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manta5 SL3 Hydrofoiler Software Upgrade User Guide

**20-00643
HYDROFOILER SL3
SOFTWARE UPGRADE INSTRUCTIONS**

This process is for Hydrofoiler SL3 using.
ECS software V0.60 and below, or Display-Throttle software V0.29 and below.
If you have these versions installed on your Hydrofoiler SL3 then it is essential that you upgrade your SL3 software.

Contents

Introduction

This document provides instructions to upgrade the Hydrofoiler SL3 software
This is a major software release fixing a severe bug present ip both the ECS and the Display-Throttle mod. es.

which if it occurred cased the corruption or loss of the software ir either mod. e or rendering the SL3 inoperable

The bug affects

- ECS application software versions VO.6O ard below
- Display-Trrottle application software versions VO.29 ard below

This pracess a so installs the latest ECS and Disp ay-Thrott e bootloader software The whole process shat d take about ten minutes to complete

You will need

- APCrurning Windows 10 or 11
- Your Hydrofoi er SL3 powered up with a fully charged battery
- The SL3 PC APP Version VO.32 ar VO. 33 installed and running
- The SL3 PC APP VO. 3x documentation
- The latest SL3 software upgrade fies

Tre latest SL3 PC, upgrade software, ard documentation car be dowrloaded fram the MartaS website
Hydrofoiler SL3 Software – Manta5
Download the Hydrofoiler SL3 PC app user guide
Hydrofoiler SL3 PC app V0.3x guide
Fo owing this upgrade, the Display-Thrattle will need to be re-calibrated. Please download tre Disp ay-Throttle Calibration instructions 001529 – Hydrofoiler SL3 Display-Throttle Calibration.pdf.
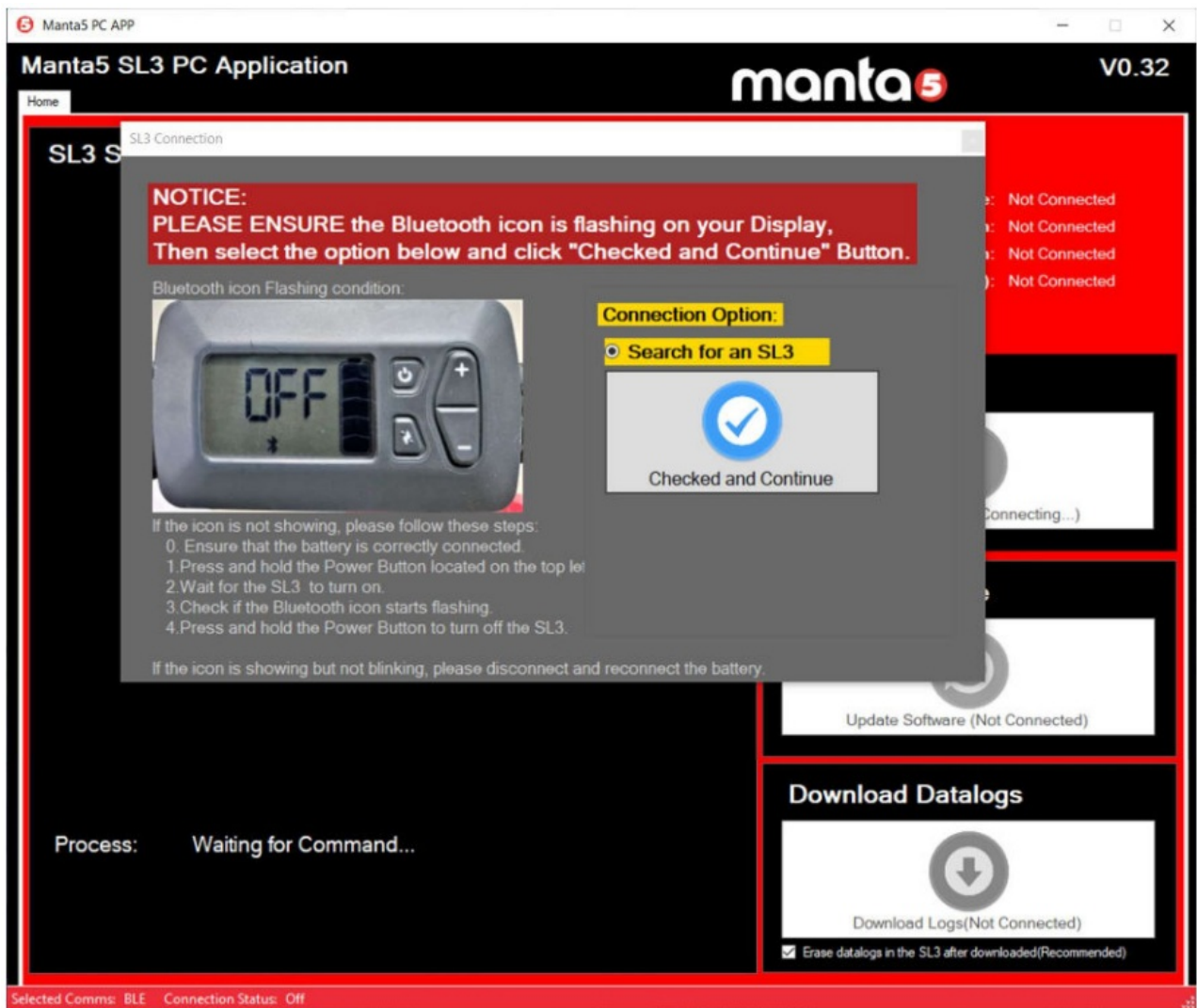
Initial Setup

1. Run the SL3 PC Application version 0.32 or VO.33. (Version VO.33 has its button icons arranged horizontally)
2. This will create a directory on your PC called C:\Manta5\PC_App\software".
3. Copy the upgrade files obtained from the Manta5S website, into this directory.
   - Display-A000753-V31[S].bin
   - Display-B006370D-V105.bin
   - ECS-A000764-V73[S].bin
   - ECS-B006370B-V105.bin
4. Before starting the upgrade process. Please familiarise yourself with these instructions and the layout of the SL3 PC Application.
5. Fallow these instructions carefully and you must upgrade the software exactly in the order given.
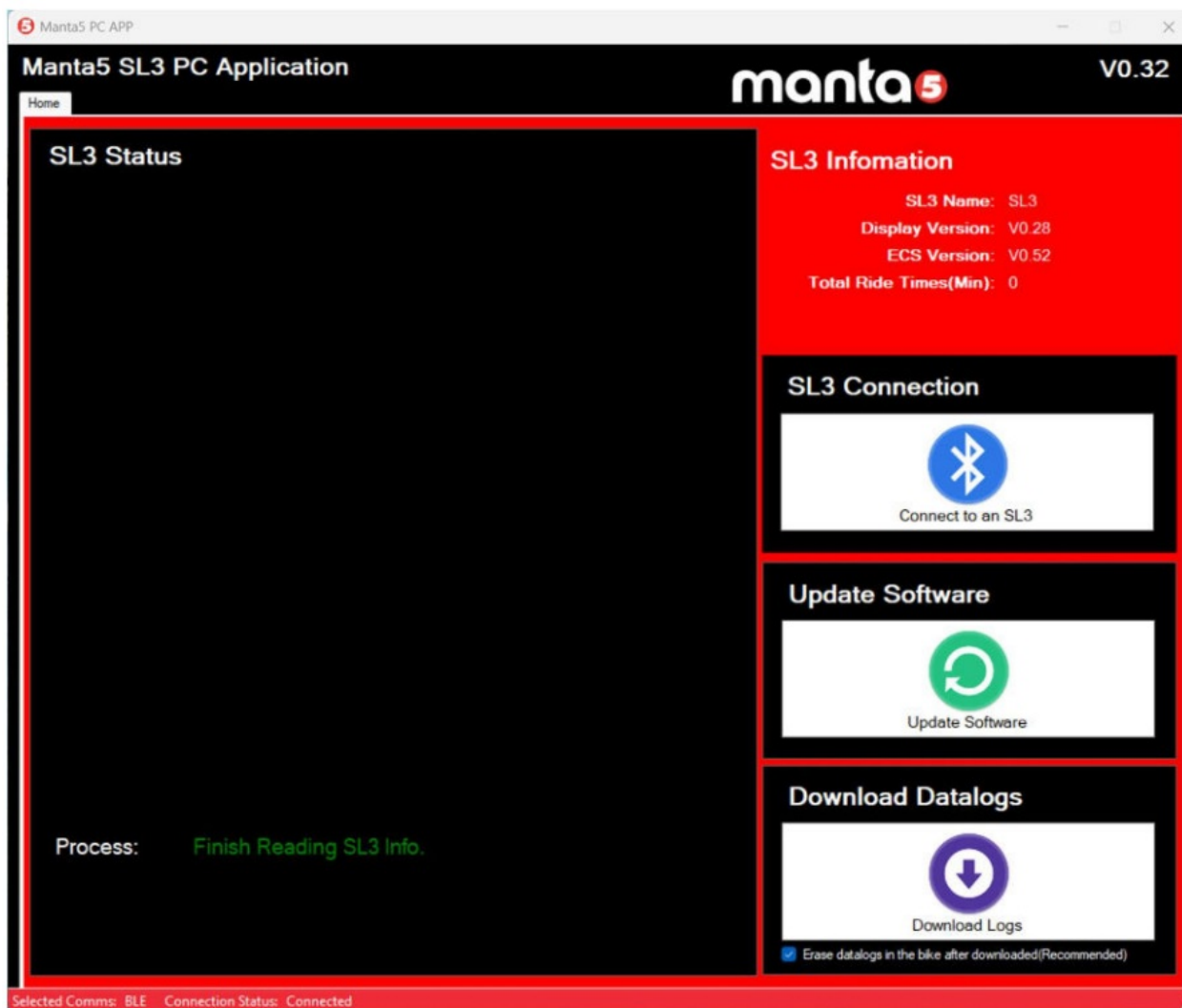
Process

Attach the battery to your Hydrofoiler SL3. Check that the Display-Throttle LCD is showing "OFF", and that the Bluetooth icon is flashing.
Follow the instructions in the SL3 PC App Guide document to connect the SL3 to the PC App using Bluetooth.
You will need to give the SL3 a name, Manta5 recommend naming it with the last 7 characters of Display Throttle's serial number.

Checking the software version numbers

Once connected via Bluetooth, the SI3 PC application will show the Hydrofoiler SL3 software version numbers for the Display-Throttle unit and the ECS unit in the SL3 Information window shown below.

By double-clicking on either of the version numbers, you can access the Bootloader software version each unit.
After obtaining each of the software version numbers, please check the table below.
Upgrading of each software version should be done in the order shown in the table.

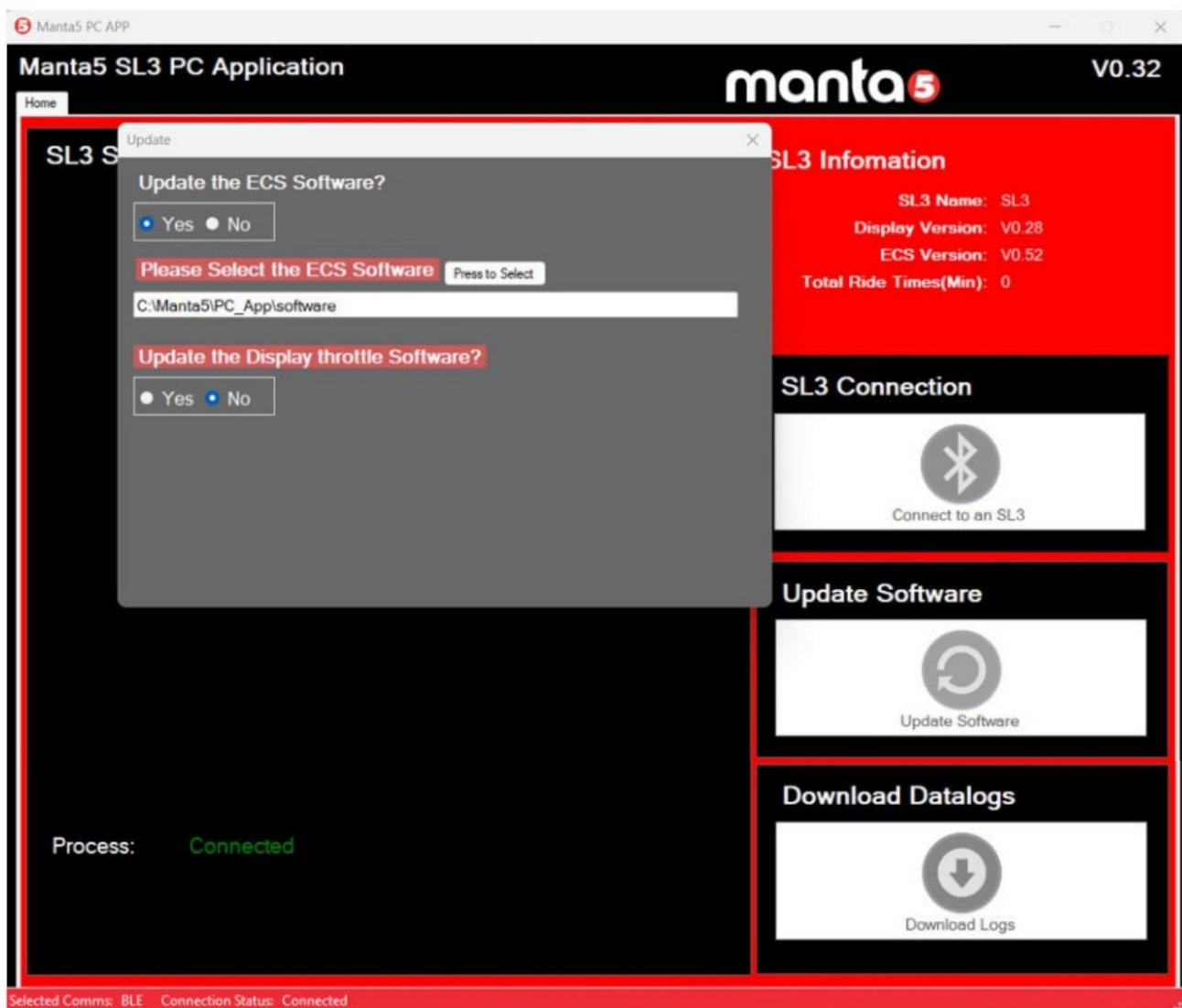| Order	Module	Current version in the 5L3	Upgrade	Go to process
1	ECS	BL Version V0.14 (or below)	V1.05	Upgrade ECS Bootloader
2		FW Version V0.60 (or below)	V0.73	Upgrade ECS Application
3	Display-Throttle	BL Version V0.13 (or below)	V1.05	Upgrade Display-Throttle Bootloader
4		FW Version V0.29 (or below)	V0.31	Upgrade Display-Throttle Application

DO NOT UPGRADE THE APPLICATION BEFORE THE BOOTLOADER, THIS WILL CAUSE THE UNIT TO BECOME INOPERABLE AND THE UNIT WILL NEED TO BE RETURNED TO MANTAS FOR REPROGRAMMING.
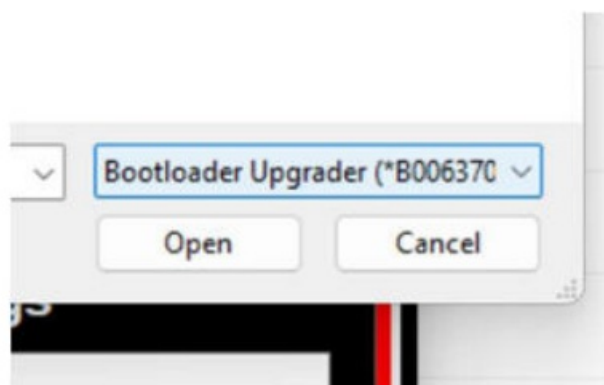
Upgrade ECS Bootloader

This process IS NOT required if the ECS bootloader is already version V1.00 or higher. Please go to Upgrade ECS Application.
This process will erase the current ECS application software and upgrade the ECS bootloader software.

To start the upgrade, click the "Update Software" button.
Click 'Yes' for Update the ECS software and click "Press to Select".

Change the filename filter to "Bootloader Upgrader" and select the software file ECS-B006370B-V105.bin Click "Open".

Click the "Confirm" button and the "Yes" button to start the upgrade.

The progress bar will start to turn green.
The Hydrofoiler SL3 LCD will display "UPL".

* The Bluetooth icon may not show in some alder versions of the software.

When the upgrade has finished the SL3 PC App attempts to read the application software version number, however this will fail because the ECS only contains the bootloader code.
The SL3 PC App will show,

This message can be ignored.
The Hydrofoiler SL3 LCD will display "E10". This can also be ignored.
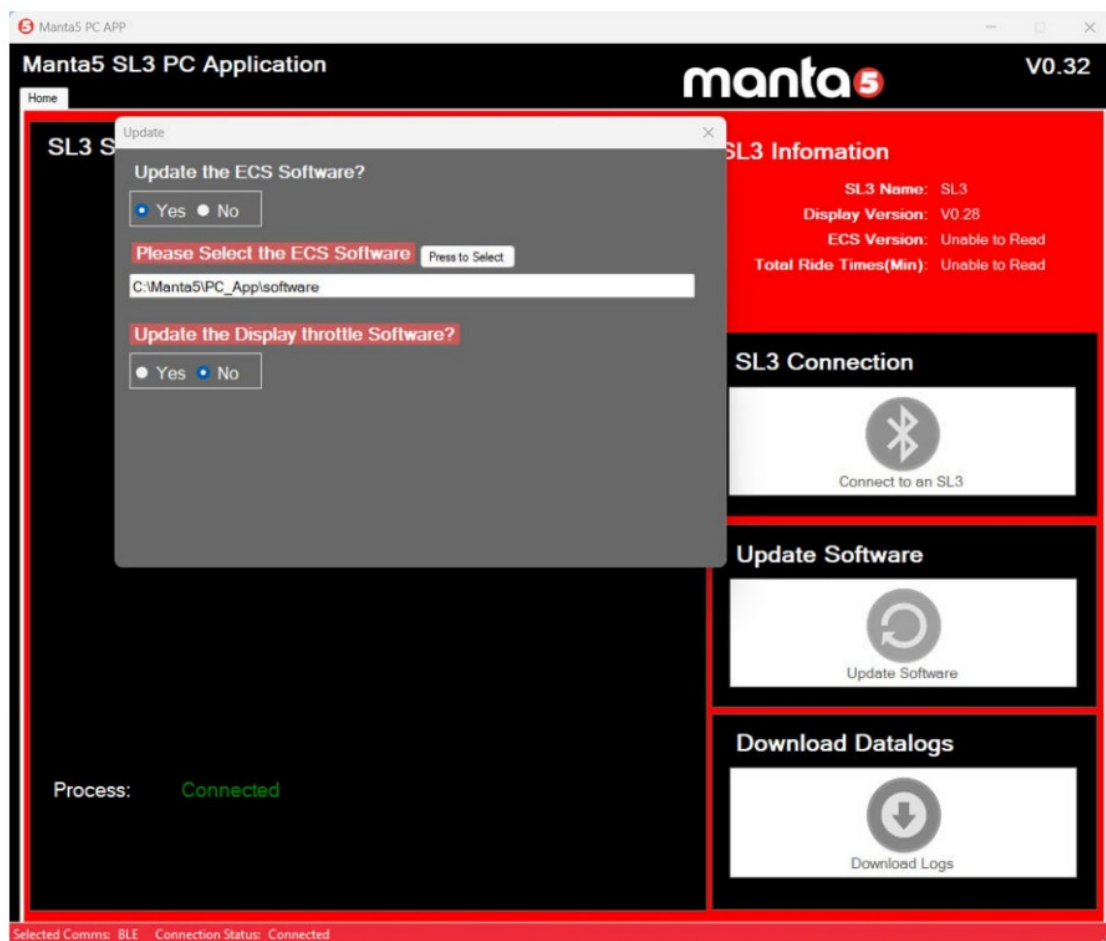
Now go to Upgrade ECS Application.

Upgrade ECS Application

DO NOT start this process unless the ECS bootloader version is already V1.00 or higher.
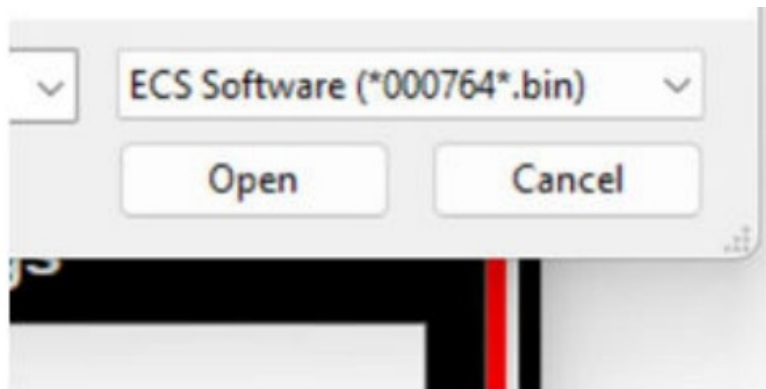This process will upgrade the ECS application software.
To start the upgrade, click the "Update Software" button.
Click 'Yes' for Update the ECS software and click "Press to Select".

Change the filename filter to "ECS Software" and select the software file ECS-A000764-V73[S].bin.
Click "Open".

Click the "Confirm" button and the "Yes" button to start the upgrade.
The progress bar will start to turn green.

Tue Hydrafailes S_3 LOO willd splay "UPL".

Wen the upgrade yas fin sied Tre SL3 PC App will show Finish Reading SL3 Info.
Tne SL3 Informat or parel wll srow,

After 2 or 3 seconds, the Hydrofoiler SL3 LCD will display "OFF".

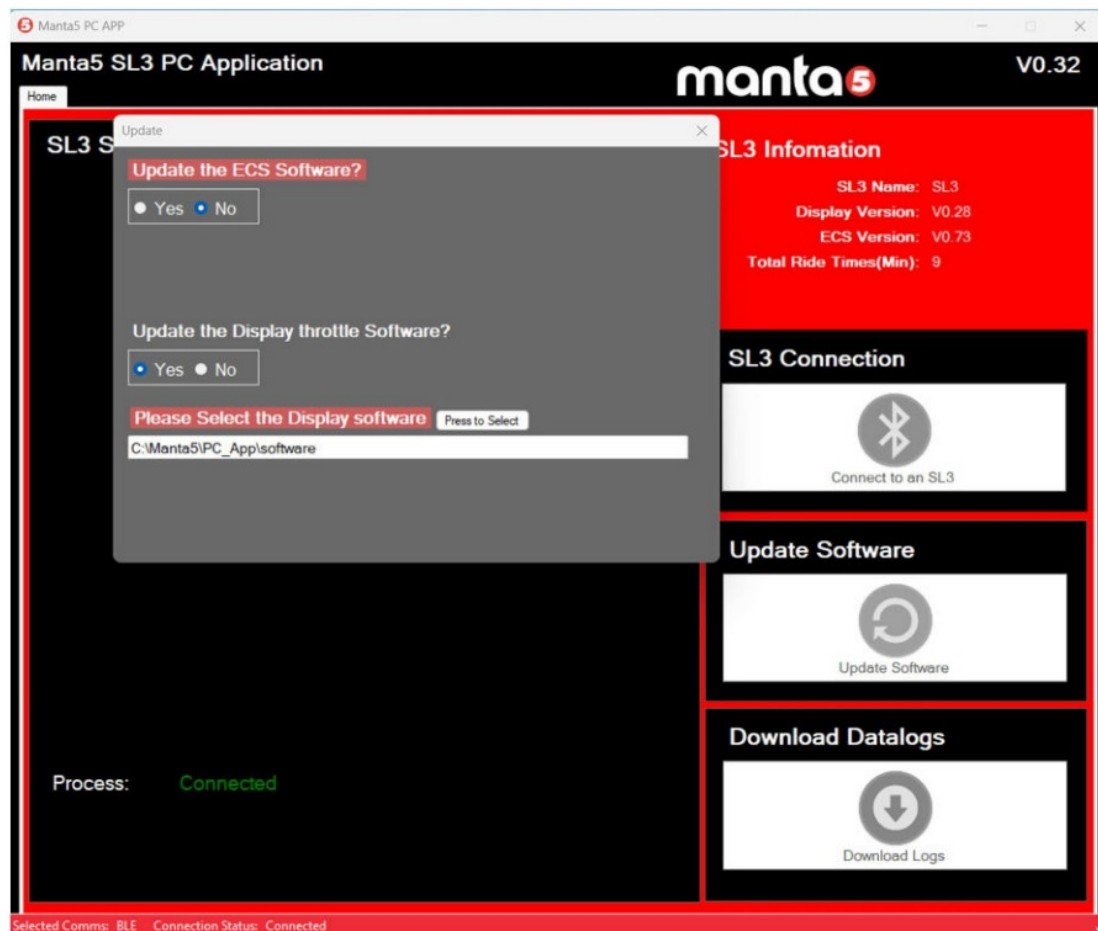ECS upgrade is now complete. Now go to Upgrade Display- Throttle Bootloader.

Upgrade Display-Throttle Bootloader

This process IS NOT required if the Display-Throttle bootloader is already version V1.00 or higher. Please go to Upgrade Display-Throttle Application.
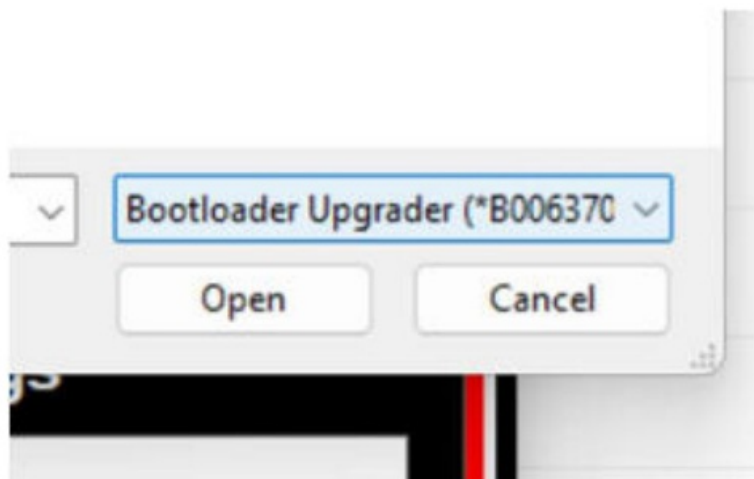
This process will erase the Display-Throttle application software and upgrade the Display-Throttle bootloader software.

To start the upgrade, click the "Update Software" button.

Click 'Yes' for Update the Display-Throttle software and click "Press to Select".

Change the filename filter to "Bootloader Upgrader" and select the software file Display-B0063 70D-V105.bin. Click "Open".

Click the "Confirm" button and the "Yes" button to start the upgrade.
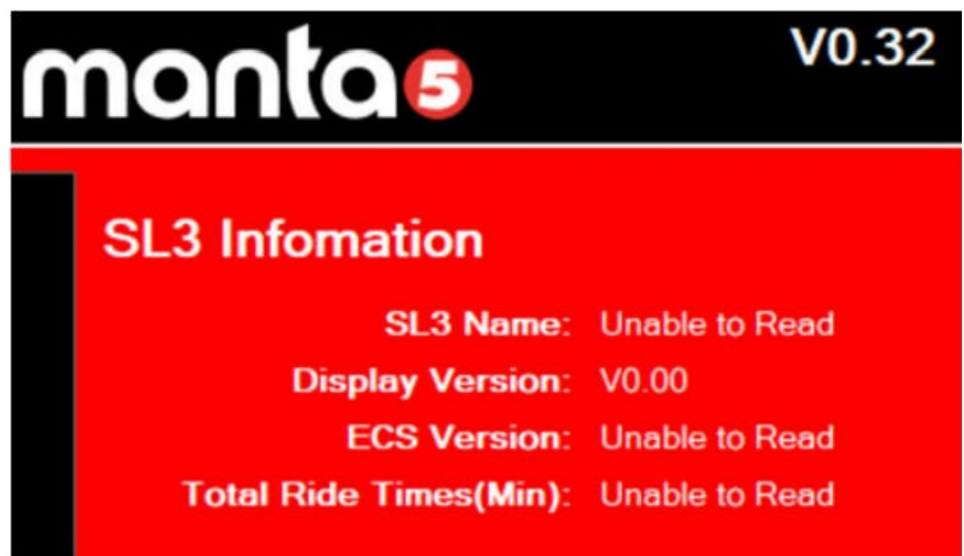The progress bar will start to turn green.

The Hydrofoiler SL3 display will show "BTL".

* In some older versions the screen may go blank
When the upgrade has finished the SL3 PC App attempts to read the application software version number, however this will fail because the Display-Throttle only contains the bootloader code.

The SL3 PC App will show,

Read Info fail, Please try re-Update related software.

This message can be ignored.
The Hydrofoiler SL3 LCD will continue to display "BTL".
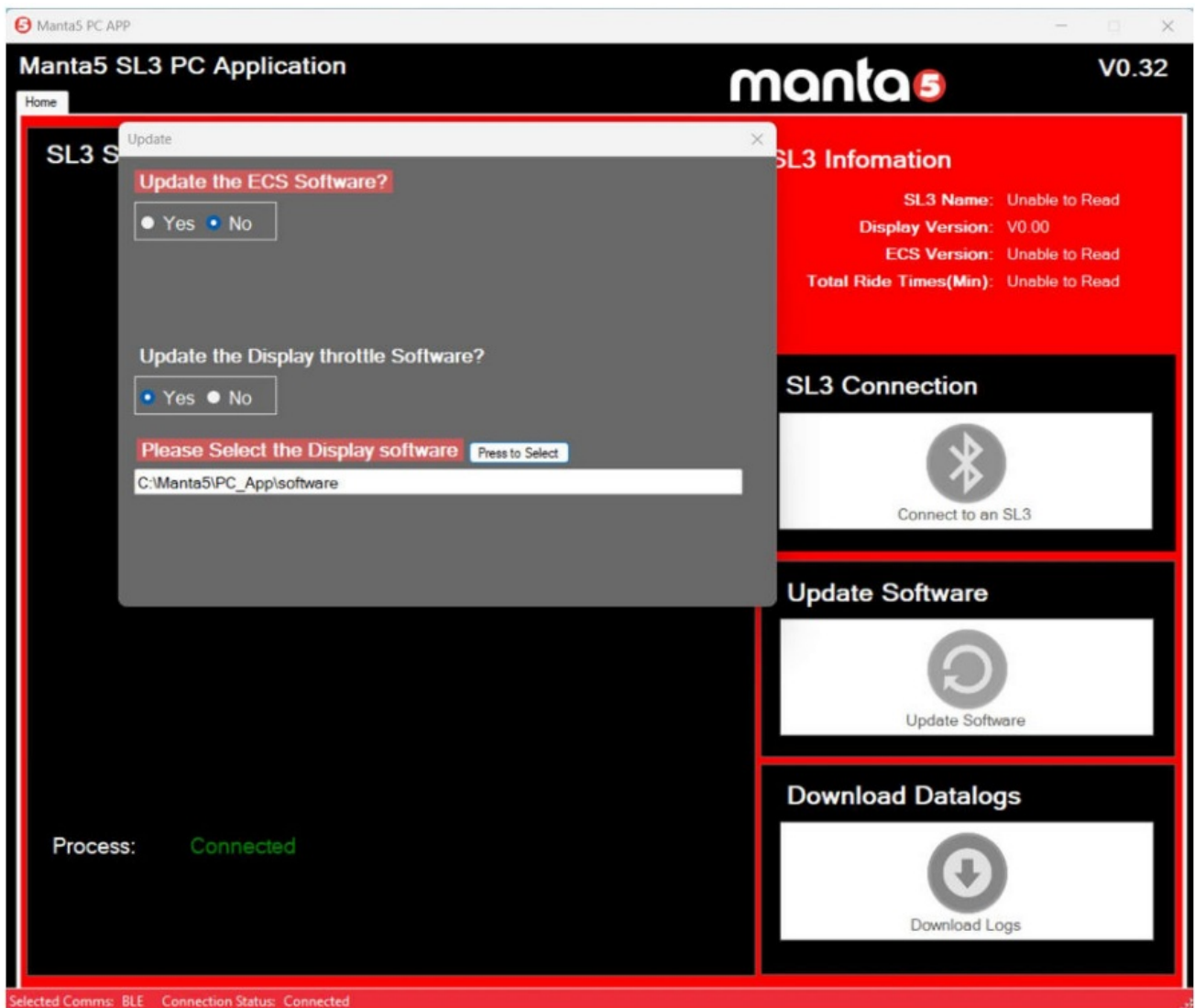
Now go to Upgrade Display- Throttle Application.

Upgrade Display-Throttle Application

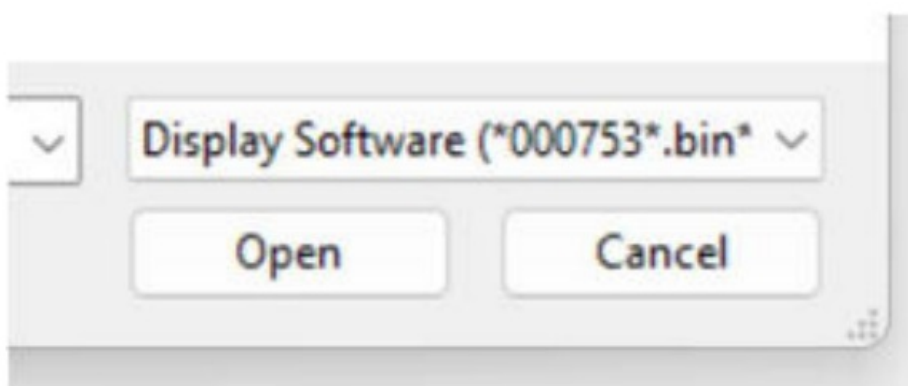DO NOT start this process unless the Display bootloader version is V1.05.
This process will upgrade the Display-Throttle application software.
To start the upgrade, click the "Update Software" button.
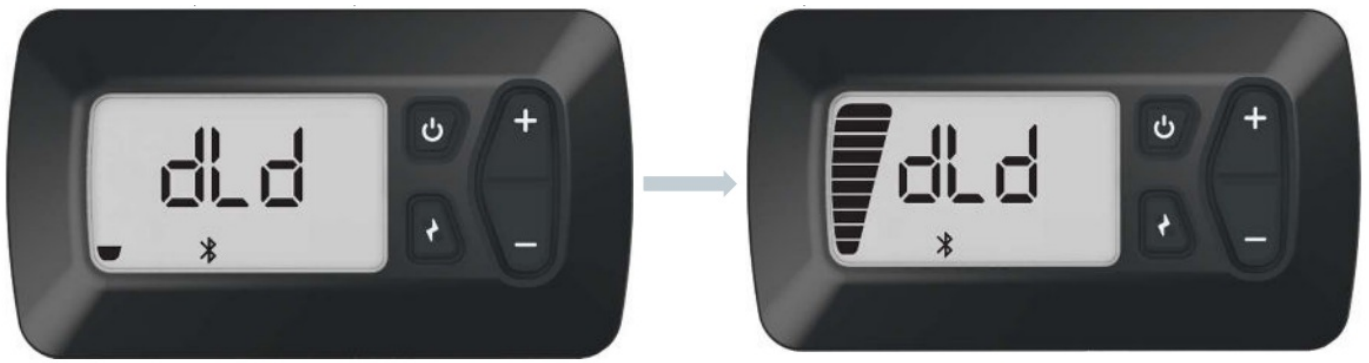Click 'Yes' for Update the Display- Throttle software and click "Press to Select".

Change the filename filter to "Bootloader Upgrader" and select the software file Display-A000753-V31[S].bin. Click "Open'.

Click the "Confirm" button and the "Yes" button to start the upgrade.
The progress bar will start to turn green.

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Tee tiers an the eft-hands de of tee LOO willincresse as tee cowelond sroceecs

At ter encof tee sovtware wperade the LOO will shcw "Pro" arc then show "CAL"

When the upgred has finshed The SL3 PC App will show Finish Reading SL3 Info.
Tre SL3 Infarmatior panel wil show,

The SL3 PC App will show,

Now go to Recalibrate Display- Throttle.

Recalibrate Display-Throttle

Due to the nature of this major upgrade, the Display-Throttle unit will require a re-calibration. Please follow the simple instructions in this document 001529 – Hydrofoiler SL3 Display-Throttle Calibration.pdf.
The Display-Throttle LCD should now display "OFF".

The process is now complete and your Hydrofoiler SL3 will have the latest available software.

Module	Version
Bike Controller (ECS)	V1.05
	V0.73
Ride controller (Display)	V1.05
	V0.31

Revision History

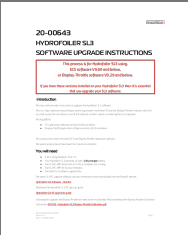| Date	Version	Author	Change Notes
25/10/2023	1	Pete Ruddock	Initial
31/10/2023	1.1	Pete Ruddock	Added note regarding V0.33 of SL3 PC app. Added warning to upgrade code exactly in the correct order.

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Version: V1.1
Date: 31 October 2023

Documents / Resources

manta5 SL3 Hydrofoiler Software Upgrade [pdf] User Guide
SL3 Hydrofoiler Software Upgrade, SL3, Hydrofoiler Software Upgrade, Software Upgrade

References

- **User Manual**