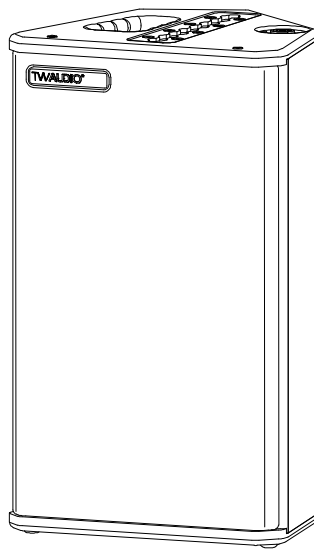


M10 | **Operation manual**



Introduction

Thank you for choosing a high-quality product “MADE IN GERMANY” from the brand TWAUDIÖ.

The M10 combines the advantages of the compact M8 with the imposing qualities of the high performance M12. The M10 is fitted with the same 1.4“ mid-high driver as the M12 and the M15, enabling a deep crossover frequency, thus giving a sound with the best possible intelligibility and directness. Something that you do not get every day within this class. The low-mid range is served by a 10“ driver with an extended voice coil for extra large linear excursion.

As a full range speaker, a compact monitor or a top, for instance in actively crossed over combination with a B18 or B30 subwoofer, the M10 offers a direct sound with plenty in reserve. Almost invisible. But impressively audible.

If you lend your product to another party, inform that party of the safety-related operating procedures and hand over this assembly guide. If you require additional copies of this manual, you can obtain them free of charge from TWAUDIÖ or download them from www.twaudio.de

Instructions in this user manual

Strictly adhere to the instructions contained in this operating manual that are marked as follows:



This symbol in combination with the signal word “Warning” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to serious injury or even death.



This symbol in combination with the signal word “Warning” identifies a potentially hazardous situation for persons with a pacemaker. Failure to comply with this safety instruction can lead to serious injury or even death.



This symbol in combination with the signal word “Caution” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to light or moderate injury.



This symbol in combination with the signal word “Note” identifies a potentially hazardous situation. Failure to comply with this safety instruction can lead to product damage.



This symbol in combination with the signal word “Tip” identifies additional information or notes that will simplify working with TWAUDIO products on the basis of practical experience.

**Read manual
before use!**

Notes on the products

Before using the device, carefully read the operating manual and keep it with the M10 loudspeaker.

General information

Operation manual: OM-M10
Version 2.0 en, 02/2022
© by TWAMBO 2022; all rights reserved.

All information contained in this operating manual was correct to the best of our knowledge at the time of printing.

Quality warranties or assurance of suitability for a certain type of use based on the technical specifications, dimensions and weights are not granted by TWAMBO.

TWAMBO also shall not assume liability for any secondary damage (property damage and/or personal injury) nor for the failure to comply with this operating manual!

TWAMBO reserves the right to update this document based on recent developments.

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Content

- 1. Safety | Intended use 5
- 2. Overview 7
 - 2.1 Components 7
 - 2.2 Variants 8
- 3. Technical specifications 9
 - 3.1 Data sheet 9
 - 3.2 Connection diagram 9
- 4. Commissioning 10
 - 4.1 Setup 10
 - 4.2 Rotating the HF horn 11
 - 4.3 Operation 12
 - 4.4 Connecting the cable 12
- 5. Transport and Storage 13
- 6. CE Conformity Declaration 14
- 7. Disposal 15

1. Safety | Intended use

Please adhere to the following safety instructions to avoid risks when operating loudspeakers.

The M10 loudspeaker was developed for use in professional sound systems. The loudspeaker may only be used by trained and qualified personnel.

Note the operating modes described in this operating manual. Other uses are not permissible.

Damage caused by improper use is not covered by TWAMBO.



Loudspeakers generate an electromagnetic field. Persons with pacemakers are not permitted to remain in the immediate vicinity of loudspeakers as the electromagnetic fields can cause pacemakers to malfunction.



Ensure that the units are in a stable position and are firmly attached. A falling loudspeaker can result in serious personal injury and property damage.

When using and assembling TWAUDIÖ loudspeakers, only use materials specified by TWAUDIÖ. These tasks must be performed by qualified personnel. Adhere to the applicable safety regulations.



When setting up loudspeakers, ensure that they are not exposed to the following ambient conditions:

- Direct sunlight
- Humidity
- Jolting
- Dust



Keep away from the immediate vicinity of loudspeakers that are operated at high sound pressure levels. These loudspeaker systems are capable of endangering your health. Sound levels beginning as low as approximately 90 dB SPL can lead to long-term hearing impairment.



Avoid:

- Feedback
- Distorted signals (clipping) and
- Peaks resulting from switching on devices, plugging in devices or unplugging devices during operation.

Such signals can lead to loudspeaker overload and ultimately to loudspeaker failure.



Ensure that the loudspeaker is not exposed to permanent thermal overloads. Thermal overloads may cause a fire and result in serious personal injury and property damage.

Note that TWAMBO does not provide a warranty for damage that can be attributed to this type of overload and therefore cannot be held liable for any secondary damage.



A permanent magnetic field is present in the immediate vicinity of loudspeakers. Ensure that objects which react sensitively to magnetic fields are not located in the immediate vicinity of the loudspeaker. In particular, this applies to magnetic storage media, magnetic stripe cards such as debit cards and CRT displays. A distance of approximately one meter is sufficient to avoid damage.



Check loudspeakers and accessory parts regularly for visible wear. This is essential to ensure continuing fault-free operation. Worn parts should be replaced immediately. Spare parts are available from TWAUDIÖ.

2. Overview

2.1 Components

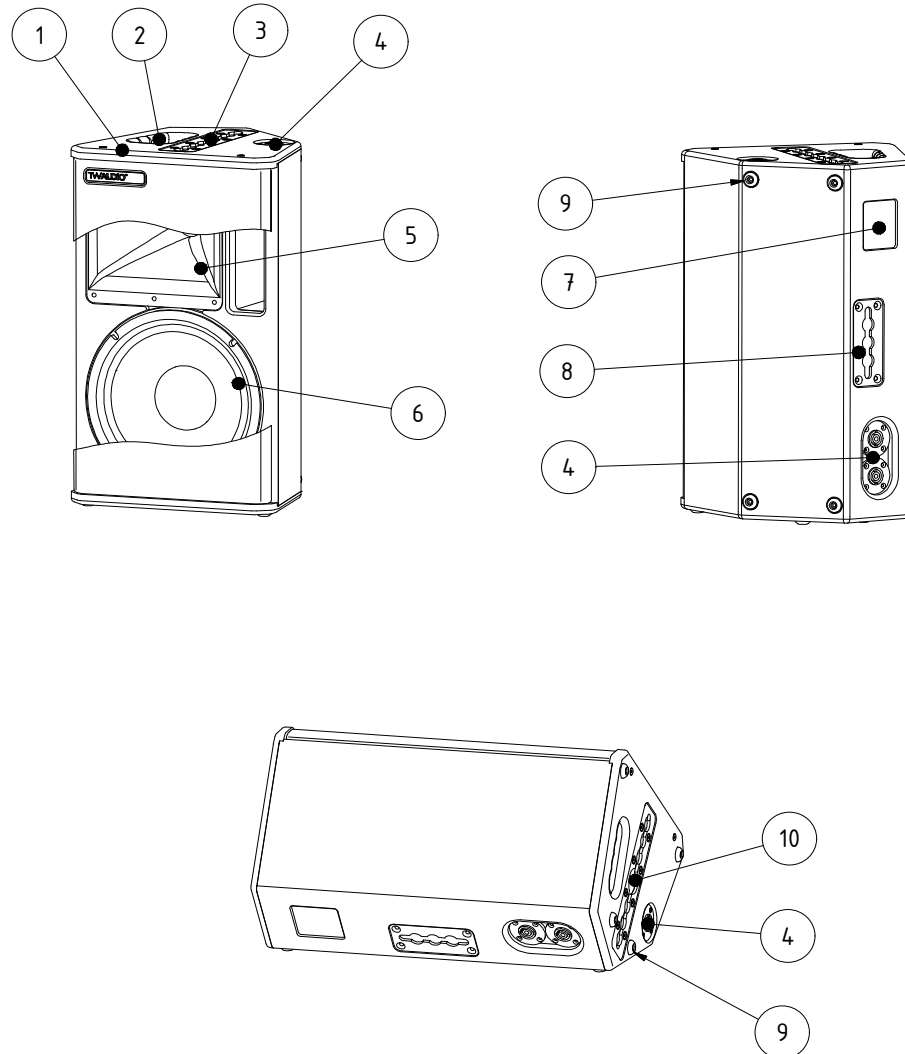


Figure 2.1 - Overview

1. 15 mm multiplex enclosure - Warnex surface finish
2. Ergonomic carrying handles (top and bottom)
3. Top rigging track
4. Connection panels one SpeakON® connector each at the top and bottom and two connectors on the back
5. Rotable horn with 1.4" compression driver
6. 10" cone driver
7. Rubber feet (4 pieces each)
8. Type label
9. Rear rigging track
10. Bottom rigging track with integrated cabinet flange

2.2 Variants

The M10 loudspeaker is available in right and left variants. These versions differ in the side on which the slanted wedge is located on the enclosure.

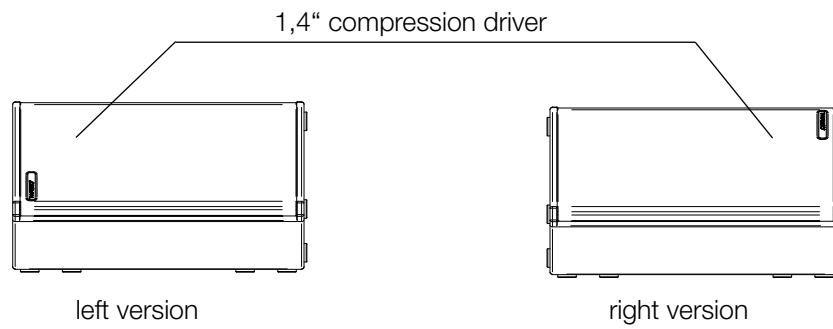


Figure 2.2 - Left and right versions

3. Technical specifications

3.1 Data sheet

Drivers	1x 10" LF / 1x 1.4" HF
Frequency response	68 - 19000Hz
Power handling (program/Peak)	600 / 1200W
Impedance	8Ω LF
Coverage angles (h x v)	75° x 50°
Max. SPL / 1m	127 dB
Dimensions (h x w x d)	505 x 300 x 280 mm [19,88 x 11,81x 11,02in]
Weight	15,2 kg [33.5 lbs]
Surface	Warnex textured paint

3.2 Connection diagram

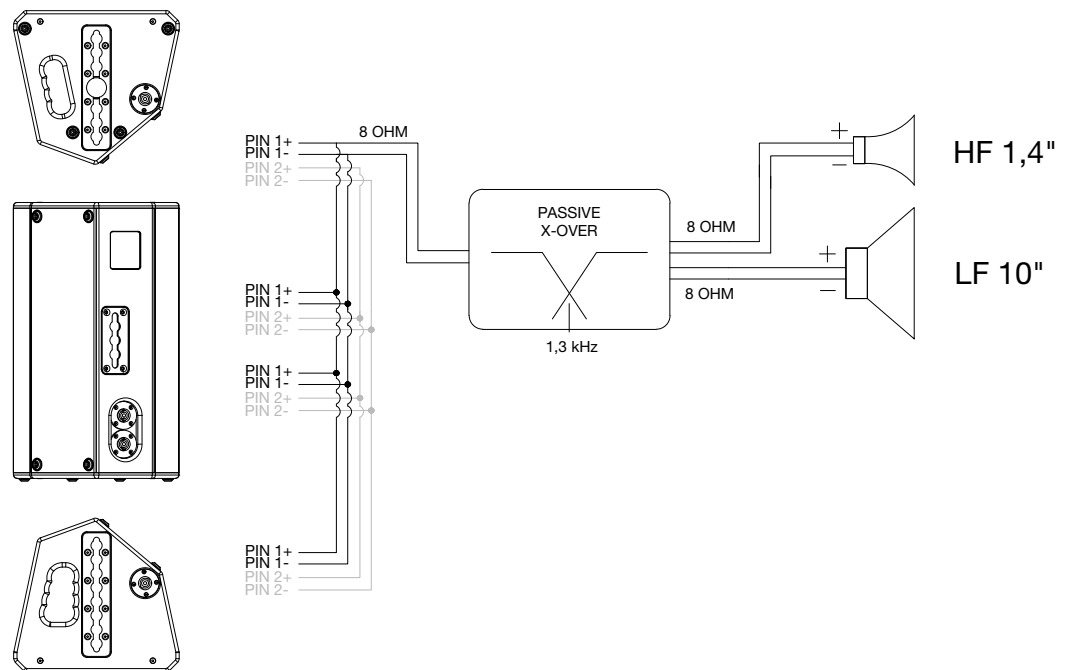


Figure 3.2 - Connection diagram

4. Commissioning

4.1 Setup

The M10 loudspeaker is designed for standing, vertical and horizontal operation. TWAUDIÖ provides a wide range of accessories to securely attach the loudspeaker.



Make sure that all system structures are located on a firm, level surface and that the surface can bear the total weight!



Make sure the speakers are securely fastened to prevent personal injury and property damage.



TWAUDIÖ recommends using only the accessories specified by TWAUDIÖ for securing and mounting loudspeakers.

4.2 Rotating the HF horn

The horn of the M10 loudspeaker is positioned such that the horizontal coverage is 75° and the vertical coverage is 50°. In some situations, it may be advantageous to switch the coverage of the high-frequency range. To do this, you can rotate the horn of the M10 loudspeaker. Proceed as follows.

1. Place the M10 loudspeaker with the wedge inclined toward you with the grill facing up. Ensure that the working surface is clean with a non-slip finish.
2. To remove the front grill of the loudspeaker, use a 3 mm hex key. Remove the four screws on the top and bottom of the loudspeaker enclosure (two on each side).
3. Release the four screws of the horn using a 5 mm hex key.
4. Pull the horn upward out of the loudspeaker enclosure.
5. Check that the seal between the enclosure and horn is properly seated.
6. Rotate the horn carefully by 90° and reinsert the horn and driver back into the recess. Screw it onto the enclosure using medium-strength thread locker.
7. Screw the front grill back on hand-tight.

4.3 Operation

TWAUDIÖ recommends operating the M10 loudspeaker on a DSP controller. For this purpose, only presets developed by TWAUDIÖ are recommended. The TWAUDIÖ system racks are ideally suited for this purpose.



NOTE

Before connecting the loudspeaker to the amplifier, ensure that the right preset has been loaded.

Using a wrong, out dated or a preset not provided by TWAUDIÖ can lead to destruction of the speaker.



NOTE

Make sure that the amplifier's specifications meet the requirements. Using an amplifier that doesn't meet the specifications can destroy the loudspeaker.

Please note the technical data in section 3.1 on page 9.

4.4 Connecting the cable

To create a cable connection with an amplifier rack from TWAUDIÖ, proceed as follows.



NOTE

Ensure that the cable cross sectional area is sufficient (at least 1.5 mm²) to avoid power losses. TWAUDIÖ recommends using the loudspeaker cables available from TWAUDIÖ.

When connecting the cables to the loudspeaker, ensure that polarity (+/-) and pin assignment (1/2) are correct. Incorrect connection can lead to a significant change in the loudspeaker's sound characteristics and may damage the driver.

The pin connections of the M10 loudspeaker can be found in section 3.2 ("Connection diagram") on page 9.

The internal wiring of the M10 loudspeaker allows for parallel connection of multiple loudspeaker units.

Please note that parallel connections will decrease the total impedance of your loudspeaker configuration.

The total impedance and the resulting power of the speaker configuration must match the output power of the amplifier.

5. Transport and Storage



NOTE

To enable a single person to transport two M10 loudspeakers, TWAUDIÖ recommends using the CaseM10.

When transporting and storing the unit, it is important to ensure that the surface and front grill of the loudspeaker are not damaged. Moisture can penetrate through exposed wood surfaces and cause the wood to swell. A bent or broken front grill will no longer adequately protect the sensitive speaker membranes.

In addition, appreciable dust deposits may considerably impair the functionality of a loudspeaker membrane. For this reason, the loudspeakers should be transported and stored in a safe, careful, dry and largely dust-free manner.

The following accessory parts for transport and storage are available from TWAUDIÖ:

- CoverM10 (protective cover for one M10)
- CaseM10 (flightcase for two M10)

The original packaging is unsuitable as permanent storage and transport packaging.

6. CE Conformity Declaration

Copy and translation of the original CE Conformity Declaration:



We hereby declare that the below-referenced components by virtue of their design and construction, and in the configuration placed on the market by us, satisfy the safety and health requirements of the applicable EC directives. This declaration becomes invalid in case of modifications that have not been approved by us.

This declaration applies to the following components

- M10 L
- M10 R

as well as all model variants based on these, provided that they correspond to the original factory models and have not been technically modified in any way.

Applicable directives:

- 2001/95/EG
- 2011/65/EU

Applicable national standards and technical specifications:

- DIN EN 18800
- DIN EN ISO 12100
- DGUV Vorschrift 17 und 18
- EN 50581: 2013-02

Berlin, Germany, January 1st, 2021

A handwritten signature in black ink, appearing to read 'Wüstner', written in a cursive style.

Bernhard Wüstner

7. Disposal

It is prohibited to dispose of used electrical equipment with household refuse.



All TWAMBO GmbH products are so-called B2B-products. This means that they are sold by a commercial business to a commercial business. TWAMBO products that bear the trash can symbol shown here may only be disposed of by TWAMBO.

The loudspeaker owner is legally responsible for proper disposal of used devices that do not bear this symbol. This pertains to all products delivered prior to March 29, 2010. Nevertheless, TWAMBO will also be happy to assist you in this case.

If you have any question regarding the disposal of used devices, please contact us under the following telephone number:

+49 (0) 71 41 - 48 89 89 0

Thus, TWAMBO is in strict compliance with the Waste Electrical and Electronic Equipment Directive (2012/19/EU) for the protection of our environment.

TWAMBO is registered under the following WEEE-reg.-no. with the German National Register EAR as a B2B-manufacturer and distributor of electrical devices:

DE93295191

In countries outside of the European Union, comply with local regulations.

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