

Echoview 7 release notes

Echoview 7 comes with useful new features, improved data processing efficiency, and access to the latest techniques and technology.

Echoview 7 64-bit edition: unleash memory and processing performance

Until now, Echoview has been a 32-bit program, and 32-bit software has innate memory restrictions. 32-bit and 64-bit editions of Microsoft Windows can only allocate a maximum of 4 GB of memory to a 32-bit program, which means that working with large volumes of data or complex calculations can result in memory-related issues when using 32-bit software.

Echoview 7 is available in both 32-bit and 64-bit editions. Using the 64-bit application will allow access to significantly more system memory and unleash the full potential of modern computing hardware, enhancing Echoview's performance.

Simplified module structure

Echoview 7 brings a new module structure that is simpler and easier to understand. Changes include:

- The Base, Bathymetric and Analysis Export modules are combined into a single new module: Echoview Essentials
- All modules only require Echoview Essentials as a prerequisite, except for the Live Viewing and Habitat Classification modules (which are standalone modules that can be used for their specific purposes without any prerequisites, but can also be used in conjunction with other modules)
- Echoview Essentials now allows access to some basic multibeam data processing functionality (exporting raw data, creating curtains, and detecting the bottom surface) that previously required a higher module
- The 2D Sonar and 3D Sonar modules are combined into the Multibeam School Detection module
- Other renamed modules:
 - Scripting is now Automation
 - Virtual Echogram is now Advanced Operators
 - Stationary Sonar is now Multibeam Fish Tracking

Windows 10 support

Echoview 7 includes support for the latest and greatly anticipated operating system from Microsoft, Windows 10.

New and improved operators

Echoview 7 includes some useful new and updated operators (virtual variables).

The newly added operators are Impulse Noise Removal and Transient Noise Removal. These operators are based on algorithms described in Ryan T. E., Downie R. A., Kloser R. J., Keith G. (2015, in press): Reducing bias due to noise and attenuation in open-ocean echo integration, ICES Journal of Marine Science, and can be used with single beam Sv or TS data as input operands.

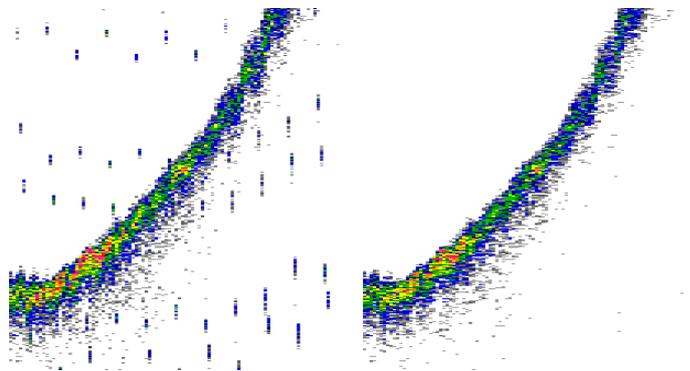


Figure 1: On left: original data with impulse noise; on right: the same area after applying the new Impulse Noise Removal operator

Echoview 7 also introduces a wideband single target detection operator for use with Simrad EK80 data collected in wideband (FM, or Frequency Modulated) mode.

Changes to existing operators include the Background Noise Removal variable, which has been extended to take single/split beam TS data (to assist with data cleaning prior to single target detection), as well as being extended to take multibeam data types as input variables.

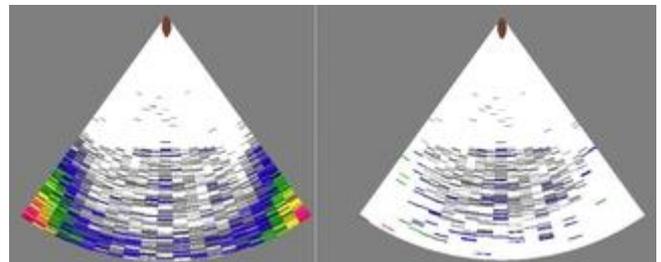


Figure 2: On left: Simrad ME70 data with TVG-enhanced noise, particularly in the outer beams; on right: the same area after applying the Background Noise Removal operator

More operators have been multithreaded for faster viewing of virtual variable echograms and calculation of sample values.

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Updated graphs

Echoview's graphing technology is updated, and gives users the ability to use graphs even more effectively. New features include:

- Tooltips displaying values for data points
- Ping graphs can be synchronized to echograms to show the same depth or range of data
- Fish track regions can have targets added or removed when viewing relevant graphs
- Easier zooming and navigation within graph windows
- Adaptive grid lines
- The four graphs available via the 2D Projections option are now individually accessible

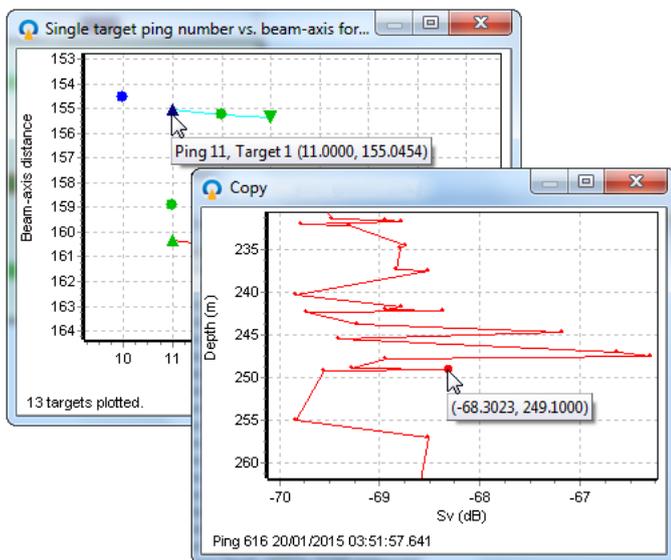


Figure 3: New graphs showing data point pop-up details

Technical changes

Important technical changes to be aware of are:

- Windows XP will no longer be supported. Microsoft has ended support for this operating system
- The format of Matlab exports will change to better optimize memory use during export
- Some very old BlueView data files may not work in Echoview 7, but can be converted
- Export to EchoIMPACT files will only be available in the 32-bit edition of Echoview
- The frequency distribution graph for angular position variables is no longer available

Other improvements

Along with the items already listed, we have improved the following;

- Further improvements and updates to Simrad EK80 support:
 - Updated file format support including removal of support for early versions of the file format
 - A new color scheme based on the colors used in Simrad's software
 - Line pick (bottom detection) is available for complex power, Sv and TS variables
 - More virtual variables now accept complex data types as input operands
 - Region and selection linking for the single target frequency response graph
- You can pan within the echogram window using the mouse or by holding down the space bar

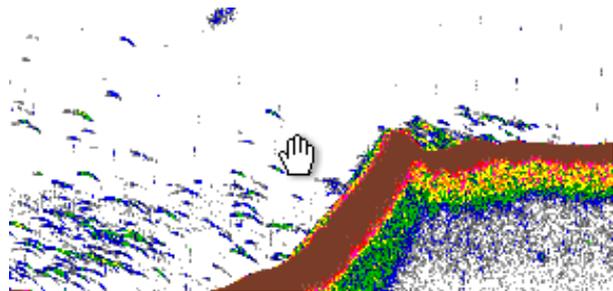


Figure 4: Echogram panning icon

- Zooming out to display more pings than a 1:1 ping-to-pixel ratio is now accessed by holding down the CTRL button while using the mouse wheel, to prevent unintentionally loading more data than needed
- Frequency distribution bin settings are now on a Graph tab in the Variable Properties dialog box
- Simplified calibration for BioSonics data files: the CalibrationOffsetSv and CalibrationOffsetTs settings are replacing the CalibrationOffset setting
- HAC data can now be calibrated for incorrectly set sound speed values via SoundSpeed and SoundSpeedLogging calibration settings
- The WASSP color scheme has an updated alternate version
- Fileset properties time offsets can now be entered with millisecond accuracy
- Distances are now calculated more accurately using the Vincenty method
- COM access to Filter Targets settings for Single Target Detection operators

Please contact sales@echoview.com for information on updating to Echoview 7.