AURA 8 / AURA PRO:
6AXIS UPDATE AND QUICK FLIP GUIDE

Firmware v1.25+ **July 27, 2025**

OVERVIEW

The tested and flight proven 6Axis features from the Aura 5 are now available on our Aura 8 and Aura Pro products **after updating to Aura Firmware v1.25+**. After updating the firmware, any existing Aura will be automatically retrofitted to allow the pilot to use the 6Axis Level Assist and Launch Assist features without any additional PC programming.

These new 6Axis features are OFF by default. The pilot will have an identical configuration and feeling until they enable the 6Axis features with our new Quick Flip procedure.

- **What does 6Axis mean?**

  Our original Aura 8/Aura Pro system used 3 Axes (roll, pitch, and yaw rate gyro data) to help reject unintended disturbances like wind. "6Axis" means we incorporate 3 additional measurements (X, Y, and Z acceleration data) to now calculate inertial, drift-free Roll and Pitch angles.

- **What are the new 6Axis features for Aura 8 and Aura Pro?**

  Since we now have drift free, inertial measurements of Roll and Pitch attitude angles, we can use our 6Axis Level Assist Mode and Takeoff/Launch Assist feature.

  - Level Assist Mode means that when the sticks are centered, the airplane will maintain level flight. When you hold the stick full over, it will bank or pitch to a pre-programmed angle and not exceed it. Level Assist Mode commands an attitude angle ([deg]) rather than rotational rate ([deg/sec]. We've tuned our Level Assist Mode so you have enough control to maneuver and fly in tighter spaces. It's great for beginners to learn to manage speed, altitude and general flying, but it's also great for more experienced pilots who want a more relaxing day in challenging conditions, a little extra reassurance on landing, or to recover from a loss of orientation.
  - Takeoff/Launch Assist Mode is great for runway takeoffs or hand launches. Activate Launch Assist by holding Left Aileron and Up Elevator with the Throttle Low and the Rudder centered. The Aura will enter a special mode that will hold your wings level while trying to climb out at ~25-30 [deg]. After you advance the throttle, any movement of the Aileron or Elevator Transmitter stick will immediately exit from Takeoff/Launch Assist Mode and resume normal control. These few seconds of extra control can take the stress out of hand launches or make for worry free takeoffs from the runway.

- **What is Quick Flip?**

  Quick Flip is our new procedure that will Enable or Disable the 6Axis features without needing a PC or a Transmitter. After updating the firmware to v1.25+, follow the procedure detailed in our Quick Flip section of this document to Flip Flight Mode 1 to 6Axis Level Assist Mode and allow Takeoff/Launch Assist. If you don't like it, you can repeat the Quick Flip procedure to change back to your previous configuration.

  In the majority of our Aura profiles, Flight Mode 1 is a Gyro Off Flight Mode. In the case of Custom or Expert profiles, Flight Mode 1 may be a 3Axis Low Gain Mode. In either case, the Quick Flip procedure will change Flight Mode 1 to our 6Axis Level Assist. Using the Quick Flip procedure on any Aura after updated with Firmware v1.25+ will leave Flight Mode 2 and 3 unchanged. Future Super PNP airplane designed specifically for 6Axis may also change Flight Mode 2 and 3 with Quick Flip, but that will be detailed in their manuals.

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QUICK FLIP PROCEDURE

Use the following Quick Flip procedure to Enable or Disable the 6Axis features: Flight Mode 1 Level Assist and Takeoff/Launch Assist.

How To: Turn On/Off 6Axis Features - Flight Mode 1 Level Assist and Takeoff/Launch Assist:

1. Unplug the battery from the airplane and Turn OFF your Transmitter.
2. Connect the battery to power up the Airplane. The Blue LED will flash indicating Gyro Calibration. After it stops flashing, orient the model with a straight nose down attitude and keep it still. The transmitter must still be OFF.
3. The Aura will detect this orientation, and Flip the 6Axis features after a few seconds.
4. The servos will power up and center. The elevator will then move to 6 times to indicate 6Axis features have been Enabled or 3 times to indicate the 6Axis features have been Disabled.
5. Once the elevator movements are complete, return the airplane to a level attitude and disconnect the battery.
6. Turn ON your Transmitter and connect your battery as normal. Use your flight mode switch to check Flight Mode 1 performs as expected and go fly!
7. Repeat this procedure if you want to switch back to the original configuration.

How to: Check Flight Mode 1 Level Assist after Quick Flip

Quick Flip replaces your existing Flight Mode 1 with 6Axis Level Assist. 6Axis Level Assist will self-level the airplane when the control sticks are released to center. The Bank and Pitch angles are also limited at full stick deflection. This mode is a great way for the beginning pilot to learn to throttle and altitude management with more confidence and lower risk. It's also a helpful way for more advanced pilots to feel comfortable in windy conditions or to recover from a loss of orientation.

To test Flight Mode 1 is configured as 6Axis Level Assist:

1. Make sure your Flight Mode switch is set to Flight Mode 1 and center the aileron/elevator control sticks.
2. Roll the airplane and hold it still. The Ailerons should stay deflected as if to roll the airplane back to wings level.
3. Pitch the airplane nose and hold it still. The Elevator should stay deflected as if to pitch the airplane back to level.
4. The Rudder control remains a 3Axis control mode and centered when there is no nose rotation. There is no rudder Heading Hold in 6Axis Level Assist.

How to: Activate Launch Assist after Quick Flip

Takeoff/Launch Assist Mode is a special mode that can help beginners or advanced pilots during challenging takeoff conditions. Once Takeoff/Launch Assist has been activated, it will control the roll and pitch angle of your airplane, keeping the wings level and commanding a brisk climb out to a safe altitude.

To Activate Takeoff/Launch Assist follow these steps:

1. Hold your Transmitter sticks at the following positions for at least 3 seconds: Throttle low, rudder centered, full left aileron, full up elevator. The airplane must be still/stationary to enter Takeoff/Launch Assist.
2. When Takeoff/Launch Assist is active you will see the elevator go up and the ailerons move to try to keep the model level. You can now return the aileron and elevator sticks to center. The Red LED on the Aura will slowly flash to indicate Launch Assist is Activated.
3. If you are having trouble activating Takeoff/Launch Assist, make sure that all your trims are centered and keep the airplane stationary with low Throttle and Aileron/Elevator/Rudder sticks centered for at least 5 seconds before again holding the controls in the positions noted above.
4. Once Takeoff/Launch Assist is active, you can proceed to takeoff by advancing the throttle and using the rudder to steer. Do not accidentally move the aileron or elevator sticks from center after advancing the throttle as this will Disable Takeoff/Launch Assist!
5. Once you are at a comfortable altitude, you can move the Aileron or Elevator stick to disable Takeoff/ Launch Assist and resume normal control.

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