



# **MicroAMP2**

## **Audio amplifier for speaker & headphone**



# **MANUAL**

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### **ID-AL products are exclusively manufactured by Waves System**

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WARNING: DO NOT EXPOSE TO MOISTURE AND DUST!

Unplug the power cord before any intervention!

FOR YOUR SAFETY, PLEASE READ CAREFULLY THIS OPERATION MANUAL  
BEFORE USING YOUR PRODUCT.

## **A. SAFETY INSTRUCTIONS**

### **A.1 CE marking**

The CE marking is on the ID plate, at the back of the product. It means this product complies with the low voltage CE directive, according to the EN 55022 standard, and the EMC directive 61000-4-x.

### **A.2 Directives**

- Electro-magnetic compatibility (EMC) and low voltage directive requirements are satisfied.

### **A.3 Overview**

- The user's manual forms an integral part of the unit. It must be kept close to the unit. Precise observance of these instructions is a pre-condition to use the unit for the intended purpose and for its correct operation.

This user's manual must be passed on to any future purchaser or operator.

The staff would receive instructions concerning the correct use of the product.

- Safety for the operator as well as trouble-free operation of the unit is only ensured if use is made of original equipment parts. Moreover, use may only be made of those accessories that are specified in the technical documentation or that have been expressly approved by the manufacturer. The manufacturer cannot guarantee for the safety or proper functioning of the unit in the case where accessories or consumables are used which are not supplied by the manufacturer.

- The warranty doesn't cover damages caused by use of accessories or consumables which are not supplied by the manufacturer.

- The manufacturer only regard himself as being responsible for the equipment with regard to safety, reliability and proper functioning if assembly, re-settings, changes or modifications, extensions and repairs have been carried out by the manufacturer or a company authorized by the manufacturer and if the equipment is used in conformity with the operating instructions written in this manual.

- The MicroSwitch complies with the applicable technical safety standards at the date of print. All rights reserved for electrical diagrams, procedures, mentioned names and equipments.

- No reproduction, in whole or in part, without the written permission from Waves System.

### **A.4 General safety instructions**

This equipment left our facilities in perfect conditions of operation. In order to maintain these conditions, for safety and to avoid any risk of injury, the user must imperatively follow the safety instructions and read the 'Warning!' notes in this manual.

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This equipment, manufactured by Waves System, has been so designed that any danger is virtually excluded provided it is used according to its purpose. However, for safety reasons, we are obliged to point out the following measures:

- When operating this appliance, observe all local rules and enforced regulations!  
The homologation shall be invalid if any modification or alteration is made on the appliance. Operating modified appliances may lead to a penal suit. In the interest of the safety of work, the manager and the operator will be responsible for respecting the instructions.
- Retain all packing material in case the device must be shipped. Take care that it does not fall into the hands of children. Only the original packing guarantees optimal safety of the appliance during transport. Should it be necessary to ship the product during the guarantee period, Waves System will not accept claims for damage arising during the transport from using incorrect packing material!
- This product is dedicated to broadcasting music. It may only be operated by trained or knowledgeable personnel who can handle the device correctly.
- Before every use, the operator must check the functional safety and the condition of the appliance.
- The operator must be knowledgeable in the operation of the appliance.
- This device must not be used in places with potential explosion risk. Moreover, it must not be used in an environment favouring combustion neither in a wet or excessively hot or cold place.

### **A.5 Safety instructions against risks pertaining to electrical current**

- The appliance must be connected to a grounded AC power outlet or a correctly wired CEE AC outlet.
- Before connecting the appliance, verify that the power supply voltage and frequency match the specifications indicated on the appliance.
- Before powering, check that the appliance and the cables are not damaged. Damaged cables and connections must be immediately replaced.
- Never leave power cords enter in contact with other cables! Handle the power cord and all the cables connected to a power supply with extreme care.
- Always connect the power supply last. Check that the power switch is 'off' before connecting the appliance to mains supply. The mains outlet must be accessible after installation.
- Check the appliance and its power cord from time to time.  
Unplug the power supply if you don't use the appliance anymore or for maintenance.
- Always grasp only the plug on the power supply cord. Never pull the cable to unplug.
- Power supply, repairs and maintenance must be done by qualified personnel.
- Do not switch the appliance on and off in short intervals, as this may reduce its life.

## **A.6 - Conditions of use :**

- This product has been designed for indoor use only.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- Do not shake the device. Avoid brute force when installing or operating the device.
- When choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be any cables lying around, for your own safety and that of bystanders.

## **B. PRODUCT INFORMATION**

### **B.1 Correct usage**

The MicroAMP2 is designed to be used with speakers and audio headphones.

Correct usage implies observation of the instructions in this manual as well as observing the requirements concerning installation.

### **B.2 Incorrect usage**

Any other use beyond this is considered as incorrect usage. The manufacturer will not be liable for any damage resulting from incorrect usage. The operator carries all risks.

### **B.3 CONTENTS**

MicroAMP2

Power Supply 12v

Manual

### **B.4 TECHNICAL SPECIFICATIONS**

Audio amplifier for speakers and headphone : MicroAMP2

#### **Power supply nominal values**

Power supply: 12V DC

### **B.5 INSTALLATION**

The apparatus must be set up in a dry and dust-free room.

**Do not install the player too close to a wall.**

### **B.6 ELECTRICAL CONNECTION**

Before use, compare mains voltage with that specified on model plate.

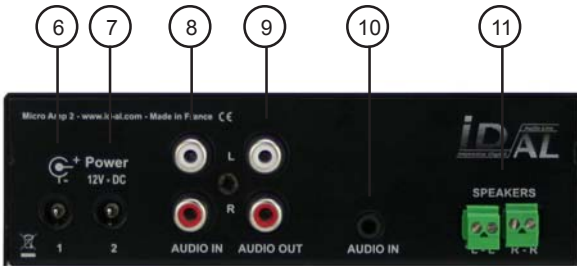
## **1 - Product presentation**

The Micro AMP 2 is a double amplifier. The first is a Bridge-Tied Load (BTL) class-B amplifier. The output power is 2x25W in a 4 Ohms load or 2x40W in a 2 Ohms load. The second is an headphone amplifier capable of delivering 250mW of continuous average power to an 8 Ohms load with 0.1% THD+N

## **2 - Installation**



- 1 - Headphone output
- 2 - Headphone Volume
- 3 - Speakers volume
- 4 - Switch on/off
- 5 - LED for power supply



- 6 - Power supply input 1 - 12v
- 7 - Power supply input 2 - 12v
- 8 - Audio line input 1
- 9 - Audio line output (by pass)
- 10 - Audio line input 2
- 11 - Speakers output

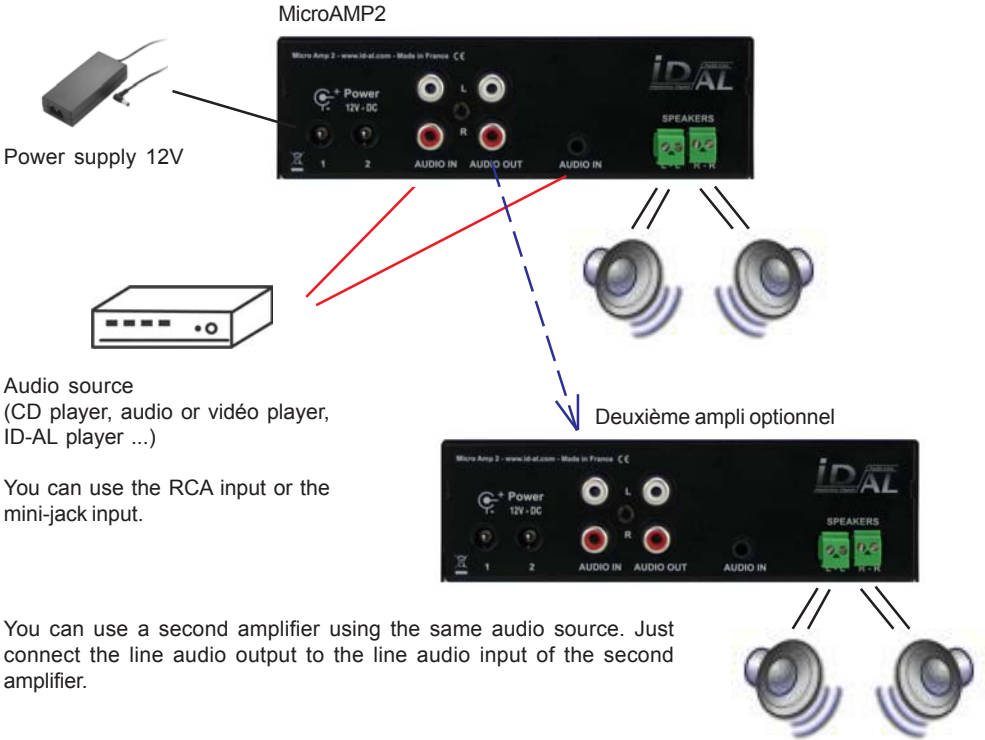
**Power supply:** If the application requires a regulated and filtered power supply or a battery, it must be 12V DC, even though the power switch can accept tension between 7v and 15V.

DC 2.1mm / 5.5mm connector - Positive in the center.



Connect the power supply unit or a 12V battery onto input 1 or 2. The second socket is wired in parallel to provide power supply for another device.

### 3 - Connection



### 4 - Specifications

Amplifier 1 : Speaker output

- Power supply : 7v to 15v
- Thermal protection
- Power output :
  - VP = 14.4v - SP = 2 ohms -> THD = 0.5% : 30W / THD = 10% : 40W
  - VP = 12v - SP = 2 ohms -> THD = 0.5% : 18W / THD = 10% : 24W
  - VP = 14.4v - SP = 4 ohms -> THD = 0.5% : 19W / THD = 10% : 25W
  - VP = 12v - SP = 4 ohms -> THD = 0.5% : 12W / THD = 10% : 16W

Amplifier 2 : Headphone output

- 2x375mW / 8 Ohms (THD 10%)
- Thermal protection
- Load from 8 to 32 Ohms



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