



**AM/FM/CD/MP3 Weather Band Radio Receiver with USB/SD &
Auxiliary Inputs, 3 Built-in Microphone inputs for PA
Announcements**



Installation/Operation Manual

50W x 4

CD-3000

Thank you for purchasing the CD-3000 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 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

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

FEATURES:

10s Anti-skip CD Mechanism

Front-panel USB Type-A input

Front-panel SD/SDHC CARD input

Supports MP3/WMA playback

Displays ID3 tag information

50W x 4 Output power

Non-volatile memory back-up stores user Presets when the battery is disconnected

Electronic AM/FM Stereo Tuner w/RBDS

7 channel NOAA® Weather Band Tuner

EURO and USA frequency bands

Radio Station Lock-Out

12/24 hr Clock modes

Presets Up to 30 Radio Stations (18 FM, 12 AM)

Two Independent Aux Inputs (Front 3.5mm Stereo Jack/Rear RCA)

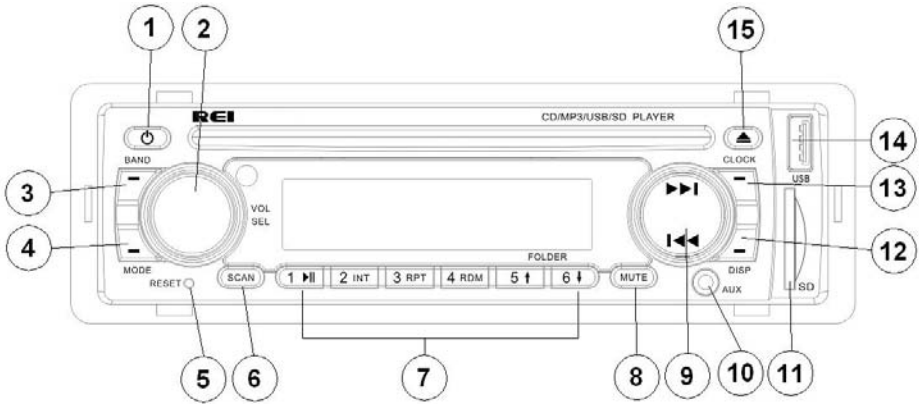
Electronic Bass, Treble, Balance, and Fader Controls

LED Backlighting

Integrated PA Microphone inputs (Microphones & Adapters Sold Separately)

Rear Channel Pre-amp outputs

IR wireless Remote Control Ready (Remote and IR extension cable sold separately)





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

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 1-6**
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)
INT Press this button to select INTRO ON/OFF on CD playback
RPT Press this button to change REPEAT from Track, Folder, All
RDM Press 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 3 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 devise 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 CLK button to change display between clock and source information.

Setting the Time:

With radio POWER ON, press CLK button momentarily to display the time. Next, press and hold the CLK 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.

RADIO SYSTEM MENU

Press and hold the VOL/SEL button for 2 seconds. LCD will display MENU, make the desired selection below:

To change display SCROLL OPTIONS, rotate VOL/SEL, then press to choose:

- Scroll OFF - RDS text will not display automatically, must press the DISP key to view
- Scroll ON - RDS text will display automatically and continuously

To enable the RDS option, rotate VOL/SEL, then press to choose:

- RDS ON
- RDS OFF

This is the firmware version present on the radio,

- VER 001

To save and exit MENU mode, press and hold the VOL/SEL button.

Note: Menu will exit automatically after 5 continuous seconds without saving any selections.

RADIO STATION LOCK-OUT

Radio station Lock-Out gives Fleet managers the ability to restrict AM/FM playback.

To enable operation, set acceptable stations into all the AM & FM presets. If only one station is allowed, preset that same station into all presets of either the FM or AM band. Once the stations are set, Press and hold both the VOL/SEL (2) and BAND (3) buttons for 3 seconds. The display will scroll "ENTER CODE", at which time the user can enter a personal 4 digit code using presets 1-6. Once entered, the display will show "LOCKED" giving the user confirmation. The user will have access to only the AM & FM stations found in presets 1-6. If the user attempts to change the station using the SEEK/TUNE buttons, the display will scroll "ENTER CODE".

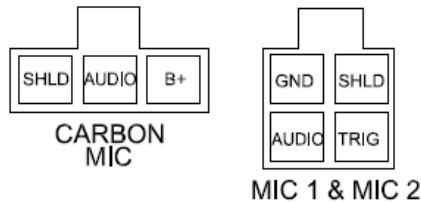
Entering the wrong code will scroll "ERR CODE". Once the user enters the correct code, the display will show "UNLOCKED" and restore the radio to normal operation.

PA OPERATION

The CD-3000 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:

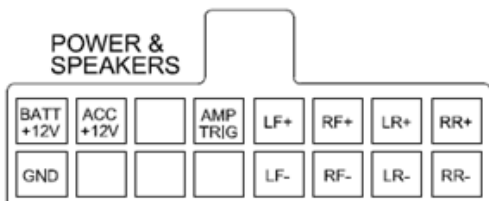


NOTE:

For easy viewing at night, the backlighting will always be on when ACC +12V switched power is applied. Backlighting will only shut off when the switched ACC +12V power is removed.

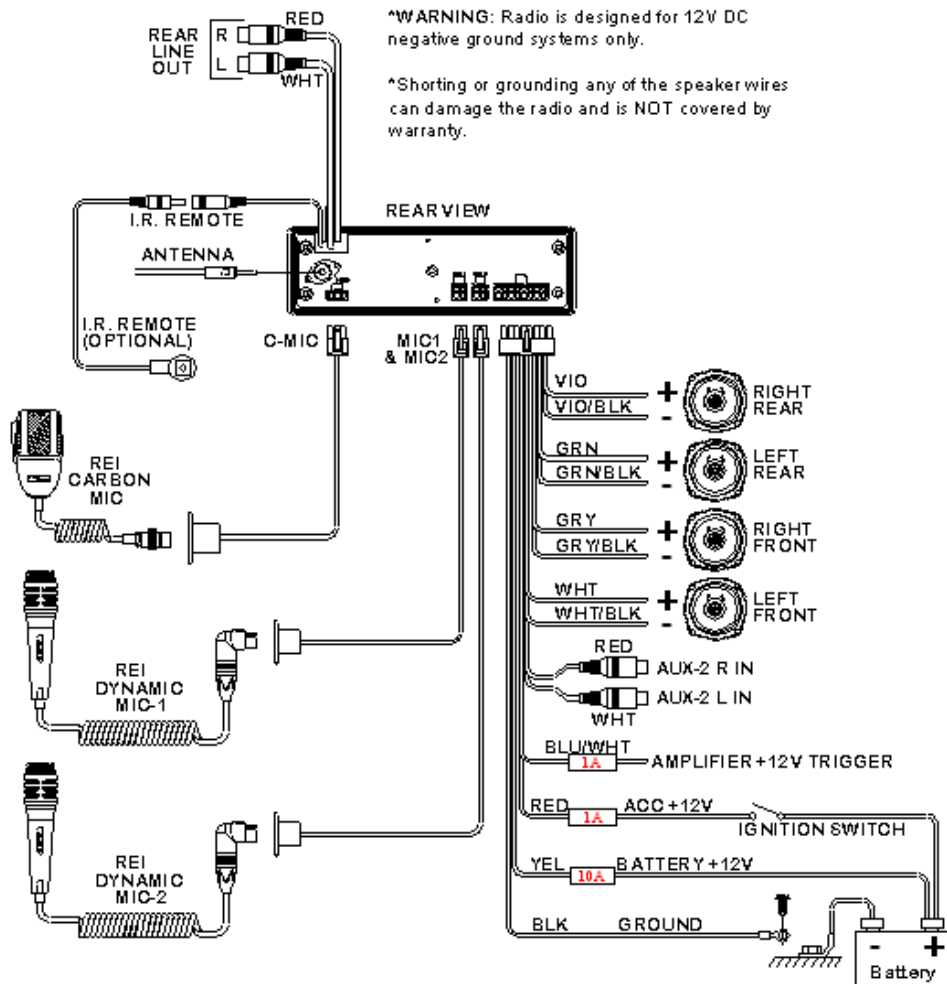
RADIO CONNECTIONS

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



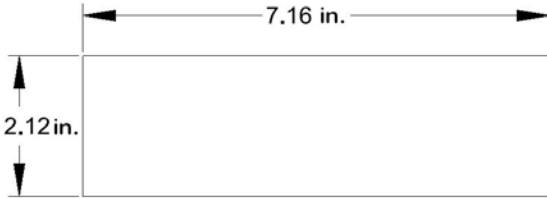
***WARNING:** Radio is designed for 12V DC negative ground systems only.

***Shorting or grounding any of the speaker wires can damage the radio and is NOT covered by warranty.**



REQUIRED RADIO DIMENSIONS

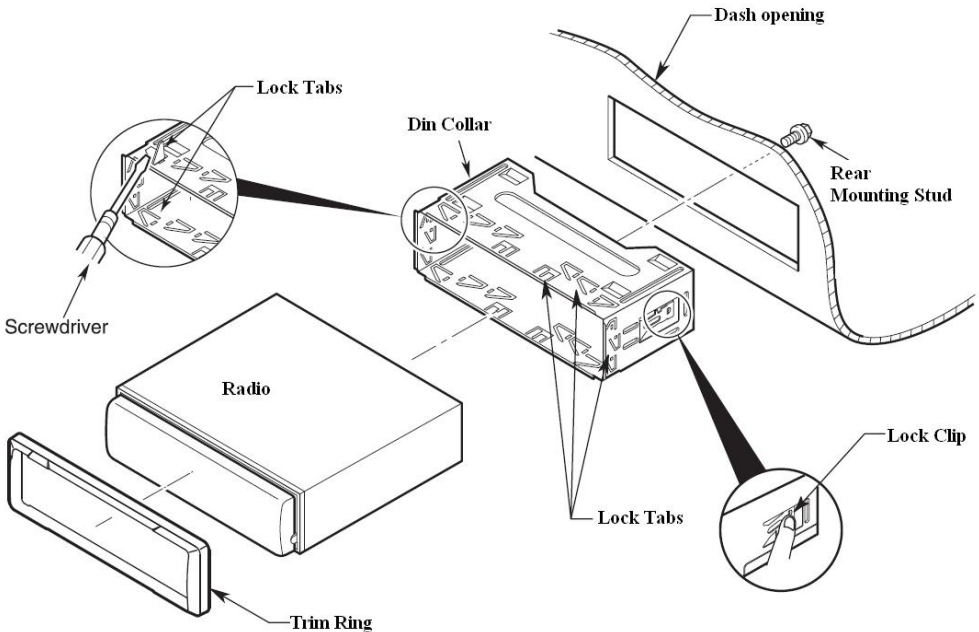
Verify the radio will fit by following the suggested dimensions below.



Dash Opening Dimensions

RADIO INSTALLATION

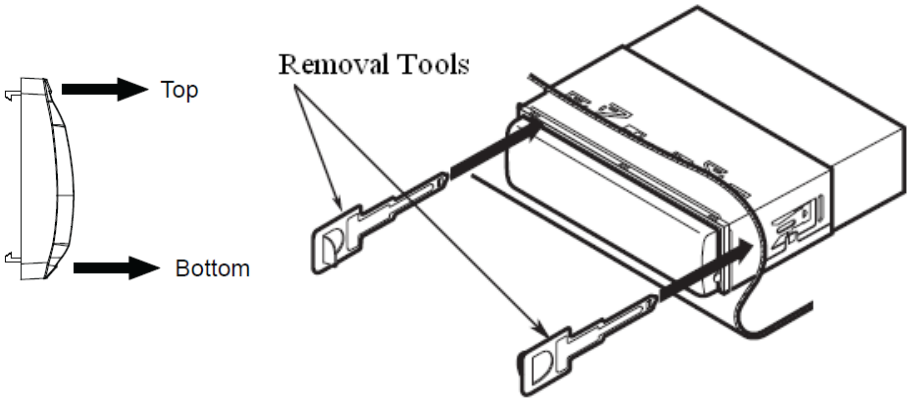
1. Verify lock Clips on the DIN collar are pressed inward. Place the collar into the dash opening. Bend the locking tabs outward as shown on the drawing below to secure into place in the Dash Opening.



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. Install Trim Ring if not already installed. Secure rear mounting stud for additional support if desired.

RADIO REMOVAL

3. To remove the radio, disconnect the rear support stud if installed. Carefully release the front Trim Ring lock tabs at the top and bottom of the nosepiece. Then insert the two release keys on both sides of the nosepiece and 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.
No sound	Speakers not connected; speakers connected with bad splices; Speakers shorted to ground; total speakers load not within 4-8Ω/ch	Connect speakers to harness; check all spliced wires; verify speakers not shorted to chassis; verify total speaker impedance.
Public Address can 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 "ERROR" and skips to "AUX"	Media is an unsupported file type.	Encode media with a supported file type; make sure disc has been finalized; use different software
Disc errors during CD playback	Disc is scratched, internal optics dirty, or the angle of operation is too extreme.	Restore the CD by removing the scratches. Adjust the angle of operation to between 0°-30°.
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
Standby Current Consumption	10mA

POWER OUTPUT

Continuous Output (4 Ω , 20 to 20,000 Hz at 1% THD)	4 x 22 Watts
Maximum Power Output	4 x 50 Watts
Speaker load 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, 75 Ω)
50db Quieting Sensitivity	15.2 dBf. (1.6 uV, 75 Ω)
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)

WEATHER BAND TUNER

Range	162.400 –162.550MHz
Usable Sensitivity	(S/N = 20dB) 0.7uV(-9dBuV)
Signal to noise ratio (LEVEL40dbuV)	42dB

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	2V
Output Impedance	600Ω

AUXILIARY INPUT SPECIFICATION

Frequency Response (+/- 1db)	20HZ – 20Khz
Input Voltage Maximum Voltage	1200mV
Input impedance	10KΩ

Memo:



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