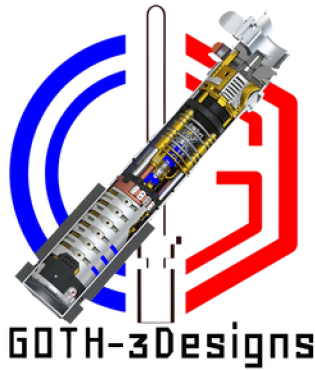# **AS2 ECO** CHASSIS INSTALL GUIDE

Chassis designed by Goth3Designs

Install Guide by Sabers Forever
July 2023

This guide will provide you with a visual index of the saber parts, along with assembly instructions for the KR Sabers "**AS2**" Goth3Designs **ECO Chassis**

You will need to posses basic soldering skills and an understanding of how to read wiring diagrams in order to complete this installation.

Please note: ALL IMAGES ARE PROVIDED FOR VISUAL REFERENCE ONLY.
THE PHOTOGRAPHS ARE NOT SHOWN AT A 1:1 SCALE.

STEP 1 - Components and Test fit.

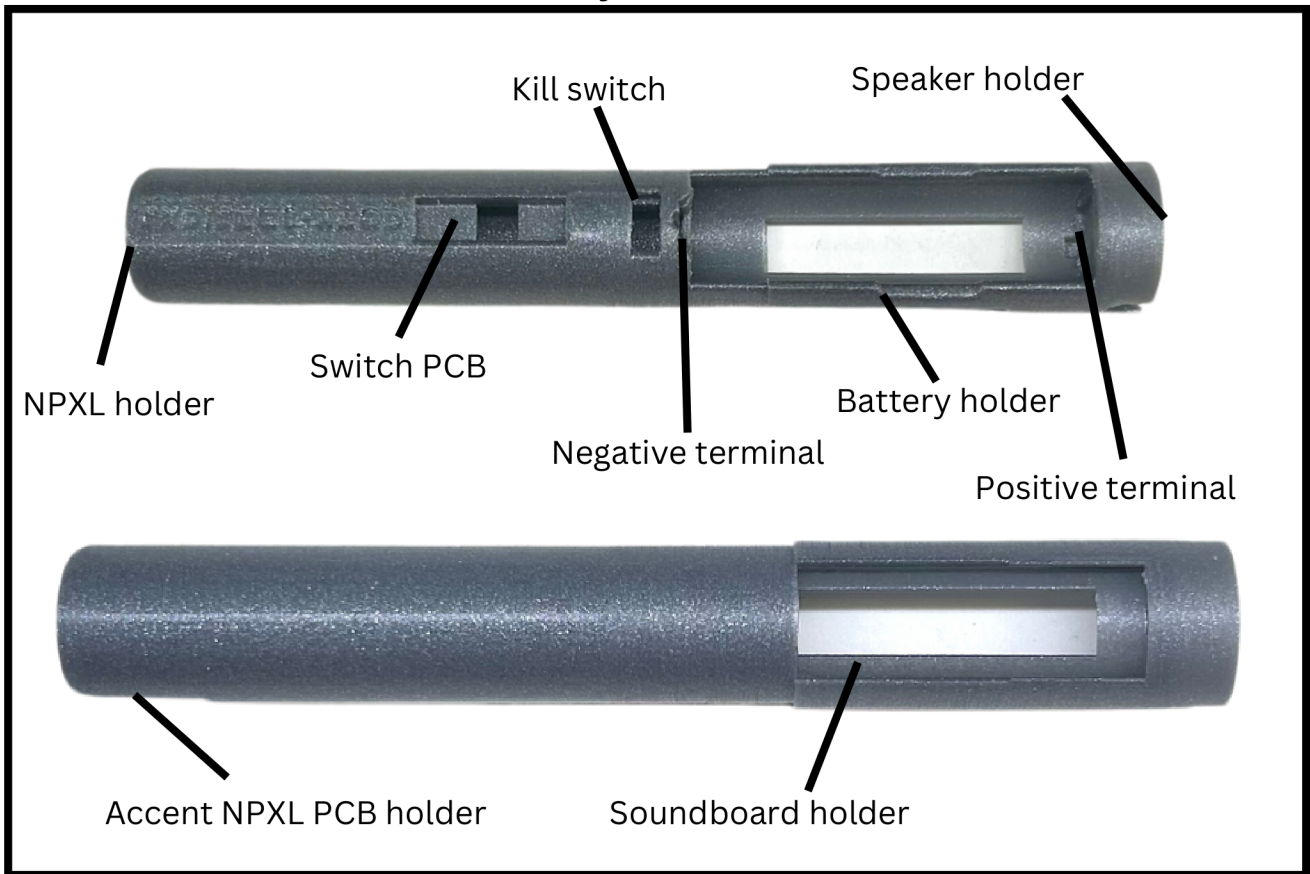The Install kit will come with the following components.

Install Kit
1. Chassis
2. Accent NPXL PCB
3. Positive terminal
4. Negative terminal
5. Kill switch
6. ECO NPXL w/Lens
7. 28mm speaker
8. Tactile switch PCB
9. Soundboard
10. 18650 Li-Ion Battery
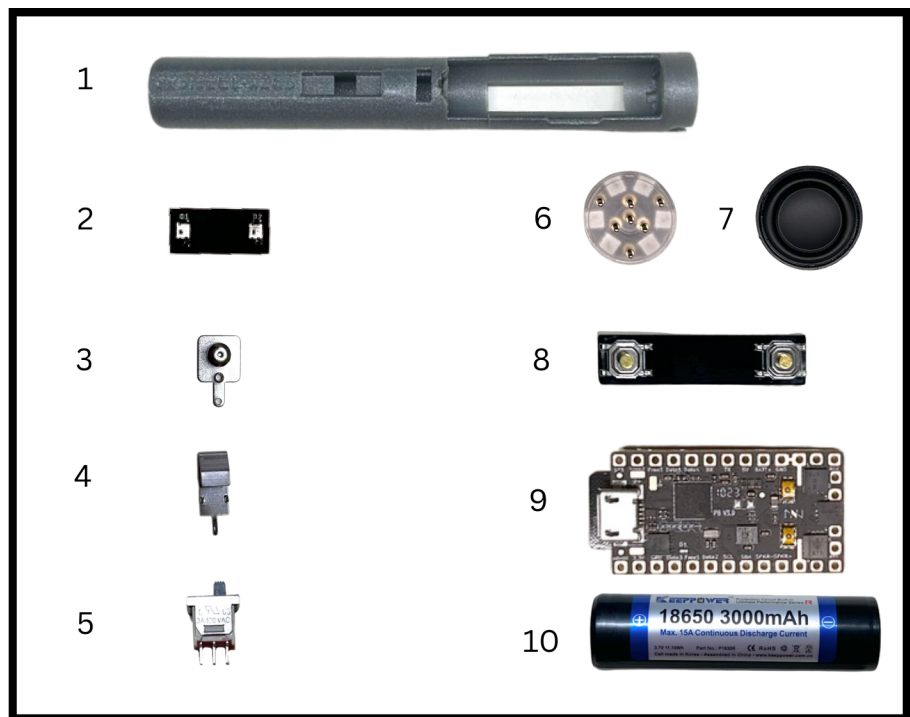
The diagram below shows the same chassis rotated 180 degrees to show both sides of the chassis.

Anatomy of the chassis

Kill switch

Speaker holder

Switch PCB

NPXL holder

Negative terminal

Battery holder

Positive terminal

Accent NPXL PCB holder

Soundboard holder

Test fit all of your components. Start by making sure the three chassis pieces all assemble and fit into your saber.

It is very important to check the inside of the saber to make sure no unwanted burs or screw threads are protruding on the inside of the hilt. Some of the screws protruding inside are helpful like the covertech wheel screw. This screw will act as a guide for the chassis orientation to keep the switches and LED's lined up inside the saber while in use.
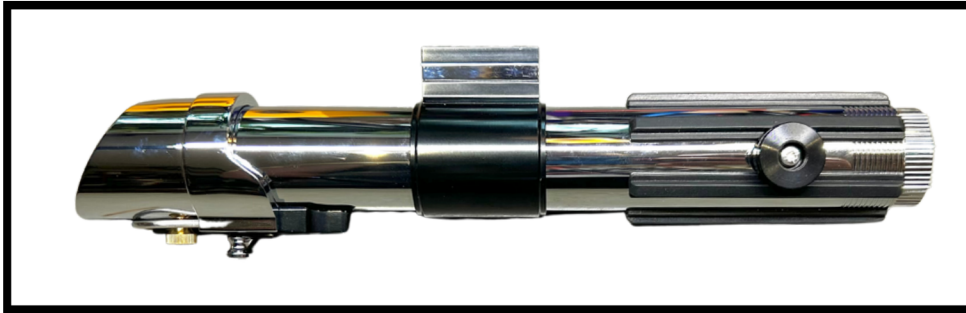
The top of the activation box is held on with a magnet. Pull the top of the activation box off to reveal the screws holding the activation box. Check inside the saber to see if they are sticking out. If they are, you may need to remove 2mm of length from the screw. These can potentially destroy the switches on the PCB if they are too long.
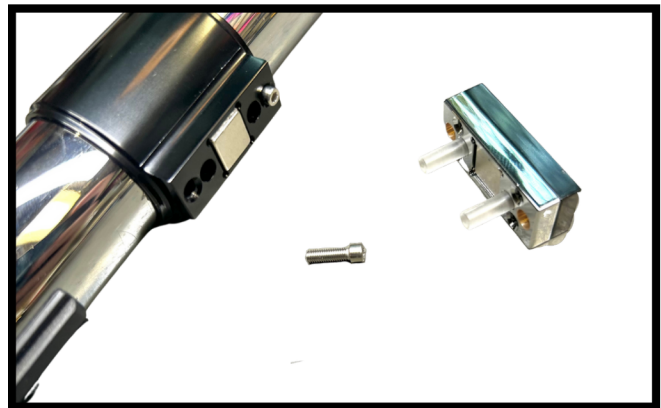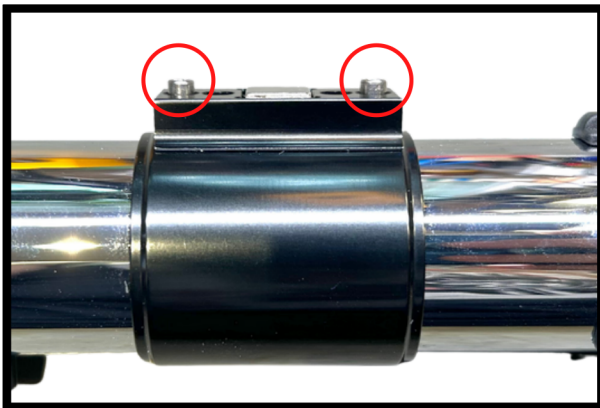
The blade plug can be removed by twisting the blade retention screw counter clockwise, the plug should just fall out into your hand. The pommel can be unthreaded for access to the bottom of the saber. This is where the chassis will be inserted.

Blade retention screw
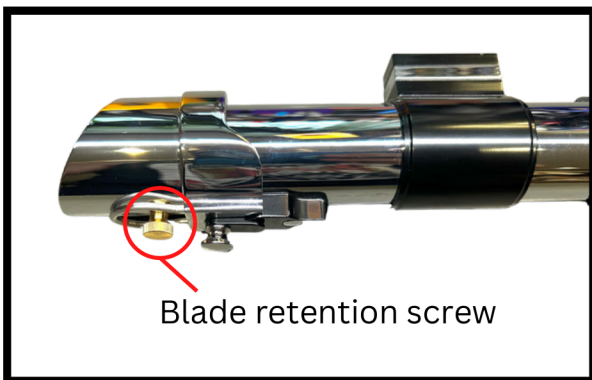
If something is too tight, use your best judgment on if the chassis or the component should be altered. For example, the NPXL PCB is easy to sand/file, where as the speaker holder might only need the lip of the holder chamfered.


Make sure not to press anything into the chassis that you wont be able to get out. The negative terminal has barbs on it that will prevent you from being able to remove it. You may want to wait to push a component like that in before soldering it. Examine your parts!

STEP 2 - Parts prep and soldering

The following section will provide insight on soldering the wire leads to the components and recommended wire paths on certain parts. Wire color is not critical but to avoid confusion, it is recommended to use different color wire to identify where it is coming from when connecting each component to your chosen soundboard.

Roughly measure out wire by putting the chassis together and running wires from where components will sit and where they will need to connect to the soundboard, give yourself some extra length you can always make wires shorter, it's harder to make them longer. The wires need to sit within a small space without pinching or being pulled as the sound board and crystal chamber are set into their final position.
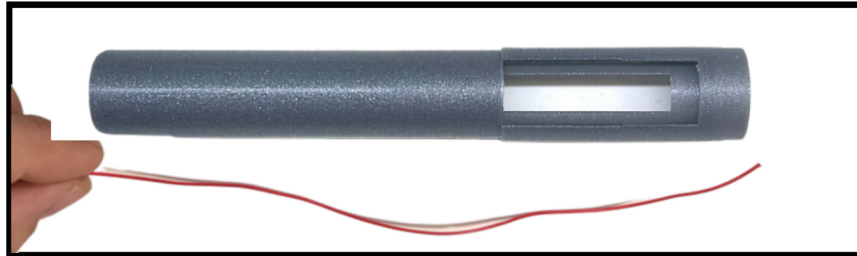

If you are unsure about wire lengths, below are recommended lengths certain component wires should be.

|	Wire Length	Wire Gauge	Color recommendation
NPXL-	9 inches (230mm)	two 22AWG wire	1x red, 1x black
Accent NPXL-	9 inches (230mm) 4 inches (100mm)	one 28AWG wire three 28AWG wire	1x green 1x red, 1x black, 1x green
Switch-	6 Inch (150mm)	three 28-32AWG wire	1x blue, 1x orange, 1x white
Speaker-	4 inches (100mm)	two 28AWG wire	2x yelow
Negative-	4 inches (100mm)	one 22AWG wire	1x black
Killswitch-	6 inches (150mm) 4 inches (100mm)	one 22AWG wire one 22AWG wire	1x red 1x red
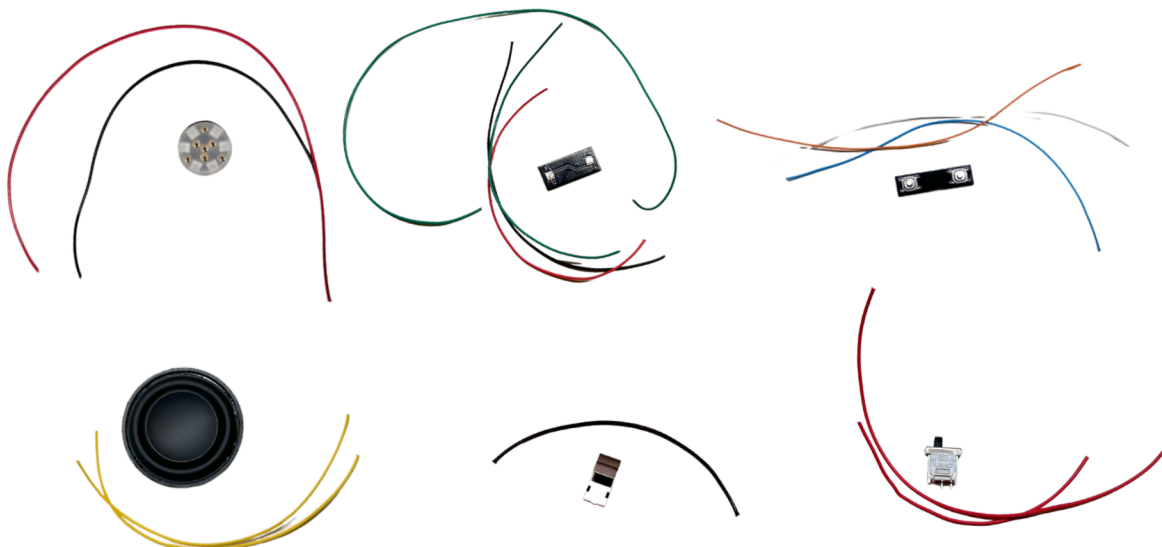
Solder the accent NPXL PCB. The pads are labeled and display
which pad is which. The
DI (data in) should get the
longer pre-cut green 9"
wire. This wire will lead to
the Soundboard area and
the others will come out
the main blade NPXL
holder.Glue the connector
to the chassis
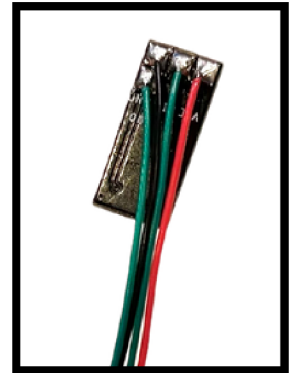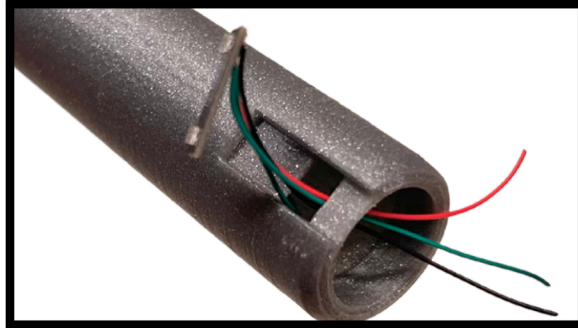
Prep the main blade connector with the 22awg positive and negative wires. Solder
the wires coming out of the NPXL holder to the connector, this should include 1
negative, 1 data and 1 positive.

Positive (22AWG)

Negative (22AWG)

28AWG from chassis

28AWG from chassis

28AWG from chassis
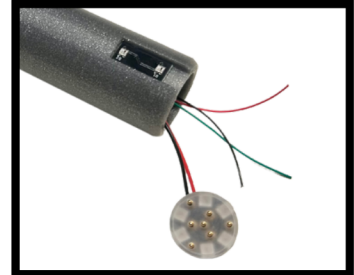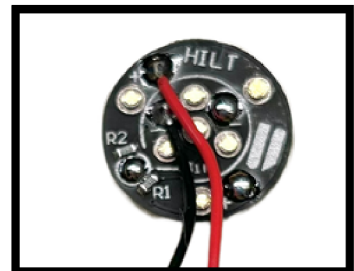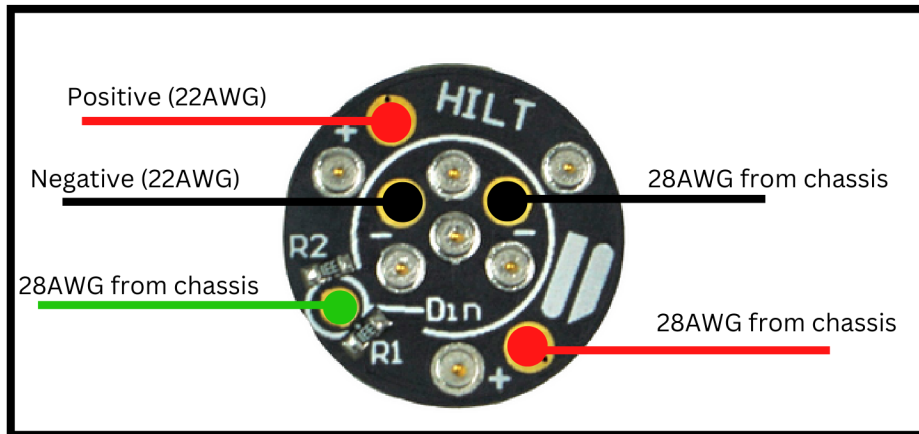
Run the 22awg wire from the NPXL blade connector into the chassis and into the
soundboard area. once the wires are cleanly placed in the chassis, press/glue if
needed the NPXL connector and lens into the chassis.
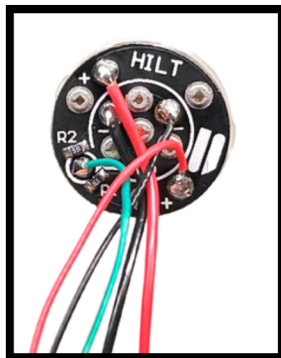
Solder the 28AWG wires to the back of the switch PCB and feed the wires into the chassis and down the bottom with the rest of the wires. Glue the PCB into the chassis and make sure it is seated all the way to the bottom of the holder.
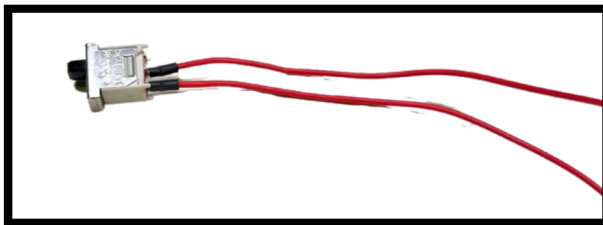
Solder the pre-cut wires onto the negative terminal and the killswitch. These components should be pushed in place into the chassis and have the wires fed to the soundboard opening. It will be easier to place the negative terminal first as it will be easier to get tools inside the chassis to help navigate the wire.
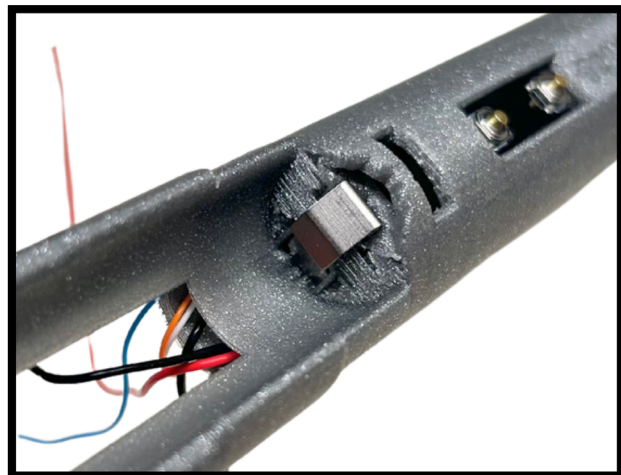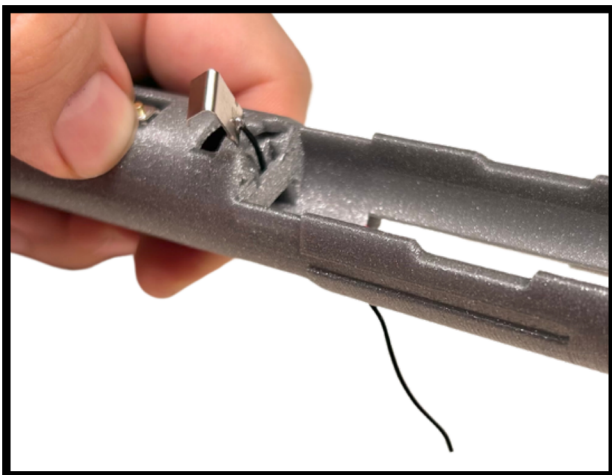
Find the two longer red 22awg wires and feed them through the hole for the positive terminal holder. Tin the two wires together and solder them to the back of the positive terminal. Once the terminal has cooled off, glue it into the chassis.
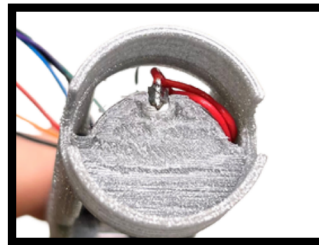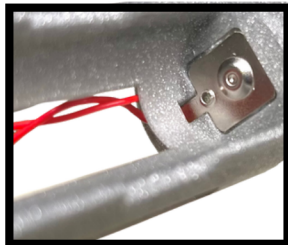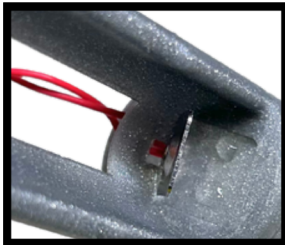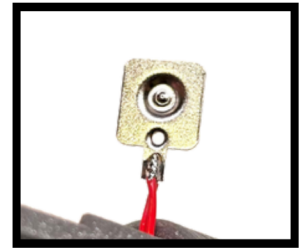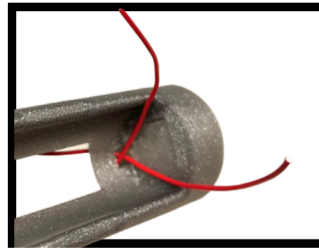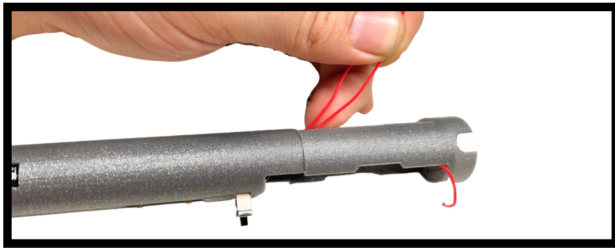
Once the terminal is glued in place, make sure to tuck the two wires into the chassis nicely. The speaker will take up all of the space in the speaker holder and no wires can be in this area.

Solder the pre-cut wires to the speaker off to the side of the speaker instead of perpandicular to the speaker. This is to make sure the wires don't sit between the speaker and chassis body. Glue the speaker into place.
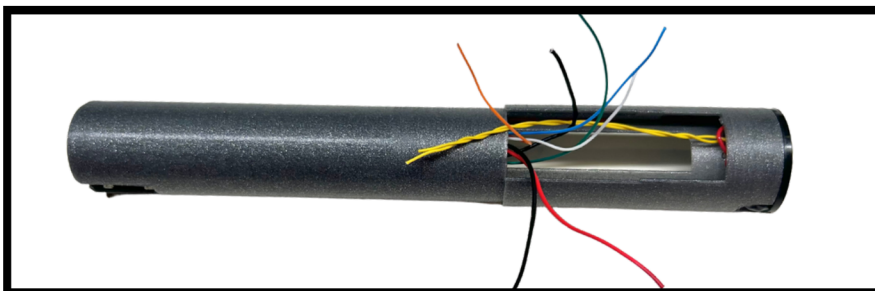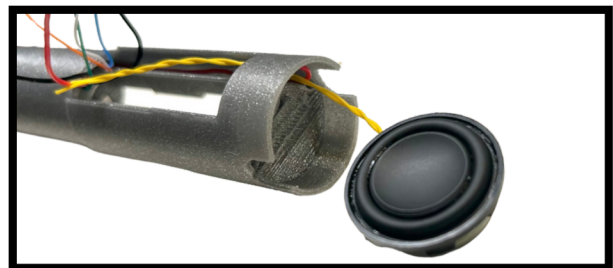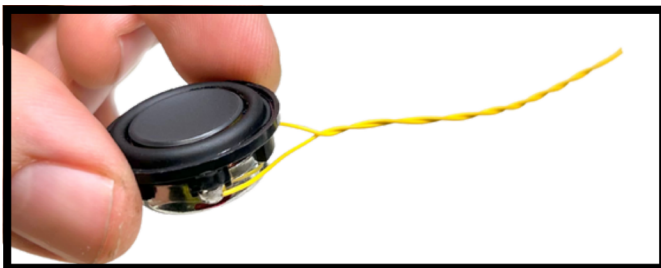

You should now have a mess of wires coming out of your soundboard holder. Please select the wiring diagram for your selected soundboard to continue.
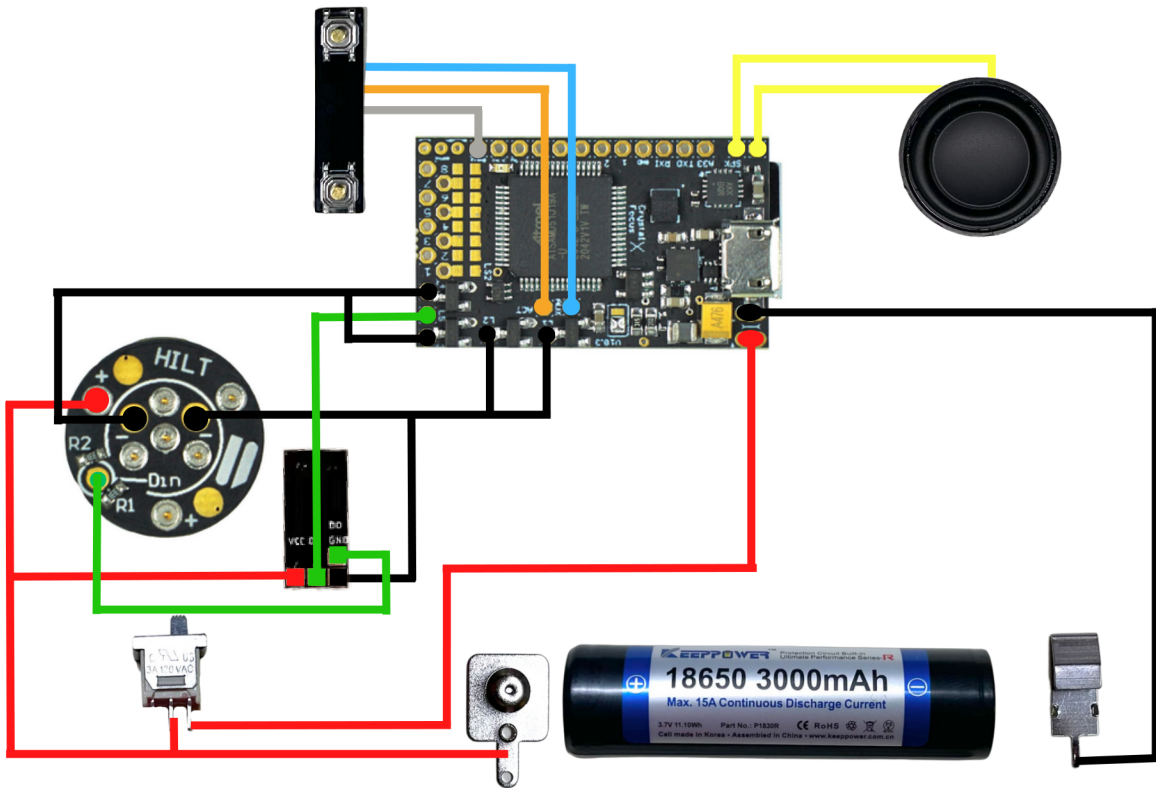
Please note, this guide is provided to assist with the wiring and assembly of this kit. For further details relating to the programming or setup of your chosen soundboard, please refer to the users manual.
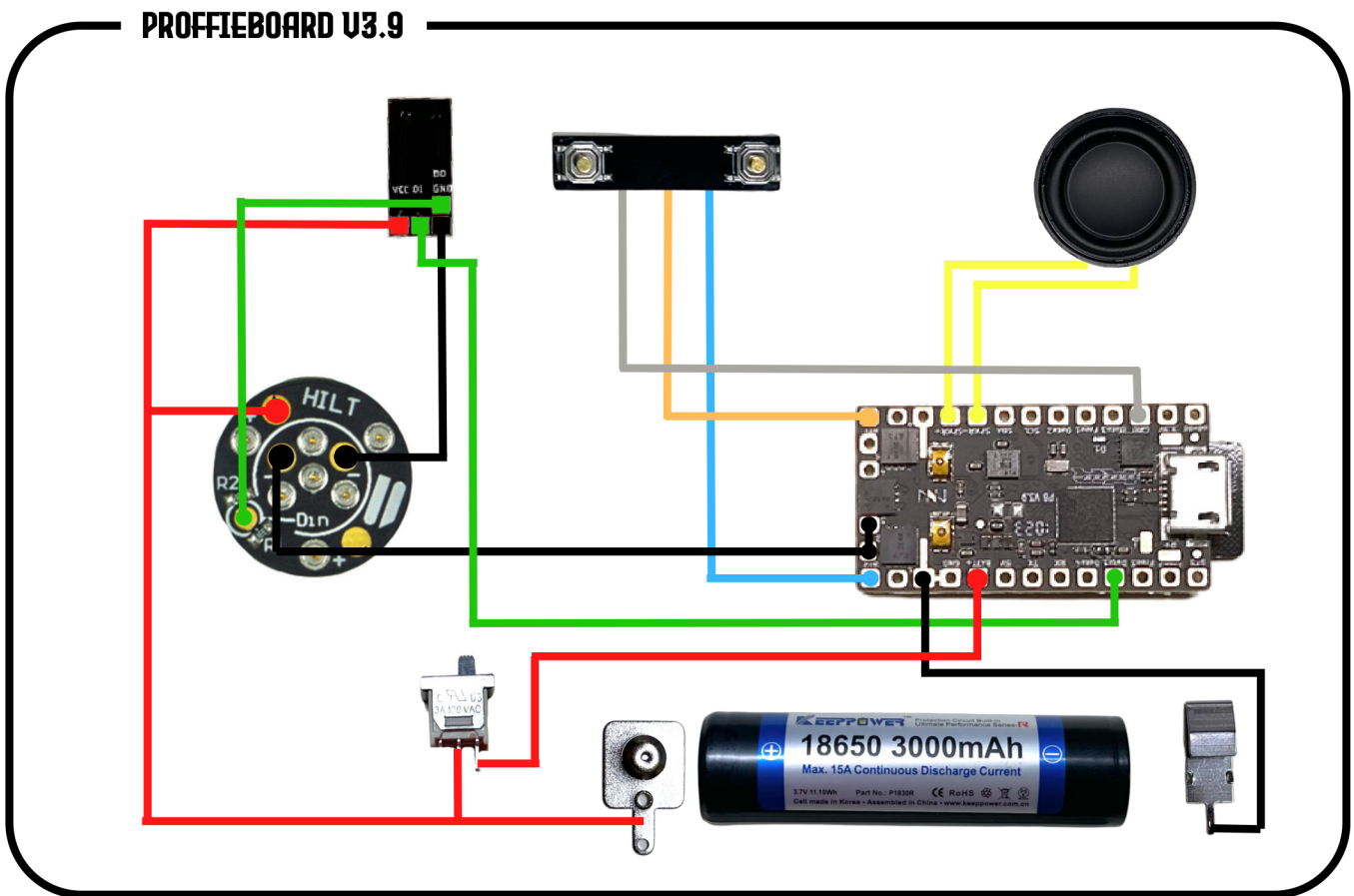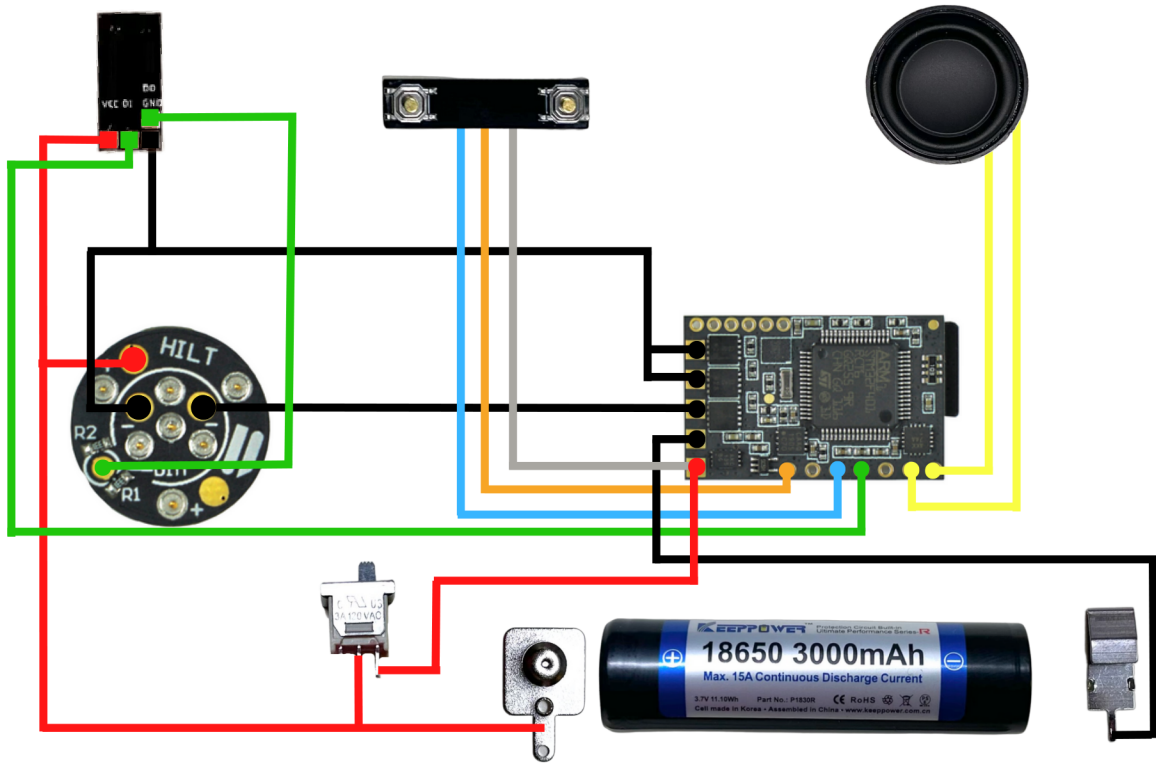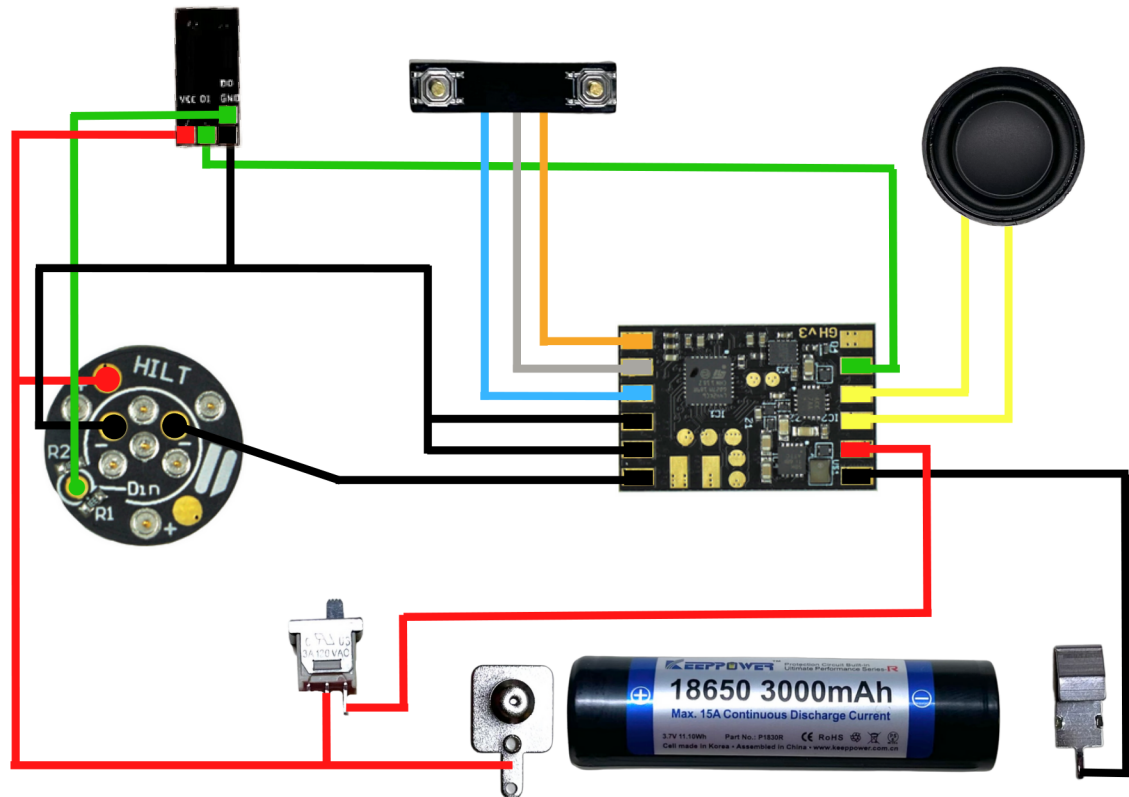

PROFFIEBOARD V3.9

PROFFIEBOARD V2.2
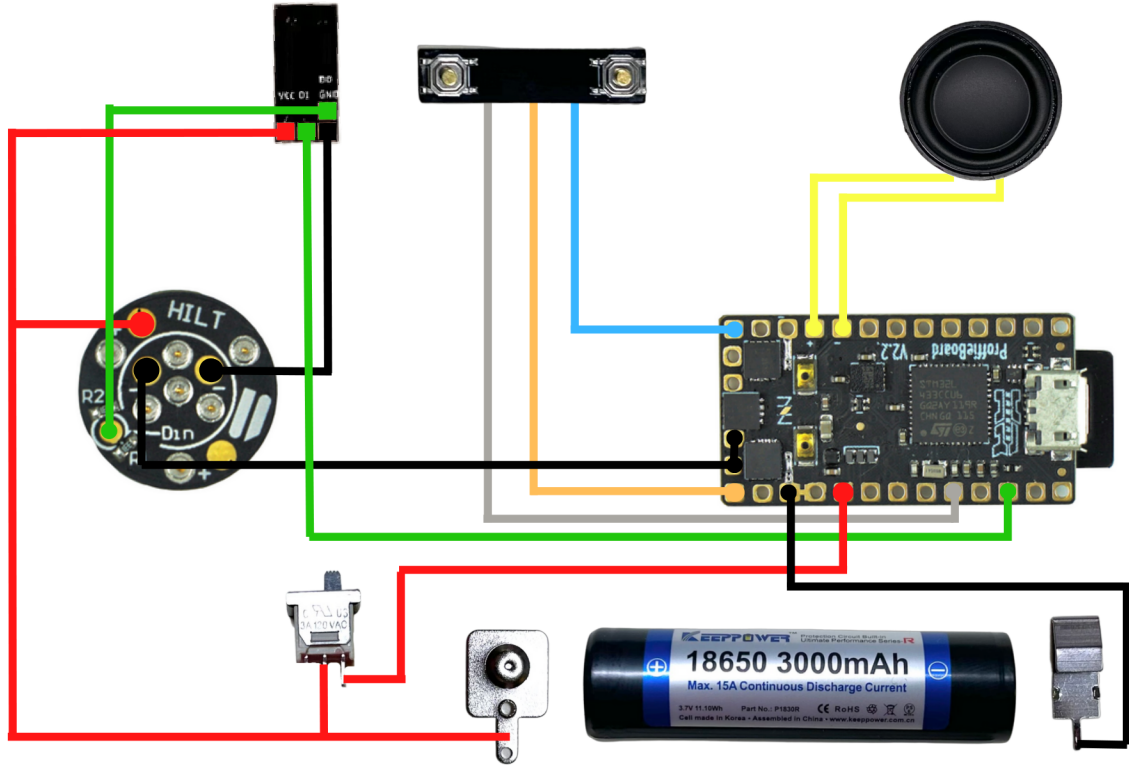
CRYSTAL FOCUS X

VERSO V2

GOLDEN HARVEST V3 PHASE 4

Once you have finished soldering the soundboard, double check your work against the diagram and put a battery into the saber before glueing everything together. if everything works, proceed to glue the two chassis halves together and the soundboard into the its holder. Do this with the battery removed!

Now that the chassis is fully assembled, you will obviously want to put it into the hilt. Align the switches with the activation box and push the chassis into the handle. secure the pommel onto the bottom of the hilt and test that you get good button actuation.
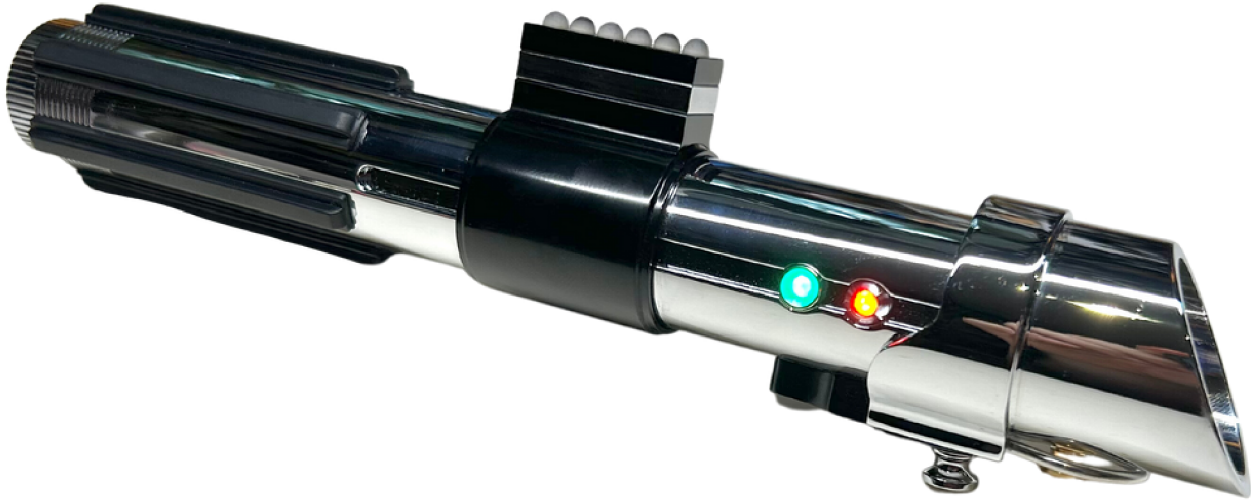
Congratulations on completing the installation of your saber!
We hope you had much success with this guide.

May the force be with you.