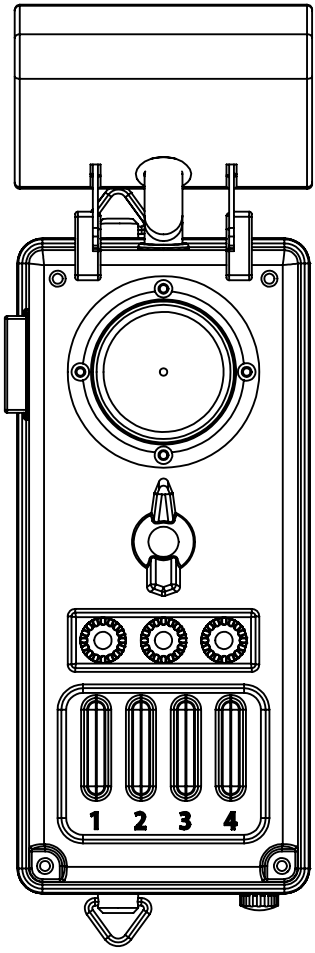
AD-15 DETECTOR ASSEMBLY INSTRUCTIONS

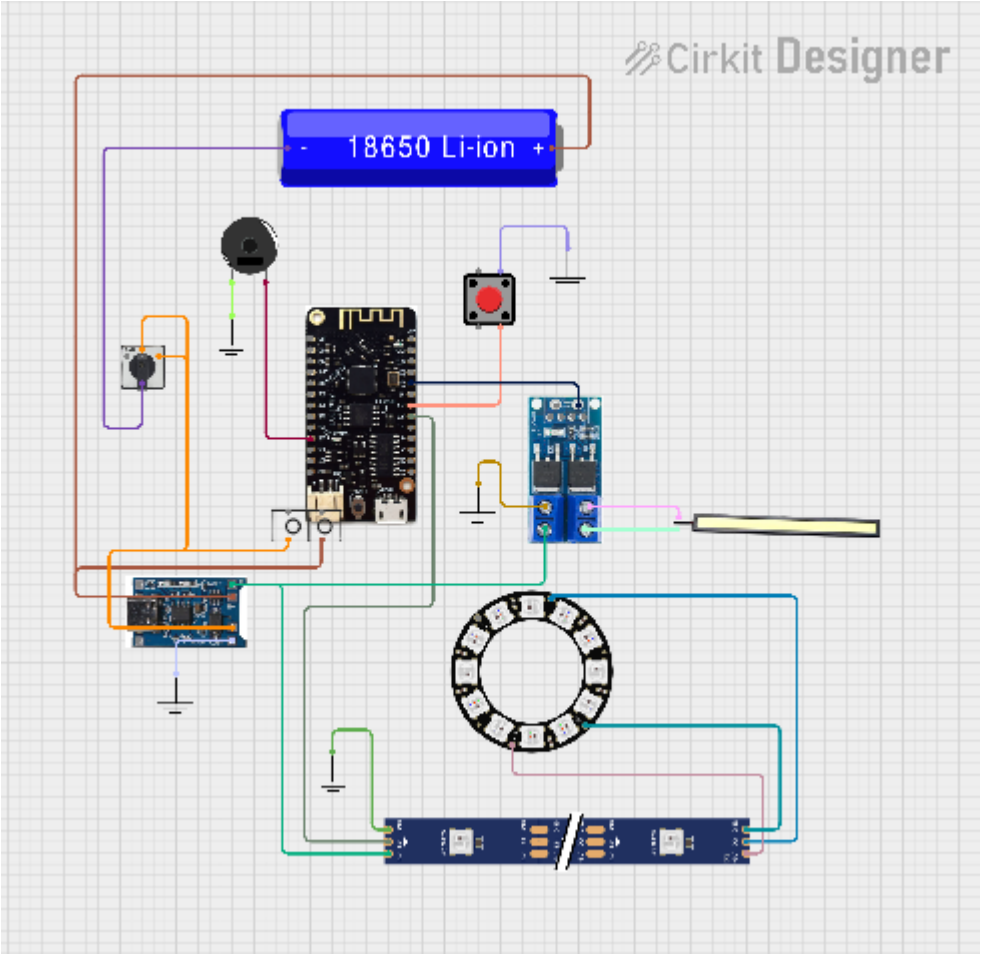


повреждением активной

BILL OF MATERIALS

Wifi Bluetooth Development Board Antenna ESP32 ESP-32 REV1 CH340 CH340G Micro USB Lithium Battery Interface - https://www.aliexpress.com/item/1005006054471619.html
5V Boost Converter Step-Up /preferable "unsoldered" with no USB A/ - https://www.aliexpress.com/item/1005006108616586.html
Rotary Channel Selector Switch - RS16 2P 4T - https://www.aliexpress.com/item/1005005742527792.html
7 Bit WS2812 - https://www.aliexpress.com/item/1005006140650184.html
WS2812B DC5V, White PCB, 1m 144 IP30 - https://www.aliexpress.com/item/1005004289391906.html
USB Type C Male To Micro USB Female Adapter Connector - https://www.aliexpress.com/item/1005006327139395.html
Passive Piezo Buzzer - https://www.aliexpress.com/item/1005001854934371.html
MOSFET Trigger Switch - https://www.aliexpress.com/item/1005007245111789.html
12x12mm momentary switch - https://www.aliexpress.com/item/1005005968686552.html
Strap mount - https://www.aliexpress.com/item/1005006146829189.html
Lithium battery 18650
5v White LED strip https://www.aliexpress.com/item/1005007683855644.html
6mm Opal acrylic

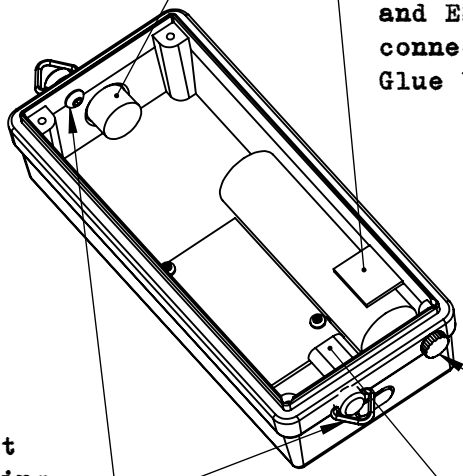
Detector Circuit Diagram



BODY - BASE ASSEMBLY

Solder wires to piezo and glue in place.
Positive - Pin 27
Negative - Ground

Remove USB A port from charger if required, solder wires to 5V out pins. Connect positive to battery and ESP32, negative will connect to rotary switch. Glue battery in place



Glue in knob.

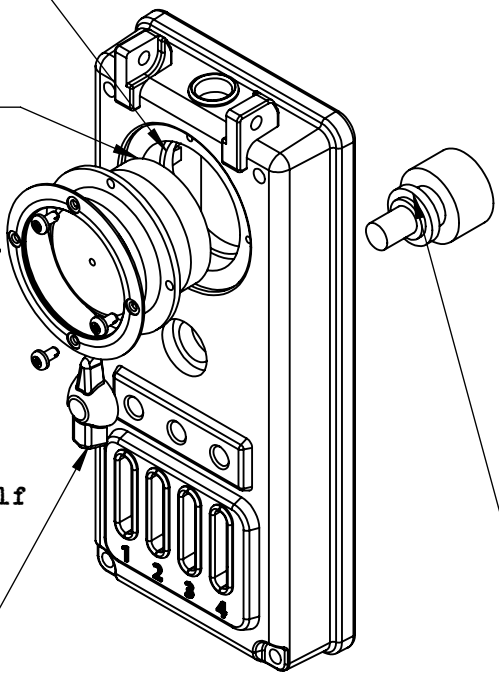
Add strap attachment points using M3x6mm screws

Insert USB C extender into ESP32. Insert both into body from inside. Screw into place. Add hot melt to extender to secure.

BODY - TOP ASSEMBLY

Solder wires to LED ring.
Glue to support.

Cut 28mm circle from 6mm opal acrylic. Alternatively use paper as a diffuser

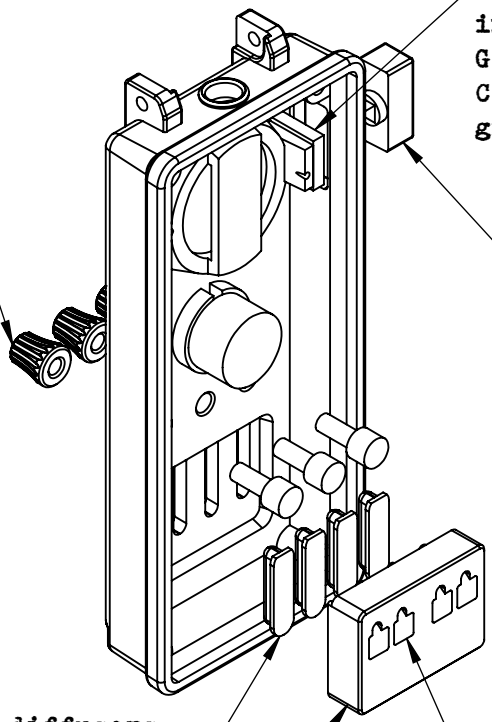


Secure indicator assembly with ring and 4x M1.8x6mm self tapping screws.

Trim knob shaft.
Solder wire to input and battery negative. Leave left position unconnected. Solder right 3 positions together and connect to 5V regulator battery input.
Secure into body with nut.

Glue selector switch to knob.

BODY - TOP ASSEMBLY



Tap knobs M4x0.7.
secure into body with M4x8 screws.
Alternatively use self tapping screws.

Slide button in from inside.
Glue to post.
Connect to common ground and pin 17.

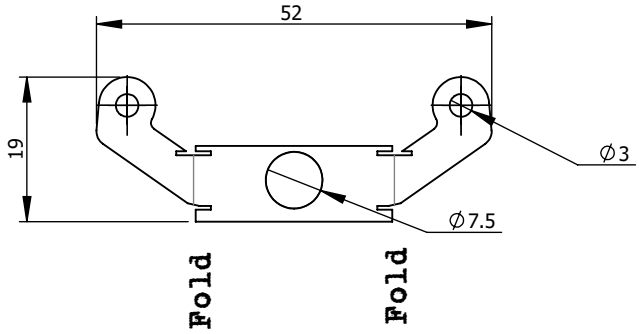
Glue trigger button to post, check for free movement.

Insert diffusers into body.

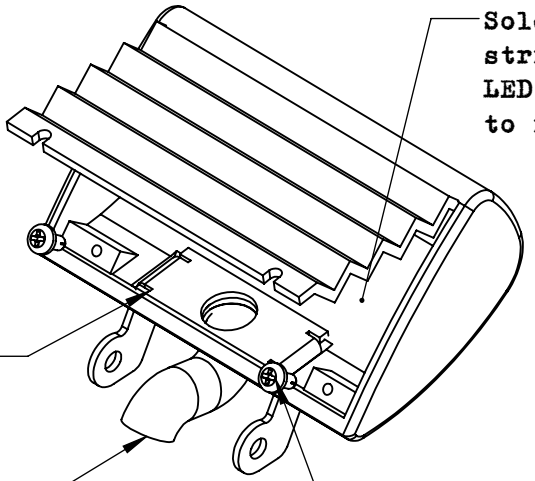
Glue in LED mount.

Insert WS2812BLED's into mount. Designed for 144LED/m.
Connect power input to 5V converter.
Connect Data input to pin 16.
Connect all outputs to LED ring.

FLASH ASSEMBLY



Print 1:1
Glue to 1mm steel sheet.
Drill. Cut. Fold



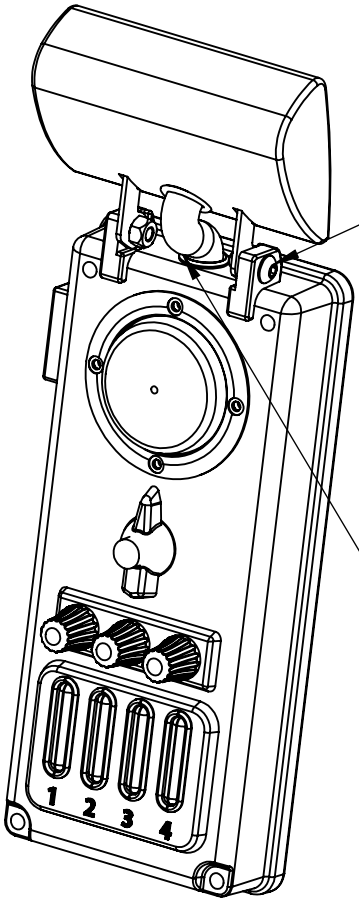
Solder wires to 2x strips of 5V white LED strip. Stick to inside of flash.

Epoxy bracket to flash

Feed wired through hole. Sheath with black cable or heatshrink.

Tilt diffeser in and fix with 2x M1.4x5mm self tapping screws

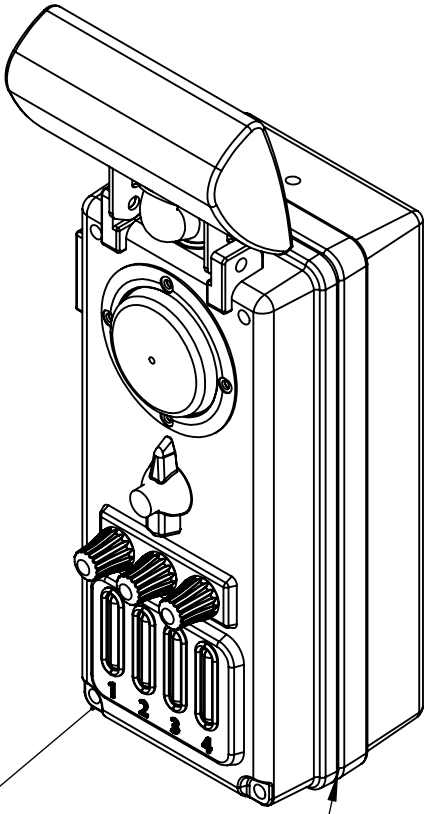
FLASH ASSEMBLY



Fix flash to body
with 2x M4x8mm screws
and lock nuts.

Connect LED wires to Mosfet
output.
Connect Mosfet input to 5v
regulator output and connect
ground to common ground.
Connect trigger to pin 18.

BODY ASSEMBLY



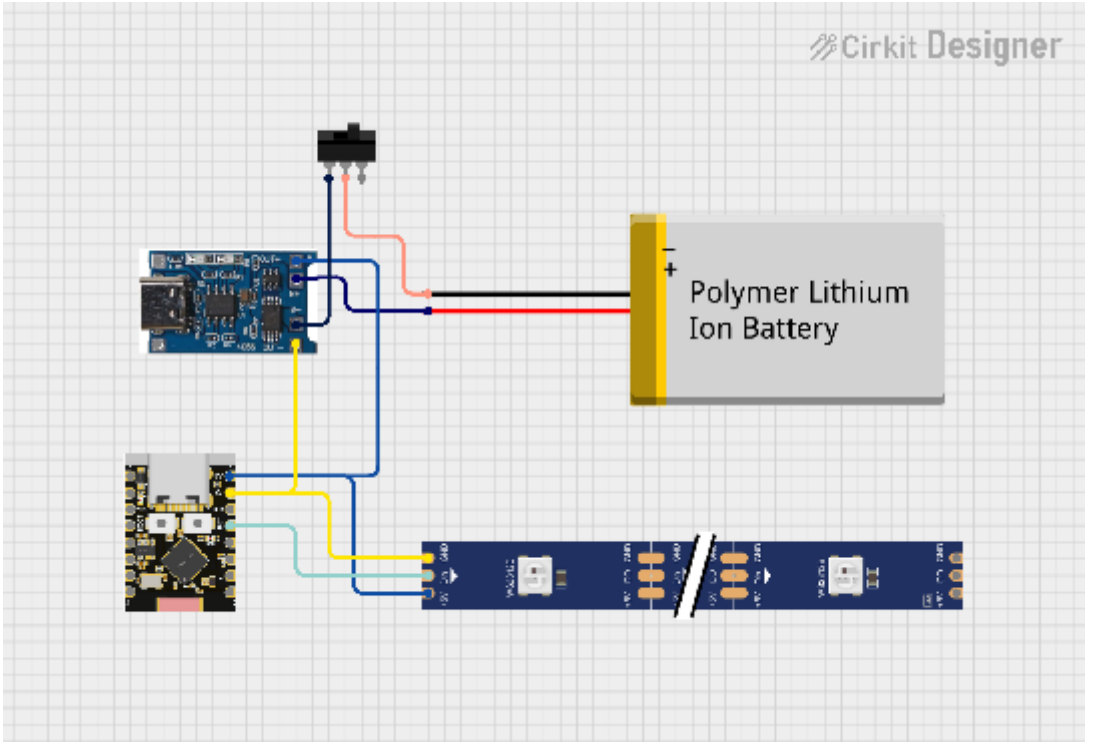
Secure body together with M3x25mm self tapping screws.

Add 10mm leather strap and buckle.

ARTIFACT BOM

ESP32-C3 Development Board ESP32 SuperMini -
https://www.aliexpress.com/item/1005006096717048.html
3mm switch -
https://www.aliexpress.com/item/4001207529493.html
TZT 5V Boost Converter Step-Up -
https://www.aliexpress.com/item/1005006108616586.html
WS2812B DC5V, White PCB, 1m 30 IP30 -
https://www.aliexpress.com/item/1005004289391906.html
2Diax2mm magnets
https://www.aliexpress.com/item/1005002971108034.html
Lithium battery 12300 12Diax30mm
https://www.aliexpress.com/item/32890837030.html

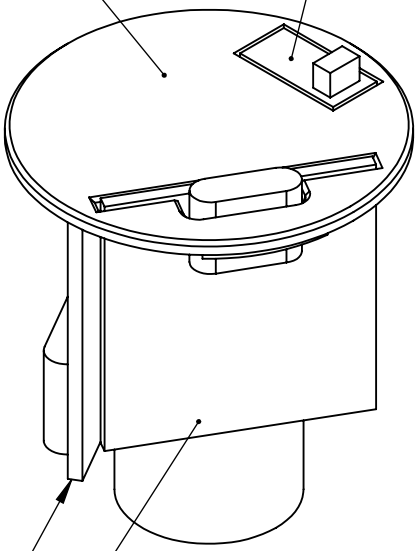
Artifact Circuit Diagram



ARTIFACT ASSEMBLY

Solder wires to battery and glue to module top.

Connect battery negative and 5v Converter negative input to switch.



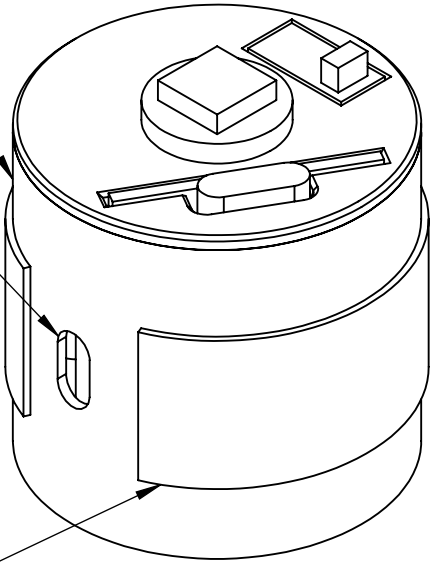
Glue ESP32 in place.
Solder LED date wire to pin4

Remove USB A port from charger if required.
Glue in place.
Connect battery positive.
Connect 5v outputs to ESP32.
Connect positive and negative wired to 5v output for LED.

ARTIFACT ASSEMBLY

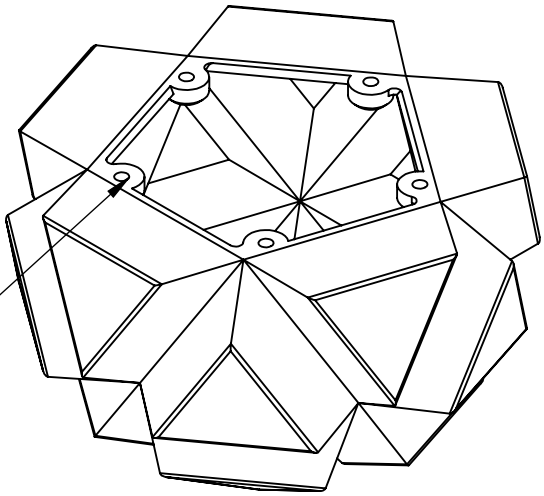
Install module casing.

Feed wires through hole.



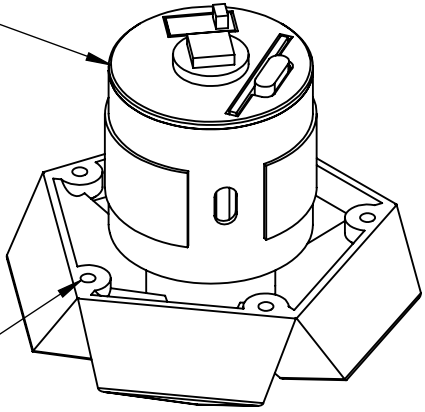
Adhere 3 LED's of WS2812B 30LED/m strip to outside of module. Try and evenly space LED's, small creases will take up any extra strip.
Fold strip to add 4th LED to top, or cut and solder.
Solder power and data wires to strip.

ARTIFACT ASSEMBLY



Glue magnets into top.
Keep polarity the same
for all magnets.

Glue electronics
into base.



Glue Magnets into base.
Keep polarity opposite from top.