# LED Codes

## Startup Codes

Battery level indication at startup.......

100%    75%    50%    Dead

Transmitter off or not bound to the quad ...

Bind mode .........................................

Compass calibration needed..............

Emergency mode
(cycle power to reinitialize).................

## Flying Codes

Low battery warning 1 (10.9V),
every 3 seconds

Low battery warning 2 (10.6V),
continuous, rapid flashing

⚠ **CAUTION:** If you see the LED signal for low battery (10.6V), immediately land your aircraft and recharge the battery.

⚠ **CAUTION:** Do not attempt to use Return Home with a low battery.

## Return Home

Return to home mode active (solid red)

Return to home mode active, loss of GPS
(rapid flash for 2 seconds, then once
every second)

## Follow Me Mode (ST-10+ only)

Entering Follow Me mode
(GPS acquired)

Normal operation
with GPS lock (all solid)
Camera tracking
with GPS lock (all solid)

Loss of GPS (rapid flash for 2 seconds,
then once every second)

GPS lock is required on both the quadcopter and the ST-10+ transmitter for Follow Me Mode to function.

## Smart Mode

Entering Smart mode
(GPS acquired)

Normal operation
with GPS lock (all solid)

Loss of GPS (rapid flash for 2 seconds,
then once every second)

## AP Mode

Entering AP mode
(GPS acquired)

Normal operation
with GPS lock (all solid)

Loss of GPS (rapid flash for 2 seconds,
then once every second)

## Stability Mode

Entering Stability mode
(GPS acquired)

Normal operation
with GPS lock (all solid)

Loss of GPS (rapid flash for 2 seconds,
then once every second)

## Agility Mode

Entering Agility mode
(GPS acquired)

Normal operation
with GPS lock (all solid)

Loss of GPS (rapid flash for 2 seconds,
then once every second)

## GPS Off

Smart, AP and Return to Home Modes — All solid white

Stability and Agility Modes — Solid white front, rear flashes active flight mode color
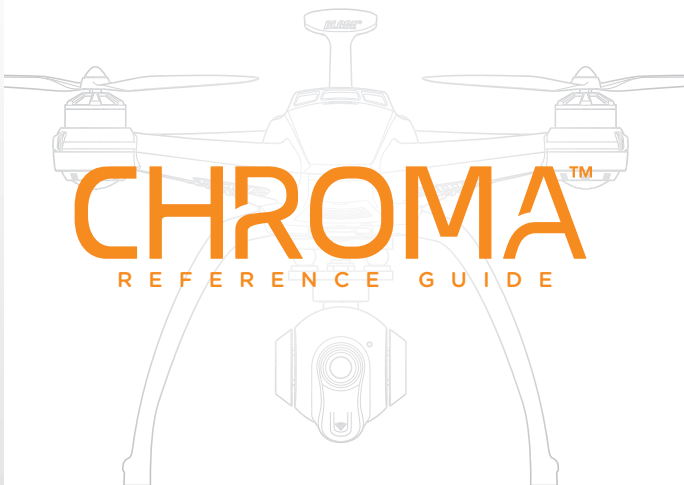
**CHROMA™**
REFERENCE GUIDE

## Compass Calibration Procedure

**NOTICE:** The following procedure has to be completed within 30 seconds after entering compass calibration mode.

1. Power the ST10+ and Chroma™ quadcopter on and face the quadcopter pointing North.
2. Touch the gear icon on the lower right side of the main screen.
3. Select OK.
4. Select Calibration.
5. Select Compass.
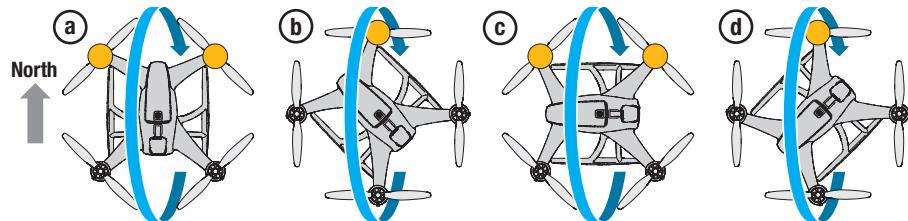
6. The quadcopter indicates it has entered *compass calibration mode* by flashing the LEDs yellow.
7. The LEDs will indicate which direction to orient the quadcopter for each rotation by lighting either one or two motor pods yellow. Turn the quadcopter to point the yellow LEDs North, then rotate the quadcopter 360° as shown by the blue arrows below. Complete all 4 rotations of the Chroma quadcopter as shown in the illustration below within 30 seconds.
8. After the last rotation step, hold the quad level, facing North and check the LEDs.
   **Green = Ready**
   **Red = Repeat Compass Calibration**



## Accelerometer Calibration Procedure

1. Power on the ST10+ and Chroma quadcopter.
2. Place the quadcopter on a flat, level surface.
3. Touch the gear icon on the lower right side of the main screen.
4. Select OK.
5. Select Calibration.
6. Select Accelerometer.

7. The Chroma quadcopter will emit a series of slow tones followed by a series of rapid tones, indicating the calibration has started.
8. Do not move the quadcopter while it performs the accelerometer calibration procedure.
9. When the procedure has completed, the quadcopter will emit a "happy" tone and the LED will display green indicating the calibration was successful. If it emits a "sad" tone and the LED displays solid red, repeat the calibration procedure.

See the online videos at *www.KnowChroma.com* for a demonstration of the calibration procedures.

## Binding

For instructions on binding with GPS disabled, refer to the online video at *www.KnowChroma.com*.

| Binding the Chroma Quadcopter to the ST10+ Transmitter |
| --- |
| 1. With the transmitter and quadcopter powered OFF, connect the battery to the quadcopter. |
| 2. Place the quadcopter on a flat level surface. |
| 3. Power the quadcopter ON and let it initialize. The status LEDs will blink white. |
| 4. Hold the quadcopter upside down until the status LEDs flash blue, indicating it has entered bind mode. |
| 5. Set the quadcopter back upright. |
| 6. Power on the ST-10+. If the RC and Wi-Fi connecting dialogue appears, touch the screen anywhere outside of the pop up window to access the main menu. |
| 7. Touch the "Model Select" button from the main menu. Click "OK" in the warning dialogue. |
| 8. Select your model and return to the main menu. |
| 9. From the main menu, select "Flight Settings" and click "OK" in the warning dialogue. |
| 10. Select "Bind" and select your model from the list. Select the number in white text. |
| 11. Click "OK" after the connection has been established. |
| 12. Press the return key twice to return to the main menu. Your quadcopter should now connect to the ST-10+. |
| 13. After returning to the main menu there will be 2 loud beeps. The LEDs will indicate which flight mode is selected. If the LEDs are flashing red, the quadcopter is in Return Home mode. Switch to Smart or AP Mode before attempting to start the motors. |
| 14. Place the quadcopter outdoors in the desired starting position in preparation for flight. |

See the online videos at *www.KnowChroma.com* for a demonstration of the binding procedure.

## Troubleshooting Quick Reference

| Problem | Solution |
| --- | --- |
| Motors won't start | Ensure GPS antenna has clear view of sky and GPS lock has been acquired |
| | Check for compass error indication |
| | Review start up procedure in manual |
| Blinking yellow led 'compass error' indication | Move model away from large metal objects or surfaces |
| | Calibrate compass (*see calibration reference*) |
| Won't hold position in hover | Check GPS antenna mast is extended |
| | Calibrate compass (see calibration guide) |
| | Calibrate accelerometers (see calibration guide) |

For a complete description of the function, capabilities and maintenance of the Chroma quadcopter, refer to the online videos at *www.KnowChroma.com*.