AVIATOR

User Manual

2023-06 v1.0

CODEV DYNAMICS

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Product Profile

This section describes the features of the remote controller and includes instructions for controlling the aircraft and the camera

Remote Controller

Introduction

The Remote Controller has a transmission range of up to 10km with controls for camera tilt and photo capture, Has a built-in 7-inch high brightness 1000 cd/m2 screen has a resolution of 1920x 1080 pixels, featuring an Android system with multiple functions such as Bluetooth and GNSS. In addition to supporting WI-Fi connectivity, it is also compatible with other mobile devices for more flexible usage. The Remote Controller has a maximum working time of 6 hours with the built-in battery.

The Remote Controller can reach maximum transmission distance (FCC) in an unobstructed area with no electromagnetic interference at an altitude of about 400 feet (120 meters). The actual maximum transmission distance may be less than the distance mentioned above due to interference in the operating environment, and the actual value will fluctuate according to the strength of interference.

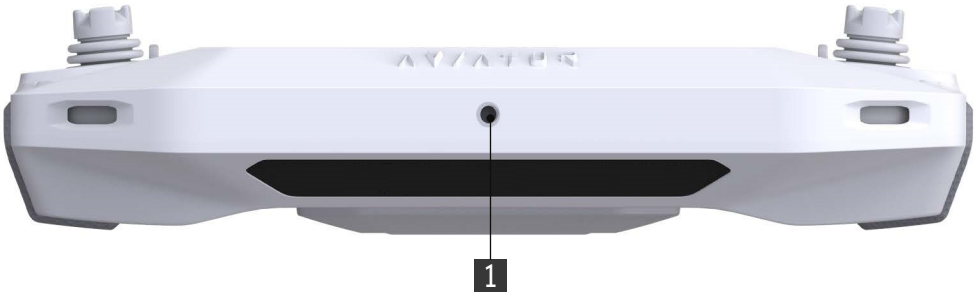
Maxed operating time is estimated in a lab environment at room temprature, for reference only. When the Remote Controller is powering other devies, the run time will be reduced.

Compliance Standards: The remote controller is compliant with local laws and regulations.
Stick Mode：Controls can be set to Mode 1, Mode 2, Can be customized in FlyDynamics (the default is Mode 2).

Do not operate more than three aircrafts within the same area (roughly the size of a soccer field) to prevent transmission interference.

Remote Controller Overview

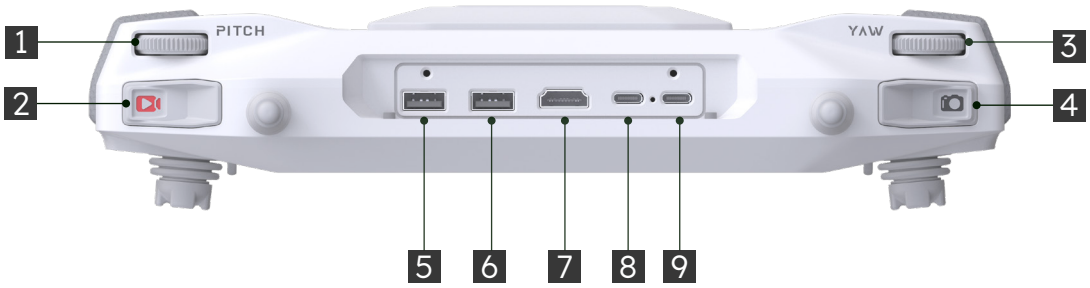
1.Antennas
2.Left Control Sticks
3.Flight Pause Button
4.RTL Button
5.Power Button
6.Battery Level Indicators
7.Touch Screen
8.Right Control Sticks
9.Function Button 1
10.Function Button 2
11.Mission Start/Stop Button



1.Tripod mounting hole

1.Customizable C2 Button

2.Customizable C1 Button



1.Gimbal Pitch Control Dial
2.Record Button
3.Gimbal Yaw Control Dial
4.Photo Button
5.USB Port
6.USB Port
7.HDMI Port
8.Charging USB-C Port
9.External Data Port

Preparing the Remote Controller

Charging

Using the official charger, it takes about 2 hours to fully charge under normal temperature shutdown.

Warnings:

Please use the official charger to charge the remote controller.
To keep the remote controller battery in the best condition, please make sure to fully charge the remote controller every 3 months.

Remote Controller Operations

Checking the Battery Level and Turning On

Checking the Battery Level

Check the battery level according to the Battery Levels LEDs. Press the power button once to check it while turned off.

Press the power button once, press again and hold a few seconds to turn on/off the Remote Controller.

Controlling the Aircraft

This section explains how to control the orientation of aircraft through the remote controller, Control can be set to Mode 1 or Mode 2.

Mode1

Mode2

The stick mode is set to mode 2 by default, This manual takes Mode2 as an example to illustrate the control method of the remote control.

RTL Button

Press and hold the RTL button to start Return to Launch(RTL) and the aircraft will return to the last recorded Home Point. Press the button again to cancel RTL.

Optimal Transmission Zone

Make sure the antennas are facing towards the aircraft .

Operating the Camera

Shoot videos and photos with the Photo button and Record button on the remote controller.

Photo Button:

Press to take a photo.

Record Button:

Press once to start recording and press again to stop.

Operating the Gimbal

Use the left dial and right dial to adjust the pitch and pan.

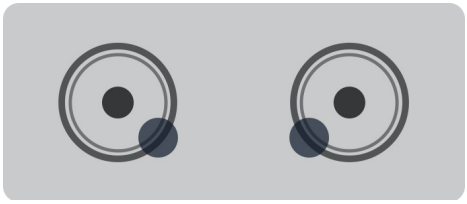
The left dial controls the gimbal tilt. Turn the dial to the right, and the gimbal will shift to point upwards. Turn the dial to the left , and the gimbal will shift to point downwards. The camera will remain in its current position when the dial is static.

The right dial controls the gimbal pan. Turn the dial to the right, and the gimbal will shift clockwise. Turn the dial to the left , and the gimbal will shift counter clockwise. The camera will remain in its current position when the dial is static.

Starting/Stopping the Motors

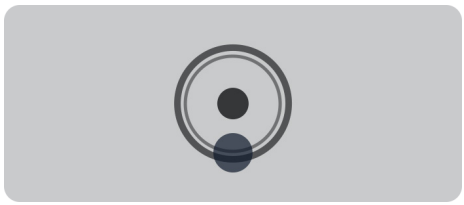
Starting Motors

Push both sticks to bottom inner or outer corners to start the motors.



Stopping Motors

When the aircraft has landed, push and hold the left stick down. The motors will stop after three seconds.



Video Transmission Description

AQUILA uses CodevDynamics industry video transmission technology, video, data, and control three-in-one. End-to-end equipment is not restricted by wire control, and maintains a high degree of freedom and mobility in space and distance. With the complete function buttons of the remote control, the operation and setting of the aircraft and the camera can be completed within a maximum communication distance of 10 kilometers. The image transmission system has two communication frequency bands, 5.8GHz and 2.4GHz, and users can switch according to the environmental interference.

Ultra-high bandwidth and bit stream support can easily cope with 4K resolution video data streams. The 200ms screen-to-screen low delay and delay jitter sensitive control are better, which meets the end-to-end real-time requirements of video data. Support H265/H264 video compression, AES encryption.

The adaptive retransmission mechanism implemented at the bottom layer is not only much better than the application layer retransmission mechanism in terms of efficiency and delay, but also greatly improves the performance and user experience of the link in an interference environment.

The module continuously detects the interference status of all available channels in real time, and when the current working channel is interfered, it automatically selects and switches to the channel with the lowest interference to ensure continuous and reliable communication.

Appendix

Specifications

Remote Controller	**AVIATOR**
Operating Frequency	2.4000 - 2.4835 GHz; 5.725-5.875 GHz
Max Transmitting Distance (unobstructed, free of interference)	10km
Dimensions	280x150x60mm
Weight	1100g
Operating system	Android10
Built-in battery	7.4V 10000mAh
Battery Life	4.5h
Touch screen	7 inch 1080P 1000nit
I/Os	2*USB、1*HDMI、2*USB-C
Operating Environment	-20°C to 50°C (-4°F to 122° F)

After-Sales Service Policies

Limited Warranty

Under this Limited Warranty, CodevDynamics warrants that each CodevDynamics product that you purchase will be free from material and workmanship defects under normal use in accordance with CodevDynamics's published product materials during the warranty period. CodevDynamics's published product materials include, but not limited to, user manuals, safety guidelines, specifications, in-app notifications, and service communications.

The warranty period for a product starts on the day such product is delivered, If you cannot provide invoice or other valid proof of purchase, then the warranty period will start from 60 days after the shipping date that shows on the product, unless otherwise agreed upon between you and CodevDynamics.

What This After-Sales Policy Does NOT Cover

1. Crashes or fire damage caused by non-manufacturing factors, including but not limited to, pilot errors.
2. Damage caused by unauthorized modification, disassembly, or shell opening not in accordance with official instructions or manuals.
3. Water damage or other damages caused by improper installation, incorrect use, or operation not in accordance with official instructions or manuals.
4. Damage caused by a non-authorized service provider.
5. Damage caused by unauthorized modification of circuits and mismatch or misuse of the battery and charger.
6. Damage caused by flights which did not follow instruction manual recommendations.
7. Damage caused by operation in bad weather (i.e. strong winds, rain, sand/dust storms, etc.)
8. Damage caused by operating the product in an environment with electromagnetic interference (i.e. in mining areas or close to radio transmission towers, high-voltage wires, substations, etc.).
9. Damage caused by operating the product in an environment suffering from interference from other wireless devices (i.e. transmitter, video-downlink, Wi-Fi signals, etc.).
10. Damage caused by operating the product at a weight greater than the safe takeoff weight, as specified by instruction manuals.

11.Damage caused by a forced flight when components have aged or been damaged.
12.Damage caused by reliability or compatibility issues when using unauthorized third-party parts.
13.Damage caused by operating the unit with a low-charged or defective battery.
14. Uninterrupted or error-free operation of a product.
15. Loss of, or damage to, your data by a product.
16. Any software programs, whether provided with the product or installed subsequently.
17. Failure of, or damage caused by, any third party products, including those that CodevDynamics may provide or integrate into the CodevDynamics product at your request.
18. Damage resulting from any non-CodevDynamics technical or other support, such as assistance with “how-to” questions or inaccurate product set-up and installation.
19. Products or parts with an altered identification label or from which the identification label has been removed.

Your Other Rights

This Limited Warranty provides you with extra and specific legal rights. You may have other rights according to the applicable laws of your state or jurisdiction. You may also have other rights under a written agreement with CodevDynamics. Nothing in this Limited Warranty affects your statutory rights, including rights of consumers under laws or regulations governing the sale of consumer products that cannot be waived or limited by agreement.

FCC Statement
Any Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
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.

RF Exposure Statement：

This device meets the government's requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. *Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the poser required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

For carrying around operation, this device has been tested and meets the FCC RF exposure guidelines for use with an accessory that contains no metal. Use of other enhancements may not ensure compliance with FCC RF exposure guidelines.

The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR infromation on this device is on file with the FCC and can be found under the Display Grant section of http://www.fcc.gov/oet/fccid after searching on FCC ID: 2BBC9-AVIATOR

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.