

# Detailed Explanation to the Safety Note of the DAV Sicherheitsforschung regarding the limits of the Mark Function of Avalanche Beacons.

During field tests, a multiple burial scenario occurred where a second transmitter was not indicated in certain situations after the first transmitter was "marked". After further intensive Pieps analysis (field tests and lab) we came to the conclusion that this also happens to the PIEPS DSP PRO and PIEPS DSP SPORT.

### Scenario:

- a) The first transmitting beacon is located and "marked". The search for the second transmitting beacon is resumed.
- b) If the searching beacon leaves the signal area of the marked beacon AND has not entered the signal area of the second beacon, the searching beacon MAY not indicate the second transmitting beacon when it comes into range.
- c) The problem gets worse if both transmitters have a similar transmitting characteristic.

### Solution:

The technical limit of the mark function of beacons is defined through the standard (EN300718) and it is not technically possible to completely solve this issue without certain performance restrictions. However, Pieps has made adjustments to the firmware to drastically limit the frequency of this occurance.

## 1) Getting the recommended firmware-Update v1.5

The firmware-update (version v1.5) is globally available and free of charge at all PIEPS Service Centers and PIEPS competence partners on February, 17<sup>th</sup> 2014 at the latest. PIEPS Service Centers in Austria and Germany can be found at <u>www.pieps.com</u> under "Dealer". The contact of all other countries can be found under "Contact".

# 2) Using a special personal method of operation

For all users that don't have the possibility to get the firmware update immediately:

Mark the first transmitter and follow the new strongest signal on the display to the second buried person. If, after marking the first transmitter, no further burial is indicated within the maximum receiving range, reset MARK ("DEMARK" or "SCAN" or "switch SEARCH $\rightarrow$ SEND $\rightarrow$ SEARCH"). After that, search within the recommended search strip width for further missed persons until a new strongest signal is indicated.

# 3) By using the electronic probe PIEPS iPROBE or iPROBE ONE with the digital PIEPS beacons this problem does not occur because the iPROBE will temporarily stop transmission of the located beacon.

Since 2008, PIEPS offers a technical solution for a multiple burial scenario with this "PIEPS SAFETY SYSTEM". The probe has an acoustic target indicator for any standard transceiver and temporarily deactivates the transmitter (unless equipped with iPROBE-support: *Freeride, DSP Standard v5.0 or higher, DSP Tour, DSP PRO, DSP SPORT*). Any receiving beacon automatically leads to the next strongest signal without using the beacon's mark function. All performance restrictions that can happen by using the mark function thus do not occur.

### Please find further information at <u>www.pieps.com/en/news</u>

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