



RD Instruments
Acoustic Doppler Solutions

Field Service Bulletin FSB-133

WinRiver and the BR Command

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Abstract

The ADCP may incorrectly process the bottom track pulse when using WinRiver and **all** of the following conditions are met.

- Your ADCP has old firmware
- The Bottom Track Resolution command is set to 1% (BR2) (WinRiver default setting)
- You are using Bottom Track Mode 5 (BM5) in the following depth ranges: 300 kHz, 6 to 10m; 600 kHz, 3 to 5m; 1200 kHz, 1.5 to 2.5m.



NOTE. Changes to the Bottom Track Ambiguity Velocity command (BZ) will cause these ranges to change.

Instrument/Program Affected

Workhorse Monitor/Sentinel ADCP with firmware prior to 8.23, Workhorse Navigator with firmware prior to 9.10, BroadBand DR/SC/VM with firmware prior to 5.55 and using WinRiver version 1.01 (International version) or 10.01 (USGS version) or earlier versions.

Description

The ADCP may incorrectly process part of the Bottom Track pulse and think that it is the bottom. The problem data is obvious because the expected depth will jump to approximately 20m (300 kHz), ~10m (600 kHz), and ~5m (1200 kHz), with perfect correlation and zero velocity on all beams and with the exact same depth on all beams.



NOTE. Again, changes to the Bottom Track Ambiguity Velocity command (BZ) will cause changes to the previously mentioned depths.

Solution/Action

Short-Term Solution

Set the Bottom Track Resolution command to 4% (BR0).

Long-Term Solution

Update your ADCP to the latest firmware. This firmware bug has been fixed in all effected systems.