

Wild Boar Audio 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!** 



# WBA LC LWR HIT

INSTALLATION MANUAL

# **IMPORTANT!**

This Kit <u>Cannot</u> Be Used In Conjunction With Factory Amplifiers Or Bikes With Air Cooled Motors Thank you for your purchase of Wild Boar Audio's WBA LC LWR KIT. We want your new product to work as well as it was designed to, so if you have any questions or concerns, please email: tech@hogtunes.com or call us during regular business hours at 705-719-6361 (EST). If you still need help, please consider a professional installation by your dealer.

# **Important—Please Read Before Proceeding!**

A) In order for the supplied amp to work properly, <u>your radio must have the proper "flash" installed.</u> Different radio flashes are used by the "MoCo" based on the factory audio system that comes on different model bikes. Re-flashes can be done at any OEM dealer, or a "Techno Research" dealer. You can find the nearest Techno Research dealer by visiting: http://technoresearch.com/index.php/tuning-centers The required flash to make this amp work best is called "4 speaker no amp" and will give highest quality sound and best reliability. It should be noted that non CVO Ultra models and Ultra Trike models come from the factory with the required "4 speaker no amp flash. See the "System Adjustment" section on Page 7 for more information.

- B) The WBA 300.2 amplifier is made to work with  $4\Omega$  (ohm) speakers only.
- C) The amplifier has built in protection and will turn itself off to protect your charging system if your charging system/battery goes below 10.5 volts.
- D) In very high heat situations the 300.2 amplifier will shut itself off before it damages itself. Once cooled down to safe operating temperatures, it will turn itself back on.

The WBA 300.2 amplifier is a Class D design. It should be understood that <u>ALL</u> Class D amplifiers, <u>regardless of brand</u>, cause a reduction in FM reception. The WBA 300.2 features a proprietary circuit design called R.E.M.I.T. (Reduced Electro Magnetic Interference Technology) that Wild Boar Audio believes gives the BEST FM reception available for any Class D Amplifier designed for a motorcycle. If you add additional amplifiers to your system, reduction of FM reception is increased and is considered normal.

Wild Boar Audio understands that some riders prefer the cosmetics of in fairing antennas, however it should be noted that <u>NOTHING</u> 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!

# **Warranty Information:**

Wild Boar Audio branded amplifiers are warranted for a period of 3 years to the original purchaser. Wild Boar Audio speakers are warranted for a period of 5 years to the original purchaser. Proof of purchase is required 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 Wild Boar Audio's sole discretion. Wild Boar Audio's complete warranty policy is available on the website at www.wildboaraudio.com

### What Is Not Covered:

- 1) Any expense related to the removal or re-installation of products.
- 2) Repairs to these products performed by anyone other than Hogtunes, Inc.
- 3) Subsequent damage to any other components.
- 4) Any product purchased from a non-authorized Wild Boar Audio dealer.
- 5) Damage to products from an accident or collision.
- 6) Damage from incorrect installation, improper use, abuse or modifications.
- 7) Reduction of FM reception.
- 8) Damage caused by incorrect factory radio "re-flash" and amp combination
- 9) Damage to inbound warranty product due to improper packing.

IMPORTANT: In the event of a warranty claim, please fill out the form in the Warranty section of our website www.wildboaraudio.com. Valid claims will have a Return Authorization Number (RA#) generated which MUST appear on the outside of the box when it arrives to our offices.

Goods Arriving Without An RA# Will Be Refused!

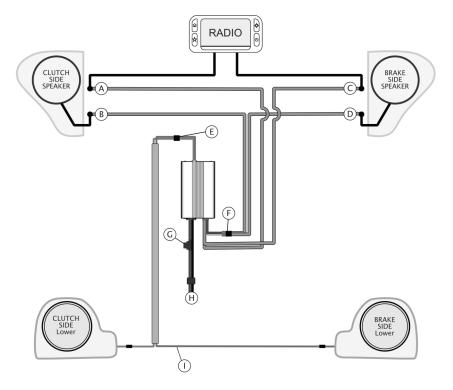
Wild Boar Audio is owned by Powersports Audio Inc.



# LC LWR KIT Amplifier Quick Reference Wiring Guide (If Only Amp On Bike)

Note: From the factory, the plugs at indicators "A" and "B", and "C" and "D" are plugged together but get separated for this install.

- A) Amplifiers Clutch Side Input (Yellow Heatshrink)
- B) Amplifiers "Bypass" Clutch Side Output (Brown Heatshrink)
- C) Amplifiers Brake Side Input (Green Heatshrink)
- D) Amplifiers "Bypass" Brake Side Output (Blue Heatshrink)
- E) Amplified Output "Pigtail" on Amp
- F) Amplifiers Bypass Output For Rerouting Radios Built In Power
- G) In Line Fuse On Supplied Power Harness
- H) Amplifiers Main Power/Ground
- I) Amplified Output Harness from Amp to Lower Speakers



This Page Is For Quick Reference Only.

To Avoid Damage To Your System,

Please Read Entire Manual!

# **Installing Speakers In the Lowers:**

Step #1: Remove the seat, and both wires (+ and -) from the battery.

Step #2: Remove the outer fairing/headlamp assembly. Refer to a service manual if you need help with this. Note: A towel on the front fender can help prevent scratches or "dings" from dropped tools or fasteners etc. High volume expletives will also be kept to a minimum.

Step #3: Starting on the brake side lower fairing, use a coin or something similar to carefully pry off the front access cover. With the cover removed, look inside the opening, and at the very back, you will see a 7/16" nut that is to be removed. This nut allows the painted fairing lower "cap" on the front to come off. With the painted cap off, you will see a "bar" that secures the top half of the lower to the crash bar. Remove the 2 nuts and the bar and put aside for now. At the bottom of the lower is a clamp that holds the bottom half of the lower to the crash bar. Remove the bolt that secures the clamp.

Step #4: Gently push the top of the lower towards the back of the bike just enough so you can remove the 3 torx screws (normally hidden by the painted cap) that hold the lowers front panel in place. Gently pull on the front panel to release 2 clips which will allow the front panel to come away, but not completely free from the bike yet. There is a small arm for the vent mechanism still attached that is removed by squeezing the top of the pivot pin and lifting up on the arm. You can now bring the factory lower front panel to a work bench and remove the torx screw that holds the vent adjuster and arm to the factory panel. Using the same screw, install the vent adjuster and arm into your new speaker adaptor.



Step #5: The kit comes with die cut foam panels. Find the one for the side of the bike you are working on and apply as shown noting you should clean the area with isopropyl alcohol first. On your factory front panel, you will see 2 white clips. One of these clips will come off and be installed onto the new speaker adaptor.

Step #6: Moving to the front side of the lower, in the area normally hidden by the painted cap, you will see a hole where the bolt passes through that secures the painted cap. Just above that hole and approximately 2" back from the bolt hole, you will need to drill a 3/8" hole for the wires to pass. When this install is finished, the painted cap will hide the wire nicely. It's a good idea to start with a pilot hole and then drill the final size. Use care to make sure your drill bit does not pierce the radiators coolant tank inside the lower on the brake side!

<u>Step #7:</u> Locate the supplied wire harness marked "LC LOWER". On the harness you will see a main 4 wire harness with blue/black, and brown/black wires covered in a black sheath. You will also see two-2 wire harnesses (wires are all black) that each need to be unplugged from the main harness.

Step #8: Locate the 2 wire harness marked "brake side" and plug it into the main harness connector noting it will only go in one way. The other side of the same harness will go into the lower. Pass the larger connector first. You can also tear off the sticker if that makes it easier. Once the wires are in the lower, take up the slack along the crash bar keeping the main harness (with blue/black, and brown/black wires) as close to the center of the crash bar as possible.

<u>Step #9:</u> The kit comes with strips of black gummy material. Take one of the strips and use it to seal the hole around the wire on the outside of the lower.

Step #10: Snap the arm for the vent back into place on the pivot pin. Re install the 3 factory torx head screws (by hand just until they are snug) to secure the panel to the lower. The "bar" and 2 nuts removed earlier that secure the top of the lower to the crash bar will now be reinstalled. The bolt removed earlier that secures the lower to the bottom of the crash bar is also re installed.

Step #11: Using some of the supplied zip ties, secure the speaker wire to the crash bar keeping the main harness as close to the center of the crash bar as you can. It's a good idea to trim the excess of the zip ties as close to flush as possible so there are no sharp edges. When done, install and secure the painted fairing lower cap with the 7/16" nut removed earlier.

Step #12: Take one of the Wild Boar WBC 1654 REAR speakers that came in the kit and attach the speaker wires just installed into the fairing lower on to the speaker, noting the wires will only go on one way. Sit the speaker and its trim ring into the lower, and BY HAND, get the supplied machine screws "started" into the brass threads. Get all 4 machine screws "snug" and then tighten in an "X" pattern.

<u>Step #13:</u> Repeat the previous steps to install the lower speaker adaptor for the clutch side of the bike.

#### **Final Installation Notes:**

- 1) All Wild Boar Audio amplifiers have been designed to give great sound with the radio bass and treble controls in the middle position. Adjusting the bass and treble up or down no more than 3 bars from center will give excellent and reliable performance for most kinds of music. If you choose to exceed this suggestion and play at high volume levels, you may damage your system!
- 2) The Wild Boar Audio 300.2 amplifier is a HIGH POWER amplifier specifically designed to work on the small charging system of a motorcycle. <u>DO NOT start your motorcycle with the radio past half on the volume dial!</u> When the start button is hit, all available current goes to your bikes starter which "starves" the amplifier and may cause damage to your system!

Before re-installing outer fairing, turn front wheel
to each extreme side making sure any
wiring is not impeding the steering
of the motorcycle.

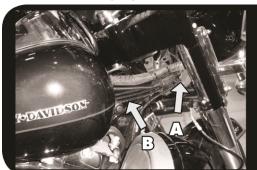
Failure to do so can result in serious injury or death!

Now is the best time to take a couple of minutes and "clean up" the wiring inside the fairing using supplied zip-ties. For best FM performance, <u>DO NOT attach any of the amplifiers wiring to the antenna cable of the bike!</u>

Re-install the fairing and the system is now ready to enjoy! <u>Please make sure to review</u> the information on the next pages!

Locate the power harness and plug the 2 pin connector into the mating connector on the amp. The power/ground harness will pass through the inner fairing where the main wire harness passes through on the brake side of the bike. If your comfortable removing and re-installing the fuel tank, the wires can go in the factory wire "chase". Alternatively, you can 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.

If there is already a WBA 600.4 on the bike, do not (REPEAT <u>DO NOT</u>) splice into the existing power harness to save time running another harness. The 600.4's wire harness is not adequate in gauge to <u>PROPERLY</u> power an additional amplifier.



Stock Harness and Amplifier's Harnesses Passing From Fairing To Just In Front Of Tank (Arrow A). Cable Tying the 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.

Attach the power harness' brown wire to the negative (-) battery terminal and the amp's 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 first. When the positive connector touches the battery, some sparking is normal. This is a function of the capacitors in the amplifier charging up. Turn the stereo on and, at low volume, test to make sure the speakers are working. With everything working, re-install the seat making sure the amplifier's "+" and "-" connectors are positioned in such a way that they will not bend or break when the rider's weight is on the seat.

# **IMPORTANT System Adjustment:**

As explained at the beginning of this manual, in order for the system to work properly you will need to have the correct "flash" in your radio. This kit only fits NON CVO Models with liquid cooled heads so if you are installing this amplifier on a Ultra Classic model or Trike, the factory flash that came with your bike is the preferred "4 speaker no amp" flash. If your bike has had no previous audio installed, you will not need a re-flash. If you have questions, please call our tech support team before proceeding!

# Radio Flash Selector (A/B/C) Switch On Side Of Amp:

- If you have your radio flashed to "4 speaker no amp" set the amp (or all Wild Boar Audio Amps) to the "A" position. "B" is not applicable for the installation.
- In extreme cases only, depending on how the music you have on your USB source was originally recorded, you may have distortion at around 60-70% of the volume on your radio. If this is a common issue for you, and you want to have "full swing" of the radios volume controls, setting the amps to "C" will fix the issue.

# **Choosing The Amplifier Mounting Location:**

The supplied "FLH Side Plate" that came in the amp box allows the amp to mount between the radio and clutch side factory speaker cabinet as seen in Fig 1.1 below. This is perfect if you are adding this amp to an existing Wild Boar Audio WBA 600.4 or have another accessory already mounted on top of the radio. You can also use the supplied hook and loop material, to "stick" the amplifier to the factory black plate that resides over top of the radio inside the fairing as seen in Fig 1.2 below. If you choose to "stick" the amp over top of the radio, please go to section "B" on Page 7.





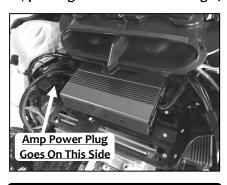
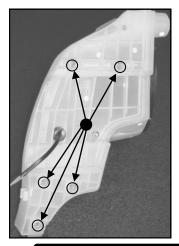
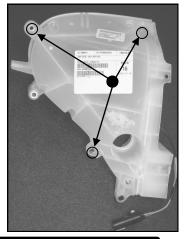


Fig1.2: Amp Mounted On Top Of Radio Power Plug Should Be On Brake Side

## **If Using The Supplied Mounting Plate:**

Step#1: Clutch Side Speaker Cabinet Removal: Fig 1.3 and 1.4 show the 8 fasteners that will need to be removed to allow the clutch side cabinet to be removed from the bike. If your bike has the CB module, (mounted "sideways" on the clutch side cabinet) undo the antenna cable and main harness. The CB Module will stay attached to the clutch side cabinet when removed. Undo the speaker wire plugs going into the cabinet (pink & pink with black stripe wires).



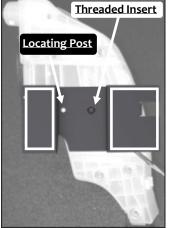


Note: Brake Side Shown But Fastener Location Is Same For Clutch Side

Fig1.3 Side View of cabinet

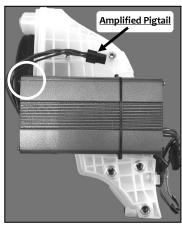
Fig1.4 Back View of cabinet

Step#2: Attaching the Main Plate To The Speaker Cabinet: If your bike had the CB Module, remove its mounting plate from the speaker cabinet. On the side of the cabinet, you will see a threaded insert and a locating post as seen in Fig 1.5. Put the main plate on the cabinet so one of the holes in the plate goes over the locating post, and the other sits over the threaded insert. If you removed a CB module from an Ultra you can use the screw that secured that module to the speaker pod. If your bike did not have a CB Module, use the machine screw that came in the kit to secure the side plate to the speaker cabinet. Fig 1.5 shows the plate correctly placed on the speaker cabinet.



Step #3: Preparing the Plate For The Amp: The kit comes with self adhesive "hook and loop" material in the box the mounting plate was shipped in. Separate this so you have 2 pieces. One of the pieces will be applied to the underside of the amp. Refer to Fig 1.5, and cut the remaining piece of hook and loop material so you have 2 smaller pieces close to the size of the metal areas highlighted by white rectangles. Apply the pieces just cut to the correct sections on the plate.

Fig1.5 Plate Correctly Placed



Step #4: Attaching the Amplifier To The Plate:
The amp will "stick" to the plate as shown. See the white circle in Fig 1.6. The "top" and left "end" of the amp must be flush to the "top" and left "end" of the plate, or the amp/factory speaker cabinet assembly will not fit! NOTE: It is CRITICAL that the "amplified pigtail" of the amp be on the speaker side of the cabinet as shown in Fig 1.6. In the kit is a 14" long "zip tie" which will wrap around the plate and around the amp. Tighten the "zip tie" so its snug only. The zip tie is on there as a back up in the unlikely event the hook and loop adhesive fails.

#### Fig1.6 Amp On Cabinet

Step #5: Placing the Amp and Cabinet Into The Bike: As shown in Fig 1.6, the "amplified pigtail" on the amp needs to be positioned over top of the amp. If you do not do this now, you will not have access to this plug when wiring the amp! The cabinet/amplifier assembly will now go in the bike as one unit. Some "finesse" is needed, but it will go without forcing anything. With the cabinet assembly in place, re-install all 8 fasteners and secure the speaker cabinet to the bike.

## **Wiring The Amplifier:**

There are 2 typical scenarios in how this amp will be installed.

# A) If you are adding the WBA 300.2 to a bike that already has a WBA 600.4 installed.

Locate the "input link" which has a small black plug with 8 wires going into it, and 2 blue plugs with 4 wires going into each of those. The 8 pin black plug will plug into the 8 pin socket on the amp. Assuming the WBA 600.4 instructions were followed, the amp on the BRAKE side of the bike is the "MASTER" and is the amp powering the front speakers. On the MASTER amplifiers input harness, you will see an empty blue, 4 pin plug. On the new WBA 300.2 you are now installing, you will take one of the blue plugs on its input link harness, and plug it into the empty blue plug on the MASTER amps input harness. Having the WBA 300.2 in this kit "tied to" the WBA 600.4 MASTER amp allows the front speakers and lower speakers to be controlled by the front "half" of the radios fader control. The rear speakers by themselves would be on the rear "half" of the radios fader control. This gives the rider the best flexibility when adjusting the system while riding.

From the wire harness you installed in the lowers, the balance of the main wire will pass through on the brake side of the fairing where the main factory wires pass and work its way up to, and be plugged into the amplified output "pigtail on the WBA 300.2. Continue to the next page for power harness installation.

## B) If this is the only amplifier in the system.

Locate the supplied "input harness", and plug its black 8 pin connector into the side of the amp. 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's input connector, take the 2 pin plug with the green heatshrink 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 heat shrink and install it into the mating plug on the clutch side of the bike.

From the wire harness you installed in the lowers, the balance of the main wire will pass through on the brake side of the fairing where the main factory wires pass and work its way up to, and be plugged into the amplified output "pigtail on the WBA 300.2.

Locate the supplied "output harness" which has a 4 pin black connector on one end, and factory style connectors on the other ends. Take the 2 pin plug with the blue heatshrink and install it into the plug going into the brake side speaker cabinet. Take the 2 pin plug with the brown heatshrink and install it into the plug going into the clutch side speaker cabinet. The small 4 pin black plug on this harness will plug into the empty BLUE plug on the WBA 300.2 input harness. In this configuration, the radios built in power is powering the fairing speakers, and the amplifier is dedicated to the lower speakers. Continue to the next page for power harness installation.