

M2TECH
CROSBY
STEREO POWER AMPLIFIER

USER MANUAL



REV. PRA – 9/2017

Warning!

Changes or modifications not authorized by the manufacturer can invalidate the compliance to CE regulations and cause the unit to be no more suitable to use. The manufacturer refuses every responsibility regarding damages to people or things due to the use of a unit which has been subject to unauthorized modifications or to misuse or to malfunction of a unit which has been subject to unauthorized modifications.



This unit is compliant with the following CE regulations: CEI EN 55022:2009 Class B (Radiated Emissions), CEI EN 55024:1999, CEI EN 55024:A2/2003, CEI EN 55024:IS1/2008 (Radio Frequency Electromagnetic Fields, 50Hz Magnetic Field Immunity Test and Electrostatic Discharges – ESD).

For a proper operation of this unit, all connections to other equipment in the system must be done when all equipment are off. Failing to comply with this advice may lead to damage to the CROSBY.



The label above, printed on the product case, indicates that the product, when no more usable, can't be treated as generic garbage, but must be disposed of at a collection point for recycling of electrical and electronic equipment, in compliance with the WEEE regulation (Waste of Electrical and Electronic Equipment).

By making sure that this unit is correctly recycled, you will help preventing potential damages to environment and human health, which could be caused by a wrong treatment of this product as generic garbage. Materials' recycling helps saving natural resources. For more in-depth information about recycling this product, please contact M2Tech Srl.

WARNING: the information contained in this manual are considered to be reliable and accurate. M2Tech reserves the right to change or modify the information any time, without prior advice. It's up to the customer to ensure that the manual being consulted is the latest version.

Dear customer,

Thank you for purchasing CROSBY. You are the owner of a very high quality power amplifier with many unique features, designed to obtain the best performance in conjunction with every M2TECH product.

CROSBY implements a specific set of technological and functional solutions, from the high efficiency class-D power stage, to a wealth of inputs, to the ability to operate in bridged mono mode for increased power, to the trigger inputs.

CROSBY is provided with a refined overcurrent and overtemperature sensing circuitry to protect the amplifier from overloads, at the same time allowing music to flow effortlessly to your speakers.

We're sure that your expectations will be fulfilled by purchasing CROSBY: your hi-fi system will exhibit an incredible increase of its sonic performance, so you can now prepare for a whole new listening experience!

Nadia Marino, CEO

Please note here your CROSBY serial number and purchase info for future reference:

S/N: _____ Date of Purchase: _____

Place of Purchase _____

Note: Proof of retail purchase, such as your purchase receipt, will be required in the unlikely event that any warranty service will be required

TABLE OF CONTENTS

1. Unpacking and Placing the Unit.....	7
2. Front Panel	9
3. Back Panel.....	11
4. Connecting and Powering the Unit.....	13
5. Cleaning the Unit	13
6. Bridged Mono Mode.....	15
7. Trigger	15
8. Overload and Protection	15
9. Specifications.....	17

1. Unpacking and Placing the Unit

Lay the box on a table and open it with a cutter or a knife, paying attention not to damage the internal box. Extract the internal box and open it. The following items are included in a cardboard tray:

- one CROSBY;
- one power cord.

Should one or more item be missing, please contact your retail dealer.

Remove the CROSBY from the cardboard tray enclosure and place it onto a stable base, far from heat sources. Avoid full sunlight on the unit. Allow for ample room around the unit for venting.

The CROSBY is a power amplifier capable of delivering up to 400VA when operating at full power in bridged mono mode with low impedance loads. Even if its efficiency is high, therefore very low power is lost in heat, and even if its' not always driven at full power, the unit can produce a relevant heat. Therefore, an adequate air flow is recommended.

Avoid smoke, moisture, dirt and liquids from reaching the unit. Please note that any signs of abuse will void warranty coverage.

Do not place the unit on thick carpets or inside a box or piece of furniture, not even close to curtains.

2. Front Panel

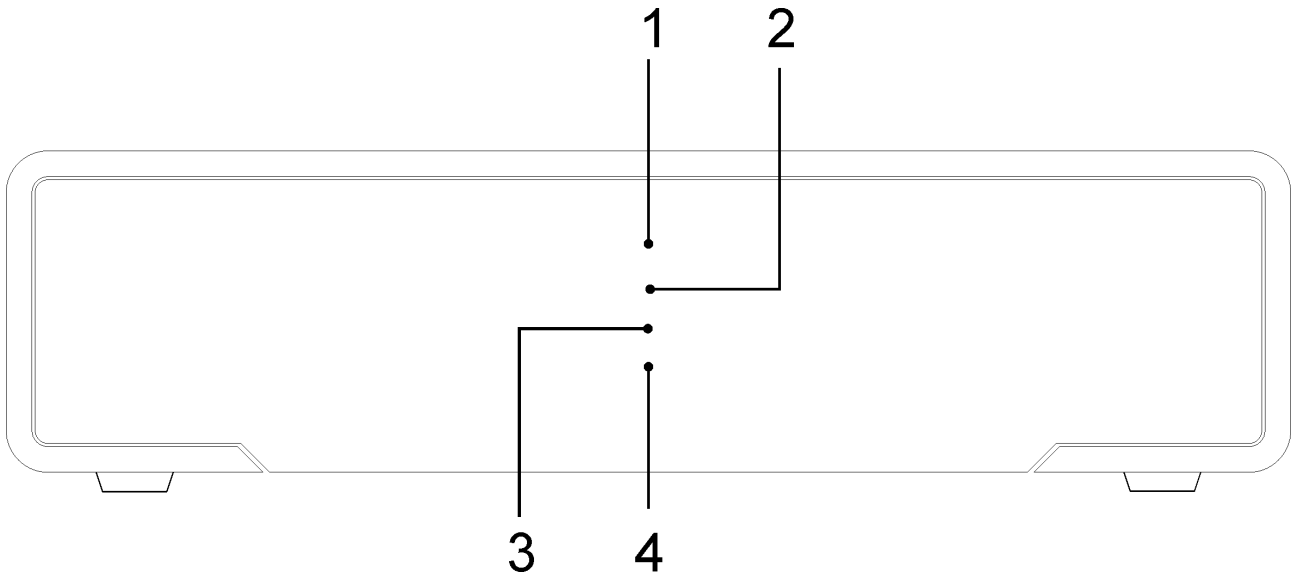


Figure 1

- 1) **Overcurrent LED (red)**. It's on when the CROSBY is trying to deliver too high a current to the load. Reduce volume to keep the CROSBY within its normal operative current limits.
- 2) **Operation LED (white)**. It's on when the amplifier is operating.
- 3) **Standby LED (blue)**. It's on when the CROSBY is in standby.
- 4) **Overtemperature LED (red)**. It's on when the CROSBY is too hot to operate safely. Reduce volume to keep the CROSBY within its normal operative temperature limits.

3. Back Panel

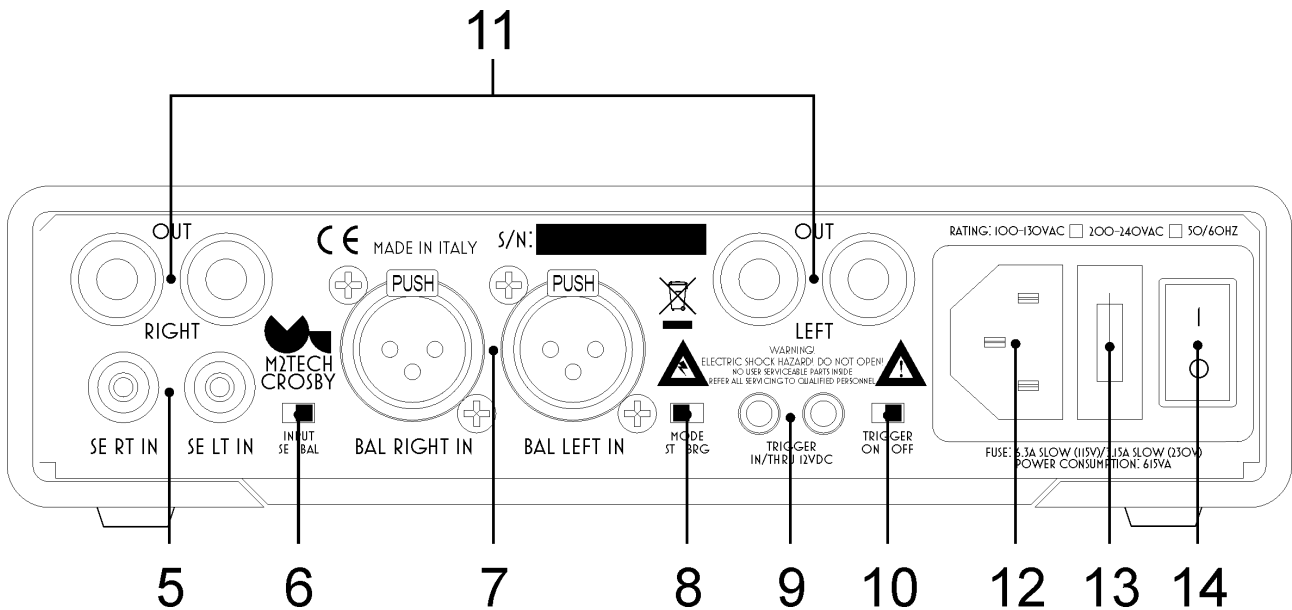


Figure 2

5) Single-ended inputs. Connect a preamplifier provided with single-ended outputs. Female RCA.

6) Input selector switch. Allows to choose between single-ended and balanced inputs.

7) Balanced inputs. Connect a preamplifier provided with balanced outputs. Female 3-pin xlr connectors. 1 is GND, 2 is send, 3 is return.

8) Mode selector switch. Allows to choose between stereo and bridged mono operation.

9) Trigger inputs. A 12V trigger signal may be sent to one of this inputs to switch CROSBY on and off by the preamplifier or other trigger source. The two inputs are in parallel, therefore the unused one may be used to forward the trigger signal to another unit (e.g. to another CROSBY when two CROSBY are used in bridged mono mode to obtain more power to drive difficult speakers).

10) Trigger enable switch. When trigger is enabled, the CROSBY needs a trigger signal on one of its trigger inputs to activate. When trigger is disabled, the CROSBY immediately powers up when the read power switch is engaged.

11) Output binding posts. Accept bare wire, forks, spades, lugs and bananas. Red is positive and black is negative

12) Power cord socket. Connect the stock power cord to this socket.

13) Fuse holder. It holds 1 slow blow fuse, please read the information on rear panel for the correct value for the selected mains voltage.

11) Power switch. Push this switch to toggle CROSBY power. When powering the unit, the operation LED or the standby LED (depending on the Trigger Enable Switch setting) will glow and the CROSBY will either activate or enter standby.

4. Connecting and Powering the Unit

WARNING: All connections between the CROSBY and other equipment must be made when all units are turned off and completely powered down or unplugged. Failing to do so may cause damage to the CROSBY and/or other units.

Please refer to chapter 3, “Back Panel”.

Connect the speakers cable to the CROSBY output posts (Fig. 2, 11).

WARNING: never short the positive output binding posts (red) to ground. This will activate the overcurrent protections and could lead to amplifier damage.

Connect a preamplifier or other driving unit (as the YOUNG MKIII) to the CROSBY single-ended (Fig. 2, 5) or balanced (Fig. 2, 7) inputs. Set the input selector switch (Fig. 2, 6) accordingly.

If the trigger feature is to be used, connect a mono cable with 3.5mm jack to one of the CROSBY trigger inputs (Fig. 2, 9). If the trigger signal must be forwarded to another unit, then the second input may be used as pass-through.

WARNING: do not drive both inputs at the same time with different trigger signals.

Connect the stock power cord to CROSBY power socket(Fig. 2, 12) and to a wall outlet.

Push the power switch on the back panel (Fig. 2, 14) to turn the CROSBY on. Depending on the trigger mode switch setting, either the operation LED (Fig. 1, 2) or the operation LED (Fig. 1, 3) on the front panel will glow. The CROSBY will either activate or enter standby, waiting to be enabled by a suitable trigger signal.

5. Cleaning the Unit

The CROSBY should be cleaned with a soft, slightly damp cloth. Do not use alcohol or any other types of cleaning fluids as they could damage the unit.

Avoid fluids from dropping or leaking inside the unit. Fluids of any type poured into the unit will void your warranty.

Be careful not to scratch the Plexiglas front screen.

6. Bridged Mono Mode

The CROSBY is capable of 60W per channel on 8 Ohms speakers. This is quite enough for normal level listening in a living room with medium- or high-sensitivity speakers. Anyway, set-ups using low-sensitivity speakers, particularly in large rooms with curtains, carpets or moquette, may require more power.

To achieve this, the CROSBY may be set to operate in mono, bridging the two channels to drive a single speakers. This way, the CROSBY is able to deliver up to 180W on 8 Ohms speakers, and up to 400W on lower loads.

Of course, two CROSBY are required to drive two speakers when the bridged mono mode is selected.

To activate the bridged mono mode, set the mode selector switch (Fig. 2, 8) to “BRG”, connect the input signal on the left input connector (RCA or XLR, according to the chosen inputs) and connect the speakers cables to the two positive output binding posts (Fig. 2, 11): positive to the left red one and negative to the right red one. The two black output binding posts are unused in this setting

WARNING: when bridged mono mode is selected, none of the used (red) output posts is connected to ground. Shorting any of the two posts to ground will activate overcurrent protection and could lead to amplifier damage.

WARNING: The above settings and connections must only be done when the CROSBY is switched off!

7. Trigger

The CROSBY accepts trigger signals, 5V_{DC} to 15V_{DC}. A trigger signal can be used to automatically activate the CROSBY by a preamplifier, so that all the system is powered on and off by the preamplifier's remote control. Trigger must be activated by the related trigger enable switch (Fig. 2, 10), and the rear panel switch (Fig. 2, 14) must be in the on position all the time.

8. Overload and Protection

The CROSBY is provided with advanced protection circuitry which senses any excess of temperature or delivered current that may damage the power stage. When any potentially dangerous event occurs, the protection circuits cut signal and turn the related LED's on (Fig. 1, 1 and 4).

Should this happen, turn the CROSBY off to allow for lowering its temperature, check for proper output cables connection, lower the volume and switch the CROSBY on again. If the overload indication persists, then the amplifier may be damaged and requires servicing.

9. Specifications

Input sensitivity:	1.25V _{rms} (single-ended and balanced)
Output power:	60W _{rms} p.c. (stereo, 8 Ohms)
	110W _{rms} p.c. (stereo, 4 Ohms)
	180W _{rms} (mono, 8 Ohms)
	350W _{rms} (mono, 4 Ohms)
Residual noise:	30uV _{rms} (20Hz-20kHz, A weighted)
SNR:	112dB (A-weighted)
THD+N:.....	0.003% (1Wrms on 4 Ohms)
IMD:	0.0009% (10Wrms, 18.5kHz+1kHz)
TIM:.....	0.007% (10W)
Mains voltage:.....	90-130V _{AC} or 180-260V _{AC} (internally set), 50/60Hz
Power consumption:	615VA
Fuse:.....	slow blow 3.15A or 6.3A
Input:.....	IEC socket with fuse holder
Size:.....	200x50x200mm (w x h x d)
Weight.....	2.1kg (device and ancillaries)
	2.6kg (packed)