



# RMD 231/BT

## MANUAL

• GB •

# INSTALLATION

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## PRECAUTIONS

Choose the mounting location where the unit will not interfere with the normal driving function of the driver.

Before finally installing the unit, connect the wiring temporarily and make sure it is all connected up properly and the unit and the system work properly.

Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.

Consult with your nearest dealer if installation requires the drilling of holes or other modifications of the vehicle.

Install the unit where it does not get in the driver's way and cannot injure the passenger if there is a sudden stop. Like an emergency stop.

Avoid installing the unit where it would be subject to high temperature, such as from direct sunlight, or from hot air, from the heater, or where it would be subject to dust, dirt or excessive vibration.

Do not expose the equipment to rain or moisture.

## DIN FRONT-MOUNT (Method A)

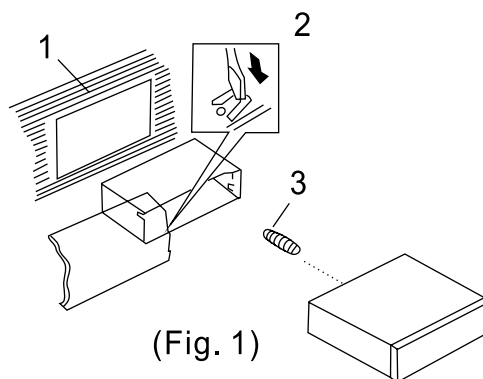
Installing the unit

1. Dashboard

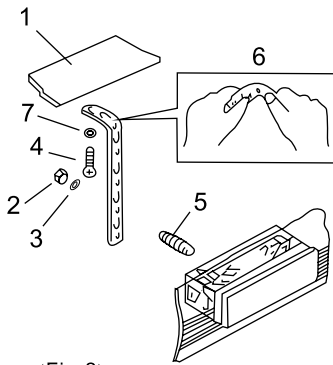
2. Holder

After inserting the holder into the dashboard, select the appropriate tab according to the thickness of the dashboard material and bend them inwards to secure the holder in place. (Fig. 1)

3. Screw



# INSTALLATION

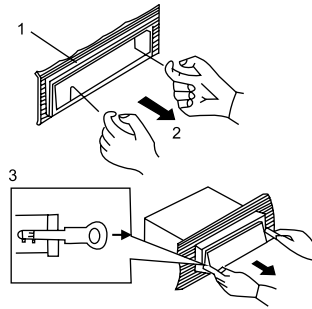


(Fig. 2)

1. Dashboard
2. Nut (5mm)
3. Spring Washer
4. Screw (5 x 25mm)
5. Screw
6. Strap
7. Plain Washer

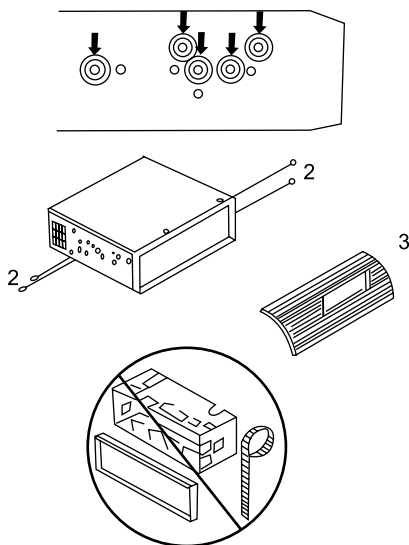
Be sure to use the strap to secure the back of the unit in place. The strap can be bent by hand to the desired angle.

Removing the unit



(Fig. 3)

1. Frame
2. Insert fingers into the groove in the front of frame and pull out to remove the frame. (When reattaching the frame, point the side with a groove downwards and attach it.)
3. Lever  
Insert the levers supplied with the unit into the grooves at both sides of the unit and shown in figure until they click. Pulling the levers makes possible to remove the unit from the dashboard.



Fastening the unit to the factory radio mounting bracket:

1. Select a position where the screw holes of the bracket and the screw holes of the main unit become aligned (are fitted), and tighten the screws at 2 places on each side. Use either truss screws (5 x 5mm) or flush surface screws (4 x 5mm)
2. Screw
3. Dashboard or Console

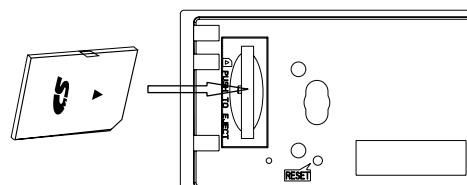
## DIN REAR-MOUNT (Method B)

Installation using the screw holes on the sides of the unit

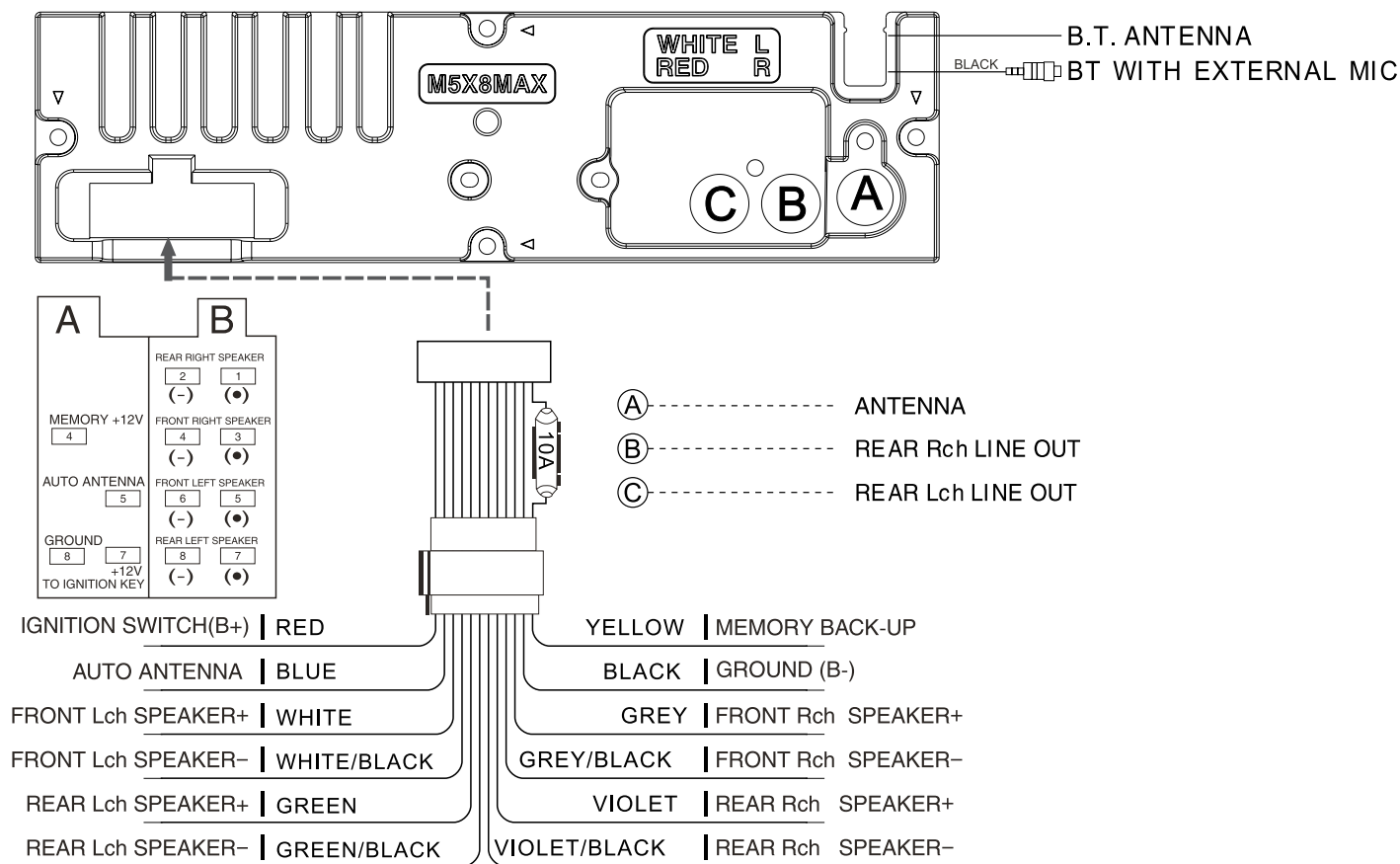
NOTE: The mounting box, outer trim ring, and half-sleeve are not used for method B installation.

## INPUT THE SD CARD

The SD oblique angle keeps Rightward exposure, put into the SD slot and press it again to eject.



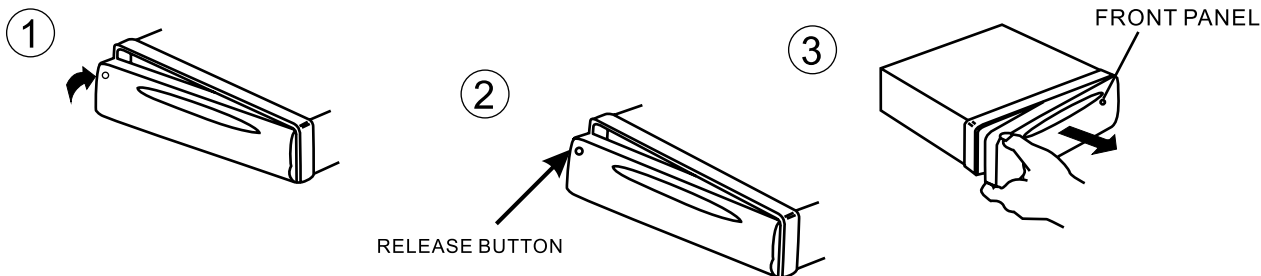
# ADDITIONAL INFORMATION



## HOW TO INSTALL AND REMOVE THE FRONT PANEL

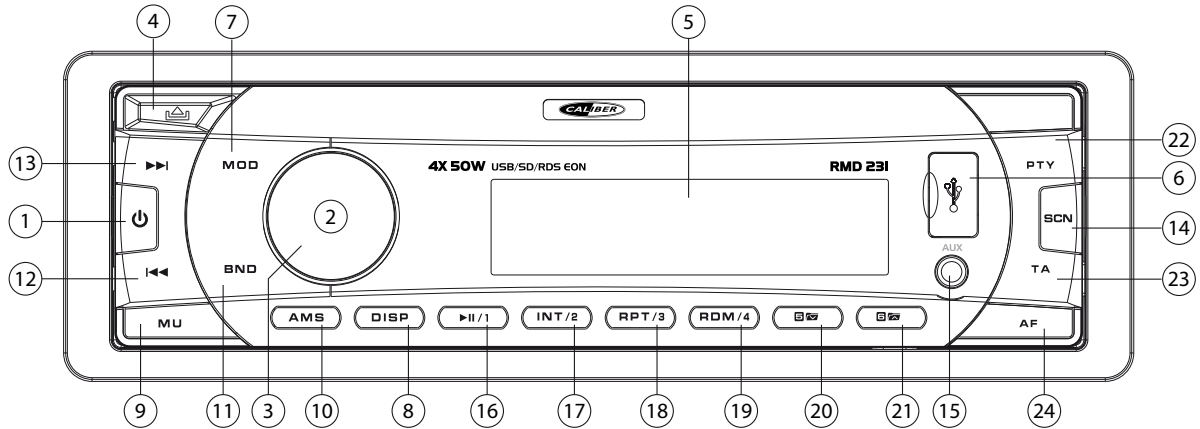
### INSTALLING THE FRONT PANEL

To install the front panel, insert the panel into the housing and make sure the panel is properly installed, otherwise, abnormalities occurs on the display or some keys will not function properly



# GENERAL OPERATIONS

## FRONT PANEL LAYOUT



1. Power Button
2. Volume/Sel Button
3. Menu (audio/system)
4. Release Button
5. LCD Display
6. USB connector
7. Mode switch
8. Display Button
9. Mute Button
10. Automatically memory storing
11. Bans switch/ID3 select
12. Tune Seek & Track reverse Button
13. Tune Seek & Track forward Button
14. SCN Button
15. AUX IN JACK
16. Play / Pause & Preset Button 1
17. Intro & Preset Button 2
18. Repeat & Preset Button 3
19. Random & Preset Button 4
20. File down Button
21. File up Button
22. Programme Type Button
23. Traffic Announcement Button
24. Alternative Frequencies Button

# GENERAL OPERATIONS

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## GENERAL OPERATIONS

### ON/OFF

Press POWER button (1) to turn on the unit. Press it more than 1 second to turn off.

### SOUND ADJUSTMENT

Turn on (2) can adjust the desired volume quality.

Press SEL button (2) will change in the following order.

Option:



### VOLUME

Adjust volume level by using VOL/SEL (2) knob. Turn the VOL knob to left to decrease the sound level, turn the VOL knob to right to increase the sound level.

Note: The unit is initially set to volume mode.

### BASS

Press VOL/SEL button(2) one time. Adjust bass level by using VOL/SEL(2) Knob.

### TREBLE

Press VOL/SEL button(2) two times. Adjust treble level by using VOL/SEL(2) Knob

### BALANCE

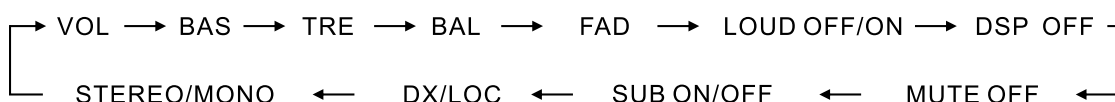
Press VOL/SEL button(2) three times. Adjust sound balance between left and right speakers by using VOL/SEL(2)Knob .

### FADER (optional)

Press SEL button(2) four times. Adjust sound balance between front and rear speakers by using VOL/SEL(2)Knob.

### SELECT MENU

Press VOL/SEL button for several seconds, selecting menu is activated as cyclical mode of following function for use's selection:



Press VOL/SEL button shortly and turn VOL button to right or left to select different menu mode.

# GENERAL OPERATIONS

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## MUTE OFF/ON

Select “MUTE on ” mode to cut down the speakers output, return to “MUTE OFF” mode to resume the speakers output.

## LOUD ON/OFF MODE

In loud on mode the bass and treble response will be boosted.

## STEREO/MONO

When FM station are weak and are disturbed. Listening can be improve by selecting MONO.

## LOCAL/DX

“LOCAL” position in areas with strong signals to let radio stop at only strong stations during manual turning select distant position in areas with weak signals to listen to all stations.

## AREA SETUP

In Radio mode. Press SEL button for several seconds. LCD will be show from BEEP ON → AREA USA/EUR. At AREA USA/EUR. You can use VOL +/- to select the AREA frequency.

# GENERAL OPERATIONS

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## SELECT MODE

By pressing this button(3) to go to different function mode:

- Tuner (radio)
- USB  
to go to this mode USB device must be connected.
- Memory Card  
to go to this mode must be have a Memory Card in.
- AUX in put

## DISPLAY

Press DISP button (4) to operate as the conversion of each display mode as follow:

- Time is displayed for 5sec when DISP key is pressed, and it returns to its previous display unless DISP key is pressed again.
- 3) From the clock mode, when DISP Key is pressed for longer than 1sec, clock mode switches to clock Adjusting mode and the clock display begins flashing. At this time clock or minute can be changed by pressing (+/-), or the ENCODER VOLUME.

## LIQUID CRYSTAL DISPLAY

Exhibit current frequency and activated functions on the display (5).

## RESET

RESET button (6) is placed on the housing and must be activated with either a ball point pen or thin metal object. (Do not use sharp object to avoid damaging the unit.) The RESET button (6) is to be activated for the following reasons:

- Initial installation of the unit when all wiring is completed.
- All the function buttons do not operate.
- Error symbol on the display.

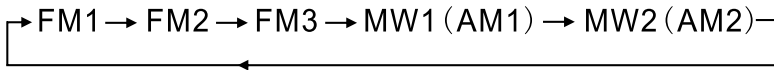


# RADIO OPERATIONS

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## BAND SELECTION

At tuner mode, press BAND button (7) to select the desired band. The reception band will change in the following order:



## STATION SELECTION

During radio mode, Press “SEEK ◀◀” or “SEEK ▶▶” buttons more than 1 second to automatically

search a station, Press “SEEK ◀◀” or “SEEK ▶▶” buttons shortly is operated as manual turning mode.

## AUTOMATICALLY MEMORY STORING & PROGRAM SCANNING

- Automatically Memory Storing

Press AMS(MP3) button (10) for several seconds, the radio searches from the current frequency and checks the signal strength until one cycle search is finished.

And then 6 strongest stations are stored into the corresponding preset number button.

- Program Scanning

Press AMS(MP3) button (10) shortly to scan preset station. When the field strength level is more than the threshold level of stop level, the radio is holding at that preset number for several seconds with releasing mute, then searches again.

## STATION STORING

Press preset button (11~16)

RADIO MODE.

M1 ~ M6

- PRESET MEMORY is loaded when key is pressed for less than 1 second.

- PRESET MEMORY is saved when key is pressed for longer than 1 sec.

## SCAN

Press scan button (22) to search radio station. When a station signal strength level is more than the level to stop. The radio will playing the station for 5 seconds and the frequency blinking on the LCD at the same time.

Press and hold scan button (22) more than 3 seconds to select the station which you desired. The radio will start play the station.

# USB/SD OPERATIONS

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## USB/SD FLASH MP3 Playing:

### PLAY / PAUSE

Press button (11) pause function is activated. Music track play time INDICATOR flashes. Press it again to resum palying, press it more than 1 second is TOP function.

### INT

Press button (12): During INTRO ON, INT indicator comes on and begins Playing the first 10sec of each song, until the last song is played. It begins playing the entire track from where INT started

### RPT

Press preset button (13): Flash play mode : REPEAT ON / OFF is activated. When REPEAT ON, RPT INDICATOR comes on and repeats the current music track.

### RDM

Press preset button (14): During RANDOM ON, RDM INDICATOR is turned on and each track of disc is played in ramdom instead of normal order.

Press (15) over 1 sec to previous folder, Press (16) over 1 sec to next folder.

## SELECT TRACKS

During USB/SD operation, press SEEK "◀◀" (8) button or SEEK "▶▶" (9) button to move to the previous track or the following track, Track number shows on display. During USB/SD, hold SEEK "◀◀" (8) button or SEEK "▶▶" (9) to fast reverse or fast forward. Music play starts from when you release the button.

Press preset button (15-16):

- MP3 MODE : 10 TRACK UP / DOWN is activated.

When the total track is 10 or less, KEY is inactivated.

# RDS OPERATIONS

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## RDS (RADIO DATA SYSTEM) OPERATION

### AF : Alternative Frequencies

- Setting RDS Mode Press AF button (20) and release immediately to switch on or off RDS mode. Whenever RDS is switched on, symbol "AF" appears on the display.

### AF / REG

#### AF

- AF / REG key directs the activation of AF SEARCH.
- AF indicator is displayed when AF is ON, AF search is activated when reception is bad.
- During FM MODE, when AF is ON, SEEK, SCAN, AUTO, MEMORY function can only receive and save RDS program. However, when Italy option is in use, regardless of RDS, programs that satisfy SD LEVEL Can be received and saved.

INDICATOR	CONDITIONS
AF ON	AF ON MODE, RDS information is received.
AF OFF	AF OFF MODE
AF FLASHING	AF ON MODE, RDS information is not received.

### REGION

- AF MODE is converted to REGION ON / OFF MODE when AF ON MODE is pressed for longer 1sec.
- ON : PI CODE is checked when AF CHECK in progress
- OFF : PI CODE and COVERAGE AREA is not checked when AF CHECK in progress.

### PTY

#### RADIO MODE

- Previous PTY is displayed when PTY key (19) is pressed. If there are no keys entered for 2seconds, previously selected PTY is searched. During 1LOOP, if desired PTY is not found, NO PTY is displayed.
- 2 program types are SPEECH and MUSIC.

By pressing PTY once, MUSIC is entered. When PTY is pressed the second time, SPEECH is entered.

M1~M6 keys can be used to select the desired program type.

### TA

TA button (21) is operated as follows:

- TA is turned ON / OFF and TA indicator is displayed.

When traffic announcement is transmitted, regardless of the mode, traffic announcement is received.

If VOLUME LEVEL is below 20, VOLUME LEVEL is raised to 20, and returns to its previous mode and volume level when the traffic announcement is over.

If volume is adjusted during traffic announcement, only the previous volume is valid.

- When TA is on, SEEK, SCAN, AUTO MEMORY function can be received or saved only when traffic program identification code has been received.
- When TA is ON, traffic program identification code is not received during specified time.

TA ALARM : NO TA / TP is displayed and alarm is set off.

TA SEEK : TA SEEK is activated.

# SPECIFICATION

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## General

Power Supply Requirements:	DC 14.4V "===", Negative Ground
Load Impedance:	4 ohms
Maximum Output Power:	4W x 7 (CH)
Chassis Dimensions:	178 x 130x 50mm (W x D x H)
Current Drain:	5A

## Tone Controls

Bass (at 100Hz):	+10dB / -10dB
Treble (at 10K):	+10dB / -10dB

## USB/SD MUSIC Player

Signal to Noise Ratio:	More than 60dB
Channel Separation:	More than 60dB
Frequency Response:	20Hz - 20KHz

## FM Radio

Frequency Coverage (MHz):	87.5 - 108MHz
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IF :	10.7MHz
Sensitivity (S/N-30dB):	12dBu
Stereo Separation:	>30dB

Remarks:  
Specifications subject to change without notice

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