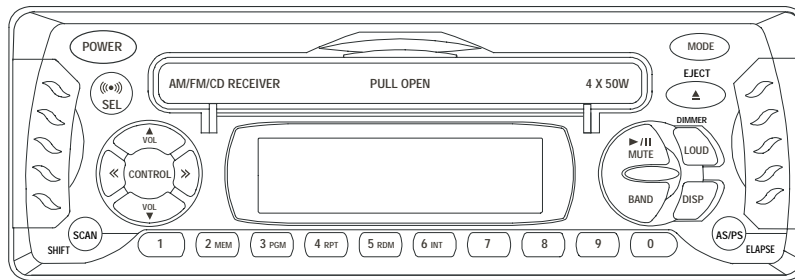


Installation and Operations Manual



M5000CD
Waterproof
AM/FM/WB and CD Stereo Receiver

**LINEAR
SERIES**

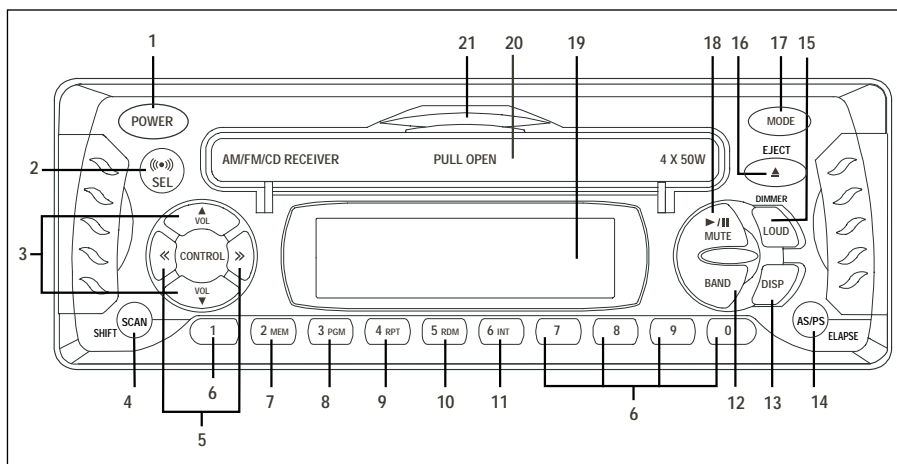
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Introduction

Your new M5000CD entertainment system has been designed to give you many years of listening pleasure. Take a moment to read through this manual and become familiar with the operations and features of this outstanding product.

It is advisable to keep this manual in your vehicle so it is readily available for reference. Be sure to fill out and send in your warranty card to ensure that you receive the full benefits of warranty repair in the unlikely event that your system will need service. We are confident that you will thoroughly enjoy your new mobile entertainment system.

Location and Function of Controls at a Glance



1. **Power:** Turns the unit On/Off.
2. **Audio Mode Selection Button:** Selects the desired audio mode in the following order: Volume, Bass, Treble, Balance and Fader.
3. **Audio Control Buttons:** Adjusts the Volume, Bass, Treble, Balance and Fader.
4. **Scan Button:** Scans through the strong stations in the current radio band.
5. **Multi-Function Buttons:** Adjusts the radio frequency, sets the clock, and changes CD tracks.
6. **Multi-Function Button 1, 7, 8, 9, 0:**
 - Radio:** Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).
 - CD:** Directly accesses CD track number (See CD Operation for more information).
7. **Multi-Function Button 2/MEM:**
 - Radio:** Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).
 - CD:** Directly accesses CD track number. Programs a CD track into memory (See CD Operation for more information).

Location and Function of Controls at a Glance


8. **Multi-Function Button 3/PGM:**
 - Radio:** Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).
 - CD:** Directly accesses CD track number. Enters CD track program mode (See CD Operation for more information).
9. **Multi-Function Button 4/RPT:**
 - Radio:** Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).
 - CD:** Directly accesses CD track number. Continuously repeats the same track (See CD Operation for more information).
10. **Multi-Function Button 5/RDM:**
 - Radio:** Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).
 - CD:** Directly accesses CD track number. Plays all tracks on the current disc in random order (See CD Operation for more information).
11. **Multi-Function Button 6/INT:**
 - Radio:** Recalls a memorized radio station, and programs a radio station into memory (See Radio Operation for more information).
 - CD:** Directly accesses CD track number. Plays the first several seconds of each track on the current disc (See CD Operation for more information).
12. **Band Button:** Selects the radio band in the following order: FM1, FM2, AM, WX.
13. **Display Button:** Displays either the clock or radio station. (See setting the clock for more information).
14. **AS/PS Elapse Button:**
 - Radio:** Automatic memory storing and preset scan (See Radio Operation for more information).
 - CD:** Displays elapsed time of current CD track.
15. **Loud Button:** Enhances high frequency and low frequency sound quality.
Dimmer Button: Adjusts the brightness of the LCD display backlight.
16. **Eject Button:** Ejects the disc from the CD slot when the CD door is open.
17. **Mode Button:** Changes sequentially through the following sources:
Radio Tuner > CD > CD Changer > Auxiliary > Radio Tuner.
18. **Play/Pause and Mute Button:**
 - Radio/Aux In:** Mutes audio level.
 - CD:** Starts CD play function or pauses CD play function.
19. **Display Area:** Displays Radio, CD and Clock functions.
20. **Waterproof CD Slot:** To access the CD Slot, pull the tab at the top of the door to open.
21. **Reset Button:** Resets control logic of CPU in the event of a lockup. See General Operations/Reset button for more details.

Radio Operation

Listening to the Radio

1. Push the "POWER" button (1) once to turn the unit on.
2. Press the "BAND" button (12) to select a radio band: FM1, FM2, AM or WX (weather band).
3. AM or FM Station Selection

Automatic Seek Station Selection: Press the ◀ or ▶ button (5) to automatically seek the next strong station.

Scan Station Selection: Press the  button (4) to automatically scan through strong stations in the current radio band. The radio will pause for 5 seconds at each strong station. Each frequency will flash in the display. Press the scan button again to hold the current station.

Manual Station Selection: Press the ◀ or ▶ button for more than 3 seconds to manually select stations, and "MAN" will appear in the display. Use either button to manually seek up and down the frequency scale.

Note: If either button is not pressed for several seconds, the unit will return to Automatic Seek Station selection and "AUTO" will appear in the display.

Weather Band Station Selection (WX)

Press the "BAND" button four times to select WX, then use the ◀ or ▶ button to manually seek the stations.


Programming the Radio

You can program up to 20 FM radio stations and 10 AM radio stations.



Manual Station Recall Programming

1. Press the "BAND" button (12) to select a radio band: FM1, FM2, or AM.
2. Select the desired station.
3. Press and hold one of the ten station recall buttons (6-11), the button number and "CH" will appear in the display area. Release the button.
4. Repeat the Steps 1-3 to memorize additional stations as desired.

Automatic Station Store




1. Press the "BAND" button (12) to select a radio band: FM1, FM2 or AM.
2. Press the  button (14) for more than 2 seconds, the radio will then search the current frequency and check the signal strength until the six strongest stations are stored into the corresponding preset number button. When completed, the system will scan the stored stations automatically.

Preset Scan

Press the  button (14) to scan the preset stations. The radio will hold at that preset number for several seconds, then will scan again. To stop scanning when a desired station is reached press the  button again.

Sound Controls



Adjusting the Volume, Bass Treble, Balance and Fader

1. Press the  button (2) to select the desired audio mode. The audio modes will be displayed in the following order: Volume, Bass, Treble, Balance and Fader.
2. Press the  or  buttons (5) to adjust the sound of the audio mode selected.

Initial Volume Level

To program the Initial Volume Level, adjust the volume to the desired level, then press the "POWER" button for more than 3 seconds. The next time the unit is turned on, the volume will be at this initial level.


Adjusting the Audio Beep

Press the  button for more than 2 seconds to turn beep On/Off. When the beep is on the  icon will be displayed.

Adjusting the Loud Feature

Press the LOUD button (15) to increase the bass and treble output, "LOUD" will then be displayed. Press the button again to release this function.

Mute

In Radio/Aux In mode, press the  button (18) mute audio level. Press the button again to release this function.

General Operations

Setting the Clock

1. Press DISP button (13) for more than 3 seconds until the clock shown in the display area is flashing.
2. Press the ◀ button to adjust the hours
3. Press the ▶ button to adjust the minutes.

Display Priority

Clock Display Priority

Press and hold DISP button (13) while pressing the ▶ button to select Clock Priority. Pressing the DISP button while in Clock Priority will temporarily display selected station frequency.

In CD Mode:

When the display priority is set to "Clock", the clock will be displayed.

Pressing DISP button will temporarily display CD track number, time remaining or elapsed time depending on current CD display option selected. After 5 seconds the display will return to the clock.

Frequency Display Priority

Press and hold DISP button while pressing the ◀ button to select Frequency Priority. Pressing DISP button while in Frequency Priority will temporarily display clock.

In CD Mode:

When the display priority is set to "Frequency", the CD track number will be displayed.

Pressing the DISP button will temporarily display the clock. After 5 seconds the display will return to the CD display.

Selecting a Mode

Press the MODE button (17) to step sequentially through the following sources: Radio Mode to Radio Tuner > CD > CD Changer (optional) > Auxiliary > Radio Tuner.

Illumination Dimmer

Press LOUD / DIMMER button (15) for more than 2 seconds to adjust the brightness of the LCD display backlight.

Reset Button (21)


The Reset Button (21) is located behind the CD Door, and above the CD Slot. Activated the reset button with either a ballpoint pen tip or paper clip for the following reasons:

- After initial installation of the unit is completed.
- When the function buttons do not operate.
- Error symbol in the display.

If there is a disc in the slot when the reset button is pressed the disc will be ejected.

CD Changer Operation (Optional)

Select a Disc

1. Load your CD Changer with compact discs per the manufacturer's operating instructions.
2. Press the  SHIFT button (4) to enter Shift Mode. "SHIFT" will then appear in the display, indicating the CD Changer is active.
3. Press the ◀ or ▶ button to scroll through the CDs loaded in the CD Changer. If there isn't any operation for several seconds, the unit will exit Shift Mode automatically.

Notes on CD-Rs and CD-RWs:

- The unit cannot play a CD-R and CD-RW that is not finalized. (Please refer to the manual of your CD-R/CD-RW recorder or CD-R/CD-RW software for more information on the finalizing process).
- This unit will not play MP3 music or WMA music recorded on any CD-R or CD-RW disc.
- Be sure to only use discs with the following labels in this unit:



CD Player Operation

Inserting and Ejecting a Disc

Pull the tab at the top of the CD Door, and the door will open. Push a disc into the CD Slot (20), label side up, and the disc will begin to play.

Press the ▲ EJECT button (16) to stop CD play and eject the disc. The disc will also eject automatically when the CD Door is opened.

Select Tracks

Press the ◀ or ▶ button (5) to move to the previous track or next track. The track number appears in the Display Area.

Fast Forward and Fast Reverse

Press and hold the ◀ or ▶ button to fast forward or fast reverse. Disc play starts from when you release the button.

Pause Disc Play

Press the ▶/|| button (18) to pause the CD player. Press it again for several seconds to resume play.

Repeat the Same Track

Press the 4 REP button (9) for several seconds to continuously repeat the same track. Press it again for several seconds to stop repeat.

Play All Tracks in Random Order

Press the 5 RDM button (10) for several seconds to play all tracks on the current disc in random order. Press it again for several seconds to stop random play.

Intro Scan

Press the 6 INT button (11) for several seconds to play the first 10 seconds of each track. Press it again for several seconds to cancel the function and listen to the track.

Program CD Tracks

Use the Program function to select up to 32 CD tracks to play in any order. The Program function allows you to select a track number for each spot in the playing sequence. A CD must be inserted to use the Program function.

1. Press the 3 PGM button (8) for several seconds to enter Program mode. PGM starts flashing and the "P-01" appears in the display.
2. Press the ◀ or ▶ button to choose a track number. Then press the 2 MEM button (7) to memorize it. Select the next track and it will memorize will be "P-02". Repeat these steps to program tracks in the

desired order. Then press the 3 PGM button for several seconds to play the CD in programmed order. When you have programmed 32 tracks, "FULL" will appear in the display.

- When the CD is played in programmed order, press the 3 PGM button for several seconds, then press it again for several seconds to exit the PGM mode.
- When the CD is playing in programmed order, pressing the 2 MEM button for several seconds will clear all the programmed content and "CLR" will appear in the display.
- If you don't press the 2 MEM button (7) to carry out program setting, press the 3 PGM button (8) for several seconds, "NO-P" will appear in the display.

Direct Track Access

While a CD music disc is playing, the station recall buttons 0 thru 9 can be used to access and play CD tracks directly (no need to scan or advance the tracks manually one-by-one to find the one you want to listen to). If you know the music track number you want to listen to, press the station recall button(s) that correspond to the desired track.

For example, if you are listening to track "1" and you want to hear track "3", press 3 PGM button. "T-03" will be displayed and track 3 will begin to play.

If the music track you want to listen to has a double digit number such as "15", press 1 and then press 5 RDM. The display will show "T-15" and track "15" will begin to play. You can direct access any track at any time.

Note: If you select a track number that does not exist on the CD, "NO TR" will be displayed. Select another track.

Track/Time Display

To display the running time/remaining time of a track, press the 14 ELAPSE button (14).

Wiring

Step 1: The radio chassis is designed to be "Panel Mounted" through a opening in the mounting panel. See the installation part of this manual for panel mounting.

Step 2: Bring all wiring for the connection of the unit (including the antenna) through the mounting hole. Connect the wiring as follows:

Yellow Wire (w/Fuse): Connect this wire to a constant +12 volt power source (a power source that is not controlled by the ignition key).

Red Wire: Connect this wire to a switched +12 volt power source (a power source turned on and off by the ignition key).

Blue Wire: Connect this wire to the (+) power antenna activation circuit. If no power antenna exists, tape-off the end of this wire to prevent shorting out of the unit.

Black Wire: Connect this wire to the frame of the vehicle (ground). This wire is the chassis grounding wire for the unit.

White Wire: Connect this wire to the Left Front Speaker (+) positive terminal or wire.

White Wire with Black Stripe: Connect this wire to the Left Front Speaker (-) negative terminal or wire.

Green Wire with Black Stripe: Connect this wire to the Left Rear Speaker (-) negative terminal or wire.

Green Wire: Connect this wire to the Left Rear Speaker (+) positive terminal or wire.

Gray Wire: Connect this wire to the Right Front Speaker (+) positive terminal or wire.

Gray Wire with Black Stripe: Connect this wire to the Right Front Speaker (-) negative terminal or wire.

Purple Wire with Black Stripe: Connect this wire to the Right Rear Speaker (-) negative terminal or wire.

Purple Wire: Connect this wire to the Right Rear Speaker (+) positive terminal or wire.

Yellow Cable with Red/White RCA Connectors: Connect to the audio line output of any additional audio or video sound source.

Gray Cable with Red/White RCA Connectors: Provides L/R Channel audio signal output to an additional amplifier.

Note: This unit is designed to connect to (4) four speakers. If the installation only requires (2) two speakers, use the White and Gray wire sets to connect the speakers.

WARNING!

Any wires left unconnected must be taped-off or capped off to prevent shorting.

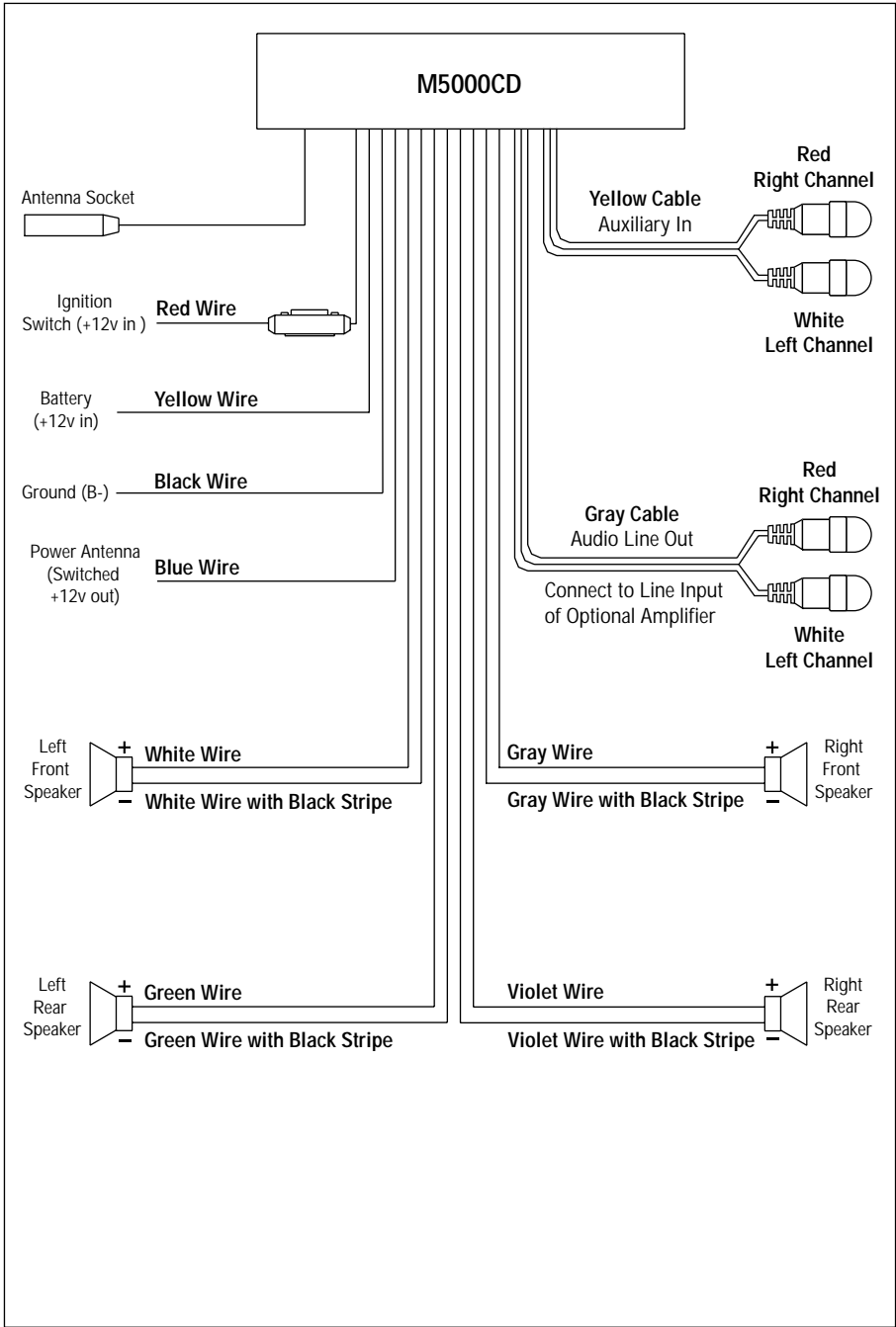
DO NOT connect speaker ground wires together.

DO NOT connect speaker ground wires to the chassis of the vehicle.

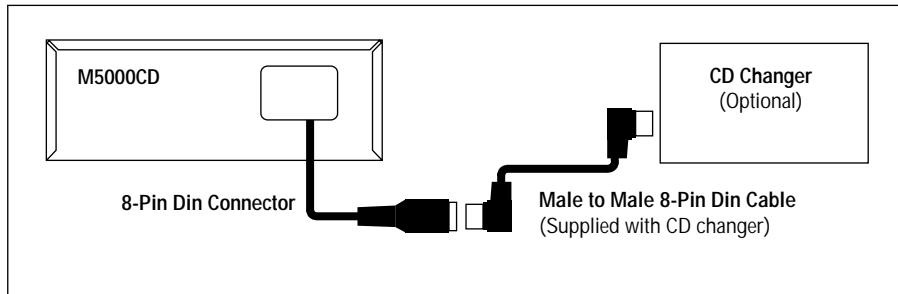
DO NOT connect front and rear speaker wires together.

FAILURE TO FOLLOW ANY OF THESE WARNINGS WILL RESULT IN DAMAGE TO THIS UNIT AND VOIDS THE WARRANTY.

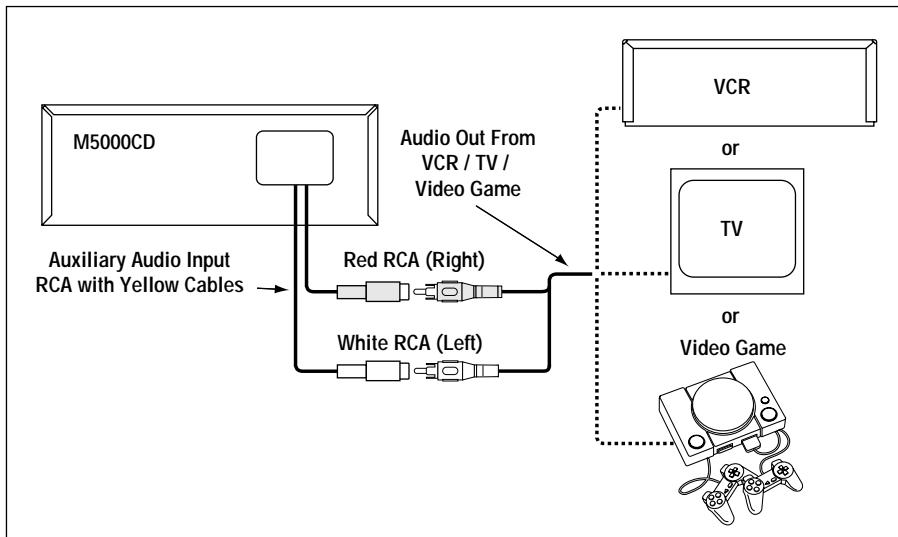
Wiring Diagram



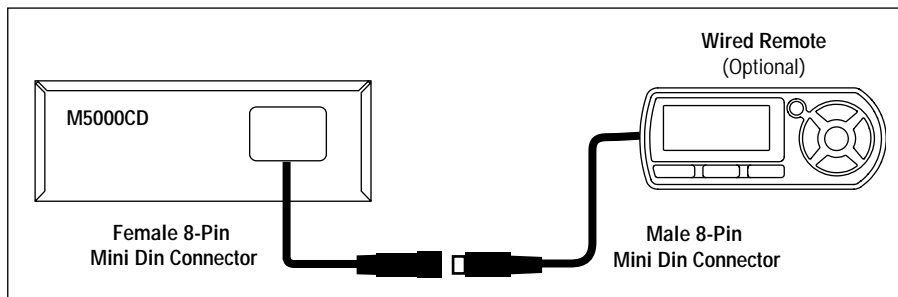
CD Changer Connection



Auxiliary Connection



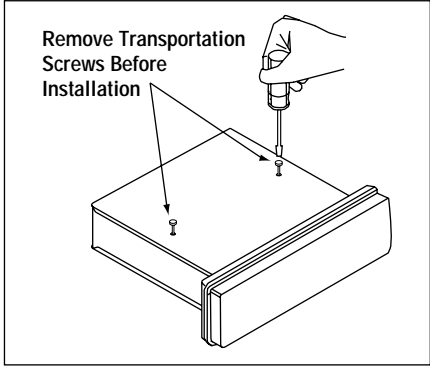
Wired Remote Connection



Installation

Remove Transportation Screws

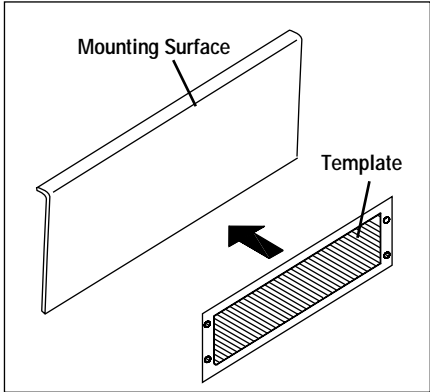
Before installing the unit, remove the two screws shown in the illustration below.



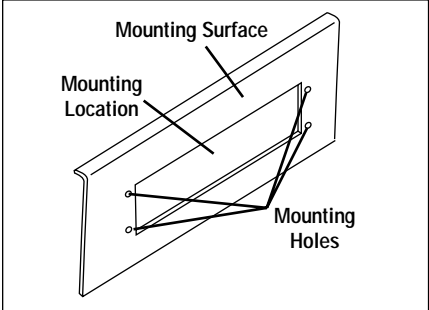
Note: If this unit is to be installed in a boat or a spa, you should use the two pieces of plastic film (30 mm X 20 mm) supplied to seal the two holes after removing the screws.

Installing the Unit

1. Using the mounting paper template supplied with the unit, determine the mounting location and then stick the template on the location.

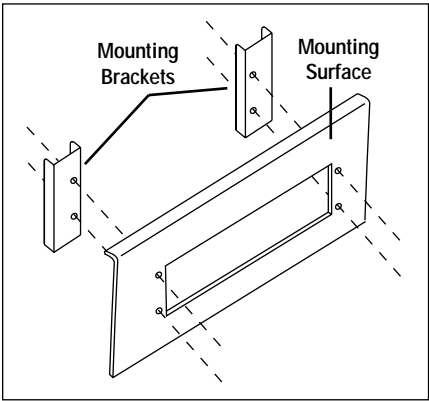


2. Cut and remove the hatching area on the template. Then drill four 1/8" mounting holes in the exact position according to the mounting paper.

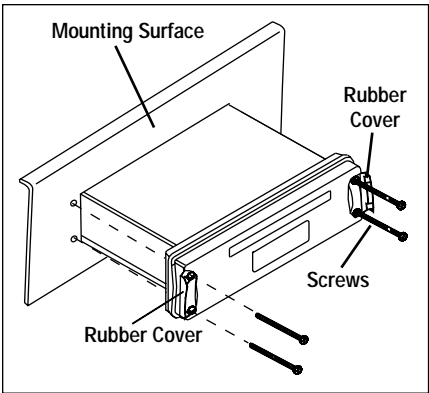


3. Use the glue paper to stick the two mounting brackets to the back of the mounting surface. The screw holes of the brackets must respectively aim at the mounting holes in order to fix the unit to the mounting surface.

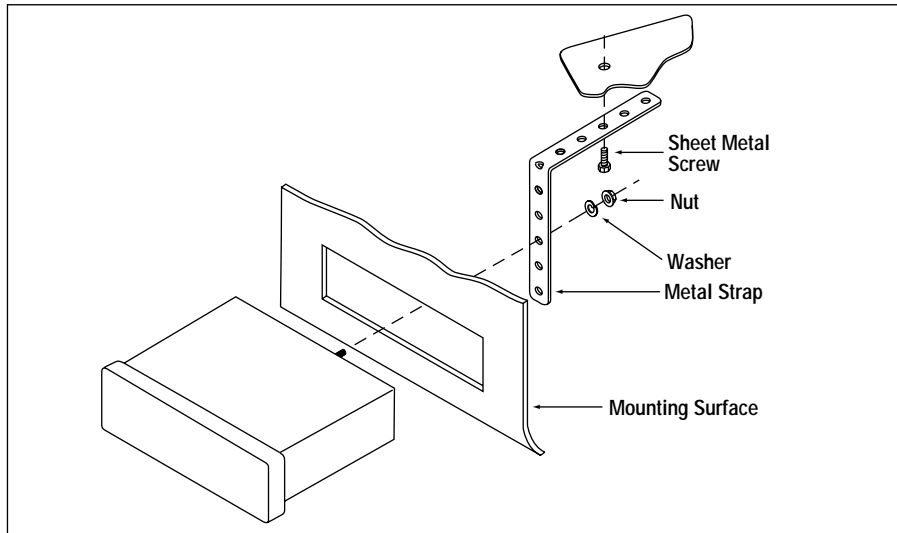
4. Open the two pieces of rubber cover on the unit



to display the four screw holes then using four screws (M4X30) to mount the unit to the dashboard.



Installation



Trouble Shooting

Before going through the trouble shooting table below, check the wiring connection. If the problem persists, consult your nearest service dealer.

SYMPTOM	CAUSE	SOLUTION
No power	The ACC Power Supply is not connected.	Both the red and yellow wires require power from the power source.
	The fuse is blown.	Replace the fuse.
Disc cannot be loaded, played or ejected	Presence of disc inside the player.	Remove the disc in the player, and replace it with another disc.
	Disc was inserted upside down.	Insert the compact disc with the label facing up.
	Compact disc is extremely dirty or disc is defective.	Clean the disc or try playing a another disc.
	Temperature inside the unit is too high.	Allow the unit to cool off, then try again.
	Condensation.	Leave the player off for an hour, then try playing it again.
No sound.	Volume is set at the minimum level.	Adjust volume to the desired level.
	Speaker wiring is not properly connected.	Check the wiring connection.
Sound skips.	The installation angle is more than 30 degrees	Adjust the installation angle to less than 30 degrees.
	Compact disc is extremely dirty or disc is defective.	Clean the disc or try playing a another disc.
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.
The radio does not work.	The antenna cable is not connected.	Insert the antenna cable firmly.
The radio station automatic does not work.	The signals are too weak.	Select a station manually.

Specifications

GENERAL

Power Supply**Requirements:**

DC 12 Volts, Negative
Ground

Chassis Dimensions:

178 mm (W) x 165 (D) x
50 (H)

Tone Controls:

Bass: 100 Hz \pm 10 dB
Treble: 10 kHz \pm 10 dB

Maximum Output Power:

4 x 50 watts

Current Drain:

15 Ampere (Max.)

CD PLAYER

Signal to Noise Ratio:

> 55 dB

Channel Separation:

> 50 dB

Frequency Response:

40Hz – 18 kHz

FM RADIO

Frequency Coverage:

87.5 to 107.9 MHz

Sensitivity (S/N=30dB):

3 μ V

Stereo Separation:

> 30dB

AM RADIO

Frequency Coverage:

530 to 1710 kHz

Sensitivity (S/N=20dB):

32 dBu

Warranty

ONE (1) YEAR LIMITED WARRANTY

Magnadyne Corporation or its authorized agents will within one year from the date of sale to you, repair, replace or refund the retail sales price of said product or any part thereof, at the option of the Magnadyne Corporation or its authorized agents, if said product or part is found defective in materials or workmanship, when properly connected and operating on the correct power requirements designated for the specific product. This warranty and Magnadyne Corporation or its authorized agents obligations hereunder do not apply where the product was: damaged while in the possession of the consumer, subjected to unreasonable or unintended use, not reasonably maintained, utilized in commercial or industrial operations, or serviced by anyone other than Magnadyne Corporation or its authorized agents, or where the warning seal on the product is broken or the power and/or plugs are detached from the unit. Magnadyne Corporation or any of its authorized agents will not assume any labor costs for the removal and reinstallation of any product found to be defective, or the cost of transportation to Magnadyne Corporation or its authorized agents. Such cost are the sole responsibility of the purchaser.

This warranty does not cover the cabinet appearance items or accessories used in connection with this product, or any damage to recording or recording tape, or any damage to the products resulting from improper installation, alteration, accident, misuse, abuse or acts of nature.

MAGNADYNE CORPORATION OR ITS AUTHORIZED AGENTS SHALL NOT BE LIABLE TO ANYONE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES OR CLAIMS EXCEPT THOSE ACCORDED BY LAW. NO EXPRESSED WARRANTY OR IMPLIED WARRANTY IS GIVEN EXCEPT THOSE SET FORTH HEREIN. NO IMPLIED WARRANTY SHALL EXTEND BEYOND ONE YEAR FROM THE DATE OF SALE.

This warranty extends only to the original purchaser of the product and is not transferable. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights that vary from state to state.

Defective merchandise should be returned to the original point of purchase or secondly, to:

Magnadyne Corporation, 1111 W. Victoria Street, Compton CA 90220
www.magnadyne.com

Return Authorization must be obtained before sending, or merchandise may be refused.