

# Soundz Amplifier Manual for All HD Models

## Road Glide 2015-2020

Amplifier mounts to bracket via 4-M4 machine screws.

Amplifier bracket mounts to factory main fairing bracket via 4-1/4-20 hex bolts in factory slots as indicated in the HD service manual.

To slide the amplifier in, you need to orient the amplifier so the point of the arrow (amp bracket is shaped like an arrow) faces towards the headlight with the amp towards the wheel, power block and output section towards the tank, and input section with adjustments towards the headlight.

**Pro tip: When installing speakers, reference the template for location, however, a 2-5/8" hole saw works best.**

### Wire Routing

Route power wires under tank and connect to battery, and ONLY the battery for both 12V+ & Ground.

Connect T-harness to appropriate input and output connections. Note that the clear color connectors go to the input side and black color connectors go to the output side. White/grey is front, and green/purple is rear, UNLESS otherwise noted as some models may deviate from this to accommodate special factory wiring in RARE scenarios.

**Power Harness** routed under tank, through trough, along the right side of the frame. Route along the main harness and along the right-side overlay harness up to the amplifier power input of the amplifier.

**Remote turn on** (without DSP) is connected behind the Volt gauge to the 2-pin accessory connector and then to the amplifier power input.

**Once T-Harness** is connected to both the radio and factory harness, the radio side of that main bundle will route to the left, below radio, then route the other side of our T-harness towards the right speaker pod with a zip tie on that overlay harness. Keep the large connection joint tucked in behind and to the right of the radio connector and along the overlay harness so it does not interfere with the outer fairing.

Route the **speaker output** above the headlight bolt tab (Right Upper), along the right side of the amplifier on the bracket, connect to the amp, and zip tie any excess to the main harness coming from the neck of the bike.

Route the **speaker input** with a small service loop initially under the radio connection and towards right speaker pod, with about an inch of wire (allows enough slack to remove radio), then along the fairing overlay harness towards the left speaker pod and down along the fairing towards the amplifier input connection with the excess bundled and zip tied below the amplifier along the main harness coming from the neck of the bike.

*If using a DSP, refer to that part of the directions for remaining information.*

## Street Glide/Ultra Models 2014-2020

Amplifier mounts to factory bracket via supplied Velcro. Clean surface of all dust, debris, and any oils using alcohol and/or adhesion promotor. Most auto parts stores sell a Duplicolor CP199 Adhesion Promotor for about \$8 that works wonders.

Orient the amplifier so the Soundz font faces towards the headlight, power block and output section towards the right speaker, and input section with adjustments towards the left speaker pod.

### Wire Routing

Route power wires under tank and connect to battery, and ONLY the battery for both 12V+ & Ground.

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**Power Harness** routed under tank, through trough, along the right side of the frame. Route along the main harness and along the right-side overlay harness up to the amplifier power input of the amplifier.

**Remote turn on** (without DSP) is connected behind the Volt gauge to the 2-pin accessory connector and then to the amplifier power input.

**Once T-Harness** is connected to both the radio and factory harness, the radio side of that main bundle will route to the left, zip tie to the plastic harness stay bracket below radio, then route the other side of our T-harness towards the right speaker pod with a zip tie on that overlay harness. Keep the large connection joint tucked in along the overlay harness so it does not interfere with the outer fairing.

Route the **speaker output** along this portion of the harness, along the tank side of the bundle, and up and along the fairing overlay harness, connect to output(s) of amplifier, with the excess being bundled behind the main two gauges.

Route the **speaker input** with a small service loop initially under the radio connection and towards right speaker pod, with about an inch of wire (allows enough slack to remove radio), then along the plastic harness stay bracket below radio towards the left

speaker pod, along the left fairing overlay harness and up towards the amplifier input connection with the excess bundled and zip tied behind the main two gauges.

*If using a DSP, refer to that part of the directions for remaining information.*

### **Road Glide/Ultra 1998-2013**

Amplifier mounts to left side of inner fairing via supplied Velcro.

Orient the amplifier so the power terminal block and output section face towards the tank, and the input section with adjustments are towards the headlight.

Route power wires under tank and connect to battery, and ONLY the battery for both 12V+ & Ground.

Connect T-harness to appropriate input and output connections. Note that the clear color connectors go to the input side and black color connectors go to the output side. White/grey is front, and green/purple is rear, UNLESS otherwise noted as some models may deviate from this to accommodate special factory wiring in RARE scenarios.

Make sure to route the T-harness along the fairing overlay harness tightly to avoid outer fairing fitment issues. Please be aware that a stock motorcycle is intended to have its factory wiring routed from the neck of the bike coming straight up to the back of the radio and then to the right and to the left. Nothing should be below the two fairing hooks on either side!

If using a DSP or CVO model refer to that part of the directions for further information.

### **Street Glide/Ultra 1998-2013**

Amplifier mounts above radio via supplied Velcro. Clean surface of all dust, debris, and any oils using alcohol and/or adhesion promotor. Most auto parts stores sell a Duplicolor CP199 Adhesion Promotor for about \$8 that works wonders.

Orient the amplifier so the Soundz font faces towards the headlight, power block and output section towards the right speaker, and input section with adjustments towards the left speaker pod.

Route power wires under tank and connect to battery, and ONLY the battery for both 12V+ & Ground.

Connect T-harness to appropriate input and output connections. Note that the clear color connectors go to the input side and black color connectors go to the output side. White/grey is front, and green/purple is rear, UNLESS otherwise noted as some models may deviate from this to accommodate special factory wiring in RARE scenarios.

If using a DSP or CVO model refer to that part of the directions for further information.

### **11-13 RG/SG CVO**

The kit will come with specific speaker connections for each speaker. These may or may not already be attached to the speakers so make sure to verify before starting the installation exactly what you received!

Each factory amplifier MUST be disconnected, and the amplifier bypass plugged in BEFORE connecting the Soundz amplifier.

Factory tweeters in gauge locations can NOT be used with the Soundz amplifier as they are 1 ohm and will possibly cause the amplifier to go into protect at high volumes/extended play time. Please disconnect them and place tape over the end of the connector to prohibit anyone else that may work on the bike from accidentally reconnecting thinking they are just helping you!

For the RG model CVO, you must revert the factory grille plastic back to the original round style opening. This is not an automatic part of our kits. We do every effort to inform at time of ordering, but that may or may not happen every time or be understood every time. The factory part numbers for those are 77021-98 and 77022-98. They will likely each be followed by a letter as HD makes changes over time and updates the part number.

### **12-13 Ultra Limited CVO**

The following also applies for ALL models with an amplifier mounted under the tour pack with some variations - PLEASE call immediately if you notice something abnormal. Harley made multiple variations of upgrades for different models and years and we can always custom make the interface for your scenario given proper pictures and information. This will take a bit of patience, but we can accommodate this for you with good communication.

Use the rear amp bypass to plug into the amp under the tour pack. Use the front output from the T-harness as your rear output to the tour pack pods. Run a direct harness for the front speakers.

## **Soundz SC-DSPX 14-20 Installation instructions**

Included with the SC-DSPX is our proprietary T-harness, DSP to amp input harness, DSP module, and DSP bracket (not used with new water-resistant case on all models).

The bracket will mount to the Left (as you sit on bike) side of either batwing or shark nose fairing style (not used with new water-resistant case on all models).

Batwing - Mount the bracket against the Left speaker pod. It has two drilled holes that align with two studs protruding from the speaker pod, one is threaded, one is not. Then slide the point into the square slot with a hole in the center and use the supplied screw to tighten the bracket in place while putting force against those two studs. This will hold the bracket in place with tension and the screw.

Shark nose - Mount the bracket on the Left side of the main inner fairing bracket next to the speaker pod. Use holes C & D with the supplied screws.

Shark nose in new water-resistant case – mount below amplifier using the two main factory wire harnesses to mount the case loops to. The RCA cables route along the left side factory cable, next to the speaker enclosure, along the factory overlay harness, behind radio, and finally down to the inputs of the amplifier, zip tied together to avoid interruption of the headlight mounting.

Mount DSP using the Velcro supplied to bracket (when bracket is used). *If either model has a CB Module, disregard the bracket and use the Velcro to mount the DSP directly to the CB Module.*

Connect DSP main T-harness to radio then connect the original radio harness to the receptacle of the T-harness.

Route and Connect the main DSP harness from T-harness to DSP. Fully seat harness.

Route and connect the Input signal and remote turn on side of the DSP harness to DSP and then to the amplifier. Fully seat harness into DSP.

Connect the front amplifier input from DSP (white/grey wires in plug) to the front input of the amplifier.

Connect the rear amplifier input from DSP (green/purple wires in plug) to the rear input of the amplifier.

Connect the blue or blue/white stripe wire to the remote turn on input of the amplifier. **DO NOT CONNECT ANY OTHER WIRE TO THIS SOURCE.** Connecting another 12V or ground wire to this will damage components and will NOT be covered under warranty.

## **Soundz Amp Suggested Settings**

### **SS4.100**

14-20 w/o DSP - gain set at roughly 9AM, or we could use a range of 8-10AM, crossover at 70HZ, HPF selected, DC Selected, 2CH Input selected.

14-20 w/DSP - gain set at roughly 9AM, or we could use a range of 8-10AM, FULL selected, REM Selected, 4CH Input selected.

14-20 w/Sony 5000/7000 - gain set at roughly 10AM, or we could use a range of 8-10AM, crossover at 70HZ, HPF selected, REM Selected, 4CH Input selected. RADIO SETTINGS: EXTRA BASS 0, DSO - OFF, EQ10 - Band 1-(-6) , Band 2-(+1) , Band 3-(+5) , Band 4-(+4) , Band 5-(+3) , Band 6-(+3) , Band 7-(+4) Band 8-(+5) , Band 9-(+6) , Band 10-(+5)

06-13 with HK stock radio - gain set at roughly 8AM or 2 bars from minimum, crossover at 70HZ, HPF selected, REM Selected, 4CH Input selected.

98-13 with Jensen HD1BT radio - gain set at roughly 8AM or 2 bars from minimum, HPF selected, crossover at 70HZ, REM Selected, 4CH Input selected.

98-13 with RF PMXHD9813 Radio - gain set at roughly 8AM or 2 bars from minimum, crossover at 70HZ, HPF selected, REM Selected, 4CH Input selected. Radio settings: Audio Kit Preset - NONE(FLAT), Source Gain - Global Input -9db, Punch EQ - Gain 0, Internal Amplifier - ON, 7 Band EQ - Band 1-(+4) , Band 2-(+7) , Band 3-(+5) , Band 4-(+3) , Band 5-(+5) , Band 6-(+7) , Band 7-(+10)

98-13 w/Sony M70/M71/M72 - gain set at roughly 10AM, or we could use a range of 8-10AM, crossover at 70HZ, HPF selected, REM Selected, 4CH Input selected. EQ10 - Band 1-(-6) , Band 2-(+1) , Band 3-(+5) , Band 4-(+4) , Band 5-(+3) , Band 6-(+3) , Band 7-(+4) Band 8-(+5) , Band 9-(+6) , Band 10-(+5)

98-13 with Aquatic AV AQ-MP-5UBT-HS (Color Screen) radio - gain set at roughly 8AM or 2 bars from minimum, HPF selected, crossover at 70HZ, REM Selected, 4CH Input selected.

98-13 with Aquatic AV AQ-MP-5BT-H (Black & White Screen) radio - gain set at minimum, HPF selected, crossover at 70HZ, REM Selected, 4CH Input selected.

### **SS2.150**

14-20 w/o DSP - gain set at roughly 9AM, or we could use a range of 8-10AM, crossover at 70HZ, HPF selected.

14-20 w/DSP - gain set at roughly 9AM, or we could use a range of 8-10AM, FULL selected,

14-20 w/Sony 5000/7000 - gain set at roughly 10AM, or we could use a range of 8-10AM, crossover at 70HZ, HPF selected, REM Selected

98-05 - DO NOT USE THIS STOCK RADIO - Radio clips immediately above half volume

06-13 with HK stock radio - gain set at roughly 8AM or 2 bars from minimum, HPF selected, crossover at 70HZ,

98-13 with Jensen HD1BT radio - gain set at roughly 8AM or 2 bars from minimum, HPF selected, crossover at 70HZ,

98-13 with RF PMXHD9813 Radio - gain set at roughly 8AM or 2 bars from minimum, HPF selected, crossover at 70HZ, Radio settings: Audio Kit Preset - NONE(FLAT), Source Gain - Global Input -9db, Punch EQ - Gain 0, Internal Amplifier - ON, 7 Band EQ - Band 1-(+4) , Band 2-(+7) , Band 3-(+5) , Band 4-(+3) , Band 5-(+5) , Band 6-(+7) , Band 7-(+10)

98-13 w/Sony M70/M71/M72 - gain set at roughly 10AM, or we could use a range of 8-10AM, crossover at 70HZ, HPF selected, REM Selected,

98-13 with Aquatic AV AQ-MP-5UBT-HS (Color Screen) radio - gain set at roughly 8AM or 2 bars from minimum, HPF selected, crossover at 70HZ.

98-13 with Aquatic AV AQ-MP-5BT-H (Black & White Screen) radio - gain set at minimum, HPF selected, crossover at 70HZ.

**Kenwood models with 13 band EQ covered on the next page. Because of the multitude of radio settings, and confusion of those settings, we have dedicated a section specifically to their radios of that type using the info they provide for their KMM-BT325U as a basis for reference.**

## Kenwood KMM-BT325U & Other Kenwood with Similar Audio Section Suggested Settings

**Vehicle Settings:** In order to optimize the sound quality in your motorcycle, you can identify the type of vehicle you have, select speaker sizes & locations, as well as configure listening distances.

- **Car Type:** Select your car type to automatically set the delay time of each speaker for timing adjustment of sound output of each channel to have the highest surround effect. Choose from Compact, Full Size Car, Wagon, Mini Van, SUV, or **Off**
- **Speaker Size:** You can select which size speakers are in your vehicle - Tweeter (Small, Medium, Large, or **None**), Front & Rear (3.5", 4", 4.75", 5", 6.5", **6.75"**, 7", 4x6", 5x7", 6x8", 6x9", 7x10" or **None**), and Sub (6.5", 8", 10", 12", 15" or Over, **None**).
- **Rear Speaker Location:** You can indicate the location of your vehicle's Rear speakers. Choose from Door, **Rear Deck**, 2nd Row, or 3rd Row.
- **DTA (Digital Time Alignment):** For a better soundstage you can select your optimal listening position. You can choose from **All**, Front Left, Front Right or Front. You can also select to manually fine tune the sound stage, using Digital Time Alignment (DTA) by selecting the distance (0-20') for each individual speaker in the vehicle compared to your listening position.

**High Pass & Low Pass Crossovers:** You are able to select independent high pass crossovers for your tweeters, front speakers, and rear speakers; as well as a low pass crossover for the head unit's sub output.

- **Tweeter:** Set high pass filter (HPF) for tweeters.
  - **Frequency:** 1kHz, 1.6kHz, 2.5kHz, 4kHz, 5kHz, 6.3kHz, 8kHz, 10kHz, 12.5kHz
  - **Gain:** -8 to 0 dB
- **Front & Rear:** Independently set high pass filter (HPF) for front & rear speakers.
  - **Frequency:** 30Hz, 40Hz, 50Hz, 60Hz, 70Hz, 80Hz, 90Hz, 100Hz, 120Hz, 150Hz, 180Hz, 220Hz, 250Hz, **Through (Full-Range)**
  - **Slope:** -6dB, -12dB, -18dB, -24dB
  - **Gain:** -8 to 0 dB
- **Sub:** Set low pass filter (LPF) for the sub output.
  - **Frequency:** 30Hz, 40Hz, 50Hz, 60Hz, 70Hz, 80Hz, 90Hz, 100Hz, 120Hz, 150Hz, 180Hz, 220Hz, 250Hz, Through (Full-Range)
  - **Slope:** -6dB, -12dB, -18dB, -24dB
  - **Phase:** Reverse (180°), Normal (0°)
  - **Gain:** -8 to 0 dB

**Equalizer:** The Kenwood KMM-BT325U offers 8 EQ Presets for easy adjustment, a 13-band EQ for customized tuning, a Drive EQ mode to overcome road noise, and a Stage EQ for better imaging. Separate EQ settings and EQ presets can be stored for each source or you can apply one EQ preset or curve to all sources.

- **Preset EQ:** The integrated equalizer offers 8 preset sound modes (Rock, Pops, Easy, Top 40, Jazz, Natural, Drive EQ, or User) suitable for the music genre of your choice.
- **13-Band EQ:** The User mode allows you to manually adjust the head unit's 13-band EQ (62.5Hz, 100Hz, 160Hz, 250Hz, 400Hz, 630Hz, 1kHz, 1.6kHz, 2.5kHz, 4kHz, 6.3kHz, 10kHz, & 16kHz). Each frequency's gain level can be adjusted from -9dB to +9 dB, while the Q-factor can be adjusted to 1.35, 1.5, or 2.0
- **Suggested EQ Settings:** **62.5Hz (+1), 100Hz (+5), 160Hz (+4), 250Hz (+3), 400Hz (+3), 630Hz (+2), 1kHz (+2), 1.6kHz (+3), 2.5kHz (+4), 4kHz (+5), 6.3kHz (+7), 10kHz (+7), 16kHz (+4)**
- **Drive EQ:** The Drive EQ mode helps you hear your music over road noise. It boosts certain frequency ranges that become hard to hear due to road noise. **NOT RECOMMENDED**
- **Stage EQ:** Stage EQ virtually lifts the sound up to ear-level for better imaging inside your vehicle. **NOT RECOMMENDED**

**Audio Settings:** The Kenwood KMM-BT325U offers a variety of audio settings to further enhance your music listening experience.

- **Sound Reconstruction:** When MP3, WMA, AAC files encoded at a low bit rate (less than 96 kbps, 44.1k, 48kHz) are played, the Sound Reconstruction function restores their high frequencies, so the sound quality is closer to files encoded at a high bit rate. The processing is optimized for the compression format and the bit rate used. When Sound Reconstruction is Off, the unit plays the original sound stored in the audio file. **NOT RECOMMENDED**
- **Space Enhancer & Sound Realizer:** The Spacer Enhancer widens the soundstage inside your vehicle, while the Sound Realizer makes your music sound more realistic. **NOT RECOMMENDED**
- **Loudness, Bass Boost & Bass Extension:** The Loudness feature boosts low and high frequencies to produce a well-balanced sound at a low volume level. The unit's Bass Boost enhances low bass frequencies at any volume level. There is also a Bass Extension feature which further enhances the unit's bass output at extremely low frequencies. **NOT RECOMMENDED**
- **Volume Offset:** The level of each source may be independently adjusted to prevent radical leaps in output volume when switching from one source to another. The available settings range from -15 to +6. **NOT RECOMMENDED**

# SOUNDZ AMPLIFIER SPECIFICATIONS

<b>SPECIFICATIONS</b>				
<b>MODEL</b>	<b><u>SM4.100</u></b>	<b><u>SM4.50</u></b>	<b><u>SS4.100</u></b>	<b><u>SS2.150</u></b>
<b>Rated Power Output @ 4 Ohms</b>	120 x 4	65 x 4	120 x 4	150 x 2
<b>Rated Power Output @ 2 Ohms</b>	204 x 4	110 x 4	204 x 4	250 x 2
<b>Bridged Power Output @ 4 Ohms</b>	408 x 2	220 x 2	408 x 2	500 x 1
<b>THD</b>	0.04%	0.04%	0.04%	0.05%
<b>Frequency Response (+/- 1dB)</b>	10Hz-20Khz	10Hz-20Khz	10Hz-20Khz	10Hz-20Khz
<b>Signal to Noise Ratio</b>	>100dB	>100dB	>100dB	>100dB
<b>Crossover</b>	50Hz-500Hz	50Hz-500Hz	50Hz-500Hz	50Hz-500Hz
<b>Overall Efficiency</b>	>90%	>90%	>90%	>90%
<b>Channel Separation</b>	>55dB	>55dB	>55dB	>55dB
<b>Input Sensitivity</b>	0.2V-6.0V	0.2V-6.0V	0.2V-6.0V	0.2V-6.0V
<b>Operating Voltage</b>	14.4V	14.4V	14.4V	14.4V
<b>Dimensions</b>	8.41" x 4.13" x 1.65"	6.5" x 4.13" x 1.65"	8.41" x 4.13" x 1.65"	6.5" x 4.13" x 1.65"
<b>Sealed Case</b>	Yes	Yes	No	No



# 2014-2020 BATWING RAIN COVER INSTALL

