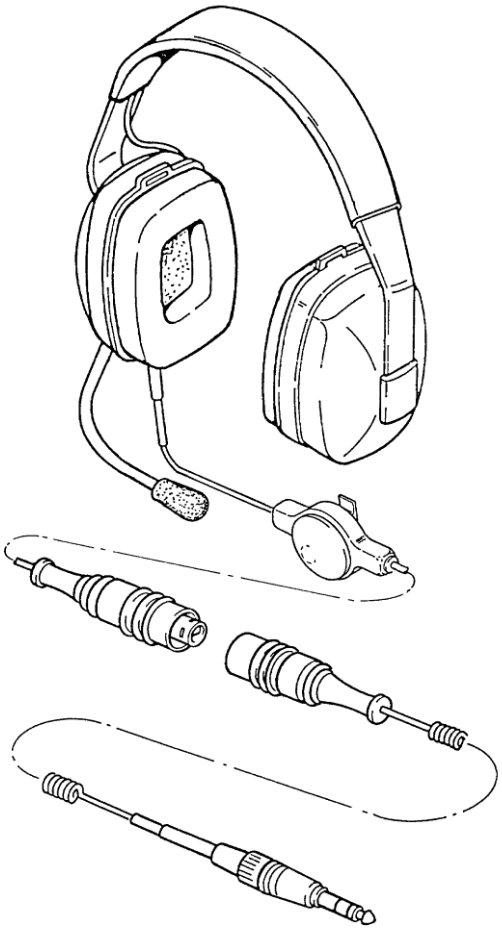
CeoTronics
Audio · Video · Data Communication

CT-GroundCom Headsets

Operating Instructions



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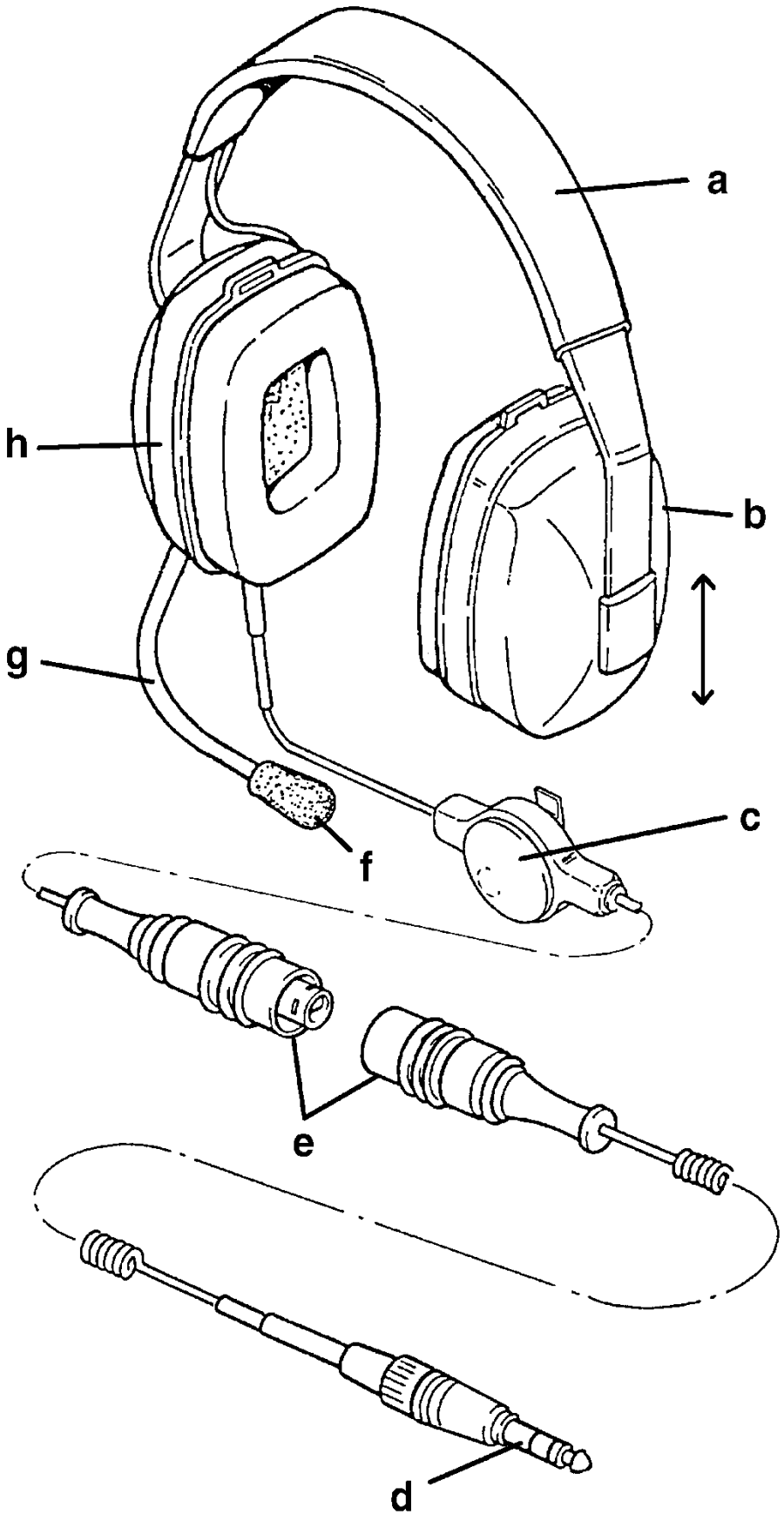

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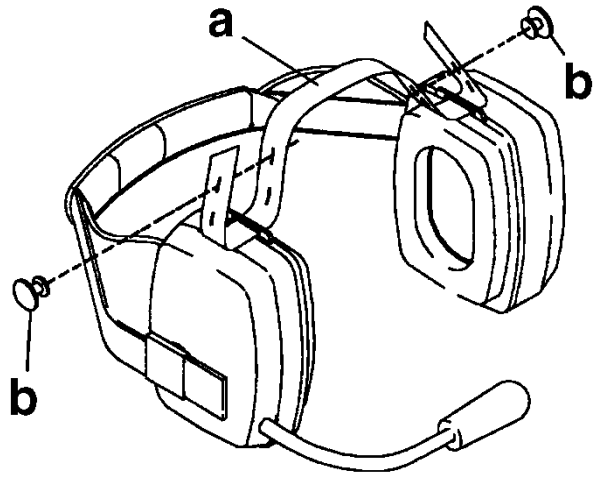

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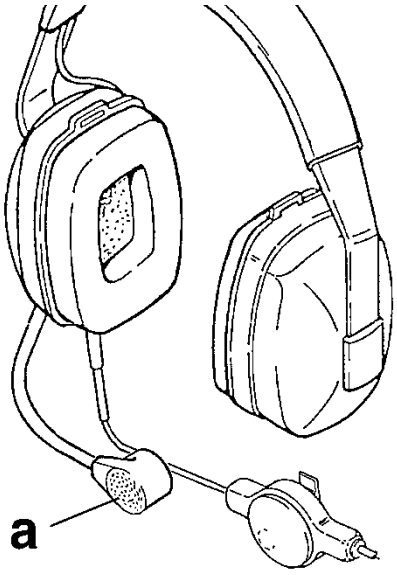

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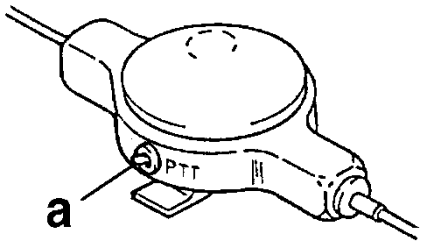

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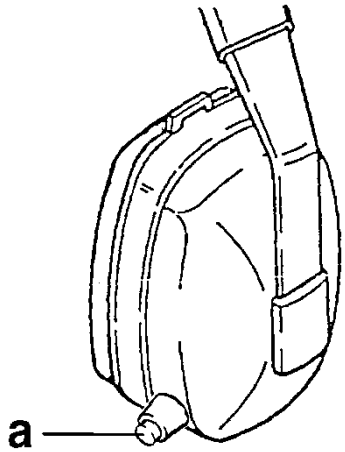

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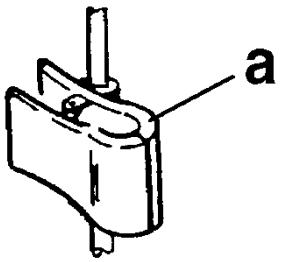

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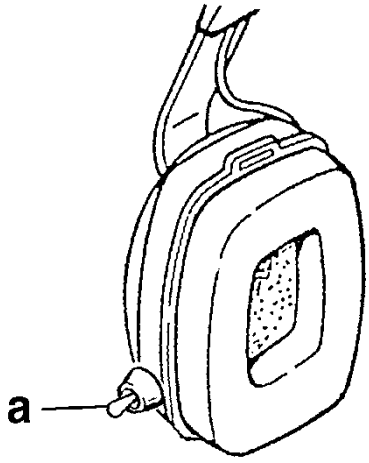

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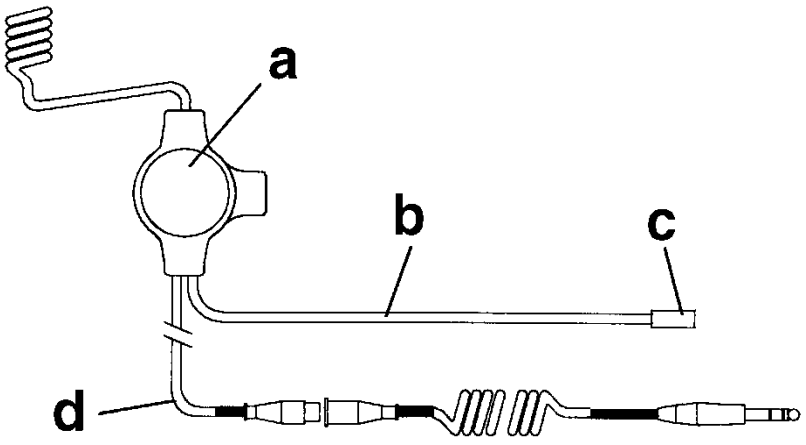

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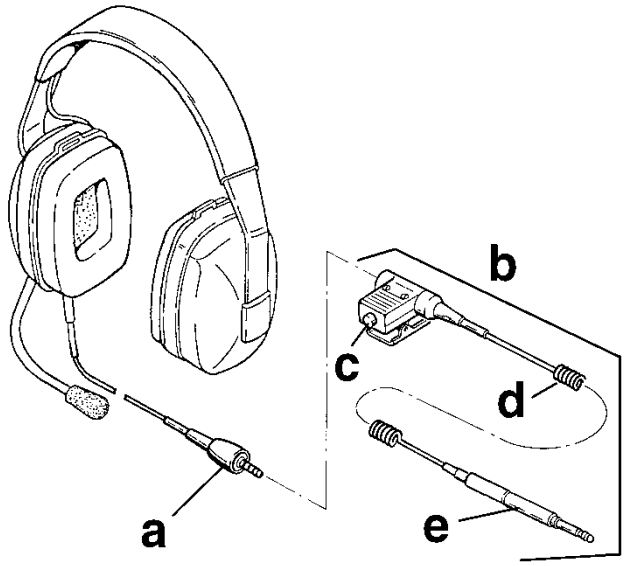

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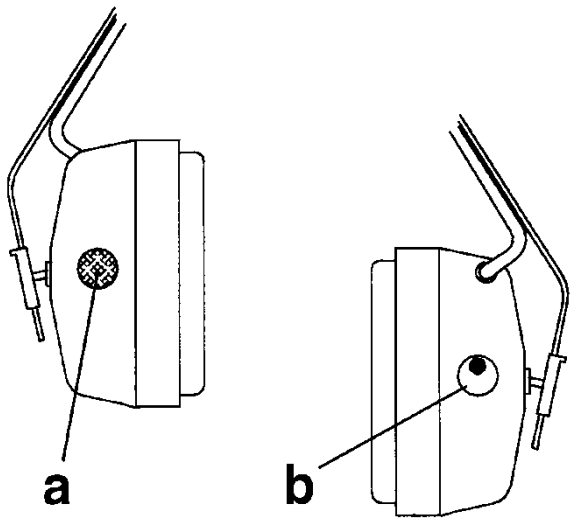

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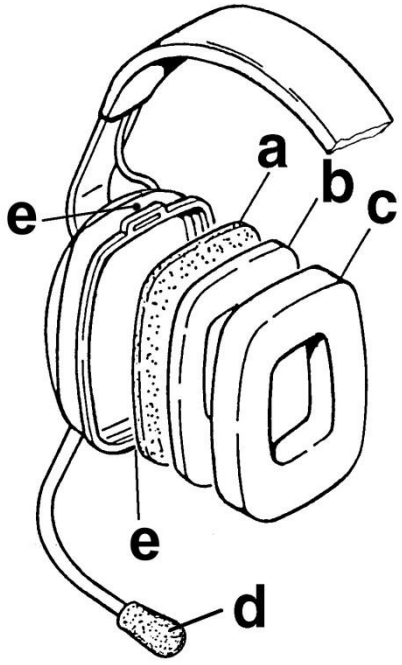

Key to Fig. 1: GroundCom Headset – standard model

a Adjustable headband
b Left-hand headset muff
c Inline PTT button with clip
d Connection plug (example)
e Safety connection
f Microphone and windshield
g Flexible microphone boom
h Right-hand headset muff

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. At all times keep them clean, dry and at normal air humidity. CeoTronics products must not be stored in areas with a temperature of over +80° C (+176° F), e.g. in the summertime on the parcel shelf of a car. If not stated otherwise, the following temperature ranges are allowed for CeoTronics products: -20 to +55° C (-4 to +131° F) for operation, -40 to +80° C (-40 to +176° F) for storage.*
- *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 !*
- *Type-tested headset 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. Full 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 !*
- *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 unintentionally 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.*
- *Keep CeoTronics products out of the reach of children and any other persons who are not familiar with the handling and operation thereof.*
- *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.*

1. Description

General: The GroundCom Headset with headset muffs protects against harmful ambient noise and allows cable-bound duplex intercom communication between the ground staff and the crew in the aircraft, e.g. for push-back operations, departure procedures, towing and service works. It is worn outside the aircraft and connected to the aircraft intercom connector on the outside of the aircraft. Depending on the usage requirements various headset versions are available.

In this operating instruction the mostly used GroundCom Headsets are described. The operation of other GroundCom Headsets is similar.

Speakers and microphone: The GroundCom Headsets are normally equipped with two dynamic speakers and can be delivered with electret or dynamic microphone. Mostly used is the noise cancelling electret near field response microphone with windshield and flexible microphone boom. Depending on the usage requirements, the microphone can be mounted to the right or left headset muff.

Connection cables and connectors: For connection of the headset to the aircraft intercom straight and/or coiled cables and various connectors are available.

PTT buttons: The GroundCom Headsets can be delivered with various PTT buttons (PTT = push-to-talk) or without PTT button. Mostly used are

- the inline PTT button in the connection cable between headset and aircraft intercom
- the PTT button on the right headset muff
- the 3-position PTT switch on the right headset muff

Other PTT buttons or GroundCom Headsets without PTT button are available also.

Safety connection: In the connection cable between headset and aircraft intercom is normally a weather resistant inline safety connection (Fig. 1/e). In case of a cable snag, the safety connection disconnects automatically at a definite tensile load.

Power supply: Power for the headset is supplied by the aircraft intercom.

2. Putting into operation and operation – standard model

a. **Connecting the headset:** At the outside of the aircraft open the access cover for the aircraft intercom. Connect the headset via the connection plug to the aircraft intercom system. The headset is ready for operation and you can listen in the intercom, when the aircraft intercom is workable.

b. **Put on the headset**. Take care for a perfect comfortable fit. Only when the ear cushions are properly located around the ears the best noise attenuation of the headset muffs is provided. Adjust the hight of each headset muff equally on both sides while holding the headband down until the ear cushions have a tight and comfortable fit. The headband should sit straight and comfortable on the top of the head.

c. **Wearing the headset with additional headstrap:** For quick body movements or unusual working positions or in conjunction with a protection helmet we recommend wearing the headset by means of the additional headstrap (Fig. 2/a) supplied. Pull the headstrap in accordance with Fig. 2 through the slits in the headset muffs and fasten it with the two fasteners (Fig. 2/b).

   Assembling the fasteners: Each fastener consists of two parts. If not assembled already ex-works, press the pin of the smaller part into the round opening of the larger part until it engages.

   Put on the headset, open out the headband to the rear and wear it as a neckband. Ensure that the headstrap and neckband are both firmly seated.

⚠ WARNING

Never twist the flexible microphone boom and never carry the headset by the flexible microphone boom. Do not use the microphone without windshield.

d. **Adjust the flexible microphone boom** so that the microphone is positioned at a distance of approx. 5 mm (0.2 in.) in front of your lips. Only then is optimal speech transmission provided with the best possible noise cancellation.

e. Fasten the inline PTT button with the clip on the rear to a suitable place on your clothing.

f. **Speaking:** Press the inline PTT button to switch on the headset microphone and keep the PTT button pressed. You can speak into the microphone while the PTT button is pressed and at the same time you can listen in the intercom. Release the PTT button to switch off the microphone.

g. **End of work:** Put down the headset and disconnect it from the aircraft intercom. Clean the outside of the headset thoroughly.

3. Safekeeping – storage

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

4. GroundCom Headset with dynamic microphone

GroundCom Headsets are also available with a dynamic, noise cancelling microphone (Fig. 3/a) and flexible microphone boom.

5. GroundCom Headset with selector switch PERMANENT/PTT integrated in the inline PTT button

GroundCom Hedasets are available with a selector switch for PERMANENT or PTT operation, which is integrated in an external inline PTT button (Fig. 4/a).

Switch position PTT: Press the inline PTT button to switch on the headset microphone and keep the PTT button pressed. You can speak into the microphone while the PTT button is pressed and at the same time you can listen in the intercom. Release the PTT button to switch off the microphone.
Switch position PERM.: The headset microphone is permanently switched on. You can speak and listen in the intercom as long as the switch is in this position.

6. GroundCom Headset with PTT button on the headset muff

GroundCom Headsets are available with PTT button (Fig. 5/a) integrated in the headset muff and located e.g. on the rear of the right headset muff.

Speaking: Press the PTT button to switch on the headset microphone and keep the PTT button pressed. You can speak into the microphone while the PTT button is pressed and at the same time you can listen in the intercom. Release the PTT button to switch off the microphone.

Fastening clip: GroundCom Headsets with PTT button integrated in the headset muff, are normally equipped with a fastening clip (Fig. 6/a) attached to the headset connection cable. Fasten the clip to a suitable fastening point on your clothing to protect the headset against tensile load.

7. GroundCom Headset with 3-position PTT switch

GroundCom Headsets are available with a 3-position PTT switch (Fig. 7/a) integrated in the headset muff. The switch can be located on the front or the rear of the right headset muff.

Neutral mid-position (listening): The headset microphone is switched off. You can listen in the intercom only.
Upper locking position (speaking and listening): The headset microphone is permanently switched on. You can speak and listen in the intercom.
Lower keying position (speaking and listening): By pushing the PTT switch downward the headset microphone is switched on. You can speak into the microphone while the switch is held in this position and at the same time you can listen in the intercom. As soon as you release the PTT switch, the switch goes back to the neutral mid-position.

Fixing clip: GroundCom Headsets with 3-position PTT switch integrated in the headset muff, are normally equipped with a fixing clip (Fig. 6/a) attached to the headset connection cable. Fix the clip to a proper fixing point of your clothing to protect the headset against tensile load.

8. GroundCom Headset with additional radio connection

GroundCom Headsets are available with an additional radio connection (Fig. 8/b) beside the intercom connection (see example Fig. 8/d). With that, two communication circuits are realizable:

- intercom communication
- radio communication in conjunction with a radio that is not encluded in supply

The incoming intercom and radio signals are audible in both headset muffs when the connections are established. The headset is connected to the radio by a radio plug which is available depending on the type of radio.

Connect the radio plug (Fig. 8/c) to the accessory socket of the radio or to the adaptor of the radio. Switch on the radio and adjust the receive volume on the radio for your personal comfort but not to a level higher than nencessary. Excessive receive volumes over long periods of time can damage your hearing. For operation of the radio please note the operating instructions of the radio manufacturer.

(1) Example: GroundCom Headset with inline PTT button and PTT button on the headset muff

Inline PTT button for intercom communication: Press the inline PTT button (Fig. 8/a) to switch on the headset microphone and keep the PTT button pressed. You can speak into the microphone while the PTT button is pressed. Release the PTT button to switch off the microphone.

PTT button on the headset muff for radio communication: Press the PTT button (Fig. 5/a) on the headset muff to switch on the headset microphone and to key the transmitter of the radio. You can speak into the microphone while the PTT button is pressed. After releasing the PTT button the headset microphone is switched off and the radio is on reception again.

(2) Example: GroundCom Headset with 3-position PTT switch and inline PTT button

3-position PTT switch (see Fig. 7/a) on the headset muff for intercom communication:

Neutral mid-position (listening): The headset microphone is switched off. You can listen in the intercom only.

Upper locking position (speaking and listening): The headset microphone is permanently switched on. You can speak and listen in the intercom.

Lower keying position (speaking and listening): By pushing the PTT switch downward the headset microphone is switched on. You can speak into the microphone while the switch is held in this position and at the same time you can listen in the intercom. As soon as you release the PTT switch the switch goes back to the neutral mid-position.

Inline PTT button for radio communication: Press the PTT button (Fig. 8/a) to switch on the headset microphone and to key the transmitter of the radio. You can speak into the microphone while the PTT button is pressed. After releasing the PTT button the headset microphone is switched off and the radio is on reception.

(3) Example: GroundCom headset with a PTT for intercommunication and another PTT for radiotelephone communication, integrated in a rectangular transmitting button

PTT button for intercommunication: Switch the headset microphone on by pressing the inline PTT button (figure 12/a).

PTT button for radiotelephone communication: Press the PTT button (figure 12/b) to switch the headset microphone on and to key the sender of the radio.

9. GroundCom Headsets with mute button for speaker signals

In the case of this GroundCom Headset, the speaker signals can be switched off by means of the mute button on the rear of the right headsetmuff. Press the mute button and keep the button pressed, to switch off the speaker signals. After releasing the mute button the intercom signals are audible again.

10. GroundCom Headsets with pluggable PTT unit

This GroundCom Headset (Fig. 9) is equipped with a pluggable PTT unit (b), consisting of PTT button (c), coiled cord (d), and intercom plug (e). Connect the plug (a) of the headset cable to the PTT button (c) and then connect the headset to the aircraft intercom.

Speaking: Press the PTT button to switch on the headset microphone and keep the PTT button pressed. You can speak into the microphone while the PTT button is pressed. Release the PTT button to switch off the microphone.

11. GroundCom Headsets with level-limited ambient sound reception

(1) General – Headsets with level-limited ambient sound reception (example Fig. 10) are used mainly where ambient sounds, warning signals etc. have to be heard alongside cable-bound communication. The external sounds are received by means of a microphone (a) on the front side of the headset muff and are audible inside this headset muff via the ambient sound speaker. If the external sounds exceed 85 dB(A), the sound level emitted to the ear by the ambient sound speaker is limited electronically to a maximum of 85 dB(A). Listening during cable-bound communication is effected as a rule by means of the speaker in the other headset muff.

(2) Switching On/Off and adjusting the volume for ambient sound reception – As a rule the ambient sound reception is switched on and off and volume controlled by means of an additional combined On/Off switch and volume adjuster (example Fig. 10/b) on the headset muff. Turning it clockwise increases the volume, turning it counter-clockwise reduces the volume.

(3) Power supply – operating durations – The electronics for ambient sound reception is fed by a 9 V battery or by a 9 V rechargeable battery in the headset muff in which the ambient sound microphone and the ambient sound electronics reside.

Operating duration with a new 9 V alkali manganese battery – Ambient sound reception approx. 270 hours.

Operating duration with a fully charged 9 V NiMH rechargeable battery – Ambient sound reception approx. 60 hours.

(4) Changing the 9 V battery – From the headset muff on which the microphone for the ambient sound reception is mounted remove the muff padding, the muff ring and the foam cover as described in section 12.4, step (2).

Pull the connector strip off the battery. Connect a new battery of the same type and with the same values to the connector strip and place the battery in the headset muff. When refitting the battery, ensure that the muff ring and the muff padding fully engage.

➔ **NOTE**

Batteries are subject to compulsory special waste disposal. Do not put them in the household waste !

(5) Charging rechargeable batteries – Headsets with a 9 V rechargeable battery are equipped with a charging socket which is closed off by means of a stopper. Before connecting the charger pull the stopper out of the charging socket and re-insert it again after charging.

Use only a charger supplied by CeoTronics to recharge the batteries. If you use a different charger, it may cause damage to the batteries. The charger is neither water-tight nor dust-tight and must be protected against water, rain and dirt. It may only be used in interior rooms with normal air humidity and at normal room temperature. Do not cover up the charger while it is charging. Avoid recharging the batteries several times consecutively without having discharged them in the meantime. The service life of the rechargeable battery can suffer from this.

12. Maintenance

12.1 Visual inspection

Regularly examine the device and in particular the headset muffs, ear cuhions, cable and plugs for signs of breakage, cracks and wear. Send any defective devices back to CeoTronics for repair. Replace any damaged or worn ear cushions in accordance with section 12.4 at the latest after 6 months of usage. If necessary, also change any dirty foam covers in the headset muffs.

12.2 Cleaning

⚠ WARNING

When cleaning ensure that no moisture is allowed to penetrate to the inside of the unit. Do no use any solvents (e.g. benzine, alcohol etc.).

Remove any loose dust with a soft brush. If necessary, clean the outside with a suitable clean tissue only **slightly** moistened with clear water and subsequently rub the unit dry again. If heavily soiled, a little dishwashing liquid can be used in addition. If necessary clean the plug terminals with a commonly available contact cleaning agent.

12.3 Replacing the microphone's windshield

Pull the windshield (Fig. 11/d) off the microphone and replace it.

12.4 Replacing the ear cushions and foam covers

(1) Ear cushion (Fig. 11/c): Pull the ear cushion off the headset muff and replace it. Ensure that the new ear cushion fully engages into the headset muff.

(2) Foam cover (Fig. 11/a):

⚠ WARNING

In some headset models the retaining ring is screwed together with the headset shell. These screws can only be removed with a Torx TX 7 screwdriver.

Remove the bolts between shell and retaining ring, if applicable (figure 11/e). Pull the ear cushion (c) off the headset muff. Hold the headset muff with one hand.

⚠ CAUTION

When removing the cover ring proceed with care so that you do not injure your fingers or break your finger nails.

Push four fingers of the other hand inside between the foam cover (a) and the cover ring (b). With your fingers pull the cover ring hard, but carefully, away from the headset muff and at the same time use your thumb to press the headset muff hard in the opposite direction. Change the foam cover. When reassembling, ensure that the cover ring and the ear cushion engage fully into the headset muff.

⚠ CAUTION

If the retaining ring was fastened with screws before replacing the foam cover, then secure it again with the two screws (e) after replacement. Use for it only the Torx TX 7 screwdriver.

13. Consumable parts

Designation and description	Article number
Hygiene set consisting of: 2 pcs. ear cushions, 2 pcs. cover foam, 2 pcs. windshield for electret near field response microphone	50 00 500
Ear cushions, 2 pcs.	50 00 501
Windshields for electret near field response microphone, 10 pcs.	50 02 201
Comfort set consisting of 25 pairs perspiration absorbers	40 10 025

Certificate No. 01100004023 (ISO 9001)

Certificate No. 01220004023 (ATEX)

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