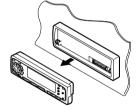


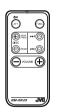


MD/CD RECEIVER RECEPTOR MD/CD RECEPTEUR MD/CD

# KD-MX3000













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.

# **INSTRUCTIONS**

MANUAL DE INSTRUCCIONES MANUEL D'INSTRUCTIONS

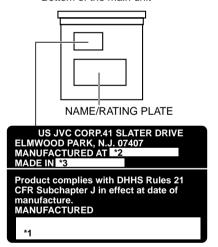
#### **INFORMATION (For U.S.A.)**

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

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

# Identification and Certification labels

Bottom of the main unit



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

#### **Precautions:**

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

#### Notes:

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

#### **CAUTION** on Volume Setting

CDs and MDs produce very little noise compared with other sources. If the volume level is adjusted for the tuner, for example, the speakers may be damaged by the sudden increase in the output level. Therefore, lower the volume before playing a disc and adjust it as required during playback.

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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CONTINUED TO THE NEXT PAGE

#### **BEFORE USE**

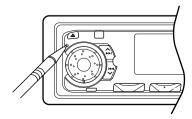
- \* For safety....
- Do not raise the volume level too much, as this will block outside sounds, making driving dangerous.
- · Stop the car before performing any complicated operations.

#### \* 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.

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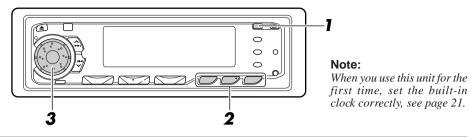
# When this unit malfunctions or does not operate:



Press the reset button on the front panel using a ball-point pen or a similar tool. If this does not work, contact your JVC car audio dealer.

# BASIC OPERATIONS 🖄





1

## Turn on the power.

### 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

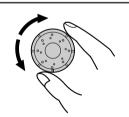


### Select the source.

To operate the tuner, see pages 6 - 9. To operate the CD player, see pages 10 - 13. To operate the MD player, see pages 14 - 17. To operate the CD changer, see pages 35 - 38.

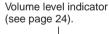
To operate an external component, see page 39.

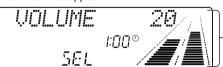
3



## Adjust the volume.

Volume level appears.





4

Adjust the sound as you want (see pages 18 - 20).

## To drop the volume in a moment

Press  $\Phi/I/ATT$  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 **O/I/ATT** for more than 1 second.

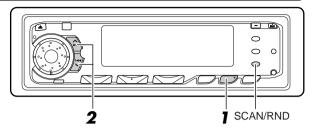


# RADIO BASIC OPERATIONS

# Listening to the radio

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

You need to change the AM/FM channel intervals. See "Changing the AM/FM channel intervals" on page 25.

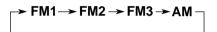


7



Select the band (FM1, FM2, FM3 or AM).

You can select any one of FM1, FM2, and FM3 to listen to an FM station.





Selected band appears.

2



To search stations of higher frequencies.

To search stations of lower frequencies.

# Start searching a station.

When a station is received, searching stops.



**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 ►►I ^ or I◄◄ ∨ untill "MANU" starts flashing on the display. Now you can manually change the frequency while "MANU" is flashing.
- - If you hold down the button, the frequency keeps changing until you release the button.

### Scanning broadcast stations

When you press SCAN/RND (Scan/Random) while listening to the radio, station scanning starts. Each time a broadcast is tuned in, scanning stops for about 5 seconds ("SCAN" appears 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.



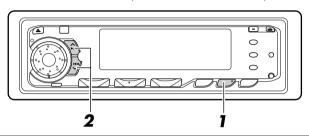
# Storing stations in memory

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

- Automatic preset of stations: SSM (Strong-station Sequential Memory)
- · Manual preset of stations

# **Automatic preset: SSM**

You can preset 6 local stations in each band (FM1, FM2, FM3 and AM).



7



Select the band (FM1, FM2, FM3 or AM) you want to store stations into.

2



Press and hold both buttons for more than 3 seconds.

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

Local stations with the strongest signals are searched and stored automatically in the band you have selected (FM1, FM2, FM3 or AM). These stations are preset in the number buttons — No. 1 (lowest frequency) to No. 6 (highest frequency).

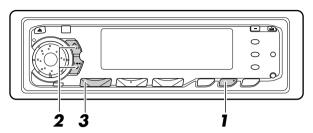
When automatic preset is over, the station stored in number button 1 will be automatically tuned in.



# 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 number 1 of the FM1 band



7



Select the FM1 band.



2

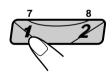


Tune into a station of 88.3 MHz.

See page 6 to tune into a station.



3



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



Selected preset number flashes for a while.

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

#### Notes:

- A previously preset station is erased when a new station is stored in the same preset 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.

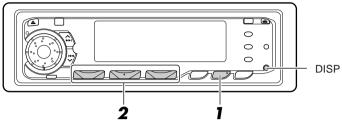


# Tuning into a preset station

You can easily tune into a preset station.

Remember that you must store stations first. If you have not stored them yet, see pages 7

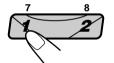
and 8.



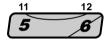


Select the band (FM1, FM2, FM3 or AM) you want.

2







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

# To change the display information while receiving a station

Press DISP. Each time you press the button, station frequency and the station name you have assigned (see page 29) appear alternately on the display.

Station Frequency ←→ Station Name

# **Selecting FM reception sound**

#### When an FM stereo broadcast is hard to receive:

Press MO/RPT (Mono/Repeat) while listening to an FM stereo broadcast. "MONO" appears on the display and the sound you hear becomes monaural but reception will be improved.



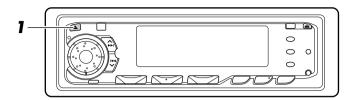
Lights up when receiving an FM broadcast in stereo.

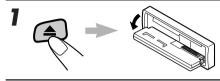
To restore the stereo effect, press the same button again.



# CD OPERATIONS

# Playing a CD





### Open the control panel.

If there is already a CD or an MD inside the unit, it ejects automatically.

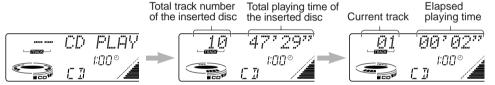
2



### 1. Insert a CD into the loading slot.

The unit turns on, draws the CD and starts playback automatically.

2. Close the control panel by hand.



#### Note:

When a CD is inserted up side down, "PLEASE EJECT" appears on the display. When you open the control panel by pressing  $\triangle$ , the CD automatically ejects.

#### Note on One-Touch Operation:

When a CD is already in the loading slot, pressing MD/CD turns on the unit and starts playback automatically.

### To stop play and eject the CD

#### Press **≜**.

CD play stops, the control panel opens, then the CD automatically ejects from the loading slot. If you change the source to FM/AM, CD changer or external component, the CD play also stops (without ejecting the CD this time).

#### Notes:

- If the ejected disc is not removed for about 15 seconds, the disc is automatically inserted again into the loading slot to protect it from dust. (CD play will not start this time.)
- You can eject the CD even when the unit is turned off.
- You cannot insert a CD and an MD together inside the unit at the same time.

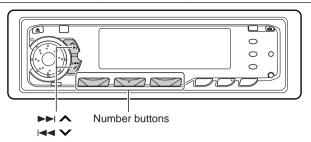
# To show the assigned name while the elapsed playing time appears

Press DISP. Each time you press the button, elapsed playing time and assigned name (see page 29) appear alternately on the display.

See also "Selecting the scroll mode" on page 26.



# Locating a track or a particular portion on a CD



### To fast forward or reverse the track



Press and hold ►►I , while playing a CD, to fast forward the track.

Press and hold ◄< ✓, while playing a CD, to reverse the track.

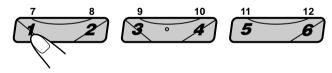
### To go to the next track or the previous track



Press ►►I 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 track is located and played back.

Press ► 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 track is located and played back.

# To go to a particular track directly

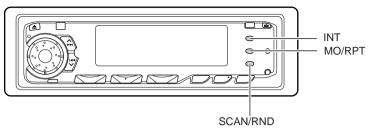


Press the number button corresponding to the track number to start its playback.

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



# Selecting CD playback modes



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

You can play back all tracks on the CD at random.



Each time you press SCAN/RND (Scan/Random) while playing a CD, CD random play mode turns on and off alternately.

When the random mode is turned on, the RND indicator lights up on the display and a track randomly selected starts playing.



To select the next track at random, press ►►I A briefly.

## To play back tracks repeatedly (Repeat Play)

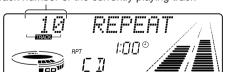
You can play back the current track repeatedly.



Each time you press MO/RPT (Mono/Repeat) while playing a CD, CD repeat play mode turns on and off alternately.

When the repeat mode is turned on, the RPT indicator lights up on the display.

Track number of the currently playing track





# To play back only intros (Intro Scan)



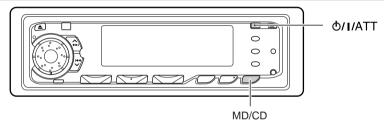
Each time you press INT (Intro) briefly while playing a CD, CD intro scan mode turns on and off alternately.

When the intro scan mode is turned on, "INTRO" appears on the display for 5 seconds and the track number flashes. The first 15 seconds of each track are played sequentially.

Track number of the currently playing track

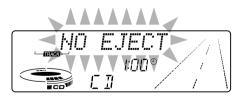


# **Prohibiting CD ejection**



You can prohibit the CD ejection and can "lock" a CD in the loading slot.

While pressing MD/CD, press and hold **6/I/ATT** for more than 2 seconds. "NO EJECT" flashes on the display for about 5 seconds, and the CD is "locked" and cannot be ejected.

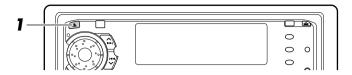


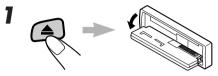
To cancel the prohibition and "unlock" the CD, press and hold  $\Phi/I/ATT$  again for more than 2 seconds, while pressing MD/CD. "EJECT OK" appears on the display, and the CD is "unlocked."



# **MD OPERATIONS**

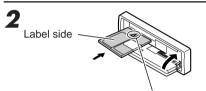
# Playing an MD





### Open the control panel.

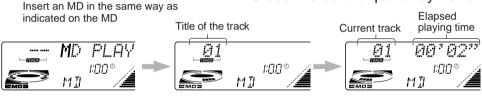
If there is already a CD or an MD inside the unit, it ejects automatically.



# 1. Insert an MD into the loading slot.

The unit turns on, draws the MD and starts playback automatically.

2. Close the control panel by hand.



### Note on One-Touch Operation:

When an MD is already in the loading slot, pressing MD/CD turns on the unit and starts playback automatically.

# To stop play and eject the MD

#### Press .

MD play stops, the control panel opens, then the MD automatically ejects from the loading slot. If you change the source to FM/AM, CD changer or external component, the MD play also stops (without ejecting the MD this time).

#### **Notes**

- If the ejected disc is not removed for about 15 seconds, the disc is automatically inserted again into the loading slot to protect it from dust. (MD play will not start this time.)
- You can eject the MD even when the unit is turned off.
- You cannot insert a CD and an MD together inside the unit at the same time.
- When you insert an MD recorded in monaural, it will be played in monaural. While playing such a
  monaural MD, the elapsed playing time may not be displayed correctly.

### To change the display while playing an MD

Press DISP. Each time you press the button, the display changes to show the following:

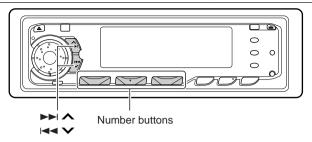
→ Track number and Elapsed playing time → Disc title → Track title

#### Note:

If scroll mode is set to either "AUTO" or "ONCE", the name including more than 12 characters will be scrolled. (See page 26)



# Locating a track or a particular portion on an MD



### To fast forward or reverse the track



Press and hold ►►I , while playing an MD, to fast forward the track.

Press and hold ◄◄ ▼, while playing an MD, to reverse the track.

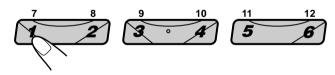
# To go to the next track or the previous track



Press >>I briefly, while playing an MD, to go ahead to the beginning of the next track. Each time you press the button consecutively, the beginning of the next track is located and played back.

Press I◄◀ ➤ briefly, while playing an MD, to go back to the beginning of the current track. Each time you press the button consecutively, the beginning of the previous track is located and played back.

# To go to a particular track directly

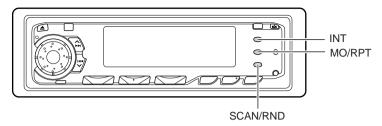


Press the number button corresponding to the track number to start its playback.

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



# Selecting MD playback modes



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

You can play back all tracks on the MD at random.



Each time you press SCAN/RND (Scan/Random) while playing an MD, MD random play mode turns on and off alternately.

When the random mode is turned on, the RND indicator lights up on the display and a track randomly selected starts playing.



## To play back tracks repeatedly (Repeat Play)

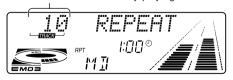
You can play back the current track repeatedly.



Each time you press MO/RPT (Mono/Repeat) while playing an MD, MD repeat play mode turns on and off alternately.

When the repeat mode is turned on, the RPT indicator lights up on the display.

Track number of the currently playing track





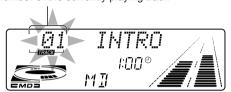
# To play back only intros (Intro Scan)



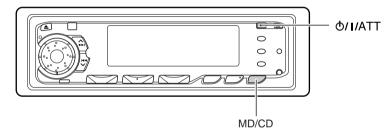
Each time you press INT (Intro) briefly while playing a MD,MD intro scan mode turns on and off alternately.

When the intro scan mode is turned on, "INTRO" appears on the display for 5 seconds and the track number flashes. The first 15 seconds of each track are played sequentially.

Track number of the currently playing track

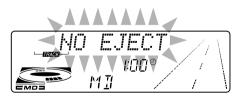


# **Prohibiting MD ejection**



You can prohibit the MD ejection and can "lock" an MD in the loading slot.

While holding MD/CD, press and hold **6/1/ATT** for more than 2 seconds. "NO EJECT" flashes on the display for about 5 seconds, and the MD is "locked" and cannot be ejected.

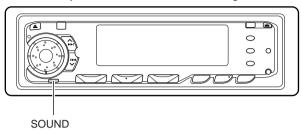


To cancel the prohibition and "unlock" the MD, press and hold  $\Phi/I/ATT$  again for more than 2 seconds, while holding MD/CD. "EJECT OK" appears on the display, and the MD is "unlocked."

# **SOUND ADJUSTMENTS**

# **Selecting preset sound control modes**

You can select a preset sound adjustment suitable to the music genre.





Call up the sound control mode you want.

Each time you press the button, the sound control mode (SCM) changes as follows:

$$ightharpoonup$$
 OFF  $ightharpoonup$  BEAT  $ightharpoonup$  SOFT  $ightharpoonup$  POP  $ightharpoonup$ 

Indication	For:	Preset values			
		Bass	Treble	Loudness	
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	

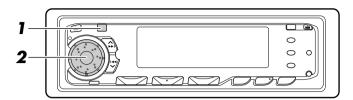
#### Notes:

- You can adjust the preset sound control mode to your preference, and store it in memory. If you want to adjust and store your original sound control mode, see "Storing your own sound adjustments" on page 20.
- To adjust only the bass and treble reinforcement levels to your preference, see "Adjusting the sound" on page 19.



# Adjusting the sound

You can adjust the sound characteristics to your preference.



1

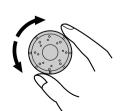


Select the item you want to adjust.

Indication	To do:	Range
BASS	Adjust the bass	-06 (min.) — +06 (max.)
TREBLE	Adjust the treble	-06 (min.) — +06 (max.)
FADER*	Adjust the front and rear speaker balance	R06 (rear only) — F06 (front only)
BALANCE	Adjust the left and right speaker balance	L06 (left only) — R06 (right only)
LOUDNESS	Boost low and high frequencies to produce a well-balanced sound at low volume level.	ON — OFF
VOLUME	Adjust the volume	00 (min.) — 50 (max.)

#### Note:

2



Adjust the level.

#### Note:

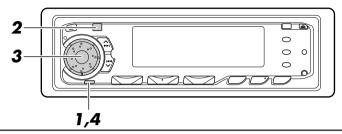
Normally the control dial is used to set the volume. So you do not have to select "VOLUME" to adjust the volume level.

<sup>\*</sup> If you are using a two-speaker system, set the fader level to "00" (center).



# Storing your own sound adjustments

You can adjust the sound control modes (BEAT, SOFT, POP: see page 18) to your preference and store your own adjustments in memory.



7



Call up the sound control mode you want to adjust.

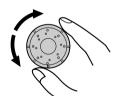
See page 18 for details.

2



Select "BASS", "TREBLE" or "LOUDNESS".

Within 5 seconds



Adjust the bass or treble level or turn the loudness function ON/OFF.

See page 19 for details.

4



Press and hold SOUND until the sound control mode you selected flashes on the display. Your setting is stored in memory.

four setting is stored in memory

5

Repeat the same procedure to store other settings.

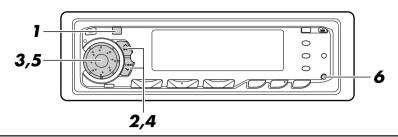
### To reset to the factory settings

Repeat the same procedure and reassign the preset values listed in the table on page 18.

# **OTHER MAIN FUNCTIONS**

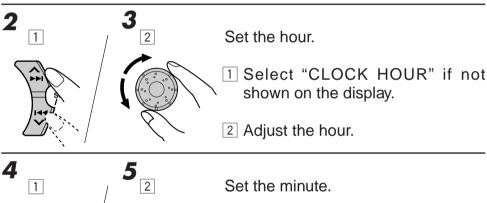


# Setting the clock





Press and hold the button for more than 2 seconds so that "PSM" appears on the lower part of the display.



1 Select "CLOCK MINUTE." 2 Adjust the minute.

6



Start the clock.

#### To check the current clock time while the unit is turned off, press DISP.

The power turns on, the clock time is shown for 5 seconds, then the power turns off.

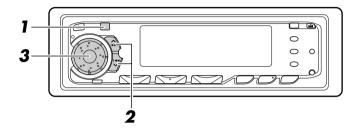
 If the ignition of your car is turned off or set to the accessory-off (ACC OFF) position, you cannot use this function.



# **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



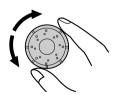
Press and hold the button for more than 2 seconds so that "PSM" appears on the lower part of the display.

2



Select the PSM item you want to adjust (see page 23).

3



Select or adjust the PSM item selected above.



1 SEL	2 Select.	ct. Set.			See page
CLOCK HOUR	Hour adjustment	Back	Advance	4.00	24
CLOCK MINUTE	Minute adjustment	Back	Advance	1:00	21
LEVEL	Level display	NORMAL ↔ PEAK  ↑ OFF ← ↑		NORMAL	24
BEEP	Key-touch tone	OFF	ON	ON	24
DIMMER	Dimmer	, .o. o ,	→ OFF	AUTO	24
AREA	AM/FM channel intervals	US	EU	US	25
P.AMP	Power amplifier switch	OFF	ON	ON	25
CONTRAST	Display contrast	1 – 10		5	26
SCROLL	Name display	ONCE +	→ AUTO FF ←	ONCE	26

• Press SEL (Select) when the setting is complete.



# Selecting the level display

You can select the level display according to your preference. When shipped from the factory, the level indicator on the display shows the audio level setting.

NORMAL: Audio level indicator
 PEAK: Peak level indicator
 OFF: Volume level indicator

- Press and hold SEL (Select) for more than 2 seconds so that "PSM" appears on the lower part of the display.
- 2. Select "LEVEL (with its current setting)" with ▶►I ▲ or I◄◄ ✔.
- Select the desired mode with the control dial. The level display setting changes as follows:

# Turning on or off the key-touch tone

You can deactivate the key-touch tone if you do not want to make it beep when you press a button. When shipped from the factory, the key-touch tone is activated.

- ON: Activates the key-touch tone
- OFF: Deactivates the key-touch tone
- 1. Press and hold SEL (Select) for more than 2 seconds so that "PSM" appears on the lower part of the display.
- 2. Select "BEEP (with its current setting)" with ▶▶I ▲ or I◄◄ ▼.
- Select the desired mode with the control dial.
   The key-touch tone alternates between on and off.

# 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
- Press and hold SEL (Select) for more than 2 seconds so that "PSM" appears on the lower part of the display.
- 2. Select "DIMMER (with its current setting)" with ▶►I ▲ or I◄◄ ▼.
- 3. Select the desired mode with the control dial.

The dimmer mode changes as follows:

#### **Note on Auto Dimmer:**

Auto dimmer of 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."



# Changing the AM/FM channel intervals

When this unit is shipped from the factory, the channel intervals are set to 10 kHz for AM and 200 kHz for FM (US settings).

You will have to change the channel intervals when using this unit in an area other than North America and South America.

- EU: Select this when using this unit in an area other than North and South America. (9 kHz for AM and 50 kHz (for manual tuning) / 100 kHz (for searching) for FM)
- US: Select this when using this unit in North or South America. (10 kHz for AM and 200 kHz for FM)
- Press and hold SEL (Select) for more than 2 seconds so that "PSM" appears on the lower part of the display.
- 2. Select "AREA (with its current setting)" with ▶▶I ▲ or I◄◄ ✔.
- Select the correct channel intervals with the control dial.The channel intervals alternate between EU settings and US settings.

EU ↔ US

# Turning on or off the power amplifier switch

You can switch off the built-in amplifier and send the audio signals only to the external amplifier(s) to get clear sounds and to prevent internal heat buildup. When shipped from the factory, the power amplifier switch is turned on so that built-in amplifier works.

- ON: Select this when not using external power amplifier(s).
- OFF: Select this when using external power amplifier(s).
- 1. Press and hold SEL (Select) for more than 2 seconds so that "PSM" appears on the lower part of the display.
- 2. Select "P.AMP (with its current setting)" with ▶▶I ▲ or I◄◄ ✔.
- Select the desired mode with the control dial.
   The power amplifier switch alternates between on and off.

ON ←→ OFF



# Adjusting the contrast level

You can adjust the display contrast level (among 1 to 10). When shipped from the factory, the display contrast level is at level 5.

- Press and hold SEL (Select) for more than 2 seconds so that "PSM" appears on the lower part of the display.
- 2. Select "CONTRAST (with its current setting)" with ▶►I ▲ or I◄◄ ✔.
- 3. Select the desired level with the control dial.

# Selecting the scroll mode

You can select the scroll mode for the name display and disc information if they consist of more than 12 characters. When shipped from the factory, Auto Scroll mode is set to "ONCE".

- AUTO: Repeats the scroll (5-second intervals in between).
- ONCE: Scrolls only once.
- OFF: Cancels Auto Scroll.
- Press and hold SEL (Select) for more than 2 seconds so that "PSM" appears on the lower part of the display.
- 2. Select "SCROLL (with its current setting)" with ▶▶I ▲ or I◄◄ ✔.
- 3. Select the desired mode with the control dial. The scroll mode changes as follows:

#### Note:

Even if the scroll mode is set to "OFF," you can scroll the display by pressing DISP for more than 1 second.

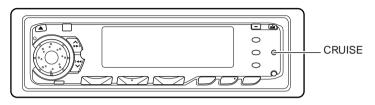


# Controlling the volume automatically (Audio Cruise Mode)

You can select the proper cruise mode for your car.

This unit changes the volume level automatically (at 3 possible levels) based on the driving speed of your car by detecting the alternator's generating frequency (Audio Cruise).

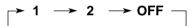
If you want to use this mode, follow the procedures below. When shipped from the factory, this mode is set to "OFF."



### Select Audio Cruise mode.

CRUISE

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



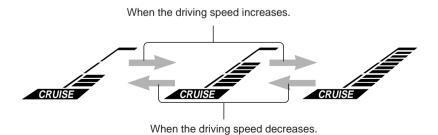
CRUISE1: Select this if your car is relatively quiet.
 CRUISE2: Select this if your car is relatively loud.

The volume increase rate is twice as much as that of the CRUISE 1

settina.

OFF: Cancels Audio Cruise.

When this function is turned on (the CRUISE indicator lights up on the display), the proper volume level is automatically selected among the 3 possible levels according to the driving speed, and the selected level is shown on the display.





#### To adjust the volume increase rate

If you find Audio Cruise increase (or decrease) the volume either too much or too little as the driving speed changes, you can adjust the increase rate by changing the boost level. To change it, follow the procedure below.

- 1 Press CRUISE to select either "CRUISE 1" or "CRUISE 2".
- 2. Press and hold CRUISE for more than 2 seconds so that "BOOST" and the current boost level appear on the lower part of the display.
- 3 Select the desired boost level (among 1 to 15) with the control dial while the current boost level is shown on the display.
  - To increase the volume increase rate, rotate it clockwise.
  - To decrease the volume increase rate, rotate it counterclockwise.

#### If Audio Cruise does not function correctly

You may need to store the idling speed into memory to make Audio Cruise function correctly.

NOTICE that a number of factors, such as electric power steering, wipers, power windows, air conditioner, etc. do generate noises and, as a result, may cause Audio Cruise not to function correctly.

- 1. Start the engine and let it warm up.
- 2. Press CRUISE to select either "CRUISE 1" or "CRUISE 2".
- Press and hold SEL (Select) for more than 2 seconds while pressing CRUISE to store the desired idling speed in memory.

When the setting is complete, the unit automatically checks to see if Audio Cruise functions correctly with this new idling setting. If it does not function correctly, Audio Cruise is canceled automatically and the idling setting becomes invalid.

• If this happens, see the NOTICE above.



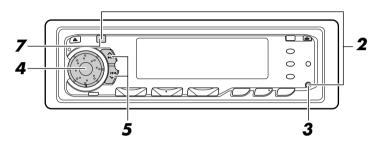
# **Assigning names to the sources**

You can assign names to station frequencies, CDs and the external component connected to the LINE IN plugs. After assigning a name, it will appear on the display when you select the source.

Sources	Maximum number of the characters
Station frequencies	up to 12 characters (up to 50 station frequencies including both FM and AM)
CDs	up to 32 characters (up to 46 discs)
External component	up to 12 characters

#### Note:

you cannot assign a name to an MD.



Select a source or a station frequency you want to assign a name to.

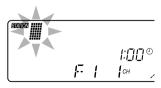
2





Press and hold SEL (Select) for more than 2 seconds while pressing DISP.

When you select a station frequency as the source:

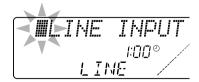


Ex: preset channel 1 of the FM1 band is selected as the station frequency.

When you select the CD as the source:



When you select the external component connected to LINE IN as the source:



CONTINUED TO THE NEXT PAGE

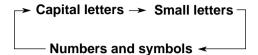


3

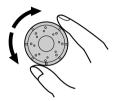


Select the character set you want while "" is flashing.

Each time you press the button, the character set changes as follows:



4



Select a character.

About the available characters, see page 31.

5



Move the cursor to the next (or previous) character position.

6

Repeat steps 3 to 5 until you finish inputting the name.

7



Press the button while the last selected character is flashing.

The input name is stored in memory.

# To erase the input characters

Insert spaces using the same procedure described above.

#### Note:

When you assign a name to the 47th disc, "NAME FULL" appears on the display. (In this case, delete unwanted names before assignment.)



# Available characters

### **Capital letters**

Α	В	С	D	Е	F	G	Η		J
K	Ш	М	Z	0	Р	Q	R	S	Т
U	٧	W	Χ	Υ	Z	Space			-

### **Small letters**

а	b	С	d	е	f	g	h	i	j
k	-	m	n	0	р	q	r	S	t
u	٧	W	Х	У	Z	Space			

**Numbers and symbols** 

0	1	2	3	4	5	6	7	8	9
!	"	#	\$	%	&	,	(	)	*
+	,	ı	•	/	••	•	٧	II	۸
?	@	_	`	Space					



# **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.

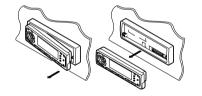
# How to detach the control panel

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

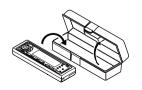
Unlock the control panel.



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

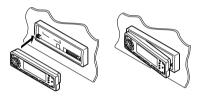


Put the detached control panel into the provided case.



# How to attach the control panel

Insert the left side of the control panel into the groove on the panel holder.



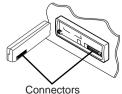
Press the right side of the control panel to fix it to the panel holder.



#### 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.



# **REMOTE OPERATIONS**



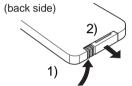
Before using the remote controller:

- 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).



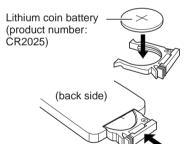
# **Installing the batteries**

When it becomes necessary to bring the remote controller close to the remote sensor for it to work, the battery is running low. At this point, the battery should be replaced. (Battery life is about 1 year with normal use.)



#### 1. Remove the battery case.

- 1) Push in the direction indicated by the arrow with your right hand thumbnail.
- 2) Remove the battery case.



#### 2. Replace the battery.

Put the battery in the case with the + side facing upwards.

### 3. Return the battery case.

Insert again the battery case pushing until you hear a clicking sound.

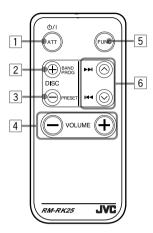
#### **WARNING:**

- Store the batteries in a place which children cannot reach.

  If a child accidentally swallows the battery, immediately consult a doctor.
- Do not recharge, short, disassemble or heat the batteries or dispose of in a fire.
   Doing any of these things may cause the batteries to give off heat, crack or start a fire.
- Do not leave the batteries with other metallic materials.
  - Doing this may cause the batteries to give off heat, crack or start a fire.
- When throwing away or saving the batteries, wrap in tape and insulate; otherwise, it may cause
  the batteries to give off heat, crack or start a fire.
- Do not poke the batteries with tweezers or similar tools.
   Doing this may cause the batteries to give off heat, crack or start a fire.



# Using the remote controller



- Functions the same as the **O/I/ATT** button on the main unit.
- 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 the selected disc starts playing.

- · Does not function as the PROG button.
- Functions as the PRESET button while listening to the radio.
   Each time you press the button, the preset station number increases, and the 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 the selected disc starts playing.

- 4 Functions the same as the control dial on the main unit.
  - Does not function for the preferred setting mode adjustment.
- 5 Select the source.

Each time you press FUNC (function), the source changes.

- Searches stations while listening to the radio.
  - Fast forwards or reverses the track if pressed and held while listening to a CD or an MD.
  - Skips to the beginning of the next tracks or goes back to the beginning of the current (or previous) tracks if pressed briefly while listening to a CD or an MD.

# **CD CHANGER OPERATIONS**



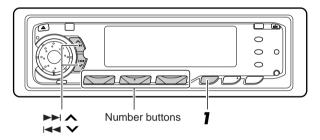
We recommend that you use one of the CH-X series (ex: CH-X1200) with your unit. If you have another type of CD automatic changer, consult your JVC car audio dealer for connections.

 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 8" 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**



7



## Select the CD automatic changer.

Each time you press the button, you can select the CD automatic changer and the external component alternately.

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

Track number\* Elapsed playing time\*

\* When you play a CD Text, the disc title and performer appear. Then the current track number and elapsed playing time appear on the display.

# Disc number Note on One-Touch Operation:

When you press EXT/CH, the power automatically comes on. You do not have to press **\Omega/I/ATT** to turn on the power.



### To fast forward or reverse the track



Press and hold ▶►I ▲, while playing a CD, to fast forward the track.

Press and hold ◄ ✓, while playing a CD, to reverse the track.

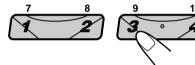
## To go to the next track or the previous track

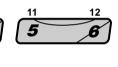


Press >> A briefly, while playing a CD, to go ahead to the beginning of the next track. Each time you press the button consecutively, the beginning of the next track is located and played back.

Press I◀◀ ✔ 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 track 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.

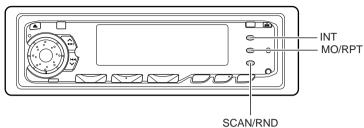
#### Ex. When disc number 3 is selected



Disc number



# Selecting CD playback modes



# To play back tracks at random (Random Play)

SCAN

Each time you press SCAN/RND (Scan/Random) while playing a CD, CD random play mode changes as follows:



Mode	RND Indicator	Plays at random
RANDOM1	Lights	All tracks of the current disc, then the tracks of the next disc, and so on.
RANDOM2	Flashes	All tracks of all discs inserted in the magazine.

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

Each time you press MO/RPT(Mono/Repeat) while playing a CD, CD repeat play mode changes as follows:





Mode	RPT Indicator	Plays repeatedly
REPEAT1	Lights	The current track (or specified track).
REPEAT2	Flashes	All tracks of the current disc (or specified disc).

# To play back only intros (Intro Scan)

**SINT** 

Each time you press INT (Intro) briefly while playing a CD, CD intro scan mode changes as follows:

→ INTRO 1 → INTRO 2 —	٦				
Cancoled -					

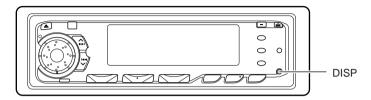
Mode	Indication	Plays the beginnings (15 seconds)
INTRO 1	Track number flashes	Of all tracks on all inserted discs.
INTRO 2	Disc number flashes	Of the first track on each inserted disc.



# Playing the CD Text

The following operations are possible only when a CD changer compatible with CD Text is connected (ex.: CH-X1200).

In a CD Text, some information about the disc (its disc title, performer and track title) is recorded. You can show these disc information on the display.





Select the text display mode while playing a CD.

Each time you press the button, the display changes as follows:

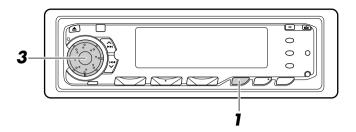


#### Notes:

- The display shows up to 12 characters at one time and scrolls if there are more than 12 characters. See also "Selecting the scroll mode" on page 26.
- When you press DISP while playing a CD you have assigned a name to, you can show it on the display. If you have not assigned a name, "NO NAME" appears on the display.

# EXTERNAL COMPONENT OPERATIONS 📼







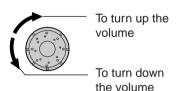
# Select the external component.

Each time you press the button, you can select the CD automatic changer and the external component alternately.

#### Note on One-Touch Operation:

When you press EXT/CH, the power automatically comes on. You do not have to press **O/I/ATT** to turn on the power.

Turn on the connected device and start playing the source.



Adjust the volume.

#### Notes:

- For the external component connection, see the Installation/Connection Manual (separate volume).
- See also "Assigning names to the sources" on page 29 if you want to match the name shown on the display with the name of the connected component.



# **MAINTENANCE**

# **Handling Discs**

# Taking care of CDs

This unit has been designed only to reproduce the CDs bearing the CDs bearing



When removing a CD from its case, press down the center holder of the case and lift the CD out, holding it by the edges.

• Always hold the CD by the edges. Do not touch its recording surface.

When storing a CD into its case, gently insert the CD onto the center holder (with the printed surface facing up).

• Make sure to store CDs into the cases after use.

### To keep CDs clean

A dirty CD may not play correctly. If a CD does become dirty, wipe it with a soft cloth in a straight line from center to edge.

## To play new CDs

New CDs may have some rough spots around the inner and outer edges. If such a CD is used, this unit may reject the CD.

To remove these rough spots, rub the edges with a pencil or ball-point pen, etc.



Center holder



#### **CAUTIONS:**

- Do not insert any CD of unusual shape like a heart or flower; otherwise, it will cause a malfunction.
- Do not expose CDs to direct sunlight or any heat source or place them in a place subject to high temperature and humidity. Do not leave them in a car.
- Do not use any solvent (for example, conventional record cleaner, spray, thinner, benzine, etc.) to clean CDs.

### About mistracking:

Mistracking may result from driving on extremely rough roads. This does not damage the unit and the CD, but will be annoying.

We recommend that you stop CD play while driving on such rough roads.



# Taking care of MDs

Since the disc is accommodated inside a cartridge, it can be handled easily without caring about dust and dirt. However, to maintain the high audio quality for an extended period, use care in the following points.

### Disc storage

Do not place the MD in following places.

- In a place subject to direct sunlight or where the temperature rises, for example in a closed automobile. The disc may be warped or damaged in these places.
- In a bathroom or where the humidity is high. The MD may be rusted in these places.
- On a beach where grit may penetrate through an opening on the cartridge.

#### Periodical maintenance

When the cartridge gets dusty or dirty, wipe it with a soft dry cloth.

### Do not open the shutter

The shutter is usually locked to prevent opening. Do not force it open or the disc may be damaged.



### Moisture condensation

Moisture may condense on the lens inside the unit in the following cases:

- · After starting the heater in the car.
- If it becomes very humid inside the car.

Should this occur, the unit may malfunction. In this case, eject the disc and leave the unit turned on for a few hours until the moisture evaporates.



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

Symptoms	Causes	Remedies
CD cannot be played back.	CD is inserted upside down.	Insert the CD correctly.
CD or MD sound is sometimes interrupted.	You are driving on rough roads.	Stop playing CD or MD while driving on rough roads.
	The disc is scratched.	Change the disc.
	Connections are incorrect.	Check the cords and connections.
Sound cannot be heard from the speakers.	The volume control is turned to the minimum level.	Adjust it to the optimum level.
	Connections are incorrect.	Check the cords and connections.
	"P. AMP (Power Amplifier) " is not set correctly.	Set "P. AMP" correctly. See page 25.
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 loading slot (or in the magazine).	Insert a CD.
	The CD is inserted incorrectly.	Insert it 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.
CD or MD can be neither played back nor ejected.	The unit may function incorrectly.	Press MD/CD and SEL at the same time for more than 2 seconds. ("PLEASE EJECT" appears on the display.) When you open the control panel by pressing ♠, be careful not to drop the disc when it is ejected.



Symptoms	Causes	Remedies
"DISC ERROR" appears on the display.	An error occurs while playing a CD or an MD.	Press ≜, then reinsert the disc.
"BLANK DISC" appears on the display.	You have inserted a blank disc.	Insert a recorded MD.
"NO DISC" appears on the display.	You have pressed MD/CD when there was no CD or MD inside the unit.	Insert a CD or an MD.
"NO NAME" appears on the display.	You have pressed DISP with a disc for which no name was assigned.	Assign a name to the disc.
"HIGH TEMP" appears on the display.	The temperature inside the unit becomes very high.	Switch the source to the tuner and wait until the temperature decreases.
Nothing appears on the display.	The connectors are dirty.	Clean the connectors periodically (once a month).
"NO PRE ADJ." appears on the display.	Preset adjustments have been lost or damaged due to noise interference etc.	Contact the shop where you have purchased the unit or a service center.
The unit does not work at all.	The built-in microcomputer may function incorrectly due to noise, etc.	Press the reset button on the front panel. (See page 4.) Press O/I/ATT and SEL at the same time for more than 2 seconds to reset the unit. (The clock setting and preset stations stored in memory are erased.)

# **SPECIFICATIONS**

#### **AUDIO AMPLIFIER SECTION**

Maximum Power Output:

Front: 40 watts per channel Rear: 40 watts per channel

Continuous Power Output (RMS):

Front: 16 watts per channel into 4  $\Omega$ , 40 to 20,000 Hz at no more than 0.8%

total harmonic distortion.

Rear: 16 watts per channel into 4  $\Omega$ , 40

to 20,000 Hz at no more than 0.8%

total harmonic distortion.

Load Impedance: 4  $\Omega$  (4 to 8  $\Omega$  allowance)

Tone Control Range

Bass: ±10 dB at 100 Hz Treble:±10 dB at 10 kHz

Frequency Response: 40 to 20,000 Hz

Signal-to-Noise Ratio: 70 dB

Line-In Level/Impedance: 1.5 V/20 k $\Omega$  Line-Out Level/Impedance: 2.0 V/20 k $\Omega$  load

(full scale)

Output Impedance: 1 k $\Omega$ 

### **TUNER SECTION**

Frequency Range:

FM:87.5 to 107.9 MHz

(with channel interval set to 200

kHz)

87.5 to 108.0 MHz

(with channel interval set to 50 kHz)

AM:530 to 1,710 kHz

(with channel interval set to 10 kHz)

531 to 1,602 kHz

(with channel interval set to 9 kHz)

#### [FM Tuner]

Usable Sensitivity: 11.3 dBf (1.0  $\mu$ V/75  $\Omega$ )

50 dB Quieting Sensitivity:

16.3 dBf (1.8  $\mu$ V/75  $\Omega$ )

Alternate Channel Selectivity (400 kHz):

65 dB

Frequency Response: 40 to 15,000 Hz

Stereo Separation: 35 dB Capture Ratio: 1.5 dB

### [AM Tuner]

Sensitivity: 20 µV Selectivity: 35 dB

### **CD PLAYER SECTION**

Type: Compact disc player

Signal Detection System: Non-contact optical

pickup (semiconductor laser)

Number of channels: 2 channels (stereo) Frequency Response: 5 to 20,000 Hz

Dynamic Range: 96 dB Signal-to-Noise Ratio: 98 dB

Wow and Flutter: Less than measurable limit

### **MD PLAYER SECTION**

Audio Playing System: MiniDisc digital audio

system

Reading System: Non-contact,

semiconductor laser pickup ( $\lambda$  = 780 nm) Error Correction System: CIRC (Cross

Interleave Reed-Solomon Code)
Sampling Frequency: 44.1 kHz

Audio Compression System: ATRAC

(Adaptive TRansform Acoustic Coding)

Number of Channels: 2

Frequency Response: 5 to 20,000Hz

Dynamic Range: 92dB
Signal-to-Noise Ratio: 95dB
Wow And Flutter: Immeasurable

### **GENERAL**

Power Requirement

Operating Voltage: DC 14.4 volts (11 to 16

volts allowance)

Grounding System: Negative ground

Dimensions (W x H x D)
Installation Size:

182 x 52 x 165 mm

(7 - 3/16" x 2 - 1/16" x 6 - 1/2")

Panel Size: 188 x 58 x 14 mm

(7 - 7/16" x 2 - 5/16" x 5/8")

Mass:  $1.8 \,\mathrm{kg}$  (4.0 lbs) (excluding accessories)

Design and specifications subject to change without notice.

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





