

## ELECTROMAGNETIC INTERFERENCE IN AVALANCHE TRANSCIEVERS

### SEND - Transmit mode - all devices may remain in use

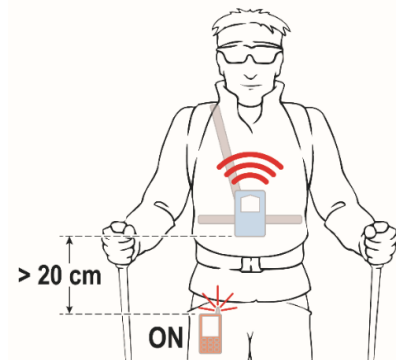
#### > 20cm from sources of interference:

- electronic devices
- metal parts
- metallic foils (e.g., to preserve heat)
- magnets
- heating elements

Keep your phone in a pocket (pants) opposite to the transceiver to avoid the devices coming to rest close to one another in the case of an avalanche, thus shielding the transmission signal.

Do not carry a phone in your jacket pocket (nor an action camera at chest level) while wearing an avalanche transceiver in its cradle.

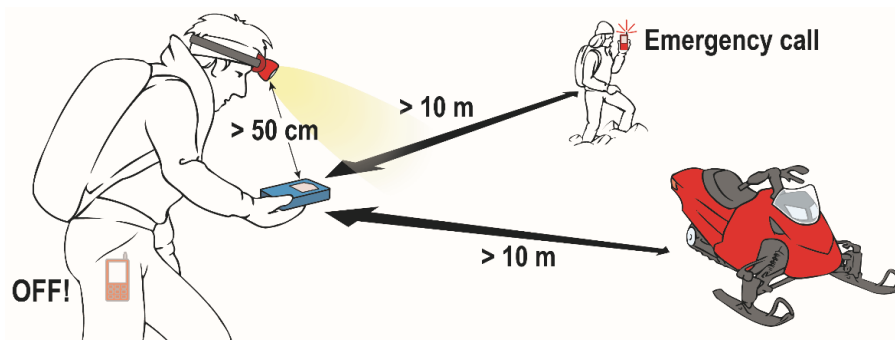
Talk about the topic in your group, make yourselves aware of the problem of interference sources once again.



### SEARCH - Receive mode - only absolutely necessary devices may stay on

**Searching rescuer:**  
all devices OFF  
take off heated gloves

**Other persons in proximity:**  
>10m distance  
all devices may remain in use



- Take off heated gloves.
- Switch off communication and other electronic devices (completely OFF, no airplane mode)
- Switch off heated socks and boots.
- When using a watch with an electronic screen, or bracelet with electronics for activity or heartbeat monitoring, hold the transceiver in the opposite hand.
- >50cm distance from devices *absolutely necessary* to conduct the search, for example a head lamp for a search at night.
- >10m distance from a turned on mobile phone, radio or satellite communication device.
- >10m distance from a snowmobile with running engine
- Reduce the search strip width to max. 20m if interference cannot be contained by the distance rule.
- Some electric airbag systems may cause interference. When using an affected system, you may need to consider searching without your electric airbag.

#### **Companion rescue in a group:**

To save time, or in case you are not familiar with turning your devices off, consider handing electronic devices to someone who is not actively searching.

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## SOURCES OF INTERFERENCE

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### Passive Interference affecting SEND and SEARCH:

Metal parts, electronic devices with metal cases, foils and wire mesh; magnets

→ Keep >20cm distance from metal parts and magnets.

### Active Interference affecting SEARCH:

Every device consuming electrical energy:

→ Follow the rules listed in SEARCH to avoid range reduction and "false positives"

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## INTERFERENCE POSSIBLE CONSEQUENCES

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→ Misleading distance and direction indications → "False Positives"

→ Range reduction

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## DETECT INTERFERENCE

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### Differentiate "signal of a buried subject" from "false positives" [based on analog sound]

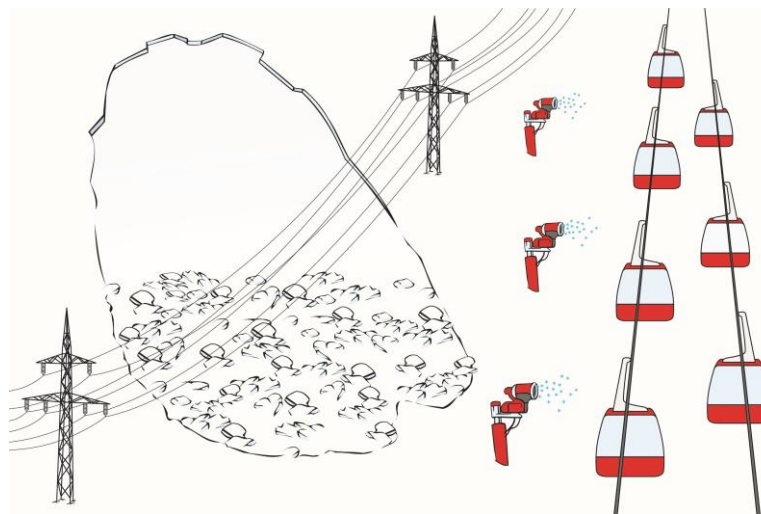
→ Authentic analog sound approx. every second + distance/direction indication  
= Signal of a buried subject

→ Distance/direction indication, but no, or only infrequent analog sounds  
= "False Positive"

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## SEARCHING IN HEAVILY DISTURBED AREAS

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→ If the transceiver indicates a narrower search strip width, apply the instructions given by the device.

→ Otherwise, cut search strip width in half,

→ in extreme cases apply micro search strips and search based on analog sound.

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Overwhelming and compelling preliminary data from recent research has been evaluated by the UIAA working group on avalanche transceivers. These recommendations have been reviewed and agreed upon by multiple organizations, federations, leading experts, and all avalanche transceiver manufacturers. Further research is warranted in the field of electromagnetic interference. Keep up to date with your equipment and current research.

<https://www.theuiaa.org/safety/>