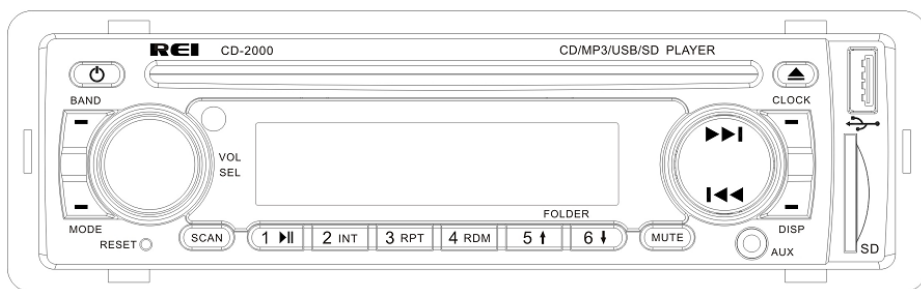




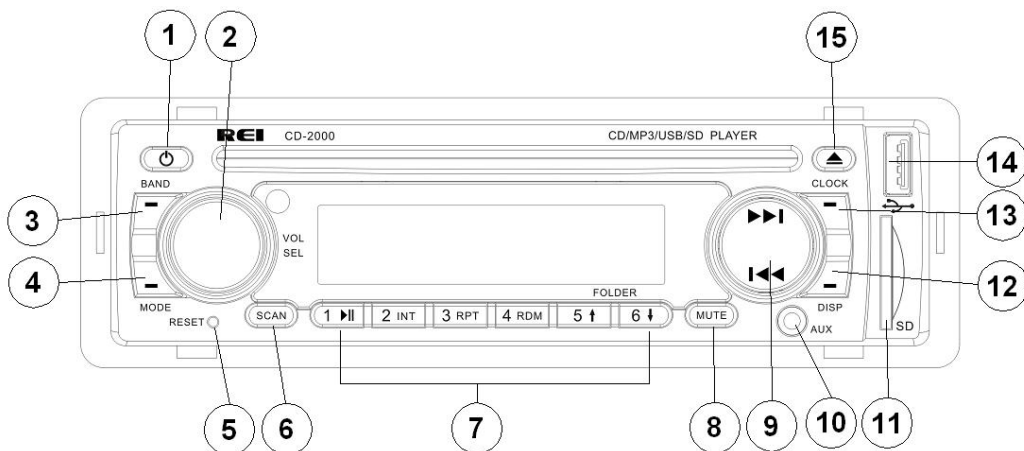
AM/FM/CD/MP3 Receiver with USB/SD & Auxiliary Input
3 Built-in Microphone inputs for PA Announcements



Installation/Operation Manual

50W x 4

CD-2000



CONTROLS AND INDICATORS

- (1) Power Button
- (2) Volume/Select Knob
- (3) Band Button
- (4) Mode Button
- (5) Reset Button
- (6) Scan Button
- (7) Preset Memory Buttons/r Playback Options
- (8) Mute Button
- (9) Radio Station Tune/Seek, Track Control Buttons
- (10) Front Auxiliary Input Jack
- (11) SD Card Input slot
- (12) Display Button
- (13) Clock Button
- (14) USB Input Slot
- (15) Eject Button

Thank you for purchasing the CD-2000 AM/FM/CD/MP3/USB/SD Receiver from REI.
This product is designed and tested to withstand temperature and vibration extremes.
Please read the owner's manual carefully before attempting to install.

**IF ADDITIONAL INSTALLATION COMPONENTS ARE NECESSARY, CONTACT YOUR REI
SALES REP FOR:**

**** OEM /FACTORY WIRING HARNESS ADAPTERS**

**** ANTENNAS & ANTENNA ADAPTERS**

**** SPEAKERS & GRILLS**

Radio Engineering Industries, Inc.

6534 "L" Street

Omaha, Nebraska 68117

www.radioeng.com

If you have an installation question or need installation assistance, please call the:

SERVICE HOT LINE

1-877-726-4617 Toll Free USA & CANADA

1-402-339-2200

AM/FM Stereo Receiver

30s Anti-skip CD

Front-panel USB type-A input

Front-panel SD/SDHC CARD input

Plays MP3/WMA file formats

Independent front panel 3.5mm and rear RCA auxiliary input jacks

Non-Volatile memory back-up

50W x 4 Output power

USA/EURO Radio Frequency modes

Amber LED backlighting

3 Microphone input jacks for PA announcements

OPERATION

- 1) **Power Button**
Press the Power Button to turn ON or OFF the unit. A red light means the unit is in standby, a Blue light means the radio is on.
- 2) **Volume/Select Knob**
Rotate the knob left or right to change the volume level.
Press the knob to select one of the following functions:
VOL---BASS---TREB---BAL---FAD
Rotate the knob to adjust the desired setting.
- 3) **Band Button**
Press this button to change radio bands as follows:
FM1—FM2—FM3—AM1—AM2
Press this button to confirm changes in the SETUP menu
- 4) **Mode Button**
Press this button to select source mode (RADIO/DISC/USB/CARD/AUX1/AUX2)
*USB and SD card must be inserted to activate these modes
- 5) **Reset Button**
If there is a malfunction of the unit, pressing the RESET button will clear the system
- 6) **Scan Button**
Press and hold this button for 2 seconds to auto program available stations into all the preset memory buttons. This function will erase previous memorized stations and store the newly searched stations. Once completed, the radio will scan for 5 seconds through each of the preset stations of either the AM or FM band.

Press this button to automatically preview all radio stations in that band for 5 seconds
- 7) **Preset Memory/Recall Buttons**
Press these buttons momentarily to select the preset stations.
Press and holding a button will preset the current station to the button being pressed.

During MP3 playback, use these buttons  to scroll through available folders.

 Press this button to PAUSE/PLAY the media (CD/SD/USB)
 Press and hold this button to select INTRO ON/OFF on CD playback
 Press and hold this button to change REPEAT from Track, Folder, All
 Press and hold this button to turn RANDOM ON/OFF
- 8) **Mute Button**
Press this button to mute the source audio.

9) TUNE / SEEK /TRACK Buttons

Under Radio mode, press the desired button to manually tune a station moving upward or downward. Press and hold button momentarily and the radio will automatically seek or down to the next available radio station. Press and hold button for 2 seconds and the radio continuously tunes up or down until the button is released.

When playing digital media, use these buttons to track UP/DOWN to the desired chapter to playback.

10) Auxiliary Input Jacks

The unit is equipped with a front panel 3.5mm auxiliary input so you can connect your external portable audio player or portable satellite radio receiver. Press Mode to display AUX 1 for operation. The radio is also equipped with a second Rear RCA AUX 2 input. Press mode to display AUX 2 for operation.

*It may be necessary to adjust the volume level of your portable device to achieve an optimal volume level.

11) SD Card Input

Insert the SD card and the radio will automatically switch to the CARD input and begin playback.

12) Display Button

Press this button to change display between available source information.

13) Clock Button

Press this button to change display between clock and source information.

Setting the Time:

Press this button momentarily to display the time. Next, press and hold this button until the hour display begins to flash. Rotate Volume/Select Knob to adjust the hour. Press the CLK button again, and the minute display will flash. Rotate Volume/Select Knob to adjust the minute. Press Volume/Select to save the desired time.

14) USB Input

Insert a USB drive and the radio will automatically switch to USB input and begin playback.

**Note: The unit's USB port does not support the Apple iPod or iPhone.

15) Eject Button

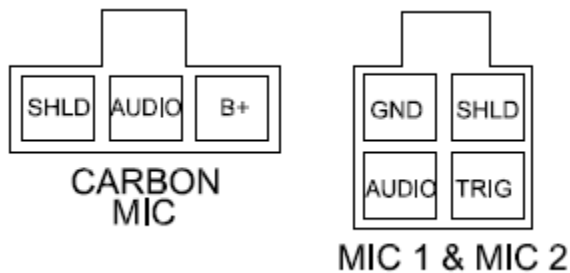
Press this button to eject CD disc.

PA OPERATION

The CD-2000 has three PA Microphone inputs, 2 Dynamic & 1 Carbon microphone input. All microphones have priority over all other audio modes and MUTE the source audio being played when keyed. When the PA is triggered, the front display will show MIC 1, MIC 2 or MIC, until the trigger is un-keyed. Once released, it will return to the previous source mode at the previous volume level.

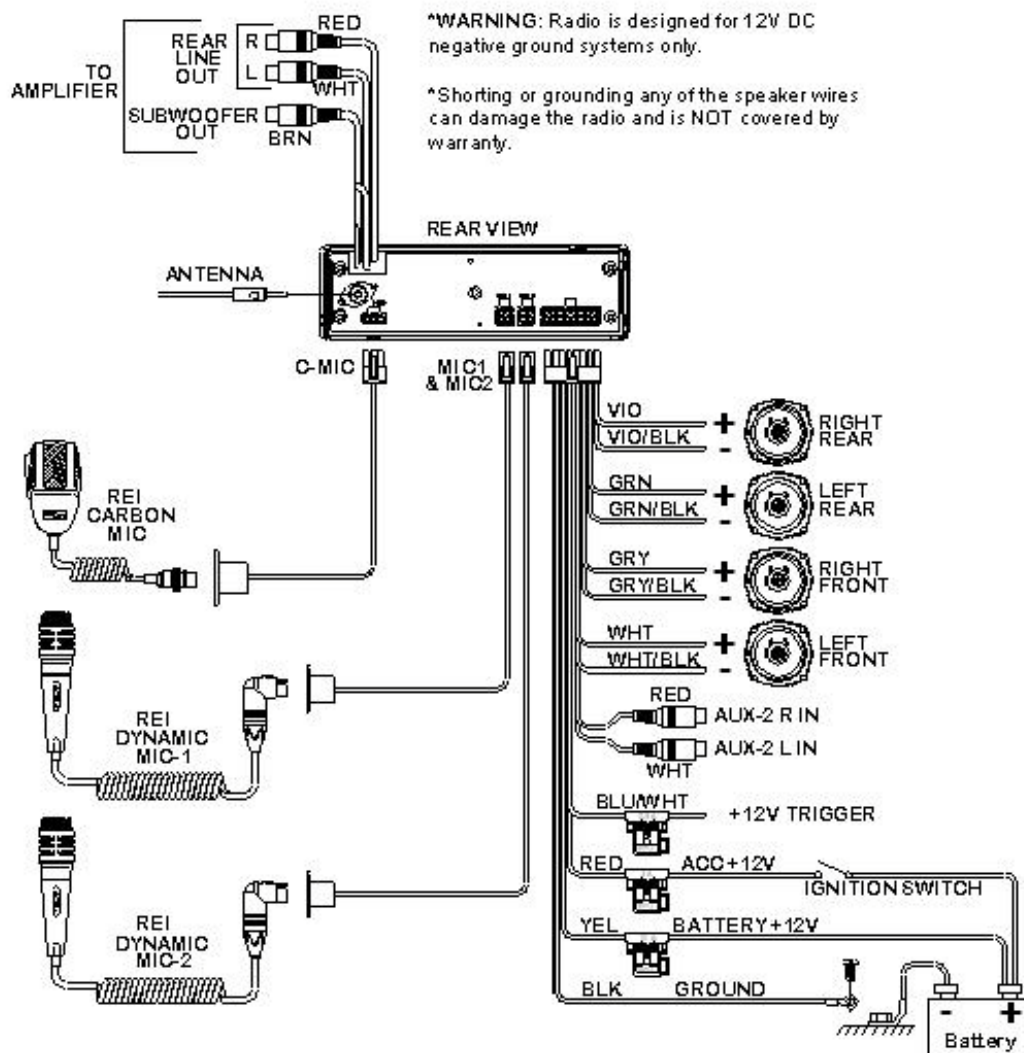
The Dynamic MIC 1 input is the Primary, and the other input MIC 2 is the Secondary. When the two are keyed simultaneously, the MIC 1 microphone will always have priority over the MIC 2.

All PA inputs operate regardless of radio power status, as long as both ACC and Battery power is applied to the radio. The volume levels of MIC 1 & MIC 2 can be independently adjusted from the radio's main Volume/Select knob on the front of the radio. Once released, their final volume levels are stored into memory as default for the next time they are keyed. The volume levels of MIC 1 & MIC 2 can only be adjusted when they are keyed. The volume of the Carbon microphone MIC is only adjustable on the microphone itself and therefore its level is not saved. A rear view of the radio's PA pin connections are shown below:



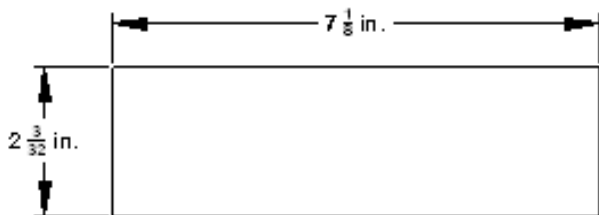
RADIO CONNECTIONS

Follow this easy wiring diagram when installing. Be sure to disconnect the battery negative terminal before beginning.



REQUIRED RADIO DIMENSIONS

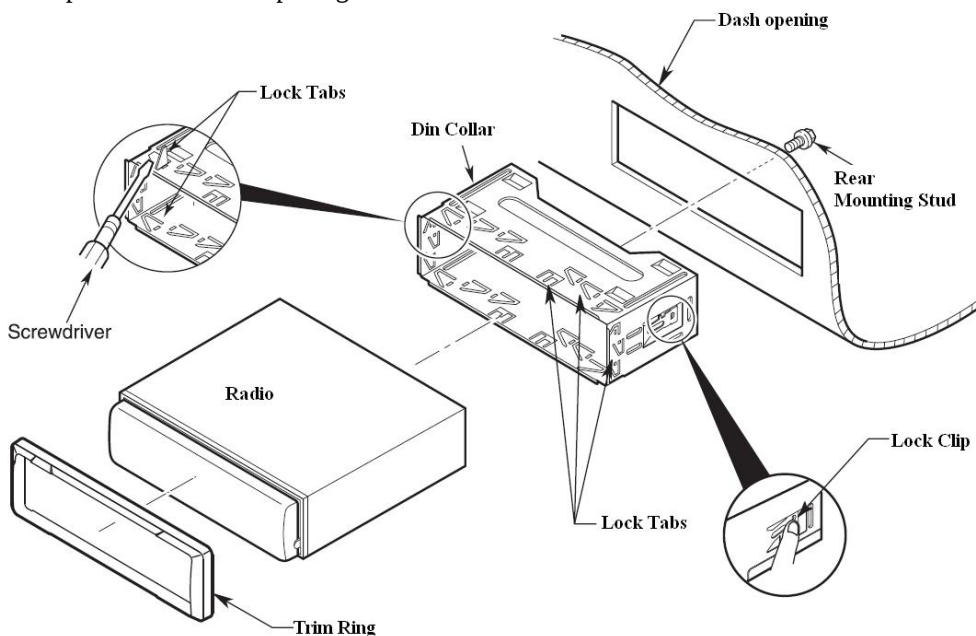
Verify the radio will fit by following the suggested dimensions below.



Dash Opening Dimensions

RADIO INSTALLATION

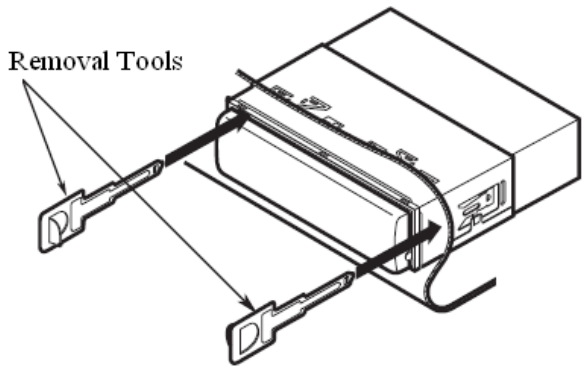
1. Verify lock Clips on the DIN collar are pressed inward. Place the collar into the dash opening. Bend the tabs outward as shown on the drawing below to secure into place in the Dash Opening.



2. Route all cable through the DIN collar and make all the necessary rear connections with the radio. Verify clearance; then gently insert the radio into the DIN Collar until both sides are locked. Secure rear mounting stud for additional support.

RADIO REMOVAL

3. To remove the radio, disconnect the rear support stud if installed. Remove the front Trim Ring and insert the two release keys on either side of the radio then pull the radio out.



TROUBLESHOOTING

Problem	Cause	Measure
Power light does not turn on	No power to yellow wire; no power to red wire; blown fuse	Check for ACC/BATTERY voltage with Multi-meter, check fuse; press RESET button.
Speakers have no sound	Speakers not connected; speakers connected with bad splices; Speakers shorted to ground; total speakers load not within 4-8Ωch	Connect speakers to harness; check all spliced wires; verify speakers not shorted to chassis; verify total speaker impedance.
Public Address is not be heard over speakers	Microphone volume level is “0”; microphone is plugged into the wrong input; wrong microphone type is used	Turn the volume up when the LCD display’s MIC 1 or MIC 2; Check that the correct microphone type is connected
Digital media won’t play or says “Unsupported Video”	Media is an unsupported file type.	Encode media with a supported file type; make sure disc has been finalized; use different software
LCD Display says MIC /MIC 1/ or MIC 2 and front controls are locked	PA system is triggered	Remove microphone connections and verify correct pinning; replace microphone

SPECIFICATIONS:

General Specifications

Operating Voltage	(10.0 –15.6V allowable)
Maximum Current Consumption	10A

POWER OUTPUT

Continuous Output (4Ω, 20 to 20,000 Hz at 1% THD)	4 x 22 Watts
Maximum Power Output	4 x 50 Watts
Speaker Impedance	4-8 Ohms

FM STEREO RADIO

Frequency range	USA 87.5MHZ – 107.9MHZ (0.2 MHz step) EURO 87.50MHZ –108.00MHZ (0.05 MHz step)
Usable Sensitivity	10.2 dBf. (0.9 uV, 75Ω)
50db Quieting Sensitivity	15.2 dBf. (1.6 uV, 75Ω)
Frequency Response	30Hz – 15kHz (+/- 3dB)
Alternate Channel Selectivity	75dB
Stereo Separation	40dB (1kHz)
Image Rejection Ration	75dB
IF rejection ratio	100dB
Signal to Noise ratio	70dB

AM RADIO

Frequency range	USA 530kHz – 1710kHz (10 kHz step) EURO 522kHz – 1620kHz (9 kHz step)
Usable Sensitivity	27 dB/uV (25uV, S/N 20dB)

CD/PLAYER

Signal/Noise Ratio (1kHz)	75dB
Frequency Response (+/- 1dB)	5 – 20,000Hz
Total Harmonic Distortion (1kHz)	less than 0.20% (1Khz)
Number of Channels	2 (stereo)
MP3 decoding format	MPEG-1 & 2 Audio layer 3
WMA decoding format	Ver. 7, 7.1,8,9,10,11 (2ch audio) (Windows Media Player)
Usable Discs:	SVCD, CD-R/RW, CD-Audio, CD-MP3, CD-WMA

USB INTERFACE

USB Standard	USB1.1/2.0 (Full Speed)
Maximum Supply Current	500mA
File System	Fat16/32
Decoding Format	same as CD

SD CARD INTERFACE

Frequency Response (+/- 1dB)	10 – 20,000Hz
Dynamic Range	80dB (1kHz)
Harmonic Distortion	0.01%
Decoding Format	same as CD

AUDIO PRE-AMP SPECIFICATIONS

Max Output level	5V
Output Impedance	600 Ω
Subwoofer output	Not adjustable

AUXILIARY INPUT SPECIFICATION

Frequency Response (+/- 1db)	20HZ – 20Khz
Input Voltage Maximum Voltage	1200mV
Input impedance	100K Ω

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Rev 0

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