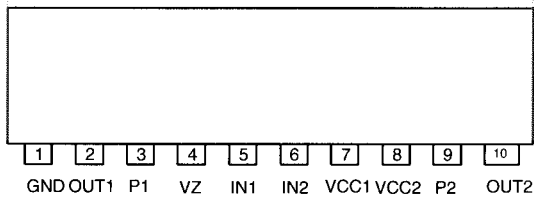


■ HD74HC126P (IC801) : Changer control



■ LB1641 (IC402) : DC Motor Driver

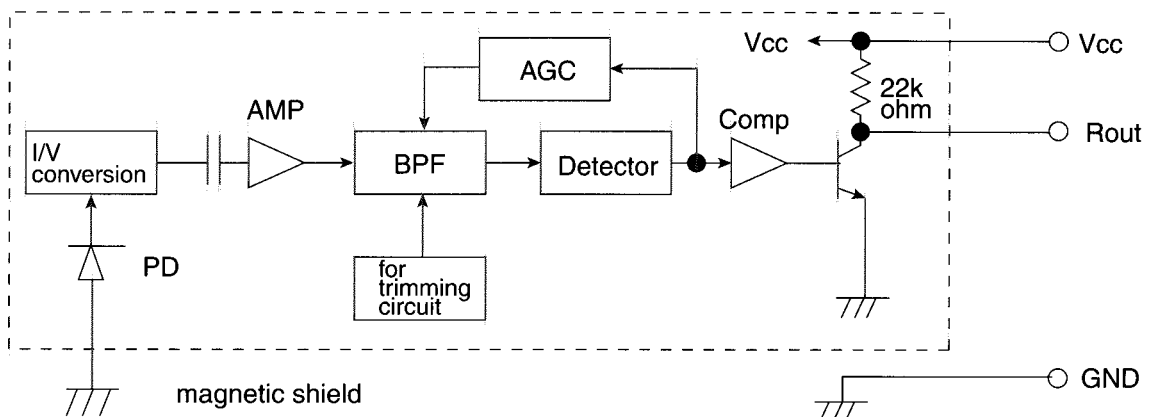
1. Pin Layout



2. Pin Functions

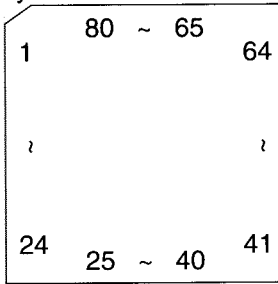
Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	CLOCKWISE
0	1	0	1	COUNTER-CLOCKWISE
1	1	0	0	Brake

■ RPM6938-SV4 (IC602) : Remote control receiver



## ■ LC72366-9599 (IC701) : Main micon

### 1. Pin layout

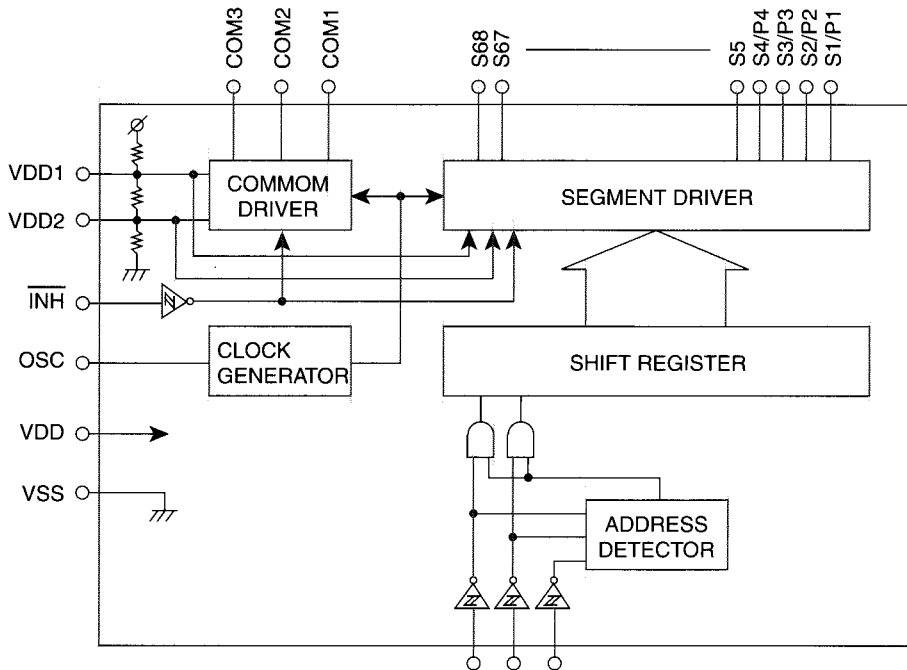


### 2. Pin function

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	XIN	4.5MHz crystal oscillation	41	MOTOR	Main motor output
2	GND	Connect to ground	42	SUBMO+	Sub-motor output(+)
3	J BUS SI	J-BUS signal data input ( to 74HC126 )	43	SUBMO-	Sub-motor output(-)
4	J BUS SO	J-BUS signal data output ( to 74HC126 )	44	BEEP	No use
5	J BUS SCK	J-BUS output clock signal ( to 74HC126 )	45	TAPE IN	Switch for detecting to input cassette
6	J BUS I/O	J-BUS I/O control	46	STANBY	Switch for detecting standby position
7	NC	No use	47	REEL	Switch for detecting tape end position
8	LCD SO	LCD driver data output	48	MODE	Detecting mode position input
9	LCD SCK	LCD driver clock signal	49	F/R	Switch for detecting FWD/REV
10	LCD CE	LCD driver chip enable port	50	MS	MS input port
11	DIMMER IN	Dimmer control in	51	SD/ST	Station detector, stereo signal input
12	EVOL SO	E.volume data out	52	DETACH	Front panel detect
13	EVOL SCK	E.volume clock signal	53	ENC2	Connect to encoder 2
14	OPEN	Front panel open detect	54	ENC1	Connect to encoder 1
15	TUNE ILLUMI	No use	55	J BUS INT	J-BUS interrupt
16	TAPE ILLUMI	No use	56	REMOCON	Remocon input
17	CD ILLUMI	No use	57	FM/AM	FM/AM band selection
18	DIMMER OUT	Dimmer control out	58	DOLBY	FM mono selection
19	NC	No use	59	NC	No use
20	NC	No use	60	MUTE	Mute output port
21	NC	No use	61	MEM DET	Muting switch
22	NC	No use	62	LEVEL	Level meter input
23	NC	No use	63	S METER	S meter input
24	NC	No use	64	KEY2	Key 2 data input (AD)
25	KS1	No use	65	KEY1	Key 1 data input (AD)
26	KS0	Output for initial setting diode matrix	66	KEY0	Key 0 data input (AD)
27	K3	Input for initial setting diode matrix	67	ACCDET	Power save 1, ACC power detect
28	K2	Input for initial setting diode matrix	68	SENSE	Voltage sense
29	K1	No use	69	AM IF CONT	No use
30	K0	Input for initial setting diode matrix	70	FM IF COUNT	FM IF counter data input
31	Vdd	5V power supply	71	NC	No use
32	TEST	Turn on all light indicator of LED	72	NC	No use
33	FF/REW	FF/REW mode select signal output	73	Vdd	5V power supply
34	SEEK/STOP	H:Auto seek L:stop	76	AM OSC	No use
35	MONO	Forced manual output	75	FM OSC	FM input frequency
36	RADIO/TAPE	No use	76	Vss	Ground
37	BEEP LEVEL	No use	77	NC	No use
38	PWR-CNT	H:Turn on power	78	EO	PLL error output signal
39	ACC	No use	79	TEST1	Connect to ground
40	KICK	No use	80	XOUT	4.5MHz crystal oscillation

■ LC75873NW (IC601) : LCD Driver

1. Block Diagram



2. Pin Functions

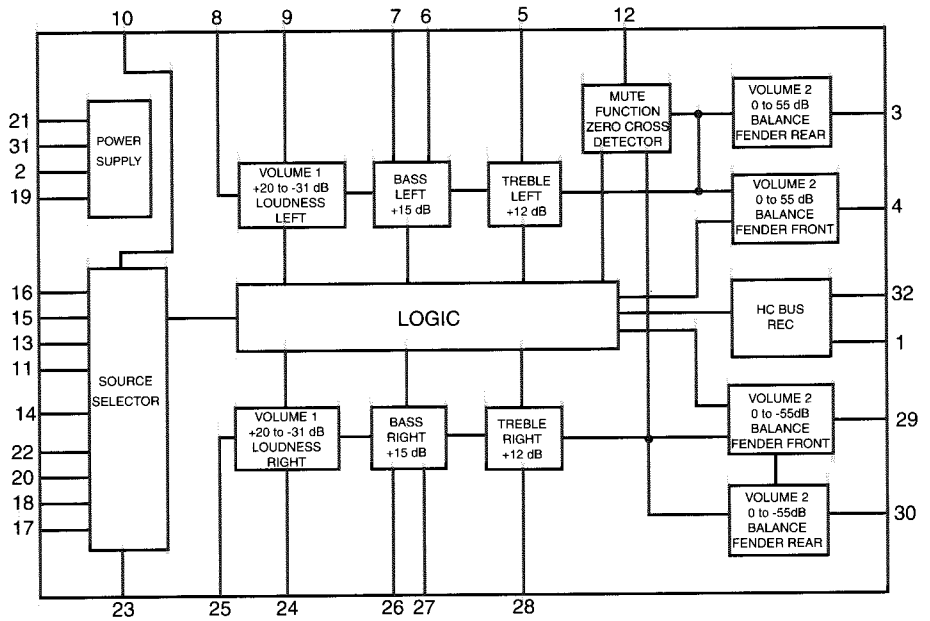
Pin No.	Symbol	I/O	Description
1~66	S3~S68	O	Segment Output.
67~69	COM1~3	O	Common Driver Output.
70	VDD	-	Power Supply Connection.
71	VDD1	I	Used for applying the LCD drive 2/3 bias voltage externally. Must be connected to VDD2 when a 1/2 bias drive scheme in used.
72	VDD2	I	Used for applying the LCD drive 1/3 bias voltage externally. Must be connected to VDD1 when a 1/2 bias drive scheme in used.
73	VSS	-	Power supply connection.
74	OSC	I/O	Oscillator connection. An oscillator circuit is formed by connecting an external resistor and capacitor to this pin.
75	INH	I	Display off control input.
76	$\overline{CE}$	I	Chip enable input.
77	CLOCK	I	Synchronization clock input.
78	DI	I	Serial data input.
79	DIMMER	O	DIMMER Control signal output.
80	NC	-	Non connect.

**TEA6320T-X (IC161) : E.volume**

1.Pin Layout

SDA	1	32	SCL
GND	2	31	VCC
OUTLR	3	30	OUTRR
OUTLF	4	29	OUTRF
TL	5	28	TR
B2L	6	27	B2R
B1L	7	26	B1R
IVL	8	25	IVR
ILL	9	24	ILR
QSL	10	23	QSR
IDL	11	22	IDR
MUTE	12	21	Vref
ICL	13	20	ICR
IMD	14	19	CAP
IBL	15	18	IBR
IAL	16	17	IAR
			CD-CH
			TUNER

2.Block Diagram



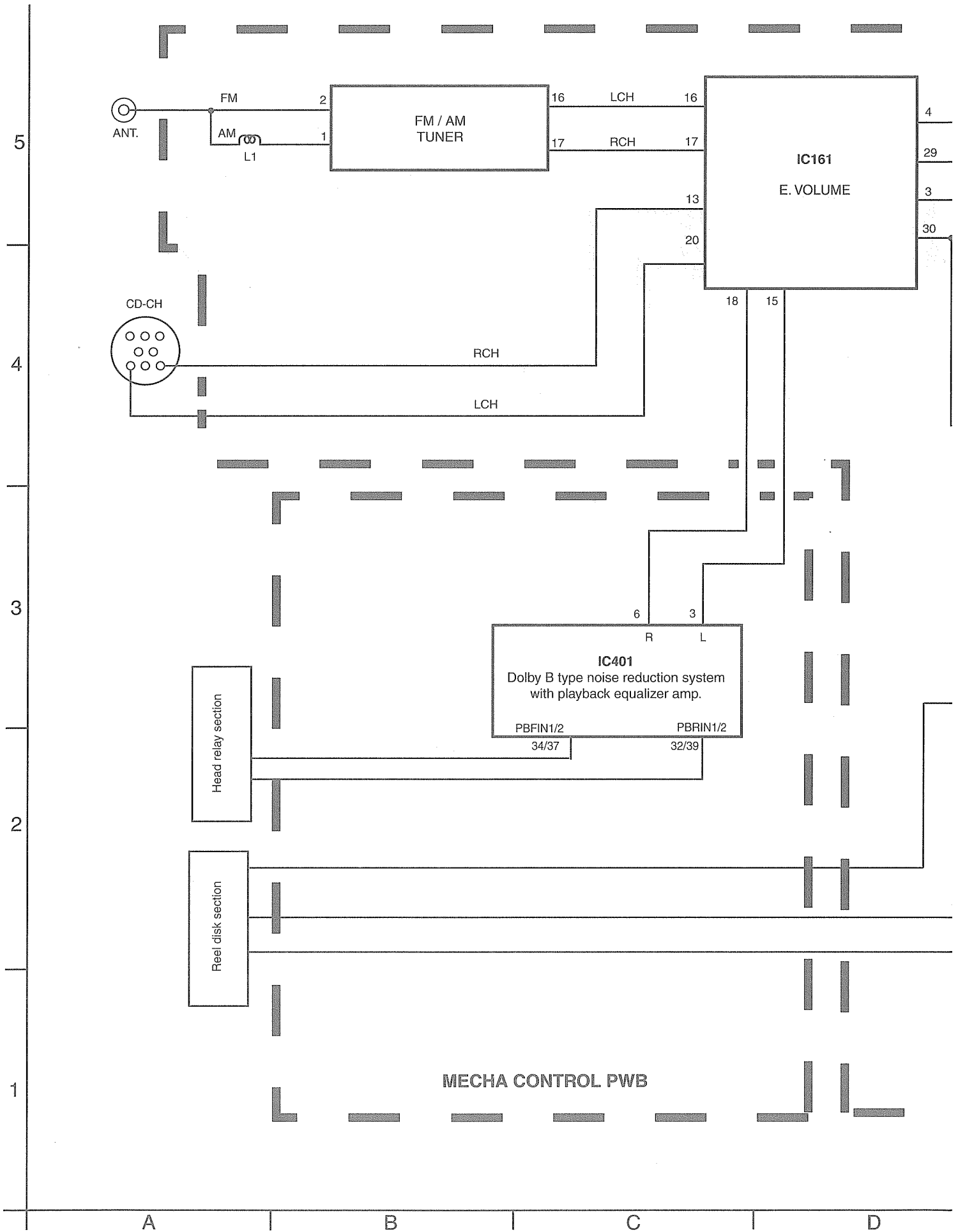
3.Pin Functions

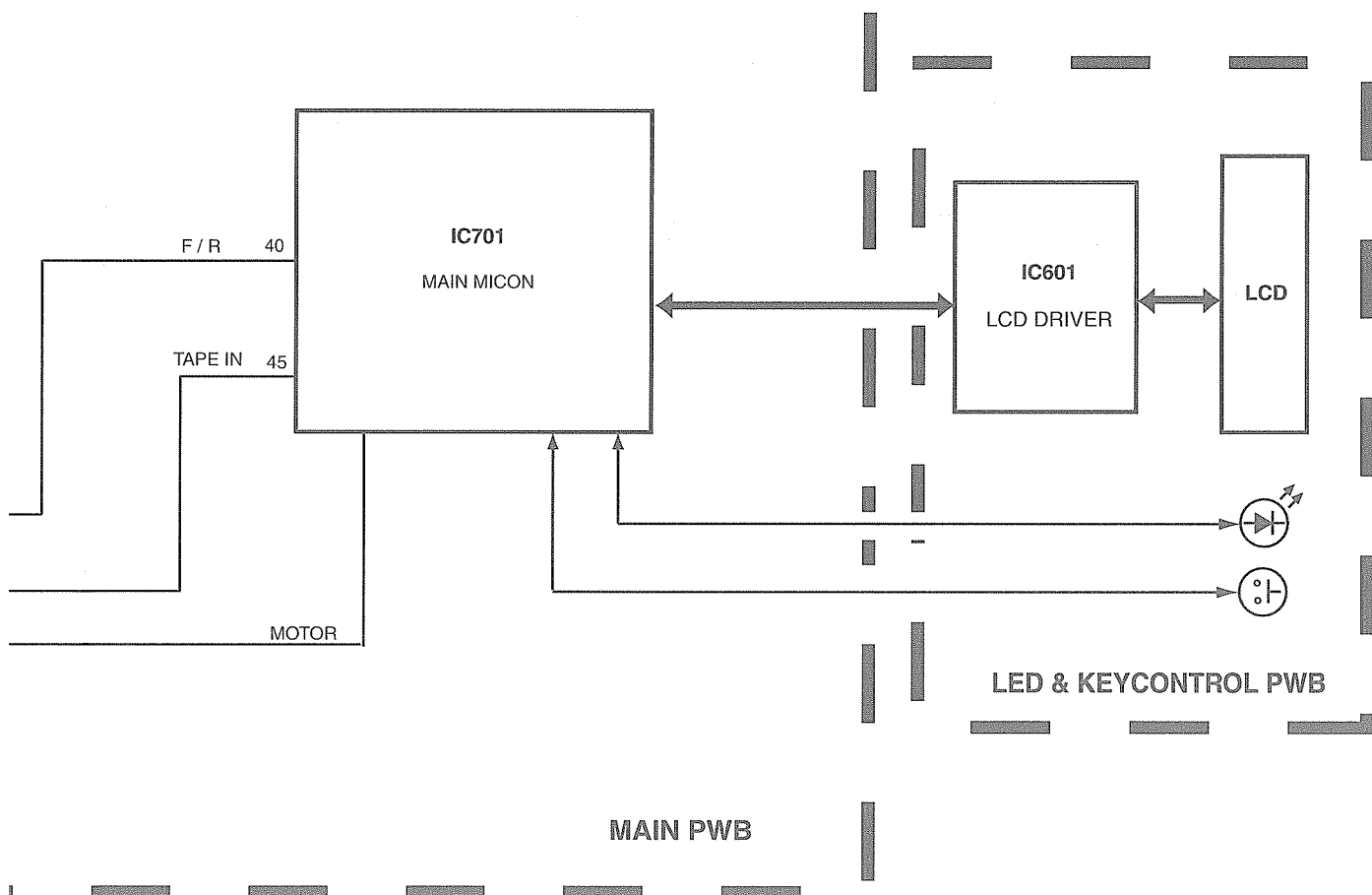
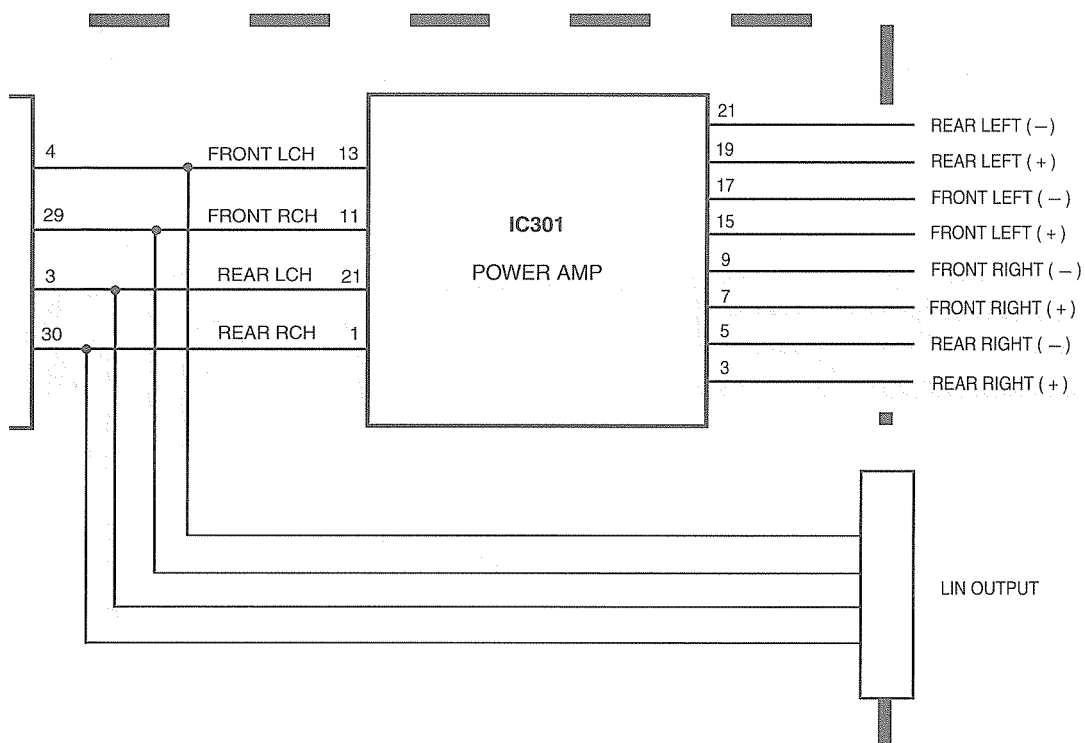
Pin No.	Symbol	I/O	Functions	Pin No.	Symbol	I/O	Functions
1	SDA	I/O	Serial data input/output.	17	IAR	I	Input A right source.
2	GND	-	Ground.	18	IBR	I	Input B right source.
3	OUTLR	O	output left rear.	19	CAP	-	Electronic filtering for supply.
4	OUTLF	O	output left front.	20	ICR	I	Input C right source.
5	TL	I	Treble control capacitor left channel or input from an external equalizer.	21	Vref	-	Reference voltage (0.5Vcc)
6	B2L	-	Bass control capacitor left channel or output to an external equalizer.	22	IDR	-	Not used
7	B1L	-	Bass control capacitor left channel.	23	QSR	O	Output source selector right channel.
8	IVL	I	Input volume 1. left control part.	24	ILR	I	Input loudness right channel.
9	ILL	I	Input loudness. left control part.	25	IVR	I	Input volume 1. right control part.
10	QSL	O	Output source selector. left channel.	26	B1R	-	Bass control capacitor right channel
11	IDL	-	Not used	27	B2R	O	Bass control capacitor right channel or output to an external equalizer.
12	MUTE	-	Not used	28	TR	I	Treble control capacitor right channel or input from an external equalizer.
13	ICL	I	Input C left source.	29	OUTRF	O	Output right front.
14	IMO	-	Not used	30	OUTRR	O	Output right rear.
15	IBL	I	Input B left source.	31	Vcc	-	Supply voltage.
16	IAL	I	Input A left source.	32	SCL	I	Serial clock input.





# Block diagram





# Standard schematic diagrams

## ■ Main amp. section

5

4

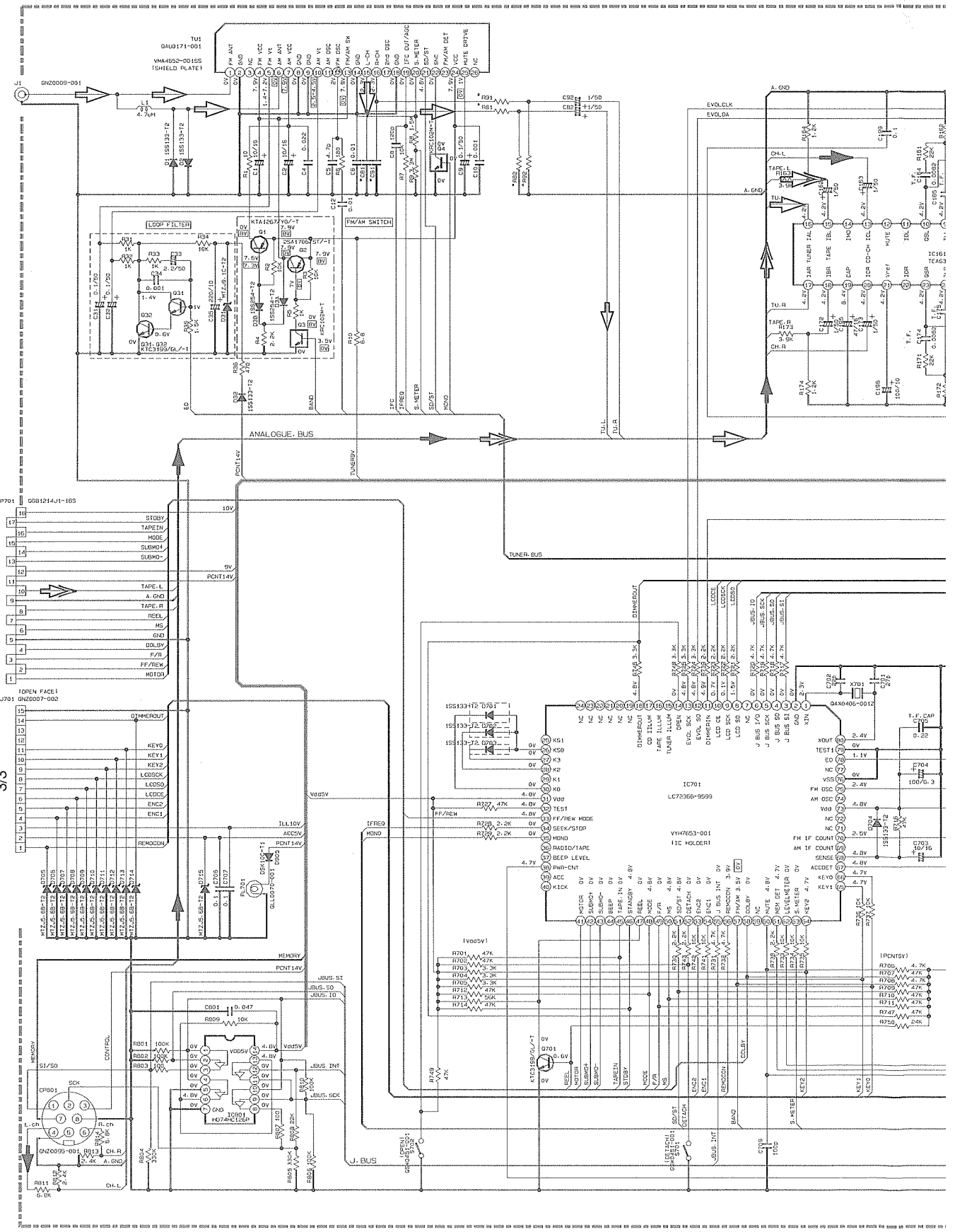
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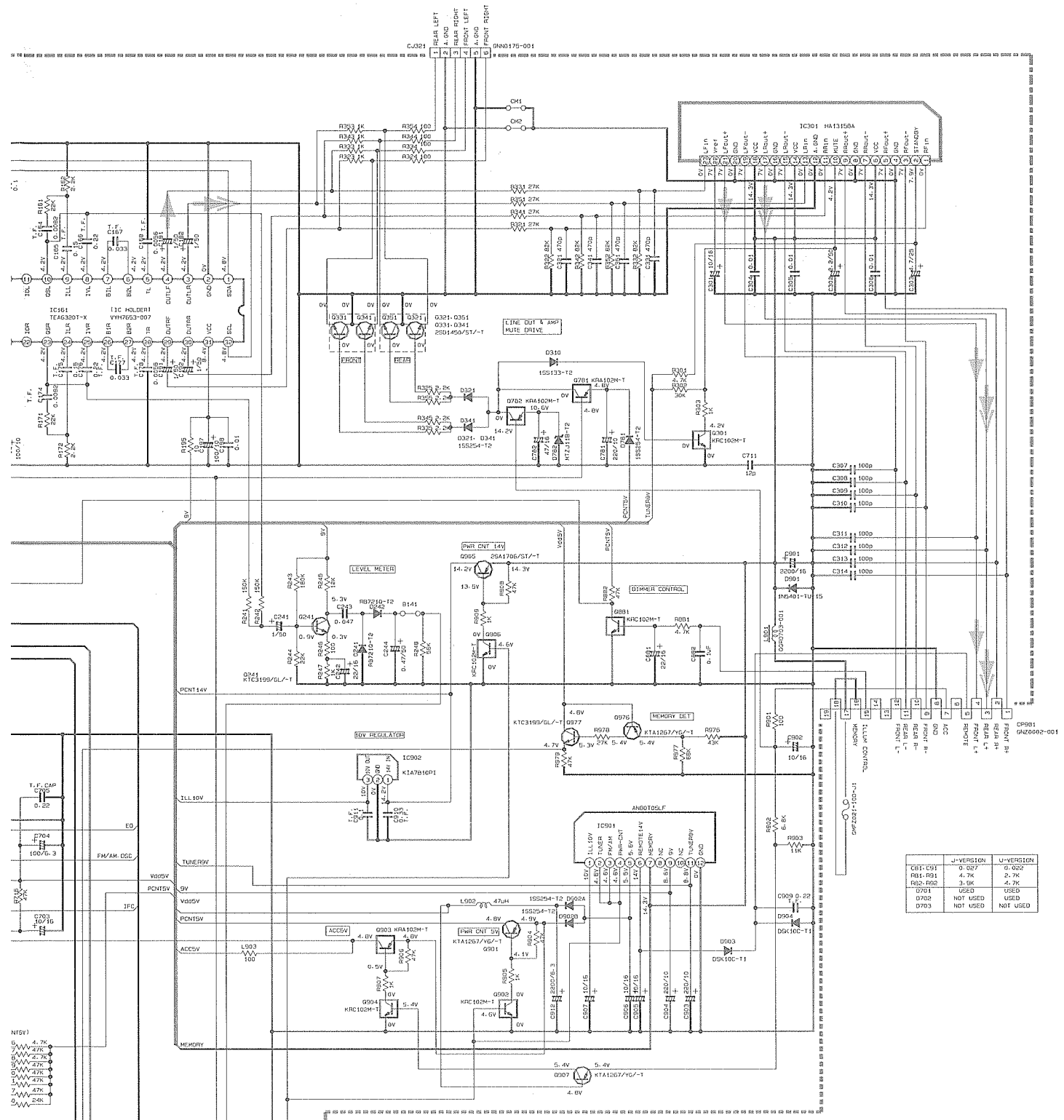
2

1

SHEET 2/3

SHEET 3/3



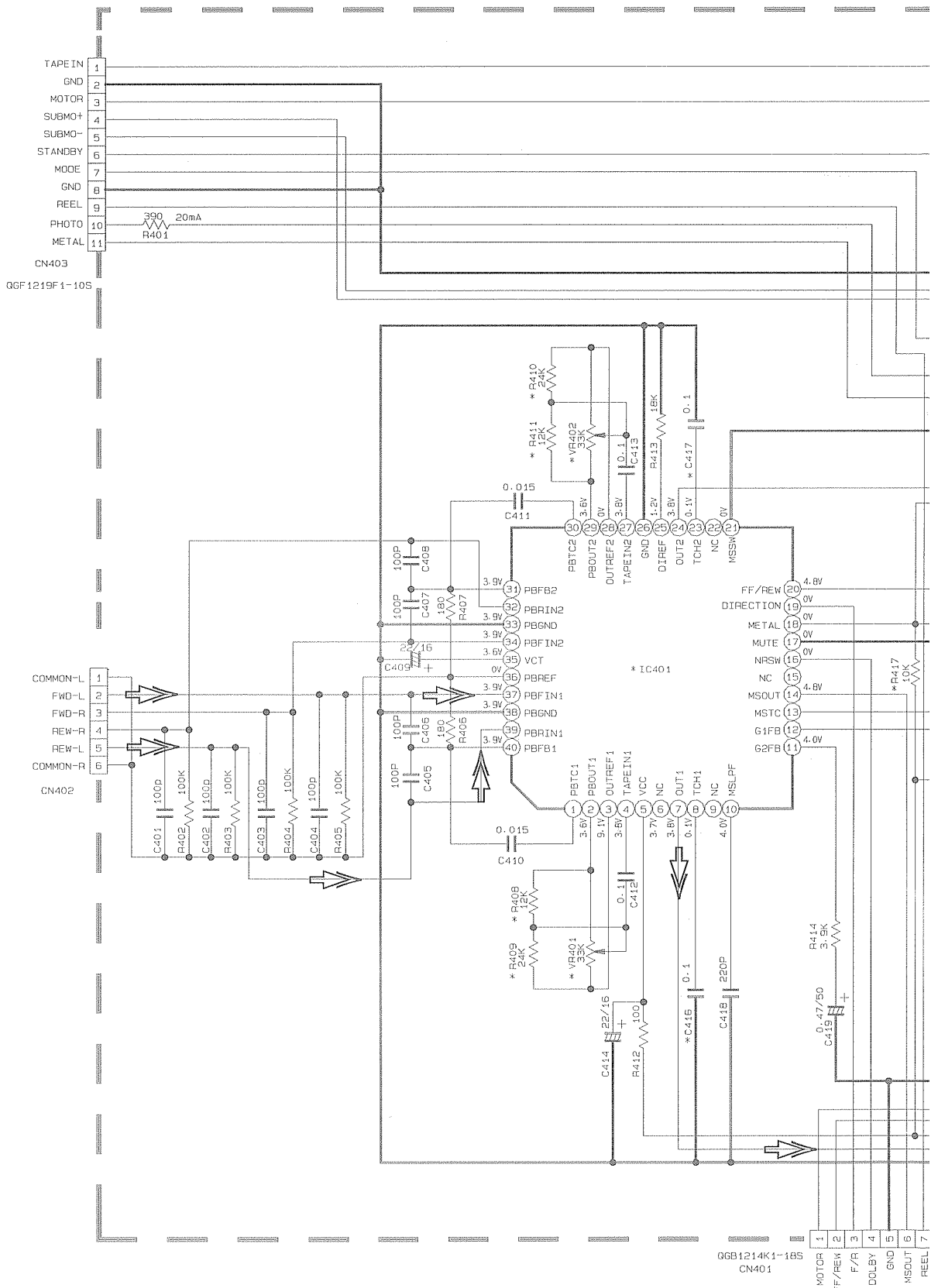


- Tuner signal
- CD signal
- Tape signal
- Front signal
- Rear signal

SHEET  
1/3

Q81-Q91	J-VERRIGN	V-VERSIGN
R81-R91	0.027	0.025
R92-R98	3.9K	4.7K
Q94	USED	USED
Q702	NOT USED	USED
Q703	NOT USED	NOT USED

■ Mecha control section



5

4

3

2

1

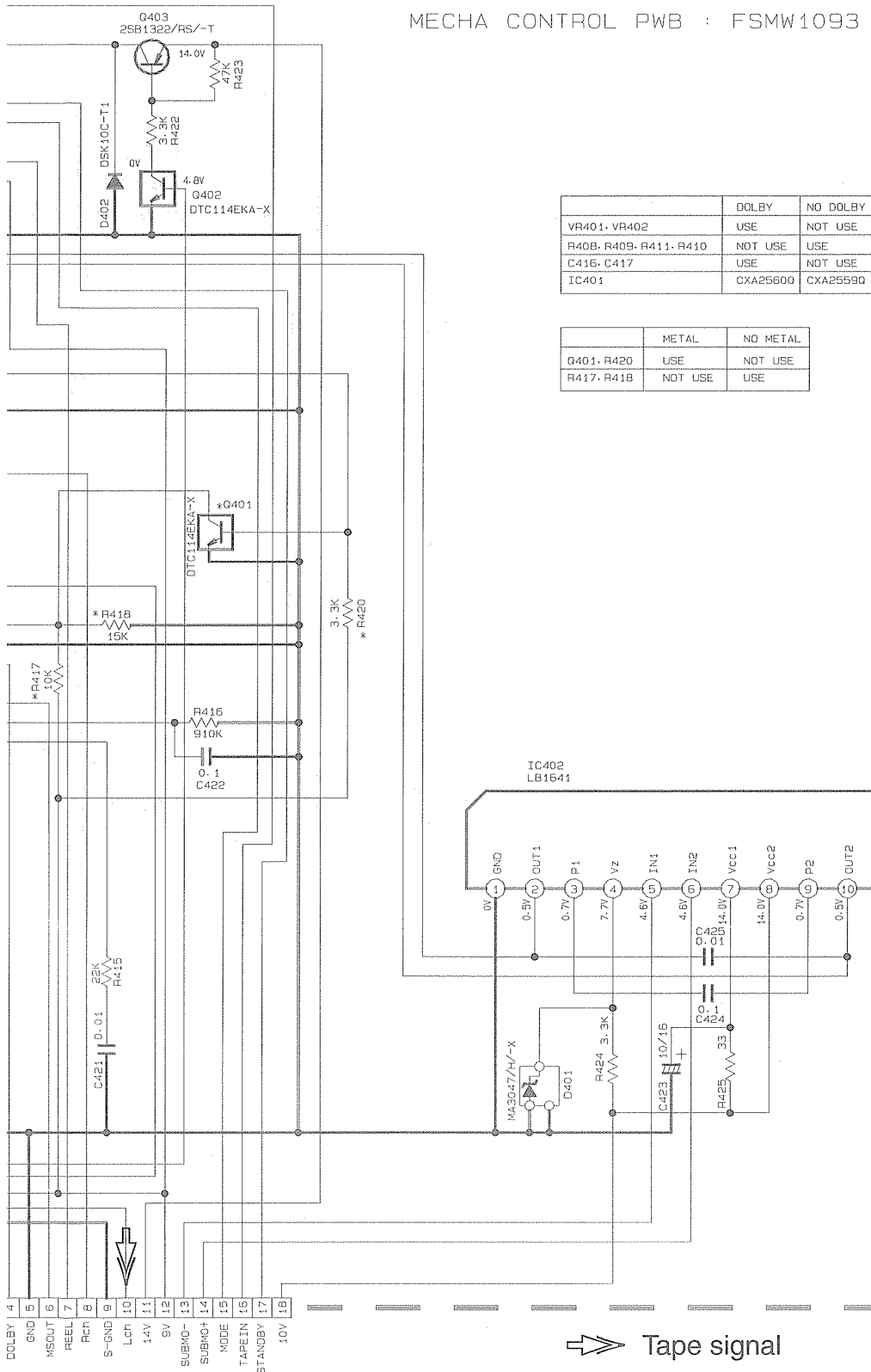
A

B

C

D

MECHA CONTROL PWB : FSMW1093



	DOLBY	NO DOLBY
VR401, VR402	USE	NOT USE
R408, R409, R411, R410	NOT USE	USE
C416, C417	USE	NOT USE
IC401	CXA25600	CXA25590

	METAL	NO METAL
G401, R420	USE	NOT USE
R417, R418	NOT USE	USE

- DOLBY 14
- GND 15
- MSOUT 16
- REEL 17
- Rch 18
- S-GND 19
- Lch 10
- 1.4V 11
- 9V 12
- SUBVDD- 13
- SUBVDD+ 14
- MODE 15
- TAPEIN 16
- STANDBY 17
- 10V 18

➔ Tape signal

SHEET  
1/3

SHEET  
2/3

■ LCD & Key control section

5

4

3

2

1

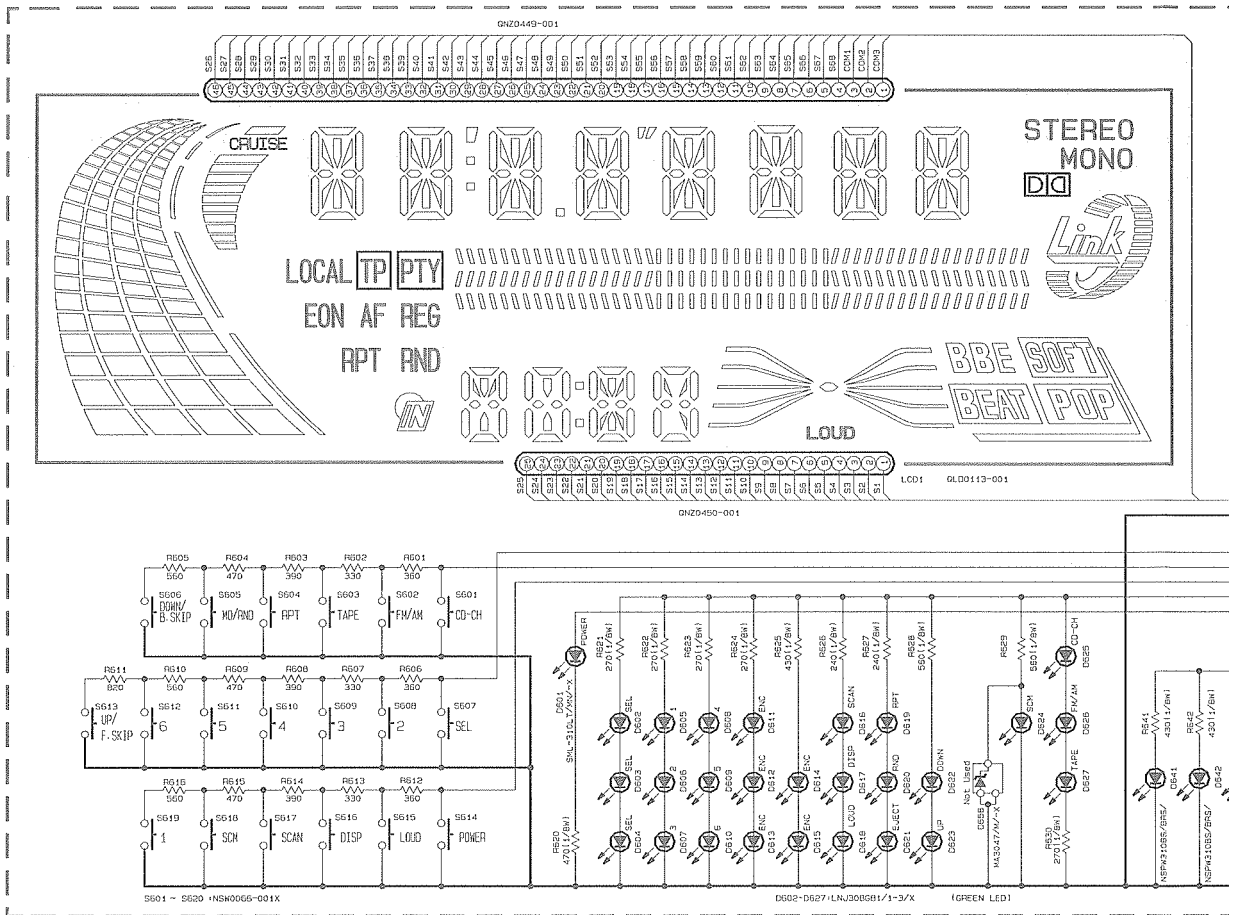
A

B

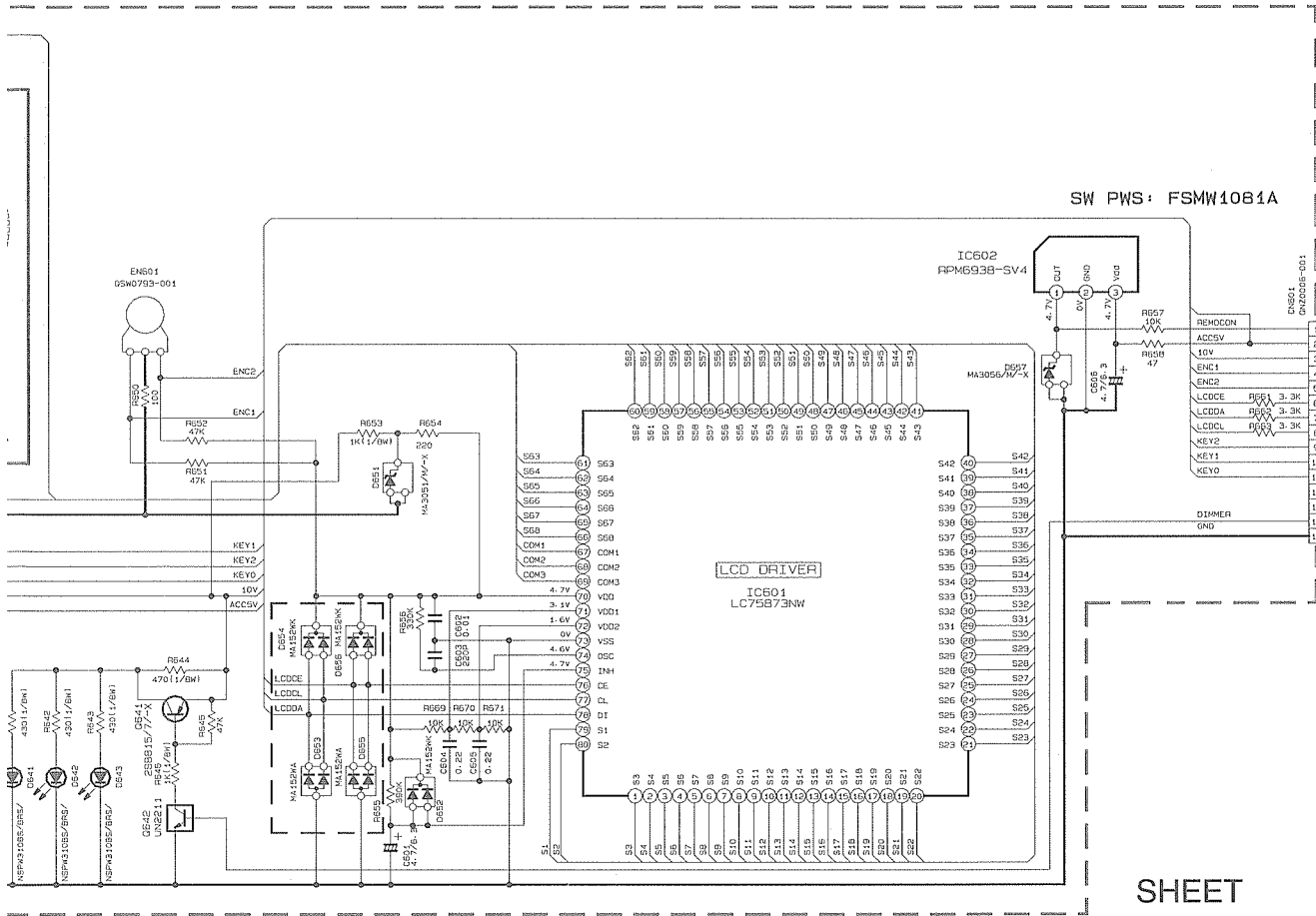
C

2-22

D







SW PWS: FSMW10B1A

SHEET  
1/3

SHEET  
3/3

D

E

F

G

H

# Printed circuit boards

## ■ Main board (Forward side)

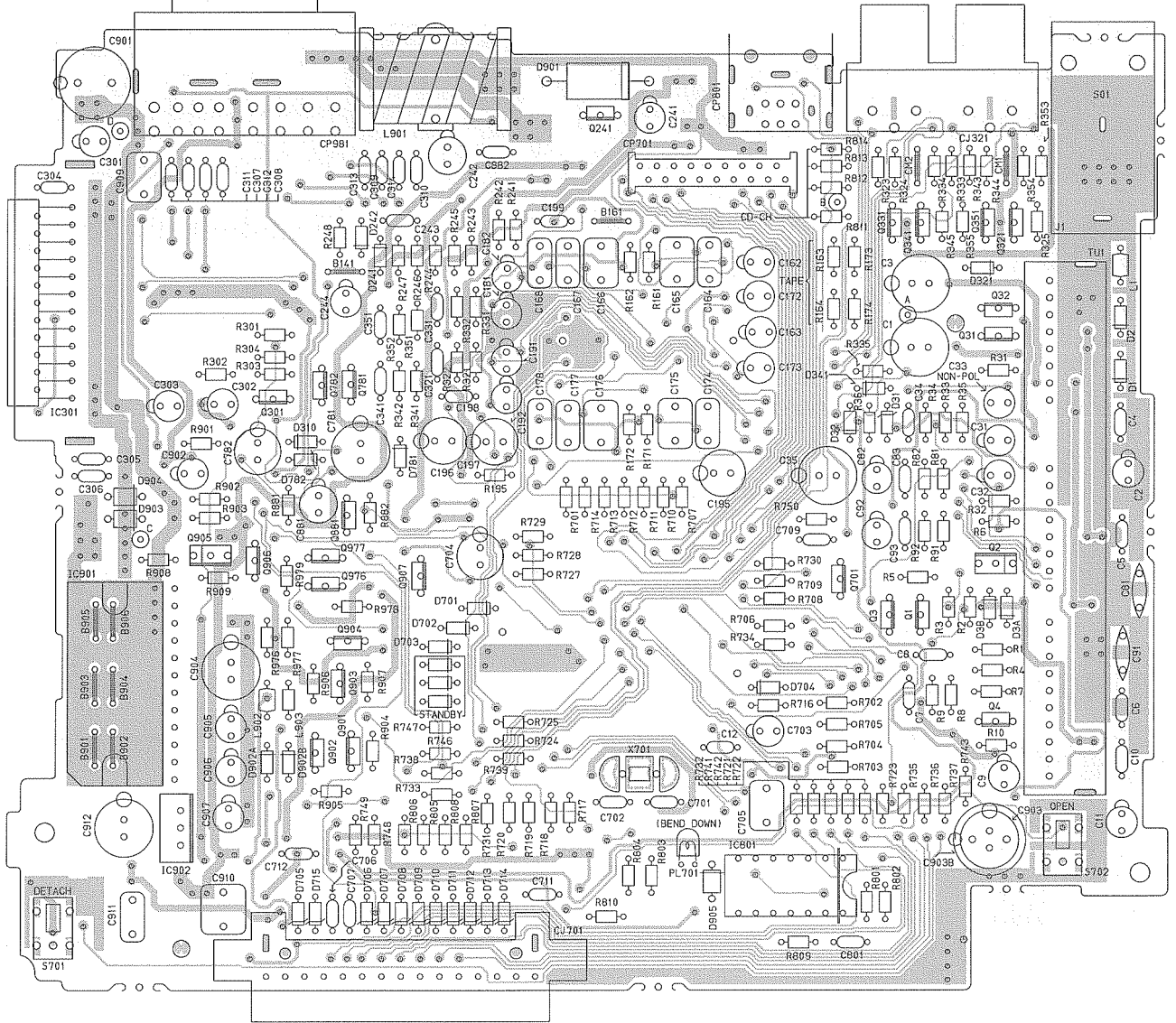
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4

3

2

1



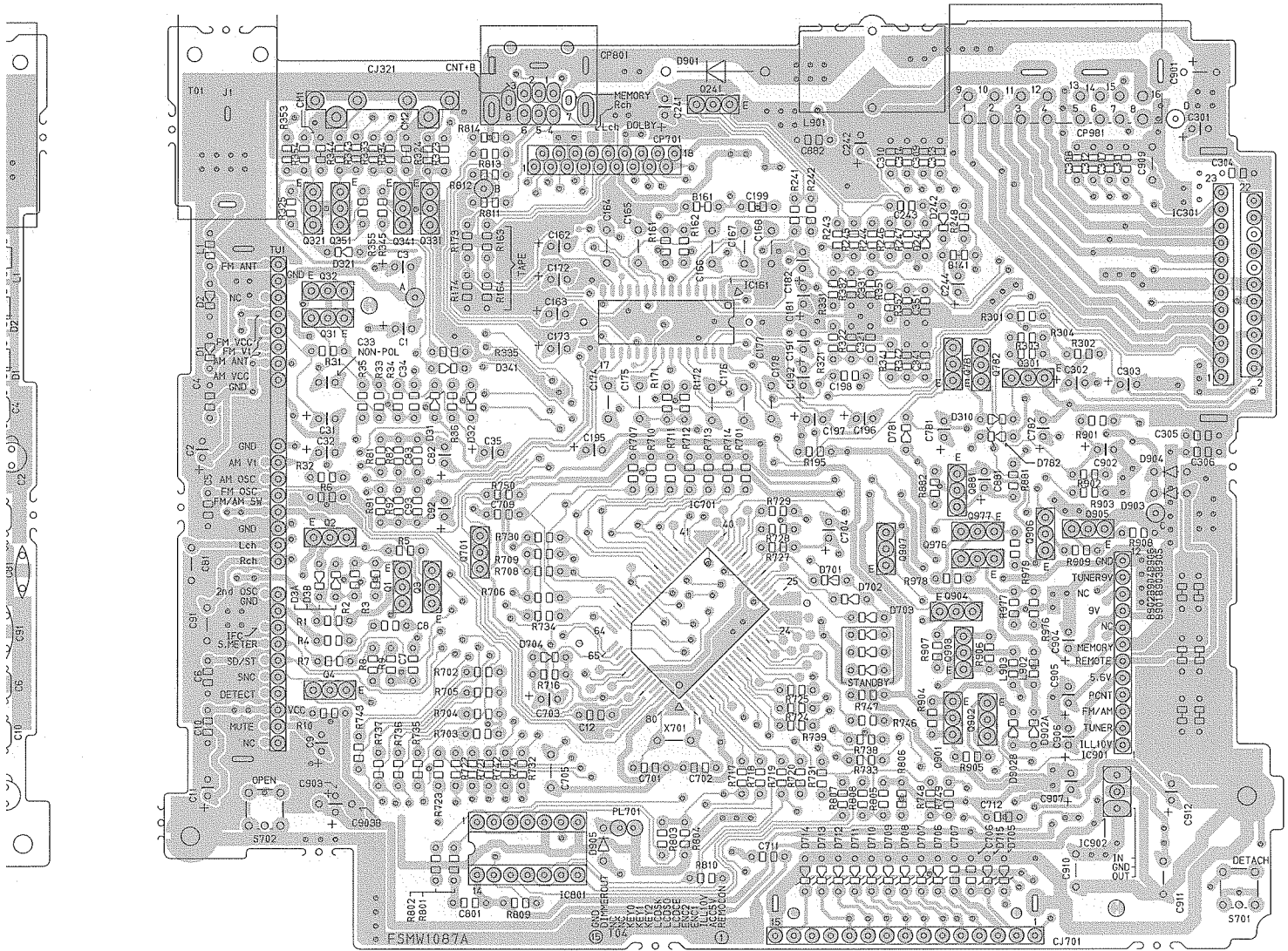
A

B

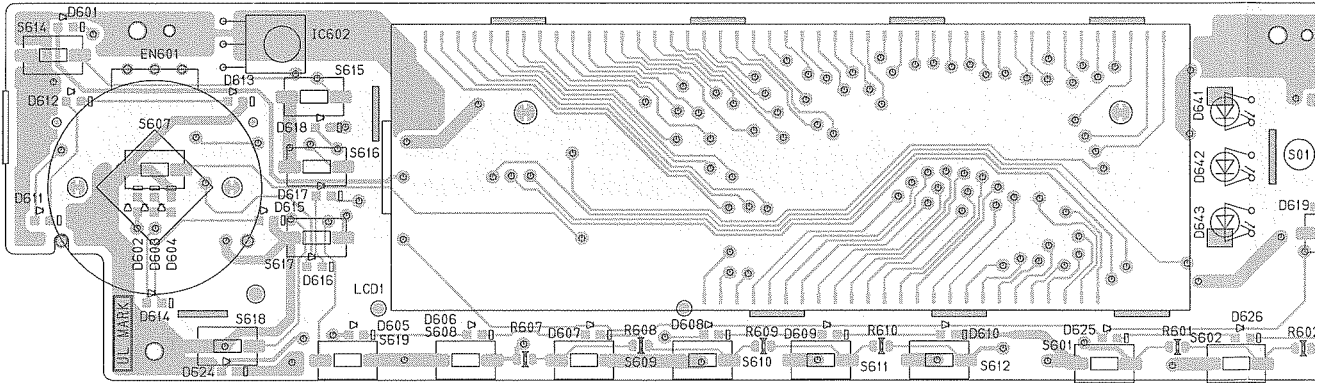
C

D

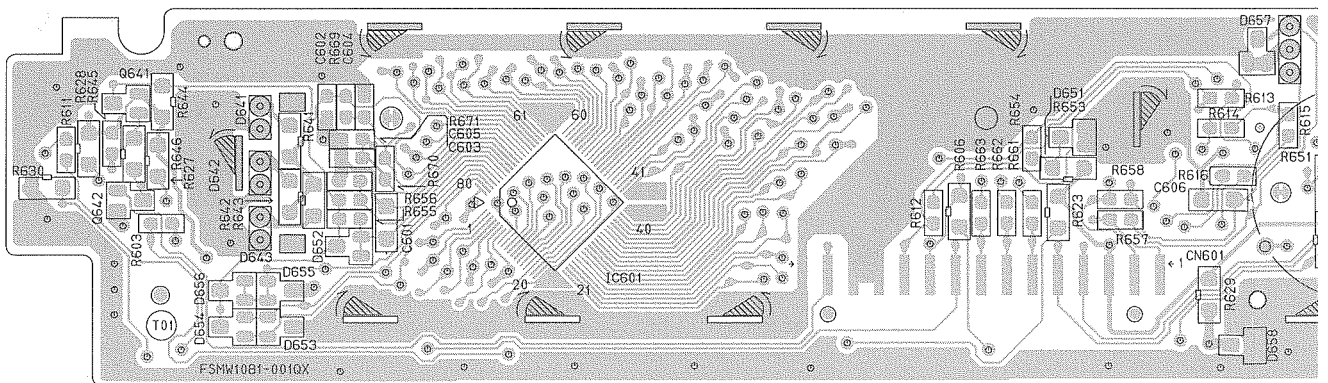
■ Main board (Reverse side)



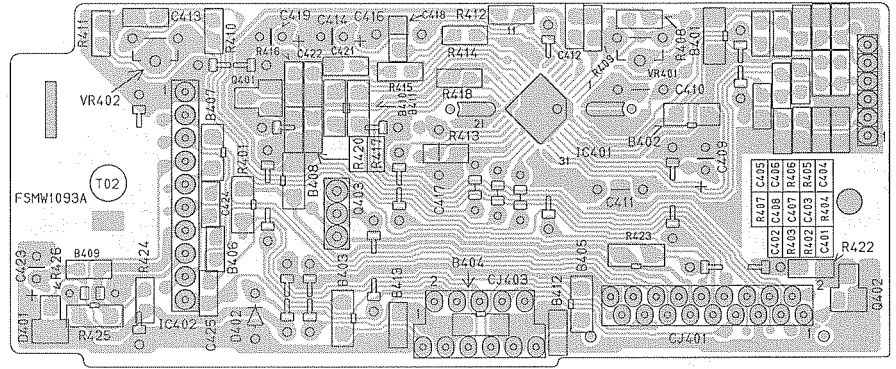
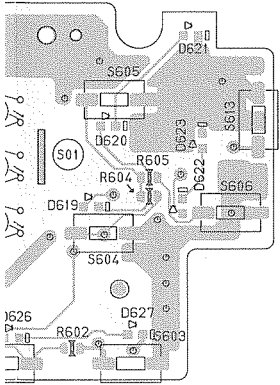
■ LCD & Key control board (Forward side)



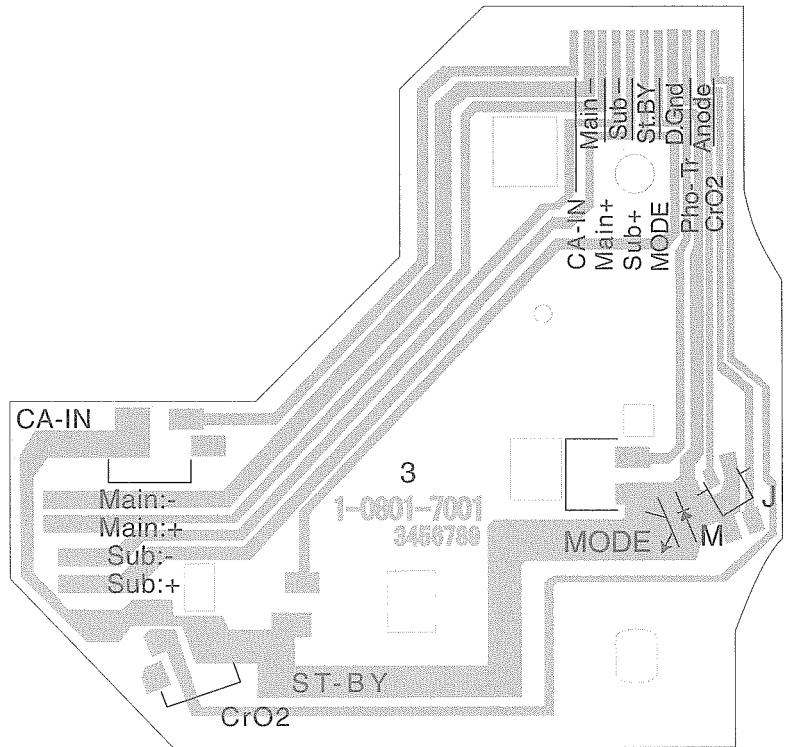
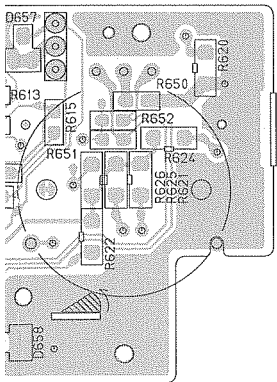
■ LCD & Key control board (Reverse side)



■ Mecha control board



■ Reel board



D

E

F

G

H



**PARTS LIST**

[ KS-FX450 ]

\* All printed circuit boards and its assemblies are not available as service parts.

**Area Suffix**  
J ---- Northern America  
U ---- Other area

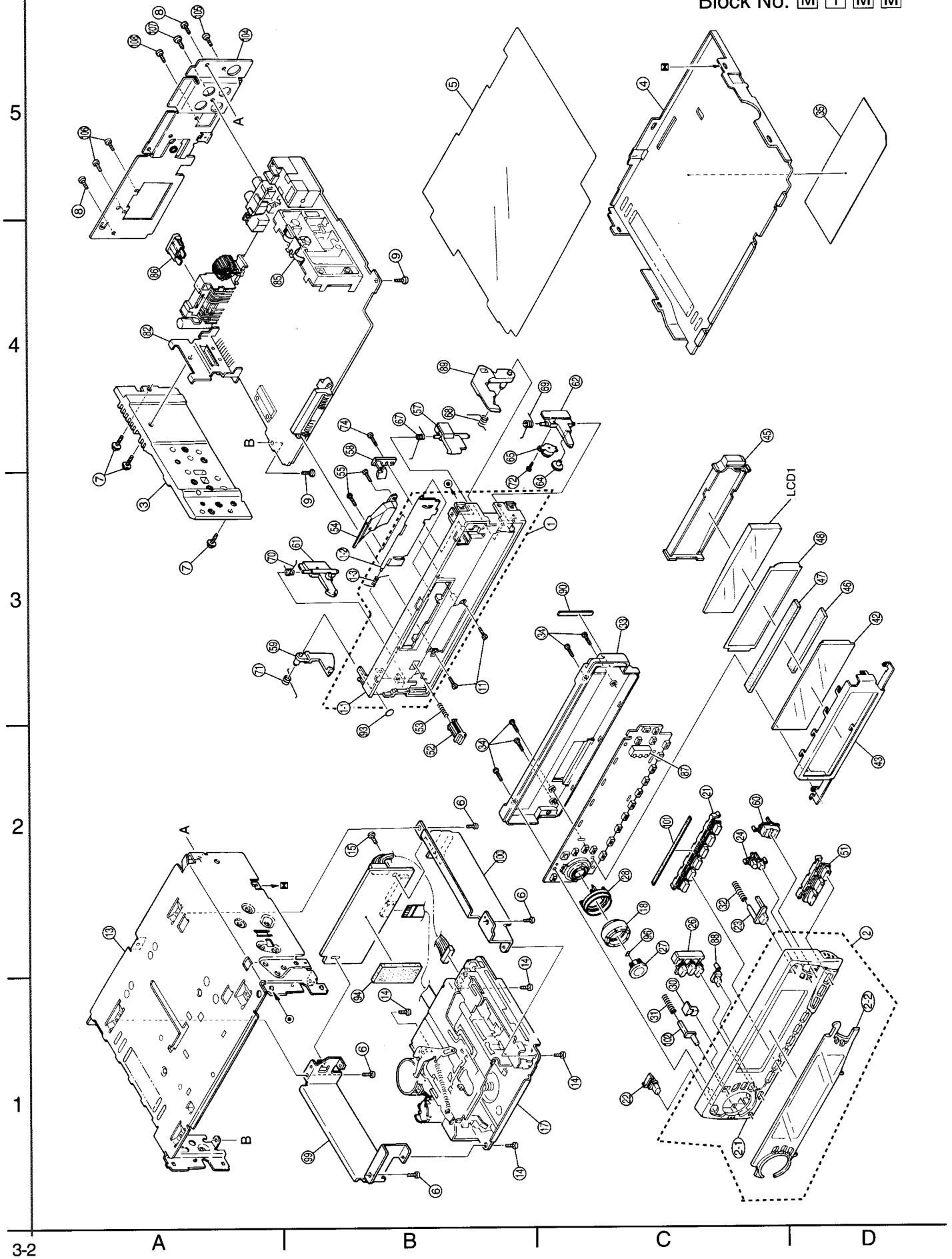
- Contents -

Exploded view of general assembly and parts list ..... 3- 2  
Cassette mechanism assembly and parts list ..... 3- 5  
Electrical parts list ..... 3-10  
Packing materials and accessories parts list ..... 3-16

# Exploded view of general assembly and parts list

Block No. 

M	1	M	M
---	---	---	---





■ Parts list (General assembly)

Block No. M1MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	1	ZCKSFX450J-FB	FRONT CHASSIS	1		
	1-1	FSJC1060-001	FRONT CHASSIS	1		
	1-2	FSJC3014-001	CASSETTE LID	1		
	1-3	VKW4947-002	DOOR SPRING	1		
	2	ZCKSFX450J-NPA	NOSE PIECE	1		J
		ZCKSFX450U-NPA	NOSE PIECE	1		U
	2-1	FSJC1058-001	FRONT PANEL	1		J
		FSJC1058-002	FRONT PANEL	1		U
	2-2	FSJC3024-00A	CASSETTELID	1	NO PRINTING	
	3	FSMH3001-202	SIDE PANEL	1		U
		FSMH3001-002	SIDE PANEL	1		J
	4	FSKM3011-002	BOTTOM COVER	1		
	5	FSMA3005-001	INSULATOR	1		
	6	QYSDST2604Z	SCREW	4	CHASSIS+MECHA.B	
	7	FSKZ4005-001	SCREW	3	CHASSIS+SIDE PA	
	8	QYSDST2606Z	SCREW	2	CHASSIS+REAR BK	
	9	QYSDST2606Z	SCREW	2	CHASSIS+MAIN PW	
	11	QYSDSF2006M	SCREW	2	F,CHASSIS+CONEC	
	13	FSJC1056-001	TOP CHASSIS	1		
	14	QYSDST2606Z	SCREW	4	MECHA+M.BKT	
	15	QYSDST2606Z	SCREW	1	PCB+MECHA	
	17	-----	CASSETTE MECHA	1		
	18	FSXK3003-005	VOL.KNOB	1	JOG DIAL	
	21	FSXP2045-002	PRESET BUTTON	1	1-6 LASER CUT	
	22	FSXP3053-002	POWER BUTTON	1		
	23	FSXP3058-001	EJECT BUTTON	1		
	24	FSXP3062-001	PUSH BUTTON(R)	1	MO/RND,RPT	
	26	FSXP2041-001	PUSH BUTTON(L)	1	LOUD,DISP,SCAN	
	27	FSXP3061-001	SEL BUTTON	1		
	28	FSJK3027-001	RIM LENS	1	FOR KNOB	
	30	FSJK4009-001	REMOTE LENS	1	FOR REMOTE CON.	
	31	VKW3001-330	COMP.SPRING	1	FOR EJECT BUTTO	
	32	VKW3001-330	COMP.SPRING	1	FOR DETACH BUTT	
	33	FSJC1059-001	REAR COVER	1		
	34	VKZ4777-001	MINI SCREW	5	FRONT+SW.PWB	
	35	FSYN3112-D007	NAME PLATE	1		U
		FSYN3112-006	NAME PLATE	1		J
	42	FSJK3028-001	L.C.D.LENS	1		
	43	FSKS3013-001	LENS CASE	1		
	45	FSYH3024-001	L.C.D.CASE	1		
	46	QNZ0450-001	RUBB.CONNECTOR	1		
	47	QNZ0449-001	RUBB.CONNECTOR	1		
	48	FSYH4061-001	LIGHT SHEET	1		
	51	FSXP2038-002	D.FUNC BUTTON	1	LENS+D.FUNC CAP	
	52	FSXP3060-001	RELEASE LEVER	1		
	53	FSKW3002-016	COMP.SPRING	1	FOR RELEASE KNO	
	54	VJK3707-001	LIGHT LENS	1		
	55	QYSPSGU1745N	MINI SCREW	2	FOR LIGHT LENS	
	57	VKS3793-001	LOCK LEVER(TOP)	1		
	58	FSKS3015-001	LOCK LEVER(O.L)	1		

■ Parts list (General assembly)

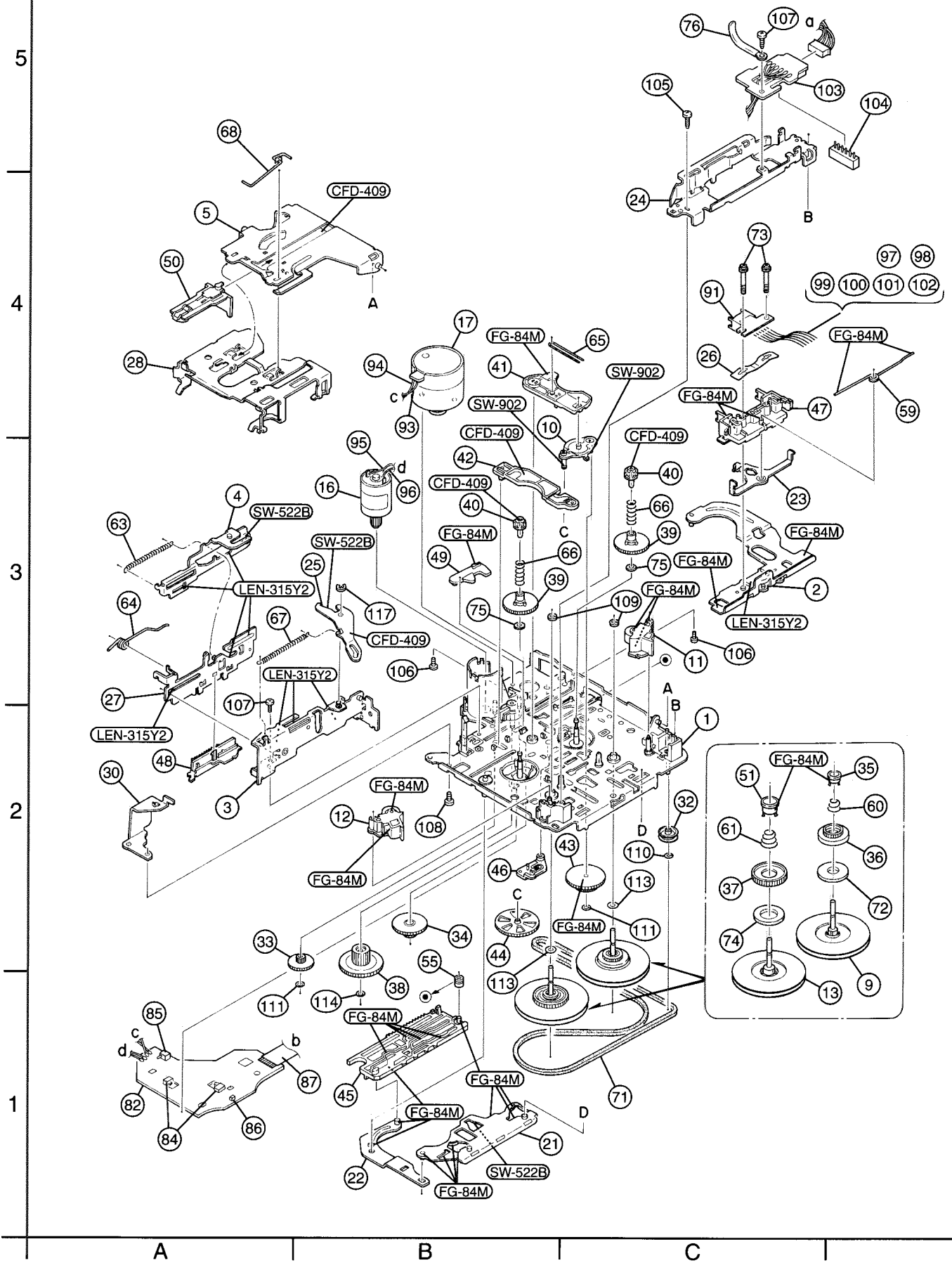
Block No. M1MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	59	VKS3798-002	RELEASE LEVER	1		
	60	FSXP2043-001	UP DOWN BUTTON	1		
	61	VKS3794-003	LOCK LEVER(L)	1		
	62	VKS3795-002	LOCK LEVER(R)	1		
	64	VKS5563-001	GEAR	1		
	65	VKZ4786-002	OIL DAMPER	1		
	67	FSKW4012-002	T.SPRING	1		U
		FSKW4012-001	T.SPRING	1	FOR L.LEVER(TOP	J
	68	FSKW4013-002	T.SPRING	1	FOR OPEN LEVER	
	69	VKW5262-001	T.SPRING	1	FOR L.LEVER(R)	
	70	VKW5263-002	T.SPRING	1	FOR L.LEVER(L)	
	71	VKW5264-005	T.SPRING	1	FOR RELEASE LEV	
	72	QYSDSF2006M	SCREW	1	DAMPER+L.LEVER(	
	74	VKZ4777-001	MINI SCREW	1	LOCK LEVER(O.L.	
	82	FSKL4018-00B	P.W.B.BRACKET	1		
	85	VMA4652-001SS	EARTH PLATE	1		
	86	QMFZ021-100-J1	FUSE	1		
	87	FSKS3017-002	L.E.D.HOLDER	1		
	88	FSXP4006-001	SCM BUTTON	1		
	89	FSKS3014-001	OPEN LEVER	1		
	90	FSYH4036-035	SHEET	1		
	93	FSYH4036-049	KNOB SHEET	1		
	94	FSYH4036-050	SHEET	1		
	96	FSYH4036-032	SHEET	1		
	99	FSKL2001-001	MECHA BKT(L)	1		
	100	FSKL2002-001	MECHA BKT(R)	1		
	101	FSYH4036-031	SHEET	1		U
	102	FSXP3059-001	DETACH BUTTON	1		
	104	FSKM3010-011	REAR BRACKET	1		
	105	QYSDST2606Z	SCREW	1	REAR BKT-ANT JAC	
	106	QTSDST2606Z	SCREW	1	REAR BKT+16PIN CN	
	107	QYSDSF3006Z	SCREW	1	REAR BKT+PIN JAC	
	108	QYSDST2606Z	SCREW	1	REAR BKT+CD IN JACK	
	LCD 1	QLD0113-001	LCD MODULE	1		

# Cassette mechanism assembly and parts list

CDS-801

Block No. M 2 M M



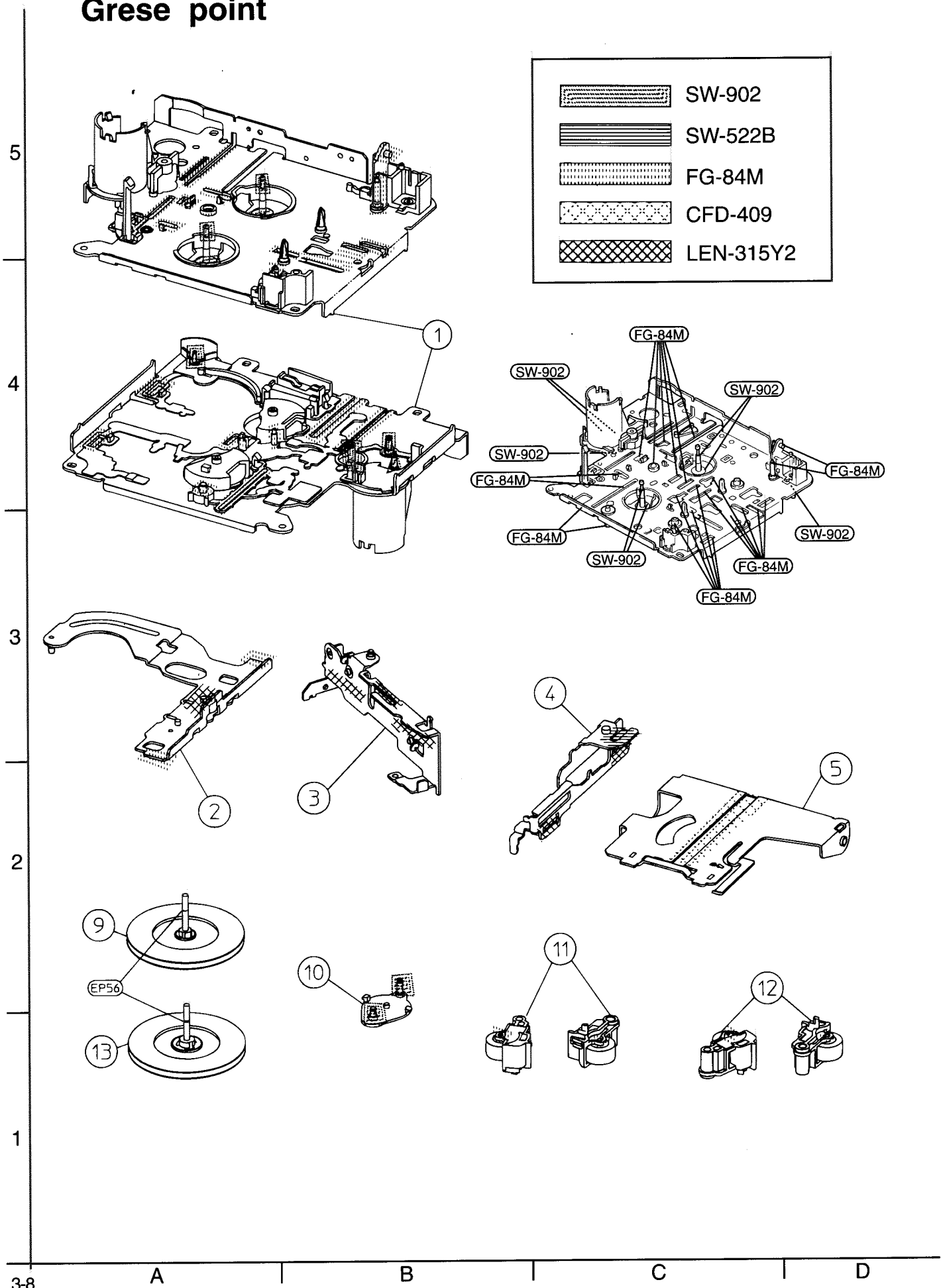
**Parts list (Cassette mechanism)**

Item	Parts number	Parts name	Q'ty	Description	Area
1	X-0801-1003S	MAIN CHASSIS AS	1		
2	X-0801-1002S	SLIDE CHASSIS A	1		
3	X-0801-1008S	SIDE BKT ASS'Y	1		
4	X-0801-1010S	EJECT CAM LIMIT	1		
5	X-0801-1013S	CASSETTE HANGER	1		
9	1-0801-6002S	FLYWHEEL ASSY F	1		
10	X-0801-2003S	GEAR BASE ASS'Y	1		
11	X-0801-2021S	PINCH ARM F ASS	1		
12	X-0801-2022S	PINCH ARM R ASS	1		
13	1-0801-6003S	FLYWHEEL ASSY R	1		
16	X-0801-7006S	SUB MOTOR ASS'Y	1		
17	X-0801-7057S	MAIN MOTOR ASSY	1		
21	1-0801-1003S	DIRECTION PLATE	1		
22	1-0801-1004S	DIRECTION LINK	1		
23	1-0801-1005S	PINCH SPG ARM	1		
24	1-0801-1006S	CASSETTE GUIDE	1		
25	1-0801-1007S	LOAD ARM	1		
26	1-0801-1009S	HEAD SUPT SPG	1		
27	1-0801-1011S	EJECT CAM PLATE	1		
28	1-0801-1012S	CASSETTE HOLDER	1		
30	1-0801-1020S	REINFORCE BRKT	1		
32	1-0101-2056S	IDLE PULLEY(A1)	1		
33	1-0801-2004S	REDUCTION GEARA	1		
34	1-0801-2005S	REDUCTION GEARB	1		
35	1-0801-2006S	SPG HOLDER F	1		
36	1-0801-2007S	FRICTION GEARPL	1		
37	1-0801-2008S	FRICTION GEARFF	1		
38	1-0801-2009S	MODE GEAR	1		
39	1-0801-2010S	REEL SPINDLE	2		
40	1-0801-2011S	REEL DRIVER	2		
41	1-0801-2014S	GEAR BASE ARM	1		
42	1-0801-2015S	GEAR BASE LINK	1		
43	1-0801-2016S	TAKE UP GEAR	1		
44	1-0801-2017S	REFLECTOR GEAR	1		
45	1-0801-2018S	MODE RACK	1		
46	1-0801-2019S	MODE SW ACTUATR	1		
47	1-0801-2020S	TAPE GUIDE	1		
48	1-0801-2023S	LOAD RACK	1		
49	1-0801-2024S	RACK LINK	1		
50	1-0801-2025S	CASSETTE CATCH	1		
51	1-0801-2030S	SPG HOLDER R	1		
55	1-0801-3005S	RACK COLLAR	1		
59	1-0801-4001S	PINCH ARM SPG	1		
60	1-0801-4002S	TU SPG	1		
61	1-0801-4003S	FF SPG	1		
63	1-0801-4005S	EJECTCAM PLT SP	1		
64	1-0801-4006S	HOLDER CUSH SPG	1		
65	1-0801-4007S	GEAR BASE SPG	1		

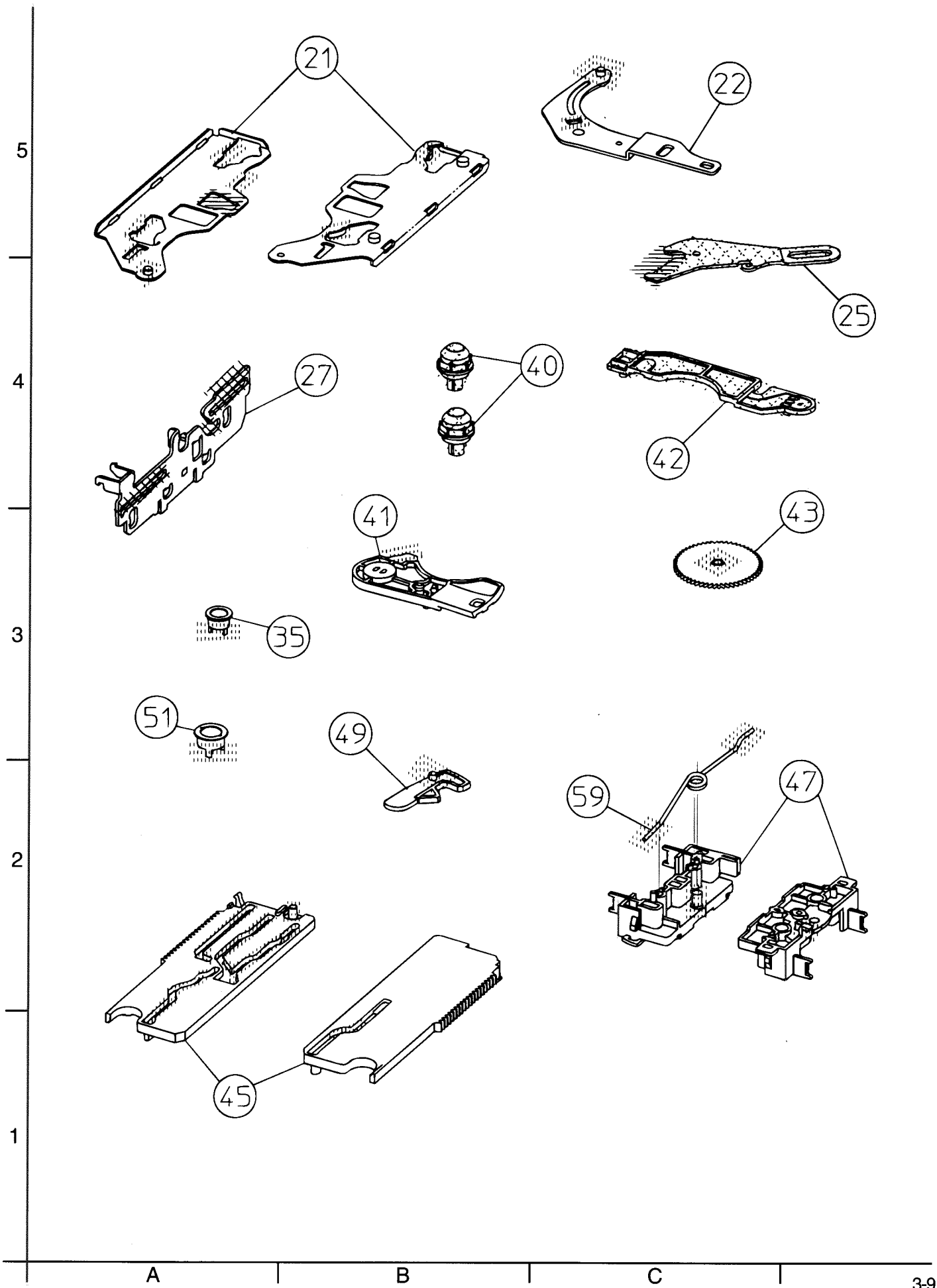
**Parts list (Cassette mechanism)**
Block No. **M2MM**

△	Item	Parts number	Parts name	Q'ty	Description	Area
	66	1-0801-4008S	REEL DRIVER SPG	2		
	67	1-0801-4009S	LOAD ARM SPG	1		
	68	1-0801-4011S	HOLDER STAB SPG	1		
	71	1-0801-5001S	BELT	1		
	72	1-0801-5002S	FELT	1	7.5*18.5*1.0	
	73	1-0801-5003S	AZIMUTH SCR	2		
	74	1-0801-5004S	FELT	1	11*18.5*1.0	
	75	1-0801-5005S	REEL WASHER	2		
	76	21732-6280-36S	LUG PLATE	1		
	82	1-0801-7001S	REEL PCB DL	1		
	84	1-0801-7003S	SW(MATSUSHITA)	2	(ESE22MH2L)	
	85	1-0801-7005S	SW	1	(ALPS SPPB64)	
	86	1-0801-7024S	PHOTO SENSOR	1	(ON2170-QR FS)	
	87	1-0801-7026S	FLAT CABLE 10P	1		
	91	1-0801-7014S	HEAD	1	(MITSUMIP-5544)	
	93	10801-7009-0S	M.MOTOR WIRE	1	BLACK	
	94	10801-7009-1S	M.MOTOR WIRE	1	RED	
	95	10801-7010-0S	S.MOTOR WIRE	1	ORANGE	
	96	10801-7010-1S	S.MOTOR WIRE	1	BROWN	
	97	10801-7015-0S	HEAD WIRE BLACK	1		
	98	10801-7015-1S	HEAD WIRE BROWN	1		
	99	10801-7015-2S	HEAD WIRE RED	1		
	100	10801-7015-3S	HEAD WIRE ORANG	1		
	101	10801-7015-4S	HEAD WIRE YELLO	1		
	102	10801-7015-5S	HEAD WIRE WHITE	1		
	103	1-0801-7016S	HEAD PCB	1		
	104	1-0801-7025S	CONN S6B-PH-K-S	1		
	105	21382-3060-C2S	+PLAIN B-TYPE	1	M2.3*6.0	
	106	2-1032-0025-C2S	+SCREW PLAIN	2	M2*2.5	
	107	21332-0035-P1S	S-TYPE PRECISIO	2	M2*3.5	
	108	21112-6035-C2S	+SCREW PLAIN	1	M2.6*3.5	
	109	2-1816-0032-E8S	LMW-S	2	1.6*3.2*0.35	
	110	21812-0032-D2S	PSW-S	1	1.2*3.2*0.25	
	111	1-0036-5024S	PSW-S(REEL B)	2	1.5*3.2*0.25	
	113	2-1821-0040-D1S	PSW	2	2.1*4.0*0.25	
	114	21821-0040-D2S	PSW-S	1	2.1*4.0*0.25	
	117	2-1711-5040-16S	E-RING	1	1.5	

# Grese point



	SW-902
	SW-522B
	FG-84M
	CFD-409
	LEN-315Y2



# Electrical parts list

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area
	C 1	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 2	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 4	QDVB1EZ-223Y	C CAPACITOR		U
	C 5	QDCB1HK-4R7Y	C CAPACITOR		
	C 6	QDYB1CM-103Y	C.CAPACITOR		
	C 8	QCBB1HK-121Y	C CAPACITOR	120PF 10% 50V	
	C 9	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 10	QDGB1HK-102Y	C CAPACITOR		
	C 12	QDYB1CM-103Y	C CAPACITOR		U
	C 31	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 32	QERF1HM-104Z	E CAPACITOR	.10MF 20% 50V	
	C 33	QEQF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 34	QDGB1HK-102Y	C CAPACITOR		
	C 35	QER41AM-227	E CAPACITOR	220MF 20% 10V	
	C 81	QDX11EK-273Z	C.CAPA I.M		J
	C 81	QDX11EK-223Z	C CAPACITOR		U
	C 82	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 91	QDX11EK-273Z	C CAPACITOR		J
	C 91	QDX11EK-223Z	C CAPACITOR		U
	C 92	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 162	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 163	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 164	QFLA1HJ-822Z	M CAPACITOR	8200PF 5% 50V	
	C 165	QFV61HJ-154Z	TF CAPACITOR	.15MF 5% 50V	
	C 166	QFV61HJ-224Z	TF CAPACITOR	.22MF 5% 50V	
	C 167	QFV61HJ-333Z	TF CAPACITOR	.33MF 5% 50V	
	C 168	QFLK1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
	C 172	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 173	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 174	QFLA1HJ-822Z	M CAPACITOR	8200PF 5% 50V	
	C 175	QFV61HJ-154Z	TF CAPACITOR	.15MF 5% 50V	
	C 176	QFV61HJ-224Z	TF CAPACITOR	.22MF 5% 50V	
	C 177	QFV61HJ-333Z	TF CAPACITOR	.33MF 5% 50V	
	C 178	QFLK1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
	C 181	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 182	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 191	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 192	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 195	QER41CM-476	E CAPACITOR	47MF 20% 16V	
	C 196	QER41AM-107	E CAPACITOR	100MF 20% 10V	
	C 197	QER41AM-107	E CAPACITOR	100MF 20% 10V	
	C 198	QDYB1CM-103Y	C.CAPACITOR		
	C 199	QDVB1EZ-223Y	C CAPACITOR	STANDBY MUTE	J
	C 199	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	U
	C 241	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 242	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 243	QCF11HZ-473	C CAPACITOR	.047MF +80:-20%	
	C 244	QERF1HM-474Z	E CAPACITOR	.47MF 20% 50V	
	C 301	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 302	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	J
	C 302	QERF1HM-225Z	AL E.CAPACITOR	2.2MF 20% 50V	U
	C 303	QERF1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 304	QDYB1CM-103Y	C.CAPACITOR		
	C 305	QDYB1CM-103Y	C.CAPACITOR		
	C 306	QDYB1CM-103Y	C.CAPACITOR		
	C 307	QCBB1HK-101Y	C CAPACITOR	LEFT FRONT	
	C 308	QCBB1HK-101Y	C CAPACITOR	LEFT REAR	
	C 309	QCBB1HK-101Y	C CAPACITOR	RIGHT REAR	
	C 310	QCBB1HK-101Y	C CAPACITOR	RIGHT FRONT	
	C 311	QCBB1HK-101Y	C CAPACITOR	LEFT FRONT	
	C 312	QCBB1HK-101Y	C CAPACITOR	LEFT REAR	
	C 313	QCBB1HK-101Y	C CAPACITOR	RIGHT REAR	
	C 314	QCBB1HK-101Y	C CAPACITOR	RIGHT FRONT	

△	Item	Parts number	Parts name	Remarks	Area
	C 321	QCBB1HK-471Y	C CAPACITOR	RIGHT	
	C 331	QCBB1HK-471Y	C CAPACITOR	LEFT	
	C 341	QCBB1HK-471Y	C CAPACITOR	RIGHT	
	C 351	QCBB1HK-471Y	C CAPACITOR	LEFT	
	C 701	QDUB1HJ-270Y	C CAPACITOR		
	C 702	QDCB1HJ-220Y	C CAPACITOR		
	C 703	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 704	QERF0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 705	QFV61HJ-224Z	TF CAPACITOR	.22MF 5% 50V	
	C 706	QCFB1HZ-104Y	C CAPACITOR	ACC5V	
	C 707	QCFB1HZ-104Y	C CAPACITOR	ILL10V	
	C 709	QCFB1HE-473Y	C CAPACITOR	.047MF +80:-20%	J
	C 709	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	U
	C 711	QDCB1HJ-120Y	C RESISTOR		U
	C 781	QER41AM-227	E CAPACITOR	220MF 20% 10V	
	C 782	QER41CM-476	E CAPACITOR	47MF 20% 16V	
	C 801	QCF11HZ-473	C CAPACITOR	.047MF +80:-20%	
	C 881	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 882	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C 901	QE20337-228	E CAPACITOR	2200MF	
	C 902	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 903	QER41AM-227	E CAPACITOR	220MF 20% 10V	
	C 904	QER41AM-227	E CAPACITOR	220MF 20% 10V	
	C 905	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 906	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 907	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 909	QDYB1CM-103Y	C.CAPACITOR		J
	C 909	QFV61HJ-224Z	C.CAPACITOR	.22MF 5% 50V	U
	C 910	QFV11HJ-334AZ	TF CAPACITOR	.33MF 5% 50V	
	C 911	QFV61HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C 912	QE20423-228	E CAPACITOR	2200MF	
	CJ321	QNN0175-001	PIN JACK		
	CJ701	QNZ0007-002	CAR CONNECTOR		
	CM 1	QUY150-050Y	BUS WIRE		
	CM 2	QUY150-050Y	BUS WIRE		
	CP701	QGB1214J1-18S	CONNECTOR		
	CP801	QNZ0095-001	CONNECTOR		
	CP981	QNZ0002-001	16P CONNECTOR		
	D 1	1SS133-T2	SI DIODE IM		
	D 2	1SS133-T2	SI DIODE IM		
	D 31	MTZJ9.1C-T2	Z DIODE IM		
	D 32	1SS133-T2	SI DIODE IM		
	D A 3	1SS254-T2	SI DIODE		
	D B 3	1SS254-T2	SI DIODE		
	D 241	RB721Q-T2	S.B.DIODE		
	D 242	RB721Q-T2	S.B.DIODE		
	D 310	1SS133-T2	SI DIODE IM		
	D 321	1SS254-T2	SI DIODE		
	D 341	1SS254-T2	SI DIODE		
	D 701	1SS133-T2	SI DIODE IM	KO	
	D 702	1SS133-T2	SI.DIODE		U
	D 704	1SS133-T2	SI DIODE IM		
	D 705	MTZJ5.6B-T2	ZENER DIODE	REMOCON	
	D 706	MTZJ5.6B-T2	ZENER DIODE	ENC1	
	D 707	MTZJ5.6B-T2	ZENER DIODE	ENC2	
	D 708	MTZJ5.6B-T2	ZENER DIODE	LODCE	
	D 709	MTZJ5.6B-T2	ZENER DIODE	LCDSO	
	D 710	MTZJ5.6B-T2	ZENER DIODE	LCDSCK	
	D 711	MTZJ5.6B-T2	ZENER DIODE	KEY2	
	D 712	MTZJ5.6B-T2	ZENER DIODE	KEY1	
	D 713	MTZJ5.6B-T2	ZENER DIODE	KEY0	
	D 714	MTZJ5.6B-T2	ZENER DIODE	DIMMEROUT	
	D 715	MTZJ5.6B-T2	ZENER DIODE	ACC5V	



Electrical parts list(Main board)

Block No. 01

Item	Parts number	Parts name	Remarks	Area
D 781	1SS254-T2	SI DIODE		
D 782	MTZ111B-T2	ZENER DIODE		
D 901	1N5401-TU-15	DIODE		
D 903	DSK10C-T1	DIODE		
D 904	DSK10C-T1	DIODE		
D 905	DSK10C-T1	SI DIODE		U
D902A	1SS254-T2	SI DIODE		
D902B	1SS254-T2	SI DIODE		
IC161	TEA6320T-X	IC		
IC301	HA13158A	IC		
IC701	LC72366-9599	IC		
IC801	HD74HC126P	IC		
IC901	AN80T05LF	IC		
IC902	KIA7810PI	10V REGULATOR		
J 1	QNZ0009-001	CAR ANT JACK		
L 1	QQL231K-4R7Y	INDUCTOR		
L 901	QQR0703-001	CHOKE COIL		
L 902	QQL231K-470Y	INDUCTOR		
L 903	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
PL701	QLL0038-001	LAMP		U
PL701	QLL0033-001	LAMP		J
Q 1	KTA1267/YG/-T	TRANSISTOR		
Q 2	2SA1706/ST/-T	TRANSISTOR		
Q 3	KRC102M-T	D.TRANSISTOR		
Q 4	KRC102M-T	D.TRANSISTOR		
Q 31	KTC3199/GL/-T	TRANSISTOR		
Q 32	KTC3199/GL/-T	TRANSISTOR		
Q 241	KTC3199/GL/-T	TRANSISTOR		
Q 301	KRC102M-T	D.TRANSISTOR		
Q 321	2SD2144S/VW/-T	TRANSISTOR		U
Q 321	KTC3199/GL/-T	TRANSISTOR	REAR	J
Q 331	KTC3199/GL/-T	TRANSISTOR	FRONT	J
Q 331	2SD2144S/VW/-T	TRANSISTOR		U
Q 341	2SD2144S/VW/-T	TRANSISTOR		U
Q 341	KTC3199/GL/-T	TRANSISTOR	FRONT	J
Q 351	KTC3199/GL/-T	TRANSISTOR	REAR	J
Q 351	2SD2144S/VW/-T	TRANSISTOR		U
Q 701	KTC3199/GL/-T	TRANSISTOR		
Q 781	KRA102M-T	D.TRANSISTOR		
Q 782	KRA102M-T	D.TRANSISTOR		
Q 881	KRC102M-T	D.TRANSISTOR		
Q 901	KTA1267/YG/-T	TRANSISTOR		
Q 902	KRC102M-T	D.TRANSISTOR		
Q 903	KRA102M-T	D.TRANSISTOR		
Q 904	KRC102M-T	D.TRANSISTOR		
Q 905	2SA1706/ST/-T	TRANSISTOR		
Q 906	KRC102M-T	D.TRANSISTOR		
Q 907	KTA1267/YG/-T	TRANSISTOR		
Q 976	KTA1267/YG/-T	TRANSISTOR		
Q 977	KTC3199/GL/-T	TRANSISTOR		
R 1	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
R 2	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 3	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 4	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
R 5	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 6	QDYB1CM-103Y	C.CAPACITOR		J
R 6	QRE141J-181Y	C CAPACITOR	180 5% 1/4W	U
R 7	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 8	QRE141J-155Y	C RESISTOR	1.5M 5% 1/4W	
R 9	QRE141J-335Y	C RESISTOR	3.3M 5% 1/4W	
R 10	QRE141J-6R8Y	C RESISTOR	6.8 5% 1/4W	
R 31	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 32	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	

Item	Parts number	Parts name	Remarks	Area
R 33	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 34	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
R 35	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
R 36	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
R 81	QRE141J-272Y	C RESISTOR	4.7K 5% 1/4W	U
R 81	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	J
R 82	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	U
R 82	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	J
R 91	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	J
R 91	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	U
R 92	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	U
R 92	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	J
R 161	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 162	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
R 163	QRE141J-392Y	C RESISTOR	TAPE LEVEL	
R 164	QRE141J-122Y	C RESISTOR	TAPE LEVEL	
R 171	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 172	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
R 173	QRE141J-392Y	C RESISTOR	TAPE LEVEL	
R 174	QRE141J-122Y	C RESISTOR	TAPE LEVEL	
R 195	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
R 241	QRE141J-154Y	C RESISTOR	150K 5% 1/4W	
R 242	QRE141J-154Y	C RESISTOR	150K 5% 1/4W	
R 243	QRE141J-184Y	C RESISTOR	180K 5% 1/4W	
R 244	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
R 245	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
R 246	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
R 247	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
R 248	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
R 301	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
R 302	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	J
R 302	QRE141J-303Y	C RESISTOR	30K 5% 1/4W	U
R 303	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	U
R 303	QRE141J-471Y	C RESISTOR	470 5% 1/4W	J
R 321	QRE141J-273Y	C RESISTOR	RIGHT	
R 321	QRE141J-823Y	C RESISTOR	RIGHT	
R 323	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	U
R 323	QRE141J-821Y	C RESISTOR	FRONT	J
R 324	QRE141J-101Y	C RESISTOR	FRONT	
R 325	QRE141J-222Y	C RESISTOR	REAR	
R 331	QRE141J-273Y	C RESISTOR	LEFT	
R 332	QRE141J-823Y	C RESISTOR	LEFT	
R 333	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	U
R 333	QRE141J-821Y	C RESISTOR	FRONT	J
R 334	QRE141J-101Y	C RESISTOR	FRONT	
R 335	QRE141J-222Y	C RESISTOR	FRONT	
R 341	QRE141J-273Y	C RESISTOR	RIGHT	
R 342	QRE141J-823Y	C RESISTOR	RIGHT	
R 343	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	U
R 343	QRE141J-821Y	C RESISTOR	REAR	J
R 344	QRE141J-101Y	C RESISTOR	REAR	
R 345	QRE141J-222Y	C RESISTOR	FRONT	
R 351	QRE141J-273Y	C RESISTOR	LEFT	
R 352	QRE141J-823Y	C RESISTOR	LEFT	
R 353	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	U
R 353	QRE141J-821Y	C RESISTOR	REAR	J
R 354	QRE141J-101Y	C RESISTOR	REAR	
R 355	QRE141J-222Y	C RESISTOR	REAR	
R 701	QRE141J-473Y	C RESISTOR	TAPEIN	
R 702	QRE141J-473Y	C RESISTOR	DETACH	
R 703	QRE141J-332Y	C RESISTOR	KEY2	
R 704	QRE141J-332Y	C RESISTOR	KEY1	
R 705	QRE141J-332Y	C RESISTOR	KEY0	

■ Electrical parts list (Main board)

Block No. 01

△	Item	Parts number	Parts name	Remarks	Area
	R 706	QRE141J-472Y	C RESISTOR	MUTE	
	R 707	QRE141J-473Y	C RESISTOR	DOLBY	
	R 708	QRE141J-472Y	C RESISTOR	FM/AM	
	R 709	QRE141J-473Y	C RESISTOR	SD/ST	
	R 710	QRE141J-473Y	C RESISTOR	MS	
	R 711	QRE141J-473Y	C RESISTOR	F/R	
	R 712	QRE141J-473Y	C RESISTOR	MODE	
	R 713	QRE141J-563Y	C RESISTOR	REEL	
	R 714	QRE141J-473Y	C RESISTOR	STANDBY	
	R 716	QRE141J-473Y	C RESISTOR	SENSE	
	R 717	QRE141J-472Y	C RESISTOR	JBUS.SI	
	R 718	QRE141J-472Y	C RESISTOR	JBUS.SO	
	R 719	QRE141J-472Y	C RESISTOR	JBUS.SCK	
	R 720	QRE141J-472Y	C RESISTOR	JBUS.IO	
	R 721	QRE141J-222Y	C RESISTOR	LCDSO	
	R 722	QRE141J-222Y	C RESISTOR	LCDSCK	
	R 723	QRE141J-222Y	C RESISTOR	LCDCE	
	R 724	QRE141J-332Y	C RESISTOR	EVOL.SO	
	R 725	QRE141J-332Y	C RESISTOR	EVOL.SCK	
	R 727	QRE141J-473Y	C RESISTOR	TEST	
	R 728	QRE141J-222Y	C RESISTOR	SEEK/STOP	
	R 729	QRE141J-222Y	C RESISTOR	MONO	
	R 730	QRE141J-222Y	C RESISTOR	SD/ST	
	R 731	QRE141J-472Y	C RESISTOR	JBUS.INT	
	R 732	QRE141J-472Y	C RESISTOR	REMOCON	
	R 733	QRE141J-103Y	C RESISTOR	LEVEL.METER	
	R 734	QRE141J-103Y	C RESISTOR	S.METER	
	R 735	QRE141J-103Y	C RESISTOR	KEY2	
	R 736	QRE141J-103Y	C RESISTOR	KEY1	
	R 737	QRE141J-103Y	C RESISTOR	KEY0	
	R 738	QRE141J-222Y	C RESISTOR	MEM.DET	
	R 739	QRE141J-222Y	C RESISTOR	DIMMERIN	
	R 741	QRE141J-103Y	C RESISTOR	ENC1	
	R 742	QRE141J-103Y	C RESISTOR	ENC2	
	R 743	QRE141J-222Y	C RESISTOR	DETACH	
	R 746	QRE141J-332Y	C RESISTOR	DIMMEROUT	
	R 747	QRE141J-473Y	C RESISTOR	DIMMEROUT	
	R 748	QRE141J-332Y	C RESISTOR	OPEN	
	R 749	QRE141J-473Y	C RESISTOR	OPEN	
	R 750	QRE141J-243Y	C RESISTOR	REEL	
	R 801	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 802	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 803	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 804	QRE141J-334Y	C RESISTOR	330K 5% 1/4W	
	R 805	QRE141J-334Y	C RESISTOR	330K 5% 1/4W	
	R 806	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 807	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 808	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 809	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 810	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 811	QRE141J-682Y	C RESISTOR	CD-CH LEVEL	
	R 812	QRE141J-242Y	C RESISTOR	CD-CH LEVEL	
	R 813	QRE141J-242Y	C RESISTOR	CD-CH LEVEL	
	R 814	QRE141J-682Y	C RESISTOR	CD-CH LEVEL	
	R 881	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 882	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 901	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 902	QRE141J-682Y	C RESISTOR	6.8K 5% 1/4W	U
	R 902	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	J
	R 903	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	J
	R 903	QRE141J-113Y	C RESISTOR	11K 5% 1/4W	U
	R 904	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 905	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	

△	Item	Parts number	Parts name	Remarks	Area
	R 906	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 907	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 908	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 909	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 976	QRE141J-333Y	C RESISTOR	33K 5% 1/4W	J
	R 976	QRE141J-433Y	C RESISTOR	43K 5% 1/4W	U
	R 977	QRE141J-683Y	C RESISTOR	68K 5% 1/4W	
	R 978	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R 979	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	S 701	QSW0451-001	DETECT SW	DETACH/OPEN	
	S 702	QSW0451-001	DETECT SW	DETACH/OPEN	
	TU 1	QAU0171-001	TUNER		
	X 701	QAX0406-001Z	CRYSTAL		

■ Electrical parts list (Mecha control)

Block No. 02

▲	Item	Parts number	Parts name	Remarks	Area
	C 401	NCB21HK-471X	C CAPACITOR		J
	C 401	NDC21HJ-101X	C CAPACITOR		U
	C 402	NDC21HJ-101X	C CAPACITOR		U
	C 402	NCB21HK-471X	C CAPACITOR		J
	C 403	NCB21HK-471X	C CAPACITOR		J
	C 403	NDC21HJ-101X	C CAPACITOR		U
	C 404	NDC21HJ-101X	C CAPACITOR		U
	C 404	NCB21HK-471X	C CAPACITOR		J
	C 405	NDC21HJ-101X	C CAPACITOR		
	C 406	NDC21HJ-101X	C CAPACITOR		
	C 407	NDC21HJ-101X	C CAPACITOR		
	C 408	NDC21HJ-101X	C CAPACITOR		
	C 409	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 410	QFV61HJ-153Z	TF CAPACITOR	.015MF 5% 50V	
	C 411	QFV61HJ-153Z	TF CAPACITOR	.015MF 5% 50V	
	C 412	NCB21EK-104X	C CAPACITOR		
	C 413	NCB21EK-104X	C CAPACITOR		
	C 414	QERF1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 416	QFV61HJ-104Z	TF CAPACITOR	DOLBY	
	C 417	QFV61HJ-104Z	TF CAPACITOR	DOLBY	
	C 418	NDC21HJ-221X	C CAPACITOR		
	C 419	QERF1HM-474Z	E CAPACITOR	.47MF 20% 50V	
	C 421	NCB21HK-103X	C CAPACITOR		
	C 422	NCB21EK-104X	C CAPACITOR		
	C 423	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 424	NCB21EK-104X	C CAPACITOR		
	C 425	NCB21HK-103X	C CAPACITOR		
	CN401	QGB1214K1-18S	CONNECTOR		
	CN402	VMP3501-001			
	CN403	QGF1219F1-10S			
	D 401	MA3047/H-X			
	D 402	DSK10C-T1	DIODE		
	IC401	CXA2560Q	IC		
	IC402	LB1641	IC		
	Q 402	DTC114EKA-X	TR		
	Q 403	2SB1322/RS/-T	TRANSISTOR		
	R 401	NRS181J-391X	MG RESISTOR		
	R 402	NRSA02J-104X	MG RESISTOR		
	R 403	NRSA02J-104X	MG RESISTOR		
	R 404	NRSA02J-104X	MG RESISTOR		
	R 405	NRSA02J-104X	MG RESISTOR		
	R 406	NRSA02J-181X	MG RESISTOR		
	R 407	NRSA02J-181X	MG RESISTOR		
	R 412	NRSA02J-101X	MG RESISTOR		
	R 413	NRSA02J-183X	MG RESISTOR		
	R 414	NRSA02J-392X	MG RESISTOR		
	R 415	NRSA02J-223X	MG RESISTOR		
	R 416	NRSA02J-125X	MG RESISTOR		J
	R 416	NRSA02J-914X	MG RESISTOR		U
	R 417	NRSA02J-103X	MG RESISTOR		
	R 418	NRSA02J-153X	MG RESISTOR		
	R 422	NRSA02J-332X	MG RESISTOR		
	R 423	NRS181J-473X	MG RESISTOR		
	R 424	NRSA02J-332X	MG RESISTOR		
	R 425	NRS181J-330X	MG RESISTOR		
	R 426	QUY150-050Y	BUS WIRE		
	VR401	QVP0006-333Z	SEMI.V.RESISTOR	DOLBY	
	VR402	QVP0006-333Z	SEMI.V.RESISTOR	DOLBY	

■ Electrical parts list (Front board)

Block No. 03

△	Item	Parts number	Parts name	Remarks	Area
	C 601	NBE20JM-475X	TS E CAPACITOR		
	C 602	NCB21HK-103X	C CAPACITOR		
	C 603	NCS21HJ-221X	C CAPACITOR		
	C 604	NCB21CK-224X	C CAPACITOR		
	C 605	NCB21CK-224X	C CAPACITOR		
	C 606	NBE20JM-475X	TS E CAPACITOR		
	CN601	QNZ0006-001	CAR CONNECTOR		
	D 601	SML-310LT/MN-X	LED		
	D 602	LNJ308G81/1-3/X	LED		
	D 603	LNJ308G81/1-3/X	LED		
	D 604	LNJ308G81/1-3/X	LED		
	D 605	LNJ308G81/1-3/X	LED		
	D 606	LNJ308G81/1-3/X	LED		
	D 607	LNJ308G81/1-3/X	LED		
	D 608	LNJ308G81/1-3/X	LED		
	D 609	LNJ308G81/1-3/X	LED		
	D 610	LNJ308G81/1-3/X	LED		
	D 611	LNJ308G81/1-3/X	LED		
	D 612	LNJ308G81/1-3/X	LED		
	D 613	LNJ308G81/1-3/X	LED		
	D 614	LNJ308G81/1-3/X	LED		
	D 615	LNJ308G81/1-3/X	LED		
	D 616	LNJ308G81/1-3/X	LED		
	D 617	LNJ308G81/1-3/X	LED		
	D 618	LNJ308G81/1-3/X	LED		
	D 619	LNJ308G81/1-3/X	LED		
	D 620	LNJ308G81/1-3/X	LED		
	D 621	LNJ308G81/1-3/X	LED		
	D 622	LNJ308G81/1-3/X	LED		
	D 623	LNJ308G81/1-3/X	LED		
	D 624	LNJ308G81/1-3/X	LED		
	D 625	LNJ308G81/1-3/X	LED		
	D 626	LNJ308G81/1-3/X	LED		
	D 627	LNJ308G81/1-3/X	LED		
	D 641	NSPW310BS/BRS/	LED		
	D 642	NSPW310BS/BRS/	LED		
	D 643	NSPW310BS/BRS/	LED		
	D 651	MA3051/M-X	ZENER DIODE		
	D 652	MA152WK-X	SI DIODE		
	D 653	MA152WA-X	DIODE		
	D 654	MA152WK-X	SI DIODE		
	D 655	MA152WA-X	DIODE		
	D 656	MA152WK-X	SI DIODE		
	D 657	MA3056/M-X	ZENER DIODE		
	EN601	QSW0793-001	ROTARY ENCODER		
	IC601	LC75873NW	IC		
	IC602	RPM6938-SV4	IC		
	Q 641	2SB815/7-X	TRANSISTOR		
	Q 642	UN2211-X	TRANSISTOR		
	R 601	NRSA02J-361X	MG RESISTOR		
	R 602	NRSA02J-331X	MG RESISTOR		
	R 603	NRSA02J-391X	MG RESISTOR		
	R 604	NRSA02J-471X	MG RESISTOR		
	R 605	NRSA02J-561X	MG RESISTOR		
	R 606	NRS181J-361X	MG RESISTOR		
	R 607	NRSA02J-331X	MG RESISTOR		
	R 608	NRSA02J-391X	MG RESISTOR		
	R 609	NRSA02J-471X	MG RESISTOR		
	R 610	NRSA02J-561X	MG RESISTOR		
	R 611	NRSA02J-821X	MG RESISTOR		
	R 612	NRSA02J-361X	MG RESISTOR		
	R 613	NRSA02J-331X	MG RESISTOR		
	R 614	NRSA02J-391X	MG RESISTOR		

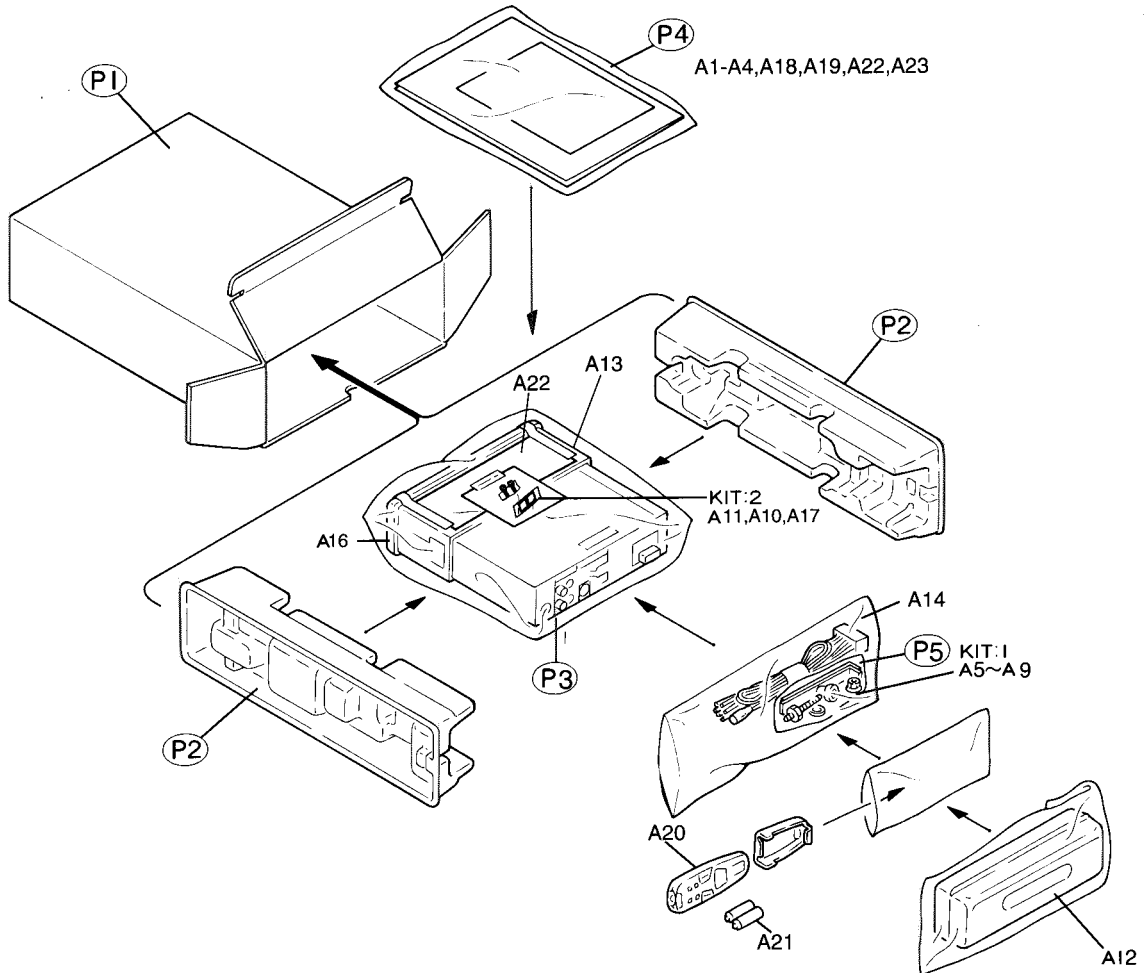
△	Item	Parts number	Parts name	Remarks	Area
	R 615	NRSA02J-471X	MG RESISTOR		
	R 616	NRSA02J-561X	MG RESISTOR		
	R 620	NRS181J-471X	MG RESISTOR		
	R 621	NRS181J-271X	MG RESISTOR		
	R 622	NRS181J-271X	MG RESISTOR		
	R 623	NRS181J-271X	MG RESISTOR		
	R 624	NRS181J-271X	MG RESISTOR		
	R 625	NRS181J-431X	MG RESISTOR		
	R 626	NRS181J-271X	MG RESISTOR		
	R 627	NRS181J-271X	MG RESISTOR		
	R 628	NRS181J-561X	MG RESISTOR		U
	R 628	NRS181J-431X	MG RESISTOR		J
	R 629	NRS181J-561X	MG RESISTOR		
	R 630	NRS181J-271X	MG RESISTOR		
	R 641	NRS181J-431X	MG RESISTOR		J
	R 641	NRS181J-471X	MG RESISTOR		U
	R 642	NRS181J-471X	MG RESISTOR		U
	R 642	NRS181J-431X	MG RESISTOR		J
	R 643	NRS181J-431X	MG RESISTOR		J
	R 643	NRS181J-471X	MG RESISTOR		U
	R 644	NRS181J-471X	MG RESISTOR		U
	R 645	NRSA02J-473X	MG RESISTOR		
	R 646	NRS181J-102X	MG RESISTOR		
	R 650	NRSA02J-101X	MG RESISTOR		
	R 651	NRSA02J-473X	MG RESISTOR		
	R 652	NRSA02J-473X	MG RESISTOR		
	R 653	NRS181J-102X	MG RESISTOR		
	R 654	NRSA02J-221X	MG RESISTOR		
	R 655	NRSA02J-394X	MG RESISTOR		
	R 656	NRSA02J-334X	MG RESISTOR		
	R 657	NRSA02J-103X	MG RESISTOR		
	R 658	NRSA02J-470X	MG RESISTOR		
	R 661	NRSA02J-332X	MG RESISTOR		
	R 662	NRSA02J-332X	MG RESISTOR		
	R 663	NRSA02J-332X	MG RESISTOR		
	R 669	NRSA02J-103X	MG RESISTOR		
	R 670	NRSA02J-103X	MG RESISTOR		
	R 671	NRSA02J-103X	MG RESISTOR		
	S 601	NSW0066-001X	TACT SWITCH		
	S 602	NSW0066-001X	TACT SWITCH		
	S 603	NSW0066-001X	TACT SWITCH		
	S 604	NSW0066-001X	TACT SWITCH		
	S 605	NSW0066-001X	TACT SWITCH		
	S 606	NSW0066-001X	TACT SWITCH		
	S 607	NSW0066-001X	TACT SWITCH		
	S 608	NSW0066-001X	TACT SWITCH		
	S 609	NSW0066-001X	TACT SWITCH		
	S 610	NSW0066-001X	TACT SWITCH		
	S 611	NSW0066-001X	TACT SWITCH		
	S 612	NSW0066-001X	TACT SWITCH		
	S 613	NSW0066-001X	TACT SWITCH		
	S 614	NSW0066-001X	TACT SWITCH		
	S 615	NSW0066-001X	TACT SWITCH		
	S 616	NSW0066-001X	TACT SWITCH		
	S 617	NSW0066-001X	TACT SWITCH		
	S 618	NSW0066-001X	TACT SWITCH		
	S 619	NSW0066-001X	TACT SWITCH		






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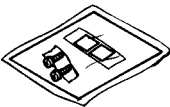
# Packing materials and accessories parts list

Block No. M 4 M M

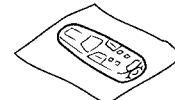
Block No. M 5 M M



SCREW KIT 1	
	A9 : Hook
	A8 : Washer
	A5 : Plug nut
	A6 : Mount bolt
	A7 : Lock nut

SCREW KIT 2	
	A10 : Screw
	A17 : Sheet
	A11 : Sheet

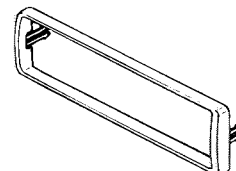
A20 : Remocon



A21 : Battery



A16: Trim Plate



■ Packing parts list

Block No. M3MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	FSPE3004-088	CARTON	1		U
		FSPE3001-173	CARTON	1		J
	P 2	FSPH1014-001	PAPER CUSHION	2		
	P 3	VPE3005-064	POLY BAG	1		
	P 4	QPA01703505P	POLY BAG	1	FOR INST. BOOK	
	P 5	QPA00801205	POLY BAG	1		

■ Accessories list

Block No. M4MM

△	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	FSUN3112-181	INST.BOOK	1	EN,CH,AR	U
		FSUN3112-631	INST.BOOK	1	EN,SP,FR	J
	A 2	FSUN3112-T631	INSTALL MANUAL	1	EN,SP,FR	J
		FSUN3112-T181	INSTALL MANUAL	1	EN,CH,AR	U
	A 3	BT-51018-1	WARRANTY CARD	1		J
	A 4	BT-51020-2	J=REGIST CARD	1		J
	A 5	VKZ4027-202	PLUG NUT	1		
	A 6	VKH4871-001SS	MOUNT BOLT	1		
	A 7	VKZ4328-001	LOCK NUT	1		
	A 8	WNS5000Z	WASHER	1		
	A 9	FSKL4010-002	HOOK	2		
	A 10	VKZ4777-001	MINI SCREW	2	THEFT PREVENTIO	
	A 11	FSYA4002-001	SHEET	1	THEFT PREVENTIO	
	A 12	FSJB3001-00A	HARD CASE	1		J
		FSJB3001-30A	HARD CASE	1		U
	A 13	FSKM2004-202	MOUNTING SLEEVE	1		U
		FSKM2004-002SSF	MOUNTING SLEEVE	1		J
	A 14	QAM0012-003	16P CORD ASS'Y	1		
	A 16	FSJD2034-001	TRIM PLATE	1		J
		FSJD2034-002	TRIM PLATE	1		U
	A 17	FSYH4036-036	SHEET	2		
	A 18	BT-20071B-S	JVC CENTER LIST	1		J
	A 19	BT-522001-4S	WARRANTY CARD	1		J
	A 20	QAL0075-001	REMOCON	1	RM-RK22	
	A 21	R03UPTT/2STS	BATTERY	2		
	A 22	LV41417-001A	CAUTION	1		J
	A 23	LVT0328-001B	TROUBLE SHOOTIN	1		J
	KIT 1	KDGS717K-SCREW1	SCREW PARTS KIT	1	A5-A9	
	KIT 2	KDSX959-SCREW2	SCREW PARTS KIT	1	A17,A10,A11	


KS-FX450

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