SonarWiz - Edgetech 4125-4200 Real-time Server Setup Procedure

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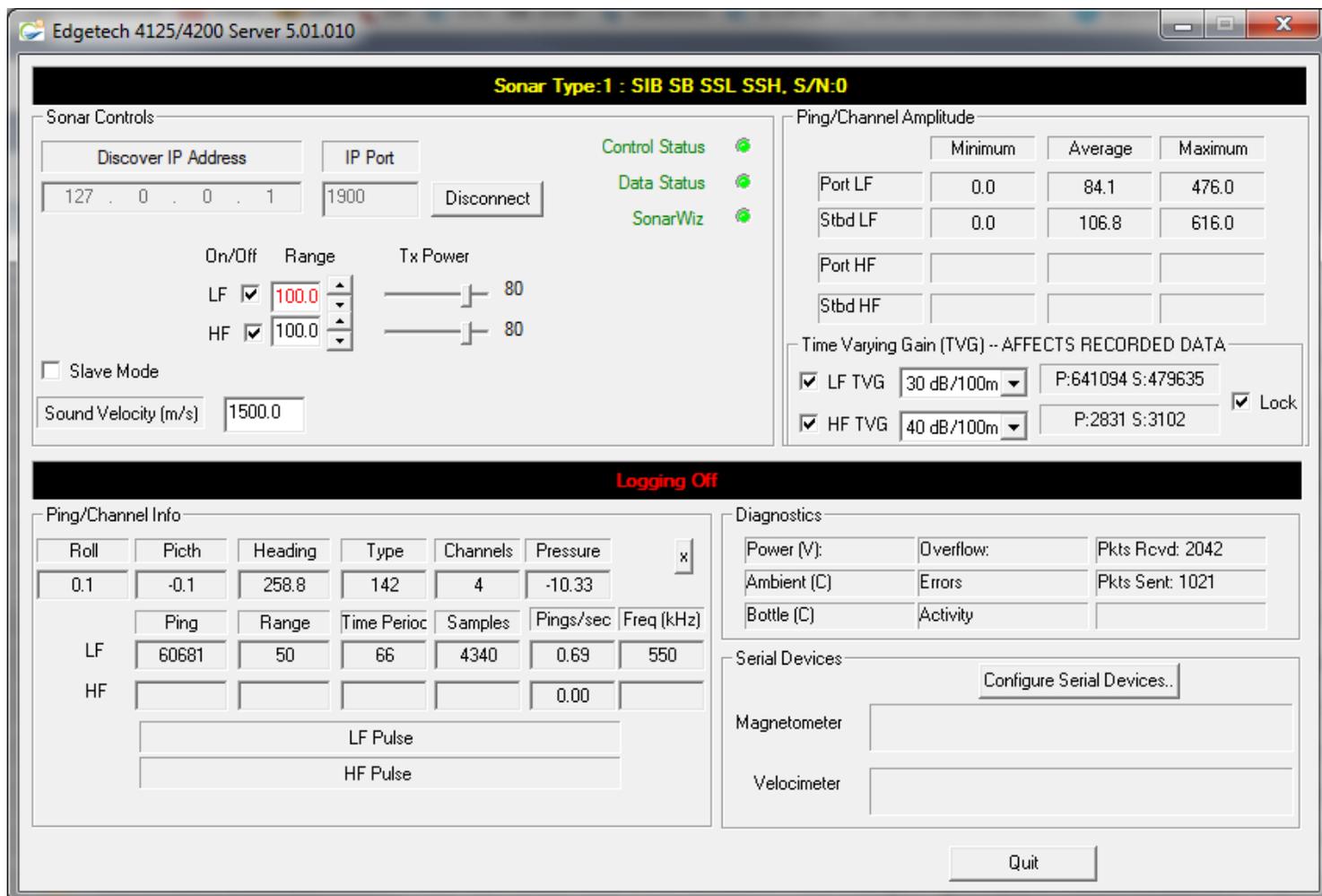Mountain View, CA 94040

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1   Edgetech 4125/4200 Network Server

1.1   EdgeTech 4125/4200 Server - General Operation

The EdgeTech 4125/4200 Network Server can be used to control the 4125 and 4200 sidescan sonar models, communicating to EdgeTech "DISCOVER" software using Ethernet protocol, as part of the process.

Regardless of the mode chosen, EdgeTech "DISCOVER" MUST be running on the EdgeTech PC.

- *Slave Mode*: Note that this checkbox is OPEN, not CHECKED, in the example GUI above. As of SonarWiz 6.01.0015 release June, 2015**, this checkbox will be removed soon, but if it is present, it should be left OPEN**. Slave mode ON

(checked) prevents the server from transmitting ANY messages to DISCOVER. Its original idea was that we could just be a listener to the DISCOVER data. The problem is that DISCOVER won't even send ANY data unless it first gets a command to send some. So leave SLAVE MODE OPEN it is is present, and the connection can run properly.)

1.2   Start-Up Procedure
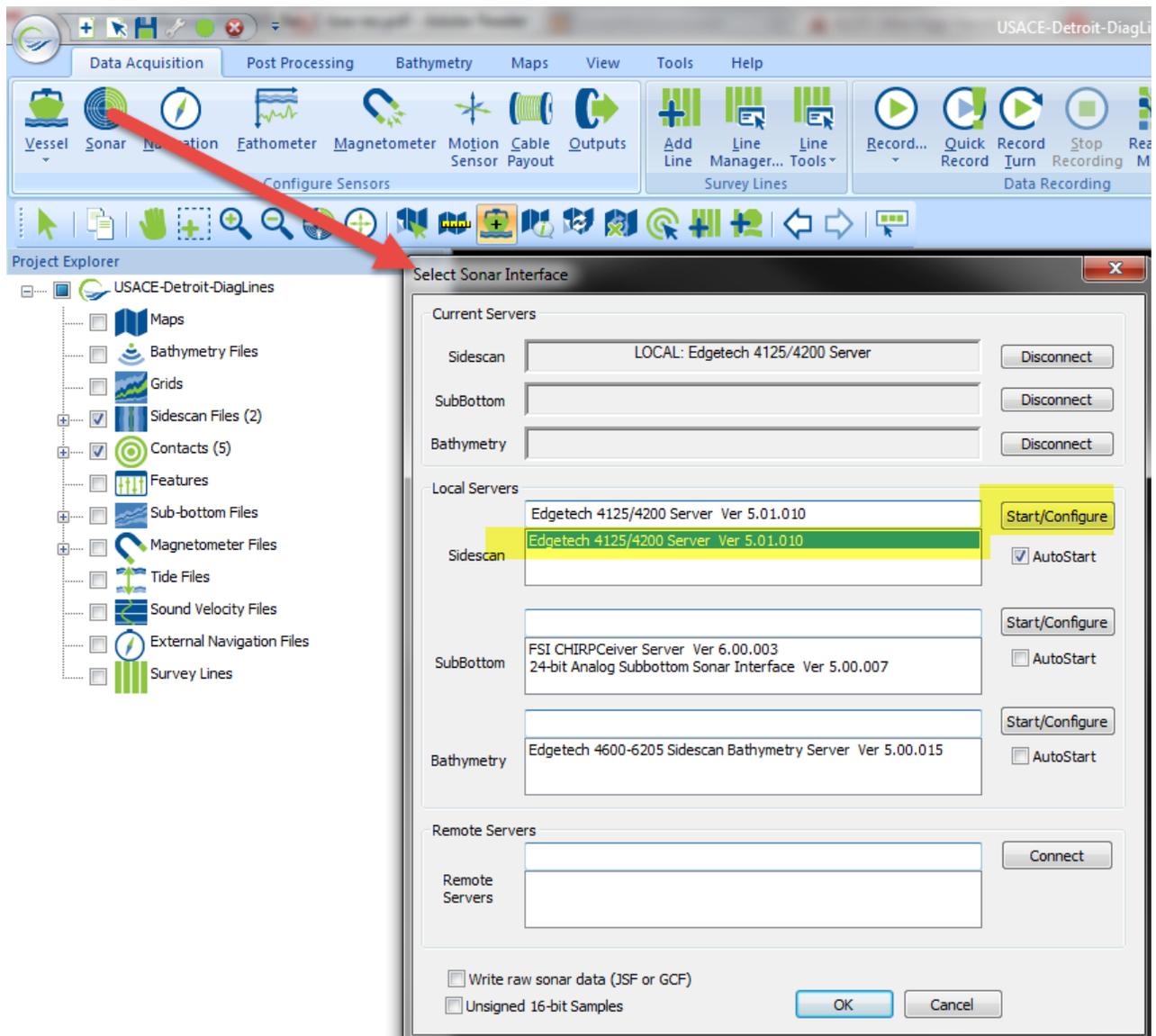
A) TURN OFF YOUR FIREWALL
B) Uninstall any Internet Security Software such as McAffee or Norton
C) If you wish to use SonarWiz on a separate PC than the DISCOVER program you must directly connect the Sonar Processor to the SonarWiz PC via LAN cable – **Do not use the wireless connection**.
D) We recommend installing SonarWiz on the DISCOVER PC and then you need no additional Ethernet cables and connect directly through the loop back IP address 127.0.0.1

1. Configure the SonarWiz PC for the 4125/4200 Server in the same manner as any other sidescan sonar. See the main SonarWiz User Guide Section 4 for details on setting up the SonarWiz PC . In summary, this will involve:

   - creating a new project in SonarWiz, or opening an existing project

   - setting up the navigation dialog, and maybe the compute towfish option

   - setting up survey lines as a plan, using the line manager

   - setting up the GUI layout views you need, to monitor sidescan data - like a 4-channel LF/HF SS waterfall, and SYS INFO window

2. Set-up the 4125/4200 sidescan sonar as prescribed by EdgeTech in the DISCOVER User Manual PDF.

3. If SonarWiz is installed on the same PC as DISCOVER then no additional Ethernet cables are required. The SonarWiz server can connect to DISCOVER using the Ethernet loopback IP address 127.0.0.1 and Port 1900.

4. If SonarWiz is not installed on the same PC as DISCOVER then an Ethernet connection between the PC running DISCOVER and the SonarWiz PC will need to be established.

5. Start SonarWiz on your PC, or on the EdgeTech PC if it is installed there.

6. Start the SonarWiz EdgeTech 4125/4200 server using the Data Acquisition tab Sonar button:

7. ***4125/4200 IP Address***:

    a. If SonarWiz is not installed on the DISCOVER PC then you need to enter the IP address of the PC on which DISCOVER is running. The factory default IP Port for DISCOVER is 1900

    b. Enter 127.0.0.1 if SonarWiz is installed on the DISCOVER PC

8. The ***IP Port*** should always be 1900 unless a custom configuration exists on the 4125/4200. So SonarWiz on the same PC can use 127.0.0.1:1900 typically.

1.3   4200 IP Address / IP Port

See previous section.

1.4   Connect

Connects the SonarWiz 4125/4200 Server to the "DISCOVER" software.

1.5   Operating Mode

The following controls detailed in this section are available when the Slave Mode checkbox is OPEN:.

- High Definition Mode; or

- High Speed Mode:

See the EdgeTech manual for full details on each operating mode.

Within each mode the following settings may be applied:

On/OFF

- Turns the channel On or Off, with independent LF / HF controls. The channels are LF (low frequency, channels 1,2 = port, stbd) and HF (high frequency, channels 3,4 = port,stbd) - you should know whether you have a single-frequency or dual-frequency towfish, and whether you want to enable recording all 4 channels. A CHECK means ON.

Range

- Selects the range, in meters, for the LF or HF channel-pair. Our experts recommend that you choose the SAME range for both LF and HF, if you have both enabled.

TX Power

- A relative slider bar for transmit power

1.6   Sound Velocity (m/s)

If known, the sound velocity of the water should be entered. The sound velocity is used to convert the Edgetech sample times to range values. The value shown will be saved into the recorded sonar file.

1.7   Status Lights

Displays green "lights" when Server Control is established, data are being received and SonarWiz is connected to the server.

1.8   Ping/Channel Amplitude

Displays the minimum average and maximum amplitude values for each channel.

1.9   Time Varying Gain (TVG)

Controls TVG of data displayed and recorded in SonarWiz. Since you will actually affect the data recorded, our experts recommend practice on this - get your real-time waterfall display running in SonarWiz, and look for good data visibility and clarity, and feature definition. A suggestion made in our companion video (see section 2) was to start at 20db/100m, and then increase, to get what you think is the best gain to use, for recording.

1.10   Logging

Informs user as to data logging state i.e. On or off

1.11   Ping/Channel Info

Displays the relevant information associated with the current ping. These data are a quick indicator of sonar status and would normally be used if troubleshooting were required.
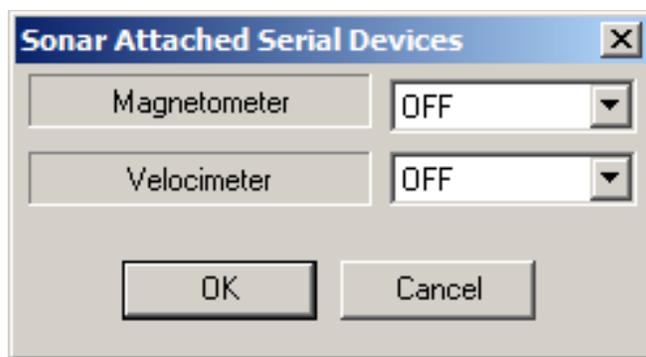
1.12   Diagnostics

Used for troubleshooting when consulting with an EdgeTech engineer.

1.13   Configure Serial Devices

The Configure Serial Devices...button opens the attached serial devices dialog shown in the figure below and is used to specify what serial ports on

the EdgeTech topside unit are connected to a magnetometer and/or velocimeter, if fitted.
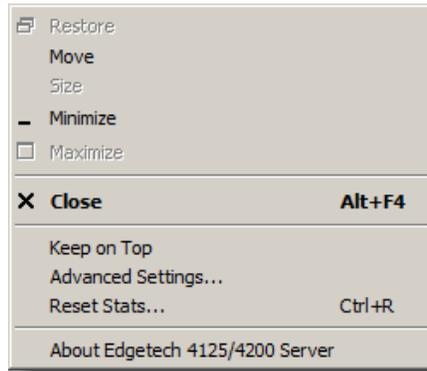

Attached Serial Devices

1.14 Quit

QUIT terminates the SonarWiz 4200 server. You can do this at the very end of the survey. **Note: The server must stay running while acquiring data with SonarWiz. An expert suggestion, from the companion video, is to MINIMIZE the server window when you are all set up,** to:

(1) clear the screen area to be able to see the waterfall and SYSINFO displays, and perhaps your real-time sidescan mosaic, and

(2) to prevent accidentally changing a setting during the survey

1.15 System Menu Controls

The system menu shown below offers options to keep the interface program on top of all other windows as well as standard Windows menu options.

EdgeTech Server Settings

The Reset Stats menu selection is used for internal Chesapeake diagnostics only and has no effect on the sonar interface.
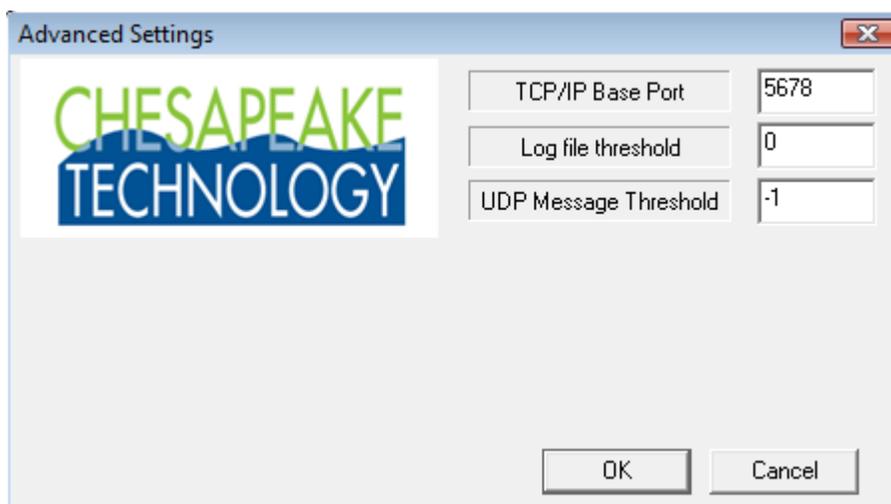
The About box menu selection is useful for reading the version number of the interface software and the date that it was last built.

The Advanced Settings dialog is described below.

1.16 Advanced Settings

The *Advanced Settings* dialog includes control settings that specify the level of diagnostic information recorded by the interface. A value of zero will only record error messages while a value of 9 will report all diagnostic messages.

Typically, these messages are sent to a log file. In a diagnostic situation, a Chesapeake support engineer may also ask you to run the SWizMon diagnostic monitoring application where messages may be viewed in real-time. The *TCP/IP Base Port* is where the real-time diagnostic messages are sent and viewed by the SWizMon software. Please do not change the TCP/IP Base Port address unless instructed to do so by a Chesapeake support engineer.

Advanced Settings

2   Companion Videos - Same Topic - Available for Viewing

Sometimes watching an expert do the set-up, looking over his shoulder, as it were, is easier than reading a PDF about the topic. We have two ways to view a companion video, on the topic of Edgetech 4125-4200 sidescan server set-up with SonarWiz.

2.1   YouTube Version - Edgetech 4125/4200 Real-Time Set-up Video

Here's a link to the YouTube version of the video on this same topic:

https://www.youtube.com/watch?v=CusItZGYZRM

2.2   MP4 Version - Edgetech 4125/4200 Real-Time Set-up Video

Here's a link to the MP4 download version of the video on this same topic. Depending upon your browser, you may do best either clicking-to-play, or downloading this, then opening it in QUICKTIME:

www.chestech-support.com/download/ctisupport/Training/DYK_Edgetech_4125-4200_AcquisitionSetup.mp4

With an older browser, you can right-click the download link, then do SAVE AS, save the MP4 download, then play it in QUICKTIME.