HMD 46
HME 46
HME 46-3S

Instruction manual

SENNHEISER

Safety instructions

- Please read this instruction manual carefully and completely before using the headset.
- Make this instruction manual easily accessible to all users at all times.
- Always include this instruction manual when passing the headset on to third parties.
- The headset is capable of producing sound pressure levels exceeding 85 dB(A). In many countries 85 dB(A) is the maximum legally permissible level for continuous noise exposure during the working day. Exposure to sounds of higher volume levels or for longer durations can permanently damage your hearing!
- Never repair or attempt to repair a defective headset yourself. Contact your Sennheiser partner or the Sennheiser Service Department.
- Only replace those parts of the headset whose replacement is described in this instruction manual. All other parts of the headset must be replaced by your Sennheiser agent.
- Protect the headset from humidity. Use only a soft, dry cloth to clean the headset. For information on how to clean the headset, contact your Sennheiser partner.

Intended use of the headset

Intended use includes:

- having read this instruction manual especially the chapter ‘‘Safety instructions’’.
- using the headset within the operating conditions as described in this instruction manual.

Improper use

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

HMD 46 / HME 46 / HME 46-3S

The HMD 46 / HME 46 / HME 46-3S headset features dynamic, open headphones. The noise-compensating microphone ensures excellent speech transmission even in noisy environments. Designed for air traffic control, intercom systems and other communication purposes.

Features

- Extremely lightweight
- Extremely comfortable to wear due to the patented two-piece automatic headband and soft ear pads
- ActiveGard™ safeguards you from the effects of an acoustic burst (except HMD 46-31 and HME 46-31)
- ''Flip-away'' headphone allows single-sided listening
- Flexible microphone boom, can be worn on either left or right-hand side
- Noise-compensating microphone ensures excellent speech transmission
- Single-sided cable, easy to exchange

Package contents

1 HMD 46 / HME 46 / HME 46-3S headset

1 cable clip

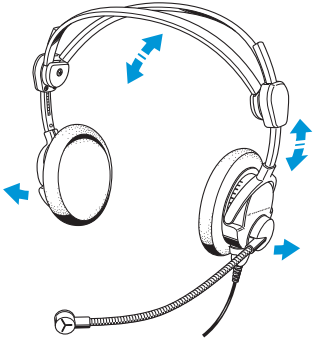
1 wind and pop screen

1 instruction manual

Operation

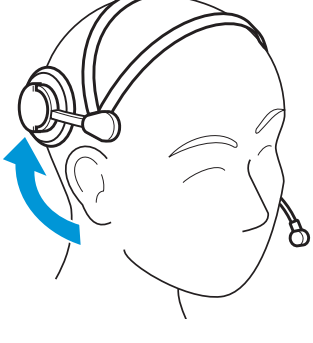
Putting on the headset

When putting on the headset, the patented two-piece headband adjusts automatically.



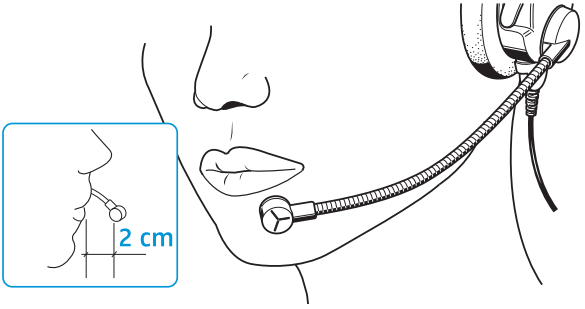
Flipping away one ear cup

The headset features a ‘‘flip-away’’ ear cup for single-sided listening.



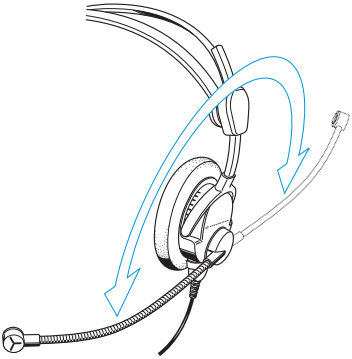
Positioning the microphone

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



Turning the microphone boom

The microphone boom can be rotated. This allows the headset to be worn with the microphone boom positioned on either the left or right-hand side of the head.



Adjusting the volume directly on the audio system

CAUTION!

Hearing damage due to high volumes!

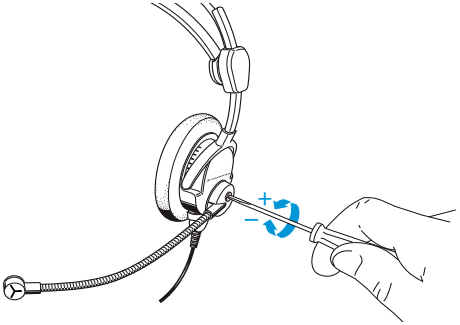
This headset is capable of producing high sound pressure levels. Higher volumes or longer durations can damage your hearing!

- Set the volume to a medium level. Make sure that you can hear critical sounds such as warning alarms.

Connect the headset to the corresponding sockets of your audio system. Adjust the volume directly on the audio system.

Adjusting the microphone sensitivity

The microphone sensitivity has been factory preset to 80 mV/Pa. You can change the microphone sensitivity by turning a small screwdriver in the direction of the arrow.



Care and maintenance

Cleaning the headset

CAUTION!

Liquids can damage the product!

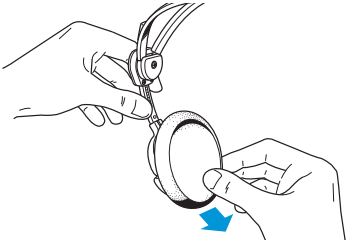
Liquids entering the product can short-circuit the electronics or damage the mechanics. Solvents or cleansing agents can damage the surface of the product.

- Keep all liquids far away from the product.

- Before cleaning, pull out the plugs of the product from the connections in the aircraft.
- Only use a soft, dry cloth to clean the product.

Replacing the ear pads

For reasons of hygiene, you should replace the black ear pads annually. Grasp the edge of the ear pad behind the ear cup and peel it up and away from the ear cup. Slide the new ear pad onto the ear cup. Repeat for the other ear cup.



Accessories and spare parts

By changing the cable, you can simply retrofit your headset (see "Product variants" on page 10).

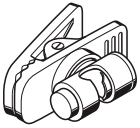
Accessories

- Cable -6 Cat. No. 500836
- Cable -7 Cat. No. 502360
- Cable -H-6 Cat. No. 502533
- Cable -H-6-1 Cat. No. 502832
- Cable -L Cat. No. 502365
- Cable -PTT-6 Cat. No. 500844
- Cable -PTT-6-1 Cat. No. 502418
- Cable -PTT-H-PJ7-10 Cat. No. 504019
- Cable -PTT-H-PJ7-15 Cat. No. 504021
- Cable -PTT-H-PJ7-25 Cat. No. 504023
- Cable -PTT-L Cat. No. 500845
- Cable -PTT-LA Cat. No. 502187
- Cable D-3PTT-M Cat. No. 500930
- Hygiene pads HZH 46, 200 pairs Cat. No. 502194

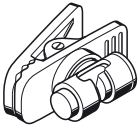
Spare parts

- Headband padding, 1 pair
- Ear pads, 1 pair
- Ear pads, 100 pairs
- Wind and pop screen for BKE 46, 1 item
- Wind and pop screen for BKE 46, any number of items
- Wind and pop screen for BMD 46, any number of items
- Cable clip HZC 08
- Cable clip HZC 09

Cable clips



HZC 08
(for round cables)



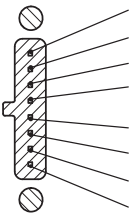
HZC 09
(for flat cables)

Product variants

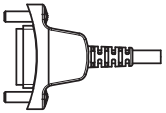
Variant (Cat. No.)	Description	Single-sided round cable
HMD 46-3 (500849)	Headsets with dynamic microphone	–
HMD 46-31 (502483)		–
HMD 46-3-6 (500466)		with open ends, length 1.85 m
HME 46-3 (500857)	Headsets with condenser microphone	–
HME 46-31 (502484)		–
HME 46-3-6 (500467)		with open ends, length 1.85 mm
HME 46-3PTT-6 (500468)		with PTT button and open ends, length 1.85 m
HME 46-3PTT-LA (502172)		with LEMO connector FHG.2B.310.CLAD52Z, length 2.30 m
HME 46-ATC (500851)		with LEMO connector FFP.3S.310.CLA.252A, length 2 m
HME 46-DCN (504286)		with 5-pin DIN connector, length 2 m
HME 46-3S (502592)	Single-sided headset with condenser microphone	–

Cable and connector assignment

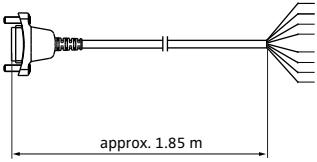
Headset connector



white	Audio Hi left
orange	Audio Hi right
brown	Audio Lo left
green	Audio Lo right
yellow	not assigned
red	Microphone Hi
blue	Microphone Lo
Screen	Screen

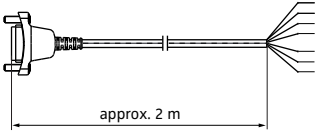


Cable -6



white	Audio Hi left
orange	Audio Hi right
brown	Audio Lo left
green	Audio Lo right
yellow	not assigned
red	Microphone Hi
blue	Microphone Lo
Screen	Screen

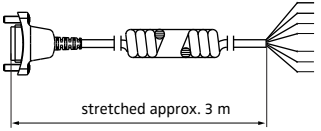
Cable -7 (steel wire cable)



yellow	Audio Hi left
red	Audio Hi right
gray	Audio Lo left
blue	Audio Lo right
red	Microphone Hi
blue	Microphone Lo
Screen	Screen

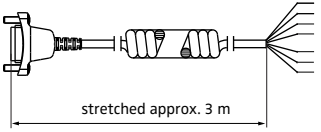
Designed for 2-connector variants

Cable -H-6



white	Audio Hi left
orange	Audio Hi right
brown	Audio Lo left
green	Audio Lo right
red	Microphone Hi
blue	Microphone Lo
Screen	Screen

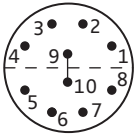
Cable -H-6-1



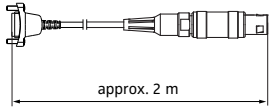
white	Audio Hi left
orange	Audio Hi right
brown	Audio Lo left
green	Audio Lo right
red	Microphone Hi
blue	Microphone Lo
Screen	Screen

Cable -L

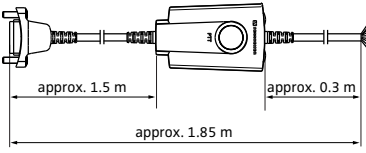
Solder side



1	Audio Hi right
2	Audio Lo right
3	not assigned
4	Screen
5	Audio Hi left
6	Audio Lo left
7	Microphone Hi
8	Microphone Lo
9	Bridge to pin 10
10	Bridge to pin 9

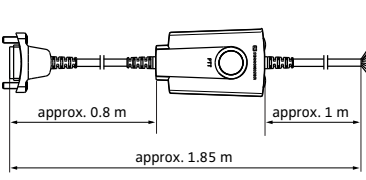


Cable -PTT-6



white	Audio Hi left
orange	Audio Hi right
brown	Audio Lo left
green	Audio Lo right
yellow	PTT
black	PTT
red	Microphone Hi
blue	Microphone Lo
Screen	Screen

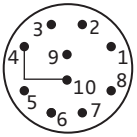
Cable -PTT-6-1



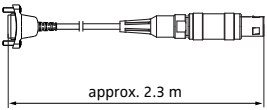
white	Audio Hi left
orange	Audio Hi right
brown	Audio Lo left
green	Audio Lo right
yellow	PTT
black	PTT
red	Microphone Hi
blue	Microphone Lo
Screen	Screen

Cable -3PTT-L

Solder side

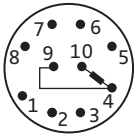


1 Audio Hi left
2 Audio Lo left
3 PTT
4 PTT (bridge to pin 10)
5 Audio Lo right
6 Audio Hi right
7 Microphone Hi
8 Microphone Lo
9 Screen
10 PTT (bridge to pin 4)

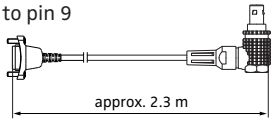


Cable -3PTT-LA

Solder side

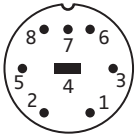


1 Audio Hi right
2 Audio Lo right
3 PTT
4 PTT / screen/ bridge to pin 9
5 Audio Hi left
6 Audio Lo left
7 Microphone Hi
8 Microphone Lo
9 Bridge to pin 4 / PTT / screen
10 75-Ω resistor between pin 4 and 10 / screen

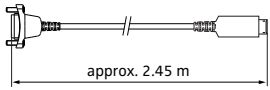


Cable -D-3PTT-M

Solder side



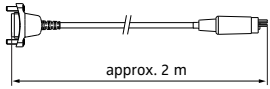
1 Audio Hi
2 Audio Lo
3 Microphone Hi
4 not assigned
5 not assigned
6 PTT
7 PTT / screen
8 Microphone Lo



Cable -DCN

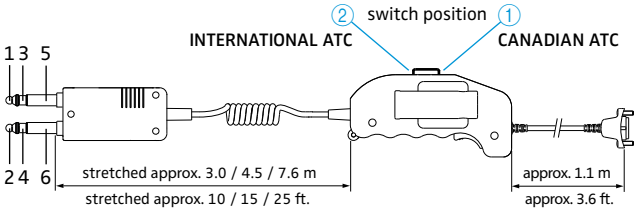
Solder side

1: Microphone Hi
2: Microphone Lo
3: Audio Hi left
4: Audio Lo
5: Audio Hi right
6: Screen



Cable -PTT-H-PJ7-xx

xx = 10 / 15 / 25



Connectors pin alignment	CANADIAN ATC Switch position = ①	INTERNATIONAL ATC Switch position = ②
1	Audio +	Mic +
2	Audio –	Mic –
3	Mic +	PTT +
4	Mic –	PTT – / Screen
5	PTT +	Audio +
6	PTT – / Screen	Audio –

Specifications

HMD 46-3 and HMD 46-31

Headphones

Transducer principle	dynamic, open
Ear coupling	supra-aural
Frequency response	20–14,000 Hz
Impedance	300 Ω
Characteristic SPL at 1 kHz, 1 mW, mono	95 dB SPL
at 1 kHz, 1 V	**HMD 46-3**: 83 dB SPL **HMD 46-31**: 103 dB SPL
THD (350–3,000 Hz)	< 1% at 95 dB SPL
Contact pressure	approx. 3 N

Microphone

Type	BMD 46-413
Transducer principle	dynamic, noise-compensating
Frequency response	100–12,000 Hz
Output voltage	0.5 mV/Pa
Impedance	200 Ω

General data

Ambient temperature	operation: –15°C to 55°C storage: –55°C to 70°C
Weight without cable	approx. 150 g

HME 46-3, HME 46-31 and HME 46-3S

Headphones

Transducer principle	dynamic, open	
Ear coupling	supra-aural	
Frequency response	20–14,000 Hz	
Impedance	300 Ω	
Characteristic SPL at 1 kHz, 1 mW, mono	**HME 46-3/HME 46-31**:	95 dB SPL
	HME 46-3S:	98 dB SPL
at 1 kHz, 1 V	**HME 46-3**:	83 dB SPL
	HME 46-31:	103 dB SPL
	HME 46-3S:	97 dB SPL
THD (350–3,000 Hz)	**HME 46-3/HME 46-31**:	< 1% at 95 dB SPL
	HME 46-3S:	< 1% at 98 dB SPL
Contact pressure	approx. 3 N	

Microphone

Type	BKE 46
Transducer principle	pre-polarized condenser microphone, noise-compensating
Frequency response	100–15,000 Hz
Output voltage	adjustable from 17–100 mV/Pa, 80 mV/Pa -2 dB factory preset: 800 mV -2 dB at 114 dB SPL **HME 46-3PTT-LA, -ATC**: adjustable from 17–215 mV/Pa, 152 mV/Pa -2 dB factory preset: 152 mV -2 dB at 114 dB SPL
Impedance	150–2,200 Ω
Supply voltage	8–16 V DC

General data

Ambient temperature	operation:	–15°C to 55°C
	storage:	–55°C to 70°C
Weight without cable	HME 46-3/HME 46-31:	approx. 150 g
	HME 46-3S:	approx. 110 g

HME 46-DCN

Headphones

Transducer principle	dynamic, open
Ear coupling	supra-aural
Frequency response	20–14,000 Hz
Impedance	300 Ω
Characteristic SPL	95 dB SPL at 1 kHz, 1 mW, mono 103 dB SPL at 1 kHz, 1 V
Max. SPL	> 125 dB SPL at 1 kHz
THD (350–3,000 Hz)	< 1 % at 110 dB SPL
Contact pressure	approx. 3 N

Microphone

Type	BKE DCN
Transducer principle	pre-polarized condenser microphone
Pick-up pattern	cardioid
Frequency response	100–15.000 Hz
Output voltage	10 mV/Pa
Impedance	min. 2 kΩ
Supply voltage	2–10 V DC
Power consumption	max. 0,5 mA (at 4,5 V DC/1 kΩ)

General data

Ambient temperature	operation: –15°C to 55°C storage: –55°C to 70°C
Cable length	approx. 2 m
Weight without cable	approx. 150 g

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.

In compliance with the following requirements

- RoHS Directive (2002/95/EC)

CE Declaration of Conformity

- EMC Directive (2004/108/EC)

The declaration is available at www.sennheiser.com.

In compliance with:

Europe	CE EMC EN 55103-1/-2
China	

SENNHEISER

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