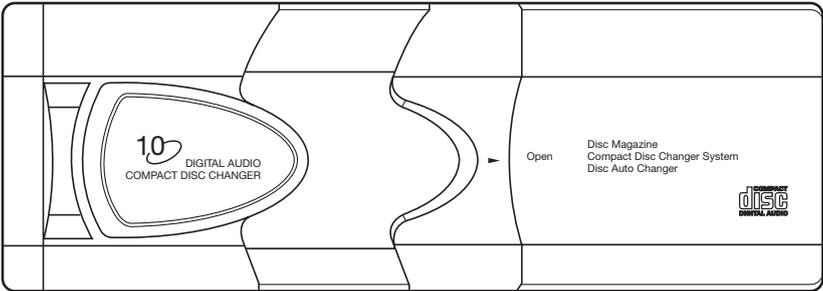


OPERATING INSTRUCTIONS



Compact Disc Auto Changer



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HINTS FOR CORRECT AND SAFE OPERATION

This CD Changer is designed to be operated only on +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 a preset level, the protection circuit halts all unit operations. If this should happen, open a window and allow the car to cool.

Condensation

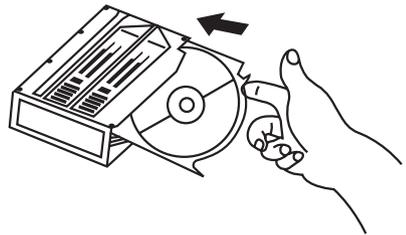
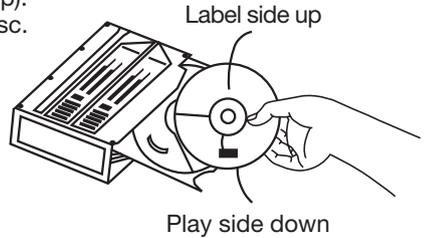
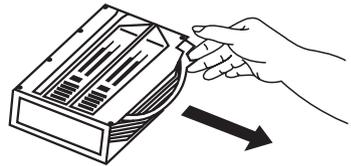
Moisture can condense on the laser lens of the CD changer during rainy and humid days, or right after the heater is turned on in the car. If this should happen the unit will not operate correctly. To remedy the situation, remove the magazine from the unit and wait approximately one hour. During this time the moisture will evaporate and the unit will operate normally.

Remove the magazine from the unit when it is not being used during hot weather and the CD changer is not used for long periods of time.

HOW TO USE THE MAGAZINE

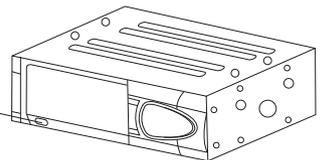
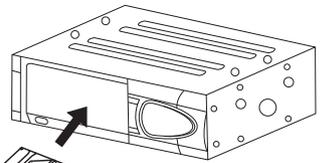
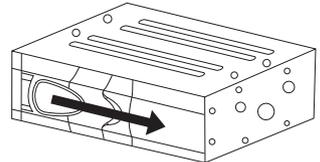
■ Loading a disc

1. Pick the tab on the magazine's disc tray and pull out only of the trays.
2. Place the disc on the tray with its play surface facing down (label surface facing up).
 - Each tray can accommodate only one disc.
3. Press the tab on the disc tray to store the tray back in the magazine.
 - Up to ten discs can be loaded.



■ Installing the magazine

1. Slide the door toward the right.
2. First check that the magazine with the discs has its top side facing up and it is pointed in the right-direction for installation. Push it in until clicks into place, indicating that it is now locked.
 - When the magazine is used for the first time, it will not lock into place unless the power supply has been connected.
 - Ejecting the magazine
The magazine is ejected by pressing the eject button (▲).



Notes:

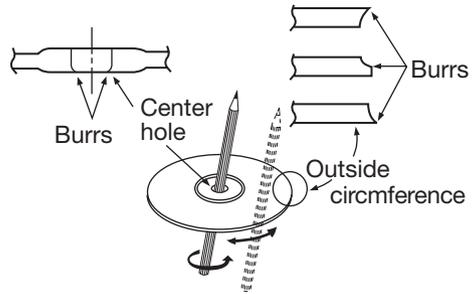
Be absolutely sure to close the door after having inserted or ejected the magazine. Dust or dirt finding its way inside may cause malfunctioning of the unit.

PRECAUTIONS FOR HANDLING DISCS

■ With new discs

The symptoms described below sometimes occur when new discs are used:

- The disc is not played even when it is loaded.
- Operation changes to the next disc before the first disc has a chance to be played.
- The same disc is played over and over again.
- The designated disc is not played.



Remove all plastic particles of burr from surfaces of disc before loading in magazine.

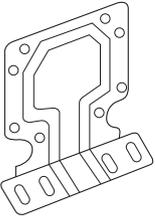
These symptoms occur when there are burrs on the center hole or outside circumference of the disc and, as a result, the disc has not been loaded properly or the disc catches on something inside the magazine. In cases like these remove the burrs using a ball point pen or similar implement, as shown in the figure on the right.

WARNING

- Although protective film is being marketed as CD accessories, use of these products will result in malfunctions and should absolutely be avoided.

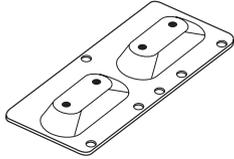
INSTALLATION PARTS

Bracket (A)



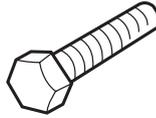
x 2

Bracket (B)



x 2

Hexagonal Bolt
(M6 x 12)



x 4

Truss Screw
(M4 x 5)



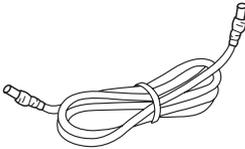
x 4

Tapping Screw
(M5 x 12)



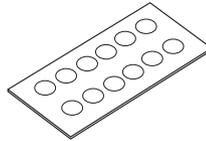
x 4

DIN 8
Pin Cable



x 1

Seal



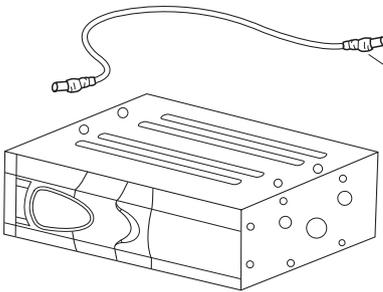
x 1

Double
Sided Tape



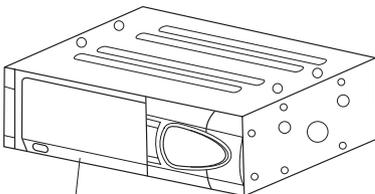
x 2

WIRING



Connect this cable to the terminal of the CD player.

RESET FUNCTION



Reset button

The reset button must be activated with either a ball point pen or thin metal object. It is to be activated for the following reason:

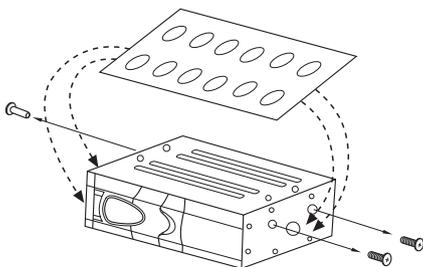
- Initial installation of the unit when all wiring is completed.
- Some functions do not operate.

BEFORE INSTALLING THE UNIT

Transport Lock Screws

The mechanism in the CD changer is "locked" into place during shipment by the transport screws.

Be sure to remove the screws prior to installation.



Caution

After removing the transport lock screws, place the supplied seals over the screw holes.

These seals are used to keep dust, which could cause a malfunction, out of the unit.

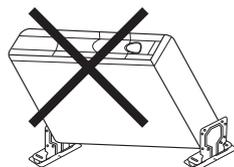
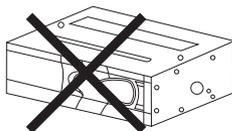
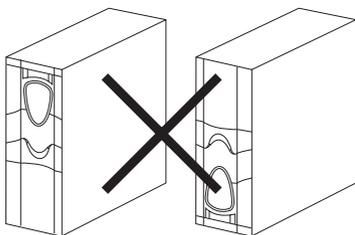
Installation and Wiring Precautions

1. To prevent a short-circuit.
 - Be sure to turn off the ignition and remove the negative (-) battery cable prior to installation.

Note

If the changer is to be installed in a car equipped with an on-board drive or navigation computer, do not disconnect the battery cable. If the cable is disconnected, the computer memory may be lost. Under these conditions, use extra caution to avoid causing a short circuit during installation.

2. Do not install the unit in the following locations.
 - Locations exposed to direct sunlight.
 - Where hot air is discharged from the car-heater.
 - When proper installation is not possible and where a great deal of vibration is generated.
3.
 - Be sure to use the supplied brackets and screws.
 - When installing the unit, do not use any screws that are part of the brake or steering system.
4. This unit cannot be installed in any way except that which is authorized (on its side, on its end, at a 45° angle or suspended). Installing it with its side facing down upside down can cause malfunctioning.



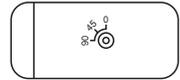
Position of the built-in anti-vibration board

This unit can be installed horizontally (suspended), vertically, and at a 45° angle. Once the installation position has been decided, it's necessary to set the position of the built-in anti-vibration board inside the unit. Please do this before performing the procedure listed below. Vibration may cause the disc to skip if the unit is used before properly setting the anti-vibration board.

- At the time of shipping, the built-in anti-vibration board is set for horizontal installation “0”.
- There are built-in anti-vibration boards on both the left and right sides.
- Set the anti-vibration board position with a screwdriver before attaching the brackets.

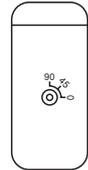
For use when unit is installed horizontally or suspended:

Confirm that the built-in anti-vibration board is set to position “0”.



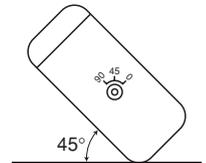
For use when unit is installed vertically:

The built-in anti-vibration board should be set to position “90”.



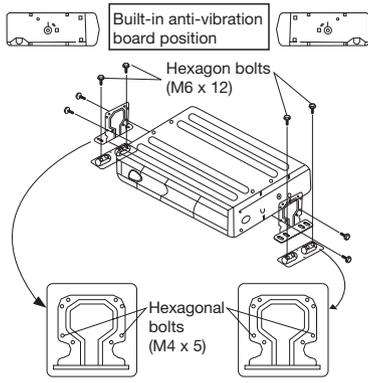
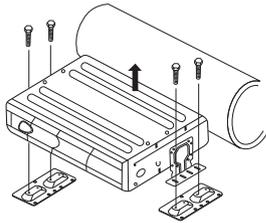
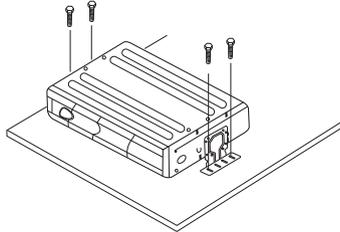
For use when unit is installed at a 45° angle:

The built-in anti-vibration board should be set to position “45”.



INSTALLATION

Procedure for Installation on Carpet (Horizontal Position)

<p>1</p>	<ul style="list-style-type: none">• Confirm that the built-in anti-vibration boards on both the left and right sides are set to the horizontal installation position “0”.• Attach the left and right brackets (A) using the hexagonal bolt (M4 x 5).• Attach the left and right brackets (A) to their respective brackets (B) using the hexagonal bolts (M6 x 12) and the hexagonal nuts (M6).	 <p>Built-in anti-vibration board position</p> <p>Hexagon bolts (M6 x 12)</p> <p>Hexagonal bolts (M4 x 5)</p>
<p>2</p>	<ul style="list-style-type: none">• Pull back the carpet and determine where to attach the unit.• Stick the supplied double-sided tape to the bottom of the brackets (B) and peel off the paper backing.• Affix the unit to the floor by pressing in place.	<p>3</p> <ul style="list-style-type: none">• Remove the hexagonal nuts and take off the changer. 
<p>4</p>	<ul style="list-style-type: none">• Using a knife, cut “X”s in the carpet directly above the brackets (B) bolts.• Return the carpet to its original position allowing the bolts to stick through.	<p>5</p> <ul style="list-style-type: none">• Once more, use the hexagonal nuts to attach the changer on top of the carpet. 

Procedure for Installation on Carpet (Vertical Position)

<p>1</p>	<ul style="list-style-type: none"> • Set that the built-in anti-vibration boards on both the left and right sides are set to the vertical installation position “90”. • Attach the left and right brackets (A) using the hexagonal bolt (M4 x 5). • Attach the left and right brackets (A) to their respective brackets (B) using the hexagonal bolts (M6 x 12) and the hexagonal nuts (M6). 	
<p>2</p>	<ul style="list-style-type: none"> • Pull back the carpet and determine where to attach the unit. • Stick the supplied double-sided tape to the bottom of the brackets (B) and peel off the paper backing. • Affix the unit to the floor by pressing in place. 	<p>3</p> <ul style="list-style-type: none"> • Remove the hexagonal nuts and take off the changer.
<p>4</p>	<ul style="list-style-type: none"> • Using a knife, cut “X”s in the carpet directly above the brackets (B) bolts. • Return the carpet to its original position allowing the bolts to stick through. 	<p>5</p> <ul style="list-style-type: none"> • Once more, use the hexagonal nuts to attach the changer on top of the carpet.

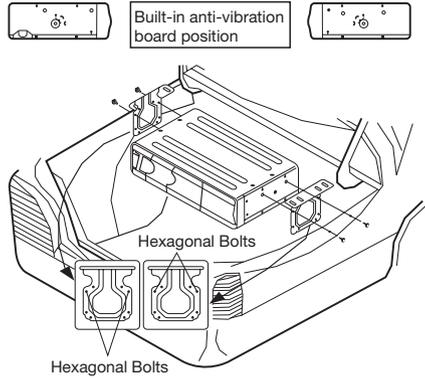
Procedure for Installation on Carpet (at a 45° angle)

<p>1</p>	<ul style="list-style-type: none"> • Set the built-in anti-vibration boards on both the left and right sides to the 45° installation position “45°”. • Attach the left and right brackets (A) using the hexagonal bolt (M4 x 5). • Attach the left and right brackets (A) to their respective brackets (B) using the hexagonal bolts (M6 x 12) and the hexagonal nuts (M6). 	<p>Built-in anti-vibration board position</p> <p>Hexagon bolts (M6 x 12)</p> <p>Hexagonal bolts (M4 x 5)</p>
<p>2</p>	<ul style="list-style-type: none"> • Pull back the carpet and determine where to attach the unit. • Stick the supplied double-sided tape to the bottom of the brackets (B) and peel off the paper backing. • Affix the unit to the floor by pressing in place. 	<p>3</p> <ul style="list-style-type: none"> • Remove the hexagonal nuts and take off the changer.
<p>4</p>	<ul style="list-style-type: none"> • Using a knife, cut “X”s in the carpet directly above the brackets (B) bolts. • Return the carpet to its original position allowing the bolts to stick through. 	<p>5</p> <ul style="list-style-type: none"> • Once more, use the hexagonal nuts to attach the changer on top of the carpet.

Procedure for Installation (Suspended Position)

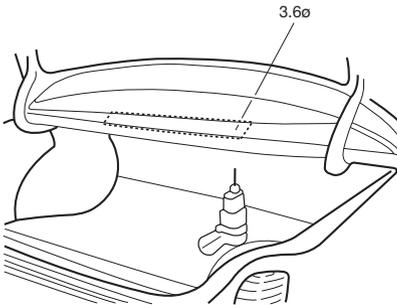
1

- Confirm that the built-in anti-vibration boards on both the left and right sides are set to the horizontal installation position "0".
- Attach the left and right brackets (A) using the hexagonal bolt (M4 x 5).



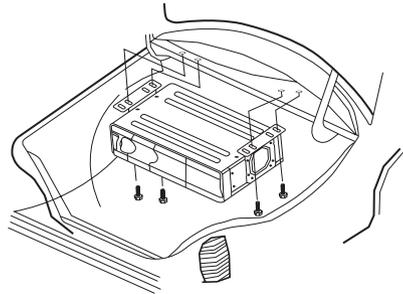
2

- Determine the mounting location and drill four mounting holes.



3

- Attach the CD changer with the tapping screws (M5 x 12).



HANDLING THE DISCS

Dirt, dust, scratches and warpage cause sound skips during playback and a deterioration of sound quality. How to take care of your disc:



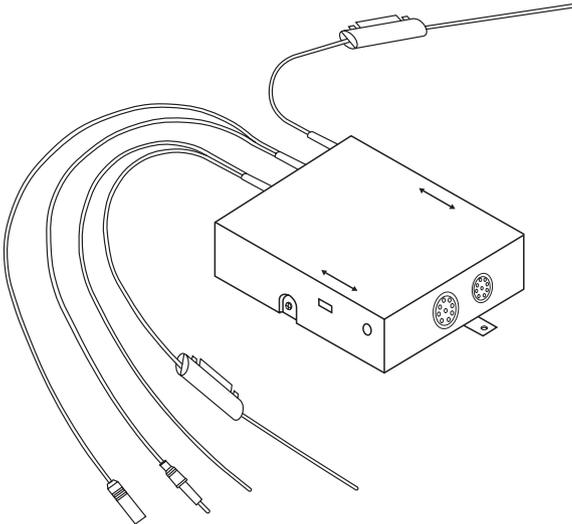
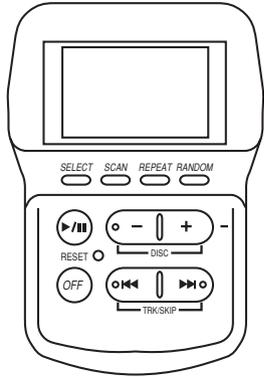
1. Use compact discs that have the mark shown on the right.
2. Fingerprints and dust should be carefully wiped off the disc's signal surface (glossy side) with a soft cloth. Unlike conventional records, the compact disc has no grooves to collect dust and microscopic debris, so gently wipe with a soft cloth should remove most particles. Wipe in a straight motion from the inside to the outside of the disc. Small dust particles or light stains will have absolutely no effect on reproduction quality.
3. Never use such chemicals as record sprays, antistatic sprays or fluid, benzene or thinner to clean compact discs. Such chemicals would irreparably damage the disc's plastic surface.
4. Discs should be put back in their cases after to avoid serious scratches that could cause sound skip.
5. Do not expose discs to direct sunlight, high humidity, or high temperatures for extended periods of time. Long exposure to high temperatures can warp the disc.
6. Do not stick paper or write anything with a ball point pen on the disc surface.

TROUBLESHOOTING

An error made in operation or in the connections is sometimes mistaken for a failure or breakdown. Perform the checks described in the following table before calling in the servicing engineer.

Symptom	Cause	Remedy
No power.	Improper connection.	Check connections.
Magazine cannot be installed.	Direction in which it is inserted is wrong.	Insert it in proper direction.
CD is not played.	Disc has been loaded upside down.	Load disc with play side facing up.
Noise is heard during playback or sound is intermittent.	Large scratches on disc or warped disc.	Compare sound with another disc. If sound from second disc is acceptable, first disc is defective.
	Extremely dirty disc.	Clean disc.
	Transit screws still in place.	Remove screws (x 3) on bottom of unit and then use.
	Built-in anti-vibration board is installed in wrong direction.	Install board in proper direction. (Refer to "installation" in Operating Instructions.)

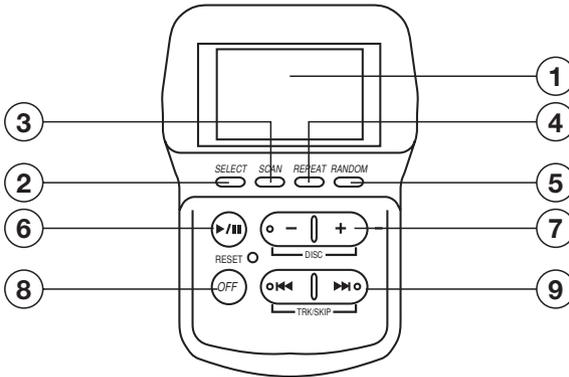
OPERATING INSTRUCTIONS



CD Changer Remote Control System

PARTS AND THEIR FUNCTIONS

Control section

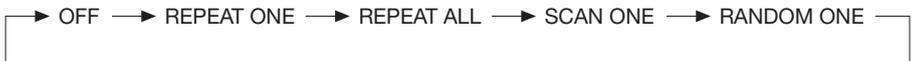


Liquid Crystal Display (LCD) - (1)

LCD display will only be active when the changer power is on. This display indicates all operation key's, including DISC number, track number.

Select Button (2)

Press this button to select functions. Functions are shown below:



Scan Play Button (Track Scan) - (3)

Upon pressing this button. "SCAN ONE" is displayed, on the lower left corner LCD display. The unit will play each track on disc for 10 seconds. Press this button for a second, "SCAN ALL" will be shown on the display. When "SCAN ALL" function is activated, the first 10 seconds of each disc will be played in sequence.

Repeat Play Button (Track Repeat) - (4)

This is used for repeating Track play. Upon pressing this button once, "REPEAT ONE" will be displayed on the LCD, and the playing will be repeated. When passed long, "REPEAT ALL" will be shown the Track is repeated in all disc.

Random Play Button (Track or DISC Random) - (5)

This is used for random selection Disc play, and sequence.

Once this button is pressed. "RANDOM ONE" is displayed in the Upper left corner of LCD commander, and disc selection will begin random play.

Press this button for a second, "RANDOM ALL" will be shown on the display. When "RANDOM ALL" function is activated, all tracks of each CD will be played in random order until all of them have been played once.

To release the random selection function, push the random button again.

Play/Pause Button (Play/Pause) - (6)

To pause all play functions of CD Changer, push the "Pause" button. To return to play mode, press the "Pause" button again.

Disc Selection Button (+ / -) - (7)

Press + / - button to select the desired DISC.

Power Button (Power On/Off) - (8)

Press this button to turn On/Off the changer.

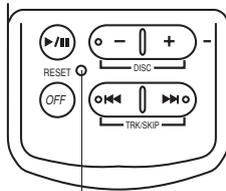
Track Selection (Track Up/Down) - (9)

These buttons are used to search for a disc or track quickly. Press T-Up or T-Down button to search to the desired track or disc. Disc and track information will be displayed on the LCD.

Reset Button

A reset button is located on the front panel of the unit which must be activated with a pen tip or other thin object as it is recessed to prevent accidental engagement.

1. Initial installation after all wiring is completed.
2. If abnormal disc operation is encountered, the reset button may be pressed to clear the system and return to normal operation.



Reset button

BEFORE USING THE SYSTEM

SETTING UP FOR OPERATION

Be sure to press reset button when all wiring is completed. Load the discs into the CD magazine and install the magazine into the CD changer.

Wiring — Using FM Modulator

This system is designed to convert CD sound into FM signals (89.1 MHz or 88.7 MHz) and play them on the existing FM car stereo. Carry out the steps outlined below before using the system.

Turn on the car stereo and select FM band operation. Tune the radio to either 89.1 or 88.7 MHz (depending on frequency to which the installer has set the unit) or push the pre-set memory button that has been set as per the above description.

Power ON and Play

Turn on the changer by pressing the OFF button on the remote controller.

The LCD panel on the display unit will illuminate and play of first disc will begin.

Adjust volume, balance and tone to your taste by using the controls on the car stereo.

CD CHANGER OPERATION

Listening to the CD Play

- **Playing a CD**

Press the play/pause button ().

Adjust the volume and tone using the FM car stereo to which the system is connected.

* When using the system for the first time or when the CD magazine has just been replaced, play starts from the first track on the first disc.

- **To temporarily stop CD play**

Press the play/pause button () during play. Disc number flashes on the display and play is temporarily stopped.

Press the button again to resume play starting from where was stopped.

* When the pause mode is maintained for 5 minutes or more, the power will be automatically turned off.

- **Selecting the disc to be played**

Display the number of the disc to be heard using the disc selector button (+ / -).

To advance to the next disc, press + .

To advance to the previous disc, press - .

- **Selecting a track**

Display the number of the track to be heard using the track skip button ().

To advance to the next track, press  .

To return the previous track, press  .

* Pressing  once returns play to the start of the track now being played.

Playing in Other Modes

- **Scan play**

- When the scan button (SCAN) is pressed, "SCAN ONE" appears, and the intro of each track on the disc now heard is played for 10 seconds each, and this operation is repeated.

- Press this button for a second, "SCAN ALL" will be shown on the display.

When "SCAN ALL" function is activated, the first 10 seconds of each disc will be played in sequence.

- Press the scan button again while the intro of a track or disc you want to hear in its entirety is being played. Normal play is resumed starting from the track during which the scan play function was released.

- **Repeat play**

- When the repeat button (REPEAT) is pressed, "REPEAT ONE" appears, and the track now heard is played repeatedly.

- Press the repeat button again to release the repeat play function.

- Pressed long, "REPEAT ALL" will be shown on display. When "REPEAT ALL" is active, the entire disc is repeated.

- **Random play**

- When the random button (RANDOM) is pressed, "RANDOM ONE" appears, and the tracks on the disc now heard are played in a random order. When all the tracks have been played, they will be played again, this time in a different random order.
- Press this button for a second, "RANDOM ALL" will be shown on the display. When "RANDOM ALL" function is activated, all tracks of each CD will be played in random order until all of them have been played once.
- Press the random button again to release the disc random play function.

Listening to the radio or tape

Press the power off button () to stop the CD play, and listen to the radio or tape.

- * Noise is heard and the reception deteriorates when listening to the radio without stopping CD play first.
To resume CD play, set the radio's FM frequency to 89.1 MHz or 88.7 MHz and press the play/pause button.

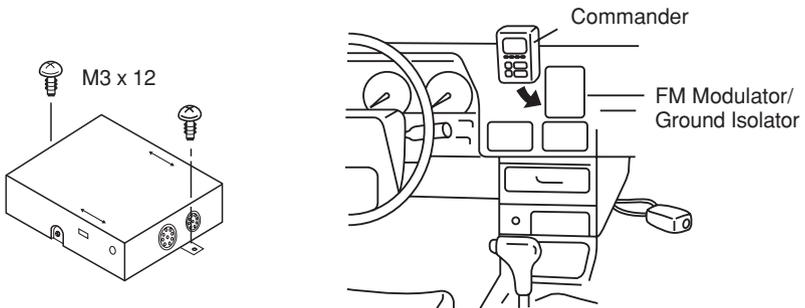
INSTALLATION

Procedure To Mount The CD Changer Commander unit

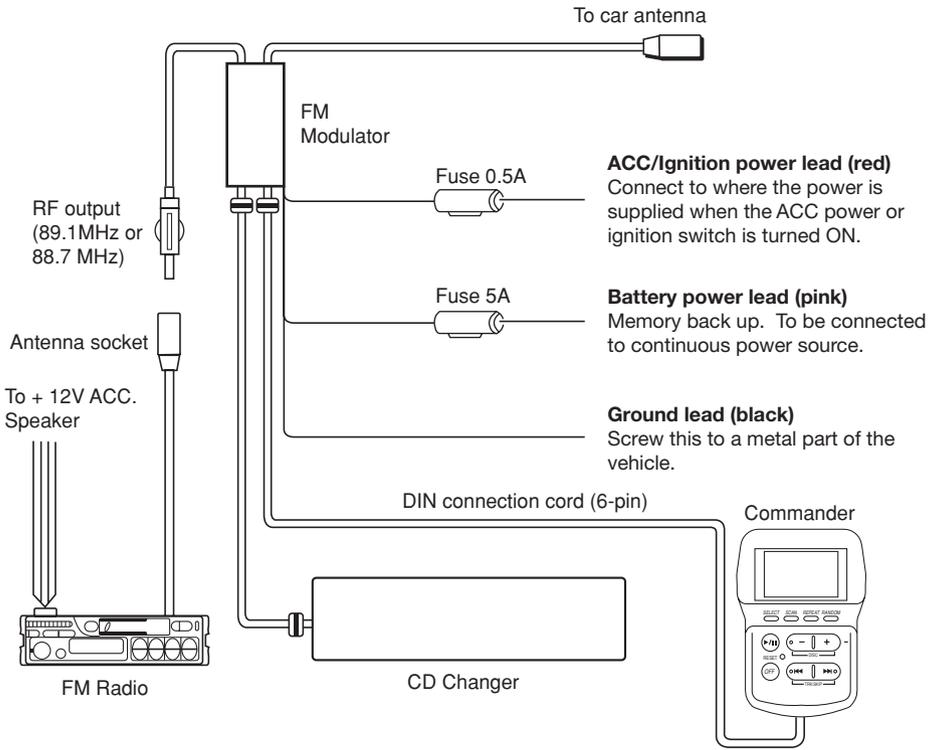
1. Determine where the commander unit will be located.
2. Be sure that the mounting surface where the commander unit will be located, is clean and dry.
3. Remove the protective paper from the back of the double sided tape.
4. Apply the commander unit to the desired location.

Installation of the FM Modulator/Ground Isolator

Install the FM Modulator/Ground Isolator to the floor or other surface with the included tapping screws (M3 x 12).

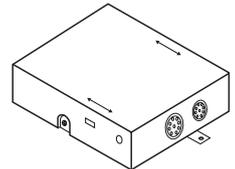


Wiring — FM Modulator unit

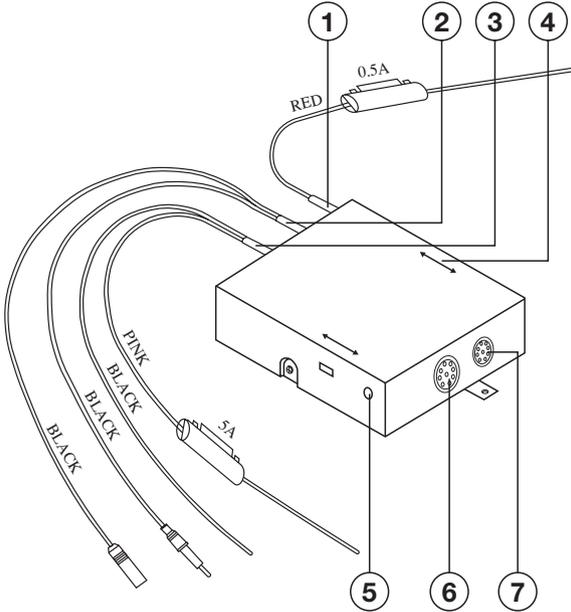


Interference on 89.1 MHz

- If a clear signal cannot be obtained on 89.1 MHz, change the position of the frequency select switch on the back of the FM Modulator and tune the radio to 88.7 MHz when using the CD changer.
- Select a frequency before mounting the FM Modulator. Radio sensitivity is slightly reduced when the FM Modulator is connected.
- **RESET SWITCH**
A reset switch is located at the bottom of the FM modulator can only activated by a thin pointed object when:
 1. After all the wiring installation completed.
 2. If abnormal disc operation occurs.



Control and Function Keys



1. +12V TO IGNITION

Connect the red power wire (with in-line fuse holder) to a point in your vehicle's fuse block that has power only when you turn the vehicle's key to either the accessory (ACC) or START position.

2. ANTENNA

If your system does not have an RCA input jack, use the FM Modulator to convert CD Changer's sound to FM signal. You can then hear it by tuning your vehicle system to FM frequency.

- Disconnect your vehicle's antenna from your vehicle's sound system, then connect the antenna to the FM Modulator's large black antenna connector.
- Connect the FM Modulator's antenna plug to your sound system's antenna jack.

3. GROUND (-) / BACK UP

- Connect the black ground wire to a chassis ground, such as a metal screw attached to a metal part of the vehicle's frame. Be sure that the screw is not insulated from the chassis by a plastic part.
- Connect the pink memory back up wire (with in-line fuse holder) to your vehicle battery's positive (+) terminal or to a fuse that provides a continuous source of 12 volts.

4. OUTPUT FREQUENCY

Turn the switch on the side of the FM Modulator to choose the output frequency between 89.1 MHz and 88.7 MHz with a screwdriver. When the reception is interfered with other station on the one frequency, switch to the another frequency.

5. RESET (FOR MODULATOR FUNCTION ONLY)

If the CD Changer locks up or does not work properly, press the reset button with a pointed object.

6. CD CHANGER

Connect the CD Changer to the FM Modulator by inserting the plug on one end of the CD Changer cable into the jack on the FM Modulator. Then insert the plug on the cable's other end into the jack on the left side of the CD Changer.

7. CD CHANGER COMMANDER

Connect the CD Changer commander to the FM Modulator. Then, insert the CD Changer controller cable's plug into the jack on the FM Modulator.

TROUBLESHOOTING

An error made in operation or in the connections is sometimes mistaken for a failure or breakdown. Perform the checks described in the following table before calling in the servicing engineer.

Symptom	Cause	Remedy
No power.	Improper connection.	Check connections.
Magazine cannot be installed.	Direction in which it is inserted is wrong.	Insert it in proper direction.
CD is not played.	Disc has been loaded upside down.	Load disc with play side facing up.
Noise is heard during playback or sound is intermittent.	Large scratches on disc or warped disc.	Compare sound with another disc. If sound from second disc is acceptable, first disc is defective.
	Extremely dirty disc.	Clean disc.
	Transit screws still in place.	Remove screws (x 3) on bottom of unit and then use.
	Built-in anti-vibration board is installed in wrong direction.	Install board in proper direction. (Refer to "installation" in Operating Instructions.)

Error Messages showing on display of controller:

	Cause	Remedy
E-01	Mechanism problem.	Press "RESET" button.
	Improper magazine installation.	Eject magazine and try again.
E-07	Improper magazine installation.	Eject magazine and try again.
	Disc has been loaded up side down.	Load disc with label facing up.
	Not original disc.	Try another original disc.
	Laser lens in high humidity.	Turn on the car and wait approximately one hour.
	Dirty disc	Clean the disc and load the disc as instruction manual mentioned.

