User and Installation Guide

5.8 GHz DIGITAL Wireless Audio Transmitter / Receiver

Model 1500

Amphony®

Unpacking: Check that this package contains:

One 5.8 GHz Digital Audio transmitter, one 5.8 GHz Digital Audio receiver, two AC adapters, two dual RCA audio cables.

Step 1 Connecting the transmitter

The transmitter connects to a line-out interface via the supplied RCA cable. Most audio devices provide a line-out interface.

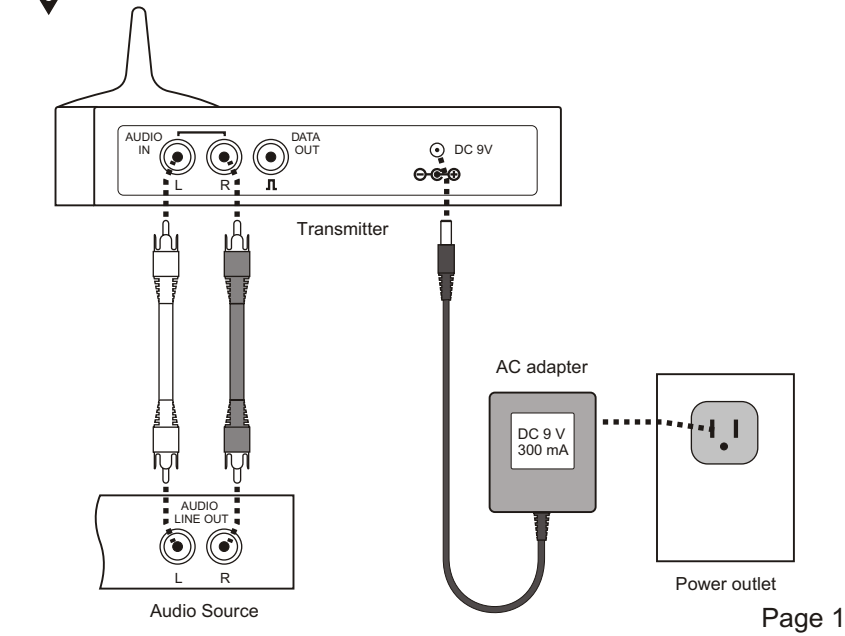
If no line-out interface is available, the transmitter can also be connected to other audio outputs by using an appropriate adapter. It should be noted that the audio level of the audio output should conform to the standard line output level (V_{pp} ± 2.8 V maximum).

If the audio level is too low, the dynamic range of the transmitter is not fully used. If the audio level is too high, clipping at high audio levels may occur. If clipping occurs, use an adjustable output (such as a headphones output) instead and a suitable adapter (such as a Y adapter). If the transmitter is connected to an amplified speaker output, an attenuator is required to lower the audio level to the maximum permitted transmitter audio level.

Connect the DC power input with the supplied AC adapter. The use of a surge protector is recommended to protect the transmitter from power surges.

ATTENTION!

Never connect the DATA OUT output to an audio source since this may damage both the transmitter and the audio equipment !



Step 2 Placing the transmitter

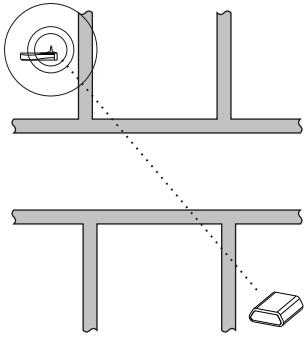
The operating range essentially depends on how many obstacles there are between the transmitter and the receiver. Therefore, it should be carefully considered where to place the transmitter.

Below, two examples are given. In the first example, there are 4 walls between the transmitter and the receiver. The transmission may be interrupted. By locating the transmitter such as in the second example, reliable transmission to all of the 6 rooms is possible.

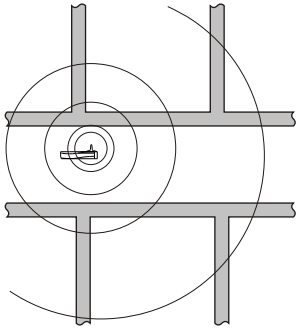
Also, the elevation of the transmitter as well as the presence of reflecting walls will influence the range.

It is suggested to experiment in order to find the best location for the transmitter.

If sufficient coverage cannot be achieved by changing the location of the transmitter, then the use of RangeBooster transmitters is suggested. These RangeBooster transmitters are available as an accessory for your 5.8 GHz Digital Wireless Audio Transmitter / Receiver from Amphony and can be located in areas where signal reception is difficult. RangeBooster transmitters connect to the DATA OUT output of the transmitter via a cable and receive the signal in a digital format without any degradation. Any number of RangeBooster transmitters can be used to extend the coverage area.
Note: The operating range of each RangeBooster transmitter is identical to the operating range of the primary transmitter.



Example 1: Poorly chosen transmitter location



Example 2: Improved transmitter location

Step 3 Connecting the receiver

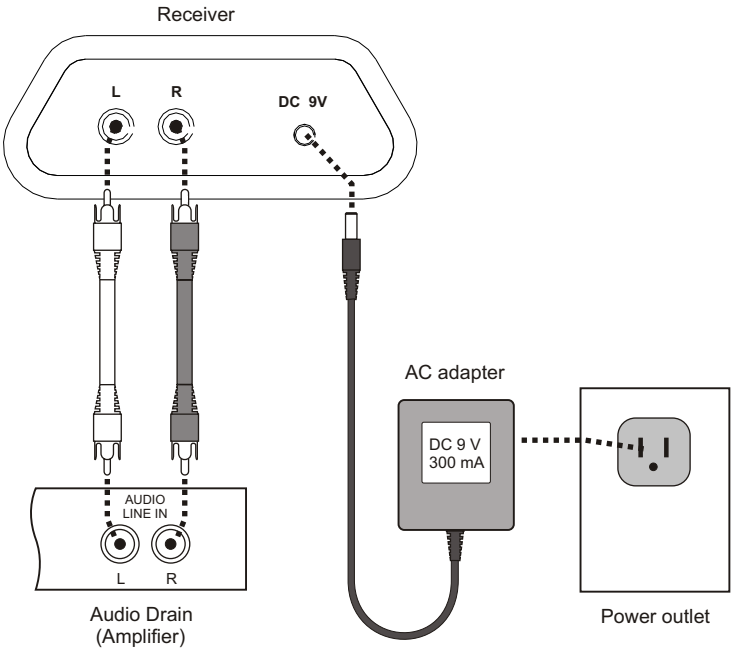
The receiver connects to a line-in interface via the supplied RCA cable. Most audio devices, such as amplifiers, provide a line-in interface.

If no line-in interface is available, the receiver can also be connected to other audio inputs by using an appropriate adapter. It should be noted that the maximum audio level of the receiver output is 1 Vrms (V_{pp} ± 1.4 V maximum). Ensure that the connected audio device will accept this audio level.

Connect the DC power input with the supplied AC adapter. The use of a surge protector is recommended to protect the receiver from power surges which may damage the receiver or may cause audio dropouts.

ATTENTION!

Do not connect the receiver audio output directly to passive speakers or other low impedance drains as this may damage the receiver! The receiver audio output cannot drive passive speakers or headphones directly. An external amplifier is required.



Step 4 Operating the transmitter and receiver

After powering up the transmitter, the transmit light will light for approximately 5 seconds while the transmitter initializes.

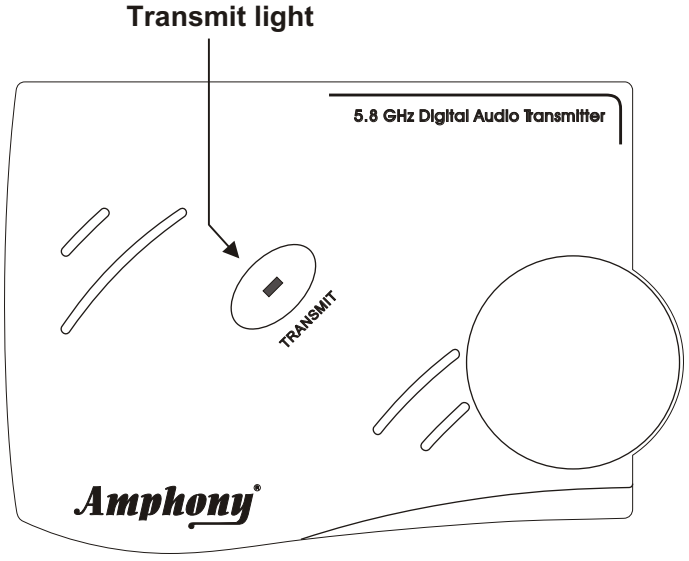
After initialization, the transmit light will go out.

Once audio is detected at the audio input, the transmit light will light and the transmitter will transmit the audio signal.

When no audio is present anymore, the transmitter will go into standby mode after approximately 1 minute. The transmit light will go out. During standby mode, no signal is transmitted.

Once the receiver is powered up and a valid audio signal is detected, audio will be output at the receiver line out. When no valid audio signal is received, the receiver audio output will be muted and the receiver will go into standby mode.

If the transmitter or receiver are not used for an extended period of time, remove the AC adapters from the power outlet.



Problems and Solutions Table

What Is Happening	Possible Why	What To Do
Transmit light of transmitter does not light when DC power is applied	Faulty AC adapter or faulty power outlet	Check the power outlet and the AC adapter, if possible, check for the correct voltage of the adapter.
Transmit light goes out after 5 seconds and does not light again	No audio present at audio input	Check the audio connection to the transmitter and ensure that there is audio present.
	Transmitter hung up	Disconnect and then reconnect DC power.
No audio at receiver	Receiver hung up	Disconnect and then reconnect DC power.
	Strong interference	In some cases, there may be strong interference preventing proper transmission of the audio signal, such as microwave ovens, directional data or video transmission devices etc. Try to either eliminate the interference, relocate the transmitter, or use RangeBooster transmitters to improve reception.
Audio at receiver drops out intermittently	Unstable power supply	Check that the power outlet delivers a stable voltage. Try a different power outlet or use a surge protector.
	Strong interference	See under “No audio at receiver“.
Low operating range	Too many obstacles between transmitter and receiver	Try to relocate the transmitter, or use RangeBooster transmitters to improve reception.
	Strong interference	See under “No audio at receiver“.
Audio is distorted	Transmitter audio level too high	Try to lower the output level of the audio source, use an attenuator, or use another audio output.
	Receiver audio level too high	Lower the receiver output level by using an attenuator, or use another audio input.

For more information, including a detailed troubleshooting guide, visit the Amphony web site at: www.amphony.com

Technical Specifications

Audio transmission method: Digital

Transmitter frequency: 5.8 GHz

Signal-to-Noise ratio (A-weighted): typ. 93 dB

Dynamic range: typ. 93 dB

Frequency response: 1 Hz - 22 kHz

Channel separation: typ. 91 dB

Harmonic distortion: typ. -88 dB

Error correction: 1/2 rate FEC

Audio sampling method: 64 times oversampling

Transmitted data rate: > 3 Mbps

Data available at high-speed data port

Max. Transmitter output power: 1 mW

Transmitter operating range (without RangeBooster modules): max. 200 ft. line of sight, max. 50 ft. through walls and ceilings

Max. transmitter input voltage level: 2 Vrms

Max. receiver output voltage level: 1 Vrms

Receiver noise shaping filter for maximum signal-to-noise ratio

FCC ID PMJT1500
This device complies with part 15 of the FCC Rules. Operation is subjected 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.

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Printed in China.

Limited warranty

WHAT YOUR WARRANTY COVERS

This warranty extends only to the original user of the equipment (“you”, ”your”) and is limited to the purchase price of each part. Amphony and it’s affiliated companies (”we”, ”our”, ”us”) warrant this Wireless Transmitter / Receiver Set against defects in materials or workmanship as follows.

LABOR: For a period of ninety (90) days from the original date of purchase, if we determine that the equipment is defective subject to the limitations of this warranty, we will replace it at no charge for labor. We warrant any such work done against defects in materials or workmanship for the remaining portion of the original warranty period.

PARTS: For a period of one (1) year from the original date of purchase, we will supply, at no charge, new or rebuilt replacement parts in exchange for parts we determine are defective subject to the limitations of this warranty. We warrant any such replacement parts against defects in materials or workmanship for the remaining portion of the original warranty period.
Note: ”Parts” means items included in this package. It does *not* include other parts purchased seperately.

WHAT YOUR WARRANTY DOES NOT COVER

This warranty *does not cover* consumer instruction, physical setup or adjustment of any consumer electronic equipment, or signal transmission problems.

This warranty *does not cover* cosmetic damage, damage due to the affixing of any attachment not provided with the product, loss of parts, connecting the product to any but the specified receptacles, lightning, electrical surges, fire, flood, or other acts of God, accident, misuse, abuse, repair or alteration by other than authorized service personnel, negligence, commercial or institutional use, or improper or neglected maintenance.

This warranty *does not cover* equipment sold AS IS or WITH ALL FAULTS, equipment removal or reinstallation, shipping damage if the equipment was not packed and shipped in the manner we prescribe, nor equipment purchased, serviced, or operated outside the contiguous United States of America.

LEGAL LIMITATIONS

REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS YOUR EXCLUSIVE REMEDY. WE SHALL NOT BE HELD LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESSED OR IMPLIED WARRANTY ON THIS EQUIPMENT, NOR FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF, OR INABILITY TO USE, THIS EQUIPMENT. UNDER NO CIRCUMSTANCES SHALL OUR LIABILITY, IF ANY, EXCEED THE PURCHASE PRICE PAID FOR THIS EQUIPMENT, EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW. EXCEPT AS PROVIDED HEREIN, WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. WE RESERVE THE RIGHT TO REFUSE TO HONOR THIS WARRANTY IF WE DETERMINE ANY OF THE ABOVE EXCEPTIONS TO HAVE CAUSED THIS EQUIPMENT NOT TO HAVE PERFORMED PROPERLY. THIS WARRANTY SHALL BE VOID IF ANY FACTORY-APPLIED IDENTIFICATION MARK, INCLUDING BUT NOT LIMITED TO SERIAL NUMBERS AND WARRANTY LABELS, HAS BEEN ALTERED OR REMOVED. THIS WARRANTY SHALL ALSO BE VOID IF THE TRANSMITTER OR RECEIVER HAVE BEEN OPENED BY AN UNAUTHORIZED PERSON.

This warranty gives you specific legal rights which may vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on the duration of an implied warranty, so those limitations may not apply to you.

Note: No responsibility is assumed for the presence of interference outside of Amphony’s control, such as other transmitters or microwave ovens, which may hamper proper signal reception.