Marine
Gauge **Radio**
Model: SEI-SEMRNGGE

Installation Guide

Important

- Please read this Installation Guide and the User Guide before installation and use. If you are unsure about installing this product, please contact a professional audio installer.

- The Marine Gauge Radio is designed to be installed into a round opening (refer to **Mount Your Marine Radio** for details), in boats, golf carts, cars, and off-road vehicles. Mounting and wiring may vary for different types of vehicles and are called out in this installation guide.

- When you plan your Radio installation, please ensure that the mounting surface is flat for best front panel sealing, check for potential obstacles behind the mounting surface, and confirm that the mounting surface has adequate clearance around the back of the Radio for open airflow and for heat ventilation.

- Mount this product securely to prevent damage or injury in severe conditions.

- **BEFORE** installation, disconnect any and all negative leads from the battery's negative (-) terminal to prevent damage to the unit, fire, and/or possible injury.

- The Radio requires +12V DC voltage for the power input. If your vehicle battery power is not 12V (e.g., 24V, 36V, or 48V), you will need a DC-DC voltage converter with 12V output (e.g. a 48V-to-12V converter). Connecting the Radio directly to higher voltages will cause damage to the Radio and **VOID THE PRODUCT WARRANTY**.

- The Radio power input has an in-line 35 Amp fuse. Do **NOT** replace the fuse with one of a different value and never bypass the fuse.

- The Radio has a Remote Turn-On Input feature; this is to ensure that the Radio is completely powered off (no battery consumption) when your vehicle is not in use. When the input has a signal between 12V and 56V, the Radio will turn on. When there is no input voltage, the Radio will turn off. In general, this Remote Turn-On signal comes from the vehicle ignition switch.

- You will need to connect the (Purple) Remote Turn-On Wire to the vehicle ignition switch with the supplied (Purple) Remote Turn-On Extension Cable. If you are not able to connect it to your vehicle ignition switch, connect this input to a rocker switch (not included), then connect the rocker switch to a 12V-to-56V power supply on your vehicle or to a switch accessory panel.

- Alternatively, you can connect the Remote Turn-On Wire, together with the (Red) Power Wire, directly to the positive terminal of your vehicle's battery. When the Radio is off, the battery consumption is minimal for vehicles whose batteries are charged multiple times a week.

- The Radio has 3 Power States:

  - Powered – When the Radio has 12V power and your vehicle's ignition switch (or a rocker switch) is turned on, your Radio is Powered. When it's Powered, the Radio may be turned on (Powered On) automatically or on Standby:

    - Turn On (Power On) – When the Radio is in Turn On state, all functions are accessible.

    - Standby – When the Radio is on Standby, it goes into a low-power consumption (sleep) mode. It turns off the Radio's LED Screen and button backlights, and all the functions except the RF Remote Receiver, so that you can still use the Remote to turn the Radio on.

  - Powered Off – When the vehicle's ignition switch is turned off, your Radio is Powered Off. You will not be able to turn on your Radio by pressing the Power Button on your Radio or the included RF Remote Control.

Notes:

- When the Radio is in the Turn On State, you can press the Power Button on the Radio or the RF Remote Control to put the Radio

Important

into Standby State. If you press the Power Button again, it will turn on the Radio.

· The Radio saves its Turn On (Power On) and Standby last state into memory. When you turn on your vehicle's ignition switch, the Radio will go back to the same Power State that it was in before it was Powered Off. For example, if your Radio is on and playing music, and you turn off your vehicle ignition switch, then the next time you turn on your vehicle, your Radio will turn on automatically.

· The first time you turn on your vehicle ignition switch after installing your Radio, your Radio may turn on automatically, or enter Standby, depending on the Radio's Power State when it was Powered Off during the factory QA testing processes. If your Radio is not on, press the Power Button to turn it on.

· The Radio has an integrated LED lighting controller with four (4 Zones) LED lighting outputs. Each Zone can support multiple types of SoundExtreme LEDCast-enabled products. But it is **NOT** compatible with other manufactures' LED strips or LED whips. Do **NOT** make modifications to the LED connectors or try to connect the LED outputs to other manufacturers' LED products. It may cause permanent damage to the Radio and **VOID THE PRODUCT WARRANTY**.
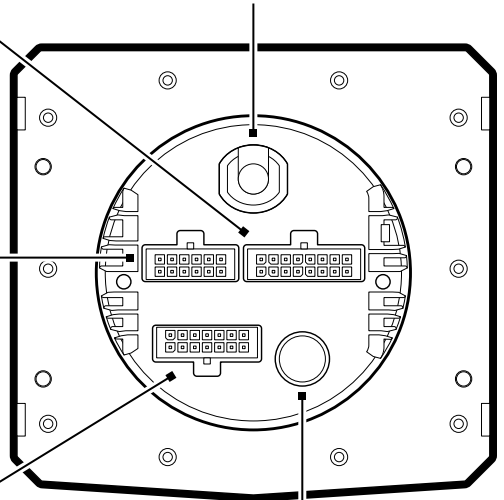
Marine Gauge Radio Layout
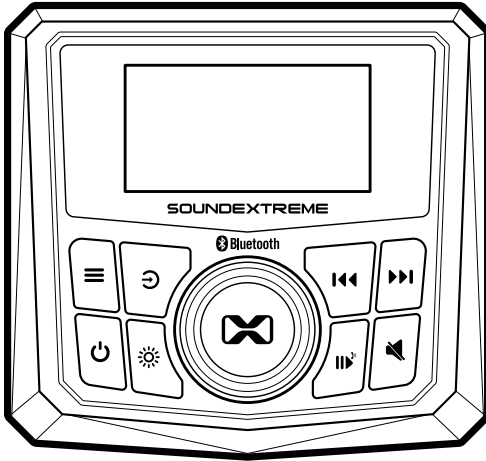
Front Panel
IP67 Dirtproof & Waterproof

J1 Connector Jack – Speaker
Outputs and Vehicle Signal Inputs

12V Power-In SAE Connector
and Remote Turn-On Wire
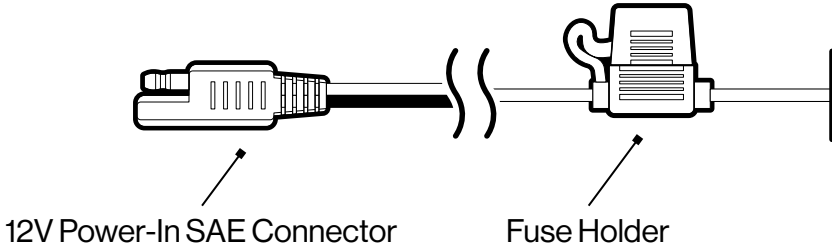
J3 Connector
Jack – LED
Lighting Controls

J2 Connector Jack – Aux-In, RCA
Outputs, and Sub Outputs
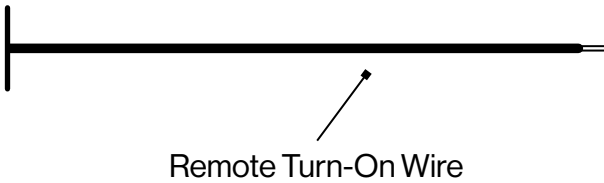
FM/AM Antenna
Jack

**Rear Input / Output Connections**

Marine Gauge **Radio Overview**

Inputs and Outputs

12V Power-In SAE Connector   Fuse Holder

Power Input SAE Connector: Power input (+12V and GND) with in-line 35 Amp Fuse Holder.

Remote Turn-On Wire

Remote Turn-On Input Wire: This (Purple) input wire connects to an ignition switch signal (or rocker switch or any switch accessory panel). The input voltage range is 12V to 56V. Besides the 12V power supply, the Radio relies on the Remote Turn-On Signal Input to turn on and power off. Therefore, you **MUST** connect a 10V to 56V switch signal to this input. Or connect it directly to the vehicle's battery, together with the Red Power Wire, if minimal battery consumption is not a concern.

J1 Connector Jack: The J1 Connector Jack has 16 pin assignments (pins 9 and 10 are not used):
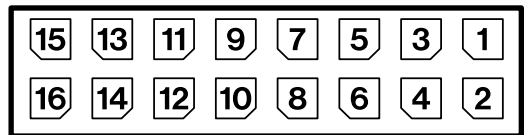
1. Inputs: 5 Pins

- Dim-In: 1 Pin – Optionally connects to your vehicle's illumination wire to dim the Radio's screen when the vehicle's light is turned on. The effective input voltage is 12V.

- Vehicle Signals (Brake, Reverse, Left Turn, Right Turn): 4 Pins – Optionally connects to your vehicle for brake, reverse, left turn signal, and right turn signal integration with LEDCast-enabled speakers, strips, and whips.

2. Outputs: 9 Pins

- Amp-On: 1 Pin – Optionally connects to an audio amplifier to turn it on and off.

- Speaker Outputs: 8 Pins – These amplified audio outputs are assigned to 2 Zones (4 channels) and connect to non-amplified wired speakers. Each channel output is 25 watt RMS (50 watt peak). Each Zone has left and right channel speaker outputs.

PIN	SIGNAL	PIN	SIGNAL
1	Speaker Zone 1 L-	9	/
2	Speaker Zone 1 L+	10	/
3	Speaker Zone 2 L-	11	Amp-On
4	Speaker Zone 2 L+	12	Dim-In
5	Speaker Zone 2 R+	13	Brake
6	Speaker Zone 2 R-	14	Reverse
7	Speaker Zone 1 R+	15	Left turn
8	Speaker Zone 1 R-	16	Right turn

Marine Gauge **Radio Overview**

J2 Connector Jack: The J2 Connector Jack has 14 pin assignments (pins 3, 13, and 14 are not used):

| 13	11	9	7	5	3	1
14	12	10	8	6	4	2
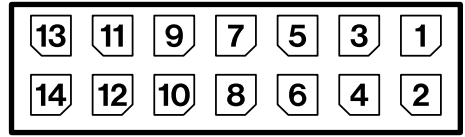
1. Aux-In Input: 3 Pins – This is a stereo line input with Red and White RCA jacks for right and left channels. It can be connected to an audio source output, like Aux-Out or a phone's earphone output. Do **NOT** connect this input to an audio source amplified output.

2. Pre-Amplified Audio Outputs: 8 Pins – These outputs are pre-amplified, full-range audio signals with Red and White RCA jacks for right and left channels. They can be connected to any external audio power amplifier. Do **NOT** connect these audio outputs directly to non-amplified speakers.

· 2 Zones: Pre-amplified audio outputs

· 1 Zone: Subwoofer pre-amplified with a single mono output to a powered subwoofer or a subwoofer amplifier.

PIN	SIGNAL	PIN	SIGNAL
1	Sub Out Zone 1	8	Audio Out Zone 1
2	Sub Out Zone 1	9	Aux-In
3	/	10	Audio Out Zone 1
4	Audio Out Zone 2	11	Aux-In
5	Audio Out Zone 2	12	Aux-In
6	Audio Out Zone 2	13	/
7	Audio Out Zone 1	14	/

J3 Connector Jack:
The J3 Connector Jack
has 12 pin assignments:

11	9	7	5	3	1
12	10	8	6	4	2
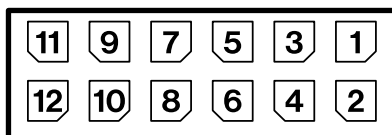
· LED Lighting Control
  Outputs – These
  outputs are assigned to 4 Zones. Each Zone has 3 pins (12V, GND, and signal). Each 3-pin, female, round LED connector supports a maximum 5A power output.

PIN	SIGNAL	PIN	SIGNAL
1	LED Zone 4 (Right)	7	LED Zone 2
2	LED Zone 4 (Right)	8	LED Zone 2
3	LED Zone 4 (Right)	9	LED Zone 2
4	LED Zone 3 (Left)	10	LED Zone 1
5	LED Zone 3 (Left)	11	LED Zone 1
6	LED Zone 3 (Left)	12	LED Zone 1

FM/AM Antenna Jack: This is a coaxial DIN connector jack for an external FM/AM antenna (not included). To listen to FM/AM radio stations, an external antenna is required.

Installation and Wiring

Safety and Wiring Considerations

- For easier assembly, it is recommended you run all wires prior to mounting your unit in place.

- Pre-plan your system layout and best wiring routes to save installation time. Carefully route all system wiring away moving parts and sharp edges; secure with cable ties or wire clamps and use rubber or plastic grommets where appropriate to protect from sharp edges.

- To avoid short-circuiting, cover any disconnected leads with electrical tape. It is important to insulate any unused wires, which, if left uncovered, may cause a short circuit.

- Do **NOT** connect the Power Cable to your Vehicle's battery until all the installations and wirings are completed.

- When using the Extension Cable and/or connecting two wires (e.g., using supplied BUTT Connectors), make sure to seal the connection either by using electrical tape or heat shrink tubing. Failing to do this may result in long-term corrosion on the connection and cause a premature malfunction.

- Use high-quality, speaker cables and connectors to minimize signal or power loss. 16 AWG speaker cable is recommended for the Speaker Outputs.

- Route all of the audio cable and RCA cables close together and away from any high current wires

Wiring Harness

Four sets of wiring harnesses are included in the package for you to connect different signal inputs and outputs, depending on the audio and LED lighting control connections in your system.
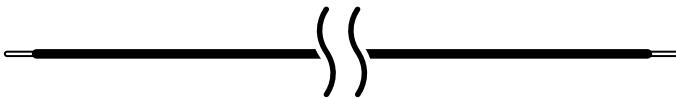
Power Input and Remote Turn-On
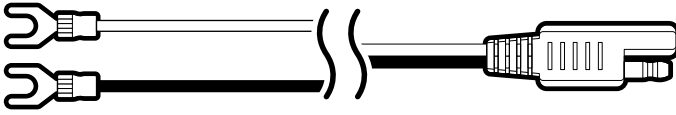
1. Power In – An 8-foot 12 AWG SAE Power Cable is included for you to connect the Radio to your vehicle's 12V battery.

   When you determine the power requirement from your battery, you need to check both the power consumptions on the audio and the LED lighting controls.

   · If you only have 4 non-amplified speakers connected to the 2 Audio Zones, and no LEDCast Products connected to the Radio, your 12V power source needs to be capable of supplying 15A.

   · If you have 4 non-amplified speakers connected to the 2 Audio Zones, and 4 LEDCast Products connected to the 4 LED Zones, you 12V power source needs to be capable of supplying 30A to support the maximum configuration of the connected LEDCast Products. Depending on the type of LEDCast Product you have, it may require lower current capacity on the battery power source. Check your LEDCast Product's specifications, or contact SoundExtreme customer service for details.

   Note: If you are connecting the LED controller to LED's for SoundExtreme wired speakers, the incremental power draw by the LEDs is very small.

2. Remote Turn-On – An 8-foot Remote Turn-On Extension Cable (Purple) is included for you to connect to your vehicle's ignition switch, rocker switch, or switched power panel.
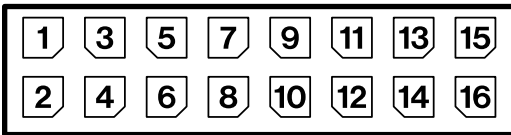
Installation and Wiring

Audio Input, Output, and Vehicle Signal Input Cable Harnesses

The three remaining wiring harnesses are designed to connect to different external devices.

CABLE HARNESS	EXTERNAL DEVICE	CONNECTOR
J1 Connector Cable Harness	Non-Amplified Speakers, Amp-On, Dim-In, Vehicle Signals	Bare Wires
J2 Connector Cable Harness	Audio Power Amplifier, Aux-In, Sub Output	RCA Connector
J3 Connector Cable Harness	LEDCast Product	3-Pin Round Connector

J1 Connector Cable Harness : The J1 Connector Jack has 16 pin assignments (pins 9 and 10 are not used).
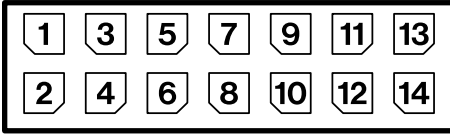
PIN	LABEL COLOR	WIRE HARNESS DEFINITION
1	White / Black	Audio Out Zone 1 Left Speaker (-)
2	White	Audio Out Zone 1 Left Speaker (+)
3	Gray / Black	Audio Out Zone 2 Left Speaker (-)
4	Gray	Audio Out Zone 2 Left Speaker (+)
5	Purple	Audio Out Zone 2 Right Speaker (+)
6	Purple / Black	Audio Out Zone 2 Right Speaker (-)
7	Green	Audio Out Zone 1 Right Speaker (+)
8	Green / Black	Audio Out Zone 1 Right Speaker (-)
9	/	/
10	/	/
11	Yellow	Amplifier On (+12VDC Output, 200ma Max)
12	Orange	Dim-In Illumination
13	Light Orange	Vehicle Brake Signal
14	Pink	Vehicle Reverse Signal
15	Light Green	Vehicle Left Turn Signal
16	Light Blue	Vehicle Right Turn Signal

Installation and Wiring

J2 Connector Cable Harness: The J2 Connector Jack has 14 pin assignments (pins 3, 13, and 14 are not used).

PIN	LABEL COLOR	WIRE HARNESS DEFINITION
1	White 1	Sub Out Zone 1
2	White 1	Sub Out Zone 1
3	/	/
4	Gray	Audio Out Zone 2
5	Gray	Audio Out Zone 2
6	Gray	Audio Out Zone 2
7	White 2	Audio Out Zone 1
8	White 2	Audio Out Zone 1
10	White 2	Audio Out Zone 1
9	Blue	Aux-In
11	Blue	Aux-In
12	Blue	Aux-In
13	/	/
14	/	/

J3 Connector Cable Harness: The J3 Connector Jack has 12 pin assignments.
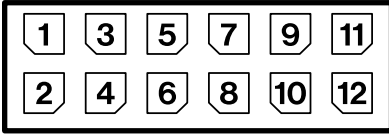
PIN	LABEL COLOR	WIRE HARNESS DEFINITION
1	Purple	LED Lighting Control Zone 4 (Right) Output
2	Purple	LED Lighting Control Zone 4 (Right) Output
3	Purple	LED Lighting Control Zone 4 (Right) Output
4	Blue	LED Lighting Control Zone 3 (Left) Output
5	Blue	LED Lighting Control Zone 3 (Left) Output
6	Blue	LED Lighting Control Zone 3 (Left) Output
7	Gray	LED Lighting Control Zone 2 Output
8	Gray	LED Lighting Control Zone 2 Output
9	Gray	LED Lighting Control Zone 2 Output
10	White	LED Lighting Control Zone 1 Output
11	White	LED Lighting Control Zone 1 Output
12	White	LED Lighting Control Zone 1 Output

Installation and Wiring

System Wiring Layout

12V Power-In SAE Connector

+12VDC (Red)

Fuse Holder

Remote Turn-On Wire (Purple)

Ground (Black)

J3 Connector Cable Harness

Audio Out Zone 1 Left Speaker
   (+) White Wire
   (-) White / Black Wire

Audio Out Zone 2 Left Speaker
   (+) Gray Wire
   (-) Gray / Black Wire

Audio Out Zone 2 Right Speaker
   (+) Purple Wire
   (-) Purple / Black Wire

Amplifier On – Yellow Wire

Dim-In Illumination – Orange Wire

Audio Out Zone 1 Right Speaker
   (+) Green Wire
   (-) Green / Black Wire

J1 Connector
Cable Harness

Vehicle Brake Signal – Light Orange Wire

Vehicle Reverse Signal – Pink Wire

Vehicle Left Turn Signal – Light Green Wire

J2 Connector
Cable Harness

Vehicle Right Turn Signal – Light Blue Wire

Sub-Out Zone 1 – White Label

Audio Out Zone 2 – Gray Label

Audio Out Zone 1 – White Label

Aux-In – Blue Label

LED Lighting Control Zone 4
(Right) Output – Purple Label

LED Lighting Control Zone 3
(Left) Output – Blue Label

LED Lighting Control Zone 2
Output – Gray Label

LED Lighting Control Zone 1
Output – White Label

Installation and Wiring

System Wiring

None of the input and output extension cables are included, except the Power and Remote Turn-On Extension Cables. You only need the extension cables for the specific features you need, depending on the external devices you wish to connect to your Radio. When you obtain the extension cables for wiring, please follow the guidelines listed below.

WIRE	EXTENSION CABLE RECOMMENDATIONS
Speaker Outputs	Use high quality speaker cable and connectors to minimize signal or power loss. 16 AWG is recommended.
Amp-On, Dim-In, Vehicle signals	22 AWG is recommended.
Aux-In, Pre-amplified Audio Outputs, Sub Output	Use high quality RCA cable and connectors.
LED Lighting Control Output	A 3-pin LED cable is included with the LEDCast Product when purchased from SoundExtreme Inc. Check details at www.soundextreme.us.

Once you determine all the wire connections between your Radio and your vehicle's power or device (12V battery, ignition switch, speakers, audio power amplifier, and LEDCast Products), it is recommended that you follow the 3 steps below for wire connections:

1. Connect all the appropriate extension wires / cables to the J1, J2, and J3 Cable Harnesses.

2. Connect the other ends of the extension wires / cables to the audio device (speaker or amplifier) inputs and to the vehicle's

signals. Make sure you power off all the vehicle equipment and disconnect vehicle power supply from the vehicle's battery **BEFORE** you make any wire connections.

3. Isolate and seal all the unused wires / leads on the J1 Cable Harness. Please keep the caps on the unused jacks on the J2 and J3 Cable Harnesses. Leave the Power Cable and Remote Turn-On wire unconnected on both ends.

Proceed to the following wiring procedures.

Connect Wires to the 3 Cable Harnesses

1. Run all the wires from your Radio's mounting location to the previously mentioned power or external device's locations. Mark both ends of the wire / cable, so that you know which signal the wire / cable is for when looking at either end.

2. Connect audio inputs and outputs:

   · If you connect the Speaker Audio Output to non-amplified speakers, connect the audio extension wire to the corresponding wire on the J1 Cable Harness.

   · If you connect the pre-amplified audio output to amplified speakers or an audio power amplifier, connect the RCA extension cables to the corresponding RCA jacks on the J2 Cable Harness.

     When you connect the pre-amplified audio output to an audio power amplifier, you will also need to connect the Amp-On wire on the J1 Cable Harness to the corresponding input on the amplifier.

   · If you connect the Subwoofer output to a powered subwoofer or a subwoofer amplifier, connect the RCA extension cable to the Sub Out RCA connector on the J2 Cable Harness.

   · If you connect the Aux-In input to an audio source output (like Aux-Out), connect the RCA extension cable to the corresponding RCA jacks on the J2 Cable Harness.

Installation and Wiring

3. Connect vehicle signal inputs:

   · If you want your Radio's LCD screen to automatically dim when your vehicle's lights are on, connect your vehicle's illumination wire to the Dim-In input on the J1 Cable Harness.

   · If you connect LEDCast Products to the Zone 3 and 4 LED lighting control outputs on J3 Cable Harness, and want to use the Vehicle Signaling Features (see details below), connect to the Vehicle's brake, reverse, left turn, and right turn signals to the corresponding wires on the J1 Cable Harness.

4. Connect LED lighting control outputs:

   · If you have any LEDCast Products (ExtremeStrips, ExtremeWhips, wired speakers, tower speakers, etc.), connect the 3-pin round connector jack on the J3 Cable Harness to the jack on the LEDCast Product, with the 3-pin LED extension cable that comes with the LEDCast Product.

   · There are 4 LED lighting control outputs (4 Zones) on the J3 Cable Harness. Refer to the Marine Gauge Radio User Guide for more details regarding the 4 Zones. Connecting an LEDCast Product to any of the 4 outputs (any Zone) will work. However, if you have LEDCast Products connected to 2 outputs AND the vehicle signal inputs connected (as mentioned above), and you want to use the Vehicle Signaling Features, you need to connect one LEDCast Product to the Zone 3 output and another LEDCast Product to the Zone 4 output.

   · When making the LED connection, connect the 3-pin female connector on J3 Cable Harness to the 3-pin male connector on the LED Extension cable.
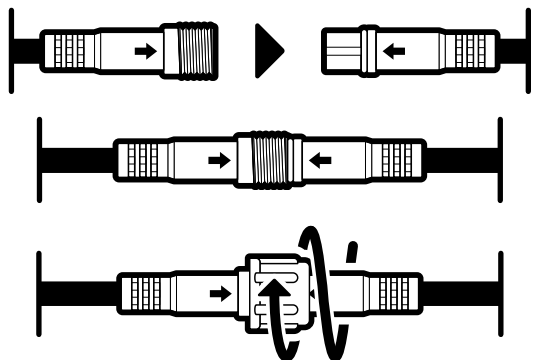
Align the arrow on both connectors, push in and screw the nut cap on the female connector. Then connect the 3-pin male connector on the LED Extension Cable to the female connector on the LEDCast Product.

· If the cable is longer than required, do **NOT** cut the cable and reconnect. Instead, wrap the extra length on your vehicle and fasten the cable with zip ties. Please ensure the cable does **NOT** touch or drag on the ground **AND** is safely secured to prevent it from coming into contact with any moving parts.

5. Secure unused wires and cables:

· Insulate and seal all the unused / unconnected cables / bare wires on the J1 Cable Harness with electrical tape or heat shrink tubing (not included) to avoid short-circuiting.

· All the RCA jacks and all the 3-pin round connector jacks on the J2 and J3 Cable Harnesses come with a removable plastic cap. Please secure the cap onto each unused jack.

6. Do **NOT** plug in the J1, J2, and J3 Cable Harnesses into the Radio until you are ready to mount the Radio to your vehicle.

Connect Wires to the Audio Device, LEDCast Products, and Vehicle Signals

BEFORE connecting any wires / cables, turn off all the audio devices (powered speakers, amplifier, and audio source), then disconnect any and all negative leads from the battery's negative (-) terminal to prevent damage to the unit, fire, and / or possible injury.

1. Audio Device Connections – Depending on your audio device, connect the audio cable / wires to the corresponding inputs on the speakers (non-amplified or powered), subwoofer, or audio amplifier. Pay attention to the following when making connections:

· Positive and Negative Speaker Audio Outputs (J1) – Each Speaker Output has Positive and Negative wires, connect the wire to the corresponding terminal on the non-powered speaker.

Installation and Wiring

- Zone 1 and Zone 2 Speaker Audio Outputs – There are two Speaker Audio Outputs for Zone 1 and two for Zone 2. You may wish to separate your external speakers into each Zone according to their location on your vehicle. For example, 2 speakers located toward the front of your vehicle can be designated to Zone 1, while 2 speakers near the rear can be designated to Zone 2. Make sure to connect each speaker to the appropriate Speaker Audio Output Wires, according to the desired Zone assignment.

- Left and Right Channels (J2) – Each Speaker Audio Output has two pairs of wires (one for the Left Channel, another for the Right Channel). Make sure the Left Channel Wires are connected to the speakers on your vehicle's left side, and the Right Channel Wires on the right side.

- Amp-On (J1) – If you connect your Radio's Pre-Amplified Audio (RCA) Output to an external audio amplifier, you will need to connect the Amp-On Wire to your amplifier's remote control input to automatically turn on your amplifier when the Radio is turned on.

2. LEDCast Product Connections (J3) – All the LEDCast Products have 3-pin round female connector jacks. As previously instructed, push in and screw the nut cap to make a connection. If you have already connected an LEDCast-enabled speaker to a Speaker Audio Output in Zone 1 or Zone 2, make sure to connect it to an LED Lighting Control Output in the same Zone.

3. Vehicle Signal Connections (J1) – Depending on the wire connections you make to the J1, J2 and J3 Cable Harnesses, you will need to connect the following wires to vehicle signals:

- Connect the Dim-In Illumination Wire (Orange) to the vehicle's illumination wire.

- Connect the Vehicle Brake Signal Wire (Light Orange), Vehicle Reverse Signal Wire (Pink), Vehicle Left Turn Signal Wire (Light

Green), and Vehicle Right Turn Signal Wire (Light Blue) to their corresponding vehicle signals.

4. Remote Turn-On to Ignition Switch Connection:

- Before you make a connection to your vehicle's ignition switch, make sure the vehicle's power supply cable is disconnected from your vehicle's battery.
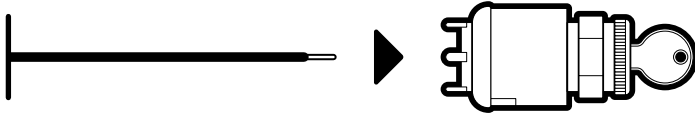
- Connect the supplied Remote Turn-On Extension Cable to your vehicle's ignition switch.

- If you are not able to connect the Remote Turn-On Extension Cable to the ignition switch, you can connect it to a rocker switch, then connect the rocker switch to a 12V - 56V power supply.

- Do **NOT** connect the Remote Turn-On Extension Cable to your Radio's Remote Turn-On Input Wire until you are ready to mount the Radio to your Vehicle.

Recommendation: If you are not familiar with all of the vehicle's battery or ignition switch connections, consult your vehicle's manual or a technician. Incorrect connections to your vehicle's battery or ignition signal terminal may cause damage to your Radio and your vehicle.

Installation and Wiring

5. Connecting the included Power Cable to your Vehicle's 12V battery is the last step of the wiring installation, but first, proceed to the following **Mount Your Marine Radio** instructions.

Mount Your Marine Radio

Safety and Mounting Considerations

· For safety, disconnect any and all negative leads from the battery prior to beginning the installation.

· Installation requires appropriate tools and safety equipment like safety googles and a dust mask when drilling, cutting, or sanding.

· When you plan your Radio installation, please ensure that the mounting surface is flat for best sealing and has sufficient depth behind it for cable clearance.

· If you need to drill or cut into a vehicle's mounting surface, be careful not to cut or drill any gas tanks, fuel lines, brake or hydraulic lines, vacuum lines, or electrical wiring.

· Be sure to use the stainless-steel screws that are provided. This will help prevent corrosion.

Mounting Options

The Radio includes two sets of mounting harnesses for you to mount the Radio in a round cutout (gauge style) on your vehicle:

1. A Mounting Plate and (4 pcs) 3.0X20 PM Screws – This harness is used to fasten the Radio and the included EVA gasket against the mounting surface with the mounting plate on the other side of the cutout opening. This mounting option requires 4 though-holes on the mounting surface for the 4 screws to pass through.

2. A U Mounting Bracket and 2 sets of M4x55 Mounting Screw Studs and M4 nylon insert anti-loose Nuts – This mounting option does not require 4 though-holes on the mounting surface.

Mounting Hole

A 3" (77mm) round opening is needed to mount the Radio. If you need to cut a hole, place the Radio into the hole to check the fit once the cutting is completed. Refine the size if needed.

If you choose to mount the Radio with the Mounting Plate Harness, you will need to drill 4 though-holes on the mounting surface. Before you begin drilling, mark the hole positions when the Radio is placed into the 3" mounting hole.

Mount the Radio: U Mounting Bracket Harness
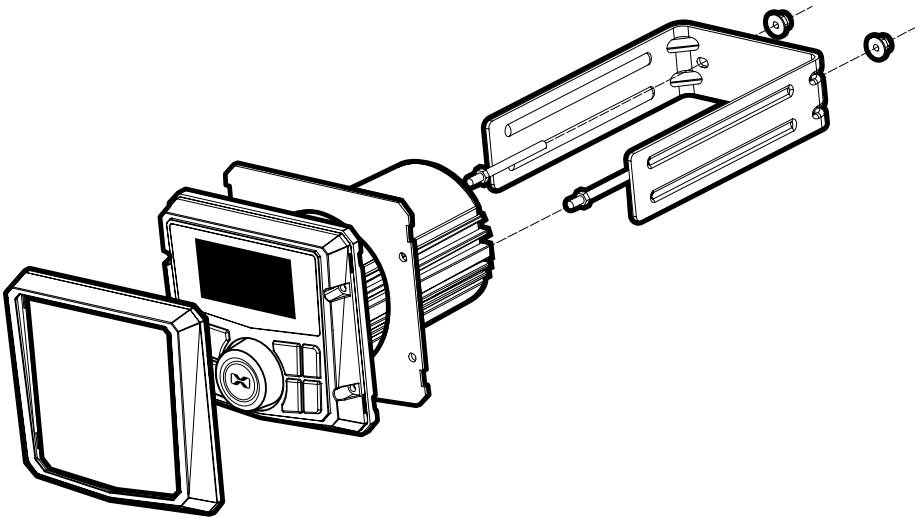
1. Attach the included Mounting Screw Studs to the back of the Radio.

2. Place the Radio in front of the dashboard opening so the wiring can be brought through the 3" mounting hole.

3. Place the EVA Gasket on the back of the Radio.

Installation and Wiring
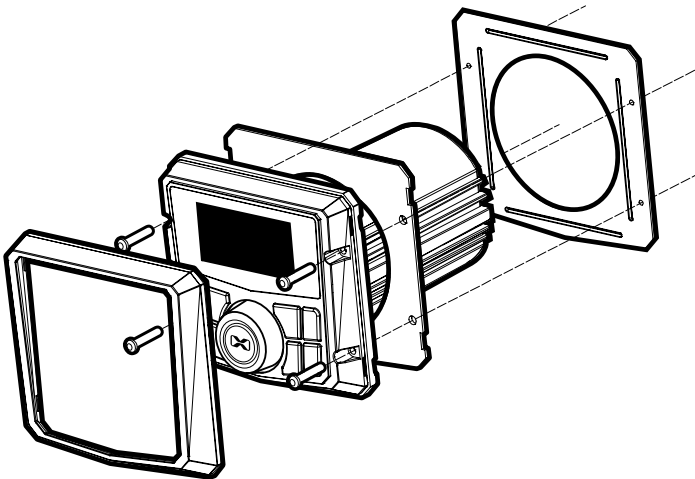
4. Connect all of the wires and cables:

   · Plug the J1, J2, and J3 Cable Harnesses and FM/AM antenna (sold separately) into the back of the Radio.

   · Connect the Remote Turn-On Extension Cable to the Remote Turn-On Input Wire. Seal the connection with electrical tape or heat shrink tubing.

   · Connect the SAE connector on the Power Cable to the SAE connector on the Radio.

5. Insert the Radio into the mounting hole.

6. Place the U Mounting Bracket over the Mounting Screw Studs and secure the Radio to the mounting surface using the included M4 nylon insert anti-loose Nuts.

7. Attach the Snap-on Trim Ring to the front of the Radio.

Mount the Radio: Mounting Plate Harness

1. Place the Radio in front of the dashboard opening so the wiring can be brought through the mounting hole.

2. Place the EVA Gasket on the back of the Radio.

3. Pass all the appropriate wires and cables through the mounting hole and connect all of the wires and cables:

   · Plug the J1, J2, and J3 Cable Harnesses and FM/AM antenna (sold separately) into the back of the Radio.

   · Connect the Remote Turn-On Extension Cable to the Remote Turn-On Input Wire. Seal the connection with electrical tape or heat shrink tubing.

   · Connect the SAE connector on the Power Cable to the SAE connector on the Radio.

4. Put the Radio into the mounting hole

5. Slide the Mounting Plate over the backside of the Radio

6. Secure the Radio with four included 3.0X20 PM Screws.

7. Attach the Snap-on Trim Ring to the front of the Radio.

Connect Power and Turn on Your Marine Radio

After the installation (mounting, wirings, cable connections) is completed, check the following before you connect the Power Cable (+12V, GND) to your vehicle's battery:

· Make sure the ignition switch is tuned off. This is to prevent your vehicle's engine from being started automatically and unexpectedly when you reconnect the vehicle power supply cable to the battery.

· The radios must be connected to a 12V battery. Higher voltages, such as 24V, 36V, or 48V, will destroy the radio and **VOID THE PRODUCT WARRANTY**.

Installation and Wiring

Power Connection

1. Reconnect the vehicle's power supply cable back to the battery.

2. Connect the included Power Cable's **RED** (positive) wire to the battery's positive (+) terminal, and the Power Cable's **BLACK** (negative) wire to the battery's negative (-) terminal.

Black Cable   Red Cable

3. Turn on your vehicle's ignition switch, your Radio is now powered.
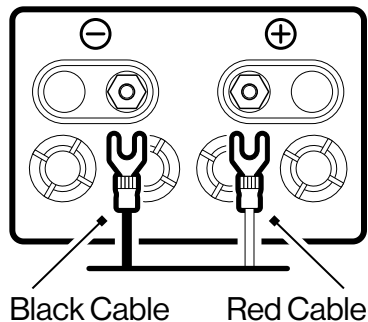
Turn on Your Radio and Play Audio

When the Radio receives power for the first time, if it does not automatically turn on, press the Power Button to turn the Radio on.

When the Radio is on, you can tune in an FM/AM station or play a song on your phone with Bluetooth connection to your Radio. Refer to the **User Guide** for details about features and functions.

IMPORTANT: BEFORE use, you **MUST** verify your wiring and installation as follows:

1. Check Audio Device Connections:

   · Check Zone 1 and Zone 2 Speaker Audio Outputs – Play Music (e.g., an audio playback via Bluetooth). Check if the Audio Zone Volume Controls on the Radio changes the sound outputs for the speaker in the corresponding Zone. For example, if you only increase Zone 1 volume but you hear Zone 2 speakers' volume increase, the Speaker Audio Output wirings are not correct.

   · Check Left and Right Channels – Play Music (e.g., an audio playback via Bluetooth). Listen to each Zone's speakers to see if the left speaker plays the corresponding audio for the

Left Channel and the right speaker plays the audio for the Right Channel. If not, the Left and Right Channel wiring may be swapped.

- Check FM/AM Radio Antenna – Play an FM or AM station. Check if the Radio can tune in a station. If the Radio is not able to tune a station, you will need to check the FM/AM antenna.

- Check Aux-In – Play Aux-In audio. If there is no Aux-In audio output, you will need to check the Aux-In audio source and wiring.

2. Check LEDCast Product's LED Lights:

   - **PRESS AND HOLD** the LED Light Button on the Radio for 3 seconds. All the connected LEDCast Products' LED lights should light up. If not, check all the 3-pin connectors on the LEDCast Products that do not light up.

3. Check All the Connected Vehicle Signal Inputs vs the Radio's Outputs:

   - Turn on your Vehicle's light, your Radio should dim automatically.

   - If your Radio has Vehicle Signal Inputs **AND** LEDCast Products connected to Zone 3 and 4, check the following:

     - When your vehicle's left turn signal is on, the LEDCast Product (on the left) connected to Zone 3 will flash Yellow.

     - When your vehicle's right turn signal is on, the LEDCast Product (on the right) connected to Zone 4 will flash Yellow.

     - When Vehicle's brake signal is on, both the LEDCast Products connected to Zone 3 and 4 will shine Red.

     - When Vehicle is moving in reverse, both the LEDCast Products connected to Zone 3 and 4 will shine White.

Installation and Wiring

If there is an issue identified by these tests and you need to adjust your wirings or make new connections, it is vitally important that **BEFORE** you do, you turn off all the power on your vehicle, your audio system, and the Radio. You **MUST** also disconnect the power supply from Vehicle's battery to prevent damage to your audio system, Radio, and LEDCast Products. Leaving the power on and power supply connected may even cause a fire, possible injury, and **VOID THE PRODUCT WARRANTY**.

Next, read your User Guide to explore more features and functions for your

Marine
Gauge Radio

Need Additional Protection?

Visit soundextreme.us to purchase a soft, silicon-rubber cover for your Marine Gauge Radio's front panel.

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