

The following article is from the Backcountry Access company's website (copied 2023-02-04):

<https://backcountryaccess.com/en-ca/blog/p/electronic-interference-in-a-nutshell>

Electronic Interference in a Nutshell: Avoiding EMI with the “20/50 Rule”

Cell phones, heated gloves, smart watches, and even snowmobiles can create electronic interference (EMI) that can disrupt an avalanche transceiver search—unless the searcher takes preventative action. In an encouraging collaboration this fall between manufacturers, avalanche centers, educators, and other stakeholders, a working group organized by the Canadian Avalanche Association produced a basic set of guidelines to clarify these issues to the public. The bottom line is to keep your searching transceiver at least 50 cm (20 inches) away from any potential EMI sources and to keep your transmitting transceiver at least 20 cm (8 inches) away. Snowmobiles and certain digital VHF radios (not including the BC Link) are exceptions and require 3 meters and 1 meter of distance, respectively.

The announcement does away with several “wives' tales” regarding cell phones and “passive” EMI sources like foil wrappers. Previous guidelines from various sources have suggested keeping a distance of 25 meters from a searching transceiver when making a call with a cell phone. However, testing by various manufacturers has verified that transmitting a cell phone signal causes no more interference than when the phone is in standby mode. It is the electronics operating the screen that creates interference. Regarding passive sources, such as metallic objects—including foil wrappers—there is no evidence that this can substantially affect a search, although very close proximity can shorten the battery life of a transmitting transceiver.

It should also be noted that the working group does not recommend turning off electronic devices when performing a search, although this is a good practice if it doesn't delay the search. The working group calls out certain items that are particularly concerning, such as heated gloves, heated socks, heated (and foil-lined) jackets, and smart watches.

In summary, there is minimal effect on a transmitting transceiver and there should be minimal effect on a searching transceiver if you search with your transceiver at arm's length (which is good search technique anyway). If riding a snowmobile, get off the sled and move at least three meters away before searching.

This messaging is intended for recreational audiences. The working group is currently working on a more detailed set of directives for professional audiences—and further directives regarding “environmental noise” such as power lines and electrical storms, which are more difficult to control. Stay tuned.