

**Yuneec™**

**SMARTRADIO™**

**ST24™ Quick Start Guide**

## **Features**

### **Transmitter and Ground Station – All in One**

The ST24 is not only an advanced 24-channel RC transmitter – it's also a powerful Personal Ground Station (PGS) that includes built-in hardware and functionality for First-Person View (FPV), a flight simulator and an Android™ tablet/pad. With the convenient and portable ST24 it's no longer necessary to use separate components to view and even record real-time video during flight.

### **Improved Radio Diversity and Range**

Dual 2.4GHz antennas are installed in the ST24 to improve radio transmission diversity and range. The result is a more reliable radio link with range that exceeds typical line of sight operations.

### **Two-Way Communication With Telemetry**

The ST24 not only transmits control information, it also downloads vital aircraft status information. During flight the pilot can see telemetry data including real-time battery voltage, signal strength, aircraft altitude, airspeed, distance from home and more right on the screen.

### **Extended-Range Video Downlink**

The built-in 5.8GHz video downlink makes it possible to view real-time video on the ST24's 7" LCD screen. And when used in conjunction with the Yuneec C-GO1 camera or other Flying Eyes downlink transmitters, range can be up to 2,600 feet (800 meters) or more.

### **Universal Channel Control System**

The Universal Channel Control System offers an innovative and revolutionary way to view, set and adjust every channel. From input devices and hardware to output channels and functions, every setting and adjustment including reversing, dual rates, mixing and more is found in a single menu. No longer do you need to struggle with cumbersome sub-menus or difficult to understand abbreviations – the ST24 makes it easier to see and customize more channel settings than any transmitter before.

### **Built-In Flight Simulator**

You can use the built-in Android™ app based flight simulator to enjoy the convenience and benefit of learning or practicing to fly using the same transmitter and controls you'll actually be flying with.

### **Built-in Android™ Tablet/Pad**

The built-in Android tablet/pad makes it possible to listen to music, watch videos, run apps and more. And when you're connected to WiFi you can even check email, surf the web and upload your latest photos and videos without the need for a separate device. This

means you have more functionality, flexibility and convenience packed into your very own Personal Ground Station (PGS).

**IMPORTANT NOTE:** This Quick Start Guide is NOT intended to replace the complete content included in the ST24 instruction manual. Although the following information covers some of the basic details you need to know we strongly recommend reading through the instruction manual completely before charging/using the ST24.

## Charging Your ST24

Use a suitable power source/supply (1.5A and 5V MAX output) and a cable with a Micro USB connector to charge the 3.7V Li-Ion battery installed in the ST24. The time it takes to fully charge the battery will depend on the current voltage/charge state of the battery and the charge rate of your chosen power source/supply. For reference it will typically take approximately 6 hours to charge a near fully discharged battery at the maximum recommended charge rate of 1.5 amps.

1. Connect the cable with the Micro USB connector to the suitable power source/supply
2. Connect the Micro USB connector to the corresponding port on the bottom of the ST24
3. When the transmitter is turned on the battery icon located in the upper right-hand corner of the screen (in select menus) will show a 'plug' inside while the battery is charging

You can also remove the battery from the back of the ST24 and charge it separately using a suitable Li-Ion battery charger and a lead with a compatible 2-pin JST connector (at a maximum recommended charge rate of 1.5 amps).

**IMPORTANT NOTE:** Charging the Li-Ion battery using an incompatible charger (such as a NiCd or NiMH battery charger), or even a compatible battery charger with the incorrect settings, may result in damage to the battery or even fire resulting in property damage and/or personal injury.

## Using Your ST24

### In the Radio Control (RC) Mode

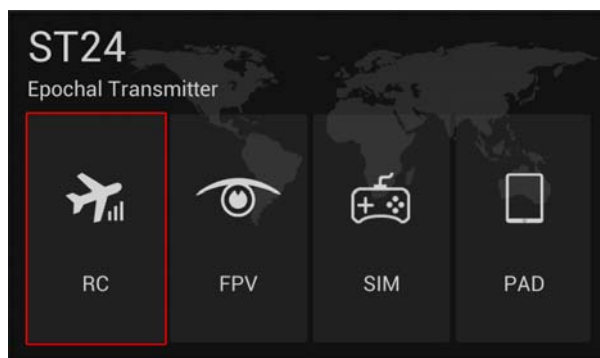
#### For RC-only (non-FPV/camera-equipped) models

1. Power on the ST24 and enter RC mode
  - Slide the **Power Switch** to the left to power on the ST24  
NOTE: The switch does not extend beyond the surface of the transmitter to

minimize the risk of accidentally powering the transmitter off during use



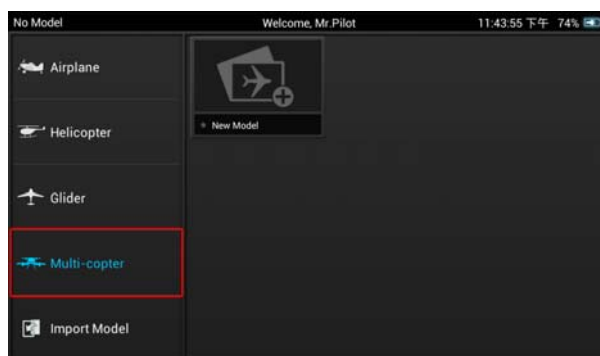
- Tap the **RC** button/icon



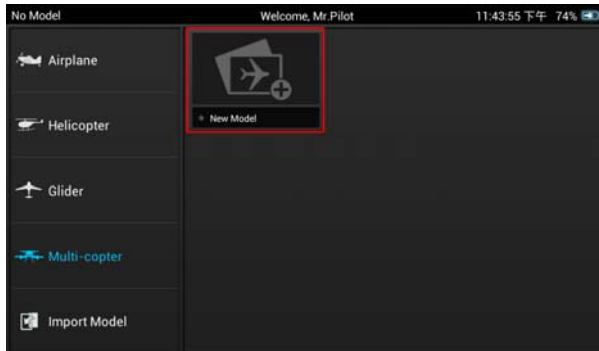
- Tap the **Model Select** button/icon



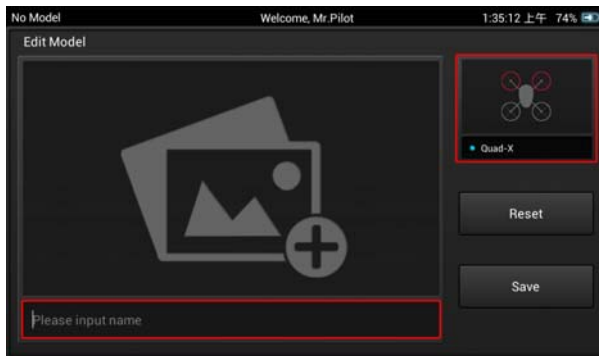
- Select the type of model (Multi-copter, Airplane, etc.) you'd like to create or load



- Select an existing model or create a **New Model**
- To create a new model tap the **New Model** button/icon



- Give the new model a name, take or select an image (optional), select a type (if applicable) then **Save** the new model

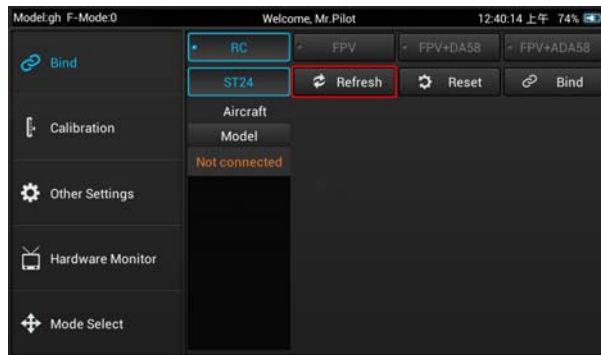


## 2. Bind the ST24 to your receiver/model

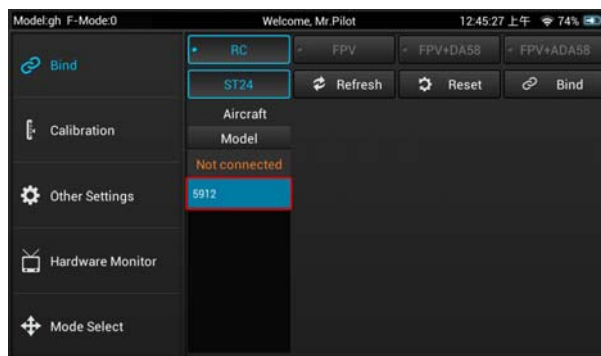
- Follow the instructions included with your receiver/model to enter the bind mode
- Tap the **System Settings** button/icon



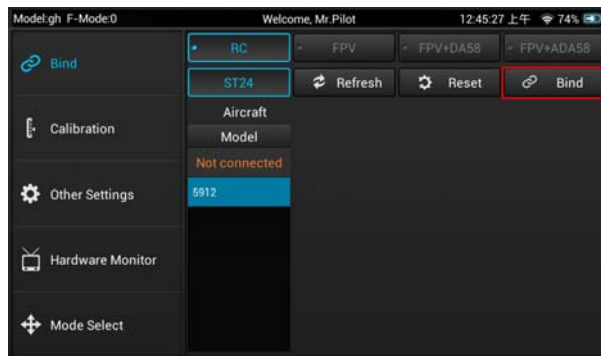
- Tap the **Refresh** button/icon



- Select the corresponding ID of the receiver/model



- Tap the **Bind** button/icon



- The receiver/model should now be bound to the ST24. Or, if the receiver/model was not bound successfully repeat the steps outlined above to complete the binding process.

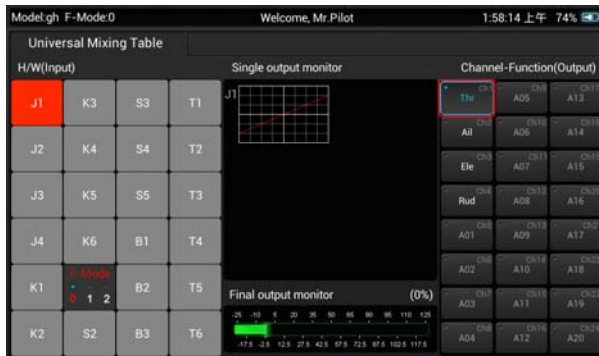
### 3. Define the channels

- Return to the main **RC Mode** screen (tap the 'Back' or 'Home' icons located near the bottom of the screen as needed)

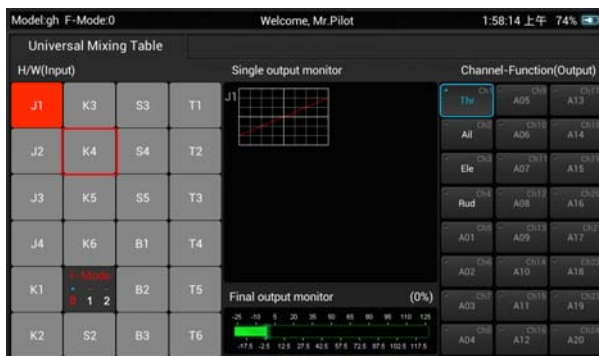
- Tap the **Channel Settings** button/icon  
NOTE: If the ST24 did not recognize the receiver/model and automatically identify the number and type of channels a corresponding menu will pop-up and you will be prompted to set the number of analog and switch channels accordingly



- Select the output channel/function (Thr, A01, etc) you'd like to view



- If you prefer to change the default input device/hardware (J1, K2, S3, etc.) set to control the selected output channel/function, tap the corresponding input device/hardware button then tap **Deactivate** and proceed to the following steps
- Select the new input device/hardware to control the selected output channel/function by tapping the desired input device/hardware button, then tap **Edit** to adjust the corresponding details (reverse, travel adjustment/rate, speed, etc.)



NOTE: You can set **Priority**, **Edit**, **Deactivate** or view the **Properties** of each channel.



You can also define which switch controls the **Flight Mode**.

- There are multiple levels of mixing priorities. The highest level input device/hardware will be processed first.
- There are multiple types of basic expo and control curves that can be selected for each output channel/function. If you want to adjust any curve you can use the buttons above and below the graph or you can touch the curve on the graph directly.
- **Reverse**, **Dual Rate** (D/R) and even output **Speed** can be changed as needed/preferred.
- After making any changes you **MUST** tap the **Save** button to save them.



- Return to the main **RC Mode** screen (tap the 'Back' or 'Home' icons located near the bottom of the screen as needed)
- Tap the **Ready** button/icon when you are ready to fly



# Using Your ST24

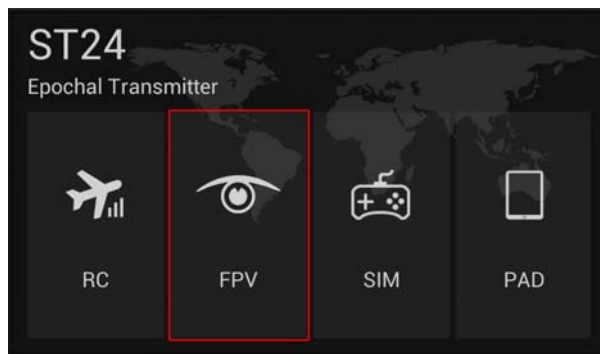
## In the First-Person View (FPV) Mode

### For FPV/camera-equipped models

1. Power on the ST24 and enter RC mode
  - Slide the **Power Switch** to the left to power on the ST24  
NOTE: The switch does not extend beyond the surface of the transmitter to minimize the risk of accidentally powering the transmitter off during use



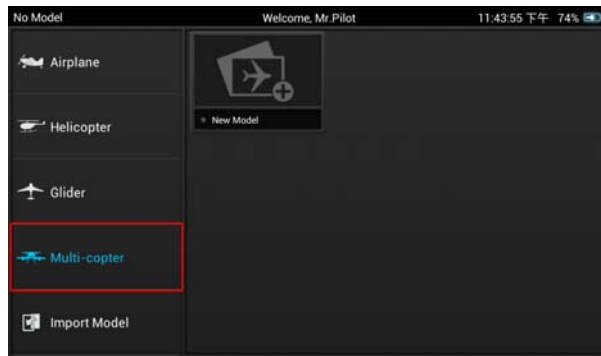
- Tap the **FPV** button/icon



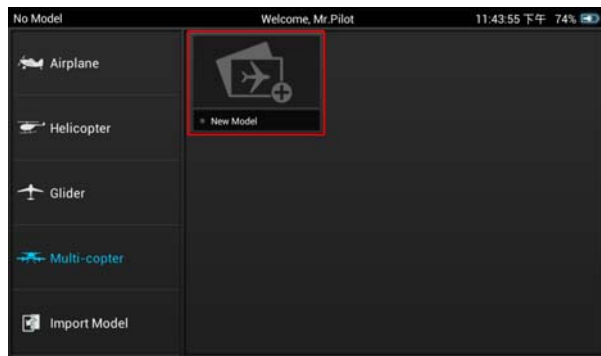
- Tap the **Model Select** button/icon



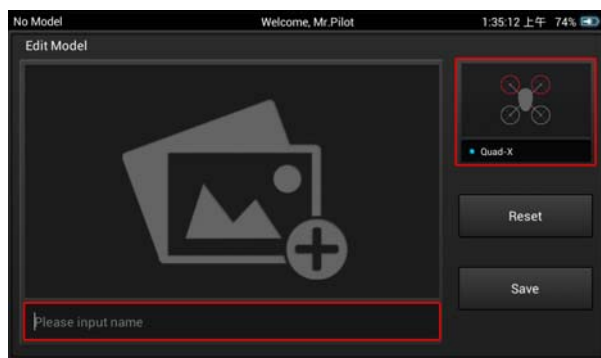
- Select the type of model (Multi-copter, Airplane, etc.) you'd like to create or load



- Select an existing model or create a **New Model**
- To create a new model tap the **New Model** button/icon



- Give the new model a name, take or select an image (optional), select a type (if applicable) then **Save** the new model



## 2. Bind the ST24 to your receiver/model

- Follow the instructions included with your receiver/model to enter the bind mode

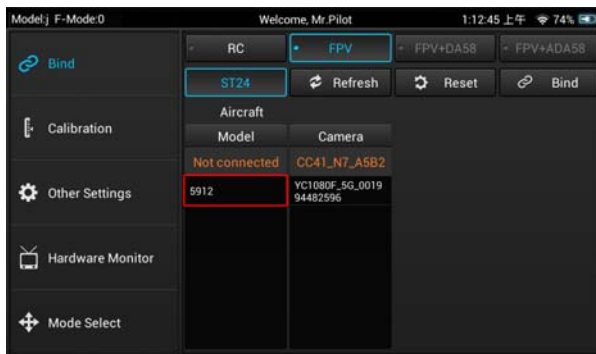
- Tap the **System Settings** button/icon



- Tap the **FPV** button/icon then press the **Refresh** button/icon



- Select the corresponding ID of the receiver/model



- Select the corresponding ID of the camera and/or downlink transmitter associated with your aircraft

NOTE: Follow the instructions included with your camera and/or downlink transmitter if needed to ensure they're already bound to or that they can be bound to the ST24



- Tap the **Bind** button/icon



- The receiver/model should now be bound to the ST24. Or, if the receiver/model was not bound successfully repeat the steps outlined above to complete the binding process.

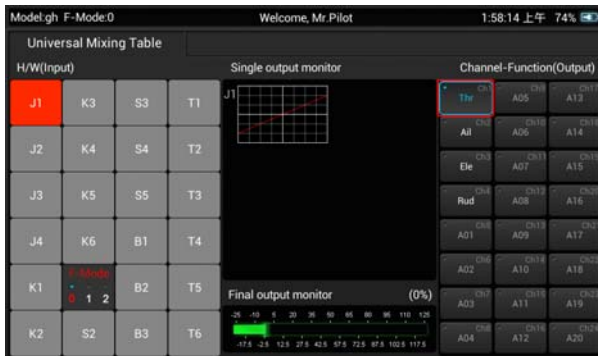
### 3. Define the channels

- Return to the main **FPV Mode** screen (tap the 'Back' or 'Home' icons located near the bottom of the screen as needed)

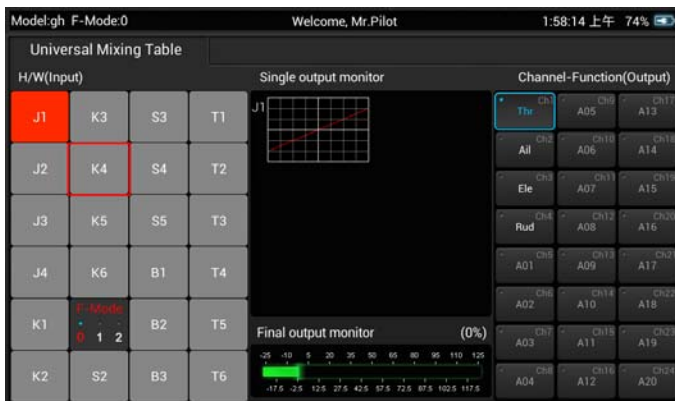
- Tap the **Channel Settings** button/icon  
NOTE: If the ST24 did not recognize the receiver/model and automatically identify the number and type of channels a corresponding menu will pop-up and you will be prompted to set the number of analog and switch channels accordingly



- Select the output channel/function (Thr, A01, etc) you'd like to view



- If you prefer to change the default input device/hardware (J1, K2, S3, etc.) set to control the selected output channel/function, tap the corresponding input device/hardware button then tap **Deactivate** and proceed to the following steps
- Select the new input device/hardware to control the selected output channel/function by tapping the desired input device/hardware button, then tap **Edit** to adjust the corresponding details (reverse, travel adjustment/rate, speed, etc.)



NOTE: You can set **Priority**, **Edit**, **Deactivate** or view the **Properties** of each channel. You can also define which switch controls the **Flight Mode**.

- There are multiple levels of mixing priorities. The highest level input device/hardware will be processed first.
- There are multiple types of basic expo and control curves that can be selected for each output channel/function. If you want to adjust any curve you can use the buttons above and below the graph or you can touch the curve on the graph directly.
- **Reverse**, **Dual Rate (D/R)** and even output **Speed** can be changed as needed/preferred.
- After making any changes you **MUST** tap the **Save** button to save them.



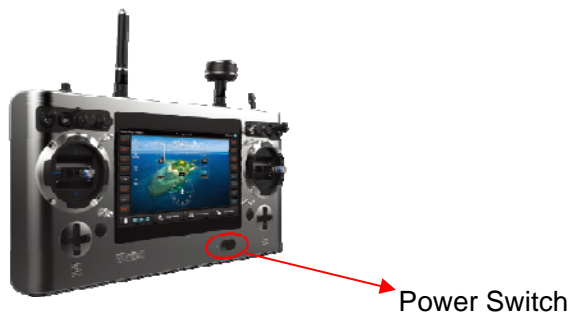
- Return to the main **FPV Mode** screen (tap the 'Back' or 'Home' icons located near the bottom of the screen as needed)
- Tap the **Take Off** button/icon when you are ready to fly

# Using Your ST24

## In the Simulator (SIM) Mode

Power on the ST24 and enter SIM mode

- Slide the **Power Switch** to the left to power on the ST24



- Tap the **SIM** button/icon
- Follow the on-screen instructions

# Using Your ST24

## In the Tablet/Pad (PAD) Mode

Power on the ST24 and enter PAD mode

- Slide the **Power Switch** to the left to power on the ST24





- Tap the **PAD** button/icon
- Use the LCD screen as a typical Android™ tablet/pad

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#### FCC STATEMENT

1. 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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.