# Misi'sGuides

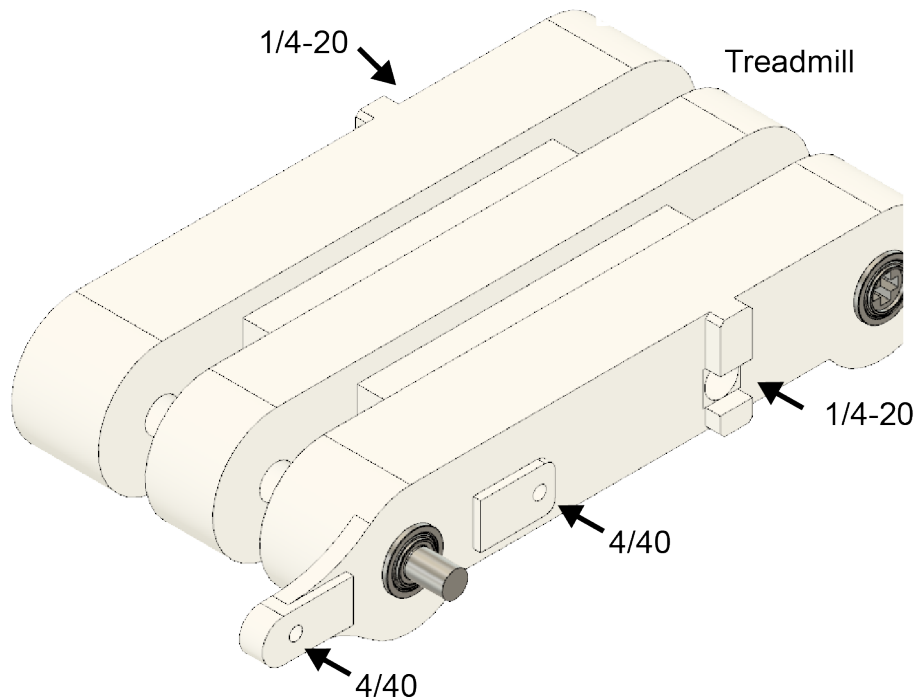# Treadmill (Rinberg's lab)

**Last update:** Mihaly Voroslakos (2025. August 29.)

**BOM (Bill of Materials)**

https://github.com/misiVoroslakos/3D_printed_designs/blob/main/Treadmill_Rinberg/BOM_Treadmill_Rinberg_v02_encoder.txt
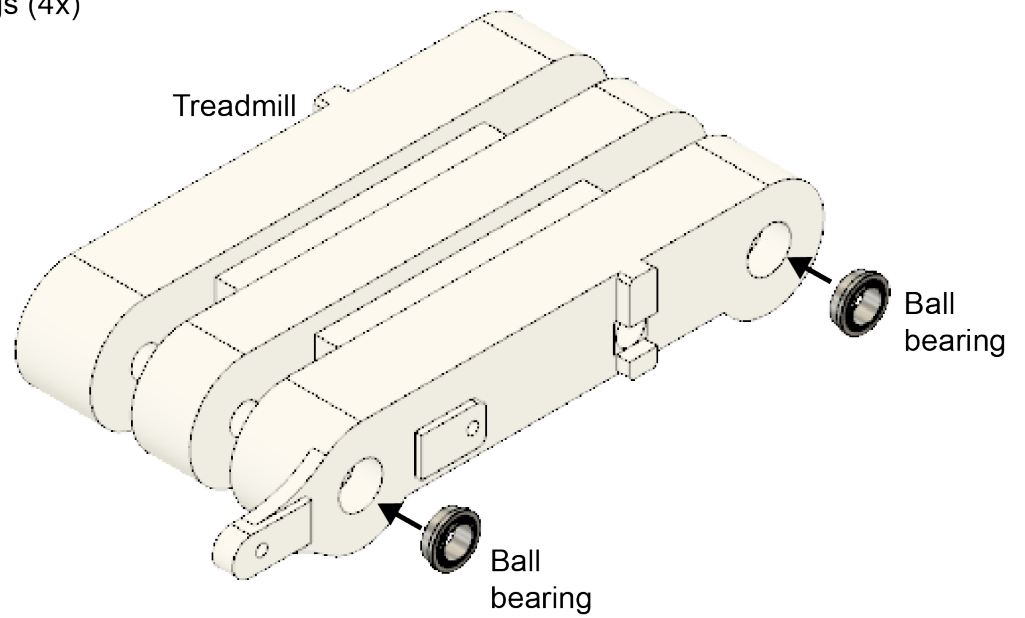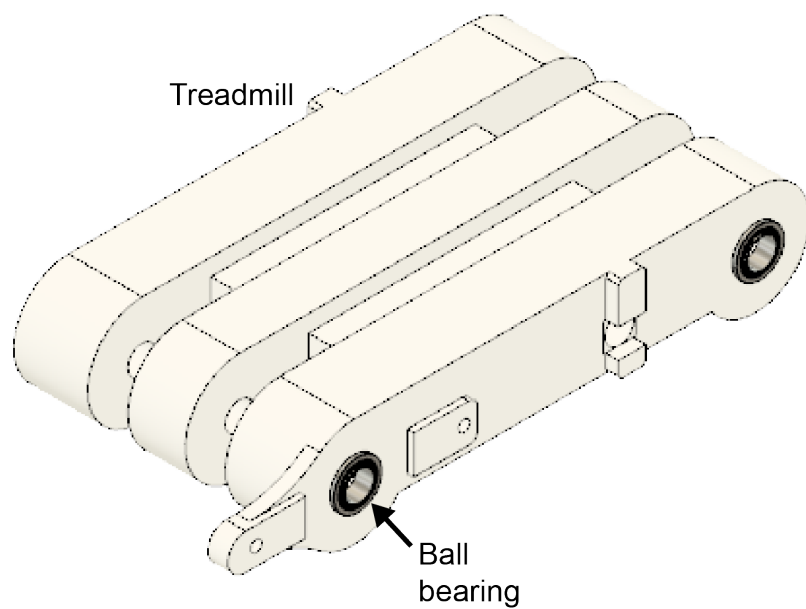
**Detailed explanations of the process**

Tapping



1. Tap 1/4" (1/4-20) holes on both sides of the Treadmill.
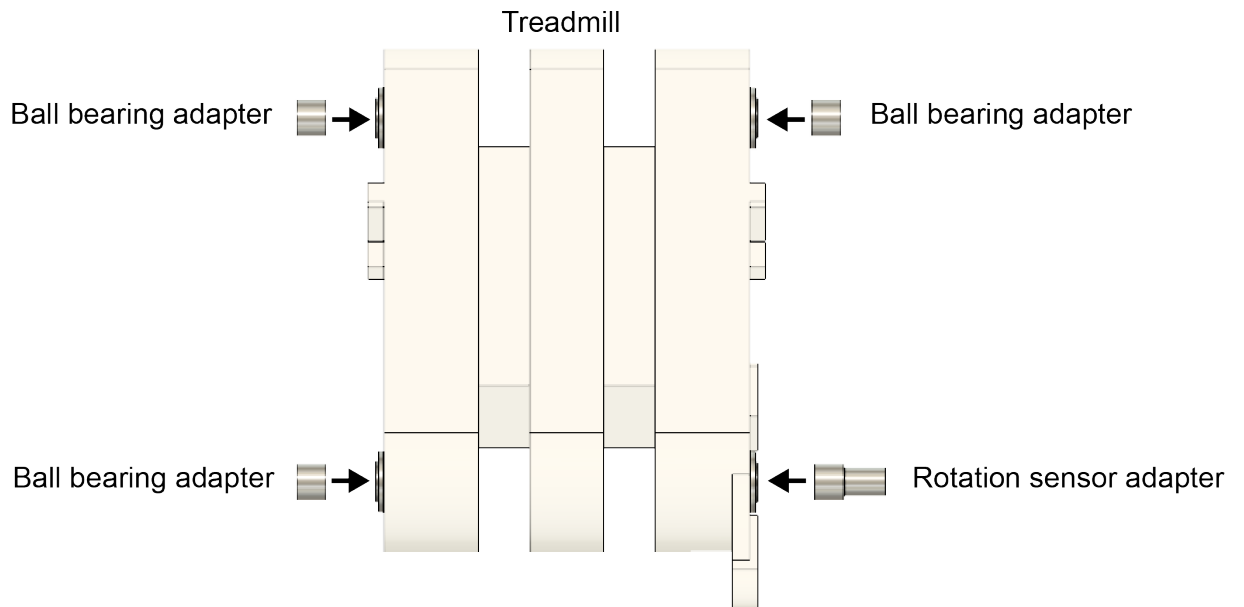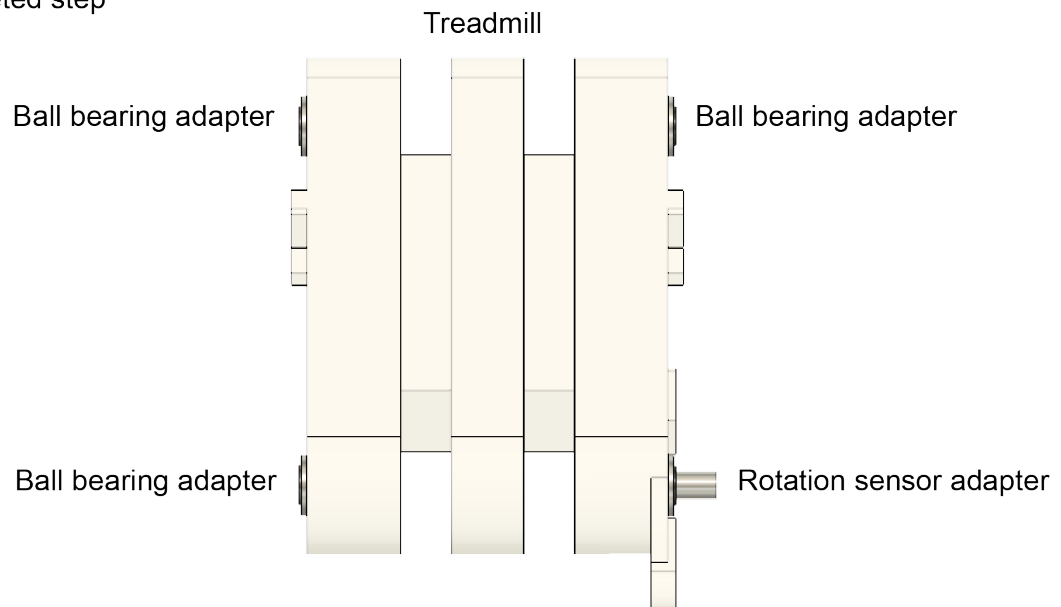2. Tap 4-40 holes for the encoder.

Insert ball bearings (4x)

Treadmill

Ball
bearing

Ball
bearing

Completed step

Treadmill

Ball
bearing

1.    Make sure to adjust the hole so the ball bearing fits tightly.

Insert ball bearing adapter

Treadmill

Ball bearing adapter → ← Ball bearing adapter

Ball bearing adapter → ← Rotation sensor adapter

Completed step

Treadmill

Ball bearing adapter     Ball bearing adapter

Ball bearing adapter     Rotation sensor adapter
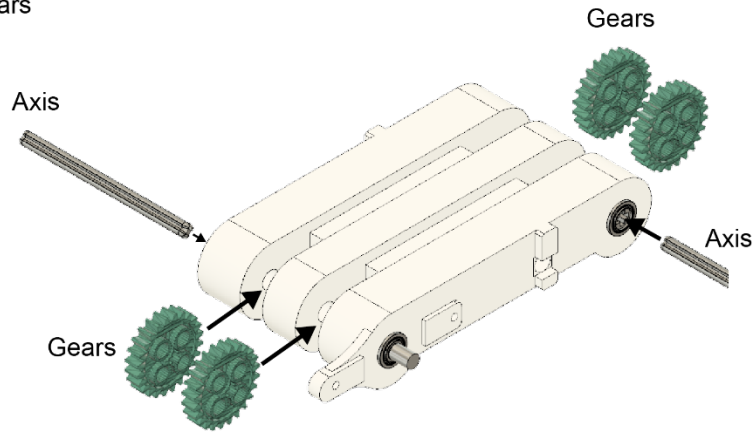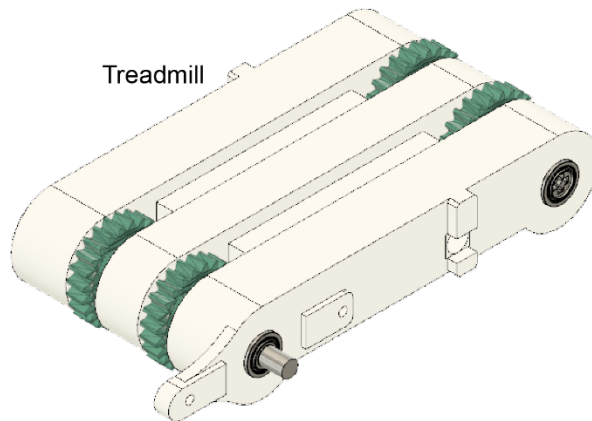
1. Make sure to adjust the outer diameter of the adapters so it fits inside the ball bearing tightly.
2. Make sure to adjust the 'x hole' of the adapter so the Lego axis can fit tightly.

Insert axis, gears

Gears

Axis

Gears

Axis

Gears

Completed step

Treadmill

Completed step
(transparent treadmill)

Treadmill

Axis