

HIGH PERFORMANCE AUDIO

WS-220 BT

4-ZONE BLUETOOTH CONTROLLER
OWNER'S MANUAL



wetsounds.com



WS-220 BT 4-ZONE LEVEL CONTROLLER with BLUETOOTH



WS-220 BT Specifications

S/N Ratio	80dB @ 1 V Input
Frequency Response	10 Hz – 40 kHz
Max Output Voltage	5V RMS
T.H.D.	0.05%
Input Impedance	20K Ohms
Operational Voltage	11-15V DC, Negative Ground



Congratulations! Thank You for purchasing the Wet Sounds WS-220 BT.

Wet Sounds professional marine audio products represent the ultimate in high performance marine audio. Wet Sounds products are specifically engineered to withstand the rigorous marine environment.

The WS-220 BT is a state of the art 4 zone level controller designed to provide amazing control over your marine audio system. The WS-220BT allows independent control of 4 separate zones. All 4 zones are equal and can be set up, for example as: tower speakers; in boat speakers; cabin speakers; and subwoofer(s). The Wet Sounds talkback microphone allows easy communication with rider or other boats in the area. By pushing the button on the microphone, the WS-220BT will automatically mute the music playing through Zone 1, and allow the microphone audio to be broadcast through Zone 1. When the microphone button is released, the audio through Zone 1 will return to the previous level. Additionally, the WS-220 BT includes the Wet Sounds exclusive Boat Link, which allows the ability to connect with other WS-220 BT, WS-420 BT, or WS-420SQ equipped boats for the ultimate party cove experience!

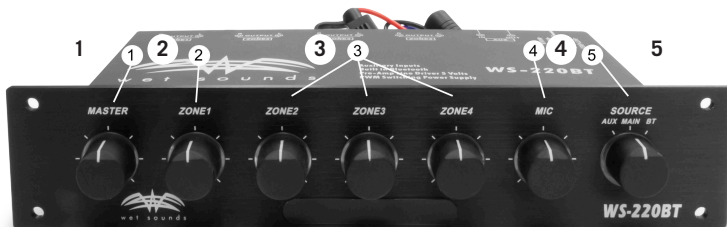
Please take a moment to read the instruction manual before starting your installation. If you have any questions or concerns, please contact your certified Wet Sounds dealer or Wet Sounds:

877-WET-SPKR (1-877-938-7757)

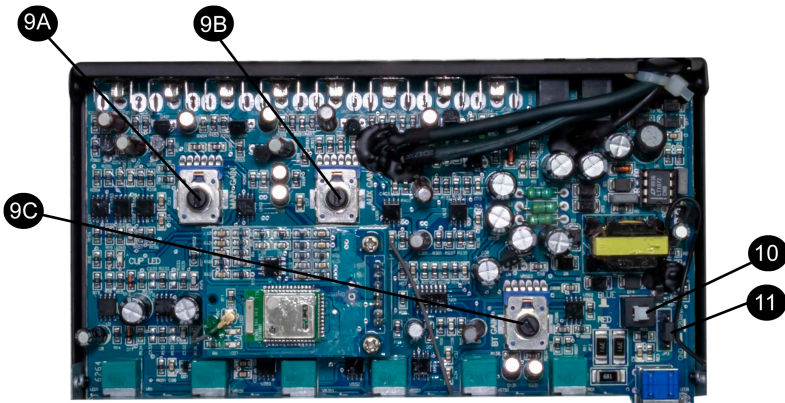
www.wetsounds.com

The WS-220 BT is a 4 Zone level controller housed in a one half DIN chassis using our exclusive design which allows the independent control of 4 zones which can be assigned to any audio components in a system. For instance, Zone 1 could be set up for Tower Speakers, Zone 2 could be used for In Boat Speakers, Zone 3 could be Cabin Speakers, and Zone 4 could be Subwoofer(s). Levels can be set for each of these zones independently, then the Master allows overall control of all 4 zones. The WS-220 BT includes a talk back microphone with its own independent level control, allowing the adjustment of the microphone level independently of the music. The talk back microphone can be used to broadcast a voice over long distances – similar to a public address system. When the talk button on the microphone is pressed, music is automatically muted on Zone 1 and the microphone audio is broadcast over Zone 1. When the microphone talk button is released, music returns to the previous level.

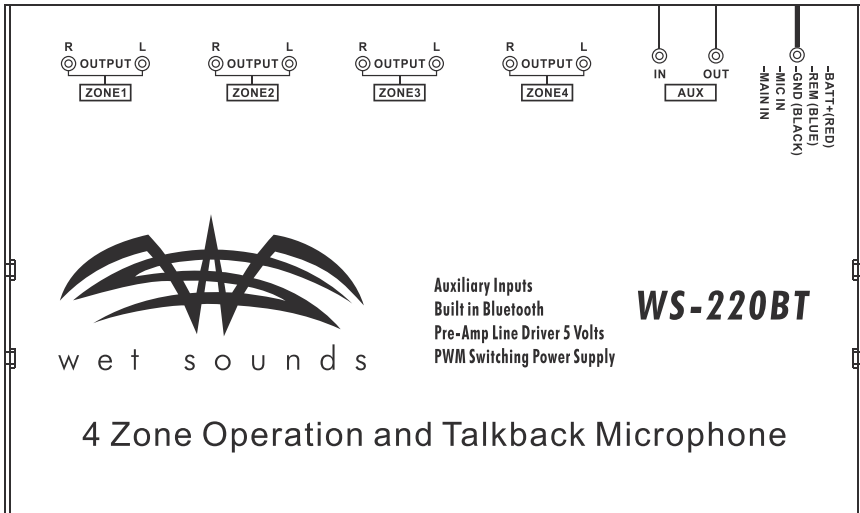
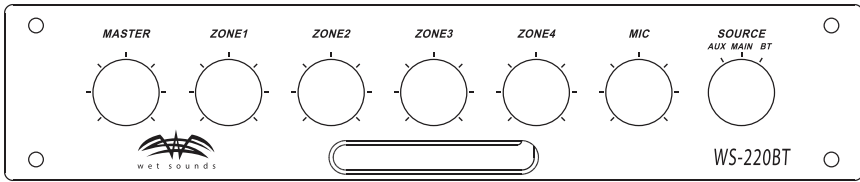
- 1. Master Level.** This controls the overall volume of the system – overriding all zones with the exception of the Mic level control.
- 2. Zone 1.** This controls the level of whatever amplifier is connected to it. Microphone audio is broadcast on this zone only, so it is suggested that this zone be used for Tower Speakers. The Master Level control overrides this zone control.
- 3. Zones 2-4.** These control whatever amplifiers are connected to them. These zones are equal in operation, so they can be assigned in any way needed. The Master Level overrides all these zones.
- 4. Mic.** This controls the level of the microphone when the talkback button is pressed. Mic level is unaffected by the Master level control.
- 5. Source.** Allows switching between Main (head unit), Auxiliary (wired audio device), or Bluetooth enabled wireless device.



- 6. Auxiliary Input.** 3.5 mm input jack for MP3 player or additional wired audio source.
- 7. Boat Link.** 3.5mm output jack. For linking with other WS-220BT, WS-420BT/SQ equipped systems.
- 8. Microphone Input.** This is where the included talk back microphone should be connected.
- 9. Input Gain.** 9(a) Main input sensitivity adjustment. 9(b) Aux input sensitivity adjustment. 9. (c) Bluetooth input sensitivity adjustment. These are to properly match the inputs of the WS-220 BT to the outputs of the sources connected. NOTE: If you are not an experienced installer, it is recommended to leave these adjustments in the pre-set factory position.
- 10. Illumination.** WS-220 BT comes preset in blue illumination mode. If red is preferred, set this switch to the position marked “RED”.
- 11. Ground Isolation.** If alternator whine appears in the system, the jumper position can be changed to even the grounding levels and eliminate the noise. Be sure the system is off before adjusting the jumper!



1. Unplug all RCA cables from system amplifiers. Set all amp gains to Zero (minimum input).
2. Turn the main source unit up to find the maximum volume. Set the system with the main source unit at 85% of maximum volume. **THIS IS THE LOUDEST THE SOURCE UNIT SHOULD EVER GO.** Source units (radios, head units, etc) will create distortion on the output signal when the volume is set close to max. This distortion will then be sent to the amplifiers, which can damage speakers and other components in an audio system. Find an easy way to remember safe volume. If source unit max is 35, do not exceed 30. If source unit max is 50, do not exceed 45...etc.
3. Once the max volume set point is found, turn the source unit back down. Use test material (CD or MP3 source) that is familiar for tuning. Suggested material has highs/lows & vocals.
4. Make sure the setting on the source unit are flat, or in the middle. Treble & Bass should be set at ZERO.
5. Plug in only the RCA cables for the amp connected to the in boat speakers (usually Zone 2). Set the high pass crossover on the amp in the 80Hz -100Hz range.
6. Turn the source unit up to the max safe level found in Step 2 above. Turn the Master level control on the WS-220BT to about $\frac{3}{4}$ of max. Set the Zone level control to about $\frac{3}{4}$ of max.
7. Slowly turn up the gain control on the amp until speaker distortion is heard. Slowly back off the amp gain from that point until the speakers play as loud as possible without distortion. This is the optimal setting.
8. Repeat this same procedure for all other FULL RANGE channels in the system (NOT SUBWOOFER CHANNELS!)



9. Plug in only the RCA cables for the amp connected to the subwoofer (usually Zone 4). Set the low pass crossover on the subwoofer amp in the 60- 80 Hz range. Set the Master level control on the WS-220 BT to about $\frac{3}{4}$ of max. Set the Zone level control to about $\frac{3}{4}$ max. Slowly turn the amp gain up until subwoofer distortion is heard. Slowly back off the amp gain from that point until the subwoofer is playing as loud as possible without distortion. This is the optimal setting.
10. Turn the source unit back down and plug in all RCA cables to all amps. Do a final check on all zones and all channels. All gains should now be set to “unity” meaning they are at the same level and matched on all zones.

WHAT THIS WARRANTY COVERS

This is a “limited” warranty. This warranty covers any defect in materials and workmanship. This warranty only covers the original purchaser and is not transferable. This warranty is also only valid if the original purchase was made from an authorized Wet Sounds™ dealer.

HOW LONG COVERAGE LASTS

This warranty extends for 2 years from the date of purchase. It is recommended to REGISTER your warranty online within 45 days of purchase at www.wetsounds.com – click on “warranty registration”.

WHAT IS NOT COVERED

This warranty does not cover fading or discoloration caused by exposure to sunlight or chemicals such as ammonia, household bleach, or any cleaning material that contains abrasive substances. Wet Sounds, Inc. does not cover the expense for removal or reinstallation. Additionally, shipping TO Wet Sounds, Inc. must be paid for by the purchaser. This warranty is void and inapplicable if Wet Sounds deems that the product was abused or misused; including but not limited to damage caused by accident, mishandling, improper installation, removing the inline fuse on the power connection, negligence, normal; wear and tear, excessive water or heat damage, freight/shipping damage, or products that have been disassembled by anyone other than Wet Sounds technical staff. Wet Sounds will not be responsible for any incidental or consequential damages, except to the extent provided (or prohibited) by applicable law. This warranty gives you specific rights, and you may also have other rights which vary from state to state.

WHAT WET SOUNDS, INC. WILL DO

Wet Sounds, Inc. will repair any part of your product that proves to be defective in materials or workmanship. In the event repair is not possible, Wet Sounds will replace the product in question. If it is deemed necessary Wet Sounds, Inc. will either replace the entire product with a refurbished unit or it will be replaced with a model that is similar in price to that model is no

longer available. Labor costs and materials needed to complete this service will be at No Charge to the purchaser. Additionally, return shipping FROM Wet Sounds, Inc. to the purchaser will be paid for by Wet Sounds.

HOW TO GET SERVICE

Contact Wet Sounds, Inc. either by phone (877-938-7757) or by email (warranty@wetsounds.com). A service representative will assist you in confirming that the problem you are experiencing is caused by a defective product and if that product is covered under warranty. The service representative will issue you a Return Manufacturer's Authorization (RMA) and other details to obtain service for your product.

DO NOT RETURN YOUR PRODUCT WITHOUT THE PROPER RETURN AUTHORIZATION (RMA)!

INTERNET WARNING

Wet Sounds, Inc. products sold on any non-authorized web site or internet auction site are void of any and all manufacturer's warranty. Please contact Wet Sounds (877-938-7757) or visit our web site (www.wetsounds.com) for a list of authorized online sellers or to find an authorized installing retailer near you.

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