myRIO Robotics Kit: MOUNT ASSEMBLY INSTRUCTIONS

XTPower Battery

myRIO

makerBoard

Ribbon Cable

USB-USB Cord

XTPower Battery-myRIO Cord

XTPower Battery Mount

myRIO Mount

M3 Nuts x20

M4 Bolts x6

M3x6mm Square Head Bolts x28

Hex Key

150mm Beam   100mm Beam   40mm Beam
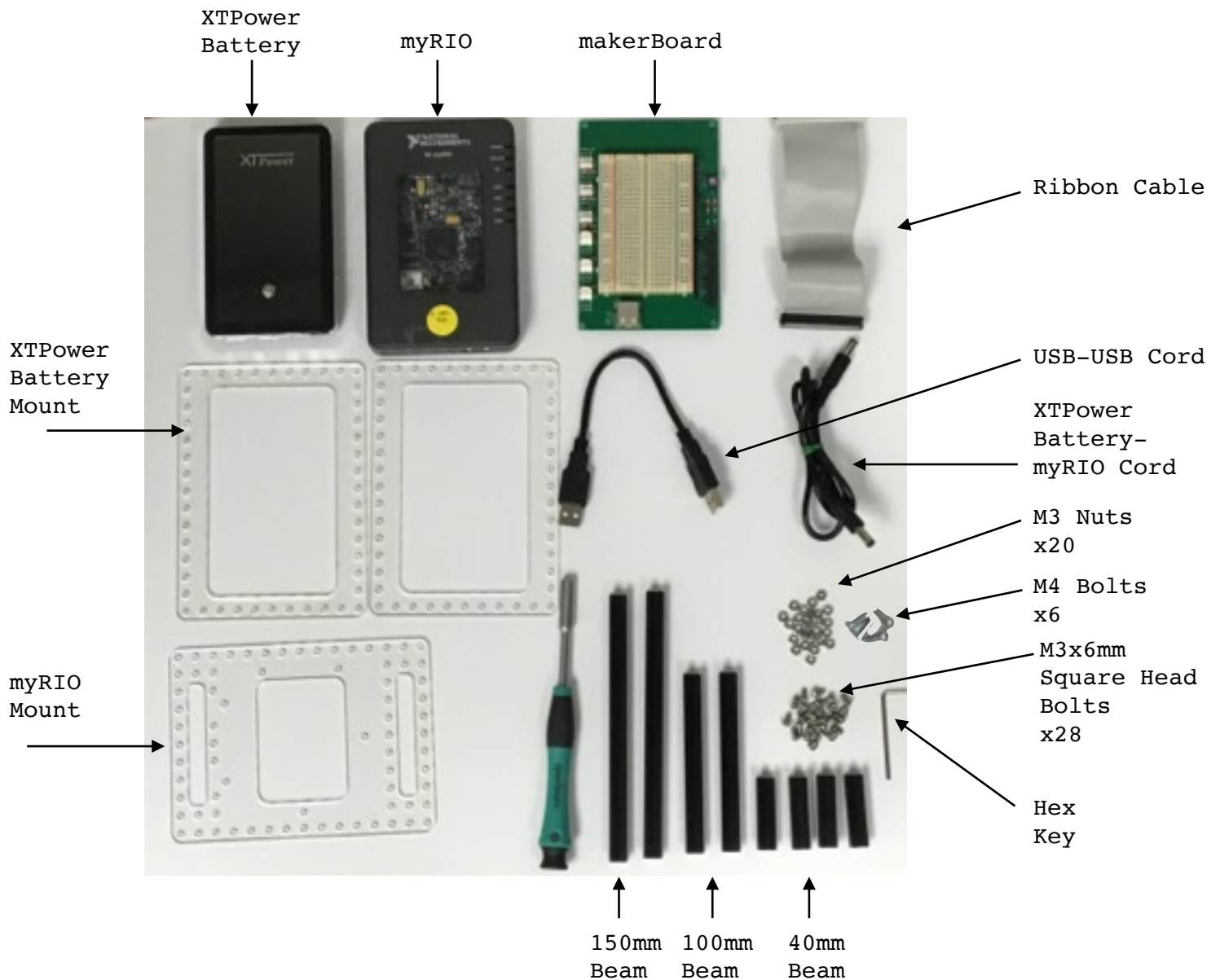
You'll Need:

- XTPower Battery x1
- myRio x1
- MakerBoard PCB x1
- myRio Mount x1
- XTPower Battery Mount x2
- USB-USB Cable x1
- XTPower Battery-myRIO Cord
- Ribbon Cable x1

- 150mm Beam x2
- 100mm Beam x2
- 40mm Beam x4
- M3x6mm Square Head Bolts x28
- M3 Nuts x20
- M4 Bolts x6
- Hex Driver x1
- Hex Key x1

Assembling the Battery Mount:

You'll Need:
- XTPower Battery
- XTPower Battery Mount x2
- 150mm Beam x2
- 100mm Beam x2
- M3x6mm Square Head Bolts x12
- M3 Nuts x12

Step 1:
Attach 150mm Beam to one of the XTPower Battery Mounts

Step 2:
Attach 100mm Beam to the other side of the XTPower Battery Mount that already has the 150mm Beams attached to it.

Step 3:
Place XTPower battery into mount so that the 100mm Beams are on the bottom and the battery power button is exposed.
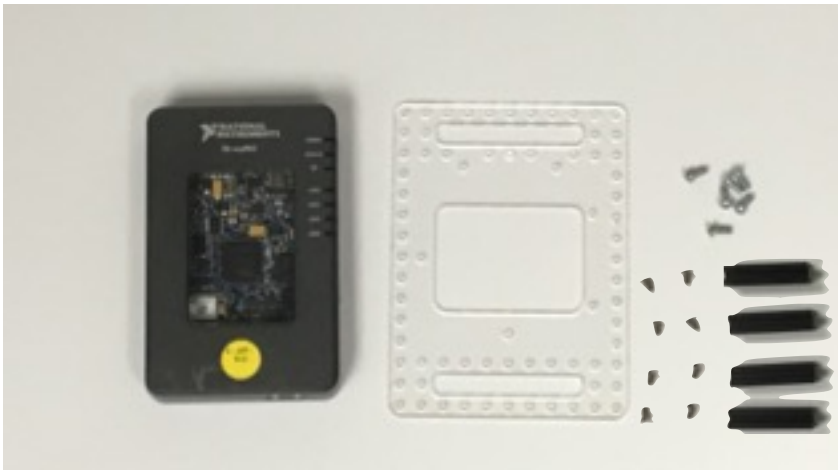

Step 4:
Insert remaining XTPower Battery mount onto battery and secure with remaining nuts and bolts.
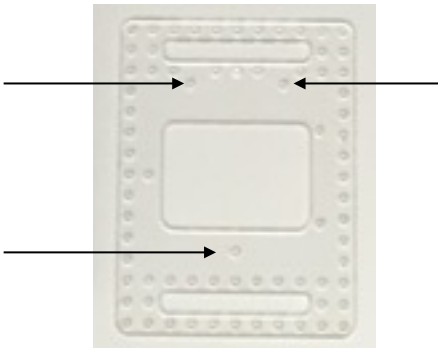
Assembling the myRIO Mount:

You'll Need:
- myRIO x1
- myRIO Mount x1
- M4 Hex Bolts x6
- M3 Square Head Bolts x8
- 40mm Beam x4
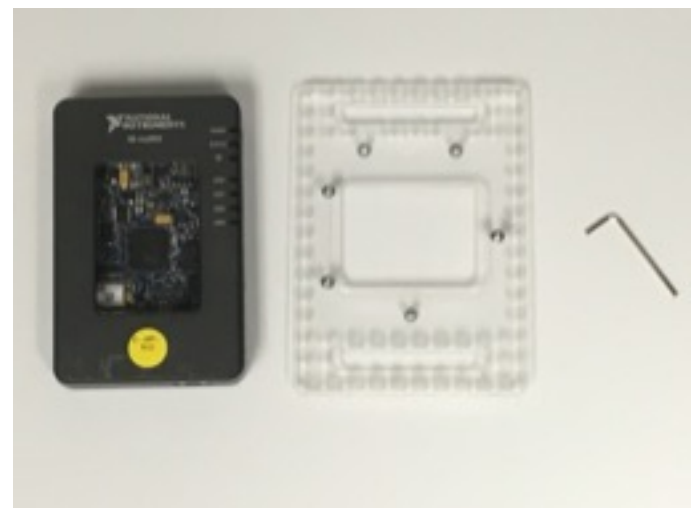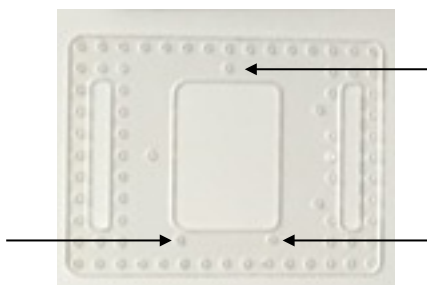
Step 1:
Screw in **1/4 of the way,** 3 M4 Bolts into myRIO mount holes (shown below)

Step 2:
Flip the mount over and screw in **1/4 of the way,** 3 M4 Bolts into the remaining myRIO Mount Holes (shown below)
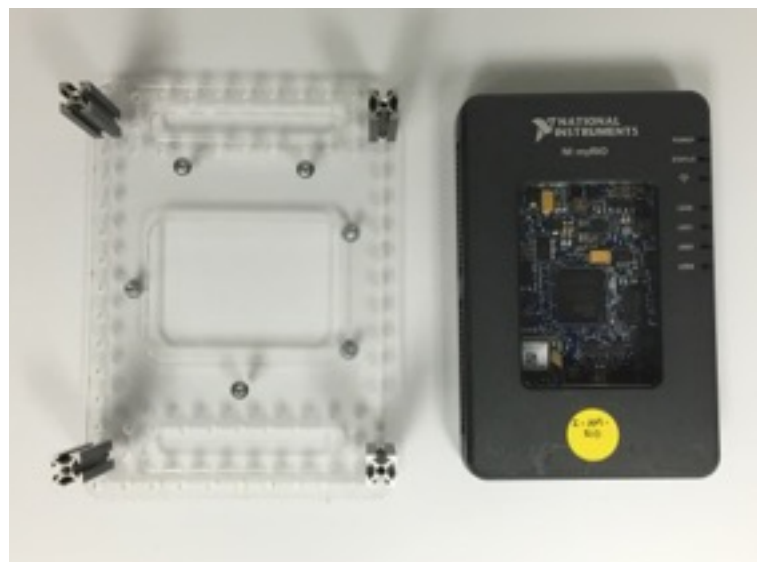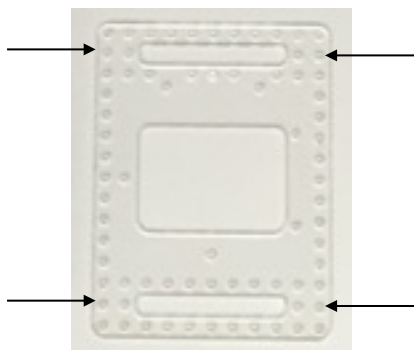
Step 3:
You should now be able to mount the myRIO both vertically and horizontally. Adjust screws as needed for ideal fit.

Step 4:
Detach the myRIO from the mount.

Step 5:
Using M3 square head bolts, screw 40mm Beams to myRIO Mount in the locations shown below.
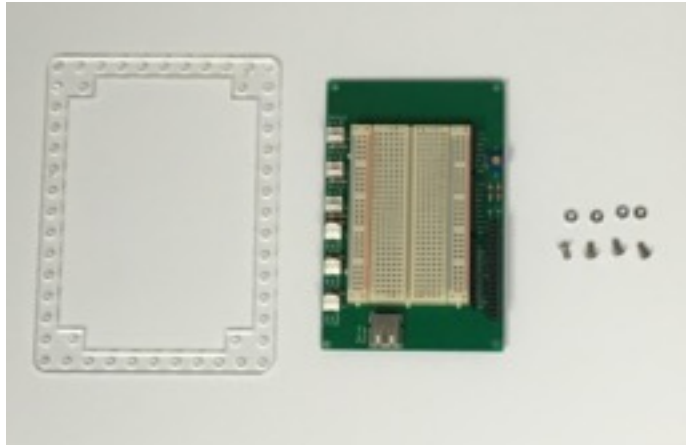
Step 6:
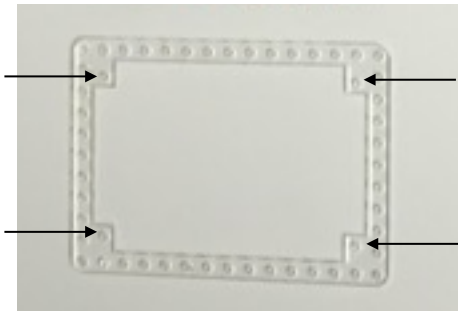Re-attach the myRIO

Assembling the MakerBoard Mount

You'll Need:
- makerBoard x1
- makerBoard Mount x1
- M3x6mm Square Head Bolts x4
- M3 Nuts x4

Step 1:
Fasten makerBoard to makerBoard mount with the square head bolts and nuts using holes shown below:
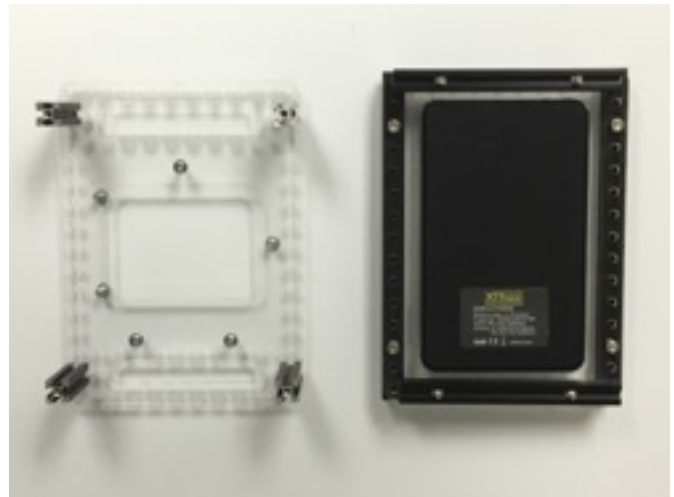
Attaching the myRIO to the XTPower Battery

You'll Need:
- myRIO with Mount x1
- XTPower Battery with Mount x1
- M3x6mm Square Head Bolts x4
- M3 Nuts x4
- XTPower Battery-myRIO Cord x1

Step 1:
Detach the myRIO from the mount to make assembly easier.

Flip Battery and mount over so power button is face down.

Step 2:
Screw myRio Mount into 100mm beams on XTPower Battery Mount using 4 Square Head Bolts and nuts. Make sure that the side of the myRIO mount with two screws in it is above the battery label as shown in the picture.

Step 3:
Re-attach the myRIO to the Mount.
The ports on the myRIO and the ports
on the XTPower Battery should line
up as shown in the image below.

Step 4:
Using the XTPower Battery-myRIO cord,
plug the battery into the myRIO.
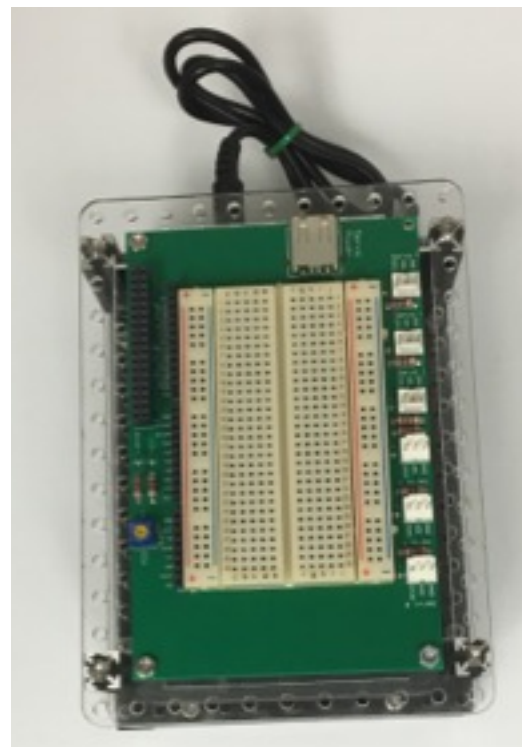
Attaching the makerBoard to the myRIO & XTPower Battery

You'll Need:
- Connected myRIO and XTPower Battery
- Mounted makerBoard
- M3x6mm Square Head Bolts x4
- Hex Key
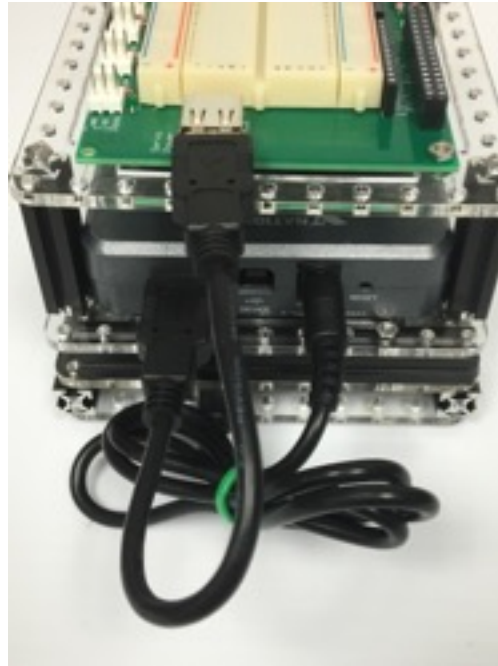- USB–USB Cable
- Ribbon Cable

Step 1:
Using the the square head bolts, screw the maker board mount into the 40mm beams attached to the myRIO mount. **Make sure that the USB port on the board is on the same side as the USB port on the XTPower battery.**
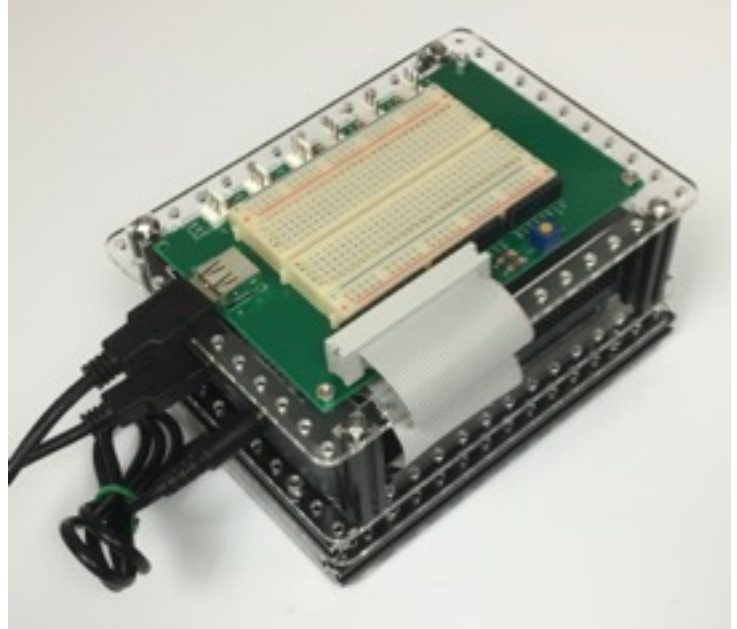
Step 2:
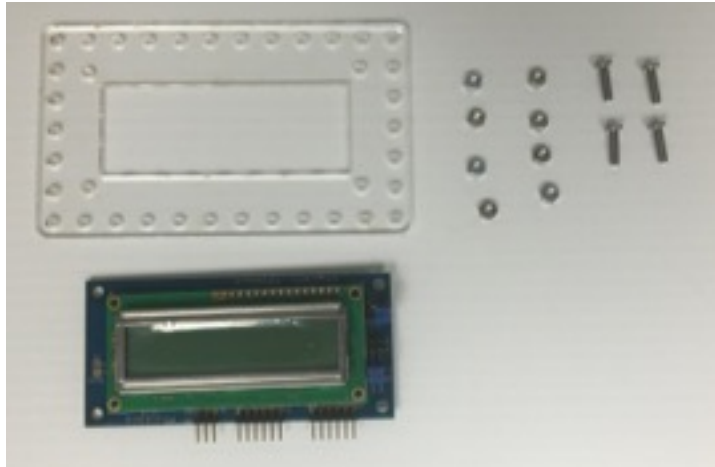Plug the makerBoard into the XTPower battery using the small USB–USB cable.

Step 3:
Plug the makerBoard into the myRIO using the ribbon cable.

Additional myRIO Robotics Kit Mounts

LCD Screen Mount:

You'll Need:
- LCD Screen x1
- LCD Screen Mount x1
- M3x12mm Square Head Bolts x4
- M3 Nuts x8

Step 1:
Insert 4 M3x12mm Square Head
Bolts into holes in LCD Screen
and fasten with an M3 Nut in
the back

Step 2:
Place LCD Screen Mount on LCD
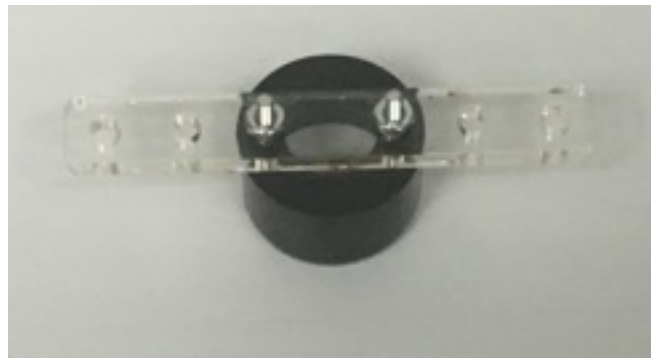Screen and fasten with M3 Bolts

Ball Caster Wheel Mount:

You'll Need:
- Ball Caster Wheel x1
- Ball Caster Mount x1
- M2x6mm Bolts x2
- M2 Nuts x2

Step 1:
Insert M2x6mm bolts into ball caster wheel casing and fasten with M2 nuts.
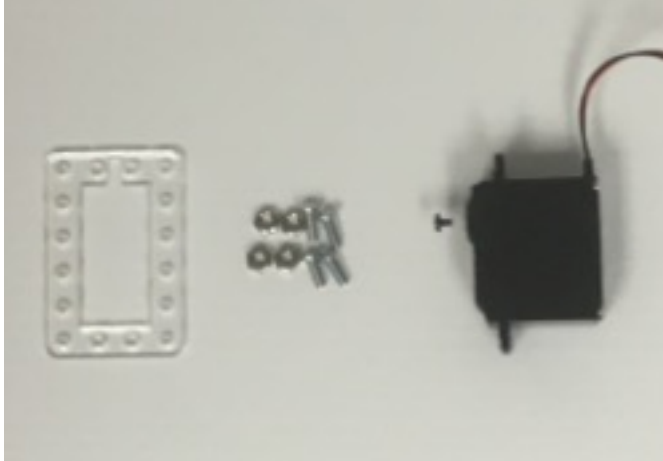
Step 2:
Insert ball caster wheel.

Servo Motor Mount:

You'll Need:
- Parallax Servo Motor x1
- Parallax Servo Motor Mount x1
- M4 Bolts x4
- M4 Nuts x4

Step 1:
Insert Parallax servo mount onto the back of the servo motor. The side with the cord should line up with the side of the mount that has a small rectangular cutout.
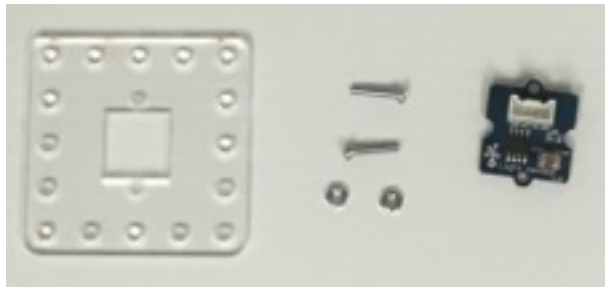

Step 2:
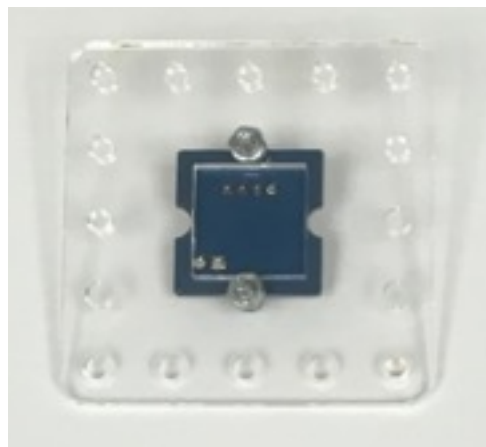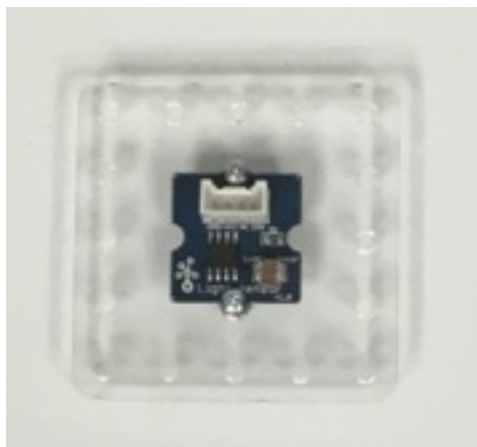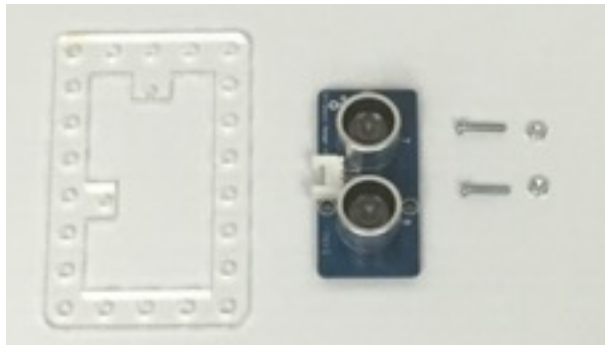Fasten mount to motor using M4 Nuts and Bolts

Grove Sensor Mounts:

You'll Need:
- Grove Sensor x1
- Grove Sensor Mount x1
- M2x6mm Bolts x2
- M2 Nuts x2

Using M2 Bolts and Nuts, secure Grove Sensor to appropriate mount.