

Save Trim / Auto Trim

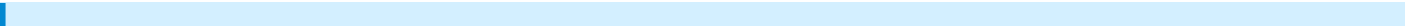
XXXXXXXXXXXX,XXXXXX,XX,XXXXX,XXXXXX,
XXXXXX,XXXXXXXXXXXXXXXXXXXX,XXXXXX,"XX Trim" "XX Trim"
XXXX.

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XXXXX,XXXXXX,XX,**XXXX,**XXXX.

AHRS XXXXXXX

XX AHRS AutoTrim,XXXXXX,XXXXXX.XX aXXXXXX XX "XX AHRS
XXXX ("182")XXXX. XXXX CH7XX :

1. XX XX url= (XX) XXXX CH7XX 1800XX
2. XXXXXXX RCx XX "AHRS Auto Trim" (182),XX Mission Planner Aux
XXXX "Write Params"XX . XX XXXX XXXX RCXXXXXX
3. Find a wind free environment with sufficient space to fly your copter without crashing into something.
4. Put the vehicle in manual Stabilize/AltHold mode or a position hold Loiter/PosHold mode (recommended).
5. Arm the vehicle and lift into a hover. The vehicle must be flying in order to enable autotrim. Flip the switch that you setup (CH7) to its High position (>1800us). "Autotrim running" message will be sent to the GCS.
6. If in a manual mode, fly your copter for about 25 seconds in a stable hover in position, keeping it from drifting with the pitch and roll sticks. As the trim is adjusted, less and less corrections with the sticks will be required. If using a position hold mode, take off and let the copter hover in place while not touching the sticks.
7. Once satisfied, flip the switch low, saving the trims, and land. "Trim save" message will be sent to the GCS.
8. Take off in AltHold mode and check if your copter is flying level now. If not repeat steps 4 - 7 again.





You can manually set the trim by modifying the **AHRS_TRIM_X** and **AHRS_TRIM_Y**. Roll trim is **AHRS_TRIM_X**, Pitch trim is **AHRS_TRIM_Y**. Both values are in radians with left roll and forward pitch being negative numbers.



It is nearly impossible to get rid of all drift so that your copter remains completely motionless without any input. It may be preferable to yaw the copter 90 degrees and holding that orientation for about 6-7 seconds each time so that any external disturbances will get cancelled out, resulting in a better trim.

Save Trim



the above AHRS AutoTrim method is preferred since it does not involve moving transmitter trims after RC calibration.

Save trim involves essentially transferring your radio transmitter's trims into the autopilot's AHRS trim (the **AHRS_TRIM_X** and **AHRS_TRIM_Y** parameters), the same values that the **AHRS AutoTrim** method above adjusts. Normally, once **common-accelerometer-calibration** is done, you never want to change the transmitter's trims, but in this case it is done **temporarily**. The "Save Trim" function ("5") is assigned to any free RC channel, usually a switch based one, using an **common-auxiliary-functions**. For the example below, Channel 7 will be used.

1. Check that your CH7 switch goes above 1800 on the MissionPlanner's Setup > Mandatory Hardware > Radio Calibration screen

[../images/MP_SaveTrim_Ch7PWMCheck.png](#)

2. Set your chosen channel's `RCx_OPTION` to "Save Trim" (5) using Mission Planner's Aux Function screen and press the "Write Params" button. See **common-auxiliary-functions** for details on assigning options to any RC channel.

[../images/MP_SaveTrim_Ch7.png](#)

3. With your CH7 switch in the off (Low) position, fly your copter in Stabilize or AltHold mode and use your transmitter's roll and pitch trim to get it flying level

4. Land and put your throttle to zero
5. Release the roll and pitch sticks and switch the CH7 switch high for at least 1 second. The words "Trim saved" should appear in the MP's Flight Data screen's Messages tab
6. Reset your transmitters roll and pitch trims back to the center and fly again and it should fly level now. If it does not repeat steps 3, 4 & 5

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Save Trim also works while ****Simple or Super Simple mode**** is enabled, but take care not to change the vehicle's heading between landing and switching CH7 high, since the trim will be saved relative to the vehicle's heading at that moment.

Desktop method

The trim can also be updated by setting the vehicle level, connecting to the Mission Planner (or perhaps other ground stations) and selecting Initial Setup, Mandatory Hardware, Accel Calibration and pushing the lower "Calibrate Level" button.

[../images/AccelCalibration_MP.png](#)

Please note though that making the HUD level while the vehicle is on the ground does not necessarily mean it won't drift horizontally while flying because of other small frame issues including the flight controller not being perfectly level on the frame, CG placement, an/ord slightly tilted motors.

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