



TRACKER™ BACKUP SEARCH TECHNIQUES

No two avalanche rescue scenarios are the same. Throw in more than two buried victims—all close together—and a search can get complicated, requiring special searching techniques. While most transceivers on the market come standard with multiple search functions such as “marking,” these are not 100 percent reliable, due to a phenomenon called “signal overlap” (see www.backcountryaccess.com/research). Therefore, it is important for rescuers to be well trained in more than one method for solving multiple burials. With any transceiver, a searcher may need to utilize special multiple search techniques to rescue the victims, especially if there are more than two victims within range.

It’s important to note that most multiple burials can be approached as a series of single burials, solved either “in series” or “in parallel” using normal search mode. The only time multiple burials can become truly complex is when the victims are in close proximity (≤ 10 m) to each other.

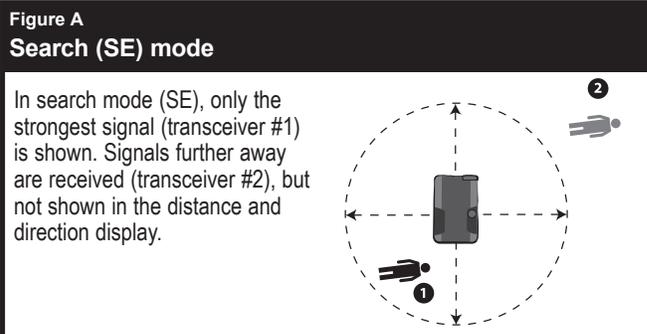
In general, we recommend using Signal Suppression (Tracker3) or Special mode (Tracker2/DTS) for all scenarios involving only two victims. When more than two victims are buried, then special techniques might be necessary—especially if some of the victims are in close proximity.

Remember: it’s fun to go out and practice multiple burial searching, and we encourage you to master it! But manpower, group organization, and excavation efficiency play equally important roles in real-life avalanche rescues.

The following section highlights two multiple-burial search techniques that serious backcountry travelers and guides should know.

THREE CIRCLE METHOD: Most effective in large, flat areas

The three circle method is used with your transceiver in standard search mode. It is most effective in large, flat areas, as it will cover only a portion of the debris pile and sometimes requires walking uphill of the victim.

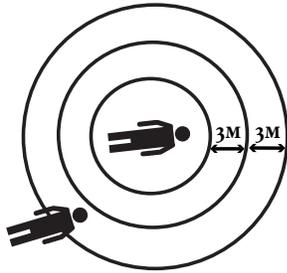


To perform this method, stay in SE mode and take three steps away from the first found victim. With your searching transceiver on the snow surface, walk in a circle of this radius around the victim, attempting to acquire another signal in SE mode. If a new signal is acquired, begin bracketing until it has been pinpointed. For this method to be successful the searcher should rely on the distance readings and ignore the directional arrows. Maintaining orientation of the searching transceiver is unimportant, as the goal is to lose the strongest signal and capture the next strongest signal as soon as possible.

If no other signal is captured, take another three steps back and repeat up to a maximum of three circles (nine steps). If a new signal is acquired and pinpointed, and there are still more victims suspected to be in close proximity, then return to the point where you abandoned the circle search (in SE mode) and begin searching again from there.

Figure B
Three Circle Method

When using the three circle method, walk around transceiver #1 in concentric circles until you detect the signal of transceiver #2. During the first circle, keep the searching beacon as close as possible to the snow surface.



MICRO SEARCH STRIP METHOD: *Most effective in complex multiple burials in a smaller search area*

This method allows a searcher to use a simple, systematic approach to solve a multiple burial. It works well in small scenarios (such as guiding exams) since it involves making many tight passes through the debris pile. It also works well in steep debris since it doesn't require walking uphill.

Based on the number of buried victims, you will determine how wide your search strips need to be (this is usually an estimate as you're "thinking on the fly"). The width of your search strip will decrease as the number of victims increases. If the Tracker2 or Tracker3's close proximity brackets are illuminated, we suggest using 3-meter search strip widths.

Like the three circle method, this technique is used with your transceiver in standard search mode. The searcher must rely on the distance readings on the searching transceiver, not the directional arrows. This is because it requires bracketing rather than following the flux lines.

If no signal or only one signal is detected, follow your normal 40-meter search strip widths. If more than one signal is detected and the close proximity lights turn on, reduce your search strip widths to 3 meters.

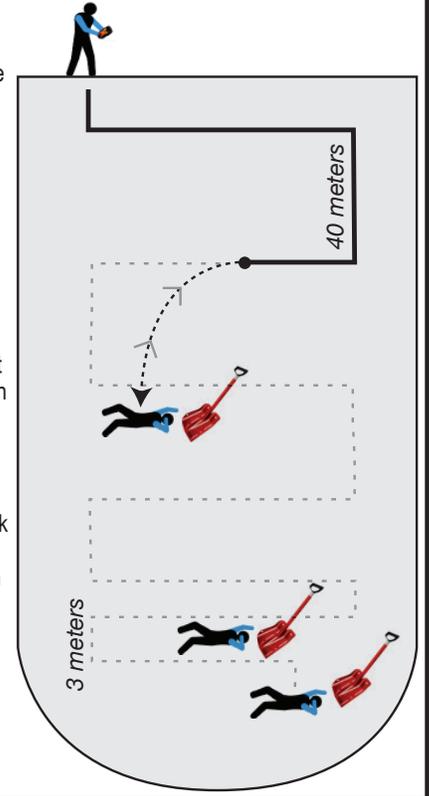
Remember, these techniques all assume there is only one searcher available. With additional searchers you would spread out and search "in parallel" (see www.backcountryaccess.com/research).

Figure C
Micro Search Strips

Consider moving to micro search strips if the search area is small and the close proximity brackets are illuminated.

Do not leave your micro-search strips and start bracketing until you see distance readings that are less than or equal to your search strip width (in this case, 3 meters). When this occurs, find the lowest distance reading and begin probing.

Remember to search as close as possible to the snow surface. Always mark the point at which you departed from your search strips and return to that point to resume searching for the next signal.



HOW TO PASS A GUIDING EXAM USING TRACKER3/2/DTS

After 20 years of transceiver searching with the world's top rescue personnel, we have found that strong searchers rely on a multitude of techniques. A complex transceiver search may require a searcher to act on the fly and improvise based on how the scenario unfolds, often combining two or three techniques. There are a few methods you should have ready to go (micro search strips, three circle method, Special mode (SP), Signal Suppression (SS), Big Picture (BP), etc.). Variables such as the number of victims, the distance between them, and the victim's burial depth make it nearly impossible to advise one technique over another.

The following hybrid technique is targeted directly at those striving to pass a guiding exam and for advanced users looking to round out their search skills. While no two exams are the same, they all share similar characteristics:

While no two scenarios are the same, the above techniques will provide you with a solid framework to work through any complex scenario. Remember that transceiver searching is the fast part. Most multiple burial rescues are limited by the number of shovelers available. However, special techniques may be beneficial if there are enough rescuers available for shoveling.

These techniques are mainly used and directed toward professional guides and advanced searchers. Shoveling is the ultimate crux in an avalanche rescue and the efficiency of your rescue will greatly depend on how many resources you have to dedicate toward excavation. Be sure to check out BCA's video on the "ABC's and D of Digging" at www.backcountryaccess.com/education.

To learn more about advanced search techniques or to set up a "How to pass a guiding exam" training session, please contact info@backcountryaccess.com.



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