



Logger Installation & Test-Data Upload Guide

(for NEMO30 and SK-WIBL as a manual-offload logger)

Purpose

This guide provides step-by-step instructions for installing and using a **Wireless Integrated Bathymetry Logger (WIBL)** on your vessel's NMEA2000 network. The WIBL records depth and positioning data to support the Seabed 2030 global ocean mapping effort.

1. Installation Overview

The WIBL connects to your vessel's NMEA2000 backbone to record depth and GPS data automatically. Installation typically takes about 1 hour.

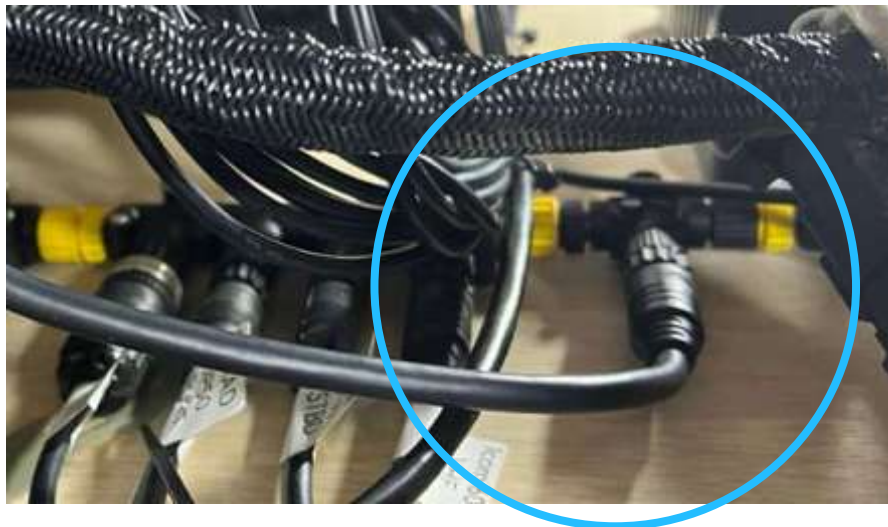
Materials Needed

- WIBL Logger (with SD card installed)
- NMEA2000 drop cable (or conversion cable if Raymarine SeaTalkNG) and T-splitter
- Velcro, double-sided tape, or mounting hardware
- Laptop, tablet, or smartphone with Wi-Fi access

⚠ Notice: If your vessel uses a Raymarine system, you must install a Raymarine DeviceNet (SeaTalkNG) to NMEA2000 conversion drop cable. This allows the WIBL to communicate with the standard NMEA2000 backbone.

Installation Steps

- Confirm your NMEA2000 backbone powers on with the vessel and that the Depth sounder and GPS/Chart plotter are both connected to said backbone.
- Turn off the power to your NMEA backbone.



- Locate or create an open port, noting that any new T-splitters should be properly terminated using an end tap.

- Plug the Drop Cable or Raymarine conversion cable into an open NMEA2000 port using the drop cable, as depicted in the circle above. Ensure locking rings are tight. Plug the other end into the WIBL logger.



- Power on the vessel and confirm LED lights (green/blue) indicate recording.



- Choose a dry, accessible area within 0.5–1 meter of the NMEA2000 backbone to mount the WIBL using Velcro or double-sided tape.
- For further guidance, find the installation videos at the QR code below.

Connect to the Logger Via WiFi

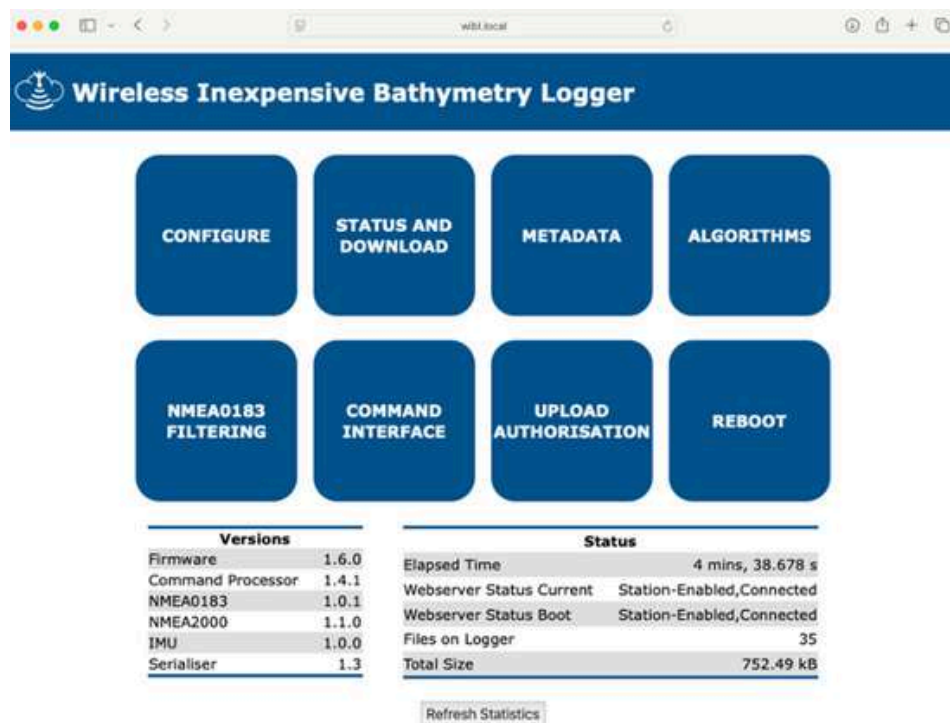
The WIBL automatically connects via Wi-Fi for data retrieval and logger maintenance. There is no need to remove the SD card.

⚠ Notice: Do not enable 'auto-connect' to the WIBL Wi-Fi network on your phone, as it does not provide internet access and could interrupt cellular connectivity.

- Turn on your vessel’s NMEA2000 system to power the WIBL.
- On your device (phone or laptop), open Wi-Fi settings and connect to the WIBL access point. The network name (SSID) will be formatted as '**LoggerWifi-UNITNUMBER**'.
- Enter the password provided to you via email or printed on your logger label. It will be similar to '**SK25-A-UNITNUMBER**', where '**25**' indicates the year, '**A**' indicates the hardware/firmware version, and '**UNITNUMBER**' is unique to your logger.

⚠ Notice: Take a photo of the Wi-Fi password on the side of the computer so that you don’t have to search at the NMEA backbone each time you want to log into it remotely.

- Once connected, open a web browser and enter '**http://192.168.4.1**' into the address bar. You should see a website interface like the one below:



⚠ Notice: You can monitor the number of “pings” or data points you are receiving, and how frequently they are being picked up! For more of this, select “**Status and Download**”.

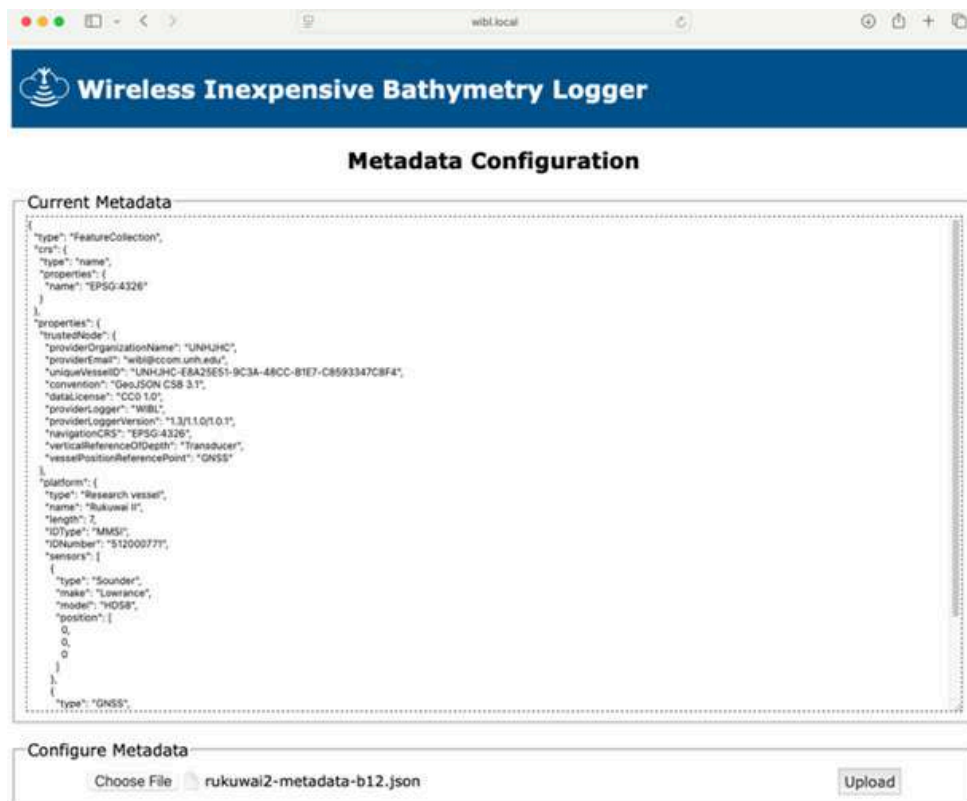
LED Legend

- Initialising: Flashing Green
- Normal: Solid Green
- Card Full: Solid Green + Blue
- Fatal Error: Flashing Red
- Stopped: Solid Blue
- Data Logging: Flashes Blue when data is being written
- No LED lights – check the power or cable connection to NMEA2000.

⚠ Notice: Both “Card Full” and “Data Logging” may appear Solid and Flashing Teal respectively on NEMO30 loggers. This is because the NEMO30 loggers do not have independent LED lights, so blue and green appear mixed.

*Optional Metadata Configuration Step:

- Request a metadata file from Haley@SeaKeepers.org. This file should be a **.JSON file type** and will include all of your vessel’s unique information that you have previous sent to SeaKeepers via the Seabed 2030 Letter of Agreement. Download this.
- Connect to the logger using Wi-Fi using the steps above.
- Navigate to the tile labeled “Metadata”, scroll down to the “Configure Metadata” section, and select “upload”. Find the **metadata.JSON file** sent to you by Haley, and upload it here.



2. Downloading Your Data To Your Local Device

- Leave your vessel navigation system running for at least 15 minutes to collect test data files.
- When the WBL interface loads, click “Status and Download” button.
- Once you seen the screen below, select “Download All Log Files”. This will download all recorded data into a single compressed TGZ file.
- The batch download does NOT delete the data from the SD card. Data remains stored until the card is manually cleared using the steps outlined below

The screenshot shows a web browser window with the URL 'wibl.local'. The page title is 'Wireless Inexpensive Bathymetry Logger'. The main heading is 'Real-time Status and Download Information'. The page is divided into several sections:

- Versions:**

Firmware	1.6.0
Command Processor	1.4.1
NMEA0183	1.0.1
NMEA2000	1.1.0
IMU	1.0.0
Serialiser	1.3
- Status:**

Elapsed Time	9 mins, 41.768 s
Webserver Status Current	Station-Enabled,Connected
Webserver Status Boot	Station-Enabled,Connected
Files on Logger	4
Total Size	714.61 kB
- Latest NMEA0183 Data:**

Depth	DBT	0 s	\$SDDBT,34.0,f,10.3,M,S,7,F*01
Position	GGA	1 s	\$GPGGA,000959.526,4300.001962,N,07400.998038,W,3,12,1.0,-19.5,M,22.5,M,0.0,0000*7A
Time	ZDA	0 s	\$GPZDA,001000.526,01,01,2020,00,00*56
- Latest NMEA2000 Data:** No Data Observed
- Buttons:** Refresh Statistics, Download Catalog, Download All Log Files
- Log Files Table:**

ID	Size	MD5 Checksum	Upload Count
31	10.16 kB	A061D9E6F4D3EE9459583C1A240EAE80	0
32	46.87 kB	0C534C8013C2DAA5635724A9C6DC271A	0
33	581.48 kB	911F26089539CEE6BEB1034D2F2D583F	0
34	76.09 kB	3EBF15DC5A3E9C6974C2F458FA63119F	0

3. Uploading Your Data to Google Drive

- Once you have successfully downloaded the .TGZ file from the seafloor logger, disconnect from the logger Wi-Fi and connect back to either a home Wi-Fi, a vessel Wi-Fi, or cellular service (automatic).
- Open the Google Drive link that you received by email from SeaKeepers.
- Locate the downloaded .TGZ file from your WIBL batch download. Rename this file with **VESSELNAME_MONTH_YEAR.TGZ** (it's important that you insert your own vessel name, and the month/year that you are conducting this transfer).
- Upload the renamed .TGZ file to the shared Google Drive folder.
- After verifying that data has been uploaded successfully to google (wait for confirmation from SeaKeepers), you can delete files off the SD card. To do this, connect back to the logger's wifi, navigate to the website again (using the Wi-Fi password to connect and typing **192.168.4.1** into your browser), then click **"Command Interface"**, click your cursor into the type box under **"Command"** and type **"erase all"**, then click **"run"**.

4. Contact & Support

For any issues with installation, Wi-Fi connection, or data uploads, please contact:

Haley Davis, Data Scientist | [✉ haley@seakeepers.org](mailto:haley@seakeepers.org)

Rosemarie Moore, Citizen Science Manager | [✉ rosemarie@seakeepers.org](mailto:rosemarie@seakeepers.org)



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