Troubleshooting your Quadcopter

Following is a list of common beginner quadcopter malfunctions and their possible causes and solutions.

Problem: Quadcopter will not take off - props seem to spin at high speed but quad flips or just skids along the floor or ground.

Solution: Carefully check that all blades are installed properly - two types of blades are used on quads, clockwise and counter clockwise. Your owner's manual should have a sketch of the proper layout - the higher edge of the blade should be leading the way! The diagram will pertain to many quads' propeller rotation.

Problem: Quadcopter wobbles when hovering - even with light or no wind.

Solution: Carefully inspect propellers both while hovering (look at the pattern they create while spinning) and when the quad is off. Chances are that a propellers is out of shape from crashes or wear. Fix or replace.

Problem: One motor seems to take longer to start or spin up to speed.

Solution: This, in itself, may not be a problem as long as the quad acts correctly when more throttle is applied. It is

somewhat normal for the props not to all start at the same instant. If, however, it affects liftoff or flight the motor (in minis and micros especially) may need to be replaced.

Problem: Quadcopter acts differently after 5+ minutes of flying.

Solution: Battery voltage may have dropped, resulting in different performance characteristics. Although flights can be as long as 10+ minutes, this depends on the battery size, number of charge cycles, charge state, etc. A fresh battery should fix the problem. For larger quads, you should become familiar with the amount of voltage your quad needs to fly and use a digital multimeter to check voltage if you have concerns about a particular battery. Larger drones should only be flown with a full charged battery (to start flight).

Problem: Quadcopter does not hover well, instead flying in one direction constantly.

Solution: As with many computerized systems, the first thing you should do is a reboot - accomplished by disconnection of the battery and reconnection, making 100% sure that the quadcopter is on a level surface. If your quad still favors one direction after a reboot, check the TX trim and adjust as needed.

Problem: Quadcopter cannot fight the wind and tends to blow away

Solution: Most quadcopters have a “rate” setting which is often expressed in percentages and can be adjusted on the TX (Remote). 20% would be a low rate which is for indoor flight while rates of 60-100% allow for steeping angling of the drone - and therefore the ability to fight the wind to some degree (depending on your flying skills).