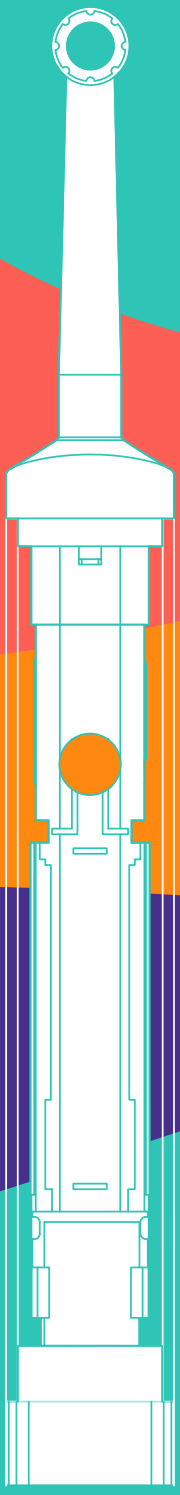
Rotary Electric V1.0

OPEN BRUSH

Open source electric toothbrush



~~User~~ Manual

Your

open source hardware

Welcome to the World of Open Source Hardware

Contents

Hello!

You have taken the first step towards a more sustainable and repairable electric toothbrush.

OpenBrush gives you full control over your toothbrush - whether you want to build it yourself, customise it to your needs or simply repair it if necessary.

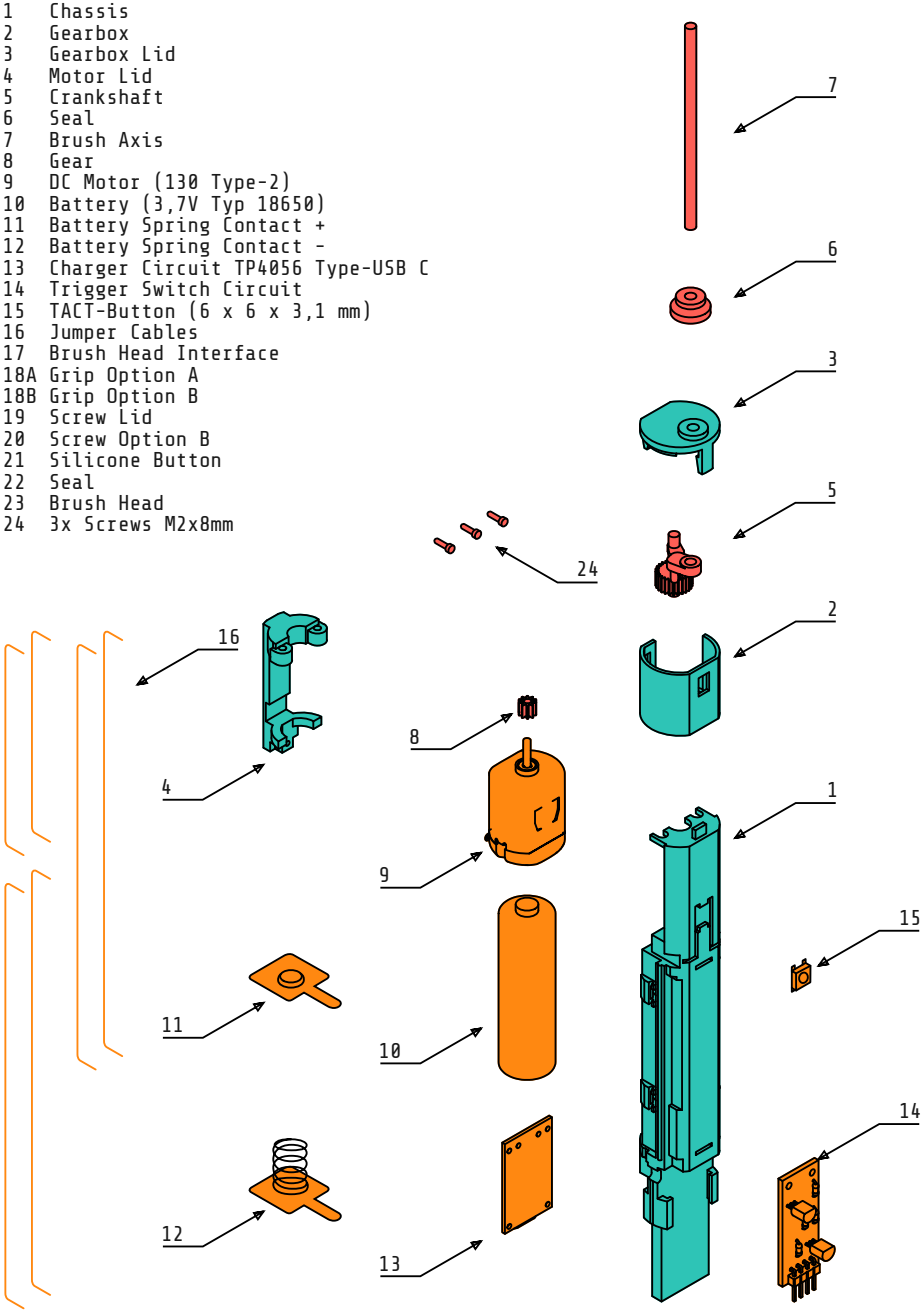
Our design is based on off-the-shelf electronic components and 3D printed parts that you can either print at home or at a local MakerSpace.
Assembly is easy, and you even have the option to customise the design to your liking.

This guide will take you step by step through the entire process - from
from making the parts to assembling the electronics.
You don't need any special previous knowledge, just a little curiosity and a desire to discover!

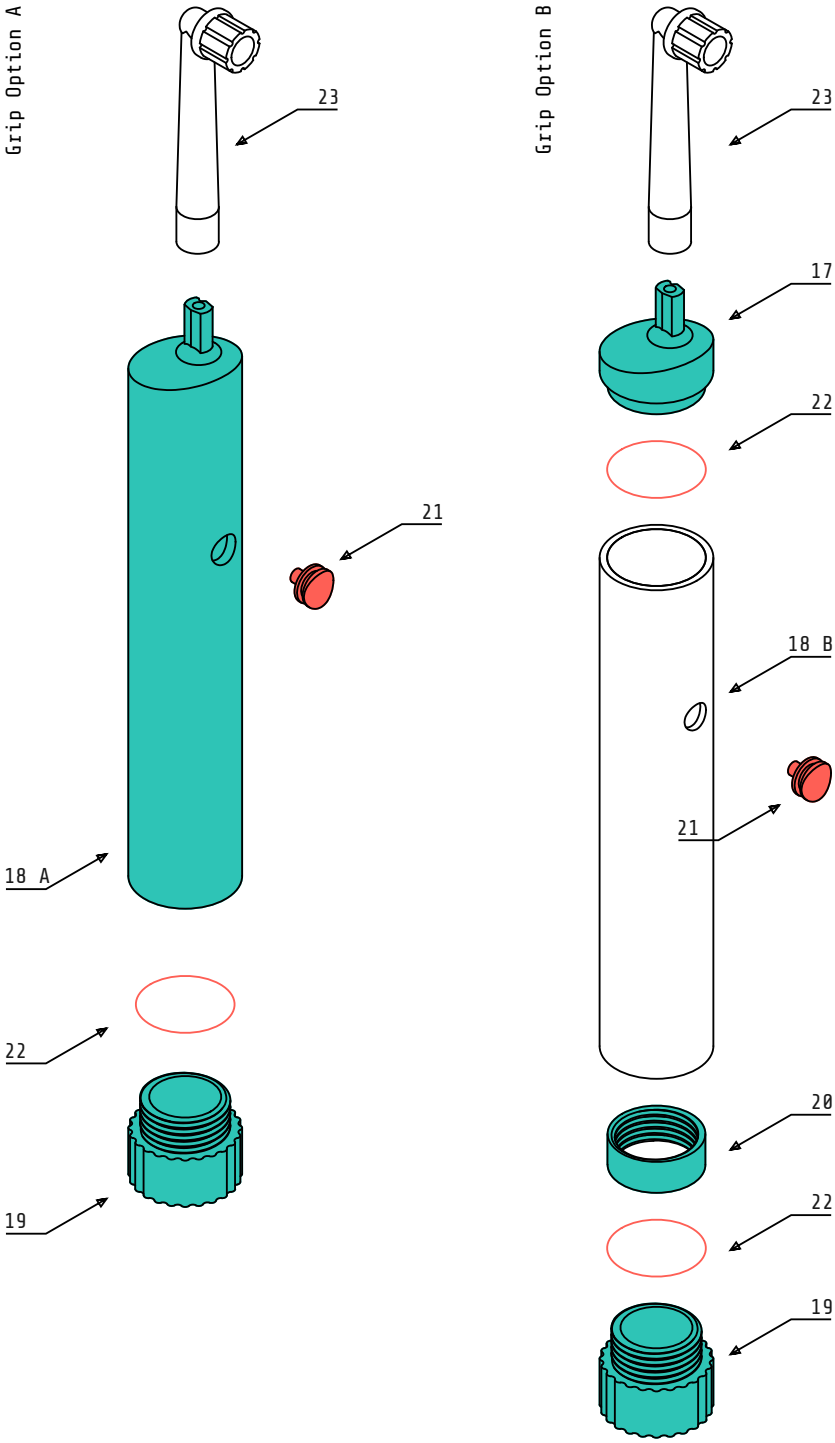
Let's get started - let's build a toothbrush that lasts!

LEGEND

1 Chassis
2 Gearbox
3 Gearbox Lid
4 Motor Lid
5 Crankshaft
6 Seal
7 Brush Axis
8 Gear
9 DC Motor (130 Type-2)
10 Battery (3,7V Typ 18650)
11 Battery Spring Contact +
12 Battery Spring Contact -
13 Charger Circuit TP4056 Type-USB C
14 Trigger Switch Circuit
15 TACT-Button (6 x 6 x 3,1 mm)
16 Jumper Cables
17 Brush Head Interface
18A Grip Option A
18B Grip Option B
19 Screw Lid
20 Screw Option B
21 Silicone Button
22 Seal
23 Brush Head
24 3x Screws M2x8mm



Model: Rotary Electric V1.0


Grip Option A
23
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18 A
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Grip Option B
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17
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18 B
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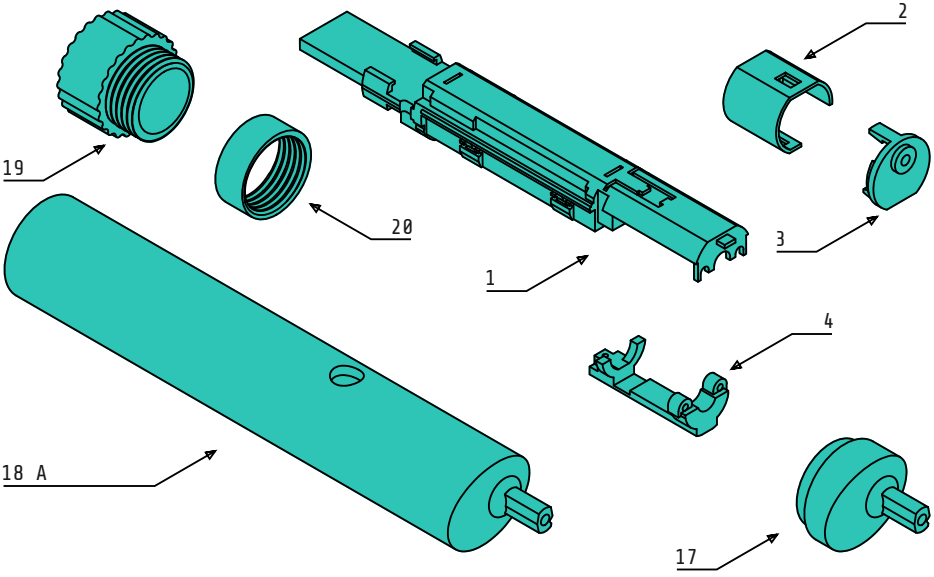
3D-Printing Parts

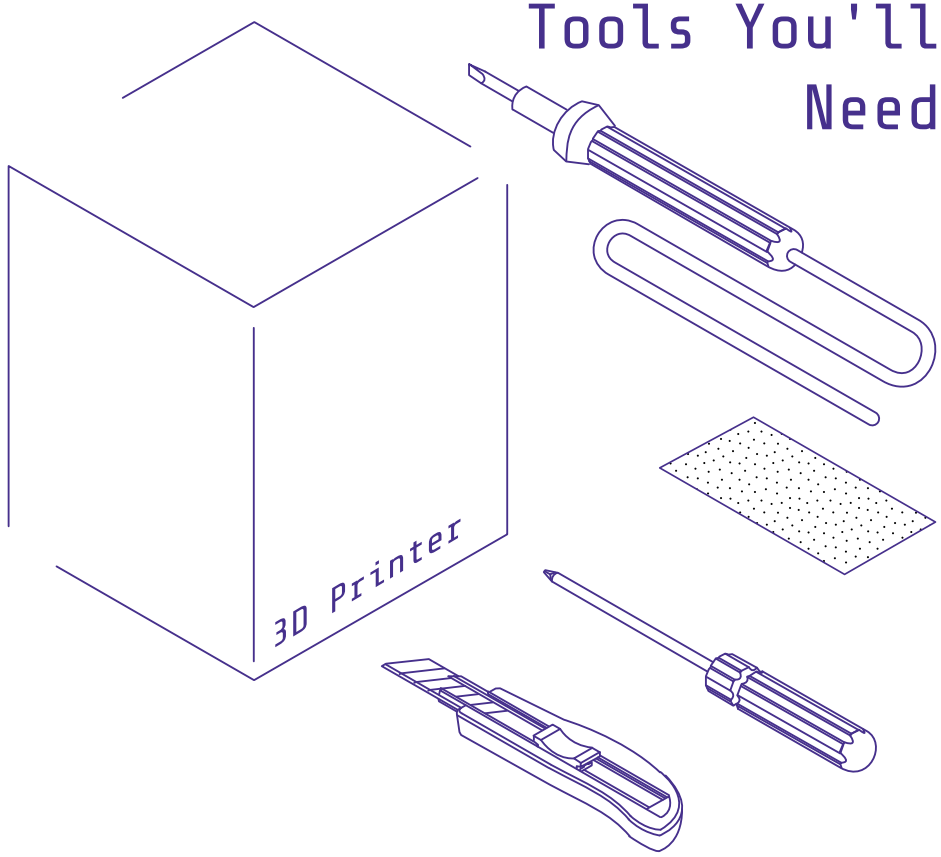
If you have purchased the OpenBrush kit, you can skip this section and continue directly with the assembly. If you want to print the parts yourself, you will find all the necessary information here.

You can produce the following components yourself using a 3D printer:

1 - Chassis
2 - Gearbox
3 - Garbox Lid
4 - Motor Lid
17 - Brush Interface (Option B)
18A - Grip (Option A)
18B - Grip(Option B)
19 - Screw Lid (Option A & B)
20 - Screw (Option B)



Tools You'll Need



Depending on the printer and settings, the parts may turn out differently. It is quite normal that some edges or surfaces need to be reworked.

We recommend:

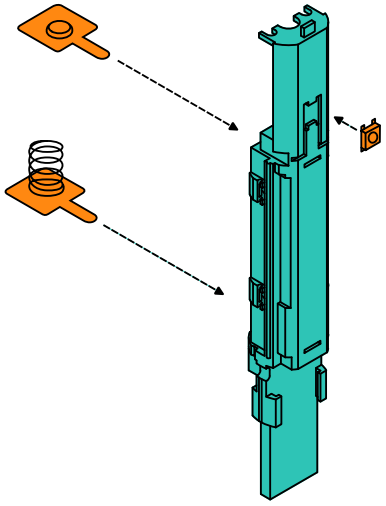
- Sandpaper
- Cutter or scalpel for fine adjustments
- Possibly superglue for small fixings

As soon as your parts are ready, you can start assembling them.

You will need:

- Screwdriver
- Soldering iron and solder and you are ready!

1



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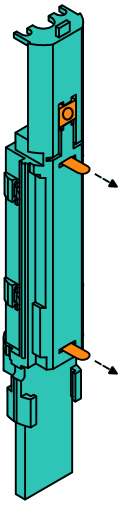

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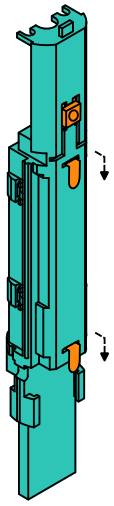

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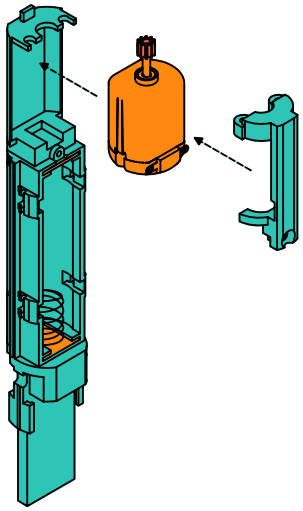

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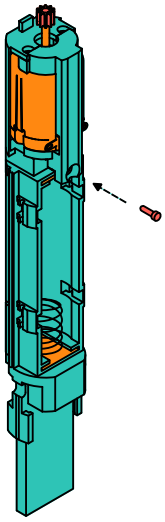

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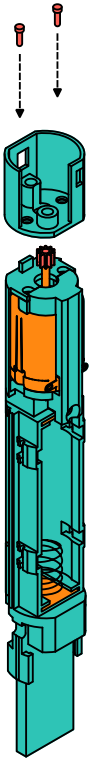

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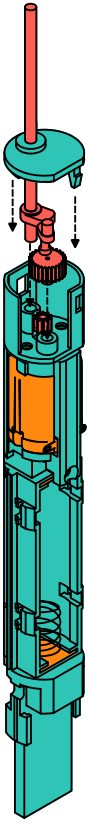

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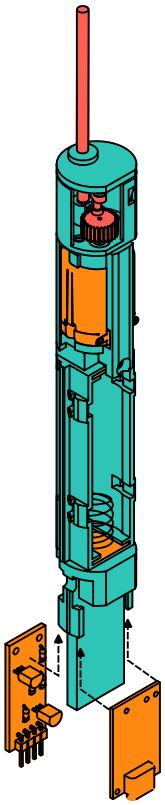

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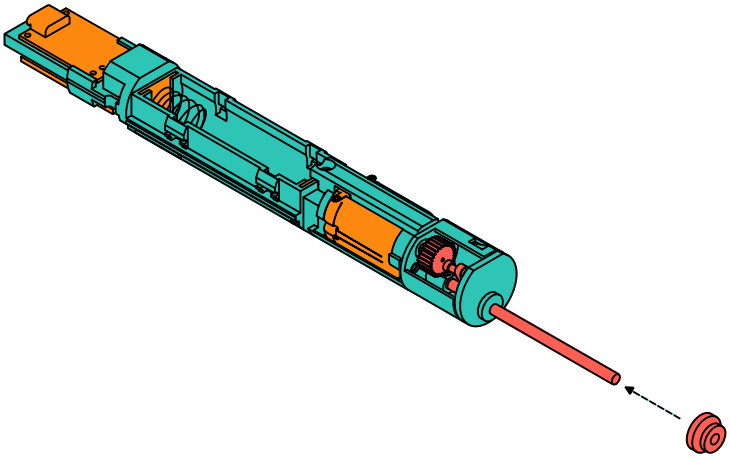
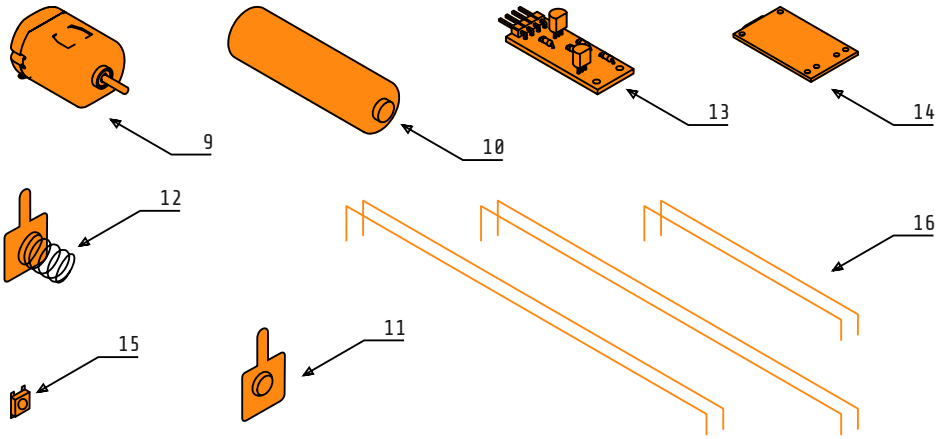


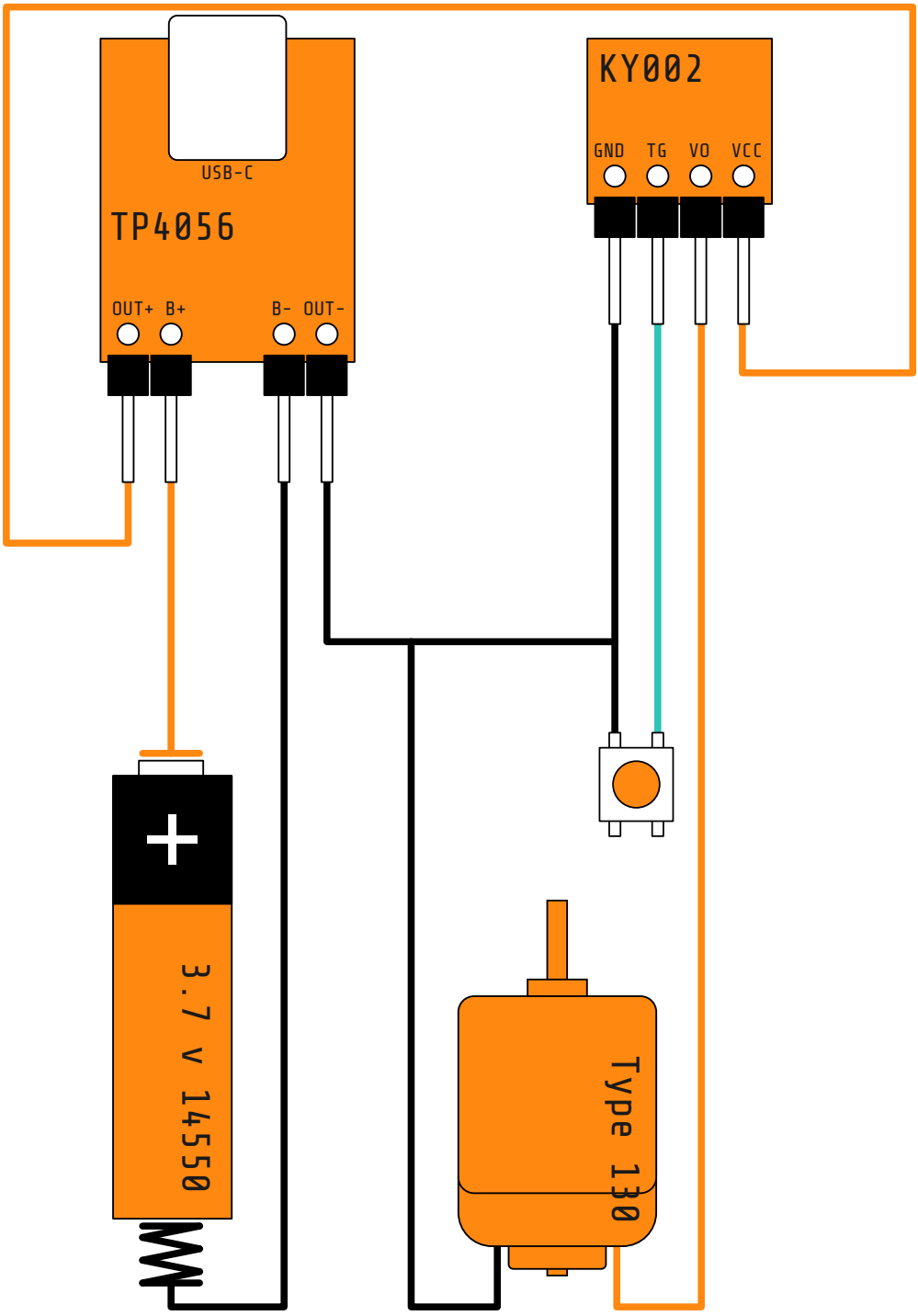
Electronics

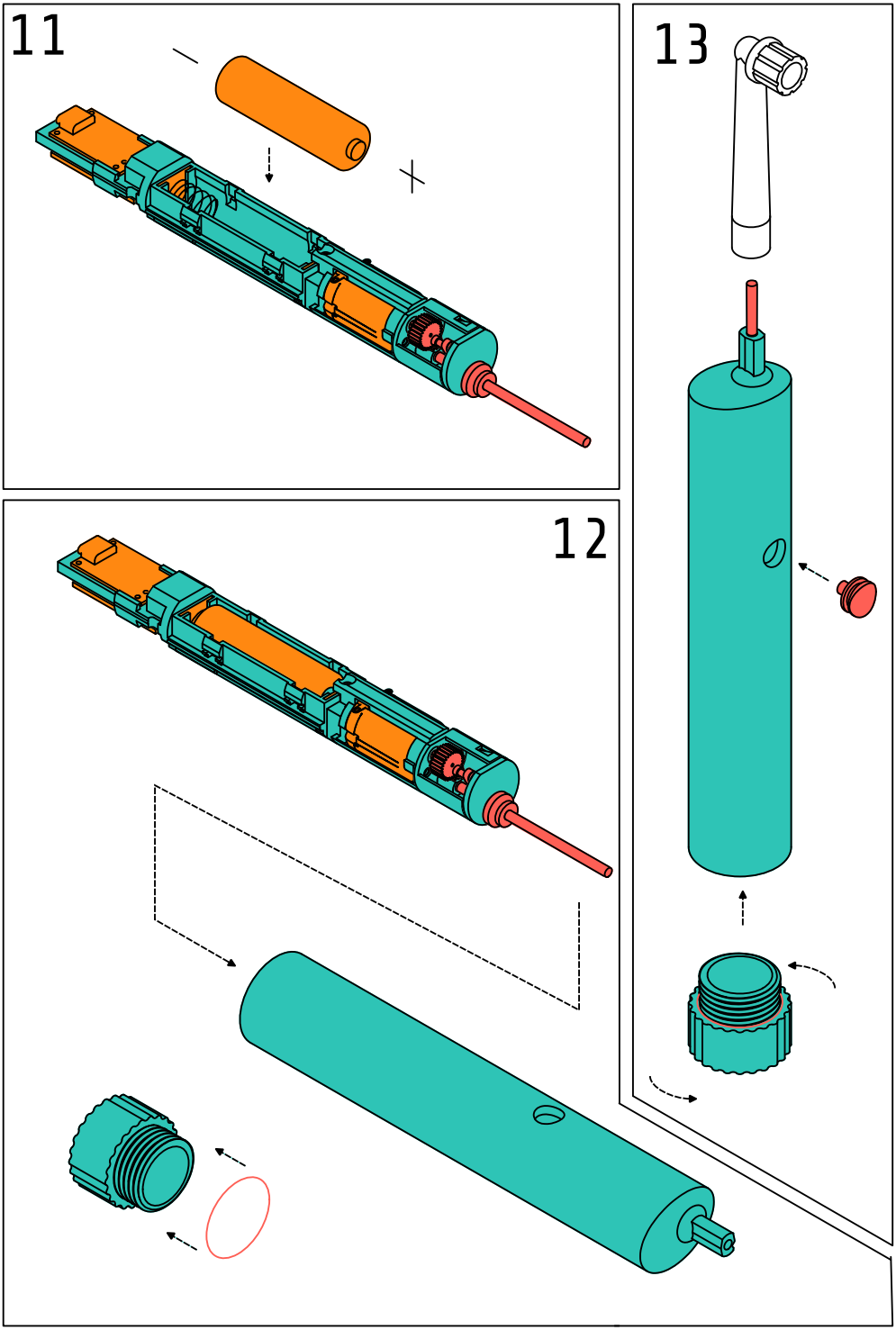
Now let's take care of the electronics.
You will need basic soldering skills for this.
If you've never soldered before, there are plenty of good tutorials online - but don't worry,
the wiring is simple.

Tools:
Soldering iron
Solder

Components:
9 DC motor (130 Type-2)
10 Battery_3.7V type 14550
11 Battery spring contact +
12 Battery spring contact -
13 Charging circuit TP4056 Type-USB C
14 Trigger Switch Circuit KY002
15 TACT button (6 x 6 x 3.1 mm)
16 Jumper wires




KY002
GND
TG
VO
VCC
USB-C
TP4056
OUT+
B+
B-
OUT-
3.7 v 14550
Type 130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13
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Congrats!

Your sustainable and repairable toothbrush is ready.

What would open source be without the contributions of the community?

So feel free to share your designs and improvements and take part in the further development of future versions.

Next versions in development:

Rotary Electric V2.0

Rotary Electric V2.1

Sonic V0.1

Rotary Electric V1.0

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Giorgi Tsutskiridze
Elisabeth Wörn

Burg Giebichenstein
Kunsthochsule Halle

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