# HELLCAT sUAS
## QUICK START GUIDE

TEAL™
A RED CAT COMPANY

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# 1 QUICK START CHECKLIST

- ☐ Check airspace & weather
- ☐ Complete flight plan
- ☐ Inspect aircraft
- ☐ Inspect GCS
- ☐ Inspect external radio & cables
- ☐ Assemble battery charger
- ☐ Charge batteries
- ☐ Batteries >2 LEDs / adequate SOC
- ☐ Install GCS battery
- ☐ Install aircraft battery
- ☐ Power on WEB
- ☐ Open WEB Control
- ☐ Power on aircraft
- ☐ Verify startup tones, LEDs, cooling fan
- ☐ Verify gimbal initialization
- ☐ Verify standoff radio selected
- ☐ Verify correct Radio Profile
- ☐ Pair aircraft via USB
- ☐ Verify firmware versions
- ☐ Open QGroundControl (QGC)
- ☐ Verify aircraft connected in QGC
- ☐ Calibrate joystick
- ☐ Verify button mapping
- ☐ Verify battery SOC
- ☐ Verify radio link
- ☐ Calibrate sensors if required
- ☐ Clear warning messages
- ☐ Arm/Disarm test
- ☐ Install propellers
- ☐ Hover check
- ☐ Fly mission

# 2 UNPACK AND INSPECT

Verify the presence of:

**Aircraft**

- 3 Air Vehicles (AVs)
- Propellers

**Ground Control Station (GCS)**

- 1 WEB Ground Control Station (GCS)
- Tripod

**Field Repair Kit (FRK)**

- 1 Field Repair Kit (FRK), containing:
  - Propellers
  - 2 Replacement Arms
  - 4 Arm Springs
  - USB-C Cable
  - Screwdriver

**Standoff Radio**

- Doodle Radio
- Doodle Radio Battery
- Doodle Radio Mounting Kit
- Doodle USB-to-Ethernet Adapter
- Glenair Nett Warrior-to-Ethernet Adapter
- 50 m Ethernet Cable
- Ethernet Tension Guard
- SINE Bracket Mount
- Zip Ties

**Power**

- Battery Charger
- Power Cable
- 7 Flight Batteries

# 3 ASSEMBLE CHARGER & CHARGE BATTERIES

**WARNING: Do not charge unattended.**

## CHARGER ASSEMBLY

1. Insert the mickey mouse end of the power cord into the charger.
2. Insert the three-prong end into a compatible AC outlet.

## SHIPPING MODE

Before first use, charge all batteries to exit Shipping Mode and enables normal operation.

1. Align the battery with the charger grooves.
2. Insert the battery until it clicks into place.

# 4 BATTERY LIGHT INDICATORS

| USER ACTION | HOW TO | LED PATTERN | DESCRIPTION |
|---|---|---|---|
| **CHECK CHARGE LEVEL** | Tap Power Button | ~2 SECONDS | Displays current battery charge level. LEDs illuminate briefly, then turn off. |
| **LOW POWER (SHIPPING) MODE** | Tap Power Button | ~2 SECONDS | Indicates the battery is in shipping mode. **Charge to exit!** |
| **POWER ON DEVICE** | Press and hold Power Button for 4 seconds (4s) | SEQUENCE: LEFT TO RIGHT | Battery power turns **ON**; LEDs illuminate in sequence. |
| **POWER ON CONFIRMATION** | Release Power Button | SOLID | Confirms power is **ON**. Battery ready for use. |
| **POWER OFF DEVICE** | Press and hold Power Button for 4 seconds (4s) | SEQUENCE: RIGHT TO LEFT | Battery power turns **OFF**; LEDs extinguish in sequence. |
| **POWER OFF CONFIRMATION** | Release Power Button | OFF | Confirms power is **OFF**. |

**NOTE:** If only the first LED blinks or stays on, the battery is in shipping mode. Charge to exit.

# 5 PREPARE THE GCS

## GCS BATTERY INSTALLATION

1. Align the battery with the battery grooves on the GCS.
2. Slide the battery into the GCS until it clicks into place.

## POWER ON THE GCS

1. Hold battery power button for **4 seconds** to turn GCS on.
2. Swipe the screen to unlock GCS.
3. Launch **WEB Control.**

# 6 REVIEW GCS COMPONENTS

# 7 PREPARE THE AIRCRAFT

1. Unfold aircraft arms.
   a. Pull arm **out and away** from the aircraft.
   b. **Rotate arm forward** until locked.
2. Install the aircraft battery.
   a. Align the aircraft battery with the installation grooves on the bottom of the aircraft.
   b. Slide battery until it clicks into place.
3. Hold battery power button for **4 seconds** to turn aircraft on.
4. Verify you hear fans turn on, see the LEDs flash, and hear boot up tones.
5. Verify gimbal initialization (it will move around and then balance itself).

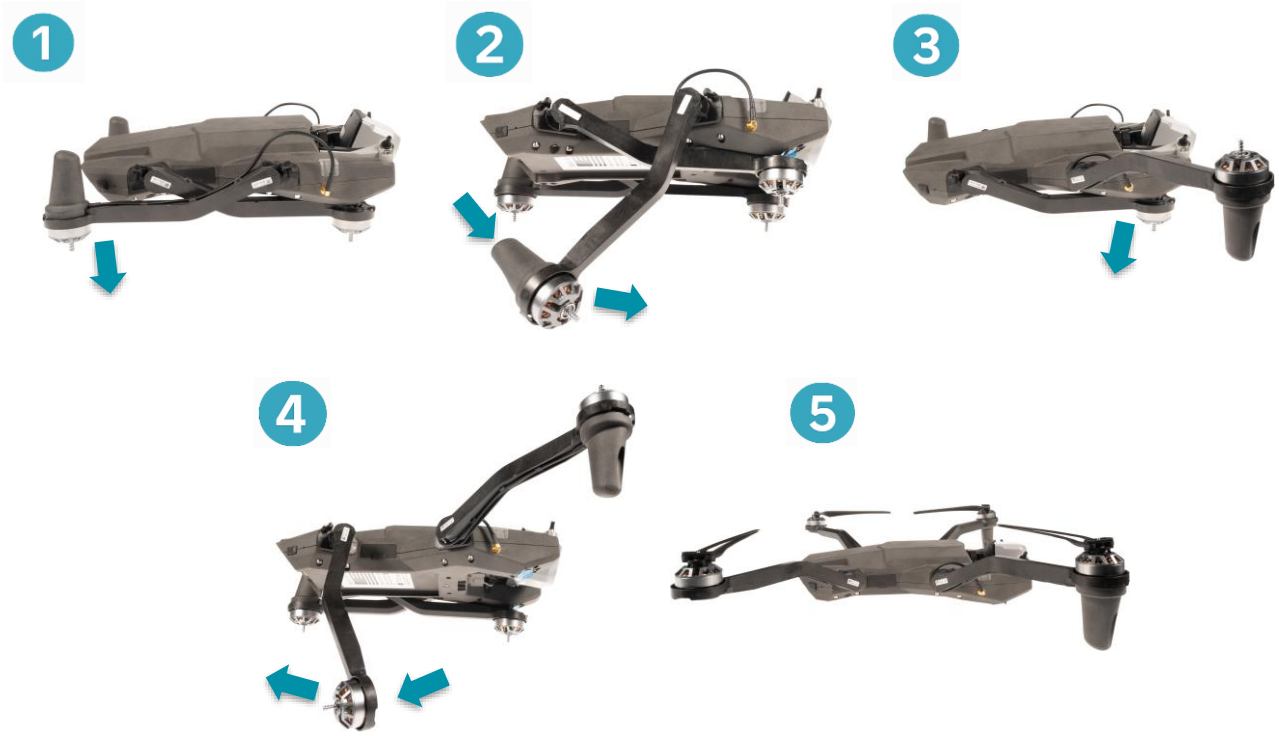
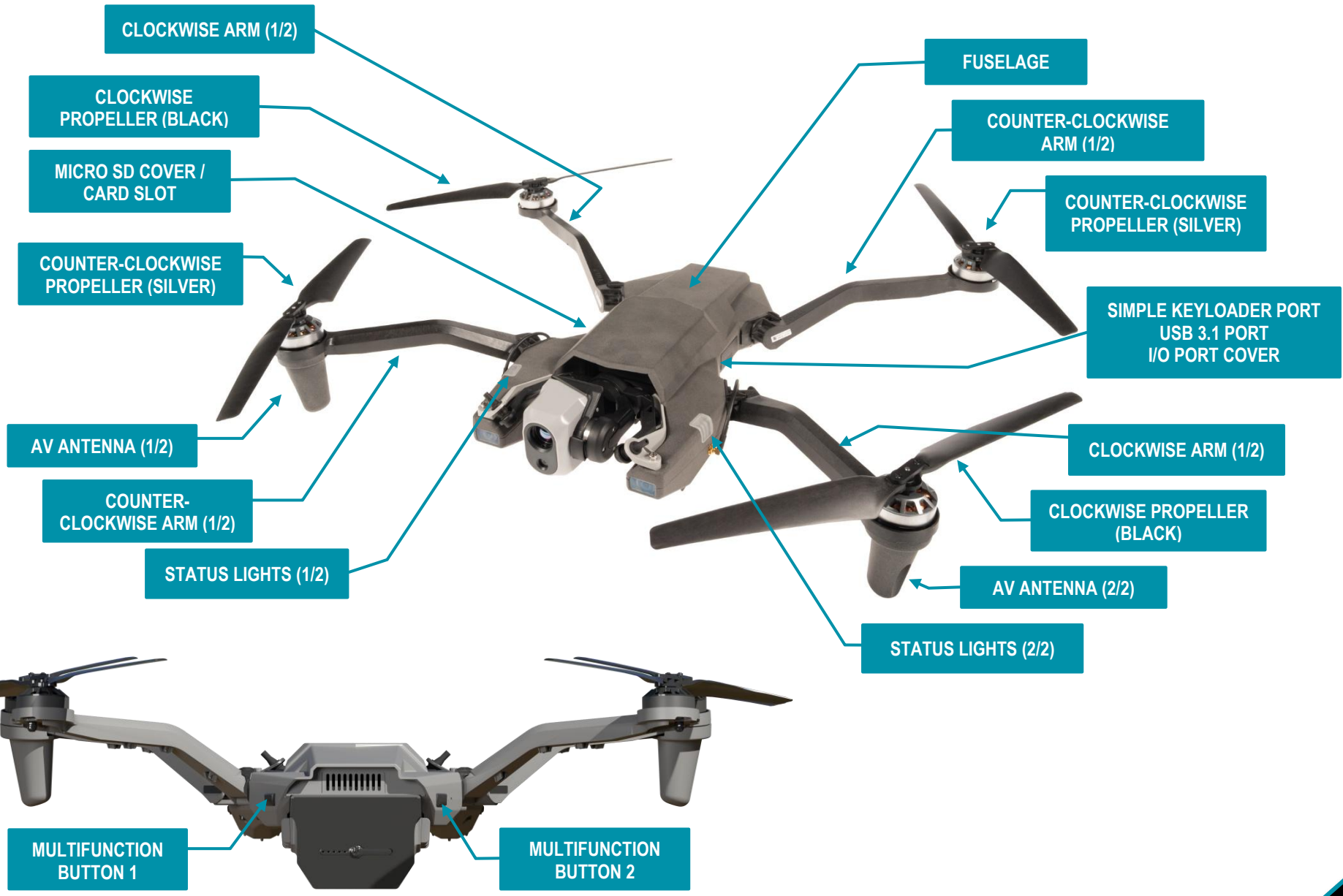



*Figure 1: How to unfold aircraft arms*

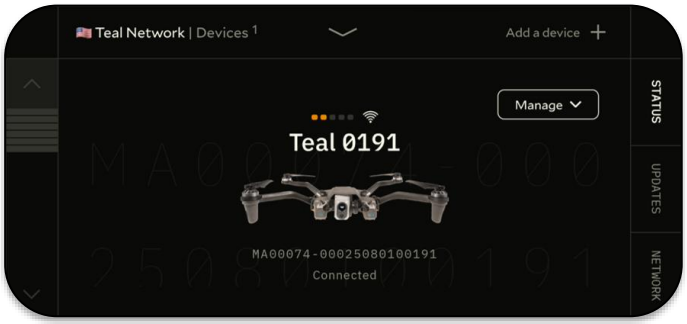
# 8 REVIEW AIRCRAFT COMPONENTS

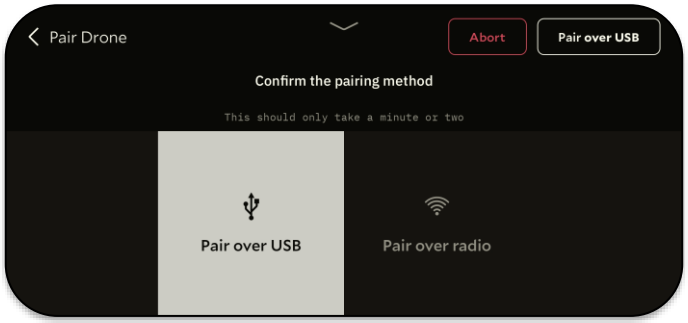


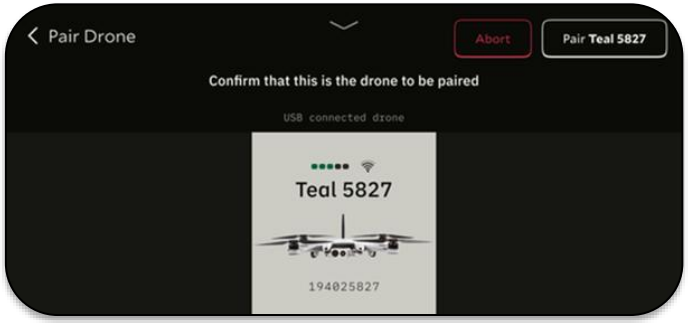
# 9 PAIRING

**Note**: Most aircraft and GCS come pre-paired from the factory.

1. Verify **Radio is active** in Radio Profiles.
2. From the Home screen, tap "**Add a device**" (top right).
3. Tap the "**Pair over USB**" tile, then tap "**Pair over USB**" again in the top right.
4. Remove the USB-C cover on the UA.
5. Connect the USB-C cable to the drone first, then to the GCS second.
6. Follow on-screen prompts to enter pairing mode. (Hold one multifunction button only; do not press both.)
7. When the drone appears, tap the **Pair** button to proceed.
8. After "**Pairing Successful**" appears, tap "**Finish**". Allow up to 1 minute to fully reboot. The USB cable may now be disconnected.

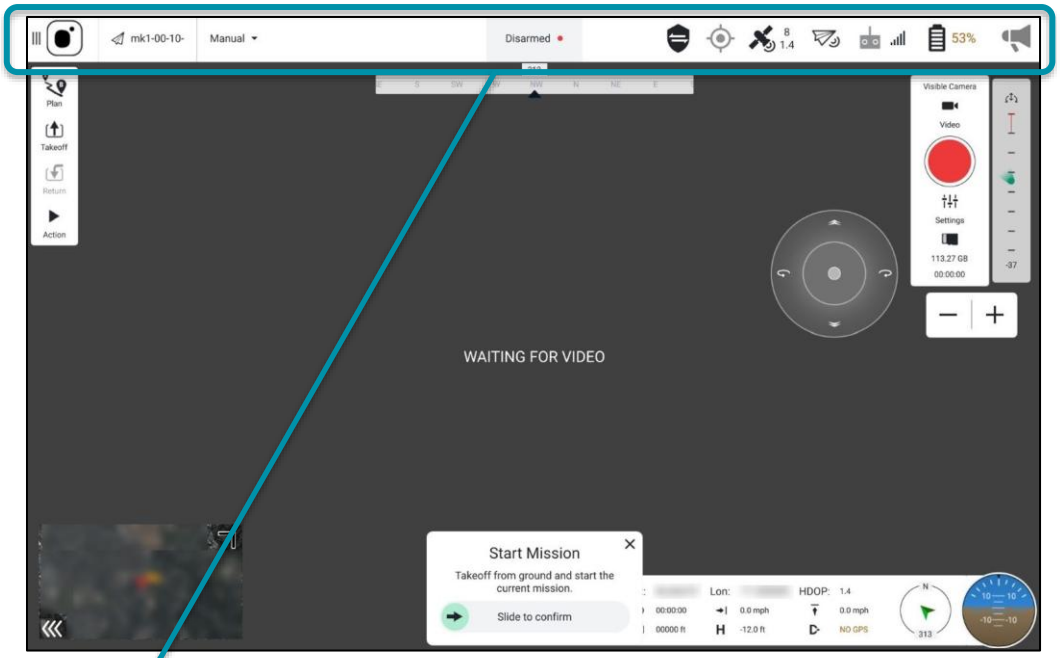


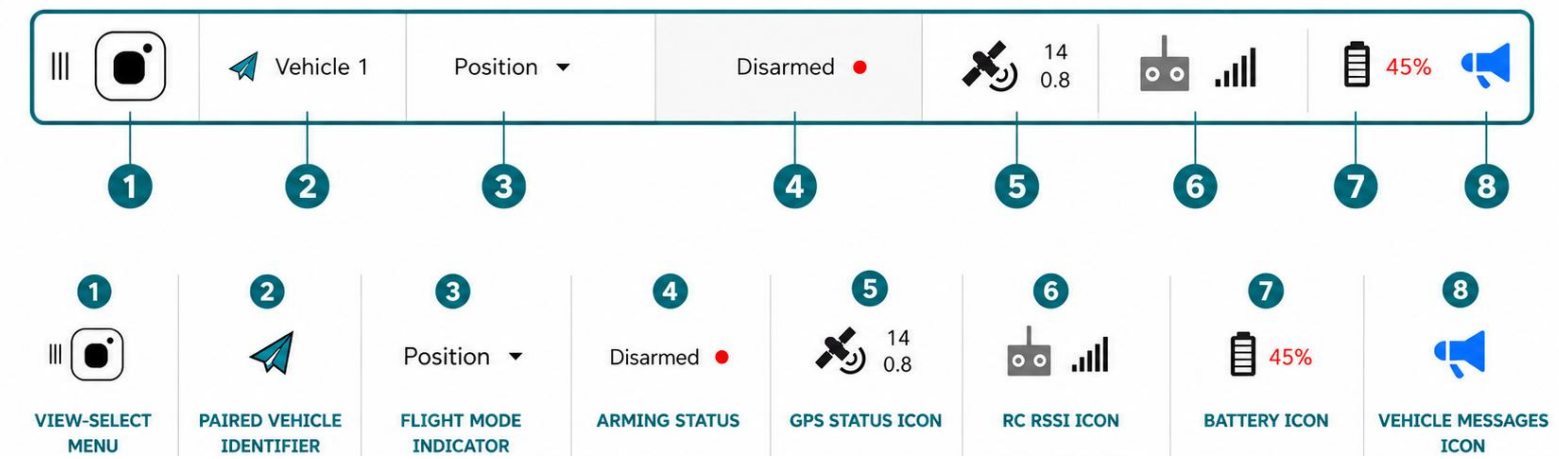





# 10 FUNCTION CHECKS

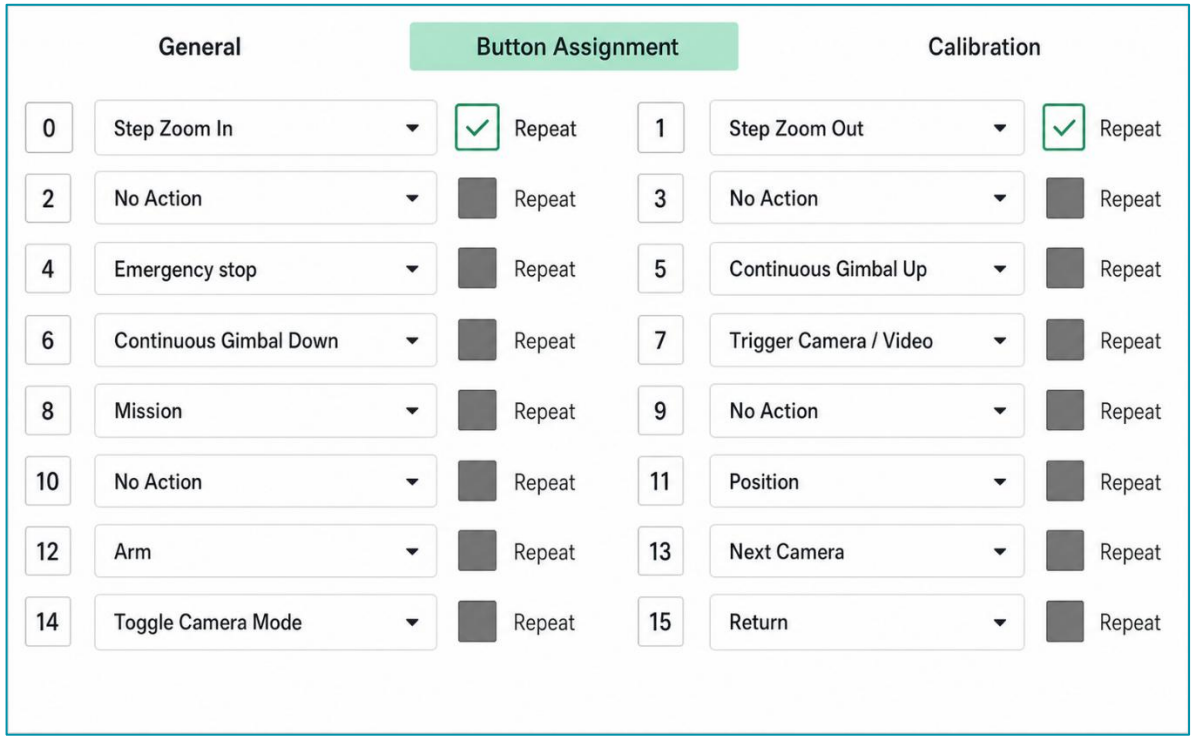
1. Close WEB Control.
2. Open **QGroundControl**.
3. Verify aircraft and GCS connection in the **Fly View Main Toolbar.**
4. Verify battery SOC.

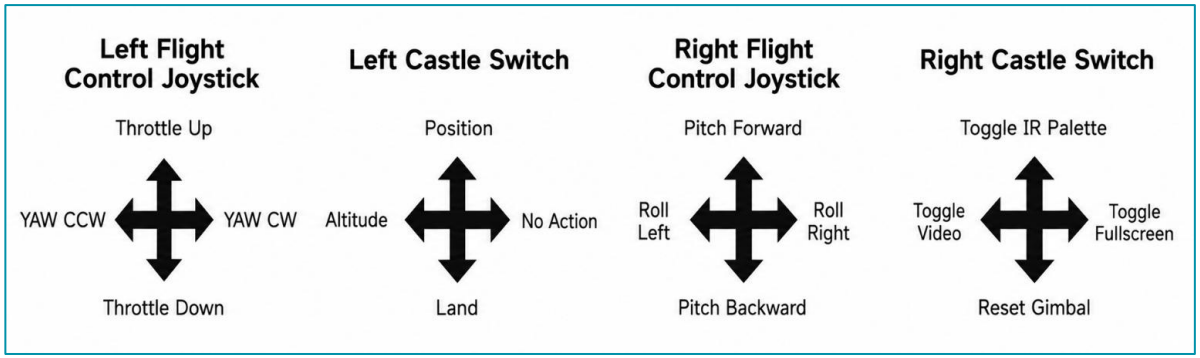


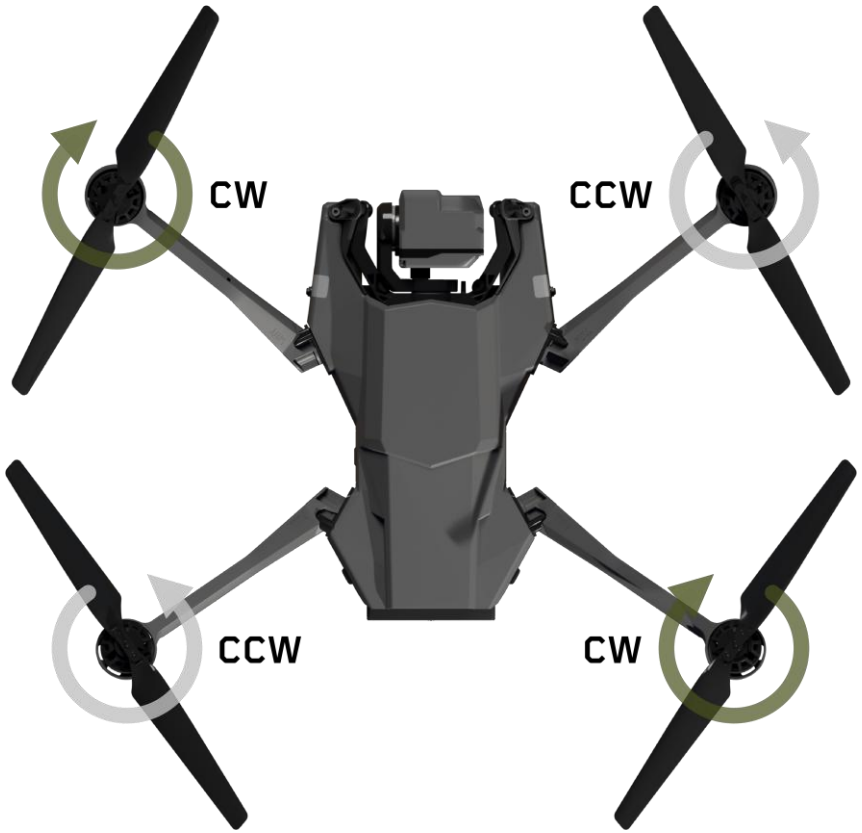
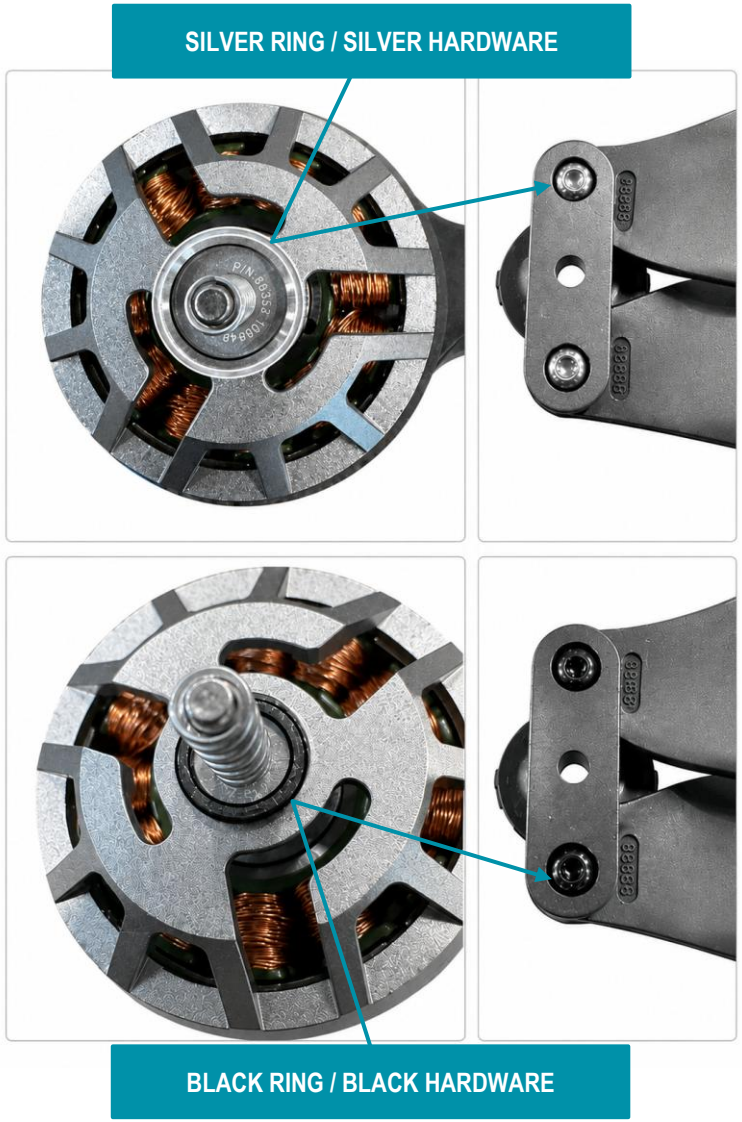



# 11 FUNCTION CHECKS

5. Run joystick calibration.
   a. Select **Vehicle Setup**.
   b. Select **Joystick**.
6. Verify Teal button map.
   a. Select **Advanced** menu.
   b. Select **Set Teal Defaults**.
7. Calibrate sensors if required.
8. Verify gimbal movement.
9. Test multifunction buttons on the aircraft.
10. Test Arm/Disarm button.



# 12 INSTALL PROPELLERS & FIRST FLIGHT

1. Install propellers.
2. Launch and hover (~10 ft).
3. Begin mission.