

uStepper S WiFi GUI

Product sheet

Make uStepper S wireless controllable !

The screenshot displays the uStepper S WiFi GUI interface, which is divided into several functional sections:

- Controls:** Features a 'Stop' button, a 'Home' button, a position display showing '45 Degrees', and a large rotary knob for manual position adjustment.
- Telemetry:** A table providing real-time data for both the ENCODER and DRIVER.
- Teach mode control:** Includes buttons for recording (circle), play (triangle), and stop (square), along with 'Upload job' and 'Save job' buttons.
- Settings:** Configurable parameters for GUI (Position unit: Degrees, Velocity unit: rpm), STEPPER (Velocity: 60.00 rpm, Acceleration: 600.00 rpm/s, Brake method: Cool brake, Closed loop: off), and HOMING (Homing velocity: 40.00 rpm, Sensitivity: 2, Direction: Counter Clockwise (CCW)).
- Log:** A scrollable log showing connection status updates such as 'Connecting' and 'Websocket connection lost'.

	ENCODER	DRIVER
Position	↑ 0.24 °	0.00 °
Abs	0.24 °	0.00 °
Velocity	-0.01 rpm	0.00 rpm

	Encoder	Driver
1:	A561.67	
2:	A-1746.19	
3:	A1544.61	



By uStepper ApS

Product: **uStepper S** WiFi GUI

Document revision: 1.0

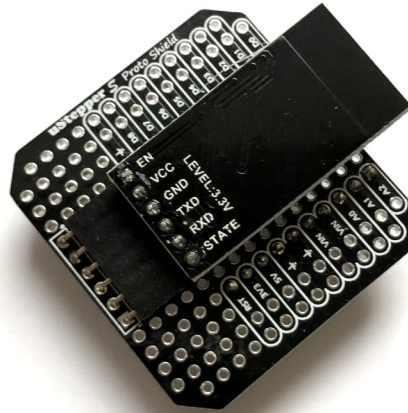
Author: MGN

Approved by: THO

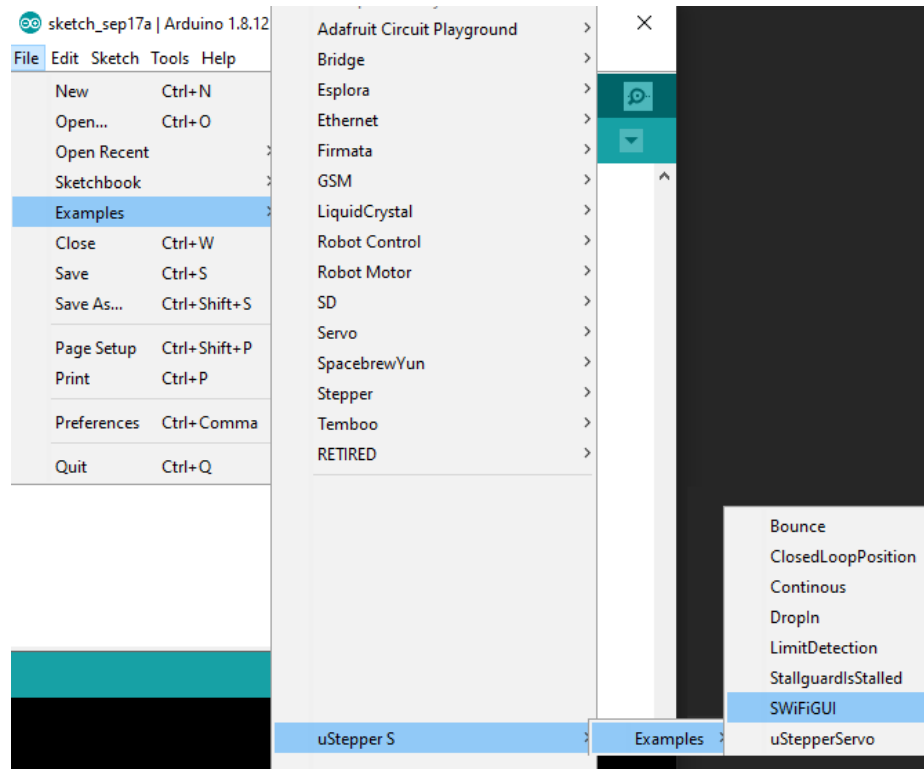
Approval date: September 17th 2020

Setting it up

uStepper S WiFi GUI is hosted on the **uStepper S** WiFi module:



To use the WiFi GUI with your **uStepper S** simply load the SWiFiGUI example sketch on your **uStepper S** and plug in the shield !



uStepper S WiFi GUI connection

After powering up your **uStepper S** with the WiFi shield attached you will be able to 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 WiFi GUI overview

The WiFi GUI consists of multiple sections which will be explained in the following. The overview of the GUI is seen here:

The screenshot displays the uStepper WiFi GUI interface, which is divided into several functional sections:

- Controls:** Features a red "Stop" button, a "Home" button, and a position display showing "45 Degrees". Below this is a large circular knob for manual position adjustment.
- Telemetry:** A table displaying real-time data for the ENCODER and DRIVER. The ENCODER shows Position (0.24 °), Abs (0.24 °), and Velocity (-0.01 rpm). The DRIVER shows Position (0.00 °), Abs (0.00 °), and Velocity (0.00 rpm).
- Teach mode control:** Includes buttons for "Stop", "Play", and "Reset", along with "Upload job" and "Save job" buttons. Below these are three recording entries: 1: A561.67, 2: A-1746.19, and 3: A1544.61.
- Settings:** Configurable parameters for the GUI, STEPPER, and HOMING. GUI settings include Position unit (Degrees) and Velocity unit (rpm). STEPPER settings include Velocity (60.00 rpm), Acceleration (600.00 rpm/s), Brake method (Cool brake), and Closed loop (disabled). HOMING settings include Homing velocity (40.00 rpm), Sensitivity (2), and Direction (Counter Clockwise (CCW)).
- Log:** A scrollable list of system events, such as "20:36:12: Connecting", "20:36:15: Websocket connection lost", and "20:36:18: Connecting".

uStepper WiFi GUI 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** linerepresents the multi-turn absolute position from powerup or home position. And finally the **Velocity** section states the velocity from both encoder and driver.

The screenshot displays the uStepper GUI interface. At the top left is the logo and 'uStepper GUI' text. At the top right, a status bar shows a Wi-Fi icon and the text 'Connecting'. The main interface is divided into several sections:

- Controls:** Features a red 'Stop' button, a 'Home' button, and a 'Power' button with a plus sign. Below these is a large circular encoder visualization.
- Settings:** A list of configuration options including 'Position unit' (Degrees), 'Velocity unit' (rpm), 'Velocity' (4000), 'Position limit' (4000), 'Motor method' (Cool brake), 'Power supply' (a slider), 'Loading velocity' (4000), 'Sensitivity' (1), and 'Direction' (Counter Clockwise (CCW)).
- Telemetry:** A table comparing Encoder and Driver data.

	ENCODER	DRIVER
Position	↑ 0.24 °	0.00 °
Abs	0.24 °	0.00 °
Velocity	-0.01 rpm	0.00 rpm

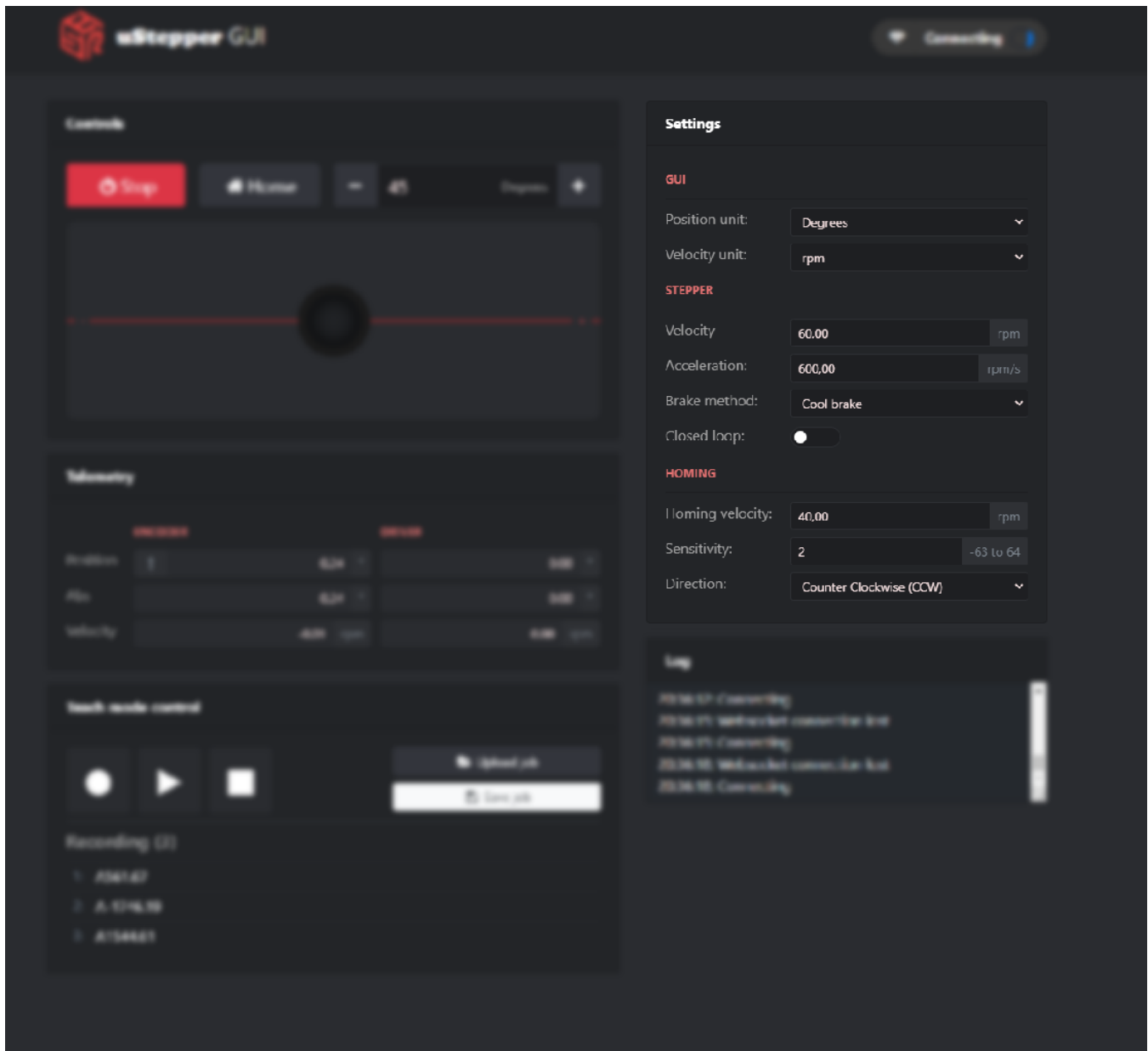
Below the telemetry table is a 'Real-time control' section with buttons for 'Stop', 'Play', 'Pause', and 'Start job'. At the bottom left, there is a 'Recording (0)' section with a list of recording IDs: A00001, A00002, and A00003.

At the bottom right, a 'Log' section shows a list of events:

- 20:36:12: Connecting
- 20:36:15: Websocket connection lost
- 20:36:15: Connecting
- 20:36:18: Websocket connection lost
- 20:36:18: Connecting

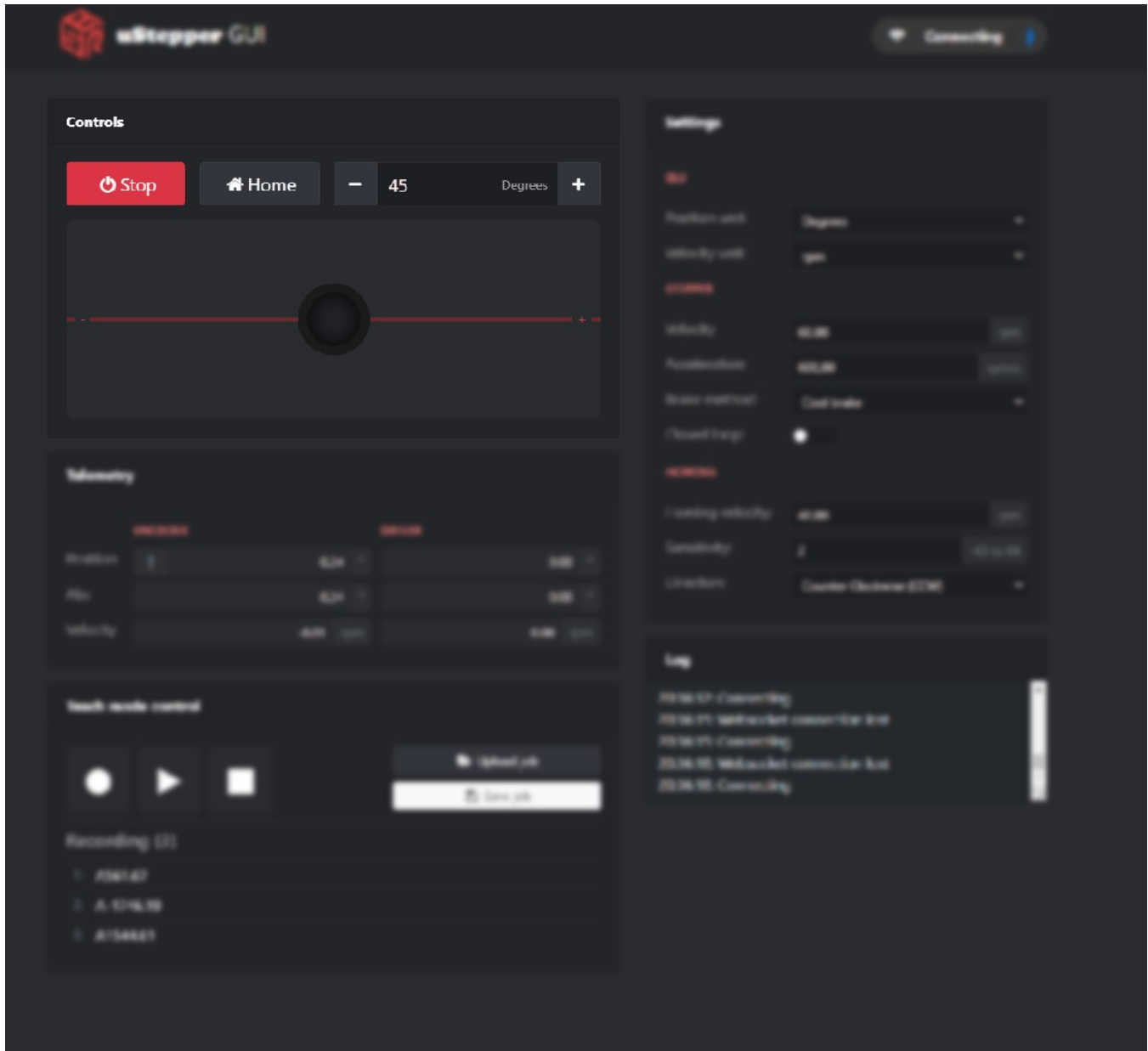
uStepper WiFi GUI Settings

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.



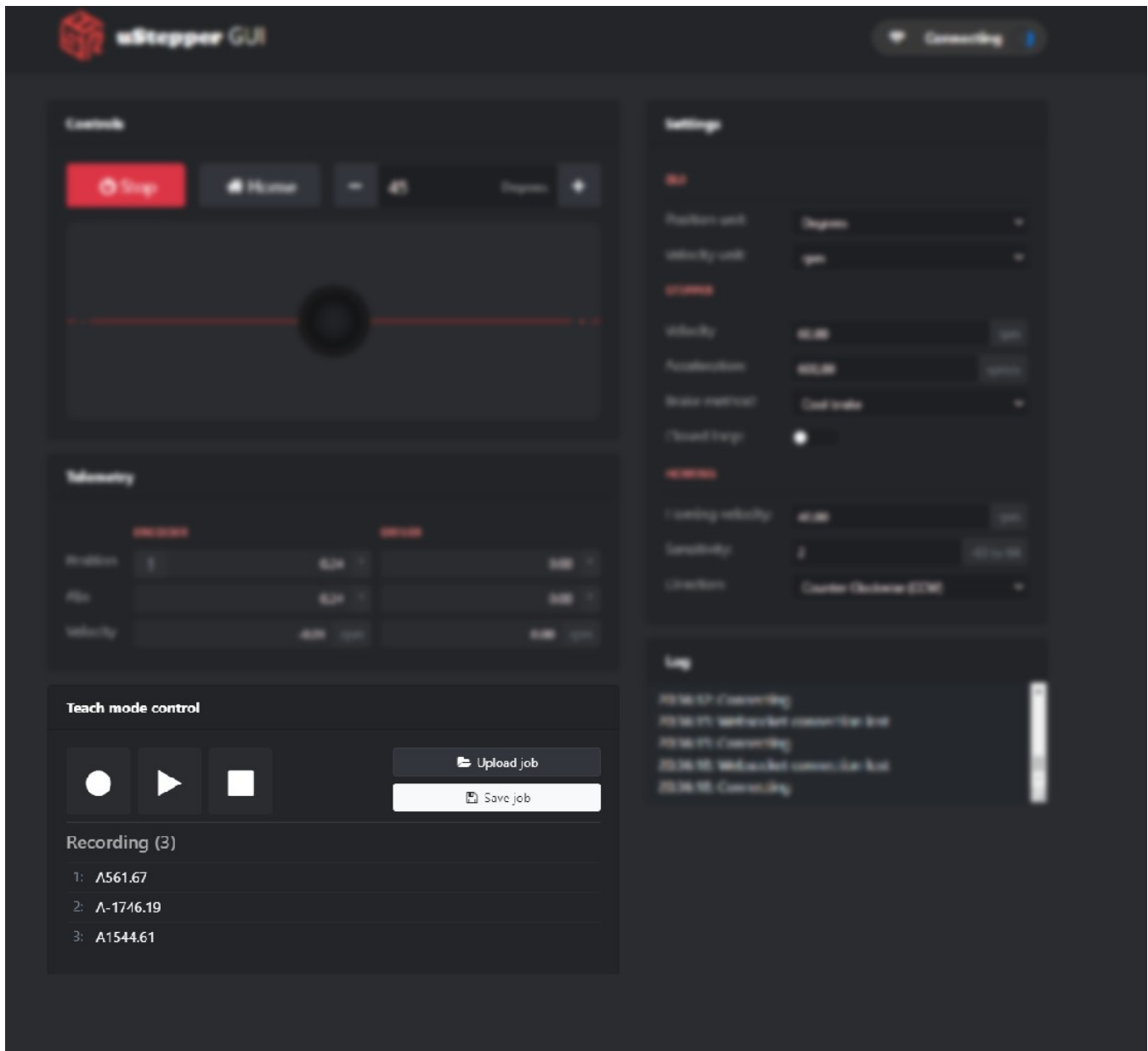
uStepper S WiFi GUI Control

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.



uStepper WiFi GUI 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.

uStepper S WiFi GUI Info

Besides the documentation here you will also find instructive videos on our YouTube channel

Video Tutorials

On our YouTube channel you will find video tutorials on how to mount uStepper S, setting it up in the Arduino IDE and programming it. You will also find a video showing the WiFi GUI running—also on a smartphone.

[Mounting uStepper S](#)



[Programming uStepper S](#)



[WiFi GUI Demo](#)



For further info visit www.uStepper.com and our YouTube channel !

Disclaimer

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