



RCD 120(/B)

MANUAL

• GB •

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INSTALLATION

PRECAUTIONS

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

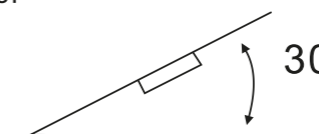
Before finally installing the unit, connect the wiring temporarily and make sure it is all connected up properly and the unit and the system work properly.

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.

If installation angle exceeds 30 from horizontal, the unit might not give its optimum performance.



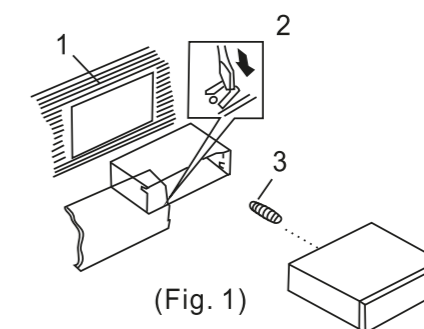
Avoid installing the unit where it would be subject to high temperature, such as from direct sunlight, or from hot air, from the heater, or where it would be subject to dust, dirt or excessive vibration. Do not expose this equipment to rain or moisture.

DIN FRONT-MOUNT (Method A)

Installing the unit

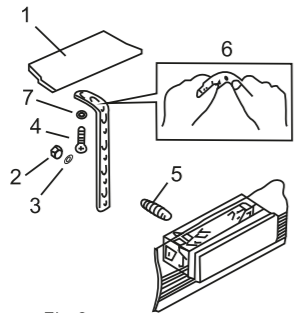
1. Dashboard

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.



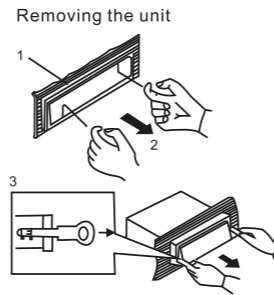
3. Screw

INSTALLATION



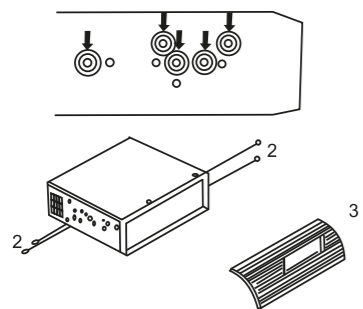
(Fig. 2)

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



(Fig. 3)

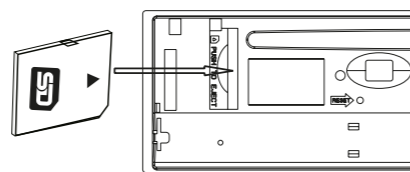
1. Frame
 2. Insert fingers into the groove in the front of frame and pull out to remove the frame. (When reattaching the frame, point the side with a groove downwards and attach it.)
 3. Lever
- Insert the levers supplied with the unit into the grooves at both sides of the unit and shown in figure until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

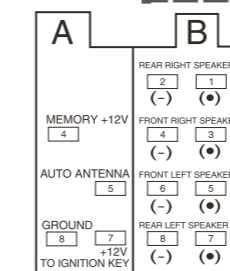
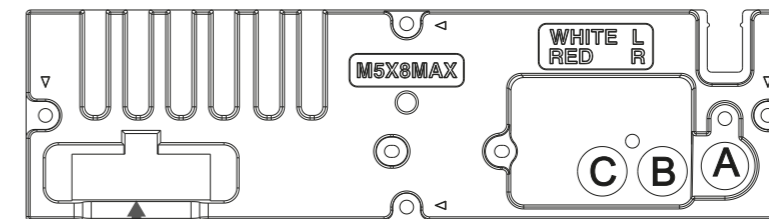
DIN REAR-MOUNT (Method)
Installation using the screw holes or the sides of the unit



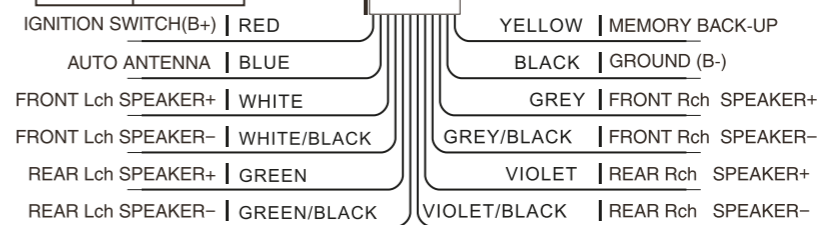
INPUT THE SD CARD

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

ADDITIONAL INFORMATION



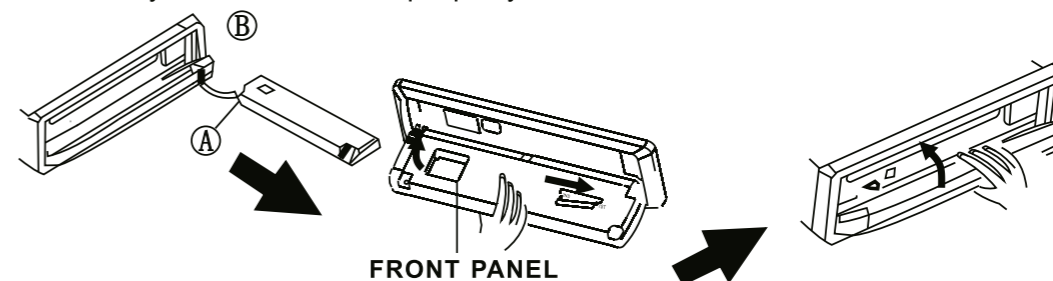
- (A) ----- ANTENNA
- (B) ----- REAR Rch LINE OUT
- (C) ----- REAR Lch LINE OUT



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

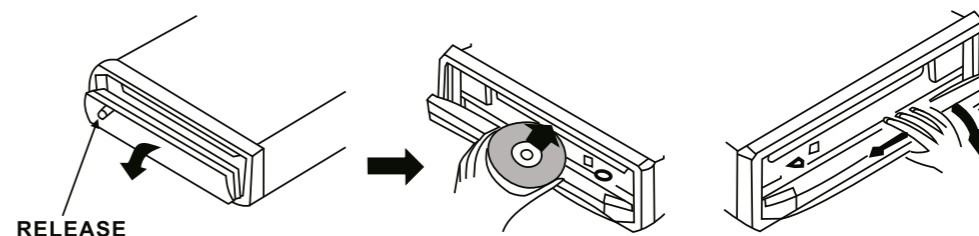


DETACHING THE FRONT PANEL

Press REL button in the upper left corner, and then front panel will not function properly.

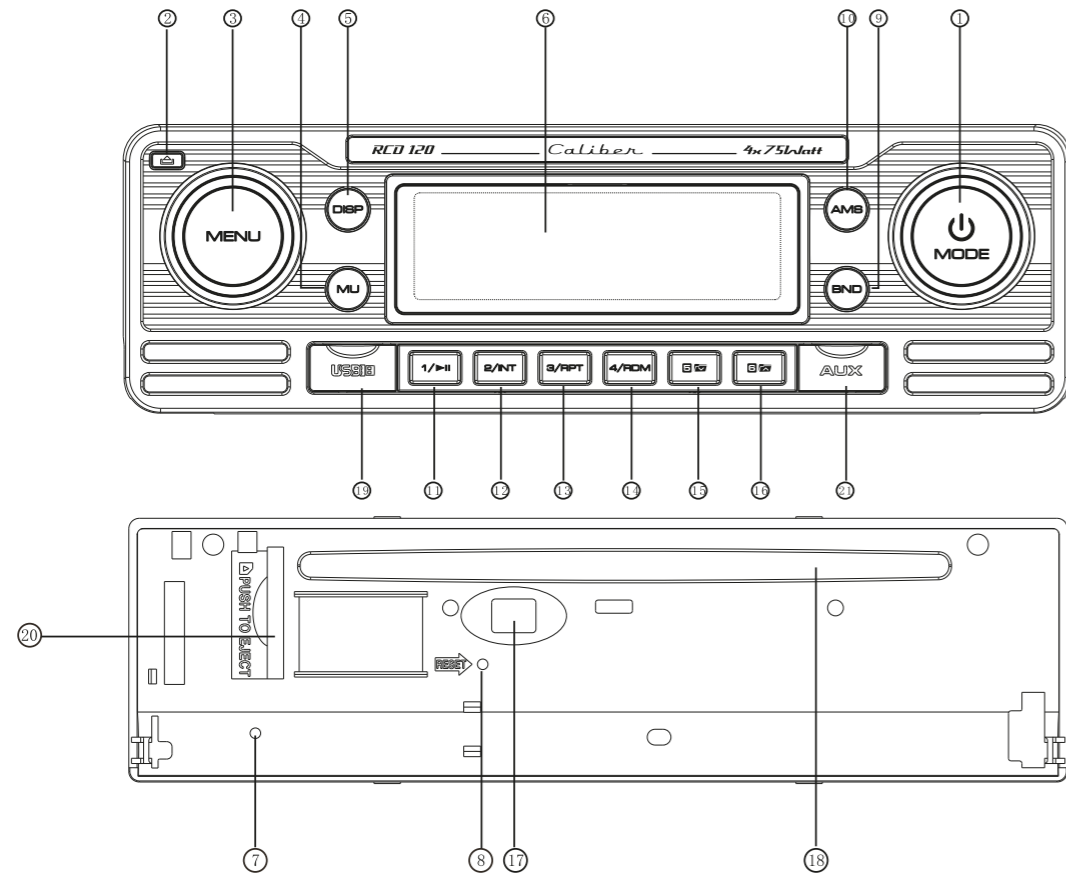
REMOVING THE FRONT PANEL

When the front panel was turned down to a position of 90°, hold and slide the front panel to left, and then pull it out.



GENERAL OPERATIONS

FRONT PANEL LAYOUT



- | | |
|--|------------------------------|
| 1. Power / Mode / Next / Previous Button | 12. Intro & Preset Button 2 |
| 2. Release Button | 13. Repeat & Preset Button 3 |
| 3. Menu / Volume Button | 14. Random & Preset Button 4 |
| 4. Mute Button | 15. Preset Button 5 |
| 5. Display Button | 16. Preset Button 6 |
| 6. LCD Display | 17. Eject knob |
| 7. Flashing LED | 18. CD Slot |
| 8. Reset Button | 19. USB connector |
| 9. Band switch /ID3 select | 20. SD/MMC Slot |
| 10. Automatically memory storing | 21. AUX IN JACK |
| 11. Play / Pause & Preset Button 1 | |

GENERAL OPERATIONS

GENERAL OPERATIONS

POWER /MOD conversion

2. Under power off status, short press is power on,
Under power on status, short press is switching mode, long press is power off.

FRONT PANEL RELEASE

Press REL button (2) to detach the removable front panel

SOUND ADJUSTMENT

Turn on (3) can adjust the desired volume quality.

A). Press MENU button (3) will change in the following order.
Option:



Volume control/MENU

Rotating this knob, you can adjust VOL/BASS/TREB/BAL/FAD . To select the functions, press the VOL knob shortly until the desired functions are shown on the display.

Increase or decrease the volume by turn the VOL knob right or left. These buttons can be used to adjust the BASS, TREBLE, BALANCE and FADER.

BASS

Press MENU/VOL button(3) one time. Adjust bass level by using MENU/VOL(3)Knob.

TREBLE

Press MENU/VOL button(3) two times. Adjust treble level by using MENU/VOL(3) Knob

BALANCE

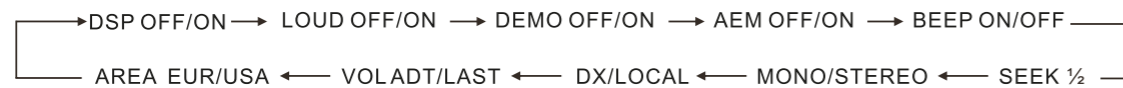
Press MENU/VOL button(3) three times. Adjust sound balance between left and right speakers by using MENU/VOL(3)Knob .

FADER (optional)

Press MENU button(3) four times. Adjust sound balance between front and rear speakers by using MENU/VOL(3)Knob

GENERAL OPERATIONS

Press MENU/VOL button(3) for several seconds, it is activated as cyclical mode of following functions for user's selection.



Press and holding MENU/VOL button and then turn this button leftward or rightward will go to different modes.

DSP ON/OFF mode:

Turn MENU/VOL button to choose the equalizer mode: POP M, ROCK M, CLASS M, FLAT M, DSP OFF.

ESP (Electronil shock Protection) 12/45 mode.

Turn MENU/VOL button to choose the ESP Value for CD disc.

BEEP ON/OFF mode:

Choose BEEP ON: BEEP sound can be heard from speakers. When the button was pressed.

VOL LAST/ADJUST

This function allows to set the volume level of the unit after it was turned off and then turned on again. Choose VOL LAST if you want the volume level to be the same as it was before turning off. VOL ADJUST allows to choose volume level.

SEEK MODE

SEEK 1: When SEEK 1 mode is activated, AUTO SEEK SCAN is stopped when station is detected even user still push SEEK button.

SEEK 2: Auto SEEK SCAN is not stopped even if station is detected if user pushes SEEK button. When releases SEEK button, then stop when station is detected.

MUTE

Press MUTE button (4) to mute down the sound. Press it again to release this mode and recover previous volume level.

GENERAL OPERATIONS
DISPLAY

Press DISP button (5) 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 (Folder, File name...) 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 can be changed by pressing (+/-), or the ENCODER VOLUME.

LIQUID CRYSTAL DISPLAY

Exhibit current frequency and activated functions on the display (6).

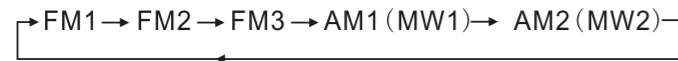
FLASHING LED

When ACC off, take out the front panel from main unit that the LED (7) will be flashin

RADIO OPERATIONS

BAND SELECTION

At tuner mode, press BAND button (9) to select the desired band. The reception band will change in the following order:



AUTOMATICALLY MEMORY STORING & PROGRAM SCANNING

- Automatically Memory Storing

Press AMS 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 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)

1) 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.

2) CD/MP3 / FLASH MP3

PLAY / PAUSE

Press preset button (11) is activated. During a PAUSE, DISC INDICATOR flashes.

TOP - First song will play when Top key is pressed for longer than 0.5sec during play.

INT

Press preset 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

RADIO OPERATIONS

LOCAL RADIO STATION SEARCH

Press MENU button repeatedly to choose LOCAL(DX). Rotate VOL regulator or press VOL+/- buttons on the RC to switch between LOCAL and DX. When the LOCAL function is on the local stations (stations with weak radio)

LOUDNESS

Press MENU button repeatedly until LOUD ON is displayed. Rotate VOL regulator on the front panel or press VOL+/VOL- buttons on the RC to select loudness ON or OFF.

MONO/Stereo control (in FM radio mode)

Press MENU button repeatedly until the display shows STEREO (MONO). Rotate VOL regulator or press VOL+/- buttons on the RC to switch between STEREO reception and MONO reception. Improvement of reception of distant stations can be done by selecting mono mode, which may cut down some reception noise.

AREA USA/EUR SETUP

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



CD/SD/MMC/USB OPERATIONS

Discs for playback:

This unit can play disc types: CD/CD -R/-RW.
Compatible with formats: CDDA/MP3/WMA.

Loading and ejecting a disc

1. Turn the power on.
2. Insert the disc with the printed side facing upward into the slot.
3. Press EJECT button to eject the disc.

Multi-media card MMC/SD card slot

Support MP3/WMA ID3 format music only. Detach the front panel. Carefully insert the SD/MMC card into the card slot on the inner panel. Attach the panel. Unit starts playback automatically.

USB jack

Carefully connect the USB driver to the USB adapter cable and then insert it into the USB jack on the front panel. Unit starts playback automatically.

USB/SD/MMC notes:

USB functions (flash memory type) MP3 music play.

1. SD/ MMC card support.
2. FAT 12/ FAT 16/ FAT 32 is possible
 - FAT 12/16 (dir: 200 support, file:500 support),
 - FAT 32 (dir: 200 support, file:500 support).
3. Filename: 32 byte/ Dir name: 32byte.
4. Tag (id3tag ver2.0)
 - Title/ Artist/ Album: 32 byte support.
5. Multi card reader not support.
6. USB 2.0 support.

Note:

USB format supports 2.0.

Capacity: up to 16 GB.

SD cards brands: Cannon, Fuji film, Palm, Motorola, Microsoft, IBM, HP, Compaq, Sharp, Samsung, etc.

Capacity: up to 16 GB.

MMC cards brands: Ericsson, Nokia, Motorola, HP, Palm, Sanyo, Microsystems, etc.

Capacity: up to 16 GB.

Note: Because of the great variety of products with SD and MMC card slots and their sometimes quite manufacturer-specific functions the producer can neither guarantee that all devices will be recognized nor that all operating options that are possible in theory will actually work.



CD/SD/MMC/USB OPERATIONS

Id3 Tag information

This unit supports ID3 tag ver2.0. If an MP3/WMA file has ID3 Tag information, it will be displayed on the LCD. If there is no ID3 Tag information, nothing will be shown on LCD. The ID3 Tag information may include File, Folder, Music, Album or Artist data.

NEXT/PREVIOUS

Rotate the NEXT/PREVIOUS button to choose next or previous track. Press longer than 1 sec., to choose forward playback or backward playback.

PLAY/PAUSE

Press PAUSE button to pause the playback, press one more time to resume the normal playback.

INTRO (Preview all Tracks)

When this button is pressed, "INT ON" indication is displayed and the first several seconds of each track of the disc is played. Press again to stop intro and listen to track.

REPEAT

When RPT button is pressed, "RPT ON" indication is displayed and playback of the selected track will be continually repeated until the track repeat mode is cancelled by pressing RPT button again.

RANDOM

When RDM button is pressed, "RDM ON" indication is displayed and each track of the disc is played in random instead of normal order. To cancel RANDOM mode, press RDM button again.

TRACK DOWN/UP SELECT (In case of MP3/WMA files)

-10/5 button: 10 Track down

+10/6 button: 10 Track up

Selection of MP3/WMA files

1. Searching Time

• Press AMS one time, then searching time is activated.

• Turn VOL knob to right or left, select the time you want.

• Press VOL knob, then the select time of the song will play

CD/SD/MMC/USB OPERATIONS

2. Searching Track

- Press AMS twice, then searching track is activated.
- Turn VOL knob to right or left, select the track you want.
- Press VOL knob, the song you selected will start.

3. Searching File Name:

- Press AMS 3 times, then file search is activated.
- Press VOL knob, then the first directory is displayed.
- Turn VOL knob to right or left, you can select the directory you want.
- Press VOL knob again, then the directory is fixed and the first file name is displayed.
- Turn VOL knob to right or left, you can select the file you want.
- Press VOL knob, then the song you selected will start.

4. Searching Character:

- Press AMS 4 times, then character search mode is activated.
- Press VOL knob, then * character is displayed.
- Turn VOL knob to right or left, you can select the letter you want.
- Press VOL knob longer than 2 sec.
- The song which has same character you selected is displayed.
- Turn VOL knob to right or left, you can select the song you want.
- Press VOL knob, then the song you selected will start.

MP3/WMA overview

- MP3 is short for MPEG Audio Layer 3 and refers to an audio compression technology standard.
- This product allows playback of MP3 files on CD-ROM, CD-R or CD-RW discs.
- The unit can read MP3 files written in the format compliant with ISO 9660. However it does not support the MP3 data written by the method of packet write.
- The unit can not read an MP3 file that has a file extension other than “.mp3”
- If you play a non- MP3 file that has the “.mp3” extension, you may hear some noise.
- In this manual, we refer to what are called “MP3 file” and “ folder” in PC terminology as “ track ” and “ album ”, respectively.
- Maximum number of directory level is 8, including the root directory. Maximum number of files and folders per disc is 256.
- The unit may not play tracks in the order of Track numbers.
- The unit plays only the audio tracks if a disc contains both audio tracks and MP3 files.
- When playing a disc of 8 kbps or “VBR”, the elapsed playing time in the display window will not be correct and also the intro play may not function properly. “ VBR ”:Variable Bit Rate.
- The unit supports the playback of WMA files. The playback of ID3 tags for WMA format is not guaranteed, it depends on versions and availability of Cyrillic alphabet.
- WMA (Windows Media Audio) -music data compression format, created by Microsoft Corporation. This format uses coding algorithm for compression of initial audio-record, greatly decreasing the file size, but, saving the good sound quality even when the bit rate is low (for example, 64 Kbit/s).
- Remember that the unit may not play the tracks in order they are written on disc.

Notes on creating your own CD-R or CD-RW containing MP3 files:

- To enjoy high quality sound, we recommend converting to MP3 files with a sampling frequency of 44.1 kHz and a fixed bit rate of 128 kbps.
- DO NOT store more than 256 MP3 files per disc.
- For ISO 9660 - compliant format, the maximum allowable depth of nested folders is 8, including the root directory (folder).
- When CD-R disc is used, playback is possible only for discs, which have been finalized.
- Make sure that when MP3 CD-R or CD-RW is burned that it is formatted as a data disc and NOT as an audio disc.
- You should not write non-MP3 files or unneeded folders along with MP3 files on the disc otherwise it takes a long time until the unit starts to play MP3 files.
- With some CD-R or CD-RW media, data may not be properly written depending on its manufacturing quality. In this case, data may not be reproduced correctly. High quality CD-R or CD-RW disc is recommended.
- Up to 16 characters are displayed for the name of an Album or a Track. ID3TAG version 1.x is required.
- Note that the unit may not play Tracks in the order that you wrote them to the disc.

RDS OPERATION
RDS(Radio Data System)operation
AF : Alternative Frequencies

- Setting RDS Mode Long press SEL key,select AF and TA ON, AF flashing on display, TA appears on 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 SEL is pressed for longer 3sec.
- 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

- Press SEL key,PTY flashing on display when select PTY. 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 entered.
M1~M6 keys can be used to select the desired program type.

TA

TA button is operated as follows:

- Press SEL enter TA, TA is turned ON / OFF and TA indicator is displayed.

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

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

TA SEEK : TA SEEK is activated.

SPECIFICATION
General

Power Supply Requirements:	DC 14.4V“===”,Negative Ground
Load Impedance:	4 ohms
Maximum Output Power:	75W x 4 (CH)

Chassis Dimensions:	178 x 163x 50mm (W x D x H)
Current Drain:	10A

Tone Controls

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

CD Player

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

FM Radio

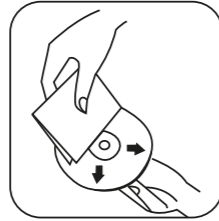
Frequency Coverage (MHz):	87.5 - 108MHz
IF :	10.7MHz
Sensitivity (S/N-30dB):	12dBu
Stereo Separation:	>30dB

Remarks:

Specifications subject to change without notice

BEFORE PLAYING DISCS
Cleaning the CD

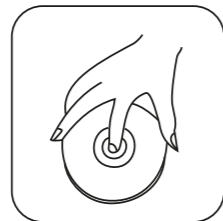
Before playing a CD, wipe it off with a clean, dust-free cleaning cloth. Wipe the disc in the direction of the arrow.



Always insert the CD with the label side facing upwards. If the CD is inserted with the printed side facing downwards, the device may be damaged.



Note: If there is already a CD in the CD slot, do not try to insert a second CD. This may damage the device. Always hold CDs by the edge. In order to keep the CD clean do not touch the surface. Pull out the CD as follows.



Do not attach any sticker or adhesive tape on the CD. Do not expose the CD to direct sunlight or sources of heating. Do not leave CDs in a car if it parked in direct sunlight as that will lead to a considerable rise in the temperature inside the car.

Note: Do not use any solvents such as petrol or thinning agents. Commercially available cleaning substances of antistatic spray will damage the device.

TROUBLE SHOOTING

Before going through the check list, check wiring connection. If any of the problems persist after checklist has been made, consult your nearest service dealer

Symptom	Causes	Solution
No Power	The car ignition key not been switched on	If the power supply is properly connected to the car accessory terminal, switch the ignition key to ACC
	The fuse is blown	Replace a new fuse
CD Cannot Be Loaded or Ejected	A CD is already inside the player slot	Remove the CD from the player and insert the new one
	Inserting the CD in reverse direction	Insert the CD with the label facing up
	The CD is extremely dirty or defected	Clean the CD or try to play a new one
	Temperature inside the car is too high	Cool off until the ambient temperature return to normal
	Condensation	Leave the player off for an hour or so and try again
No Sound	Volume is at minimum	Adjust volume to desired level
	Wiring is not properly connected	Check wiring connection
Sound Skipping	The installation angle is more than 30°	Adjust the installation angle to less than 30°
	CD is extremely dirty or Defected	Clean the CD or try to play a new one
The Operation Keys Do Not Work	The built-in microcomputer is not operating properly due to Interference	Press the RESET button or reinstall the front panel properly
The Radio or Automatic Selection Does Not Work	The antenna cable is not connected correctly	Connect the antenna cable correctly
	The signals are too weak	Select the station manually

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