



EIVA

RELEASE NOTES

NAVISUITE MOBULA 4.7.2 (BLUE ROBOTICS)

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1 Release notes for Blue Robotics BlueROV2

NaviSuite Mobula 4.7.2 collects a series of new features, some improvements and bug fixes. The release notes are valid for the Core, Sonar and Pro variants of NaviSuite Mobula for BlueROV2.

2 New features in version 4.7.2

- Calibration of compass, gyro and accelerometer
- Calibration Quick Guide document: [Available here](#)
- [Learn more at the EIVA website](#)

2.1 IMU accelerometer, gyro and compass calibration

The IMU sensors on both Navigator Board and Pixhawk can be calibrated in NaviSuite Mobula 4.7.2:

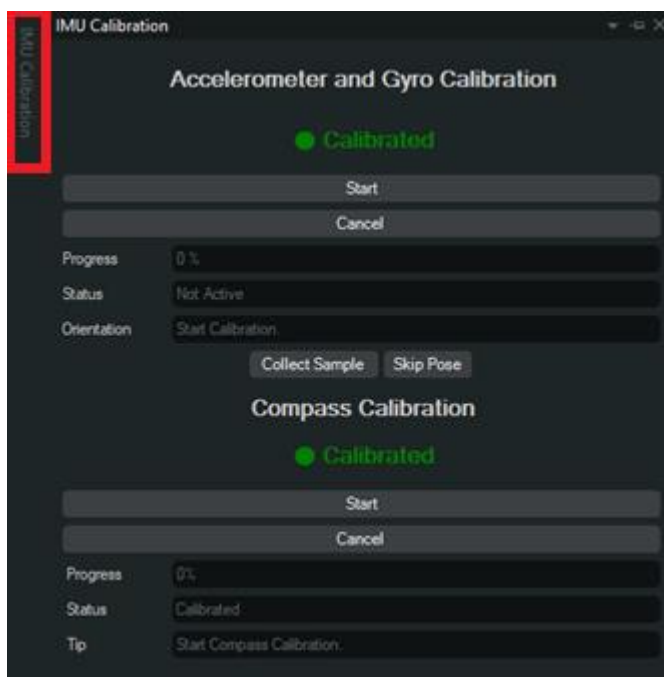


Figure 1 IMU Calibration window

The accelerometer and gyro are calibrated together in a single procedure. The compass can be calibrated separately after a successful accelerometer calibration.

The accelerometer calibration procedure also estimates the board orientation, so it is not necessary to manually set it up before calibration.

For a detailed description of this feature, as well as an FAQ, follow [this quick guide](#).

2.2 Cruise control

A new control mode has been added, namely cruise control. It is an extension to manual control, and it allows you to set your current joystick values as trims.

It can only be activated from the joystick if a button has been mapped to **Cruise Control**. Pressing the **Cruise Control** button will always add your current joystick values to the trims, so it can be used to fine-tune the trims. Additionally, a button can be mapped to **Reset Trims** to set the trims to 0.

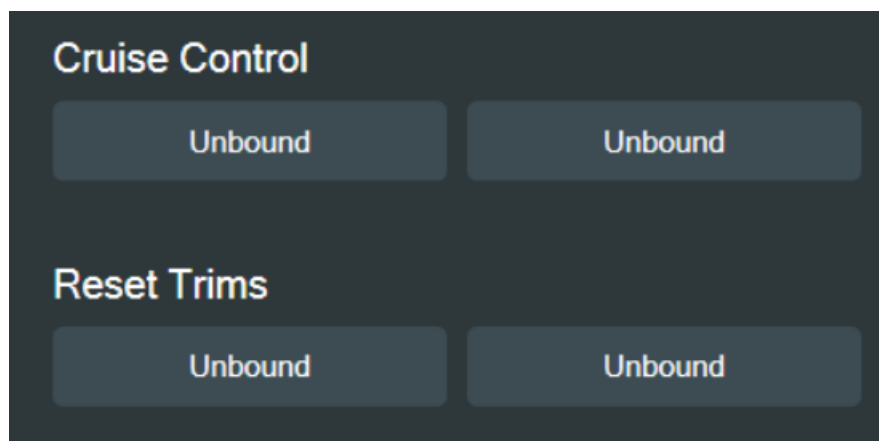


Figure 2 Cruise Control and Reset Trims binding options

3 Improvements

Make an ROV a vehicle instead of a waypoint.

3.1 Joystick

The joystick user interface and interactions have been updated.

3.1.1 Toolbar

Joystick settings is no longer available in the **Project Tree** and **Property View**. Instead, they are available from the **Toolbar**.

The icon in the **Toolbar** indicates the connection state of the joystick.



Figure 3 Joystick not connected



Figure 4 Joystick connected

3.1.2 User interface

The joystick user interface has been updated.

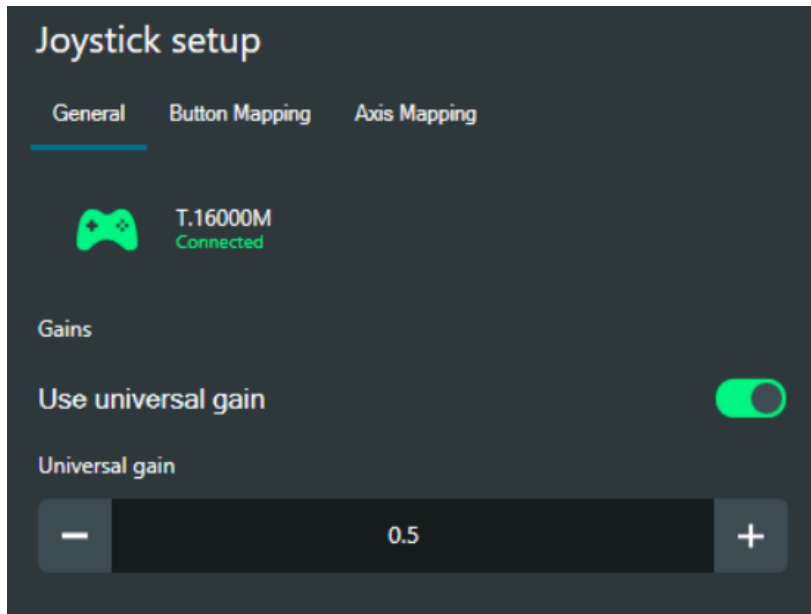


Figure 5 Joystick setup – General view

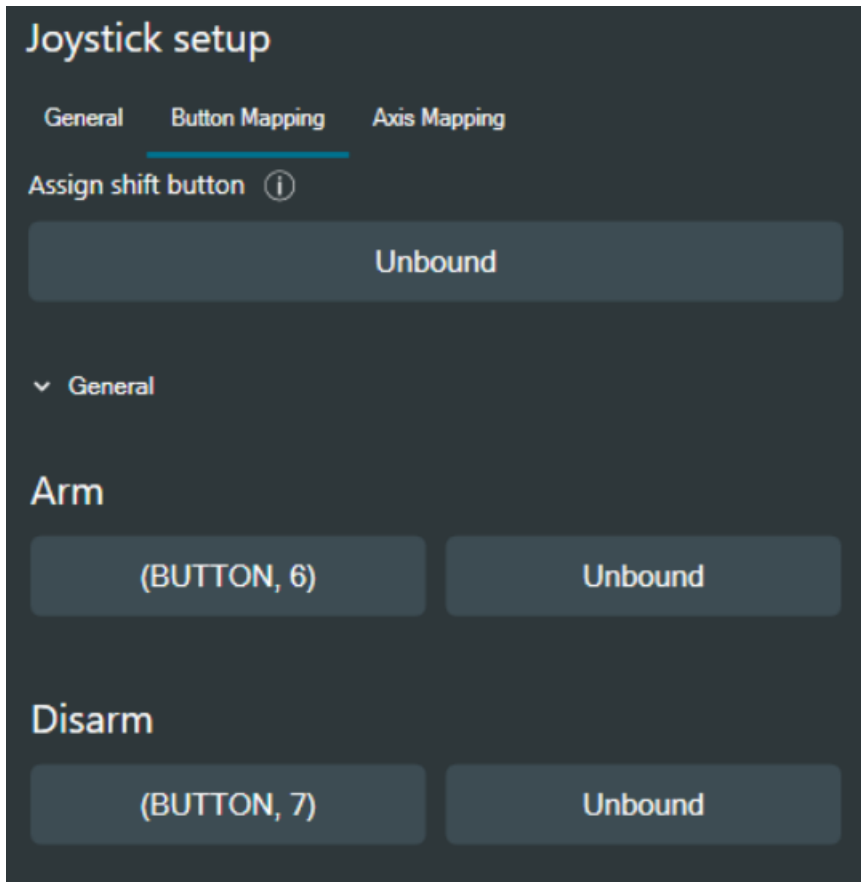


Figure 6 Joystick setup – Button Mapping view

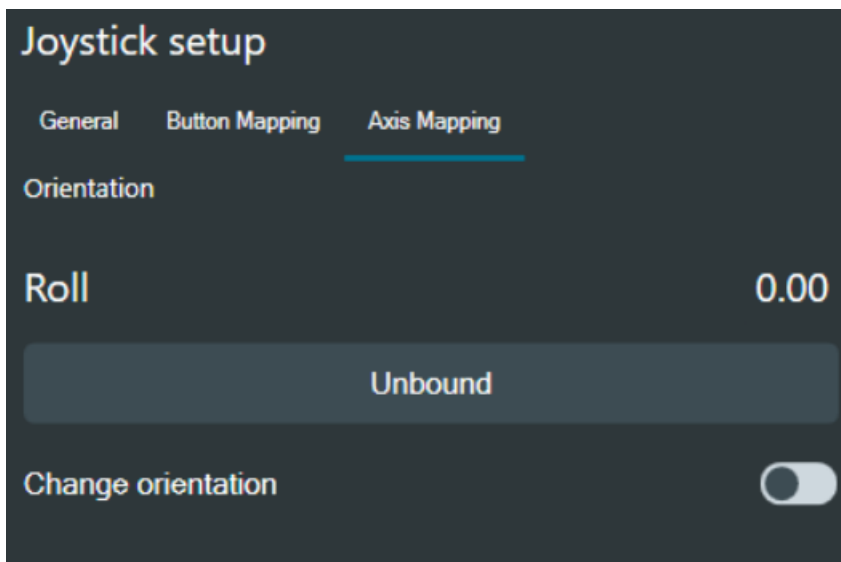


Figure 7 Joystick setup – Axis Mapping view

3.1.3 Miscellaneous

The ROV is automatically put in the **Disarmed** state if the joystick disconnects. The **Universal Gain** and **Shift** status are visible from the **Live Data View**.

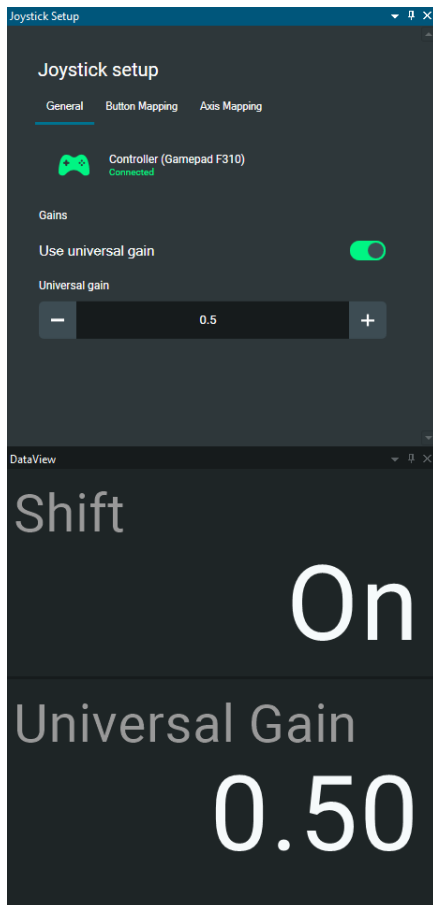


Figure 8 Joystick Setup view and DataView with Shift and Universal Gain

3.2 Config

- Renamed NaviSuite repeater instrument to *Send to NaviSuite Mobula*
- Use drop-down menus for instrument selection in *Send to NaviSuite Mobula*
- Free position driver in Config program

3.3 Eventing

Instead of having to click on the map where you want to place the event, events are placed on the ROV position by default.

3.4 Recording

The universal **Record** button has been made a toggle, rather than two separate buttons. Additionally, it is now possible to start/stop recording of individual cameras by *right-clicking* on them.



Figure 9 Record button – not recording



Figure 10 Record button – recording in progress

3.5 Channel mapper

The **Channel Mapper** is no longer accessible from the **Project Tree**, instead it is accessed from the NaviSuite Mobula **Toolbar**.



Figure 11 Channel Mapper

3.6 Assisted steering interval of depth

The step-interval when using the +/- buttons for depth has been reduced. It used to be 0.5 m per increment, now it is 0.25 m.

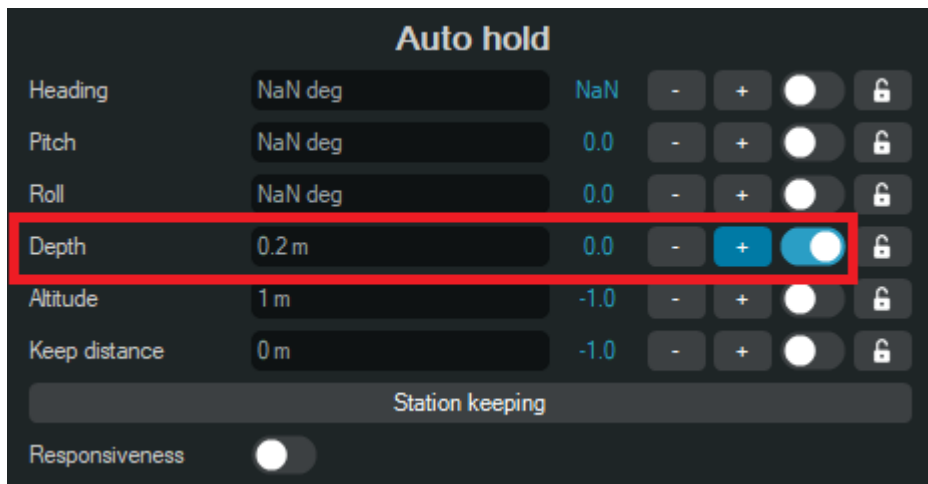


Figure 12 Auto hold depth setting

3.7 Custom frame file

Centre of mass and centre of buoyancy can now be specified in the *Custom frame* file. Follow this link for information about the Custom frame selection [here](#).

3.8 Trims

Trims are now disabled when station keeping is engaged.

4 Fixes

Here is a list of the bugs that have been fixed since NaviSuite Mobula 4.7.1.

4.1 Loading custom frame

When a custom frame was loaded, sometimes the **Thruster properties** window would still look at the old frame, thus changes in this window would not be reflected on the correct frame. This has been fixed.

4.2 Camera tilt

The step-interval for camera tilt was unexpectedly large, making it difficult to control. The camera tilting has now been made smooth (step-less) for better control of camera tilting.

4.3 Loading project

Sometimes when loading a project, the thrusters would not spin in the loaded project. This has been fixed.

4.4 Regular small freezes

Since 4.7.1, small freezes at a regular interval have occurred for some people. This has been fixed.

4.5 Reconnecting upon changing battery

Sometimes NaviSuite Mobula would not reconnect after changing battery. This has been fixed.

4.6 ROV moving on the wedge display

ROV should no longer move around on top of the wedge display.

4.7 Saving controller parameters

When controllers are tuned and their parameters are saved, this process will take less resources than before.

4.8 Position flickering

If the **Position source** was unreliable, the ROV would flicker between *0.0* and the position retrieved from the position source. This has been fixed, ROV will always be drawn at the latest position received.

4.9 Mobdebug

Fixed a rare problem that could cause NaviSuite Mobula to freeze when entering mobdebug debug state.

4.10 License issue in Config program

Fixed an error causing licensing issues in the **Config** program if NaviSuite Mobula started in an unconnected state.

4.11 Saving settings from joystick setup with saved project

The buttons set in the joystick setup are saved along with the saved project.