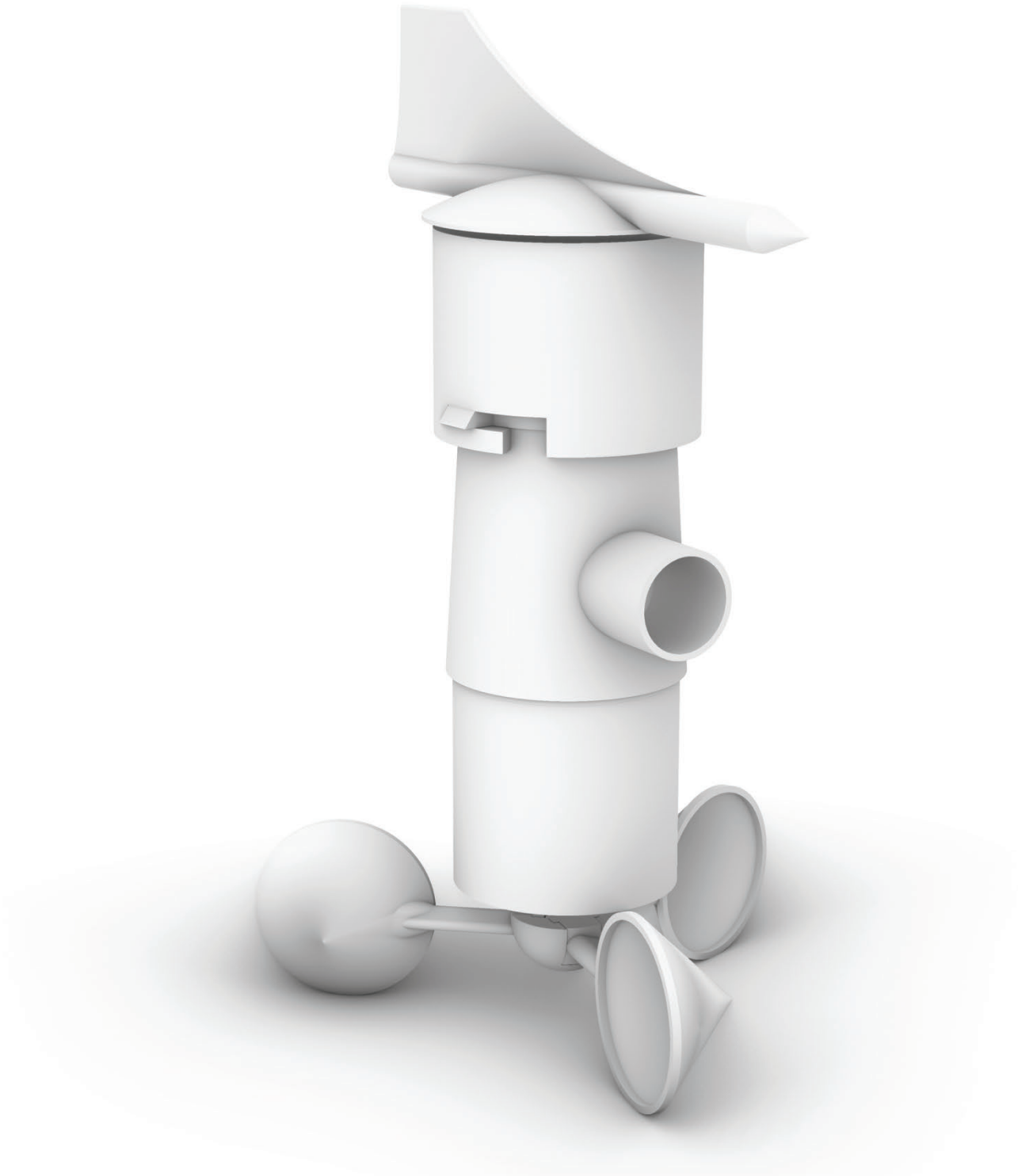


CCX
CLIMATE
CHANGE
XPLORERS

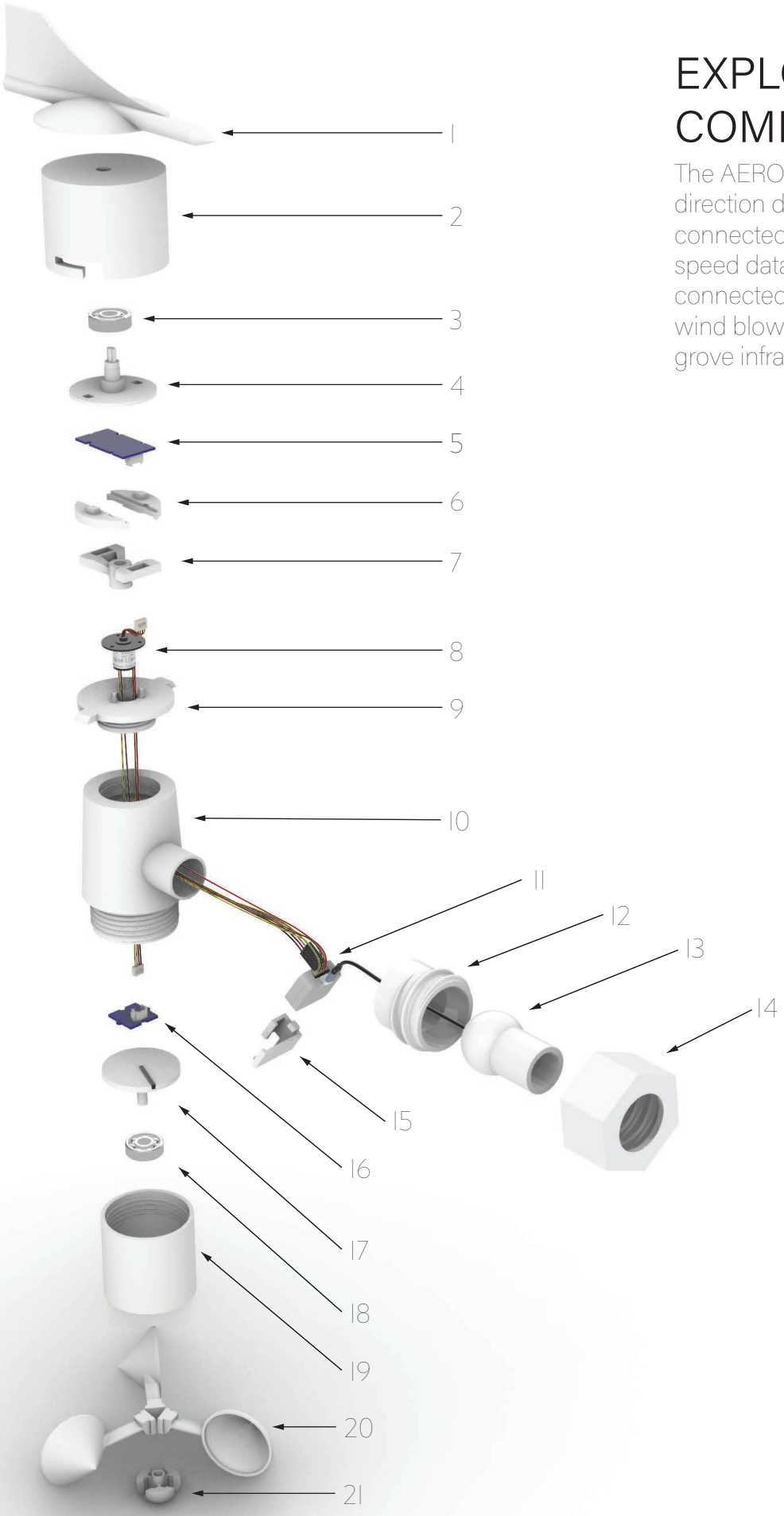
AERO NODE ASSEMBLY

SIP

DESIGN
BUILD
ASSOCIATES

EXPLODED COMPONENTS

The AERO Node collects and measures wind direction data using a wind vane ornament connected to a grove compass sensor. Wind speed data is collected using cups which are connected to a disc that spins when the wind blows. Spins are then counted using a grove infrared sensor.

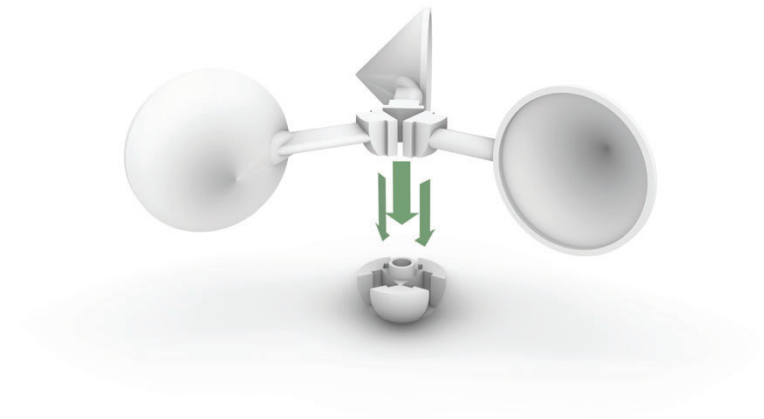


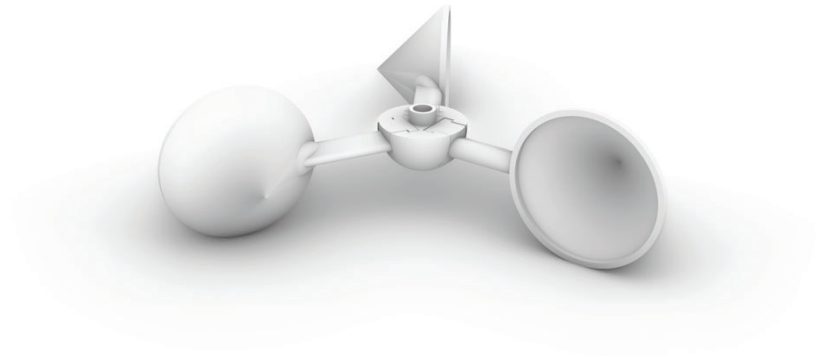
COMPONENTS LIST

#	DESCRITION	QUANTITY
1	Ornament	1
2	Wind Vane Hull	1
3	Wind Vane Bearing	1
4	Wind Vane Plate	1
5	Grove Compass Sensor	1
6	Wind Vane Plate Clips	1
7	Wind Vane Coupler	1
8	Comidox Slip Ring Capsole	1
9	Wind Vane Cap	1
10	Center Hull	1
11	Microprocessor	1
12	Swivel Innerlock	1
13	Swivel Ball Joint Bar	1
14	Swivel Outerlock	1
15	Micro Harness	1
16	Wind Speed Plate	1
17	Grove Infrared Sensor	1
18	Wind Speed Bearing	1
19	Wind Speed Hull	1
20	Wind Speed Cups	1
21	Wind Speed Cup Connector	1

ASSEMBLY
STEP 1

Align the slots on the cap connector with the groves on the cups and connect them one at a time.





ASSEMBLY STEP 2

Place the bearing into the Wind Speed Hull in the center then place the bearing tapv on the bearing in the center.

ASSEMBLY STEP 3

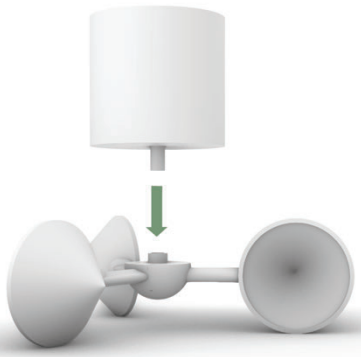
Tap the bearing into the hull with a small hammer until the bearing is seated fully and flat into the hull.

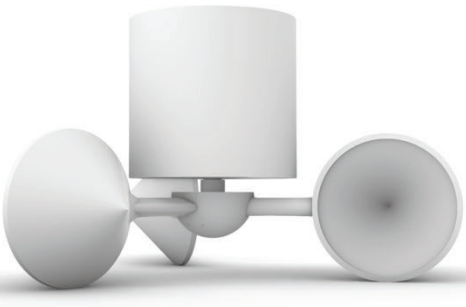
ASSEMBLY STEP 4

Push the wind speed plate into the bearing until seated on to of the bearing. The speed plate rod should protrude through the bottom of the hull.

ASSEMBLY STEP 5

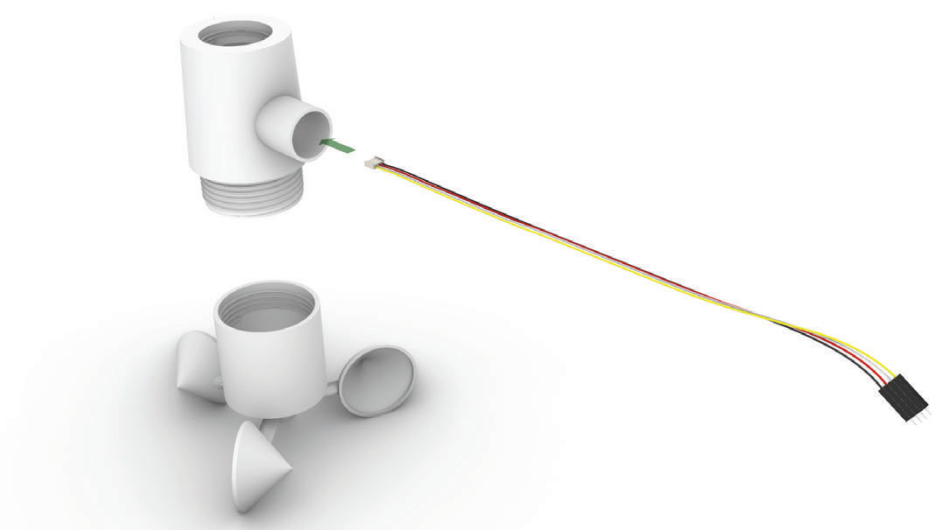
Push the speed plate rod into the slot in the center of the cup connector.

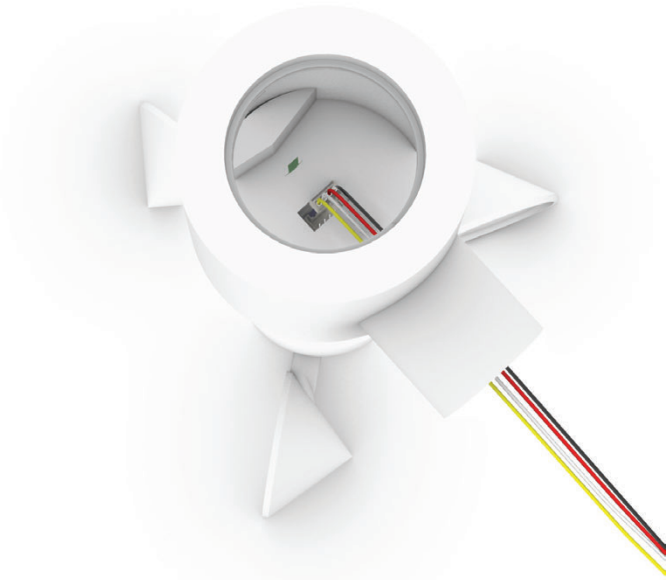




ASSEMBLY STEP 6

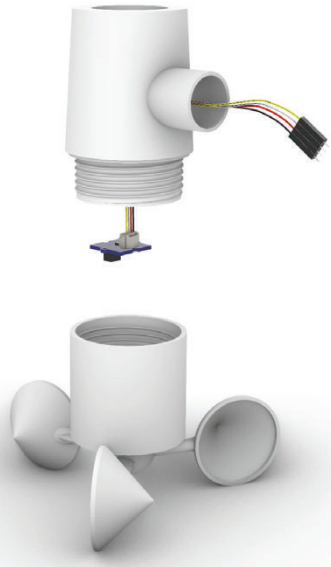
Insert the 4-pin grove cable in the center hull down through the infrared sensor slot.





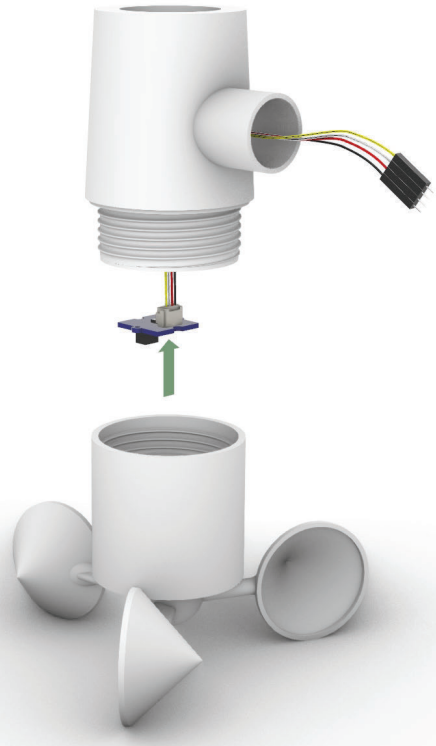
ASSEMBLY STEP 7

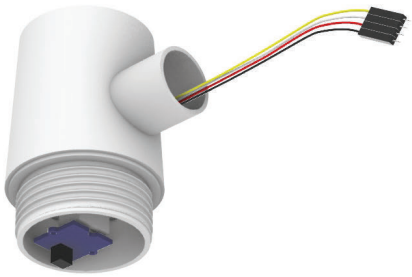
Connect the infrared sensor to the grove cable as shown.

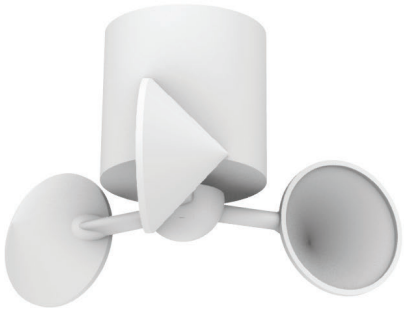


ASSEMBLY STEP 8

Insert the infrared sensor into the slot in the center hull.

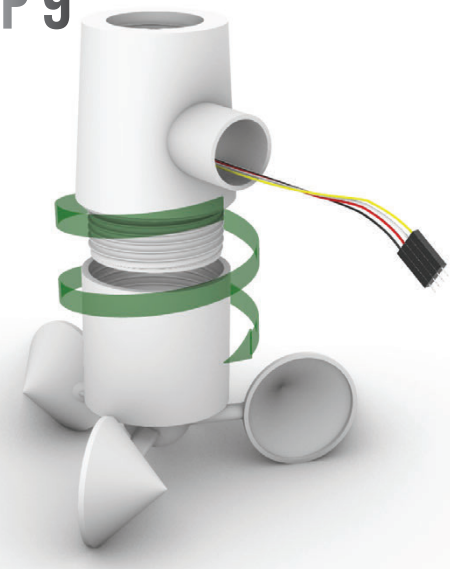


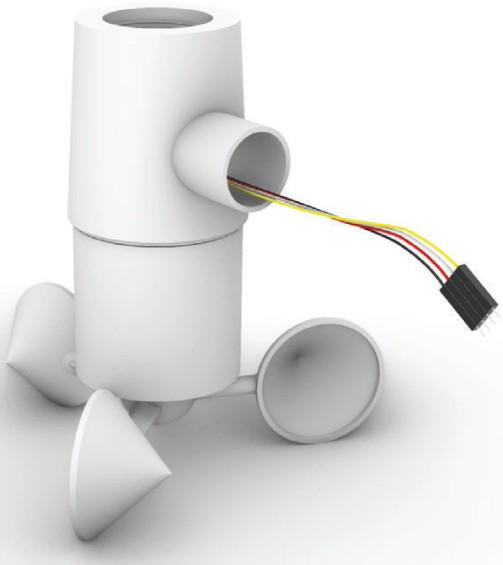




ASSEMBLY STEP 9

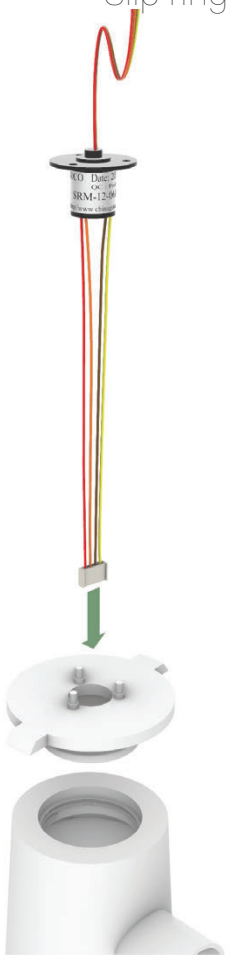
Connect the Center hull to the Wind Speed Hull by twisting it on until tight.

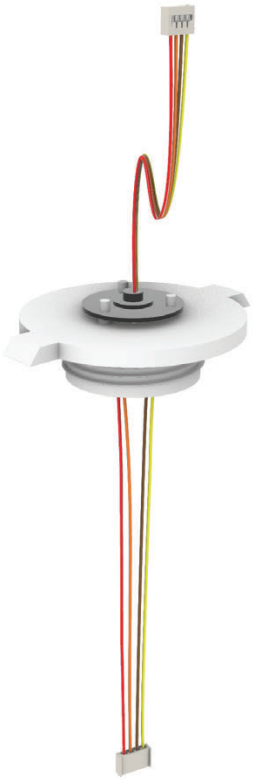




ASSEMBLY STEP 10

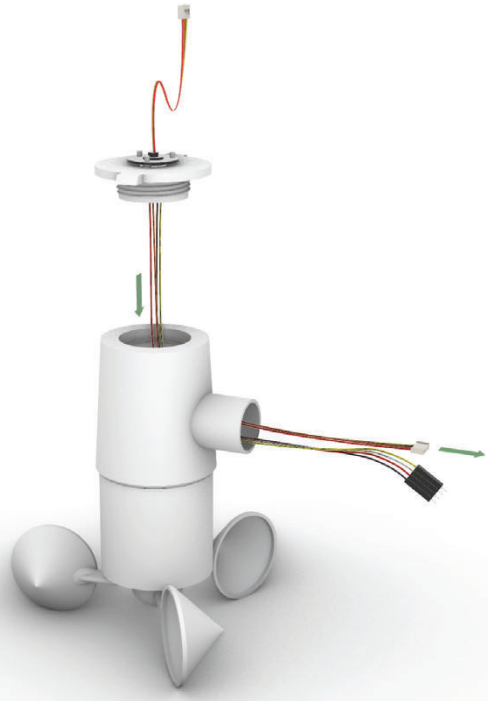
Inset the slip ring wires into the Wind Vane Cap. Seat the Slip ring on the three posts in the cap.





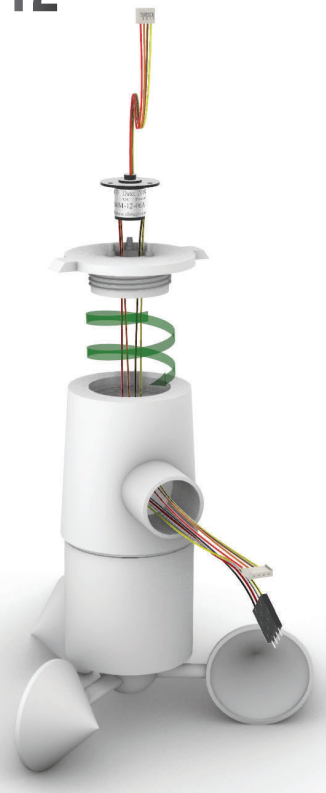
ASSEMBLY STEP 11

Insert the slip ring wires into the center hull and out through the front of the hull.



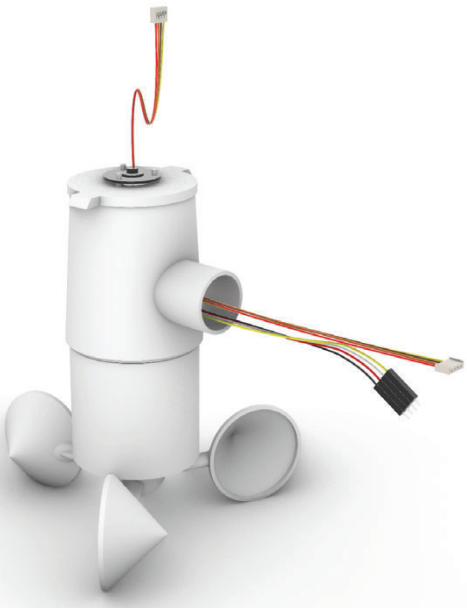
ASSEMBLY STEP 12

Hold the slip ring up and twist the cap into the hull as shown.



ASSEMBLY STEP 13

Seat the slip ring on the 3 post again.

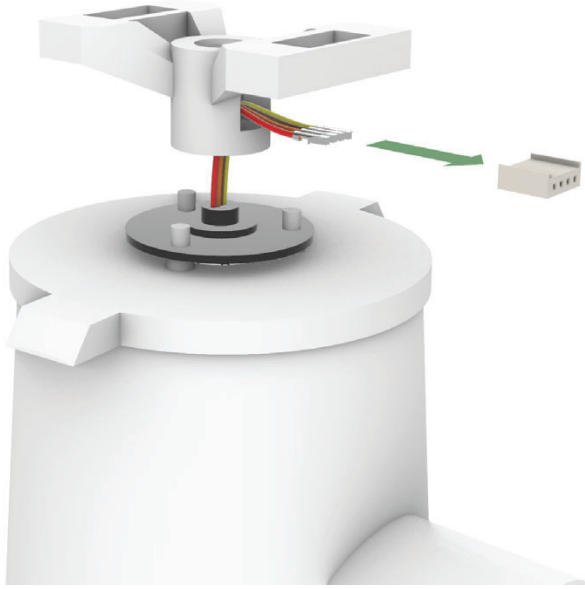


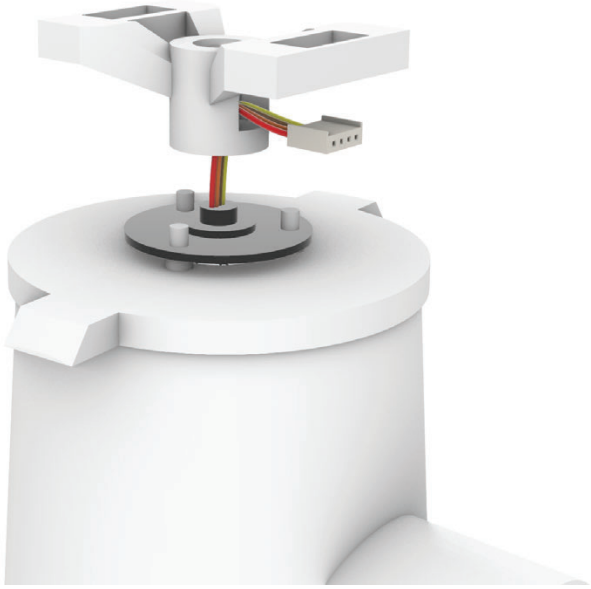
ASSEMBLY STEP 14

Cut the wires on the top of the slip ring to 2.5cm. Install the grove crimps on the ends of the wires as shown and thread the wires through the coupler as shown.

ASSEMBLY STEP 15

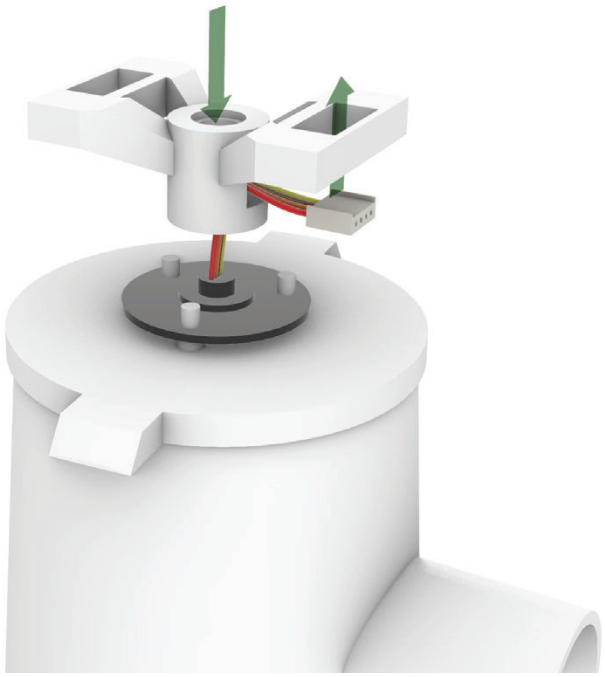
Be sure to use the same colors as the bottom wires and insert the crimps into the connector in the same order as the bottom wires. Push the crimp ends into the grove connector as shown.

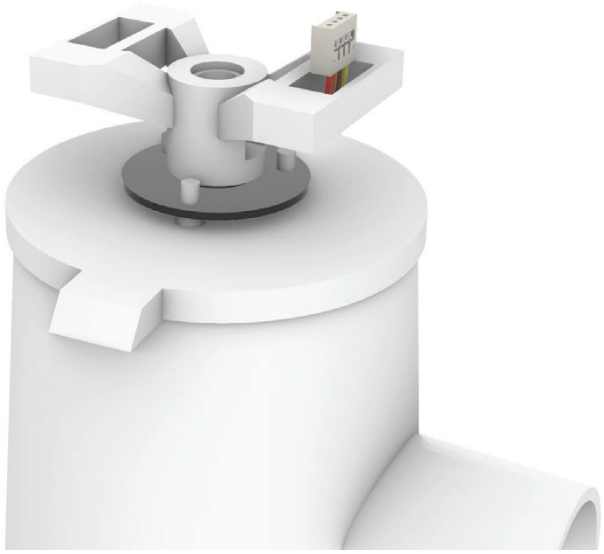




ASSEMBLY STEP 16

Thread the cord up through the coupler and connect the coupler to the slip ring. Apply moderate pressure only to the slip ring when connecting the coupler.



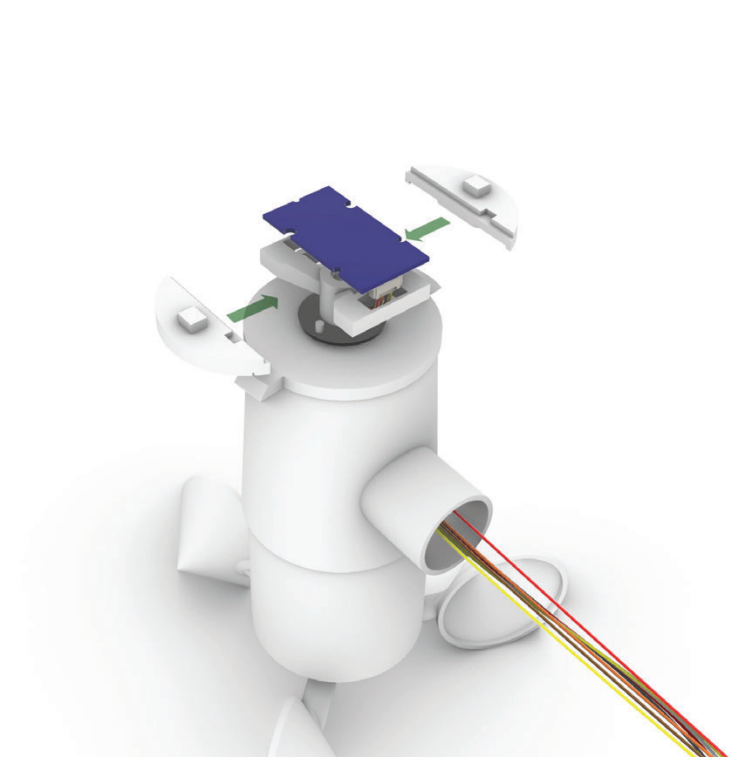


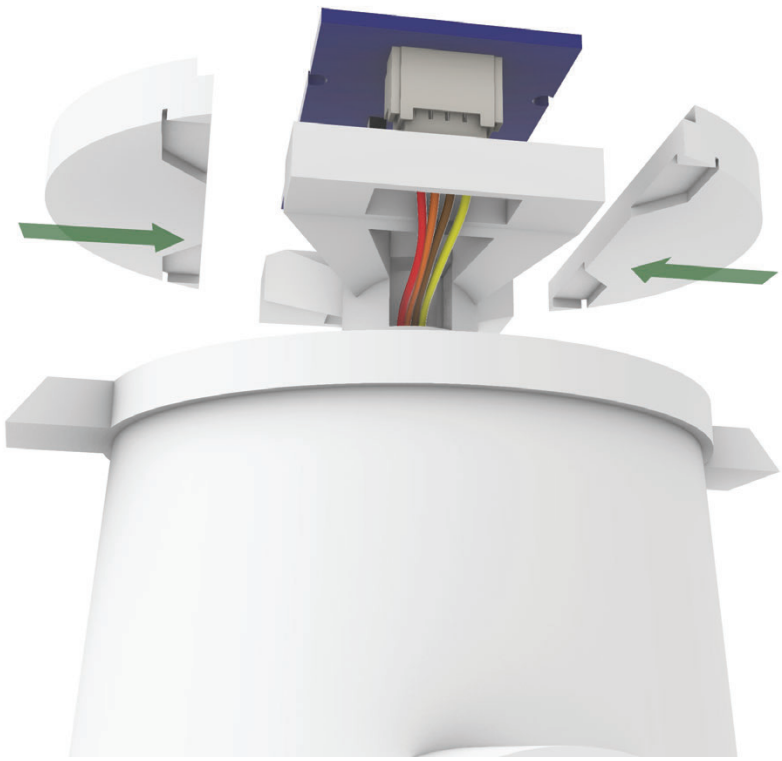
ASSEMBLY STEP 17

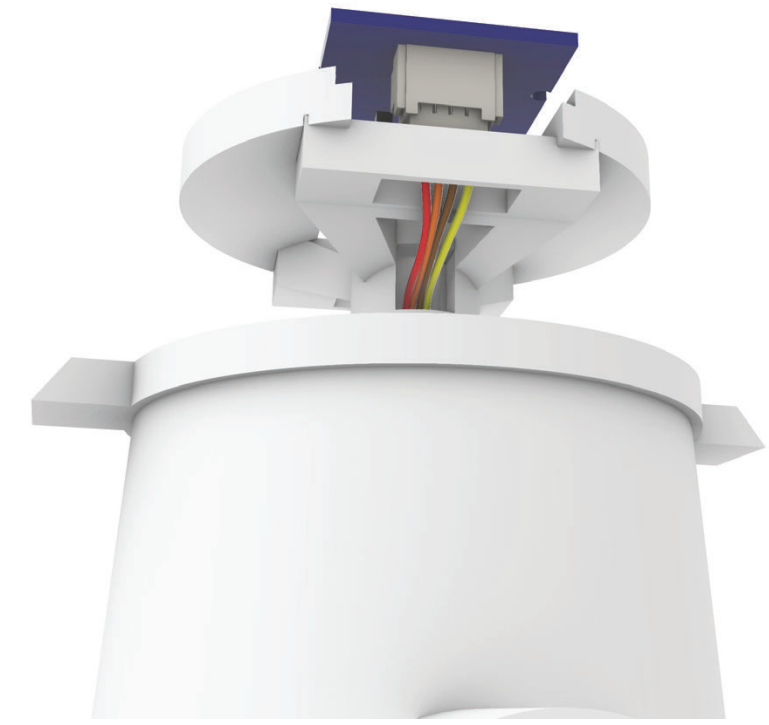
Connect the compass sensor to the slip ring cord via the grove connector.

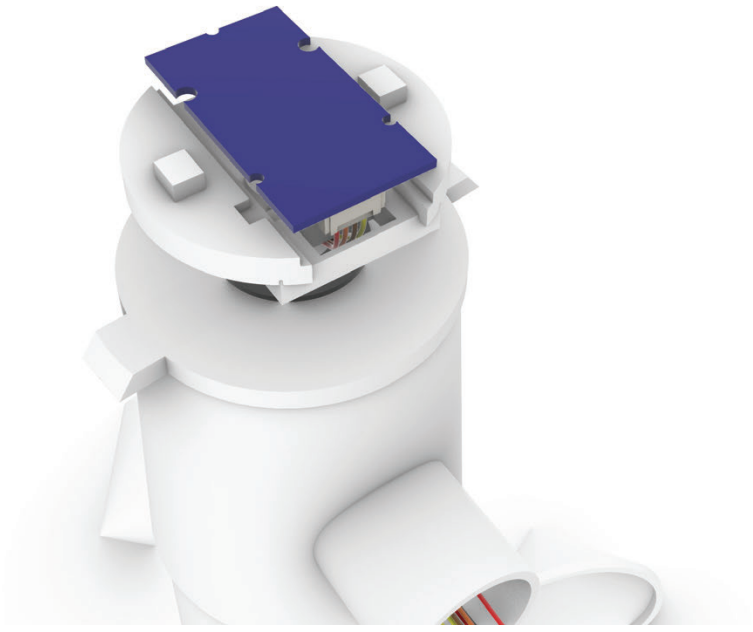
ASSEMBLY
STEP 18

Place the Wind Vane Clips onto the coupler. The grooves on the underside of the clips should seat the clips as shown.



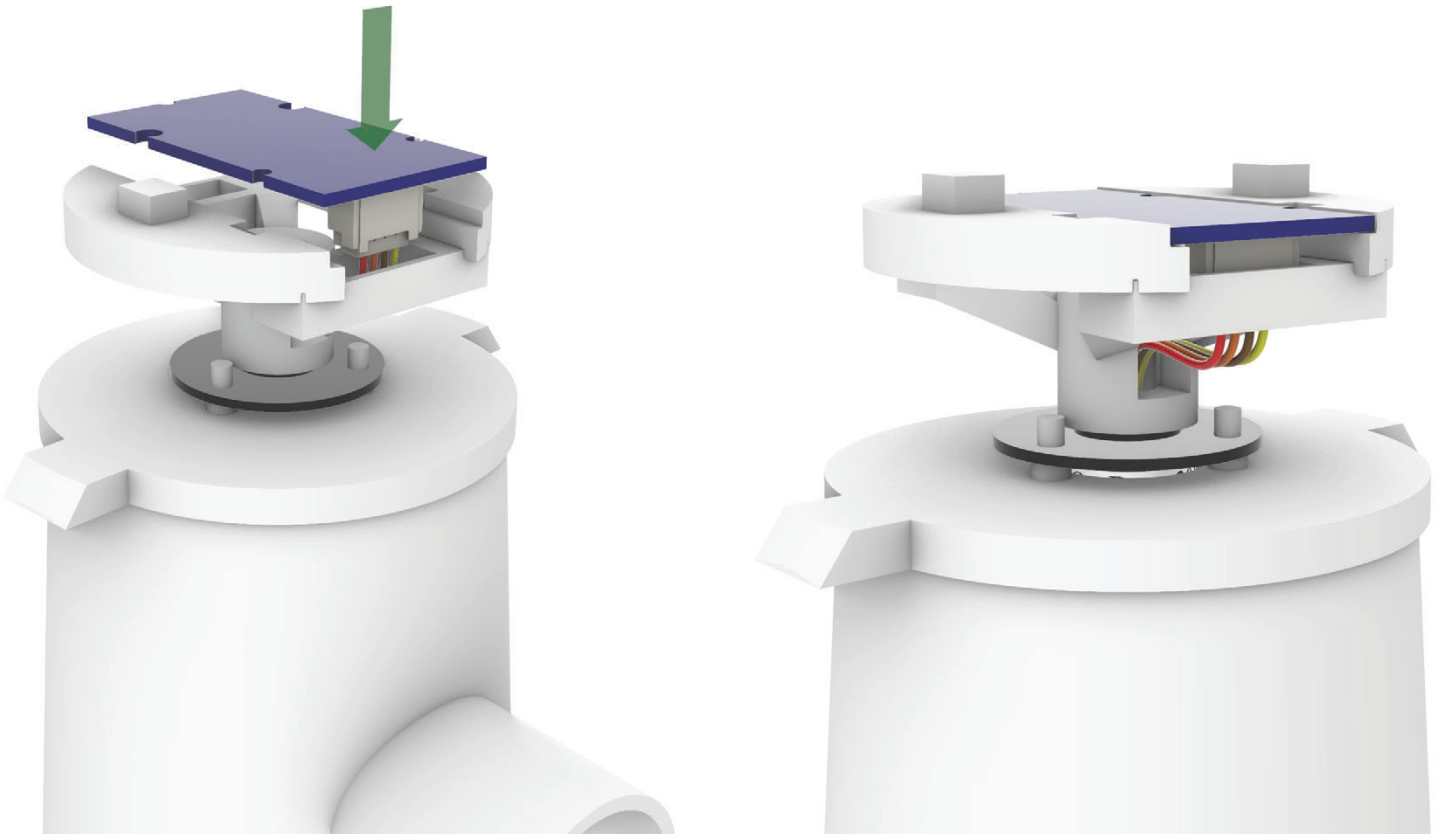






ASSEMBLY STEP 19

Slot the compass sensor into the clips and coupler.

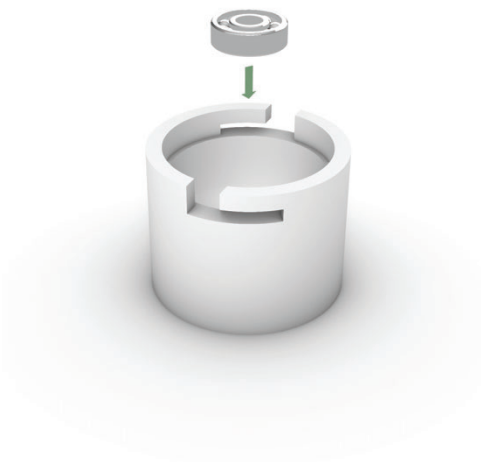


ASSEMBLY STEP 20

Snap the Wind Vane Plate in place fitting the square pegs from the clips into the square holes in the plate.

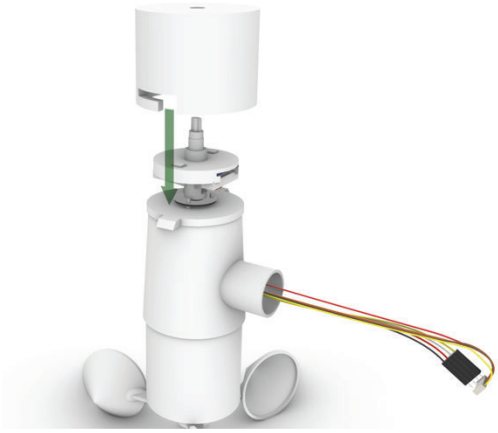
ASSEMBLY STEP 21

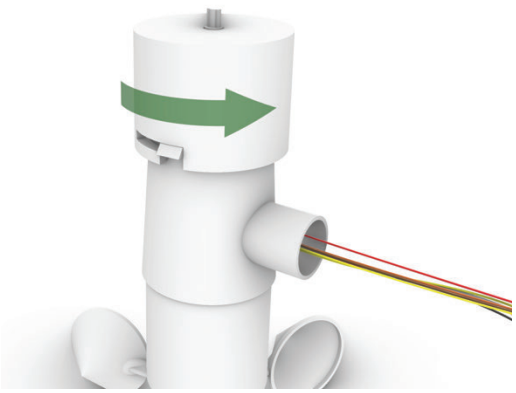
Use the Bearing tapper to slot the bearing into the Wind Vane Hull.



ASSEMBLY STEP 22

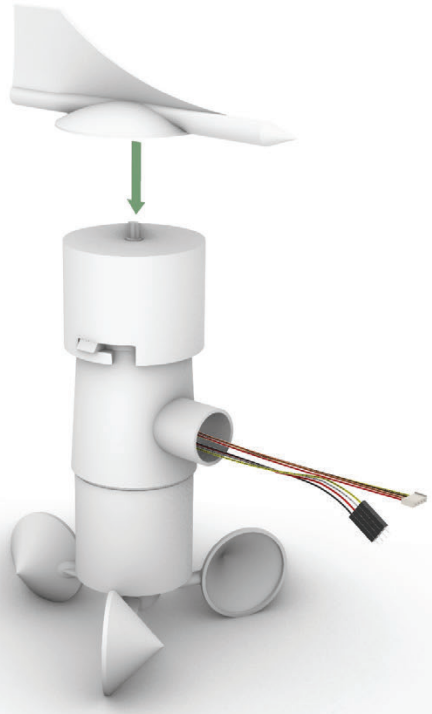
Insert the hull into the cap applying moderate pressure to slip the wind vane plate through the bearing and out of the top of the hull.

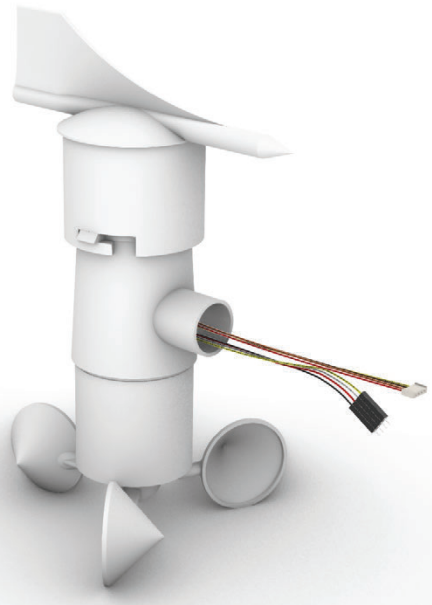




ASSEMBLY STEP 23

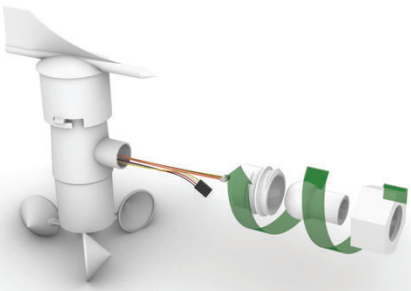
Seat the Ornament on to the Rod from the wind vane plate.

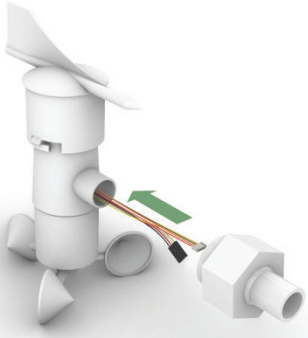




ASSEMBLY STEP 24

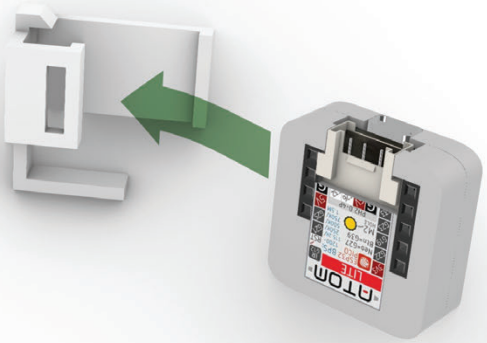
Assemble the swivel unit as shown then slot the assembly on to the center hull as shown.





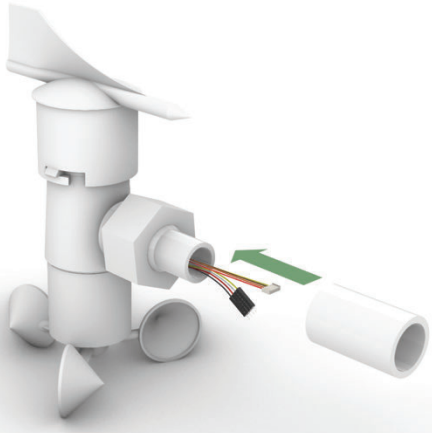
ASSEMBLY STEP 25

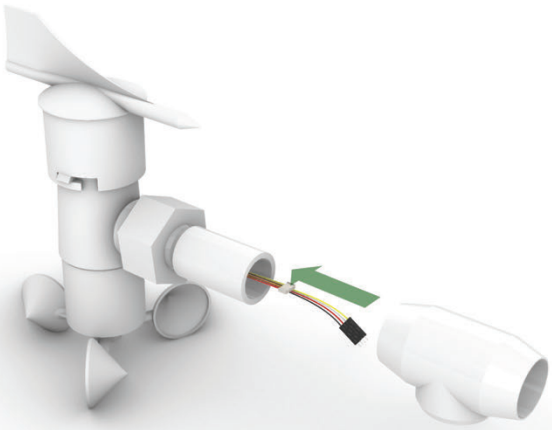
Insert the microprocessor into the micro harness.



ASSEMBLY STEP 26

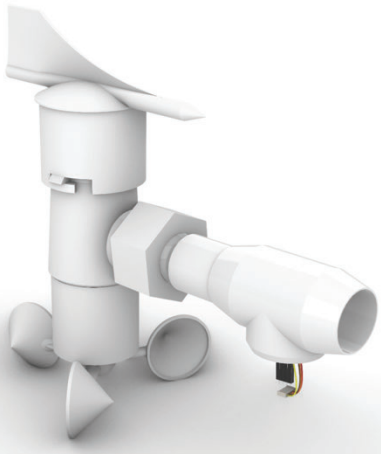
Connect a 3" piece of PVC into the swivel joint. Insert the T-joint onto the PVC short arm.





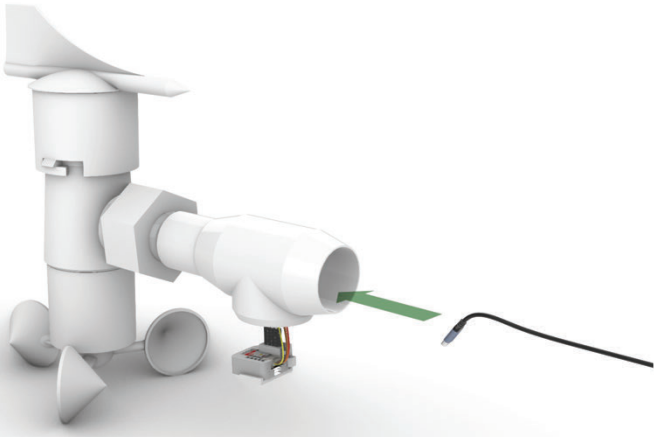
ASSEMBLY STEP 27

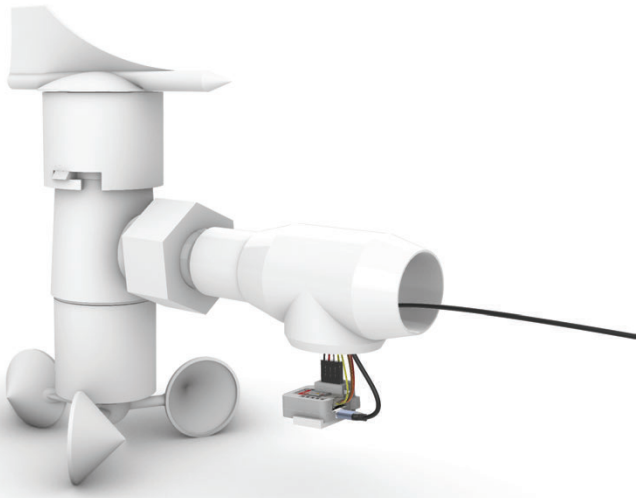
Connect the 4-Pin grove wires through the harness. Connect the crimp grove slip ring wires to the grove slot in the micro processor.



ASSEMBLY STEP 28

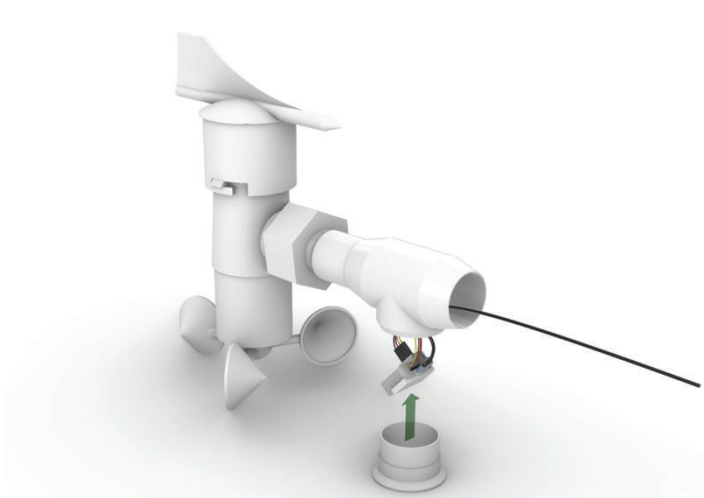
Insert the Power Cord though the T-Joint and connect it to the microprocessor a th USB-C hub.

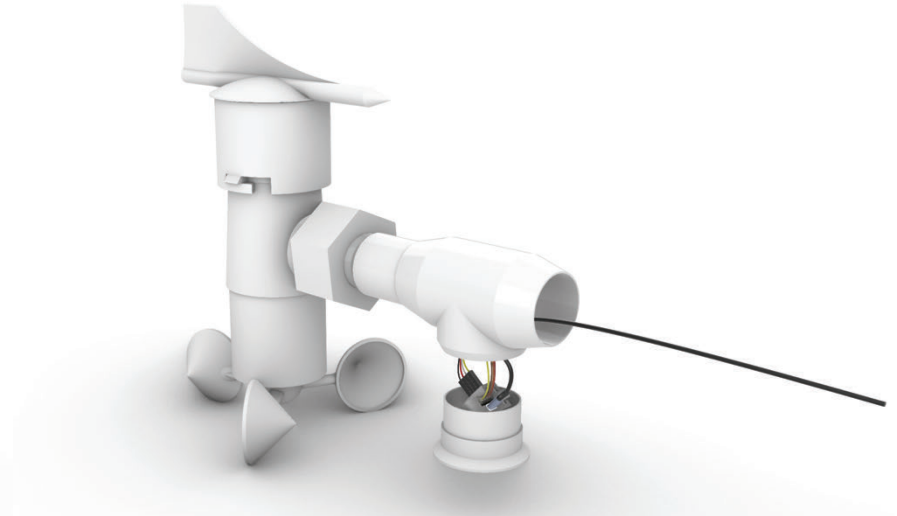




ASSEMBLY STEP 29

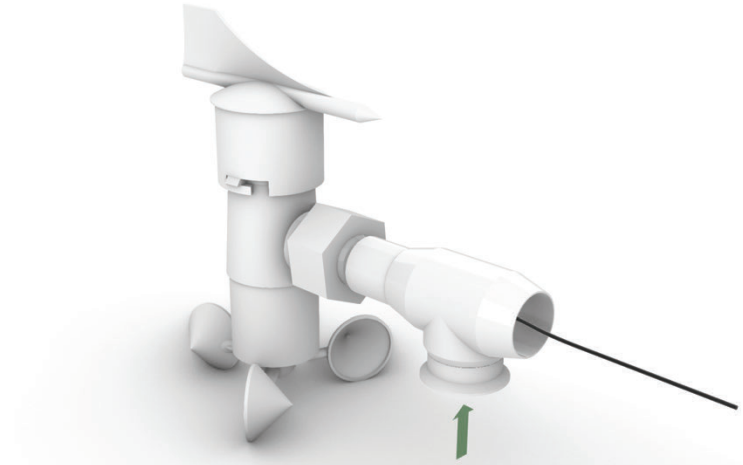
Place the microprocessor into the micro holder.

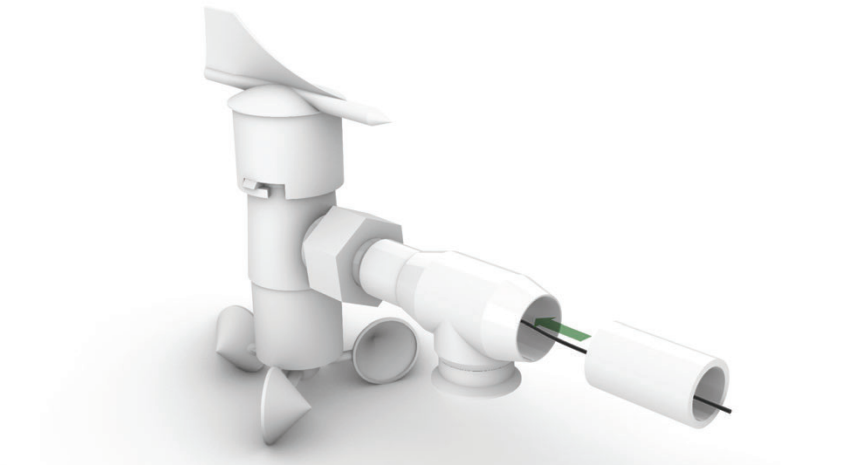




ASSEMBLY STEP 30

Insert the micro holder into the T-Joint. Insert the final 3" PVC.





ASSEMBLY COMPLETE

The AERO Node Should be assembled as shown.