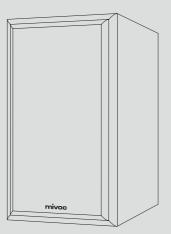
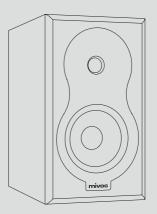




# HM5

#### **LOUDSPEAKER**





**OPERATING MANUAL** 

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#### **SOUND - EXPERIENCE - JOY**

When you don't just hear a favourite song or film, but actually feel it, it's a very special experience. It can cast a spell over you! – it surrounds you and draws you fully into the moment! – You feel all the energy it contains! – and then... you find yourself just feeling happy!

#### BOOM!

#### WHEN SOUND BECOMES AN EXPERIENCE

Mivoc lets us bring our passion for excellent sound to life within our own four walls. Here, the expertise acquired as a result of decades of experience and our specialist knowledge acquired through the development of professional loudspeaker systems come together to create a listening experience that is pure joy - and we want to share it with you.

We are delighted that you share our love of sound and have chosen this mivoc product. To ensure that you get the most out of your mivoc product, we have summarised everything you need to know in this operating manual. We wish you lots of fun and many hours of immersive listening.

If you have any questions or would like to find out about other mivoc products, visit the mivoc website at **www.mivoc.com**. You can also contact us at **info@mivoc.com**.

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The contents of this document may be modified without prior notice, with a view to improving reliability, function, design or for other reasons.

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## INSTRUCTIONS AND INFORMATION

## **USE**

This product is a passive loudspeaker intended for use in dry indoor areas in private homes. The speakers must be connected to a suitable external power amplifier using suitable speaker cables. To ensure optimum and safe operation, only use your mivoc speaker as described in this manual. Use for purposes other than those intended or other than those described in this manual may result in personal injury or damage to property.

## **GRAPHIC SYMBOLS**

Graphic symbols can be found on the product. These symbols represent handling instructions that must be observed and indications of conformity with relevant directives.



The CE mark indicates conformity with the applicable EU directives regarding safety, health and environmental protection.



Symbol indicating compliance with Directive 2002/96/EC and Directive 2003/108/EC of the European Parliament on waste electrical and electronic equipment (WEEE).

You will encounter a number of graphic symbols in this manual. These symbols indicate important information and helpful hints.



This symbol indicates important operating and maintenance instructions that must be observed.



This symbol indicates that the relevant text passage contains worthwhile and helpful information concerning the product.



This symbol provides practical tips and ideas for the correct handling of the product.

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## SAFETY INSTRUCTIONS

Be sure to observe the following safety instructions. This way, you can use your product safely and enjoy listening to music for a long time.

- 1. Read this operating manual carefully and keep it in a safe place so that you can refer to it if necessary.
- Some mivoc products have small removable parts. Ensure that children do not have unsupervised access to mivoc products. Small parts pose a risk of swallowing and can cause injury or suffocation.
- 3. Do not allow children to play with the product or its packaging. There is a risk of injury and suffocation.
- 4. Use only accessories recommended by mivoc.
- 5. Ensure that the unit is wired and set up correctly as described in this manual.
- 6. Mivoc products contain magnets of different strengths that generate a magnetic field around the product, which can have a negative effect on other devices (e.g. computers) or medical implants (e.g. pacemakers). Do not place any computer products on top of or in the immediate vicinity of your mivoc product and check with your doctor in advance if you have medical implants.
- Listening to loud audio for prolonged periods of time can lead to hearing damage and mental impairment. Please also be considerate of other household members, neighbours and pets.
- 8. Do not touch the technical components or the inside of your mivoc product (membrane, bass reflex opening, connection contacts, ventilation openings, etc.). Doing so could damage parts, and you could injure yourself.
- 9. Please switch off your mivoc product (if possible) and other connected devices (amplifiers, players, etc.) and disconnect them from the power supply before inserting and removing cables. This reduces the risk of electric shock or other damage or injury.
- 10. Only place this product on a firm surface and make sure that it cannot fall down or fall over.
- 11. Do not allow loudspeaker or other power and signal cables to form tripping hazards.
- 12. Make sure that your mivoc product is positioned at least 50 cm away from heat sources (radiators, amplifiers, fireplace, candles, etc.). Insufficient distance from heat sources can cause malfunctions, damage or fire.

- 13. Ensure that your mivoc product is not exposed to direct sunlight. Direct sunlight can result in high heat absorption. This can lead to malfunctions, damage or fire.
- 14. Do not place any containers holding liquids on or near your mivoc product.
- 15. Check your mivoc product regularly for external damage and correct cabling.
- 16. Do not use cleaning agents to clean the unit. A duster or a slightly damp cloth is sufficient. Ensure that no liquid gets into your mivoc product or comes into contact with the connections. Switch off your mivoc product (if possible) and other connected devices (amplifier, player, etc.) and disconnect them from the power supply before you start cleaning.
- 17. Do not remove any housing components from your product. There are no parts inside that you can service yourself.



Make sure that the signal reproduction via the speakers is free of distortion or interference in all situation. There should be no unwanted distortions, unusual noises or unwanted sound colouration. Ensure that there is no smell of burning and that no smoke is produced. Do not use your speakers under such conditions, as this could result in damage (risk of injury, damage to health, fire, damage to the loudspeaker or the connected devices, etc.). In such cases, contact your mivoc dealer or the Support Centre immediately.



High sound volumes or sudden loud sounds can cause hearing damage and other health impairments. Before each time you use the unit, first set the volume back to minimum, and from there you can then set it to your preferred listening level.

#### PACKAGE CONTENTS

Your mivoc product is supplied with the following items:

- 1 mivoc product
- 1 operating manual

#### CHECKING THE PACKAGING

Please check the condition of the packaging of your product before you unpack it. If the packaging has been damaged during transport, remove the product from the packaging (as described below) and check it for visible damage before using it. Notify the delivery company immediately and contact your mivoc dealer or the Support Centre for help and assistance. Carefully document any damage. Keep the shipping carton as evidence in the event of a complaint, which only you can lodge.

We generally recommend that you retain all packaging material and contents in case you need to transport the unit again in future.

## UNPACKING AND CHECKING THE CONTENTS

Carefully open the packaging. Take care not to damage the contents with pointed or sharp objects (scissors, knives) that you use to open the packaging. Remove the padding and protective material on top and lift the product out of the packaging. Do not exert any pressure on the external technical components (e.g. membrane, connection terminal, etc.). Check the contents of the packaging for completeness and damage. If you notice any damage, contact your mivoc dealer or the Support Centre immediately before using the product and clarify how to proceed.



Open the packaging on the floor. This way, you can prevent your mivoc product from falling when lifting it out.

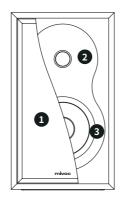


Allow your speakers to acclimatise after unpacking (or after transport) before using them. You can go ahead and set up and connect your speakers according to the instructions, but you should wait a little longer before you enjoy the sound of your new system for the first time.

## **MIVOC HM5**

The mivoc HM5 is a compact passive 2-way hi-fi loudspeaker featuring a bass reflex design. It is equipped with a 5-inch woofer/midrange driver and a 1-inch tweeter. The HM5 is characterised by a frequency range of 42 Hz to 21 kHz and an efficiency of 84 dB. A suitable external amplifier (compact hi-fi amplifier, AV receiver or multi-channel (stereo) audio amplifier) is required for operation.

## **HM5 COMPONENTS**



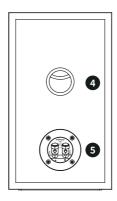


Figure 1. HM5 - front and rear view.

- 1 Front panel: Removable panel with magnetic attachment
- 2 1-inch tweeter
- 3 5-inch woofer/midrange driver
- 4 Bass reflex opening
- 5 Connection terminal

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## HM5 CONNECTION TERMINAL

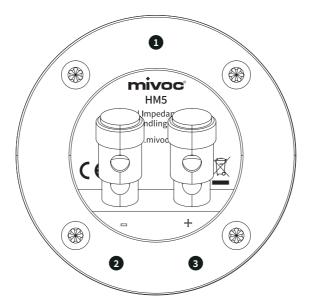


Figure 2. HM5 - Connection terminal.

- 1 Connection terminal with information on load capacity and impedance
- 2 Speaker connection terminal negative pole
- 3 Speaker connection terminal positive pole



The speaker terminals can accommodate cables with a cross-section of up to  $2.5 \text{ mm}^2$  or plug connectors with a diameter of up to 4 mm.

## MIVOC HM5 INSTALLATION

## FRONT PANEL

The front panel of the HM5 can be removed and replaced without tools. Fastening is realised using magnets that are integrated into the housing and cover.

To remove the front panel, proceed as follows:

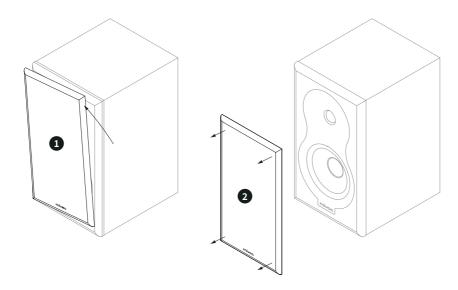


Figure 3. HM5 - Removing the front panel.

Firstly, ensure that your speaker is standing on a firm and stable surface. First take hold of the front panel at the sides using your hands and turn the upper part of the panel anti-clockwise until three of the corners begin to come loose.

Once the magnetic holder no longer has any influence on the first three connection points, increase the distance between the panel and the loudspeaker by pulling evenly on the panel.

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To attach the front panel, you can proceed as described below:

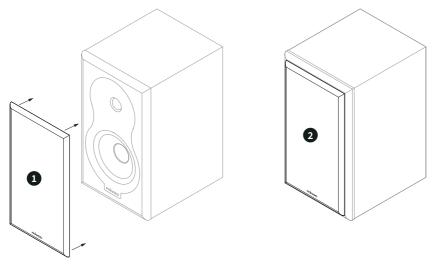


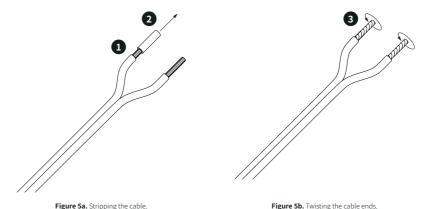
Figure 4. HM5 - Attaching the front panel.

Ensure that the speaker is standing on a firm and stable surface. Firmly hold the front panel on the left and right-hand sides. Guide the panel evenly and slowly to the front of the speaker. Make sure that the corners of the panel line up with the corners of the speaker.

2 Once you have the panel close enough to the front of the speaker, you will notice that the attraction of the magnets increases and the panel will eventually hold in place in the correct position on the front of the housing.

## PREPARING THE SPEAKER CABLES

Before you connect your speakers to your amplifier, you need to prepare the speaker cables.





of each speaker cable to suit the depth of the amplifier terminals and that of the cable receptacle of end is created. the speaker connector.

Remove a piece of the cable insulation at each end Twist the strands of the cables as such that no individual strands protrude and a uniform, sturdy cable



It is best to use a wire stripper tool. This allows you to strip the cable without damaging the conductors. Follow the instructions for the wire stripper.



If you are using connector plugs, follow the instructions supplied with them to connect the speaker cable to the plugs correctly.

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## CONNECTION TO AN AMPLIFIER

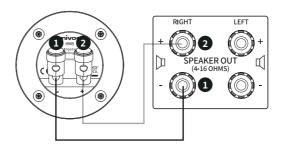


Figure 6. HM5 - Connection to an amplifier.

Connect your HM5 speakers to your amplifier using a suitable speaker cable. Connect the minus (-) connection of the HM5 to the minus (-) connection of an amplifier output (Figure 6 shows the right-hand output as an example). Connect the plus (+) connection of the HM5 to the plus (+) connection of the same amplifier output.

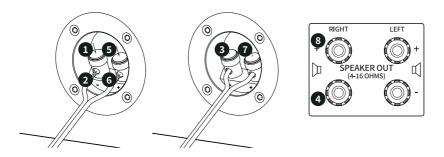


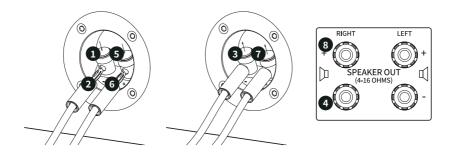
Figure 7. HM5 - Speaker cable connection (without plug).

Detailed description for the connection of the HM5 loudspeaker to an amplifier:

- Press the loudspeaker terminal labelled Minus (-) on the connection terminal of the HM5 speaker downwards until the two cable holders are on top of each other.
- 2 Insert a prepared end of one wire of the speaker cable into the previously formed continuous cable retainer.
- 3 You can now release the speaker terminal. This ensures that the wire of the speaker cable is fixed by the clamping mechanism.

- Now connect the other prepared end of the wire of the speaker cable to the Minus (-) connection of an amplifier output. Follow the amplifier instructions for details on how to connect the speaker cable.
- 5 Then press the speaker terminal labelled Plus (+) on the connection terminal of the HM5 speaker downwards until the two holes overlap.
- 6 Insert the prepared end of the second wire of the speaker cable into the previously formed through-hole.
- You can now release the speaker terminal. This ensures that the wire of the speaker cable is fixed by the clamping mechanism.
- 8 Now connect the other prepared end of the wire of the speaker cable to the Plus (+) connection of the same amplifier output. Follow the amplifier instructions for details on how to connect the speaker cable.

Connect your second HM5 speaker to another channel of your amplifier in the same way.



 $\textbf{Figure 8.} \ \mathsf{HM5} \text{ -} \ \mathsf{Speaker} \ \mathsf{cable} \ \mathsf{connection} \ (\mathsf{with} \ \mathsf{plug}).$ 

If you are using speaker plugs (see Figure 8), follow the steps above (1 to 8) to connect your speakers to your amplifier.

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## SELECTING THE RIGHT AMPLIFIER

Make sure that you operate your HM5 speakers with a suitable amplifier. The amplifier you are using must be designed for connecting loudspeakers with an impedance of 4 ohms. Your amplifier should also be capable of providing a continuous output of at least 50 W.



Figure 9. HM5 - Technical specifications in the connection terminal.

- 1 Nominal impedance of the HM5 loudspeaker.
- 2 Continuous resilience.
- 3 Programme load capacity.



Amplifier too weak: If you want to achieve a higher volume but your amplifier cannot provide sufficient power, clipping will occur. This can damage the tweeters of your speakers in particular.



Amplifier too strong: If your amplifier provides more power than your speakers are able to handle, distortion and extreme excursion of the speakers will occur. This can damage the midrange drivers/woofers in particular.



Impedance: If your amplifier is not designed for the impedance of your loudspeaker (impedance of the loudspeaker is lower than the minimum impedance specification of the amplifier), excessive current flow can cause damage to the loudspeaker and amplifier.



If your hi-fi system sounds distorted or strained, either your amplifier or your HM5 are overloaded. Reduce the volume immediately to prevent damage to your amplifier and/or your HM5 speakers. In addition, listening to loud audio can damage your hearing or lead to other health problems.

## MIVOC HM5 INSTALLATION

The following section provides instructions on how to set up your HM5 speakers for an optimal listening experience.

## DISTANCE TO LISTENING POSITION

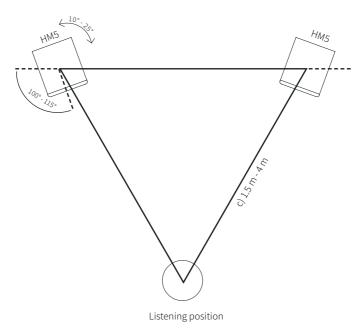


Figure 10. HM5 - Setup - Stereo triangle.

Depending on the room size and installation location, you should place the speakers at a distance ranging between  $1.5\,\mathrm{m}$  and  $4\,\mathrm{m}$  from each other. Your two speakers, together with the listening position where you are ideally located, should form an equilateral triangle (stereo triangle). Turn the speakers between  $10^\circ$  and  $25^\circ$  inwards from the reference axis so that the tweeters and midrange/woofers point towards the listening position.

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## **INSTALLATION HEIGHT**

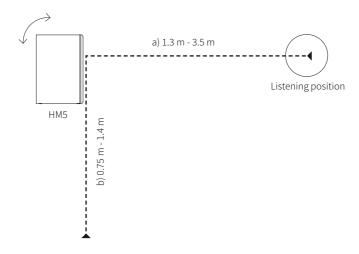


Figure 11. HM5 - Installation height.

For the best possible listening experience with balanced and accurate localisation, the tweeters of the speakers should be positioned approximately at the listener's ear level. If you cannot install the speakers at the ideal height, you can also tilt the speakers slightly. In this case, the angle of inclination should not be greater than 10°.



Only use solid, non-slip and stable surfaces (shelf, speaker stand, TV board, etc.) when installing the speakers. If you want to install your speakers at an angle, make sure that you only use speaker holders or speaker stands that allow you to tilt them safely. Falling speakers can cause serious injury and damage.



The room in which you use your speakers has a major influence on the sound experience. You can vary the distances, installation height and alignment angles within the specified ranges to find the best installation position for you and your room.

## DISTANCE TO INTERFACES

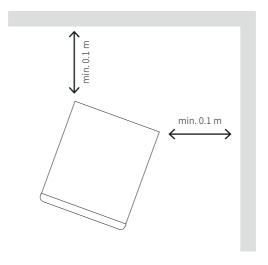


Figure 12. HM5 - Distance to interfaces.

When positioning your HM5 speakers, make sure that the distance between the rear of the speakers and adjacent walls is not less than 10 cm. This will ensure that your HM5 works properly.



You will get the best sound if you position the speakers so that they are 0.5 metres or more away from adjacent walls or larger objects with a large surface area, such as cabinets. This minimises overemphasis in the bass range and will improve the sound quality in your room.

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## **TECHNICAL DATA**

# **HM5 SPECIFICATIONS**

ELECTRO-ACOUSTIC DATA	
Frequency range (-3 dB) <sup>1</sup>	50 Hz - 19 kHz
Frequency range (-10 dB) <sup>1</sup>	42 Hz - 21 kHz
Nominal impedance:	4 Ohm
Efficiency <sup>1</sup>	84 dB
Rated load capacity <sup>2</sup>	50 W
Programme load capacity	100 W
System type	2-way system
Acoustic crossover frequency	1.8 kHz
Crossover	Passive
Transducer	1 x 5" woofer (1" voice coil) 1" dome tweeter
Enclosure type	Bass reflex
Connections	Connection terminal with connection terminals
Occupancy	Pin+/-: Drivers
MECHANICAL DATA	
Product dimensions (incl. cover) [H x W x D]	316 x 184 x 225 mm
Weight (incl. cover)	5.3 kg
Housing	12 mm MDF
Housing surface	Black PVC film
Protective cover	Polyester fabric, wooden frame, magnetic attachment

in the room (depending on installation and room characteristics) according to the EIA-426B standard

# **HM5 DIMENSIONS**

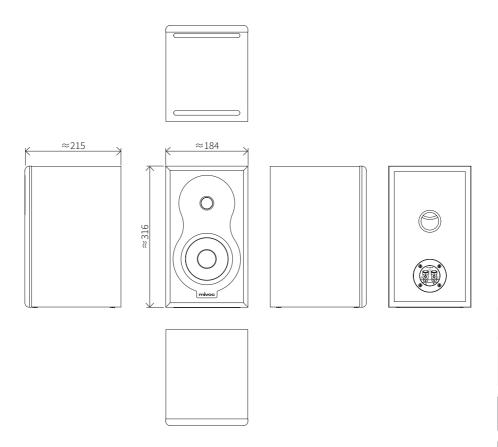


Figure 13. HM5 - technical drawings.

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## MANUFACTURER INFORMATION

#### WARRANTY

mivoc grants a 2-year warranty on mivoc products. The warranty period begins on the date of purchase. The warranty applies to material or production defects. During the warranty period, defective components or products will be repaired or replaced free of charge by mivoc at its own discretion.

#### TRANSFER OF WARRANTY

The warranty granted is transferable during the warranty period. A copy of the original proof of purchase is required when transferring the warranty.

#### NOTE

mivoc does not guarantee the uninterrupted and fault-free operation of its products.

#### The warranty does not apply:

- To wear parts or natural wear and tear.
- To damage, defects or malfunctions caused by improper use or use other than the intended purpose.
- For damage, defects or malfunctions caused by the application of force or by environmental conditions.
- In case of unauthorised repair attempts.

#### REQUESTING WARRANTY SERVICES

Requests for warranty services can be submitted to mivoc or to the dealer from whom the mivoc products were purchased.

#### Contact mivoc

Neuenhofer Strasse 42-44

42657 Solingen

Germany

Telephone +49 212 382 26-0

Proof of purchase is required when submitting warranty claims. In addition, you must allow mivoc the opportunity to verify the warranty claim (e.g. by sending in the products or by means of an inspection by an authorised partner). Without proof of purchase, provision of a warranty service may be refused. In the case of an extended warranty period, proof of product registration must also be provided.

#### IMPORTANT NOTE

Your statutory warranty rights are not affected by this warranty. Furthermore, this warranty has no influence on any agreements made with a dealer.

#### LIMITATION OF LIABILITY

mivoc shall not be liable for personal injury or damage to property, or for claims arising from unsuitable, dangerous or improper use of the products.

#### EU DECLARATION OF CONFORMITY

Mivoc devices comply with the basic requirements and other relevant specifications of the European Union directives. This declaration in detail and the list of these directives and harmonised standards are available on the website: www. mivoc.com. This applies for all product variants, provided that they correspond to the original technical design and have not been subsequently modified mechanically, electrically or in relation to their original condition.

#### CORRECT DISPOSAL OF PRODUCTS (ELECTRONIC WASTE)

(Applicable in the European Union and all countries with separated waste collection systems).



To prevent possible harm to the environment or to human health, mivoc products must not be disposed of with other waste at the end of their service life. Domestic users can either contact the dealer from whom they purchased the products or their local authority to obtain information on environmentally sound disposal. Commercial users can contact their supplier or an official local authority if they have any questions regarding disposal.

#### **EXPLANATION CONCERNING WEEE**

mivoc products are developed and manufactured using high-quality materials and components that are designed to be recyclable and/or reusable.

mivoc, as a trade mark of speaker trade, is registered in accordance with the WEFF Directive

#### LICENCES AND COPYRIGHT

mivoc products may directly or indirectly contain software that is necessary for their use or is provided as an add-on. These software components may be mi-voc's own developments, or licensed or open-source products and solutions or a combination of the above. In the case of open-source licences, mivoc will provide a copy of the source code and the full text of the corresponding licence in accordance with the licence conditions on request. Excluded from this and protected by copyright are proprietary and licensed software solutions and software components.

#### mivoc

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