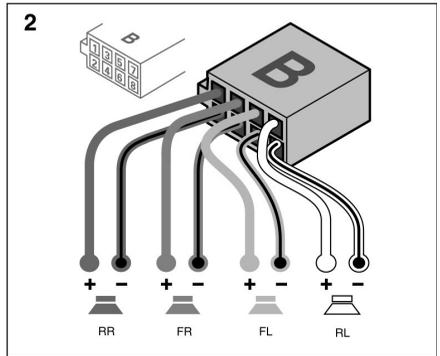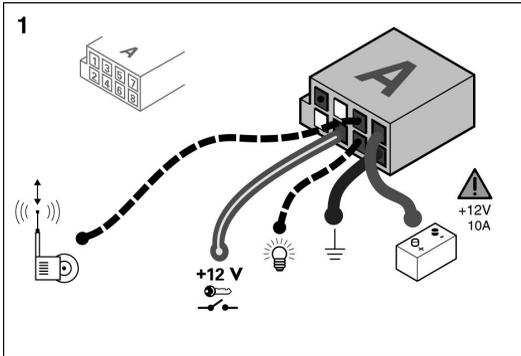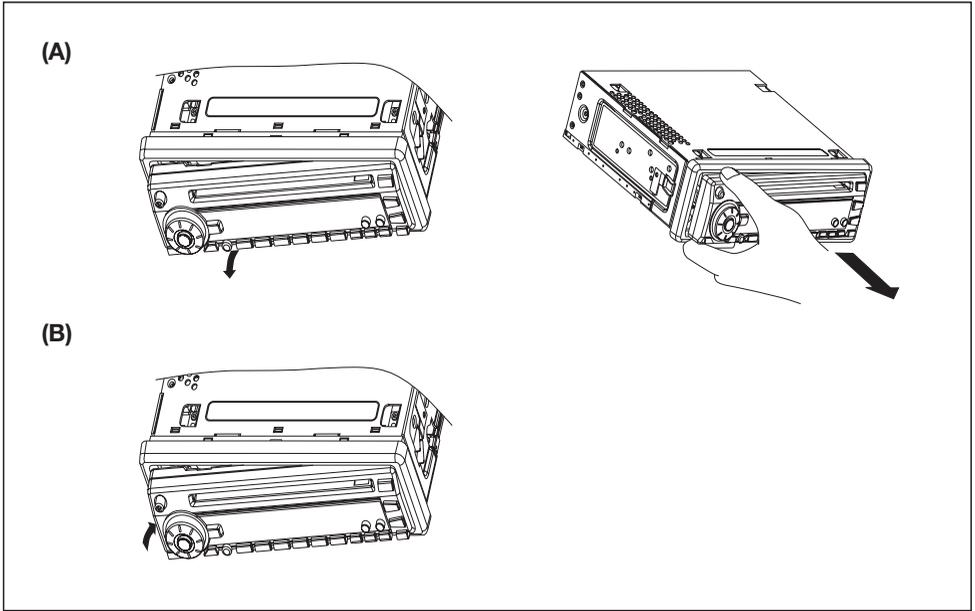1. Detachable front release button
2. Volume rotary button
3. Power ON/OFF button
4. Display button
5. CD slot
6. LCD display
7. AST/P.SCAN button
8. LOUD/BAND button
9. CD eject button
10. TUNE/TRACK up/forward button
11. TUNE/TRACK down/backward button
12. SOURCE/Illumination button
13. AF button
14. TA button
15. PTY button

16. Radio preset 6 button
17. Radio preset 5 button
18. Radio preset 4/CD SHUFFLE button
19. Radio preset 3/CD REPEAT button
20. Radio preset 2/CD SCAN button
21. Radio preset 1/CD PAUSE button
22. SEL button (to set Vol., Bass, Treble, Balance & Fader)
23. SOUND button (to select Flat, Classics, Pop, Rock & DSP OFF)
24. Mute button
25. Blinking LED
26. Reset button
27. Detachable unit connector

(A)

(B)

1

+12V
10A

+12 V

2

RR   FR   FL   RL

3

TEL MUTE HIGH (PINK)

TEL MUTE LOW (GREY)

Lch (WHITE)*

Rch (RED)*

B'
F
A'

B
A
F

10A

* For CD 138 model only

4

BEFORE YOU START...

Thank you for purchasing this VDO product which has been designed and manufactured to the highest standards and subjected to rigorous testing.

Kindly familiarise yourself with the product by reading this user manual. Keep this manual handy in your car for future reference.

This manual covers the following models: CD 138 and CD 136

The main differences between them are as follows:
Power   - 4 x 50W (CD 138)
                               - 4 x 35W (CD 136)
2 Channel line-out   - only CD 138

IMPORTANT

This device has been designed and produced according to applicable Safety Regulations. Please read carefully the instruction manual and use the device as intended.

CONTENTS

HINTS FOR CORRECT AND SAFE OPERATION

This unit is designed to be operated only +12 volt DC negative ground systems. The unit cannot be used on +24 volt or positive ground systems.

The unit may not operate correctly in extremely hot or cold temperatures. The unit is equipped with a built in self-protection circuit. When the temperature reaches factory preset level, the protection circuit halts all unit operation. If this happen, let the unit settles to the car ambient temperature before it get back to normal operation.

INSTALLATION

Notes:

• 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 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 your nearest dealer if installation requires 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 the installation angle exceeds 30° from horizontal, the unit might not give its optimum performance.

• If for any reason, the fuse is blown, only replace with an automotive blade fuse of the same rating.

• 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.

DIN FRONT/REAR-MOUNT
This unit can be properly installed either from "Front" (conventional DIN Front-mount) or "Rear" (JIN or Japanese) mounting. For details, refer to the following illustrated installation methods.

DIN FRONT-MOUNT (Method A)
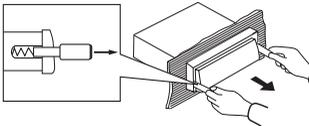Installation of the unit
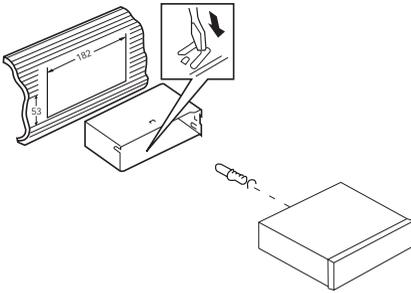
1. Metal Sleeve
   Install the metal sleeve in the dashboard.
   For optimal performance of the CD
   player, the metal sleeve should be
   positioned horizontally (between –10 and
   +30). Fix metal sleeve into place by
   pressing the metal tags outwards using
   screwdriver.

2. Front Mounting
   Slide the radio into the metal sleeve until
   the springs at either side of the radio
   snap into the openings of the sleeve.
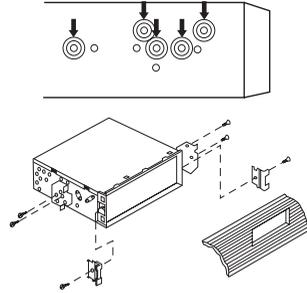

3. Removing Radio
   Insert the levers supplied with the unit
   into the grooves at both sides of the unit
   until they lock. Pull the levers toward
   you makes it possible to remove the unit
   from the dashboard.

JIN REAR-MOUNT (Method B)
Installation using the screw holes on the
sides of the unit.

Remove the outer rim around the front panel
and the side springs. Select a position
where the screw holes of the mounting
bracket and the screw holes of the radio
become aligned and tighten the screws at
2 places on each side.

HOW TO REMOVE AND INSTALL THE FRONT PANEL

See details at the back of the cover page
for remove (figure A) and install (figure B)
the front panel.
1. Press the release button and pull-off the
   front panel. Keep front panel into the
   case.
2. To install the front panel, insert the panel
   into the housing, slide in to the right hand
   side and push in till locked.
3. Make sure the panel is properly installed.
   Otherwise, abnormalities occurs on the
   display or some keys will not function
   properly.

GENERAL OPERATION

- **ON/OFF**
  Switch on the unit by pressing any button, except **REL** button (1) and the **CD eject** button (9). When system is on, press **POWER** button (3) to turn off the unit.

- **VOLUME/BASS/TREBLE/BALANCE/ FADER ADJUSTMENT**
  Press **SEL** button (22) to select the desired adjustment mode.
  The adjustment mode will change in the following order:

  ```
  ►Volume ►Bass ►Treble ►Balance ►Fader
  ```

  By turning **AUDIO ADJUST** button (2), different setting levels can be adjusted.
  Note: Bass/Treble selections are only active when the DSP (Digital Sound Processor) is switched off.
  Press **SEL** button (22) for 2 seconds, it will trigger a series of Advanced RDS setting. Refer to RDS (Radio Data System) operation section for details.

- **SOUND**
  Press **SOUND** button (23) to turn on sound DSP function (Digital Sound Processor) and to select desired audio mode.
  There are five kinds of mode as below:

  ```
  ►FLAT ►CLASSICS ►POP M ►ROCK M ►DSP OFF
  ```

  Activating the DSP overrides the prior selected Bass/Treble settings.

- **LOUDNESS**
  Press **LOUD** button (8) for 2 seconds to reinforce the bass output and display will show **"LOUD"**. Press it for 2 seconds again to release this function.

- **MUTE**
  Press **MUTE** button (24) to silence the receiver. Press it again to resume listening.

- **FLASHING LED**
  If the front panel is removed from the unit, the **LED** (25) will be flashing.

- **SOURCE**
  Press **SOURCE** button (12) to switch between CD and Radio.

- **ILLUMINATION COLOR**
  Press the button (12) for 2 seconds to change the color of LCD.

- **RESET**
  RESET button (26) is placed on the front panel and must be activated with either a ball point pen or thin hard object.
  The **RESET** button (26) 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.
  Note: Pressing the **RESET** button (26) will erase your stored stations in the memory.

RADIO OPERATION

- **BAND SELECTION**
  At tuner mode, press **BAND** button (8) shortly to select the desired band.
  The reception band will change in the following order:

  ```
  ►FM1 ►FM2 ►FM3 ►MW ►LW
  ```

- **STATION SELECTION**
  Press **TUNE/TRACK** buttons (10) or (11) shortly to activate automatic seek function. Press for 2 seconds until **"MANUAL"** appeared on the display, the manual tuning mode is selected. If both buttons have not pressed for several seconds, they will retune to seek tuning mode and **"AUTO"** appeared on the display.

- **AUTOSTORE**
  - Automatic Memory Storing
    Press **AST** button (7) for 2 seconds.
    The radio searches for 6 strongest stations and stores them into the presets of the currently selected band.
    Note: Any stations that were previously stored in this memory bank are replaced by the new stations.

- Program Scanning
  Press **P.SCAN** button (7) shortly to scan all preset stations throughout the entire band.

- **STATION STORE AND RECALL**
  Press any one of the preset button for 2 seconds to store the current tuned frequency in this memory.
  Previously stored information in this button will be lost. Press any one of the preset buttons briefly (1 to 6) to recall a station, which had been stored in the memory.

RDS (RADIO DATA SYSTEM) OPERATION

The RDS data are the PI, PS, TP, PTY, TA and AF data.
PI: Program Identification Code
    Code for identifying program
PS: Program Service Name
    Broadcast station name data expressed in alphanumerically character
TP: Traffic Program Identification
    Identification data for traffic information broadcasting station
TA: Traffic Announcement Identification
    Identification data showing traffic information is being transmitted or not
AF: Alternative Frequencies
    Frequency list of broadcasting station transmitting the same program

Setting AF Mode
- Press **AF** button (13) briefly to switch on/off **AF** mode.
- Whenever **AF** is switched on, symbol **"AF"** appears on the display.
- The tuner will return to **A**lternative **F**requencies whenever the reception signals getting worse.
- **"ALARM"** will be displayed when an emergency broadcasting is received; meanwhile sound output level will be adjusted to the preset output level automatically when the volume control is set at minimum.

Regional Program Operation
- Press **AF** button (13) for 2 seconds to switch on or off regional mode.

- When region is on, the current listening program remains unchanged.
  When region is off, it allows the reception moves to the regional station.

Using PTY to Select Program
The PTY function allows you to search for stations with a particular Program Type.
To select your program type, press the **PTY** button (15):

→ PTY music group → PTY speech group → PTY off ┐

Now you can select the music type or speech type using preset keys 1 - 6 for your selection as listed in below table:

Preset number	PTY MUSIC group
1	POP M, ROCK M
2	EASY M, LIGHT M
3	CLASSICS, OTHER M
4	JAZZ, COUNTRY
5	NATION M, OLDIES
6	FOLK M

Preset number	PTY SPEECH group
1	NEWS, AFFAIRS, INFO
2	SPORT, EDUCATE, DRAMA
3	CULTURE, SCIENCE, VARIED
4	WEATHER, FINANCE, CHILDREN
5	SOCIAL, RELIGION, PHONE IN
6	TRAVEL, LEISURE, DOCUMENT

While selecting PTY engagement, its selection is implemented by preset button as described in notes.
When PTY is selected, the radio starts to search corresponding PTY information, and stops of the corresponding PTY information is detected.
If corresponding PTY information is not found, normal radio reception is resumed.

Listening to Traffic Announcement
Traffic announcement can interrupt CD play or radio listening when broadcast.

Briefly press the **TA** button (14) to select the TA mode on or off.
When TA mode is on, you will hear the Traffic Announcement when broadcast.
During traffic announcement, you can interrupt it by short press of **TA** button (14), without switching off the TA mode.
By doing so, the set will return to the previous operating mode.
Long press on **TA** button (14) allows ON/OFF selection of TA LOCAL/TA DISTANT mode.
TA LOCAL will only allow traffic announcement from strong station to come through.
TA DISTANT ("RDS TA DX") selection will allow all received announcements to interrupt CD play or radio listening.

ADVANCED RDS SETTINGS

Press the **SEL** button (22) for 2 seconds to enter the advanced RDS settings menu.

a) TA SEEK or TA ALARM
   - TA SEEK mode:
     When TP information gets lost at the current station for retune time which is set by RETUNE SHORT (30sec.) or RETUNE LONG (90sec.), the radio start to retune to next same PI station.
   - TA ALARM mode:
     When TP information gets lost at the current station, beeps will be heard.

b) PI SOUND or PI MUTE
   In some countries, there is a possibility of having 2 different stations with same frequencies but different PI.
   If PI SOUND is selected, radio will switch to the new PI station for few seconds before switch back to current PI station.
   If PI MUTE is selected, radio will mute when a new PI station is received.

c) RETUNE L or RETUNE S
   When PI information is not caught for retune time, the radio start to retune to next same PI station.
   - RETUNE L mode:
     Retune time selected as 90 seconds.
   - RETUNE S mode:
     Retune time selected as 30 seconds.

d) MASK DPI or MASK ALL
   - MASK DPI mode:
     Masked only the AF which has different PI.

   - MASK ALL mode:
     Masked the AF which has different PI and any other interfering non PI station which having the same transmitting frequency.

e) Option for Beep level
   - Beep OFF:
     No beep will be heard when pressing of any buttons.
   - Beep 2ND:
     Beep sound will be heard with any long press function.
   - Beep ALL:
     Beep will be heard when pressing any button.

CD OPERATION

Insert discs, autoplay track and time display.

• **SELECT TRACKS**
  During CD operation, press **TUNE/TRACK** buttons (10) or (11) to advance or reverse to the previous track. Track number is shown on display.
  During CD operation, hold **TUNE/TRACK** buttons (10) or (11) to fast forward or fast reverse. CD play resume when you release the button.

• **PAUSE**
  Press **PAUSE** button (21) to pause CD player. Press it again to resume play.

• **REPEAT THE SAME TRACK**
  During CD operation, press **REPEAT** button (19) to continuously repeat the same track. Press again to stop repeat.

• **TRACK SCAN**
  The scan function enables you to listen to the first few seconds of each track. Press **SCAN** button (20) to activate/de-activate scan track.

• **PLAY ALL TRACKS IN RANDOM ORDER**
  During CD operation, press **SHUFFLE** button (18) to play all tracks on the disc in random order. Press again to cancel the function.

• **EJECT**
  Press button (9) to stop CD playing and eject the disc from the disc slot (5).

MAINTENANCE

The following suggestions help you care for the product so that you can enjoy it for years.

1. Keep the product dry. If it does get wet, wipe it dry immediately. Liquids might contain minerals that can corrode the electronic circuits.
2. Keep the product away from dust and dirt, which can cause premature wear of part.
3. Handle the product gently and carefully. Dropping it can damage circuit boards and cases, and can cause the product to work improperly.
4. Wipe the product with a dampened cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the product.
5. Use and store the product only in normal temperature environment. High temperature can shorten the life of electronic devices and distort or melt plastic parts.

For CD Player
As dust tends to accumulate in the CD slot, clean it every once in a while. Your CDs can get scratched if you put them in a dusty CD slot.

Care of Discs
Playing a CD that is dirty, scratched or warped can cause the sound to skip and the unit to operate incorrectly, resulting in worsened sound quality. Take the following precautions to prevent your CDs from getting scratched or damaged.

1. Avoid making fingerprint on the disc when handling it.
2. Put the disc back in the box immediately after eject.
3. Do not expose the disc to heat and direct sunlight.
4. Clean the CD frequently with commercially available cleaning cloth or soft cotton cloth.

SPECIFICATION

GENERAL

Power Supply Requirements	:	DC 12 Volts, Negative Ground
Chassis Dimensions	:	180 (W) x 155 (D) x 50 (H)
Tone Controls		
- Bass (at 100 Hz)	:	+ 10 dB / – 10 dB
- Treble (at 10 KHz)	:	+ 10 dB / – 10 dB
Maximum Output Power		
- CD 136	:	4 x 35W
- CD 138	:	4 x 50W
- Set Illumination	:	Switchable Orange/Green
- Safety fuse	:	10 Ampere (max.)

CD PLAYER

Signal to Noise Ratio	:	More than 85 dB
Channel Separation	:	More than 70 dB
Frequency Response	:	20 Hz - 20 KHz

RADIO

FM

Frequency Coverage	:	87.5 to 108 MHz
IF	:	10.7 MHz
Sensitivity (S/N = 30 dB)	:	3 µV
Stereo Separation	:	> 30 dB

MW

Frequency Coverage	:	522 to 1620 KHz
IF	:	450 KHz
Sensitivity (S/N = 20 dB)	:	32 dBu

LW

Frequency Coverage	:	144 to 288 KHz
IF	:	450 KHz
Sensitivity (S/N = 20 dB)	:	35 dBu

TROUBLE SHOOTING

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

Symptom	Cause	Solution
No power.	The car ignition is not on.	If the power supply is properly connected to the car accessory terminal, switch the ignition key to "ACC".
	The fuse is blown.	Replace the fuse.
Disc cannot be loaded or ejected.	Presence of CD disc inside the player.	Remove the disc in the player, then put a new one.
	Inserting the disc in reverse direction.	Insert the compact disc with the label facing upward.
	Compact disc is extremely dirty or defective disc.	Clean the disc or try to play a new one.
	Temperature inside the car is too high.	Cool off or wait until the ambient temperature return to normal.
	Condensation.	Leave the player off for an hour, then try again.
No sound.	Volume is in minimum.	Adjust volume to a desired level.
	Wiring is not properly connected due to telephone mute.	Check wiring connection. Ensure your phone MUTE is correctly connected.
Sound skips.	The installation angle is not more than 30 degrees.	Adjust the installation angle to less than 30 degrees.
	The disc is extremely dirty or defective.	Clean the compact disc. Then try to play a new one.
The operation keys do not work.	The built-in microcomputer is not operating properly due to noise.	Press the RESET button. Front panel is not properly fixed into its place. Contacts between front and main unit are dirty. Clean contacts with a cotton bud soaked in isopropyl alcohol.
The radio does not work. The radio station automatic selection does not work.	The antenna cable is not connected.	Insert the antenna cable firmly.
	The signals are too weak.	Select a station manually.