



- [illegible]



IMU sensors, such as accelerometers, gyroscopes, and magnetometers, can be affected by vibration. Excessive vibration can cause the IMU to produce inaccurate readings, which can lead to a crash. Excessive vibration can also make altitude hold imprecise or even produce uncontrollable climbs/descents.

One method of testing this, is to secure the helicopter to the ground, and run up the main rotor, watching the artificial horizon in the ground control station. If it moves away from level, you probably have a vibration issue which needs to be addressed. Testing should be done at various collective levels and rotor speeds. Be careful not to over-stress the helicopter with collective extremes.

Setup for ground test:

1. Secure vehicle to the ground.
2. Temporarily reduce Roll, Pitch, and Yaw P,I,and D, PID's to zero. Be sure to restore them after this test!
3. Set **ACRO_OPTIONS** = 2, temporarily, if not being used already.
4. Change to ACRO mode.
5. Arm and engage motor interlock, allowing the vehicle to spool up at 0 degree pitch, watching for any change from level in the GSC of the artificial horizon. Any significant tilt indicates noise is disrupting the attitude estimate and should be investigated and eliminated.

