

User and Installation Guide

5.8 GHz Multi Channel Audio Transmitter

Model 400


wireless
multi channel

Amphony[®]

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Unpacking: Check that this package contains:

One 5.8 GHz Digital Audio transmitter - Model 400, one 9 V AC adapter (wallwart), four short speaker cables, two RCA audio cables.

Step 1 Connecting the transmitter

The transmitter has two stereo audio inputs, one zone-A and one zone-B input. 4 audio channels can be transmitted simultaneously. Both zone-A and zone-B audio inputs can connect either to an unbalanced line-level audio output or a balanced amplified speaker output. For best audio quality, we recommend using the unbalanced line-level audio input.

The transmitter can transmit to Model 400 wireless audio receivers and Model 480 wireless amplifiers. Each audio channel is encoded with a channel ID and can be selected by each wireless receiver.

Note: Regardless of whether any specific audio channel is transmitted to a wireless receiver or wireless amplifier, both the transmitter line-level and amplified speaker audio inputs can be used to feed audio into the transmitter.

Connect the transmitter to an unbalanced audio input by using the supplied phone-RCA audio cable. Connect the phone jack with the line level input of the transmitter and the RCA jack with the RCA output of your audio source.

Alternatively, connect the transmitter to an amplified speaker output by using the supplied speaker cables. Be sure to observe the correct polarity of the speaker cable. If one of the speaker cables is switched (reversed), one speaker will receive an opposite polarity signal which will degrade sound performance.

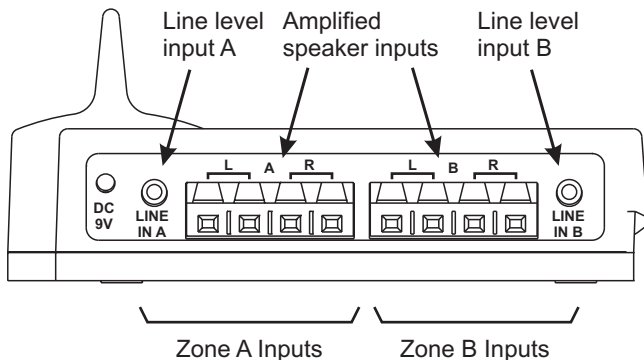
It is possible to connect zone-A audio inputs to line-level audio outputs and zone-B audio inputs to amplified speaker outputs and vice versa. However, only the unbalanced line level input or speaker inputs of each zone can be used, i.e. you cannot mix audio inputs within a zone.

Connect the supplied small AC adapter's barrel-shaped plug into the DC 9V jack, and then plug the transformer into a standard AC outlet. We recommend the use of a surge protector to protect the transmitter from power surges.

ATTENTION!



Do not connect both the line level audio input and amplified speaker audio input of the same zone. This may damage your audio source.

Transmitter audio inputs

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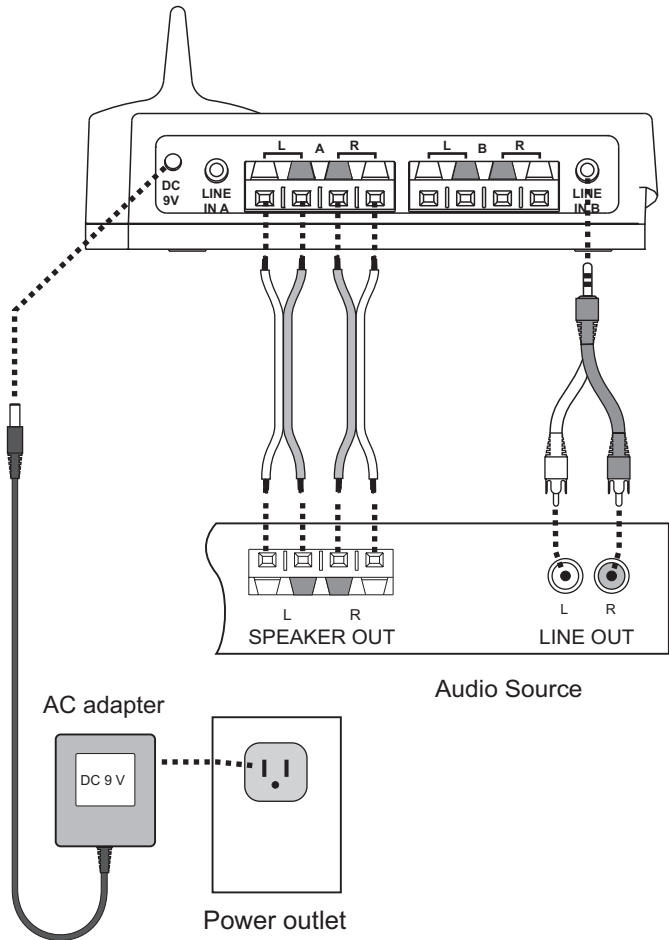
The information contained herein is subject to change without notice. Revisions may be issued to advise of such changes and/or additions.

All product names, trade names, or corporate names mentioned in this document are acknowledged to be the proprietary property of the registered owners.

FCC ID PMJT400

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.



Example: Using the amplified Zone-A speaker inputs and Zone-B line level audio input

Step 2 Placing the transmitter

Ideally, the transmitter should be placed at an elevation such that there are no obstacles between the transmitter and wireless receivers or amplifiers (line of sight) in an area where there will be the least amount of traffic. We suggest that you place the transmitter on top of your audio source.

Step 3 Operating the transmitter

The green transmit light of the transmitter will be on when audio is transmitted.

If you are using the speaker outputs, adjust the audio level of your audio source to the maximum level where no clipping / distortion occurs at the wireless receivers.

If the audio level supplied to the transmitter is too high, then distortion will occur. If the audio level is too low, the dynamic range of the transmission will not be used and the audio level at the receiver may be too low.

If you are using a line-level audio output and the audio level is too low, try instead using an audio output with audio volume regulator such as a headphone output. The transmitter can connect to a headphone output by using a phone jack-to-phone jack cable.

If audio reception is poor, try raising the transmitter and changing the transmitter location until reception is acceptable.

If no audio signal is present, the transmitter will go into standby mode after approximately two minutes. The transmitter will wake up as soon as an audio signal is present.

Troubleshooting

Problem	Possible Cause	Solution
The transmit light does not go on after DC power is applied to the transmitter	Faulty AC adapter or faulty power outlet	Check the power outlet and the AC adapter; if possible, check for correct voltage of the AC adapter.
The transmit light goes out after a few 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	Faulty AC adapter or faulty power outlet	Check the receiver power supply.
	Strong interference	See under "Strong Interference" on next page.
Audio is distorted	Audio volume too high	Adjust the transmitter volume control until clipping stops.
	Amplifier volume control set too high	Lower the source audio volume until clipping stops.
	Strong interference	See under "Strong Interference" on next page.
Receiver audio level is too low	Audio volume too low	Raise the source audio volume to achieve the desired audio level. Connect transmitter to an adjustable audio output
	Amplifier volume control set too low	Adjust the amplifier volume control to achieve desired audio level.
Audio drops out intermittently or crackles	Strong interference	See under "Strong Interference" on next page.
	Unstable power supply / power surges	Ensure that the power outlet delivers a stable voltage. Very strong surges or voltage fluctuations may cause audio dropouts. Try using a surge protector.

Problem	Possible Cause	Solution
Transmitter range is extremely short	Strong interference	In some cases, there may be strong interference preventing proper reception of the audio signal which can be caused by 5.8 GHz cordless telephones or 5.8 GHz wireless networks. Either eliminate the interference, locate the base unit of the cordless phone in another room, set the wireless network to use the 5.1 GHz frequency band rather than 5.8 GHz, relocate the transmitter, relocate or reorient the amplifier to improve reception.
	Too many obstacles	Audio will drop out if there are too many obstacles between the transmitter and the receiver, try relocating the transmitter or receiver to improve reception.

For up-to-date troubleshooting advice, visit www.amphony.com

Technical Specifications:

Audio transmission: **Digital**

Transmitter frequency: **5.8 GHz**

Number of wireless audio channels: **4**

Operating range:

- **max. 150 ft line of sight**
- **max. 30 ft through walls and obstacles**

Compatible wireless receivers:

- **Model 400 wireless audio receiver**
- **Model 480 wireless audio amplifier**

Audio inputs:

- **4 x speaker-level input**
- **2 x stereo line-level input**

Signal-to-noise ratio: **typ. 96 dB (A-weighted)**

Frequency response: **2 Hz - 20 kHz**

Audio latency: **< 1 ms**

Total harmonic distortion: **-90 dB (0.003%)**

Transmitted data rate: **6 Mbps**

Error correction: **1/2 rate FEC**

Channel separation: **95 dB**

Audio input level: **max. 3 Vrms**

Automatic power-down feature

IMPORTANT SAFETY INFORMATION

**READ THESE SAFETY INSTRUCTIONS CAREFULLY AND
HEED ALL WARNINGS IN THIS MANUAL.**

ATTENTION!



POWER SOURCE

To product malfunction, and to protect against electric shock, fire or personal injury, please observe the following:

- This product has been designed to work with 120-volt AC current using the supplied AC adapters. Connection to a line voltage other than that or use of non-compatible AC adapters may create a safety and fire hazard and may damage the product.
- Do not run power cords under rugs or carpets or place heavy objects on them.
- Damaged or deformed power cords are hazardous and should be replaced immediately by a qualified service technician.

LOCATION

- Do not use this product outdoors or in cars.
- Do not place this product in direct sunlight, or near heat sources.
- Keep this product away from strong magnetic objects.

VOLUME CONTROL

- Do not turn up the amplifier volume while listening to a portion with very low level input or no audio signal to avoid damage to your speakers during a peak level audio portion.
- Turn the amplifier volume control to minimum prior to connecting or disconnecting the transmitter or amplifier and prior to switching audio sources as this may cause loud clicks which can damage your speakers.

CARE

- Do not place any object containing water or other liquids on this product.
- Do not remove the cabinet. Touching parts inside the cabinet could result in electric shock and damage to the product.

NON-USE PERIODS

- When the product is not being used for a long period of time, unplug the product.

CLEANING

- Unplug the product before cleaning.
- When the system gets dirty, wipe it with a clean, soft cloth. If necessary, wipe it with a soft cloth, slightly dampened with soapy water. Wipe dry immediately with a dry cloth.
- Never use benzene, aerosol cleaners, thinner, alcohol or any volatile cleaning agent.
- Do not use abrasive cleaners, as they may damage the finish.

SERVICE

- Do not open the cabinet of any components. Opening the cabinets may present a shock hazard, and any modification to this product will void your warranty.
- Do not attempt to service the unit yourself.
- Please refer any service to an authorized Amphony service center.

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 its affiliated companies (“we”, “our”, “us”) warrant this Multi Channel Audio Transmitter 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 separately.

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 AMPLIFIER 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 cordless phones, which may hamper proper signal reception.