

# Recoverable microdrive assembly instructions.

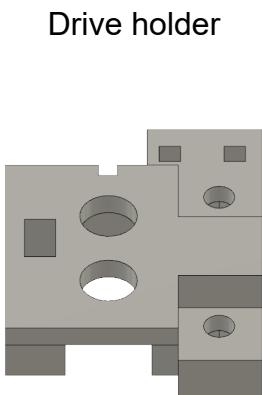
Design name: rat 1/2" v21

Travel distance: 4.8 mm

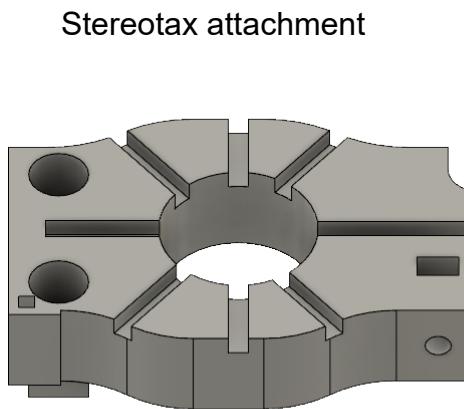
Shell base: 3.2 x 7.5 mm (WxL)

More information is available at:

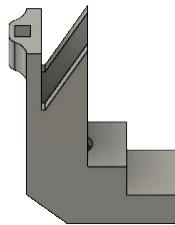
- <https://github.com/YoonGroupUMich/Microdrive> or
- [https://github.com/buzsakilab/3d\\_print\\_designs/tree/master/Microdrives/Plastic\\_recoverable](https://github.com/buzsakilab/3d_print_designs/tree/master/Microdrives/Plastic_recoverable)
- or contact me (Misi Voroslakos) directly at voroslakos@gmail.com



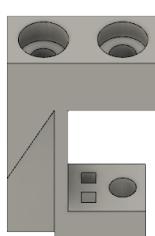
Drive holder



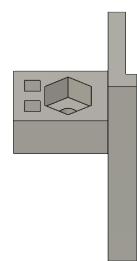
Stereotax attachment



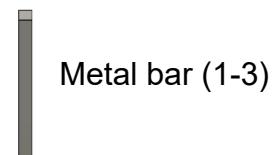
Shell



Drive



Arm



Metal bar (1-3)



00-90 nut (7x)

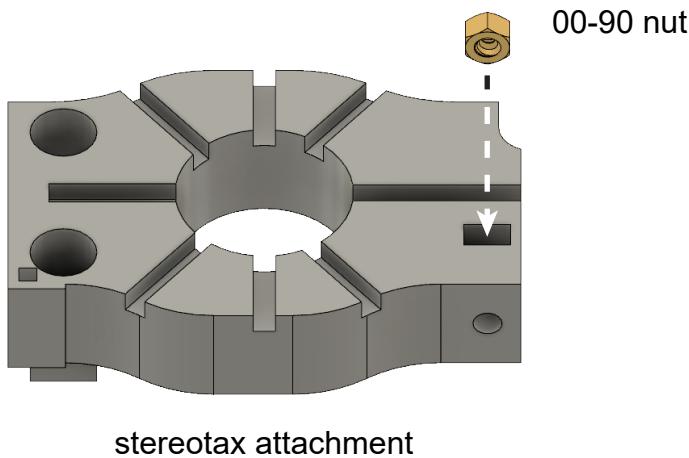


00-90 screw (2x)  
flat head

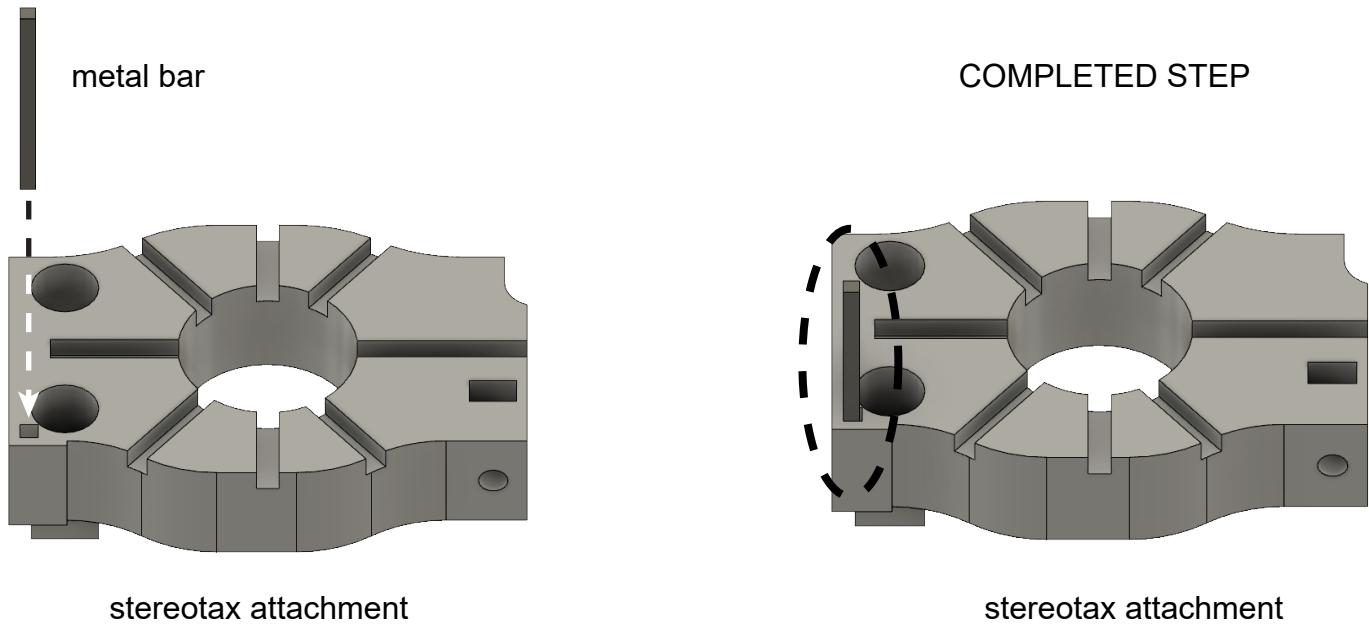


00-90 screw (4x)  
torx head (T2)

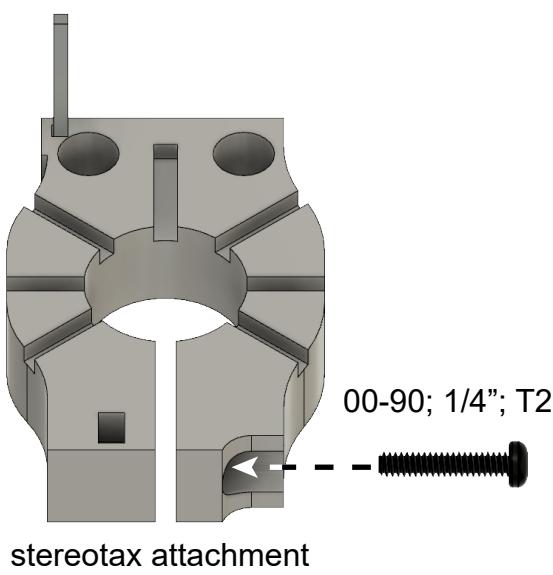
**1. Insert 00-90 nut into stereotax attachment.**



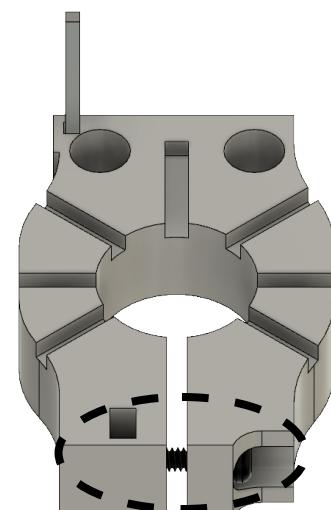
**2. Insert metal bar into stereotax attachment.**



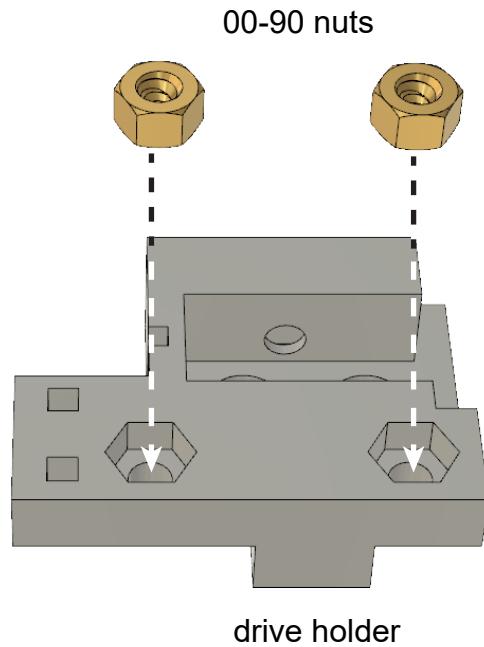
**3. Insert 00-90 1/4" T2-screw.**



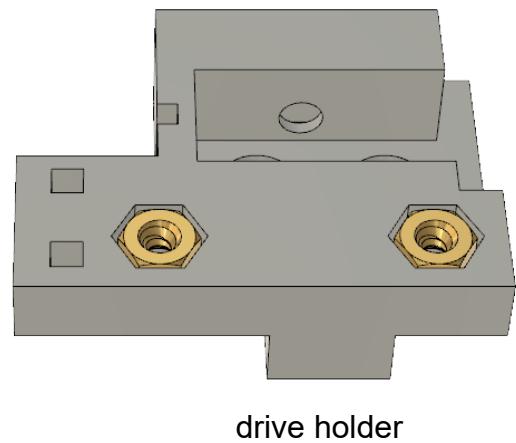
COMPLETED STEP



**1. Insert 00-90 nuts into bottom of drive holder.**

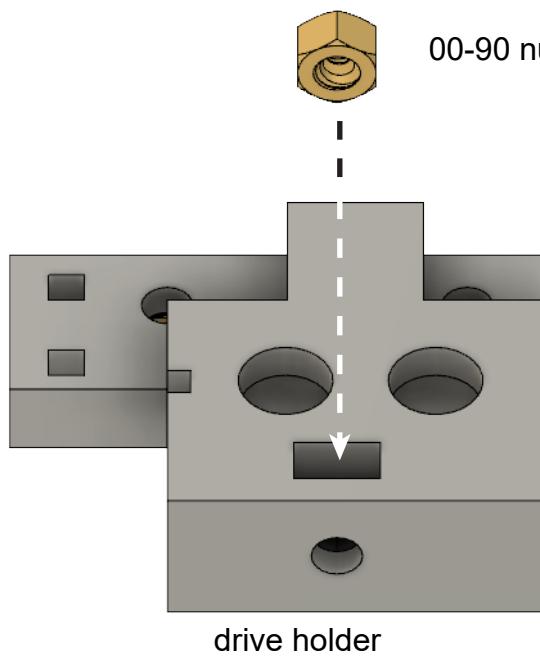


COMPLETED STEP

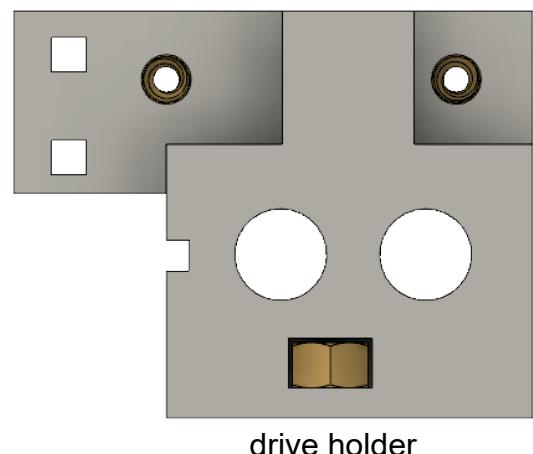


drive holder

**2. Insert 00-90 nut into top of drive holder.**

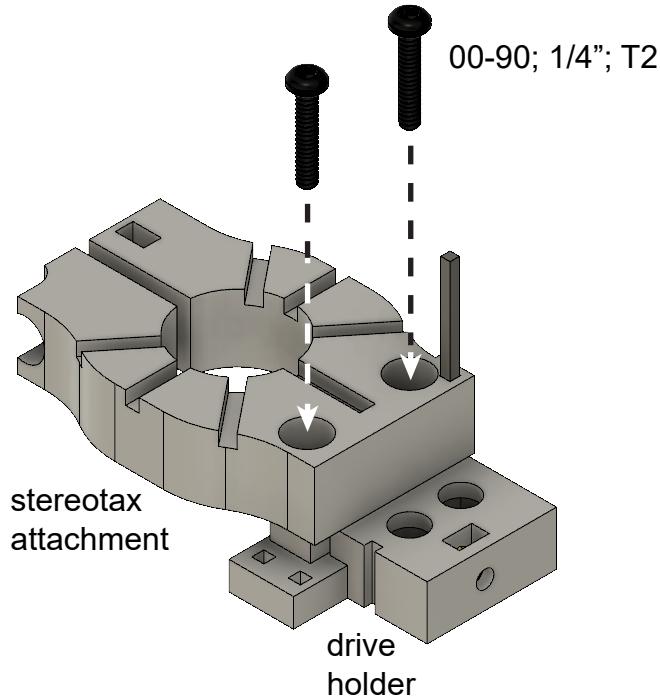


COMPLETED STEP

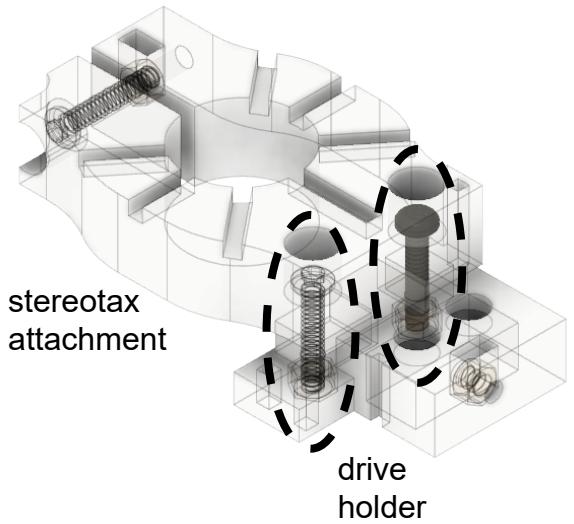


drive holder

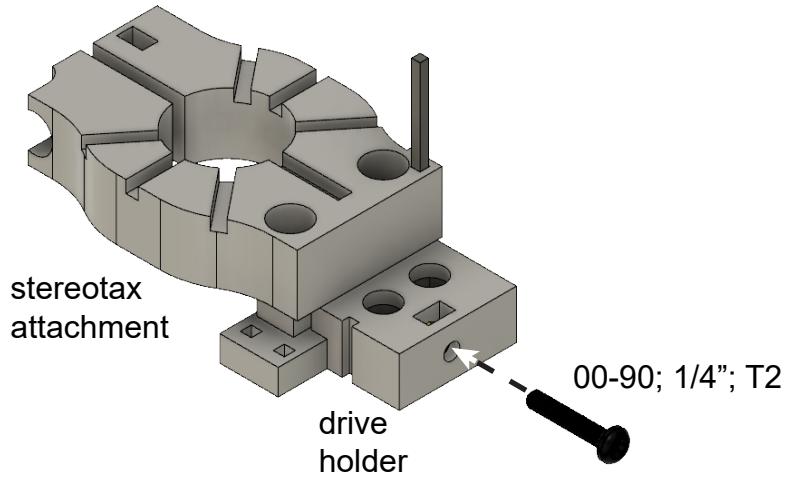
## 1. Insert 00-90 1/4" T2-screws.



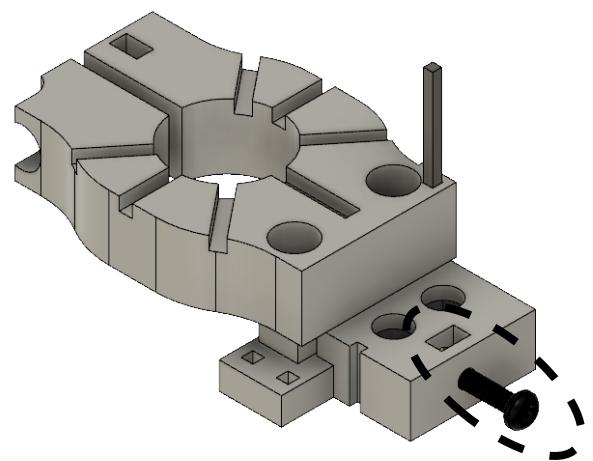
COMPLETED STEP



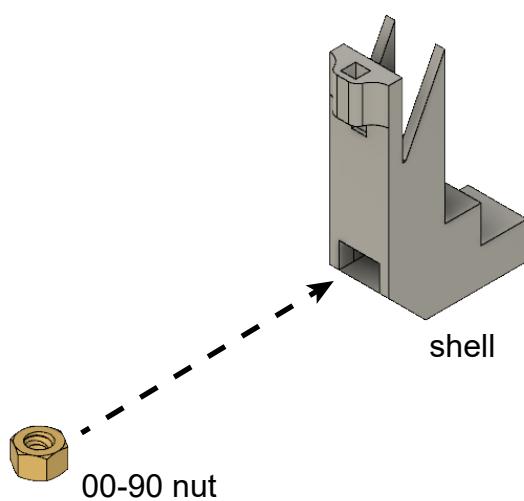
## 2. Insert 00-90 1/4" T2-screws.



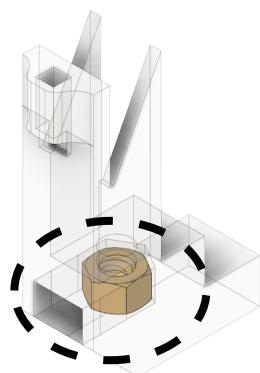
COMPLETED STEP



**1. Insert 00-90 nut into shell.**

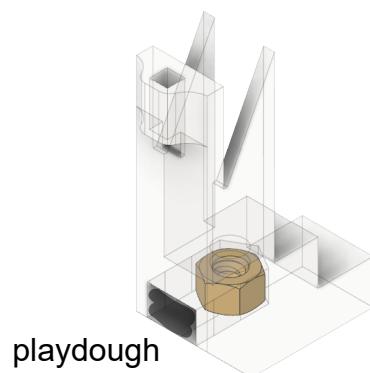


COMPLETED STEP



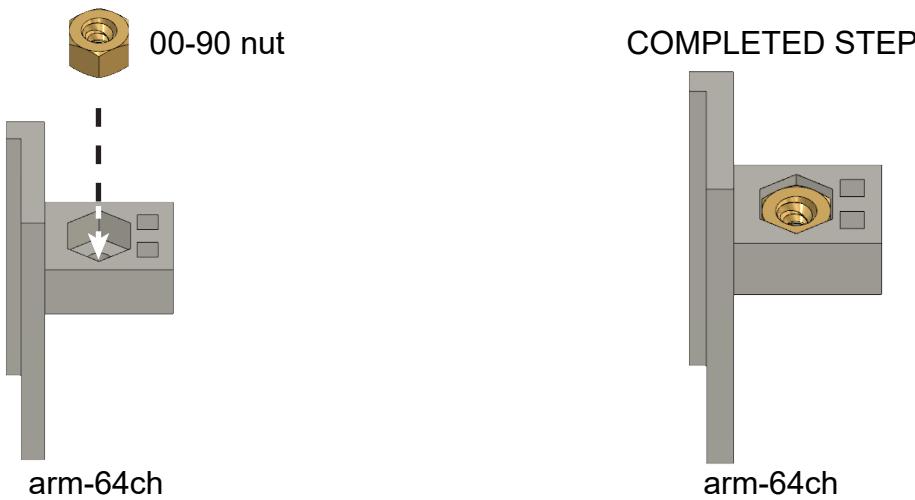
**2. Seal the hole with playdough.**

It will prevent cement flowing into the hole/nut during surgery.

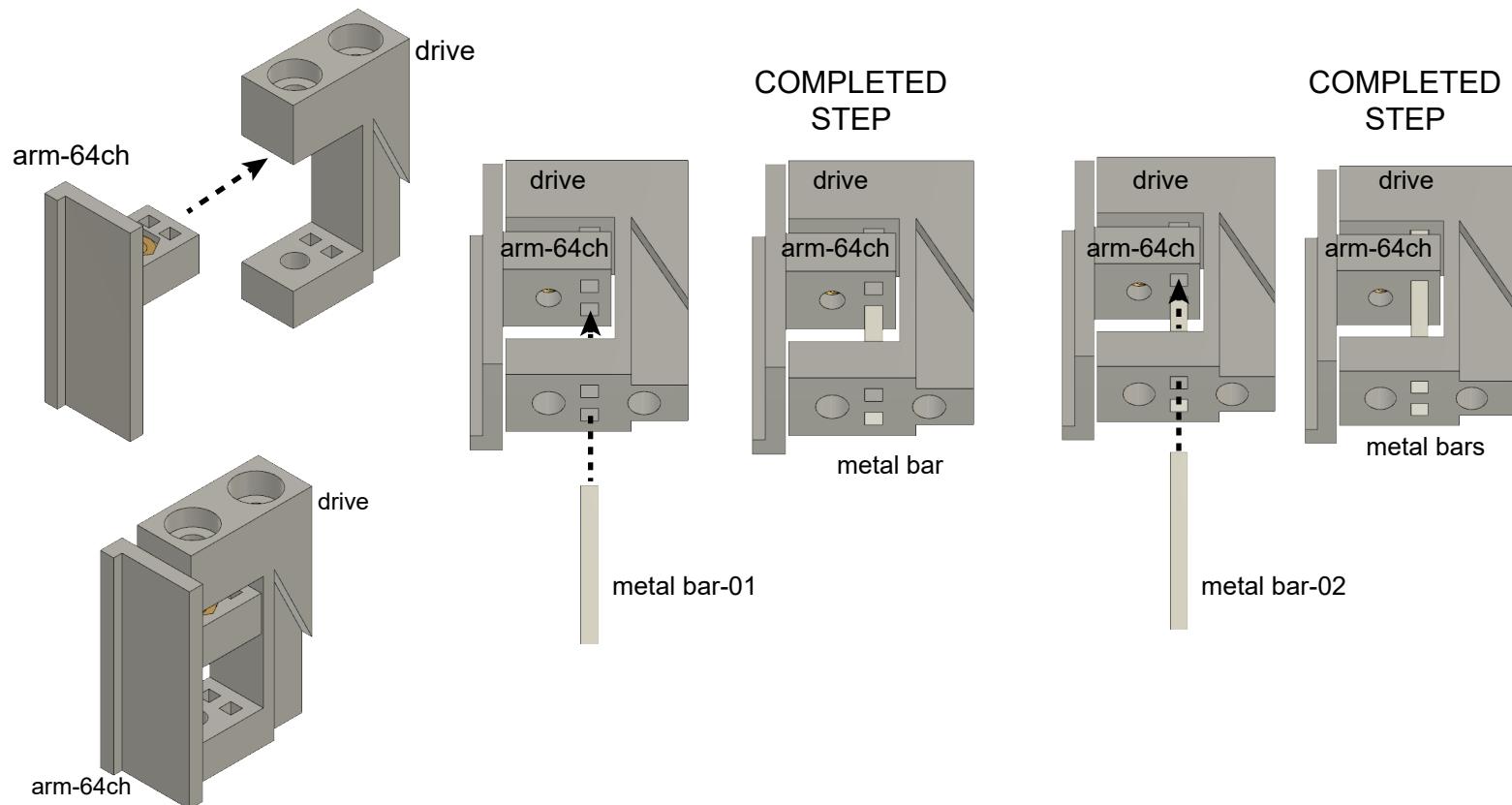


**3. Cover the playdough with cement.**

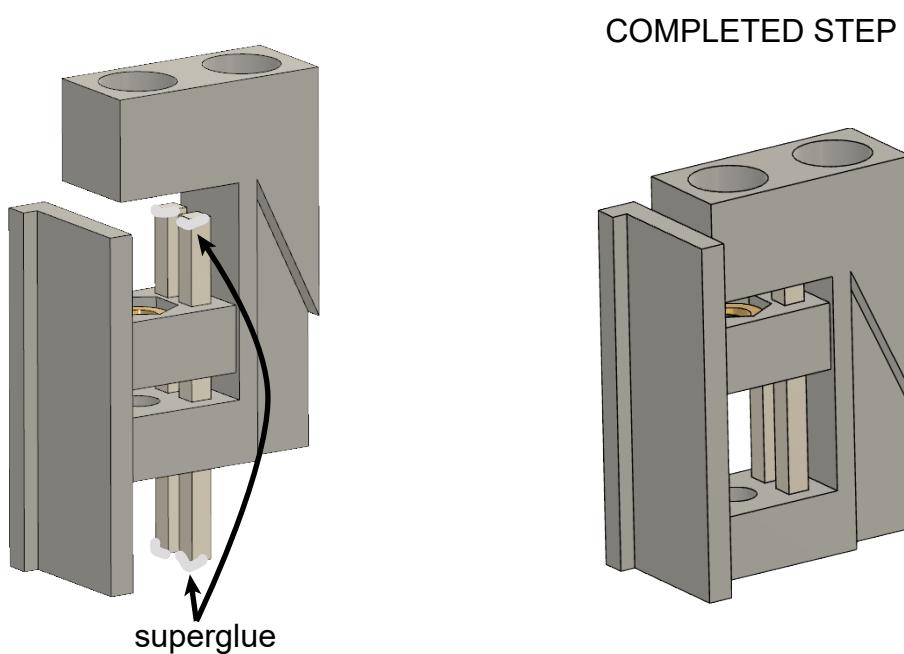
### 1. Insert 00-90 nut into arm.



### 2. Align arm and drive and insert metal bars.



### 3. Glue metal bars into drive body.



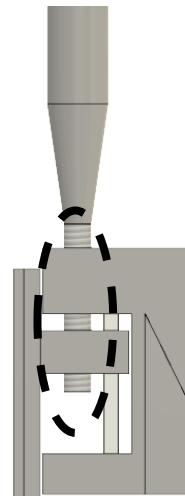
#### 4. Tap the arm through the arm nut (00-90 tap).

Option-1 (preferred)



00-90 tap

COMPLETED STEP



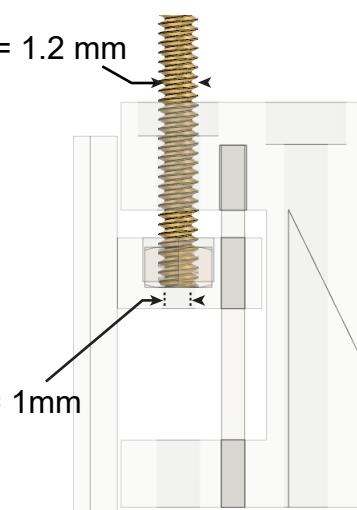
Option-2

00-90 screw

$d = 1.2 \text{ mm}$

$d = 1 \text{ mm}$

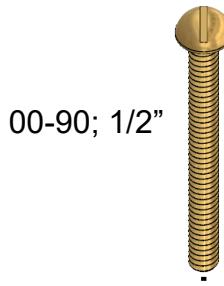
COMPLETED STEP



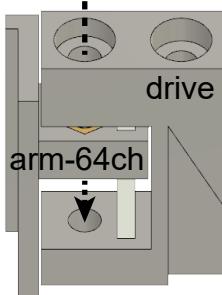
$d = 1.2 \text{ mm}$

$d = 1.2 \text{ mm}$

#### 5. Insert 00-90; 1/2" screw into arm nut.



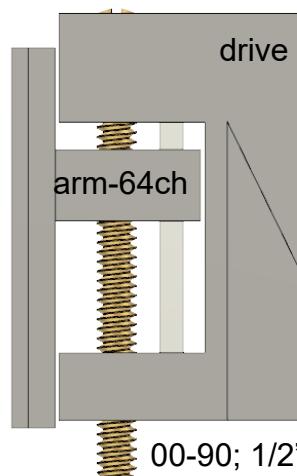
00-90; 1/2"



drive

arm-64ch

COMPLETED STEP



drive

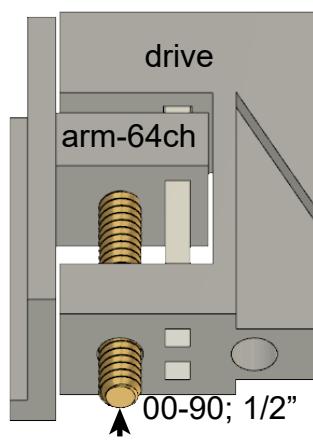
arm-64ch

00-90; 1/2"

#### 6. Solder 00-90 nut to 00-90 screw.

Tighten nut completely then release a quarter/half turn. Apply a drop of flux then solder nut to screw.

COMPLETED STEP

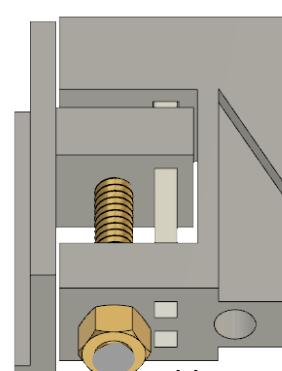
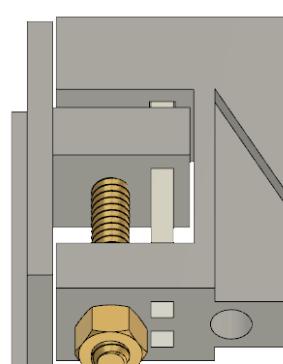


drive

arm-64ch

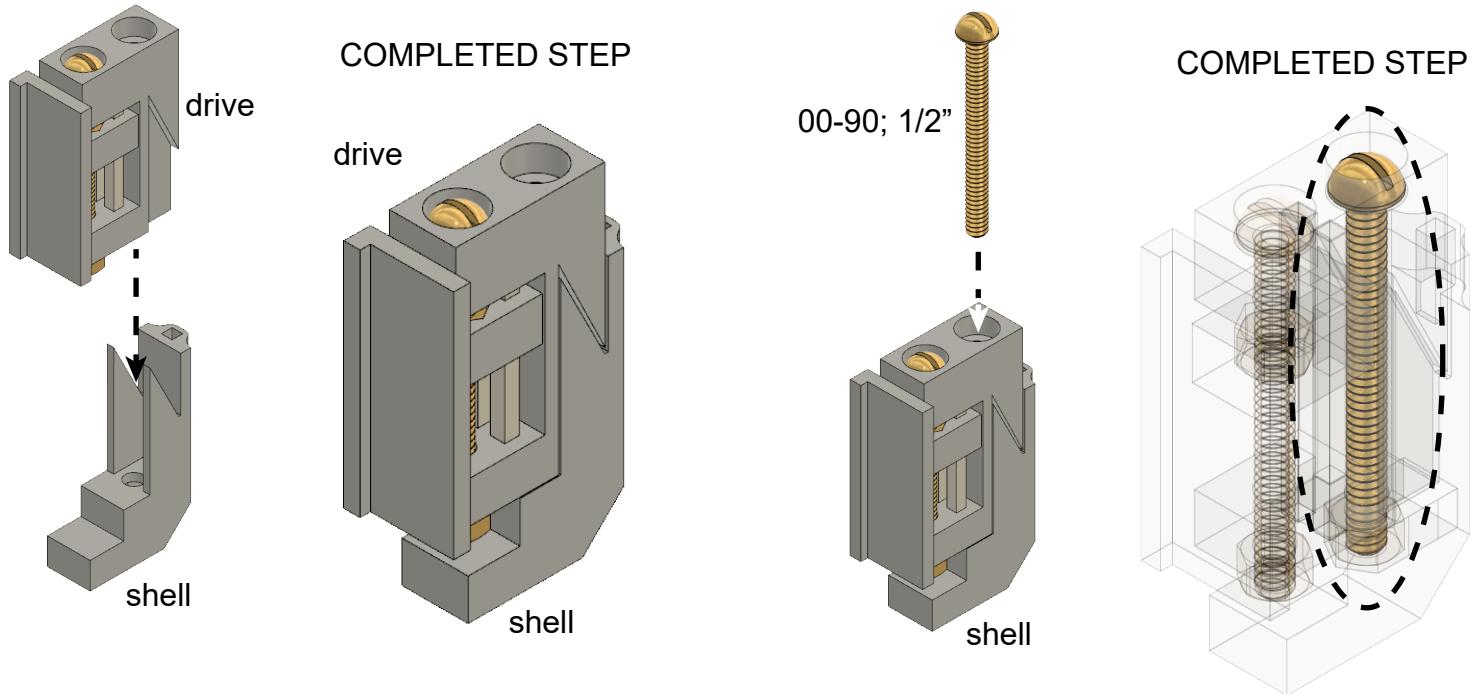
00-90; 1/2"

00-90 nut



solder

## 1. Insert drive into shell then insert 00-90; 1/2" screw into shell.



## 2. Attach silicon probe to arm.

See video instruction here: <https://www.youtube.com/watch?v=2L5RHcbsU7o>

## 3. Attach drive holder to drive. Lock the drive with side screw.

Be aware that you are pushing metal against plastic (if it is too tight, you can break the drive!!!).

