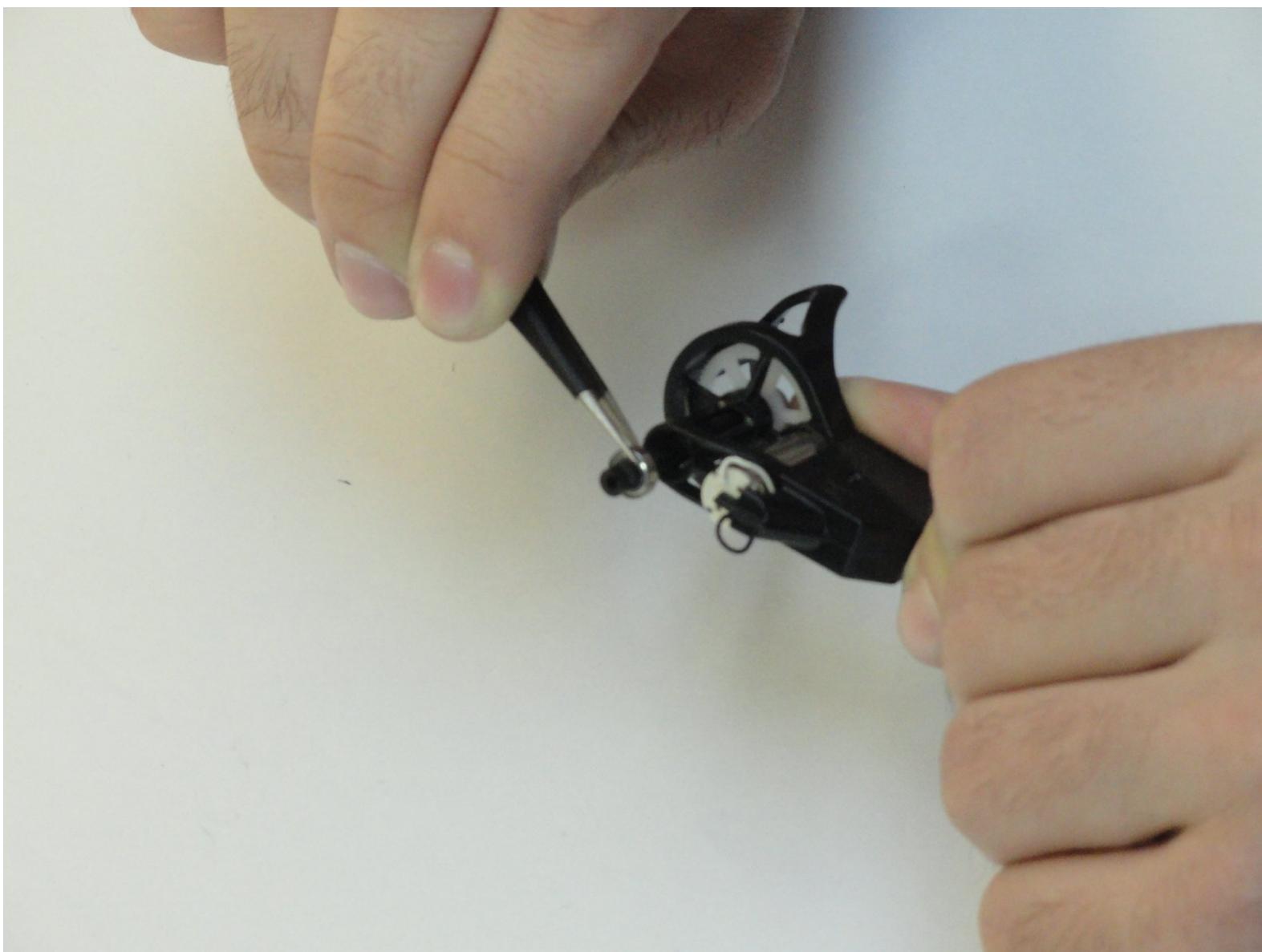




# UDI U818A Carbon Tube and Tooth Gears Replacement

This guide will service the replacement of the carbon tube and tooth gears which are necessary to spin the propellers.

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## INTRODUCTION

After reading this guide, you will know how to swap out the gears and tube attached to the gears that are part of the arms that hold the propellers and motors of the drone.

### TOOLS:

- [Phillips #000 Screwdriver](#) (1)
- [iFixit Opening Tools](#) (1)
- [Metal Spudger Set](#) (1)
- [Tweezers](#) (1)

## Step 1 — Propellers



- Using a #PH000 screwdriver, remove the 5mm screws retaining each propeller to the rotating post.
- As each screw is removed, safely pull the respective propeller from its apparatus.

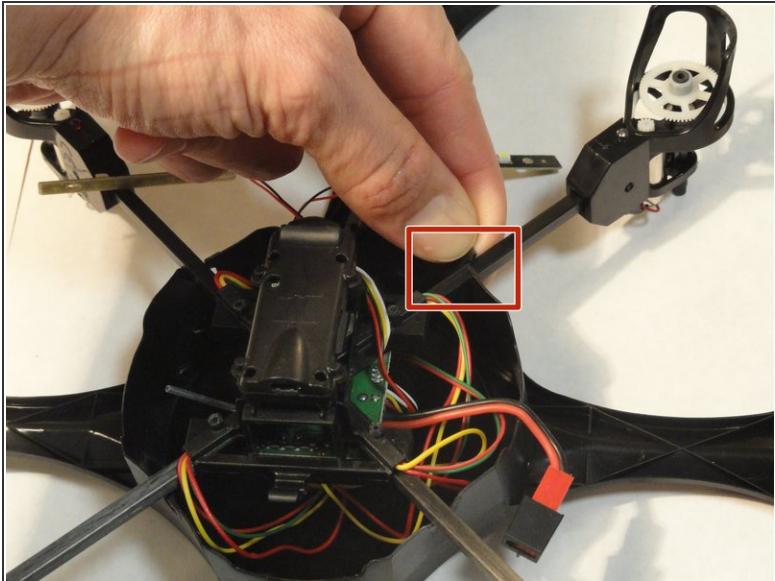
## Step 2 — Drone Cover



- After removing the propellers, unscrew all 4 (3x3mm) screws connecting the electronics to the frame.
- Once all of the screws holding the plastic dust cover to the frame are removed, pull the 2 LED bars through the dust cover and remove the thin plastic dust cover from the drone.

⚠ As the piece connecting the electronics to the drone cover are accessible, keep note to not remove electronics until *after* disconnecting the drone head lamp first.

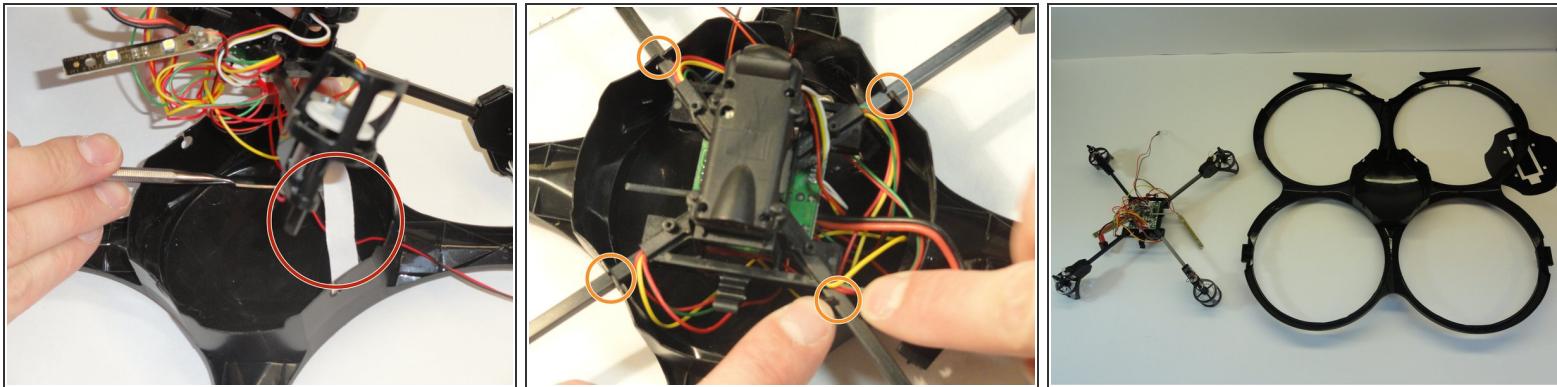
## Step 3



- Step two is disconnecting and removing the head lamp.
- Use a screw driver to remove the 5mm screw. Remove head lamp of drone.
- Disconnect the electronics from the frame of the drone by pulling each arm out of the hole in the frame holding it in place.

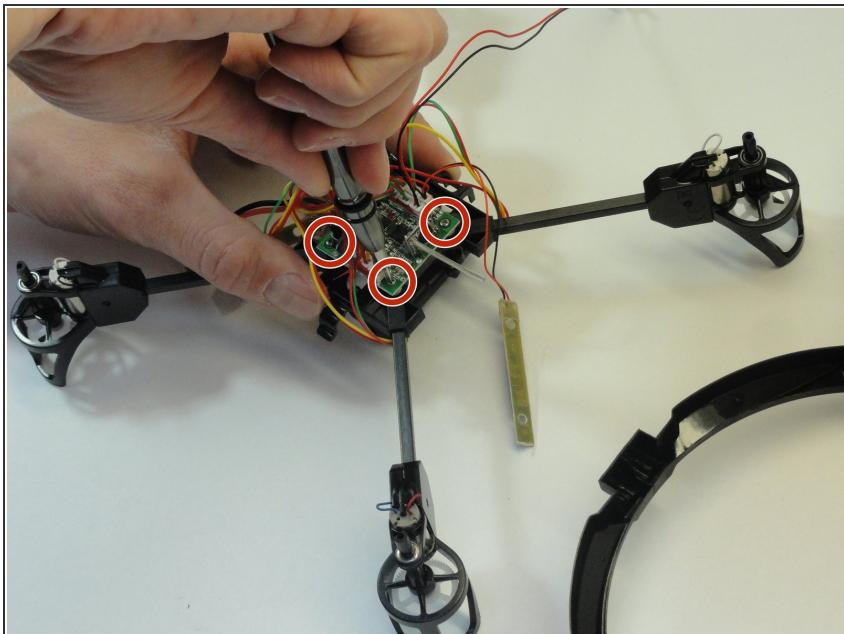
**⚠** Do not try to separate the frame from the electronics yet! Check to see if there is tape holding the head lamp wires in place underneath the electronics.

## Step 4



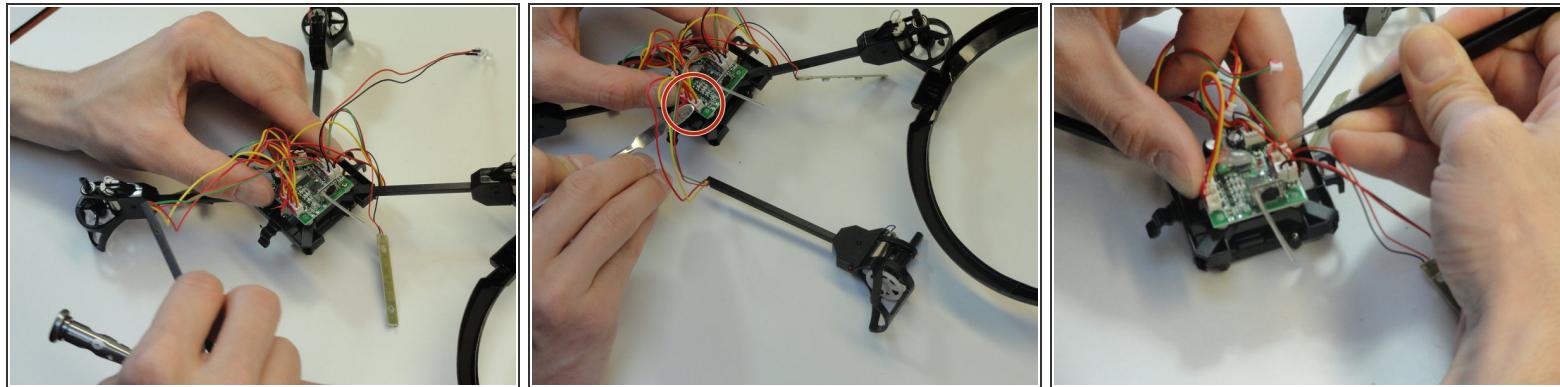
- If present, remove the white tape over the black and red wires for the head lamp with a metal spudger (a wide flat-head tool for separating plastic parts).
  - *i* If tape is removed, keep in reusable condition to re-secure the headlight later so there are no loose wires.
- Separate the plastic tabs securing the motor arms to the drone cover and delicately pull out the arm. Do this for all 4 arms to remove the frame from the cover.

## Step 5 — Drone Arms



- Use a #PH000 screwdriver to remove all 4 (5mm) corner screws that secure both the receiving board and the motor arm.
- *i* Notice how the wires tuck neatly in the bottom channel of the motor arm.

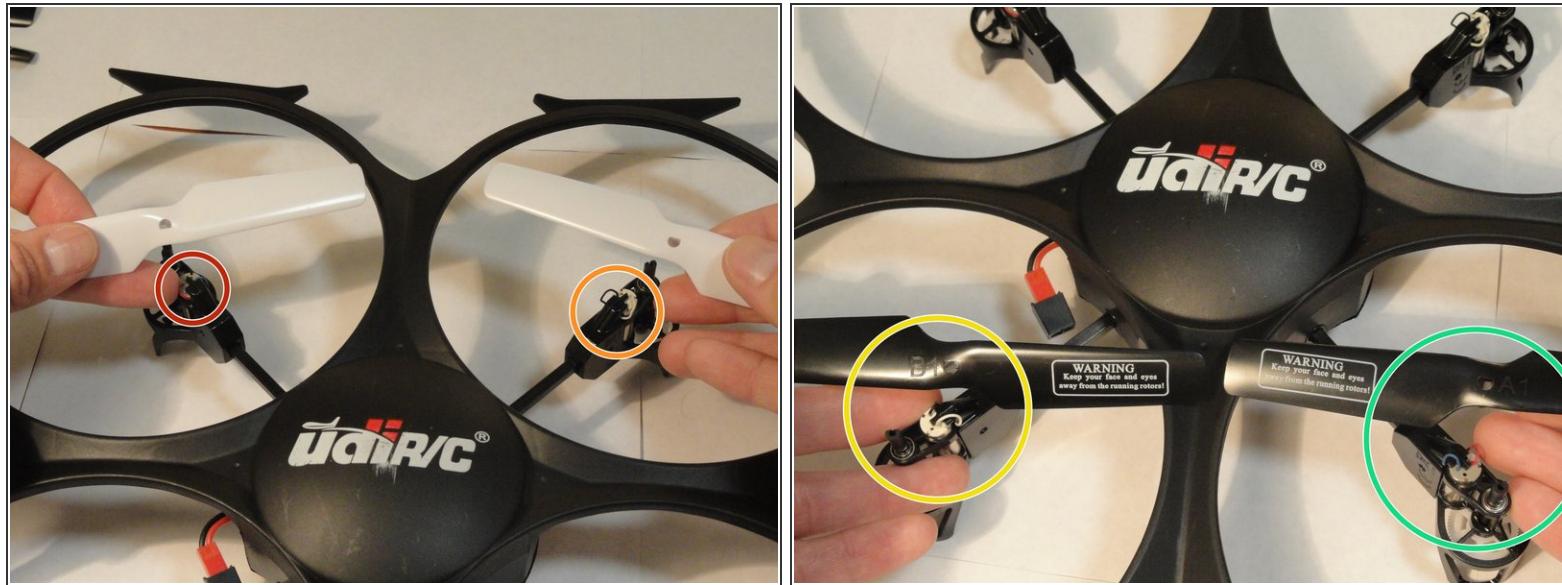
## Step 6



- Carefully slide the arm out from the socket.
- Use a plastic removal tool or tweezers to remove the connectors from the receiving board.

*(i)* The cables connecting to the receiving board will be secured with a light adhesive that can be easily scraped away to remove the desired connector.

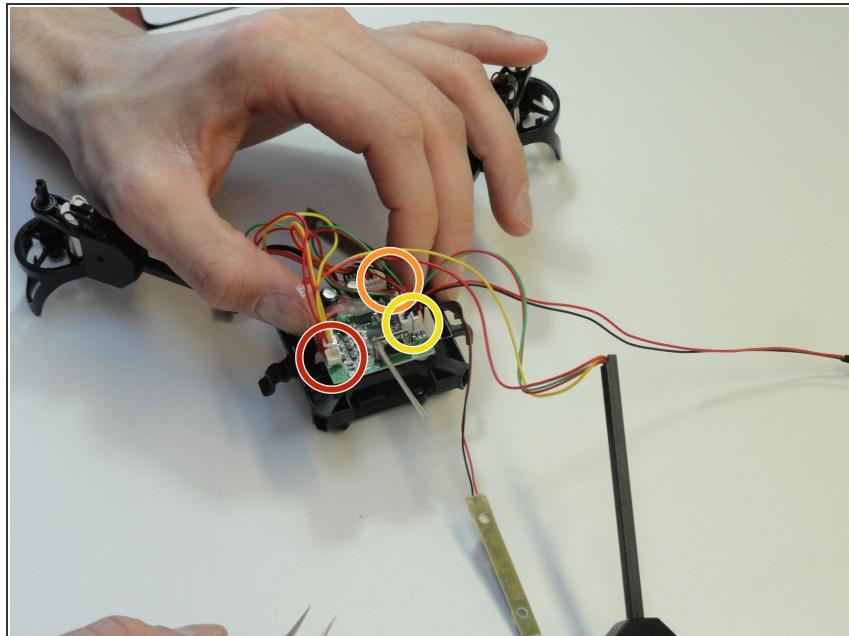
## Step 7



*(i)* Motor direction and propeller direction is crucial to proper flight, refer to this format.

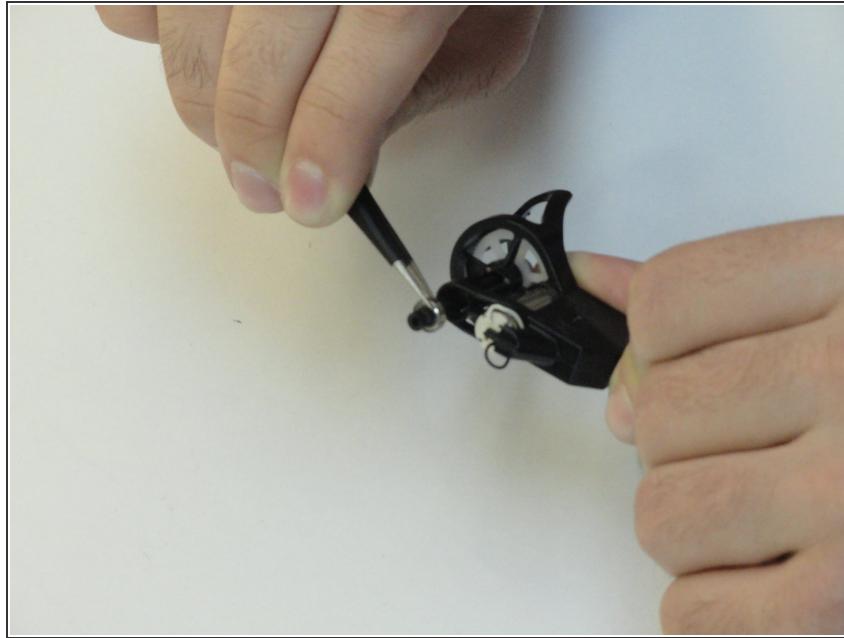
- The Front Left motor identified by the Red/Blue wires is a **Standard**(*Clockwise*) spinning motor, it pairs with a *White A2* propeller.
- The Front Right motor identified by the Black/White wires is a **Reverse**(*CounterClockwise*) spinning motor, it pairs with a *White B2* propeller.
- The Back Left motor identified by the Black/White wires is a **Reverse**(*CounterClockwise*) spinning motor, it pairs with a *Black B1* propeller.
- The Back Right motor identified by the Red/Blue wires is a **Standard**(*Clockwise*) spinning motor, it pairs with a *Black A1* propeller.

## Step 8



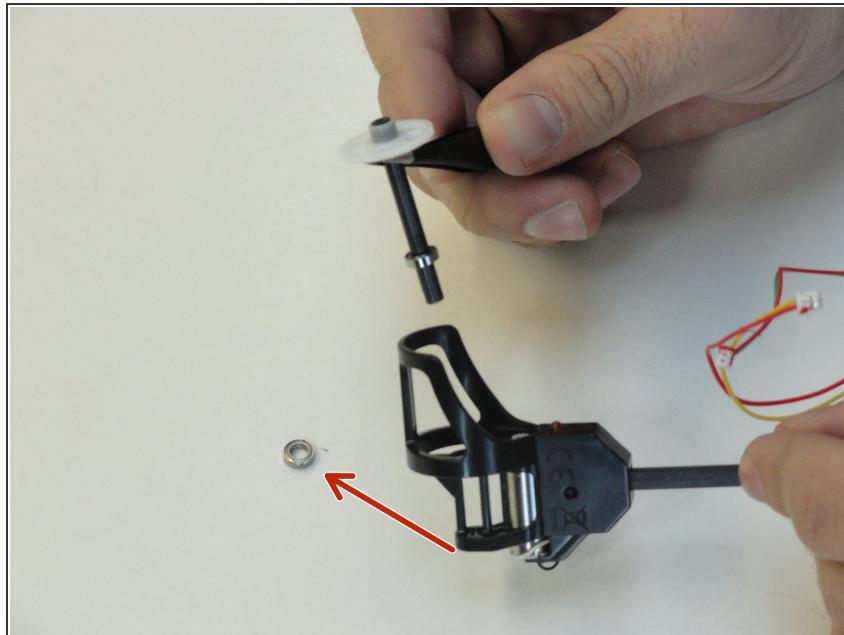
- ⓘ The wiring can appear confusing, don't be alarmed. It's quite easy, and absolutely necessary for proper flight.
- The 4 bottom connectors receive the motor power cables that are Red/Yellow wire pairs from each motor. Counting the sockets 1-4 from left to right.
  - Front Right motor connects to socket 1.
  - Front Left motor connects to socket 2.
  - Rear Left motor connects to socket 3.
  - Rear Right motor connects to socket 4.
- The Red/Green wire pairs from each motor power the LED to that branch, they connect to 4 of 6 sockets on the top of the receiving board. There is no sequence required.
- The headlight LED, and underside LED bars connect to the remaining 2 sockets on the top of the receiving board. Again, no sequence is required. All LED Red/Black and Red/Green wire pairs connect to top of the receiving board.

## Step 9 — Carbon Tube and Tooth Gears



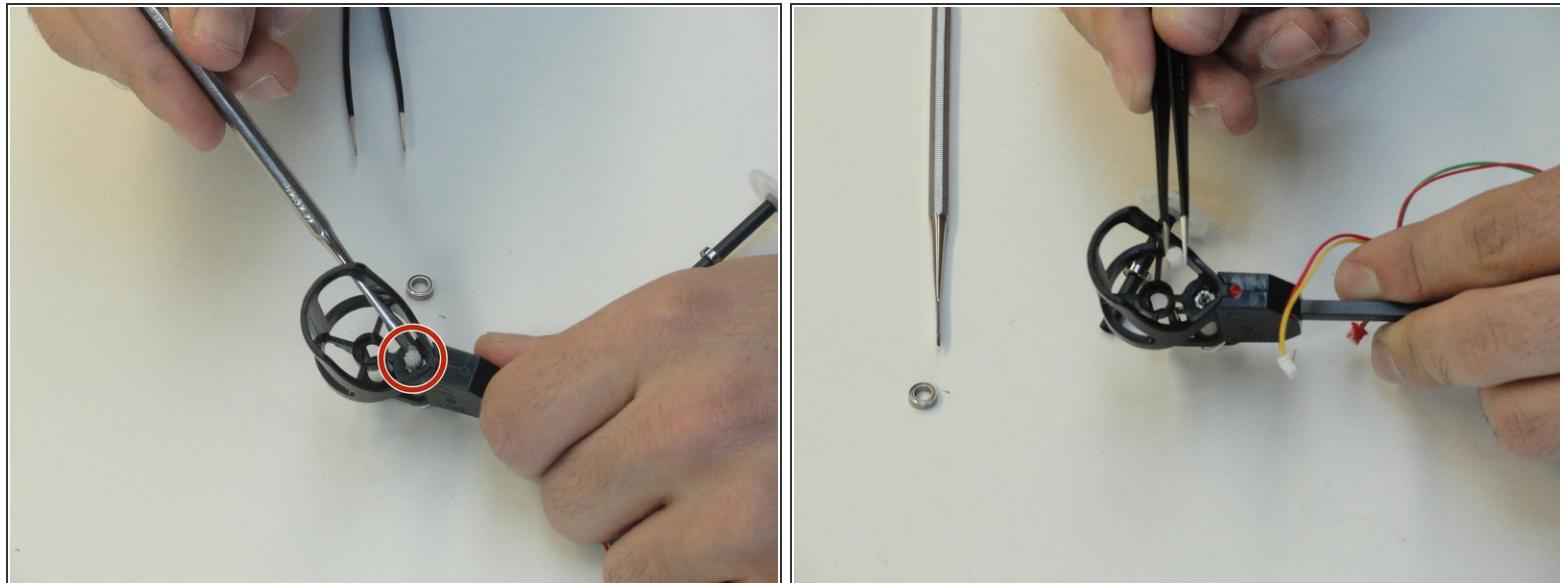
- After having the arm separate from the rest of the drone, take a pair of tweezers and remove the silver nut from the bottom of the carbon tube.

## Step 10



- Once the ball-bearing is removed, use tweezers and remove the entire tube and gear from the drone arm assembly.

## Step 11



- If the tooth gear attached to your carbon tube is the only gear damaged/stripped, then you need not continue.
- However, if your smaller gear is damaged/stripped as well, then you will need lightly pry it free from the metal post it sits on. A spudger or flat tip screwdriver will work.
- Once it is free, take your tweezers and remove it completely from the drone arm assembly.

To reassemble your device, follow these instructions in reverse order.