Quick Start Guide for Hydrolite Plus Dual Frequency Echosounder with Trimble Access

Seafloor Systems Technical Support

September 23, 2024

1 Introduction

This document will walk through setting up Trimble Access to work with the Hydrolite Plus Dual Frequency Echosounder.

2 Getting Started

2.1 Download Hydrolite DFX Software

Download Hydrolite Plus Dual Frequency Control Program

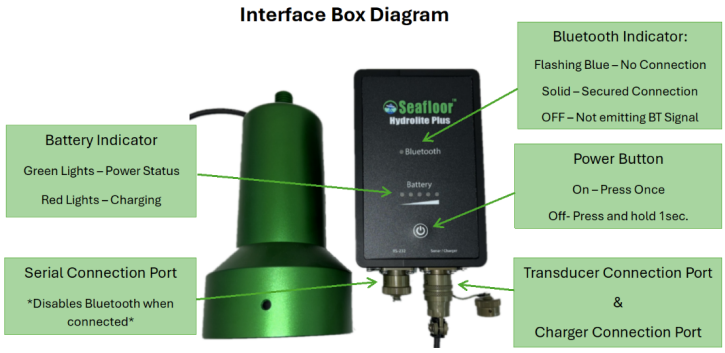

Figure 1: Overview of Interface Box.

The control program is a mandatory software that accompanies your Hydrolite system. The control program allows you to change output modes and adjust sonar settings to your specific environment.Drag and drop the Sonar Control program onto a Windows 10 or 11 device. The program is located on the USB drive that is included with the system. It is also available at: https://www.seafloorsystems.com/manuals

2.2 Bluetooth Pairing

1. Connect the transducer cable to the sonar/charger.
2. In your Windows Search bar, search for "Bluetooth and Other Device Settings".
3. Select "Add Bluetooth or other device".
4. Search for Bluetooth devices.
5. Select Hydrolite Device. It may also appear as Unknown Device.
6. You will be prompted to enter a pin. The pin is "Seafloor". The serial number and PIN of the sensor should be engraved on the back of the Hydrolite's interface box.

7. Confirm that the device pairs and the Hydrolite device appears on the Bluetooth and Other Devices List.
8. Search for Devices and Printers.
9. Scroll down to Unspecific and select the Hydrolite device.
10. Right click on the device and select "Properties". Select the Hardware tab.
11. Under "Device Functions" find "Standard Serial over Bluetooth link (COM***)" Write down the associated COM number!

You may now close all windows and return to your Windows Desktop.

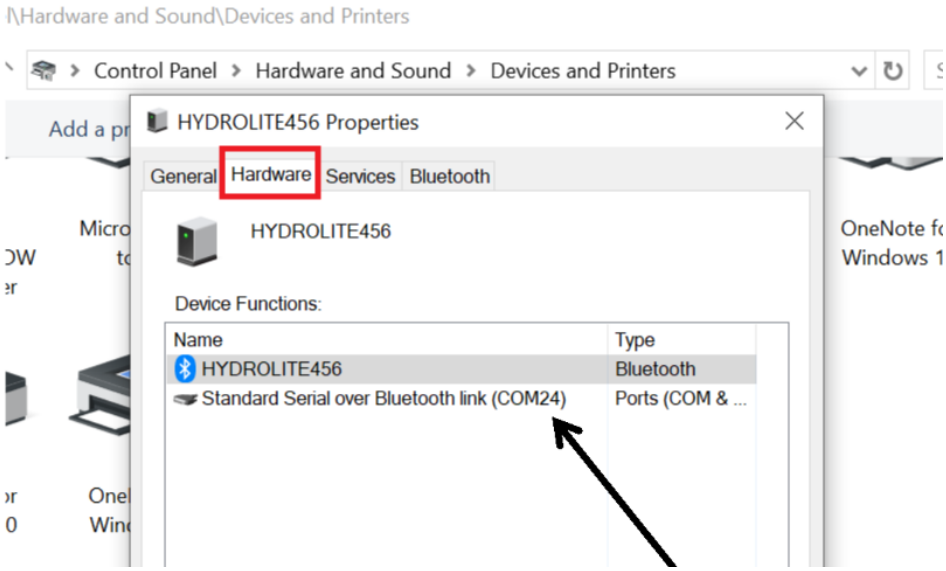

Figure 2: Overview of Hardware Settings.

2.3 Configuring the Sonar Control Program

1. Open the sonar control program.
2. In the top left corner of the sonar UI, next to Echsounder, select the drop down for Serial Port Number. Select the Echosounder COM port number (COM***) that you recorded in Step 11 of Section 2.2.
3. In the next column over, select the drop down for Serial Port Speed bps. Select 115200.
4. Click Connect.Note that the sonar will not connect unless the transducer is plugged in.
5. Under output mode select Sonarmite. The Sonarmite DFX file format is displayed in Figure 3 below.

The device is connected to the control program when all parameter values are displayed and selectable. Profile display will start to scroll from left to right. After you have chosen your selected settings, please disconnect from the Echsounder UI. Trimble Access cannot connect to the Echosounder when the UI is connected to the com port.

Refer to our full manual for default settings and parameter descriptions at www.seafloorsystems.com/manuals

Sonarmite DFX output format

1	2	3	4	5	6
1	0.73	0.28	19.45	17.2	7

1 = id = The id number of the instrument (0..7)
2 = depth 1 (High Frequency) = current measured depth 200khz(m)
3 = depth 2 (Low Frequency) = current measured depth 30khz(m)
4 = battery = current battery condition (v)
5 = qa = current depth relative qa value (0=null, 70=poor, 128=best)
6 = flags = binary toggle flags 1=^X, 2=^Y, 4=^A, 16=^Z, 32=^G

Figure 3: Overview of Sonarmite DFX format.

2.4 Trimble Access Configuration

Open Trimble Access.

1. Select Settings then Survey Styles. Either create a new survey style or add the echo sounder to an existing style. Seafloor often creates a new survey style titled "Hydrolite Setup".
2. Once the new style is created or selected, scroll down and select "Echo sounder".
3. Select type "SonarMite DFX". Controller port "Bluetooth", see Figure 4.
4. Click the Bluetooth icon on the bottom bar of the Trimble Access window to see paired devices. See Figure 4.

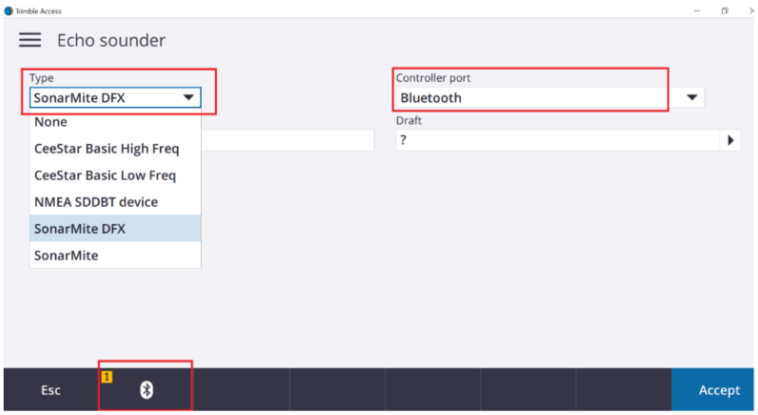

Figure 4: Location of Bluetooth Icon in Trimble Access Window.

5. Under "Connect to echo sounder" dropdown list, Select "HYDROLITE***".
6. Click "Accept" , then "Accept", and then "Store".
7. Once stored, click "Measure" under General Survey.
8. Select the correct survey style with the echo sounder configured. Launch Continuous Topo (Figure 5).

2.5 Offsets

Once Continuous Topo is launched, the Bluetooth LED on the Interface box will display a solid blue light if connected.

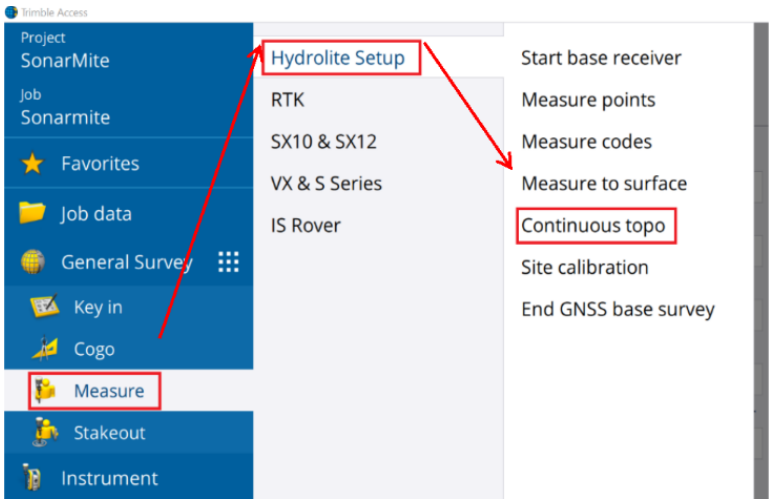

Figure 5: Location of Continuous Topo Selection in Trimble Access.

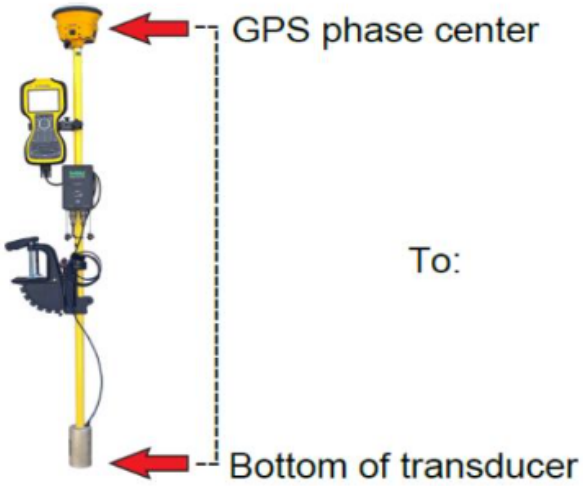

Figure 6: Measure Offset Between Antenna and Transducer.

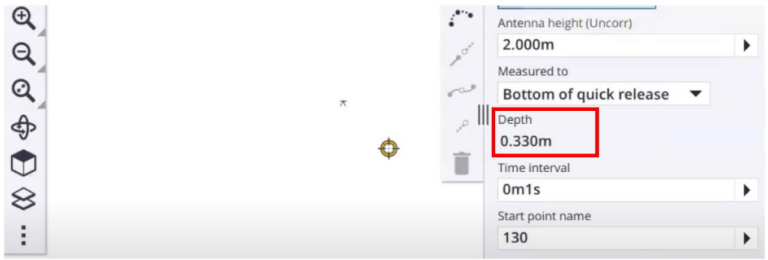

Figure 7: Enter Antenna Height in Trimble Access

1. Measure antenna height from GPS measure point to bottom of echosounder (Figure 6) and then store this value in the Antenna Height field (Figure 7).

2. Depths below the echosounder will display on the survey screen when the echosounder is sub-

merged in water. Depending on the model data collector being used, you may only see one depth, (High Frequency) during collection.

3. Start measurement via time or distance.

Please visit www.seafloorsystems.com for our full manual library.