

# User and Installation Guide

## **2.4 GHz DIGITAL Wireless Headphones**

**Model 1000**

***Amphony***<sup>®</sup>

**Unpacking:** Check that this package contains:

One set of 2.4 GHz Digital Wireless Headphones, one 2.4 GHz Digital Audio transmitter, one AC adapter, one dual RCA audio cable.

**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 ( $V_{pp} \pm 2.8$  V maximum).

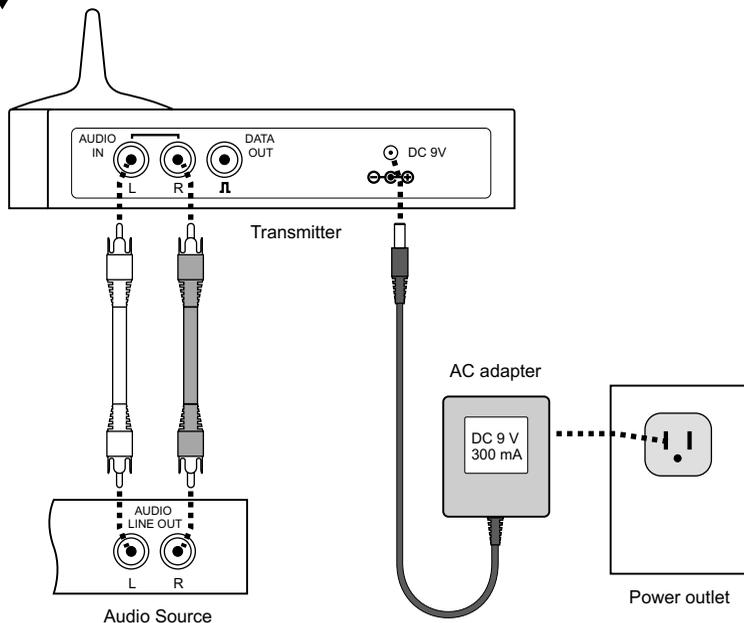
If the audio level is too low, the dynamic range of the transmitter is not fully used. If the audio level is too high, clipping at high audio levels may occur. If clipping occurs, either use an adjustable output (such as a headphones output) or use an Amphony audio level attenuator.

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

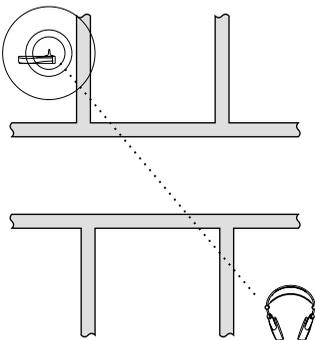
The operating range essentially depends on how many obstacles there are between the transmitter and the headphones. Therefore, it should be carefully considered where to place the transmitter.

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.

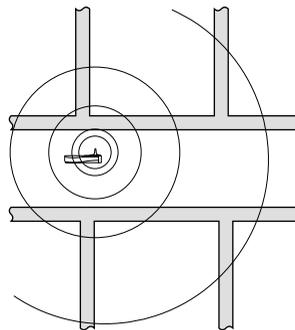
Also, the elevation of the transmitter as well as the presence of reflecting walls will influence the range.

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

If sufficient coverage can not 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 2.4 GHz Digital Wireless Headphones from Amphony and can be located in areas where signal reception is difficult. RangeBooster transmitters connect to the DATA OUT output of the transmitter and receive the signal in a digital format without any degradation. Any number of RangeBooster transmitters can be used to extend the operating range almost indefinitely.



**Example 1:** Poorly chosen transmitter location



**Example 2:** Improved transmitter location

**Step 3** Installing the headphone batteries

Two AA (UM-3, R6, Mignon - 1.5 V) batteries are required to operate the headphones. Rechargeable batteries with a sufficiently high voltage can be used as well. Choosing batteries with a high capacity (mAh) will extend operating time.

There are two battery compartments, located on both sides, each housing one battery. To access each battery compartment, push on the outer edge of the battery lid. This will release the battery lid. Then lift the middle portion of the battery lid to gain access to the battery compartment.

Insert the battery by pressing the minus pole of the battery against the spring at the bottom of the battery compartment until the plus pole can slide into the battery compartment. The battery should snap into place.

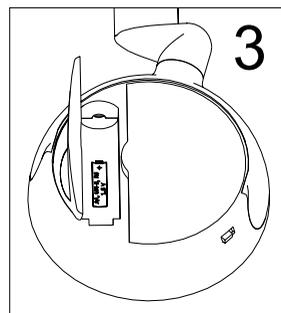
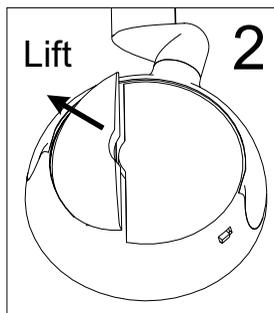
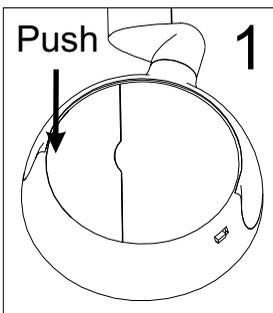
Be sure to only use batteries with a well formed plus pole to ensure proper contact between the plus pole of the battery and the plus pole inside the battery compartment and also to ensure that the battery will not slide out of the battery compartment unintentionally.

Finally, close the battery lid by pushing the middle section. It should snap into the closed position.

To replace the batteries, open the battery lid as described above and pull the battery out of the battery compartment by pushing the battery towards the bottom until the plus pole is released and slides out.

**ATTENTION!**

Never leave batteries inside the headphones for very long periods of time to prevent any damage to the headphones from leaking batteries. Dispose of spent batteries conforming to local waste disposal rules.



**Step 4** **Operating the headphones**

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.

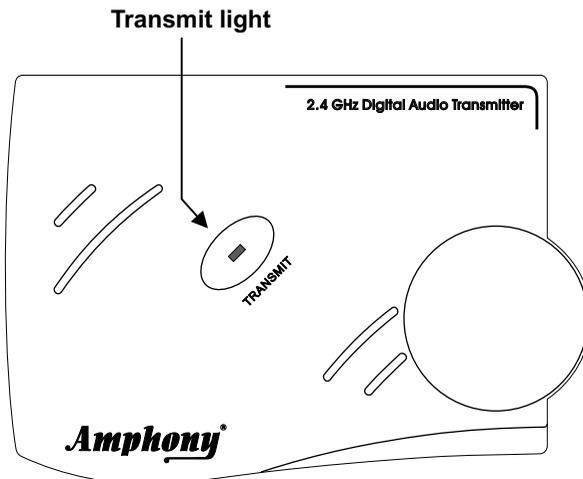
Set the volume control of the headphones to minimum. Then, switch on the headphones and slowly increase volume.

After each use, be sure to switch off the headphones to extend battery life.

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. If the headphones are not used for an extended period of time, remove the AC adapter from the power outlet.



**Listening over headphones at high audio levels can cause hearing impairments! Also, switching between different audio sources, connecting and disconnecting the transmitter, and the transmitter going into standby mode can cause loud clicks and pops which can impair your hearing! Therefore, always set the volume control to minimum.**



**Problems and Solutions Table**

<b>What Is Happening</b>	<b>Possible Why</b>	<b>What to Do</b>
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 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 headphones	Batteries empty or plus contact of batteries deformed	Check battery voltage, also check that plus contact of both batteries touch plus contact of battery compartment, replace batteries if necessary
	Volume control at minimum	Slowly increase volume at the headphones
	Receiver hung up	Switch headphone power off and on
Audio is distorted	Audio level too high	Ensure that the audio level provided by the audio device conforms to the line output level. If possible, lower the audio level.
Audio at headphones drops out intermittently	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.
	Batteries empty	Check the batteries and replace them if necessary.
	Unstable power supply	Make sure that the power outlet delivers a stable voltage. Very strong surges or voltage fluctuations may cause audio dropouts. Try using a surge protector.

For more information, including a detailed troubleshooting guide, visit the Amphony web site at: [www.amphony.com](http://www.amphony.com)

## Technical Specifications

### Transmitter:

**Audio transmission method:** Digital

**Transmitter frequency:** 2.4 GHz

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

**Dynamic range:** typ. 93 dB

**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

### Headphones:

**Type:** dynamic, closed

**Operating time:** max. 100 hours with two AA batteries

**Frequency response:** 20 Hz ... 24 kHz

**Maximum sound pressure level:** 113 dB

Copyright (C) 2001 Amphony. All rights reserved.

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 PMJT1000**

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 its affiliated companies (“we”, “our”, “us”) warrant this Wireless Headphone 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 separately.

## WHAT YOUR WARRANTY DOES NOT COVER

This warranty *does not cover* consumer instruction, physical setup or adjustment of any consumer electronic equipment, headphone batteries, 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 HEADPHONES HAVE BEEN OPENED BY AN UNAUTHORIZED PERSON (with the exception of opening the battery lid on the outside of the headphones).

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.