

Printable Head Strap - Proof of Concept

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Summary

Fully printable head strap as a "proof of concept" printed things can be used wearable gadget Consists of several...

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Fully printable head strap as a "proof of concept" printed things can be used wearable gadget

Consists of several parts:

- Base (Base.stl)
- Cog wheel (Wheel.stl)
- Turn wheel (to tighten everything up - Spanner.stl)
- Straps (mirrored to get everything somehow centered - Strap.stl)
- Pad (polster) to make wearing more comfortable (Polster.stl)
- Connector (to lower the strap to guide around ears - Connector.stl)

It's a "proof of concept" to showcase capabilities of 3D printed parts - feel free to modify, update, change, alter, improve... the attached STEP and Fusion360 files with your own creativity and ideas.

Hopefully this gives you **inspiration** what 3D prints can do - Have fun and stay healthy!

Print Settings

Printer:

Alfawise U30pro

Rafts:

Doesn't Matter

Supports:

No

Resolution:

0,2mm layer height

Infill:

up to 100%

Filament:

AmazonBasics ABS, PETG, TPU

random

Notes:

Straps have been tested in ABS with 100% infill to grant stability and durability over a period of time wearing this construction. PETG might be possible as well, but not tested.

Print pad in TPU or something soft to increase comfort

Post-Printing

Assembly

Press cog wheel into base (3 noses for orientation) and fiddle straps through the guide holes. Make sure the straps snap at the same position and snap the "Spanner" onto the cog wheel - use the clips for guidance - move the straps left and right to find a proper position.

Check pictures for guidance - overview shown below

Connectos will snap into the straps at the designed points so they give stability and offer the possibility to rotate the connection point (see pictures)

Stuff in STEP and Fusion360 files

Those files contain all exported STL files, as well as some additional stuff for testing and aligning the mechanism applied on this POC - not everything is necessary... the items listed as STL files should be sufficient.

In case you're going to use this stuff, I recommend to to use a gadget of choice (i.e. a microphone, close-up light, body cam, ... or anything else you would like to attach around your neck)

Additional and IMPORTANT Note:

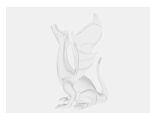
Even the design will - maybe - fit to some printed Covid 19 face masks, **I do not recommend** to use it for this purpose, since the design does not serve any safety requirements or applies to any regulations, standards or legal requirements for personal protection equipment.

Use this design for your personal application of gadgets like microphones, body cams or lighting (as done by me) to help in daily life activities, but **do not** rely on any "possible" safety - not only, but especially in these (Q2/2020) days!

Use this design wisely and everything you do will be at your own risk and responsibility!

Category: Accessories

Model files



poc_-_printable_head_strap.f3d



strap.stl



wheel.stl



polster.stl



spanner.stl



connector.stl



poc_-_printable_head_strap.step



base.stl

[Find source .stl files on Thingiverse.com](https://www.thingiverse.com/thing:1111111)

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