REI

Heavy Duty AM/FM/CD/DVD Weather Band Receiver, Rear USB w/ 1.5A Charging, Bluetooth® Hands Free Calling and Wireless Audio Streaming, Front/Rear Auxiliary Inputs and built in PA.

Radio Engineering Industries, Inc.

www.radioeng.com

Rev A.0   Date: 9-02-19

Installation/ Operation Manual

50W x 4   **VR-5650**

Thank you for purchasing VR-5650 AM/FM/CD/DVD Receiver from REI. This product is designed and tested to with stand temperature and vibration extremes. Please read the owner's manual carefully before attempting to install this unit.

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

SERVICE HOT LINE
1-877-726-4617 Toll Free USA & CANADA

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
(800)228-9275
www.radioeng.com

Your player will play DVDs with region code [1] labels on them.

FEATURES:

Heavy Duty construction for Tough Environments

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

Clock Battery back-up

Output Power 50W x 4

Full Dot Matrix LCD display

Anti-skip Gear driven CD/DVD Mechanism

7 channel NOAA® Weather Band Tuner

AM/FM Stereo Tuner w/RBDS

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

EURO and USA frequency bands

USB MP3/WMA file playback w/ ID3 Tag Support

2 Aux Inputs (Front 3.5mm/Rear RCA A/V)

iPod® /iPhone® Smartphone Charging and Playback Control

Bluetooth® audio Streaming w/ support for Hands Free calling

Integrated Bluetooth® Microphone input

Rear Channel RCA Line outputs

Composite Video Output via locking BNC connection

Built in PA input (Microphones & Adapter Sold Separately)

ISO Connector for vehicles manufactured with the ISO connect harness

Wireless Remote Control

REI LIMITED WARRANTY

What Does This Warranty Cover?
This warranty only covers failures due to defects in materials or workmanship which occur during normal use.

What Does This Warranty Not Cover?
This warranty does not cover damage which occurs in shipment or failures which are caused by products not supplied by REI or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, faulty installation, set-up adjustment, improper maintenance, alteration, improper antenna, inadequate signal pick-up, maladjustment of consumer controls, modification, line power surge, or damage that is attributable to acts of God, or service by anyone other then a REI Factory Service Center. This warranty does not include service or labor charges connected with the determination or replacement of defective parts or the operation of this equipment. REI is not responsible for any labor charges incurred by any person or company other than REI authorized repair centers.

LIMITS AND EXCLUSIONS
There are no express warranties except as listed above.
REI SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING WITHOUT LIMITATION, DAMAGES TO TAPES OR DISCS. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY, ARE LIMITED TO THE APPLICABLE WARRANTY PERIOD SET FORTH BELOW. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.
This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

What is the Period of Coverage?
REI will repair this product, free of charge, from the date of original purchase in the event of a defect in materials or workmanship as follows:

For ninety (90) days - microphones, speakers, antennas, housings, rechargeable batteries, remanufactured product and all non-warranty repairs (replaced parts and labor only).
For one (1) year - all other manufactured products.
For three (3) years - select manufactured motorcoach products.
For three (3) years - select surveillance equipment.
REI may have contractual agreements which provide REI motorcoach and surveillance products with additional coverage. Call 877-726-4617 for details.
Any product supplied by REI, but not manufactured by REI, will include the original manufacturers warranty only.

What Will REI Do to Correct Problems?
Once the product is deemed by REI to be a warrantable defect, REI will, at its own discretion, repair or replace the product with new or reconditioned product. All warranty repairs and/or product replacements will include the remaining warranty from the original purchase date.

How Do You Get Service?
For assistance in obtaining service for REI products call toll free 877-726-4617 (Continental United States and Canada only) or 402-339-2200 (outside Continental United States and Canada) between the hours of 7:00A.M. - 5:00P.M. CST Monday thru Friday (excluding Holidays).
Prior to calling REI, customers must have the part number, serial number, VIN number (if it's a motorcoach product) and detailed description of the problem ready to provide to the REI service representative. After providing the proper information to REI, customers will be issued a return authorization number. When the REI service representative provides the return authorization number, they will also give instructions for returning the item. Any discrepancies in following this procedure may cause shipments to be refused or warranty claims to be rejected.

IMPORTANT! REI does not accept product returns for repair or replacement without first issuing a return authorization number. All returns must be sent freight prepaid and insured by the customer. REI will not accept COD shipments.

IMPORTANT! REI does not accept responsibility for lost shipments. It is the customer's responsibility to provide REI with the part number, serial number, return authorization number and shipper tracking number in the event REI does not have record of receiving product for repair or replacement.

Once warranty service has been performed on your product, REI will ship the item freight prepaid to any business address in the Continental United States or Canada. Customers located outside the Continental United States and Canada are responsible for all freight charges.   Any duties or fees, if any, are the customer's responsibility.

Any repair deemed non-warranty by REI will be subject to all freight charges, and in some cases inspection fees, to be paid by the customer.   These fees may exist regardless of whether the product is repaired. If a customer requires help in trouble shooting a problem, contact REI and request technical assistance before requesting a return authorization number.

What Must You Do To Keep This Warranty in Effect?
KEEP YOUR ORIGINAL PROOF OF PURCHASE AS IT MAY BE REQUIRED IN ORDER TO RECEIVE WARRANTY SERVICE.
Make sure the serial number is not removed, altered or defaced.
Do not attempt to have your product repaired by anyone other then a REI Factory Service Center.
Also, see "What Does This Warranty Not Cover".

REI AUTHORIZED REPAIR FACILITIES:

REI	REI
6534 L Street	1376 Bennett Drive, Unit 126
Omaha, Nebraska 68117	Longwood, Florida 32750
Phone: 877-726-4617	

What if your Product is a Non-Warranty Repair?
All Products sent to REI for repair which are determined, at REI's discretion, to be non-warrantable repair may incur inspection fees regardless of actual repair being performed or will incur repair fees if the product is repaired. All non-warranty repairs include a 90 day warranty for any components that are replaced, if any, and labor performed. Inspection fees apply regardless of whether a product is determined to be non-warrantable prior to shipping to REI. All freight charges, duties or fees associated with non-warranty repair are the customer's responsibility.

FORM 640020 REV 0.1

USB INTERFACE
USB Standard……………………………………………USB1.1/2.0 (Full Speed)
Maximum Supply ……………………………………………...5V/1.5A
File System…………………………………………………..Fat16/32

AUXILIARY INPUT SPECIFICATIONS
Input Voltage Maximum Voltage…………………………………………..1.2V
Frequency Response (+/- 1dB)………………………...……………20 – 20,000Hz
Input impedance…………………………………………………..10KΩ

VIDEO
Color System ……………………………………………………NTSC / PAL
Video Output ………………………………..Composite 1.0 Vp-p (+/- 0.2) 75ohm
Video Input…………………………………..Composite 1.0 Vp-p (+/- 0.2) 75ohm

DIMENSIONS
Chassis (W x H x D) ………...……………178mm (7") x 50mm (2") x 154mm (6")
Nosepiece (W x H x D) …….…..188mm (7-3/8") x 58mm (2-1/4") x 17mm (5/8")
Weight ……………………………………………………………3.5Ibs

Due to continuous product improvement, specifications and design are subject to change without notice.

CONTROLS AND INDICATORS
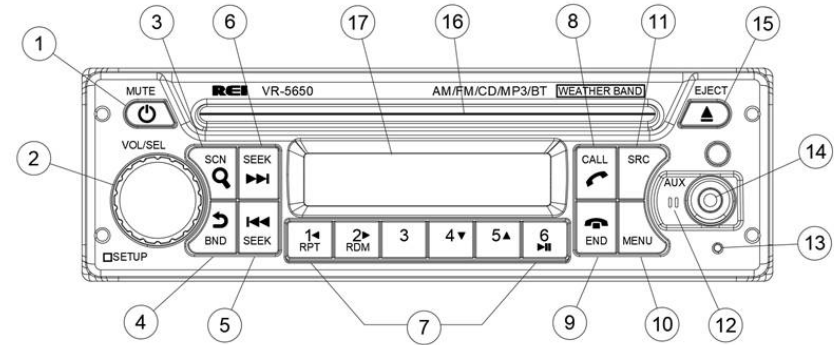
1. Power/Mute Button
2. Volume/Select Knob
3. Scan /Search Button
4. Band /Back Button
5. Tune /Seek/Track Back Button
6. Tune /Seek/Track Up Button
7. Preset Memory/Recall, Media Control Buttons
8. Call Connect/Transfer Button
9. Call End Button
10. MENU/Display Button
11. Source Select Button
12. Internal Bluetooth Microphone
13. Reset switch
14. Front AUX1 Input Jack
15. Disc EJECT Button
16. Disc Slot
17. Dot Matrix Display
18. Antenna input
19. USB input
20. EXTERNAL Bluetooth Microphone input
21. IR Remote extension input
22. Aux 2 RCA Composite Video Input
23. BNC Composite Video Output
24. Aux 2 Trigger Input
25. Video Trigger Output (Power Relay Control)

REAR INPUTS SHOWN
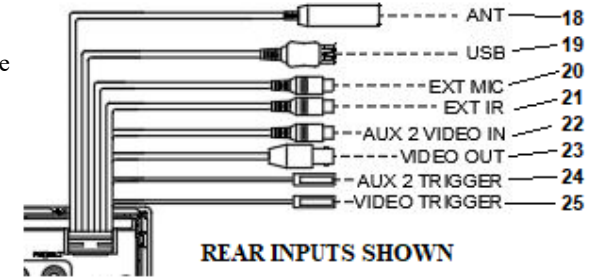
OPERATION

1) Power/Mute Button
Press the Power Button to turn the unit ON or hold to turn the unit OFF. The button will illuminate RED when OFF and BLUE when ON. When ON, press to MUTE the audio on/off. **Note: Radio can also be powered on by pressing any front button.**

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
Upon choosing the function, rotate the knob to adjust the desired setting.
PLEASE NOTE: If the Volume/Select Knob has not been adjusted for 3 seconds it will automatically revert to the previous informational display.

Press and hold this button to access the radio SETUP MENU.

3) Scan/Search Button
Press and hold this button for 2 seconds to auto program available stations into 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 and stop.

4) BAND/Back Button
Press this button to change radio bands as follows:
FM1—FM2—FM3—AM1—AM2

5) TUNE/SEEK DOWN Button
Under Radio mode, press this button momentarily to manually tune downward. Press and hold a button and the radio will automatically seek to the previous radio station. When playing digital media, use this button to track backwards to the previous track. This button also functions as Weather Band Channel access. Under Weather Band mode, press this button to select Weather Band channels 1-7.

6) TUNE/SEEK UP Button
Under Radio mode, press this button momentarily to manually tune upward. Press and hold a button and the radio will automatically seek to the next radio station. When playing digital media, use this button to track forwards to the next track. This button also functions as Weather Band Channel access. Under Weather Band mode, press this button to select Weather Band channels 1-7.

7) Preset Memory/Recall Buttons 1-6
Press these buttons momentarily to select the preset stations.
Press and holding a button will set the current station to the button being pressed.

**Preset buttons are pre-assigned frequencies in Weather Band Mode.

SPECIFICATIONS

AUDIO SECTION
Power supply voltage (negative ground) …………………..……….12V DC (10V-18V)
Standby Current…....…………….….……………….…………………………<5mA
Max Current Consumption.…………….…………….……….…………….……......10A
Speaker impedance ……………….……………………..…4-8 Ohms per channel
Maximum Pre-output Voltage…………....................................2.0Vrms/10k ohms

POWER OUTPUT
Continuous Output into 4Ω, @1KHz at 10 % THD ………..…....…….…4 x 25Watts
Maximum Power Output (Volume control Maximum)………..…...50W×4 (at 1kHz)

FM TUNER
Range …………………………………………………..…..(USA) 87.5 – 107.9 MHz
(EUR) 87.50 – 108.00 MHz
Usable Sensitivity (S/N = 30dB)…………………………...7.34dBf.(0.6uV/75ohms)
Signal to noise ratio ……………………………….………………....58dB (Mono)
Stereo separation (@ 1K Hz) …………………………….…..…………….…42 dB

AM TUNER
Range …………………………………………………..…..(USA)530 – 1,710 kHz
(EUR) 522 – 1,620 kHz
Usable Sensitivity (S/N = 20dB)……………………..………....23dBuV (14.4uV)
Signal to noise ratio (LEVEL60dbuV)…….……………...………………….... 60 dB

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

CD/DVD PLAYER
Signal/Noise Ratio (1kHz)……………………………………………………85dB
Frequency Response (+/- 1dB)……………………………10 – 20,000Hz (+/-1dB)
Channel Separation ………………………… 2 Channel (Stereo) > 60dB @ 1 kHz
Playable disc file format…………………………ISO 9660 Level 1/2, Romeo, Joliet
Usable Discs………………………….............DVD, DVD-R/RW, DVD+R/RW/DL,
CD-R/RW, CD

BLUETOOTH®
Version……………………………………………………………Bluetooth® v5.0
Frequency Range……………………………………………..2.402 – 2.480 GHz
Output power……………………………………………………….……+4dBm Typ
Profiles supported …………………………………………HFP, A2DP, AVRCP

PLAYABLE FILE TYPES:

FILE REQUIREMENTS (.MP3/.WMA using ISO 9660 formatting)
- The MP3 files with a sampling frequency of 8-48 kHz. And a bitrates between 8 to 320 kbps. Supports ID3 Tag Versions 1.0/1.1/2.2/2.3/2.4
- The WMA file with a sampling frequency of 32-48 kHz. And a bitrates between 48 to 320 kbps.

MPEG-4 FILE REQUIREMENTS (.MP4)
- Video Codec: MPEG-4 Simple Profile
- Audio Codec: AAC
- Bitrate: Max. 4 Mbps
- Frame rate: Max. 30 fps (30p/60i)
- Image size: Max. 720 *480 pixels
- File extension: .mp4

DivX® FILE REQUIREMENTS (.AVI)
- Files encoded with Xvid or divX Profiles, Max frame rate 30 fps (30p/60i)
- Video Codec: MPEG-4 Advanced Simple Profile
- Audio Codec: MP3/AC3/PCM
- Frame rate: Max. 30 fps
- Image size: Max. 720 *480 pixels

MPEG-1/MPEG-2 (.MPG)
- Video Codec: MPEG1/2 MPG1/2
- Audio Codec: MP1/2/3
- Frame rate: Max. 30 fps
- Image size: Max. 720 *480 pixels

JPEG(.JPG)
- Still image files up to a resolution of 3072 x 2048.
- File format used by digital still cameras.
- Not compatible with progressive JPEG.
- JPEG file name requires .jpg as extension

NOTE:
Individual file size limit is 2G in accordance with Fat16/32 file restrictions.

8) CALL Button
Press this button to Place or Answer an incoming call when successfully paired using the Hands-Free Profile on a Bluetooth® enabled phone. Press this button to transfer the call from the radio to the phone and vise versa.

9) END Button
Press this button to END a call when successfully paired using the Hands-Free Profile on a Bluetooth® enabled phone. Press this button to quickly disconnect a paired device from the radio when in BT PHONE mode.

10) MENU Button
Press this button to access the DVD menu. Press to change between Clock and Mode Information display when available.

11) Source Button
Press this button to navigate between source modes:
TUNER—WB—CD/DVD—USB(when connected)—BT PHONE—BT MUSIC (if paired)—AUX1—AUX2.

12) Internal Bluetooth® Microphone
Internal Microphone for Hands Free Bluetooth calling.

13) Reset Switch
In the unlikely event that the radio is not operating correctly, press the RESET button to restart the operating system of the radio.

14) Front AUX 1 Input Jack
The unit is equipped with a front panel 3.5mm auxiliary input (AUX 1) so you can connect your external portable audio player or portable satellite radio receiver. A second REAR (AUX 2)* RCA A/V jacks are also included on the rear of the radio.

15) Disc EJECT button
With the radio ON, press this button to EJECT the Compact Disc from the radio.

16) Disc Slot
Insert a Compact Disc label side up here.   The radio will switch modes and begin playback after the file is loaded.

17) Dot Matrix Display
LED Dot Matrix display shows the radios operational information.

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

SETUP MENU

With the unit ON, press and hold the VOL/SEL button for 2 seconds. The LCD will display MENU. Rotate the VOL/SEL knob to choose the option and press to select.

- SCROLL ON/OFF

Choose how iPod/iPhone®, and ID3 tag information is displayed on the LCD. With the scroll set to ON, information is repeated continuously on the front display. When set to OFF, information is not displayed unless the user presses the MENU/DISPLAY button.

- LOUD ON/OFF

Choose to turn LOUNDNESS ON or OFF.

- RDS ON/OFF

Choose to turn the RDS (Radio Broadcast Data System) Scrolling display ON or OFF.

- BT SET
  - ➢ BLUETOOTH ON/OFF (Must be set to ON to access further)
  - ➢ SEL DEV
  - ➢ DISCOVER ON/OFF
  - ➢ ANSWER AUTO ON/OFF
  - ➢ DELETE ALL NO/YES (Delete ALL previously paired devices)
  - ➢ RESET BLUETOOTH NO/YES
  - ➢ ALL ON/FRONT ON/FRONT LEFT/FRONT RIGHT/REAR ON

Press the BACK button to EXIT the BT SET menu and return to previous

- MIC CARBON/DYNAMIC

The first option is to select a correct PA input based on the microphone type you are using. Rotate VOL/SEL button to choose type:

DYNAMIC
Microphone does NOT have on on-board volume control. PA volume control is built into the radio. Adjustments are made by keying the microphone.

CARBON
Microphone has on on-board volume control. Radio will not control the volume. Press VOL/SEL knob to make the desired selection.

- CONTRAST 0-35

Rotate the VOL/SEL knob to choose the desired CONTRAST level of the display. Press the VOL/SEL knob to select.

- VER VR-5650-XXX

This is the firmware version present on the radio. Not all features described in this manual may be available on the radio at this time.

TROUBLE SHOOTING

Problem	Cause	Solution
Backlighting is on, but no LCD display	No power to BATTERY wire or blown 10A main fuse.	Check for both ACC & BATTERY voltage with Multi-meter, check all fuses.
No sound	Speakers not connected; speakers connected with bad splices; Speakers shorted to ground; speaker load is not within 4-8 Ω.	Connect speakers to harness; check all spliced wires; verify speakers not shorted to chassis; verify total speaker impedance. Check volume level.
Public Address can NOT be audible over speakers	PA setting in MENU is wrong; microphone is pinned wrong; wrong microphone type is used. Microphone is defective.	Turn the volume up on the microphone or radio when the LCD displays MIC; Check that the correct microphone type is connected. Check the PA settings in the radio menu.
LCD Display says MIC and front controls are locked	PA system is triggered	Remove microphone connection and verify correct pinning and or type, replace microphone. Reset the unit.
Cannot tune radio stations	The antenna cable is not connected. The signal is too weak. The radio is in the wrong frequency steps.	Connect the antenna cable. Check the frequency spacing in the SERVICE menu to the radio.
Audio is distorted or low.	Source audio level is too weak or overdriven. Bitrate of audio file is too large.	Adjust the volume level of the auxiliary source. Change the sample frequency or Bitrate of the file.
iPod® screen displays "loading" for a long period of time.	Device is not a supported device. The radio supports a majority of iPod® models, but not all are guaranteed.	Wait for iPod® to load or reconnect 30-pin plug. If still loading, then device is not supported, or has low battery. Use the AUX input or a Bluetooth® connection instead.
The Radio does NOT respond to the front buttons	An error in operation has occurred	Reset the unit from the front panel.
The Radio does not charge my device	The device requires additional current via the USB to charge the device	Unplug and try again. The USB can support 5V/1500mA.
My device will not connect to the radio via Bluetooth® &/or my device can't find the VR-5650 radio	Bluetooth® is set to OFF or the Discover mode is set to OFF on the radio.	Enter SETUP and set Bluetooth® to ON, set Discover mode to ON. Delete previously paired devices or Reset BT.
Digital media won't play, says Unsupported File Type	File Type is incompatible.	Re-encode file to a playable file type, see chart for details.

7.40 IN.

MUTE REI VR-5650 AM/FM/DVD/MP3/BT WEATHER BAND EJECT

VOL/SEL
SCN SEEK CALL SRC
AUX
BND SEEK 1 RPT 2 RDM 3 4 5 6 END MENU
SETUP

2.28 IN.

7 IN.
[177.8 mm]

ANT
USB
EXT MIC
EXT IR
AUX 2 VIDEO IN
VIDEO OUT
AUX 2 TRIGGER
VIDEO TRIGGER

7.01 IN.
[178 mm]

1.97 IN.
[50 mm]

5.89 IN.
[149.6 mm]

REI Radio Engineering Industries
800.228.9275•402.339.2200

FEMALE ANTENNA
CONNECTOR

PA INPUT

6.58 IN.
[167.3 mm]
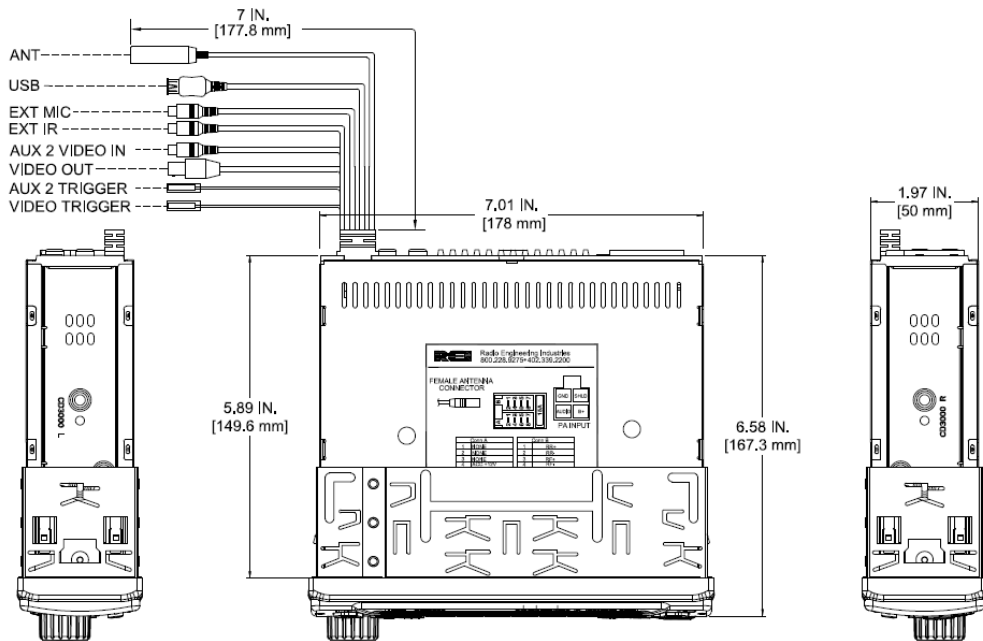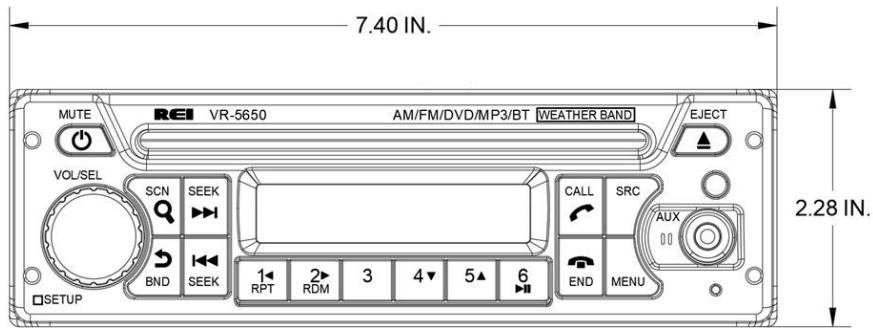
What's Included:

- 5mm Screws (Qty 4)
- Removal Tools
- Mounting Strap
- Rear Stud Hardware
- Operators Manual
- Remote

- CLOCK PRI ON/OFF
When set to on, the display defaults to LARGE format clock display. When set to off the clock displays in SMALL text format.

- LCD NORMAL/REVERSE/DIMMER
When set to NORMAL, the display defaults to BLACK text. When set to REVERSE, The TEXT is illuminated in Amber. When set to DIMMER, the ILLUMINATION +12V input controls the display.

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.

SETTING THE CLOCK

With the BLUE power light ON, press and hold the MENU button until the hour display begins to flash. Rotate Volume/Select Knob to adjust the hour. Press the MENU button again, and the minute display will flash. Rotate VOL/SEL Knob to adjust the minute. Press either the MENU button or let the radio time out for 3seconds on the LCD.

RADIO OPERATION
Use the SEEK/TUNE up/down buttons to tune stations. Press and hold any of the Preset buttons to save a desired station. Use the SCAN/SEARCH button to auto set and Scan channels.

1 2 3 4
FM3 CH5 ST [*]
105.9
12:46

1 2 3
AM1 CH5 [*]
1620
12:46
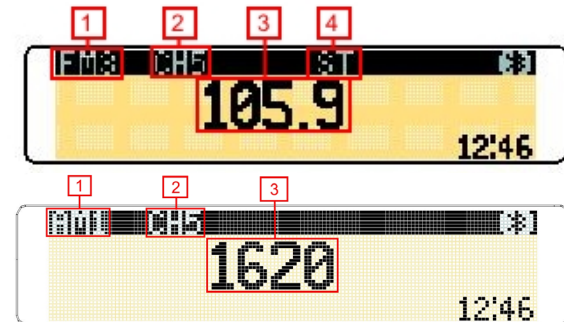
1. **AM/FM Band Preset Mode**
Press the BAND button to switch from FM1, FM2, FM3, AM1, or AM2.
2. **Preset Number**
Displays the Preset Channel of the frequency.
3. **Frequency Display**
Displays the Frequency of the current tuned station.
4. **Stereo Indicator**
Displays when the FM frequency is tuned in Stereo.

Radio Broadcast Data System
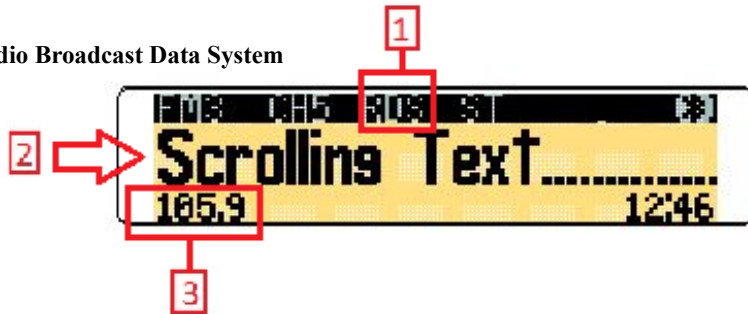
1. RDS Display Indication
When RDS is set to ON in the MENU, FM station's receiving RDS PS data will display this indicator.

2. RDS Text Information
Information such as the title and artist of the currently playing song.

3. Frequency Display
Displays the alternate location of the frequency when RDS is set to ON and

WEATHER BAND OPERATION

NOAA National Weather Radio Broadcasts from over 380 Locations throughout the U.S. on seven VHF/FM frequencies. Tune to receive continuous weather information 24 hours a day on one of the following frequencies.

For local station listing see: http://www.nws.noaa.gov/nwr/nwrbro.htm

    Press preset 1 to select weather band channel 1 - 162.400MHZ
    Press preset 2 to select weather band channel 2 - 162.425MHZ
    Press preset 3 to select weather band channel 3 - 162.450MHZ
    Press preset 4 to select weather band channel 4 - 162.475MHZ
    Press preset 5 to select weather band channel 5 - 162.500MHZ
    Press preset 6 to select weather band channel 6 - 162.525MHZ
  **Press SEEK UP/DOWN to select weather band channel 7 - 162.550 MHz

3.   If additional support is needed, bend the included support bracket, and secure it to the vehicle using a screw.   Secure the opposite end to the rear stud on the radio using the nut and washer provided.
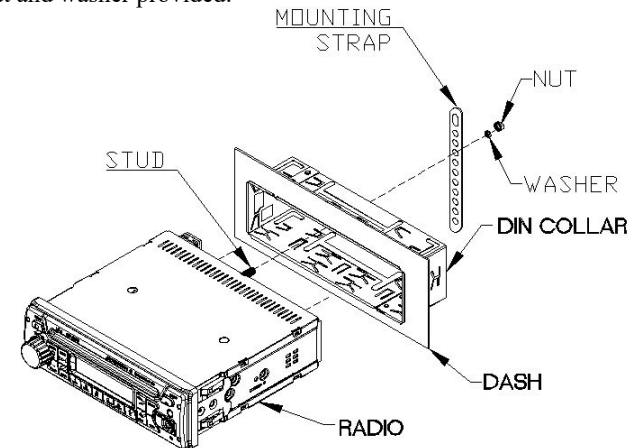
4.   To remove the radio, insert the two release keys into the holes on the front face of the radio.   The tools must be inserted with the notched side facing the radio. Slide the keys foreword until a click is heard.   Then pull the radio out, releasing it from the DIN collar.
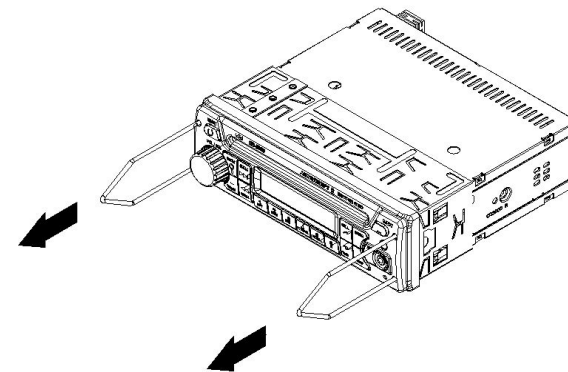
ISO INSTALLATION

1.   For installations that do NOT require the use of the DIN collar.   The radio has threaded holes in the chassis side panels for ISO mount applications. If necessary, four M5x10mm screws are included with the hardware pack to assist you.

DIN POCKET (OEM)

ISO BRACKET
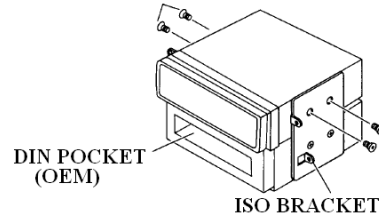
INSTALLING THE RADIO

1.   Place the DIN collar into the dash opening.   Bend the tabs outward as shown on the drawing below to lock into place.

DIN COLLAR

BEND TABS ON TOP, BOTTOM AND SIDES OF DIN COLLAR TO SECURE

DASH
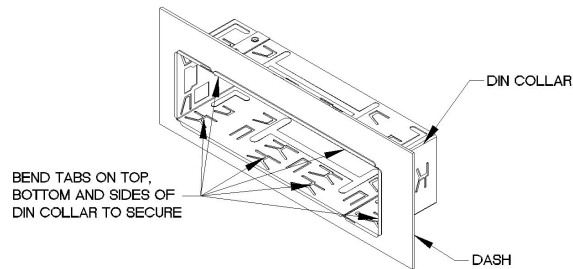
2.   Pass the harness and antenna cable through the DIN collar and connect to the back of the radio.   Verify clearance; then gently insert the radio into the DIN Collar until both spring clips are locked into place.

STUD

DIN COLLAR

DASH
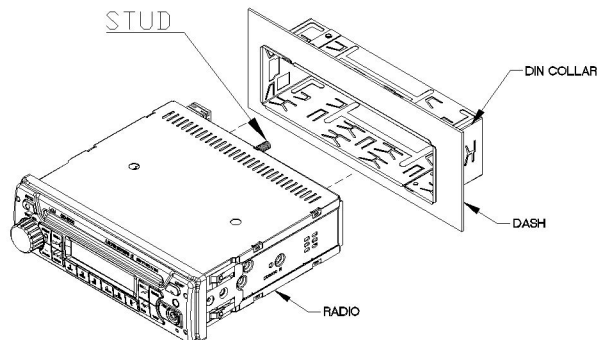
RADIO

CONNECTING A NEW BLUETOOTH® DEVICE

To connect your Bluetooth® device to the Radio, the device must first be paired. Verify that "BLUETOOTH" is set to "ON", (refer to BT SET menu) and verify that "DISCOVERY" is set to "ON", (refer to BT SET menu).

Pairing the Your mobile device with the Head Unit
Your mobile phone can initiate a search for new devices and pair to the unit. The following paragraph describes the pairing process:

NOTE: Procedures for pairing mobile phones may vary slightly from manufacturer to manufacturer.

1. Verify that the Radio is powered up and ON.
2. Set the Bluetooth® function of the Mobile Device to ON.
3. Access the" Look for devices" feature of the Mobile device and begin searching.   After searching, the Radio should appear in the list of devices as VR-5650.   Press to accept.

VR-5650
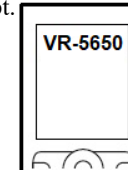
4. A prompt to bond should appear on your Mobile device.   Press to accept and continue the process. The device will then ask for the passkey, enter it on the mobile device.

NOTE: Some mobile devices require the passkey to connect. If your mobile device requires the passkey, you will need to enter it now. The default code is "0000".


Enter Passcode

XXXX
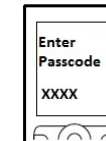
5. After entering the passkey, press OK.   The Mobile device should display connected.   The Bluetooth® icon on the Radio should appear in the upper right-hand corner of the screen.

NOTES:
- *Only ONE mobile device can be paired with the Radio at a time.*
- *Turn "DISCOVERY OFF" to disable any unwanted Bluetooth® devices.*
- *After turning off the ignition, the Radio will automatically search for the last-connected Bluetooth® device, and if possible, restore the connection.*
- *This Radio does NOT support HSP (Head Set Profile)*

BLUETOOTH® PHONE OPERATION
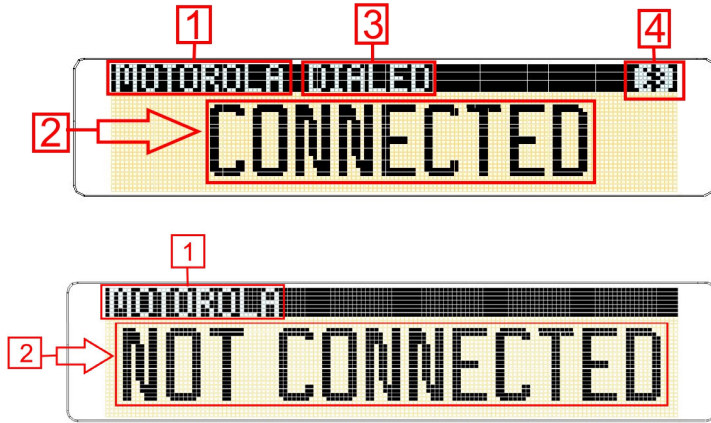
1. Bluetooth Phone ID
Displays the ID of previously paired Bluetooth Phones. Rotate to the VOL/SEL knob to display other paired devices and press the VOL/SEL to initiate re-connection.

2. Display information
Shows the connection status and phone number of the incoming or outgoing call.

3. Options Menu
When connected to a Bluetooth Enabled phone, Rotate the VOL/SEL knob to access DIALED, RECEIVED, MISSED, or PHONEBOOK.

➢ **DIALED** Displays all dialed calls from the currently connect phone.
➢ **RECEIVED** Displays all answered incoming calls from the currently connect phone.
➢ **MISSED** Displays all missed calls from the currently connect phone.
➢ **PHONEBOOK** Displays the contacts currently stored on the connected phone. Some phones require the user to accept the radio's permission to view contacts before displaying them on the radio.

The use can rotate and choose using the VOL/SEL button and press it to also select the desired number. Use the [BND] button to return to the previous menu.

Once the phone number is displayed, press the CALL button to place the call.

4. Connection Status
Displays the Bluetooth® icon connection status of the radio.

TYPICAL INSTALLATION:

Follow this easy wiring diagram when installing Radio and Speakers.

Conn A		Conn B	
1	NONE	1	RR+
2	NONE	2	RR-
3	NONE	3	RF+
4	ACC +12V	4	RF-
5	ANTENNA	5	LF+
6	DIMMER	6	LF-
7	BATTERY +12V	7	LR+
8	GROUND	8	LR-

***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.
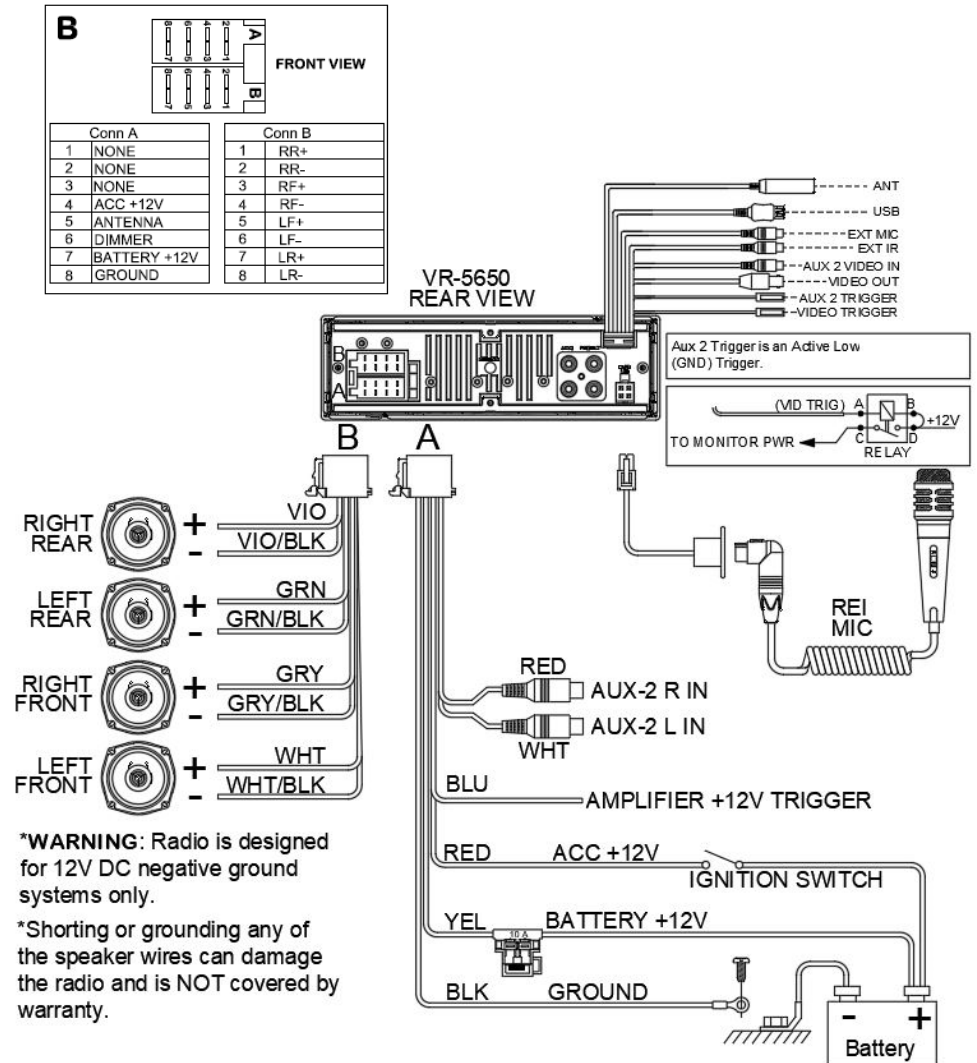
BRIGHTNESS 0-100

CONTRAST 0-100

HUE 0-100
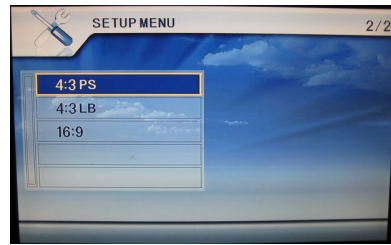

SATURATION 0-100

SHARPNESS 0-100

TV RATIO:
To select the appropriate aspect ratio of the connected monitors, select TV RATIO and press the PLAY/PAUSE button. Once selected, the user can scroll to choose either; 4:3 PAN & SCAN, 4:3 LETTERBOX, or 16:9 WIDE-SCREEN.   Press the PLAY/PAUSE button to select the option.

TV RATIO
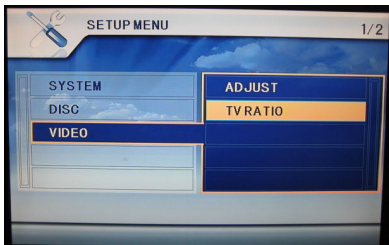
SELECT TV ASPECT RATIO

*The ZOOM button found on the remote control will also allow the user to adjust the picture during DVD playback to ZOOM in by 2X, 3X, 4X, 1/2, 1/3, ¼, or OFF

BLUETOOTH® STREAMING AUDIO OPERATION

The unit allows you to play back audio files from your mobile device using a Bluetooth® connection. The Radio can control a Bluetooth® audio player via Advanced Audio Distribution Profile (A2DP) or Audio/Video Remote Control Profile (AVRCP). Bluetooth® audio players (or Bluetooth® adapters) compatible with these profiles can be connected to this Radio.   Verify the device is connected via Bluetooth®, then Touch the SRC button on the front to access BT AUDIO.

1. **Bluetooth Phone ID**
Displays the ID of the paired Bluetooth Phone you are trying to stream audio from.
2. **Connection Status**
Displays the Bluetooth® icon connection status of the radio.

Press the PLAY/PAUSE button to listen to audio. While listening to audio the following functions are available:

➢ **SEEK UP**: Touch this button to play the next track.
➢ **PLAY/PAUSE**: Touch this button to pause playback. Touch again to resume playback.
➢ **SEEK DOWN**: Touch this button to play the previous track.

Press the MENU button to display Metadata information on the track itself (artist, track name, etc.). This option is only available on compatible devices.

NOTE:
When there is an incoming call, the song will be paused. After the incoming call is finished, the screen will return to the music function screen and playback will continue.

Functionality may vary depending on the profile or device used.

iPod®/iPhone® OPERATION
To listen to audio through your apple device, verify that a Certified USB extension is connected to the USB pigtail on the rear of the radio. Next, connect the USB cable to the Apple device.   Once connected, the iPod/iPhone® will begin charging the device. Press the SRC button to switch the source for playback.   If the device has enough battery power, it will begin playback.
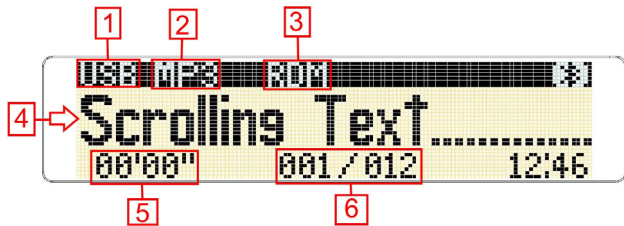
1. **Operational Mode**
2. **Displays the file type**
3. **Shows the current playback option**
4. **Displays the Track Title, Artist, and Album information of the file if available**.
5. **Shows the elapse time of the audio track.**
6. **Indicates the file number and number of files in the folder.**

When connected, the user can playback specific files or folders.   First press the SEARCH [icon] button.   The user can then rotate the VOL/SEL knob to select one of the following search options:

- Playlists
- Podcasts
- Audiobooks
- Songs
- Albums
- Artists

Press the VOL/SEL knob to choose.   To return to a previous menu, press the RETURN [icon] button and choose again using the VOL/SEL knob. Use the radio's SEEK up/down buttons to change tracks, or the [icon] button to PAUSE or PLAY the track.   To return to the iPod/iPhone® source from any other source menu, touch SRC on the front panel until the iPod/iPhone® icon is shown on the front display.

AUX 1/2 OPERATION

Press the SRC button on the front panel until the display shows either AUX 1 or AUX2.   AUX 1 uses the front 3.5mm audio input while AUX 2 uses the rear RCA L/R audio inputs and the Composite Video RCA input. It may be necessary to adjust the VOLUME level of the AUXILARLY input device if too little or too much signal is present.

Aux 2 mode will pass video when connected to the RCA Video input.   By connecting the AUX 2 trigger wire to ground, the radio will automatically switch sources to AUX 2.
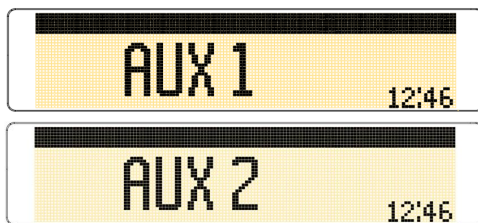
AUTOPLAY:
The AUTOPLAY option enables AUTO PLAY of most the DVD discs.   When set to ON the disc will immediately begin playback when inserted, allowing the user to skip the MENU and previews section.   When set to OFF the user must navigate to the disc MENU to playback the disc.
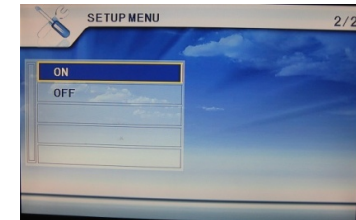
VIDEO OPTIONS

ADJUST:
The VIDEO options give the user control of the Video Output settings.   To change, scroll to select ADJUST and press the PLAY/PAUSE button. Once selected, the user can scroll to choose the desired screen option to modify.   Press the PLAY/PAUSE button to select the option; then scroll to choose the desired setting from 0 to 100. Press the PLAY/PAUSE button to confirm.
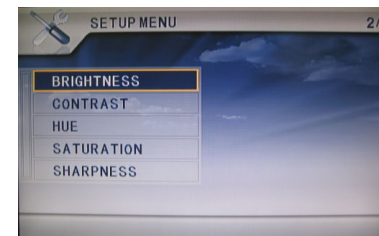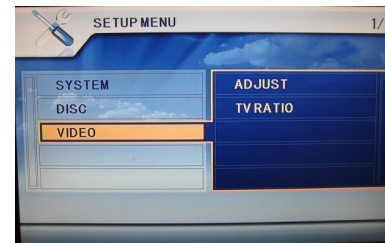
AUDIO LANG:

The AUDIO LANG option allows the user to change the default audio soundtrack on a DVD disc. The disc must support the language type. Due to different DVD encodings, this feature may not work on all discs, and the user may be required to access this feature from the main menu to the DVD. Press the PLAY/PAUSE button to confirm selection.


SUBTITLE LANG:

The SUBTITLE LANG option allows the user to change the default Subtitle Language displayed on the bottom of the screen for DVD discs. The disc must support the language type selected. Due to different DVD encodings, this feature may not work on all discs. If playing DIVX encoded media, select DIVX SUBTITLE LANG to change the subtitle language. Press the PLAY/PAUSE button to confirm selection.

CD OPERATION

Insert a disc into the unit, the radio will automatically switch MODE and begin playback after the media is successfully loaded. Use the SEEK UP/DOWN buttons to change tracks.

 Press and hold this button to REPEAT Chapter, Title, or Off.

 Press and hold this button to turn RANDOM on/off

 Press this button to PAUSE/PLAY the media
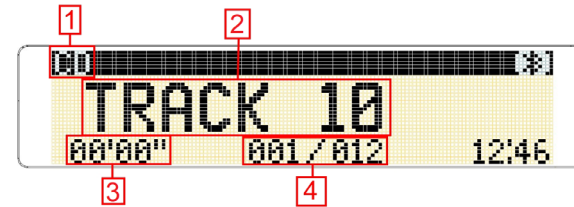
1. **Operational Mode**
2. **Shows the Track number of the ID3 tag information of the MP3 file.**
Press the DISPLAY button to switch from Title, Artist, or Album information
3. **Shows the elapse time of the audio track.**
4. **File number and number of files in the folder.**

USB OPERATION

Insert a USB device into the rear input, press the SRC button to select this source.
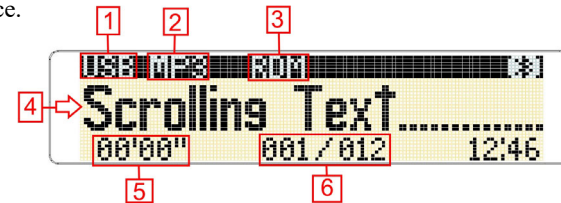
1. **Operational Mode**
2. **Compressed media file format**
Displays either WMA or MP3 Compressed media file format file formats.
3. **Playback Mode of Operation**
Displays either RDM, RPT or nothing at all
4. **Shows the Track number of the ID3 tag information of the MP3 file.**
Press the DISPLAY button to switch from Title, Artist, or Album information
5. **Shows the elapse time of the file.**
6. **File number and number of files in the folder.**

Once selected, playback should begin automatically. Press the MENU button and use the PRESET buttons ▼ ▲ ◄ ► to navigate to a desired folder or file for playback.
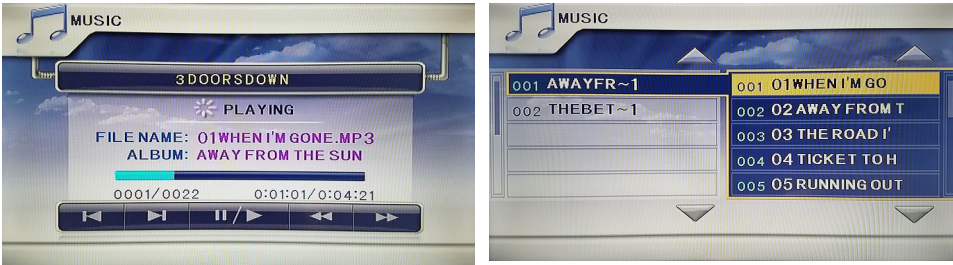
Use the [SCN SEARCH icon] SEARCH Button to change the file type for playback when using USB.

i.e., MUSIC, PHOTO, or MOVIE when multiple formats are available.

See " **PLAYABLE FILE TYPES"** page for a list of compatible format types.

DVD OPERATION
Insert a disc into the unit, the radio will automatically switch MODE and begin playback after the media is successfully loaded.

1. **Operational Mode**
2. **Shows the Track number**
3. **Shows the elapse time of the title.**

Use the [MENU icon] button to return to the disc MENU.

Use the PRESET buttons ▼ ▲ ◄ ► to navigate the disc MENU for playback.

DEFAULT:
The DEFAULT option allows the user the option to return all SETUP settings to their default conditions including language options.   Press the PLAY/PAUSE button to confirm selection.
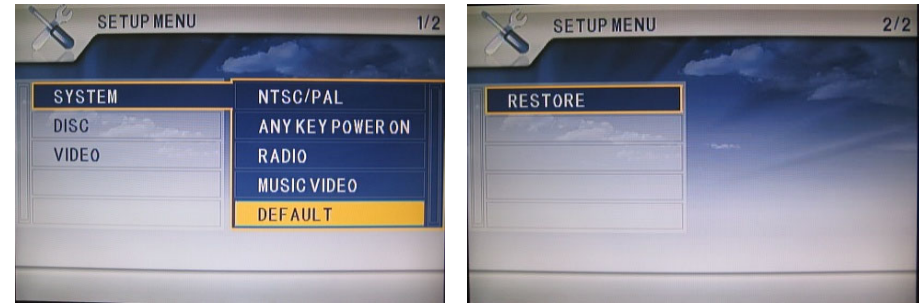

DISC OPTIONS

OSD LANG:
The OSD LANG option allows the user to change the default On-Screen Display (OSD) language displayed on the SETUP menu from ENGLISH, SPANISH to PORTUGUESE.   Press the PLAY/PAUSE button to confirm selection.

RADIO:
The RADIO option allows the user choices between either EURO MODE or USA MODE.   These modes will change the frequency steps of the FM/AM tuner in the radio.   Press the PLAY/PAUSE button to confirm selection.
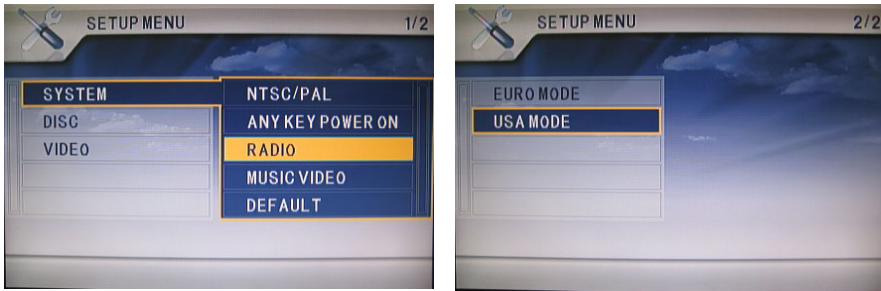

MUSIC VIDEO:
The MUSIC VIDEO option gives the user the option to output a composite video image during digital music playback. When ON is selected, the file information is displayed on the VIDEO OUT signal.   When OFF is selected, the VIDEO OUT is not active. Press the PLAY/PAUSE button to confirm selection.
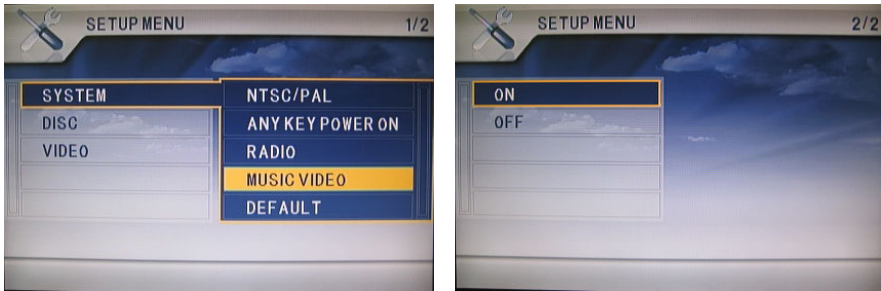
Below is CD IMAGE when set to ON   Below is MP3/WMA image when set to ON
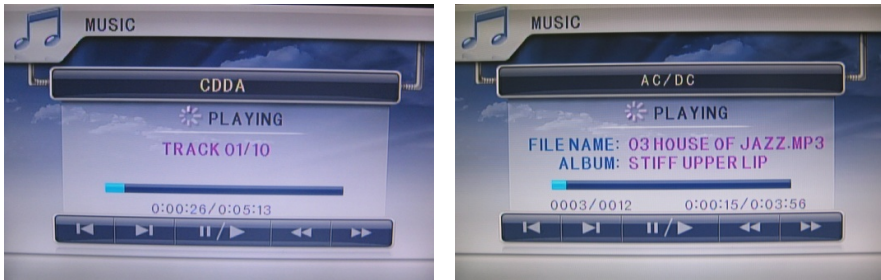
## PA OPERATION (microphone sold separately)
Connect a PA microphone into the 4-pin connector. Microphone has priority over all other audio modes and mute's the source audio being played when keyed. When the PA is triggered, the front display will show MIC, until the trigger is un-keyed.   Any digital media being played at that time will be sent a PAUSE command. Once released, it will return to the previous source mode at the previous volume level. Any digital media will be given a PLAY command.

The PA operates regardless of radio status if the ACC and Battery power is applied to the radio.

When CARBON mode is set, the volume of the PA is only adjustable on the microphone itself.   When set to DYNAMIC mode, the volume level is adjustable only when keyed from the front using the VOL/SEL button.   A rear view of the optional radio PA pin connection is shown below:
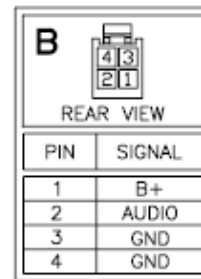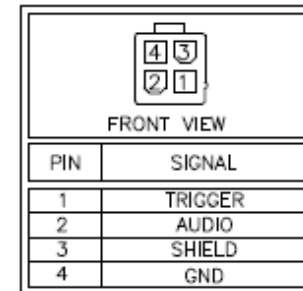
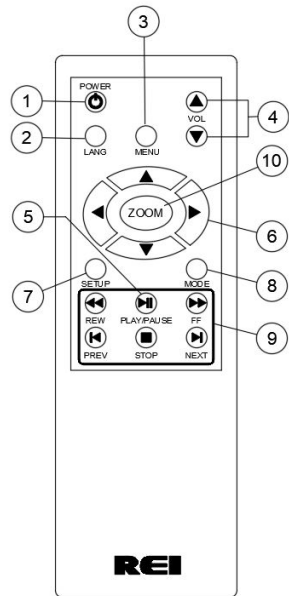**Carbon PA**   **Dynamic PA**

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REMOTE CONTROL

*Requires 2AA Batteries (included)

(1)   Power Button
(2)   Language Button
(3)   Menu Button
(4)   Volume Up/Down Buttons
(5)   Enter/Play/Pause Button
(6)   4 Scroll Buttons
(7)   Setup Button
(8)   Mode Button
(9)   Playback Buttons
(10)   Zoom Button

SETUP OPERATION

Setup operation requires the user be in either DVD/CD/USB mode to operate. When in one of these source modes, press SETUP on the remote to activate the on-screen display. Use the scroll up/down/left/right buttons to make changes. Use the PLAY/PAUSE button to accept changes. Press SETUP again to go BACK and/or EXIT at any time. Changes made in the SETUP menu will not return to default by pressing the RESET button on the front of the radio. To reset these changes, refer to the DEFAULT option in the SETUP menu.

SYSTEM OPTIONS:

NTSC/PAL/AUTO:
This option allows the user to choose a composite output signal to either NTSC or PAL depending on the video monitor used. The AUTO option will output the signal according to the current DVD title. Scroll to highlight the desired selection as shown on the right. Press the PLAY/PAUSE button to confirm selection.

ANY KEY POWER ON:
This option gives the user a choice between having any of the front panel buttons turn the radio on, or only the power button. Having the selection at ON means any button will power up the radio, having it set to OFF means only the power button can turn the radio on. Press the PLAY/PAUSE button to confirm selection.