

HOGTUNES

Audio Solutions For The Great American Cruiser



REV 225-RM

225 Watt 2-Channel Amplifier

FOR USE ON RUSHMORE PLATFORM BIKES

INSTALLATION MANUAL

Thank you for choosing the Hogtunes REV 225-RM Amplifier for 2014+ Rushmore Platform Bikes. Since positive word of mouth is the best way to grow our business, we want your new system to work as well as it was designed to. If you have any questions or concerns, we are here to help.

The REV 225-RM amplifier is a Class D design. It should be understood that ALL Class D amplifiers, REGARDLESS OF BRAND, cause a reduction in FM reception. The REV 225-RM features a proprietary circuit design called R.E.M.I.T. (Reduced Electro Magnetic Interference Technology) that Hogtunes believes gives the BEST FM reception available for any Class D Amplifier designed for a motorcycle. If you add a 2nd or 3rd model amplifier to your system, reduction of FM reception is increased and is considered normal.

Hogtunes understands that some riders prefer the cosmetics of in fairing antennas, however it should be noted that NOTHING works as well as the factory antenna. If FM is an important part of your riding experience, we strongly advise against the use of any in fairing type antenna!

To help protect your bike's electrical system and battery, the amp has a built in feature where it will turn itself off if it sees less than 10.5 volts, whether the bike is running or not. If you're listening to your stereo while not riding, this feature can help protect your battery so the bike can still start. If you're riding and the amp shuts off, this could be showing a potential issue with your charging system. If this feature is activated and the amp shuts off, it will turn the amp back on again if the voltage exceeds the 10.5 volt threshold.

REV 225-RM is rated for 112.5 watts per channel @ 2 ohms. Although this amplifier makes its highest power with 2 ohm speakers, if Hogtunes 5.75 ohm speakers or 4 ohm car speakers are used there will still be a noticeable improvement in volume and sound quality.

There are 3 main sections of this manual to help with your installation:

- 1) INSTALLATION IN STREET GLIDE MODELS**
- 2) INSTALLATION IN ROAD GLIDE MODELS**
- 3) ADDING A SECOND REV 225-RM TO THE BIKE**

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SECTION 1

SINGLE AMPLIFIER INSTALLATION IN STREET GLIDE/ULTRA

- Step #1: Remove the seat and both wires (+ and -) from the battery. Remove the outer fairing/headlamp assembly and set aside. Refer to a service manual if you need help with this. NOTE: Placing a towel on the front fender can help prevent scratches or "dings" from dropped tools or fasteners, etc. Expletives will also be kept to a minimum!
- Step #2: Over top of the radio, pull up to release each wire harness from the black plate via the factory "Christmas tree" fasteners. If your bike has factory GPS, the small square antenna will need to be relocated just behind the voltmeter as shown in Fig 1.1 below. Remove the four factory T-20 "Torx" screws that go through the top of the black plate and into the top of the radio.

Step #3:

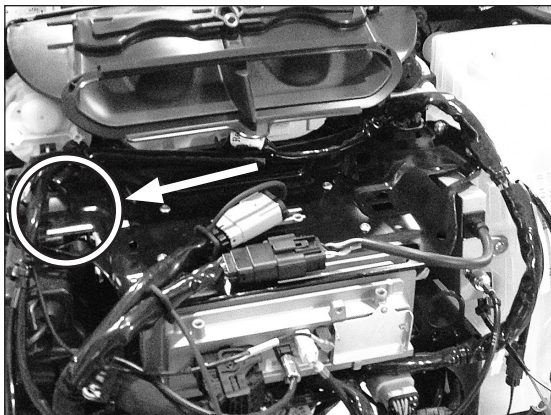


Figure 1.1 - The white circle shows the new location for GPS Antenna if your bike came factory equipped with this feature.

A video version of this manual is available at
www.hogtunes.com/support/videos.html

*If you still need assistance, please consider a professional
installation by your motorcycle dealer.*

Step #4: The amplifier comes on a black mounting plate and needs to be separated from that plate. Sit the amplifier plate over top of your radio and re install the factory screws to secure the amplifiers mounting plate to your bike noting the plate can only go on one way. Locate the supplied input harness and plug into the "audio input" socket on the side of the amp. Locate the "front output" harness with brown/ black and blue/black wires and plug it into the 4 pin BLACK plug on the pig-tail coming out of the amp. Place the amp back on the plate.



Figure 1.2 - Single REV 225-RM amplifier correctly positioned on mounting plate

For reference, if you are standing in front of the bike looking down at the plate, the amp will go

to the extreme left so the power harness is closest to you. When sticking the amp in place, position the 4 pin black plug on the pig-tail so its sitting on top of the amp. This will allow the amp to sit as close to the gauges as possible and allow your outer fairing to go back on. There is a "tab" on the front of the amplifiers mounting plate which allows you re-attach the wire harness using the factory Christmas tree fastener.

Step #5: On the back of each speaker cabinet, you will see pink wires that go to a plug. Separate these plugs on each side of the bike. From the amp, take the 2 pin plug with the blue/black wires and install it into the plug going into the brake side speaker cabinet. Take the 2 pin plug with the brown/black wires and install it into the plug going into the clutch side speaker cabinet.

Step #6: From the amp's input connector, take the 2 pin plug with the green/black wires and install it into the mating plug on the brake side of the bike. Also from amp's input connector, take the 2 pin plug with the yellow/black wires and install it into the mating plug on the clutch side of the bike.

Step #7: Locate the main power harness and plug it into the matching "pig-tail" on the side of the amp. If installing 2x REV 225-RM, run the second power harness at the same time as this step. The balance of the main wire harness will pass under the inner fairing where the main wire harness passes through on the brake side of the bike. Loosen the tank console and run wires up and over the gas tank, but under the tank console. There is a provision on the front of the tank console for wires to pass. Secure the amplifier's harness to the bike's factory harness using zip ties. When correctly installed, the power and ground wires are the right length to connect on to the battery.

Step #8: The balance of the main wire harness will pass under the inner fairing where the main wire harness passes through on the brake side of the bike. Loosen the tank console and run wires up and over the gas tank, but under the tank console. There is a provision on the front of the tank console for wires to pass. Secure the amplifier's harness to the bike's factory harness using zip ties. When correctly installed, the power and ground wires are the correct length to connect on to the battery.

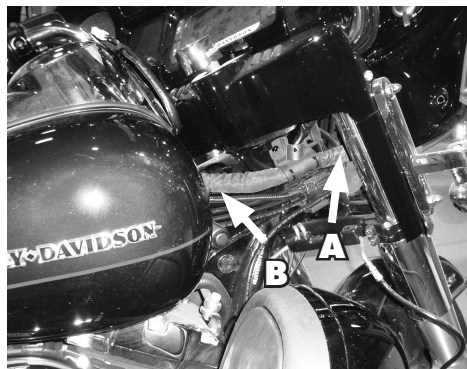


Figure 1.3 - Stock Harness and Amplifier's Harnesses Passing From Fairing To Just In Front Of Tank (Arrow A). Cable Tying the 2 Amp Harnesses To The Main Bike Harness Just In Front Of The Tank (Arrow B) Allows The Amp Harnesses To Go Up Towards The Tank's Chrome Console Easier And Makes For a Cleaner Install.

Note: although not necessary, you can run the harness along the back-bone of the bikes frame if you choose to remove and re-install the bikes fuel tank.

- Attach the red wire to the positive (+) battery terminal and the black wire to the negative (-) battery terminal. The factory battery wires are also re-installed at this point. Turn the ignition of the bike to the "on" position and play the stereo at low volume to verify the amplifier is working fine

Now is a good time to "clean up" and secure any wiring inside your fairing using supplied zip ties. For best possible FM reception, DO NOT attach any of the amplifiers wiring to any factory antenna wires! If you are installing a second REV 225-RM amplifier, please go to Section 3 of this manual.

IMPORTANT: With all wires secured, turn the front wheel to each extreme side, making sure that any wires cannot bind or impede the steering of the motorcycle. Failure to do so can cause an accident resulting in serious injury or death!

If this is the only amplifier being installed, please go to "adjusting your system" near the back of this manual.

SECTION 2 / SINGLE AMPLIFIER INSTALLATION IN ROAD GLIDE/ RG ULTRA

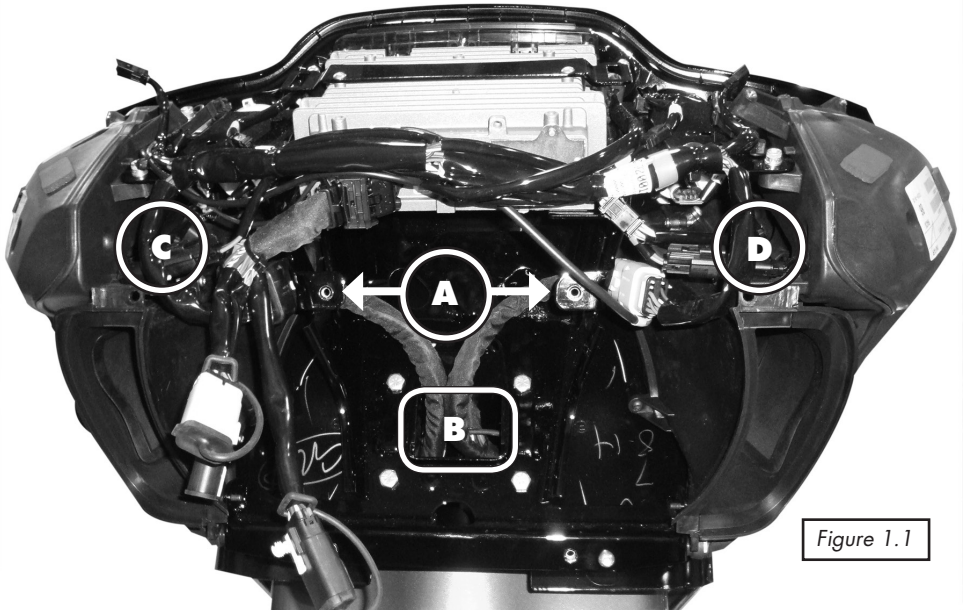


Figure 1.1

Before proceeding, please locate the points in the fairing identified by the letters in Figure 1.1.

A= mounting points for Headlight assembly

B= Wire passage from fairing to bike

C= Brake side speaker harness (Pink and Pink with Black Stripe wires)

D= Clutch Side Speaker harness (Pink and Pink with Black Stripe wires)

Step #1: Out of the box, the amplifier comes on a black mounting plate used for Street Glide and Ultra fairings only. Separate the amp for the plate and put that plate aside. As shown in Fig 1.2, locate the Road Glide specific plate and adhere the amp to the plate so it is in the same orientation as shown. When installed, the amp will be on the back of the plate. We do this so it is much easier to put a second amp later if you choose. The second amp sticks to the front of the plate.

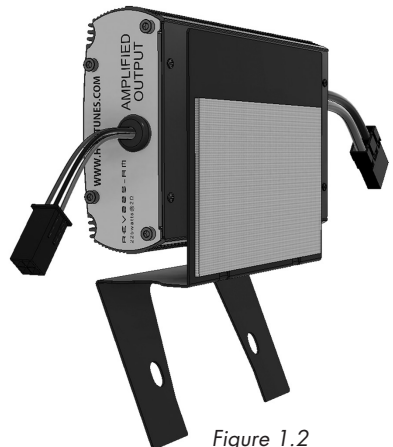


Figure 1.2

Step #2: Locate the power harness for the amplifier. One end has ring terminals and a fuse, and the other has a 2 pin connector. Using Fig 1.1 on Page 6 for reference, to run the "ring terminal end" of the power harness through "B". We need it so the 2 pin power connector is accessible in the inner fairing and the slack can be adjusted later in the installation. Just in front of the tank, there is a structure that attaches the fairing to the frame of the bike. The power harness will pass through this structure and exit through the rectangular opening where the factory harness also exits the structure on the BRAKE side of the bike. Note: it can be easier to pass the wire harness through the rectangular opening if you "open" the fuse holder and remove the fuse before passing the wire harness. Loosen the tank's "chrome console" and run wires up and over the gas tank, but under the tank's chrome console. There is a provision on the front of the tank console for wires to pass.

NOTE: Although not necessary, the power harness can go under the gas tank if you choose to remove and re-install the tank.

With the power and ground wires in the vicinity of the battery, move to step #3 WITHOUT connecting amp wires to battery.

Step #3: Locate the "audio in" harness and plug its 8 pin white plug into "audio in" on the side of the amp. Locate the amp's "front out" harness and plug it into the 4 pin BLACK pigtail coming out of the side of the amp.

Note: There is a 3 position switch on the side of the amplifier. For all typical installs, this should be in the "+3" position. The switch allows you to "tune" the amp in relation to other speakers and/or amps on the bikes if they are added.

Step #4: Using Fig 1.1 on page 6 for reference, locate the 4 bolts around "B" and remove the top left and top right bolts (only). Also using Fig 1.1 on page 6 for reference, there are 2 large factory harnesses between "A" and "B". You will have to wiggle the amp on the plate into place around these harnesses so that the holes on the "legs" at the bottom of the plate line up with the holes where the factory bolts around "B" were. With the plate in position, reinstall the factory bolts around "B" which will secure the amp on its plate to the bike.

Step #5: As shown by "C" in Figure 1.1, on the brake side of the bike, there is a 2 pin connector with pink/pink with black stripe wires going through it. The plug is close to where the wires enter the brake side speaker cabinet. Separate the connector so there are 2 plugs. From the amp, take the plug with blue/black wires and plug it into the mating plug you just separated noting it will only go in one way. Also from the amp, take the plug with green/black wires and plug it into the mating plug that was just separated noting it will only go in one way.

Step #6: As shown by "D" in Figure 1.1, on the clutch side of the bike, there is a 2 pin connector with pink/pink with black stripe wires going through it. The plug is close to where the wires enter the clutch side speaker cabinet. Separate the connector so there are now 2 plugs. From the amp, take the plug with brown/black wires and plug it into the mating plug that was just separated noting it will only go in one way. Also from the amp, take the plug with yellow/black wires and plug it into the mating plug that was just separated noting it will only go in one way.

Step #7: Attach the black wire to the negative (-) battery terminal and the red wire to the positive (+) battery terminal. The factory battery wires are also re-installed at this point. When attaching the power and ground wires, it is always a good practice to do the negative (black) first. When the positive connector touches the battery, some sparking is normal. This is a function of the capacitors in the amplifiers charging up.

Turn the stereo on and, at low volume, test to make sure the speakers are working. Now is a good time to "clean up" and secure the wires using the supplied zip ties. DO NOT attach any of the amplifiers wiring to any factory antenna wires!

IMPORTANT: With all wires secured, turn the front wheel to each extreme side making sure that any wires cannot bind or impede the steering of the motorcycle. Failure to do so can cause an accident resulting in serious injury or death!

If you are installing a second Rev 225-RM amplifier, please go to Section 3 of this manual.

If this is the only amplifier being installed, please go to "adjusting your system" near the back of this manual.

SECTION 3

IF THIS IS THE SECOND AMP IN YOUR SYSTEM

- Step #1: Remove the seat and both wires (+ and -) from the battery. Remove the outer fairing/headlamp assembly and set aside. Refer to a service manual if you need help with this.
- Step #2: You will now need to run the second power harness to the battery. For Street Glide/Ultra, refer to Step #7, on page 4, in Section 1 of this manual. For Road Glide/RG Ultra, please refer to Step #2, on page 7, in Section 2 of this manual for running the power harness. **DO NOT** re-attach the power wires to the bike at this time!
- Step #3: Remove the new amp you are installing off the plate it came on in the box. Put that plate aside as it is not used in this installation. If installing a second amp in a Street Glide or Ultra, the second amp will be installed on the plate already on the bike as shown below in Fig 1.1 below. Make sure to have the 4 pin black "pigtail" sit on top of the amp when sticking it in place.

If installing the second amp in a Road Glide or RG Ultra, the second amp will "stick" to the front of the mounting plate as shown in Fig 1.2 below.

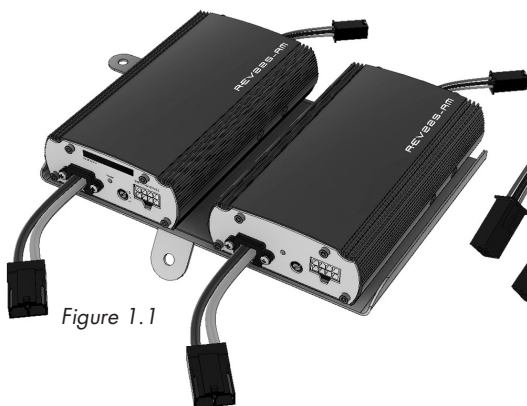


Figure 1.1

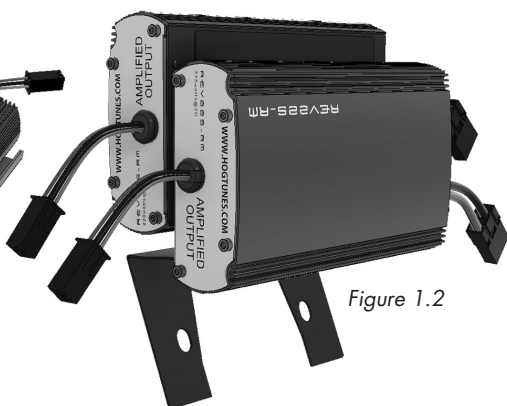


Figure 1.2

IMPORTANT!

In this install, we refer to the "1st amp" as the Master, and the 2nd amp as the Slave. On Street Glide/Ultra, the Master Amp is on the left side of the plate. On Road Glide/RG Ultra, the Master Amp is on the back side of the plate. In all cases, the Master Amp is what is powering your front fairing speakers and the Slave is powering speakers elsewhere on the bike.

Step #4: Locate the "input link" harness included in the box. Take the blue 4 pin male plug on the "input link" and plug into the empty blue 4 pin female plug on the Master Amps input harness. The 8pin plug on the input link will now plug into the "input" on the Slave Amp. This is how we get music from the Master Amp to the Slave Amp. When done, you will have a blue 4 pin female plug on the input link that is empty. Although not used for this install, this empty plug could be used to send music to a 3rd amp later on.

Step #5: The last connection to the Slave (right side on Street Glide or Front amp on Road Glide) amplifier is to the second set of speakers in the system.

If you are using Hogtunes lids, the harness that comes with the lids will work its way up the bike, and plug right into the 4 pin black amplified out "pigtail" on the Slave Amplifier.

If you are using Hogtunes LC-Lower-RM Kit for speakers in the lowers of liquid cooled touring bikes, the harness included with the kit will also plug directly into the 4 pin black amplified out "pigtail" on the Slave (front) amplifier.

In all other cases you will use the "ACC" harness included in this kit that has a 4 pin black plug on one end, and wires on the other. This will plug into the amplified out "pigtail" on the Slave Amplifier and "hardwire" the second set of speakers to this harness. The wires on the supplied ACC harness are clearly labeled which will make wiring easy. To avoid unnecessary warranty calls, please do a GOOD JOB of joining the wires together.

Step #6: Attach the power harnesses black wires to the negative (-) battery terminal and the red wires to the positive (+) battery terminal. The factory battery wires are also re-installed at this point. When attaching the power and ground wires, it is always a good practice to do the negative (black) first. When the positive connector touches the battery, some sparking is normal. This is a function of the capacitors in the amplifiers charging up.

Step #7: Turn the stereo on and, at low volume, test to make sure all speakers are working. Each amp has a 3 position volume switch you can now adjust to tune the volume levels between amps. If there are front speakers and lids, and you want the lids louder, lower the Master Amp to "0" or "-3" setting and leave the Slave Amp at "+3". There is no right or wrong here, just set it how you prefer it.

Now is a good time to "clean up" and secure any wiring inside your fairing using supplied zip ties. For best possible FM reception, DO NOT attach any of the amplifiers wiring to any factory antenna wires!

IMPORTANT: With all wires secured, turn the front wheel to each extreme side making sure that any wires cannot bind or impede the steering of the motorcycle. Failure to do so can cause an accident resulting in serious injury or death!

Final System Adjustments:

From time to time, the "Motor Company" will release software updates on their website which can be downloaded, and installed on the bike. For best performance of your audio system, please make the downloads are up to date! Earlier versions of the software could cause any brand of aftermarket amplifier to distort prematurely so this is an important point!

How the system sounds when the bike is running is going to differ from how it sounds when the bike is not running. This is a function of the radios built in software. You may find yourself adjusting the bass and or treble controls if you're listening to the bike without the motor running.

A Couple Of Tips To Have Your System Sound Great

- 1) Many people will store music on a hand held type player and use that as the music source for the bikes audio. PLEASE NOTE: If you "borrow" your music files from certain sites, they typically sound poor. Using a good quality file will only make your system sound better!
- 2) Many people will take advantage of the convenience of streaming their music to the radio using Bluetooth®. It should be noted that we found plugging in your music device using the radios USB cord sounds better and plays louder than using Bluetooth.
- 3) Streaming your music in from internet based radio is not always constant, especially outside of populated areas. When streaming while riding, the quality of the audio is greatly effected by the speed of the cell signal you're in at any given time.

WARRANTY INFORMATION

IMPORTANT: In the event of a warranty claim, please fill out the form in the Warranty section of our website, or contact us by email or by phone. Valid claims will have an Return Authorization Number (RA#) generated which **MUST** appear on the outside of the box when it arrives to our office.

Goods Arriving Without an RA# Will Be Refused!

Please Record Your Amplifier's Serial # Here_____

The REV 225-RM Amplifier is warranted for 3 years from original purchase date. Proof of purchase is required for all warranty claims. The warranty applies to the original retail customer and is not transferable. Please contact Hogtunes for all warranty claims. Products found to be defective during the warranty period will be repaired or replaced (*with a product deemed to be equivalent*) at Hogtunes sole discretion. Hogtunes complete warranty policy is available on our website at:

www.hogtunes.com/warranty.html

What Is Not Covered:

- 1) Any expense related to the removal or re-installation of Hogtunes products.
- 2) Repairs to these products performed by anyone other than Hogtunes.
- 3) Subsequent damage to any other components.
- 4) Any product purchased from a non-authorized Hogtunes dealer.
- 5) Damage to Hogtunes products due to an accident or collision.
- 6) Hogtunes Amplifiers with broken or removed "warranty void" stickers.
- 7) Damage due to water from custom installations.
- 8) Damage from incorrect installation, improper use, abuse or modifications.
- 9) Damage to inbound product due to improper packing.

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Hogtunes products will play much louder than the Original Equipment, which can be a distraction to the rider and/or passenger. Please use caution when adjusting or playing your stereo at high volume, especially in traffic.

You are a valued customer so please:

**Ride Alert
Arrive Alive!**

www.hogtunes.com

REV 225-RM Manual Ver 2.0