



IRIS

IMPROVEMENT UPDATE PIXHAWK ADJUSTMENT

V.A
2014

Contents

It has come to our attention that, in some cases, the electronics inside Iris can become positioned in a way that wears on the connections between the components. To ensure that this issue doesn't affect your Iris's autopilot system, follow these instructions to adjust the position of Pixhawk.

For a video tutorial of this process and for more information, visit 3dr.com/iris/info.

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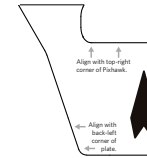
Parts



foam



cleaning pad



guide



zip tie

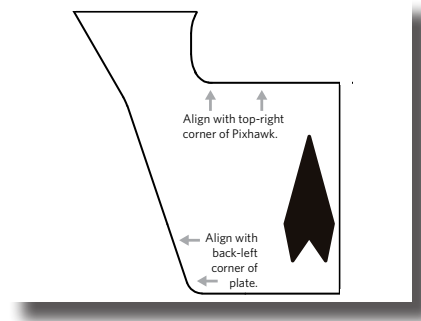
Tools

To complete this update, you will need the following tools:

- medium hex key, 2 mm (included with Iris)
- flat-head screwdriver or other small, flat prying tool (not included)
- scissors (not included)

1 Cut out guide

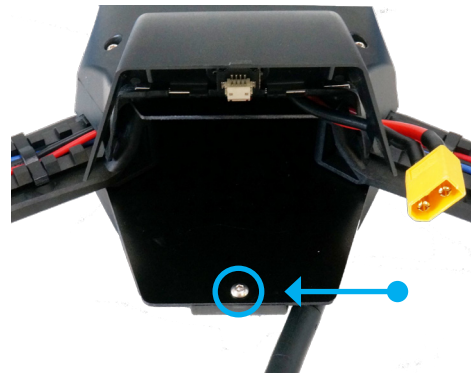
Cut out the shape of the guide provided with this kit.



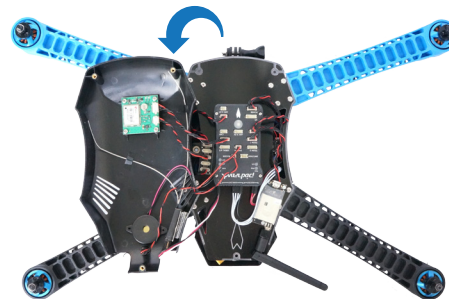
2 Remove top shell

Place Iris upside down with the battery door open. Using the medium hex key, remove the screw inside the battery compartment. On the front end of Iris, remove the two deep-set screws on either side of the camera mount.

Holding the shell together, turn Iris over and open the top shell.



Remove screws.



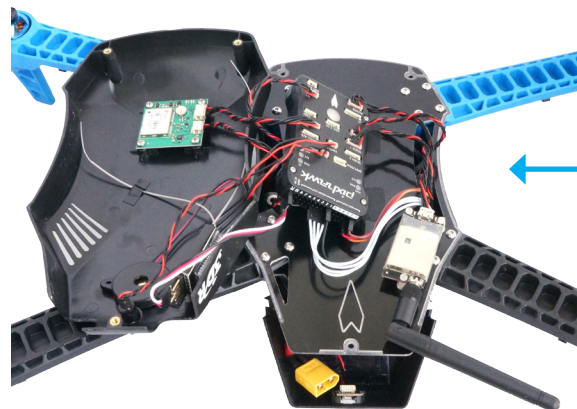
Open shell.

3 Re-position Pixhawk

During this process, try not to stress any of the cable connections between the components.

1 Pull Pixhawk away from plate.

Pull Pixhawk off the foam squares and slightly away from the plate. Remove the remaining foam from the bottom of Pixhawk and the top of the plate. Use the cleaning pad to remove any dust from the surface of the plate.



*Remove foam from Pixhawk and plate.
Some adhesive residue may remain on the plate.*

2 Attach foam to Pixhawk.

Separate the four foam squares, and remove the adhesive backing from one side. Place one square onto each corner of the bottom of Pixhawk without disconnecting any of the cables.

3 Align guide to plate.

Place the guide over the back-left corner of the plate as shown. It may be helpful to tape the guide in place.

4 Check position of splitter.

Align the top-right corner of Pixhawk with the guide. If the I²C splitter is touching Pixhawk, complete this step to adjust its position.

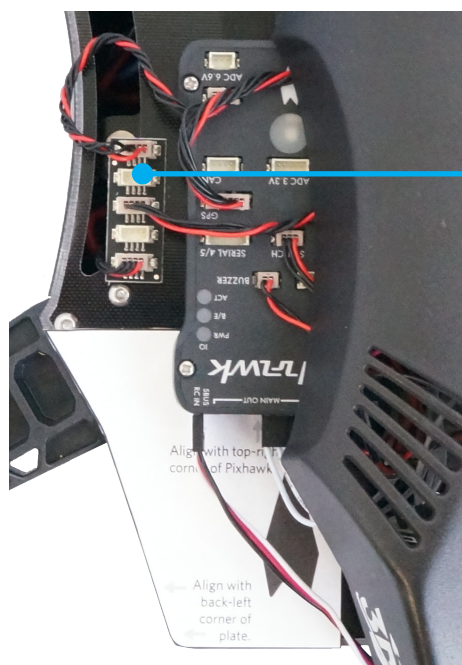
Use a flat-head screwdriver or similar tool to wedge the splitter and adhesive gently away from the plate. To avoid damaging the splitter, do not use too much force or put pressure on the connectors.

Move the splitter a few millimeters away from Pixhawk so that it won't touch the board in its new position. The splitter may overlap slightly onto the cutout in the plate as long as it can stick securely in place.

Be very careful when completing these steps! The adhesive on the foam will only stick once, so make sure to place the pieces carefully the first time.



example of foam attached to the bottom of Pixhawk



I²C splitter

If the splitter touches Pixhawk in its new position, use a tool to adjust the position of the splitter so that it has a few millimeters of clearance between the two components as shown.

Pixhawk situated in the correct position, aligned with the guide, with the proper clearance for the splitter

5 Attach Pixhawk to plate.

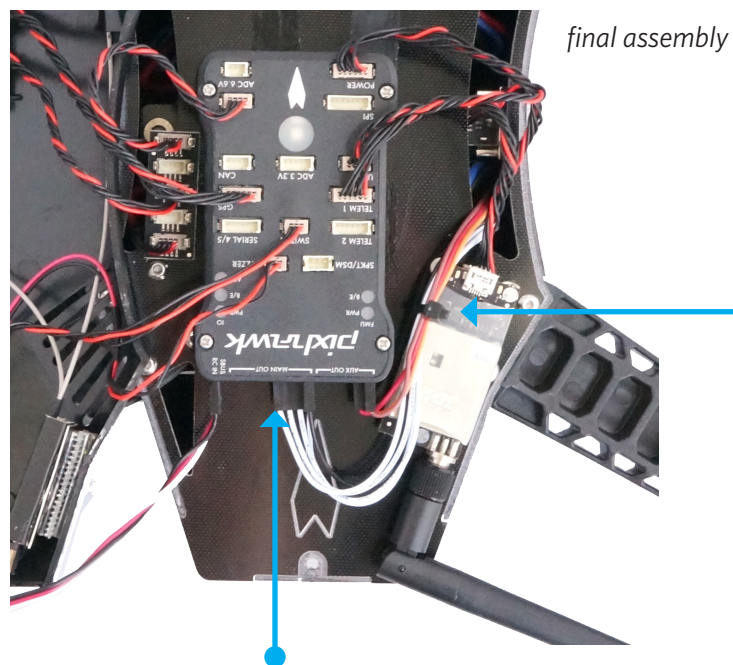
Remove the remaining backing from the foam squares and stick Pixhawk in place, aligned with the guide. Remove the guide from the plate.

6 Zip tie cables.

To the right of Pixhawk, zip tie the cables together so that they sit on top of the telemetry radio and do not become pinched between Pixhawk and the telemetry radio.

7 Check components.

Check that the splitter, telemetry radio, and other components do not touch Pixhawk.



final assembly

Zip tie cables on top of telemetry radio.

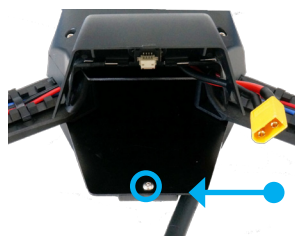
Check that Pixhawk doesn't touch any other components.

4 Replace top shell

Reverse the process in step 2 to replace the top shell. Make sure that the shell does not pinch any of the cables.



Close shell, making sure not to pinch cables.



Replace screws.

5 Re-calibrate Iris

Now that you've re-positioned Pixhawk, re-calibrate the compass and accelerometer for the new configuration.

1 Power on transmitter, and connect telemetry radio to computer using the micro-USB cable.

2 Connect battery to Iris. Do not press the safety button!

3 Connect to Mission Planner or APM Planner by selecting the available COM port and setting the rate to 57600.

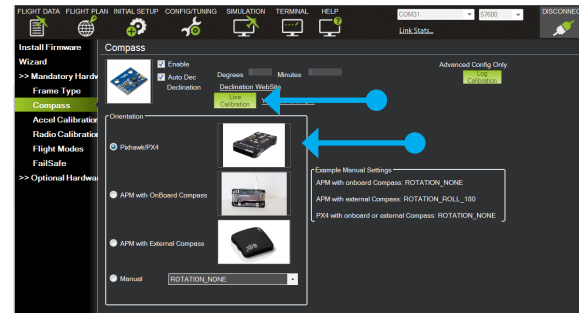
4 Select Initial Setup and Mandatory Hardware.

5 Perform compass and accelerometer calibrations.

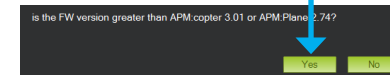
Do not complete the setup wizard. Only the two calibrations specified here are required. If the wizard appears, close it, and select Initial Setup and Mandatory Hardware to view individual calibrations.

Connect to Mission Planner/APM Planner, select Initial Setup and Mandatory Hardware, and follow the prompts to perform the following calibrations:

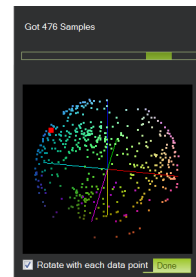
1 Compass



Select Pixhawk.



If prompted for firmware version over 3.01, select Yes.

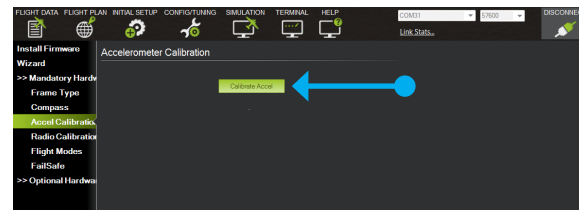


Select Live Calibration.

Move Iris around all axes.

Select Done after collecting data points for all positions.

2 Accelerometer



Select Calibrate Accel, and follow the prompts.

The update is now complete!

For customer support, contact us at help@3dr.com or call our support line at +1 (858) 225-1414 Monday through Friday, from 8 am to 5 pm, PST.

View calibration video tutorials at 3dr.com/iris/info!