

Double Q
Quick start guide.



Double q is a stand alone gestural device built on a small neural processor trained to track 30 points of the hand.

Equipped with a high resolution camera , users can manipulate live hand data in a myriad of ways.

This quick start guide will aim to provide the basic functionalities of this device.

- 16 cv outputs
- Record and loop buffers
- Phase, speed control and randomising sub loop arrays.
- Nrpn & midi cc usb-c output / usb host and device.
- Double q web app / preset saving, loading.
- The Double luck engine.
- Hand map key & display output.



Left output

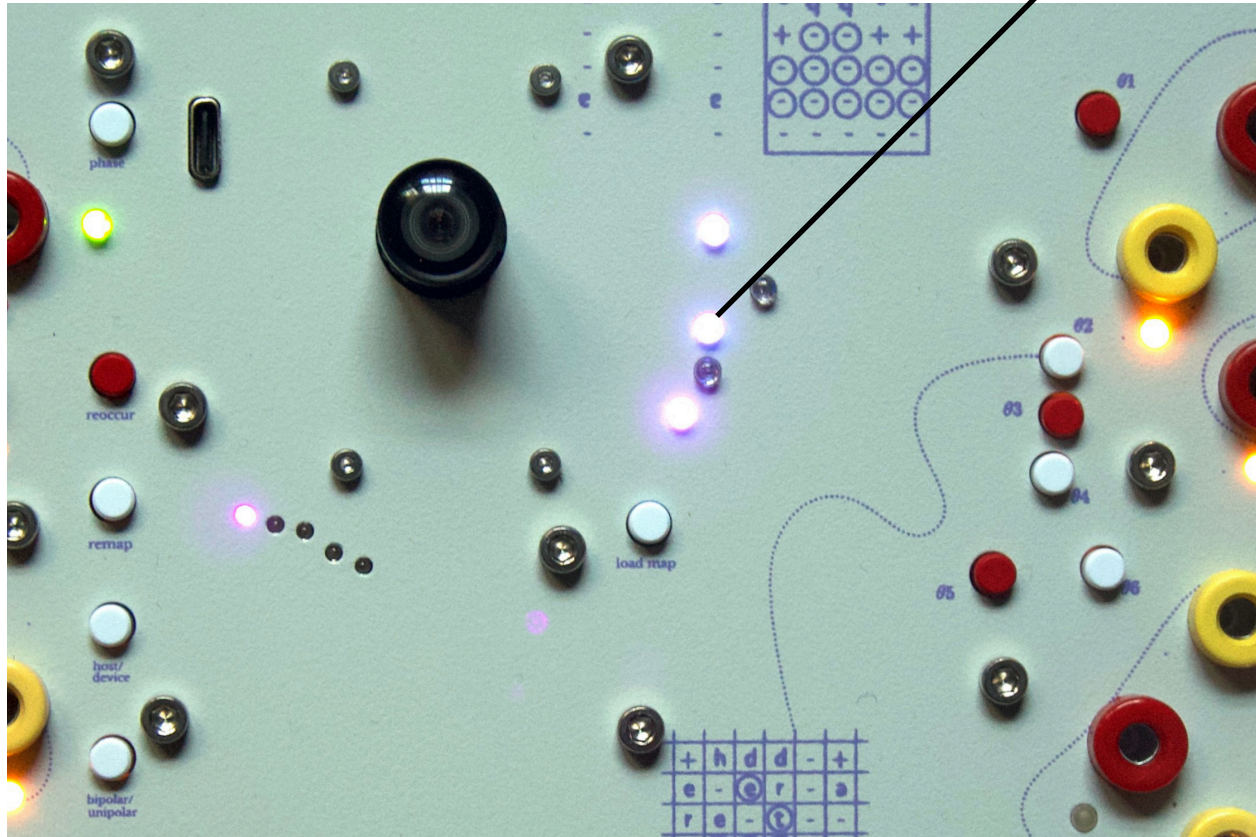
Ground

12v 2a 2.1mm
center positive psu.

Right output

Startup.

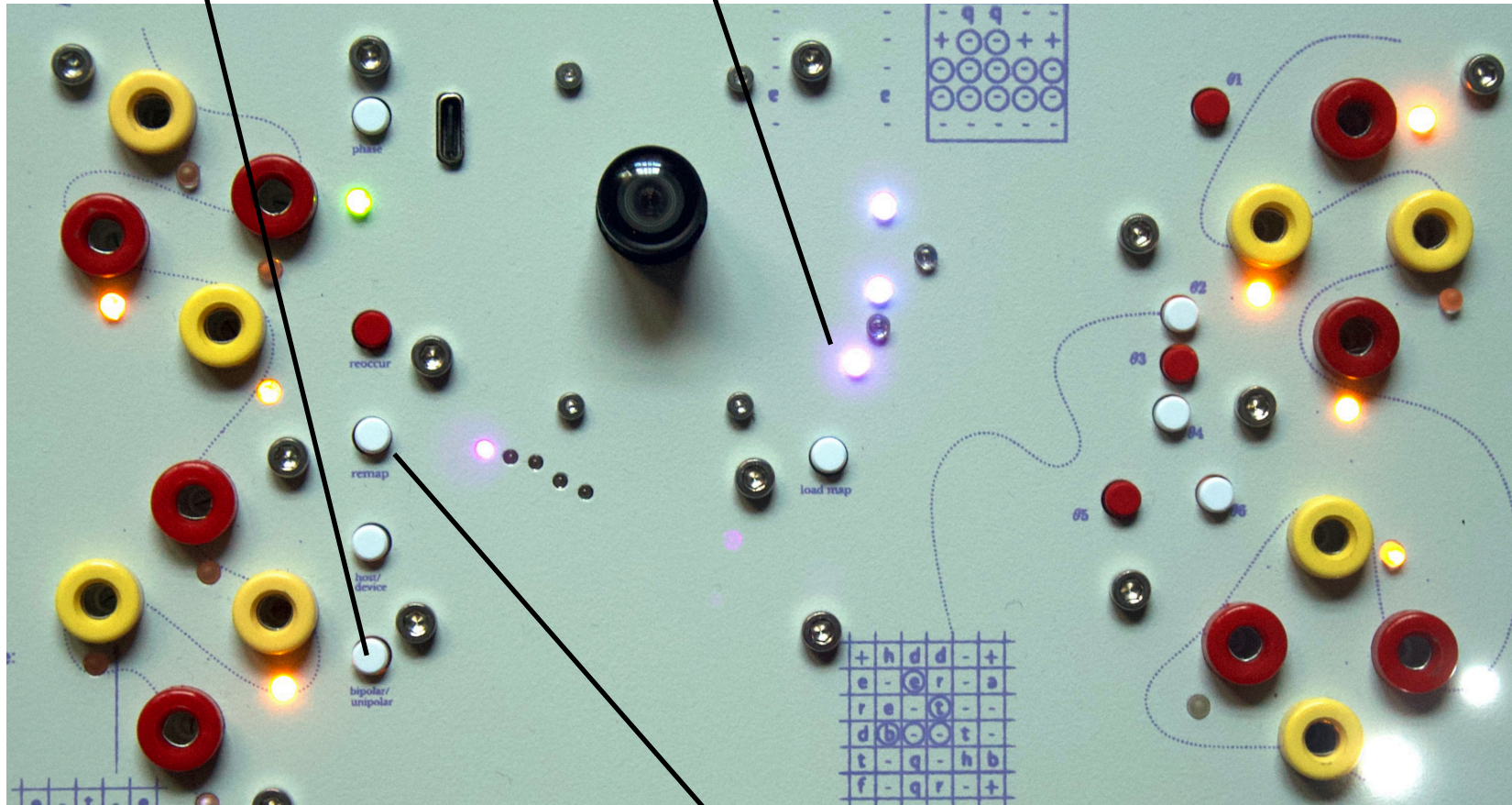
On start up double q will take roughly 1 second to initiate communication with the neural processor.
When this led is lit, we are prepared for communication.



16 cv outputs.

As system default double q maps 16 of the 30 hand points to cv outputs in bipolar mode.

This button will switch cv output from bipolar to unipolar and will be indicated by this led. Cv outputs in bipolar mode output -8v / + 8v
In unipolar mode : 0v - +8v.



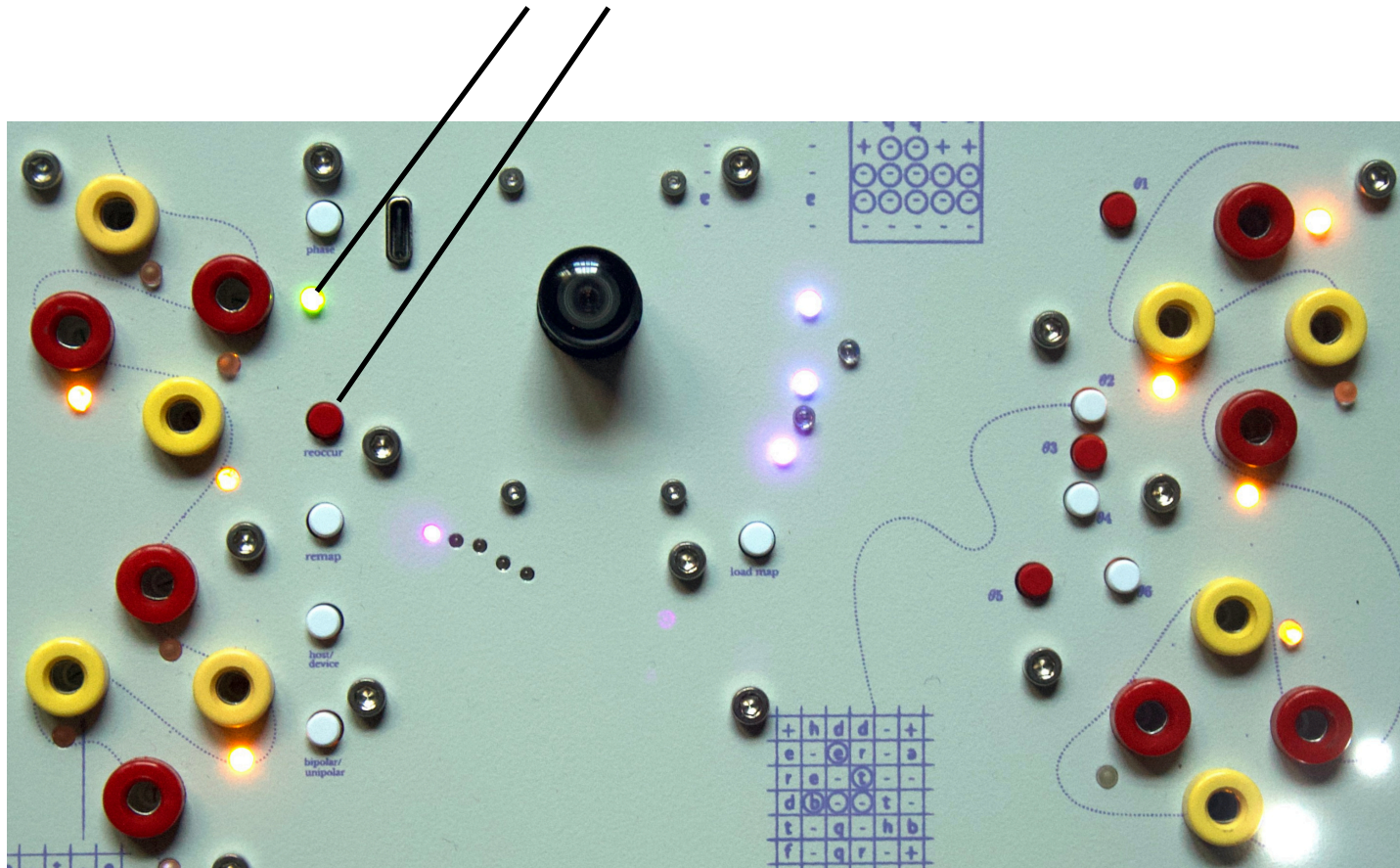
To randomise the remap of the 30 tracked hand mappings to cv outputs, press the remap button

Record and loop buffers

Pressing and holding the red record button will initiate the recording of all 30 hand points universally across, cv outputs, nrpn, midi cc mappings and the internal double luck engine.

The green led will blink slowly to indicate recording in progress. Once removing pressure from the recording button the loop will begin. The loop buffer is large for all data, plus 10 minutes.

Simply double tap the recording button to erase the loop buffer.



Phase, speed control and randomising sub loop arrays.

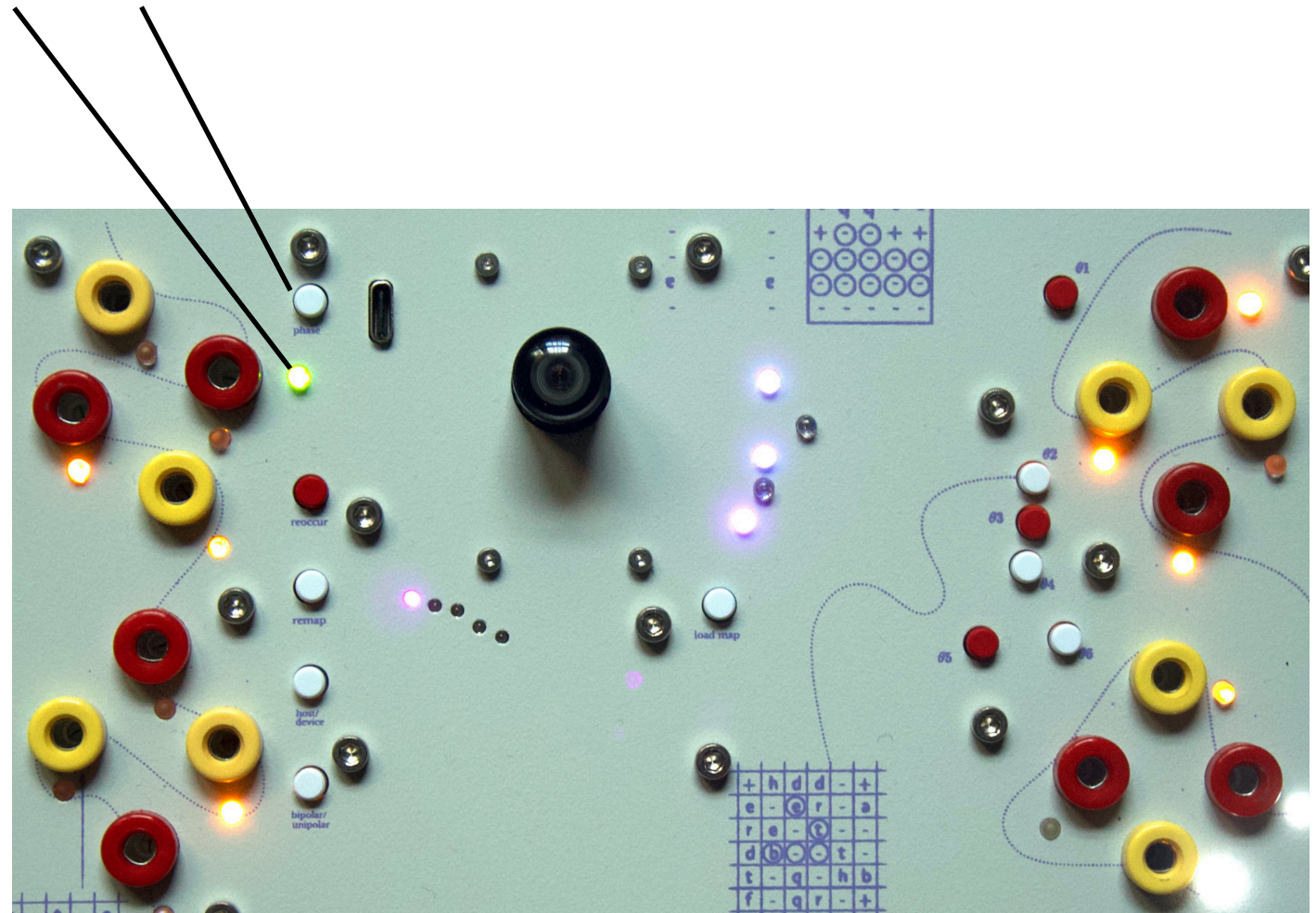
Once entering a loop, the user has options on how they may want to augment this data.

The phase button has 3 modes of operation:

- **press once to randomise the phase / start point timing of each looped output.**
- **Double tap the phase button to slow the buffer output. One double tap: 2x slower. two double tap: 4x slower. three double tap : 8x slower.**

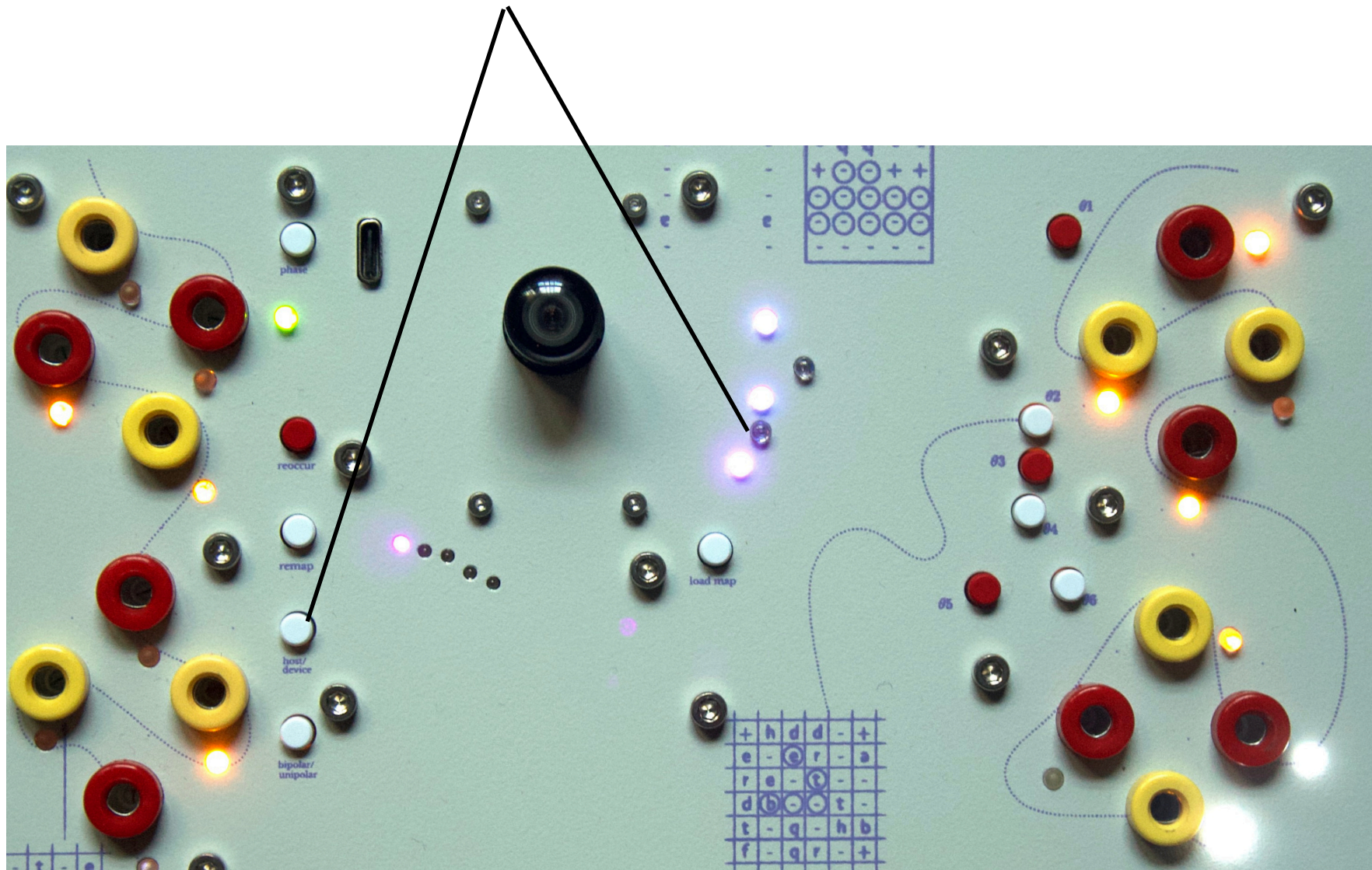
The green led will indicate what buffer reduction you will be in by flashing either once, twice or three times. Led on will indicate normal speed.

- **Random global sub loop mode:** pressing the phase button for longer than 400ms will trigger each recorded hand point to choose a randomised sub loop window inside its recorded array, each independently at its own speed and phase.

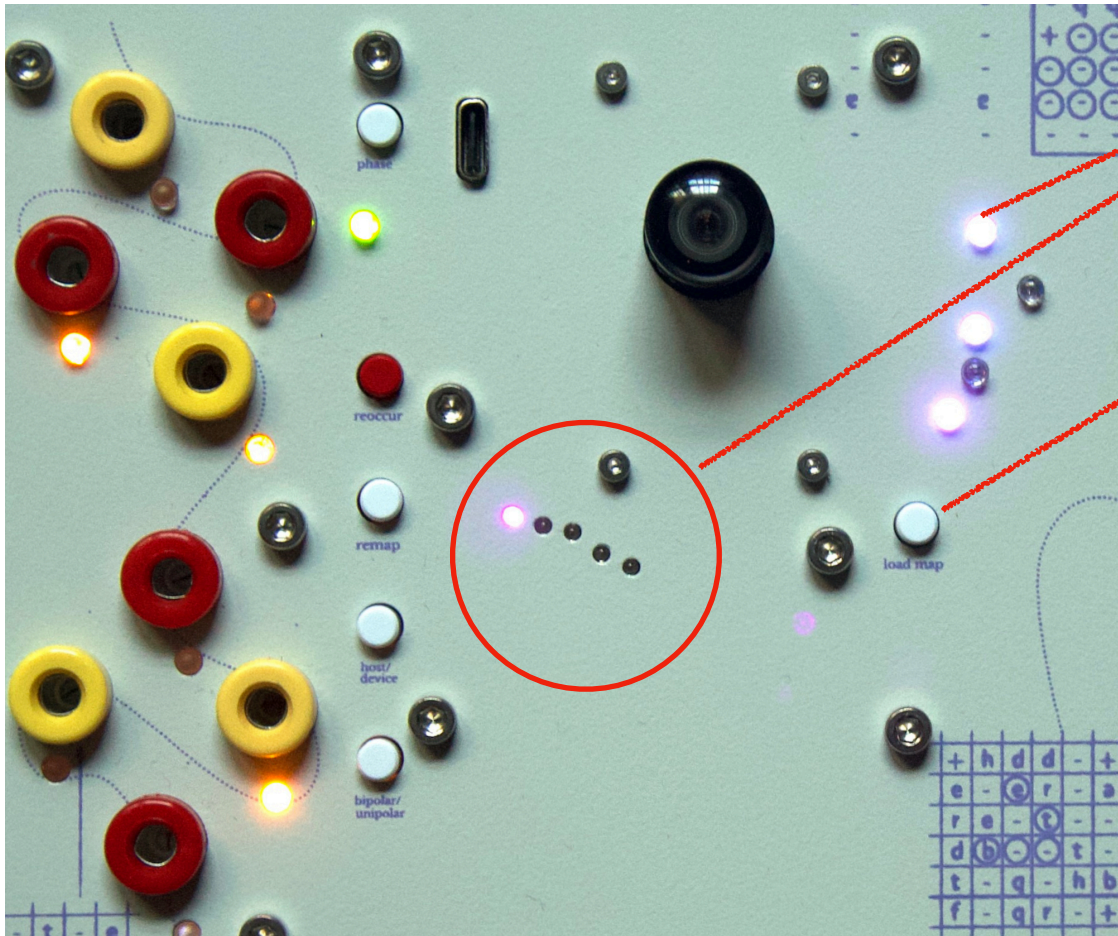


Nrpn & midi cc usb-c output / usb host and device.

Double q has the ability to output user defined hand data to nrpn or midi cc in host or device mode.
Aimed to integrate into any existing hardware or daw. Perfect for modelq2 or experimenting with daw's or plugins.
The host/device button will engage the usb-c output for communication and will be indicated with this led.
Led on: host mode (external hardware)
Led off: device mode (daw / laptop)



Double q web app / preset saving, loading.



On board the device the user can fill 5 slots with either midi cc or nrpn mappings and double luck engine control data. Pressing the load map button will scroll through user saved presets and this led will indicate wether the saved preset is
midi cc: led on
nrpn: led off.
No slot can output midi cc and nrpn at the same time.

The web app portal exists to assign hand data to nrpn numbers, midi cc and double luck engine parameters. Users are given the ability to attenuate, assign enable/disable, slot allocate and completely design the way hand data is used. Once connected to the QQ device with the usb attached, Simply choose how many hand data points you would like to use, assign an nrpn or midi cc number, optionally use limits to your control if needed and press save and apply to one of 5 slots.

<https://qqapp.pages.dev/>

double q

CONNECTDISCONNECTHEX • Disconnected

MIDI CCNRPNDOUBLE LUCKDOUBLELUCK SINGLE

CHANNEL 0OUT 0.. 127DEAD 3

SLOT 0NAME nameAPPLYSAVE & APPLY

#	EN	CC	IN MIN	IN MAX	OUT MIN	OUT MAX	DEAD
0	☒	-1	0	65535	0	127	3
1	☒	-1	0	65535	0	127	3
2	☒	-1	0	65535	0	127	3
3	☒	-1	0	65535	0	127	3
4	☒	-1	0	65535	0	127	3
5	☒	-1	0	65535	0	127	3
6	☒	-1	0	65535	0	127	3
7	☒	-1	0	65535	0	127	3
8	☒	-1	0	65535	0	127	3
9	☒	-1	0	65535	0	127	3
10	☒	-1	0	65535	0	127	3
11	☒	-1	0	65535	0	127	3
12	☒	-1	0	65535	0	127	3
13	☒	-1	0	65535	0	127	3
14	☒	-1	0	65535	0	127	3
15	☒	-1	0	65535	0	127	3
16	☒	-1	0	65535	0	127	3
17	☒	-1	0	65535	0	127	3

CONSOLE

CLEAR

> command (e.g. help, spi slots, spi show s=0)

Writes: HEX for blocks, ASCII for live "spi send".

SEND

Double luck.

QQ has an internal synthesis engine. It has 6 user buttons and gesture.
No professional guidance will be given navigating this engine. I wish you double luck.



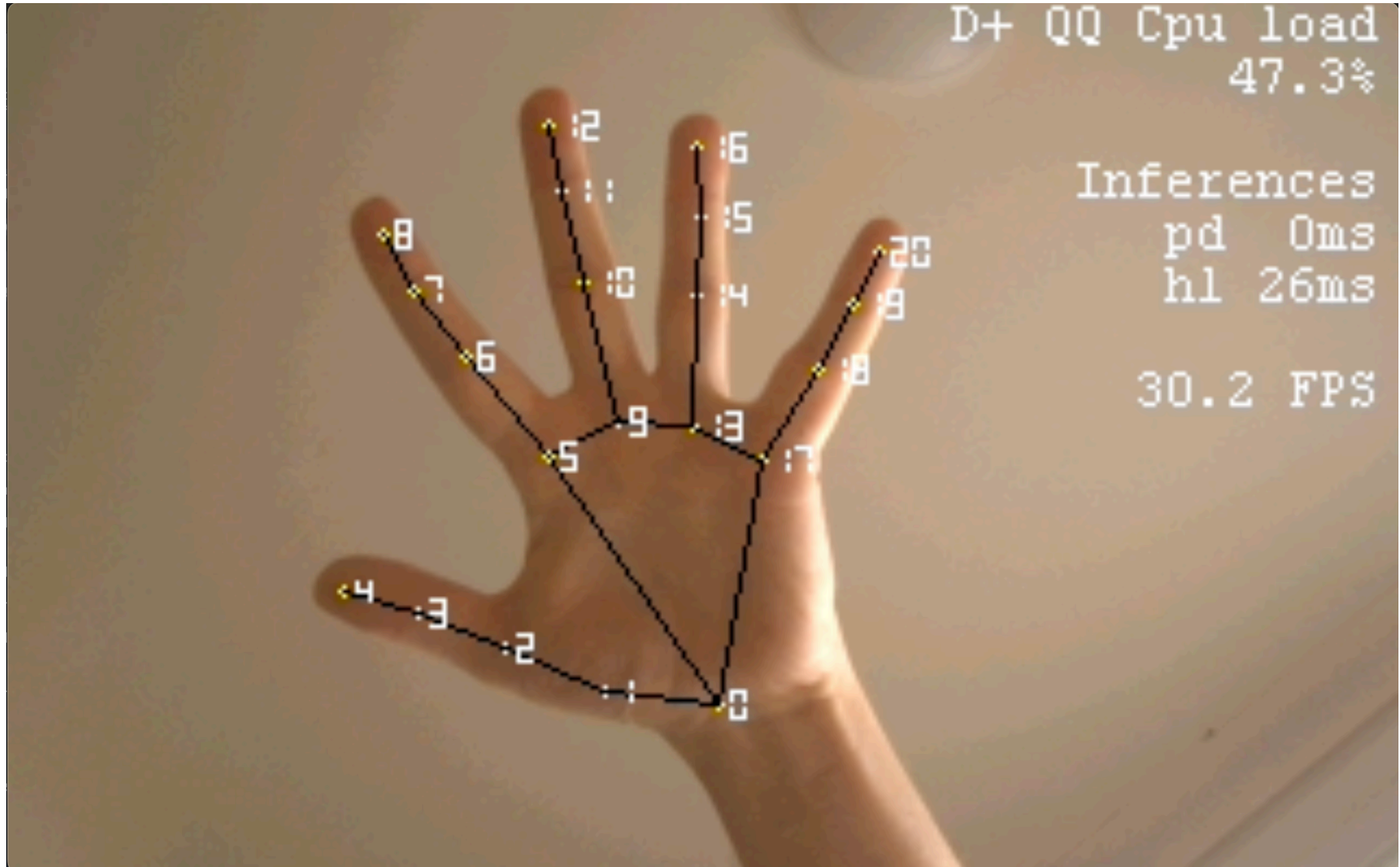
Hand map key & display output.

The hand map key below is a guide to how the neural processor is collecting information for the user to manipulate.

The user also has a tucked away usb-c output inside the unit should any user desire to understand cpu load, inference or mapping in real time.

*the neural processor collects much more data than we actively use in our engine.

The following points { 0, 4, 8, 12, 16, 20, 2, 5, 9, 13, 17, 6, 10, 14, 18 } x, y values are the only points streamed collected and available to use in our application. Full 30 channel map below.



Neural processor hand map key	App mapping X values.	App mapping Y values.
0	0	1
4	2	3
8	4	5
12	6	7
16	8	9
20	10	11
2	12	13
5	14	15
9	16	17
13	18	19
17	20	21
6	22	23
10	24	25
14	26	27
18	28	29

