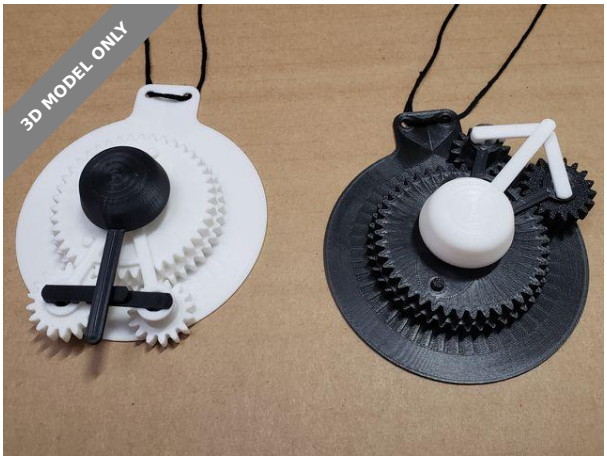
Printables by JOSEF PRUSA




# Gender Gear Pendant v2 (easier to remix!)

settinger

VIEW IN BROWSER

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## Summary

Turn the dial to change ♀/♂ symbol on the pendant. Snap-in-place parts, ready to modify as either .SCAD or .STEP files!

Art & Design > Other Art & Designs

Tags: art gear gears mechanicaltoy wearable necklace pendant gender astrology

After taking the gear pendant v1 to a few events, I got some great feedback and suggestions for what to try next! But since I used SOLIDWORKS to make v1, it's not that easy for other people to remix. So I recreated the whole thing, from scratch, in OpenSCAD, in the hopes that other people can customize it to their tastes. If you print and/or customize this, a few requests:

- Respect the CC-BY-SA license
- Using the .SCAD file requires you to have the OpenSCAD MCAD libraries installed; I'm 99% sure OpenSCAD installs these libraries by default, but I thought I should point it out just in case.
- If people like your prints, please let me know so I can share in the good feelings
- If you make money off your prints, please donate some of your proceeds to a relevant local charity group or mutual aid fund (and

again, please let me know so I can share in the good feelings!). Local ones that mean a lot to me include Pasadena For All and St. John's Community Health, and US- and Canada-wide Trans Lifeline.

Speaking of licenses, the pins used in this design are based on the classic pins by emmett (CC-BY-SA). I took measurements off the STLs and used that as the starting point to get the right dimensions and the right snappiness on mine.

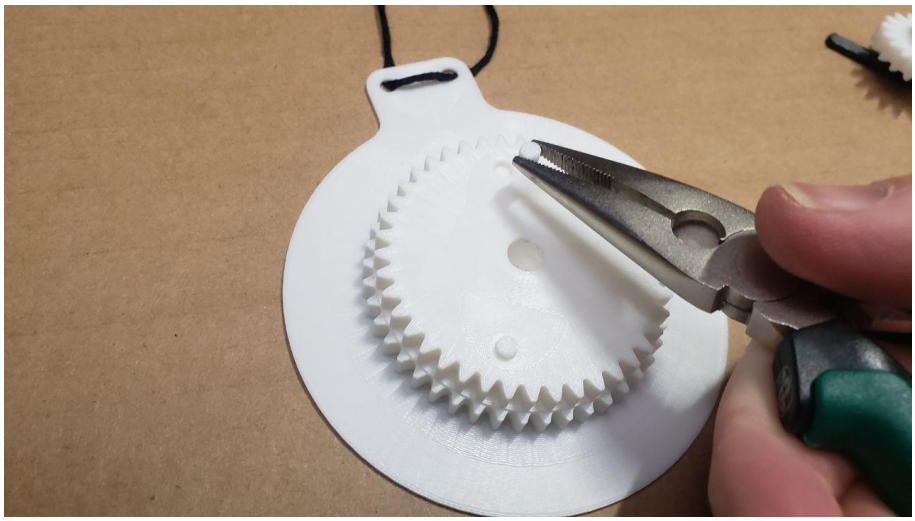
## Assembly instructions

### Step -1: Printing

Print the following in a background color of your choice: base_gear, dial_frame, 15_tooth_gear, 18_tooth_gear. Depending on which base gear you choose, you may need to print the optional limiter_pegs. There are pre-arranged plated STLs you can grab in the downloads section.

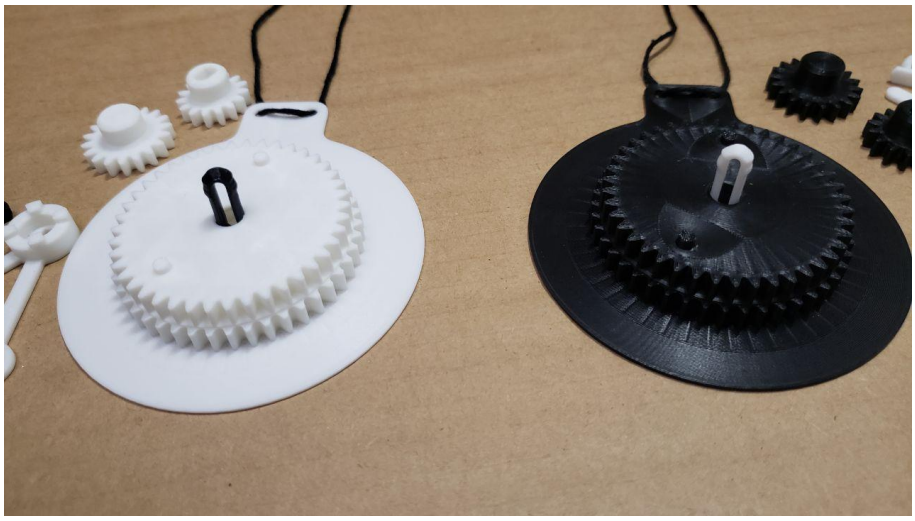
Print the following in a foreground color of your choice: center_dial, dial_pins. There are pre-arranged plated STLs you can grab in the downloads section.

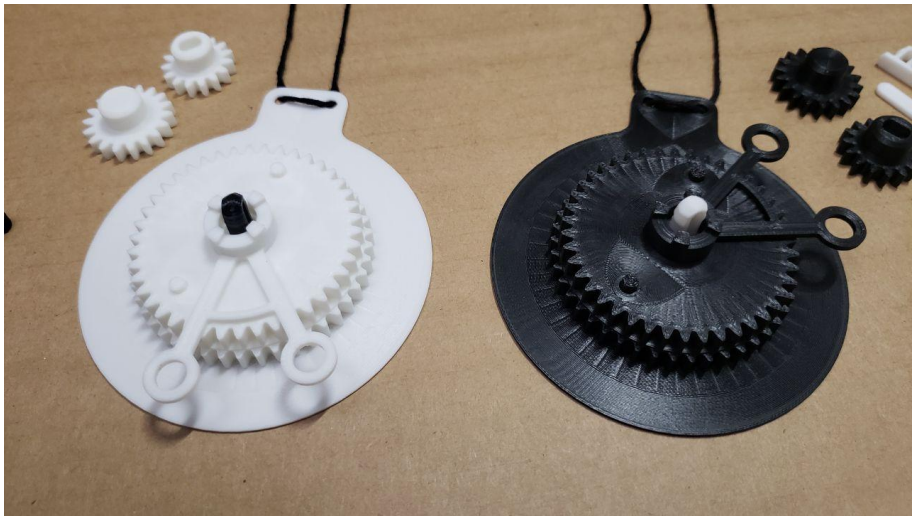
**Step 0: (optional) insert limiter pegs**



If you printed one of the base pendants with holes for removable limiter pegs, now's a good time to test and see if they fit securely. These pegs keep the dial frame from turning past the positions for ♀ or ♂.

**Step 1: Dial frame**

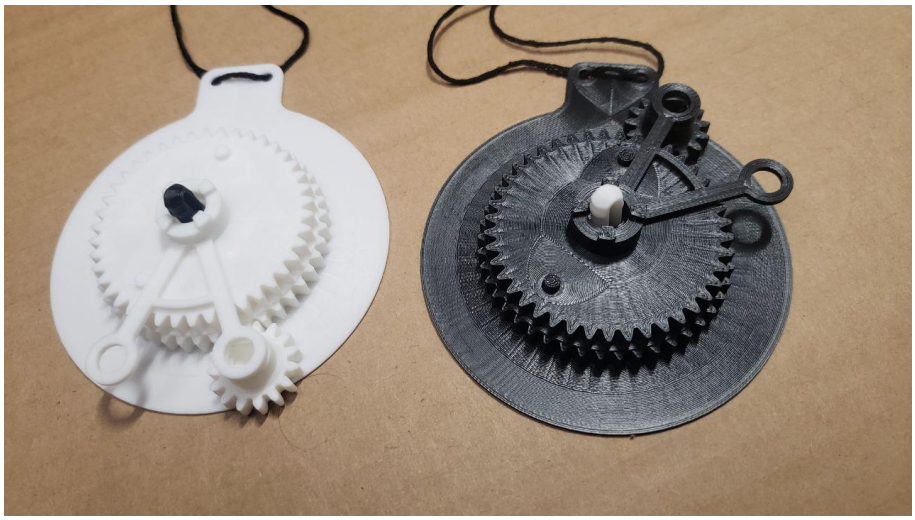




Insert the long pin (the one that doesn't have a dial indicator on one side) into the center of the base gear. Line up the dial frame and snap it in place over the pin.

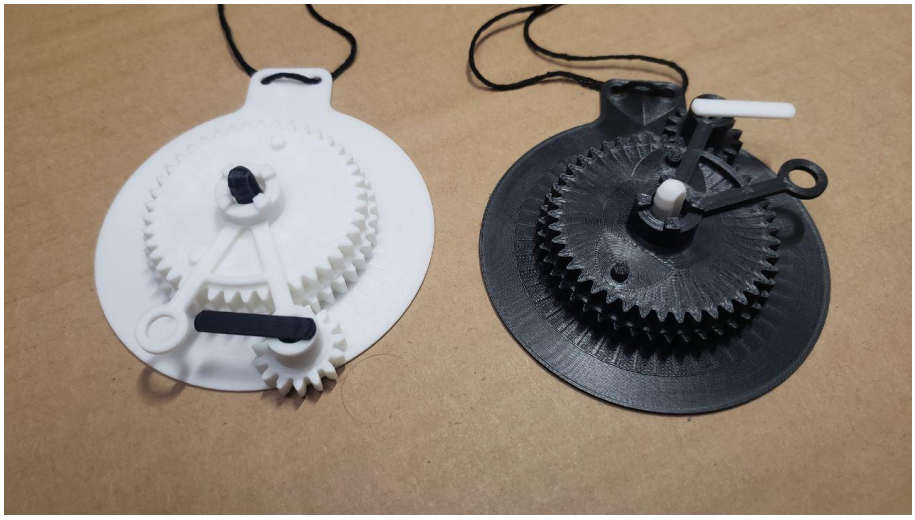
**Step 2: the 15-tooth gear**

Look for a notch in the 15-tooth gear, on one side of the slot for the dial pin. This notch indicates which direction the dial should be inserted.



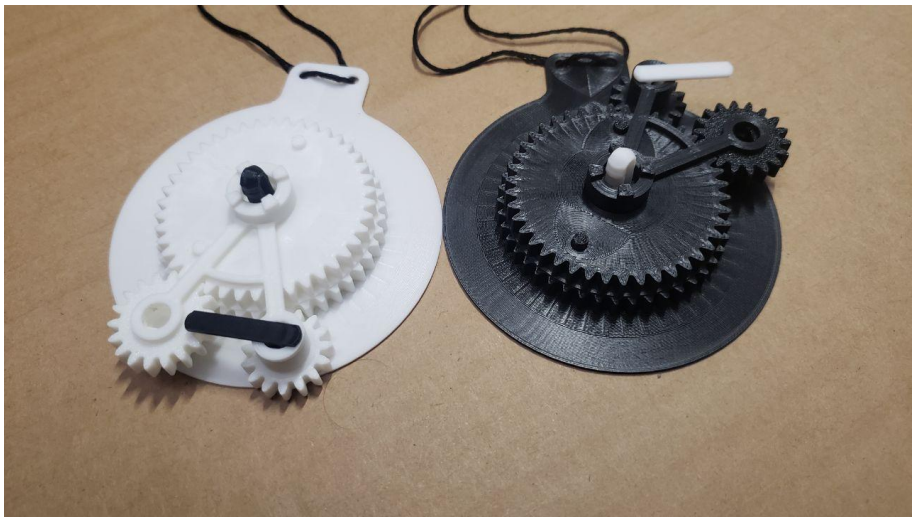
Slide the gear into place at one of the end positions, either ♀ or ♂. In the ♂ position, the gear should be lined up under the gear holder at the top of the model, and the notch should be pointing to the **right**. In the ♀ position, the gear should under the right-most gear holder, and the notch should be pointing to the **left**.

Whichever position you have the gear in, fix the gear in place by inserting the shorter dial pin.



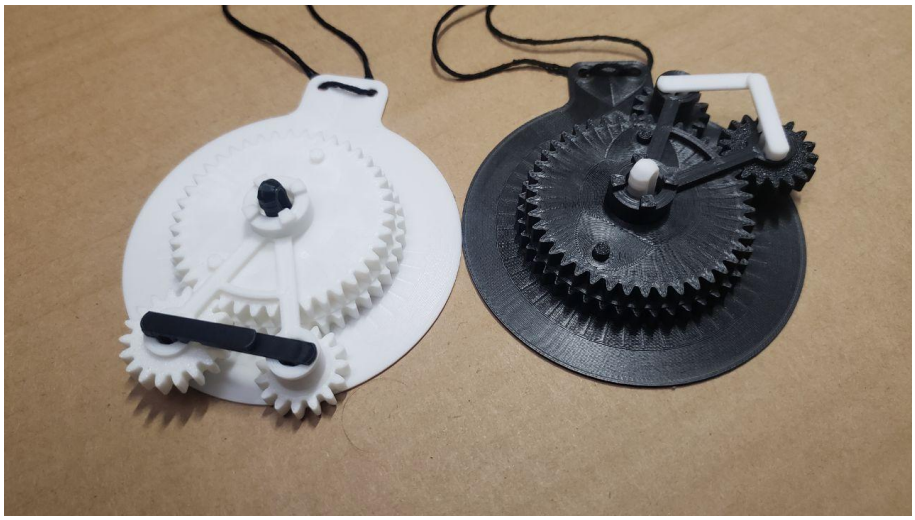
**Step 3: the 18-tooth gear**

The 18-tooth gear is symmetrical, so there's no notch to worry about aligning.

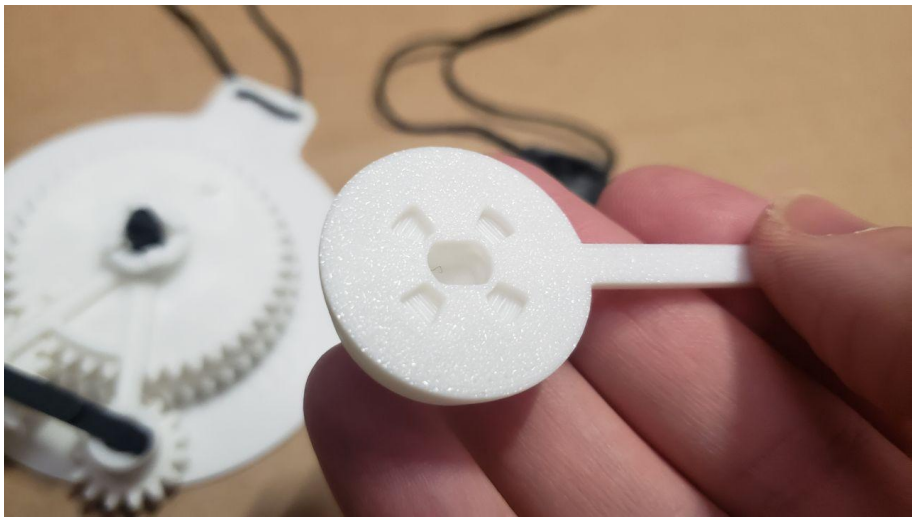


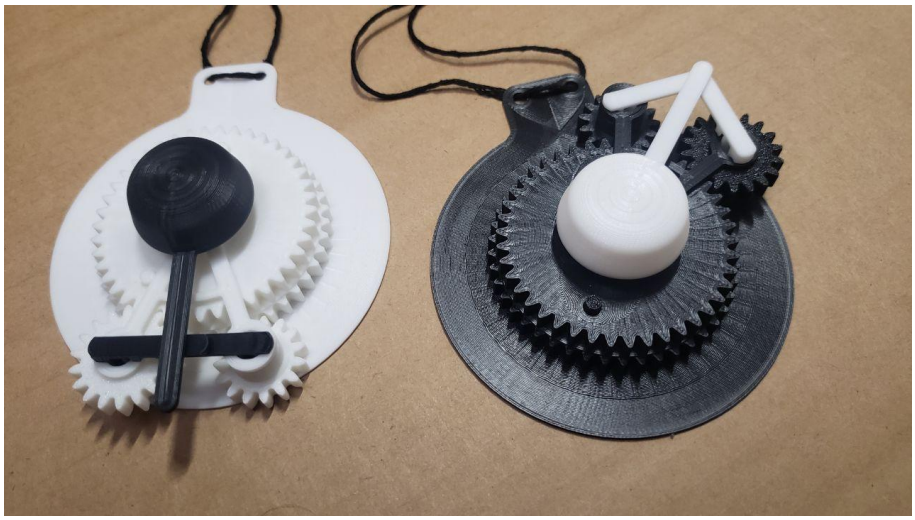
Slide the 18-tooth gear into place at one of the end positions, either ♀ or ♂. In the ♀ position, the gear should under the left-most gear holder, and the pin slot should be aligned so the dial will point to the to right. In the ♂ position, the gear should be lined up under the gear holder at the right of the model, and the dial should be pointing upward.

Whichever position you have the gear in, fix the gear in place by inserting the taller dial pin.



**Step 4: The center dial**





The center dial has holes that line up with the notches in the top of the dial frame. This helps reduce play while turning the assembly.

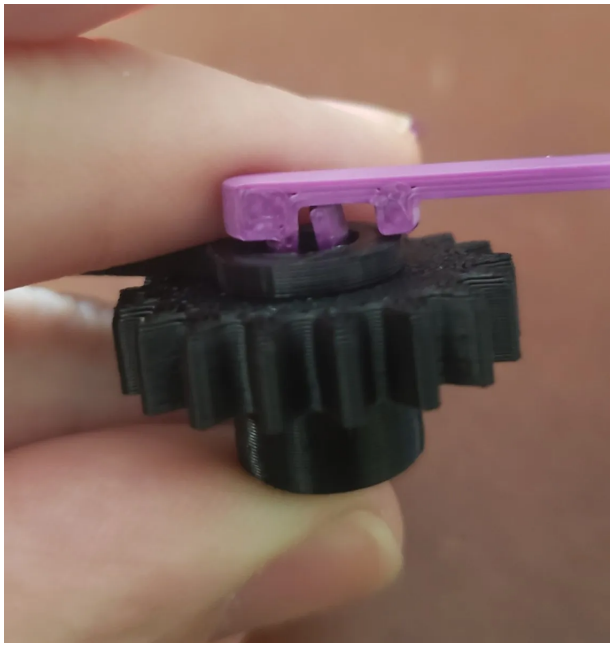
Run some string through the holes in the pendant base and wear it proudly! The gears should be stiff enough to hold their position; after a

while I did notice the gears loosening up and sliding more, but I think that can be adjusted for by strengthening the A-shaped frame piece or shortening it slightly.

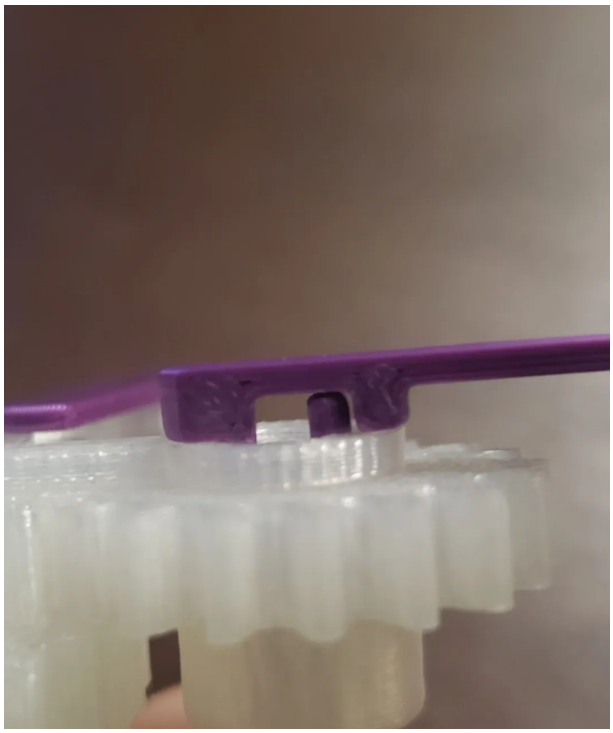
## Troubleshooting

The pins need some flex to work properly. I printed them in PLA. Pins printed in polycarbonate were too rigid and snapped instead of sliding into place.

If the dials scrape against each other while turning, check if they are fully seated in the gears. In this picture you can see the pin wall is bent inward, meaning it's not fully clicked into place:



For comparison, here is a pin that is fully clicked into place:



This happened to me because, on these prints, my black filament was overextruding pretty dramatically.

## This remix is based on

**Gender Wheel Pendant**

by settinger

## Model files

**Individual STLs** 9 files

**18_tooth_gear.stl**

The gear that meshes with the upper, 42-tooth part of the base gear.

### 15_tooth_gear.stl

The gear that meshes with the lower, 45-tooth part of the base gear.

### dial_frame.stl

The frame that holds the dials and rotating gears.

### pegs_for_base_gear_pendant.stl

Small pegs that can be inserted/removed to keep the dial from rotating too far.

### center_dial.stl

The main dial piece. Print this in a fun color.

### dial_pins.stl

The pins that snap into the center of each gear. Print these in a fun color.

### base_gear_pendant_removable_pegs.stl

Base gear with sockets for removable limiter pegs.

### base_gear_pendant_fixed_pegs.stl

Base gear with fixed pegs to keep the dial frame in place.

### base_gear_pendant_no_pegs.stl

Base gear with no peg holes for a cleaner look.

## Plated STLs

4 files

**gendergears_dials_plate.stl**

All of the primary-color parts

**gendergears_plate_no_pegs.stl**

All the secondary-color parts with no limiter pegs

**gendergears_plate_removable_pegs.stl**

All the secondary-color parts with removable limiter pegs

**gendergears_plate_fixed_pegs.stl**

All the secondary-color parts with fixed limiter pegs

## STEP files

8 files

**center-dial.step**

**center-pin.step**

**dial-pin-1.step**

**dial-pin-2.step**

**gearframe.step**

**planet15.step**

**planet18.step**

**sun-gear.step**

## Source files

2 files

**gendergears.scad**

OpenSCAD source file

**gendergear_step.fcstd**

FreeCAD file that I used to convert the .SCAD file to .STEP parts.

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