

Becoming a Better Drone Pilot – The Preflight Checklist

By Chris Anson

There are a lot of things remember when you're flying a drone. If you're shooting video and/or photographs, then there are even more things to remember and set. Having a preflight checklist makes this much easier. Here are some of the things to check on the ground, prior to takeoff and immediately after takeoff, while in the air. *Note that some of these options depend upon which drone you're flying.*

Remember that whether you are a recreational pilot or Part 107 commercial pilot, you are responsible for checking and setting up the drone so that it is safe to fly.

On the ground

1. **Do a visual inspection of your drone and surrounding area**
 - Are there people, buildings, trees, or cars around where you're going to take off?
 - Will this impact the flight/mission? If so, consider moving to another location.
 - Is the landing/takeoff area clear of debris, rocks, and stones?
 - If you have a landing pad, put it down, otherwise move to another spot.
2. **Are all the propellers securely attached?**
 - Never hurts to recheck (losing a propeller causes more crashes than you might imagine).
3. **Is the drone's landing gear locked into place?**
 - If not, correct it.
4. **Are the drone batteries fully charged and locked in place?**
 - If they aren't fully charged, do they have enough power for this flight/mission?
5. **Are your remote-control batteries fully charged?**
 - If they aren't fully charged, do they have enough power for this flight/mission?
6. **Camera/Gimbal**
 - Is your camera gimbal mounted and secured?
 - Is your gimbal lock removed and/or unlocked?
 - If you have a lens choice, do you have the right lens on your camera for this flight/mission?
 - Do you have the correct ND filter on your lens for current lighting conditions?
 - Make your best guess and recheck it once you are in the air. You might have to land and change. Remember that the smaller sensors on these drones require a lower f-stop to get the sharpest image.
 - Is your SD and/or SSD card inserted correctly?
 - If not, reinsert and recheck.
 - Is your Phone or Tablet fully charged?
 - If not, do you have enough charge for this flight/mission?

Getting ready to fly

1. **Power up the remote**
2. **Power on the tablet and connect to the remote**
3. **Start the Go 4 app or whichever application you are using**
4. **Power up the drone**
5. **Check all the indicators for**
 - Battery levels on drone and remote controller
 - GPS/Satellites
 - Sensors
 - Visual/telemetry link to your drone. DJI shows this by way of the HD icon
6. **Camera related**
 - your SD or micro SD card formatted?
 - Is your SSD card formatted?
 - Are you're shooting video?
 - What is your frames per second set to (FPS)?
 - Is your shutter speed twice what your frames per second are (FPS)?
 - 24fps = 1/50 | 30fps = 1/60
 - What is your Style set to?
 - What is your SD/Liveview set to?
 - What is your White Balance set to?
 - If you are using an SSD
 - What is your RAW or Prores settings?
 - What is your SSD Looks (Normal or RAW)?
 - Are you shooting in Normal Mode or EI Mode?
7. **Are you shooting photographs?**
 - What kind of shot are you taking?
 - Single, multiple, AEB, Timed, Raw Burst
 - What is your Image Size?
 - What is your Image Format?
 - What is your Color set to?
 - What is your Style set to?

In the air

1. Lift off the drone into a hover approximately 15 feet in altitude.
2. Test the controls on the remote. Are they responding correctly?
 - If not, land and correct them.
3. Test the camera for both photo and video. Is the camera working correctly?
 - If not, land and correct it.
4. Check or recheck the exposure levels for the camera for both video and photographs and adjust as necessary.
 - For video this is where you may need to change your ND filter to get that lower f-stop for a sharper image.

5. Recheck all the indicators for GPS/Satellites, HD, Remote Battery, Drone Battery, Avoidance Sensors.

If everything is a go, fly the mission. If not, land and correct the problem. Then lift off and check again.