
Whole-Round Multisensor Logger (WRMSL): Quick Start Guide

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Introduction

This guide is designed to help the scientist use the Whole Round Multisensor Logger (WRMSL) and upload their data to the LIMS. For detailed information on the WRMSL please refer to the Whole Round Multisensor Logger User Guide available at <http://mckinley:8080/sites/>

Running Cores on the WRMSL

1. Load the core on the track. Run all cores in the same orientation, which is top toward the detectors and bottom toward the pusher bar.
2. Double click on the **Run WRMSL** icon on the desktop (Fig. 1).

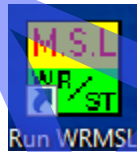


Figure 1. WRMSL desktop icon.

3. The logger **Program Interface** opens, ready to scan the first section (Fig. 2, Fig. 3). The normal order sample measurements is as follows: first section, following sections, and a push bar section (e.g., a standard core) to clear the instrument of previous sections.

Which sensors are active is at the discretion of the user and can be configured by a marine technician. The measurement interval can also be adjusted below the **Scan Sample** button on the **Interface** screen (Fig. 2).

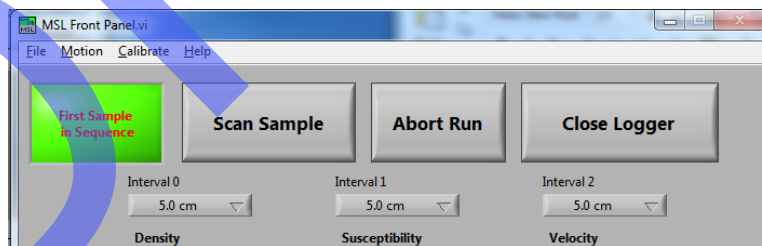


Figure 2. Close-up of controls on interface screen.

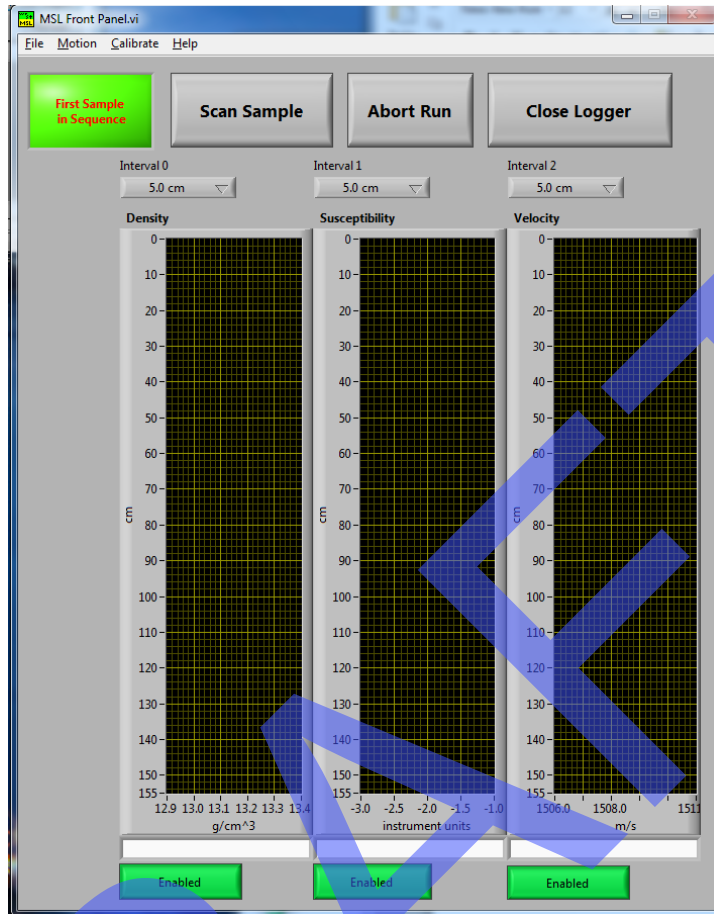


Figure 3. Program interface screen.

4. Click **Scan Sample** on the **Program Interface** to open the **Sample Entry** screen (Fig. 4). Scan the core label with the handheld barcode scanner to automatically populate **Text ID**, **Sample ID**, and **Curated Length**. **Important note:** check the sample length against the actual section in case a whole-round sample, etc., has been taken from the section. *For hard-rock cores, enter the entire length of the section, not just the part containing core pieces.*

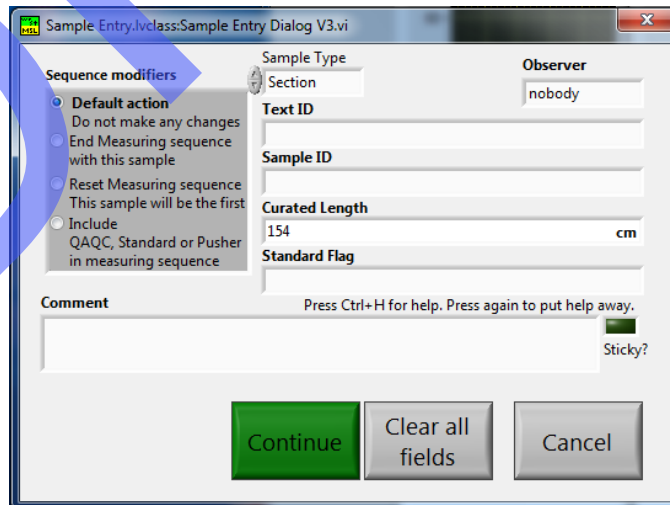


Figure 4. Sample Entry screen.

- Once Sample Entry is complete and verified, click **Continue** (Fig. 4) to start the measurement.
- During the measurement, the laser displacement sensor locates the top of the core, and the actuator moves the core section at the specified intervals through the series of sensors mounted on the logger.
- Once the core section has cleared the first 1.5 m of track, the logger will automatically stop and retract the pusher bar. A prompts for loading the next section appears (Fig. 5). Place the next section on the track and Click **OK** to view the **Sample Entry** screen.

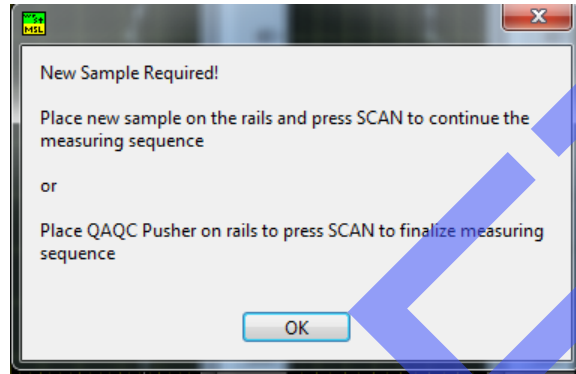


Figure 5. Prompt to load the next sample.

- On the **Sample Entry** screen, click **Scan Sample**, scan the sample barcode, verify the length on the screen, and click **Continue**.
- After sections for a full core have been measured (typically 6–7 sections, and typically omitting the core catcher [CC] section), load and scan the standard water core.
- Once the water standard has been run, the end of core notification appears (Fig. 6); click **OK**.

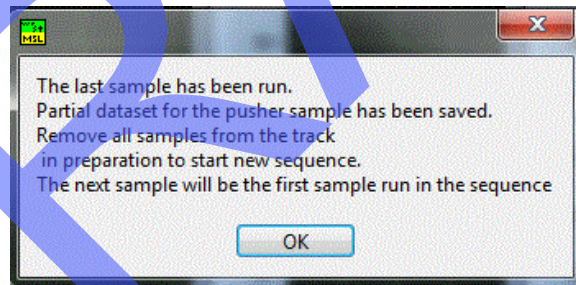


Figure 6. End of sequence message.

- Before beginning the measuring process again, a **Sensors will be zeroed** message will appear; click **OK** (Fig. 7)

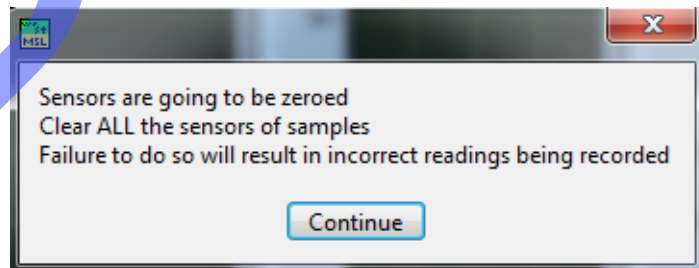


Figure 7. Clear sensors message.

The logger automatically stops when the leading section reaches the end of the track and the current section has reached the point where a new section can be loaded. If the leading core is left on the track when a third section loaded and run, the leading core trips a sensor and sets off an alarm. This halts logger operations until the sensor and alarm are cleared, so this should be avoided if possible.

Uploading Data Using MegaUploadaTron (MUT)

Preferably prior to analyzing the first core, start the data uploader so that every section measured on the logger is automatically uploaded to LIMS. If data is acquired while MUT was not running, contact the marine technician, and they can trigger the upload of files been generated prior to starting the uploader.

1. Double-click on the **MegaUploadaTron (MUT)** icon on the desktop (Fig. 8) to open the **Upload Interface** screen (Fig. 9).

If MUT is already running, a message will appear (Fig. 10); click **OK**. To open the already-running uploader, click on the **MUT** icon on the task bar (Fig. 11).

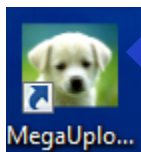


Figure 8. MUT desktop icon.

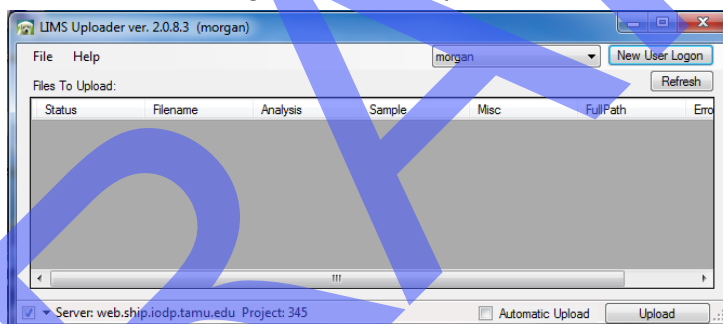


Figure 9. LIMS uploader (MUT).

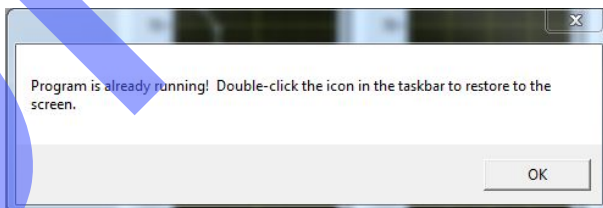


Figure 10. MUT is already open message.



Figure 11. MUT taskbar icon.

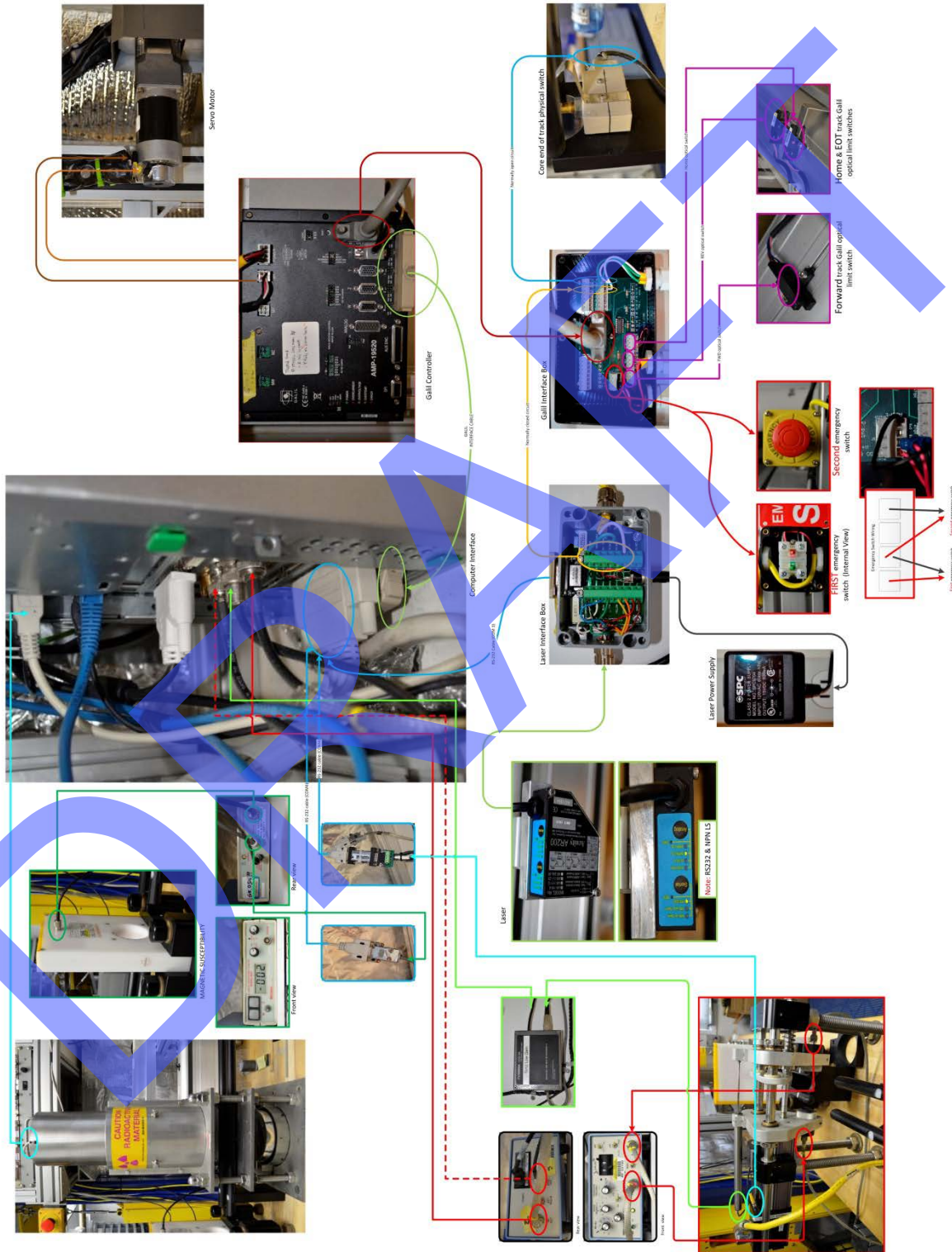
2. On the **MUT** interface screen, check the **Automatic Upload** checkbox, and then click **Upload**.

Health, Safety, and Notes of Caution

- Keep extraneous items and body parts away from moving belt, arm, and motor.
- Do not place your hand inside the GRA enclosure (and especially in between the GRA source and detector!) unless the plug is in place. The GRA source is a 10 mCi ^{137}Cs source and is sealed inside of the source housing, so it does not present an environmental hazard.
- The track system has 2 well-marked emergency stop buttons at both ends of the logger to halt the system if needed, and a 3rd stop button in the center that halts the PWL actuator.
- Do not attempt to work on the system while a measurement is in progress.
- Do not lean over or on the track.
- Do not stack anything on the track.
- This analytical system does not require personal protective equipment.
- Be careful not to hit any sensor when loading core.

DRAFT

Appendix: WRMSL Flowchart



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