

## KK2.1.x Self level setup, trimming and review with firmware v1.6

### Determining your Current Firmware Version

Your KK2.1x board that came with your kit has firmware version 1.6 or higher. You can easily verify the version by following these steps: When you first apply power to your KK2.1 board with a battery, a screen will flash across the screen that displays the current hardware and firmware versions. You might have to unplug and re-plug your KK2.1 a few times to read the firmware version as it only displays on the screen for part of a second, but you are going to look at the second line in the splash screen, which says "FW: ###". That number is the firmware version currently running on your KK2.1.

### Self-Level

"**Self-level**" is not GPS or altitude hold. It's only purpose is to keep your drone level in flight. It won't apply any corrections as it brings the drone level, meaning that if you are drifting in a certain direction, you will continue to drift even though the drone self-levels. But it makes the aircraft much more controllable.

You need to begin your flight with self-level "**ON**" (using the Gear switch), or the aircraft will misread the self-level data if you turn it on in flight.

1. Plug in the battery. Perform the **ACC Calibration** on an absolutely level surface.



2. Unplug the battery and then plug it back in. Perform an **ARM** and then **DISARM**.
3. The **SAFE** screen should show either 0, 1, or -1 on the **Roll Angle/Pitch Angle** readings.



4. Scroll down to **Self-Level Settings**:



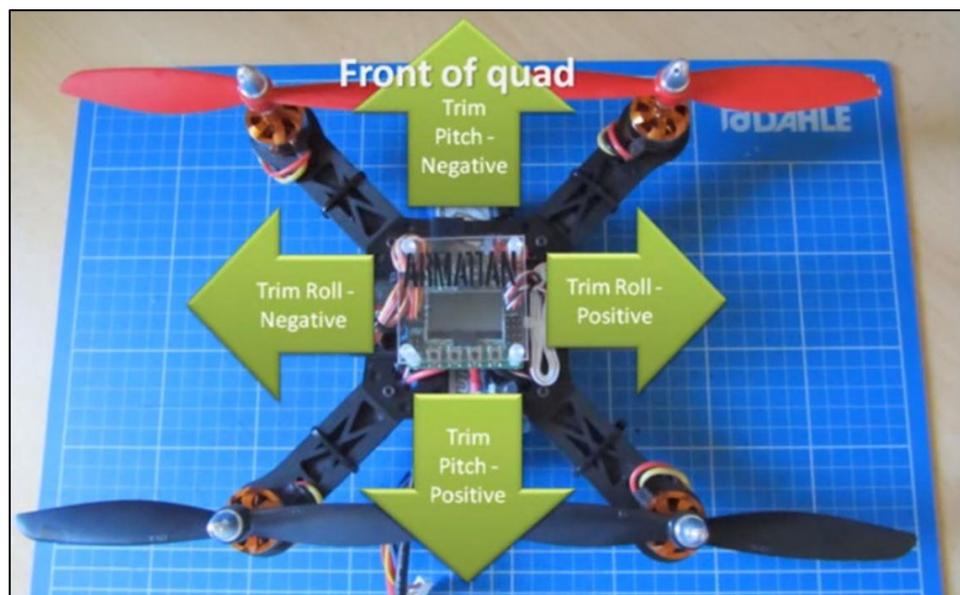
5. The **ACC Trim Roll** affects side-to-side movement while the **ACC Trim Pitch** affects front to back movement.



6. Change the **Trim settings** if needed: For example, if the drone drifts forward slightly in flight (after you confirmed it was setup as level), then you need to apply **Positive Pitch Trim**.
7. If it was drifting backwards, you would apply **Negative Pitch Trim**.
8. If it was drifting to the right, you would apply **Positive Roll Trim**.
9. If it was drifting to the left, you would apply **Negative Pitch Trim**.

Summary of the way to correct any drift in self-level:

- If the model drifts forward, to correct use positive pitch trim.
- If the model drifts backwards, to correct use negative pitch trim.
- If the model drifts left, to correct use positive pitch trim.
- If the model drifts right, to correct use negative pitch trim.



This is an excellent YouTube video showing you the process described above:

[https://www.youtube.com/watch?v=7KSof\\_L6vik](https://www.youtube.com/watch?v=7KSof_L6vik)