

## Selecting A Clear Channel

1. Turn **ON** the receiver and keep the transmitter **OFF**.
2. On the top of the display you will see 2 metered bars, **RF (Radio Frequency Indicator)** and **AF (Audio Frequency)**. Goal is to select a channel without RF and AF activity during selection process.
3. Groups and channels can be selected manually following the instructions above.
4. You can use **AUTO** function to select best available frequency within the selected group. Press the **AUTO** button after unlocking the system (no icons flashing). **AUTO** scan can take up to 30 seconds.
5. Turn on transmitter and sync it to the receiver. See instructions for "Syncing Transmitters".
6. For multiple systems, repeat step 3-5 for each transmitter. Turn on one transmitter at a time to make sure there's no interference on any of the other receivers.

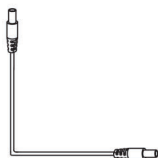
## Tips For Best Performance

1. If experiencing interference or signal dropouts, search and change to another channel using instructions above.
2. If signal dropouts persist, you may increase the transmitter signal strength in settings which should give the system longer range, at a slightly greater risk of experiencing interference.
3. If Interference is the persistent, try increasing the SQL (Squelch) settings. Increasing the Squelch will help ignore audible artifacts / interference at the slight cost of transmission range. Experiment with adjusting the squelch and transmission signal strength for optimal performance.
4. If issues persist, please contact the Airwave Technologies support number or email so we may assist with troubleshooting and frequency selections.

# Audio Rack Connection Diagram



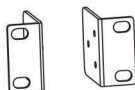
**1** TNT/BNC dualhead connecting line  
(Optional Accessory)



**2** Power connecting line



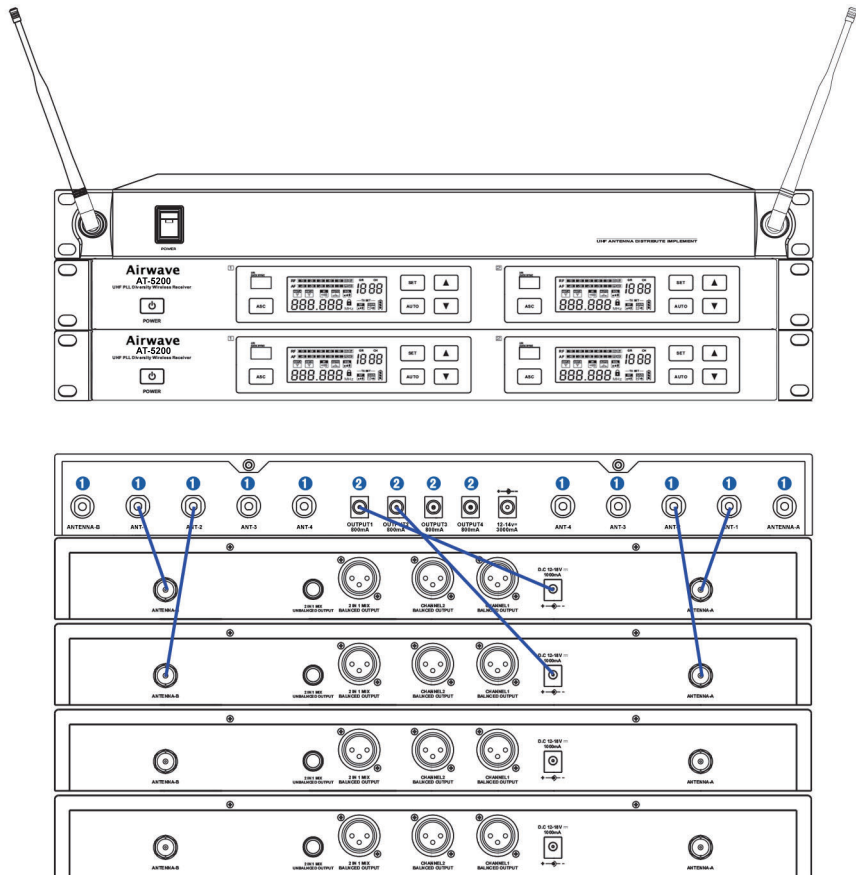
**3** Direct power adapter socket



**4** Airwave Rack Mount System  
(Optional Accessory)



**5** Antenna Combiner & Amplifier  
(Optional Accessory)



# Important Safety Instructions

- Transmitter and antenna should remain in line of sight for best signal reception.
- Do not place the receiver in close proximity to a metal surface or near any digital device.
- Receiver should be placed 3' off the ground and have space surrounding to ventilate.
- Ventilation holes should not be covered.
- Two-way radios can interfere with any audio transmission. Insure the transmitter and receiver are far from these devices to eliminate potential sources of interference.
- Receiver should not be placed in direct sunlight and should be kept away from any water sources or open flame.
- Nominal operating temperature is -5° C ~ +50° C (23° F ~ 122° F)

# Troubleshooting Guide

Problem	Indicator (lamp) state	solution
No sound or faint sound	Transmitter Power Light Off	Confirm main power is on Confirm batteries are inserted correctly +/- Confirm batteries in transmitter are charged
	Receiver Power Indicator Off	Confirm AC power is connected to receiver via power jack. Confirm AC power supply is normal Confirm Voltage on power supply is normal
	Receiver RF Indicator illuminated	Adjust high receiver volume control Adjust high transmitter gain switch setting Check receiver / amplifier / mixer connections
	Receiver Power Indicator Off Receiver RF Indicator illuminated	Ensure receiver is away from metal surfaces. Ensure space between transmitter and receiver is free of obstacles. Verify transmitter and receiver are using the same frequency.
	Low-voltage light on transmitter	Replace Batteries in Transmitter
Distortion or excess noise	RF Signal illuminated on receiver	Ensure that no potential sources of interference are nearby. (CD players, computers, digital devices, ear monitoring systems). Set receiver and receiver to a different frequency. Reduce the transmitter. signal Replace batteries. If using multiple systems - increase frequency interval between the systems.
Distortion level gradually increased	Low Battery Indicator flashing	Replace Batteries in Transmitter
Output has feedback and / or distortion.		Adjust the transmitter and receiver volume to appropriate levels.

## AT-5200 DUAL CHANNEL WIRELESS RECEIVER SPECIFICATIONS

Frequency Range: 470~489MHz / 514~542 MHz  
Infrared Data Synchronization  
Band Width: 19MH / 28MHz  
Working Range: 328'  
Receiving Sensitivity: < -92dBm for 30dB S/N Ra  
Frequency Response: 50Hz~15KHz ( $\pm 3$ dB)  
Maximum Frequency Offset:  $\pm 50$ KHz  
Signal to Noise Ratio:  $> 100$ dB (A)  
THD:  $< 1\%$  to 1KHz  
Gain Control Range: 0 to 63dB per 1dB Step  
Dynamic Range:  $> 102$ dB  
Audio Output Level: XLR: +8dBV / 1/4-inch connector: +8dBV  
Audio Output Connectors: XLR Each Channel / XLR Mix / 1/4-inch connector  
Impedance: XLR: 3K $\Omega$  / 1/4-inch connector: 3K $\Omega$   
Antenna Connectors: 2 BNC 50 $\Omega$   
Display: LCD  
Power Requirements: 12V/0.5A DC  
Operating Temperature Range: 28°F - 122°F  
Dimensions: 6.299" (W) x 16.142" (L) x 1.732" (H)  
Weight: 3.86 lb.

## AT-U51 HANDHELD MICROPHONE TRANSMITTER SPECIFICATIONS

Frequency Range: 470~489MHz / 514~542 MHz  
Replaceable Capsule  
Infrared Data Synchronization  
Capsule Frequency Response: 50Hz~15KHz ( $\pm 3$ db)  
Capsule Sensitivity: -50dB  $\pm$  2dB V/PA@1KHz  
Capsule Directivity: Single Point  
Signal to Noise Ratio:  $> 100$ dB (A)  
Gain Adjustment Range: 0 / -3/ -6 / -9 dB  
Input Impedance: 5K $\Omega$   $\pm$  30% @ 1KHz  
Output Impedance: 400 $\Omega$   $\pm$  30% @ 1KHz  
Maximum Modulation Depth:  $\pm 50$ KHz  
3-Stage RF Power Adjustment: 2mW / 10mW / 30mW  
Display: LCD  
Power Requirements: 2 x 1.5V (AA)  
Battery Life:  $> 8$ H/1300mAH  
Dimensions: 9.84" x 1.97"  
Weight: 12.7oz

## AT-U52 BODYPACK TRANSMITTER SPECIFICATIONS

Frequency Range: 470~489MHz / 514~542 MHz  
Infrared Data Synchronization  
Frequency Response: 50Hz~15KHz ( $\pm 3$ db)  
Gain Adjustment Range: 0 / -3/ -6 / -9 dB  
Input Impedance: 5K $\Omega$   
Maximum Modulation Depth:  $\pm 50$ KHz  
3-Stage RF Power Adjustment: 2mW / 10mW / 30mW  
Harmonic Rejection:  $> 50$ dB  
Pilot Tone: 32.768KHz  
Display: LCD  
Power Requirements: 1.5V x 2(AA)  
Battery Life:  $> 10$ H/1300mAH  
Dimensions: 6.5" x 2.56" x .91"  
Weight: 4.59oz

**FCC Warning:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Caution:** Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0cm between the radiator and your body.

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