CSAW Quick Start Guide

Prototype B (Wireless) / DEFAULT

- CSAW is configured to send controller messages via its ESP8266 WiFi module over a LAN using the TP_Link router. To use another network/IP, refer to the documentation, as the PrototypeB_ESP.ino file will need to be updated with the new WiFi config & IP and then flashed to the chip.

1. Turn on the accompanying TP_Link Router and connect to it using the PC that will be running the Pd software and DAW. **SSID:** CSAW_router **Password:** c5@w_123!

2. The router should automatically assign IP address 192.168.1.100 to the PC. If not, then login to the device with these credentials and assign it, as ESP is configured to forward messages to this IP.

Address: http://tplinkwifi.net/ **Password:** c5@w_123!

3. Power on CSAW's Arduino component using the 12V power supply. It can also be powered using the battery pack or via USB (though the latter may be redundant for wireless comm).

4. Download Purr Data and install: https://github.com/agraef/purr-data/releases . Run 'PrototypeB.pd' and wait for the connection.

5. Patch faders/knobs may start moving sporadically on startup. These can be calibrated quickly by simply moving each knob/fader on the desk. It's advised to do this before operating with the DAW.

IMPORTANT: On first startup, messages will stop coming in to Pure Data from ESP after about a minute. This occurs due to the high number of messages being sent from ESP as pot voltages change rapidly – assumed to occur due to built-up potential energy from the last time the controller was plugged out. Wait for the PrototypeB patch to start reacting to actions again and continuously move/calibrate pots, even when it comes back up. Be patient as this can sometimes take about 2-3 minutes. 99.9% of the time, after this fixes itself, everything will run smoothly without issue.

6. Once each sensor is (relatively) motionless, open the DAW and import the DAW config file. This will import the OSC control surface (double-check - listening on local port 9999), all tracks, plugins and OSC message mappings. Alternatively, open the DAW template directly.

7. In the PrototypeB.pd patch, click the button to connect to the DAW. Controller operations should now interact with DAW functions.

Prototype A (Wired)

- The wireless prototype (B) is flashed to CSAW's Arduino by default so the 'PrototypeA.ino' sketch needs to be uploaded.

1. First, download and install the Arduino IDE: https://www.arduino.cc/en/main/software .

2. Open the PrototypeA.ino file in the IDE and connect the Arduino to the PC via USB.

3. Select the board type via Tools->Board->Arduino/Genuino Mega or Mega 2560.

4. Select the port via Port->COM port

NOTE: Arduino Mega is known to occasionally have issues with Windows, where the port section is greyed out so if this occurs download and reinstall the Mega driver (there is plenty of documentation online about this).

5. Upload the Arduino sketch.

6. Download Purr Data and the Arduino_Pd abstraction library from the GitHub repositories:

- https://github.com/agraef/purr-data/releases
- https://github.com/alexdrymonitis/Arduino_Pd .

Install Purr Data

7. Copy the 'serial_print.pd' from Arduino_Pd into the same directory as PrototypeA.pd.

8. Open PrototypeA.pd and select the COM port for Arduino

9. Again, patch faders/knobs will start moving on startup so calibrate manually (move each one).

10. Open the DAW and import the config file or open the template.

11. In the PrototypeA patch, click the button to connect to the DAW. Controller operations should now interact with DAW functions.