

# JVC



## CD RECEIVER

## KD-AR470/KD-G420

ENGLISH

## RECEPTOR CON CD

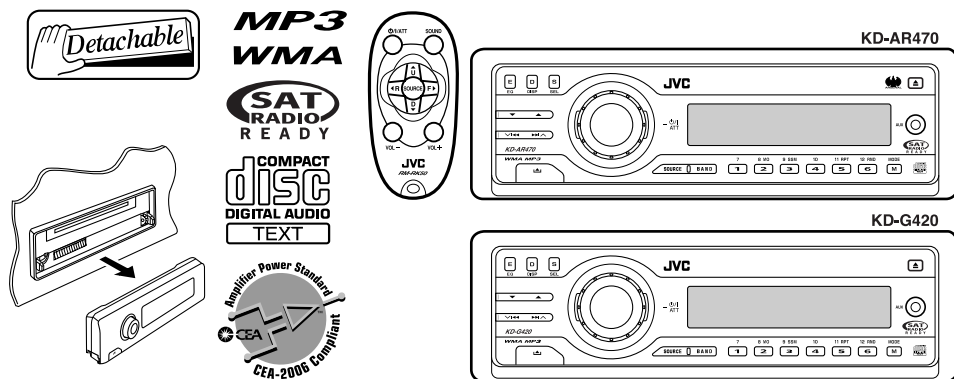
## KD-AR470/KD-G420

ESPAÑOL

## RECEPTEUR CD

## KD-AR470/KD-G420

FRANÇAIS



For canceling the display demonstration, see page 7.

Para cancelar la demostración en pantalla, consulte la página 7.

Pour annuler la démonstration des affichages, référez-vous à la page 7.

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. \_\_\_\_\_

## INSTRUCTIONS

### MANUAL DE INSTRUCCIONES

### MANUEL D'INSTRUCTIONS

GET0336-001A

[J]

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.

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

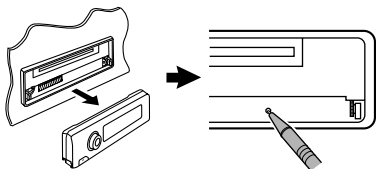
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate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

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

### **IMPORTANT FOR LASER PRODUCTS**

1. CLASS 1 LASER PRODUCT
2. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
3. **CAUTION:** Visible and invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.

### **How to reset your unit**

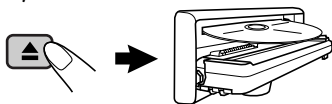


*Your preset adjustments will also be erased.*

### **How to forcibly eject a disc**



“PLEASE” and “EJECT” appear alternately on the display.

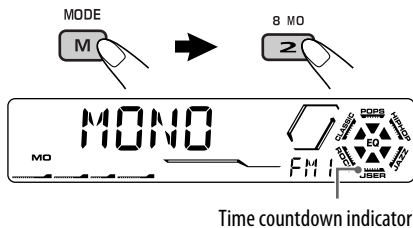


- If this does not work, reset your unit.
- Be careful not to drop the disc when it ejects.

### **How to use the M MODE button**

If you press M MODE, the unit goes into functions mode, then the number buttons and ▲/▼ buttons work as different function buttons.






Ex.: When number button 2 works as MO (monaural) button.




**To use these buttons for their original functions again after pressing M MODE, wait for 5 seconds without pressing any of these buttons until the functions mode is cleared or press M MODE again.**

## How to read this manual


- Button operations are mainly explained with the illustrations in the table below.
- Some related tips and notes are explained in “More about this unit” (see pages 20 – 22).

	Press briefly.
	Press repeatedly.
	Press either one.
	Press and hold until your desired response begins.
	Press and hold both buttons at the same time.

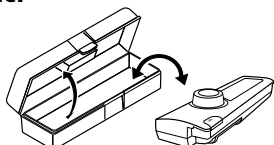
The following marks are used to indicate...

 : Built-in CD player operations.

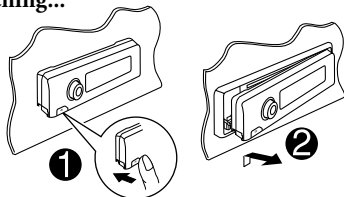
 : External CD changer operations.

 : Indicator displayed for the corresponding operation.

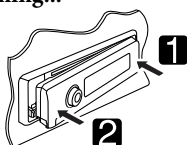
## How to detach/attach the control panel



Detaching...



Attaching...



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### Warning:

If you need to operate the unit while driving, be sure to look ahead carefully or you may be involved in a traffic accident.

### 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...

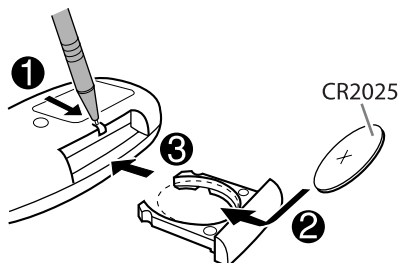
If you have parked the car for a long time in hot or cold weather, wait until the temperature in the car becomes normal before operating the unit.



## Remote controller — RM-RK50

RM-RK50 is supplied for KD-AR470. KD-G420 can be remotely controlled as instructed here (with an optionally purchased remote controller). We recommend you to use RM-RK50 or RM-RK60 with your unit.

### ■ Installing the lithium coin battery (CR2025)

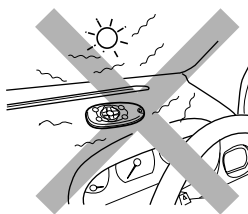


Aim the remote controller directly at the remote sensor on the unit. Make sure there is no obstacle in between.

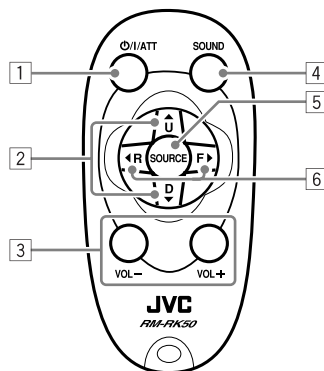
#### Warning:

- Do not install any battery other than CR2025 or its equivalent; otherwise, it may explode.
- Store the battery in a place where children cannot reach to avoid risk of accident.
- To prevent the battery from over-heating, cracking, or starting a fire:
  - Do not recharge, short, disassemble, heat the battery, or dispose of it in a fire.
  - Do not leave the battery with other metallic materials.
  - Do not poke the battery with tweezers or similar tools.
  - Wrap the battery with tape and insulate when throwing away or saving it.

#### Caution:



### Main elements and features



- 1 **⏻/I/ATT** (standby/on/attenuator) button
  - Turns the power on if pressed briefly or attenuates the sound when power is on.
  - Turns the power off if pressed and held.
- 2 **▲ U (up) / D (down) ▼** buttons
  - Changes the FM/AM bands with **▲ U** only.
  - Changes the preset stations with **D ▼** only.
  - Changes the folder of the MP3/WMA discs.
  - While playing an MP3 disc on an MP3-compatible CD changer:
    - Changes the disc if pressed briefly.
    - Changes the folder if pressed and held.
  - While listening to the satellite (SIRIUS or XM) radio:
    - Changes the categories.

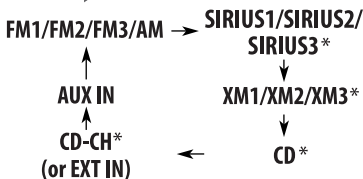
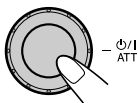
To be continued...

- 3 VOL - / VOL + buttons
  - Adjusts the volume level.
- 4 SOUND button
  - Selects the sound mode (C-EQ: custom equalizer).
- 5 SOURCE button
  - Selects the source.
- 6 ◀ R (reverse) / F (forward) ▶ buttons
  - Searches for stations if pressed briefly.
  - Fast-forwards or reverses the track if pressed and held.
  - Changes the tracks of the disc if pressed briefly.
  - While listening to the satellite radio:
    - Changes the channels if pressed briefly.
    - Changes the channels rapidly if pressed and held.

## Getting started

### Basic operations

- 1 Turn on the power.



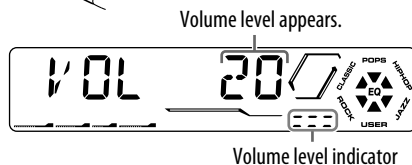
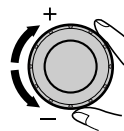
- Select "CD-CH" when using an Apple iPod® or a JVC D. player (see page 16).

iPod is a trademark of Apple Computer, Inc., registered in the U.S. and other countries.

\* You cannot select these sources if they are not ready or not connected.

- 3
  - For FM/AM tuner
  - For SIRIUS Satellite radio
  - For XM Satellite radio

- 4 Adjust the volume.



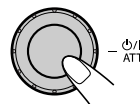
- 5 Adjust the sound as you want. (See pages 11 and 12.)

#### Caution on volume setting:

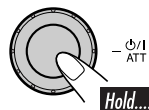
Discs produce very little noise compared with other sources. Lower the volume before playing a disc to avoid damaging the speakers by the sudden increase of the output level.

#### To drop the volume in a moment (ATT)

To restore the sound, press it again.

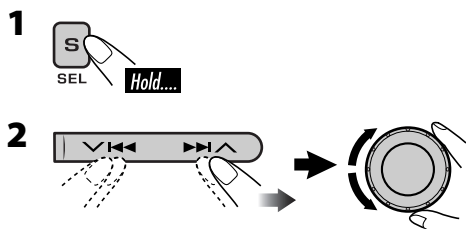


#### To turn off the power



## Basic settings

- See also “General settings — PSM” on pages 12 – 14.



- 1 Canceling the display demonstrations**  
Select “DEMO,” then “DEMO OFF.”
- 2 Setting the clock**  
Select “CLOCK H” (hour), then adjust the hour.  
Select “CLOCK M” (minute), then adjust the minute.

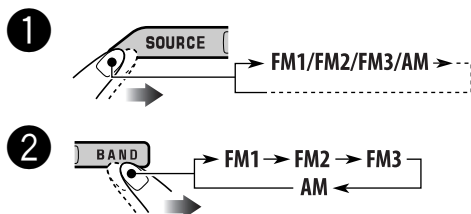
### 3 Finish the procedure.



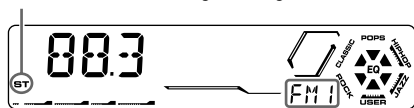
**To check the current clock time when the power is turned off**



## Radio operations

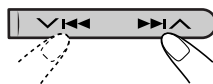


Lights up when receiving an FM stereo broadcast with sufficient signal strength.



Selected band appears.

### 3 Start searching for a station.

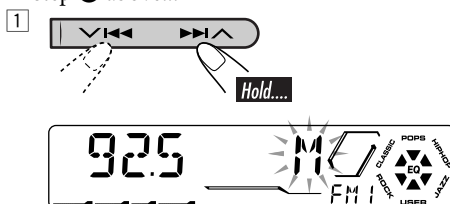


When a station is received, searching stops.

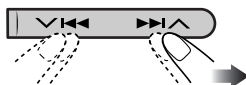
**To stop searching**, press the same button again.

### To tune in to a station manually

In step 3 above...



### 2 Select the desired station frequencies.



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



Lights up when monaural mode is activated.

Reception improves, but stereo effect will be lost.

**To restore the stereo effect**, repeat the same procedure. “MONO OFF” appears and the MO indicator goes off.

## Storing stations in memory

You can preset six stations for each band.

### FM station automatic presetting—SSM (Strong-station Sequential Memory)

- 1 Select the FM band (FM1 – FM3) you want to store into.



- 2 MODE  
M

- 3 9 SSM  
3 Hold....

“SSM” flashes, then disappears when automatic presetting is over.

Local FM stations with the strongest signals are searched and stored automatically in the FM band.

### Manual presetting

Ex.: Storing FM station of 92.5 MHz into preset number 4 of the FM1 band.

- 1 BAND → FM1 → FM2 → FM3  
AM
- 2 VV VV → 92.5
- 3 10  
4 Hold....

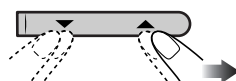
Preset number flashes for a while.

## Listening to a preset station

- 1 BAND → FM1 → FM2 → FM3  
AM
- 2 Select the preset station (1 – 6) you want.



or



### To check the other information while listening to an FM or AM station

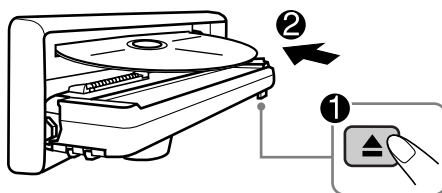


Clock → Station name\* → Frequency →  
(back to the beginning)

\* If no title is assigned to a station, “NO NAME” appears. To assign a title to a station, see page 15.

## Disc operations

### Playing a disc in the unit



All tracks will be played repeatedly until you change the source or eject the disc.

### To stop play and eject the disc

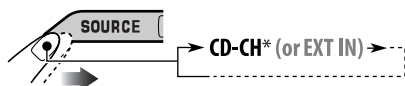


# Playing discs in the CD changer

All discs in the magazine will be played repeatedly until you change the source.

- Ejecting the magazine will also stop playing.

1



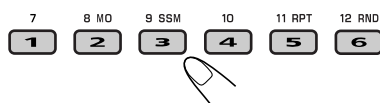
\* If you have changed "EXT IN" setting to "EXT IN" (see page 14), you cannot select the CD changer.

See page 16 when using an iPod or JVC D. player.

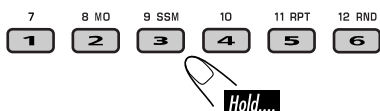
2

## Select a disc.

For disc number from 01 – 06:



For disc number from 07 – 12:



## About MP3 and WMA discs

MP3 and WMA "tracks" (words "file" and "track" are used interchangeably) are recorded in "folders."

## About the CD changer

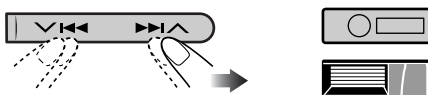
It is recommended to use a JVC MP3-compatible CD changer with your unit.

- You can also connect other CH-X series CD changers (except CH-X99 and CH-X100). These units are not compatible with MP3 discs.
- You cannot play any WMA disc in the CD changer.
- You cannot use the KD-MK series CD changers with this unit.
- Disc text information recorded in the CD Text can be displayed when a JVC CD Text compatible CD changer is connected.
- For connection, see Installation/Connection Manual (separate volume).

## To fast-forward or reverse the track



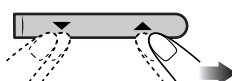
## To go to the next or previous tracks



## To go to the next or previous folders (only for MP3 or WMA discs)

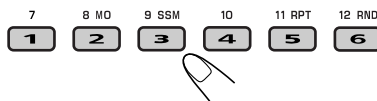
For MP3 discs:

For WMA discs:

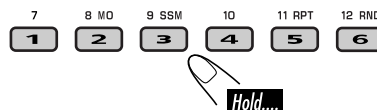


## To locate a particular track (for CD) or folder (for MP3 or WMA discs) directly

To select a number from 01 – 06:

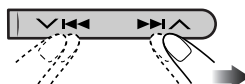


To select a number from 07 – 12:



- To use folder search on MP3/WMA discs, it is required that folders are assigned with 2-digit numbers at the beginning of their folder names—01, 02, 03, and so on.

- To select a particular track in a folder (for MP3 or WMA disc):



## Other main functions

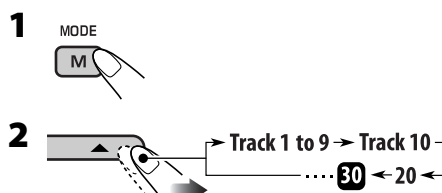
### ■ Skipping a track quickly during play



**Only possible on JVC  
MP3-compatible CD changer**

- For MP3 or WMA disc, you can skip a track within the same folder.

Ex.: To select track 32 while playing a track whose number is a single digit (1 to 9)



Each time you press the button, you can skip 10 tracks.

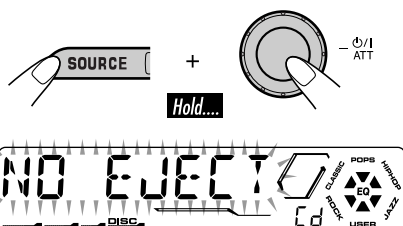
- After the last track, the first track will be selected and vice versa.



### ■ Prohibiting disc ejection



You can lock a disc in the loading slot.



To cancel the prohibition, repeat the same procedure.



## Changing the display information

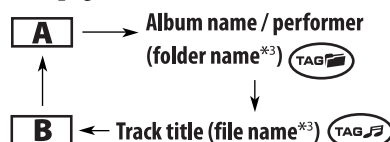


### ■ While playing an audio CD or a CD Text

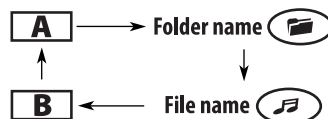


### ■ While playing an MP3 or a WMA\*2 disc

- When "TAG DISP" is set to "TAG ON" (see page 14)



- When "TAG DISP" is set to "TAG OFF"



- A** : Clock with the current track number
- B** : Elapsed playing time with the current track number

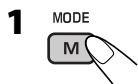
\*1 If the current disc is an audio CD, "NO NAME" appears.

\*2 Only for the built-in CD player.

\*3 If an MP3/WMA file does not have ID3 tags, folder name and file name appear. In this case, the TAG indicator will not light up.

## Selecting the playback modes

You can use only one of the following playback modes at a time.



### 2 Select your desired playback mode.

#### Repeat play



Mode	Plays repeatedly
<b>TRK RPT</b>	: The current track.
<b>FLDR RPT</b> *1	: All tracks of the current folder.
<b>DISC RPT</b> *2	: All tracks of the current disc.
<b>RPT OFF</b>	: Cancels.

#### Random play



Mode	Plays at random
<b>FLDR RND</b> *1	: All tracks of the current folder, then tracks of the next folder and so on.
<b>DISC RND</b>	: All tracks of the current disc.
<b>MAG RND</b> *2	: All tracks of the inserted discs.
<b>RND OFF</b>	: Cancels.

\*1 Only while playing an MP3 or a WMA disc.

\*2 Only while playing discs in the CD changer.

## Sound adjustments

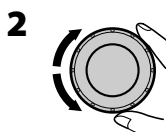
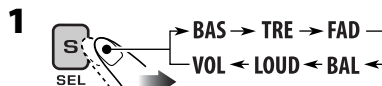
You can select a preset sound mode suitable to the music genre (C-EQ: custom equalizer).



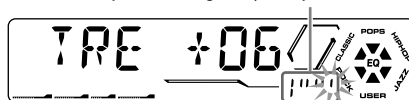
Preset values	BAS (bass)	TRE (treble)	LOUD (loudness)
<b>USER</b> (Flat sound)	00	00	OFF
<b>ROCK</b> (Rock or disco music)	+03	+01	ON
<b>CLASSIC</b> (Classical music)	+01	-02	OFF
<b>POPS</b> (Light music)	+04	+01	OFF
<b>HIP HOP</b> (Funk or rap music)	+02	00	ON
<b>JAZZ</b> (Jazz music)	+02	+03	OFF

## Adjusting the sound

You can adjust the sound characteristics to your preference.



Indication pattern changes as you adjust the level.



Ex.: When "TRE" is selected

To be continued...

## Indication [Range]

### **BAS**\*<sup>1</sup> (bass)

Adjust the bass. [-06 to +06]

### **TRE**\*<sup>1</sup> (treble)

Adjust the treble. [-06 to +06]

### **FAD**\*<sup>2</sup> (fader)

Adjust the front and rear speaker balance.  
[R06 to F06]

### **BAL** (balance)

Adjust the left and right speaker balance.  
[L06 to R06]

### **LOUD**\*<sup>1</sup> (loudness)

Boost low and high frequencies to produce a well-balanced sound at low volume level.  
[LOUD ON or LOUD OFF]

### **VOL** (volume)

Adjust the volume. [00 to 30 or 50\*<sup>3</sup>]

\*<sup>1</sup> When you adjust the bass, treble, or loudness, the adjustment you have made is stored for the currently selected sound mode (C-EQ) including "USER."

\*<sup>2</sup> If you are using a two-speaker system, set the fader level to "00."

\*<sup>3</sup> Depending on the amplifier gain control setting. (See page 14 for details.)

## General settings — PSM

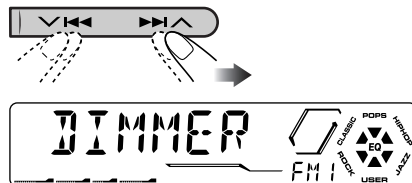
You can change PSM (Preferred Setting Mode) items listed (except "SID") in the table that follows.

**1**



**2**

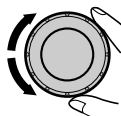
Select a PSM item.



Ex.: When you select "DIMMER"

**3**

Adjust the PSM item selected.



**4**

Repeat steps 2 and 3 to adjust other PSM items if necessary.

**5**

Finish the procedure.



Indications	Selectable settings, [reference page]
<b>DEMO</b> Display demonstration	<b>DEMO ON</b> : [Initial]; Display demonstration will be activated automatically if no operation is done for about 20 seconds, [7]. <b>DEMO OFF</b> : Cancels.
<b>CLOCK H</b> Hour adjustment	1 – 12, [7] [Initial: 1 (1:00)]
<b>CLOCK M</b> Minute adjustment	00 – 59, [7] [Initial: 00 (1:00)]
<b>CLK ADJ</b> *1 Clock adjustment	<b>AUTO</b> : [Initial]; The built-in clock is automatically adjusted using the clock data provided via the satellite radio channel. <b>OFF</b> : Cancels.
<b>T-ZONE</b> *1, *2 Time zone	Select your residential area from one of the following time zone for clock adjustment. <b>EASTERN</b> [Initial] ⇄ <b>ATLANTIC</b> ⇄ <b>NEWFOUND</b> ⇄ <b>ALASKA</b> ⇄ <b>PACIFIC</b> ⇄ <b>MOUNTAIN</b> ⇄ <b>CENTRAL</b> ⇄ (back to the beginning)
<b>DST</b> *1, *2 Daylight savings time	Activates this if your residential area is subject to DST. <b>ON</b> : [Initial]; Activates daylight savings time. <b>OFF</b> : Cancels.
<b>SID</b> *3 SIRIUS ID	The 12-digit SIRIUS identification number scrolls on the display 5 seconds after “SID” is selected, [17]. • Press S SEL to resume the previous display.
<b>LEVEL</b> Audio level meter	<b>ON</b> : [Initial]; Activates the audio level indicator. <b>OFF</b> : Cancels; sound mode indicator is shown.
<b>DIMMER</b> Dimmer	<b>AUTO</b> : [Initial]; Dims the display when you turn on the headlights. <b>ON</b> : Activates dimmer. <b>OFF</b> : Cancels.
<b>TEL</b> *4 Telephone muting	<b>MUTING 1/MUTING 2</b> : Select either one which mutes the sounds while using the cellular phone. <b>OFF</b> : [Initial]; Cancels.

\*1 Displayed only when SIRIUS Satellite radio or XM Satellite radio is connected.

\*2 Displayed only when “CLK ADJ” is set to “AUTO.”

\*3 Displayed only when SIRIUS Satellite radio is connected.

\*4 Only for KD-AR470.

Indications	Selectable settings, [reference page]
<b>SCROLL</b> *1 Scroll	<b>ONCE</b> : [Initial]; Scrolls the disc information once. <b>AUTO</b> : Repeats scrolling (5-second intervals in between). <b>OFF</b> : Cancels. • Pressing D DISP for more than one second can scroll the display regardless of the setting.
<b>EXT IN</b> *2 External input	<b>CHANGER</b> : [Initial]; To use a JVC CD changer, [9], an Apple iPod or a JVC D. player, [16], a JVC compatible satellite (SIRIUS/XM) tuner, [17]. <b>EXT IN</b> : To use any other component than the above, [16].
<b>AUX ADJ</b> Auxiliary input level adjustment	<b>A.ADJ 00 – A.ADJ 05</b> : Adjust the auxiliary input level accordingly, to avoid the sudden increase of the output level when changing the source from the external component connected to the AUX input jack on the control panel. <i>[Initial: A.ADJ 00]</i>
<b>TAG DISP</b> Tag display	<b>TAG ON</b> : [Initial]; Shows the ID3 tag while playing MP3/WMA tracks, [10]. <b>TAG OFF</b> : Cancels.
<b>AMP GAIN</b> Amplifier gain control	You can change the maximum volume level of this unit. <b>LOW PWR</b> : VOL 00 – VOL 30 (Select this if the maximum power of the speaker is less than 50 W to prevent them from damaging the speaker.) <b>HIGH PWR</b> : [Initial]; VOL 00 – VOL 50
<b>AREA</b> Tuner channel interval	<b>AREA US</b> : [Initial]; Select this when using the unit in North or South America, except for Middle South America. (FM: 200 kHz; AM: 10 kHz) <b>AREA EU</b> : Select this when using the unit in any other area than North, Middle South, and South America. (FM: 50 kHz—manual tuning, 100 kHz—auto search; AM: 9 kHz) <b>AREA SA</b> : Select this when using the unit in Middle South America. (FM: 100 kHz; AM: 10 kHz)

\*1 Some characters or symbols will not be shown correctly (or will be blanked) on the display.

\*2 Displayed only when one of the following sources is selected—FM, AM, CD, or AUX IN.

# Title assignment

You can assign titles to station frequencies and CDs (both in this unit and in the CD changer).

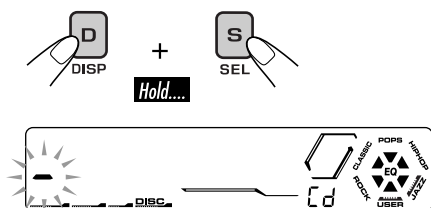
Sources	Maximum number of characters
FM/AM tuner	Up to 8 characters (up to 30 station frequencies including both FM and AM)
CDs/CD-CH	Up to 32 characters (up to 30 discs)

- You cannot assign a title to a CD Text or an MP3/WMA disc.

## 1 Select the sources.

- For FM/AM tuner: Tune into a station.
- For a CD in this unit: Insert a CD.
- For CDs in the CD changer: Select "CD-CH," then select a disc number.

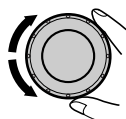
## 2 Enter the title assignment mode.



Ex.: When you select "CD" as the source

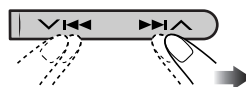
## 3 Assign a title.

### 1 Select a character.



A	B	C	D	E	F	G	H	I	J	K	L	M	N
O	P	Q	R	S	T	U	V	W	X	Y	Z	0	1
2	3	4	5	6	7	8	9	-	/	<	>	space	

### 2 Move to the next (or previous) character position.



### 3 Repeat steps 1 and 2 until you finish entering the title.

## 4 Finish the procedure.



## To erase the entire title

In step 2 on the left...



This unit is ready for operating an Apple iPod® or a JVC D. player from the control panel.

- For details, refer also to the manual supplied with the interface adapter for iPod®—KS-PD100 or D. player—KS-PD500.

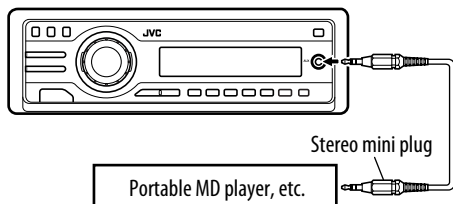
## External component operations

You can connect an external component to...

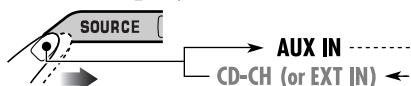
- CD changer jack on the rear using:
  - **Line Input Adapter**—KS-U57 (not supplied) or **AUX Input Adapter**—KS-U58 (not supplied) for any other components (except iPod and D. player).
  - **Interface adapter for iPod®**—KS-PD100 (not supplied) for controlling iPod.
  - **D. player interface adapter**—KS-PD500 (not supplied) for controlling D. player.
- AUX (auxiliary) input jack on the control panel.

For connection, see Installation/Connection Manual (separate volume).

### Connecting an external component to the AUX input jack

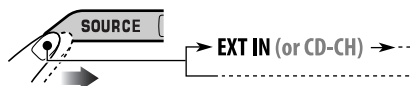


- 1 For selecting the external component connected to...
  - **AUX input jack**

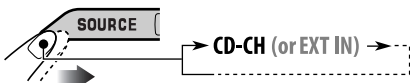


- **CD changer jack on the rear using KS-U57 or KS-U58**

If "EXT IN" does not appear, see page 14 and select the external input ("EXT IN").

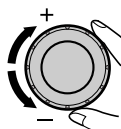


- **CD changer jack on the rear using interface adapter for iPod—KS-PD100 or for D. player—KS-PD500**



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

- 3 Adjust the volume.



- 4 Adjust the sound as you want. (See pages 11 and 12.)

### To check the other information while listening to an external component



Clock ↔ AUX IN, EXT IN, or CD-CH\*

\* See "While playing an MP3 or WMA disc" on page 10 for details.

# Satellite radio operations

This unit is Satellite (SAT) Radio Ready—compatible with both SIRIUS Satellite radio and XM Satellite radio.

Before operating your satellite radio:

- For connection, see Installation/Connection Manual (separate volume).
- Refer also to the Instructions supplied with your SIRIUS Satellite radio or XM Satellite radio.
- “SIRIUS” and the SIRIUS dog logo are registered trademarks of SIRIUS Satellite Radio Inc.
- XM and its corresponding logos are registered trademarks of XM Satellite Radio Inc.
- “SAT Radio,” the SAT Radio logo and all related marks are trademarks of SIRIUS Satellite Radio Inc., and XM Satellite Radio, Inc.

## Listening to the satellite radio

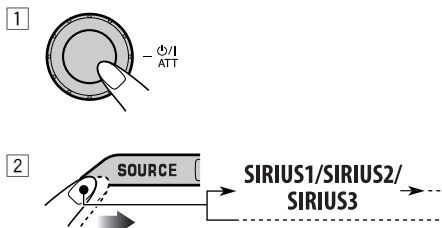
Connect either one of the following (separately purchased) to the CD changer jack on the rear of this unit.

- **JVC SIRIUS radio DLP**—Down Link Processor, for listening to the SIRIUS Satellite radio.
- **XMDirect™ Universal Tuner Box using a JVC Smart Digital Adapter**—XMDJVC100 (not supplied), for listening to the XM Satellite radio.

### GCI (Global Control Information) update:

- If channels are updated after subscription, updating starts automatically. “UPDATING” flashes and no sound can be heard.
- Update takes a few minutes to complete.
- During update, you cannot operate your satellite radio.

## Activate your SIRIUS subscription after connection:



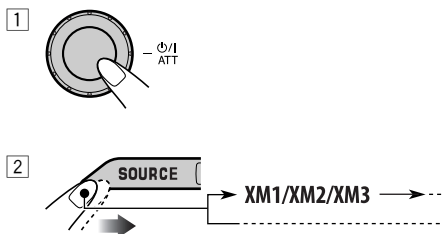
JVC DLP starts updating all the SIRIUS channels.

Once completed, JVC DLP tunes in to the preset channel, CH184.

- 3 **Check your SIRIUS ID, see page 13.**
- 4 **Contact SIRIUS on the internet at <<http://activate.siriusradio.com/>> to activate your subscription, or you can call SIRIUS toll-free at 1-888-539-SIRIUS (7474).**  
“SUB UPDT PRESS ANY KEY” scrolls on the display once subscription has been completed.

## Activate your XM subscription after connection:

- Only Channel 0, 1, and 247 are available before activation.



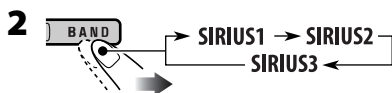
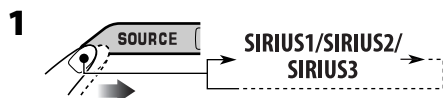
XMDirect™ Universal Tuner Box starts updating all the XM channels. “Channel 1” is tuned in automatically.

To be continued...

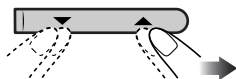
- 3 Check your XM Satellite radio ID labelled on the casing of the XMDirect™ Universal Tuner Box, or tune into “Channel 0” (see page 19).

- 4 Contact XM Satellite radio on the internet at <<http://xmradio.com/activation/>> to activate your subscription, or you can call 1-800-XM-RADIO (1-800-967-2346). Once completed, the unit tunes in to one of the available channels (Channel 4 or higher).

## Listening to the SIRIUS Satellite radio



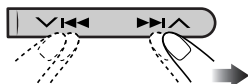
- 3 Select a category.



You can tune in to all the channels of every category by selecting “ALL.”

Selecting a particular category (SPORTS, ENTERTAINMENT, etc.) allows you to enjoy only the channels from the selected category.

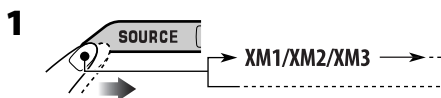
- 4 Select a channel for listening.



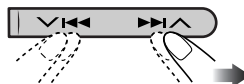
Holding the button changes the channels rapidly.

- When changing the category or channel, invalid and unsubscribed channels are skipped.

## Listening to the XM Satellite radio



- 3 Select a channel for listening.



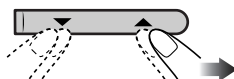
Holding the button changes the channels rapidly.

## Category/channel search

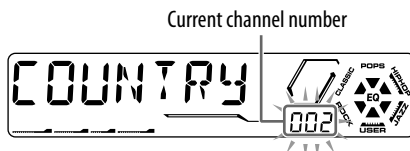
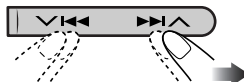
You can search for programs by category (Category Search) or channel number (Channel Search).

- In Category Search,** you can tune in to the channels of the selected category. Category Search begins from the currently selected channel. The selected channel number flashes on the display.
- In Channel Search,** you can tune in to all channels (including non-categorised channels).

- 1 Select a category (Category Search).



- 2 Select a channel for listening.



Ex.: When you select “COUNTRY” for Category Search

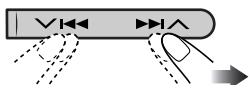
If no operation is done for about 15 seconds, Category Search is canceled.

In Channel Search, channel name and channel number appear on the display during search.

- While searching, invalid and unsubscribed channels are skipped.

## Checking the XM Satellite radio ID

While selecting “XM1,” “XM2,” or “XM3,” select “Channel 0.”



The display alternately shows “RADIO ID” and the 8-digit (alphanumeric) ID number.

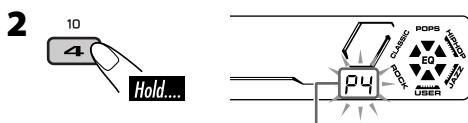
To cancel the ID number display, select any channel other than “Channel 0.”

## Storing channels in memory

You can preset six channels for each band.

Ex.: Storing a channel into preset number 4.

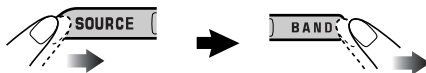
**1** Tune in to a channel you want.



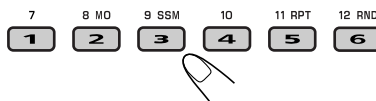
Preset number flashes for a while.

## Listening to a preset channel

**1** Select either SIRIUS Satellite radio or XM Satellite radio.



**2** Select the preset channel (1 – 6) you want.



## To change the display information while listening to a channel



Clock → Category name → Channel name → Artist name → Composer name\* → Song/program name/title → (back to the beginning)

\* Only for SIRIUS Satellite radio.

## More about this unit

### Basic operations

#### Turning on the power

- By pressing SOURCE on the unit, you can also turn on the power. If the source is ready, playback also starts.

#### Turning off the power

- If you turn off the power while listening to a disc, disc play will start from where playback has been stopped previously, next time you turn on the power.

### Selecting the sources

- When no disc is loaded in the unit, “CD” cannot be selected.
- “SIRIUS,” “XM,” or “CD-CH” cannot be selected when the target component is not connected.

### Tuner operations

#### Storing stations in memory

- During SSM search...
  - All previously stored stations are erased and stations are stored newly.
  - Received stations are preset in No. 1 (lowest frequency) to No. 6 (highest frequency).
  - When SSM is over, the station stored in No. 1 will be automatically tuned in.
- When storing a station manually, a previously preset station is erased when a new station is stored in the same preset number.

### Disc operations


#### Caution for DualDisc playback

- The Non-DVD side of a “DualDisc” does not comply with the “Compact Disc Digital Audio” standard. Therefore, the use of Non-DVD side of a DualDisc on this product may not be recommended.

### General

- This unit has been designed to reproduce CDs/CD Texts, and CD-Rs (Recordable)/CD-RWs (Rewritable) in audio CD (CD-DA), MP3 and WMA formats.
- When a disc has been loaded, selecting “CD” for the playback source starts disc play.

### Inserting a disc

- When a disc is inserted upside down, “PLEASE” and “EJECT” appear alternately on the display. Press  to eject the disc.
- Do not insert 8 cm discs (single CD) and unusual shape discs (heart, flower, etc.) into the loading slot.

### Playing a disc

- While fast-forwarding or reversing on an MP3 or WMA disc, you can only hear intermittent sounds.

### Playing a CD-R or CD-RW

- Use only “finalized” CD-Rs or CD-RWs.
- This unit can play back only the files of the same type which is first detected if a disc includes both audio CD (CD-DA) files and MP3/WMA files.
- This unit can play back multi-session discs; however, unclosed sessions will be skipped while playing.
- Some CD-Rs or CD-RWs may not play back on this unit because of their disc characteristics, and for the following causes:
  - Discs are dirty or scratched.
  - Moisture condensation occurs on the lens inside the unit.
  - The pickup lens inside the unit is dirty.
  - CD-R/CD-RW on which the files are written with “Packet Write” method.
  - There are improper recording conditions (missing data, etc.) or media conditions (stain, scratch, warp, etc.).
- CD-RWs may require a longer readout time since the reflectance of CD-RWs is lower than that of regular CDs.

- Do not use the following CD-Rs or CD-RWs:
  - Discs with stickers, labels, or protective seal stuck to the surface.
  - Discs on which labels can be directly printed by an ink jet printer.
 Using these discs under high temperatures or high humidities may cause malfunctions or damages to the unit.

### **Playing an MP3/WMA disc**

- This unit can play back MP3/WMA files with the extension code <.mp3> or <.wma> (regardless of the letter case—upper/lower).
  - This unit can show the names of albums, artists (performer), and ID3 Tag (Version 1.0, 1.1, 2.2, 2.3, or 2.4) for MP3 files and for WMA files.
  - This unit can display only one-byte characters. No other characters can be correctly displayed.
  - This unit can play back MP3/WMA files meeting the conditions below:
    - Bit rate: 8 kbps — 320 kbps
    - Sampling frequency:
      - 48 kHz, 44.1 kHz, 32 kHz (for MPEG-1)
      - 24 kHz, 22.05 kHz, 16 kHz (for MPEG-2)
    - Disc format: ISO 9660 Level 1/ Level 2, Romeo, Joliet, Windows long file name
  - The maximum number of characters for file/folder names vary among the disc format used (includes 4 extension characters—<.mp3> or <.wma>).
    - ISO 9660 Level 1: up to 12 characters
    - ISO 9660 Level 2: up to 31 characters
    - Romeo\*: up to 128 (72) characters
    - Joliet\*: up to 64 (36) characters
    - Windows long file name\*: up to 128 (72) characters
- \* The parenthetic figure is the maximum number of characters for file/folder names in case the total number of files and folders is 313 or more.*
- This unit can play back the files recorded in VBR (variable bit rate).  
The files recorded in VBR have a discrepancy in elapsed time display, and do not show the actual elapsed time. Especially, after performing the search function, this difference becomes noticeable.

- This unit can recognize the total of 512 files, of 200 folders, and of 8 hierarchies.
- This unit cannot play back the following files:
  - MP3 files encoded with MP3i and MP3 PRO format.
  - MP3 files encoded in an unappropriated format.
  - MP3 files encoded with Layer 1/2.
  - WMA files encoded with lossless, professional, and voice format.
  - WMA files which are not based upon Windows Media® Audio.
  - WMA files copy-protected with DRM.
  - Files which have the data such as WAVE, ATRAC3, etc.
- The search function works but search speed is not constant.

### **Changing the source**

- If you change the source, playback also stops (without ejecting the disc).  
Next time you select “CD” for the playback source, disc play starts from where it has been stopped previously.

### **Ejecting a disc**

- If the ejected disc is not removed within 15 seconds, the disc is automatically inserted again into the loading slot to protect it from dust. (Disc will not play this time.)

### **General settings—PSM**

- If you change the “AMP GAIN” setting from “HIGH PWR” to “LOW PWR” while the volume level is set higher than “VOL 30,” the unit automatically changes the volume level to “VOL 30.”

### **Other main functions**

- If you try to assign a title to a 31st disc or to a 31st station frequency, “NAMEFULL” flashes on the display. Delete unwanted titles before assignment.
- Titles assigned to discs in the CD changer can also be shown if you play back the disc from the unit.

*To be continued....*

## Satellite radio operations

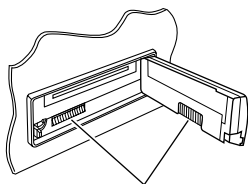
- You can also connect the JVC SIRIUS radio PnP (Plug and Play), using the JVC SIRIUS radio adapter, KS-U100K (not supplied) to the CD changer jack on the rear. By turning on/off the power of the unit, you can turn on/off the JVC PnP. However, you cannot control it from this unit.
- To know more about SIRIUS Satellite radio or to sign up, visit «<http://www.sirius.com>».
- For the latest channel listings and programming information, or to sign up for XM Satellite radio, visit «<http://www.xmradio.com>».

## Maintenance

### How to clean the connectors

Frequent detachment will deteriorate the connectors.

To minimize this possibility, periodically wipe the connectors with a cotton swab or cloth moistened with alcohol, being careful not to damage the connectors.



Connector

### Moisture condensation

Moisture may condense on the lens inside the CD player in the following cases:

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

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

## How to handle discs

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

Center holder



- Always hold the disc by the edges. Do not touch its recording surface.

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

- Make sure to store discs into the cases after use.

### To keep discs clean

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



- Do not use any solvent (for example, conventional record cleaner, spray, thinner, benzene, etc.) to clean discs.

### To play new discs

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



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

### Do not use the following discs:

Warped disc



Sticker



Sticker residue

Disc



Stick-on label

# Troubleshooting

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

	Symptoms	Remedies/Causes
General	<ul style="list-style-type: none"> <li>Sound cannot be heard from the speakers.</li> </ul>	<ul style="list-style-type: none"> <li>Adjust the volume to the optimum level.</li> <li>Check the cords and connections.</li> </ul>
	<ul style="list-style-type: none"> <li>The unit does not work at all.</li> </ul>	Reset the unit (see page 2).
FM/AM	<ul style="list-style-type: none"> <li>SSM automatic presetting does not work.</li> </ul>	Store stations manually.
	<ul style="list-style-type: none"> <li>Static noise while listening to the radio.</li> </ul>	Connect the antenna firmly.
Disc playback	<ul style="list-style-type: none"> <li>Disc cannot be played back.</li> </ul>	Insert the disc correctly.
	<ul style="list-style-type: none"> <li>CD-R/CD-RW cannot be played back.</li> <li>Tracks on the CD-R/CD-RW cannot be skipped.</li> </ul>	<ul style="list-style-type: none"> <li>Insert a finalized CD-R/CD-RW.</li> <li>Finalize the CD-R/CD-RW with the component which you used for recording.</li> </ul>
	<ul style="list-style-type: none"> <li>Disc can be neither played back nor ejected.</li> </ul>	<ul style="list-style-type: none"> <li>Unlock the disc (see page 10).</li> <li>Eject the disc forcibly (see page 2).</li> </ul>
	<ul style="list-style-type: none"> <li>Disc sound is sometimes interrupted.</li> </ul>	<ul style="list-style-type: none"> <li>Stop playback while driving on rough roads.</li> <li>Change the disc.</li> <li>Check the cords and connections.</li> </ul>
MP3/WMA playback	<ul style="list-style-type: none"> <li>Disc cannot be played back.</li> </ul>	<ul style="list-style-type: none"> <li>Use a disc with MP3/WMA tracks recorded in the format compliant with ISO 9660 Level 1, Level 2, Romeo, or Joliet.</li> <li>Add the extension code &lt;.mp3&gt; or &lt;.wma&gt; to the file names.</li> </ul>
	<ul style="list-style-type: none"> <li>Noise is generated.</li> </ul>	Skip to another track or change the disc. (Do not add the extension code <.mp3> or <.wma> to non-MP3 or WMA tracks.)
	<ul style="list-style-type: none"> <li>A longer readout time is required ("CHECK" keeps flashing on the display).</li> </ul>	Do not use too many hierarchies and folders.
	<ul style="list-style-type: none"> <li>Tracks do not play back in the order you have intended them to play.</li> </ul>	Playback order is determined when the files are recorded.
	<ul style="list-style-type: none"> <li>Elapsed playing time is not correct.</li> </ul>	This sometimes occurs during play. This is caused by how the tracks are recorded on the disc.
	<ul style="list-style-type: none"> <li>"NO FILES" appears on the display.</li> </ul>	Insert a disc that contains MP3/WMA tracks.
	<ul style="list-style-type: none"> <li>Correct characters are not displayed (e.g. album name).</li> </ul>	This unit can only display alphabets (upper case), numbers, and a limited number of symbols.

To be continued...

	Symptoms	Remedies/Causes
CD changer	• “NO DISC” appears on the display.	Insert a disc into the magazine.
	• “NO MAG” appears on the display.	Insert the magazine.
	• “RESET 8” appears on the display.	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.
	• The CD changer does not work at all.	Reset the unit (see page 2).
Satellite radio	• “CALL 1-888-539-SIRIUS TO SUBSCRIBE” scrolls on the display while listening to the SIRIUS Satellite radio.	Starts subscribing SIRIUS Satellite radio (see page 17).
	• No sound can be heard. “UPDATING” appears on the display.	The unit is updating the channel information and it takes a few minutes to complete.
	• Either “NO SIGNAL” scrolls or “NO SIGNAL” appears on the display.	Move to an area where signals are stronger.
	• Either “NO ANTENNA” scrolls or “ANTENNA” appears on the display.	Connect the antenna firmly.
	• “NO CH” appears on the display for about 5 seconds, then returns to the previous display while listening to the SIRIUS Satellite radio.	No broadcast on the selected channel. Select another channel or continue listening to the previous channel.
	• “NO (information)*” scrolls on the display while listening to the SIRIUS Satellite radio. • “---” appears on the display while listening to the XM Satellite radio.	No text information for the selected channel.
	• “---” appears on the display for about 2 seconds, then returns to the previous channel while listening to the XM Satellite radio.	Selected channel is no longer available or unauthorized. Select another channel or continue listening to the previous channel.
	• “OFF AIR” appears on the display while listening to the XM Satellite radio.	Selected channel is not broadcasting at this time. Select another channel or continue listening to the previous channel.
	• “LOADING” appears on the display while listening to the XM Satellite radio.	The unit is loading the channel information and audio. Text information are temporary unavailable.
	• “RESET 8” appears on the display. • Satellite radio does not work at all.	Reconnect this unit and the satellite radio correctly and press the reset button of this unit.

\* NO CATEGORY, NO ARTIST, NO COMPOSER, and NO SONG/PROGRAM

## AUDIO AMPLIFIER SECTION

### Power Output:

20 W RMS  $\times$  4 Channels at 4  $\Omega$   
and  $\leq$  1% THD+N

### Signal to Noise Ratio:

80 dBa (reference: 1 W into 4  $\Omega$ )



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

### Line-Out Level/Impedance:

KD-AR470: 4.0 V/20 k $\Omega$  load (full scale)

KD-G420: 2.5 V/20 k $\Omega$  load (full scale)

Output Impedance: 1 k $\Omega$

Other Terminals: CD changer

AUX (auxiliary) input jack

## TUNER SECTION

### Frequency Range:

FM: 87.5 MHz to 107.9 MHz

(with channel interval set to 100 kHz  
or 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

## 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 Hz to 20 000 Hz

Dynamic Range: 96 dB

Signal-to-Noise Ratio: 98 dB

Wow and Flutter: Less than measurable limit

MP3 Decoding Format:

MPEG1/2 Audio Layer 3

Max. Bit Rate: 320 kbps

WMA (Windows Media® Audio) Decoding

Format:

Max. Bit Rate: 192 kbps

## GENERAL

Power Requirement:

Operating Voltage:

DC 14.4 V (11 V to 16 V allowance)

Grounding System: Negative ground

Allowable Operating Temperature:

0°C to +40°C (32°F to 104°F)

Dimensions (W  $\times$  H  $\times$  D):

Installation Size (approx.):

182 mm  $\times$  52 mm  $\times$  150 mm

(7-3/16"  $\times$  2-1/16"  $\times$  5-15/16")

Panel Size (approx.):

188 mm  $\times$  58 mm  $\times$  11 mm

(7-7/16"  $\times$  2-5/16"  $\times$  7/16")


Mass (approx.):

1.5 kg (3.3 lbs) (excluding accessories)

*Design and specifications are subject to change  
without notice.*

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

- Microsoft and Windows Media are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.



**Having TROUBLE with operation?**  
**Please reset your unit**  
Refer to page of How to reset your unit  
**Still having trouble??**

**USA ONLY**

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

**<http://www.jvc.com>**

**We can help you!**

**JVC**



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