

Attachment B – Changes to WinRiver since release of version 10.03 and known problems with version 10.05

Features Added

1. Added the Discharge Measurement Wizard
2. Add configuration file locking.
3. Added 3-point slope and no-slip extrapolation methods
4. Add new plot windows
 - Combo Shiptrack Plot. Plots both bottom track and GGA reference (DGPS) shiptrack on one plot when available.
 - Total Discharge Time Series Plot. Plots the total discharge of each transect in the discharge tabular history and time.
5. ASCII out Batch Processing
 - Multiple files can be selected for ASCII out batch processing at one time. After selecting various files, the program loads, processes, and outputs ASCII data to files (with automatically generated names *.000). Any existing file with the default ASCII name will be overwritten automatically without any warning. Clicking the Cancel button on the message box that appears while processing can stop the conversion.
6. Default direct commands now include &E000000011
7. GPS update rate added to the GPS Tabular View.
8. In Acquire mode configuration comments are open now for edit until recording has been turned off.
9. Default user options setting has been changed to NOT start pinging immediately upon entering acquire mode.
10. Added menu item to execute an external program for running a self-test, and for executing an external program for calibrating and reading a pressure sensor.
11. Minor serial communications changes. Ensemble size limited to 10 kilobytes
12. A Date/Time stamp corresponding to the time when a transect was started now can be added automatically to the file name prefix. This option is enabled with a checkbox in the configuration settings under the recording tab.
13. Added capability to edit comment lines during data collection. If this option is checked, each transect will have a unique filename prefix. This is not recommended for discharge measurements
14. Added depth screening option. Filters out a beam depth if the depth is greater than 1.75X any other beam. This option is disabled by default and should only be enabled to remove obvious depth errors.

Changes made to existing features

1. Added functionality to the Configuration Wizard.
2. Modified Subsection behavior. When a user changes the subsectioning if the current ensemble is equal to the last ensemble and the new last ensemble is greater than the current ensemble, WinRiver assumes that they want to playback the file to the end (new last ensemble).
3. Discharge profile now plots the bottom and top fit used for both the top and bottom extrapolation methods. The measured discharge displayed on this plot is computed as $Q = ((\sum(q/dt)/n)*Dt)/N$ where q = the discharge of a valid bin, dt = time of the valid bin, n = the number of valid bins, N = the number of ensembles, and Dt = total time of all bins (both valid and invalid) in the average.
4. Stick Shiptrack Stick Magnitude now is scaled to the chart properties maximum velocity magnitude.
5. Changed BX to be twice the old length in the configuration wizard, to correct inconsistency with the way the firmware handles BX and &R.
6. Changed the way ensembles are flushed to the hard drive. File buffers are flushed every ensemble instead of every 20 ensembles.

Bugs Fixed

1. Fixed the problem with PC clock time in navigation file in the \$RDENS line
2. Fixed problem with number of pings per ensemble in averaged data (ASCII-out). The number would stay constant during averaging.
3. Changed software break from "====" to "===== ". Users had problems in stopping pinging when using modems.
4. Fixed problem with computer not responding at the end of long transects.
5. Fixed auto-detect function that still was sending a hardware break even when a soft break was selected.
6. Fixed bug in ASCII Out when "as Received from ADCP" was selected.
7. Increased DBT section size by 10 bytes. In the previous versions, 38 bytes were reserved and a customer had an echo sounder that sent a longer string.
8. Fixed problem with incorrect scaling of VTG velocity.
9. Fixed auto-detect function. The program would crash on some machines.
10. Fixed the problem with opening ports > COM9.
11. Fixed a typo on Expert Menu.
12. Fixed a bug that happened when a user opened a Discharge Measurement Wizard file that had GPS as the reference. The values displayed in the DMW summary were incorrect.

13. Changed the method for detecting available COM ports. Some COM ports were not always correctly detected by WinRiver.
14. Fixed a problem in properly handling the decoding of GPS data when no data were available in the GGA string (ie., no satellite fix was available).

Known Problems

1. After installing WinRiver 10.05, it is possible for the program to crash when switching from Playback Mode to Acquire Mode (*Ctrl-M*). A description of the problem follows. When switching from Playback Mode to Acquire Mode, the user is prompted as follows: **“Would you like to load a different configuration file?”** If the user selects **“No”**, the program can crash if a configuration file has never been loaded in Acquire mode.

This problem can be avoided by first running WinRiver in Acquire mode, either by double-clicking the corresponding desktop icon or by going to the start menu and selecting "Programs—RD Instruments—WinRiver (Acquire)" menu. After that, the user should load an existing configuration file or create a new one. After doing so, and exiting WinRiver, this problem should not occur again.