

BSA Drones

Standard Preflight Checklist

BSA Drone pilots should go through this checklist every time they fly their drone.

Weather and Site Safety Check

- Check local weather forecast - do not fly if there is a greater than 10% chance of rain.
- Sustained wind speed should be under 10 mph with gusts less than 20 mph
- The base of any clouds should be at least 500 feet above the flight site.
- Visibility should be at least 3 miles
- If flying will occur close to dawn/dusk, double check twilight hours as you must fly only in daylight.
- Check for FAA notices or restrictions at the site you will be flying your drone. (The Drone App will help you run these checks.)
- Establish take-off, landing and emergency hover zones and mark them on your Flight Planning Template. Avoid landing sites that can damage your drone (hard concrete, sand, etc.)
- Look for potential electromagnetic interference sources (transformers, generators, solar power inverters, etc.) and plan a safety zone around those sources.
- Look around and identify all obstructions such as towers, wires, buildings, trees or other obstructions.
- Identify where to put spotters to ensure that between the pilot and all spotters, the drone will always be visible to someone.
- Look for pedestrians, animals or vehicles and set up a safety perimeter if needed.
- Review your flight plan with your spotters if present

Visual Aircraft / System Inspection

- Verify that your FAA Registration number is displayed properly and is legible and that you have a paper or electronic copy of your FAA **Small UAS Certificate of Registration** with you at all times.
- Look for abnormalities in your drone—airframe, motors, undercarriage. Check that all parts are firmly attached and all fasteners are tight.
- Inspect Propellers - ensure they are not cracked, damaged, are screwed on tight, etc.
- Inspect your batteries for any swelling, or discoloration that might be indicators of damage.
- Remove any lens caps that are a part of your drone.
- Clean the camera lens with microfiber cloth
- Attach your battery

Powering Up

- Turn on the controller and open up the Drone app on your phone. Use the app to mark take off, landing and emergency hover/landing locations in the app.
- Turn on your aircraft
- Verify you have established connection between the transmitter and aircraft
- The Drone App will automatically check that your drone is properly licensed by the BSA, and present the Safety and FAA rules list to you which must be acknowledged before flight.
 - Remain under 400 feet
 - Keep flight speed at or below 50 mph
 - Fly only during daytime
 - Aircraft must weigh under 55 pounds with all attachments and anything you plan to pick up with the gripper.
 - Yield the right of way to manned aircraft at all times
 - Keep your drone within line of sight at all times
 - Fly in accordance with the BSA Safety rules.
 - Notify airports and air traffic control before flying within five miles of an airport
 - Do not fly over people unless they have given permission.
 - Do not fly from a moving vehicle
- Verify your phone is firmly mounted on top of the controller and is functioning properly
- Calibrate the Inertial Measurement Unit (IMU) as needed
- Calibrate the compass before every flight
- Verify battery levels on both the controller and the drone
- Verify that the drone has acquired GPS location for outdoor flights and has a green lock status.
- Set the “Home” location to your takeoff point or another point on the map (if flying in GPS mode).

Taking Off

- Take-off to eye-level altitude for about 10-15 seconds
- Look for any imbalances or irregularities
- Listen for abnormal sounds
- Do small changes to pitch, roll, and yaw to test control response and sensitivity
- Regularly check the app for alerts and warnings regarding interference or errors.
- Do one final check of safety of flight operations area
- Proceed with your flight plan