# HD1 Wireless M2 OEBT



**Instruction Manual** 





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# Important safety instructions

- ▶ Read this instruction manual carefully and completely before using the product.
- ▶ Always include this instruction manual when passing the product on to third parties.
- ▶ Do not use an obviously defective product.

#### Preventing damage to health and accidents

- ▶ Protect your hearing from high volume levels. Permanent hearing damage may occur when headphones are used at high volume levels for long periods of time. Sennheiser headphones sound exceptionally good at low and medium volume levels.
- ▶ Keep the headphones at least 10 cm/3.94" from cardiac pacemakers or implanted defibrillators. The headphones contain magnets that generate a magnetic field which could cause interference with cardiac pacemakers and implanted defibrillators.
- ► Keep the product, accessories and packaging parts out of reach of children and pets to prevent accidents and choking hazards.
- ▶ Do not use the product in situations which require special attention (e.g. in traffic or when performing skilled jobs).
- ▶ Unplug the power supply unit from the wall socket during lightning storms or when it is unused for long periods of time.
- ▶ Do not use the product near water and do not expose it to rain or moisture to reduce the risk of fire or electric shock.

#### Preventing damage to the product and malfunctions

- ▶ Always keep the product dry and do not expose it to extreme temperatures to avoid corrosion or deformation. The normal operating temperature is from 0 to 40°C/32 to 104°F.
- ▶ Use only attachments/accessories/spare parts supplied or recommended by Sennheiser.
- ▶ Clean the product only with a soft, dry cloth.
- ➤ Only use the product in environments where **Bluetooth**® wireless transmission is permitted.
- ▶ Do not wear the headphones during charging because the built-in rechargeable battery can get warm.
- ▶ Use the product with care and store it in a clean, dust-free environment.
- ▶ Do not operate the product near heat sources.

#### Intended use/Liability



These wireless headphones are designed for use with mobile devices (e. g. mobile music players, smartphones, tablets, laptop computers) that support wireless communication via **Bluetooth**. Compatible **Bluetooth** devices inlude those that support the following profiles: Hands Free Profile (HFP), Headset Profile (HSP), Advanced Audio Distribution Profile (A2DP), Audio/Video Remote Control Profile (AVRCP), and Device ID profile (DIP).

It is considered improper use when this product is used for any application not named in the associated instruction manuals and product guides.

Sennheiser does not accept liability for damage arising from abuse or misuse of this product and its attachments/accessories.

#### Safety instructions for the Lithium-Polymer battery pack

#### **WARNING**

In extreme cases, abuse or misuse of the Lithium-Polymer battery pack can lead to:



- explosion,
- fire development,
- heat generation or
- smoke or gas development.



Dispose of products with built-in rechargeable batteries at special collection points or return them to your specialist dealer.



Use only rechargeable batteries and chargers recommended by Sennheiser.



Charge products with built-in rechargeable batteries at ambient temperatures between 10 and  $40^{\circ}C$  (+/- $5^{\circ}C$ )/ 50 and  $104^{\circ}F$  (+/- $41^{\circ}F$ ).



Switch battery-powered products off after use.



When not using the product for extended periods of time, charge its built-in rechargeable batteries regularly (about every 3 months).



Do not heat above 70°C/158°F, e.g. do not expose to sunlight or throw into fire.



Do not charge products with built-in rechargeable batteries if the product is obviously defective.

# The HD1 Wireless (M2 OEBT)

Proudly leading the way into the next generation of Sennheiser's highly regarded HD1 line, the M2 OEBT brings you freedom of movement and total purity of sound. Bluetooth® wireless technology makes a cable unnecessary, and thanks to Sennheiser's innovative NoiseGard™ Hybrid active noise cancellation technology, you'll be able to enjoy your favorite music on the go with minimal ambient noise.

A technological masterpiece in a stunning package, the M2 OEBT sports an elegant stainless steel construction and luxurious Alcantara® padding, fully in keeping with the exacting aesthetic principles of the HD1 line while the foldable headband adds a new level of comfort and convenience to your listening experience. Sennheiser's M2 OEBT – liberation for sound and body.

#### **Features**

- Closed supra-aural design featuring Bluetooth® wireless technology
- Soft, durable Alcantara® for a sensuous and functional wearing experience
- Amazing stereo sound across the audible range thanks to Sennheiser's 18  $\Omega$  high-end transducers
- Robust, foldable headband for easy storage on the go
- NoiseGard™ Hybrid active noise cancellation for optimum isolation from background noise and outstanding audio performance
- Immediate pairing to smart devices using NFC connectivity
- VoiceMax<sup>™</sup> technology utilizing two built-in microphones for voice communication to emphasize speech quality and remove external noise
- 22 hours of battery life span with both Bluetooth® and NoiseGard™ activated
- Comes with an attachable audio cable for use in environments where **Bluetooth**® connectivity is not permitted

#### **Bluetooth**



The HD1 Wireless (M2 OEBT) headphones comply with the **Bluetooth** technology 4.0 standard and are compatible with all **Bluetooth** 1.1, 1.2, 2.0, 2.1, 3.0 and 4.0 devices with the following profiles:

- **Headset Profile (HSP) 1.2** provides the basic functionalities used by the headphones to interact with a **Bluetooth** smartphone.
- Hands-Free Profile (HFP) 1.6 provides extra functionalities as compared to the HSP. If a function, such as voice control, is not supported by the HSP profile, the HFP takes place.
- Audio/Video Remote Control Profile (AVRCP) 1.5 used to control music on the Bluetooth device from the headphones (play, pause, skip music track, etc.).
- Advanced Audio Distribution Profile (A2DP) 1.3, supporting aptX® used by a Bluetooth device to stream high-quality stereo music to the headphones.
- **Device ID Profile (DIP) 1.3** by the headphones to be identified, such as by its manufacturer, product ID, product version, etc.

#### NFC



Near Field Communication (NFC) is a short-range wireless technology that enables connection and communication between NFC-capable electronic devices by placing them near one another or with a single touch.

#### VoiceMax



VoiceMax<sup>™</sup> dual microphone technology filters away the background noise. 2 microphones work in synergy; one to emphasize your voice, and the other to remove the ambient noise.

#### **NoiseGard**



The NoiseGard™ hybrid Active Noise Cancellation system is a combination of 2 noise-cancellation systems composed of a total of 4 microphones. Two microphones with openings to the outside of the headphones work as a Feed-Forward active noise cancellation system that reduces noise in the high-frequency band, while the other two microphones inside the headphones work as a Feed-Back active noise cancellation system that reduces noise in the low-frequency band. The combination of these 2 microphone systems results in a broad reduction in noise covering a wider band of frequencies.

#### aptX®



With aptX® audio coding, you can be assured of crisp, pure and full stereo sound. It allows you to not only hear, but experience and feel the audio as it was intended. Utilizing aptX®, **Bluetooth** technology can now offer wireless audio quality that is indistinguishable from the highest quality wired connection.

# Package includes



Headphones



Carry case



Soft carry case



Audio cable with 2.5 mm and 3.5 mm jack plug



USB cable with micro USB connector



In-flight adapter



Quick guide



Safety guide



A list of accessories can be found at www.sennheiser.com. For information on suppliers, contact your local Sennheiser partner: www.sennheiser.com> "Sales Partner".

# **Product overview**

# Overview of the headphones



- 1 Headband
- 2 Ear pads
- 3 Ear cups
- 4 Microphone
- 6 NFC antenna

- 6 LED
- 7 Power button
- 8 3-way multi-function button
- 9 Audio input
- 10 Micro USB input

# Overview of pictograms

#### Pictograms for pressing a button

Pictogram	Meaning
1x	Press and immediately release the button
2x	Press the button twice
55	Press the button and hold for 5 seconds

#### Pictograms for the LED

Pictogram	Meaning
*	The LED lights up
<del></del>	Time interval or interruption. Causes the LED to flash
•••	The LED lights up/flashes continuously
<u>  3s   3s  </u>	Time interval of flashing

Examples of pictograms used in this manual:

Pictogram	Meaning
* * * *	The LED flashes continuously
3s	The LED flashes continuously once every 3 seconds
<u>*</u>	The LED lights up continuously
* * *	The LED flashes 3 times per second

#### The icon with "i"

Notes marked with the pictogram "i" provide useful information on the use of the headphones.

# Overview of the LED indications

### LED indications during operation



LED	Meaning
* * *	The headphones switch on
<del>                                      </del>	Pairing with a device is successful
***	The headphones switch off
* *	The headphones are in pairing mode
<u>↓</u> 25 ↓	The headphones are disconnected from the device
<u>↓ 25 ↓</u>	The headphones, with an almost empty battery, are disconnected from the device
***	The pairing settings are cleared from the headphones

# LED indications during calls

LED	Meaning
****	Incoming call
* * * * *	Incoming call with an almost empty battery

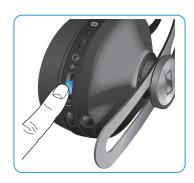
### Overview of buttons

#### Power button



Press	Function	Page
2s1	Switches the headphones on and off	17

# 3-way multi-function button



Press	Function	Page
1x	Accepts/ends a call	21
	Accepts an incoming call and ends the active call	21
	Plays/pauses a song	20
Us Us	Rejects a call	21
15	Activates the voice control	23
	Transfers a call	22
	Plays the next song	20
2x	Accepts an incoming call and puts the active call on hold/Toggles between 2 calls	21
	Checks the battery life	19
3x	Plays the previous song	20
3x + <sub>HOLD</sub>	Rewinds a song	20
2x +HOLD	Fast-forwards a song	20

# **Getting started**

### **Charging basics**



A complete charging cycle takes about 3 hours. Before using the headphones for the first time, charge their rechargeable battery for a complete charging cycle without interruption.

When the battery is almost empty or when the headphones are being charged, the LED lights up or flashes as indicated in the table below and a voice prompt announces the charge condition of the battery. When the battery charge drops to a low level, a voice message prompts you to recharge the headphones to avoid call and music disruptions.

It is recommended to charge the headphones using only the supplied USB cable. If you are charging using an external USB-power adapter, it is recommended to use an adapter with an output rating of 500 mA or higher.

LED	Meaning	Voice prompt
* * *	Battery is almost empty (less than 2 % charged)	"Recharge headset" "Power off"
* * *	Battery is less than 15 % charged	"Below 3 hours play time"
*	Battery is less than 25 % charged	"Between 3 and 5 hours play time"
*	Battery is less than 50 % charged	"Between 5 and 11 hours play time"
*	Battery is less than 80 % charged	"Between 11 and 18 hours play time"
*	Battery is more than 80 % charged	"Between 18 and 22 hours play time"
* * * *	Battery is fully charged	"Between 18 and 22 hours play time"

#### Charging the headphones

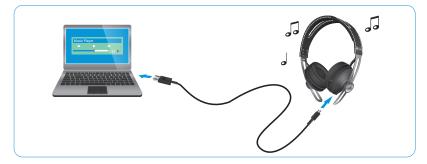
- 1. Connect the micro USB plug of the charging cable to the micro USB input of your headphones.
- 2. Connect the USB plug to the USB port of your computer. If you are using an external power adapter, connect the USB plug to the power adapter (not included) or to the USB car charger adapter (also not included), and connect to the power source.

Depending on the charge condition of the headphones, the LED flashes/lights up as indicated in the table above.



If you connect the headphones to a computer using the USB cable, the headphones switch off automatically. Switch the headphones on (see page 17) to continue listening to music or making calls from your smartphone via **Bluetooth** wireless connection.

You can also use the cable to listen to a media player on your computer. If you connect to a computer for the first time, you may need to set your M2 OEBT headphones as the default device in the sound panel of your computer.



#### Pairing the headphones

#### **AUTION**

#### Danger of malfunction!



The transmitted radio waves of mobile phones can impair the operation of sensitive and unprotected devices.

▶ Only make calls with the headphones in locations where Bluetooth wireless transmission is permitted.

To pair your headphones with a **Bluetooth** device, you can either use the Near Field Communication (NFC) or the **Bluetooth** search function. In order that a connection between the headphones and a **Bluetooth** device can be established, **Bluetooth** must be activated, whether you use **Bluetooth** or NFC pairing.

The M2 OEBT headphones comply with the **Bluetooth** 4.0 standard. In order that data can be transmitted wirelessly using **Bluetooth** technology, you have to pair your headphones with compatible **Bluetooth** devices that support the following profiles:

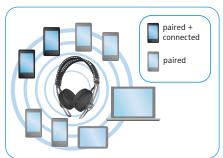
- ► Hands Free Profile (HFP)
- ► Headset Profile (HSP)
- ► Audio/Video Remote Control Profile (AVRCP)
- ► Advanced Audio Distribution Profile (A2DP)
- ▶ Device ID Profile (DIP)

When you switch the headphones on, they automatically try to connect to the last two connected **Bluetooth** devices. The headphones can save the connection profiles of up to eight **Bluetooth** devices with which they have been paired.

If you pair the headphones with a ninth **Bluetooth** device, the saved connection profile of the least used **Bluetooth** device will be overwritten. If you want to re-establish a connection with the overwritten **Bluetooth** device, you have to pair the headphones again.

You can easily pair and connect your wireless headphones with your smartphone if the device supports the Near Field Communication (NFC) technology.





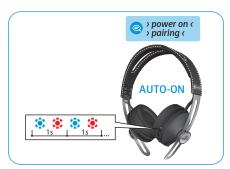
The following sections describe, using a smartphone as an example, how to pair your M2 OEBT headphones with an NFC or **Bluetooth** device. If the instructions provided do not work on your smartphone, proceed as described in the instruction manual of your device.

#### Pairing the headphones with an NFC device

- 1. Activate the NFC function on your smartphone.
- 2. Place your smartphone close (less than 3 cm) to the NFC antenna on the left ear cup of the headphones.
  - You hear the voice prompts "power on" and "pairing" and the LED flashes blue and red.
- 3. Click "Yes" if a pairing confirmation dialog appears on the screen of your smartphone (this step may vary depending on your smartphone). If pairing was successful, you hear the voice prompt "connected" and the LED switches off.









#### Pairing the headphones with a Bluetooth device

Ensure that your headphones are within the 20 cm range of your smartphone during this procedure.

- 1. Switch the headphones off (see page 17). Press the power button and keep it pressed until you hear the voice prompts "power on" and "pairing" and the LED flashes blue and red.

  The headphones are in pairing mode.
- 2. Enable the Bluetooth visibility on your smartphone.
- 3. On your smartphone, start a search for **Bluetooth** devices.

  All active **Bluetooth** devices in the proximity of your smartphone are displayed.
- 4. From the list of found Bluetooth devices, select "HD1 M2 OEBT" to establish a Bluetooth connection to the headphones. If necessary, enter the default PIN code "0000".

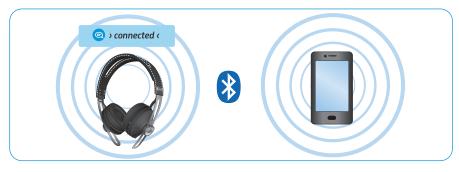
If pairing was successful, you hear the voice prompt "connected" and the LED switches off.







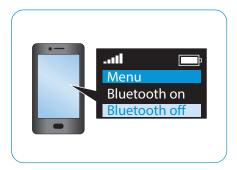




If no connection is established within 5 minutes, pairing mode is terminated and the headphones return to the disconnected state. Switch the headphones off and repeat the pairing procedure.

#### Disconnecting the headphones from an NFC or Bluetooth device

▶ Disable the Bluetooth visibility on your smartphone. The headphones are disconnected from the smartphone, and you hear the voice prompt "disconnected". The headphones then search for previously paired devices. If no device is found, you hear the voice prompt "no device found" after a few minutes.

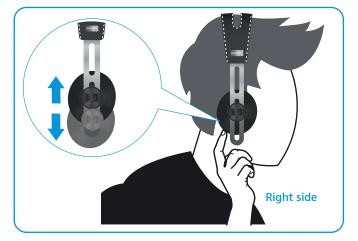




#### Adjusting the headband

For good sound quality and best possible wearing comfort, you can adjust the ear pad location on the headband to properly match the size of your head. The ear cups feature a locking mechanism that you can easily slide up and down through the headband slider.

- ▶ Wear the headphones so that the headband runs over the top of your head.
- ➤ Adjust the location of the ear pads by moving the ear cups up and down of the headband slider until:
  - the ear pads sit comfortably on your ears,
  - you feel even, gentle pressure on your ears,
  - a snug fit of the headband on the head is ensured.



# Using the headphones

#### Switching the headphones on

#### WARNING

Danger due to high volume levels!



Listening at high volume levels for long periods of time can lead to permanent hearing defects.

- ▶ Before putting the headphones on, set the volume to a low level.
- ▶ Do not continuously expose yourself to high volume levels.
- ▶ Press the power button for 2 seconds. You hear the voice prompts "power on" and "connected" and the LED flashes blue. The headphones switch on.





#### Switching the headphones off

▶ Press the power button for 2 seconds. You hear the voice prompt "power off" and the LED flashes red. The headphones switch off.





# Adjusting the volume

#### WARNING

Danger due to high volume levels!



Listening at high volume levels for long periods of time can lead to permanent hearing defects.

- ▶ Before putting the headphones on, set the volume to a low level.
- ▶ Do not continuously expose yourself to high volume levels.

You can adjust the volume at any time according to your mood or preference.



▶ Push the 3-way multi-function button down to reduce the volume. When the minimum volume is reached, you hear the voice prompt "volume min".



▶ Push the 3-way multi-function button up to increase the volume. When the maximum volume is reached, you hear the voice prompt "volume max".

# Checking the remaining battery life

You can check the remaining play and talk time of the battery at any time except when you are on an active call or listening to music.

- ▶ Press the 3-way multi-function button 3 times quickly.
- ▶ You hear the voice prompt announcing the remaining play time.

<u> </u>	<u> </u>
Voice message	Meaning
"Recharge headset"	Battery is almost empty (less than 2 % charged)
"Below 3 hours play time"	Battery is less than 15 % charged
"Between 3 and 5 hours play time"	Battery is less than 25 % charged
"Between 5 and 11 hours play time"	Battery is less than 50 % charged
"Between 11 and 18 hours play time"	Battery is less than 80 % charged
"Between 18 and 22 hours play time"	Battery is more than 80 % charged





Depending on your smartphone, the battery life of your headphones may also be displayed on the screen.

#### **Music functions**

The following music functions are only available if the headphones and the smartphone are connected using **Bluetooth** wireless technology or if the USB cable is used. Some smartphones may not support all functions.

If your audio source supports aptX®, the headphones will automatically stream music wirelessly in aptX® high-quality mode. If your audio source does not support aptX®, music will be streamed in standard quality mode.

#### **Playing music**

Press the 3-way multi-function button.



#### **Pausing music**

Press the 3-way multi-function button.



#### Playing the next song

Press the 3-way multi-function button twice quickly.



#### Playing the previous song

► Press the 3-way multi-function button 3 times quickly.



#### Fast-forwarding a song

Press the 3-way multi-function button twice quickly and hold until the desired part of the track is reached.



#### Rewinding a song

Press the 3-way multi-function button 3 times quickly and hold until the desired part of the track is reached.







#### **Call functions**

The following call functions are only available if the headphones and the smartphone are connected using **Bluetooth** wireless technology or if the USB cable is used. Some smartphones may not support all functions.

#### Making a call

▶ Dial the desired number on your mobile phone.

If your mobile phone does not automatically transfer the call to the headphones:

➤ Select the HD1 M2 OEBT as the audio source on your smartphone (see the instruction manual of your smartphone if necessary).

#### Accepting/rejecting/ending a call

If your headphones are connected to a smartphone and you receive a call, you hear a ring tone in the headphones and the LED flashes blue. If the battery level of the headphones is low, the LED flashes red.

If you are listening to music when you receive a call, the music is paused until you end the call.

▶ Press the 3-way multi-function button.

Press	Function		Voice prompt/ tone
1x		Accepts/starts a call	
U Is	×	Rejects a call	"Call rejected"
1x		Ends a call	"Call ended"
1x	(2) (0)	Accepts an incoming call and ends the active call	
2 x	(2) (1) HOLD	Accepts an incoming call and puts an active call on hold	
2 x	(2) (1) HOLD	Toggles between 2 active calls	

#### Transferring the call to/from the headphones

Once the connection is established, you can transfer the call between the headphones and your smartphone.

▶ Press the 3-way multi-function button.

Press	Function		Voice prompt
LIS LIST		Transfers a call from the headphones to the smartphone	
List Control of the C		Transfers a call from the smartphone to the headphones	

#### Redialing

The redialing function must be supported by your smartphone or **Bluetooth** device (with HFP profile). This function may be required to be activated on your device.

▶ Press the 3-way multi-function button.

Press	Function		Voice prompt
2x		Redials the last number called	"redialing"
1x	X	Cancels redialing	

#### Voice control functions

The voice control functions are only supported by **Bluetooth** smartphones with HFP profile.

1. Press the 3-way multi-function button.

Press	Function		Voice prompt
LIS LIS		Starts voice dialing	"voice dialing"
1x	X	Stops voice dialing	"call ended"

2. Say your voice command, such as "Call Jane".
The Bluetooth smartphone dials the phone number of Jane.



#### Using the audio cable

There are 2 connection modes when you use the audio cable:

- ▶ Active mode the audio cable is used and the headphones are switched on.
- ▶ Passive mode the audio cable is used and the headphones are switched off. Regardless of the connection mode, Bluetooth and the call and music control functions are disabled if the audio cable is used. Use the audio cable only when:
  - the headphones' battery pack is empty
  - wireless transmission is not allowed, e.g. during aircraft take-off and landing

#### Connecting using the audio cable

1. Plug the 2.5 mm jack plug into the audio input of the headphones until you hear a click sound. Turn the jack plug clockwise and ensure that it is securely locked in place.

The Bluetooth connection is disabled.

- 2. Connect the 3.5 mm jack plug to:
  - the audio output of your smartphone
  - the in-flight adapter if you want to use the headphones with an in-flight entertainment system

In active mode, the NoiseGard active noise cancellation feature is enabled; in passive mode, the active noise cancellation feature is disabled.







# Care and maintenance

#### **CAUTION**

Liquids can damage the electronics of the product!



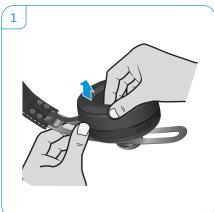
Liquids entering the housing of the product can cause a short-circuit and damage the electronics.

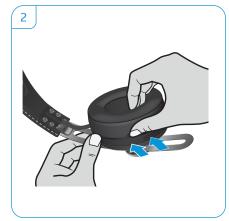
- ▶ Keep all liquids away from this product.
- ▶ Do not use any solvents or cleaning agents.

### Replacing the ear pads

For reasons of hygiene, you should replace the ear pads from time to time. Spare ear pads are available from your local Sennheiser partner.

- 1. Lightly pull the ear pad away from ear cup until it is detached.
- 2. Secure the new ear pad by inserting the fixation band in the space on the ear cup.





# Storage and handling

To keep the headphones in good condition and to avoid nicks and scratches, fold the ear cups inwards towards the headband. Store the headphones in a carry case when not in use or when transporting them.



## Replacing/removing the rechargeable battery

#### **CAUTION**

#### Danger of damage to the product!

During the warranty period, the rechargeable battery must only be replaced by an authorized Sennheiser service center, otherwise the warranty will be null and void.

▶ Contact your Sennheiser service center if the rechargeable battery needs to be replaced or removed. To find a Sennheiser service partner in your country, visit www.sennheiser.com.

Outside the warranty period, the rechargeable batteries may be replaced or removed by any qualified service center in an appropriate manner. Instructions on how to replace or remove the batteries for qualified service centers are available from the Sennheiser service partner.

# Troubleshooting

Problem	Possible cause	Possible solution	Page
Headphones	Battery is empty	Charge the headphones.	12
cannot be switched on	Battery is completely exhausted/worn out	Visit an authorized Sennheiser service center for battery replacement.	
No audio signal	Headphones are not paired with your device	Check if the headphones are paired. If necessary, pair the headphones with your device again.	13
	Volume too low	Increase the volume.	18
	Headphones are switched off	Switch the headphones on.	17
Headphones cannot connect	Pairing does not work	Check if your smartphone supports the HFP or HSP Bluetooth profile.	
	Smartphone is switched off	Switch your smartphone on.	
	Bluetooth is deactivated on your smartphone	Activate <b>Bluetooth</b> on your smartphone.	
Headphones do not respond to any button press	Function of the head- phones is faulty	Clear the pairing settings from the headphones.	29

If you encounter a problem that is not listed in the table, or if the solutions provided do not work, please contact an authorized Sennheiser service partner for assistance.

To find a Sennheiser service partner in your country, visit www.sennheiser.com.



#### Leaving the Bluetooth transmission range

Wireless calling and streaming are only possible in the **Bluetooth** transmission range of your smartphone. The transmission range largely depends on environmental conditions such as wall thickness, wall composition etc. With a free line of sight, the transmission range of most smartphones and **Bluetooth** devices is up to 10 meters.

If the headphones leave the **Bluetooth** transmission range of the smartphone, the sound quality deteriorates and you repeatedly hear the voice prompt "lost connection". At this point, the connection breaks down completely. You can re-establish the connection if you re-enter the **Bluetooth** transmission range and you hear the voice prompt "connected".

To re-establish the connection:

▶ Press the 3-way multi-function button.

#### Clearing the pairing settings

- 1. Switch the headphones off (see page 17). Press the power button and keep it pressed until you hear the voice prompts "power on" and "pairing" and the LED flashes blue and red.
  - The headphones are in pairing mode.
- 2. Simultaneously press the 3-way multi-function button and the power button for 3 seconds.
  - The LED flashes 3 times purple and the headphones change to pairing mode. The pairing settings are cleared from the headphones.





# **Specifications**

#### M2 OEBT

Ear coupling on-ear
Frequency response 16 Hz - 22 kHz
Transducer principle dynamic, closed
Frequency response (MIC) wideband: 100 Hz - 8 kHz

 $\frac{\text{narrowband: } 300 \text{ Hz - } 3.4 \text{ kHz}}{111 \text{ dB (passive: } 1 \text{ kHz/1 V}_{\text{rms}})}$ 

Impedance  $active mode: 480 \Omega$ 

THD (1 kHz, 100 dB SPL) < 0.5 %

Pick-up pattern (speech audio) dual omni-directional microphone

(2 mic beamforming array)

Noise compensation

NoiseGard™ hybrid active noise
cancellation technology with 4 pick-up

passive mode: 28  $\Omega$ 

Total noise attenuation microphones up to 20 dB

Input power 3.7 VDC, 600 mAh: Built-in rechargeable

Lithium-Polymer battery 5 *VDC, 400 mA:* USB charging

Operating time 22 hours (HFP + ANC)

Temperature range Operation: 0 to 40°C/32 to 104°F
Storage: -25 to 70°C/-13 to 158°F
Relative humidity Operation: 10 to 80%, non condensing

Storage: 10 to 90%

Charging time approx. 3 hours
Weight approx. 210 g



#### **Bluetooth**

Version4.0, class 1Transmission frequency2402 MHz to 2480 MHzModulation typeGFSK,  $\pi/4$  DQPSK / 8DPSKProfilesHSP, HFP, AVRCP, A2DP, DIP

Output power 10 mW (max)
Codec aptX®



#### **NFC**

Frequency 13.56 MHz
Modulation type ASK

Output power within 500  $\mu V/m$ 

# Manufacturer declarations

#### Warranty

Sennheiser electronic GmbH & Co. KG gives a warranty of 24 months on this product. For the current warranty conditions, please visit our website at www.sennheiser.com or contact your Sennheiser partner.

#### FOR AUSTRALIA ONLY

Sennheiser goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

This warranty is in addition to other rights or remedies under law. Nothing in this warranty excludes, limits or modifies any liability of Sennheiser which is imposed by law, or limits or modifies any remedy available to the consumer which is granted by law.

To make a claim under this warranty, contact

Sennheiser Australia Pty Ltd, Unit 3, 31 Gibbes Street Chatswood NSW 2067, Australia

Phone: (02) 9910 6700, email: service@sennheiser.com.au.

All expenses of claiming the warranty will be borne by the person making the claim.

The Sennheiser International Warranty is provided by Sennheiser Australia Pty Ltd (ABN 68 165 388 312), Unit 3, 31 Gibbes Street Chatswood NSW 2067 Australia.

#### In accordance with the following requirements

• WEEE Directive (2012/19/EU)

Please dispose of this product at the end of its operational lifetime by taking it to your local collection point or recycling center for such equipment.



• Battery Directive (2013/56/EU)

The product's built-in rechargeable batteries can be recycled. In order to protect the environment, please dispose of defective products with their rechargeable batteries as special waste or return them to your specialist dealer.



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#### **CE Conformity**

- R&TTE Directive (1999/5/EC)
- EMC Directive (2004/108/EC)
- Low Voltage Directive (2006/95/EC)
- RoHS Directive (2011/65/EU)
- Product Safety Directive (2001/95/EC)
   Headphones for mobile players: EN 60065/A12, EN 50332-2

The CE Declaration of Conformity is available on our website at www.sennheiser.com.

Before putting the product into operation, please observe the respective country-specific regulations!



#### Statements regarding FCC and Industry Canada

FCC Declaration of Conformity (DoC)

SENNHEISER
Model No: M2 OEBT

We.

Sennheiser Electronic Corporation One Enterprise Drive • Old Lyme • CT 06371 • USA Tel: +1 (860) 434 9190

Tel: +1 (860) 434 9190 Fax: +1 (860) 434 1759

declare the above device comply with the requirements of Federal Communications Commission.

This device complies with Part 15 of the FCC rules. Operation is subjected to the following two conditions:

1) This device may not cause harmful interference, and

2) This device must accept any interference received, including interference that may cause undesired operation.

Responsible Party: Greg Beebe

This device complies with Part 15 of the FCC rules and RSS-210 of Industry Canada. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules and RSS-210 of Industry Canada. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications made to this equipment not expressly approved by Sennheiser electronic Corp. may void FCC authorization to operate this equipment.

CAN ICES-3 (B)/NMB-3(B)

#### **RF Radiation Exposure Information**

Since the radiated output power of this device is far below the FCC / IC radio frequency exposure limits, it is not subjected to routine RF exposure evaluation as per Section 2.1093 of the FCC rules and RSS-102 of Industry Canada.

This device meets FCC/ IC RF exposure guidelines for an uncontrolled environment. Use of other accessories not verified by the manufacturer may not ensure compliance with FCC / IC RF exposure guidelines.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

#### **Trademarks**

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