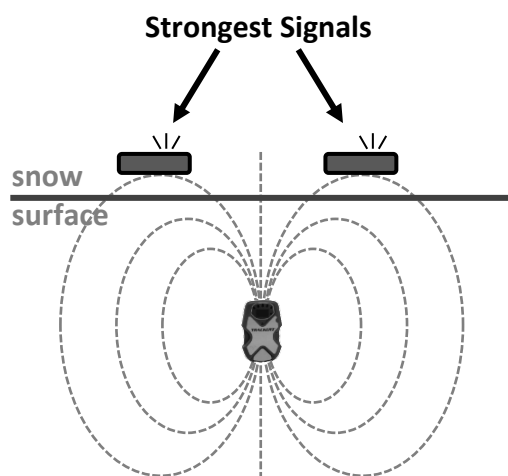


AVALANCHE RESCUE

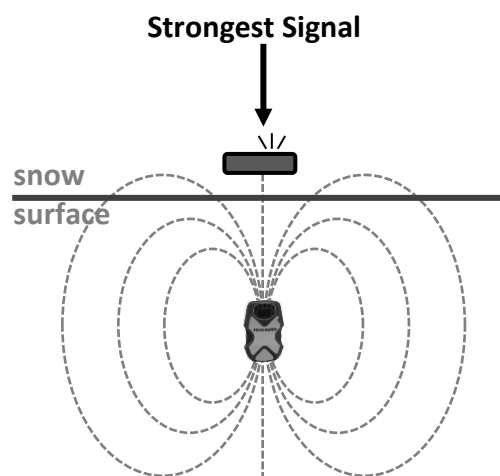
Transceiver Use

Two-antenna transceivers have two antennas mounted perpendicularly. They compare the relative strength of the signal that is received on each antenna to calculate the location of the buried beacon. This is displayed as distance & direction. Two-antenna transceivers are unable to resolve spikes.

Three-antenna transceivers display distance and direction, and also have a tiny, vertically-mounted third antenna which only turns on when you get near the victim. The third antenna greatly reduces, or eliminates, spikes.



2 antenna transceiver & spikes



3 antenna transceiver & no spikes

Function Check:

Turn all transceivers to receive, turn one to transmit. Check to see that all transceivers receive this signal. All transceivers that were on receive should then go to transmit. The transceiver that had been transmitting should go to receive. Check that ALL members of the party are transmitting. Receiving transceiver then goes to transmit.

Range Check:

Tester skis beyond range of other transceivers. All (but tester) turn transceivers to transmit. Tester (in receive/search mode) has each party member approach until their signal is picked up.

PROFESSIONAL LEVEL 1 WORKBOOK

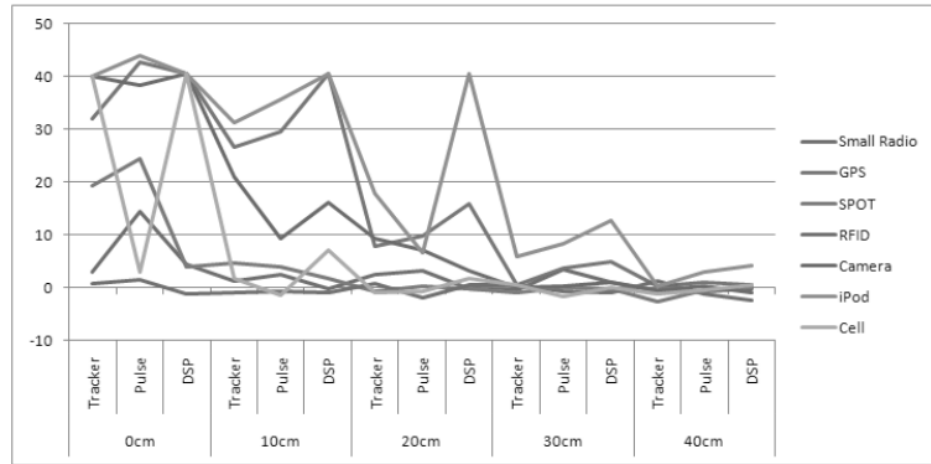


External Antenna Interference:

Electronics interfere with transceivers in search and send mode.

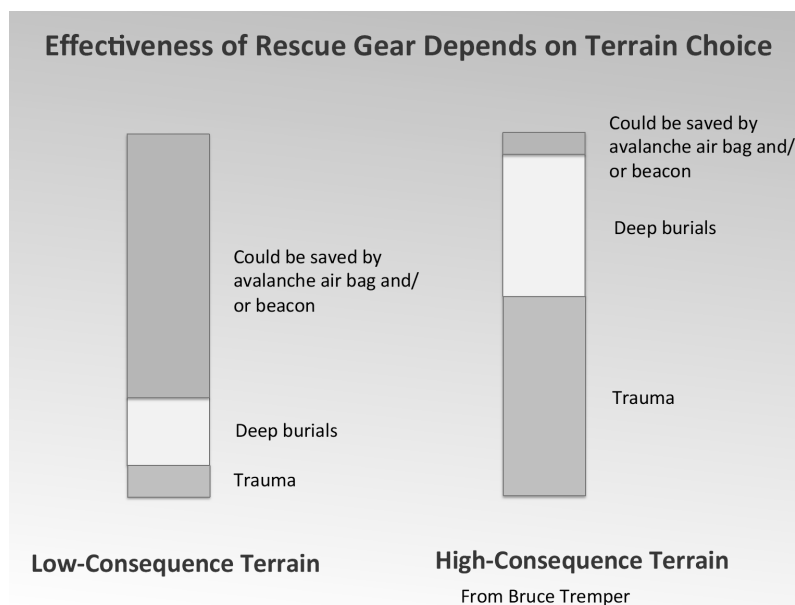
IKAR

recommendation:
Transceiver 50 cm away from any other electronics.

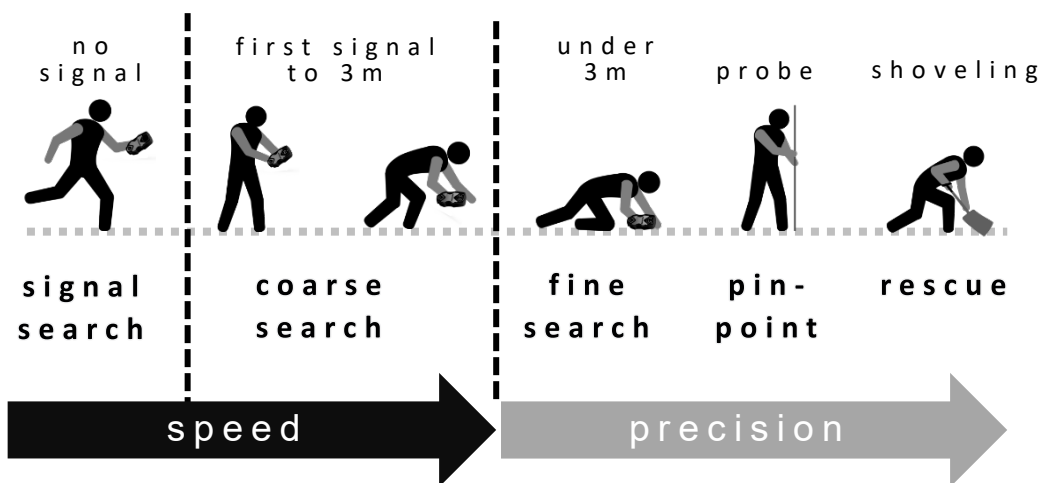
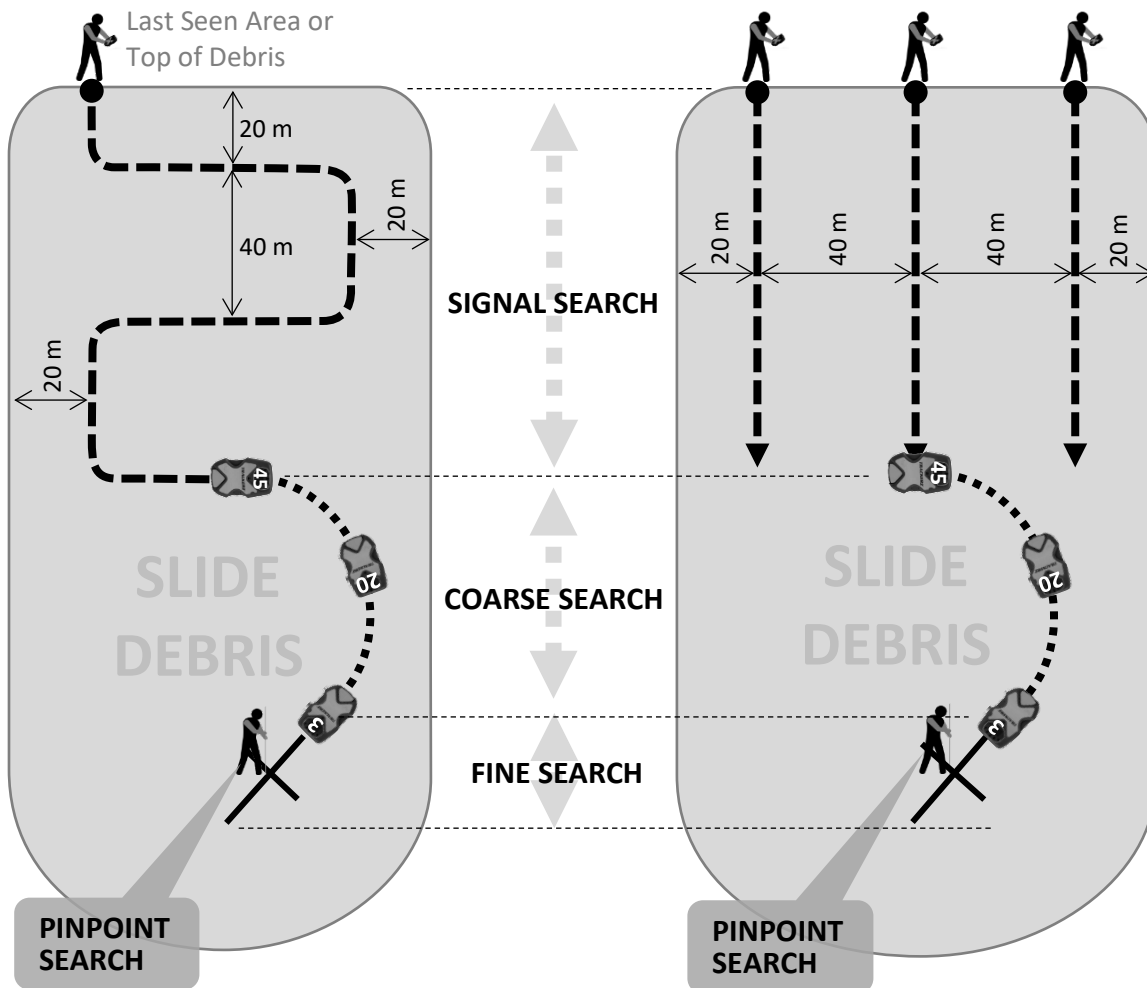


Airbags

- Decreases burial depth through inverse particle segregation.
✓ In Swiss study, dummy burial depth with airbag vs. dummy burial depth without airbag **15 cm vs 42 cm**
- Will possibly save 1 in 4 who would otherwise die in an avalanche.
- Efficacy is influenced by terrain choice.
- High consequence terrain – airbag less effective.



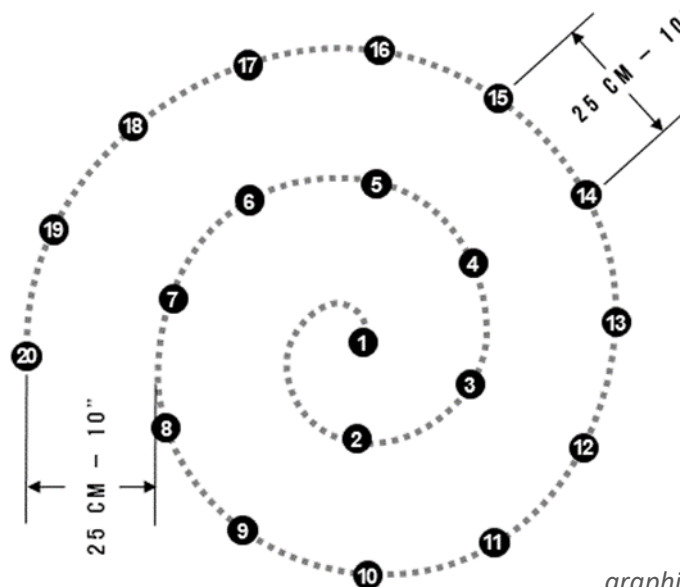
Transceiver Search Methods



Graphics provided by ©Glissemedia

Pinpoint Search Patterns

Continue to spiral out from the strongest signal, until victim is located with a probe strike.
LEAVE THE PROBE IN PLACE.

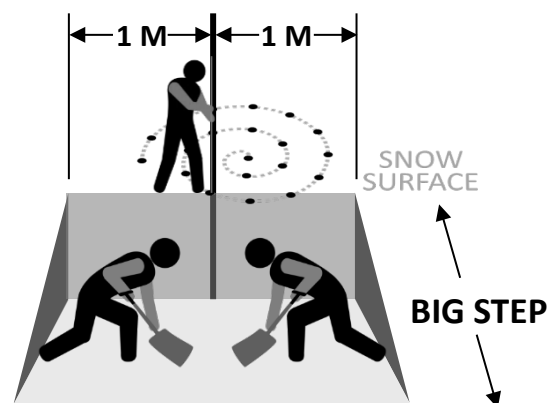


graphic: Glissemmedia LLC

Shoveling Techniques

STRATEGIC SHOVELING

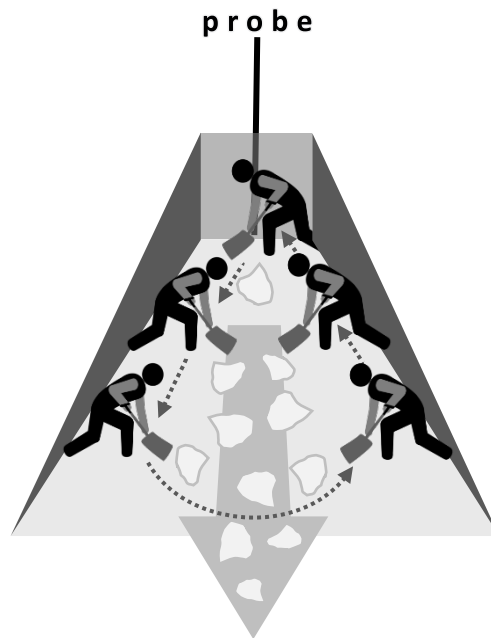
1. Starter hole - downhill of probe
2. Hole needs to be 1 1/2 times the burial depth
3. Throw snow to the side until knee to waist deep
4. THEN throw snow downhill
5. Rotate positions every 45-90 seconds



graphic: Glissemmedia LLC

V-SHAPED SNOW CONVEYOR BELT

1. Starter hole – 1-2 rescuers position at probe
2. Rescuers position in a v-shape, approx. 2 shovel lengths apart
3. Snow paddled from front to back of conveyor belt
4. Rotate positions every 45-90 seconds (dotted line)



Rescue Without Transceivers

1. Visual clue search
2. Search likely burial sites (debris piles above trees, in turns, benches and at the toe)
3. Spot probe likely burial spots
4. Yell out to the victim
5. Organized probe line: line up fingertip to fingertip in a line across the slope. Have probers evenly spaced. Each prober should probe to their right, center, to their left, then take 1 step forward. This pattern should be repeated over entire area. If a probe strike occurs, probe is left in place while a team excavates.

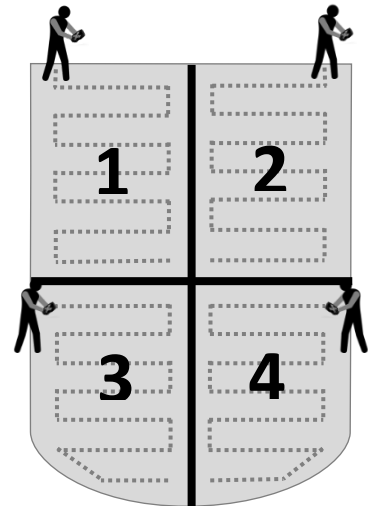
Multiple Burial – Tip and Techniques

Flagging/Marking:

Even the best beacons will lose marked or flagged beacons, usually when there are more than two buried beacons. It is good to have back-up search techniques if these functions fail. What follows are several strategies to help work through large multi-beacon scenarios.

Visualize terrain to be searched:

- Divide search area into quadrants. Where you don't leave a quadrant or section, until you KNOW that there are no burials in that zone.
- Likely burial spots: Trees, boulders, benches, toe of slopes
- Flow lines – Last point seen and visual clues

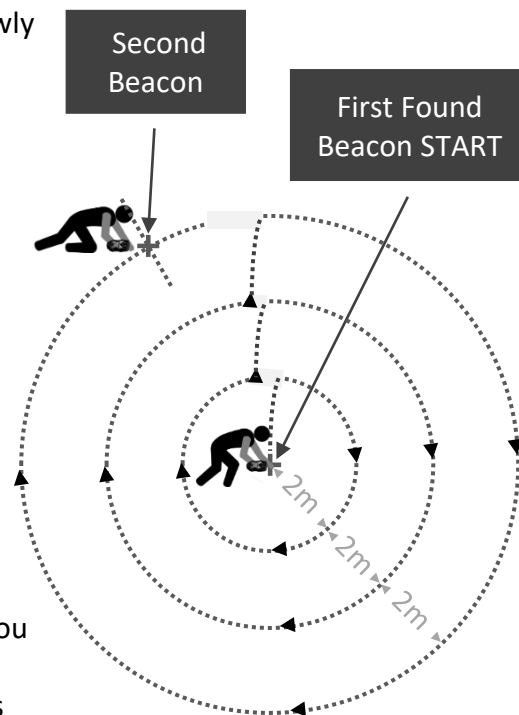


graphics: Glissemmedia LLC

Circle technique:

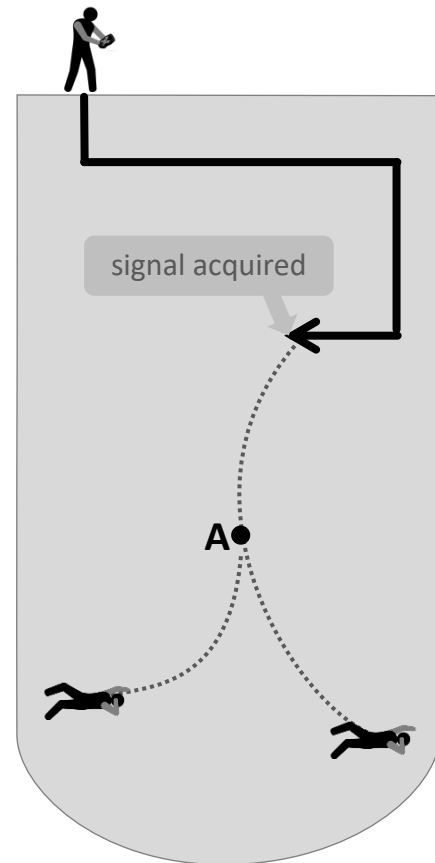
For closely buried beacons

- Walk away on the lowest volume – move slowly
- Walk a circle 2m from first beacon:
- Analog - keep orientation constant (same relative to path).
- Digital – watch distance display closely (orientation does not matter) .
- Do a larger circle if no signal is heard on the initial circle (analog increase volume).
- Continue to a 3rd circle at 6 meters out – if no signal is found AND you believe that there are closely buried beacons in your search area, then use the micro search technique. Otherwise, resume primary search by quadrant.
- Know your beacon! Some beacons will give you a readout of how many beacons are within certain distance ranges. Know how to get this information from your beacon (read the manual).



Split point for multiple beacons:

- Mark the point that you have two, or more, different signals = Point A
- Note whether distances are all decreasing as you approach the first signal. If so, then you likely have two, or more, beacons buried closely together.
- If one distance decreases, while the other remains relatively constant, then you are paralleling one of the beacons off to the side of your track.
- If one distance decreases, while the other increases, you have relatively wide spaced burials and you should go in another direction from the split point after you locate the first beacon.
- Isolate one signal by distance readout or by audio signal.
- Follow the flux line in and locate first signal.
- Return to initial marked point (A).
- Reorient beacon to isolate second signal (Tracker beacons go to SP mode)
- Follow the flux line to the second signal



graphics: Glissemmedia LLC

Micro Search Strip Method

Steve Blagbrough and Jesse de Montigny

- This technique is best for many signals in a small area.
- Allows digital beacons with proximity filters to do their job, without a great deal of thought.
- Requires good fine search and pinpointing skills.
- Analog beacons must be maintained in the same orientation throughout the search. That includes digital/analog combinations.
- Once a beacon is found and marked, and shovelers are digging out the buried victim, return to the search pattern to locate others.

