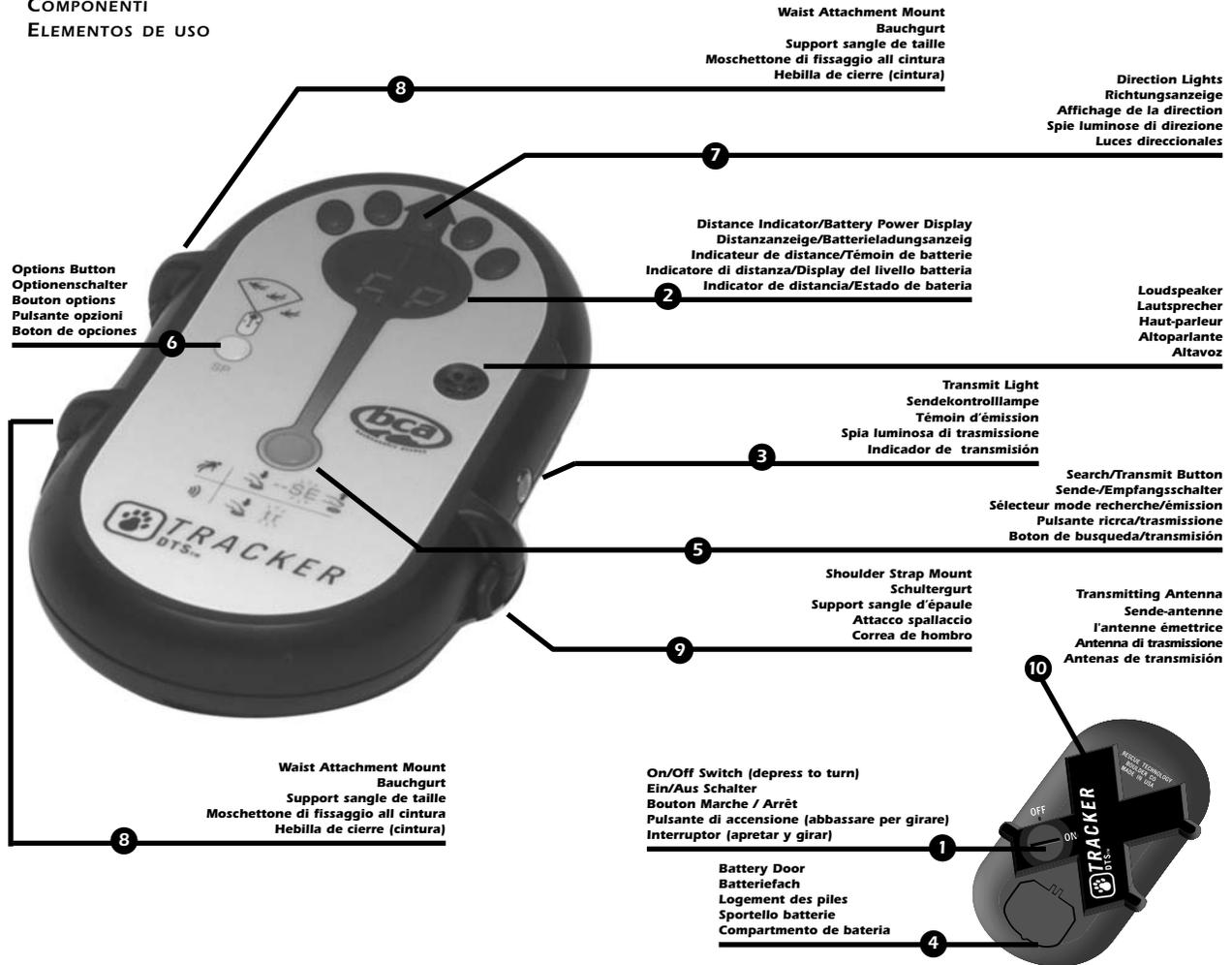


OPERATING ELEMENTS  
 BEDIENUNGSELEMENTE  
 FONCTIONNEMENT ET AFFICHAGE  
 COMPONENTI  
 ELEMENTOS DE USO



Waist Attachment Mount  
 Bauchgurt  
 Support sangle de taille  
 Moschettone di fissaggio all cintura  
 Hebilla de cierre (cintura)

Direction Lights  
 Richtungsanzeige  
 Affichage de la direction  
 Spie luminose di direzione  
 Luces direccionales

Options Button  
 Optionenschalter  
 Bouton options  
 Pulsante opzioni  
 Boton de opciones

Distance Indicator/Battery Power Display  
 Distanzanzeige/Batterieladungsanzeig  
 Indicateur de distance/Témoin de batterie  
 Indicatore di distanza/Display del livello batteria  
 Indicador de distancia/Estado de batería

Loudspeaker  
 Lautsprecher  
 Haut-parleur  
 Altoparlante  
 Altavoz

Transmit Light  
 Sendekontrolllampe  
 Témoin d'émission  
 Spia luminosa di trasmissione  
 Indicador de transmisión

Search/Transmit Button  
 Sende-/Empfangsschalter  
 Sélecteur mode recherche/émission  
 Pulsante ricerca/trasmisione  
 Boton de búsqueda/transmisión

Shoulder Strap Mount  
 Schultergurt  
 Support sangle d'épaule  
 Attacco spallaccio  
 Correa de hombro

Transmitting Antenna  
 Sende-antenne  
 l'antenne émettrice  
 Antenna di trasmissione  
 Antenas de transmisión

Waist Attachment Mount  
 Bauchgurt  
 Support sangle de taille  
 Moschettone di fissaggio all cintura  
 Hebilla de cierre (cintura)

On/Off Switch (depress to turn)  
 Ein/Aus Schalter  
 Bouton Marche / Arrêt  
 Pulsante di accensione (abbassare per girare)  
 Interruptor (apretar y girar)

Battery Door  
 Batteriefach  
 Logement des piles  
 Sportello batterie  
 Compartimento de batería



## Quick Reference

### Rescue Technology, Inc.

**Model No.:** Tracker DTS  
**FCC ID:** OUNDT51

This device complies with 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.

#### Note:

This equipment has been tested and found to comply with the limits for a 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 residential installation. This equipment generates, uses and can radiate radio 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 cause 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 or more 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.

#### Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

This quick reference page is an introduction to proper use of the Tracker DTS. For more detailed information, read the entire manual and consult our website: [www.bcaccess.com](http://www.bcaccess.com).

### Basic functions

**On/off** -- Push and turn the on/off switch on the back of the Tracker to the "on" position. It performs a self-diagnostic check, displays battery power in percent, and enters transmit mode. Change batteries before they reach zero percent.

**Search mode** -- Push the red search/transmit button, hold until "SE" is displayed, then quickly release.

**Return to transmit** -- Press the search/transmit button until "tr" is displayed.

### Searching with the Tracker DTS

The objective for beginners is to find the strongest signal (lowest distance reading) and immediately begin probing the area.

In the event of a burial, switch your Tracker (and all other beacons) to search mode. "SE" will flash in the distance window until a signal is captured.

**Primary/signal search:** If there is a "last seen point," start your signal search there, and search downhill. Otherwise, start your signal search at the top of the slide path. Allow a maximum of 20 meters between searchers or between switchbacks if only one searcher. Slowly rotate your Tracker back and forth and vertically until you engage the signal.

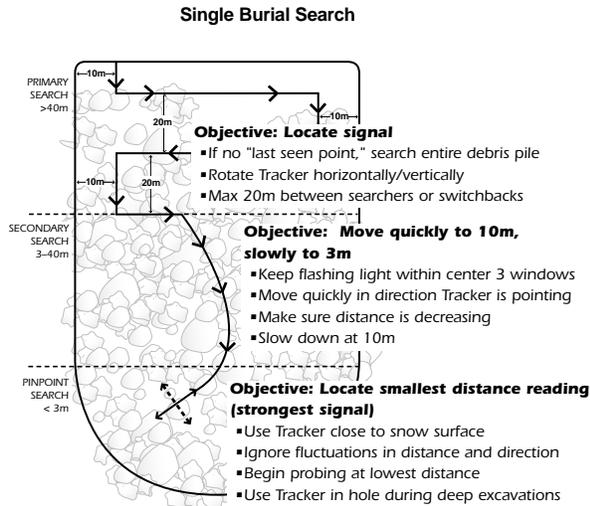
**Secondary search:** Once a signal is engaged, align the Tracker so that any of the center three lights are flashing and move quickly in the direction the Tracker is pointing. Make sure the number in the distance display is decreasing. If it is increasing, turn 180 degrees. Inside 10 meters, move slowly and try to keep the center search light engaged. Your direction of travel might be straight or slightly curved.

**Pinpoint search:** Within three meters, use your beacon close to the snow surface and look for the smallest distance reading. Ignore sudden fluctuations in distance and direction; the strongest signal is often just past these fluctuation points. Begin probing at the smallest reading (strongest signal).

ENGLISH



## Quick Reference



### Multiple Burial Search

If you suspect there is more than one victim, carefully search the entire area. If the Tracker displays more than one signal, follow the one with the lowest distance reading. Once you are within about 10 meters, the Tracker will isolate that signal. If possible, turn off the first beacon once it is found. If you can't turn it off, and don't see a second signal, conduct a "primary search" for the next beacon. Once you are closer to that beacon, the Tracker will isolate that signal. For advanced multiple burial searching, read the entire manual or see our website.

## Familiarization

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Thank you for choosing the Tracker DTS, the world's first digital avalanche beacon, and the first beacon with a high-precision dual antenna system. Regardless of the transceiver, no avalanche beacon can save lives without a fully trained user. Practice frequently with your Tracker before going into the backcountry. Learn and understand the inherent dangers of backcountry travel. Become educated in avalanche hazard evaluation, route selection, and self-rescue. Always carry an avalanche beacon, probe, and shovel—and always travel with a partner. Make sure all rescue equipment is functioning properly before venturing into the backcountry.

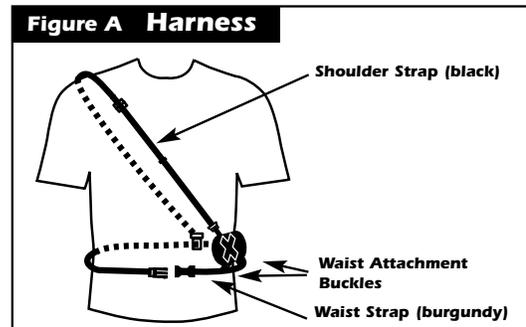
This owner's manual covers the basic techniques required to use the Tracker DTS effectively. To increase your efficiency, please refer to the advanced techniques described on our website: [www.bcaccess.com](http://www.bcaccess.com). Here you will also find important resources for obtaining avalanche education and updates on regional avalanche conditions.

To ensure warranty protection, please return the enclosed warranty registration card.

## FAMILIARIZATION

### Adjustment/Fitting

The Tracker DTS should be worn underneath your outer garments, as shown in Figure A. The concave side should be snug against your lower left rib cage. To search, disconnect one or



## Familiarization

both of the diagonal waist attachment buckles and fully extend the shoulder strap.

To use the Tracker without the harness, disconnect the waist attachment buckles and thread the shoulder strap back through the shoulder strap mounting hardware.

### Startup/Testing

Turn on the Tracker DTS by *depressing* and then turning the on/off switch (1) clockwise (see inside front cover). When turned on, the Tracker runs through a brief diagnostic test of both the transmitter and receiver, then indicates the remaining battery life in the battery power display/distance indicator (2). A reading of 95 to 99 percent indicates fully charged batteries.

After the diagnostics, the Tracker will enter transmit mode (tr). The flashing transmit light (3) confirms the unit is in transmit mode.

### Power Supply

The Tracker DTS operates with three AAA alkaline batteries. Use only high-quality alkaline batteries. Do not use rechargeables.

Note that the battery level percentage is approximate, depending on battery manufacturer and operating temperature. The Tracker will operate safely down to and below a zero battery power display. The manufacturer suggests, however, that you replace your batteries frequently, well before this occurs.

If the Tracker is subjected to excessive moisture, open the battery door (4) to help allow the unit to dry. Remove batteries during extended periods of inactivity.

### Search/Transmit

To enter search mode, push the search/transmit button (5) for at least one second, but for no longer than two seconds. During this time, the distance indicator (2) will display two dashes (“--”). Release your thumb when the display changes from “--” to “SE” and the Tracker sounds a series of three beeps. If the button is released before or after this time, it will remain in transmit mode.

The Tracker can be switched instantly from search (SE) to transmit (tr) mode at any time by simply pushing the search/transmit button.

## Familiarization

### Options

#### Auto-Revert System

At startup, the user can engage the Tracker's auto-revert safety feature by pressing the options button (6) while pressing and turning the on/off switch. With auto-revert engaged, the Tracker will revert to transmit mode after five minutes in search mode.

If auto-revert is engaged, “Ar” will be shown in the power display after the diagnostic testing. If auto-revert is not engaged, “nr” will be displayed.

If auto-revert has been engaged, then after five minutes in search mode, an alarm will sound for ten seconds and “Ar” will flash repeatedly in the distance indicator. To remain in search mode, press the search/transmit button or the options button at any time during the ten-second alarm period. If ten seconds elapses, “tr” will appear and the Tracker will revert to transmit mode.

If auto-revert is not engaged, the Tracker will sound a short alarm every ten minutes to remind the user that he or she is in search mode.

#### Special Mode

Special (SP) mode is a feature designed to assist searchers in the event of a multiple burial. It can help searchers isolate individual signals when searching for more than one transmitter at a time. In search (SE) mode, the Tracker only displays the strongest signal (once the searcher is within about 10 meters). In special (SP) mode, however, it will display all signals, regardless of their strength—providing they are within special mode's reduced search window (Figure E, page 11). In special mode, the search area is reduced from 180 degrees to about 75 degrees: signals will only be displayed if they are captured within the center three directional lights.

Special mode can only be entered while the user is in search mode. To enter SP mode, press the options button (6). Release the button when “SP” appears in the display window. When signals are detected in this mode, they are displayed for a shorter time than in SE mode.

#### Mute Mode

To mute the sound while in search mode, push the options but-

## Operating Instructions

ton (6) for three seconds until "LO" is displayed, then release. To turn the speaker back on, perform the same operation. "L1" will be displayed, indicating the speaker is back on.

### OPERATING INSTRUCTIONS

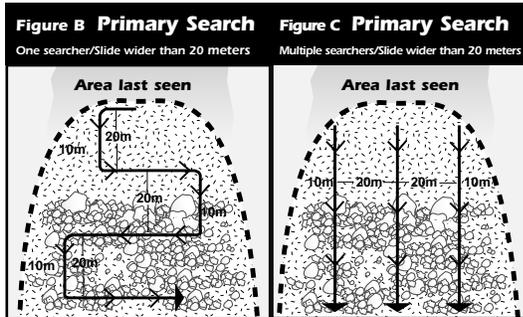
#### Searching

The Tracker DTS operates using the 457 kHz international standard frequency. It is fully compatible with all transceivers adhering to this standard. The Tracker, however, offers many advancements in beacon searching and is operated differently from "older" style (analog) beacons.

The search process includes three phases: the signal (or primary) search, the fine (or secondary) search, and the pinpoint search.

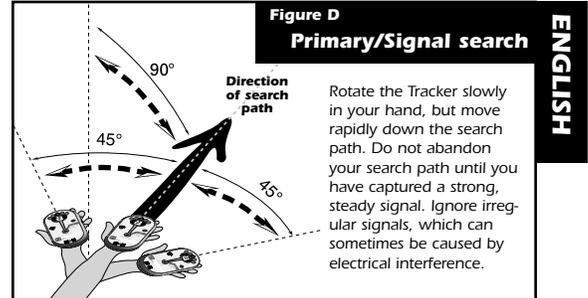
#### Signal/Primary Search

The signal search refers to the process of establishing a search pattern and looking for a signal. The search pattern will be defined by the victim's last seen area, the size of the slide, and the number of searchers. Refer to Figures B and C, below, to



establish a primary search pattern. If the slide is less than 20 meters wide, the primary search path will be directly down the center. If the victim's last seen area is well defined, the primary search will follow a direct path down the fall line from this point.

## Operating Instructions

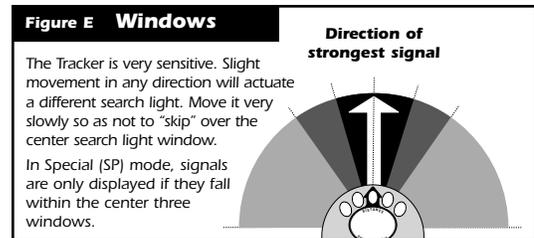


Prior to the primary search, be sure that all transceivers are turned to search mode. Rotate the Tracker slowly back and forth on a horizontal and vertical plane (Figure D) while moving in the direction as defined by your primary search pattern. While searching, be aware of other physical clues, such as equipment or extremities protruding from the snow surface. When no signal is detected, "SE" will flash in the distance indicator. Once a signal is detected consistently, mark this spot and begin the fine search.

#### Secondary/Fine Search

The secondary search (also referred to as the fine search) is the portion of the search from where you have detected a steady signal to where you are close to the victim.

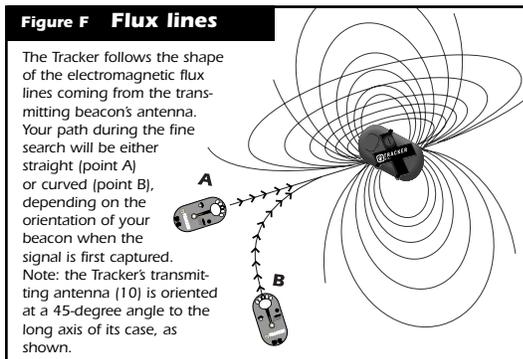
Once the signal is consistently detected, rotate the Tracker slowly on a horizontal plane until the center direction light (7) is



blinking. The Tracker is now pointed in the direction of the strongest signal, or your direction of travel (Figure E). The four lights (7) on either side of center tell you which way to rotate the

## Operating Instructions

Tracker to engage the center light. The distance indicator (2) tells you, in approximate meters, how far you must travel (1 meter = 1.1 yards or 3.3 feet). If the number on the distance indicator is increasing, you are on the same axis as the victim's signal, but moving in the opposite direction. Turn 180 degrees, engage the center search light again, and continue your search in the direction the Tracker is pointing. This is preferable to walking backwards, in which case the Tracker will often flash "SE" rather than show a direction and distance. If you are stationary, but the distance is significantly changing, you are probably detecting the signal of another rescuer. Make sure all rescuers are in search mode before continuing.



You may find that, while following the directional lights, your route follows an arc. This is because the Tracker DTS performs the fine search using the "flux (or induction) line" method (see Figure F). It follows the shape of the electromagnetic signal, or flux line pattern, coming from the transmitting beacon's antenna. The distance displayed is the distance to be traveled along that flux line, not the straight-line distance from you to the victim.

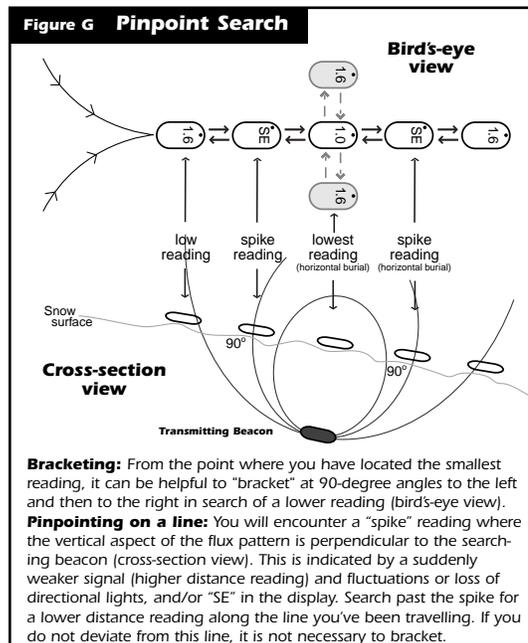
### Pinpoint Search

The pinpoint search is the final part of the beacon search, which is performed on foot with the beacon positioned at or near the snow surface. The objective of the pinpoint search is to locate where the signal is strongest and to reduce the area to be probed.

## Operating Instructions

Move your beacon very slowly along the surface of the snow during the final three meters of the pinpoint search. It can be helpful to tilt the front of the Tracker down, although it is not necessary. Ignore sudden fluctuations in distance and direction, often followed by no distance reading and/or "SE" in the distance indicator. This means you are very close. The lowest reading will be near this point.

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From the point where you have located the smallest reading, it can be helpful to "bracket" at 90-degree angles to the left and then to the right in search of a lower reading (Figure G, bird's-eye view). Repeat if necessary along both axes. Begin probing at the lowest distance reading.

### TIP: PINPOINTING/PROBING ON A LINE

Until the Tracker is very close, it will point you in the general

## Operating Instructions

direction of the buried beacon. Once you are within less than approximately three meters, however, there is a "spike" reading where the distance and direction lights fluctuate and the distance display might flash "SE". At this point, the searching Tracker is temporarily perpendicular to the vertical aspect of the flux pattern of the buried beacon (Figure G, cross-section view). If you draw a line in the snow or place a long object on the snow in the direction you were pointing just before the spike, you can limit your pinpoint search to that line and then probe along it. If you are searching with a partner, he or she can probe ahead of you, on the line you have established. Known as "pinpointing on a line," this technique performed properly is the most efficient method for pinpointing with the Tracker.

In most cases, the buried beacon will be oriented roughly horizontal, there will be two "spikes," and the lowest reading will be between them, as shown in Figure G. If the transmitter is buried vertically, there will be only one spike and a low reading on either side. In either case, probe at the lowest reading. If you do not strike the victim, then continue probing along the flux line.

### Probing/Digging

At the point where the distance has reached a minimum, probe the area, preferably along the flux line. Your probe should enter the snow perpendicular to the slope surface. Once you have confirmed the victim's location, leave the probe in the snow and begin digging. To monitor your progress during a deeper burial, continue to use the Tracker inside the hole. Upon reaching the victim, first uncover his or her face. In the event of multiple burials, turn off the victim's beacon (if possible) before continuing the search for the next victim.

### Multiple Burials

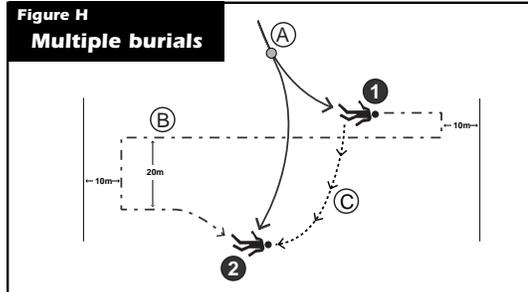
Multiple beacon searches are more difficult and complex than single searches. They require practice and an understanding of flux lines. A thorough understanding of the Tracker's special (SP) mode can also greatly increase the efficiency of the multiple search, though it is not necessary.

If you begin to receive more than one set of signal data, you probably have a multiple burial. Stay in search (SE) mode, and focus on the closest distance reading, attempting to engage that signal in the center search light. If you are roughly the same distance from both transmitters, the Tracker will often flash "SE".

## Operating Instructions

Once you are significantly closer to one signal—and within about 10 meters of it—the Tracker DTS (in SE mode) will "lock" onto that signal and mask out the others. Once you are locked in, the Tracker will behave very similar to how it does in a single beacon search. Pay attention to the readings you last received from the other beacon; they will give you an indication of where to go after finding the closest one.

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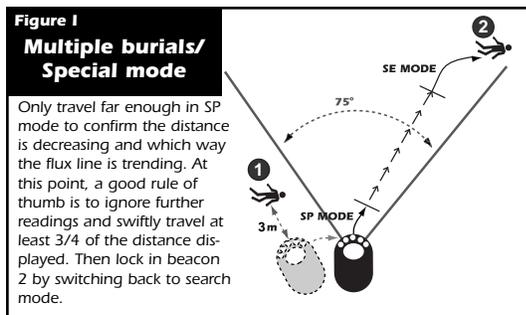
Once you have located the first beacon (beacon 1), turn it off, if possible. Even if this is not possible, you might already have a good idea of where beacon 2 is located. In that case, move in that direction until the Tracker isolates that signal. If you do not have an idea of where to look next, then you have three options (Figure H): A) return to the point at which you had two clear signals, and start your search for beacon 2 from that point, remaining in search mode; B) in search mode, perform a primary search away from beacon 1 until you detect and isolate beacon 2; C) move directly from beacon 1 to beacon 2 using special mode. This is the most efficient technique, but requires the most practice.

### TIP: SPECIAL MODE

Special (SP) mode enables the Tracker to display the distance and direction of signals other than those of the closest beacon. It also reduces the Tracker's search "window" to the center three directional lights, enabling the searcher to mask out beacon 1 and differentiate it from beacon 2. SP mode is used to determine approximately what direction and distance to go to get closer to beacon 2. Once you are closer always switch back to SE mode.

## Operating Instructions

Step back from beacon 1 at least three meters and re-engage beacon 1 in your center search light. With the center search light engaged, switch the Tracker to SP mode (Figure 1). Then rotate the Tracker slowly until another signal is detected (beacon 2), most likely with a larger distance reading. If the Tracker is rotated more than about 40 degrees away from the flux line of beacon 1, that signal will disappear, allowing you to focus on the signal from beacon 2. This “filtering” process can often simplify multiple searches.



If two signals are captured in the same directional window, or no other signal is captured at all, it can be helpful to step three meters to the right or left and try again.

Once you have located another signal, begin to move in that direction. If the distance consistently decreases, you are going in the right direction. Travel far enough in SP mode to confirm the distance is decreasing and which way the flux line is trending. If the flux line is curving sharply, continue in SP mode until it becomes straighter. If more than one signal is being displayed and it becomes unclear which one to pursue, continue in the direction you have been searching. Always switch back to SE mode when you think you are getting closer to beacon 2 than beacon 1.

If after finding a victim, you do not know how many are still buried, it is helpful to enter SP mode and check all four sides surrounding that victim. If still no signals are detected, continue the search as if it were a multiple burial. Revert to search mode

## Operating Instructions

and perform a primary search of the remaining unchecked areas within the debris pile.

### Three or more victims

If more than two beacons are buried, multiple burials become extremely complex with any transceiver. If using special mode, after locating beacon 1, it is helpful to start each fine search from the same point, most likely back at beacon 1. By returning to this reference point, you are likely to recognize which signals you have located and which ones you have not. If using search mode, after locating beacon 1, it is best to perform a primary search pattern away from that beacon through the remaining unchecked area. The Tracker will isolate each beacon as you become closer to that beacon than the ones already located. *For more details on multiple burials, please refer to our website: [www.bcaccess.com](http://www.bcaccess.com).*

## Technical Information

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### TECHNICAL SPECIFICATIONS

- Frequency: 457 kHz
- Batteries: Three AAA/LR03 alkaline batteries; do not use rechargeables
- Battery life: minimum 1 hour in search mode after 200 hours in transmit mode (approximately 250 hours in transmit only or 50 hours in search only)
- Receive range: up to 50 meters (with Tracker DTS transmitting)
- Weight: 10.88 ounces (310 grams), including strap and batteries; 8.3 ounces (200 grams) without strap and batteries.
- Size: 5-3/4" x 3-1/4" x 1-1/4" (14cm x 8cm x 3cm)
- Minimum temperature range (at 66.7 percent battery power):  
transmit mode: -10°C to +40°C (14°F to 104°F);  
search mode: -20°C to +40°C (-4°F to 104°F)
- U.S. Patent number 6,167,249

Do not place cellular phones, communication radios, or any other electronic equipment within 6" (15 cm) of the Tracker DTS while performing a transceiver search. In receive mode, irregular readings can be caused by these and other sources of electrical interference, such as power lines, electrical storms, and electrical generating equipment. In transmit mode, the Tracker DTS can tolerate equipment touching end-to-end or as close as 1" (2.5 cm) if stacked horizontally.

**Made in U.S.A. at an ISO-9002-certified facility.**

Conforms to the R&TTE harmonized version of the EN 300 718 and meets or exceeds the requirements of Articles 3.1, 3.2, and 3.3.

**FCC ID: OUNDT51  
CANADA: 35811021823**

