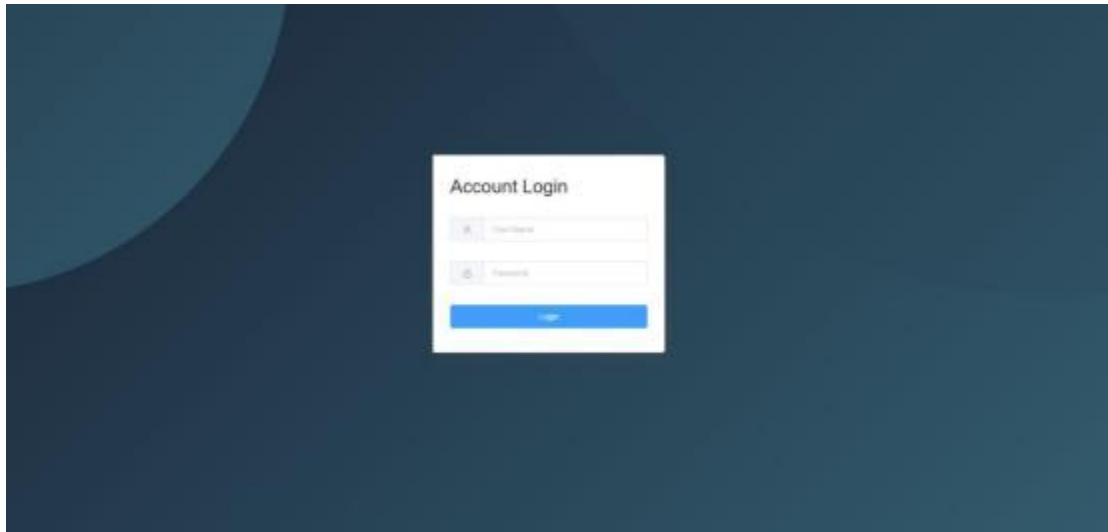


Operating Manual for Detection and Countermeasures System Equipment



I. Login



Enter the system web address in the CHROME browser <http://169.254.1.1:8081> to enter the login interface. Enter the correct username and password to enter the system main interface. The system has the highest built-in permission account websuper password: dp123 &*(, and the password for the regular user account webuser: 123456. Accounts can be added through the user management function.

II. Main Page



1. Unmanned machine detection

1.1 Unmanned machine list

The unmanned devices detected by the equipment will be automatically added to the list. If the signal disappears, the drone will be automatically removed from the list, and the current number of detected drones will be recorded in the list. When fuzzy targets are discovered, the specific information includes the model, quantity, detection times, threat, degree, frequency, pictures, etc. When a direction-finding target is discovered, the specific information includes model, quantity, direction, distance, detection times, threat level, frequency, picture, protocol number, etc. When locating the target, the specific information includes the model, location, position of the flying object, quantity (after analysis), direction, distance, number of detections, threat level, frequency, image, protocol number, etc. When a position target is found, the line below this one in the list turns blue and the other lines turn green.

Among them,  represents the change of the detection signal;  Indicates that it has been added to the whitelist, and  indicates that it has not been added to the whitelist.  means that the drone is conducting precise strikes, and  means that the drone supports precise strikes. No icon indicates that the unmanned aircraft does not support precise strikes.  indicates that the UAV supports being added to the ignore list. The absence of an icon indicates that the UAV does not

support being added to the ignore list.  Indicates that the pan-tilt turns towards the specified target. Click on the agreement number of the drone, and the static library image page of the drone will pop up.

1.2 Unmanned Aerial Vehicle Position

The position, trajectory and status of the unmanned aerial vehicle are updated in real time. Meanwhile, there is a linkage with the list of unmanned aerial vehicles. When the drone icon in the list is clicked, the map will automatically locate the selected drone. The status indicator icon of the drone icon    ;  Represent DF targets,  position targets,  fuzzy targets and whitelist targets. When the DF target or location target is discovered, the direction line from the target to the device will be drawn, and the location target will also display the target trajectory. In addition, if the position target can be resolved, the pilot's position will be displayed and the pilot icon will be white.

1.3 Ignore List

Click the "Ignore List" menu button to enter the Ignore list. The specific information of the ignore list includes the drone number, frequency, threat, detection times, pictures, protocol number, etc. Click the "DELETE" button to remove this target from the ignore list. Click in the list of drones  to add the target to the ignore list. Click on the

agreement number of the drone, and a static library image page of the drone will pop up.

2. Equipment positioning and control



2.1 Equipment Positioning

When the device is connected to the system, an icon  will appear on the map. When the device connection is abnormal, an icon  will appear. Meanwhile, the system will display abnormal error messages in the lower right corner of the map. Draw the detection range equipment and the response range of the equipment on the map.

2.2 Equipment Control

Click the device icon, and the device control interface will be displayed in the upper left corner. If the system is configured with external devices, PTZ, spoofing, etc., the lower left corner controls PTZ, and the upper left corner controls external devices, spoofing, FPV, etc. The device function area on the frequency side map of the device turns red, and the device

function area on the off side map turns blue.

➤ Unattended equipment status switching

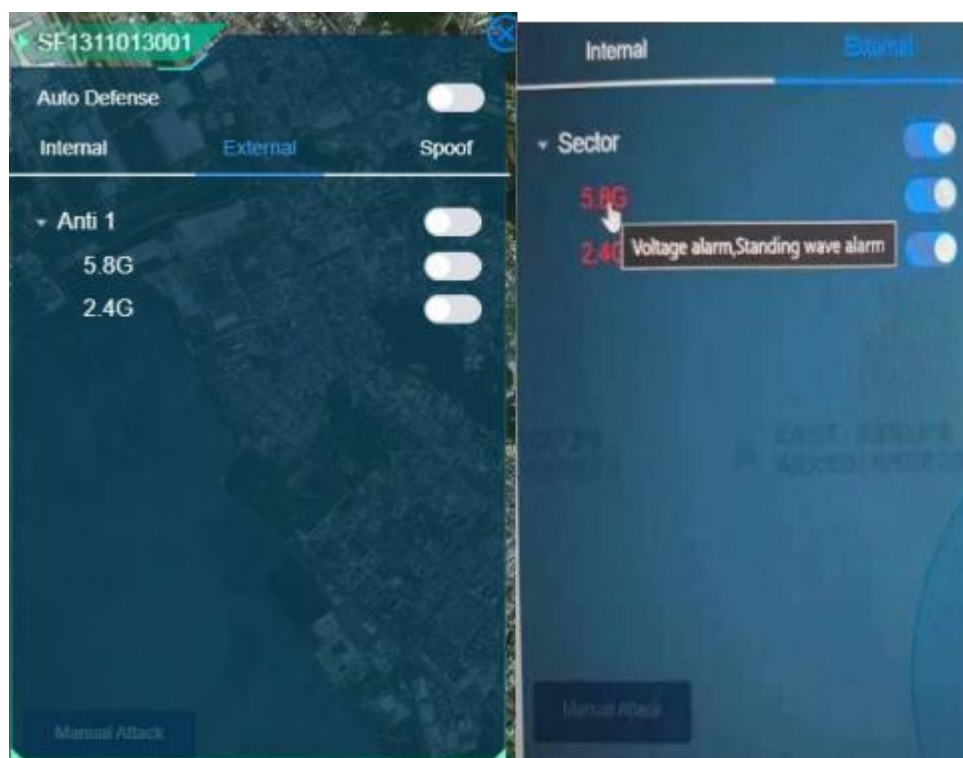
➤ Internal equipment frequency switch control

Read all frequency bands inside the device, and the Switch button displays the switch. Blue indicates on and grey indicates off. After selecting the frequency band, click "Settings" to open the selected frequency band, and click "Settings" to close all frequency bands.

➤ External device frequency switch control

Read all frequency bands of external devices and control the switch by operating the Switch button. Blue indicates on and grey indicates off.

The frequency name is displayed in red, indicating that the power amplifier is abnormal. Move upwards to view the abnormal prompt information.

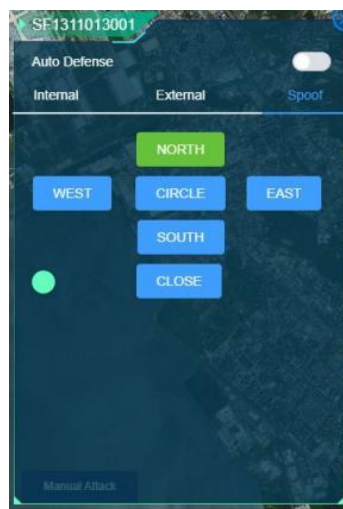


➤ Quickly set up the deception device

The linear motion, circular motion and closing control buttons in the four directions of east, south, west and north are listed. The status of the blue button is the default state. If the working mode is set, clicking the button indicates that the setting is complete and it is opened. At this time, the button is in the green state. If you need to turn off the current mode, click the close button. The circular light indicates the switch status, and green indicates on

Red indicates closed.

➤ Pan-tilt control



By continuously holding down the eight directions of up, right up, right up, right down, down, left down and left up, you can rotate each of the eight directions respectively. Release the button to stop the rotation. Click the middle button to return to the preset origin position. By entering the specified horizontal Angle and pitch Angle, click "PTZ To" to switch to the specified Angle. The rotation process can be achieved by

drawing the changes in the range of motion on the map

Check. Here, the changes in the current horizontal and pitch Angle values of the equipment are displayed.

➤ FPV frequency band control

List all the FPV frequencies that are turned on and turn them off by pressing the switch button.

3. Map operation function

➤ Manual/unattended switching

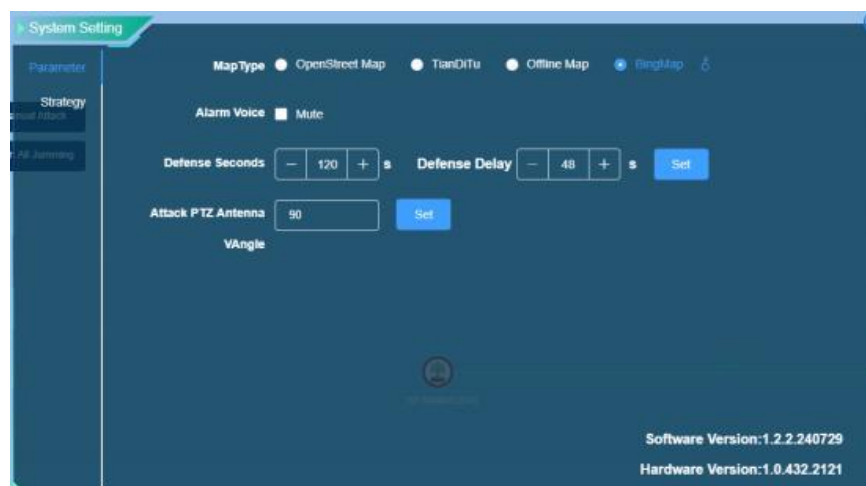
➤ One-click to enable interference/One-click to disable interference:

One-click to enable interference will generate interference depending on the selected strategy.

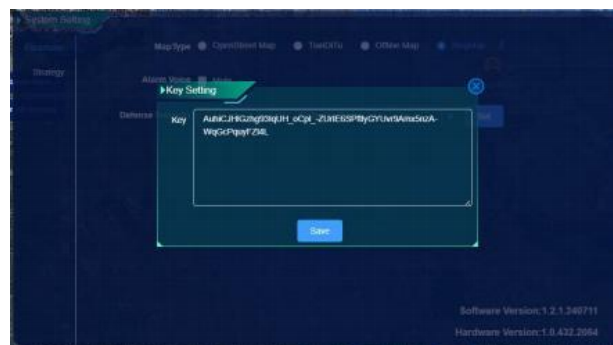
➤ Map operations include map zooming in, zooming out, initial position and layer management.

4. System Settings

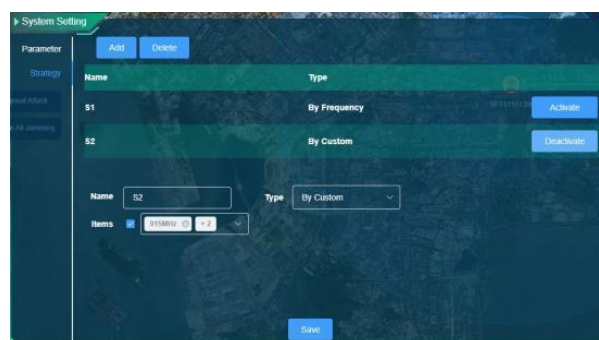
4.1 Parameter Settings



Click the button  to enter the Settings interface. Map switching mainly uses Openstreet map, Tiandi Map, offline map and BingMap map sources.  Enter the BingMap key setting interface, input a valid key before switching to the BingMap map, and it will take effect immediately after the switch. The setting of the system alarm sound takes effect immediately regardless of whether it is set to silent or not. By default, the counter controls the duration and the counter controls the delay. The duration will be automatically obtained. Re-enter these two values and click the Settings button to remotely change the device configuration. The elevation Angle of this shaking and tilting antenna is set here. The system displays the software and hardware version numbers here.



4.2 Strategy Management



➤ New strategy

Click the "Add" button, enter the name, and select the type (including by frequency, by brand, and by user-defined). Different types add different strategy items. When choosing by frequency, only one strategy item can be added, and different deception methods can also be selected. When choosing by brand, multiple strategy items can be added. You can enter the brand name, check multiple frequencies, different deception methods, etc. When choosing "Custom", only one policy item can be added, and multiple frequencies can be selected. Finally, click "Save" to save the policy

➤ Modify the strategy

Select the item for modifying the strategy in the list.

➤ Deletion strategy

Select the item of the deletion strategy in the list.

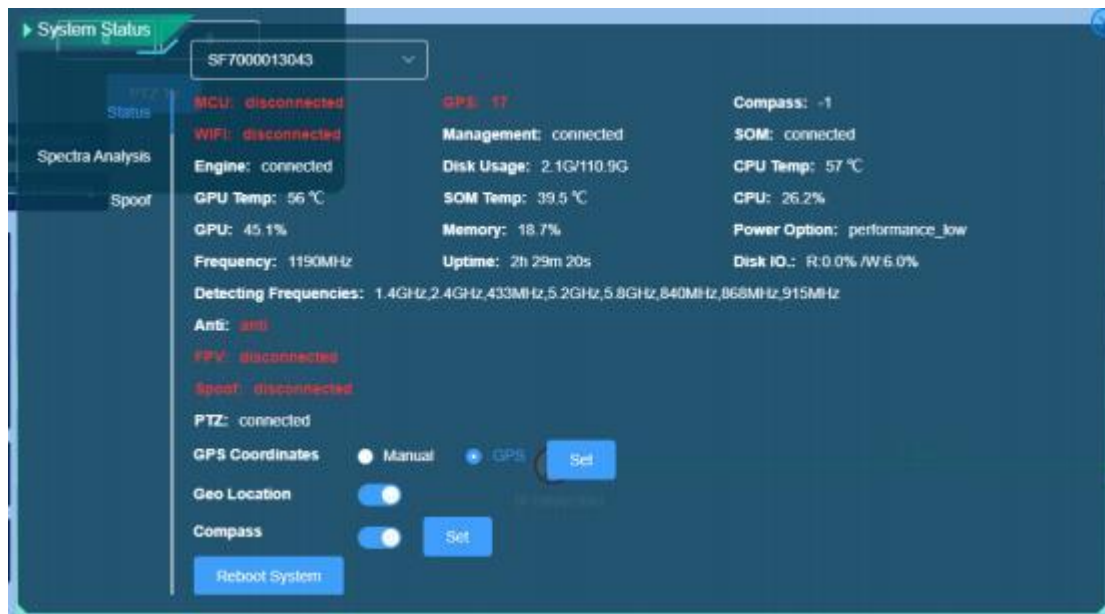
➤ Strategy switching

The strategy list lists the name, type and current activation status (the strategy currently in use). If it is "Activate", it indicates that it is not activated. If it is "Deactivate", it indicates that it is currently activated.

You can also switch the activation status through this button.

5. System state

5.1 Equipment operation status



Click the " " button to enter the system status interface. The system status includes the operating status and Settings of the equipment, the spectrum analysis diagram, and the trick setting function. The system status includes status information such as the single-chip microcomputer, GPS, Compass, WIFI, Management, SOM, engine, CPU temperature, GPU temperature, SOM temperature, built-in disk space, detection frequency, as well as the status of devices and external devices, and the status of FPV devices.

Deceptive device status, PTZ device status.

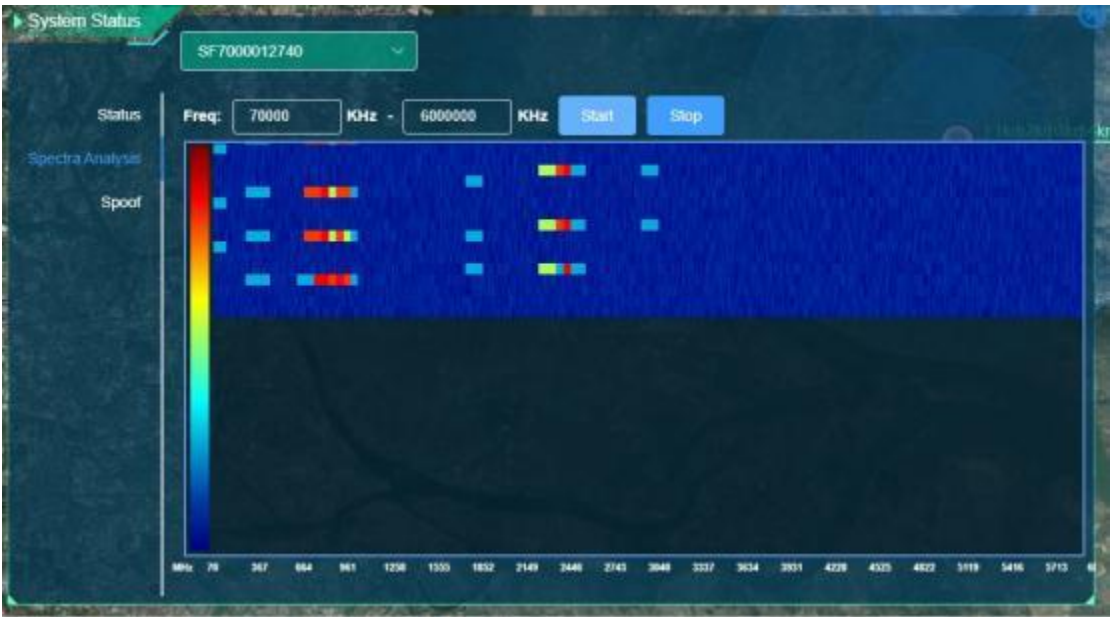
The GPS location is automatically obtained by satellite by default. You can manually set the longitude and latitude to update the position of the device.

Geolocation. Switching to the blue state indicates that this function is enabled. When enabled, it can parse the location, but some model

checking will be lost. Switching to the gray state indicates that this function is turned off, which improves the sensitivity of detecting other models, but it cannot solve the positioning problem.

Compass, indicating an electronic compass. Activate the electronic compass, which is equivalent to the zero Angle of the device and is adjusted according to the electronic compass. If you turn off the electronic device compass, you need to enter the zero Angle, and the device will calculate based on this Angle. Restarting the system refers to performing a soft start on the system.

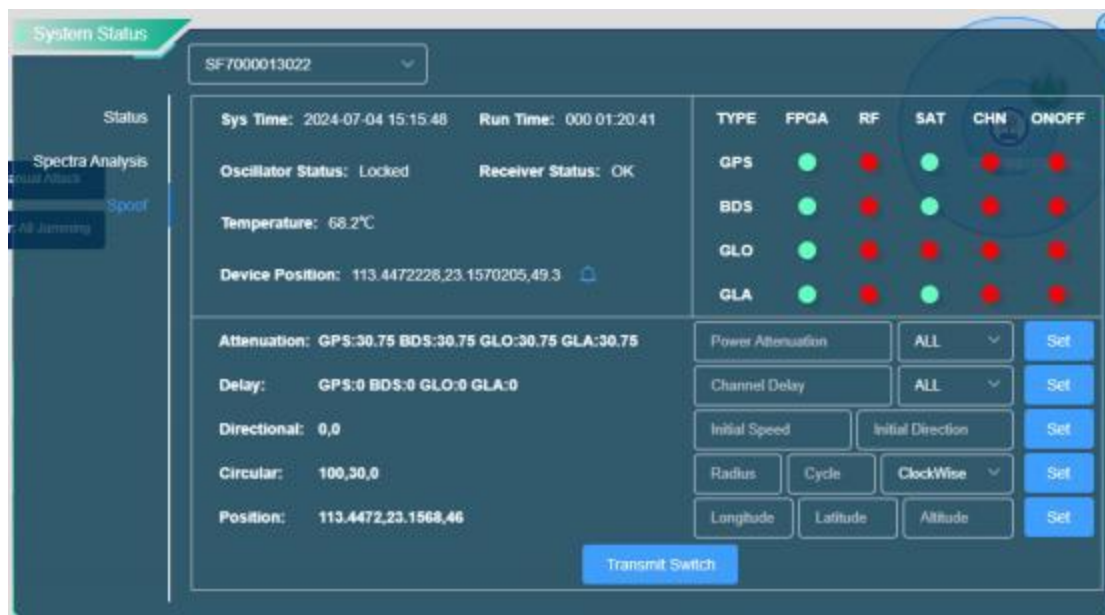
5.2 Spectrum Analysis Table



The changes in the real-time frequency of unmanned aerial vehicles are reflected through two-dimensional coordinate axes. The X-axis represents the frequency points, and the Y-axis is an example graph of different colors. In the system, red represents 100 signal values, orange

represents 75 signal values, yellow represents 50 signal values, blue-white represents 25 signal values, and pure blue represents 0 signal values. Click the "Start" button to start the waterfall display at the currently set start-stop frequency, and click the "Stop" button to stop the waterfall display. You can move the mouse upwards to view the frequency

5.3 Status and Settings of Deceptive Devices



The equipment status includes system time, running time, temperature, oscillator status, receiving status, and the longitude and latitude of the equipment. Height and other status information. Click, fill in the current device, set the reference position as the pseudo-satellite simulation position, click "Settings", and set the device reference position. The satellite search and switch status of the equipment: Green indicates the satellite search status, and red indicates the no satellite search status.

Additionally, ON/OFF indicates the power amplifier switch status, green indicates it is on, and red indicates it is on. Different numbers of satellites can be set and different satellites can be monitored by the attenuation method. The number of satellites for channel delay monitoring is different, and then the number of satellite navigation Settings is also different. Directional monitors the direction and velocity mode of linear motion, and then the direction and velocity can be set. Continuously monitor the radius, period and forward/reverse state of circular motion, and then set the corresponding parameters; The location simulation device for simulated monitoring can then be set to simulate longitude, latitude and altitude. The transmission switch button can be used to switch and control the setting of the movement mode.

6. Report Query

Query Report

Deletions

Time2024-07-292024-07-30

QueryExport

No.	Model	Freq	Detect Time	Seconds(s)	Seen Times	Last Info
000002	DJI FPV / DJI RC PRO	2.4GHz	2024-07-30 10:34:01	60	12	SF7000013043(-12 3.005433,49.26865 6) 120°
00001c	Mavic Pro / Air 2	2.4GHz	2024-07-29 17:24:24	195	10	SF7000013043(-12 3.005433,49.26865 6) 300°
00002d	Mavic 3 / DJI FPV (Narrowband)	5.8GHz	2024-07-29 17:23:12	0	1	SF7000013043(-12 3.005433,49.26865 6) 269°
00000a	Mavic Pro / Air 2	2.4GHz	2024-07-29 17:00:37	1418	10	SF7000013043(-12 3.005433,49.26865 6) 315°
Total 79 < 1 2 3 4 5 6 14 >						

Query Report

Deletions

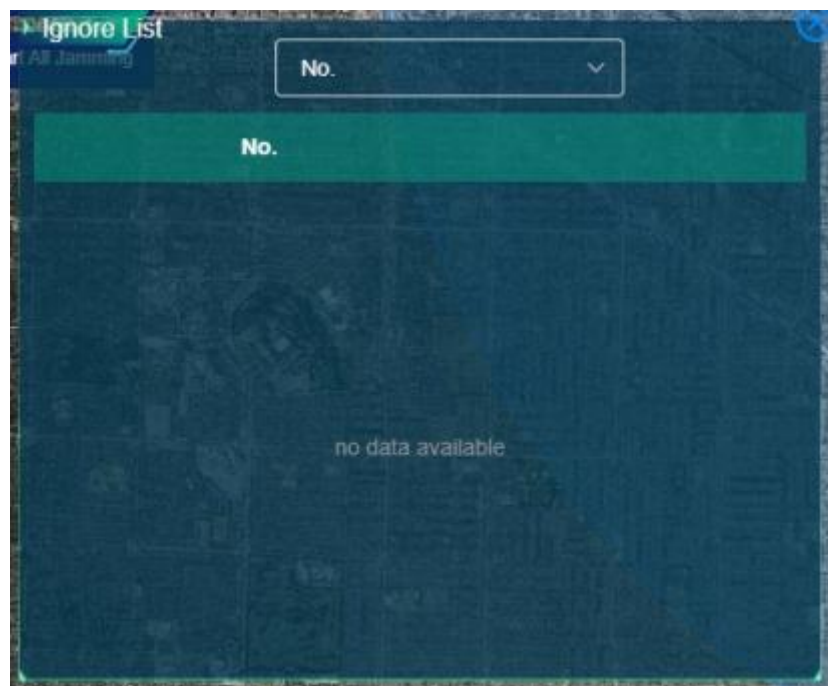
Time2024-07-152024-07-18

QueryExport

Device	Time	Seconds(s)	Last Info
Internal Anti	2024-07-17 14:23:48	24	2.4G
Internal Anti	2024-07-15 14:09:04	7	915M
Internal Anti	2024-07-15 14:08:23	4	2.4G
Internal Anti	2024-07-15 08:59:30	8	1.2G,1.5G,2.4G,433M,5.1G,5.8G,915M
Internal Anti	2024-07-15 08:58:22	5	915M
Internal Anti	2024-07-15 08:58:05	8	2.4G
Total 11 < 1 2 >			

Click the  button to open the report query record, which is mainly divided into two categories: detection record and defense counter record. By selecting a specific type and time range, click the query button to query the corresponding record. The detection records include the number, model, frequency, detection time, detection duration, detection time, position and direction of unmanned aerial vehicles. To record the position and direction, click the trajectory button in the list to view the detailed trajectory status of the drone. The counter records include the device name, the start time of the interference, the duration, detailed information, etc. Click the "Export" button to export all report records of the excel table under the current query conditions.

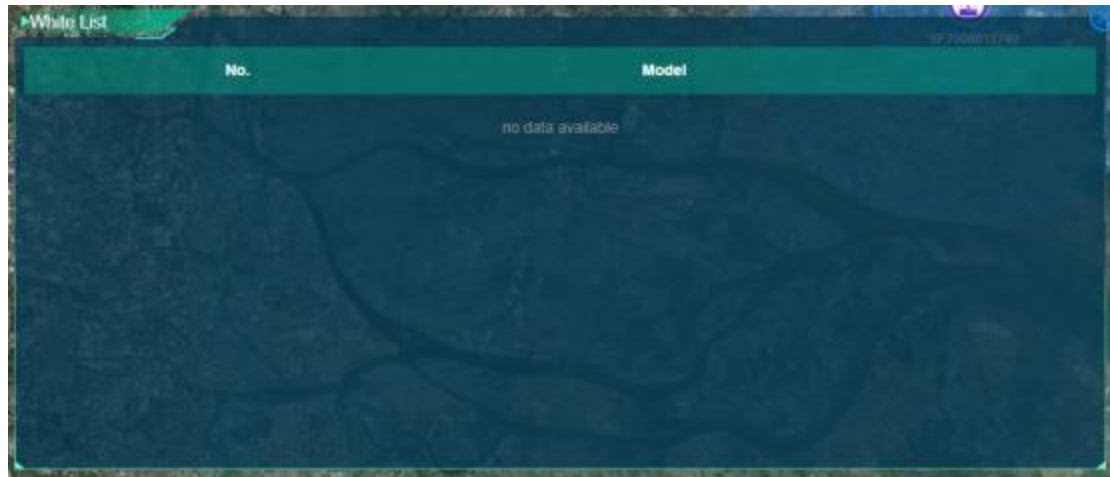
7. Ignore the target query



Click the  button to open the Ignore object query, which mainly consists of two types: ID and frequency. You can switch between two

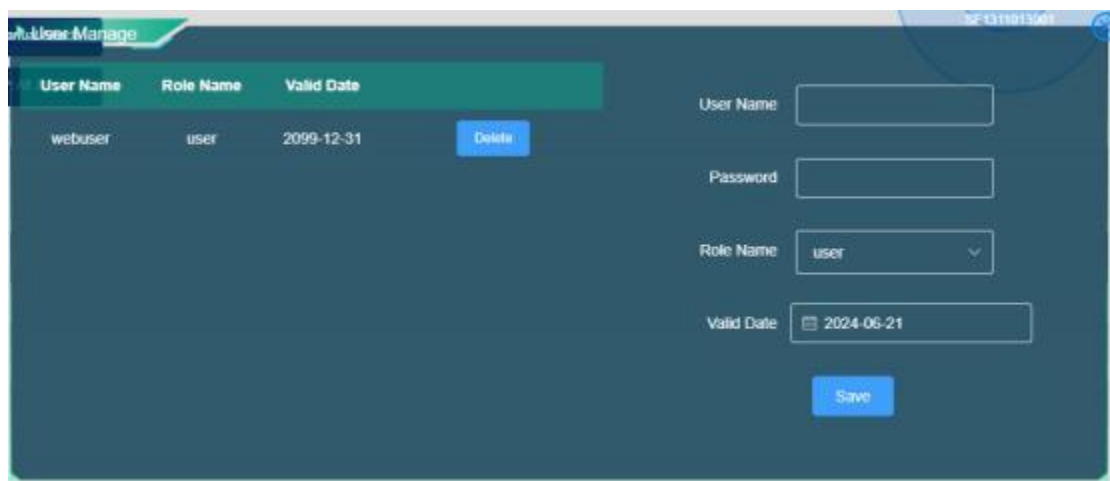
types of display target records. Click the "Delete" button in the list to delete the ignored target.

8. Whitelist query



Click the  button to open the whitelist list, which mainly shows the number and model of drones. Click the delete button in the list to delete the whitelist in the list.

9. User Management



Click the  button to enter the user management interface. User management includes functions such as user lists, adding users, and deleting users.

➤ Add a user

The user list only views users with the corresponding permissions of the currently logged-in user. "Operator" refers to the operator authority, which is less than the system set authority on the basis of the administrator authority. "User" refers to an ordinary user who can only view but not operate. The validity period means that after this date, the account cannot log in to the system.

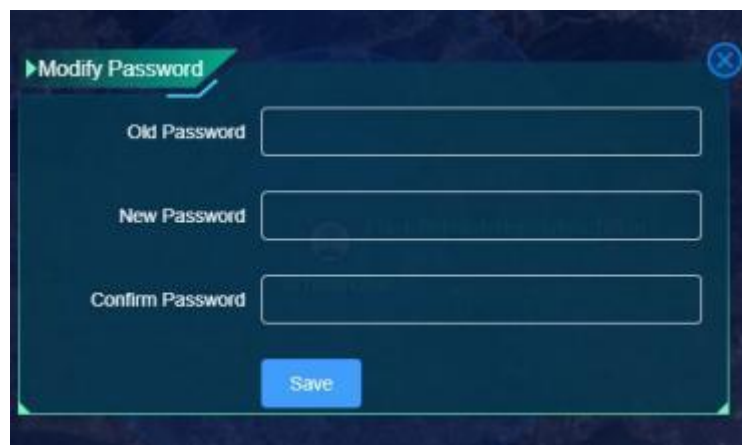
➤ Delete the user

Click the DELETE button in the user list to delete the user.

10. Language switching

You can switch between English and Russian through the language selection box in the upper right corner.

11. Change the password



Click the  button in the upper right corner to enter the password modification interface. Input the correct old password, new password, confirmed password and modified password.

12. User Configuration



Click the  button in the upper right corner to open the user configuration interface, where you can modify the system title and logo. Click the "Reset" button to reset the title and logo to their default values. Select the "Frequency" item, modify the displayed value of "Frequency", click the "Save" button, and a prompt will pop up asking whether to restart the device. Under normal circumstances, the device needs to be restarted after the modification is completed.

13. System exit

Click the  button in the upper right corner to exit the current system and enter the login interface.

14. Log query

After logging into the system, open the website <http://169.254.1.1:8081/#/Log> and enter the log query interface

Log Records

2020-07-26 10:07:20 To 2020-07-26 10:07:20 Save Close

Log Time

1999

1000

100-0000