

# uStepper S32 WiFi Shield



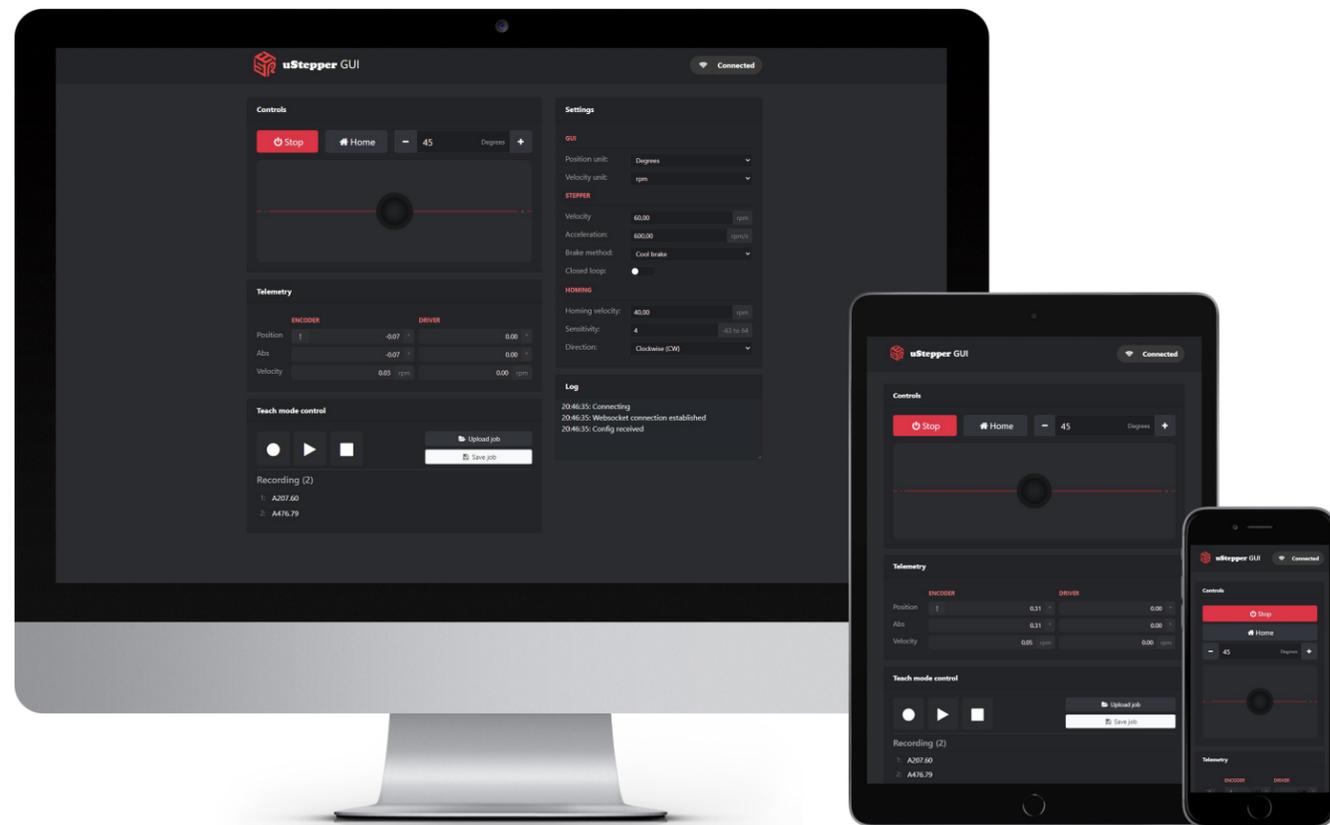
## LET'S GET CONNECTED

The uStepper S32 addition giving you the ultimate wireless stand-alone motor control solution - from PC, tablet or smartphone



## FREE YOURSELF FROM MORE APP'S

THE **uStepper S32 WiFi Shield** OFFERS FULL CONTROL AND FEEDBACK FROM YOUR PC OR SMART DEVICE WITHOUT REQUIRING AN APP



## THE NEXT GENERATION **uStepper**, TAKING YOU ONE STEP FURTHER

### Flexible user interface

**uStepper S32 WiFi Shield** lets you control **uStepper S32** from any device that can connect to WiFi. The GUI is running locally on the shield and accessed through your internet browser independent on platform - PC, Tablet, Smartphone etc.

### Easy access to key features

The key features are exposed in the Graphical User Interface enabling readout of position and speed while brake modes, speed settings closed loop and open loop selection is also directly available for you in the GUI.

### Record and playback

Embedded storage allows for recording and replay of a sequence enabling rapid generation of single-axis automations. Teach mode where a user manually positions the actuator while recording position points for later replay further eases the process. Sequences can be both downloaded and uploaded to the device.

### Home it

Homing without a limit-switch is one of the many features of **uStepper S32**, and this is of course also available in the GUI - giving you the option to initialize your system against a mechanical stop. Sensitivity and speed of the homing feature is easily adjustable to make this feature versatile and easy to tune.

## GET YOURSELF CONNECTED

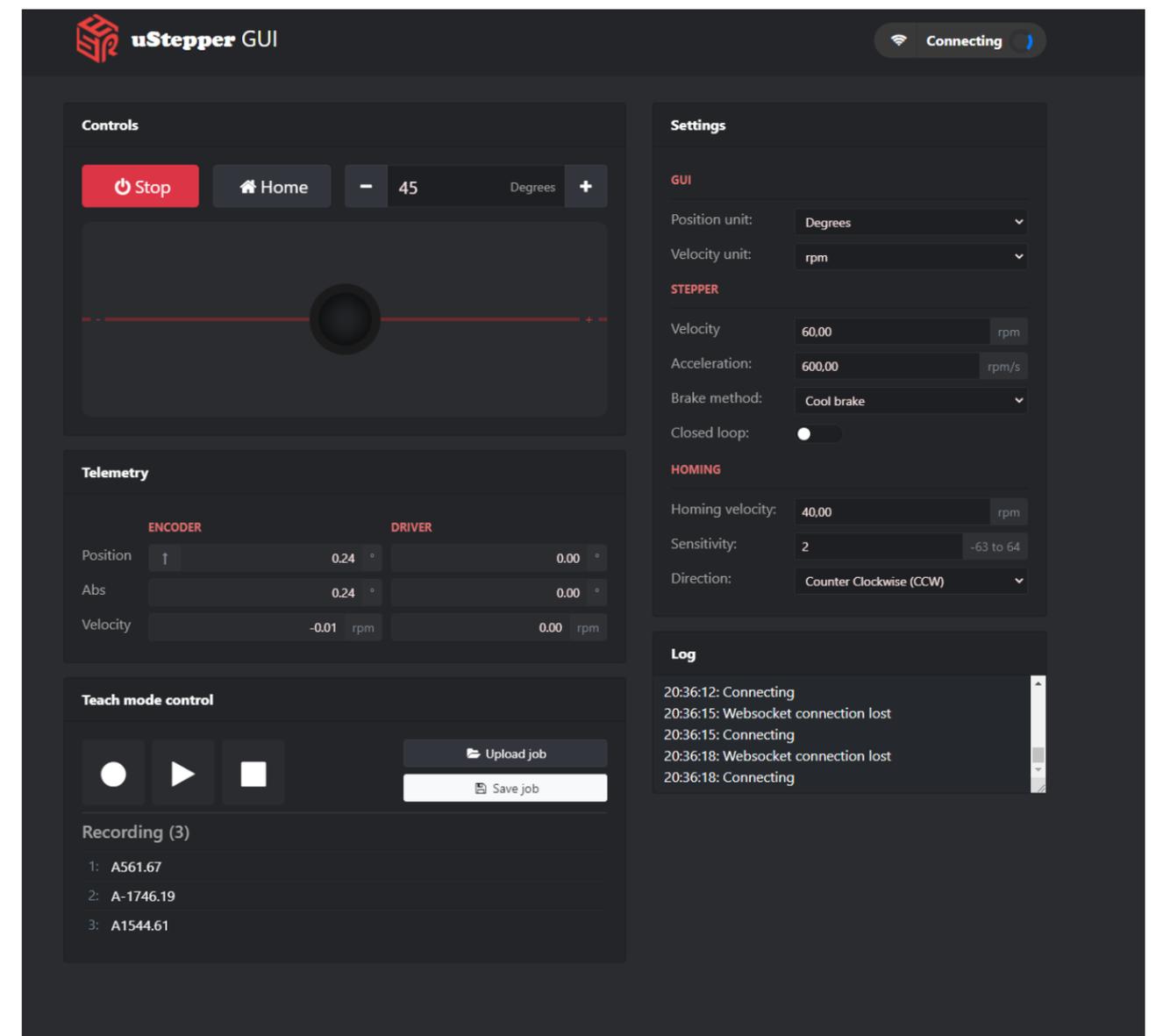
Power up your **uStepper S32** with the WiFi shield attached and connect to the GUI with the SSID as shown below:



The password for the GUI network is **12345679**

After connecting open a browser and type: **192.168.4.1** and the GUI will load.

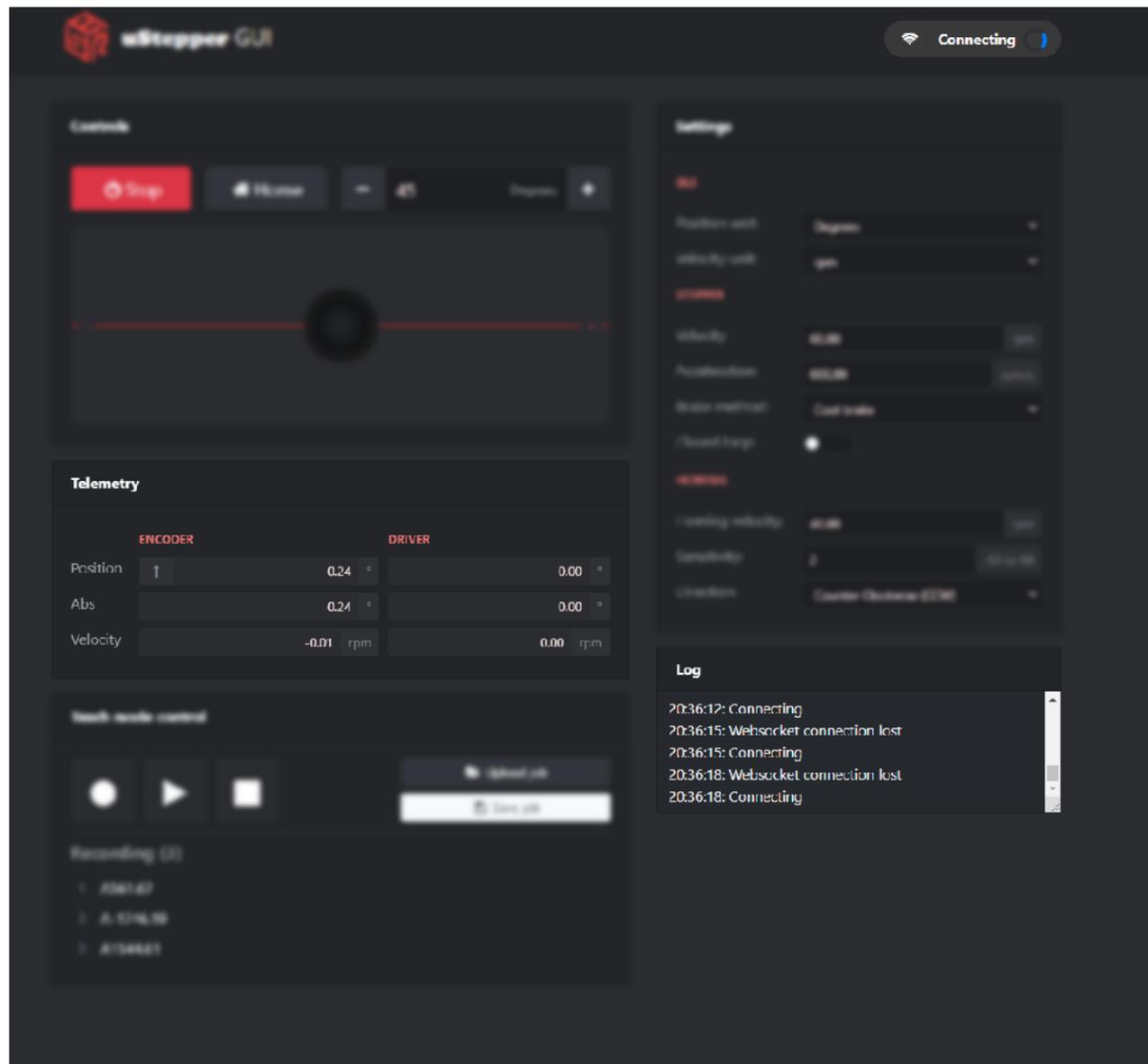
## uStepper S32 WiFi Shield GRAPHICAL USER INTERFACE IN BRIEF



# TELEMETRY

The telemetry sections consists of the connection status in the top right corner, the Log in the lower right corner and the Telemetry section in the middle. The middle section shows the **Position** within one revolution as seen by the encoder and the driver - these would be equal in closed loop.

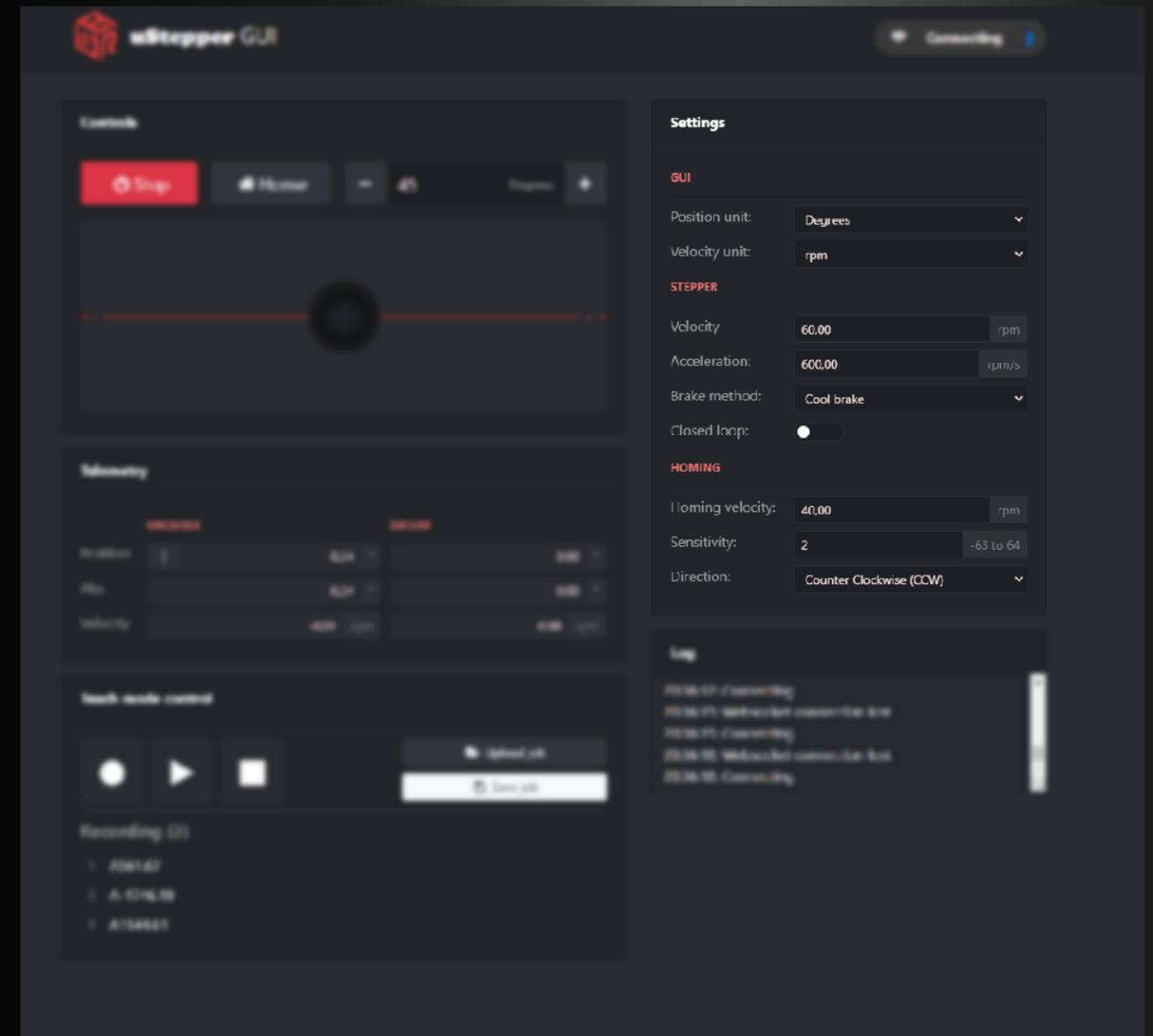
The **Abs** line represents the multi-turn absolute position from powerup or home position.



# SETTINGS

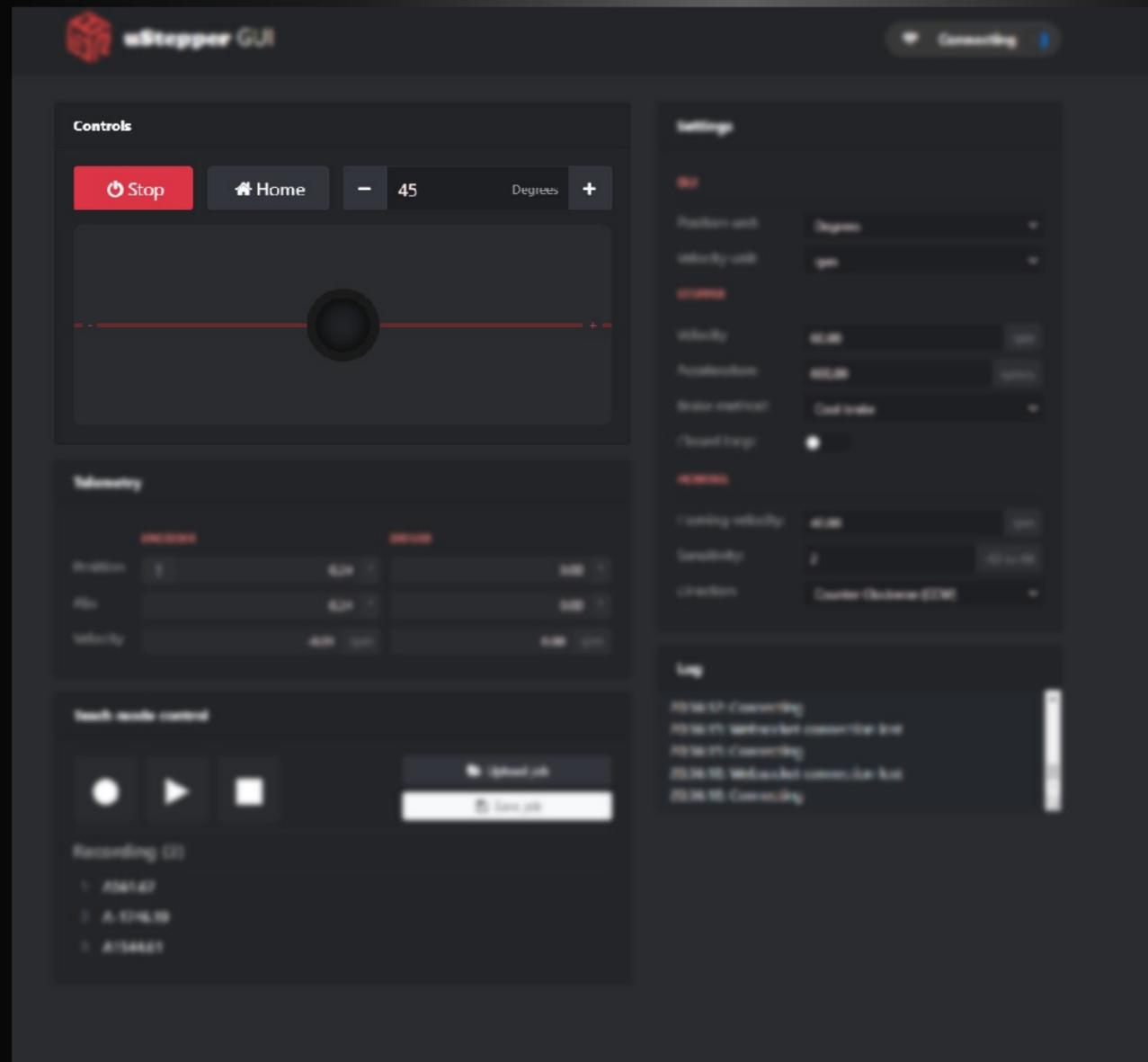
The settings section allows for changing units from **Degrees** to **steps** and from **rpm** to **steps/s**.

**Velocity** and **acceleration** settings can be adjusted as well as the brake type where **Cool brake** brakes without power, **Freewheel** does not brake at all and **Hard brake** brakes with power. **Closed loop** can be enabled/disabled here also and finally **Homing** settings are available in this section as well.



# CONTROL

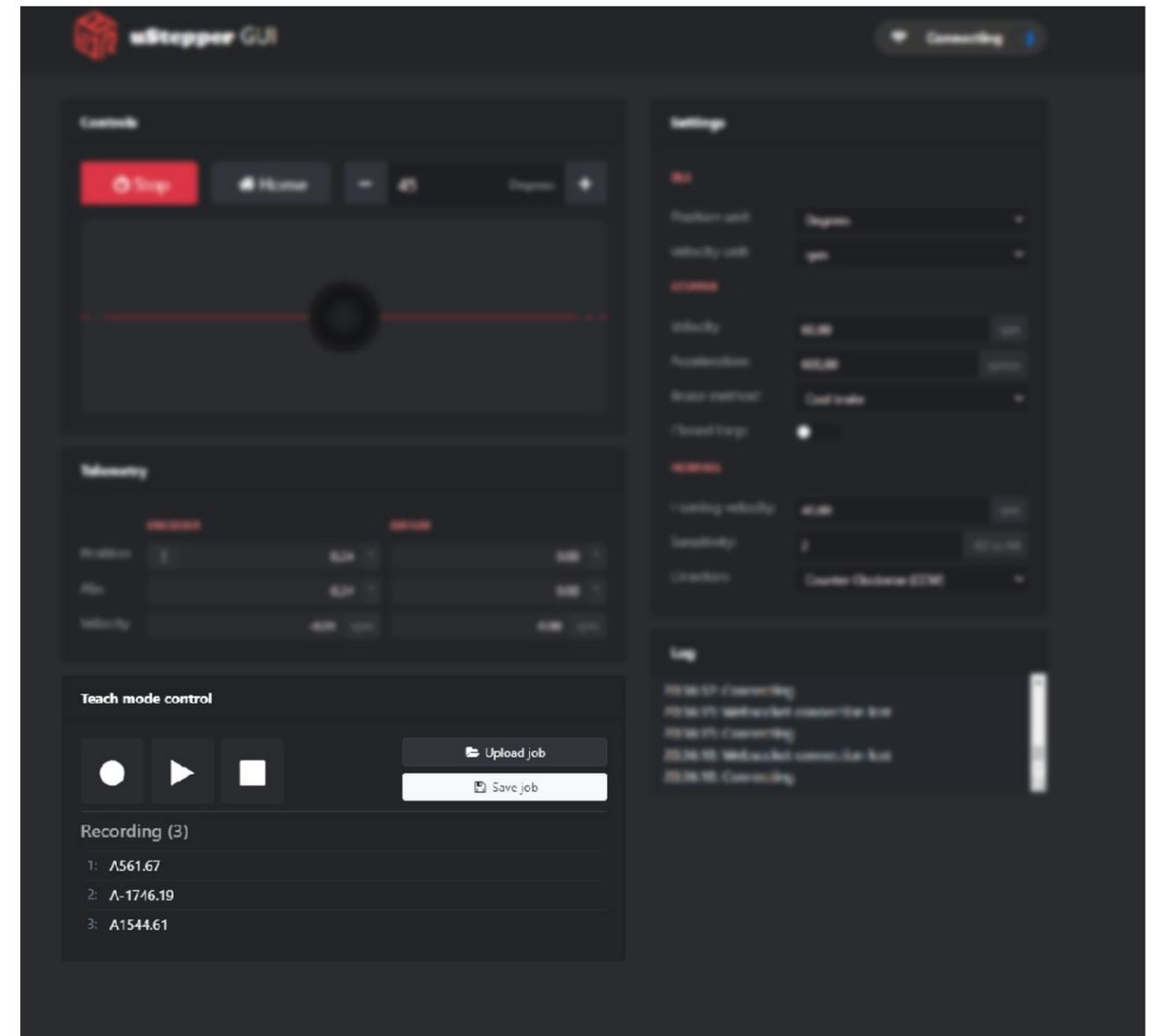
In the top panel it is possible to start a homing sequence according to the settings chosen in the homing settings, moving a user-defined distance (entered in the 45 Degrees section) by pressing + or - and moving in either direction with variable speed by pulling the knob to left or right. The stop button only applies during playback of a sequence.



# TEACH MODE

The lower left section provides the Teach mode control interface which is for recording sequences of motion. Simply press the round record icon and a new button stating "Add position" will appear to the right. Press this button at every position to be recorded and move the shaft manually or by Controls to the desired positions.

When recording is done press the record icon again. Play/pause and stop are now available for playing, pausing and stopping the sequence. Sequences can be stored and loaded.



## GAIN FULL CONTROL OF THE LINEAR ACTUATOR

The **uStepper** Linear Actuators are a perfect match for the combination of **uStepper S32** and **uStepper S32 WiFi Shield** enabling wireless and intuitive control of the mechanical setup requiring linear actuation.

Manually control the linear actuator or record a sequence of operation to perform on your command.



### Mounting uStepper S32

The dual mount bracket gives you the option of either a flexible magnetic mounting or a permanent and more secure screw mount by just flipping the bracket. Not sure how to mount it? Then scan the QR code or press the hyperlink below.



[Mounting uStepper](#)

### Code, documentation and more

Documentation, source code and more can be retrieved from our GitHub repository. Just scan the AQ code or follow the hyperlink given below.



[GitHub repository](#)

### Usage example

See how the WiFi GUI is used in the video [here](#).



[WiFi GUI Demo](#)

### 1 Disclaimers and Limitation of Liability

1.1 uStepper ApS (or any individuals affiliated with either of the two companies) can not be held responsible for any damage inflicted upon mounting or interfacing with the uStepper board. This also includes damage to stepper motor (both electrical and mechanical) or any other 3rd party hardware connected to uStepper. Most stepper motor cases are made of aluminum, and care must be taken when preparing the mountings for uStepper.

1.2 By using the uStepper products (including, but not limited to, hardware and software) you acknowledge that uStepper ApS (or any individuals affiliated with either of the two companies) can not be held responsible for any personal injuries and/or damage to any 3rd party hardware that may occur when using the uStepper products.

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1.4 Nothing in these Terms and Conditions shall be construed so as to hold uStepper ApS liable for death or personal injury as a result of the negligence of uStepper ApS or that of its employees or agents.

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### 3 Severance

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**uStepper ApS**

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