



# An Update on Valeport SWiFT Usage within HYPACK

By Andrew Clos

## VALEPORT SWIFT CTD SUPPORT AND BUG FIXES ADDED

Hello Fellow HYPACK Users,

We recently made some changes that should make downloading and processing Valeport SWiFT data more effective. A bug was found that sometimes caused erroneous lines of data to appear in the table of depths and velocities. Additionally, some casts were truncated and did not show some of the deepest depths and velocity data points. I am happy to report that both of these issues are fixed.

The Valeport SWiFT product lineup includes an SVP model, which we've supported for several years, as well as a CTD model. This update adds support for the Valeport SWiFT CTD. The changes should be seamless to the user and detection of whether you have a CTD or SVP connected occurs behind the scenes. If you would like to use a Valeport SWiFT CTD and download its data from within HYPACK, you can now do so following the same steps you'd take to download from a SWiFT SVP device. Conversion of the conductivity, temperature, and pressure data into sound velocity is done using the Chen and Millero equation.

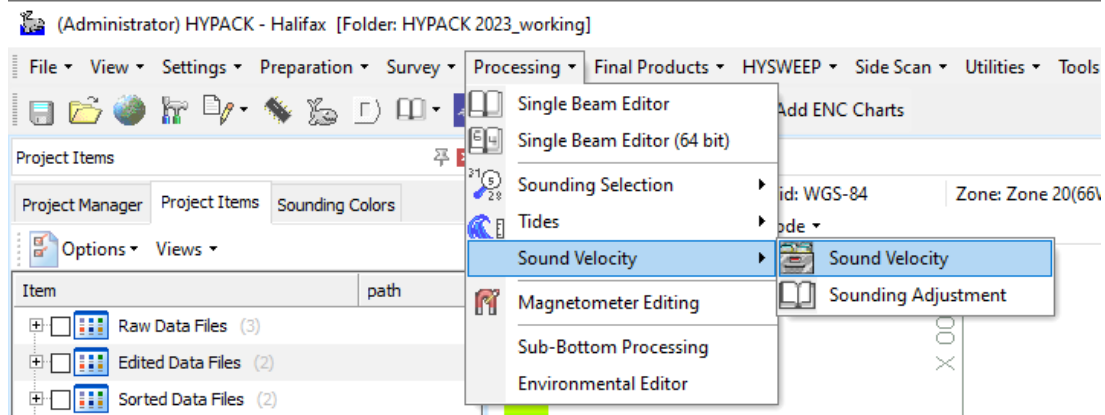
## PROCESSING VALEPORT SWIFT DATA FROM HYPACK

Before you begin in HYPACK, make sure that the Valeport device is turned on and connected to your machine via Bluetooth, Serial, or USB. For more information on connecting via Bluetooth, please see the following Sounding Better article:

<https://www.hypack.com/File%20Library/Resource%20Library/Technical%20Notes/Valeport-SWiFT-SVP-Interface.pdf>

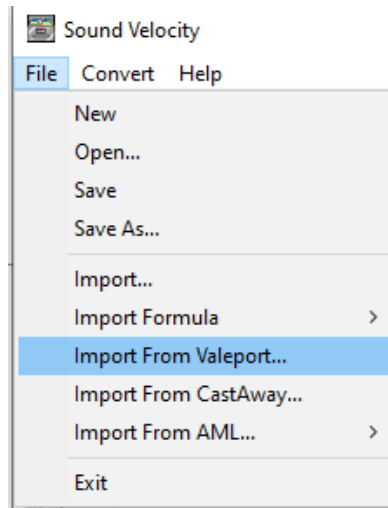
To download data from a Valeport SWiFT device from the HYPACK Shell, select the Processing menu and run the Sound Velocity program (Figure 1).

Figure 1. Access to the Sound Velocity Program from the HYPACK Shell



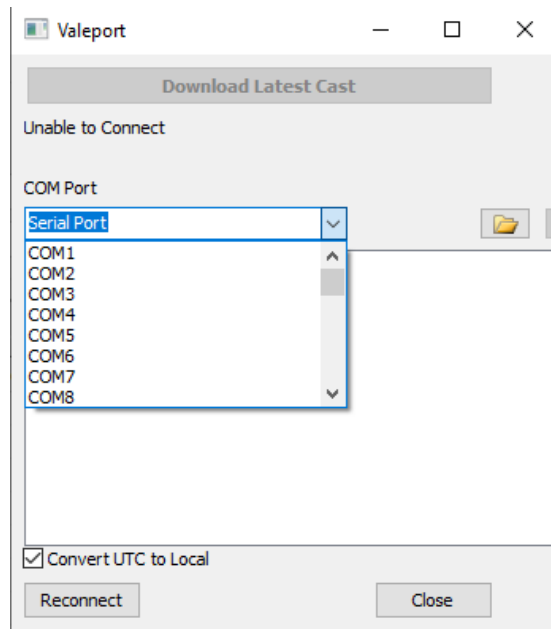
Once the Sound Velocity program launches in its own window, select the File drop down menu and choose “Import From Valeport...” (Figure 2).

Figure 2. The “Import From Valeport” Option in the Sound Velocity Program



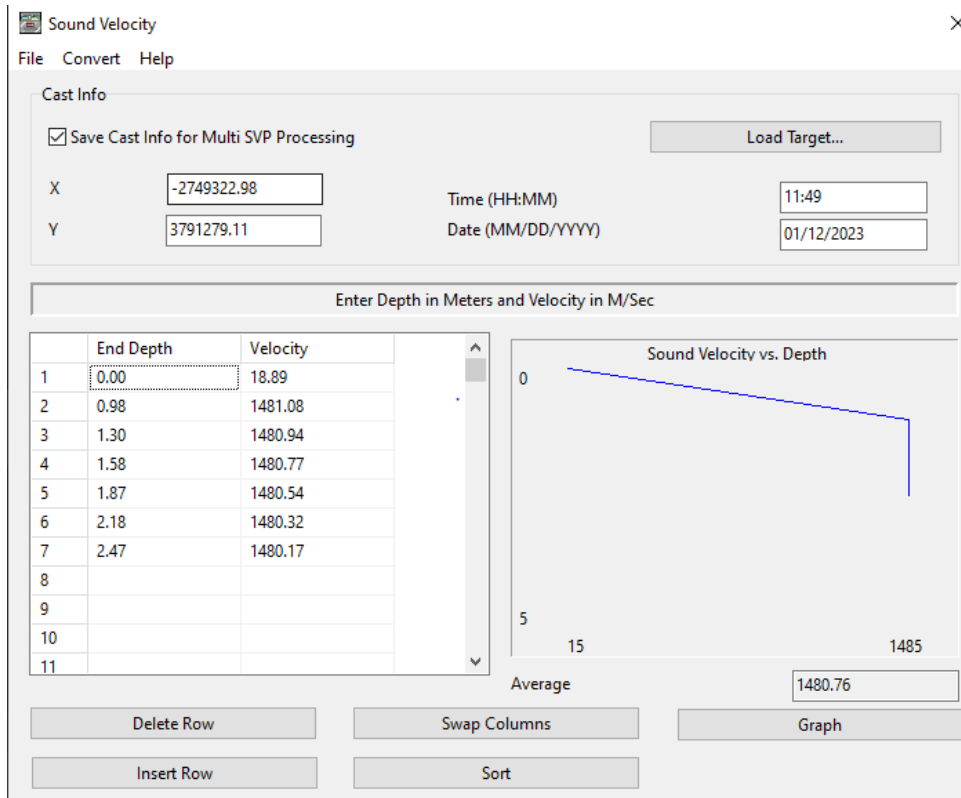
A new window will show the connection status of the Valeport. If the Valeport device is found, click the [Download Latest Cast] button at the top of this window (Figure 3). If the device is not found, the button will stay grayed out and you should make sure the correct COM port is used via the drop down menu (Figure 3).

Figure 3. Valeport Connection Status and COM Port Selection Drop Down Menu



After clicking [Download Latest Cast], the program will retrieve the most recent data from the Valeport device. This can take a minute or so, but often runs faster. The status light on the Valeport device should blink to indicate that data is being transmitted. After the download has completed, a window will appear that shows the sound velocity profile and allows for editing and exporting of the data (Figure 4). From the File menu, you can save the \*.VEL file that will be readable by HYPACK.

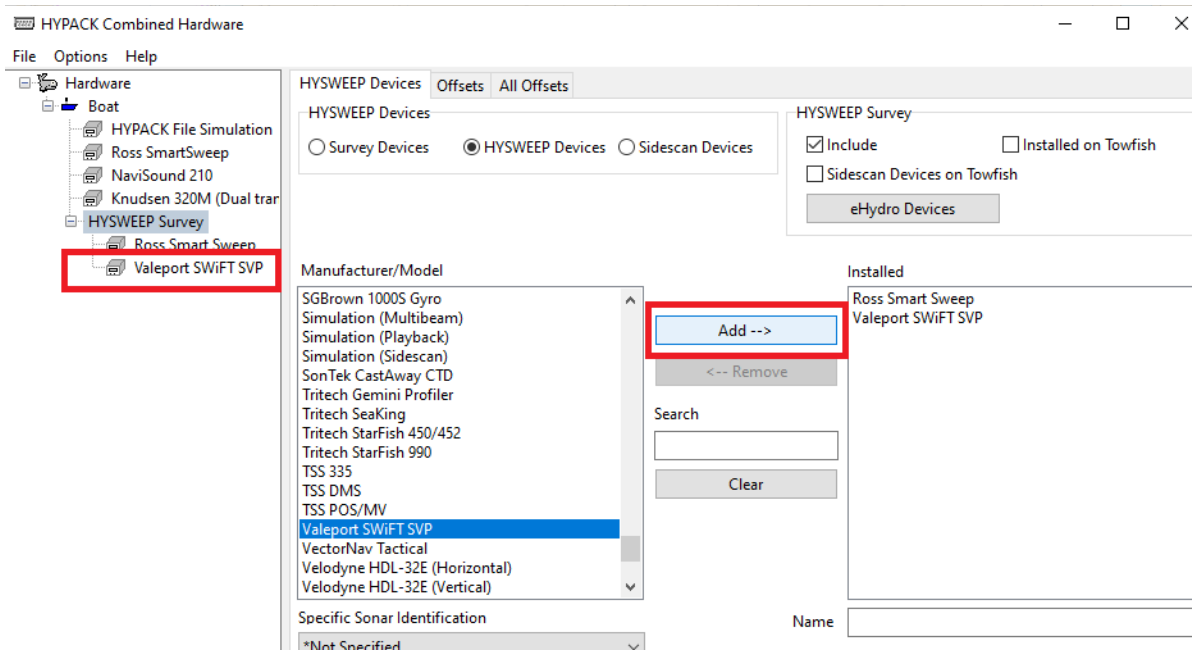
Figure 4. The Sound Velocity Program After Downloading a Valeport SWiFT Cast



# PROCESSING VALEPORT SWIFT DATA FROM HYSWEEP

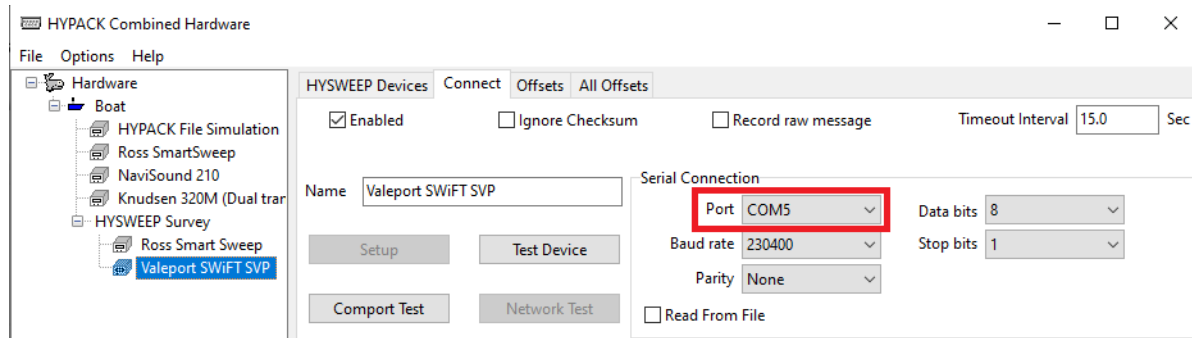
If you'd like to process Valeport SWiFT casts from within HYSWEEP, first open the hardware configuration program from HYPACK, navigate to the HYSWEEP Devices tab, then scroll down or search the list of available hardware until you find “Valeport SWiFT SVP.” Click the Add button to add it to your project (Figure 5).

Figure 5. Adding the Valeport SWiFT SVP Device as a HYSWEEP Survey Device



Next, select the device and navigate to the Connect tab. The serial connection settings should default to the correct values, aside from the COM Port which will need to be entered manually. On my system, the Valeport Bluetooth Serial to USB device was assigned to COM 5, so that is the port chosen under the Serial Connection section (Figure 6).

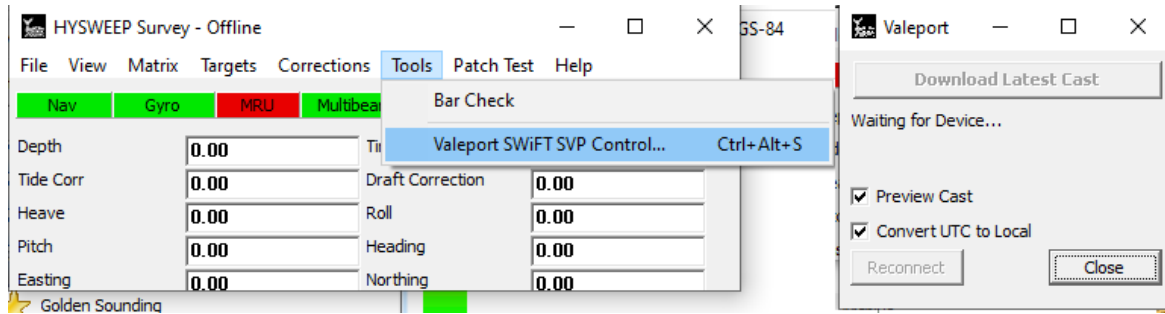
Figure 6. Setting the COM Port for the Valeport SWiFT in the Connect Tab



Once you've launched HYSWEEP and you're ready to download a cast, make sure the Valeport SWiFT device is powered on and from the HYSWEEP Survey window, select Tools

-> Valeport SWiFT SVP Control. A small Valeport window will appear and the same steps outlined in the section above can be used for processing your cast (Figure 7).

*Figure 7. Accessing the Valeport Cast Downloading Function from HYSWEEP Survey*



Happy Surveying,

Andrew Clos