



INSTRUCTION MANUAL



*Pure Passion*

OF LISTENING

# MYS-PH-3

*Thank you for choosing MYS-PH-3.*

*You have chosen a high-end product with a notable design history rooted in the high performing AKG K1000 headphone. The construction and technology of the MYS-PH-3 design is special in a number of details. Please take the time to become familiar with your new product. This instruction manual is intended to guide you in effective care and maintenance of the product, as well as the provisions for warranty and replacement, in the unlikely event this becomes necessary.*

## CONTENT

<u>Generally</u> .....	4
<u>Features</u> .....	5
<u>Package Contents</u> .....	5
<u>Safety and Environment</u> .....	6
<u>Our Features</u> .....	7
<u>Premium Quality</u> .....	7
<u>Components</u> .....	8
<u>Usage</u> .....	9
<u>Care and Maintenance</u> .....	12
<u>Liability/Guarantee</u> .....	14
Data and Explanation <u>MYS-PH-3.1/3.2</u> .....	15
Typical Measurement <u>Curves</u> .....	16
<u>Contact</u> .....	17



## GENERALLY

The roots and ideas of MYSPHERE 3 go back to the late 1980's. Back then, reputable companies' open sided headphones were available and sometimes referred to as "ear speakers".

A unique product has been created, based upon the latest material and design technologies, as well as measurement techniques. Long-term user comfort as well as a high level of acoustical performance is offered by the design, which reproduces sound that is close to the reality of the original recorded source. A new membrane technology constituted of glass, air and resin, achieves very high rigidity combined with a high level of damping. The elastic performance of the membrane allows desirable symmetrical linear movement with displacements that have not previously been achieved in headphone design. This capability produces the highest sound pressure levels in the bass range in a non-closed back design.

A fully radially aerated magnet system, and a specially manufactured acoustic resistor in the additive method is applied to the membrane, whose effective low mass helps to achieve an unprecedentedly high dynamic response.

The construction follows the doctrine: "design follows function". This is apparent in the innovative diagonal headband arrangement that reaches from front to back, and that allows fine critical adjustment of the transducer to the ear for optimum results. This is also evident in the easy to achieve compact packaging for both service, as well as neatly space efficient accommodation in the custom designed transport case. All materials, the product, and its packaging are designed robustly to give long service life – a typically well conceived, "Made in Austria" product.



## FEATURES

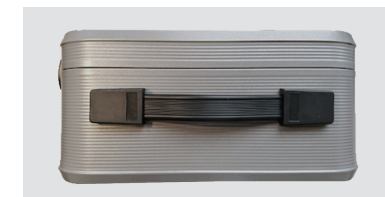
- > Wired near-field head-monitor – completely open backed transducers hovering in front of the ear, “Hover Ear” with dynamic operating principle.
- > Natural listening experience aided by the multi-layered headband construction made of metal and plastics. This design approach dampens mechanical vibration transmission to and from each side of the receiver, as well as any noise transmitted along the cable.
- > Handmade headband and ear pads are made of special, highly aerated, spacer fabrics that afford natural comfort during extended listening, without the inconvenience of sweating. All pads are easily replaceable and washable, being magnetically fixed without the need for tools.
- > Specially manufactured lightweight, robust, symmetrical inductance and low-capacitance cable can be connected (left or right) despite perfectly symmetrical cabling design layout on a single side.
- > Transducers are made with 20 gold plated, fully ventilated, radially symmetric, individual magnets. Multilayer technology membranes feature internal damping with glass, air and resin reinforcement, which realises resonance-free high frequency performance far into the ultrasonic range.



*Premium Case with package contents*

## PACKAGE CONTENTS

- > MYSPHERE 3.1 or/and 3.2 (variant according to the order)
- > Standard connection cable short with 3.5 mm jack
- > Adapter – 6.25 mm / 3.5 mm 3-pole screwable
- > Added optional cables (according to the order)
- > USB-Stick including:
  - This operation manual
  - Statement of Guarantee
  - Product measurement data including readout curves
  - GTC, CE conformity
  - Care and maintenance instructions
- > Storage box, and optional travel case (according to the order)
- > Quick operation guide



*Premium Case closed*

## SAFETY AND ENVIRONMENT

- > Please read the manual carefully and completely before using the product. Safeguard this information for future reference.
- > Follow these safety instructions and always pass on the product to third parties together with this description.
- > Do not use the product if it is damaged. This is especially true for the electric cables.

---

### Environmental Information



*This product has been developed and manufactured in accordance with the following requirements or guidelines:*

- > WEEE Directive (2012/19/EU)
- > CE conformity
- > RoHS Directive (2011/65/EU)
- > EMV Directive (2014/30/EU)

*Dispose of this product at the end of its life at your local collection point or recycling centres. The detailed explanations are available on the Internet at [www.lb-acoustics.at](http://www.lb-acoustics.at).*

### AVOIDING DAMAGE TO HEALTH AND ACCIDENTS

- > Protect your hearing from the risk of damage at excessive listening volume levels. Do not use your headphones at high volume for an extended period of time to avoid damage to your hearing. MYSPHERE naturally by design sounds very good at low and medium volume as well. Caution; irreversible hearing damage can occur at sound pressure levels greater than 85 dB when present for more than one hour! Due to the very clear distortion-free and natural sound of MYSPHERE, high levels can easily be reached and underestimated. In case of uncertainty, suitable measuring equipment is recommended (We are happy to advise you). When connecting the product to the player, always set it to the lowest volume level first and increase the level in use. This is to avoid potentially damaging power-crack-noise which can reach up to 130 dB SPL (Similar to a gunshot).
- > Do not use this product while driving a vehicle. This is dangerous despite the completely open construction, as environmental noises will potentially be masked by playback material. This may also be prohibited depending on the country of use. We also advise against use when running or cycling for these same safety reasons.
- > Do not use MYSPHERE when approaching a distance of less than 10 cm from pacemakers or IDCs, and magnetic stripe cards, whose operation can be compromised by strong built-in magnets.

## OUR FEATURES



### SPATIAL SOUND

Supported by the open design, the soundframes are kind of levitating over the ear. The open front cushion enables sound to flow from one side to the other and vice versa. This creates an unprecedented binaural effect and great spatiality.



### TRANSIENT RESPONSE

An ultra light coil and a glass foam membrane with a cobweb structure allow fastest impulse reproduction. All dispensable air volumes like tight channels, slots, holes etc. are largely avoided in order to reduce additional acoustic masses.



### OPEN DESIGN

On both sides of the moving membrane the spaces are completely vented. No acoustic volumes hamper the membrane in its movement and the front cushion is acoustically open. This yields an unsuspected sense of space.



### INNOVATIVE FRAME CONSTRUCTION

A light metal frame transmits the force from the soft cushions to the head to achieve very small specific surface pressure. Sensitive areas of the head are bypassed resulting in a well-fixed headband carrying the hovering soundframes.

## PREMIUM QUALITY



**DESIGNED & ASSEMBLED  
IN AUSTRIA**

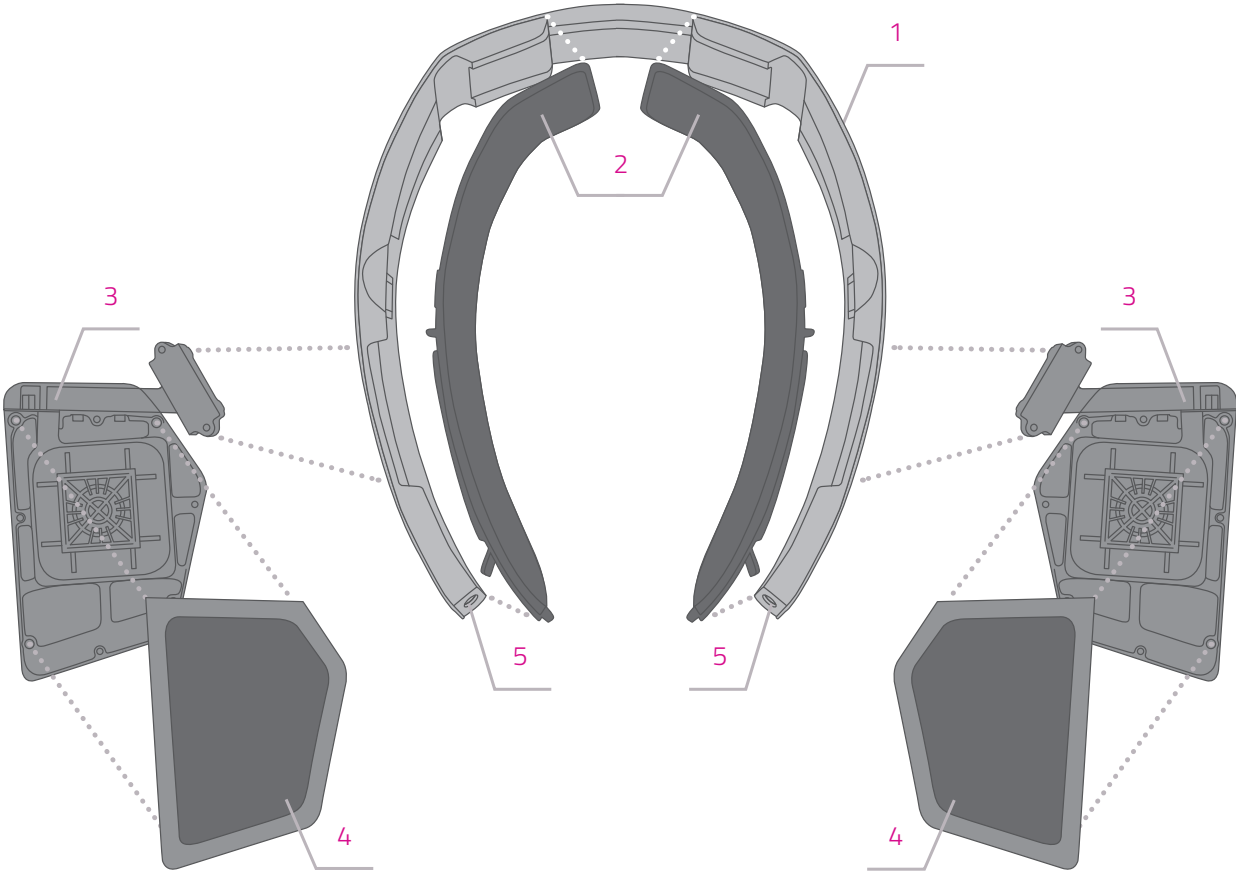


**PREMIUM  
MATERIALS**

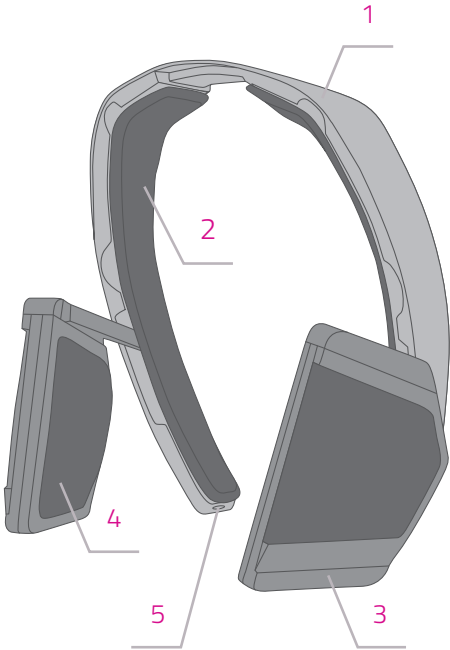


**MADE IN EU**

# COMPONENTS

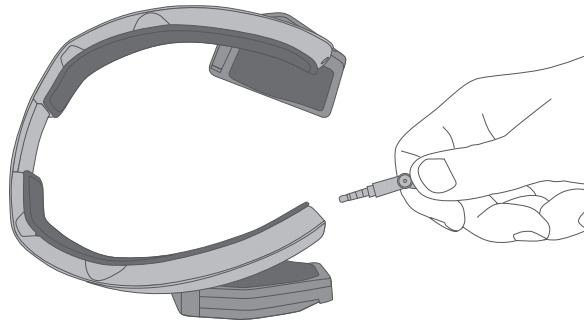


- 1 ..... bow
- 2 ..... bow pad
- 3 ..... soundframe
- 4 ..... soundframe pad
- 5 ..... connection



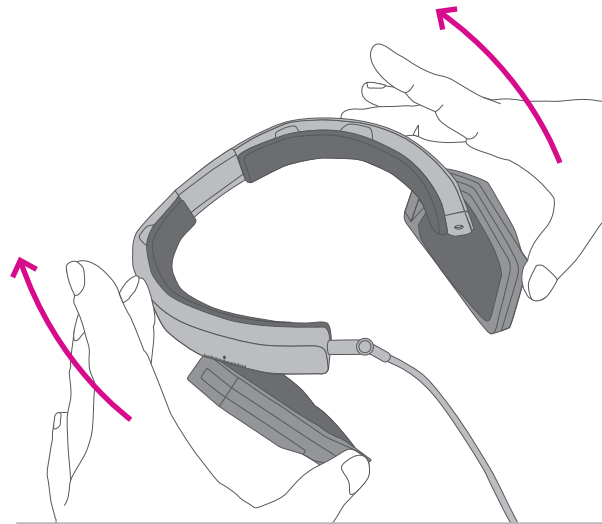


## USAGE



### CONNECTING THE HEADPHONES

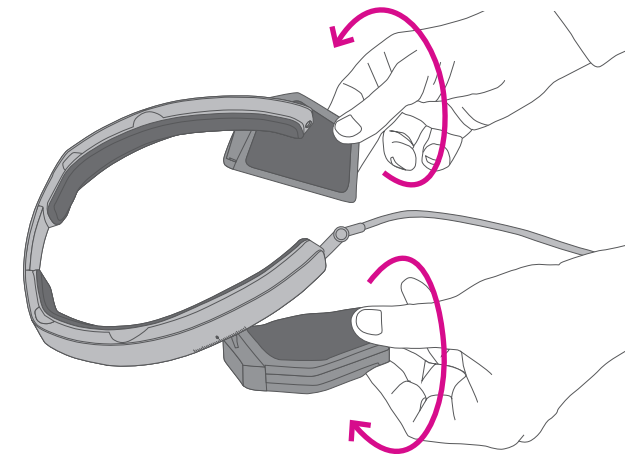
- > Insert the enclosed standard or optional cable by using the 4-pole plug with 3.5 mm angled 45 degree connection in the lower end of the bow, until the connector snaps into place.
- > Left and right channels are automatically properly presented by the unique internal circuitry of the headphone and the line which remains completely symmetrical.
- > Plug the second end of the cable – the 3.5 mm jack plug with or without the 6.25 mm adapter – into the appropriate equipment outlet. (Optional other connector ends and cable lengths are available and shall be used similarly).



### EARPHONES PREPARATION FOR FIRST-TIME USE

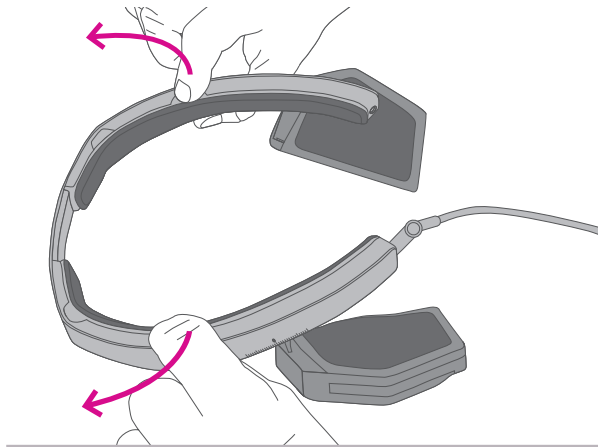
- I Take the headset out of the packaging and push the two soundframes along the metal bow up to the stop.

To do this, hold the handset so that one finger holds the top of the bar in the middle and the other pushes the two soundframes upwards.



- II Open out the two soundframes to the outside. Hold these two cup-like forms between index finger and thumb. A built-in stop prevents from any over-stretching.

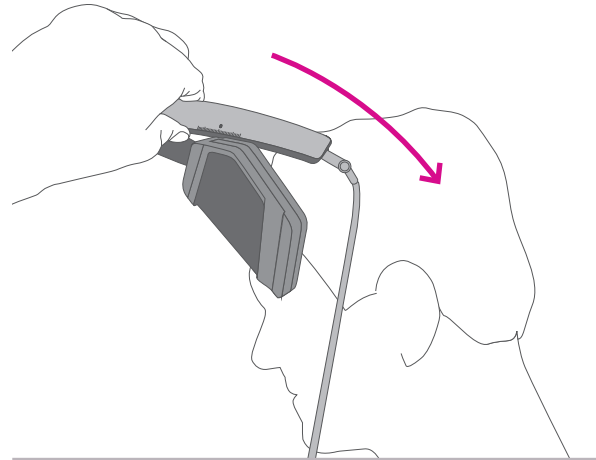
## USAGE



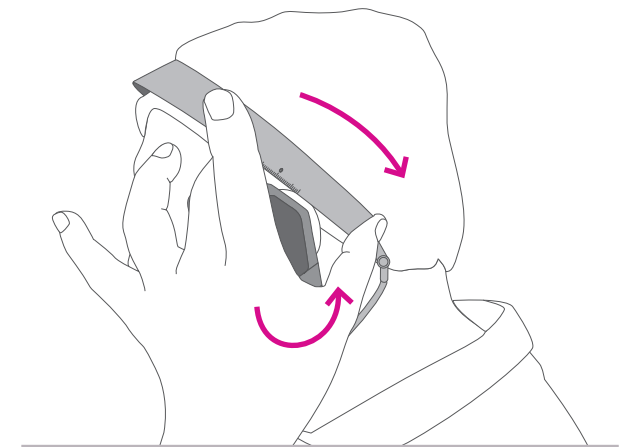
### PUTTING ON THE HEADPHONES (1 / 2)

- III** Hold the headphone with both hands between index finger and thumb at the constriction of the bow.

Now, extend the bow so that the width is slightly larger than your head.



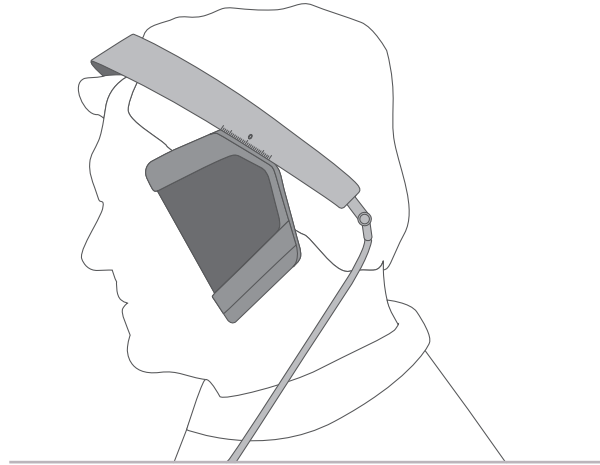
- IV** Slide the headphones diagonally from the front to the lower rear. The metal bow should rest just behind the forehead.



- V** Now slide the two soundframes back downwards and angle them inward until the noticeable elevation of the soundframe pads is approximately at the center of the ear.

Hold the handset so that the thumbs to come to rest at the end of the temple and the middle finger the two soundframes pull down. At the same time, the inner surface of the fingers shall push the two soundframes closer to the ear.

## USAGE



### PUTTING ON THE HEADPHONES (2 / 2)

**VI** The right position to the ear is very important, individually different and not necessarily exactly in the middle of the ear channel entrance. Therefore, vary the position by listening to known pieces of music, until you find an individually optimal impression of sound. Note: The angle to the ear mainly varies the bass level, and the perceived "sound-stage".

**VII** The height position on the head of the two soundframes relative to the bow can be read on the inscribed bow scale. There is a small embossed arrow on the inner part of the soundframe lever which points to the scale on the bow. This position will not naturally and necessarily be the same on both sides. This is because virtually no head and especially the human ears left, and right, are not perfectly symmetrical.

#### Rosa Rausch.wav

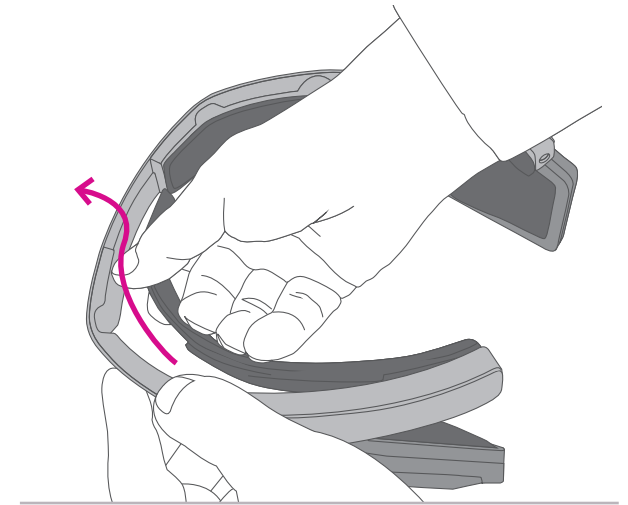
As a further aid and an alternative to music, a noise signal can be used. For this purpose, a signal file with the name "**Rosa Rausch.wav**" is included on the USB stick and can be reached quickly via the link on the left side.

It is best to record the optimal position and make a note of it for the future.

## CARE AND MAINTENANCE



For hygienic reasons, the soundframe pads and the head bow pads may be cleaned with soapy water or replaced from time to time.



### REMOVING/REPLACEMENT OF BOW PAD & SOUNDFRAME PAD



This process is used on the one hand to remove the bow padding, but also to dismantle the two soundframes of the headphone from the temple itself.



Pull the upper portion of the bow pad firmly inwards. Apply at the same time an upward torque to release the lower latch.



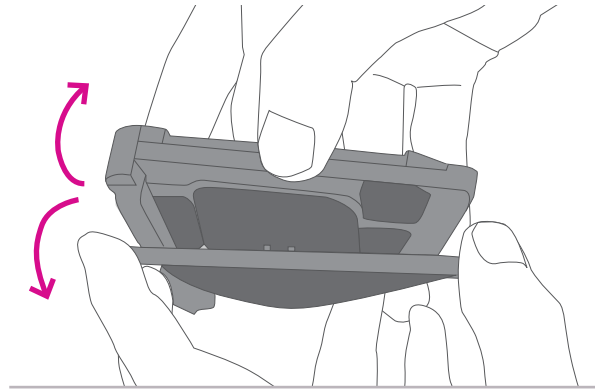
The bow pad opens and the padding and then the soundframes, which are magnetically fixed as well, can be removed (for example, for easier transport).



Replacement shall be performed in the reverse order of motion. When inserting the bow pads, make sure that you slide the obliquely downward hook below the padding part first into the slot provided on the head bow. Now place the strap parts in the magnetic recesses provided for this purpose.

Press now just above the soundframes at the constrictions on the bow, the pad firmly into the bow until a noticeably audible click is heard.

## CARE AND MAINTENANCE



### SOUNDFRAME PAD REMOVING/REPLACING

**I** Peel off the magnetically fixed soundframe pad by using your fingernail to lift off the padding on the lower pointed edge of each soundframe half. A small resistance must be overcome to achieve magnetic fixing.

**II** Re-assembly may be achieved by reversing the order of assembly. For this purpose, the soundframe pad must again be lightly pressed so far at the peripheral edges that no gap between the cushion and the soundframe shell remains visible. The in-built magnetic location assists with final assembly.

## LIABILITY/GUARANTEE

- > This headphone is designed and manufactured for use with high quality audio systems. A non-intended use applies when this product is operated in a manner at variance with that described in the operation manual.
- > The warranty period begins from the date of purchase of the brand-new unused product as evidenced by the bill of receipt. Without this proof, repairs can only be offered with costs to be advised in advance.
- > In the event of defects in the product resulting from defects in material or workmanship during the warranty period of 3 years, LB-acoustics Messgeräte GmbH will repair the product without calculating the labour and material costs or replace the product itself, or the defective parts.
- > The warranty can be used worldwide in all countries where national law does not conflict with our warranty. Claims other than those described here cannot be made under the warranty.
- > In case of a warranty claim please contact us via the following e-mail address: [office@lb-acoustics.at](mailto:office@lb-acoustics.at) or via the homepage [www.mysphere.at](http://www.mysphere.at) under the heading „Contact“.
- > Excluded from the warranty are:  
Insignificant errors or deviations in the product of no relevance to the value or intended use.  
Defects due to wear. Defects due to force majeure.  
Modifications to the product made by yourself or a third party even when conducted as a repair.
- > LB-acoustics assumes no liability for misuse or improper use of the product (e.g. operating errors, mechanical damage incurred, incorrect operating voltage, etc.) as well as resulting damage to any additional equipment/accessories.
- > The risk of an unsuccessful or damaged return lies with the customer. To guard against damage during transport, the original or equivalent effective protective packaging shall be used. Please retain the original packaging for such use if practical.



# DATA AND EXPLANATION

## MYSHERE 3.1/3.2

### DATEN

	MYSHERE 3.1	MYSHERE 3.2
Useable frequency range	20 – 44.000 Hz (-10 dB at near field)	
Frequency range	linear on ear reference point, individual diffuse field corrected	
Rated-continuous power	60 mW RMS (pink noise)	
Sensitivity	96 dB / 1 mW RMS = 115 dB SPL/V eff. (on ear reference point)	
Nominal impedance	15 ohms	110 ohms
Far field sound pressure	at 1 kHz typically -33 dB SPL rel. 1 PA (in diffuse field condition)	
Coupling to the ear	Over ear hovering	
Magnet field	typically 1.5 T	
Weight	approx. 340 g (w. o. cable)	
Connection	3.5 mm Jack 4-pole	
Cable length	<b>Standard:</b> 1.2 m length 3.5 mm jack 3-pole gold plated + 6.25 mm Adapter screwable	
	<b>Optional:</b> 3.5 m length 3.5 mm jack 3-pole gold plated + 6.25 mm Adapter screwable	
	<b>Optional:</b> 3.5 m length 4-pole XLR gold plated	
	<b>Optional:</b> 1.2 m length 4-pole 2.5 mm jack gold plated	
Environmental condition in use	+10 °C up to +35 °C	
Storage condition	-10 °C up to +60 °C	

### EXPLANATIONS

- > At LB-acoustics, MYSHERE 3.1/3.2 is measured in the near field. The resulting equalization at the ear is naturally based due to the open design serving individual human head and ear geometry, in a scenario similar to loudspeaker use.
- > The **rated-continuous power** is the electrical power with which the headphones can be operated continuously, without suffering permanent damage. At the same time, however, sound pressures can be readily created at the ear at the pain threshold, and may only be tolerated by the ear for a few seconds without permanent damage!
- > The **impedance** is the electrical resistance averaged over all frequencies.
- > **Far field sound pressure** is that volume which, in a normal listening room, is perceived by another listener at a distance of one meter, when the ear-phone is worn by a person.
- > The electrical **connection** is made via the built-in 3.5 mm 4-pole plug with the following wiring: Tip +left, ring 1 +right, ring 2 -right, rear ring -left
- > All custom-made standard **cables** are made of silver-plated, oxygen-free (OFC) copper wire, which in turn consists of 8 fine single strands. These are intertwined to achieve low capacitance and inductance. Finally, the cable is covered with a soft yet tear-resistant fabric.

# TYPICAL MEASUREMENT CURVES

## EXPLANATIONS

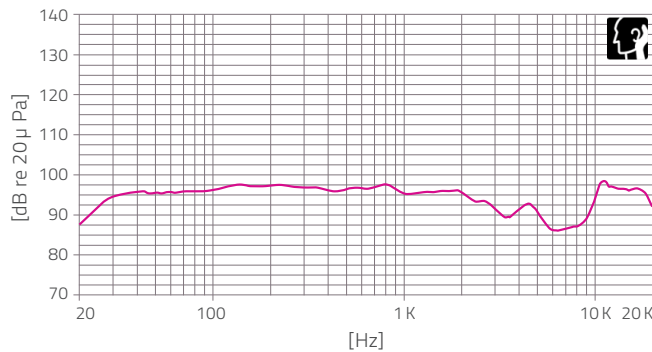
> Frequency response: MYS-PHERE 3.1/3.2 is optimized for completely open listening. The most relevant measurement is that which arises in the near field of the listener (measurement E). However, this does not consider the "near effect" that occurs at the ear and mainly affects bass level depths. This effect is shown by measurement A).

> The measurements of the step response and impulse response demonstrate the speed of the product. Wherein the step response (measurement C) is again measured at the ear and the impulse response (measurement D) in the near field condition.

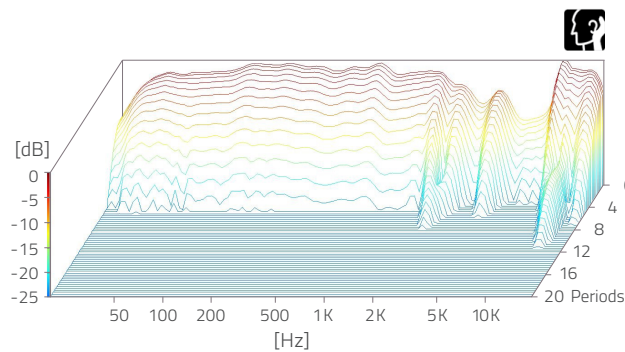
> The measurement of the number of oscillations as a function of frequency is measured at the ear and is shown with measurement B).

> The impedance and phase response depend on the MYS-PHERE variant used (measurement F).

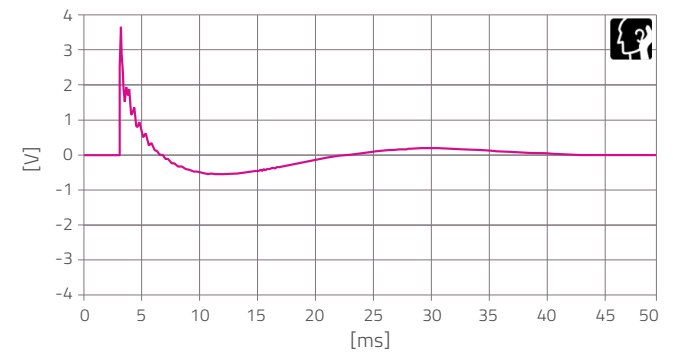
A) Frequency response with ear compensation



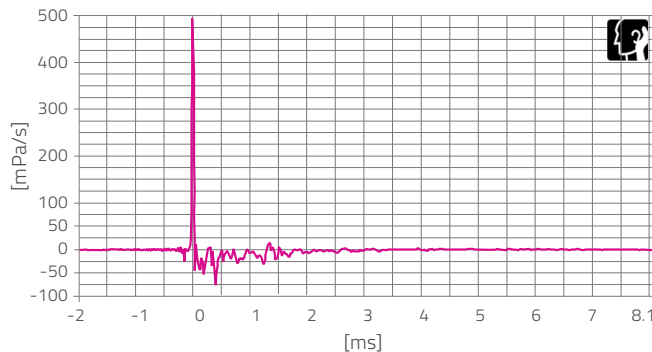
B) Burst decay



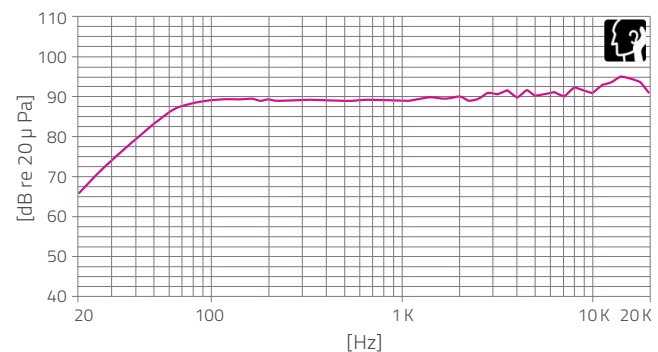
C) Step response



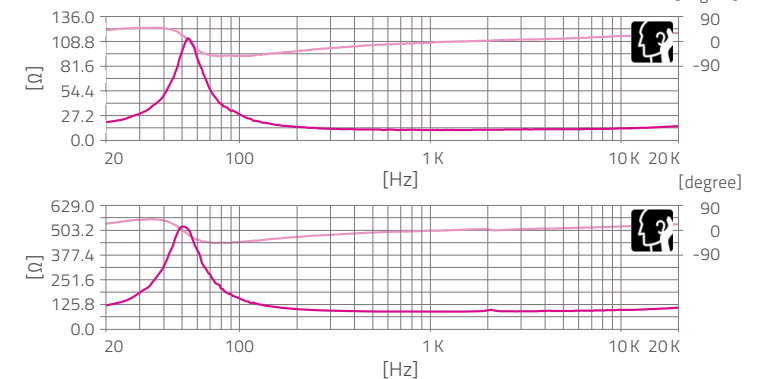
D) Impulse response



E) Frequency response in near field



F) Impedance and phase (above 3.1 below 3.2)







#### **CONTACT**

LB-acoustics Messgeräte GmbH  
Bahnsteggasse 17–23/Stiege 1  
1210 Vienna, Austria  
ATU 52464907  
FN 213131d

[www.mysphere.at](http://www.mysphere.at)  
[www.lb-acoustics.at](http://www.lb-acoustics.at)  
[office@lb-acoustics.at](mailto:office@lb-acoustics.at)

Subject to modifications.  
Issued April 9<sup>th</sup>, 2018