

PREMIUM
ALPINE
PERFORMANCE



MANUAL

PIEPS iPROBE II

07.16
Firmware v1.0

ENGLISH

Table of content

1.	Introduction	3
1.1	Identification	4
1.2	Liability.....	4
1.3	Warranty conditions.....	4
1.4	Support	5
1.5	Intended use.....	5
1.6	Target group and previous knowledge.....	5
1.7	Operating limits	5
1.8	Essentials	6
1.9	Technical data.....	6
2.	Safety.....	6
2.1	Signal words used in the safety instructions	7
2.2	General safety rules and obligations	7
2.3	Residual risks Warnings	7
3.	Packaging.....	9
3.1	Unpacking	9
3.2	Scope of delivery	9
4.	General description	9
4.1	Procedure in an avalanche emergency and instructions on the search phases.....	9
4.1.1	<i>Avalanche emergency Method for rescuing companions.....</i>	<i>9</i>
4.1.2	<i>Pinpointing Implementation</i>	<i>10</i>
4.2	iPROBE Structure	11
4.3	Switching on & self-test.....	11
4.3.1	<i>Self-test.....</i>	<i>12</i>
4.4	Functionality during operation.....	12
4.4.1	<i>Check A: Search mode Proximity indicator Hit indicator.....</i>	<i>13</i>
4.4.2	<i>Check B: Sender deactivation.....</i>	<i>14</i>
4.5	Turning off and correct folding.....	15
5.	Troubleshooting, maintenance, storage, disposal.....	17
5.1	Troubleshooting	17
5.2	Replacing the battery	17
5.3	Cleaning	18
5.4	Storage.....	18
5.5	Disposal	18
6.	Approval & conformity	18

1. Introduction

Dear winter sports enthusiast!

Congratulations on having purchased one of our products.

The PIEPS iPROBE II is a fully-automatic electronic avalanche probe with the following functions:

- Automatic activation when tensioned
- Self-test during activation checks battery, electronics, software and hardware
- Optical-acoustic hit indicator for each avalanche beacon that transmits a standard signal
- Automatic deactivation of the sending beacon if it has iPROBE-support
- Automatic deactivation when folded

With these functionalities, the PIEPS iPROBE II offers inexperienced beginners and trained professional rescuers maximum support with the point search and in scenarios involving multiple victims. It also saves valuable time when rescuing companions and with organized rescue deployments.

With the PIEPS iPROBE II (hereinafter referred to as the iPROBE), you have a product that is state of the art in terms of safety and user-friendliness. Despite this, the iPROBE can pose risks if used inappropriately or incorrectly. We refer to possible hazards in chapter **Error! Reference source not found.** and with safety notes placed throughout the operating manual.

This operating manual is intended to ensure the safe use of the iPROBE. The safety instructions in this document must be followed at all times.

Before you use the iPROBE, you must have read and understand this operating manual.

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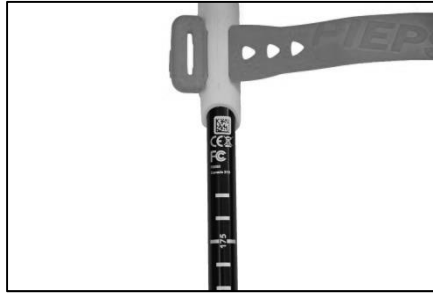
Pieps GmbH, July 2016

1.1 Identification

The iPROBE is identified on the unit and on the packaging in accordance with applicable regulations.



Identification on the front of the probe



Identification on the rear of the probe



Identification on the side of the packaging

CE- identification according to:

- RED RL 2014/53/EU
- EMV 2014/30/EU
- RoHS 2011/65/EU

1.2 Liability

The information contained in this operating manual describes but does not guarantee the features of the product.

No liability is accepted for damage caused by:

- Improper use
- Failure to follow the operating manual
- Unauthorized modifications of the iPROBE
- Improper work on and with the iPROBE
- Continuing to use the iPROBE despite evidence of wear and tear
- Unauthorized, improperly carried out repairs
- Emergencies, external influences or force majeure

NOTICE

Alterations or modifications not explicitly approved by the manufacturer will result in you no longer being allowed to use the unit.

1.3 Warranty conditions

The manufacturer provides a 2-year warranty covering manufacturing and material defects of the iPROBE from the date of purchase. Exceptions are the battery, carrier bag and any damage caused by improper use or dismantling of the unit by unauthorized persons. Any other warranties and liability for consequential damage are expressly excluded. For warranty claims, please take proof of purchase and a description of the fault to the point of sale.

1.4 Support

For technical problems, please contact Support: support@pieps.com

1.5 Intended use

The iPROBE is an electronic avalanche probe with an optical-acoustic hit indicator for every standardized (EN300718) avalanche beacon, as well as an automatic sender deactivation function for avalanche beacons with iPROBE-Support.

In practice, the iPROBE is used for the pinpointing of a person buried by an avalanche and must be used for this intended purpose only. Training on how to handle the avalanche emergency equipment is decisive for a good and rapid search result - the prerequisite for this is regular training.

The iPROBE must always be folded away on descents and stowed securely in the backpack (e.g. emergency pocket).

Any other use requires the written consent of Pieps GmbH. Improper use can put individuals at risk and result in the unit being damaged. The iPROBE is an electronic avalanche probe with a number of automatic functions – for this reason, the iPROBE may only be used after having read and understood this operating manual.

Failure to use the unit as intended will result in all liability and warranty claims being rejected. The iPROBE is to be operated only under the conditions of use described in this documentation.

1.6 Target group and previous knowledge

An avalanche probe should be part of the avalanche emergency equipment of everyone who ventures off secured pistes into open, unsecured terrain (e.g. ski tourers, freeriders, mountain rescuers, etc.).

Users of the iPROBE must meet the following conditions:

- Read and understand this operating manual.
- Users with impaired vision / color blindness must ensure that they can correctly interpret the multicolored, optical display (LED lamps) in accordance with the instructions in the operating manual and can read the labelling on the unit.
- If users with impaired hearing are unable to hear the acoustic signal, they must ensure that the multicolored optical display (LED lamps) can be correctly interpreted in accordance with the instructions in the operating manual.
- Regular training ensures safe and efficient use of the iPROBE.

1.7 Operating limits

The operating limits of the iPROBE are defined as follows:

- Ambient temperature: Guaranteed for use between min. -20°C (-4°F) and max. +45°C (+113°F).

1.8 Essentials

The iPROBE meets the current state of technology and the applicable health and safety regulations. However, incorrect operation or misuse can give rise to hazards for:

- the life and health of the users or third parties
- The iPROBE and property of the operator
- The efficient use of the iPROBE

1.9 Technical data

Name	PIEPS iPROBE II 220 260
Frequency range	457 kHz
Total probe length	220 cm 260 cm
Total probe pack length	47.6 cm
Weight incl. battery	390 g 430 g
Power supply	1 x Alkaline, AA, LR6, 1,5V
Battery life	125 hours
Operating temperature range	-20°C to +45°C (-4°F to +113°F)
Convergence range	approx. 2 m – 0.5 m
Hit indicator range	approx. 0.5 m – 0 m
Max. mechanical probe length	220 cm 260 cm
Max. mech. + elec. probe length (hit indicator)	270 cm 310 cm

2. Safety

This operating manual is structured in accordance with the applicable EU regulations and contains safety instructions. Each individual is personally responsible for complying with the safety instructions. This chapter contains all safety-related information.

Should anything be unclear or difficult to understand, please contact our support team.

2.1 Signal words used in the safety instructions

- ⚠ DANGER** *Imminent threat to the life of individuals*
A safety instruction with the signal word DANGER indicates an imminent threat to the life and health of individuals!
- ⚠ WARNING** *Risk of personal injury (serious injuries) and possible material damage*
A safety instruction with the signal word WARNING indicates a dangerous situation which could affect the health of individuals.
- ⚠ CAUTION** *Risk of material damage and possible minor risk of injury*
A safety instruction with the signal word CAUTION indicates a possibly dangerous situation which could primarily result in material damage.
- NOTICE** *This symbol with the text NOTICE indicates supporting information for installation, operation or maintenance and repair.*

2.2 General safety rules and obligations

The following safety rules and obligations apply in general for using the iPROBE:

- The iPROBE may only be used in a perfect condition.
- It is forbidden to alter or change the iPROBE without the written permission of Pieps GmbH.
- Do not attempt to rectify faults or damage without authorization. Instead, you must contact support, who will tell you how to proceed. The iPROBE must not be used until the damage has been rectified.
- The safety and operating instructions in the operating manual must be followed at all times.

2.3 Residual risks | Warnings

Even though the iPROBE has been designed with maximum care and all safety-related facts have been taken into consideration, residual risks may exist and must be evaluated by means of a risk assessment. All residual risks and warnings from the risk assessment are listed in this chapter.

- ⚠ DANGER** *Risk of electric shock when touching the unit with electrical conductors*
Keep yourself and the unit at a safe distance from energized conductors.
- ⚠ WARNING** *Risk of puncture injuries from the metal tip of the probe*
Be aware of puncture injuries in the area of the tip. Never point the tip towards people, with the exception of the buried person.

⚠ CAUTION

Risk of accidental folding up of the probe

Transport the unit in a folded and secured condition only (by means of a locking tab or in the backpack emergency pocket). Ensure that the unit is stored properly in the backpack and is secured against being lost.

⚠ CAUTION

Risk of crushing from assembling and locking the probe tubes

During assembly, be aware of any possible risk of crushing when locking the individual probe tubes. Always hold the probe by the handle and push it into soft ground (snow). Lock the probe with the quick-closing latch.

⚠ CAUTION

Risk of crushing when inserting the quick-closing system

Beware of crushing risks when inserting the quick-closing system.

⚠ WARNING

Risk of falling and slipping during operation with snow gloves

When using the probe while wearing snow gloves, there is a risk of slipping on the probe tube, which can result in a loss of balance.

The probe tube must not be used as a walking aid.

⚠ DANGER

Risk of explosion from incorrectly used batteries

Use only batteries of type "AA, LR6, 1,5V"!

⚠ CAUTION

Risk that the displayed battery level is incorrect

Use only batteries of type "AA, LR6, 1,5V"!

⚠ CAUTION

Risk of extreme temperatures

Do not expose the unit to extreme temperatures. Store the unit so that it is protected from direct sunlight. Extreme temperatures can impede operation or damage the battery.

NOTICE

*If the iPROBE is faulty (system fault self-test), no electronic functionalities are available and any electronic support will lapse. In this case, use the iPROBE like a classic avalanche probe. You can find instructions for performing the point search in [chapter **Error!**](#) **Reference source not found.***

NOTICE

The operating personnel must read the operating manual.

3. Packaging

Ensure that the unit is transported only in the packaging provided. The unit can be damaged if transported in insufficient or defective packaging. Furthermore, the unit must not be exposed to moisture or heat at any time during transport.

If stored for an extended period, the unit should be stored in its original packaging in a dry place. This is to avoid corrosion and soiling.

3.1 Unpacking

Remove the iPROBE carefully from the packaging, remove all transport safeguards and check whether all parts contained in the scope of delivery are accounted for. It is recommended to retain the original packaging in case the unit has to be returned.

NOTICE

Dispose of the packaging and transport safeguards in an environmentally friendly manner (paper to paper, plastic to plastic, etc.).

3.2 Scope of delivery

- 1x PIEPS iPROBE II
- 1x battery (in battery compartment)
- 1x storage bag
- 1x Quick Manual

NOTICE

Check that the contents are complete and undamaged after unpacking. If necessary, contact your point of sale or our support team.

4. General description

4.1 Procedure in an avalanche emergency and instructions on the search phases

The following instructions provide an overview of a possible method for rescuing companions and are not a substitute for deeper discussion. PIEPS recommends attending relevant training courses with professional providers as well as regular training on how to use the emergency equipment.

4.1.1 Avalanche emergency | Method for rescuing companions

A person buried under an avalanche has the greatest chance of being rescued quickly if as many of the companions in the group were not buried and these people are able to work efficiently as a team to rescue the victim. If the worst happens, the following applies: REMAIN CALM, OBSERVE, ALERT, ACT WITH COORDINATION!

(1) Remain calm and get an overview of the situation

- Are there any further dangers?
- Number of victims?
- Establish primary search area!

(2) Make a brief emergency call

- max. 2 min
- EU 112, AT 140, CH 1414, IT 118, FR 15

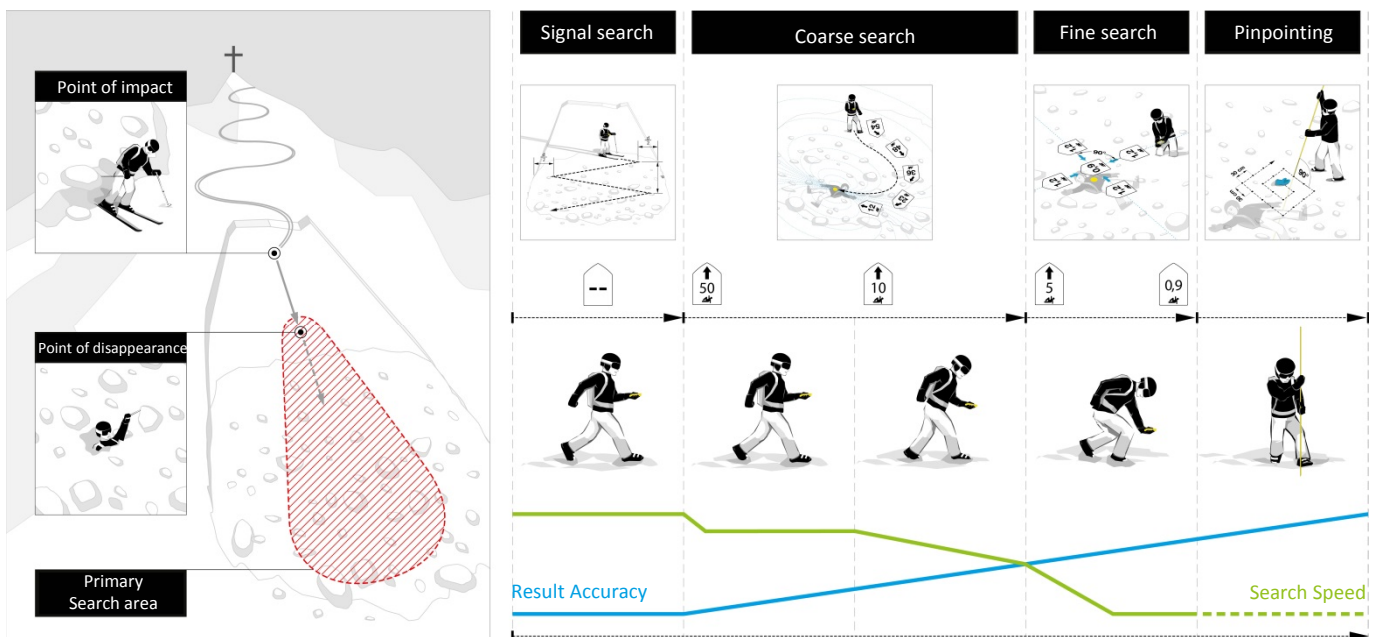
(3) Victim search

- Signal search (eyes + ears, avalanche probe)
- Coarse search (from first reception)
- Fine search (from 5 m on the surface)
- Pinpointing (systematic probing)

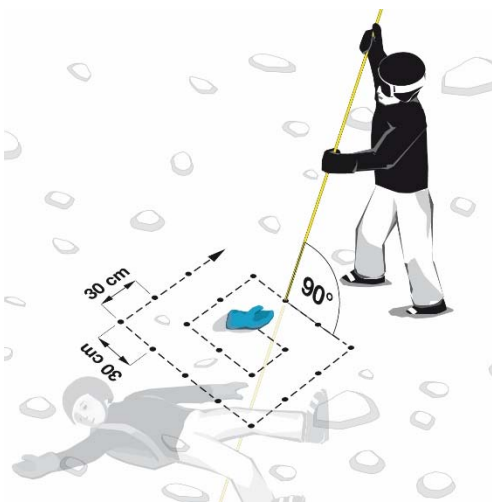
(4) Systematic digging

(5) First Aid

(6) Rescue



4.1.2 Pinpointing | Implementation

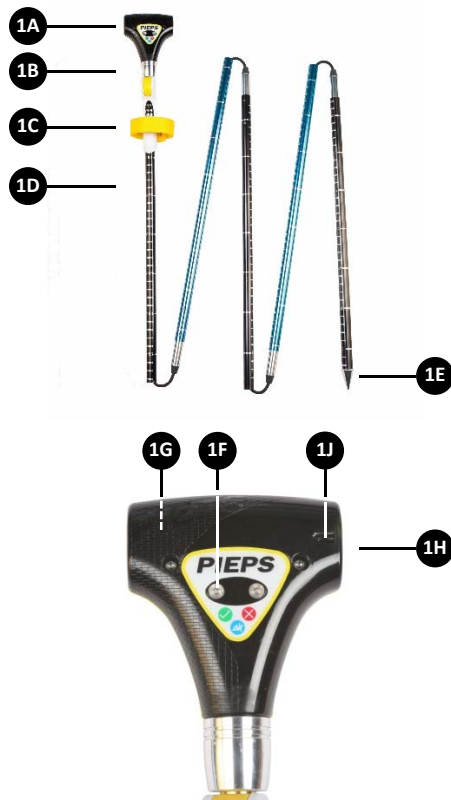


Always probe at right angles to the surface of the snow.

- Probe systematically – e.g. in spirals around the marked fine search result every 30 cm.
- Communicate a hit and push the probe into the snow.

IMPORTANT! Also leave the probe where it is throughout the digging out! It serves as an essential orientation aid!

4.2 iPROBE Structure



- (1A) Probe handle with LED display and loudspeaker for optical and acoustic output of system status
- (1B) Quick-closing latch for efficient locking of the drop probe
- (1C) Locking tab for secure closure
- (1D) Probe tube with centimeter scale for reading off the buried depth and as a centimeter scale for snow profile photos
- (1E) Probe tip with integrated receiver localizes any standard avalanche beacon
- (1F) LED display in green, red and blue for optical output of system status
- (1G) Loudspeaker for acoustic output of system status
- (1H) Battery compartment access
- (1J) Battery symbol with polarity indication

4.3 Switching on & self-test

Proceed with commissioning in the following steps:

- Open the locking tab (1C).
- Push the **iPROBE** into soft ground (snow) and tension the probe. To do so, hold the top part of the probe tube with one hand and with the other hand pull on the probe handle (1A) until the quick-closing latch (1B) clicks into place and a beep from the loudspeaker (1G) indicates that the **iPROBE** is on.










NOTICE

The *iPROBE* is electronically active only when the beep sounds!

🔊 Continuous tone for 1 second (piiieep)

4.3.1 Self-test

Each time it is turned on, the iPROBE performs a self-test to check all functional components.

iPROBE Status		Optical signal output (LEDs)	Acoustic signal output
Activation		No optical signal output	Continuous tone for 1 second (piiiiiiiiep) 
Self-test	Self-test „OK“	Both LEDs glow GREEN for 1 second 	No acoustic signal output 
	Self-test „Low battery capacity“	Both LEDs flash RED for 3 seconds 	Warning tone for 3 seconds (5 x piiieep), see Replacing the battery 
	Self-test „System fault“	Both LEDs glow RED for as long as the iPROBE is active 	Warning tone for 3 seconds (5 x piiieep), see Troubleshooting 

- If the iPROBE is OK (self-test “OK”), a green LED indicator glows for 1 second. The LED indicator of the Check A1 then starts flashing and the iPROBE can be used.
- If the battery needs replacing (low battery capacity self-test), a red flashing LED indicator and an acoustic warning signal will be output for 3 seconds. The LED indicator of the Check A1 then starts flashing and the iPROBE can be used. In this case, replace the battery according to chapter **Error! Reference source not found.**
- If the iPROBE is faulty (system fault self-test), a steady red LED indicator and an acoustic warning signal will be output for 3 seconds. The optical warning will continue for as long as the iPROBE is activated. The electronic functionalities are not available. In this case, perform troubleshooting according to chapter **Error! Reference source not found.**

NOTICE

*If the iPROBE is faulty (system fault self-test), no electronic functionalities are available and any electronic support will lapse. In this case, use the iPROBE like a classic avalanche probe. You can find instructions for performing the point search in chapter **Error! Reference source not found.***

4.4 Functionality during operation

Check A	Check A1 Search mode	Check A2 Proximity indicator	Check A3 Hit indicator
Check B	Check B Sender deactivation		

4.4.1 Check A: Search mode | Proximity indicator | Hit indicator

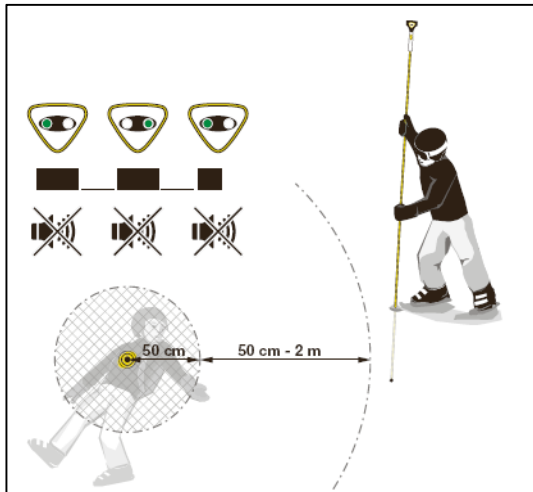
The optical-acoustic hit indicator gives you maximum support and saves valuable time with the point search!

In search mode (Check A1), the iPROBE searches for a transmitting avalanche beacon. From a distance of approx. 2 – 0.5 m between probe tip and transmitting avalanche beacon, the proximity indicator (Check A2) is output. From a distance of approx. 0.5 – 0 m, the iPROBE signals a hit (Check A3).

NOTICE

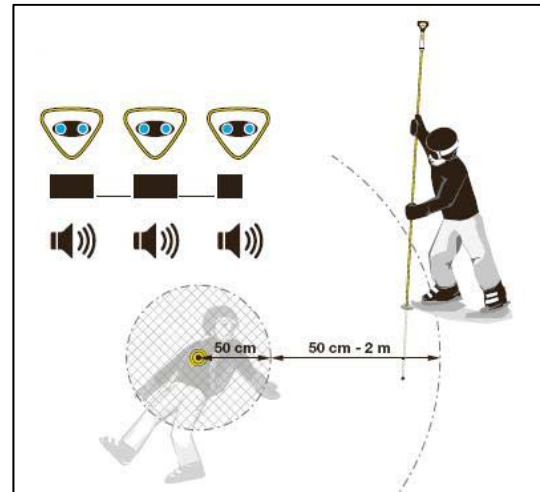
The proximity and hit indicators operate for each transmitting avalanche beacon that transmits in accordance with EN300718.

Check A1: Search mode, no active transmitting avalanche beacon within < 2 m



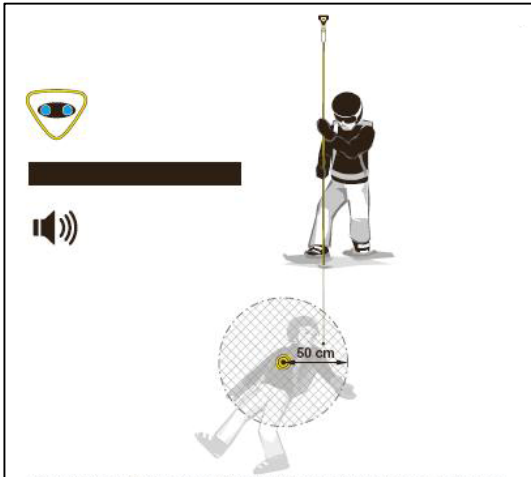
- 👁️ LEDs flash GREEN on and off
- 🔊 No acoustic signal output

Check A2: Proximity indicator, active transmitting avalanche beacon within approx. 2 - 0.5 m



- 👁️ both LEDs flash BLUE at the interval of the transmitting beacon
- 🔊 uniform beeps at the interval of the transmitting beacons (piep_piep_piep_etc.)

Check A3: Hit indicator, active transmitting avalanche beacon within < 0.5 m



- 👁️ Both LEDs glow BLUE
- 🔊 Continuous tone (piiiiiiiie...)

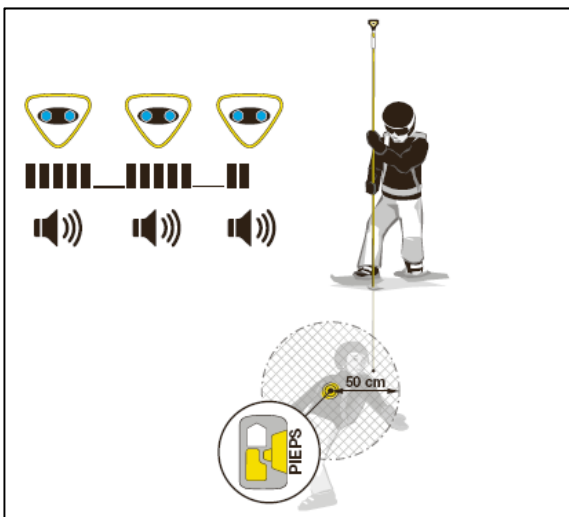
4.4.2 Check B: Sender deactivation

The “transmitting avalanche beacon deactivation” function is a great help if more than one person is buried. The receiver displays the next strongest signal without the need to press the MARK button. The search for all other buried people is simplified for all receivers.

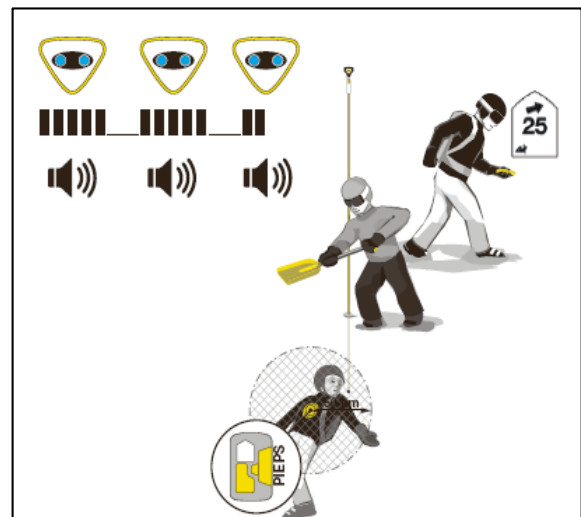
A transmitting avalanche beacon is automatically deactivated after the hit indicator (Check A3) if the transmitting avalanche beacon has iPROBE-Support* and the iPROBE is in a vertical position in the snow. Deactivation takes place within a few seconds.

* Avalanche beacons with iPROBE-Support: *PIEPS MICRO, PIEPS DSP PRO, PIEPS DSP PRO ICE, PIEPS DSP SPORT, PIEPS DSP STANDARD ≥ v5.0, PIEPS DSP TOUR, PIEPS FREERIDE*

Check B: Sender deactivation, temporary deactivation of the transmitting avalanche beacon within < 0.5m



- 👁️ both LEDs flash BLUE, 5 repeated flashes
- 🔊 repeated groups of 5 beeps (ti-ti-ti-ti-ti_ti-ti-ti-ti_etc.)



After deactivation of the transmitting avalanche beacon, the receiver displays the next strongest signal. The searching rescuer immediately follows the new signal, while other rescuers begin digging.

For as long as the iPROBE remains in the near range (0 – approx. 0.5 m) of the transmitting avalanche beacon, the beacon remains deactivated. If the iPROBE is removed or changed to the horizontal position, the transmitting avalanche beacon starts sending again after 5 seconds.

After being moved away from the transmitting beacon, the iPROBE remains in Check B until:

- Either the probe is changed from the vertical position to a horizontal position $< 20^\circ$ (carrying position). In this case, the iPROBE switches automatically to search mode (Check A1).
- Or a new send signal is received. In this case, the iPROBE switches automatically to the proximity indicator (Check A2) or hit indicator (Check A3).

NOTICE

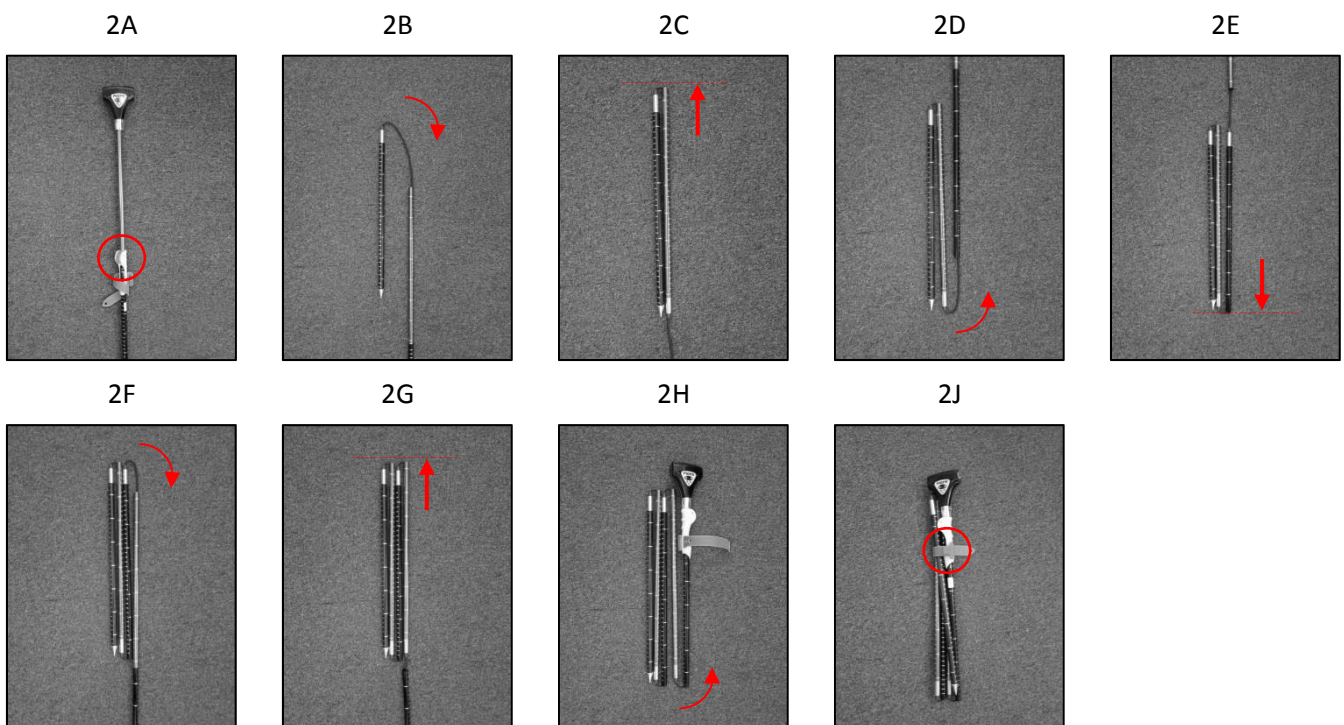
If the transmitting avalanche beacon does not have iPROBE-Support, the transmitting beacon is not deactivated and the iPROBE remains in Check A3 mode (hit indicator).

4.5 Turning off and correct folding

The iPROBE switches off automatically when the probe is untensioned and folded.

Proceed with turning off and folding in the following steps:

- Press the yellow unlocking button to release the lock, and pull gently on the probe handle (2A).
- Commence the folding process with the bottom probe tube and fold the next probe tube parallel to the preceding one (2B). Push the tube until its stops (2C).
- Repeat the process with the remaining probe tubes until the iPROBE is completely folded (2D-2H).
- Secure the folded probe with the locking tab (2J).



NOTICE

Always start the folding procedure with the bottom probe tube and always push the probe tubes in until they stop before starting the next folding procedure. This ensures the probe cable will have a long service life.

5. Troubleshooting, maintenance, storage, disposal

5.1 Troubleshooting

Follow the steps below if the iPROBE does not respond when activated or the self-test indicates a system fault:

- 1) Deactivate the iPROBE by folding it
- 2) Check the iPROBE for physical damage
- 3) Check the battery capacity, type and polarity (+,-); if necessary, fit a new battery
- 4) Reactivate the iPROBE

If the iPROBE still does not respond or shows a system fault as before, please contact a PIEPS Service Center or our Support team (support@pieps.com).

5.2 Replacing the battery

The PIEPS iPROBE analyses the charge remaining in the battery each time the probe is turned on. If the charge reaches a critical level, a warning will be output after the self-test for 3 seconds (*see chapter 0*).

PIEPS recommends replacing the battery with a new one immediately, even though it will normally have enough power left for another 1 - 3 rescues.

Replace the battery as follows:

- Unscrew the cover of the battery compartment anticlockwise (3A).
- Replace the battery with 1x alkaline, AA, LR6, 1,5V. When installing the new battery, make sure the polarity is correct (3B).
- Dispose of the battery in accordance with the law in your country.



⚠ DANGER

Risk of explosion from incorrectly used batteries

Use only batteries of type "AA, LR6, 1,5V"!

⚠ CAUTION

Risk that the displayed battery level is incorrect

Use only batteries of type "AA, LR6, 1,5V"!

5.3 Cleaning

Use a damp cloth without cleaning agent to clean the unit.

NOTICE

Flowing water, steam or cleaning agent must not be used to clean the unit. To do so could impede operation of the unit.



5.4 Storage

Store the unit in a dry room at room temperature.

NOTICE

If the unit device is not used for extended periods of time (summer months), it is recommended to remove the battery from the battery compartment. The warranty does not cover damage caused by leaking batteries.

⚠ CAUTION

Risk of extreme temperatures

Do not expose the unit to extreme temperatures. Store the unit so that it is protected from direct sunlight. Extreme temperatures can impede operation or damage the battery.



5.5 Disposal

NOTICE



Please note that the unit is an electronic device. It cannot therefore be disposed of by public waste management companies. Dispose of the unit in accordance with the law in your country.

6. Approval & conformity

The approval text and the full text of the EU conformity declaration is available at the following website

www.pieps.com/conformity