Preflight

|  |  |
| --- | --- |
| **Frequencies/Numbers** | Babson CP’s: 781.239.5555  PixHawk Radios: 915Mhz  PixHawk Channel: Match with UAV  RC Transmitter: 2.4Ghz  Connex Video: 5.1-5.8Ghz |

Drone

|  |  |
| --- | --- |
| General Condition | Check |
| Battery | Secured, Check Charge Level |
| Payload | Secured |
| Payload Function | Check and Arm |
| Other Items | Secured or Removed |
| Shake Check | Perform |
| Comms Antenna | Point As Appropriate |
| Propellers | Attach |
| Propeller Direction | Check |
| Propeller Locknuts/Washers | As Appropriate |
| Wind Speed/Direction | Check |
| Weather | Check |
| Transmitter | On/Battery Charged |
| Transmitter Model Select | Match Vehicle |

|  |  |
| --- | --- |
| Drone Battery | Connect |
| Communications Link | Connect |
| Battery Voltage | Check |
| GPS Lock | Check |
| Battery Capacity | Set and Check |
| Failsafe Cutoff Voltage | Set and Check (*3.3 v/cell or 20%*) |
| Battery Failsafe | On |
| Transmitter Failsafe Parameter\_975 | Always RTL |
| Transmitter Signal | Check |
| Flight Modes | Check (*Refer to flight modes section*) |
| GPS Fence | On, Check Limits (*minimum required & <100M, Radius as required*) |
| RTL Altitude/Descent Rate | 27 Meters  1 Meter/Second |
| Mission File (*if applicable)* | Load to Vehicle |

Ground Station

Launch Prep

|  |  |
| --- | --- |
| Propellers | Clear |
| Area | Clear (*3+ Meter Radius*) |
| Personnel | Ready and Aware |
| Arming Button | Press |
| Pilot | Announce “**Arming”** |
| Arm | Left Stick to Lower Right |

|  |  |
| --- | --- |
| General Condition | Check |
| Battery Level | Check |
| Mission Planner/APM Planner | Execute |
| Ground Radio | Connect |

**Continue to Backside**

|  |  |
| --- | --- |
| ***Stabilize*** | ***Reject Disturbance*** |
| Alt Hold | Maintain Altitude |
| ***Loiter*** | ***Maintain Position*** |
| ***RTL*** | ***Return to Launchpoint*** |
| ***Auto*** | ***Autonomous*** |
| Acro | Full Manual |
| Sport | Hold Altitude |
| Guided | Go to GPS Coordinate |
| Drift | Fly Like a Plane |
| Circle | Orbit or Rotate at a Point |
| Pos Hold | Hold Current Position |
| ***Land*** | ***LAND IMMEDIATELY*** |
| Brake | Stop Immediately |
| Follow Me | Follow Assigned GPS Device |
| Simple/Super Simple | Pilot Heading Control |

|  |  |
| --- | --- |
| Throttle | Down |
| Disarm | Left Stick to Lower Left |

Landing

Flight Modes

RED = NO GPS HOLD

BLUE = GPS HOLD

*ITALICS = OLIN PRIMARY MODES*

Post Flight

|  |  |
| --- | --- |
| Datalink | Disconnect |
| Battery | Unplug and Stow |
| Transmitter | Off and Stow |
| Propellers | Remove and Stow |
| Antennas | Orient for Stow |
| Vehicle | Stow |
| Radios | Off and Stow |
| Telemetry | Off and Stow |

|  |  |
| --- | --- |
| Red/Blue Flash | Gyro Initialize |
| Blue Flash | Disarmed, No GPS |
| Blue Solid | Armed, No GPS |
| Green Flash | Disarmed, GPS Lock |
| Green Solid | Armed, GPS Lock |
| Yellow Double Flash | Prearm Check Fail |
| Yellow Single Flash | Radio Failsafe |
| Yellow/Blue Flash | GPS Error/Failsafe |
| Yellow/Red Flash | EKF/Inertial Failure |
| Yellow/Purple Flash | Barometer Failsafe |
| Red Solid | **ERROR** |

|  |  |
| --- | --- |
| Long Beep | Arming |
| Two Short Beep | Disarming |
| “Uh Oh” | Failed to Arm |
| Rapid Beeps | Low Battery |
| “Dee dee dee dah” | GPS Error |
| Descending Notes | Barometer Error |
| Ascending Notes | EKF/Inertial Nav Error |

Blink Colors

**IMPORTANT:** On first flight, run safety checks (e.g. RTL, mode switch) immediately after takeoff

Tones