ST10+

PERSONAL GROUND STATION

QUICK START GUIDE

BATTERY WARNINGS AND USAGE GUIDELINES

WARNING: Lithium Polymer (LiPo) batteries are significantly more volatile than alkaline, NiCd or NiMH batteries. All instructions and warnings must be followed exactly to prevent property damage and/or serious injury as the mishandling of LiPo batteries can result in fire. By handling, charging or using the included LiPo battery you assume all risks associated with LiPo batteries. If you do not agree with these conditions please return the complete product in new, unused condition to the place of purchase immediately.

• You must always charge the LiPo battery in a safe, well-ventilated area away from flammable materials.
• Never charge the LiPo battery unattended at any time. When charging the battery you must always remain in constant observation to monitor the charging process and react immediately to any potential problems that may occur.
• After flying/discharging the LiPo battery you must allow it to cool to ambient/room temperature before recharging.
• To charge the LiPo battery you must use only the included charger or a suitably compatible LiPo battery charger. Failure to do so may result in a fire causing property damage and/or serious injury.
• If at any time the LiPo battery begins to balloon or swell, discontinue charging or discharging immediately. Quickly and safely disconnect the battery, then place it in a safe, open area away from flammable materials to observe it for at least 15 minutes. Continuing to charge or discharge a battery that has begun to balloon or swell can result in a fire. A battery that has ballooned or swollen even a small amount must be removed from service completely.
• Do not over-discharge the LiPo battery. Discharging the battery too low can cause damage to the battery resulting in reduced power, flight duration or failure of the battery entirely. LiPo cells should not be discharged to below 3.0V each under load.
• Store the LiPo battery at room temperature and in a dry area for best results.
• When charging, transporting or temporarily storing the LiPo battery the temperature range should be from approximately 40–120° F (5–49° C). Do not store the battery or aircraft in a hot garage, car or direct sunlight. If stored in a hot garage or car the battery can be damaged or even catch fire.
• Never leave batteries, chargers and power supplies unattended during use.
• Never attempt to charge low voltage, ballooned/swollen, damaged or wet batteries.
• Never allow children under 14 years of age to charge batteries.
• Never charge a battery if any of the wire leads have been damaged or shorted.
• Never attempt to disassemble the battery, charger or power supply.
• Never drop batteries, chargers or power supplies.
• Always inspect the battery, charger and power supply before charging.
• Always ensure correct polarity before connecting batteries, chargers and power supplies.
• Always disconnect the battery after charging.
• Always terminate all processes if the battery, charger or power supply malfunctions.

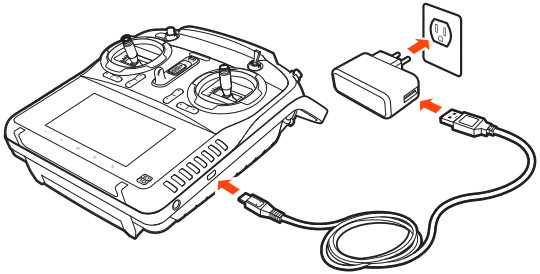
IMPORTANT NOTE: It's safer and better for the longevity of the battery to store it only partially charged for any length of time. Storing the battery approximately 50% charged (which is around 3.85V per cell) is typically best, however, it will take some careful management of the charge time and the use of a volt meter to achieve this voltage. If you have the equipment and skills to achieve the 50% charge level for storage it is recommended. If not, simply be sure to not store the battery fully charged whenever possible. In fact, as long as the battery will be stored at approximately room temperature and for no more than a few weeks before the next use, it may be best to store the battery in the discharged state after the last flight (as long as the battery was not over-discharged on the last flight).

CHARGING THE BATTERIES

WARNING: Lithium Ion (LiIon) and Lithium Polymer (LiPo) batteries are significantly more volatile than alkaline, NiCd or NiMH batteries. All instructions and warnings must be followed exactly to prevent property damage and/or serious injury as the mishandling of LiIon/LiPo batteries can result in fire. By handling, charging or using the included LiIon/LiPo batteries you assume all risks associated with them. If you do not agree with these conditions please return the complete product in new, unused condition to the place of purchase immediately.

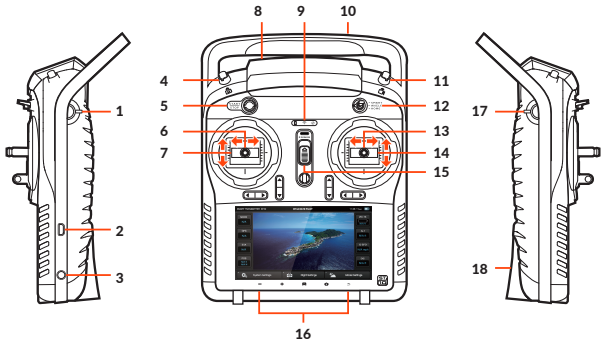
CHARGING THE LI-ION ST10+ BATTERY

You can charge the LiIon battery installed in the ST10+ from a 100-240V AC outlet using the USB adapter/charger, or from a suitable USB power source (2.0 amps max), with the USB to micro USB cable. While the ST10+ is powered off connect the cable to the USB adapter/charger, then plug it into the USB connector/charging port on the right side. After approximately 30-45 seconds the LED indicator for the battery will blink blue while the battery is charging, and will glow solid blue when the battery is fully charged. It will take approximately 5.5 hours to charge a fully discharged (not over-discharged) battery.



NOTE: The AC plug type will vary depending on the region in which the product was imported/purchased (AU = Australian; EU = European; UK = United Kingdom; US = United States).

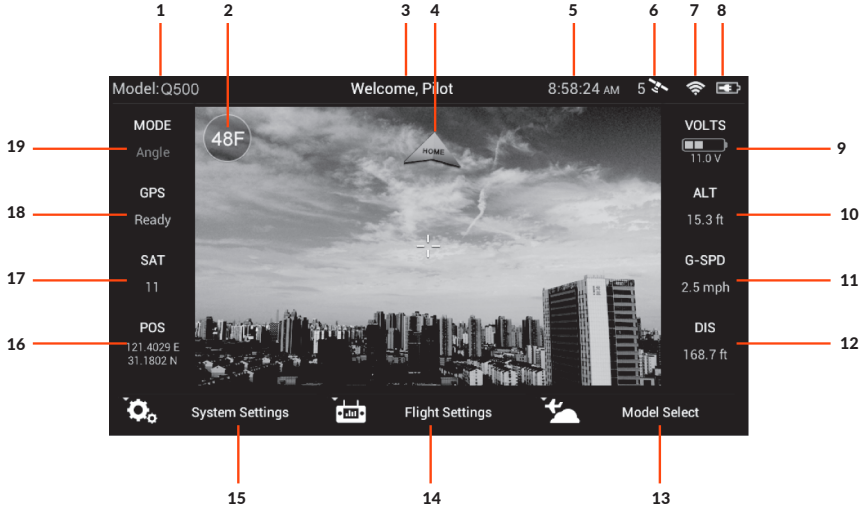
ST10+ OVERVIEW



1 Proportional Control Rate Slider
2 USB Connector/Charging Port
3 Audio/Earphone Jack
4 Take Still Photo Button
5 Start/Stop Motors Button
6 Rudder/Yaw Control *(for Mode 2 and Mode 1)*
7 Throttle/Altitude Control *(for Mode 2)*
Elevator/Pitch Control *(for Mode 1)*
8 5.8GHz Antenna *(located inside the case)*
9 Status Indicators *(for ST10+ battery, 5.8GHz WiFi and GPS)*
10 2.4GHz Antenna *(located inside the handle)*
11 Start/Stop Video Recording Button
12 Flight Mode Selection Switch
13 Aileron/Roll Control *(Mode 2 and Mode 1)*
14 Elevator/Pitch Control *(Mode 2)*
Throttle/Altitude Control *(Mode 1)*
15 Power Switch
16 Volume and Navigation Touch-Activated Buttons *(Volume Down/Volume Up/Menu/Home/Back)*
17 CGO2+ Pitch Angle/Position Control Slider
18 SD Card Slot *(located under the battery)*

ST10+ DISPLAY

The ST10+ is equipped with a touchscreen display that allows for changing various settings and viewing real-time telemetry data and streaming video during flight.



1 Model Name
2 Frames Per Second for Video Recording Button
3 Status Information
4 Direction to Home Point
5 Clock/Current Time
6 GPS Status and Number of Satellites for ST10+
7 5.8GHz WiFi Video Link Status
8 ST10+ Battery Charge Level Status Icon
9 Aircraft Battery Voltage
10 Altitude of Aircraft (Above Ground Level)
11 Ground Speed of Aircraft
12 Distance of Aircraft from Home Point
13 Model Select Menu Button
14 Flight Settings Menu Button
15 System Settings Menu Button
16 Latitude/Longitude Position of Aircraft
17 Number of Satellites for Aircraft
18 GPS Status for Aircraft
19 Flight Mode of Aircraft

QUICK TIP: Double tap on the screen to increase the size of the video viewing area to full-screen and double tap again to return to the standard size).

WARNING: NEVER attempt to fly TYPHOON via First-Person View (FPV). There's a slight 'lag' in the CGO2+ streaming video downlink to the ST10+, and as a result the streaming video/FPV should only be used for aligning camera shots and not for flying! Attempting to fly via FPV can result in a crash that will cause damage to the product, property and/or cause serious injury.

IMPORTANT NOTE: Streaming video from the CGO2+ to the ST10+ and to a separate phone/tablet (or another Yuneec transmitter/personal ground station) at the same time is NOT recommended as it will result in a very significant lag in the video downlink.

TAKING PHOTOS AND RECORDING VIDEO

The ST10+ seamlessly integrates control of the CGO2+ so you can easily take still photos and start/stop video recording using the corresponding buttons located on top:

TO TAKE A STILL PHOTO

Press the button located near the top left corner of the ST10+. You'll hear an audible 'shutter' sound from the ST10+ and the LED indicator on the front of the CGO2+ will change from glowing solid green to glowing solid blue. It will take approximately 5 seconds to capture the photo and before you can take another still photo.

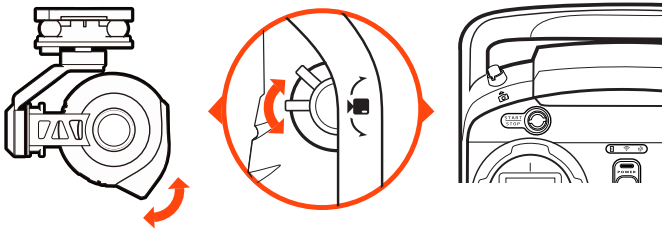
IMPORTANT NOTE: You cannot take still photos while recording video. You MUST stop recording video in order to take still photos.

TO START/STOP RECORDING VIDEO

Press the button located near the top right corner of the ST10+. You'll hear an audible indication from the ST10+ each time the recording starts/stops. And while video is recording the LED indicator on the front of the CGO2+ will flash blue and green, and there will be a red dot next to the time length of the recording near the upper right-hand corner on the screen of the ST10+.

IMPORTANT NOTE: You can choose to record video at 48, 50 (PAL) or 60 (NTSC) frames per second by tapping the corresponding button near the upper left-hand corner on the screen of the ST10+. And keep in mind that the delay in the live video stream will be lowest at 48 and 50 as compared to 60 frames per second.

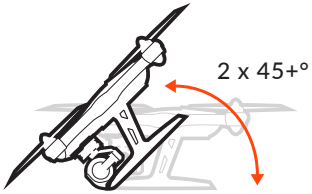
The slider located on the left side of the ST10+ allows you to set the pitch/tilt position of the CGO2+ from approximately straight ahead (when the slider is in the uppermost position) to approximately straight down (when the slider is in the lowermost position). And you can easily set a position in between by adjusting the slider accordingly.

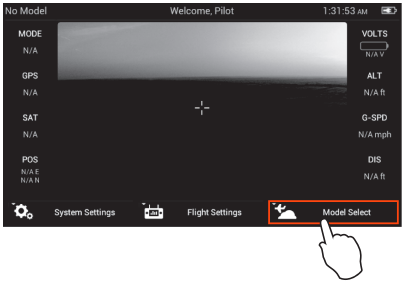


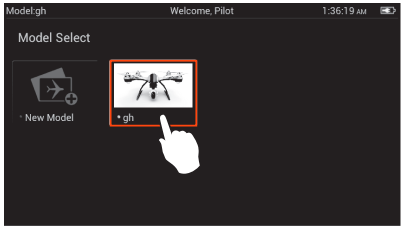
QUICK TIP: There's an adjustable counterbalance located on the rear of the CGO2+. This counterbalance has been adjusted at the factory to provide the best balance and performance overall so typically it should NOT need to be adjusted. However, if you find that the CGO2+ is making any 'buzzing' sounds while powered on, carefully twist the counterbalance in or out until the sound stops in order to achieve the best balance, performance and photo/video quality.

ST10+ AND RECEIVER BINDING

Step 1) Turn on TYPHOON, and after the Main LED Status Indicator begins to flash blue rapidly, lift the back end upward approximately 45° then back down to 'level' two (2) times to put the aircraft/receiver into bind mode. The Main LED Status Indicator will begin to the flash orange very rapidly when the aircraft/receiver are in bind mode.



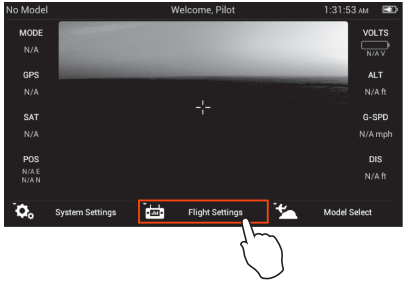


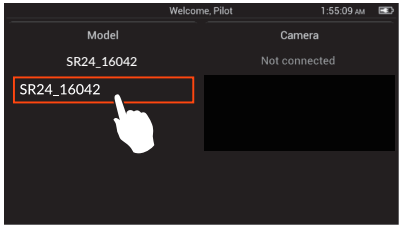


Step 2) Turn on the ST10+, and if required tap the screen (outside of the pop up status window) to bypass the RC and WiFi connection process.

Step 3) Tap the 'Model Select' button, and if required press 'OK' to bypass any pop up warnings/alerts.

Step 4) Select the existing model (for example: 'TYPHOON') you would like to bind to (or create a 'New Model'), and if required press 'OK' to bypass any pop up warnings/alerts.





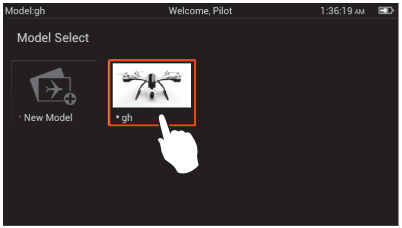
Step 5) Tap the 'Flight Settings' button, and if required press 'OK' to bypass any pop up warnings/alerts.

Step 6) Tap the 'Bind' button and select the 'SR24_XXXXX' receiver listed in the column under 'Model', then tap 'OK' after the connection has been established.

Step 7) Tap the 'Back' button two (2) times to return to the main screen and the model/receiver should automatically connect to the ST10+.

ST10+ AND CGO2+ BINDING

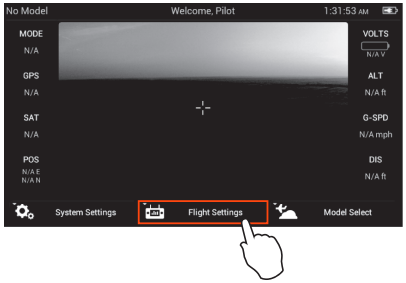
Step 1) Turn on the ST10+, and if required tap the screen (outside of the pop up status window) to bypass the RC and WiFi connection process.

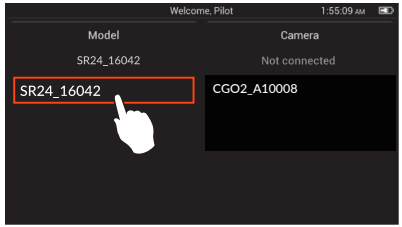


Step 2) Tap the 'Model Select' button, and if required press 'OK' to bypass any pop up warnings/alerts.

Step 3) Select the existing model (for example: 'TYPHOON') you would like to bind to (or create a 'New Model'), and if required press 'OK' to bypass any pop up warnings/alerts.

Step 4) Turn on TYPHOON and ensure that the CGO2+ is powered on.





Step 5) if required tap the screen (outside of the pop up status window) to bypass the RC and WiFi connection process, then tap the 'Flight Settings' button and press 'OK' to bypass any pop up warnings/alerts.

Step 6) Tap the 'Bind' button and select the 'CGO2_XXXXXX' camera listed in the column under 'Camera', then enter the password '1234567890' when prompted and tap 'OK' after the connection has b

CERTIFICATION INFORMATION

FCC STATEMENT:
This equipment has been tested and found to comply with the limits for Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

IC RADIATION EXPOSURE STATEMENT FOR CANADA
This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with IC RSS-102 radiation exposure limit set forth for an uncontrolled environment.
Cet équipement respecte les limites d’exposition aux rayonnements IC définies pour un environnement non contrôlé.

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