Kairos Autonomi
8700 S. Sandy Pkwy.
Sandy, Utah 84070
801-255-2950 (office)
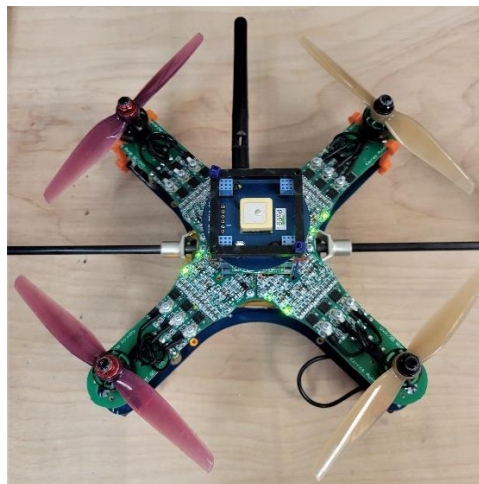801-907-7870 (fax)
www.kairosautonomi.com

ESC Calibration Procedure for Kairos Drones

Purpose: The purpose of this document is to outline the procedure to calibrate the ESCs on a Kairos UxV/35 drone. This procedure will work for any drone that uses Ardupilot and the UxV/35 Mission Controller board. The procedure will be demonstrated in this document using a small UxV/35 drone, but can be used on larger drones as well. The procedure requires a completed drone with four ESCs installed and a test computer with the Mission Planner software installed.

ESC Calibration

1. Open the Mission Planner Software on the test computer and allow it to load completely.


2. Power up the drone to be calibrated. Allow the drone to initialize the ESCs. The ESCs will beep a few times. The ESCs will indicate that they are initialized when they make a higher pitched beep. The ESCs will be silent once they are initialized.
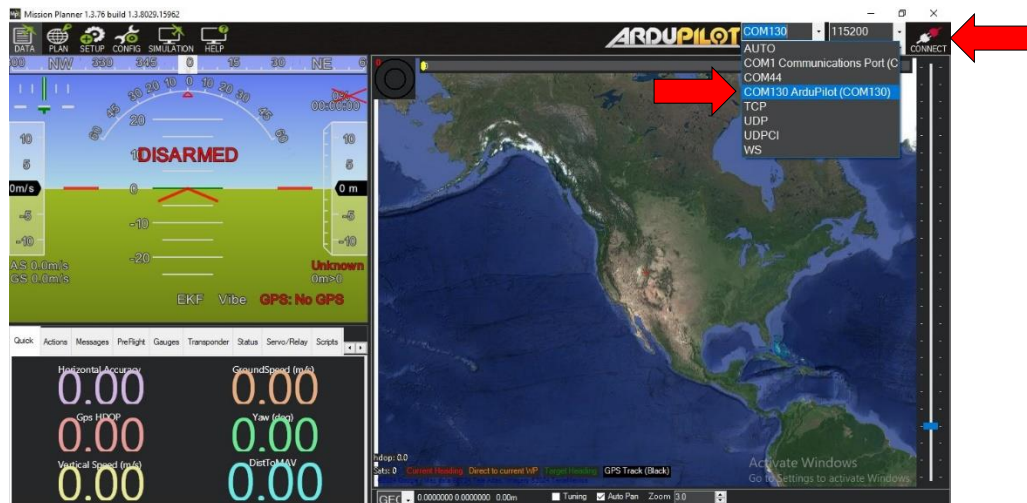

ESC Calibration Procedure for Kairos Drones

Kairos Autonomi
8700 S. Sandy Pkwy.
Sandy, Utah 84070
801-255-2950 (office)
801-907-7870 (fax)
www.kairosautonomi.com

3. Connect the drone to the test computer using a USB A to USB Mini cable. Connect the USB Mini connector to the USB Mini connector on the UxV/35 Mission Controller board.
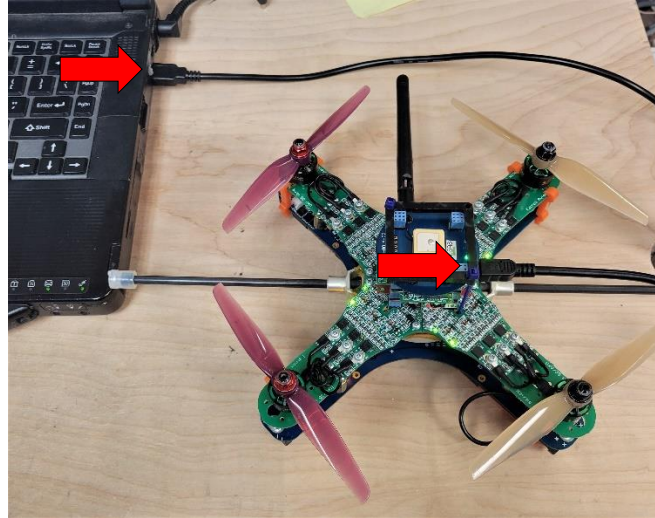

4. Click the down arrow next to the COM port selection on the top right corner of the Mission Planner window. Select the appropriate COM port for the drone that is connected via USB cable. The COM port should be labeled as ArduPilot. Click the Connect button in the top right corner of the Mission Planner window to connect the drone to the software.
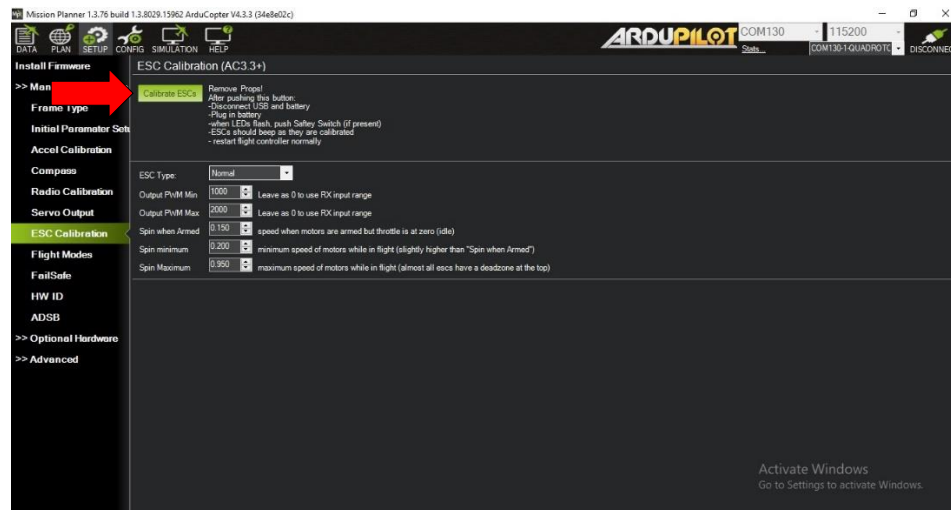

ESC Calibration Procedure for Kairos Drones

Kairos Autonomi
8700 S. Sandy Pkwy.
Sandy, Utah 84070
801-255-2950 (office)
801-907-7870 (fax)
www.kairosautonomi.com

5. Once the connection process completes, Click the Setup icon at the top left of the Mission Planner window and select the ESC Calibration tab in the left pane.
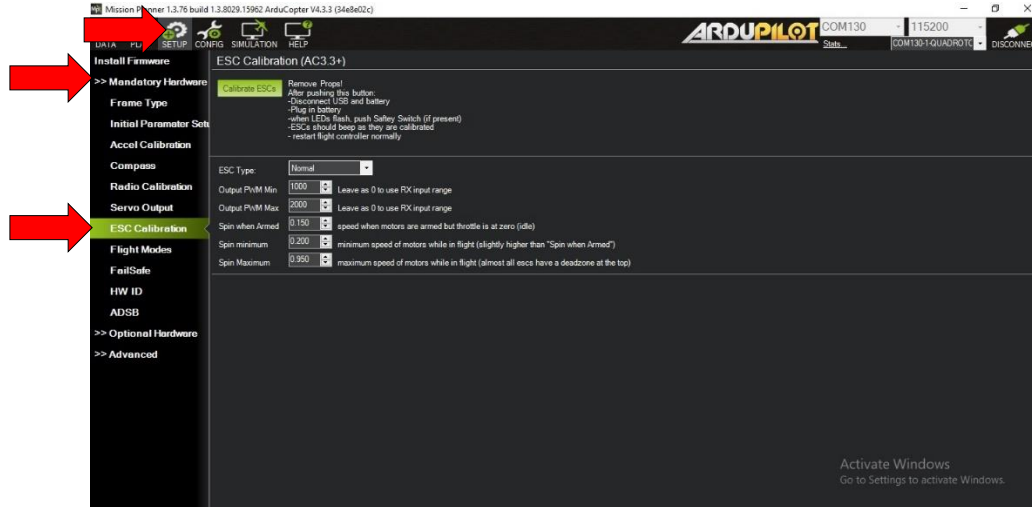

6. Click the Calibrate ESCs button in the ESC Calibration window. The button will be grayed out after it has been pushed. This sends the command to the UxV/35 Mission Controller board to calibrate the ESCs on the next startup.

ESC Calibration Procedure for Kairos Drones

Kairos Autonomi
8700 S. Sandy Pkwy.
Sandy, Utah 84070
801-255-2950 (office)
801-907-7870 (fax)
www.kairosautonomi.com

7. Disconnect the USB cable from the drone. Power cycle the drone. When the drone initializes the ESCs there will be a series of beeps ending with a three-beep tone at the end. This signals that the calibration is complete.
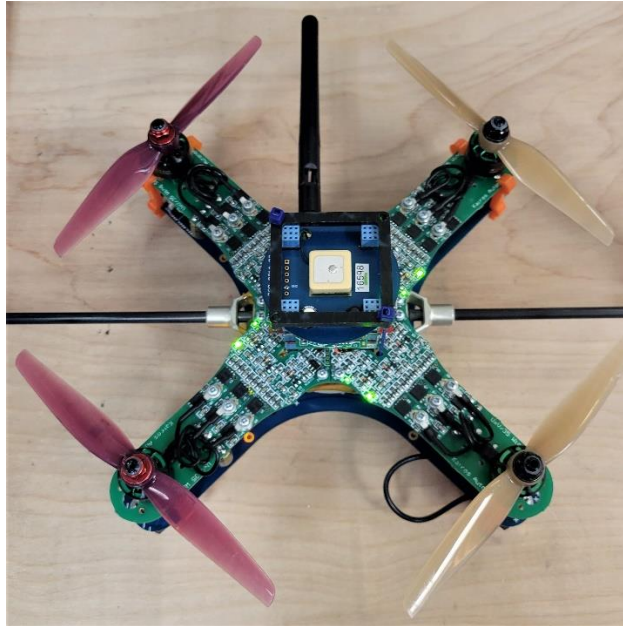
8. Power cycle the drone again after the ESC calibration has completed and verify a normal startup.