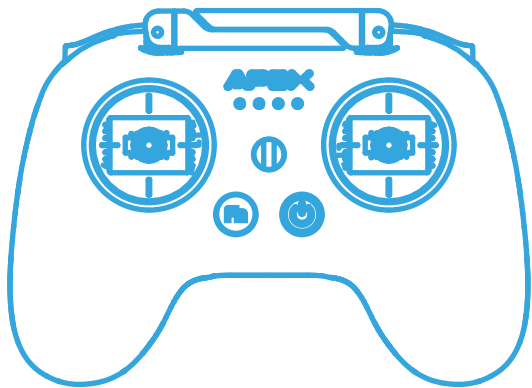


13.5*20cm

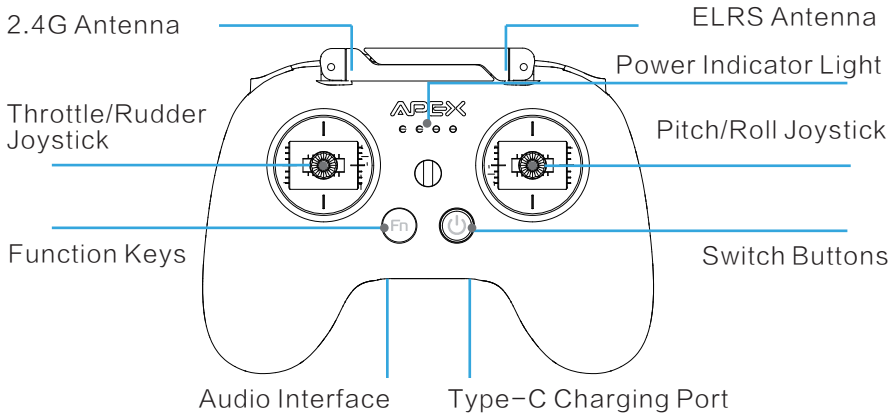


APEX TX Protocol

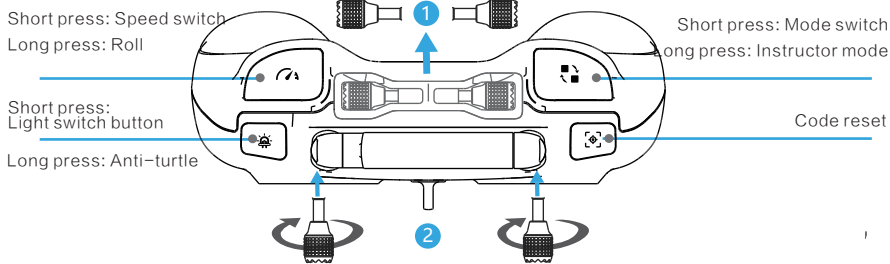


Remote Control Manual

Remote Controller Function Introduction



Take out the joystick from the joystick storage slot and install it into the remote controller.



Remote Controller Function Description

1. Power On/Off

- ① Power on, long press the switch button, the buzzer will beep quickly four times, and the remote controller will enter the working mode.
- ② Power off, long press the switch button, the buzzer will beep quickly four times, the power indicator light will be on all the time, and the remote controller will enter the power-off state.

2. Unlock/Lock

In the beginner mode, short press the "Fn" function button, the motor will idle; short press the "Fn" function button again, the motor will stop rotating; during flight, short press the "Fn" function button, the aircraft will slowly descend and lock.

(Before unlocking or locking, ensure that the throttle joystick is in the neutral position)



Throttle to the lowest position. Press the function button to unlock

3. Throttle Control

After unlocking, push the throttle joystick above the middle position, the aircraft will ascend; pull the throttle joystick below the middle position, the aircraft will descend; when the throttle joystick is in the middle position, the aircraft's altitude remains unchanged. (In altitude hold mode)

4. Code Reset

Long press the code pairing key to exit the matching channel with this flying machine. In the case that the craft is not matched to the code, the craft is powered on and shaken until the seven-colour light flashes, then switch on the remote control and long press the code matching key to achieve re-matching the code.

5. Turning (Yawing) : After the aircraft takes off, move the throttle stick left/right, the aircraft will turn left/right.

6. Forward/Backward(Pitching): After the aircraft takes off, move the direction stick forward/backward, the aircraft will fly forward/backward.

7. Left/Right(Rolling across): After the aircraft takes off, move the direction stick left/right, the aircraft will fly left/right.

8. Fine-tuning Function (Fn + Direction Stick Combination)

After the vehicle has lifted off, when the vehicle drifts in one direction without manipulating the joystick, correct the vehicle's drift by using the FN function key plus the directional joystick; to achieve a hovering state. (Press and hold the Fn key while hitting the directional rocker to achieve fine adjustment)

9. Colorful Light Conversion

Short press the colorful light button: the aircraft's colorful light will cycle through red, orange, yellow, green, cyan, blue, and purple in sequence.

10. Short Press for Speed Switching/Long Press for Rolling

Short press the button to adjust the speed, there are a total of 3 gears, the buzzer sounds once for gear 1, the speed is the smallest; sounds twice for gear 2; sounds three times for gear 3, the speed is the largest. Press again to switch back to gear 1. (In altitude hold mode, long press the button when the throttle is not 0, the aircraft will enter rolling mode, the buzzer will sound for a long time, and the aircraft will roll 360 degrees in the corresponding direction when the direction stick is moved.)

11. Short Press for Mode Switching/Long Press for Instructor Mode

Mode switching: Short press to switch between 3 flight modes: there are 3 speeds in total, one beep for self-stabilised high mode, three beeps for manual mode. Two beeps for semi-autostable mode, three beeps for manual mode.

Self-stabilising Height Mode: In the height fixing mode, the drone will activate the optical flow fixing function at speed 1 as well as 2 gears, and at 3 gears, there is only height fixing but no fixing.

Semi-autostable mode: The aircraft has no altitude hold function, and the aircraft cannot automatically hold altitude and hover, manual adjustment of the throttle stick and direction stick is required to achieve this.

Manual mode: In horizon mode, there is no altitude hold function, and the user controls the aircraft with the stick. When the aircraft flies forward, backward, left, or right, it will maintain the attitude after the stick is moved and fly automatically; the operations for ascending, descending, and heading remain unchanged.

12. Joystick Calibration (Fn + Mode Switching Combination)

After the remote controller is powered on, without pairing, press and hold the Fn key and the mode switching button to calibrate the remote controller's joystick. When calibrating the joystick, the joystick should be placed naturally and not be interfered with by external forces.

13. "Anti-Turtle" :When the drone is overturned, long press the LED light button without releasing, enter the anti-turtle mode, the drone's indicator light will flash. At this time, push the front, back, left, and right sticks until the drone turns back to the front, then release the LED light button.

14. APEX TX Protocol Built-in ExpressLRS 2.4G Protocol

In the off state, press the "Fn" function button and the power button at the same time to switch between APEX TX and ELRS2.4G protocols. (A quick four beeps indicate the APEX TX protocol, and a slow four beeps indicate the built-in high-frequency head ELRS2.4G protocol)

15. FPV Simulator Practice: Turn off the remote controller, connect the remote controller to the PC computer with a Type-C data cable, no need to install drivers, open the PC computer simulator software and calibrate to practice on the FPV simulator. (Supports mobile devices such as smartphones and tablets, requiring an OTG adapter) It can also be connected using an audio cable and a dongle.

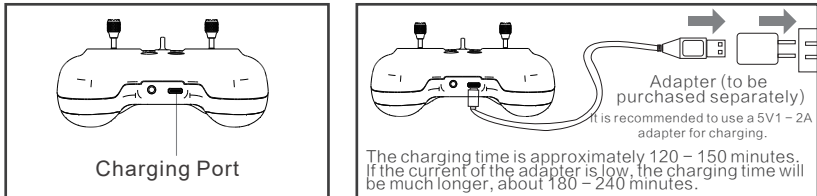
16. Instructor Mode: Coach mode: long press mode switching, need two remote controllers Coach mode: long press mode switching, need two remote controllers connected by audio cable, where the one with the aircraft pair code will be automatically confirmed as the coach mode, the other one is the student mode.

17. Forced Emergency Stop

Forced Emergency Stop: In altitude hold mode, press and hold the Fn key and pull the throttle stick to the bottom, the aircraft will stop immediately.

18. Linked Channel Switching: Linked Channel Switching: Press and hold the Fn key and the speed switching button to enter linked channel switching, each press will switch the channel once.

Charging Instructions for the Remote Control



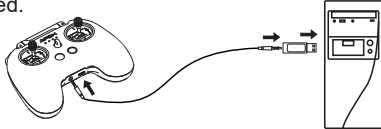
- 1. Insert the end of the remote control charging cable with a USB socket into the mobile phone adapter port, and then correctly connect the other end with a plug to the battery socket.
- 2. Insert the USB - socket - end of the charging cable into the USB port of the computer host. The method is the same as above, and charging can also be completed.
- 3. When charging, the indicator lights of the remote control light up and go out in sequence cyclically. When fully charged, all four indicator lights are on.

Method 1 for Using the Simulator

The remote control of this product has the function of connecting to a computer for simulated operation:

- 1. Turn on the remote control
- 2. Insert one end of the audio cable into the audio output port of the remote control, and the other end into the audio input port of the dongle. Switch to the specified position according to the requirements of the simulator. (The dongle needs to be purchased separately.)
- 3. Insert the dongle into the USB port of the computer. When the red light of the dongle flashes, it indicates that the remote control is connected.
- 4. Calibrate the remote control channel

Note When using the simulator with the remote control, the remote control must be disconnected from the aircraft; otherwise, computer - simulated operation cannot be performed.

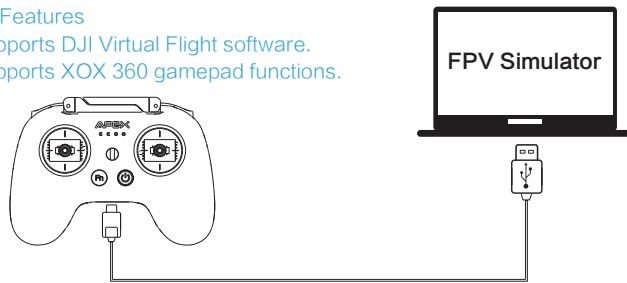


Method 2 for Using the Simulator

Turn off the remote control. Connect the remote control to a PC using a Type - C data cable. There is no need to install a driver. Open the PC simulator software, and after calibration, you can start FPV simulator practice. (It supports mobile devices such as mobile phones and tablets. An OTG adapter)

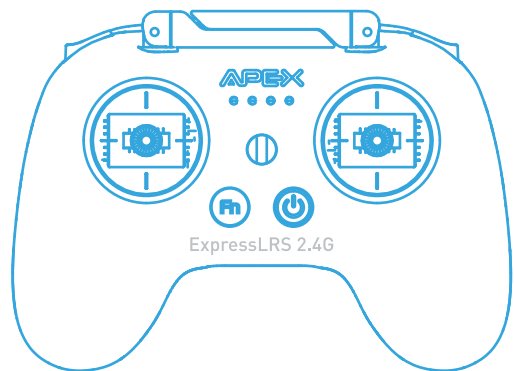
New Features

- 1. Supports DJI Virtual Flight software.
- 2. Supports XO360 gamepad functions.



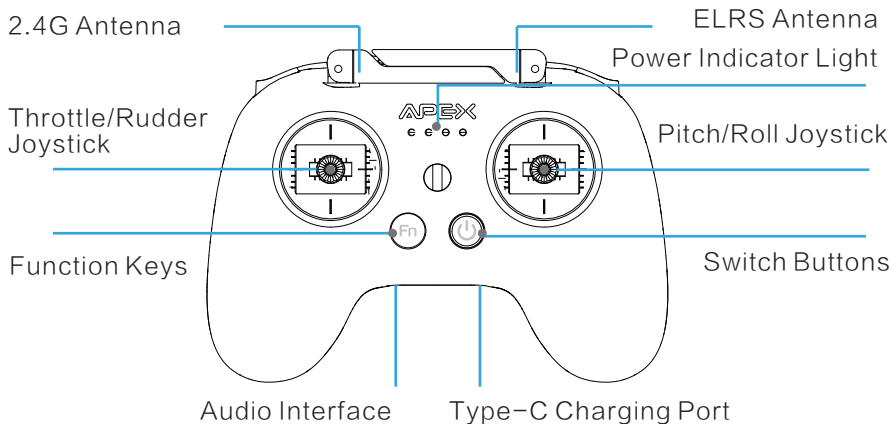


Instructions for APEX ExpressLRS 2.4G Protocol

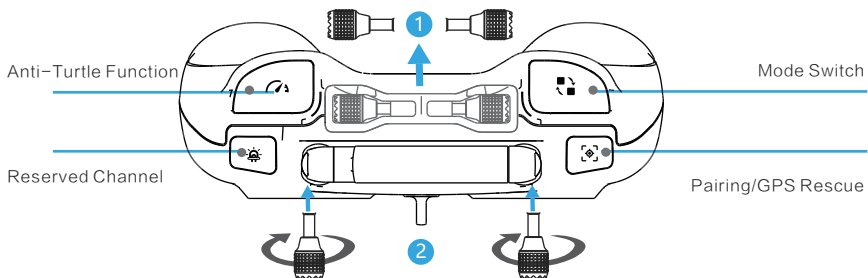


Remote Control Manual

Remote Controller Function Introduction



Take out the joystick from the joystick storage slot and install it into the remote controller.



Remote Controller Function Description

1. Power On/Off

- ① Power on, long press the switch button, the buzzer will beep quickly four times, and the remote controller will enter the working mode.
- ② Power off, long press the switch button, the buzzer will beep quickly four times, the power indicator light will be on all the time, and the remote controller will enter the power-off state.

2. Unlock/Lock

In the beginner mode, short press the "Fn" function button, the motor will idle; short press the "Fn" function button again, the motor will stop rotating; during flight, short press the "Fn" function button, the aircraft will slowly descend and lock.

(Before unlocking or locking, ensure that the throttle joystick is in the neutral position)



Throttle to the lowest position. Press the function button to unlock

3. Throttle Control

After unlocking, push the throttle joystick above the middle position, the aircraft will ascend; pull the throttle joystick below the middle position, the aircraft will descend; when the throttle joystick is in the middle position, the aircraft's altitude remains unchanged. (In altitude hold mode)

4. Pairing between the Remote Control and the ExpressLRS 2.4G Protocol Receiver

Power on the receiver quickly three times in a row to enter the pairing state. Turn on the remote control, and its indicator light will flash slowly. Press the pairing button, and atick - tock" sound will be heard. At this time, the pairing connection is in progress. Wait for 8 - 9 seconds (the first pairing takes a relatively long time). Then, five"beeps"with different tones will be heard, and the indicator light will be constantly on, indicating that the pairing is successful."

5. Turning (Yawing) After the aircraft takes off, move the throttle stick left/right, the aircraft will turn left/right.

6. Forward/Backward(Pitching) After the aircraft takes off, move the direction stick forward/backward, the aircraft will fly forward/backward.

7. Left/Right(Rolling across) After the aircraft takes off, move the direction stick left/right, the aircraft will fly left/right.

8. Mode switching: Short press to switch between 3 flight modes: there are 3 speeds in total, one beep for self-stabilised high mode, three beeps for manual mode. Two beeps for semi-autostable mode, three beeps for manual mode.

Self-stabilising Height Mode: In the height fixing mode, the drone will activate the optical flow fixing function at speed 1 as well as 2 gears, and at 3 gears, there is only height fixing but no fixing.

Semi-autostable mode: The aircraft has no altitude hold function, and the aircraft cannot automatically hold altitude and hover, manual adjustment of the throttle stick and direction stick is required to achieve this.

Manual mode: In horizon mode, there is no altitude hold function, and the user controls the aircraft with the stick. When the aircraft flies forward, backward, left, or right, it will maintain the attitude after the stick is moved and fly automatically; the operations for ascending, descending, and heading remain unchanged.

9. Joystick Calibration (Combination of Fn + Mode Switch Button)

After turning on the remote control and without pairing, press and hold the Fn key and the mode - switch button simultaneously to calibrate the remote control joystick. When calibrating, the joystick should be placed naturally without being affected by external forces.

10. Anti - Turtle Function: When the drone rolls over, short - press the "Anti - Turtle" button twice (to prevent misoperation). The buzzer will emit a "beep - beep - beep" sound, and the drone enters the anti - turtle mode. Press the "Fn" function button to unlock. Then, push the pitch and roll joysticks until the drone turns back to its normal position.

11. GPS Rescue: To use the GPS rescue or GPS return - to - home function, the aircraft must have no less than 8 GPS satellites. It will take effect only after refreshing the return - to - home point, unlocking, and taking off. After takeoff, the arrow will point in the direction of the return - to - home point. When the remote control signal is lost, the GPS rescue will be triggered, and the aircraft will fly back to the return - to - home point. After the remote control signal is restored, control can be regained by swinging the joystick more than 30 degrees outward from the center.

12. Reserved Channels (Channel Mapping)

This function can be set and defined on the Betaflight Configurator ground station. The "Reserved Channel" button corresponds to AUX5 channel, the "Anti - Turtle" button corresponds to AUX4 channel, the "Mode Switch" button corresponds to AUX2 channel, and the "Pairing/GPS Rescue" button corresponds to AUX6 channel. (This button can be defined as functions such as flight controller light control and BB alarm.) The functions of the above buttons are default from the factory and can be customized.

13. APEX TX Protocol with Built - in ExpressLRS 2.4G Protocol

In the power - off state, press the "Fn" function button and the power - on button simultaneously to switch between APEX TX protocol, and four slow beeps indicate the built - in high - frequency head ELRS 2.4G protocol.)

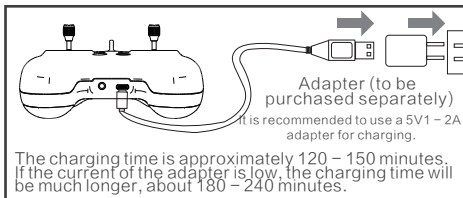
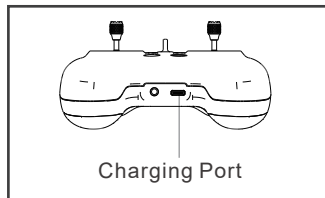
14. Remote Control Power Adjustment

In the ELRS mode, press and hold the Fn key, and then adjust the direction joystick left/right to switch the remote control power. Confirm the remote control power according to the prompts of the remote control indicator lights. From left to right, when the first light is on, it indicates 25mw; when the second light is on, it indicates 50mw; when the third light is on, it indicates 100mw; when the fourth light is on, it indicates 250mw; when the first and fourth lights are on simultaneously, it indicates 500mw. (The power adjustment must be carried out when the remote control is not paired.)

15. FPV Simulator Practice

Turn off the remote control. Connect the remote control to a PC using a Type - C data cable. There is no need to install a driver. Open the PC simulator software, and after calibration, you can start FPV simulator practice. (It supports mobile devices such as mobile phones and tablets. An OTG adapter or a double - ended Type - C data cable is required.) The connection method using an audio cable + dongle is also available.

Charging Instructions for the Remote Control



1. Insert the end of the remote control charging cable with a USB socket into the mobile phone adapter port, and then correctly connect the other end with a plug to the battery socket.
2. Insert the USB - socket - end of the charging cable into the USB port of the computer host. The method is the same as above, and charging can also be completed.
3. When charging, the indicator lights of the remote control light up and go out in sequence cyclically. When fully charged, all four indicator lights are on.

Method 1 for Using the Simulator

The remote control of this product has the function of connecting to a computer for simulated operation:

1. Turn on the remote control
2. Insert one end of the audio cable into the audio output port of the remote control, and the other end into the audio input port of the dongle. Switch to the specified position according to the requirements of the simulator. (The dongle needs to be purchased separately.)
3. Insert the dongle into the USB port of the computer. When the red light of the dongle flashes, it indicates that the remote control is connected.
4. Calibrate the remote control channel

Note When using the simulator with the remote control, the remote control must be disconnected from the aircraft; otherwise, computer - simulated operation cannot be performed.



Method 2 for Using the Simulator

Turn off the remote control. Connect the remote control to a PC using a Type - C data cable. There is no need to install a driver. Open the PC simulator software, and after calibration, you can start FPV simulator practice. (It supports mobile devices such as mobile phones and tablets. An OTG adapter)

New Features

1. Supports DJI Virtual Flight software.
2. Supports XO3 360 gamepad functions.

