PRECISIONHAWK

DATE: _____ TIME: _____ AIRCRAFT ID: _____

1 IN THE OFFICE

- [ ] Insert aircraft USB into laptop
- [ ] Open Flight Planner application
- [ ] Create flight plan
- [ ] Save flight plan
- [ ] Eject USB
- [ ] Open Mission Planner Application
- [ ] Go to Flight Plan Tab
- [ ] Right click and open Map Tool
- [ ] Zoom to location
- [ ] Right click map tool to prefetch
- [ ] Place aircraft USB into rear of the aircraft
- [ ] Confirm microSD card is in payload
- [ ] Confirm all gear is in box
- [ ] Confirm batteries charged (payload, laptop, flight & futaba)
- [ ] Confirm regulatory documents, insurance, and permissions

2 INITIAL ASSEMBLY

- [ ] Complete Initial Arrival Checklist (wind direction and speed)
- [ ] Remove fuselage from case
- [ ] Attach payload (and antenna for video link)
- [ ] Remove horizontal and vertical stabilizer from case
- [ ] Attach to tail with the two quarter turn screws
- [ ] Remove wings from case and slide them together
- [ ] Attach wings to fuselage with two quarter turn screws
- [ ] Attach battery to comm box
- [ ] Turn on laptop and open mission planner
- [ ] Verify switches are in correct position for Takeoff on RC Transmitter (Auto/Stabilize, Auto/RTL,Throttle 0%)
- [ ] Attach Propeller

3 POWER ON

- [ ] Place Battery into aircraft, thus powering it on
- [ ] Place aircraft on case
- [ ] Within Mission Planner Application select correct COM Port. Open Device Manager > Verify Ports (COM & LPT)
- [ ] Set Baud Rate to 115200
- [ ] Click Connect
- [ ] Connect to aircraft in Mission Planner application

4 AIRCRAFT SYSTEM CHECK

- [ ] Press ok to initialize aircraft
- [ ] Use up/down arrow keys to select flight plan
- [ ] Press ok to confirm
- [ ] Turn on RC Transmitter
- [ ] Assure Pitot Tube cover is on (if not available shield pitot tube with hand DO NOT BLOCK PITOT TUBE)
- [ ] Blow into pitot tube (assure airspeed spike on Hud)
- [ ] Mode switch check (confirm stabilize and auto)
- [ ] Walk aircraft to landing area

5 MISSION PLANNER FINAL STEPS

- [ ] Laptop
- [ ] Go to Flight Plan tab
- [ ] Click Read WPs
- [ ] Confirm bounded area of interest
- [ ] Move Last WP to Location of Plane (red aircraft on screen)
- [ ] Move to WP2 to Center of Survey (confirm loiter is at survey altitude)
- [ ] Move Home to a safe location away from spectators or obstacles while still in visual range (In case need for RC Control)
- [ ] Write WPs
- [ ] Go to Flight Data tab
- [ ] Select auto-pan on the bottom taskbar, below the moving map (one time only)
- [ ] Select Actions tab
- [ ] From dropdown box, select WP1 and click "Set WP" (confirm It is in the HUD and active, go back to flight data tab)

6 LAUNCHING AIRCRAFT

- [ ] Pick up plane with throwing arm
- [ ] Aircraft nose pointed into a headwind
- [ ] Confirm propeller is extended
- [ ] No notable obstructions in vicinity
- [ ] Press OK/Launch
- [ ] Countdown 5 seconds, yelling CLEAR
- [ ] Wait for ESC to arm motor; note the beep
- [ ] Motor starts to spin
- [ ] Wings level
- [ ] Pitch 0-15 degrees
- [ ] Wait two seconds until full motor RPM
- [ ] Toss if wind >6m/s; Throw if wind >3m/S; Running throw if little to no wind

7 IN FLIGHT

- [ ] Aircraft turns after climbing to 40m
- [ ] Aircraft goes to takeoff loiter (WP 2)
- [ ] Aircraft does 2-3, 60m loiters
- [ ] Flight plan calculated, aircraft navigates to survey (WP 3)
- [ ] Go to Flight Plan Tab
- [ ] Click read WPs
- [ ] Confirm/ adjust landing loiter approach (2nd to last WP) (250m HW, 275mXW, OR 300+m TW)
- [ ] Click Write WPs if changes were made
- [ ] Monitor environmental conditions, battery level, altitude/airspeed fluctuations, and spectators
- [ ] Watch for Bingo Pt (3rd to last WP)

8 AFTER FLIGHT

- [ ] Disarm Motor (Shut off plane by pressing and holding right arrow key on aircraft)
- [ ] Remove Battery
- [ ] Remove aircraft USB and sensor micro SD card
- [ ] Insert aircraft USB card into laptop
- [ ] Open DataBridge application
- [ ] Select directory within storage drive "HEFW"
- [ ] Type a mission name
- [ ] Insert sensor MicroSD card into the laptop
- [ ] Check for images taken on ground via the file explorer window; remove if necessary
- [ ] Select directory within the storage drive "DCIM"
- [ ] Click Export to save data
- [ ] Select folder either on laptop or removable storage device to transfer images to
- [ ] Click to sensor SD card