

**the  
box**

MA100  
full-range speaker

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# 1 General notes



This user manual contains important information on safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to other users, be sure that they also receive this manual.

Our products are subject to a process of continuous development. We therefore reserve the right to make changes without notice.

## **Symbols and signal words**

This section provides an overview of the symbols and signal words used in this user manual.

| Signal word   | Meaning  |
|---|--|
| <b>DANGER!</b>  | This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.        |
| <b>WARNING!</b>   | This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.           |
| <b>CAUTION!</b>   | This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.                      |
| <b>NOTICE!</b>  | This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided. |
| Warning signs   | Type of danger   |
|  | Warning – high-voltage.  |

| Warning signs  | Type of danger            |
|--|---------------------------|
|  A yellow triangular warning sign with a black border, depicting a crane hook lifting a rectangular load. | Warning – suspended load. |
|  A yellow triangular warning sign with a black border, featuring a large black exclamation mark.          | Warning – danger zone.    |

## 2 Safety instructions

### Intended use

This device is intended to be used in a sound reinforcement system. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.



#### **DANGER!**

#### **Danger for children**

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.



**DANGER!**

**Electric shock caused by high voltages inside**

Within the device there are areas where high voltages may be present. Never remove any covers.

There are no user-serviceable parts inside.



**DANGER!**

**Electric shock caused by short-circuit**

Always use proper ready-made insulated mains cabling (power cord) with a protective contact plug. Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.





**CAUTION!**

**Possible hearing damage**

The device can produce volume levels that may cause temporary or permanent hearing impairment. Over an extended period of time, even levels that seem to be uncritical can cause hearing damage.

Decrease the volume level immediately if you experience ringing in your ears or hearing impairment. If this is not possible, keep a greater distance or use sufficient ear protectors.



**NOTICE!**

**Risk of fire**

Do not cover the device nor any ventilation slots. Do not place the device near any direct heat source. Keep the device away from naked flames.



### **NOTICE!**

#### **Operating conditions**

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.



### **NOTICE!**

#### **Power supply**

Before connecting the device, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly injure the user.

Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

## 3 Features

Special features of the device:

- Inputs: Two XLR sockets
- Outputs: One XLR socket for line out, one lockable NL4 socket (to connect a passive speaker)
- 10" woofer, 3" tweeter
- Volume control for mic and line input, 3 band EQ, clipping LED
- Tripod mounting thread 36 mm on the bottom
- Carpet covering
- Standby feature

## 4 Installation

Unpack and carefully check that there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.



### **WARNING!**

#### **Risk of injury caused by falling objects**

Make sure that the installation complies with the standards and rules that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.



**NOTICE!**

**Possible property damage by magnetic fields**

Loudspeakers produce a static magnetic field. Therefore, maintain an appropriate distance to devices that can be adversely affected or damaged by an external magnetic field.



**NOTICE!**

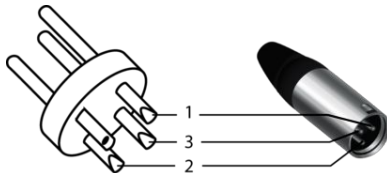
**Use of stands**

When mounting the device onto a stand, ensure that the stand is in a safe and stable position and that the weight of the device does not exceed the maximum permissible load capacity of the stand.

## 4.1 Pin assignment

You can use XLR plugs with balanced or unbalanced wiring. The following will give you an overview of the various possibilities.

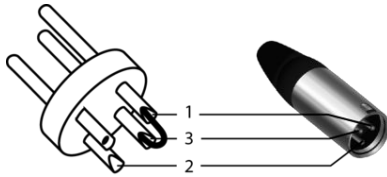
### XLR connections for signal inputs and output



XLR mounting sockets are used for signal inputs. An XLR mounting plug provides the line out signal. Drawing and table indicate the XLR pin assignment.

Balanced wiring:

|   |                     |
|---|---------------------|
| 1 | Ground, shielding   |
| 2 | Positive signal (+) |
| 3 | Negative signal (-) |

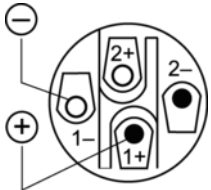


Unbalanced wiring:

|   |                   |
|---|-------------------|
| 1 | Ground, shielding |
| 2 | Signal            |
| 3 | Bridged to pin 1  |

**NL4 mounting connection for speaker output**

The drawing alongside shows the pin assignment of the lockable NL4 mounting connector.



## 4.2 Tips on handling speakers

We recommend you to set up the speakers in a way, that the sound signals can reach the audience unobstructedly. It will often be helpful to mount the speakers on tripods. Thus, the sound will be evenly spread with maximum range throughout the audience area.

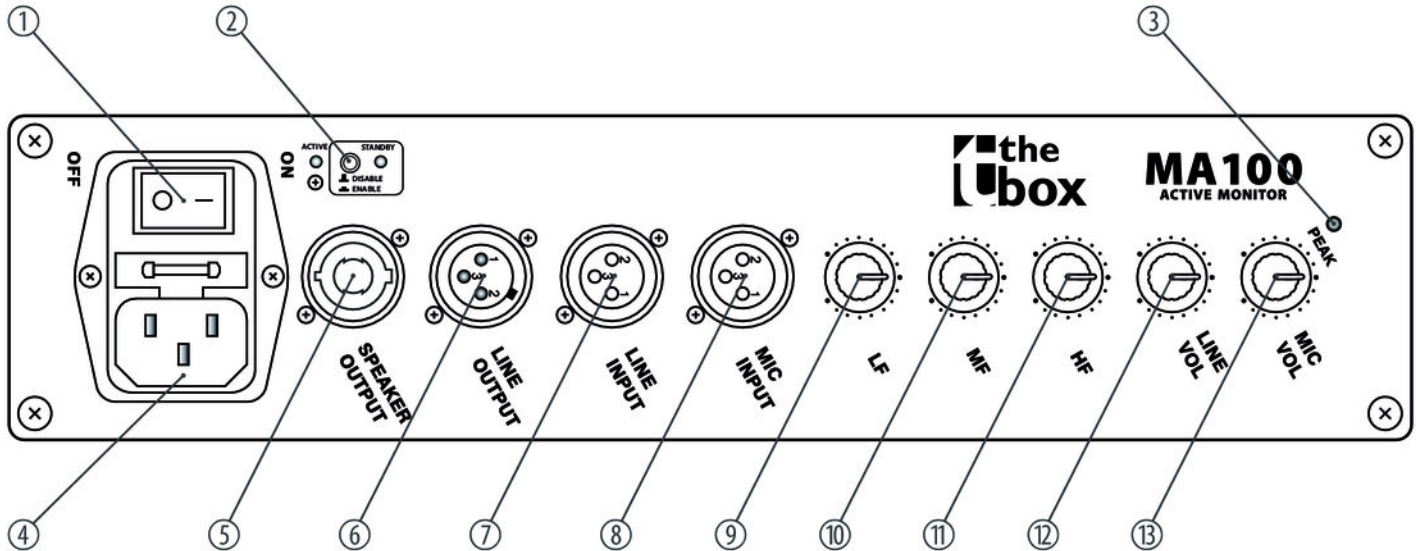
Always use high grade cable to connect your equipment. Otherwise you won't reach maximum sound quality.

For optimum results both impedance and power handling of the speakers must match the requirements of the amplifier. Always follow the technical specifications of the speakers! The overall impedance of the connected loudspeakers must not exceed the minimum output impedance of the amp. The amps max. RMS output power should be 50 % above the power handling capacity of the connected speakers.

If you notice distortion during operation, either the amp or the speaker is overloaded. This may permanently damage the amp or the speaker. Always reduce the volume when you hear distortion.



## 5 Connections and operating elements



MA100

|   |  |
|---|--|
| 1 | <b>ON/OFF</b><br>Use the mains switch to turn the unit on or off.  |
| 2 | <b>STANDBY</b><br>Push button to enable or disable the energy saving mode.<br>When the box receives no signal for 60 minutes, it switches to standby mode. When it receives a signal again, it automatically switches back to normal mode.<br><b>LED ACTIVE</b><br>Power indicator LED. This LED is permanently on in normal mode. It goes off when the energy-saving mode is enabled and the box enters the standby mode.<br><b>LED STANDBY</b><br>Standby mode. This LED lights up when the energy saving mode is enabled and the box enters the standby mode. It goes off again when the box switches back to normal. |
| 3 | <b>LED PEAK</b><br>Indicates clipping. If the LED flickers or lights up during operation, the input level is too high. In this case, reduce the volume of the input signal.  |

|    |   |
|----|---|
| 4  | IEC chassis connector for operating voltage supply with fuse holder.  |
| 5  | <b>SPEAKER OUTPUT</b><br>NL4 output to connect a passive monitor.   |
| 6  | <b>LINE OUTPUT</b><br>XLR output to connect another active monitor.   |
| 7  | <b>LINE INPUT</b><br>XLR input for line signals (PA, preceded speakers etc.).   |
| 8  | <b>MIC INPUT</b><br>XLR microphone input.   |
| 9  | <b>LF</b><br>Control to attenuate or increase the low frequencies. Turn it clockwise / counter-clockwise to increase / decrease the lows by $\pm 6$ dB. |
| 10 | <b>MF</b><br>Control to attenuate or increase the mid frequencies. Turn it clockwise / counter-clockwise to increase / decrease the mids by $\pm 6$ dB. |

|    |   |
|----|---|
| 11 | <b>HF</b><br>Control to attenuate or increase the high frequencies. Turn it clockwise / counter-clockwise to increase / decrease the treble by $\pm 6$ dB.          |
| 12 | <b>LINE VOL</b><br>Control to adjust the volume of the line input. Turn the knob clockwise / counter-clockwise to increase / decrease the volume of the input.      |
| 13 | <b>MIC VOL</b><br>Control to adjust the volume of the microphone input. Turn the knob clockwise / counter-clockwise to increase / decrease the volume of the input. |

## 6 Technical specifications

|                    |   |
|--------------------|---|
| Operating voltage  | AC 230 V ~ , 50/60 Hz                                   |
| System             | 2-way full-range active speaker with built-in crossover |
| Speakers           | 1 × 10" woofer, 3" tweeter                              |
| Dispersion (V × H) | 90° × 80°   |
| Frequency response | 70 Hz ... 17 kHz (-3 dB)                                |
| THD                | Line: 0,02%, microphone: 0,04%                          |
| Maximum SPL (1 m)  | 119 dB  |
| Controls           | 2 level controls (MIC, LINE), 3 band EQ                 |
| Output power       | 100 W (RMS), 400 W (peak)                               |
| Load impedance     | 8 Ω   |
| Input impedance    | 10 kΩ   |

## Technical specifications

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|                        |                          |
|------------------------|--------------------------|
| Dimensions (W × H × D) | 360 mm × 495 mm × 310 mm |
| Weight                 | 15 kg                    |

## 7 Protecting the environment

### Disposal of the packaging material



For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

### Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE). Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.











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