

Mercury



Application Software Quick-Start Guide



STAR:ODDI

Logging Life Science

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This is the Quick Start Guide for **Mercury**. The whole user manual is included with the software under the **Help** menu.

Changes may occur without notice.



1 Downloading and Installing Mercury

Mercury runs under Windows operating systems.

To download **Mercury** visit: www.star-oddi.com/support/software.

To install the program, follow the automatic InstallShield Wizard.

During installation you need to enter the product key found on the inside of the front cover. Please keep the product key in a safe location as you may need it for future use.

All updates are free. It is recommended to **always do a software update when prompted to do so**.

Where to find the User Manual

In Mercury select your logger type and find the appropriate user manual.

We recommend using the user manuals, especially for the HRT and ACT product series.

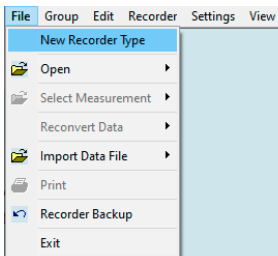


Figure 1.1 Select New Recorder Type under the File menu.

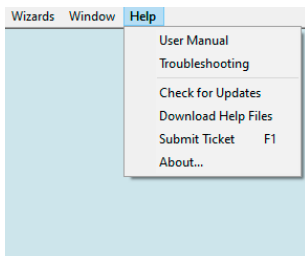


Figure 1.2 Open the User Manual under the Help menu.



2 Communication Box

The Communication Box is a USB compatible communication interface, specially designed to communicate with DST recorders wirelessly via RF (radio frequency). The supplied USB cable connects directly from the box to a PC computer. The USB driver should automatically install on the computer, if not then download the driver from www.star-oddi.com/support/software.

The Communication Box has three diodes:

1. **Red** – shows that power is fed to the Communication Box.
2. **Yellow** – shows that Mercury has made connection with the box and the correct COM port has been selected.
3. **Green** – shows that the recorder is connected

You may need to use the Connection Wizard under Wizard menu in Mercury to get the yellow and green lights. See chapter 3.1

The green light will not turn on unless the red and the yellow lights are on. The recorder is inserted into the box as shown in the figure below. Please make sure that the logger is dry.

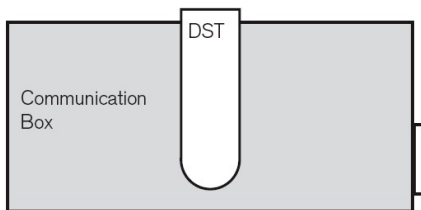


Figure 2.1 Inserting recorder into the Communication Box

For troubleshooting go to File -> New Recorder Type, and choose your logger type from the drop-down menu. Then go to Help -> Troubleshooting.



3 Interval Setup and Data Retrieval

3.1 Connection Wizard

The **Connection Wizard** is used for starting recordings and data retrieval. This wizard can be set to launch every time Mercury is opened, but can also be accessed through the **Wizards** menu.

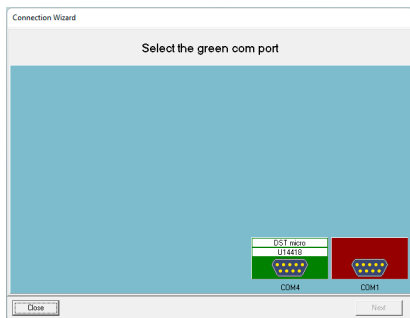


Figure 3.1 Connection wizard

For the COM port to appear green-lit, the DST must sit in the Com Box with all three lights on the box.

The recorder takes reference to the PC clock. Therefore make sure the PC clock is correct before the connection.

In the **Connection Wizard** select the green-lit port and select **NEXT** or double-click on the port.



3.2 Recorder Wizard

The wizard makes connection with the recorder and the **Recorder Wizard** opens:

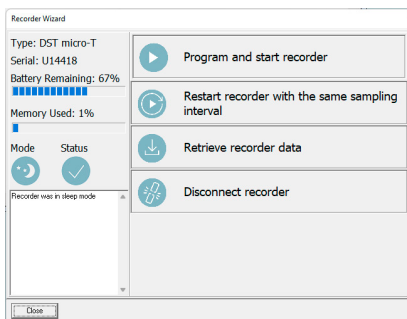


Figure 3.2 Recorder Wizard

The wizard guides the user through the proceedings of starting the recorder or retrieving data. The recorder type and serial no. are displayed and estimated battery life reported. It also reports the recorder's mode, if it was in sleep mode or measurement mode.

Note: If the recorder was in measurement mode it will stop taking measurements when connected to Mercury



3.3 Program and start recorder

For defining the measurement interval and start date & time then click on **Program and start recorder** in the **Recorder Wizard**. Alternatively (if not using the Recorder Wizard) choose the **Edit** menu and **New Measurement Sequence Definition**.

Either choose to program with **Single recording interval** or **Multiple recording intervals**. The multiple intervals option enables the user to switch between different intervals within a measurement sequence. If choosing single interval, the following window appears:

The screenshot shows a window titled "Set New Measurement Sequence" with standard Windows window controls (minimize, maximize, close). The window is divided into several sections:

- Set Start Time:** Contains a "Start date:" dropdown menu showing "08/07/2022" and a "Start time:" section with "Hour" and "Min" spinners. The hour is set to 14 and the minute to 10.
- Set measurement interval time:** Contains three spinners for "Hours" (set to 0), "Minutes" (set to 2), and "Seconds" (set to 0).
- Set Mode:** Contains two radio buttons: "Single mode" (which is selected) and "Multi mode".
- Buttons:** To the right of the "Set Mode" section are three buttons: "Use Template", "Use Default", and "Previous".
- Save as template:** A checkbox labeled "Save this NMS definition as a template (file)" is currently unchecked.
- Battery & memory calculator (days):** A spinner box at the bottom right is set to 7.
- OK and Cancel:** Two buttons at the bottom left for confirming or canceling the operation.

Figure 3.3 Measurement sequence definition



Depending on recorder type, parameters can be set as primary and secondary with different sampling frequency.

If you want to program several recorders with the same sampling interval and start time, it is recommended to select **Multi Mode** under **Set Mode**

For more information on options with **Multiple Intervals, Primary/Secondary, Burst, Multi mode** and **Sampling frequency** then please refer to the tutorial in the **User Manual** under **Help** menu. Especially recommended for ACT and HRT loggers.

The **Battery & memory calculator (days)** gives information on the energy and memory consumption based on the defined interval setup. Define the number of days which the calculations should be based on.

After the settings have been selected, press the OK button.

If you are using the wizard, the software will automatically start the new measurement sequence (start recording) and disconnect the logger. If not, choose the **Recorder** menu and **Start New Measurement Sequence** command.

A window appears on the screen in order to verify the settings to be downloaded into the recorder:

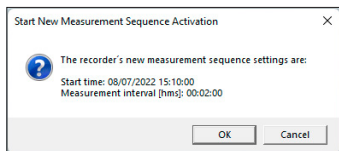


Figure 3.4 Start new measurement sequence

Press **OK** and the settings will be downloaded into the recorder. A window pops up confirming that it is in measurement mode.



3.4 Energy and memory calculations file

After acknowledging the interval programming window, a **New Measurement Sequence (NMS)** file automatically opens showing calculations on when the recorder's memory fills up and battery consumption estimation. It can be helpful to do calculations on different interval examples to help deciding on what interval is optimal for the study.

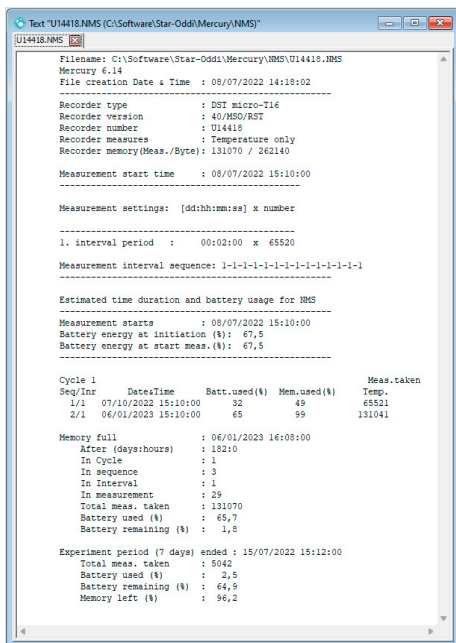


Figure 3.5 Results from NMS calculation



3.5 Disconnect recorder

After the recorder has been set up for measuring, it should be removed from the Communication Box. If the recorder is not put in measurement mode, it will automatically go into sleep mode when removed from the box.

3.6 Retrieve recorder data

When connecting to a logger after a measurement period, the following window appears.

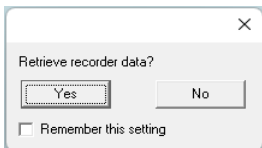


Figure 3.6 Retrieve recorder data?

Click **Yes** if you wish to retrieve the data, click **No** if you would like to retrieve it later. If you are not using the wizard choose the **Recorder** menu, **Connect** and the **Retrieve Data** command. Data is automatically stored in the **Mercury** directory on the computer.

You can repeatedly read the data without erasing it from the memory. Each time data is retrieved, a new file will automatically be created. The name of the data file consists of the measurement sequence number and the serial number of the recorder. The recorder cannot be programmed with new settings if it contains data that has not been retrieved. New recordings overwrite previous recordings that have been retrieved.

After you have retrieved the data you can either start a new measurement sequence or disconnect and put the recorder into sleep mode.



4 View data

4.1 Data graph and table

When data is retrieved from the recorder, a new file is automatically created and opened in graphical and tabular form. To open existing data files on the computer, choose the **File** menu, and **Open > Browse for Recorder Information Files**.

The computer mouse can be used to zoom in and out from the data. Double-clicking on the axis enables definition of scaling ranges. The **Save** button allows the user to save changes to the graph as a new file. The original data files are never overwritten.

4.2 Reconvert data

After data retrieval it is possible to modify the data file format and the unit values under the **Settings** menu. After re-defining these options select **File > Reconvert Data** and the changes will take effect in the graph and table.

4.3 Export data

In the graphical window there is a button called **Export as Workbook**. By clicking this icon the data can be saved as an Excel file. The time-series data text file (*.DAT) can also be imported to other programs for further analysis. The DAT file amongst other files created are stored in the Mercury folder on the PC. By choosing **Directories** under the **Settings** menu the data path can be seen.



Figure 4.1 Export data as.xlsx or CSV file.



5 Help Menu

5.1 User manual and Troubleshooting

In Mercury select your logger type and find the appropriate User Manual and Troubleshooter, see Figures 5.1 and 5.2.

Select **User Manual** under the **Help** menu to open the user manual. The user manual explains in more details the possibilities the software has to offer; multiple intervals programming, description of buttons, conversion of data, chart editing and saving and more.

Select **Troubleshooting** to open the Trouble-Shooter. Problem description can also be sent to support@star-oddi.com and Star-Oddi will respond with technical assistance via email or phone.



5.2 Check for updates

Each time Mercury is started it will automatically check for an update at the Star-Oddi website. We recommend to always approve the software update, user manual and troubleshooter. It is also possible to check for updates manually by choosing **Help > Check for Updates**.

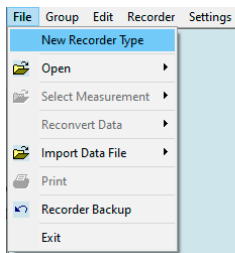


Figure 5.1 Select New Recorder Type under the File menu.

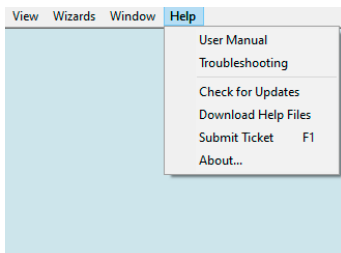


Figure 5.2 Open the User Manual and Troubleshooting, and check for software updates under the Help menu.

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