

Portable broadband drone detection equipment

User Manual



1、Statement and Safety Notice

(I) Copyright Statement

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(II) Statement of Responsibility

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(III) About this manual

*This manual is for multiple models. Please refer to the actual product for product appearance and functions.

*This manual is compatible with multiple software versions. The product interface and functions shall be subject to the actual software.

*The contents of this manual may contain technical errors or typographical errors, which shall be subject to the final interpretation of our company.

*The user shall be responsible for any losses caused by failure to follow the instructions in this manual.

*The company reserves the right to modify any information in this manual without notice or reminder. Due to product version upgrades or legal and regulatory requirements in relevant regions, the content of this manual will be updated from time to time, and the updated content will be reflected in the new version.

(IV) Instructions for use

When using this product, please observe the following precautions to avoid property loss or personal injury:

- *Do not use unapproved or damaged accessories.
- *Do not place this product above an airbag or in an area that can be reached by an airbag after deployment.
- *Keep this product and its accessories out of reach of children and pets.
- *Please use this product within the specified operating temperature range.
- *High temperature environment will cause the body to heat up. Please let the product stand to cool down.
- *Keep the force when pressing the keys, and avoid using excessive force.
- *Do not disassemble, modify or repair this product and its accessories without authorization.

2. Battery Safety Precautions

(I) Charging is strictly prohibited

Charging is strictly prohibited in the following places or situations to avoid property damage or personal injury:

1. It is strictly prohibited to charge or replace the battery in places where fuel, chemicals, explosive gases and other flammable and explosive items are stored.
2. If the battery or terminal is accidentally exposed to moisture, please wipe it dry with a clean dry cloth before charging. Otherwise, charging is strictly prohibited.
3. Do not charge the battery when it is leaking, deformed, overheated or in other abnormal conditions.
4. It is strictly prohibited to use unapproved chargers for charging.
5. It is strictly forbidden to charge near strong radiation sources.
6. It is strictly forbidden to overcharge the battery, otherwise it will affect the battery life.

(II) Maintenance Instructions

To ensure proper operation of the battery and extend its life, please observe the following precautions:

1. Dust accumulation on the battery poles may affect normal charging, so please clean the battery in time with a clean dry cloth.
2. It is recommended that the ambient temperature during charging be between 5°C and 40°C. Charging at too high or too low a temperature will shorten the battery life or even cause leakage.
3. If you want to charge a terminal with a battery installed, it is recommended to turn off its power during charging to ensure that the battery is charged normally.
4. Do not plug or unplug the power supply and battery during charging to avoid interfering with the normal charging process.

5. Do not dispose of batteries in fire.
6. Do not expose the battery to direct sunlight for extended periods of time or place it near other heat sources.
7. Do not crush, puncture or disassemble the battery casing without authorization.

(III) Transportation Instructions

1. Do not transport a damaged battery.
2. Make sure that the batteries in the box will not short-circuit. If there are multiple batteries in the same box, please pack each battery separately.
3. If the device contains a battery, it must be turned off and measures must be taken to prevent accidental startup. The shipping documents should list the details of the items shipped and mark the packaging box with a battery shipping label. For local laws, regulations and other information, please contact your carrier.

3. Preparation before use

(I) Installation accessories

Antenna, belt clip, battery pack.

(II) Installing the antenna

Rotate the antenna clockwise until it is tightened. To remove the antenna, rotate it counterclockwise. Note: Do not swing the product by holding the top of the antenna, otherwise the performance and service life of the antenna will be reduced.

(III) Installing the belt clip

Attach the belt clip to the back of the device using the two screws provided.

(IV) Install the battery pack

Before installing or removing the battery, make sure the device is fully turned off by turning the power/volume knob counterclockwise.

1. To install the battery pack:
 - * With the back of the device facing you, insert the lithium-ion battery pack into the back of the device.
 - * Push the bottom of the battery upwards and the battery lock button locks the battery.
2. To remove the battery pack:
 - * With the back of the device facing you, press down on the battery lock button.
 - * Press and pull the battery back until the battery pack is completely separated from the device.

4. Battery Pack Charging

Note: Please make sure that the product is turned off when charging. Please use the charging station specified by our company to charge the battery.

- * Plug the power adapter into a power socket.
- * Plug the other end of the power adapter into the jack on the back of the charging dock.
- * Insert the battery or the product with the battery into the charging station correctly.

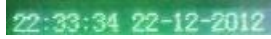
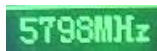
Note: For best battery performance, charge the battery for at least 8 hours when charging for the first time.

5. Introduction of detection equipment

The portable broadband drone detection equipment adopts low power consumption design and highly integrated design. It can detect mainstream rotary-wing drones such as DJI and Docom that use OFDM high-definition image transmission and various DIY crossings that use analog image transmission signals. The equipment adopts dual antennas and multi-channel simultaneous scanning, and has the characteristics of fast detection speed, high detection sensitivity, long detection distance, low false alarm rate, strong scalability, and easy use.



6.LCD display icon description

Icon	Description
	The value displayed in the upper left corner of the screen indicates the device time
	The upper right corner of the screen shows that the device is muted.
	The upper right corner of the screen shows the device power level
	Displays the type of drone detected
	Displays detected drone frequencies
	Displays the detected drone frequency strength value
	The detection spectrum range is displayed in red, indicating that a drone is detected at this frequency

7. Basic Operations

(1)Power on and off

To turn on the device, turn the [Power Switch/Volume Control] knob clockwise until you hear a "click". To turn off the device, turn the knob counterclockwise until you hear a "click".

(2) Adjust the volume

After turning on, turn the [power switch/volume control] knob clockwise to increase the voice receiving volume, and turn counterclockwise to reduce the voice receiving volume. Or adjust the volume by pressing the volume button on the right of the device.



(3) Real-time alarm function

After powering on, the middle part of the screen will automatically display the surrounding drone alarm list and real-time spectrum. The alarm list lists the drone type (DJ\DJ04\AUTEL\FPV, etc.), frequency (MHz), signal strength (maximum 128), and displays up to the most recent 5 alarms.

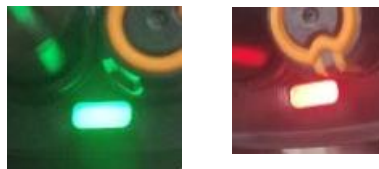
The real-time spectrum graph displays the real-time spectrum information (300MHz-6200MHz) near the device, and displays the frequency of the drone warning information with a red line. The longer the line, the stronger the signal.



Screen display interface

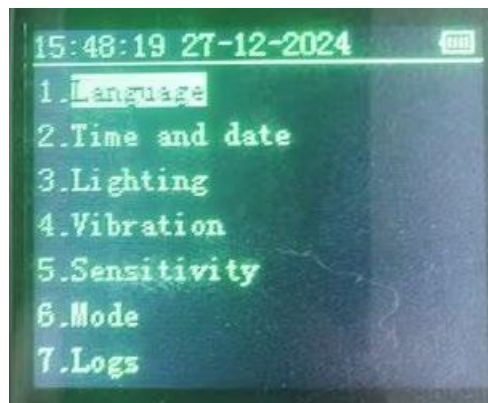
(4) Warning light display function

After the device is turned on, it will receive a drone alarm. There is an LED light on the top of the device that will display the alarm. It will flash red when a drone is detected and flash green when no drone is detected.



(5) Equipment configuration function

The device supports the sound alarm function. Press the "#" key and the screen will display the system configuration interface.



Screen configuration interface

(6) One-button mute function

The device supports one-touch mute function. Press and hold the upper button on the right side of the device for 3 seconds. The device enters mute mode and displays the mute icon on the screen. After pressing and holding for 3 seconds, press the volume - button to cancel the mute.



8. Main functions and features

- *Uav passive passive detection: can identify Dajiang, Daotong and other rotorwing UAV using OFDM high-definition image transmission; It can detect all kinds of traversers using analog map transmission within 300MHz-6200MHz.
- *Sound and light alarm: headphone sound alarm, external sound and light alarm.
- *Log record: It has alarm log record function and can export alarm log through USB interface.
- *Headphone function: Ability to receive alarm sound through headphones.
- *Firmware upgrade function: Firmware upgrade via type-c interface.
- *Multi-language switching: support English and Russian.
- *Working status display: time, power, equipment status
- *Working modes: default mode, key frequency band scanning mode (to be supported later),

user-defined signature library scanning mode (to be supported later).

*Custom detection: Users can modify, delete, and add detection drone feature libraries through the Type-C interface.

9. Main technical indicators

name	parameter
frequency	300MHz-6200MHz
Recognition type	OFDM HD image transmission signal, FM analog image transmission
Detection range	≥1km
Detection sensitivity	Better than -96dBm
Detection alarm mode	Headphones, sound and light
Log recording	A maximum of 500 alarm records are supported
Upgrade and data export interface	type-c
Power supply	Removable lithium battery (type-c charging)
Battery life	≥6 hours (single battery)
Structural dimension	≤135mm×60mm×35mm (host does not include antenna)
weight	≤500g (including single battery)
Starting mode	Knob button, rotation start
Control mode	Button operation, support to adjust the sound, screen backlight on and drone detection information view functions

10. Configuration modification

(1)Language Configuration

Press the "#" key and the screen will display the system configuration interface. You can use the "▲" and "▼" arrow buttons to switch configuration options. In the "1.Language" language option, press the green "FUN" key again to enter the language configuration interface, then press the "*" key to switch the system language, and then press the red "CLR" key to confirm and return to the previous menu.



(2) Time and date configuration

Press the "#" key and the screen will display the system configuration interface. You can use the "▲" and "▼" arrow buttons to switch configuration options. In the "2. Time and date" option, press the "FUN" key again to enter the time configuration interface. Use the "1" and "2" number keys to move the cursor, and use the "▲" and "▼" arrow buttons to modify the time. Press the "FUN" key to confirm. The screen displays: "set OK" to indicate that the modification is successful. Press the "CLR" key to return to the previous menu.



(3) Brightness adjustment configuration

Press the "#" key and the screen will display the system configuration interface. You can use the "▲" and "▼" arrow buttons to switch configuration options. In the "3. Lighting" option, press the "FUN" key again to enter the brightness adjustment interface, and then use the "▲" and "▼" arrows to move the cursor up and down. In the "Key" option, press the "*" key to modify the keyboard brightness display. In the "Lcd" option, press the "*" key to modify the screen

brightness to "high, medium, low". Press the "CLR" key to confirm and return to the previous menu.



(4) Vibration adjustment configuration

Press the "#" key to enter the system configuration screen. You can switch the configuration options by using the "▲" and "▼" arrow buttons. On the "4.Vibration" option, press the "FUN" key to enter the vibration adjustment screen, press the "*" key to vibrate the vibration, press the "CLR" key to confirm and return to the previous menu.



(5) Sensitivity adjustment configuration

Press the "#" key, the screen will display the system configuration interface, you can switch the configuration options through the "▲" and "▼" arrow buttons, in the "5.Sensitivity" option, press and then press the "FUN" key to enter the sensitivity adjustment interface, press the "*" key to modify the sensitivity of "high, medium and low", press the "CLR" key to confirm and return to the previous menu.



(6) Device mode configuration

Press the "#" key and the screen will display the system configuration interface. You can use the "▲" and "▼" arrow buttons to switch configuration options. In the "6. Mode" option, press the "FUN" key again to enter the device working mode interface. Press the "*" key to modify the working mode between "standard" and "Eco". Press the "CLR" key to confirm and return to the previous menu.



(7) Log Configuration

Press the "#" key, the screen displays the system configuration interface, you can switch the configuration options by the "▲" and "▼" arrow buttons, in the "7. Logs" option, press and then press the "FUN" key to enter the log configuration interface, in the "Recordings" option, press the "*" key to switch on and off the log recording function, in the "Erase" option, Press * to clear logs. Press CLR to confirm and return to the previous menu.



11. Troubleshooting Guide

problem	solution
No power supply, can not turn on	The battery may not be installed properly. Remove the battery and reinstall it The battery may be exhausted, please replace the battery or charge it before use
Undetected drone	The drone is not within range of the device The drone is not in the device's range Lack of drone library, enable scanning function detection
The standby time is too short	Maintain the battery regularly to prevent false charges Confirm that lighting and vibration functions are turned off Replace the battery regularly to prevent the battery capacity from decreasing over time Battery life is up (about 300 cycles of charge and discharge), please replace the battery

* If the above methods still fail to solve your problem, or you encounter some other faults, please contact your local dealer for more technical support.

12. Maintenance and cleaning

In order to ensure the good performance of this product and extend its service life, please be familiar with the following contents so that you can better perform daily maintenance and cleaning of this product.

(1) Maintenance

1. Do not puncture or scratch this product with hard objects.
2. Do not store this product in an environment containing substances that may corrode electronic circuits.
3. Do not use a portable antenna when carrying or using this product.
4. When you are not using accessories, please close the accessory interface cover.

(2) Cleaning

Note: Before cleaning, turn off the device and remove the battery.

1. Please use a clean, dry, lint-free cloth or brush to regularly wipe off the dust on the surface of the product and the charging electrode.
2. The buttons, control knobs and housing of this product are easy to get dirty. They can be cleaned with neutral detergent and non-woven cloth. Do not use chemical agents such as detergents, alcohol, sprays or petroleum preparations to clean them to avoid damage to the product surface and housing.
3. After cleaning, make sure the product is completely dry before use.

13. Device Operation and Maintenance

1. Visual inspection

*Plastic surface and screen: Check regularly for cracks, scratches or dirt, and clean the surface with a soft cloth and appropriate detergent.

2. Battery maintenance

*Charge and discharge regularly to avoid long periods of full or empty charge to extend battery life.

*Monitor the battery health status. If the battery life is significantly shortened, consider replacing it.

*Avoid storing the battery in high or low temperature environments for a long time.

3. Battery Charger

*Regularly check the adapter cable and plug for damage.

4. Functional testing

*Regularly test the functions of the equipment to ensure normal operation.

5. Safety precautions

*Use original or certified accessories.

*Avoid using the device in humid or extreme temperature conditions.

*Check the equipment regularly for abnormal phenomena such as overheating and odor.

14. Inspection and maintenance

No.	item	Check/maintain content	Frequency	Note
1	Visual inspection	Cleaning and integrity of plastic surfaces and screens	Per Month	
2	Battery maintenance	Battery charge and discharge cycle	Per Month	Record the battery health status
3	Battery maintenance	Avoid extreme temperature environments	Continuous monitoring	
4	Battery charger	Check cables and plugs	Per Month	
5	Functional testing	Equipment function test	Per quarter	Record test results
6	Safety precautions	Use original/certified accessories	Continuous monitoring	
7	Safety precautions	Avoid humid/extreme temperature environments	Continuous monitoring	