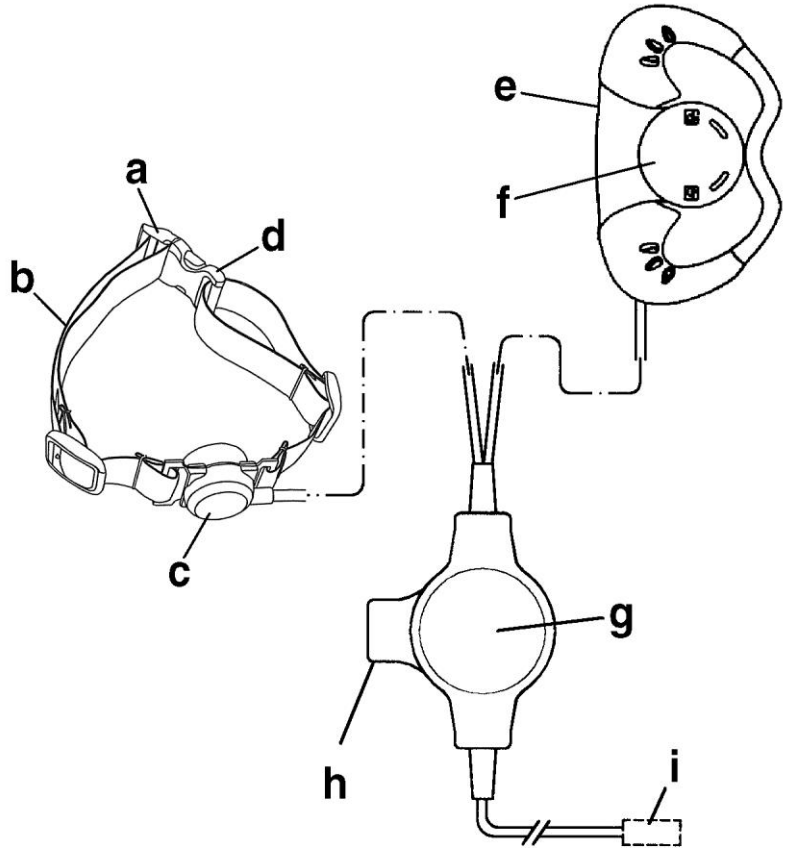
Hear/speak system PTT/Ex-*

CT-Throatmike and Earphone with Earhanger

Operating Instructions

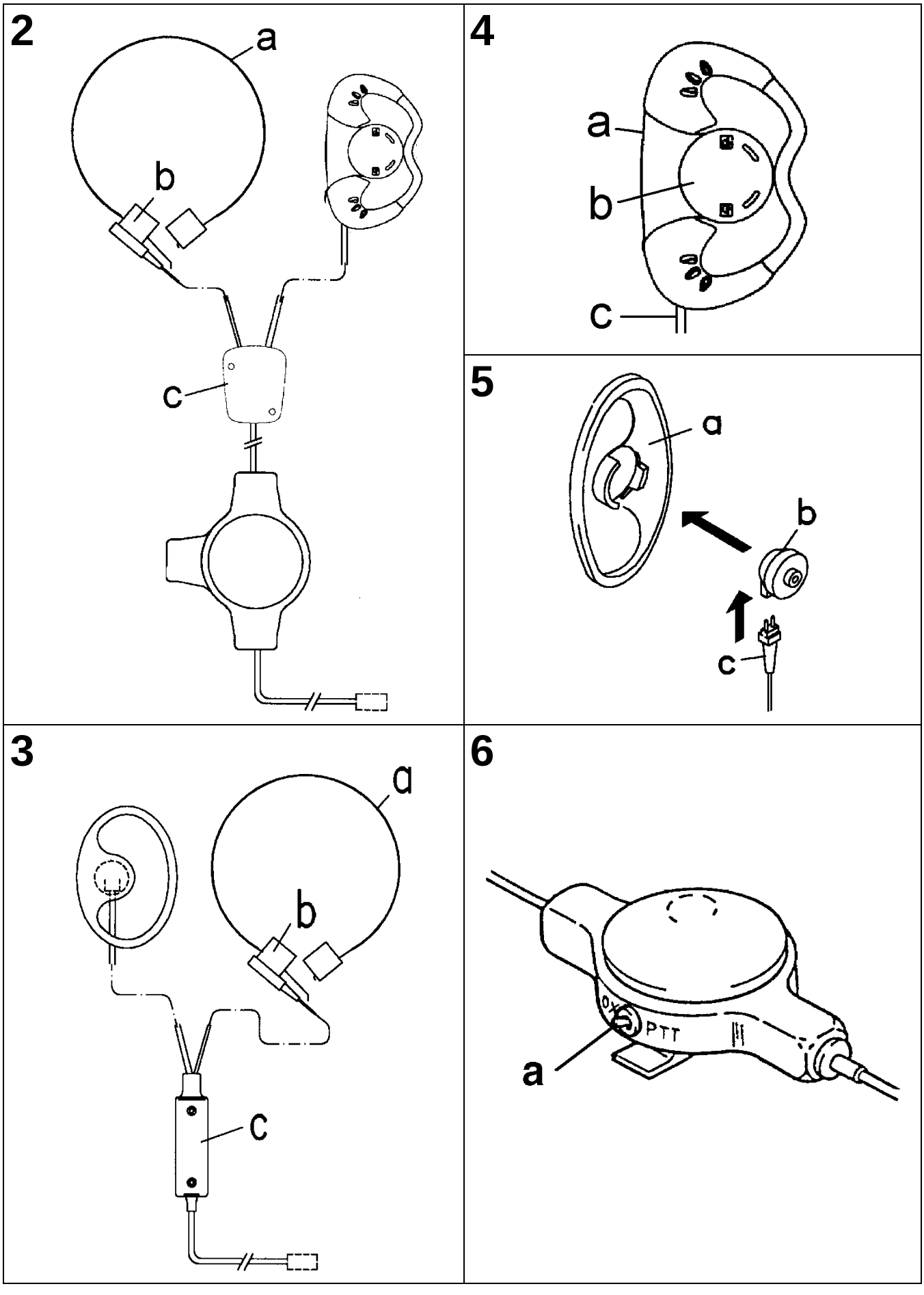
1



English

Revision: 03/1015 DOK 0600-be

Contents


2
a
b
c
4
a
b
c
5
a
b
c
3
a
b
c
6
PTT
a

1. Legend to Fig. 1: Throatmike and earphone with earhanger – standard version

a Snap fit
b Elastic adjustable stretch necklet
c Throatmike
d Snap fit
e Flexible earhanger
f Earphone, permanently fixed to the earhanger
g PTT button
h Fixing clip
i Connection cable and connection plug (accessory)

2. Important safety instructions

For the use of the device notice the national safety and accident prevention regulations and the following safety instructions shown in italics in this instruction manual.

- *Before using CeoTronics products read completely the appropriate operating instructions. If in doubt, ask our technical staff.*
- *If repair work of any kind needs to be done to CeoTronics products, arrange for it to be performed only by the company CeoTronics or by a specialized workshop that is authorized by CeoTronics. In all other cases our warranty and liability for the product shall lapse.*
- *Do not store CeoTronics products outside or in damp ambient conditions but keep them always clean and dry at normal atmospheric humidity. CeoTronics products must not be stored in areas with temperatures above +80° C, e.g. in summertime on the rear window shelf of a car. If not otherwise indicated on the product, the following temperature ranges are allowed for intrinsically safe CeoTronics products: for operation -20 to +40° C, for storage -40 to +80° C.*
- *Do not immerse a CeoTronics product into water, if it is not expressly specified for this purpose.*
- *When using CeoTronics products that are equipped with connection leads ensure that the latter do not get caught up in operational machinery or wheels!*
- *Muffs with a high degree of passive noise attenuation are used for CeoTronics headsets with headset muffs. If not stated otherwise, it is our experience that the passive noise attenuation of the headset muffs is reduced by approx. 3 dB due to the electronics that are integrated into the headset muffs. As a rule no empirical values are available for non-standard products.*

  Information to noise attenuation values, which result from representative measurements of a named place, are to be regarded as orientation values, which cannot be guaranteed, if no "Type Examination Certificate" is present.

  Note that it acts with electronic communication systems of CeoTronics, <u>not</u> around "Personal Protective Equipment" in the sense of the "PPE Directive 89/686/EEC", if not differently indicated.

  At very high noise levels that exceed the passive protective effect of the headset muffs we recommend that ear plugs be worn as an additional measure. If in doubt, ask your safety officer or company doctor. Best noise attenuation exists only if the muff padding is in perfect condition. This should be replaced at the latest after every 6 months of use.
- *In the case of headsets with headset muffs that protect against harmful ambient noise and that are not equipped with additional electronics for level-limited ambient sound reception, take heed that the audibility of warning signals, warning calls etc. is also impaired!*
- *Intrinsically safe (explosion-proof) CeoTronics products are used wherever potentially explosive atmospheres – e.g. explosive gases or vapours in conjunction with air – exist or can be present. For intrinsically safe CeoTronics products the special "Ex" advises in this manual have to be respected.*
- *CeoTronics products that are not intrinsically safe (explosion-proof) and therefore have no special explosion-proof designation must never be operated in potentially explosive environments (e.g. when refuelling cars, aircraft etc.). Devices that are not explosion-proof can trigger off explosions in such areas !*
- *Connect CeoTronics accessories to a device or disconnect them from a device only when the device is switched off. In the case of intrinsically safe products (explosion-proof) this must always take place outside of the potentially explosive area. Otherwise the consequence could be an explosion!*
- *For safety reasons reception volumes in excess of 85 dB(A) are possible with a whole series of CeoTronics products. However, these can be regulated by the user. After switching on the communication system, set the reception volume to approx. 1/2 the available loudness volume and then test the audible volume, e.g. by opening the squelch on the radio set.*

  Do not set the volume any higher than is necessary. A very high volume setting can lead to damaged hearing, particularly if it is continuous.

- *Do not leave CeoTronics products lying around loose in cars, e.g. on the parcel shelf. Stow these products in a suitable, safe place in the car so that they do not present a danger to you or to other occupants of the car, if emergency braking is effected.*
- *When driving a car, do not use the radio because it may distract you from the other traffic. Never use a CeoTronics product (headset, insert earphone, induction receiver etc.) that will impair your hearing.*
- *Keep CeoTronics products and rechargeable batteries out of the reach of children and any other persons who are not familiar with the handling and operation thereof.*
- *Packaging materials, e.g. filling materials and plastic bags are not toys and have to be kept out of the reach of children. There is a risk of children ingesting them and choking!*
- *Safe operation requires clean devices. Ensure that the devices (microphones, connectors etc.) are clean and in good condition at all times.*
- *CeoTronics products may only be used for the specific application envisaged.*
- *Should equipment, supplied by CeoTronics, be definitely put out of service you may return it to CeoTronics.*

We ensure recycling and/or disposal of outdated equipment in compliance with the applicable environment protection law.

- *Keep these operating instructions for later use.*

3. Brief description

The throatmike communication system, consisting of throatmike and earphone with earhanger, is preferably used in conjunction with protective suits, helmets and masks. Depending on the usage requirements various versions are available:

- Throatmike (Fig. 1/c) with an elastic stretch necklet (b) that is adjustable to the neck size of the wearer (standard version)
- Throatmike (Fig. 2-3/b) with flexible and padded metal harness (a) instead of stretch necklet
- Earphone (Fig. 4) with flexible earhanger (a), earphone (b) permanently fixed to the earhanger and cable (c) permanently fixed to the earphone
- Earphone (Fig. 5) with solid earhanger (a), earphone (b) clicked into the earhanger and cable (c) connected to the earphone by plug connection
- Throatmike communication system with additional connection housing (Fig. 2/c)
- Throatmike communication system with additional matching unit (Fig. 3/c) to match the throatmike communication system to a communication device, without a PTT button, because transmitter keying is be effected on the communication device
- PTT button (PTT = push-to-talk) with an additional selector switch (Fig. 6/a) for VOX (voice activated transmitter keying) or PTT (manual transmitter keying) in connection with a two-way radio with VOX function

The connection plug of the throatmike communication system is in some cases not included in the supply and depents on the two-way radio respectively the communication device.

In the case of the communication headset individual components like microphone and/or speaker and/or PTT button can be left out optional, so that e.g. a microphone/speaker combination without PTT button or a speaker results.

As a rule the power for the communication headset is supplied by the radio set or communication device.

4. Information concerning explosion proofness

4.1 Equipment

Model designation:	PTT/Ex-1 or PTT/Ex-2
User group:	Skilled electricians and trained personnel according to national Safety and Accident Prevention Rules

4.2 General

This CeoTronics product is also available as an intrinsically safe version for deployment in explosion hazard areas. It conforms to the European standards for intrinsically safe products (ignition protection type "i") and meets the requirements of protection class Ex ib IIB T4 respectively Ex ib IIC T4. For the explosion-proof class please refer to the explosion-proof marking on the product. Use the product only in explosion hazard areas that do not require a higher protection class than that specified. If in doubt ask your safety officer or superior.

Before using this product please read the explosion hazard instructions carefully and comply with the explosion hazard instructions in order to avoid any risk whatsoever of an unintended explosion.

4.3 Conformity with standards

This intrinsically safe product meets the requirements of the European standards EN 60079-0 and EN 60079-11. It has been developed, manufactured and tested in compliance with the state of the art and in conformity with DIN EN ISO 9001.

4.4 Product liability

We expressly draw attention to the fact that any repair, modification or exchange of components whatsoever – including plugs and cables – may be effected only by CeoTronics or by specialized operations that are authorized by CeoTronics. In all other cases our warranty and liability for the product shall lapse automatically and shall pass to the party who/that occasioned such action.

4.5 Use of intrinsically safe equipment

When connecting intrinsically safe CeoTronics products to another intrinsically safe device, do not fail to take heed of the explosion-proof class on the explosion-proof marking on the CeoTronics product and of the electrical limit values. The use of a CeoTronics product that has no explosion-proof marking or that has one which has become illegible, is strictly prohibited in explosion hazard areas!
Electrical limit values: Only if the electrical limit values of the CeoTronics product are complied with by the other intrinsically safe device, is deployment in an explosion hazard area allowed. If you do not know the electrical limit values at the connection socket of the other device, get in contact with the supplier or manufacturer of that device.

Different protection classes: When interconnecting explosion-proof devices and explosion-proof accessories of different classes of protection, the resulting protection class is always the lower one of those specified on the explosion-proof device or explosion-proof accessory of this system.

4.6 Markings

Manufacturer:	CeoTronics AG
Type designation:	PTT/Ex-1 or PTT/Ex-2
Protection class:	Ex ib IIB T4 or EEx ib IIC T4
Certification number:	TÜV 03 ATEX 2124
Marking in conformity with EC Directives 94/9/EC:	CE 0035 Ex II 2 G

Example cable flag *front*

back

4.7 General technical specifications

Ambient temperature:	-20 to +40 °C
Degree of protection	≥ IP 20 (in some cases ≥ IP 40)

4.8 Electrical specifications

PTT/Ex-1

maximum input voltage:	$U_i \leq 10$ V

maximum input current:	I_i ≤ 1.5 A
maximum input wattage:	P_i ≤ 14 W
Effective internal capacity:	C_i Negligible
Effective internal inductivity:	L_i Negligible

PTT/Ex-2

maximum input voltage:	U_i ≤ 3.9 V
maximum input current:	I_i ≤ 400 mA
maximum input wattage:	P_i ≤ 1.56 W
Effective internal capacity:	C_i Negligible
Effective internal inductivity:	L_i 10 µH

4.9 Electrostatic charging

The device is partially made of non-conductive plastic material. It is especially designed to ensure that, if appropriately used, no inadmissible electrostatic charge could occur (gas group IIB respectively IIC).

Comply with the following instructions to avoid electrostatic charging. Otherwise an explosion could be caused:

1. ***The headset must never be exposed to friction while being worn in explosion hazard areas.***
2. ***Headsets with an external PTT button – Fasten the PTT button by means of the clip on its rear side to a suitable place on your clothing so that no electrostatic charging can occur, e.g. by the PTT button rubbing on your clothing.***

   Accommodate a PTT button without a clip inside your clothing (e.g. in a pocket in your clothing) so that no electrostatic charging can occur, e.g. by the PTT button rubbing on your clothing.
3. ***The headset must be cleaned only outside of explosion hazard areas.***

4.10 Installation

For installation & operation apply authoritatively the national Safety and Accident Prevention Rules, the state-of-the-art technology, and the present operating instructions.

Take heed of the following instructions:

1. ***Only explosion-proof assemblies with the same type marking (PTT/Ex-1 or PTT/Ex-2) may be interconnected.***
2. ***Other CeoTronics products or products of third-party manufacturers that are coincidentally equipped with the same plug connectors must never be combined with PTT/Ex-1 respectively PTT/Ex-2 products.***

4.11 Explosion hazard instructions

If the following instructions for explosion hazard instructions are not complied with, the consequence could be a explosion!

(1) This intrinsically safe CeoTronics equipment is not suitable for use in category 1 (zone 0).

(2) Operate this intrinsically safe CeoTronics equipment only in compliance with its intended use and in an undamaged and clean condition.

(3) The performance of any modifications to intrinsically safe CeoTronics equipment is prohibited.

(4) If this CeoTronics equipment has faults of any type whatsoever, remove it immediately from the explosion hazard area.

(5) An intrinsically safe CeoTronics equipment may be connected to and disconnected from an intrinsically safe device (e.g. radio set) only outside of the explosion hazard area. This means, e.g. that an explosion-proof radio set, an explosion-proof rechargeable radio battery and an explosion-proof CeoTronics equipment must always be connected to a communication system outside of the explosion hazard area and must be introduced into the hazardous area in an interconnected state only!

5. Putting into operation and operation

WARNING

For PTT/Ex take heed of sections 4.9, 4.10, 4.11.

First of all clear up whether the earphone should be worn on the left or on the right ear, if you use an earphone with solid earhanger (Fig. 5/a). Fig. 5 shows an example for the left ear. For wearing the earphone on the other ear the earhanger has to be turned through 180 degrees. In the case of an earphone with flexible earhanger (Fig. 4/a) the side where the earphone can be worn is determined, because the earphone is permanently fixed to the earhanger.

a. **Only valid for earphone with a solid earhanger (Fig. 5):** Connect the connection cable with the miniature plug (c) to the earphone (b). Click the earphone into the earhanger (a).
b. **Throatmike with stretch necklet (Fig. 1):** The stretch necklet (b) is adjustable to the neck size of the wearer and closed and opened by a hook (d) and eye (a) clasp. Place the stretch necklet around the neck, fix it, and position the mike (c) to the throat.

   Throatmike with flexible padded metal harness (Fig. 2 and 3): Place the harness (a) around the neck and position the mike (b) to the throat.
c. Place the earhanger over the ear.
d. Fix the PTT button (Fig. 1/g) with the clip (h) to a proper fixing point of your clothing. Connect the throatmike communication system via the connection cable and connection plug (i) to the radio or to the communication device.
e. **Transmitting and receiving:**

   ### ➔ NOTE

   Valid only for communication headsets in conjunction with a PTT unit and radio set.

   Switch on the radio or the communication device. Adjust the receive volume for the earphone on the radio or communication device for your personal comfort but not to a level higher than necessary. Excessive receive volumes over long periods can damage your hearing. For the radio or the communcation device please notice the operating instructions of the manufacturer.

   PTT operation – manual transmitter keying: Press the PTT button and keep the PTT button pressed for transmitting (speaking). You can speak while the PTT button is pressed. Release the PTT button for standby/reception (listening).

   VOX operation – voice activated transmitter keying: On the PTT button (Fig. 6) set the selector switch VOX/PTT (a) to the VOX position. When you speak the radio switches over automatically to transmission. When you have finished speaking it switches back over automatically to standby/reception.
f. **End of work:** Switch off the radio or the communication device and disconnect the throatmike communication system.

6. "Channel busy" signalling (option)

In conjunction with compatible two-way radios with the feature for "channel busy" signalling the CeoTronics communication headset can be equipped with a tone generator. The tone generator resides usually in the inline PTT button or in the radio adapter respectively in the radio plug. If the channel is busy and you press the PTT button an acoustic signal is audible via the speaker of the communication headset.

7. Safekeeping – storage

After use store the cleaned throatmike communication system in a clean and dust-free place. It may only be stored in internal rooms with normal temperature and normal relative air humidity.

8. Maintenance – repair

⚠ ATENTION!

In general the intrinsically safe PTT/Ex* is maintenance-free. However, the body of the PTT/Ex* should be inspected before every use whether it is faultless and intact (protection class ≥ IP 20).

⚠ WARNING

To avoid static charging, intrinsically safe devices must never be cleaned in the explosion hazard area – a explosion could be the consequence (see section 4.9 "Electrostatic charging").

8.1 Visual inspections

Examine the devices and in particular the cables and plug connectors regularly for signs of fractures, cracks and wear. Send defective devices to CeoTronics for repair.

8.2 Cleaning

⚠ CAUTION

Do not immerse the devices in water. No moisture may be allowed to penetrate the devices.
Do not use any solvents (benzine, alcohol, etc.) for cleaning purposes !

Remove any loose dust with a soft brush. Clean the outside with a suitable clean cloth that has been slightly moistened with clear water, and rub the parts dry afterwards. If heavily soiled, some dishwashing liquid can be used in addition.

For routinely cleaning of the earphone we recommend the use of the special cleaning tissues, Part No. 60 98 296, delivered in a packing of 10 pieces.

If necessary, clean the contacts of the connection plug with a commonly available contact cleaning agent.

EC-Type Examination Certificate TÜV 03 ATEX 2124

Translation

(1) **EC-TYPE EXAMINATION CERTIFICATE**

(2) Equipment or protective system intended for use in potentially explosive atmospheres **- Directive 94/9/EC**

(3) EC-Type Examination Certificate Number

TÜV 03 ATEX 2124

(4) Equipment: Hear/speak system type PTT/Ex-*

(5) Manufacturer: CeoTronics AG

(6) Address: D-63322 Rödermark, Adam-Opel-Str.6

(7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The TÜV NORD CERT GmbH & Co. KG, TÜV CERT-Certification Body, notified body number N° 0032 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential report N° 03 YEX 550549.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50 014: 1997 **EN 50 020: 2002**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment or protective system must include the following:

II 2 G EEx ib IIB T4 or EEx ib IIC T4

TÜV NORD CERT GmbH & Co. KG
TÜV CERT-Certification Body
Am TÜV 1
D-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Hanover, 2003-05-16

Head of the Certification Body

TÜV NORD CERT

TÜV CERT A4 10.02 10.000 Lö

page 1/2

(13) **SCHEDULE**

(14) **EC-TYPE EXAMINATION CERTIFICATE N° TÜV 03 ATEX 2124**

(15) Description of equipment

The hear/speak system type PTT/Ex-* is used for the remote-control of radio devices or similar communication systems which may also be cable-bound.
Differently marked and external modules must not be combined. The hear/speak system type PTT/Ex-* is realized in several versions e.g. also integrated in different ear muffs.

The gas group in dependence on the ear muff type of has to be taken from the table:

Type	Gas group
Viking	IIC
Mark 12	IIC
AS/AM	IIB
LAS/LAM	IIB
Optime I	IIB
Optime II	IIB
Optime III	IIB

Electrical data

Supply circuit (plug) — in type of protection Intrinsic Safety EEx ib IIC
only for the connection to a certified intrinsically safe circuit

The maximum values in dependence on the type have to be taken from the table:

Type	U_i	I_i	P_i	L_i	C_i
PTT/Ex-1	10 V	800 mA	8 W	≈ 0	≈ 0
PTT/Ex-2	3,9 V	400 mA	1.56 W	10 µH	≈ 0

(16) Test documents are listed in the test report No.: 03 YEX 550549.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

BA 02 03.02

Translation

1. SUPPLEMENT to

EC TYPE-EXAMINATION CERTIFICATE No. TÜV 03 ATEX 2124

of the company: CeoTronics AG
Adam-Opel-Str.6
D-63322 Rödermark

In the future, the hear/speak system type PTT/Ex-* may also be manufactured according to the test documents listed in the test report.

The amendments concern the alternative design of the ear muff “AS/AM” and “LAS/LAM” with the helmet attachment type “Kombi S”.

The electrical data and all other data apply unchanged for this supplement.

The marking for this model is:

II 2 G EEx ib IIC T4

Test documents are listed in the test report N° 03 YEX 550724.

TÜV NORD CERT GmbH & Co. KG
TÜV CERT-Certification Body
Am TÜV 1
D-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Hannover, 2003-08-07

Head of the
Certification Body

BA 02 03.02

Translation

2. SUPPLEMENT to

EC TYPE-EXAMINATION CERTIFICATE No. TÜV 03 ATEX 2124

of the company: Ceotronics AG
Adam-Opel-Str.6
D-63322 Rödermark

In the future, the Hear/speak system type PTT/Ex-* may also be manufactured according to the test documents listed in the test report.

The amendments concern the electrical data of the type PTT/Ex-1.

Electrical data

Supply circuit (plug)	in type of protection Intrinsic Safety EEx ib IIC only for the connection to a certified intrinsically safe circuit

The maximum values have to be taken from the table:

Type	U_i	I_i	P_i	L_i	C_i
PTT/Ex-1	10 V	1.4 A	14 W	≈ 0	≈ 0

All further data apply unchanged for this supplement.

(16) Test documents are listed in the test report N° 03 YEX 550956.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

TÜV NORD CERT GmbH & Co. KG
TÜV CERT-Certification Body
Am TÜV 1
D-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Hannover, 2003-10-30

Head of the Certification Body

BA 02 03.02

Translation

3. SUPPLEMENT to

EC TYPE-EXAMINATION CERTIFICATE No. TÜV 03 ATEX 2124

of the company: CeoTronics AG
Adam-Opel-Str.6
D-63322 Rödermark

In the future the hear/speak system type PTT/Ex-* may also be manufactured according to the test documents listed in the test report.

The amendments concern the internal design.

The electrical data and all other data apply unchanged for this Supplement.

Test documents are listed in the test report N° 04 YEX 551353.

TÜV NORD CERT GmbH & Co. KG
TÜV CERT-Certification Body
Am TÜV 1
D-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Hanover, 2004-03-24

i.V. Schwedt

Head of the
Certification Body

BA 02.11.03

Translation

4. S U P P L E M E N T

to Certificate No.	**TÜV 03 ATEX 2124**
Equipment:	Hear/speak system type PTT/Ex-*
Manufacturer:	**CeoTronics AG**
Address:	Adam-Opel-Str. 6 D-63322 Rödermark
Order number:	8000553432
Date of issue:	22.11.2006

Amendments:

In the future, the hear/speak system type PTT/Ex-* may also be manufactured and operated according to the test documents listed in the test report.

The amendments concern an additional device alternative “CT-Neckband” and a changed printed circuit board for the transmission key unit (PTT).

The electrical data and all other data apply unchanged for this supplement.

The equipment incl. of this supplement meets the requirements of these standards:

EN 50 014:1997+A1+A2 **EN 50 020:2002**

(16) The test documents are listed in the test report No. 06 YEX 553432.

(17) Special conditions for safe use

no additional ones

(18) Essential Health and Safety Requirements

none

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

Schwedt

Hanover office, Am TÜV 1, 30519 Hanover, Tel.: +49 (0) 511 986-1455, Fax: +49 (0) 511 986-1590

BA 02 07.06 1.000.000

P17-F-016 06-06

page 1/1

Translation

5. SUPPLEMENT

to Certificate No.	**TÜV 03 ATEX 2124**
Equipment:	Hear/speak system type PTT/Ex-*
Manufacturer:	**CeoTronics AG**
Address:	Adam-Opel-Str. 6 63322 Rödermark Germany
Order number:	8000553695
Date of issue:	2007-05-09

Amendments:

In the future, the hear/speak system type PTT/Ex-* may also be manufactured and operated according to the test documents listed in the test report.

The amendments concern the use of an other enclosure material and a changed printed circuit board.

The electrical data and all other data apply unchanged for this supplement.

The equipment incl. of this supplement meets the requirements of these standards:

EN 50014:1997 +A1 +A2 **EN 50020:2002**

(16) The test documents are listed in the test report No. 07203553695.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

Schwedt

Hanover office, Am TÜV 1, 30519 Hanover, Tel.: +49 (0) 511 986-1455, Fax: +49 (0) 511 986-1590

Translation

6. S U P P L E M E N T

to Certificate No.	**TÜV 03 ATEX 2124**
Equipment:	Hear/speak system type PTT/Ex-*
Manufacturer:	**CeoTronics AG**
Address:	Adam-Opel-Str. 6 63322 Rödermark Germany
Order number:	8000555258
Date of issue:	2009-06-08

Amendments:

In the future, the hear/speak system type PTT/Ex-* may only be manufactured according to the documents listed in the test report.

The amendments concern the connection data of the variant PTT/Ex-1, the internal construction, the marking and the instruction manual.

The marking is in future:

⟨Ex⟩ **II 2 G Ex ib IIB T4 resp. Ex ib IIC T4**

Technical Data:

PTT/Ex-1

Supply circuit ..... (plug)	in type of protection „Intrinsic Safety“ Ex ib IIB resp. Ex ib IIC only for the connection to a certified intrinsically safe circuit. Maximum values: U_i = 10 V I_i = 1.5 A P_i = 15 W The effective internal capacitance and inductance are negligibly small.

All other data apply unchanged for this supplement.

The equipment incl. of this supplement meets the requirements of these standards:

EN 60079-0:2006 **EN 60079-11:2007**

(16) The test documents are listed in the test report No. 09 203 555258.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

Schwedt

Hanover office, Am TÜV 1, 30519 Hanover, Tel.: +49 (0) 511 986-1455, Fax: +49 (0) 511 986-1590

Translation

7. S U P P L E M E N T

to Certificate No.	**TÜV 03 ATEX 2124**
Equipment:	Hear/speak system type PTT/Ex-*
Manufacturer:	**CeoTronics AG**
Address:	Adam-Opel-Str. 6 63322 Rödermark Germany
Order number:	8000556210
Date of issue:	2011-01-24

Amendments:

In the future, the hear/speak system type PTT/Ex-* may also be manufactured according to the documents listed in the test report.

The amendments concern an additional marking possibility of all product variants with a "cable flag", the supplement with two new headsets "CT HL-09" and "CT HL-19", in the version without transmission key optionally with enlarged ambient temperature range, as well as the enlargement of the ambient temperature range for the already certified headset "KKM/BOH" in the version as a pure earbud.

Technical data of the headsets „CT HL-09" and „CT HL-19"

PTT/Ex-1

Supply circuit ..... in type of protection „Intrinsic Safety" Ex ib IIC
only for the connection to a certified intrinsically safe circuit.

Maximum values: U_i = 10 V
I_i = 1.5 A
P_i = 15 W

The effective internal capacitance and inductance are negligibly small.

PTT/Ex-2

Supply circuit ..... in type of protection „Intrinsic Safety" Ex ib IIC
only for the connection to a certified intrinsically safe circuit.

Maximum values: U_i = 3.9 V
I_i = 0.4 A
P_i =1.56 W

Effective internal capacitance: negligibly small
Effective internal inductance: L_i = 10µH

The permissible ambient temperature range amounts to -20 °C ≤ T_{amb} ≤ +40 °C or for the headsets "CT HL-09" and "CT HL-19", in the version without transmission key as well as for the headset "KKM/BOH" in the version as a pure earbud -20 °C ≤ T_{amb} ≤ +60 °C, respectively.

All other data apply unchanged for this supplement.

The equipment incl. of this supplement meets the requirements of these standards:

EN 60079-0:2006 **EN 60079-11:2007**

(16) The test documents are listed in the test report No. 11 203 556210.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

Schwedt

Hanover office, Am TÜV 1, 30519 Hanover, Tel.: +49 (0) 511 986-1455, Fax: +49 (0) 511 986-1590

Translation

8. S U P P L E M E N T

to Certificate No.	**TÜV 03 ATEX 2124**
Equipment:	Hear/speak system type PTT/Ex-*
Manufacturer:	**CeoTronics AG**
Address:	Adam-Opel-Str. 6 63322 Rödermark Germany
Order number:	8000422324
Date of issue:	2013-07-03

Amendments:

In the future, the hear/speak sets „CT HL-09“ and „CT HL-19“ may also be manufactured according to the documents listed in the test report. For those types the Printed Circuit Board HL_Ex-1 is superseded by HL_Ex-6.

Furthermore the hear/speak sets „UKL“ and „GD“ for CT-MultiCom may be manufactured with other components so that a higher sound level can be achieved.

The permissible ambient temperature range amounts to -20 °C ≤ T_{amb} ≤ +40 °C or for the headsets “CT HL-09” and “CT HL-19”, in the version without transmission key as well as for the headset “KKM/BOH” in the version as a pure earbud -20 °C ≤ T_{amb} ≤ +60 °C, respectively.

Marking of the equipment:

⟨Ex⟩ II 2 G Ex ib IIC T4 Gb resp. Ex ib IIB T4 Gb or
II 2 G Ex ib IIC T4 resp. Ex ib IIB T4

All other data apply unchanged for this supplement.

The equipment incl. of this supplement meets the requirements of these standards:

EN 60079-0:2012 **EN 60079-11:2012**

(16) The test documents are listed in the test report No. 13 203 123806.

(17) Special conditions for safe use

none

(18) Essential Health and Safety Requirements

no additional ones

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

Herbert Peters

Hanover office, Am TÜV 1, 30519 Hanover, Tel.: +49 (0) 511 986-1455, Fax: +49 (0) 511 986-1590

Translation

9. S U P P L E M E N T

to Certificate No.	**TÜV 03 ATEX 2124**
Equipment:	Hear/speak system type PTT/Ex-*
Manufacturer:	**CeoTronics AG**
Address:	Adam-Opel-Str. 6 63322 Rödermark Germany
Order number:	8000441511
Date of issue:	2015-09-30

Amendments:
In the future, the hear/speak system may also be manufactured and operated according to the documents listed in the ATEX testing report.
The amendments concern an additional device model "CT-FlexCom" with the accompanying technical changes. The device model "CT-FlexCom" is intended to be mounted with different helmet attachment adapters to suitable fire helmets.
The device model "CT FlexCom" may be used in areas where explosive atmospheres caused by gases, vapors or mists may occur and where the use of equipment of category 2 is required.

Technical data of the device model „CT-FlexCom":
Supply circuit ..... in type of protection „Intrinsic Safety" Ex ib IIC
only for the connection to a certified intrinsically safe circuit.

Maximum values: U_i = 10.0 V
I_i = 1.5 A
P_i = 15.0 W

The effective internal capacitance and inductance are negligibly small.

Permissible range of ambient temperature:
$-20\ °C \leq T_a \leq +40\ °C$ / +60 °C (with / without push to talk button unit)

All other data apply unchanged for this supplement.

The equipment incl. of this supplement meets the requirements of these standards:
EN 60079-0:2012+A11:2013 **EN 60079-11:2012**

(16) The test documents are listed in the ATEX testing report No. 15 203 151682.

(17) Special conditions for safe use

none

9. Supplement to Certificate No. TÜV 03 ATEX 2124

(18) Essential Health and Safety Requirements

no additional ones

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, notified by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the notified body

Meyer

Hanover office, Am TÜV 1, 30519 Hannover, Tel.: +49 (0) 511 986-1455, Fax: +49 (0) 511 986-1590

Certificate No. 01100004023 (ISO 9001)

Certificate No. 01220004023 (ATEX)

Germany and International Sales

CeoTronics AG
Adam-Opel-Str. 6
63322 Rödermark
Tel. +49 6074 8751-0
Fax +49 6074 8751-676
E-Mail sales@ceotronics.com

USA/Canada/Mexico

CeoTronics, Inc.
512 South Lynnhaven Road, Suite 104
Virginia Beach, Virginia 23452
Tel. +1 757 549-6220
Fax +1 757 549-6240
E-Mail sales@ceotronicsusa.com

Spain

CeoTronics S.L.
C/Ciudad de Frias 7 y 9
Nave 19
28021 Madrid
Tel. +34 91 4608250 51
Fax +34 91 4603193
E-Mail ventas@ceotronics.es

Germany and International Sales

CT-Video GmbH
Gewerbegebiet Rothenschirmbach 9
06295 Lutherstadt Eisleben
Tel. +49 34776 6149-0
Fax +49 34776 6149-11
E-Mail ctv.info@ceotronics.com

Revision: 03/1015 • DOK 0600-be Subject to change