



# Turnigy 9X Mode 1 to Mode 2 conversion

This guide will show how to change the sticks on a Turnigy 9X from Mode 1 to Mode 2.

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## INTRODUCTION

The Turnigy 9X is an inexpensive and highly hackable transmitter for remote controlled aircraft. This guide will show how to change a Turnigy 9X from Mode 1 (with the throttle on the right and elevator on the left) to Mode 2 (with the throttle on the left and the elevator on the right).

Thanks to Miro at iFixit for photographing this guide while I performed the work at Maker Faire 2011!

## TOOLS:

- [Flathead Screwdriver](#) (1)  
*To push a retaining pin into place*
- [Large Needle Nose Pliers](#) (1)
- [Paper Clip](#) (1)  
*To push out a retaining pin*
- [Phillips #0 Screwdriver](#) (1)

## Step 1 — Turnigy 9X Mode 1 to Mode 2 conversion



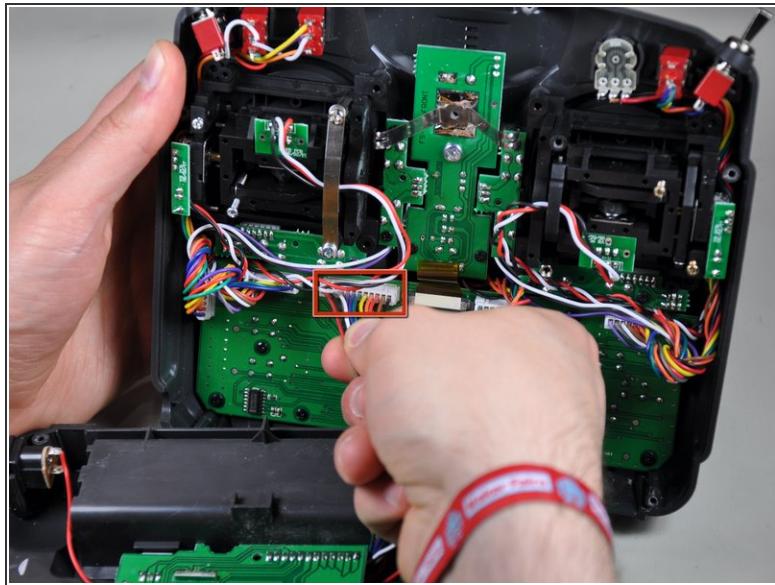
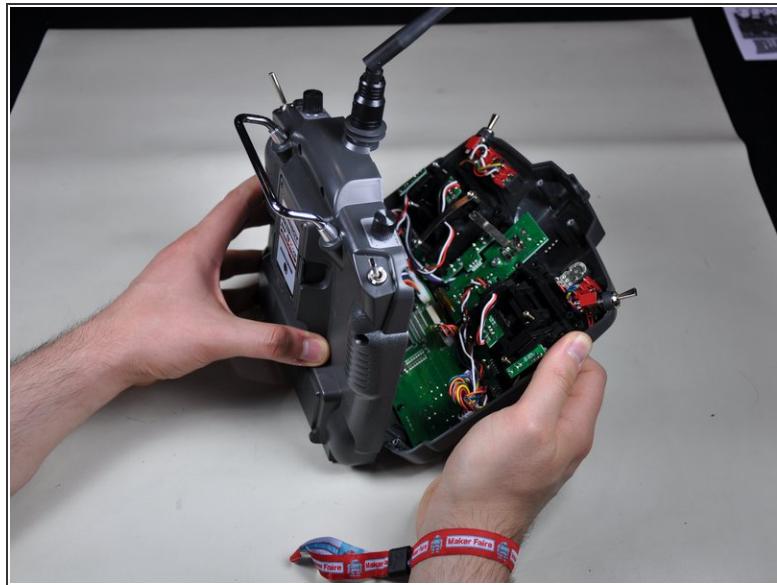
- The Turnigy 9X, set up for Mode 1. Notice the left stick is centered in both axes, while the right stick is only centered horizontally.
- *i* In this guide "right stick" and "left stick" refer to the positions of the sticks when viewed from the front of the case.

## Step 2



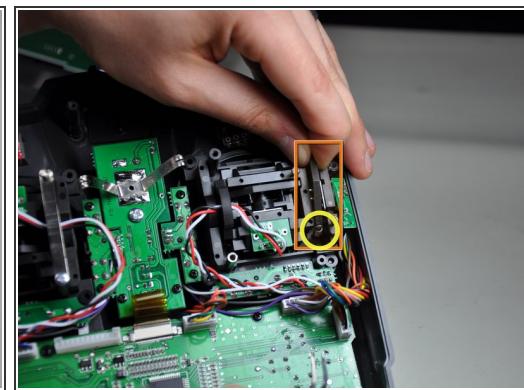
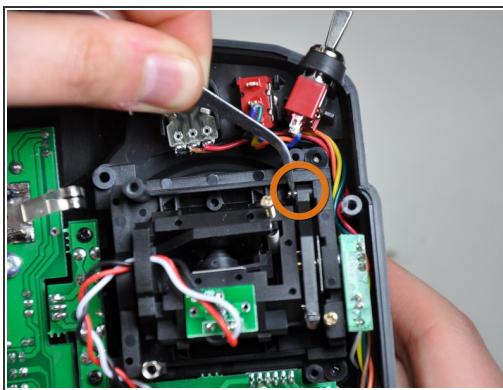
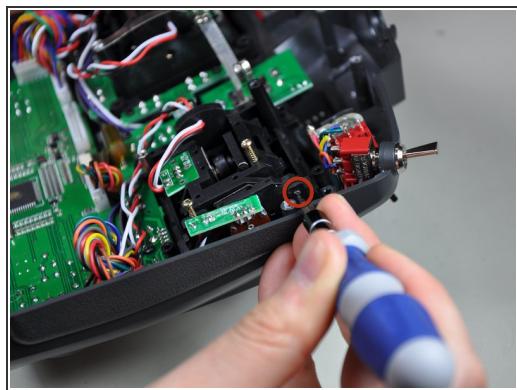
- Remove the six screws around the back of the case.

## Step 3



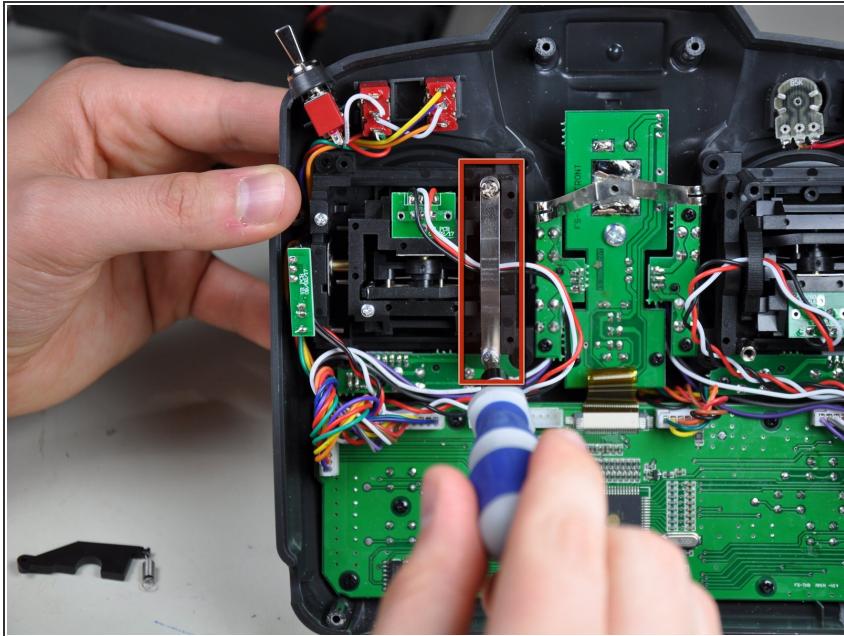
- Separate the front and back halves of the case.
- Disconnect the cable linking the rear half to the front half.

## Step 4



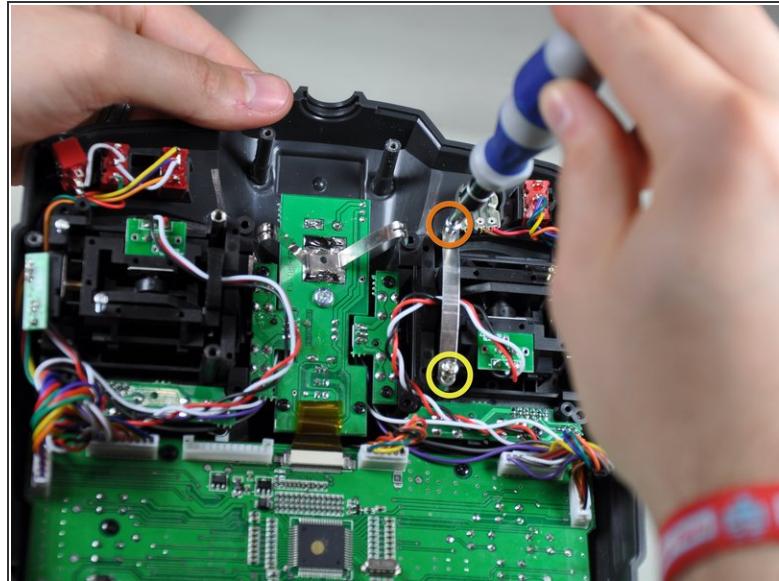
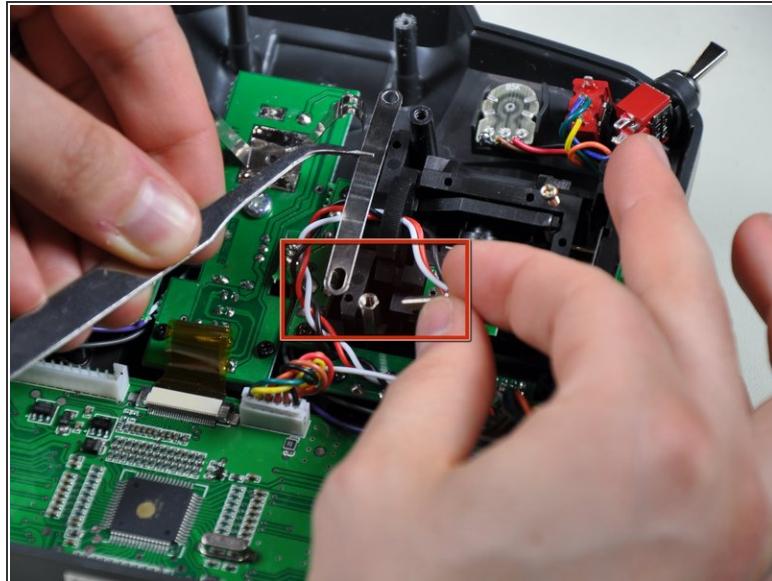
- Remove the spring arm and spring for the left stick.
- Push out the retaining pin.
- Remove the retaining pin and spring arm.
- Remove the spring.

## Step 5



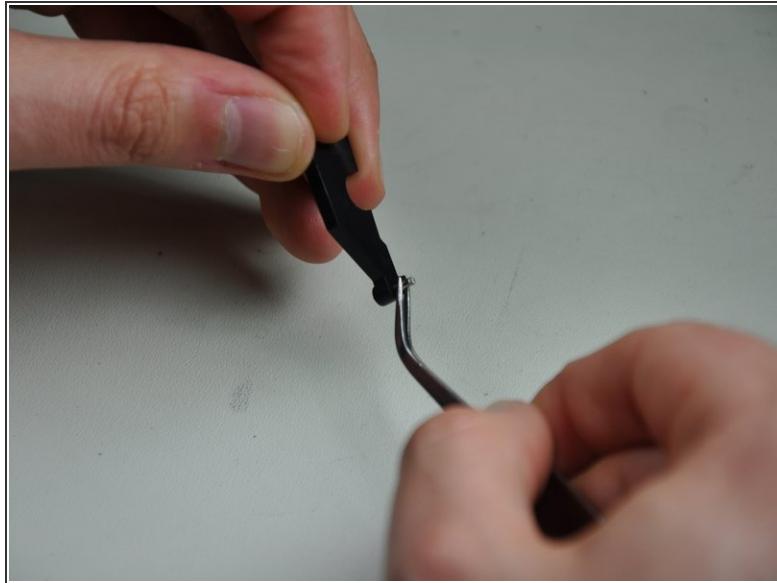
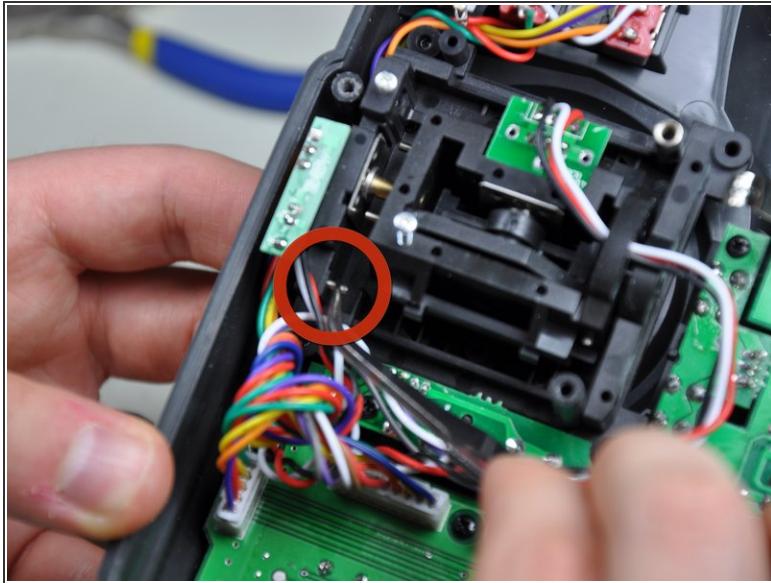
- Remove the tensioner from the right stick.

## Step 6



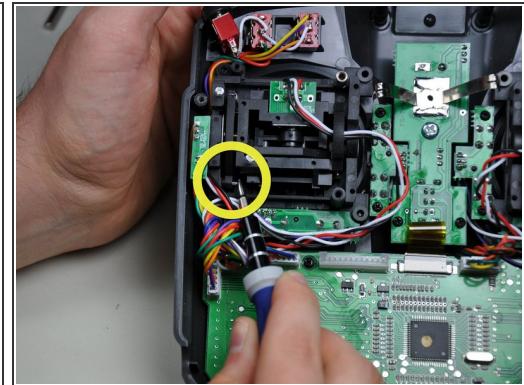
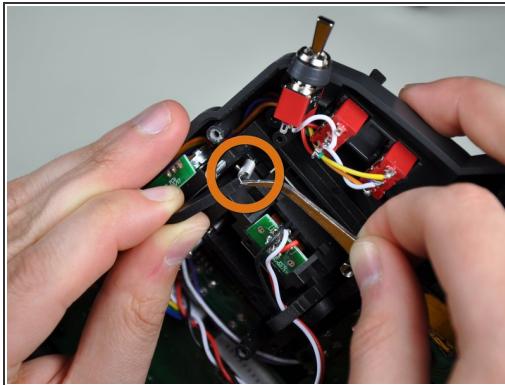
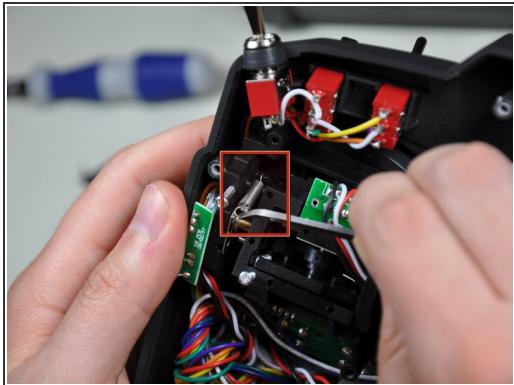
- Attach the tensioner to the left stick.
- Make sure you have the larger slot and machine screw on the metal post.
- Fully tighten down the screw in the plastic post.
- Use the screw in the metal post to adjust the tension on the left stick.

## Step 7



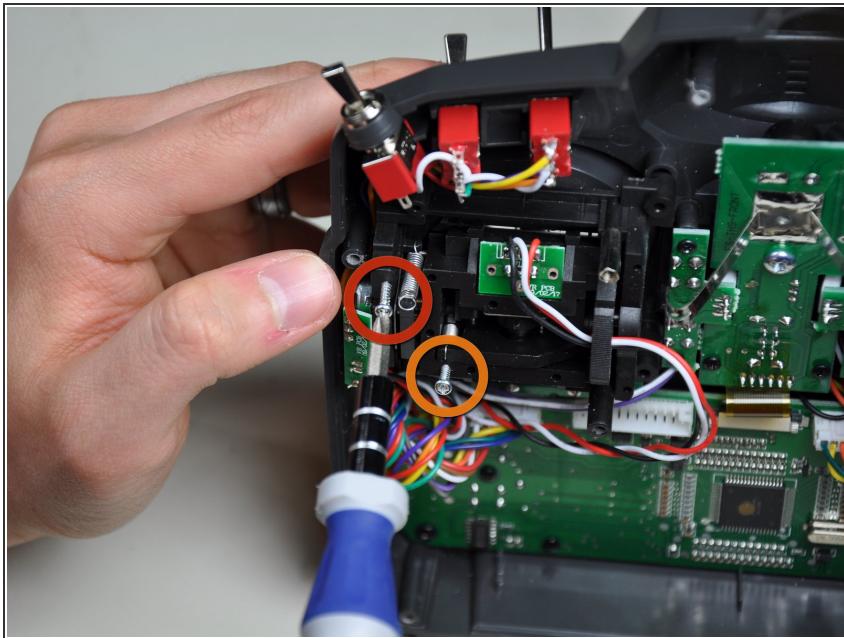
- Remove the retaining pin from the right stick.
- Drop the retaining pin into the spring arm. It is a loose fit, so it will freely drop straight through if the arm isn't held level.

## Step 8



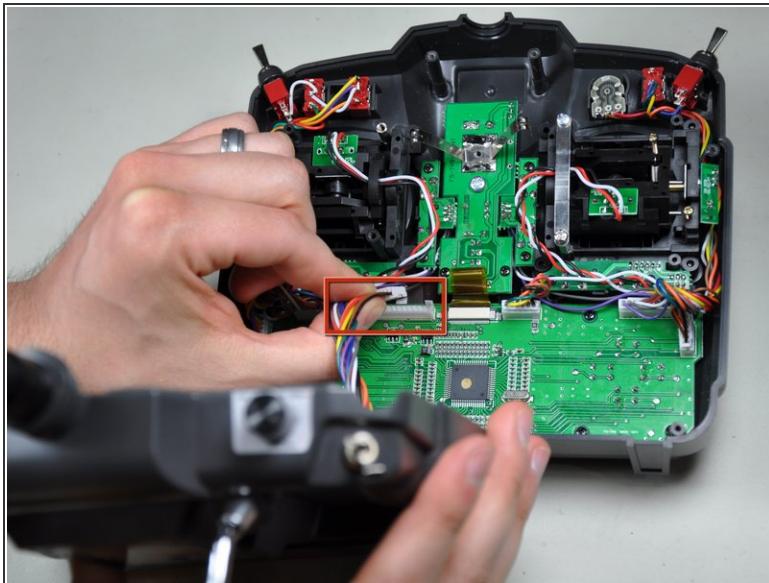
- Attach the spring to the plastic hook on the right stick.
- Hook the spring over the end of the spring arm.
- Line the spring arm up with the hole in the right stick casing and push the pin into place so it is flush with the side of the spring arm.

## Step 9



- You can now adjust the spring tension for the right stick.
- Vertical movement spring tension set screw
- Horizontal movement spring tension set screw

## Step 10



- Reconnect the cable linking the front and back halves of the transmitter.
- Close up the case and enjoy your Mode 2 transmitter.

To change from Mode 2 to Mode 1, use the same instructions but swap the left and right stick references.