## Rack Mount Wood Board



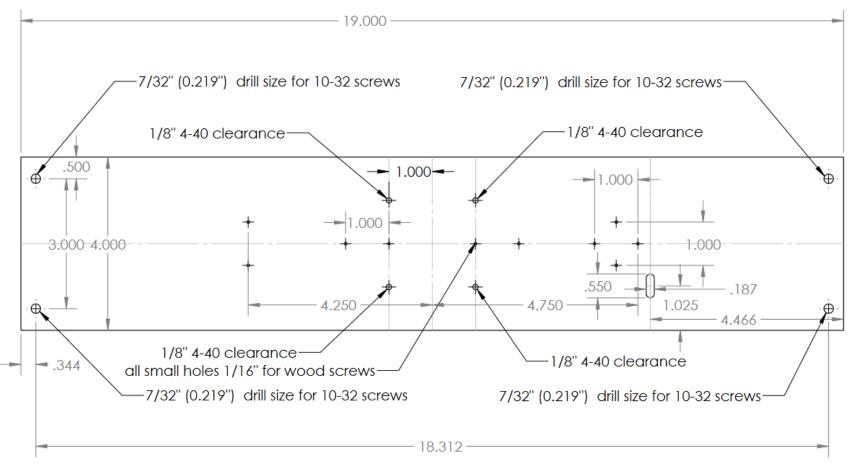




#### **MEMSDuino**

Lafe Spietz NIST 2024

#### 1/2 thick white oak board



rack-mount-board

# Slightly more than 2U Blank Rack Panel



### Drill bits to use

- 1/16" bit: pilot holes and holes for wood screws.
- 1/8" bit: through holes for 4-40 screws
- 7/32" for 10-32 thumb screw clearance holes
- 5/32" to mill out slot for 4 wire header cable





#### 4"x24"x0.5" White Oak Boards





https://ocoochhardwoods.com/detail/?i=124wo

## Knurled Brass Thumb Screws to Mount in Panel



https://www.mcmaster.com/92421A645/

#### Rack Mount Nuts





Quality Products. Service Excellence.

#### 10-32 Rack Rail Clip Nuts 1421N Series





Clip Nuts (Also known as Speed nuts or Timmerman nuts) are a great alternative to **Cage Nuts** and have many more uses. Whether your rack has non-threaded round holes or square, clip nuts are an easier solution to speed up your installation.

#### **Features**

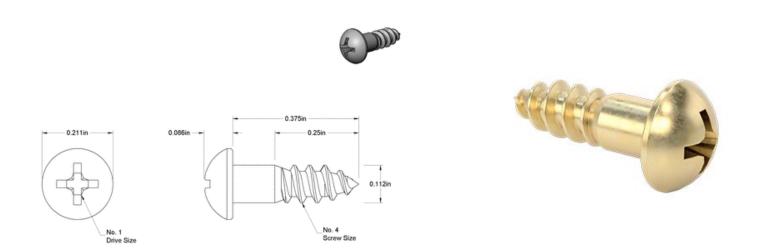
- . 10-32 clip nuts for non-threaded rack rails.
- · Heat-treated by means of austempering.
- · Available in black or plated steel finish.
- · Ships in a clam shell or resealable jar, depending on quantity.

#### **Specifications**

- Constructed of SAE 1050-1065 spring steel.
- · Recommended torque spec 31.4 +/- 20% inch-lbs
- . For use with 0.069-0.079" panel thickness.
- Hardness: HRC 38-42.
- . Maximum load rating will vary depending on rail mounting and cabinet load rating.
- . 1421NP are zinc plated CR3.

https://www.mouser.com/ProductDetail/Hammond-Manufacturing/1421NP25?qs=yc9RBI4tIALvGirsWAVfbg%3D% 3D

### Wood screws



https://www.mcmaster.com/98685A540/

#### 4-40 Brass screws and washers

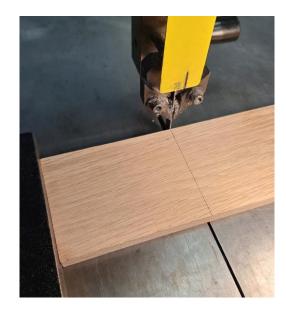


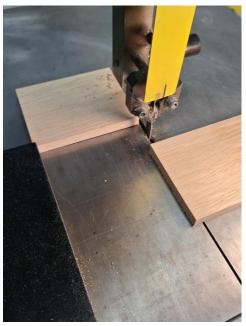
https://www.mcmaster.com/93465A113/

https://www.mcmaster.com/92916A320/

### Cut board off at 19 inches







### Sand or file edges

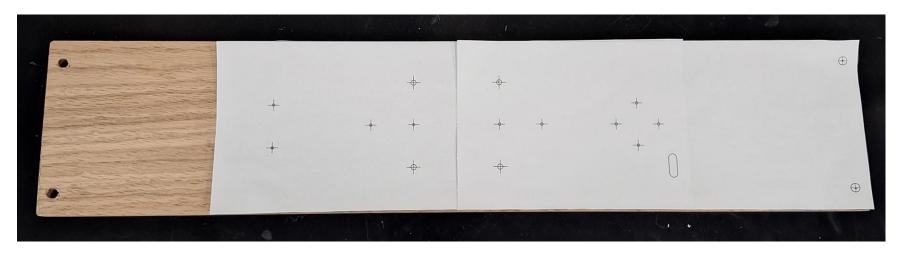




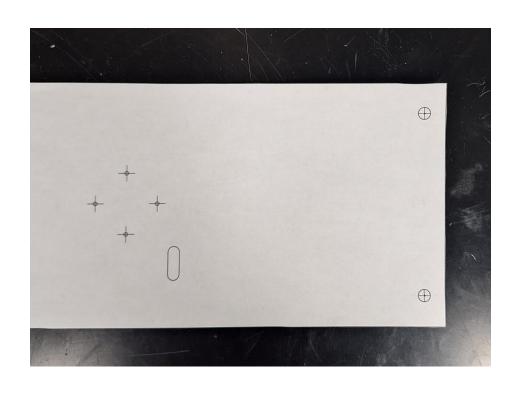
# Print Templates And use for Hole Punches

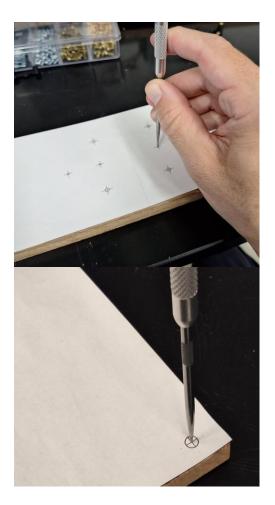




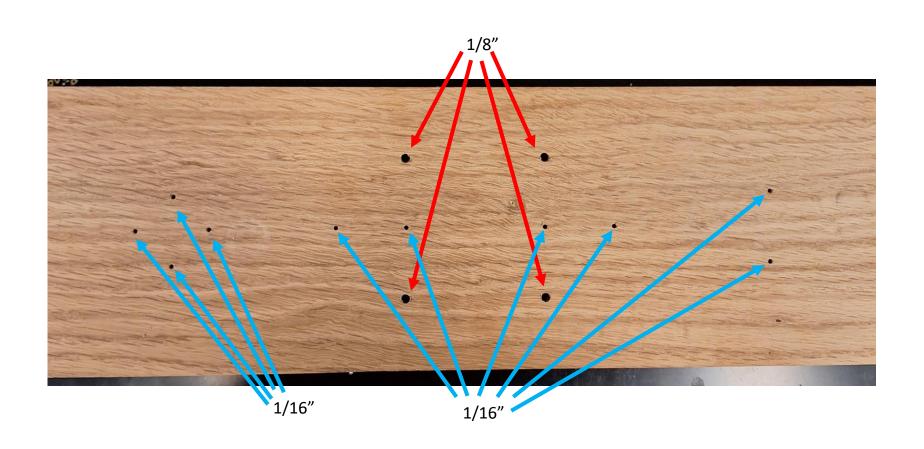


# Punch hole locations with sharp object





### Drill pattern in center of board



### Rack, nut and thumb screw detail



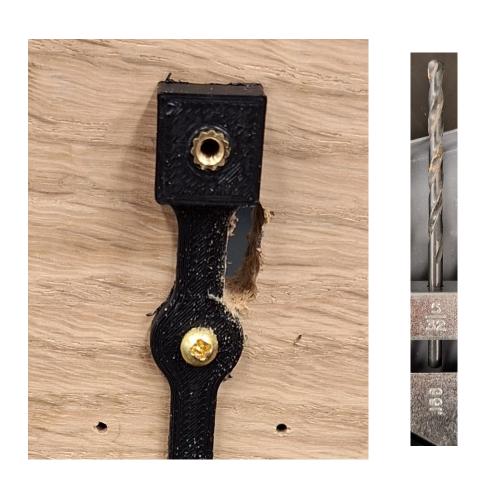








# Hand-drilled cutout for 4 pin connector



# Full assembly with Bud Box and 3d printed parts

