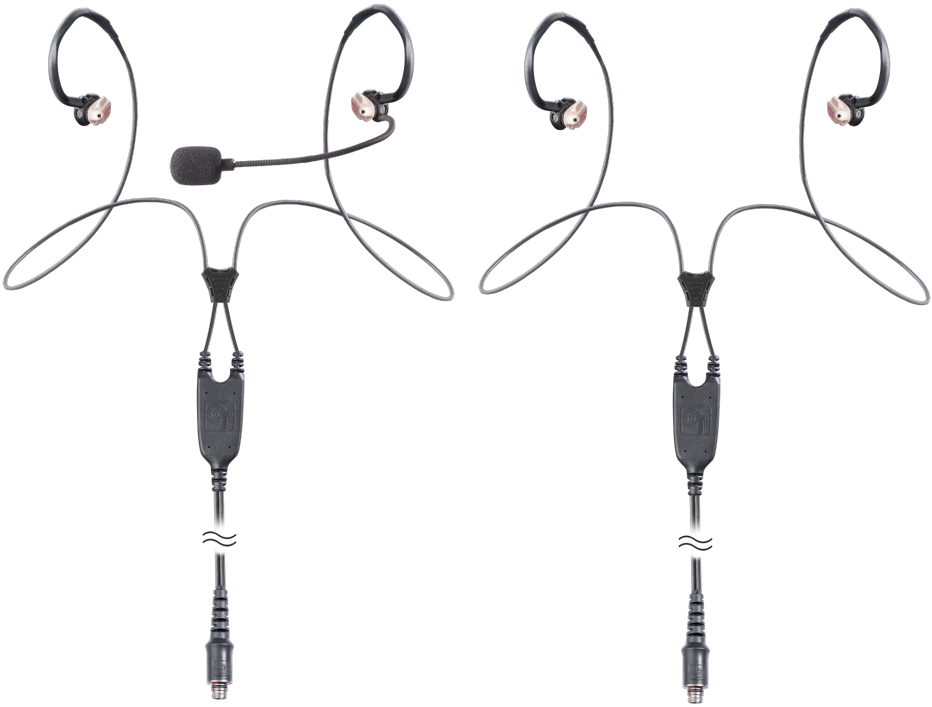
EN

CT-ClipCom Digital CL

Product instructions

CEOTRONICS
when it counts

Contents



1 Safety notices

⚠ DANGER

Immediate hazardous situation. Results in death or serious injury.

⚠ WARNING

Potentially hazardous situation. May result in death or serious injury.

⚠ CAUTION

Potentially hazardous situation with minor or moderate injury.

NOTICE

Indicates a situation that, if not avoided, may cause damage to the product or other property. Used to indicate useful information for efficient and safe use of the product.

2 Introduction

The CT-ClipCom Digital CL is a binaural in-ear headset including level-dependent hearing protection for connection to a communication system.

The CT-ClipCom Digital CL protects against environmental noise and at the same time allows the use of connected communication devices.

The earphones or microphone-earpiece unit of the CT-ClipCom Digital CL are equipped with a microphone that allows for the reception of ambient noise from both sides (ASR).

The CT-ClipCom Digital can be connected to various control units and communication devices via the CT-ComLink® Red connector.

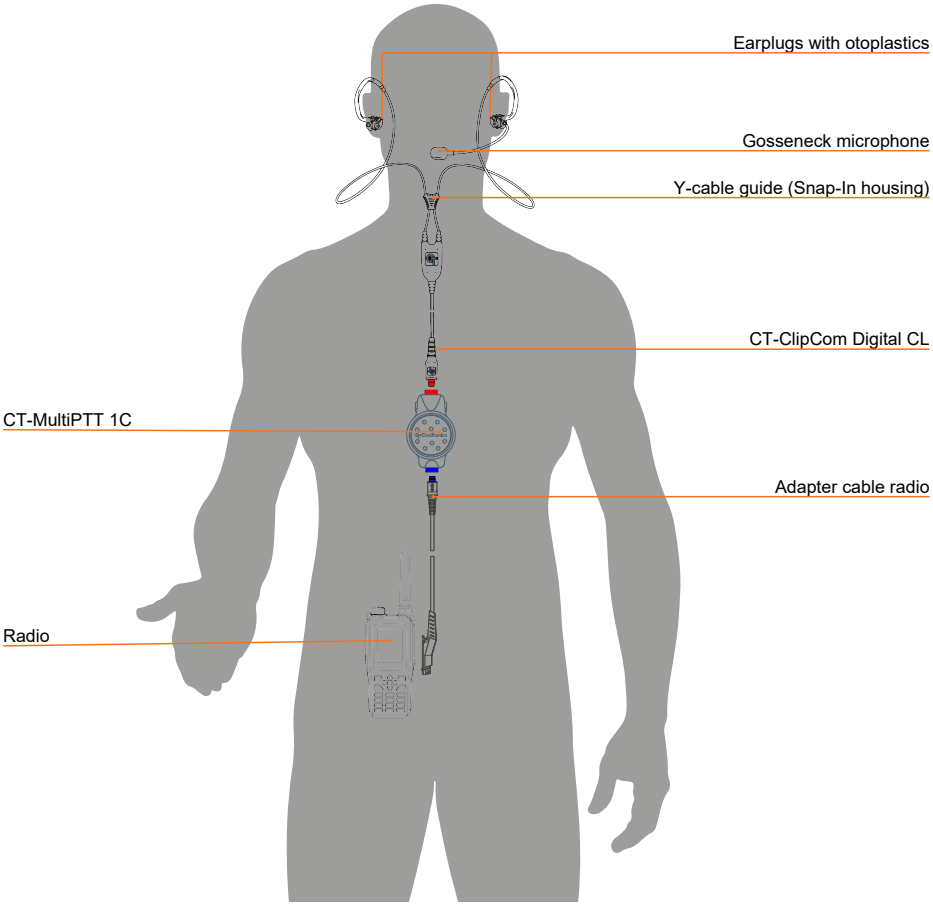
The in-ear components can be worn either with custom-made earmoulds or with universal earplugs.

In both cases, integrated electronics protect the hearing from loud and harmful external noises. These are then transmitted to the hearing in a noise-reduced manner.

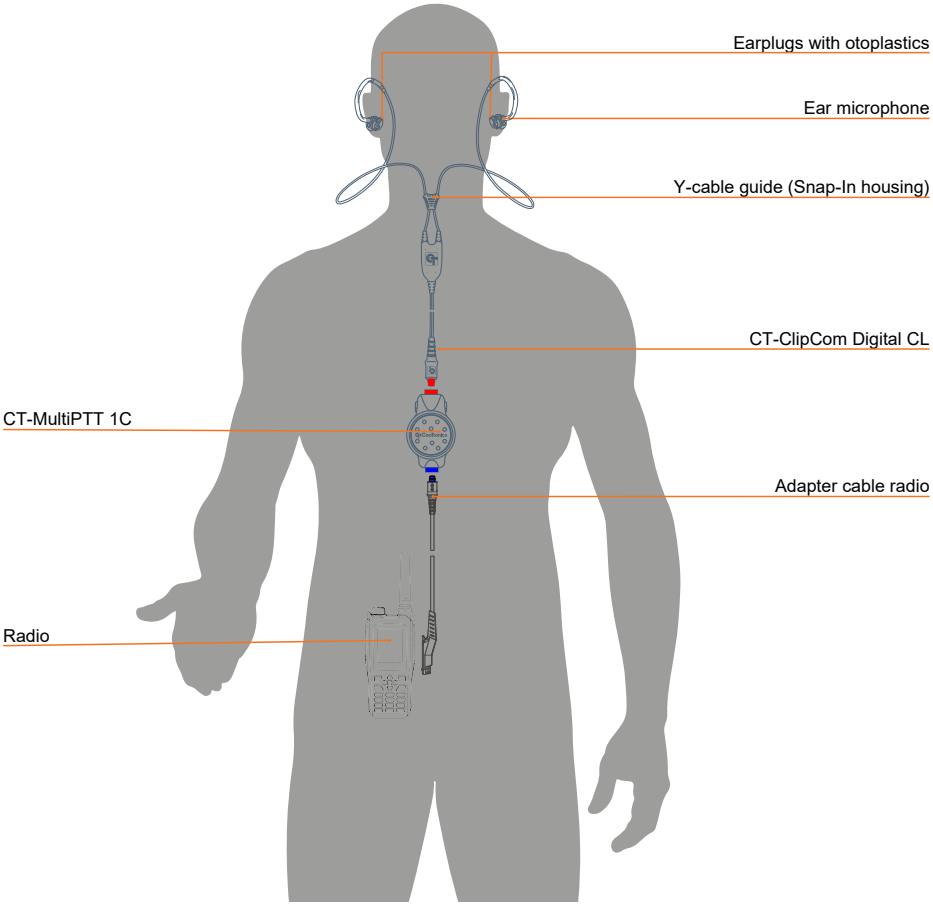
3 Product description

3.1 Example of configuration

Goosneck microphone



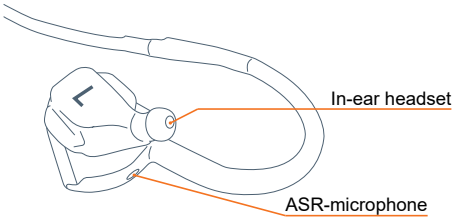
Ear microphone



3.2 In-ear headset

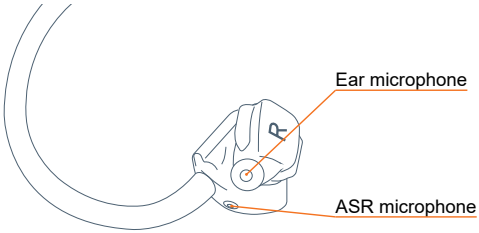
The Ambient Sound Reception (ASR) microphone is located on the in-ear headset.

The in-ear headset is worn by placing it in an individual otoplastic or earplug.



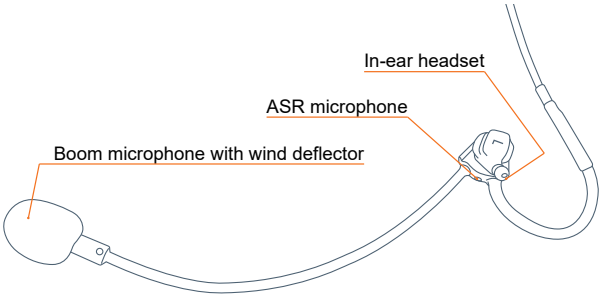
3.3 In-ear headset with in-ear microphone

The in-ear microphone and the ASR microphone are located in the in-ear headset. The in-ear headset is worn by placing it in an individual otoplastic or earplug.



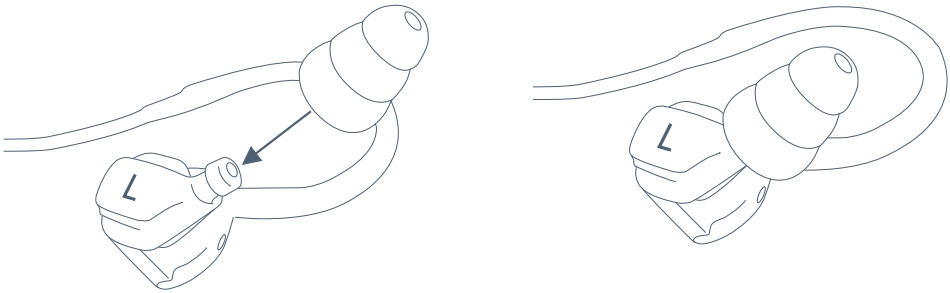
3.4 In-ear headset with boom microphone

The in-ear headset includes the boom microphone with wind deflector and the ASR microphone. The in-ear headset is worn by inserting it into an individual otoplastic or an earplug.

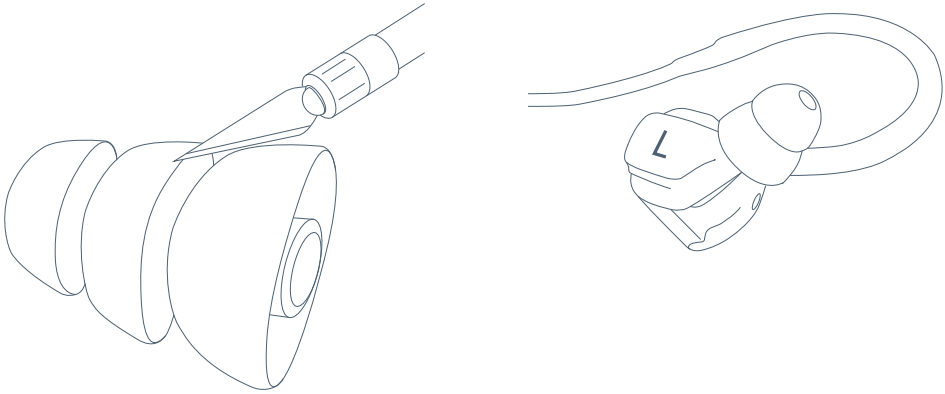


3.5 Universal three-stage earplug

The earplug serves to adapt the in-ear headset to the ear canal. It is “pushed onto” the in-ear headset with a twisting movement.



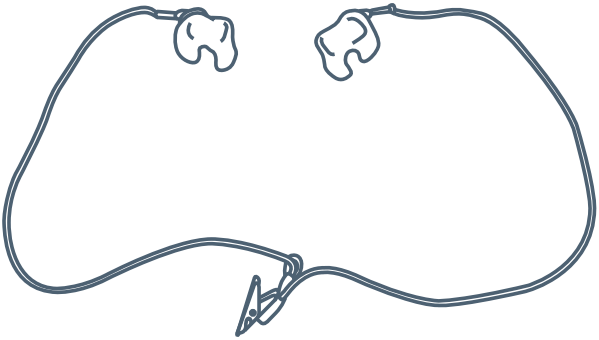
Insert the earplug into the ear canal by moving it up and down. After being inserted, the earplug should not fall out of the ear canal of its own accord or as a result of slight head movements. If the earplug does not sit perfectly in the ear because it is too large, the biggest lamellar ring can be cut off with a sharp blade – but the centre bar must remain.



We recommend replacing the earplugs after a maximum of 2 years.

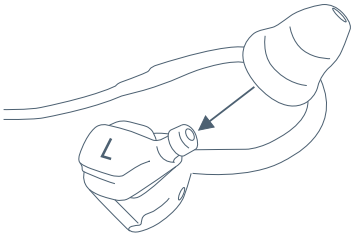
3.6 Dummy plugs

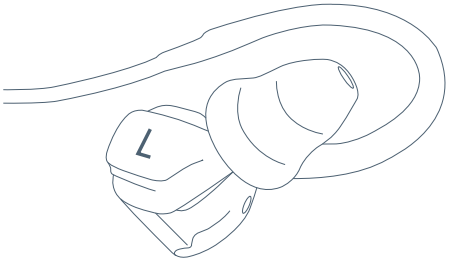
The CT-ClipCom dummy plugs are used instead of the CT-ClipCom Digital CL in combination with individual CT-ClipCom ear moulds. The dummy plugs protect the user from noises with a high high sound level. This product can be be used when only hearing protection is needed and no communication device is required.



3.7 Universal foam earplugs

The foam earplug serves to adapt the in-ear headset to the ear canal. It is pushed onto the earpiece. After being pushed on, it can take 1 to 2 minutes before the foam earplug reacquires its original shape.





Insert the foam earplug into the ear canal by moving it up and down. It is not necessary to roll the foam earplug.

Check it is sitting correctly by gently pushing the CT-ClipCom Digital CL into the ear. After that, the CT-ClipCom Digital CL should not fall out. Before use, check the foam earplug for wear and replace if necessary.

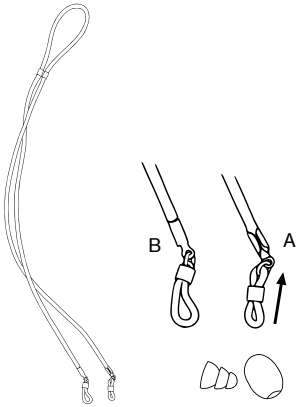
For daily use, we recommend replacing the foam earplug on a weekly basis.

3.8 Preparation

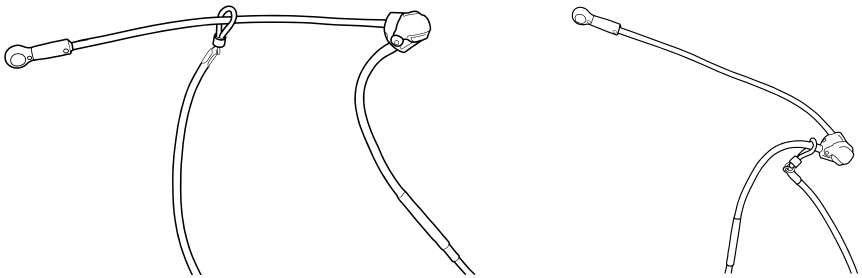
3.8.1 Lanyard

The lanyard is used to wear the CT-ClipCom Digital CL around the neck. The lanyard must be slid over the ear microphone/ earpiece and/or boom microphone of the CT-ClipCom Digital CL before use.

First enlarge the passage of the rubber rings before mounting from figure A to figure B by moving the plastic sleeve.

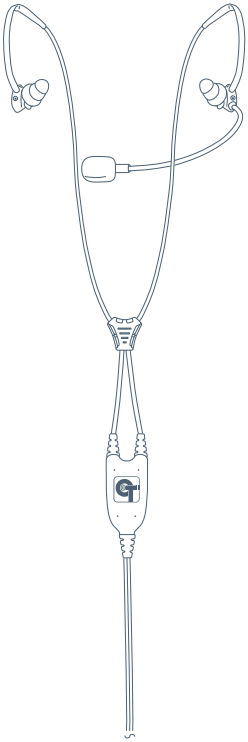


Then pull the rubber ring over the boom microphone and/or the ear microphone/ earphone. Pulling it over the ear microphone/ earphone may require a lot of force.



3.8.2 Y-Cable guide (Snap-In housing)

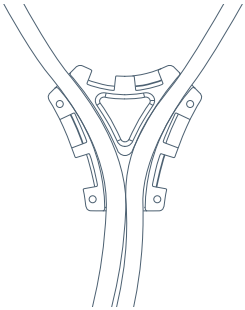
The CT-ClipCom Digital CL is provided with a clip in the factory. This clip can be attached by the user as required. It is used to better guide the cables and to decouple noise caused by friction of the cables, which is unintentionally passed on to the speaker by the cables.



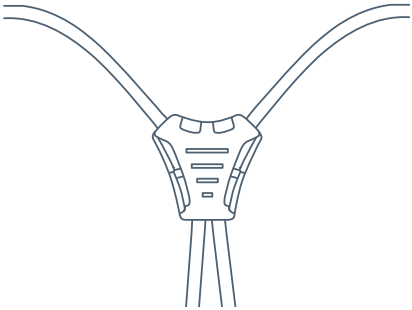
Attach

To attach the clip, proceed as follows:

1. Lay one side of the clip on a level surface and position the two cables in the two guides provided.

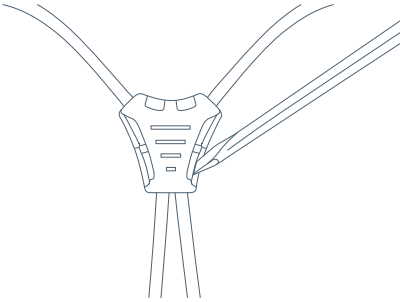


1. Then position the second half of the casing on the lower half and press the two halves together.



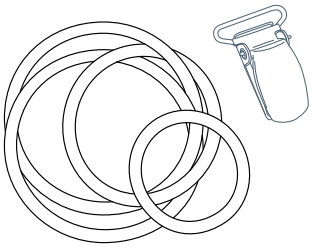
Remove

To remove the housing, prise the housing open using a suitable screwdriver. Use the small slots on the side of the housing for this.

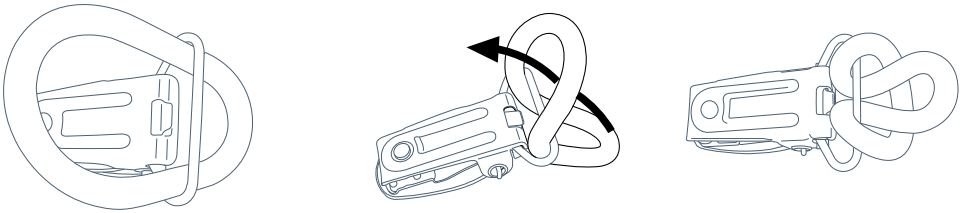


3.8.3 Cable fixing set

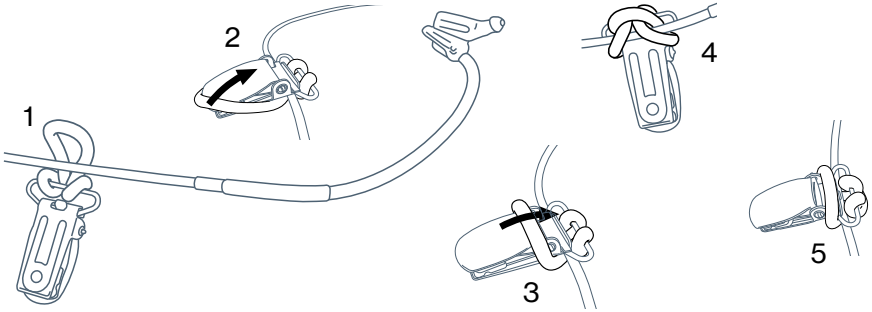
The cable fixing kit consists of a clamp and 4 different flexible rubber rings. It is used to attach various products to the user's clothing. The following pictures show an example of attachment to a CT-ClipCom Digital.



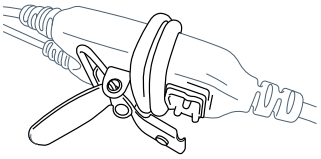
Attachment of a flexible ring to the clamp.

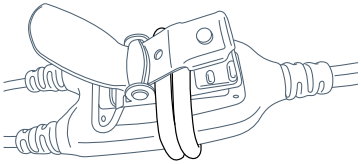


Fastening the clamp to the cable of the CT-ClipCom Digital with the smallest rubber ring.

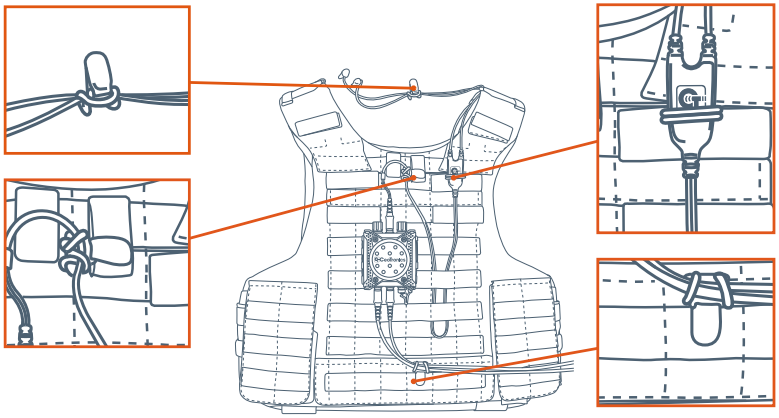


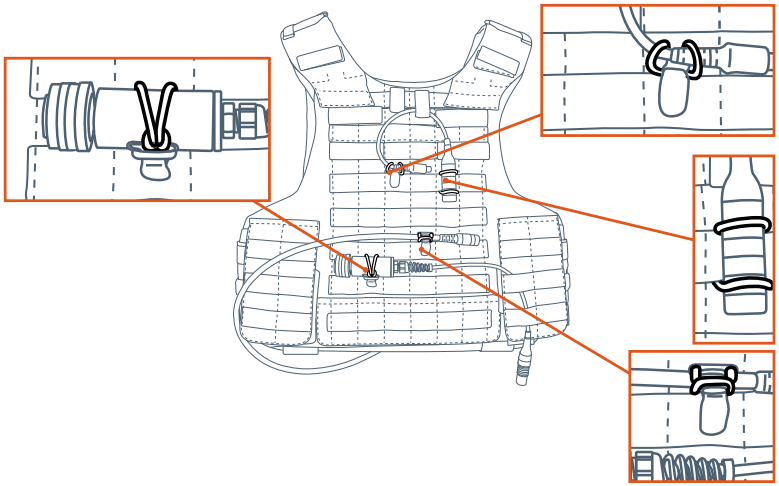
Fastening the clamp to the housing of the CT-ClipCom Digital with the second smallest rubber ring.





This following illustration shows various attachment options on a protective vest.





4 Information on personal protective equipment (PPE)

This product is certified as personal protective equipment by:

PZT GmbH (Nominated Office No.: 1974)

Bismarckstrasse 264 B

26389 Wilhelmshafen/Germany

PZT GmbH also carries out annual monitoring of the quality assurance system.

Only products with the following labelling are certified as protective equipment in accordance with the EC-type examination certificate.

CeoTronics AG hereby declares that the hearing protectors are in accordance with Directive 2014/30/EU and with Regulation (EU) No. 2016/425. The products are identified with CE_{1974}.

The declaration of conformity can be downloaded from the following Internet address:

https://www.ceotronics.com/de/service/ce-konformitaetserklaerungen/index.html.

4.1 Transport

Only use suitable packaging (e.g.: original packaging) for transporting the product. It protects the product from physical/chemical damage and contamination.

4.2 Fit testing

When the headset is used properly, the optimal insulating effect is achieved when your own voice sounds hollow and ambient noises sound quieter and muted. Also observe the operating instructions for the moulded earpieces with regard to the intervals for fit testing.

4.3 Materials

Otoplastics: Silicone

Earplugs: Silicone

All materials remain visibly undamaged after cleaning according to the procedure specified in the instructions.

The parts of the hearing protectors that may come into contact with the skin are stainless, soft and flexible. The materials have no detrimental health effects for the wearer during the period of use.

This product may be damaged by certain chemical substances. Further information should be requested from the manufacturer.

4.4 Important safety instructions for the PPE

⚠ WARNING

Make sure the product is assembled, adjusted and maintained in accordance with the instructions in the operation manual.
Wear the product continuously in noisy areas. Sudden or rapid removal of the hearing protection may cause damage to the eardrum.
Do not remove the plug from the ear by pulling the connection cable.
Regularly check the product for damage. Failure to comply with the safety instructions listed above may seriously reduce the protective effect of the product.

5 Information on the hearing protector

Manufacturer:	CeoTronics AG
Model designation of product group:	CT-ClipCom Digital CL
Model designation of products:	CT-ClipCom Digital BoomMike L/ CT-ComLink®R Short designation: CLIP-D-BML-CLR
	CT-ClipCom Digital EarMike R/CT-ComLink®R Short designation: CLIP-D-EMR-CLR

5.1 Conformity with standards

The hearing protection meets the requirements of European standards EN 352-2:2020+A1:2024, EN 352-9:2020+A1:2024 and EN 352-7:2020. It was developed, manufactured and tested according to the state of the technology and pursuant to DIN EN ISO 9001.

5.2 General technical data

Mass without accessories:

CLIP-D-EMR-CLR	52 g
CLIP-D-EMR-CLR	50 g

5.3 Size ranges

Note: Hearing protection in accordance with EN 352-2:2020+A1:2024 is offered in the sizes “S”, “M” and “L”.

5.4 Sound insulation values

The values APV, H, M, L, and SNR were determined pursuant to EN ISO 4869-2:2018 with the parameter α =1.

5.4.1 Silicone earplugs 7/12 mm

	SNR	H	M	L
Average (dB)	29.1	28.7	26.9	27.6
Standard deviation (dB)	5.5	5.5	5.4	5.5
Value (dB)	24	23	22	22

Frequency [Hz]	Sound insulation [dB]	Standard deviation [dB]	APV [dB]
63	28.3	4.8	23.5
125	30.3	6.0	24.3
250	30.4	6.1	24.3
500	29.6	7.7	21.9
1000	25.7	5.5	20.2
2000	30.0	5.3	24.7
4000	31.7	7.0	24.7
8000	33.2	7.7	25.5

5.4.2 Foam earplugs 6/13 mm

	SNR	H	M	L
Average (dB)	31.8	32.8	28.9	27.8
Standard deviation (dB)	4.4	3.4	4.9	5.2
Value (dB)	27	29	24	23

Frequency [Hz]	Sound insulation [dB]	Standard deviation [dB]	APV [dB]
63	26.5	4.7	21.8
125	27.9	5.2	22.7
250	27.4	6.1	21.3
500	28.1	6.5	21.6
1000	28.6	6.1	22.5
2000	33.2	3.4	29.8
4000	39.1	5.7	33.4
8000	43.2	5.9	37.3

5.4.3 Otoplastics individual

	SNR	H	M	L
Average (dB)	29.3	29.8	26.5	26.8
Standard deviation (dB)	3.6	3.4	3.7	4.1
Value (dB)	26	26	23	23

Frequency [Hz]	Sound insulation [dB]	Standard deviation [dB]	APV [dB]
63	24.9	5.1	19.8
125	28.2	5.1	23.1
250	27.8	5.4	22.4
500	28.0	5.9	22.1
1000	25.0	3.8	21.2
2000	31.9	4.5	27.4
4000	33.3	5.1	28.2
8000	36.6	5.3	31.3

5.4.4 Moulded earpieces with dummy plugs

	SNR	H	M	L
Average (dB)	29.4	29.6	26.9	26.7
Standard deviation (dB)	2.8	2.1	3.6	3.5
Value (dB)	27	28	23	23

Frequency [Hz]	Sound insulation [dB]	Standard deviation [dB]	APV [dB]
63	24.3	3.4	20.9
125	26.4	5.7	20.7
250	27.9	3.4	24.5
500	27.9	4.7	23.2
1000	25.8	5.0	20.8
2000	31.5	3.5	28.0

Frequency [Hz]	Sound insulation [dB]	Standard deviation [dB]	APV [dB]
4000	33.2	5.3	27.9
8000	38.2	8.3	29.9

5.5 Sound pressure level and duration of use

⚠ WARNING

Hearing damage
The output sound pressure level of the communication device of this hearing protector can exceed the limit value.
This product must not be used for entertainment purposes, as the output level is not limited to the level considered harmless.

This hearing protector is equipped with a communication device. The user should verify proper operation before use. If distortions or failures are observed, the user should follow the manufacturer's maintenance recommendations.

Requirement: The electrical input signal level is to be determined, in which the sum of the average plus a standard deviation of the A-rated sound pressure level of all 16 ears equivalent to the diffuse sound field is equal to 82 dB.

Result electrical input signal level

Otoplastics	Earplugs
54,5 mV (-21,4 dBm)	49,0 mV (-23,9 dBm)
The measurement result was determined according to EN 352-9:2020+A1:2024.	

Sound pressure level and period of use

Otoplastics	Earplugs
Maximum SPL: 99,0 dB(A) at 953,0 mVrms (1,8 dBm) input level	Maximum SPL: 99,3 dB(A) at 953,0 mVrms (1,8 dBm) input level
Period of use for the maximum input signal corresponding to an A-weighted equivalent diffuse field-related SPL of 82 dB(A) over 8 h Period of use:	
0,16 h at 953,0 mVrms	0,15 h at 954,0 mVrms

5.5.1 Earplugs

Input voltage	dBm	-33.2	-28.2	-23.2	-18.2	-13.2	-8.2	-3.2	1.8	**Criterion level (dBm)**
Input voltage	mV	17	30	54	95	170	302	536	953	
Average	dB(A)	69.5	74.7	79.7	84.7	89.9	94.3	95.8	96.3	-20.9
Standard deviation	dB(A)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Average + Standard deviation +3 dB		**72.6**	**77.7**	**82.7**	**87.7**	**92.9**	**97.3**	**98.8**	**99.3**	
Average + Standard deviation +3 dB										**-23.9**
										49.2 mV

The period of use is determined on the basis of the measurement results pursuant to EN 352-9:2020+A1:2024.

5.5.2 Otoplastics

Input voltage	dBm	-33.2	-28.2	-23.2	-18.2	-13.2	-8.2	-3.2	1.8	**Criterion level (dBm)**
Input voltage	mV	17	30	54	95	170	302	536	953	
Average	dB(A)	68.7	73.4	78.4	83.3	88.3	92.9	95.1	95.9	-19.5
Standard deviation	dB(A)	1.5	1.8	1.9	1.9	1.9	1.7	1.1	0.7	1.9
Average + Standard deviation +3 dB		72.0	76.9	81.9	86.9	91.9	96.4	98.3	99.0	
Average + Standard deviation +3 dB										**-23.1**
										54.5 mV

The period of use is determined on the basis of the measurement results pursuant to EN 352-9:2020+A1:2024.

5.6 Level-dependent hearing protection

This hearing protector is provided with level-dependent sound insulation.

⚠ WARNING

Hearing damage
The output sound pressure level of the circuit built into this hearing protector for level-dependent sound insulation can exceed the daily limit values.

Criterion level

Foam earplugs 6/13 mm	
H-value	111 dB(A)
M-value	107 dB(A)
L-value	106 dB(A)

Silicone earplugs 7/12 mm	
H-value	106 dB(A)
M-value	105 dB(A)
L-value	105 dB(A)

Otoplastics individual	
H-value	108 dB(A)
M-value	105 dB(A)
L-value	104 dB(A)

6 Marking

Type designation	CT-ClipCom Digital CL
Model designation:	CT-ClipCom Digital EarMike R/CT-ComLink®R Short description: CLIP-D-EMR-CLR CT-ClipCom Digital BoomMike L/CT-ComLink®R Short description: CLIP-D-BML-CLR
Manufacturer	CeoTronics AG Adam-Opel-Str. 6 63322 Rödermark Germany

Body label and Flag label

CT-ClipCom Digital BoomMike L /
CT-ComLink® R (civil version)

CT-ClipCom Digital EarMike R /
CT-ComLink® R (civil version)

CT-ClipCom Digital BoomMike L /
CT-ComLink® R (NATO version)

CT-ClipCom Digital BoomMike L /
CT-ComLink® R (BMI version)

CT-ClipCom Digital EarMike R /
CT-ComLink® R (NATO version)

CT-ClipCom Digital EarMike R /
CT-ComLink® R

CT-ClipCom Digital BoomMike L /
CT-ComLink®

Blank ear plug (civil version)

7 Operation

7.1 Connection and operation

Connect the CT-ClipCom Digital CL with the CT-ComLink® Red (CLR) plug to the CLR socket of a CT-MultiPTT or a CT-DECT Multi. CLR socket of a CT-MultiPTT or a CT-DECT Multi.

For further operation, please refer to the respective operating instructions for these products.

7.2 Ambient sound reception (ASR)

The CT-ClipCom Digital CL is equipped with level-dependent sound muting.
Ambient sound reception is performed via the microphone in the CT-ClipCom Digital CL headsets. It can be controlled via compatible operating units (e.g. CT-MultiPTT 3C) and compatible communication devices (e.g. CT-DECT Multi M7). See the corresponding operating instructions.

Power supply

The power for the ASR function is supplied through the externally connected communication device. The user should check flawless function before use. The performance is also dependent on the power supply. Therefore, make sure that the power supply is guaranteed. If necessary, replace the battery/rechargeable battery of the device.

Controlling

Adjustment takes place in 4 steps ring circuit. Switching between them is signalled by tones.

Activity	Amplification/attenuation	Signalling
Basic setting:	0 dB	(natural hearing sensitivity)
1 clic	+6 dB	3 short tones
2 clic	OFF	1 long tone
3 clic	-10 dB	1 short tone
4 clic	Jump back to 0 dB (basic setting)	2 short tones

8 Maintenance and care

8.1 Inspecting devices

Routinely inspect your CeoTronics devices, especially cables and connectors, for damage and wear and have them repaired, if necessary.

8.2 Cleaning

Clean your CeoTronics device with a suitable cloth moistened with clean water. If necessary, you can also use a mild soap solution, e.g. in the form of a hand dishwashing detergent or the following cleaning agents:

- Sterillium® classic pure
- Sterillium® med
- Bacillol® plus

Clean the contacts of the plug connectors with a commercially available contact cleaning agent.

8.3 Storage

After use, store the cleaned CT-ClipCom Digital CL in a clean and dry place at normal room temperature and humidity. It is generally recommended to store the product in the carrying bag (packaging unit) before and after use.

Only store the product and accessories in the supplied carrying bag.

The product is suitable for a storage temperature range of -40 °C to +80 °C.

9 Accessories/hygiene parts

Description	Article No.	NSN
Dummy plug	6015038	4240-12-400-9882
Lanyard	6015048	5975-12-382-7396
Cable fixings set	6096187	5340-12-416-0529
Earplug (lamella-shaped), ClipCom, MOQ 10 pcs	6015017	5930-12-372-9006
Foam earplugs 3M™ Peltor™ CCCGRM-25	6015053	6515-12-414-6876
Y-cable guide (Snap-In housing)	6096188	5340-12-416-0531

For the procurement of accessories and hygiene parts, please contact the CEOTRONICS AG sales department.

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10 Abbreviations and terms

Abbreviation/term	Explanation
ASR	Ambient Sound Reception
BM	Boom Microphone
CL	CT-ComLink®
CLB	CT-ComLink® B B = blue is usually used to connect a communication device or the CT-InlinePowerPack
CLR	CT-ComLink® R R = red is usually used to connect a headset
EM	Ear Microphone
SPL	Sound Pressure Level

Notes

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