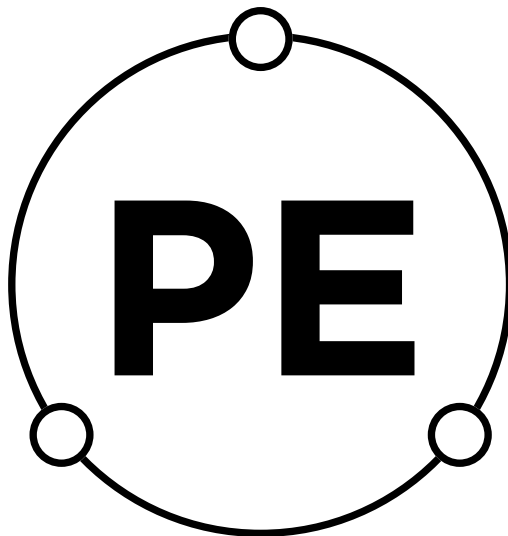


POUNAMU ELECTRONICS  
RE\_SWC  
USER GUIDE

*Rev 1*



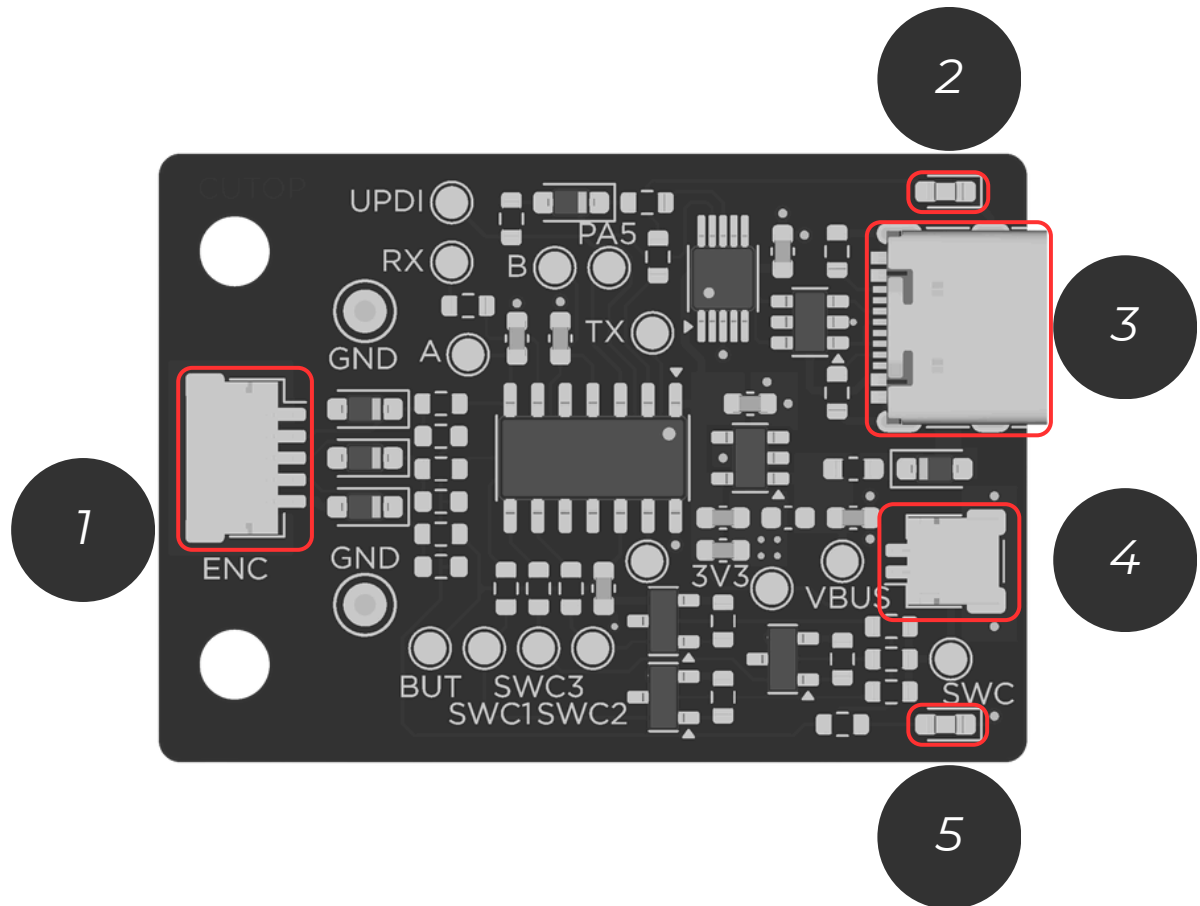
**POUNAMU  
ELECTRONICS**

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# OVERVIEW

## CONTROLLER BOARD



**1. VOLUME KNOB  
CONNECTOR**

**2. WHITE STATUS  
LIGHT**

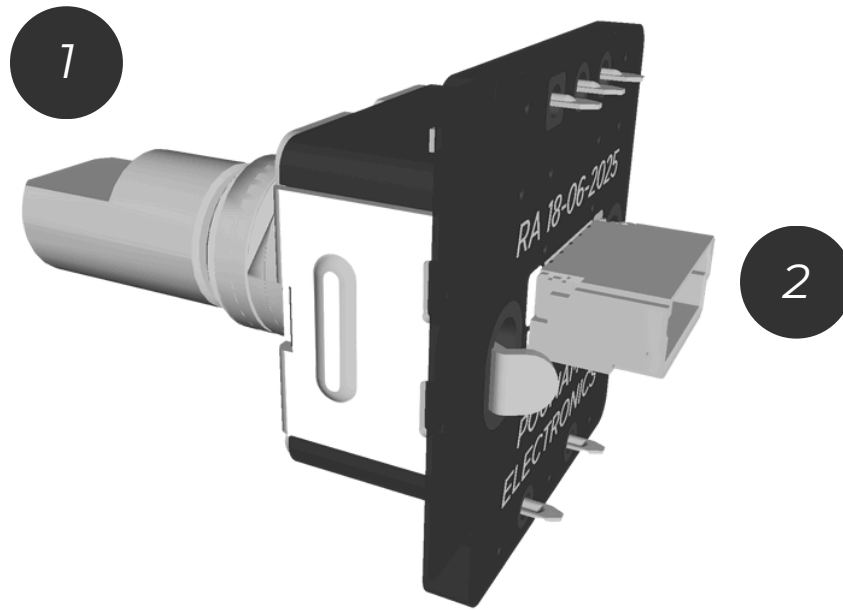
**3. USB DATA &  
POWER IN**

**4. STEERING  
WHEEL CONTROL  
OUTPUT**

**5. RED POWER LIGHT**

# OVERVIEW

## VOLUME KNOB BOARD



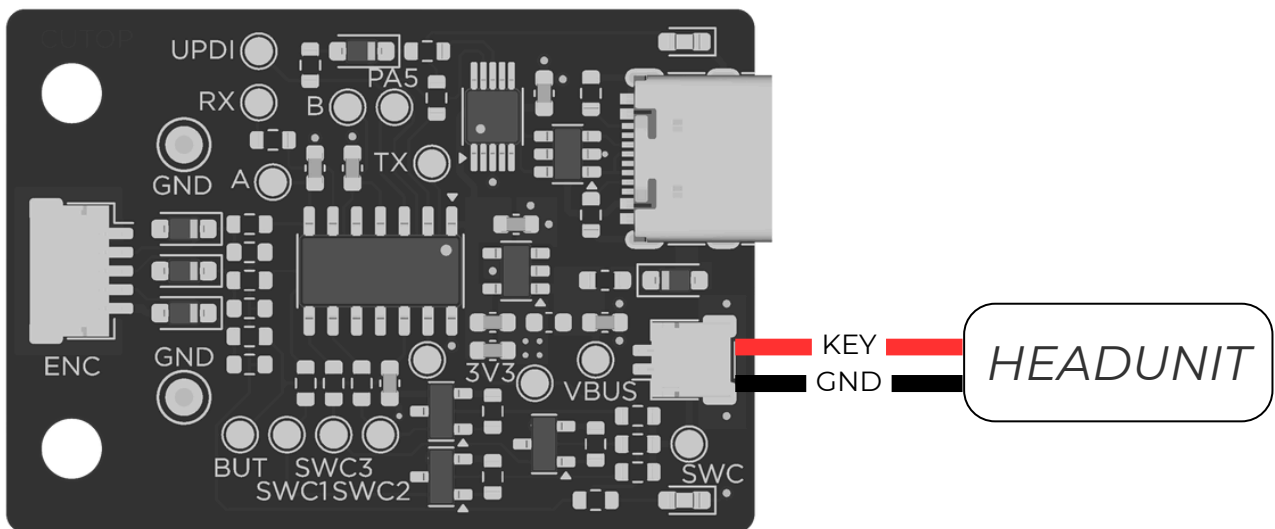
**1. VOLUME KNOB**

**2. VOLUME KNOB  
CONNECTOR**

# ASSEMBLY

## STEERING WHEEL CONTROL OUTPUT

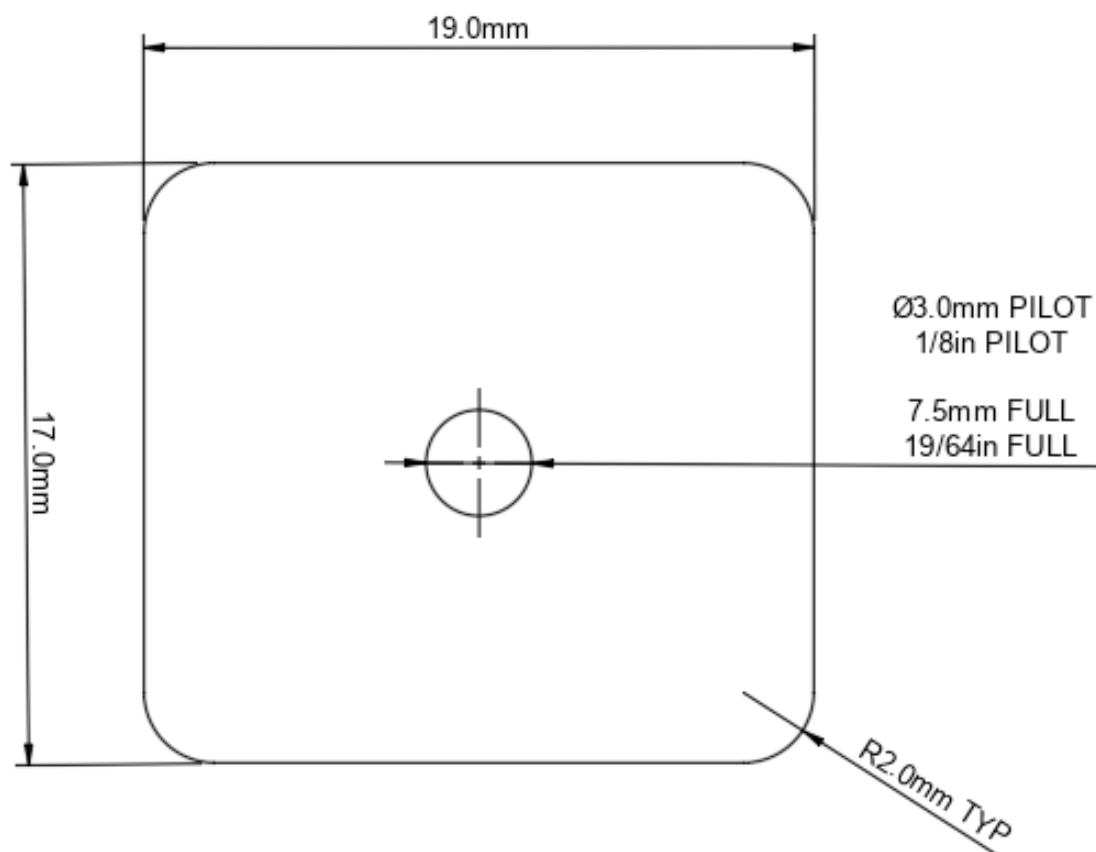
- Solder RE\_SWC steering wheel control output to headunit steering wheel control input
  - RED wire to headunit steering wheel control input (KEY)
  - BLACK wire to headunit ground
- Plug the connector into RE\_SWC



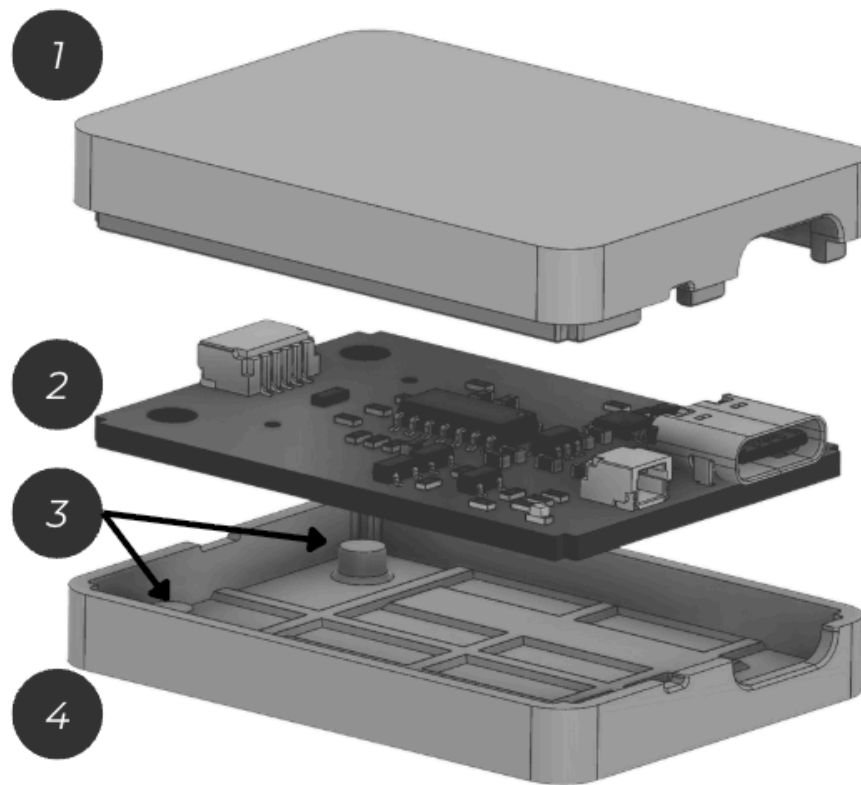
## ASSEMBLY

### VOLUME KNOB CONNECTION

- *Locate an area to fit your volume knob. Use the drilling template as a guide for clearance*
- *Use the drilling template included in the box or shown below to create a 3mm (1/8in) pilot hole for the volume knob*
- *Open the pilot hole with a 7.5mm (19/64in) drill bit*
- *Plug the 5-pin connector into the volume knob board*
- *Mount the volume knob to your panel. Secure it with the washer and nut included in the kit*
- *Plug the 5-pin volume knob connector into RE\_SWC*



# ASSEMBLY CASE



**1. CASE LID**

**2. SWC BOARD**

**3. GUIDE POSTS**

**4. CASE BASE**

- *Ensure the volume knob and SWC output connectors are connected to the controller before proceeding*
- *Lower the SWC board into the case base using the guide posts for alignment and press into place. The volume knob and SWC output connectors will sit flush to the inside edge of the case*
- *Press the case lid into the case base. It should be a tight, snap fit. The connectors will be captive inside the case, unable to be pulled out*

## ASSEMBLY POWER

- *Plug the included USB-C cable into the RE\_SWC*
- *When the RE\_SWC is powered, the RED power light will illuminate*
- *When working correctly, rotating the volume knob or pressing the volume knob button will result in the WHITE status light illuminating briefly*
- *If the WHITE status light does not illuminate, ensure the volume knob connector is fully seated into both the controller and volume knob boards*



# HEADUNIT LEARNING

## Type 1

*Headunit Learning Type 1 is used with headunits that require momentary inputs when learning SWC functions*

- *Open the Steering Wheel Control learning app/setting on your headunit*
- *Select the function you want to program on the headunit e.g. Volume+*
- *Perform the action with your volume knob e.g. for Volume+, rotate the volume knob clockwise one step*
- *The headunit will confirm that the function has been programmed*
- *Repeat for all required functions*
  - *Volume+/-*
  - *Button Short Press*
  - *Button Long Press*

# HEADUNIT LEARNING

## Type 2

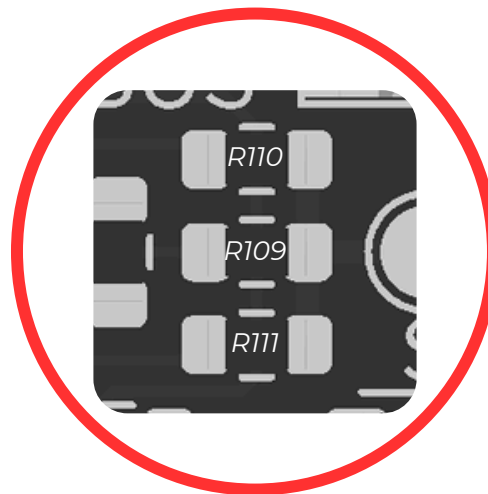
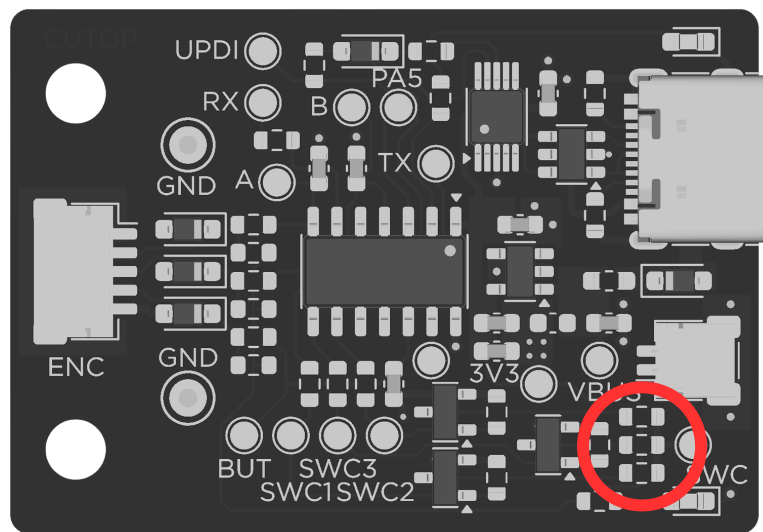
*Headunit Learning Type 2 is used with headunits that require inputs to be held during SWC learning*

- *Enable learning mode on RE\_SWC controller by double-pressing the volume knob*
  - *The RE\_SWC will confirm learning mode is enabled by rapidly flashing the WHITE status light*
- *Select the function you want to program on the headunit e.g. Volume+*
- *Perform the action with your volume knob e.g. for Volume+, rotate the volume knob clockwise one step*
- *The WHITE status light will illuminate for 4 seconds while the output is held.*

***IMPORTANT:*** *Do not touch the SWC or headunit during this time to allow the headunit to configure itself*

- *Once the function is programmed, the WHITE status light will be turned off*
- *Repeat for all required functions*
  - *Volume+/-*
  - *Button Short Press*
  - *Button Long Press*

# SWC OUTPUT RESISTORS



RESISTOR ID	VALUE	OUTPUT
R110	1k $\Omega$ $\pm$ 1%	SWC OUT 2
R109	330 $\Omega$ $\pm$ 1%	SWC OUT 1
R111	5.1k $\Omega$ $\pm$ 1%	SWC OUT 3

# RE\_SWC SPECS

## **Input**

5V USB-C

*300mA AUTO RESETTING FUSE*

## **Output**

SWC OUT 1:  $330\Omega \pm 1\%$

SWC OUT 2:  $1k\Omega \pm 1\%$

SWC OUT 3:  $5.1k\Omega \pm 1\%$

## **CONNECTORS**

VOLUME KNOB: JST SHR-05V-S-B

SWC OUT: JST SHR-02V-S-B

## **MCU:**

MICROCHIP ATTINY414

AVR 1 Series

# Document Revision History

- *Rev 1 - Initial release*