

GUIDE BT RECON BT

INSTRUCTIONS



Guide BT



Recon BT



08/2018
Firmware v1
M13107_A

Table of Contents

1.	Introduction	3
1.1	Markings.....	4
1.2	Liability	4
1.3	Warranty conditions	5
1.4	Manufacturer address & support	5
1.5	Intended use	5
1.6	Target group and previous knowledge	5
1.7	Essentials.....	6
1.8	Technical specifications	6
2.	Safety.....	6
2.1	Signal words used in the safety instructions	6
2.2	General safety rules and obligations	7
2.3	Residual risks Warnings.....	7
3.	Packaging.....	8
4.	General description	8
4.1	Structure	8
4.2	Carrying system.....	9
4.3	Switching on Self-Check Send mode	9
4.4	Group check	10
4.5	Helpful background features	12
4.5.1	<i>Interference protection</i>	<i>12</i>
4.5.2	<i>PIEPS iPROBE-Support.....</i>	<i>12</i>
4.6	Send ⇌ Search	12
4.7	Search ⇌ Send	12
4.7.1	<i>Secondary avalanche Auto-Search-to-Send</i>	<i>12</i>
4.8	Search mode Search strategy.....	13
4.8.1	<i>In case of emergency.....</i>	<i>13</i>
4.8.2	<i>Signal search</i>	<i>14</i>
4.8.3	<i>Coarse search.....</i>	<i>15</i>
4.8.4	<i>Fine search</i>	<i>15</i>
4.8.5	<i>Pinpointing.....</i>	<i>16</i>
4.8.6	<i>Multiple burials MARK function</i>	<i>16</i>
4.9	GUIDE BT features.....	17
4.9.1	<i>Vibra support.....</i>	<i>17</i>
4.9.2	<i>Extended group check & pro-mode.....</i>	<i>17</i>
4.9.3	<i>Mark range settings.....</i>	<i>17</i>
4.9.4	<i>Inclinometer</i>	<i>18</i>
4.9.5	<i>SCAN & victim selection</i>	<i>18</i>
4.9.6	<i>Analog mode.....</i>	<i>19</i>
4.9.7	<i>TX600 mode</i>	<i>19</i>
5.	Device management with the PIEPS APP	19
6.	Troubleshooting, maintenance, storage, disposal.....	20
6.1	Troubleshooting	20
6.2	Battery replacement	21
6.3	Cleaning.....	22
6.4	Storage	22
6.5	Disposal	22
7.	Conformity.....	22

1. INTRODUCTION

Thank you for purchasing a BLACK DIAMOND GUIDE BT/RECON BT!

The BLACK DIAMOND GUIDE BT/RECON BT is an easy to use avalanche transceiver with reliable high performance. The BLACK DIAMOND GUIDE BT/RECON BT comes with all tried and tested beacon features:

- 3 antenna technology
- Big, circular receiving range for a quick and stable signal detection
- Perfect signal processing, even in difficult situations (multiple burials)
- Mark function
- Comprehensive self-check
- Easy to use group check
- Automatic interference protection
- Auto search-to-send
- iPROBE support
- Device management via PIEPS APP

The GUIDE BT provides additional functionality for maximum support in professional use:

- SCAN function
- Analog mode
- Victim selection
- Group check pro-mode

An avalanche beacon does not protect against avalanches! Detailed knowledge of avalanche prevention is as indispensable as regularly practicing victim searches in an emergency. The following procedures and tips relate only to special usage in conjunction with the BLACK DIAMOND GUIDE BT/RECON BT. The basic line of action in an emergency – as explained in specialist publications and material from avalanche courses – must be followed.

With the BLACK DIAMOND GUIDE BT/RECON BT you have a product that is state of the art in terms of safety and user-friendliness. Despite this, the BLACK DIAMOND GUIDE BT/RECON BT can pose risks if used inappropriately or incorrectly. We refer to possible hazards in chapter 2 and with safety notes placed throughout the operating manual.

This operating manual is intended to ensure the safe use of the BLACK DIAMOND GUIDE BT/RECON BT. The safety instructions in this document must be followed at all times.

Before you use the BLACK DIAMOND GUIDE BT/RECON BT, you must have read and understand this operating manual.









Black Diamond Equipment is not liable for technical or printing errors in this operating manual, neither is any liability accepted for damage caused directly or indirectly by the delivery, performance or use of this operating manual.

Copyright © Black Diamond Equipment, 07/2018

This translation of the original manual is protected by copyright. All rights, especially the rights of reproduction, distribution and translation, are reserved. No part of this document may be reproduced or stored, processed, duplicated or distributed using electronic systems in any form (photocopy, microfilm or other method) without the written consent of Black Diamond Equipment. Violations may incur criminal penalties.

1.1 MARKINGS

In accordance with applicable regulations, the following marks may be found on the BLACK DIAMOND GUIDE BT/RECON BT or/and on the packaging:


	CE mark of conformity: indicating the fulfillment of the following standards: EMV 2014/30/EU, RED 2014/53/EU, RoHS 2011/65/EU.
	Dustbin symbol: advising users to dispose of waste electrical and electronic equipment separately from unsorted municipal waste.
FCC ID	FCC ID: indicating the compliance with Part 15 of the FCC Rules.
IC ID	IC ID: indicating the compliance with Industry Canada's licence-exempt RSS standard(s).
	Bluetooth® logo: The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Black Diamond Equipment is under license. Other trademarks and trade names are those of their respective owners.
SN	12 digit serial number: identifying the device and is used for device registration. The first 4 digits indicate year and week of manufacturing.
	Recycling symbol.
	Battery symbol: indicating battery type and correct position.
	Instruction pictogram: advising users to read the instructions and warnings.
	Black Diamond brand name.
	Black Diamond logo.
PRO BT	Example of the model name.

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 BLACK DIAMOND GUIDE BT/RECON BT,
- improper work on and with the BLACK DIAMOND GUIDE BT/RECON BT,
- continuing to use the BLACK DIAMOND GUIDE BT/RECON BT 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 device.*

1.3 WARRANTY CONDITIONS

The manufacturer provides a 2-year warranty covering manufacturing and material defects of the BLACK DIAMOND GUIDE BT/RECON BT from the date of purchase. Exceptions are the battery, carrying system, hand-loop and bag as well as any damage caused by improper use or dismantling of the device 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.

Register your BLACK DIAMOND GUIDE BT/RECON BT in the PIEPS APP (iOS, Android) or at my.pieps.com and get:

- a warranty extension from 2 to 5 years!
- important information on software updates!

1.4 MANUFACTURER ADDRESS & SUPPORT

Black Diamond Equipment, Ltd. 2084 East 3900 South, Salt Lake City, UT 84124

Europe: Black Diamond Europe Hans-Maier-Straße 9, 6020, Innsbruck, Austria

For technical problems, please contact the support: blackdiamondequipment.com

1.5 INTENDED USE

The BLACK DIAMOND GUIDE BT/RECON BT serves as an avalanche victim search device (avalanche transceiver) for the localization of buried persons and must only be used as intended. Any other use requires the written consent of Black Diamond Equipment. Improper use can put individuals at risk and result in the device being damaged. The BLACK DIAMOND GUIDE BT/RECON BT is not an automatically functioning device with partly automated functionalities – for this reason, the BLACK DIAMOND GUIDE BT/RECON BT may only be commissioned after having read and understood the documentation. Failure to use the device as intended will result in all liability and warranty claims being rejected. The BLACK DIAMOND GUIDE BT/RECON BT is to be operated only under the conditions of use described in the documentation.

1.6 TARGET GROUP AND PREVIOUS KNOWLEDGE

An avalanche beacon should be part of the avalanche emergency equipment of everyone who ventures off from the secured piste into open, unsecured terrain (e.g. ski touring, freeriding, mountain rescue operations, etc.).

Users of the BLACK DIAMOND GUIDE BT/RECON BT must meet the following conditions:

- Read and understand this operating manual.
- Users with impaired vision must ensure that they can read the labelling and displays on the device as well as the instructions in the documentation without problem.
- If users with impaired hearing are unable to hear the acoustic signal, they must ensure that they can correctly interpret the display indications in accordance with the instructions in the operating manual.
- Regular training ensures safe and efficient use of the BLACK DIAMOND GUIDE BT/RECON BT.

1.7 ESSENTIALS

The BLACK DIAMOND GUIDE BT/RECON BT 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 BLACK DIAMOND GUIDE BT/RECON BT and property of the user,
- the efficient use of the BLACK DIAMOND GUIDE BT/RECON BT.

1.8 TECHNICAL SPECIFICATIONS

Name	BLACK DIAMOND GUIDE BT/RECON BT
Transmission frequency	457 kHz
Field strength	max. 7 dB μ A/m (2,23 μ A/m) at a distance of 10 m
Power supply	3x Alkaline (AAA) LR03 1.5 V or 3x Lithium (AAA) FR03 1.5V
Battery lifetime	400/200 h (Alkaline) 600/300 h (Lithium)
Maximum range	60 m
Search strip width	60 m
Dimensions (LxWxH)	118 x 76 x 29 mm
Weight	230/220 g (incl. battery)
Temperature range	-20°C to +45°C (-4°F to +113°F)
Storage temperature range	-25° C to +70° C (-13° F to +158° F)

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.*

2.2 GENERAL SAFETY RULES AND OBLIGATIONS

The following safety rules and obligations apply in general for using the BLACK DIAMOND GUIDE BT/RECON BT:

- The BLACK DIAMOND GUIDE BT/RECON BT must only be used in perfect condition.
- It is forbidden to alter or change the BLACK DIAMOND GUIDE BT/RECON BT without the written permission of Black Diamond Equipment.
- Do not attempt to repair damage or malfunctions without authorization. Instead, contact our support, who will tell how to proceed. The BLACK DIAMOND GUIDE BT/RECON BT must not be used until the damage/malfunction has been repaired.
- The safety and operating instructions in the operating manual must be followed at all times.

2.3 RESIDUAL RISKS | WARNINGS

Even though the BLACK DIAMOND GUIDE BT/RECON BT 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 device loss***
*Always carry the device in the included carrying system or an approved apparel pocket!
Always leave the device cord-secured!*
- ⚠ DANGER** ***Risk of a not transmitting device due to enabled Bluetooth***
The Bluetooth mode is supposed for device management and training mode only! Never use the Bluetooth mode in avalanche terrain!
- ⚠ DANGER** ***Risk of device loss during slope angle measurement***
Although the GUIDE BT keeps transmitting while the inclinometer is active, the function should only be used for training reasons. Never use the inclinometer function in avalanche terrain!
- ⚠ DANGER** ***Risk of battery explosion due to improper battery types or damaged batteries***
*Only use batteries of type “Alkaline (AAA) LR03 1.5 V or 3x Lithium (AAA) FR03 1.5V“!
Never use damaged batteries!
The use of Lithium batteries must be confirmed in the PIEPS APP!*
- ⚠ DANGER** ***Risk of incorrect battery capacity reading due to improper battery types***
*Only use batteries of type “Alkaline (AAA) LR03 1.5 V or 3x Lithium (AAA) FR03 1.5V“!
The use of Lithium batteries must be confirmed in the PIEPS APP!*
- ⚠ WARNING** ***Risk of hearing damage due to the high noise level***
Never hold the device directly next to your ear! A minimum distance of 50 cm is recommended.
- ⚠ CAUTION** ***Risk of crushing***
Be aware of a crushing risk when using the sliders!

⚠ CAUTION

Risk of device malfunction or damage due to extreme temperatures

Do not expose the device to extreme temperatures outside of the operating limits! Store the device protected from direct sunlight! Extreme temperatures can result in malfunction or damage!

NOTICE

The user must read the operating manual!

3. PACKAGING

- 1x BLACK DIAMOND GUIDE BT/RECON BT
- 3x Alkaline battery (in battery compartment)
- 1x BLACK DIAMOND GUIDE BT/RECON BT carrying system
- 1x Hand loop
- 1x Quick Start Guide

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

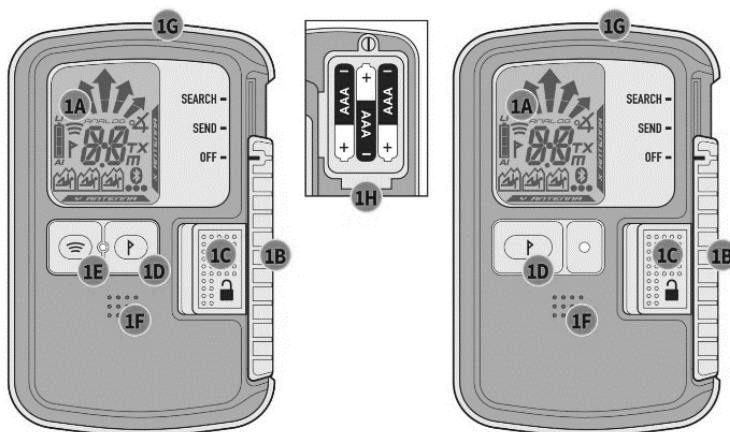
A correct disposal of the packaging is an environmentally friendly manner (paper to paper, plastic to plastic, etc.).

4. GENERAL DESCRIPTION

4.1 STRUCTURE

GUIDE BT

RECON BT



- (1A) LCD display (backlight)
- (1B) Slider OFF/SEND/SEARCH
- (1C) Slider lock
- (1D) Button MARK
- (1E) Button SCAN*
- (1F) Speaker
- (1G) Transmit control LED
- (1H) Battery compartment



- (2A) Direction indication
- (2B) Distance indication
- (2C) Transmit symbol
- (2D) Battery capacity/type
- (2E) MARK (marking possible)
- (2F) Active transmitting antenna
- (2G) Number of burials (1-3)
- (2H) Number of burials (4 or more)

- (2J) Transmitter marked
 - (2K) Bluetooth active
 - (2L) Inclinometer mode*
 - (2M) TX600 mode*
 - (2N) SCAN mode*
 - (2P) Analog mode*
 - (2Q) Meter symbol for SCAN /analog mode*
- * GUIDE BT only

4.2 CARRYING SYSTEM

BLACK DIAMOND recommends using the included carrying system (3A) or an approved apparel pocket. In order to protect the beacon's display, carry the beacon with its display facing inwards (3B). The transmit control LED (1G) is visible in the pouch's window (3C).

The included hand loop is intended to be used for training sessions.



⚠ DANGER

Risk of device loss

*Always carry the device in the included carrying system or an approved apparel pocket!
Always leave the device cord-secured!*

4.3 SWITCHING ON | SELF-CHECK | SEND MODE

Switching on: Move the slider lock (1C) to the left and the slider (1B) upwards into the position SEARCH. Then release the slider lock (1C) and move the slider (1B) downwards, until it locks in the position SEND.




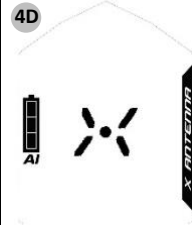
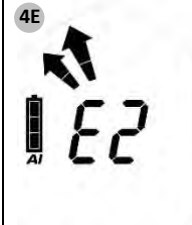
The display shows firmware version, battery capacity, self-check progress (4A), self-check result (4B), group check countdown (4C) and finally the send display with the active transmitting antenna (4D).

The device is now in send mode, the transmit control LED (1G) is blinking.

NOTICE

A minimum distance of 5 m from other devices and all electronic, magnetic and metallic sources of interference should be kept during the self-check.

If the self-check is successful, "OK" is indicated on the display (4B). In the event of a device warning, an alert signal sounds and the display indicates "E" in combination with a number (4E). For error codes, see [chapter 6.1](#).

4A 	4B 	4C 	4D 	4E 
Firmware version Battery capacity/type (AL=Alkaline, LI=Lithium)	Self-check OK	Group check countdown	SEND display	Self-check error

Send-Vibra

Additionally, the GUIDE BT provides haptic send mode confirmation (10x vibration).

This feature is enabled by default and can be disabled in the PIEPS APP device manager.



4.4 GROUP CHECK

Despite a comprehensive self-check, a beacon check (transmit check and receive check) is obligatory prior to every tour! The BLACK DIAMOND GUIDE BT/RECON BT provides a group check function. In group check mode the receiving range is limited to 1 m.

	Group check regular BLACK DIAMOND GUIDE BT/RECON BT Check: frequency	Group check extended GUIDE BT only Check: frequency/pulse/period
Start	Press and hold the button MARK (1D) during the group check countdown (CH)	Press and hold the button SCAN (1E) during the group check countdown (CH)
Result	<ul style="list-style-type: none"> “Distance indication” = OK “ER” = error (frequency not according to standard) 	<ul style="list-style-type: none"> “OK” = OK “ER” = error (one or more transmit parameters not according to standard)
End	Release button	

The Regular group check is sufficient for checking modern, digital devices with 3 antennas.

The Extended group check is recommended for checking old devices (analog single-antenna devices).

Regular group check display readings



Device not transmitting or distance too big (> 1 m)



Distance reading: device transmitting and



Device transmitting but frequency not according to standard

frequency according to standard

Extended group check display readings



Device not transmitting or distance too big (> 1 m)



Distance reading: device transmitting and all transmit parameters according to standard



Device transmitting but one or more transmit parameters not according to standard



More than one signals within 1 m range => increase distance

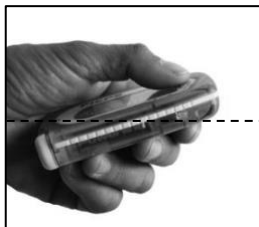


Continuous wave indication | old-device-indication (see [chapter 4.8.6](#))

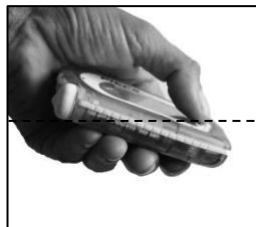
Group check pro-mode

The GUIDE BT additionally provides a pro-mode. The pro-mode allows a transmit check as well as a receive check without exiting the group check mode. By default, it is disabled and can be enabled in the PIEPS APP device manager.

- Tip the GUIDE BT downwards to transmit in group check mode
- Tip the GUIDE BT upwards to receive in group check mode



Pro-mode SEARCH



Pro-mode SEND

(example image)

The full avalanche beacon check with pro-mode

(1) Receive check

Group leader => pro-mode SEND: device transmitting?

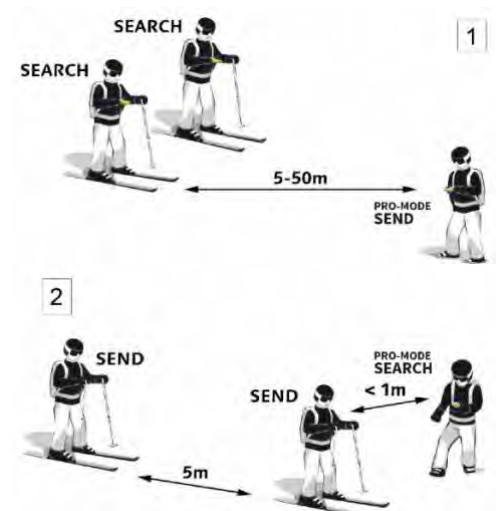
All others => search mode: devices receiving?

(2) Transmit check

Group leader => pro-mode SEARCH: device receiving?

All others => send mode: devices transmitting?

NOTICE The receive check can be combined with a range test by choosing a large distance (50 m).



4.5 HELPFUL BACKGROUND FEATURES

Maximum background support in send mode and search mode!

4.5.1 Interference protection

- Auto-Antenna-Switch | Protection in send mode
If the transmitting antenna is impacted by external interference, the other antenna will take over the transmit function. The BLACK DIAMOND GUIDE BT/RECON BT always transmits with the strongest possible signal!
- Signal Verification | Protection in search mode
Only a verified 457kHz signal is indicated. The BLACK DIAMOND GUIDE BT/RECON BT doesn't confuse ghost signal indication!

External interference and distance recommendations

All beacons are very sensitive to electrical and magnetic sources of interference. Due to this, all manufacturers recommend keeping a minimum distance from electronic, magnetic and metallic sources of interference (mobile phone, radio, keys, magnetic closures, etc.):

Minimum distance in send mode: 20 cm | Minimum distance in search mode: 50 cm

4.5.2 PIEPS iPROBE-Support

Beacons with iPROBE-support* get automatically deactivated when probing with the electronic probe PIEPS iPROBE. This prevents signal overlaps and the next-strongest signal is automatically shown on the display of the receiving beacon. Maximum support in multiple burials!

** Beacons with iPROBE-Support: BLACK DIAMOND GUIDE BT/RECON BT, PIEPS PRO BT/POWDER BT, PIEPS MICRO, PIEPS DSP PRO/SPORT/PRO ICE, PIEPS DSP STANDARD/TOUR ≥ v5.0, PIEPS FREERIDE.*

4.6 SEND ⇔ SEARCH

Move the slider lock (1C) to the left and the slider (1B) upwards in the position SEARCH.

4.7 SEARCH ⇔ SEND





Move the slider (1B) downwards, until it locks in the position SEND.

4.7.1 Secondary avalanche | Auto-Search-to-Send

The BLACK DIAMOND GUIDE BT/RECON BT provides the feature Auto-Search-to-Send. By default, it is disabled and can be enabled in the PIEPS APP device manager. Once enabled, the device switches from search mode to send mode automatically after a certain time without motion (burial).

The function provides the following characteristics:

- Motion-controlled initialization
- Short switching timeout
- Long warning phase with alert and countdown prior to switching
- Continued alert, also after switching

Beacon function	SEARCH	WARNING	SEND
Display indication	Search display		
Sound	Search sound		
Manual abort		Turn device or press MARK button	Turn device off or into send mode
		START WARNING	SWITCHING TO SEND
Setting 1 (60 s)		0:30 min	1:00 min
Setting 2 (90 s)		1:00 min	1:30 min
Setting 3 (120 s)		1:30 min	2:00 min

4.8 SEARCH MODE | SEARCH STRATEGY

4.8.1 In case of emergency

A buried person has the greatest chance of being rescued by an efficient companion rescue. In the event of an accident, the following applies: KEEP CALM, OBSERVE, ALERT, ACT WITH COORDINATION!

(1) Keep calm & get an overview

- Are there any other risks?
- How many victims?
- Determine the primary search area!

(2) Make a brief emergency call

- EU 112, AT 140, CH 1414, IT 118, FR 15, NA 911

(3) Burial search

- Signal search (eyes + ears, beacon)
- Coarse search (starting with initial signal)
- Fine search (closer than 5 m on the surface)
- Pinpointing (systematic probing)

(4) Systematic digging

(5) First Aid

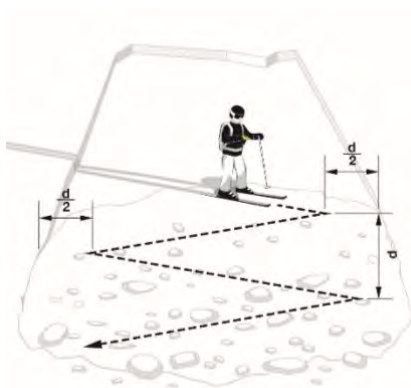
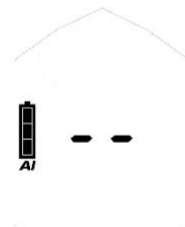
(6) Rescue



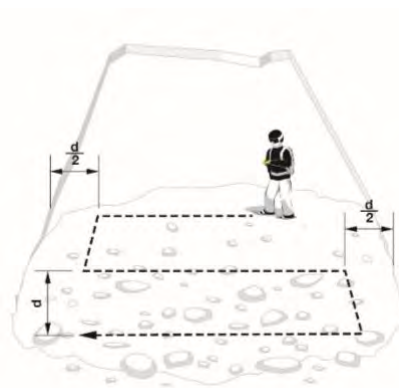
4.8.2 Signal search

Start searching in the primary search area for the initial signal detection as well as for visual/acoustic signals. The BLACK DIAMOND GUIDE BT/RECON BT has a circular receiving range that allows a correct indication of direction and distance from the point of initial signal detection – a specific method such as turning/rotating is not necessary. All signals of the burials that are within the maximum receiving range are received simultaneously.

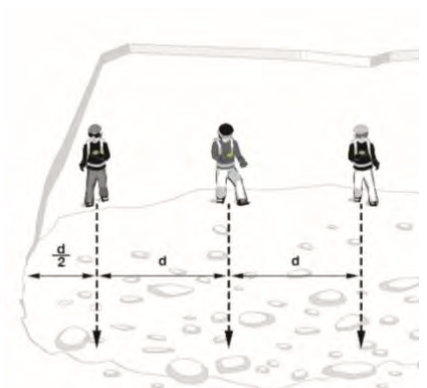
Walk the search strip width in the search area quickly. The recommended search strip width for the BLACK DIAMOND GUIDE BT/RECON BT is 60 m. The display shows “no signal”.



One rescuer with skis for signal search
 d = search strip width



One rescuer by foot for signal search

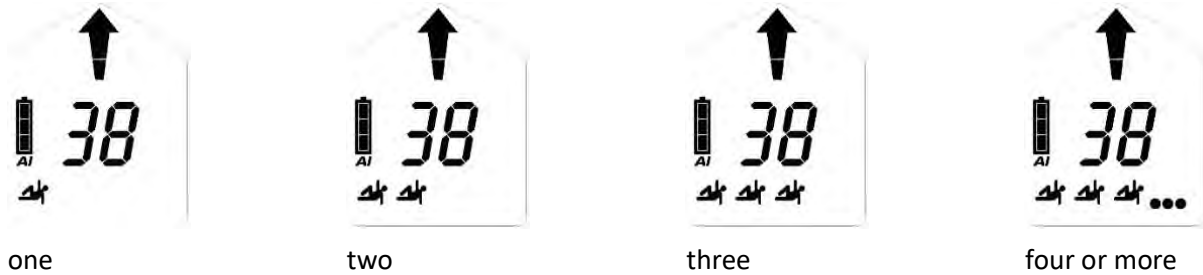


More rescuers for signal search

NOTICE

All participants, observers included, must switch their devices to search mode (or to standby mode)! Also follow the external interference distance recommendations!

As soon as signals are received, the distance and direction to the strongest signal are shown on the display. The number of victims located within the receiving range is indicated by the number of human figures.



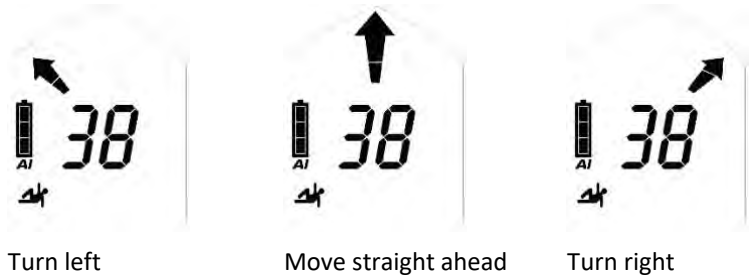
Vibra on initial signal detection

The GUIDE BT provides additional haptic support by vibration on initial signal detection. This lets rescuers focus on the visual surface search during the signal search.



4.8.3 Coarse search

Follow the directional arrow quickly and check for a decreasing distance reading. Change the search direction by 180° in case of an increasing distance reading.



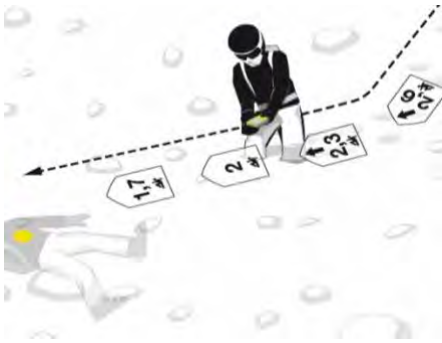
NOTICE

Work calmly and with concentration in search mode.

Avoid hasty movements!

4.8.4 Fine search

From a distance of 5 m, the search speed should be notably reduced (50 cm/s). At the same time, start working close to the surface of the snow. To prevent confusion during the fine search, the direction indication disappears below a distance of 2 m. Reduce the search speed again and find, by cross-like movements, the position of the lowest distance reading. A dynamic acoustic signal output supports the fine search: the closer the higher/faster.



Do an accurate direction adjustment before the direction arrow disappears! You are then moving to the transmitting beacon in best coupling position and save time during the cross-like movements.



Move your beacon at a slow, steady speed of about 10 cm/s, keep it leveled close to the surface and do not rotate your device. Search along the Y axis, determine the lowest distance value, then follow along the X axis. Always move past the point of the lowest distance to verify the distance tendency. Mark the point of the lowest distance reading and start pinpointing.

4.8.5 Pinpointing

Begin at the point of the lowest distance indicated. Always probe perpendicular to the surface. Use your lower hand as a “probe guide” to ensure the probe follows a steady path. Follow a proven system until you have a hit. Communicate a hit clearly to companions. Leave the probe stuck for shoveling guidance.



4.8.6 Multiple burials | MARK function

A multiple burial is indicated clearly on the display by the number of small human figures (2G, 2H). Marking is possible from a distance reading of 5 m and is indicated by the MARK symbol (2E). Press the button MARK (1D) briefly to “hide” the localized transmitter. A successful flagging is confirmed by a frame around the human figure (2J). The display then indicates the direction/distance to the next strongest signal inside the receiving range. If there are no further signals within the receiving range the display indicates “no signal”.



prior to marking



after marking



De-mark a single signal: press the button MARK (1D) for 3 seconds.

De-mark all: switch to send mode and then back to search mode. With the GUIDE BT you can also use the SCAN function for a full reset.

Continuous wave indication | old-device-indication

Old analog transceivers are transmitting a continuous wave in addition to the pulse signal. To keep an impact at a minimum, it is recommended to step a few meters away after marking such a transmitter.



Signal without continuous wave



Signal with continuous wave

The BLACK DIAMOND GUIDE BT/RECON BT identifies a continuous wave and supports visually by flashing human figures.



4.9 GUIDE BT FEATURES

4.9.1 Vibra support

Send-Vibra: see [chapter 4.3](#).

Vibra on initial signal detection: see [chapter 4.8.2](#).

4.9.2 Extended group check & pro-mode

See [chapter 4.4](#).

4.9.3 Mark range settings

In the PIEPS APP device manager the mark range can be changed from 5 m (default) to 20 m or to max. range.

4.9.4 Inclinometer

You can use the integrated three dimensional inclinometer to quickly check the gradient:

- Put your ski pole in slope line at that point of the slope you want to measure.
- Press the button SCAN (1E) for 3 seconds while in send mode.
- Put your GUIDE BT next to the ski pole and read the indicated value. The display switches back to send mode indication automatically after 20 seconds.



⚠ DANGER *Risk of device loss during slope angle measurement*

Although the GUIDE BT keeps transmitting while the inclinometer is active, the function should only be used for training reasons. Never use the inclinometer function in avalanche terrain!

4.9.5 SCAN & victim selection

Two SCAN modes are available:

The Regular SCAN provides a rough overview about the burial situation by indicating the number of victims within certain distance ranges. This is the default setting. The Detailed SCAN shows direction and distance for each victim and allows selecting a victim. The setting can be changed in the PIEPS APP device manager.

Regular SCAN

Press the button SCAN (1E) while in search mode.

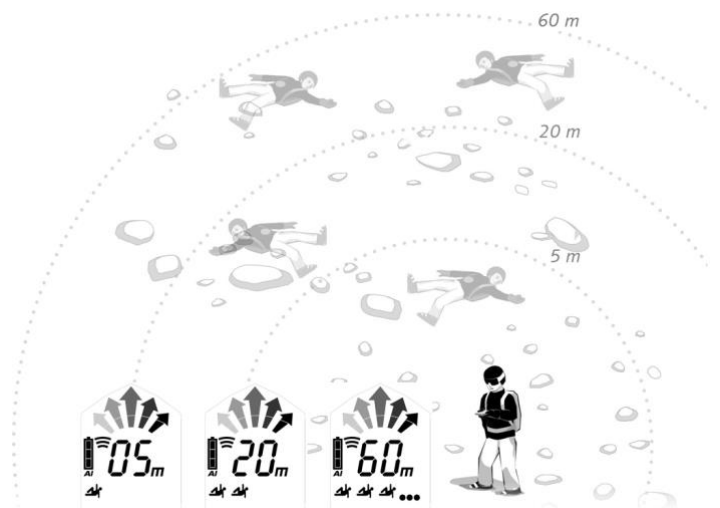
The GUIDE BT scans the entire receiving range and displays an overview. During the scan, don't move and hold the device steady.

reading 1: total number of victims within 5 m

reading 2: total number of victims within 20 m

reading 3: total number of victims within 60 m

The SCAN mode ends automatically but can also be interrupted by another SCAN button press.



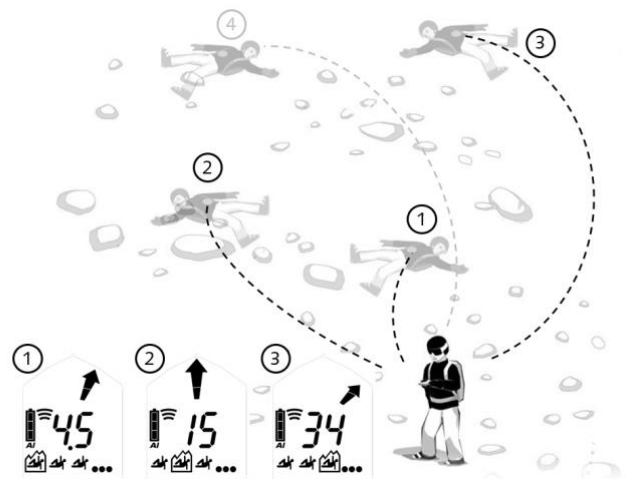
Detailed SCAN & victim selection

Press the button SCAN (1E) while in search mode.

The GUIDE BT scans the entire receiving range and ends with indicating the direction and distance to the first victim.

Use MARK (1D) to scroll through the closest 3 victims. The selected one is encircled (2J) – follow the direction/distance reading to approach it. The MARK function is not available in this mode.

Press SCAN to exit the Detailed SCAN mode and to return to regular search mode.



4.9.6 Analog mode

The analog mode can be used for specific search strategies as well as for demo reasons (coupling positions). Disabled by default, the feature can be enabled in the PIEPS APP device manager.

Press the button SCAN (1E) for 3 seconds while in search mode. The analog mode starts with biggest range.

Use SCAN to reduce range. Use MARK to increase range.

Press SCAN for 3 seconds to exit the analog mode and to return to regular search mode.



4.9.7 TX600 mode

The TX600 mode allows detecting the PIEPS TX600 – this is a mini transmitter for dogs/equipment that works with 456 kHz.

Start TX600 mode: Press the buttons MARK (1D) and SCAN (1E) simultaneously for 3 seconds while in search mode. You see a “TX” indicated on the display (2M). Follow the search phases as usual but use a reduced search strip width of 20 m. MARK can also be used as usual, SCAN and analog mode is not available in TX mode.

Exit TX600 mode: Press MARK and SCAN simultaneously again for 3 seconds. Alternatively, switch to send mode and then back to search mode. The “TX” indication disappears and the GUIDE BT is receiving 457 kHz signals again.



NOTICE *The recommended search strip width in TX600 mode is 20 m.*

5. DEVICE MANAGEMENT WITH THE PIEPS APP

Bluetooth and the PIEPS APP allow a straightforward device management (e.g. software update) and additionally provide a handy training mode.

Get the PIEPS APP (Android Play Store, iOS App Store), connect your BLACK DIAMOND GUIDE BT/RECON BT and take advantage of all features!

To enable Bluetooth, press the button MARK (1D) while switching on the beacon.



Bluetooth enabled



Connection to mobile device established

⚠ DANGER *Risk of a not transmitting device due to enabled Bluetooth*

The Bluetooth mode is supposed for device management and training mode only. Never use the Bluetooth mode in avalanche terrain!

Settings are available for the following features:

Feature	RECON BT	GUIDE BT
Battery type (Alkaline/Lithium)	✓	✓
Auto-Search-to-Send timeout (60 s/90 s/120 s)	✓	✓
Group check ON/OFF	✓	✓
Group check pro-mode ON/OFF		✓
Send-Vibra ON/OFF		✓
Analog mode ON/OFF		✓
Scan mode (regular/detailed)		✓
Mark range (5 m/20 m/MaxRange)		✓

Further useful content in the PIEPS APP:

- Training scenarios
- Basic knowledge
- Software Updates
- Manuals

6. TROUBLESHOOTING, MAINTENANCE, STORAGE, DISPOSAL

6.1 TROUBLESHOOTING

Error	Description	Measure
	No indication on the display	Check the device for physical damage. Check the battery capacity, type and polarity (+,-). Replace the batteries. Take the device to your retailer.
E0	High current This error disappears after the self-check.	Take the device to your retailer.
E1	System configuration This error remains on the display. The device is not serviceable.	Take the device to your retailer.
E2	Transmitter or receiver or amplifier	Repeat the self-check in an area free from interference (outdoors) and check for electronic,
E3	The error disappears after the self-check.	
E4		

	The device has limited functionality in send or search mode.	magnetic and metallic sources of interference. In case of a permanent error take the device to your retailer.
E5	<i>Processor</i> This error remains on the display. The device is not serviceable.	Take the device to your retailer.
E6	<i>Distance and/or direction indicator</i> This error disappears after the self-check. The device has limited functionality regarding the distance and/or direction indication.	Take the device to your retailer.
E8	<i>Accelerometer</i> This error disappears after the self-check. The device has limited functionality: Auto-Search-to-Send is not possible. Group check pro-mode is not possible.	Take the device to your retailer.
E9	<i>Bluetooth</i> Bluetooth activation and/or connection not possible. The avalanche beacon function is working. Is not checked during the self-check, occurs only during Bluetooth activation.	Retry to activate the Bluetooth mode. In case of a permanent error take the device to your retailer.

6.2 BATTERY REPLACEMENT

Change the batteries as soon as the battery capacity indication (2D) shows an empty battery. Always change all three batteries at once! To do so, open the battery compartment (1H) and be sure to insert the new batteries the right way around. For battery disposal, follow the applicable regulations in your country.








⚠ DANGER *Risk of explosion from incorrectly used batteries*

Risk of incorrect battery capacity indication

Only use batteries of type "Alkaline (AAA) LR03 1.5 V" or "Lithium (AAA) FR03 1.5V"!

The use of Lithium batteries must be confirmed in the PIEPS APP!

Battery lifetime	Alkaline	Lithium
GUIDE BT	400 h SEND	600 h SEND
RECON BT	200 h SEND	300 h SEND

	3/3 full	100% - 66% h SEND	✓
	2/3 full	66% - 33% h SEND	✓
	1/3 full	33% - 20 h	✓
	empty	20 h SEND (+10° C, 50° F) + 1 h SEARCH (-10° C, 14° F)	
	empty, blinking	Final reserve, device can shut down at any time	

6.3 CLEANING

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

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



6.4 STORAGE

Store the device in a dry room at room temperature.



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

⚠ CAUTION ***Risk of device malfunction or damage due to extreme temperatures***
Do not expose the device to extreme temperatures outside the operating limits! Store the device protected from direct sunlight!
Extreme temperatures can result in malfunction or damage!



6.5 DISPOSAL

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



7. CONFORMITY

EUROPE

Black Diamond Equipment declares that the radio equipment type BLACK DIAMOND GUIDE BT/RECON BT is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <http://blackdiamondequipment.com/DOC>.

USA/CANADA

Manufacturer: Black Diamond Equipment | Type/Model: PRO BT/POWDER BT
FCC ID: REMDSP04, contains FCC ID VPYLBZY | IC: 7262A-DSP04, contains IC 772C-LBZY

USA: FCC Notice, Cautions and Statement

This device complies with the Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residual installation. This equipment generates, uses and can radiate frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).

Canada: IC Notice

This device complies with Industry Canada's licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference; and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).