

FLipMouse - Mouthpiece

Fabrication Note v1.0, AsTeRICS Foundation



Scope

The FLipMouse needs a stick in front to be actuated via finger or lip movements. From 2022 on, the AsTeRICS Foundation produces the mouthpieces in-house.

Basic components of the mouthpiece are:

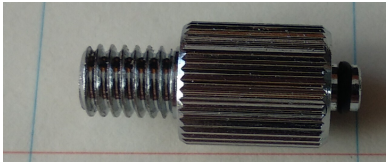
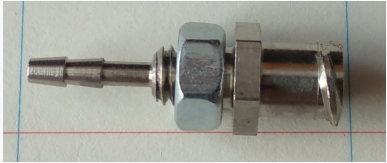

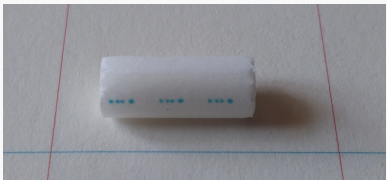

1. Acrylic pipe, variable length
2. Male Luer Lock adapter to M6
3. Filter

The acrylic pipe (Ø10/6mm) is glued to the Luer Lock adapter with epoxy resin.





Preparation


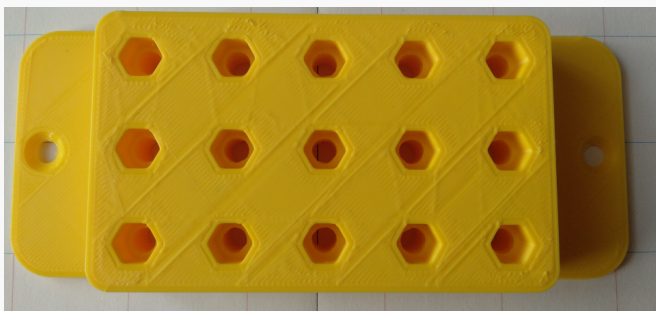
Material

Nr.	Description	Source	Image
1	Male Luer Lock to M6 adapter	https://www.droh.de/produkt/2836-luer-loc-k-adapter-mit-m6-gewinde-mannlich	
2	Female Luer Lock to pipe adapter. Note: this part is either already in the holder OR it can be taken from the FLipMouse construction kit.	https://www.droh.de/produkt/1752-luer-loc-k-adapter-mit-m6-gewinde-fur-schlauche-mit-3-mm-id-und-zur-geratemontage-weiblich	
3	Acrylic pipe (Ø10/6mm)	https://acrylhaus.com/Acrylglasrohr-rund-XT-transparent-R-10-6mm-Aussen-Innen-1000mm	
4	Cigarette filters, 6mm diameter	Local tobacco store	
5	Epoxy resin, UHU 300 or equivalent	DIY-store	

Note: Material will be referenced in square brackets: []

Tools

Nr.	Description	Source	Image
1	Mixing pan & toothpick	Included in the epoxy kit or DIY- store	
2	Miter saw	DIY-store	

Nr.	Description	Source	Image
3	Heat gun	DIY-store	
4	Mouthpiece holder	3D printed, .stl file in this folder.	

Note: Tools will be referenced in curly brackets: {}

Procedure

Cut the acrylic pipe:

1. Adjust the mitre saw {2} to the necessary length: 50, 100, 120 or 150mm
2. Cut as many pipes [3] as you want to produce
3. Use the heat gun {3} at ~120°C and heat up both ends for ~10s (removing the burr) (TBA: give exact values here)

Prepare holder and epoxy resin:

1. Place as many female luer lock adapters [2] in the holder {4} as you want to produce. Take care that both hex nuts are in the holder.
2. Attach a male luer lock adapter [1] on each female adapter by pushing and turning 180°.
3. Mix epoxy resin 50:50 in the mixing pan (TBA: give here a weight for a full holder)

Glueing:

1. Use the toothpick to apply epoxy resin on the male luer lock's [1] M6 thread. **Note:** do NOT apply too much and start applying directly on the thread.
2. Push the acrylic pipe [3] on the luer lock adapter [1]. **Note:** make sure you have clean hands.
3. Repeat for all luer lock adapters
4. Use paper or a tissue to remove any surplus epoxy.

Wait for 12h

Finalize:

1. Use the heat gun {3} at ~120°C and heat up the top for ~30s (TBA: exact value) to have rounded edges
2. Put a filter [4] into the acrylic pipe
3. TBA: how to mark the mouthpieces with a chargenumber?
4. Unscrew the luer locks, the female luer lock can be put into the construction kit.

Fabrication Records

[illegible]

