

## PREFLIGHT

- Determine Flight Crew
- Safety glasses
- Propeller guards for dangerous or indoor spaces
- Shadow protector
- Orange cones
- Landing pad
- (VO) Airmap approval - Ceiling: \_\_\_\_\_ Radius \_\_\_\_\_

License or certificate with PIC during flight

- Trust certificate - recreational flight -
- Part 107 License - commercial flight -
- Low chance of rain (Less than 10%)
- Wind less than drone can handle - see manufacturer recommended -
- Clouds more than 500' above your LAANC approved ceiling
- At least 3 miles visibility
- Twilight - Not 30 minutes before or after civil twilight -
- Safety vest -basic/recreational or FAA drone pilot labeled vest/commercial -

Discuss flight mission with flight crew

- Mission - What is your goal? What are you aiming to accomplish by this flight?
- Obstacles - Power lines, trees, people, structures, fences, etc..?

### Flight crew jobs

- PIC (Pilot in Command)
  - All responsible
- VO (Visual Observer)
  - Report to PIC
  - Confirm checklist
- Safety spotter(s)
  - Inform public/PIC
- Equipment manager
  - Equipment check
  - Care for equipment

## Aircraft Check

- Registration sticker visible
- Check for issues with aircraft
  - Frame, propellers, gimbal cover, gimbal brace, camera, landing gear (Gear Badge)
  - SD card inserted properly
  - Camera lens clean and ND/Polarized lens if needed

Battery(s) full

- Scout battery (Checking things out. Looking around at what you want to see)
- Mission battery (Accomplishing the mission.. shooting the pics/video you want)
- Backup battery (Just in case you need a backup)

## Power Up

- Transmitter battery is full
- Confirm camera settings
- Transmitter antennas facing drone
- Flight application is running and connected
- Flight area is clearly marked with cones if needed
- Verify connection between drone and transmitter
- Calibrate IMU or compass if necessary
- At least 7 satellites connected to transmitter
- No people potentially to be flown over during mission (Ensure clear flight area)
- Transmitter mode set to safest mode using most sensor tech as possible

## Flight Time

- V0 voice commands if V0 present. Otherwise, PIC confirms.
- I. "Your ceiling is \_\_\_\_\_"
- 2. "Keep transmitter antennas facing drone flat"
- 3. "VLOS and be sure not to fly over people"
- 4. Check for potential distractions during mission (social media, people, annoyances)
- 5. "PIC, you are clear for takeoff"
- 6. "Take-off and hover for at least 30 seconds or home point recorded"
- 7. "Confirm 7 satellites"
- 8. "Is your flight application working properly?"
- 9. "Speed is always minimal. No erratic movements. No time for risk PIC"
- 10. "Obstacles clear"
- II. "Head to your mission"
- 12. "Check camera settings and histogram"
- 13. V0 watching for possible issues (PIC head on swivel if no V0)
- V0 ringer on for possible ATC contact (PIC if no V0)

## Emergency Procedures

PIC actions for loss of aircraft control or pilot not feeling well.

"Flight crew (or VO), we have a problem! (Note problem) Prepare a clear area for landing!"

- Try to note the height and location of the drone
- Maintain VLOS as long as possible
- Change to Atti to regain
- Activate RTH (Return to Home)
- Turn off/on transmitter to recover control
- Last resort "power off motors"
- Inform police and ATC (Air traffic Control) if necessary
- If necessary from property damage or injury, inform the local emergency services.
- If necessary, contact FAA Regional Operations Center within 10 days

Person enters the flight area

If an individual not part of the flight crew enters flight mission location..

- VO or crew should notify PIC immediately
- VO or crew if possible, should notify the individual that they are in a flight area and request they please remain in position so the pilot can safely land
- VO or crew assist in finding safe landing area
  - if individual is further than 30 meters from landing spot, land immediately
  - if individual is within 30 meters from landing spot, pilot should select an alternate site to safely land
- Entire crew decide a new place to fly if possible

## Post Flight

- Power down drone and transmitter
- Check drone structure for abnormalities, cracks, and clean where necessary
- Remove propellers and SD card. Send pics to a file or cloud.
- Pack the drone in a secure case and store properly
- Mission debrief with VO or crew
- If commercial, edit photos/videos and deliver to customer within 24 hours