JVC

CD RECEIVER   KD-S12

RECEPTOR CON CD   KD-S12

Detachable

JVC   KD-S12   CD-RW

CD-RW

COMPACT
disc
DIGITAL AUDIO

Amplifier Power Standard
CEA
CEA-2006 Compliant
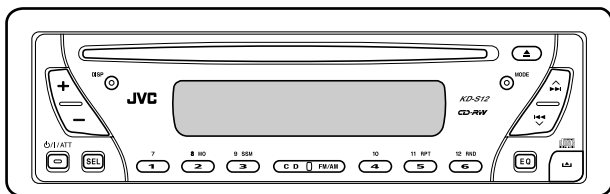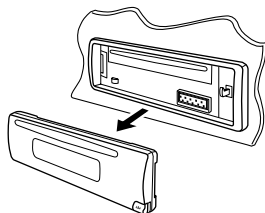
For canceling the display demonstration, see page 7.
Para cancelar la demostración en pantalla, consulte la página 7.

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

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

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 unit.
– 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.

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.

How to reset your unit

* *This will reset the microcomputer. Your preset adjustments will also be erased.*
* *If a disc is loaded, it will eject. Be careful not to drop the disc.*

How to forcibly eject a disc

If a disc cannot be recognized or cannot be ejected, eject the disc as follows.

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

Contents

For safety....

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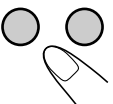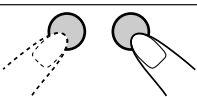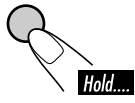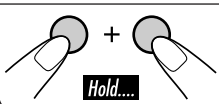- Stop the car before performing any complicated operations.

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.

◧ How to read this manual

The following methods are used to make the explanations simple and easy-to-understand:
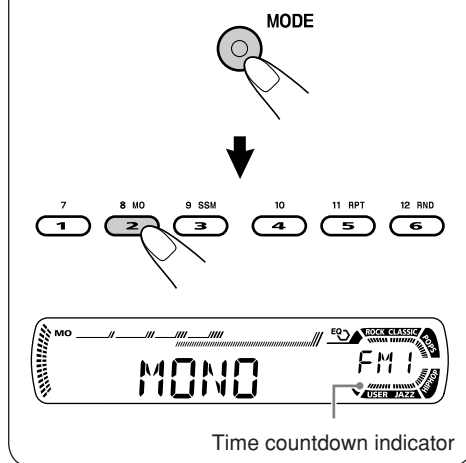- Some related tips and notes are explained in "More about this unit" (see page 15).
- Button operations are mainly explained with the illustrations as follows:

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

◧ How to use the MODE button

If you press MODE, the unit goes into functions mode, then the number buttons work as different function buttons.

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

MODE

7	8 MO	9 SSM	10	11 RPT	12 RND
1	2	3	4	5	6

MO EQ ROCK CLASSIC POPS

MONO   FM1

USER JAZZ

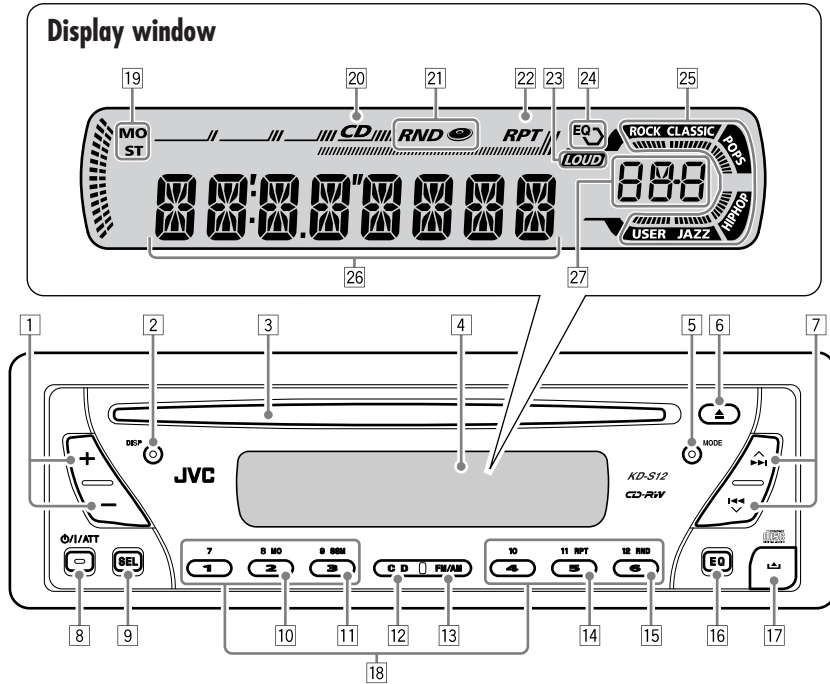Time countdown indicator

To use these buttons for their original functions again after pressing MODE, wait for 5 seconds without pressing any of these buttons until the functions mode is cleared.
- Pressing MODE again also clears the functions mode.

◧ How to detach/attach the control panel

❶

Detaching....

❷

❶

❷

Attaching....

Control panel — KD-S12

Parts identification

Display window

Display window

Display window

19 Tuner reception indicators
MO (monaural), ST (stereo)
20 CD indicator
21 RND ● (disc random) indicator
22 RPT (repeat) indicator
23 LOUD (loudness) indicator
24 EQ (equalizer) indicator
25 Sound mode (C-EQ: custom equalizer)
indicators
ROCK, CLASSIC, POPS, HIP HOP, JAZZ,
USER
• ⅿⅿⅿ *also works as the time countdown*
indicator.
26 Main display
27 Source display
Volume level indicator

1 +/– buttons
2 DISP (display) button
3 Loading slot
4 Display window
5 MODE button
6 ▲ (eject) button
7 ∧ ▶▶|/|◀◀ ∨ buttons
8 ⏻/I/ATT (standby/on/attenuator) button
9 SEL (select) button
10 MO (monaural) button
11 SSM (Strong-station Sequential Memory)
button
12 CD button
13 FM/AM button
14 RPT (repeat) button
15 RND (random) button
16 EQ (equalizer) button
17 ◢ (control panel release) button
18 Number buttons

5

Getting started

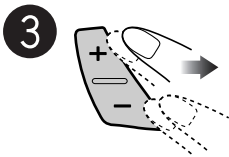## Basic operations

① **ᵖ/I/ATT**

② **C D   FM/AM** → FM1/FM2/FM3/AM

→ CD
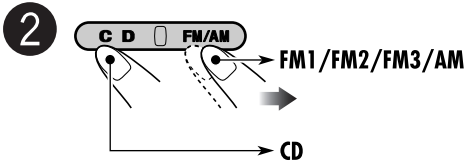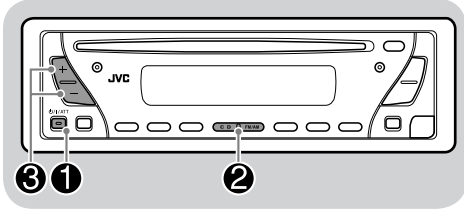
You cannot select "CD" as the playback source if there is no disc in the loading slot.

③

Volume level appears.

VOL   20
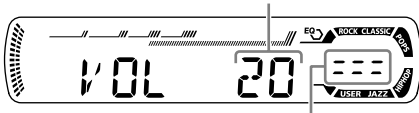
Volume level indicator

④ **Adjust the sound as you want. (See page 12.)**

To drop the volume in a moment (ATT)

ᵖ/I/ATT

To restore the sound, press it again.

To turn off the power

ᵖ/I/ATT

Hold....

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.

Canceling the display demonstrations

If no operations are done for about 20 seconds, display demonstration starts.
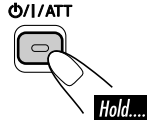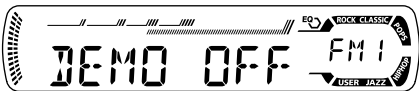*[Initial: DEMO ON]—see page 13.*

1 [SEL] *Hold....*

2

DEMO   FM1

3

DEMO OFF ←→ DEMO ON

DEMO OFF   FM1
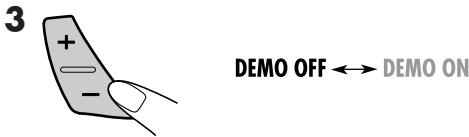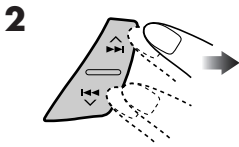
4 **Finish the procedure.**

[SEL]

To activate the display demonstration

In step **3** above...

DEMO OFF ←→ **DEMO ON**

Setting the clock

1 [SEL] *Hold....*

2 **Set the hour and minute.**
  1 **Select "CLOCK H" (hour), then adjust the hour.**
  2 **Select "CLOCK M" (minute), then adjust the minute.**

3 **Finish the procedure.**

[SEL]

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

DISP

Radio operations

Listening to the radio

❶ FM/AM ⟶ FM1 → FM2 → FM3
AM ⟵
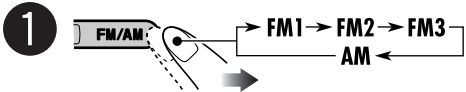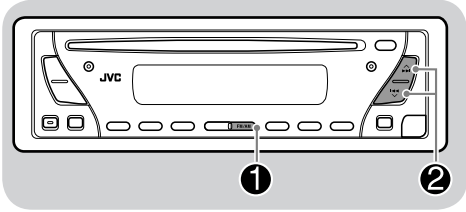
Lights up when receiving an FM stereo broadcast with sufficient signal strength.

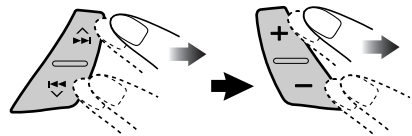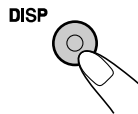ST 88.3 FM1
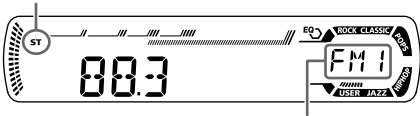
Selected band appears.

❷ **Start searching for a station.**
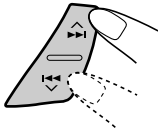
When a station is received, searching stops.
To stop searching, press the same button again.

To tune in to a station manually

In step ❷ above...

[1] Hold.... M FM1
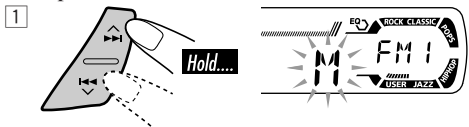
[2] **Select the desired station frequencies.**
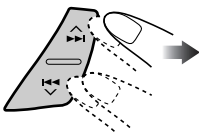
When an FM stereo broadcast is hard to receive

[1] MODE

[2] 8 MO
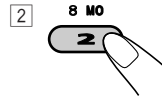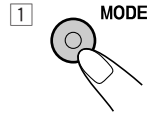
Lights up when monaural mode is activated.

MO MONO FM1
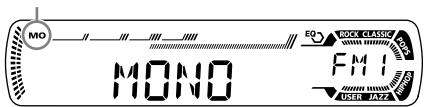
Reception improves, but stereo effect will be lost.

To restore the stereo effect, repeat the same procedure so that 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.**

FM/AM ⟶ FM1 → FM2 → FM3
AM ⟵

2 MODE

3
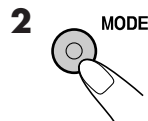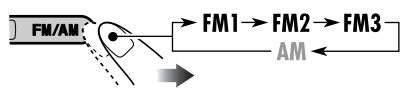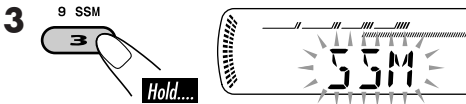
"SSM" flashes, then disappears when automatic presetting is over.

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 the preset number 4 of the FM1 band.

1 FM/AM → FM1 → FM2 → FM3 → AM

2

3
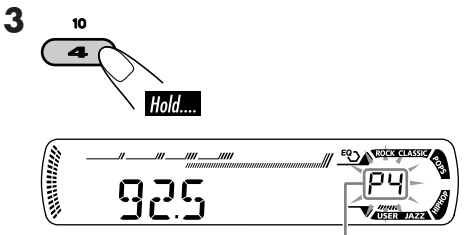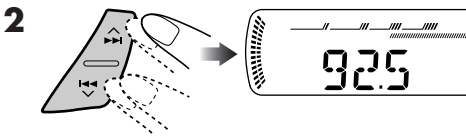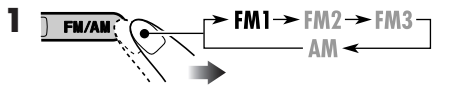
Preset number flashes for a while.

Listening to a preset station

1 FM/AM → FM1 → FM2 → FM3 → AM
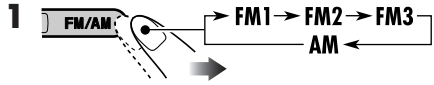
2 Select the preset station (1 – 6) you want.
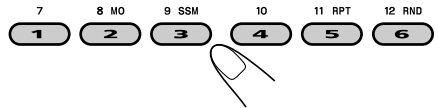
To check the current clock time while listening to an FM or AM station

DISP

Frequency ←→ Clock

9
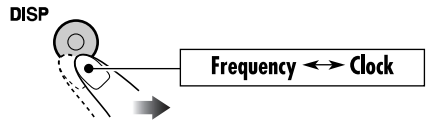
Disc operations

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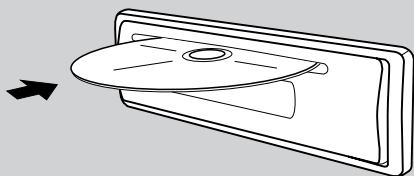
All tracks will be played repeatedly until you change the source or eject the disc.

```
PLAY    .. ..    Cd
```

```
73'40"    17    Cd
```
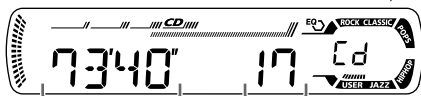
Total playing time of the inserted disc   Total track number of the inserted disc

```
0:03"    01    Cd
```
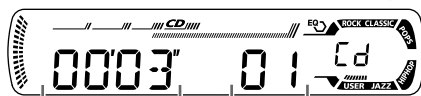
Elapsed playing time   Current track number

To stop play and eject the disc
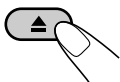
To fast-forward or reverse the track

Hold....
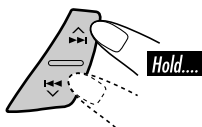
To go to the next or previous tracks
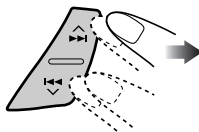
To go to a particular track directly

To select a number from 01 – 06:

7	8 MO	9 SSM	10	11 RPT	12 RND
1	2	3	4	5	6

To select a number from 07 – 12:

7	8 MO	9 SSM	10	11 RPT	12 RND
1	2	3	4	5	6

Hold....

■ Prohibiting disc ejection

You can lock a disc in the loading slot.

C D   +   ▲

Hold....

```
NO EJECT    Cd
```

To cancel the prohibition, repeat the same procedure.

To check the current clock time while listening to a disc

DISP

Elapsed playing time ←→ Clock
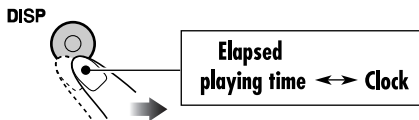
Selecting the playback modes

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

1 MODE
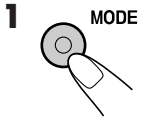
2 **Select your desired playback mode.**

Repeat play	**Mode**	**Plays repeatedly**
11 RPT	**TRK RPT** :	The current track.
5		• RPT lights up.
	RPT OFF :	Cancels.
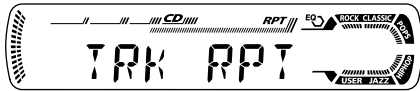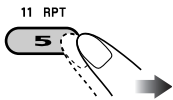
TRK RPT

Ex.: When "TRK RPT" is selected

Random play	**Mode**	**Plays at random**
12 RND	**DISC RND** :	All tracks of the current disc.
6		• RND ● lights up.
	RND OFF :	Cancels.
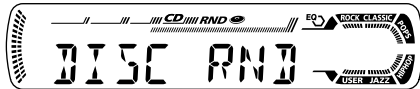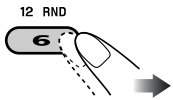
DISC RND

Ex.: When "DISC RND" is selected

Sound adjustments

Selecting preset sound modes
(C-EQ: custom equalizer)

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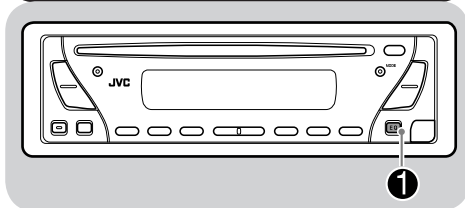
You can select a preset sound mode suitable to
the music genre.

❶ **EQ** → USER → ROCK → CLASSIC
JAZZ ← HIP HOP ← POPS ←
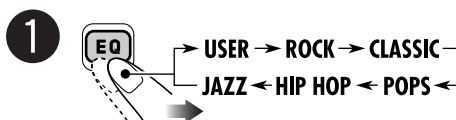
Indication	For:	Preset values		
		BAS*1	TRE*2	LOUD*3
USER	(Flat sound)	00	00	OFF
ROCK	Rock or disco music	+03	+01	ON
CLASSIC	Classical music	+01	–02	OFF
POPS	Light music	+04	+01	OFF
HIP HOP	Funk or rap music	+02	00	ON
JAZZ	Jazz music	+02	+03	OFF

*1 *BAS: Bass;* *2 *TRE: Treble;*
*3 *LOUD: Loudness*

Adjusting the sound

You can adjust the sound characteristics to your
preference.

❶ **SEL** → BAS → TRE → FAD
VOL ← LOUD ← BAL ←

❷
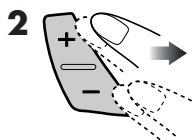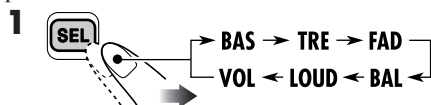
Indication pattern changes as
you adjust the level.

TRE +06
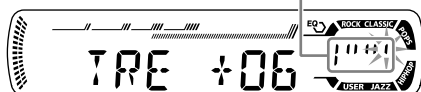
Ex.: When "TRE" is selected

Indication	Range
BAS*4 (bass) Adjust the bass.	–06 (min.) to +06 (max.)
TRE*4 (treble) Adjust the treble.	–06 (min.) to +06 (max.)
FAD*5 (fader) Adjust the front and rear speaker balance.	R06 (Rear only) to F06 (Front only)
BAL (balance) Adjust the left and right speaker balance.	L06 (Left only) to R06 (Right only)
LOUD*4 (loudness) Boost low and high frequencies to produce a well-balanced sound at low volume level.	LOUD ON ↕ LOUD OFF
VOL*6 (volume) Adjust the volume.	00 (min.) to 30 or 50 (max.)*7

*4 *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."*
*5 *If you are using a two-speaker system, set
the fader level to "00."*
*6 *Normally the +/– buttons work as the volume
control. So you do not have to select "VOL"
to adjust the volume level.*
*7 *Depending on the amplifier gain control
setting. (See page 13 for details.)*

General settings — PSM

Basic procedure

You can change PSM (Preferred Setting Mode) items listed on the table that follows.

1

Hold....

2 Select a PSM item.

AMP GAIN FM1
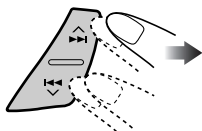
Ex.: When you select "AMP GAIN"

3 Adjust the PSM item selected.
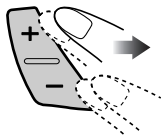
4 Repeat steps **2** and **3** to adjust the other PSM items if necessary.

5 Finish the procedure.

Indications	Selectable settings, [reference page]	
DEMO Display demonstration	**DEMO ON** :	*[Initial]*; Display demonstration will be activated automatically if no operation is done for about 20 seconds, [7].
	DEMO OFF :	Cancels.
CLOCK H Hour adjustment	1 – 12, [7] *[Initial: 1 (1:00)]*	
CLOCK M Minute adjustment	00 – 59, [7] *[Initial: 00 (1:00)]*	
AMP GAIN Amplifier gain control	You can change the maximum volume level of this unit.	
	LOW PWR :	VOL 00 – VOL 30 (Select this if the maximum power of the speaker is less than 50 W to avoid damaging the speaker.)
	HIGH PWR :	*[Initial]*; VOL 00 – VOL 50
AREA Tuner channel interval	**AREA EU** :	Select this when using the unit in an area other than North and South America. (FM: 50 kHz—manual tuning, 100 kHz—auto search; AM: 9 kHz)
	AREA US :	*[Initial]*; Select this when using the unit in North or South America. (FM: 200 kHz; AM: 10 kHz)

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.
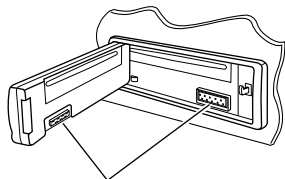
Connector

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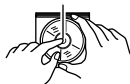
• Always hold the disc by the edges. Do not touch its recording surface.

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, benzine, 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

---

More about this unit

Basic operations

Turning on the power

- By pressing CD or FM/AM 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.

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, and CD-Rs (Recordable)/ CD-RWs (Rewritable) in audio CD (CD-DA) format.
- 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, the disc automatically ejects.
- Do not insert 8 cm (3-3/16") discs (single CD) and unusual shape discs (heart, flower, etc.) into the loading slot.

Playing a CD-R or CD-RW

- Use only "finalized" CD-Rs or CD-RWs.
- 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 or 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 humidity may cause malfunctions or damage to discs.

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."

Troubleshooting

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

	Symptoms	Remedies/Causes
General	• Sound cannot be heard from the speakers.	• Adjust the volume to the optimum level. • Check the cords and connections.
	• The unit does not work at all.	Reset the unit (see page 2).
FM/AM	• SSM automatic presetting does not work.	Store stations manually.
	• Static noise while listening to the radio.	Connect the antenna firmly.
Disc playback	• Disc automatically ejects.	Insert the disc correctly.
	• CD-R/CD-RW cannot be played back. • Tracks on the CD-R/CD-RW cannot be skipped.	• Insert a finalized CD-R/CD-RW. • Finalize the CD-R/CD-RW with the component which you used for recording.
	• Disc can be neither played back nor ejected.	• Unlock the disc (see page 10). • Eject the disc forcibly (see page 2).
	• Disc sound is sometimes interrupted.	• Stop playback while driving on rough roads. • Use an unscratched disc. • Check the cords and connections.
	• "NO DISC" appears on the display.	• Insert a correct disc into the loading slot.

Specifications

■ AUDIO AMPLIFIER SECTION

Power Output:
    18 W RMS × 4 Channels at 4 Ω
    and ≤ 1% THD+N
Signal to Noise Ratio:
    80 dBA (reference: 1 W into 4 Ω)

Load Impedance: 4 Ω (4 Ω to 8 Ω allowance)
Tone Control Range:
    Bass: ±10 dB at 100 Hz
    Treble: ±10 dB at 10 kHz
Frequency Response: 40 Hz to 20 000 Hz
Line-Out Level/Impedance:
    2.0 V/20 kΩ load (full scale)
Output Impedance: 1 kΩ

■ TUNER SECTION

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

[FM Tuner]
Usable Sensitivity: 11.3 dBf (1.0 µV/75 Ω)
50 dB Quieting Sensitivity:
    16.3 dBf (1.8 µV/75 Ω)
Alternate Channel Selectivity (400 kHz): 65 dB
Frequency Response: 40 Hz 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 Hz to 20 000 Hz
Dynamic Range: 96 dB
Signal-to-Noise Ratio: 98 dB
Wow and Flutter: Less than measurable limit

■ 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 × H × D):
    Installation Size (approx.):
        182 mm × 52 mm × 150 mm
        (7-3/16" × 2-1/16" × 5-15/16")
    Panel Size (approx.):
        188 mm × 58 mm × 11 mm
        (7-7/16" × 2-5/16" × 7/16")
Mass (approx.):
    1.4 kg (3.1 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 speciality shop.

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

JVC KD-S12

Installation/Connection Manual
Manual de instalación/conexión

GET0317-002A
[J]

0705DTSMDTJEIN
EN, SP
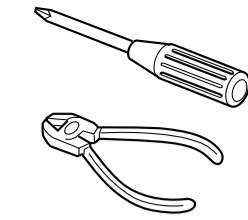
ENGLISH

You need the installation kits which corresponds to your car.
• Mark all the check boxes (☑) to make sure you have follow the instructions and the listed parts.

Check the battery system in your car.

☐ 12 V ⊖ ⊕   12 V DC, NEGATIVE ground

Parts list for installation and connection

☐ Ⓐ / Ⓑ Hard case/Control panel

☐ Ⓒ Sleeve

☐ Ⓓ Trim plate

☐ Ⓔ Power cord

☐ Ⓕ Washer (ø5)

☐ Ⓖ Lock nut (M5)

☐ Ⓗ Mounting bolt— M5 x 20 mm (M5 x 13/16'')

☐ Ⓘ Rubber cushion

☐ Ⓙ Handles
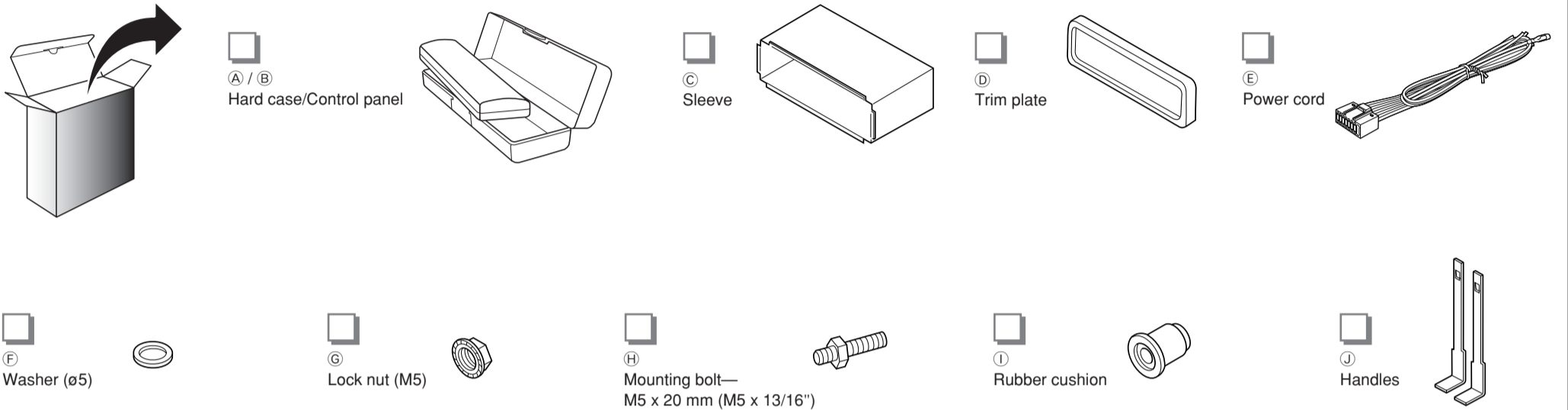
INSTALLATION (IN-DASH MOUNTING)

☐ If you are not sure how to install this unit correctly, consult your JVC car audio dealer.

1 Ⓑ

2 Ⓓ

3 Ⓙ / Ⓒ

4 ❸ Do the required electrical connections.

Ⓘ
Ⓒ ❶ ❷ Ⓗ
184 mm (7-1/4")
53 mm (2-1/8")
❹
❺ ❻ Ⓓ
Ⓑ

Bend the appropriate tabs to hold the sleeve firmly in place.
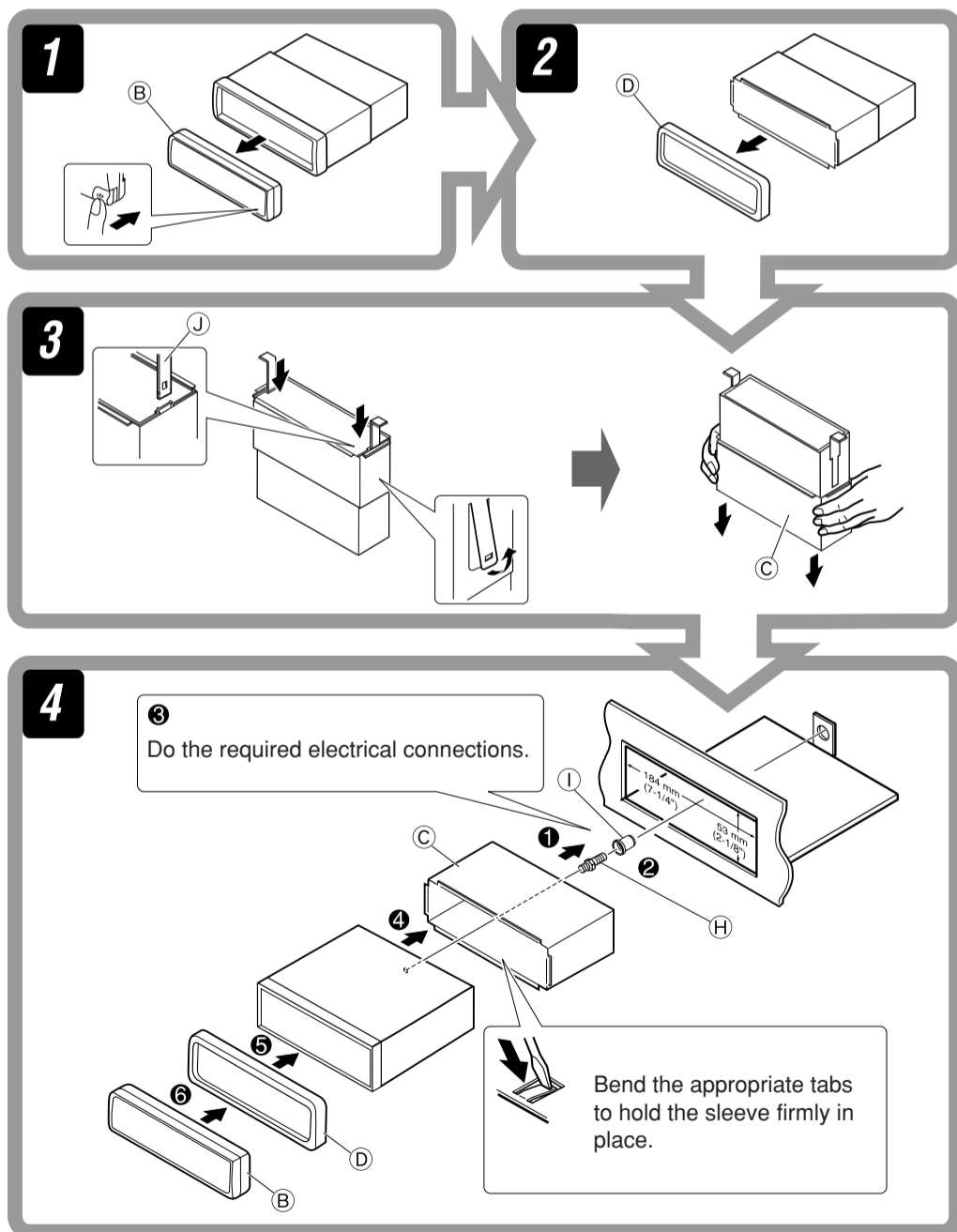
When using the optional stay

Stay (option)
Fire wall
Dashboard
Ⓗ Ⓕ Ⓖ
Screw (option)
Ⓒ

Install the unit at an angle of less than 30˚.
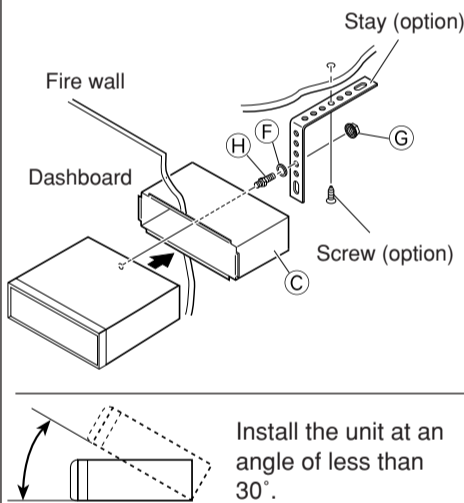
When installing the unit without using the sleeve

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

Flat type screws— M5 x 8 mm (M5 x 3/8'')
Bracket
Bracket
Flat type screws— M5 x 8 mm (M5 x 3/8'')
8 mm (3/8") 8 mm (3/8")

Removing the unit

Before removing the unit, release the rear section.

1 Ⓑ

2 Ⓓ

3 Ⓙ

4 Ⓙ

ELECTRICAL CONNECTIONS

☐ Make sure to disconnect the battery's negative terminal.

• **Be sure to ground this unit to the car's chassis again after installation.**

Note:
It is recommended to connect to the speakers with maximum power of more than 50 W (both at the rear and at the front, with an impedance of **4 Ω to 8 Ω**). If the maximum power is less than 50 W, change "AMP GAIN" setting to prevent the speakers from being damaged (see page 13 of the INSTRUCTIONS).

High ┈┈
Heat sink

A **Typical Connections**

Before connecting: The leads of the power cord and those of the connector from the car body may be different in color.

B **Connecting the external amplifier**

L
R
Signal cord (not supplied)

Rear speakers

Line out

LINE OUT
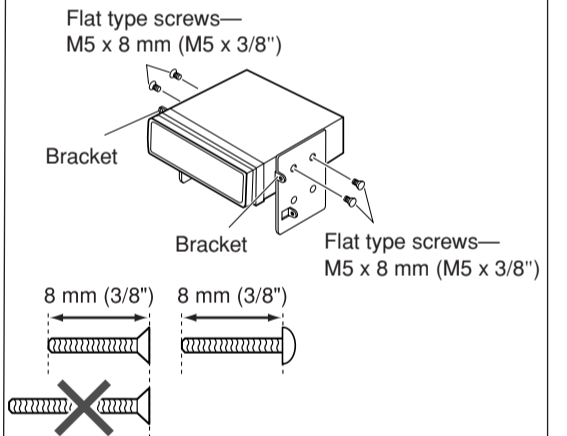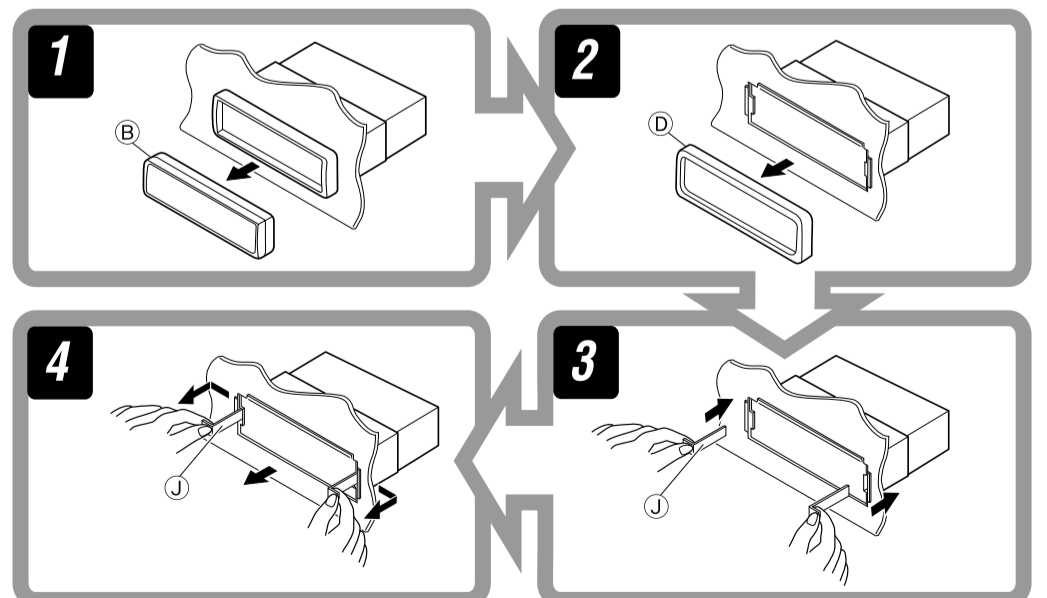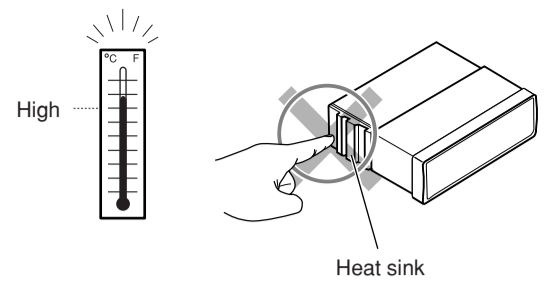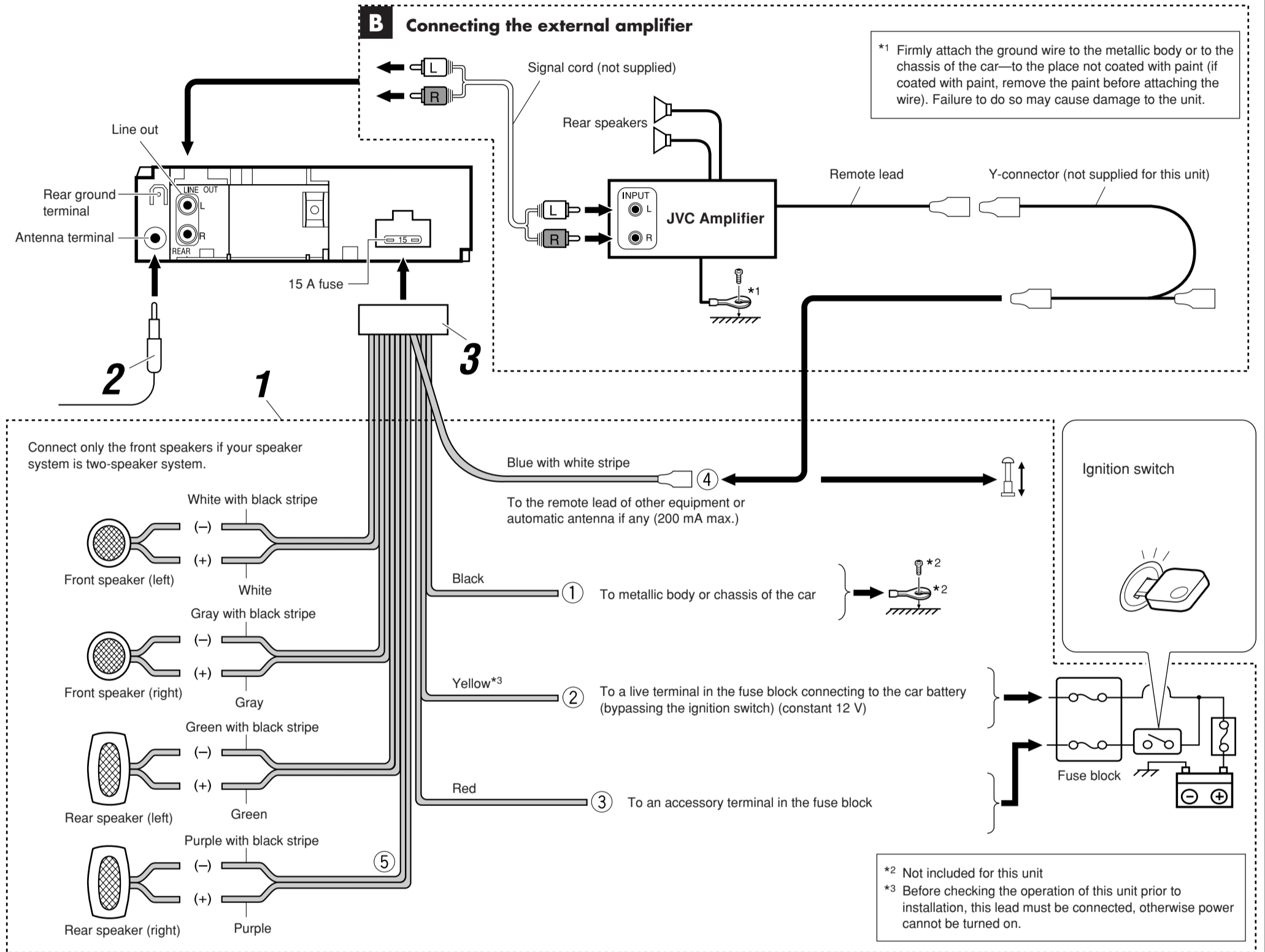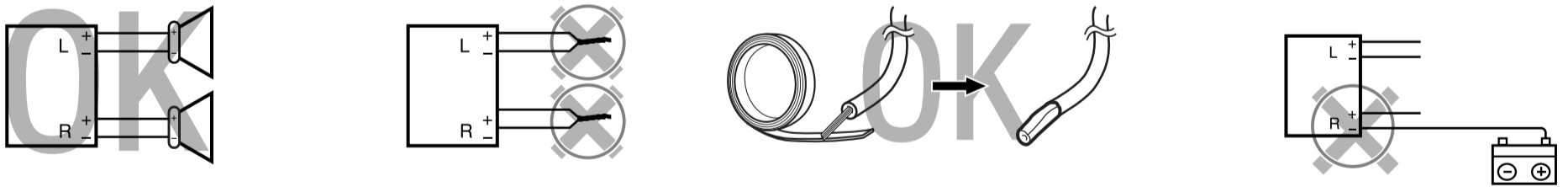L
R
REAR

Rear ground terminal

Antenna terminal

15 A fuse

L
R
INPUT
L
R
JVC Amplifier

Remote lead   Y-connector (not supplied for this unit)

*¹

2   **1**   **3**

*¹ Firmly attach the ground wire to the metallic body or to the chassis of the car—to the place not coated with paint (if coated with paint, remove the paint before attaching the wire). Failure to do so may cause damage to the unit.

Connect only the front speakers if your speaker system is two-speaker system.

White with black stripe
(−)
(+)
Front speaker (left)
White

Gray with black stripe
(−)
(+)
Front speaker (right)
Gray

Green with black stripe
(−)
(+)
Rear speaker (left)
Green

Purple with black stripe
(−)
(+)
Rear speaker (right)
Purple

Blue with white stripe
④
To the remote lead of other equipment or automatic antenna if any (200 mA max.)

Black
①   To metallic body or chassis of the car   *² *²

Yellow*³
②   To a live terminal in the fuse block connecting to the car battery (bypassing the ignition switch) (constant 12 V)

Red
③   To an accessory terminal in the fuse block

⑤

Ignition switch

Fuse block

*² Not included for this unit
*³ Before checking the operation of this unit prior to installation, this lead must be connected, otherwise power cannot be turned on.

PRECAUTIONS on power supply and speaker connections:

L +−
R +−
OK

L +−
R +−
✗

OK

L +−
R +−
✗

TROUBLESHOOTING

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

• **Power cannot be turned on.**
* Is the yellow lead connected?

• **No sound from the speakers.**
* Is the speaker output lead short-circuited?

• **Sound is distorted.**
* Is the speaker output lead grounded?
* Are the "−" terminals of L and R speakers grounded in common?

• **Noise interfere with sounds.**
* Is the rear ground terminal connected to the car's chassis using shorter and thicker cords?

• **Unit becomes hot.**
* Is the speaker output lead grounded?
* Are the "−" terminals of L and R speakers grounded in common?

• **This unit does not work at all.**
* Have you reset your unit?