

# HME 110

## Headset



Instruction manual

 **SENNHEISER**

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# Important safety information

- ▶ Please read this instruction manual carefully and completely before using the product.
- ▶ Always include this instruction manual when passing the product on to third parties.
- ▶ This instruction manual is also available on the Internet at [www.sennheiser-aviation.com](http://www.sennheiser-aviation.com) or [www.sennheiser.com](http://www.sennheiser.com).

## Preventing health problems and accidents

- ▶ Always maintain a distance of at least 3.94" (10 cm) between the ear cups and the cardiac pacemaker or implanted defibrillator since the product generates permanent magnetic fields.
- ▶ Keep the product, accessory and packaging parts out of reach of children who could swallow smaller pieces.
- ▶ When using a headset, typical aircraft sounds (for example, those from engines, propellers, warning alarms, etc.) may sound different to you. Before operating any aircraft, make sure that, while wearing the headset, you can hear and recognize these sounds. Set the volume to safe levels that do not interfere with your ability to hear informational sounds and warning alarms.
- ▶ If during flight operation you, as the pilot, operate your connected device using the headset, this can limit your

attention. During flight operation, do not use the headset for making phone calls or listening to music.

- ▶ The product is capable of producing sound pressure exceeding 85 dB(A). In many countries 85 dB(A) is the maximum legally permissible level for continuous noise exposure during the working day. Do not listen at high volume levels for long periods of time to prevent hearing damage.

### Preventing damage to the product and dysfunctions

- ▶ Always keep the product dry and do not expose it to extreme temperatures (hairdryer, heater, extended exposure to sunlight, etc.) to avoid corrosion or deformation.
- ▶ Only clean the product with a soft, dry cloth.
- ▶ Never repair or attempt to repair a defective product yourself. Contact your Sennheiser partner or the Sennheiser Service Department.
- ▶ Only replace parts of the product whose replacement is described in this instruction manual. All other parts of the product must be replaced by your Sennheiser partner.

### Intended use of the headset

Intended use of the product includes

- having read and understood this instruction manual, especially the chapter “Important safety information” on page 1,
- using the headset in helicopters, propeller and turboprop aircraft and within the operating conditions as described in this instruction manual.

“Improper use” means using the product other than as described in this instruction manual, or under operating conditions which differ from those described herein.

# HME 110 headset

The HME 110 pilot headset is characterized by the following features:

- Passive headset with excellent noise attenuation
- Excellent comfort due to very low weight, soft ear pads and padded headband
- Foldable headband for easy and space-saving transport
- Clear communications due to BKE 45-1 condenser microphone with adjustable sensitivity
- Microphone can be easily positioned and worn on either left or right side due to flexible microphone boom with quick-fixing device
- Best possible freedom of movement due to unilateral connection cable
- Optimum radio reception due to headphone system with a wide frequency response
- Integrated volume control
- Adaption to the aircraft audio system via mono/stereo switch
- Made in Germany, 10-year warranty

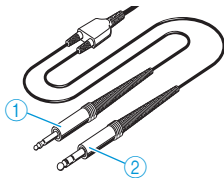
# Delivery includes

- 1 HME 110 headset
- 1 wind screen for microphone
- 1 cable clip
- 1 instruction manual

# Putting the HME 110 in operation

## Connecting the headset

- ▶ Connect the two jack plugs of the headset to the corresponding jack sockets of your audio system.



| Jack plug                                  | Jack socket of the audio system |
|--|---------------------------------|
| 5.25 mm jack plug ①<br>(PJ-068 equivalent) | Microphone input                |
| 1/4" (6.35 mm) jack plug ②                 | Headphone output                |

## Adjusting the headband

For good noise attenuation and best possible comfort, the headset has to be adjusted to properly fit your head. To do so, you can adjust the headband.

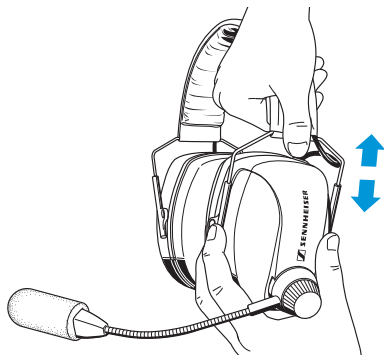
### CAUTION!

#### Damage to the product due to squeezing of cables!

When adjusting the headband, the connection cable for the headphones can be squeezed and damaged.

- ▶ Make sure not to squeeze the headphones connection cable when adjusting the headband.

- ▶ Wear the headset so that the headband runs over the top of your head.
- ▶ Adjust the length of the headband so that
  - your ears are completely inside the ear pads,
  - you feel even, gentle pressure around your ears,
  - a snug fit of the headband on the head is ensured.
- ▶ Final adjustment is best made in a noisy environment.

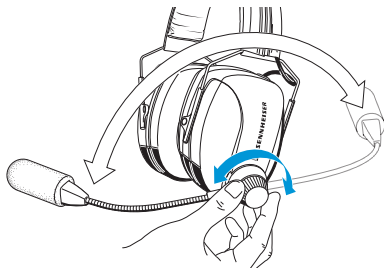




### Positioning the microphone

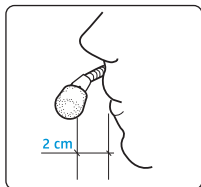
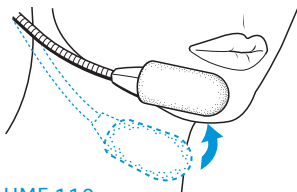
To position the microphone boom on either the right or left-hand side of the mouth:

- ▶ Loosen the quick-fixing device.
- ▶ Rotate the microphone boom by 180°.
- ▶ Tighten the quick-fixing device.



### Positioning the microphone towards the corner of the mouth

- ▶ Bend the flexible microphone boom so that the microphone is placed at the corner of the mouth. Maintain a distance of approx. 2 cm between microphone and mouth.



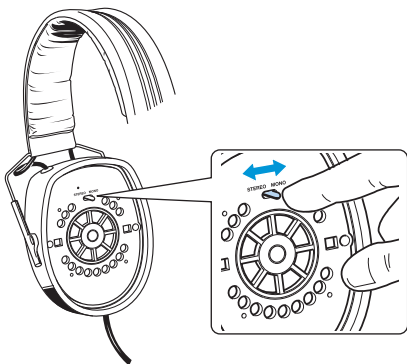
# Using the HME 110

## Switching between mono and stereo operation

In general, you'll receive a mono sound source so that the mono/stereo switch can remain set to "MONO" (factory setting).

To set the headset to stereo operation:

- ▶ Remove the ear pad (see "Replacing the ear pads" on page 14) from the ear cup with the microphone boom attached.
- ▶ Set the mono/stereo switch to "STEREO".



## Adjusting the volume

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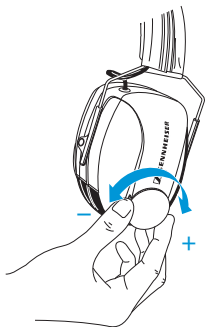
### WARNING!

Hearing damage due to high volume levels!

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

- ▶ Before putting the headset on, set the volume to a low level.
  - ▶ Do not **continuously** expose yourself to high volumes.
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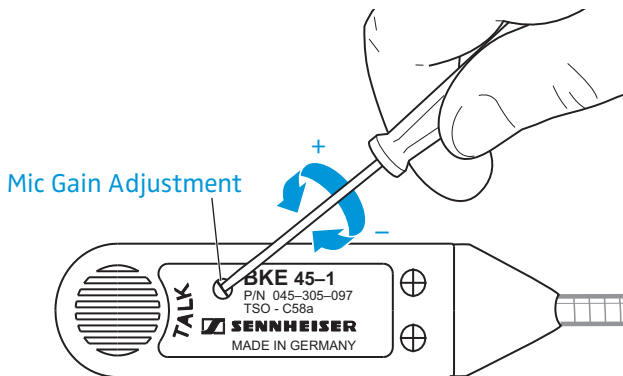
- ▶ Adjust the volume to a medium level. Make sure that you can hear critical sounds such as warning alarms.



## Adjusting the microphone gain "Mic Gain"

According to JTSO approval C58a, the microphone output voltage is factory preset to 400 mV. If the microphone output voltage is too high or too low for your audio system, it can be readjusted on the microphone.

- ▶ Use a small slotted screwdriver and turn the "Mic Gain Adjustment" screw (see diagram) until you have reached the desired setting.



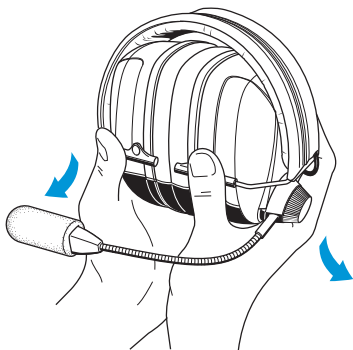
## Transporting the headset

For space-saving transportation, you can fold the headset:

- ▶ Tuck the ear cups between the headband.

To unfold the headset:

- ▶ Grasp both ear cups and pull them up and away from the headband.



# Cleaning and maintaining the HME 110

## Cleaning the headset

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### 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 far away from the product.
  - ▶ Do not use any solvents or cleansing agents.
- 
- ▶ Use a soft, dry cloth to clean the product from time to time.

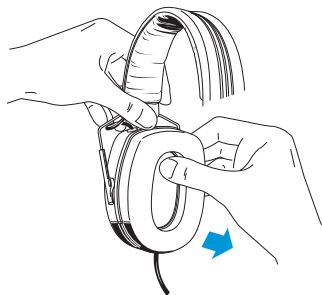
## Replacing the wind screen

If the wind screen for the microphone shows signs of wear such as tears or holes, replace the wind screen. The new wind screen must totally enclose the microphone.

## Replacing the ear pads

If the ear pads are damaged or worn out, replace them as follows:

- ▶ Grasp the edge of the old ear pads and peel them up and away from the ear cups.
- ▶ Press the new ear pads onto the ear cups.



# Accessories and spare parts

The following accessories and spare parts are available from your Sennheiser partner. To find a Sennheiser partner in your country, search at [www.sennheiser-aviation.com](http://www.sennheiser-aviation.com) or [www.sennheiser.com](http://www.sennheiser.com).

- Wind screen for BKE 45-1 condenser microphone
- HZC 08 cable clip
- Carry and storage bag
- GOP gel ear pads
- LUXURY ear pads



## If a problem occurs ...

| Problem  | Possible cause  | Solution  |
|--|---|---|
| Communication<br>s in one ear only                     | You are using a stereo audio system but the headset is set to mono operation. | Set the mono/stereo switch to "STEREO" (see page 9).  |
|  | You are receiving a mono source but the headset is set to stereo operation.   | Set the mono/stereo switch to "MONO" (see page 9).  |
| Very low<br>volume<br>communication                    | The volume is set too low.  | Adjust the volume setting of your headset (see page 10).  |
|  | The headphone connection has been pulled out.                                 | Check to see if the headphone jack plug is correctly connected.                                 |
| Reduced<br>intelligibility                             | The microphone connection has been pulled out.                                | Check to see if the microphone jack plug is correctly connected.                                |
| Microphone<br>output voltage<br>too high or too<br>low | The microphone gain "Mic Gain" needs to be readjusted.                        | Adjust the microphone gain "Mic Gain" until you have reached the desired setting (see page 11). |

If a problem occurs that is not listed in the above table or if the problem cannot be solved with the proposed solutions, please contact your local Sennheiser partner for assistance.

To find a Sennheiser partner in your country, search at [www.sennheiser-aviation.com](http://www.sennheiser-aviation.com) or [www.sennheiser.com](http://www.sennheiser.com).

# Specifications

## Headset

|                      |  |
|----------------------|--|
| Transducer principle | dynamic, closed                            |
| Ear coupling         | circum-aural                               |
| Frequency response   | 45 – 15,000 Hz                             |
| Nominal impedance    | mono: 150 $\Omega$<br>stereo: 300 $\Omega$ |
| Noise attenuation    | > 10 to 40 dB                              |
| Contact pressure     | approx. 10 N                               |

## Microphone incl. preamplifier

|                       |  |
|-----------------------|--|
| Transducer principle  | BKE 45-1 condenser mic capsule,<br>noise-compensating                                      |
| Frequency response    | 300 – 5,000 Hz   |
| Max. SPL              | 120 dB   |
| Terminating impedance | 150 $\Omega$   |
| Output voltage        | 400 mV $\pm$ 3dB at 114 dB<br>(as per RTCA/DO 214)   |
| Supply voltage        | typ. 16 V <sub>DC</sub> (8 to 16 V <sub>DC</sub><br>approx. 8 to 25 mA as per RTCA/DO 214) |

### General data

|                      |   |
|----------------------|---|
| Connection cable     | approx. 1,5 m,<br>unilateral  |
| Weight without cable | approx. 350 g   |
| Connectors           | ¼" (6.35 mm) jack plug for headphones,<br>5.25 mm jack plug (PJ-068 equivalent)<br>for microphone |
| Controls             | mono/stereo switch<br>headphone volume control  |
| Temperature range    | operation: -15°C to 55°C<br>storage: -55°C to 55°C  |

### Connector assignment

#### 5.25 mm jack plug (PJ-068 equivalent)



- 1 Not assigned
- 2 Microphone High
- 3 Microphone Low

#### ¼" (6.35 mm) jack plug



- 1 Audio High left
- 2 Audio High right
- 3 Audio Low

# Manufacturer Declarations

## Warranty


Sennheiser electronic GmbH & Co. KG gives a warranty of 10 years on this product.

For the current warranty conditions, please visit our web site at [www.sennheiser-aviation.com](http://www.sennheiser-aviation.com) or [www.sennheiser.com](http://www.sennheiser.com) or contact your Sennheiser partner.

## In compliance with the following requirements

- RoHS Directive (2002/95/EC)
- WEEE Directive (2002/96/EC)

## CE Declaration of Conformity

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- EMC Directive (2004/108/EC)

The declaration is available at [www.sennheiser.com](http://www.sennheiser.com).

## WEEE Declaration

Please dispose of this product by taking it to your local collection point or recycling centre for such equipment. This will help to protect the environment in which we all live.



## Name plates





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