



**WS 420 4 Band Parametric Equalizer with 2 Zone operation  
& Talk Back Microphone**

**Owner's Manual**

Thank You for purchasing the Wet Sounds WS 420. 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 420 Equalizer is a state of the art equalizer designed to provide amazing control and flexibility of your marine audio system. The WS 420 gives you independent control of your tower speakers as well as independent control of your in boat speakers. The Wet Sounds talk back microphone allows the boat driver to communicate with the rider or other boats in the area. By pushing the button on the microphone, the system will automatically mute the music playing from the tower speakers and allow you to use your tower speakers as a PA system. Once the button is released, the tower speakers will begin to play again at the level they were at. Additionally, the WS 420 includes Wet Sounds exclusive Boat Link™. Boat Link gives you the ability to link up with other WS 420 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 you certified Wet Sounds dealer or Wet Sounds at 877-Wet-Sprk. (1-877-938-7757)***

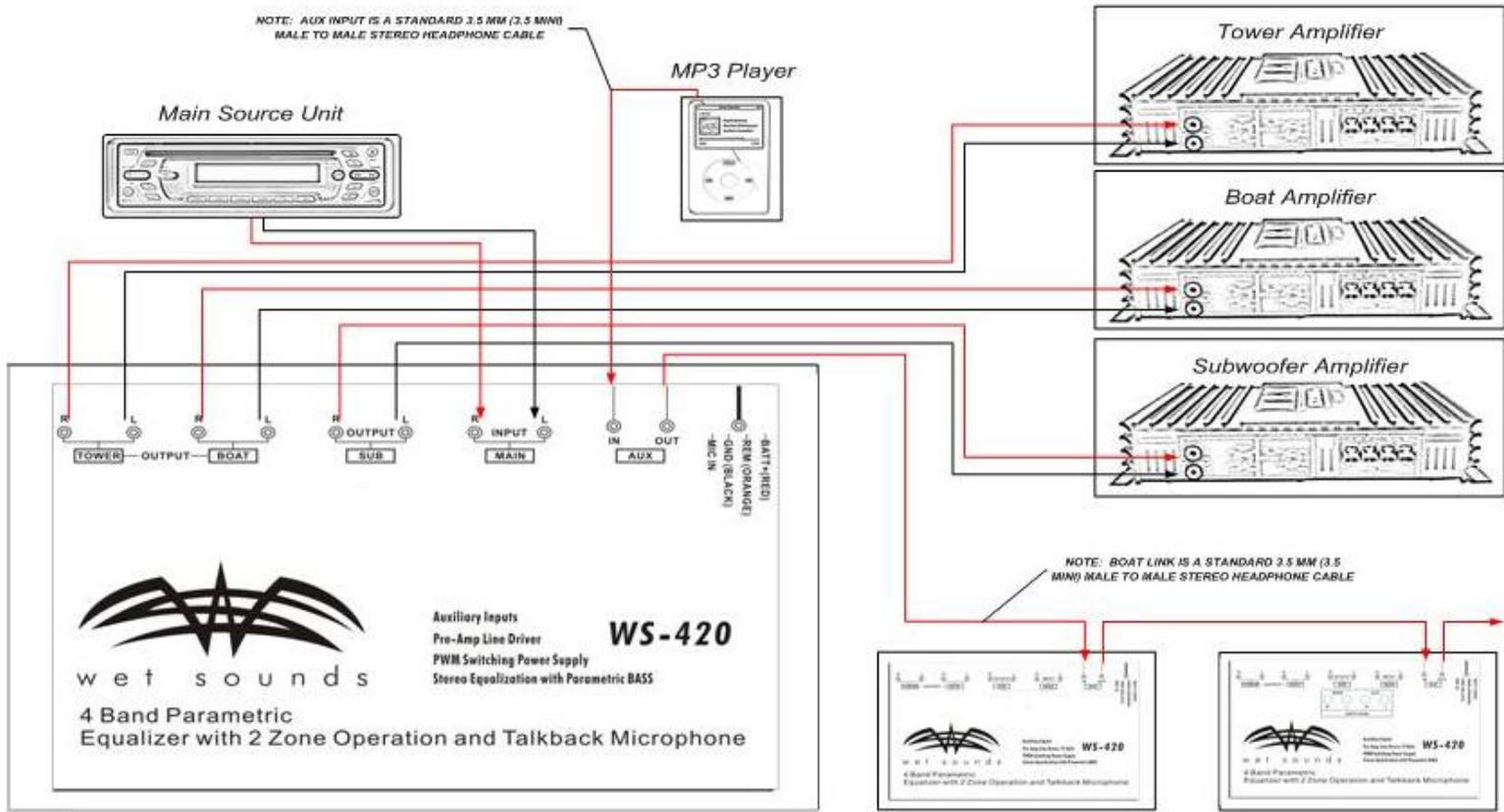
### **WS 420 Specifications**

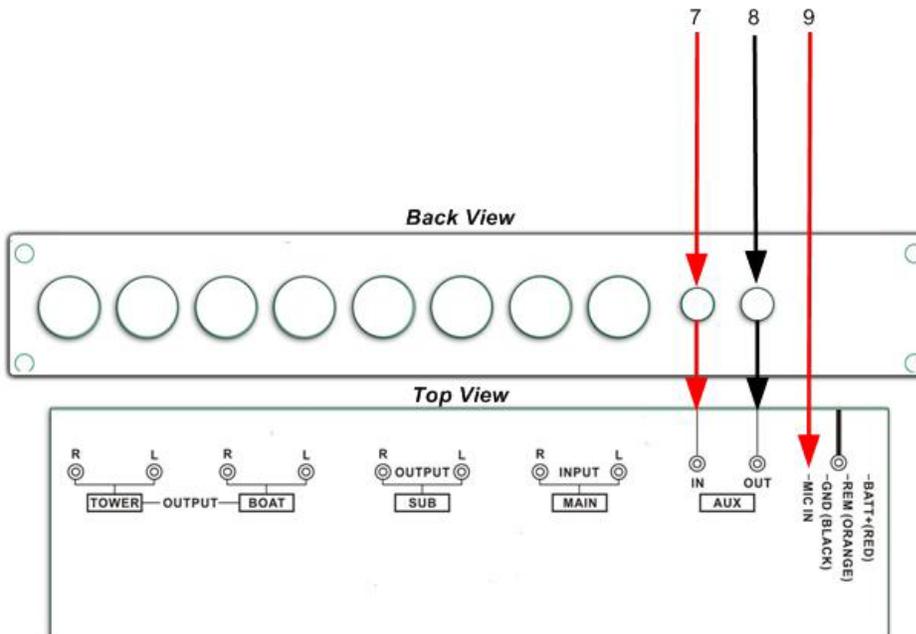
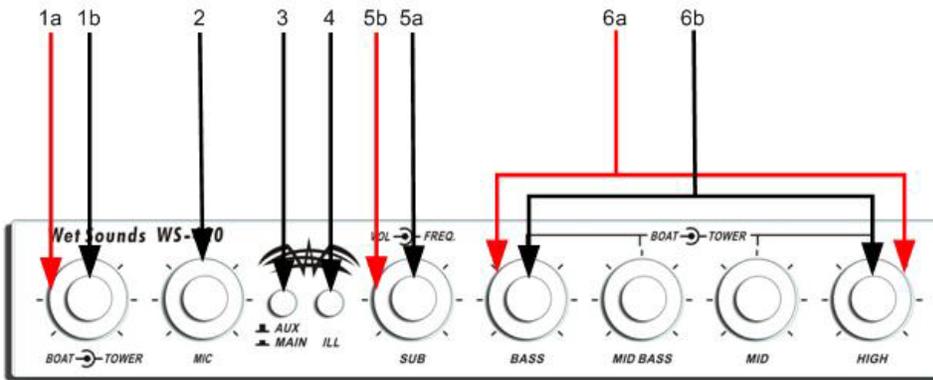
Bass Equalizer Frequency	100Hz
Mid Bass Equalizer Frequency	300 Hz
Mid Equalizer Frequency	2 KHz
Hi Equalizer Frequency	15 KHz
Parametric Equalizer Range	± 12dB
S/N Ratio	80 dB REF 1V Input
Frequency Response	10 Hz-40KHz, -3dB
Maximum Output Voltage	5V RMS
T.H.D.	0.05%
Input Impedance	20K Ohms
Stereo Separation	80 dB/1 KHz
Subwoofer Frequency Range	30 Hz- 300 Hz
Operational Voltage	11-15V DC, Negative Ground

## WS 420 Features

The WS 420 is 2 separate equalizers in one half din chassis using our exclusive knob/ring system which allows you to independently control the volume and EQ adjustments of both in boat and tower speakers. There is also a separate knob/ring for the subwoofer gain control and frequency adjustment. The WS420 includes a talk back microphone for rider communication. The level of the talk back microphone is independent from your music level allowing you to adjust the volume for the PA function. (The knob/ring for the microphone is fixed to operate as one control) The microphone feature only plays through the tower speakers. When the microphone is keyed up, the music is muted for announcements. After the key is released, the music will resume at previous level.

1. **Main Volume.** (1a) Outside Ring= Volume Control for the tower speakers. (1b) Inside Knob=Volume Control for the in boat speakers/subwoofers.
2. **Microphone Volume.** Adjusts the volume of the talkback microphone. (you will need to test your system to determine the maximum volume achievable without feedback. Turning the microphone volume level up very high can result in feedback. It is recommended to find the maximum level for the microphone and leave the control set at this level)
3. **Input Selector Switch.** This switch selects between the main input or auxiliary input
4. **Illumination.** This switch selects between Red or Blue background Illumination.
5. **Subwoofer Boost/Frequency.** The knob adjusts the subwoofer boost (5a). The ring adjusts the subwoofer frequency (5b).
6. **Equalizer Adjustments.** These 4 controls adjust the four separate frequencies (bass, mid bass, mid, high) Offering 12 dB of cut/boost. The outside ring adjusts the frequencies for the tower speakers (6a) while the inside ring adjusts the frequencies for the in boat speakers (6b).
7. **Auxiliary Input.** 3.5 mm aux input jack for MP3 player or additional source.
8. **Boat Link™** 3.5 mm aux output jack. For linking with other WS 420 equipped boats.
9. **Microphone Input.** Microphone input for Wet Sounds talk back microphone.





## Setting up a system using the WS 420

- 1) Unplug all the RCA's from your amps. Turn all the amp gains down.
- 2) Turn the radio up to find the maximum volume. Set the system with the head unit volume at 85% of max. This is the loudest the radio should ever go. Radios will create distortion the higher the volume is turned up. Which will create distortion on the output signal before reaching the amps. So find a safe easy to remember volume. If the head unit is 35. Max should be 30. If the head unit is 40. Maximum should be 30 to 35 and so on.
- 3) Once you have found the maximum volume set point. Turn the radio back down. Use a test CD that you are familiar with for tuning. Something that has highs and lows and vocals.
- 4) Make sure the settings on the radio are flat. You should not tune a system with the treble or bass up.
- 5) Make sure all the eq adjustments are flat. Right in the middle. Plug in all the rcas from the eq to the amps.
- 6) Plug in just the RCA's for the in boat speakers amp. Set the high pass crossover at around 80HZ to 100HZ.
- 7) Turn the radio up to the max safe level found in step 2. Turn the eq up to about  $\frac{3}{4}$  of max volume.
- 8) Slowly turn the gain up until you hear the speakers distort. Slowly back off the gain from that point a small amount until you hear the speakers play as loud as they can with no distortion.
- 9) Unplug the RCA's from that amp and plug the RCA's into the amp running the tower speakers. Set the high pass crossover on the amp for the tower speakers at 80HZ to 100HZ.
- 10) Slowly turn the gain up until you hear the speakers distort. Slowly back off the gain from that point a small amount until you hear the speakers play as loud as they can with no distortion.
- 11) Unplug the RCA's from that amp and plug the RCA's into the amp running the subwoofer. Set the low pass crossover on the amp for the subwoofer at 80HZ. On the WS 420. Turn the bass level to max. The ring is a frequency adjustment. All the way down to the left is 30 HZ. You will want to put this around 60 to 80HZ. So about  $\frac{1}{4}$  of the way up.
- 12) Slowly turn the gain up until you hear the speakers distort. Slowly back off the gain from that point a small amount until you hear the speakers play as loud as they can with no distortion.
- 13) Turn the radio back down and plug in all RCA's and do a final check with everything playing. You should now have the gains set at "unity" Meaning they are all at the same level and you are matched across the board.
- 14) Note that you can adjust the high pass and low pass filters to tailor the sound to each boat. As you can set the high pass higher to get more volume but at the expense of losing some low end mid bass. You can then fine tune the sound on the eq as well. Using the knobs and rings. Most systems will not need much in terms of boost.

## Limited Warranty

### What This Warranty Covers

This is a "Limited" warranty. This warranty covers any defects in materials and workmanship and this warranty only applies to 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 Last

This warranty runs for 2 years from the date of the purchase. It is recommended to REGISTER your warranty online within 45 days of your purchase at [www.wetsounds.com](http://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 cost for removal and reinstallation. Additionally, shipping **TO** Wet Sounds, Inc. is covered 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 damage or speakers that have been disassembled by anyone other than Wet Sounds™ technical staff. Wet Sounds™ shall not be responsible for any incidental or consequential damages, except to the extent provided (or prohibited) by applicable law. This warranty gives you specific legal 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, Inc 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 if that model is no longer available. Labor cost and materials needed to complete this service will be at no charge to the purchaser. Additionally, the cost of shipping **TO** the consumer is also covered under this warranty.

### How To Get Service

Contact Wet Sounds, Inc. either by phone at 877-938-7757 or by email at [warranty@wetsounds.com](mailto:warranty@wetsounds.com). A service representative will assist you in the necessary actions to concur that the problem that you are experiencing is covered under warranty and what to do if it needs to be shipped to Wet Sounds, Inc.

### 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™ at 877-938-7757 or visit our web site at [www.wetsounds.com](http://www.wetsounds.com) to search for an authorized site and/or an authorized retailer near you.

Wet Sounds Inc.  
1-877-938-7757  
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