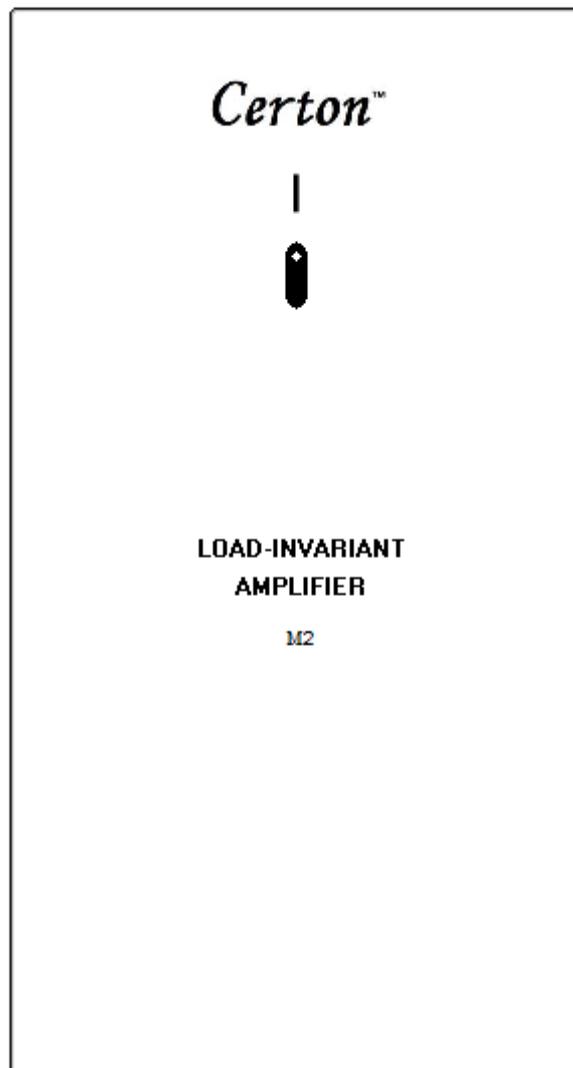


User's Manual for Certon M2 Power Amplifier



Safety Instructions

- Do not use near water
- Do not expose to rain or moisture
- Clean only with dry cloth
- Do not block ventilation
- Do not place on a soft surface
- Do not operate near a heat source or in a confined area
- Do not use with a damaged power cord
- Use main plug to disconnect from power grid
- Do not remove cover
- Use only supplied power adapter. Other power supplies may cause serious harm both to the M2 and to other components in the system.



A lightening bolt triangle is used to alert the user of the risk of electric shock.



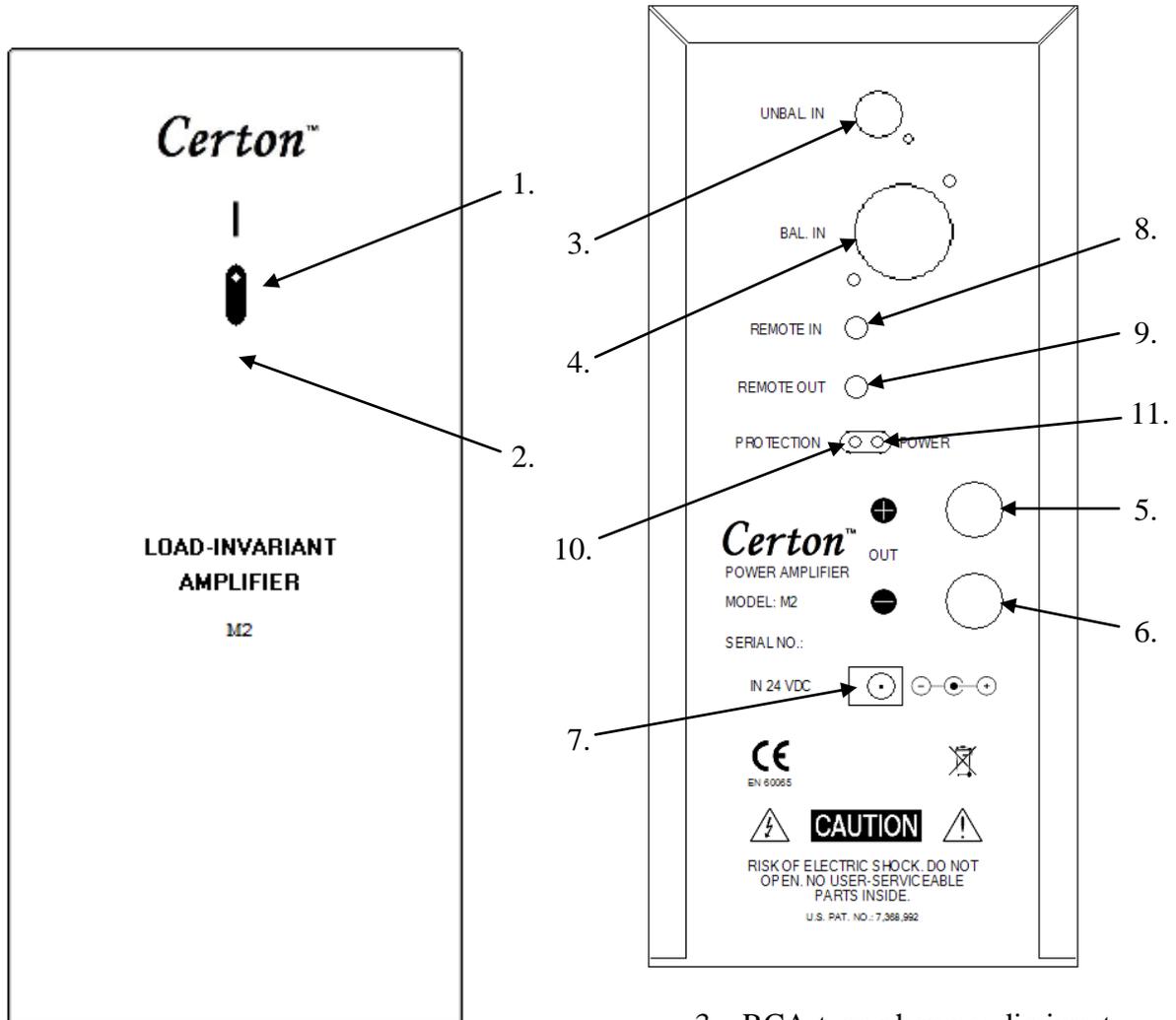
An exclamation point triangle is used to alert the user of an important operating or maintenance instruction.

Getting Started

Thank you for purchasing the Certon M2 monaural power amplifier. The M2 features awarded technology for achieving powerful sound from a small enclosure.

The M2 is typically used in a stereo or multi-channel set-up. Each channel requires its own power amplifier. Simply connect each M2 in a set-up to its respective loudspeaker. The M2 has loudspeaker output binding posts that accept bare wire, banana plugs or forks. Pay attention to the polarity of the loudspeaker. Make sure the wires are firmly attached, and are not short-circuiting the outputs of the amplifier. Connect the audio input of the M2 to the audio output of your pre-amplifier, home-theater processor or other similar audio equipment. Attach the DC plug of the supplied power adapter to the power inlet of the amplifier, and the mains power cord to the power adapter and a power grid outlet. Toggle the power switch located on the front panel to its on-position. Your M2 should be ready for operation in a few seconds, in which case a concealed white LED underneath the power switch would illuminate.

Controls



1. On/off toggle switch
2. Power on/off LED indicator (concealed)

3. RCA-type phono audio input
4. XLR-type audio input (AES)
5. Positive loudspeaker binding post
6. Negative loudspeaker binding post
7. Power inlet
8. Trigger input
9. Trigger output
10. Protection indicator
11. Power on/off Indicator

Installation

Place the M2 on a stable surface. The unit has a self-resetting heat-switch, however:



Do not place the amplifier on a thick cloth or carpet, as ventilation would be obstructed. Do not place in a confined area. Clearance should be allowed for heat dissipation on the top and sides of the enclosure.



During installation, keep the power switch (1) in the “off” position (toggle-switch in the lower position).

Attach an RCA-type or XLR-type signal cable between the audio input (3,4) of the M2 and your pre-amplifier, home-theater processor or corresponding unit.



Be sure not to connect the audio input of the M2 to a line output. Doing so may cause damage to your loudspeakers and your hearing.

Attach the loudspeaker cables to the positive and the negative loudspeaker binding posts (5,6) of the M2. Pay attention to the phase. In general, the positive terminal of the loudspeaker should be connected to the positive binding post of the amplifier, and the negative terminal of the loudspeaker should be connected to the negative binding post of the amplifier. Tightly secure the terminals. The M2 is non-inverting.



Do not short-circuit the loudspeaker terminals. Protection circuitry within the amplifier will protect the unit from most overload conditions, but short-circuits may seriously harm your M2. It is recommended not to use loudspeakers with a nominal impedance of less than 4 ohms.



Do not use highly capacitive loudspeaker cables, as this reduces the phase margin of the amplifier and may cause failure.

M2 has a 12 VDC trigger input (8) and output (9). You may daisy-chain several amplifiers. Simply connect a trigger output of one unit to a trigger input of another unit. Doing this enables all units to be powered-up by control from your pre-amplifier, home-theater processor or corresponding unit.

Attach the plug of the power outlet cord of the supplied power adapter to the power inlet (7) of the M2. Attach the power cord between the power adapter and a power grid outlet.



Only use the supplied power adapter, or one that has been approved by Certon. Other power supplies may cause serious harm both to your M2 and to other components in your system. Safe operation depends not only on correct “wattage”, voltage and polarity of the power adapter. In particular, neither the positive nor the negative supply voltage must ever be connected to ground.

Operation

Your Certon M2 is now responsive to either a 12 VDC signal on the trigger input (8), or to setting the on/off switch (1) on the front of the unit in the “on”-position (toggle-switch in the upper position). Either should turn on your M2.

Provided there is no fault condition, the unit should be ready for operation within a few seconds. A light underneath the switch indicates that the unit is ready for use.

Removing the 12 VDC signal and putting the on/off toggle-switch back to the off-position takes the amplifier back to an off-state.

When the unit switches on or off, a discrete chirp or noise may be heard in the loudspeaker. This is normal for the M2 as its protection relay operates on the power rail rather than the loudspeaker circuit.

Certon M2 is designed to play adequately loud in a normal home environment. However, distortion rises abruptly and becomes clearly audible at some level. This is called voltage-clipping. Hard, sustained voltage clipping may be very harmful to even the most powerful loudspeaker, and must be avoided. Please note that loudspeaker damage due to voltage clipping constitutes misuse and may void the warranty of your loudspeaker.



In an event of abrupt onset of clearly audible distortion, quickly lower the volume to avoid loudspeaker damage.

Maintenance

It is recommended to use a dry non-abrasive cloth to clean the amplifier.



Do not use detergents or other strong chemicals to clean your Certon M2 amplifier.



There are no user-serviceable parts inside the enclosure. Opening the cover exposes high-voltage surfaces that may cause electric shock.

Your Certon M2 has a DC protection circuit through which DC faults are detected. In the event of a malfunction within the unit, or in another component of your audio system that leads to a DC offset, the M2 shuts down until the DC fault ceases. A red LED indicator on the back panel lights up for as long as the DC fault persists. The red LED indicator also lights up briefly during start-up. In case the red LED stays on, your M2 may require servicing by a qualified technician.



In the event of loud thumps, clicks or pops from the loudspeaker at start-up, immediately turn off the M2 and seek assistance from a qualified technician.

There is a heat switch inside the enclosure. The heat switch protects the amplifier against excessive and potentially harmful temperatures that may result e.g. from loud listening for prolonged periods at elevated ambience temperatures. When the heat switch trips, the amplifier turns off. As soon as the temperature is safe again, the amplifier automatically resumes operation.

Specification

Power (8 Ohms)	20 Watts RMS
Damping factor (8 Ohm)	>5000 @ 500 Hz
Input impedance (RCA/XLR)	22 kOhm / 27 kOhm
Input voltage (at full power)	0.25 Volt RMS
THD+N	< - 60 dB
Output binding posts	WBT
Audio signal input jacks	RCA phono type (cinch) / XLR
Remote trigger voltage	12 VDC
Top and sides	Brushed stainless steel
Front fascia	PMMA
Weight	2.7 kg (6 lb)
Size of enclosure:	9.6 x 22 x 16.5 cm. (3.8 x 8.7 x 6.5 in.)
Mains voltage	AC 230 Volts (EU)