Aeroscope Assistant

User Guide V1.0

2018.07

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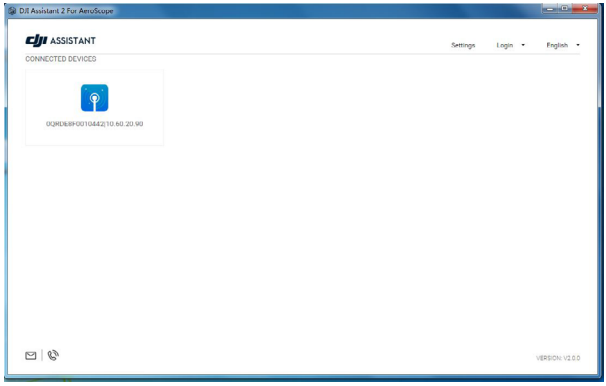
Instruction

DJI Assistant 2 for Aeroscope enables users to check device status, network settings, and update firmware, while providing users with tools and advanced settings for Aeroscope.

Installation and Connection

1. Download and install DJI Assistant 2 from https://www.dji.com/aeroscope (currently available on Windows only).
2. There are two ways to connect the Aeroscope to the computer.
   (a). Aeroscope and the computer are connected via a network cable.
   (b). Aeroscope and the computer are connected to the same local area network.
3. When the connection is successful, the Aeroscope icon appears in the app. The string below the icon is composed of the device's Serial Number (SN) and IP address. For example, the SN of the device shown below is 0QRDE8F0010442 and the local IP address is 10.60.20.90.



⚠ When Aeroscope is connected to the computer, but the Aeroscope icon does not appear in the app, try to restart the computer and temporarily block other network connections (e.g., wireless network connections) on the computer.

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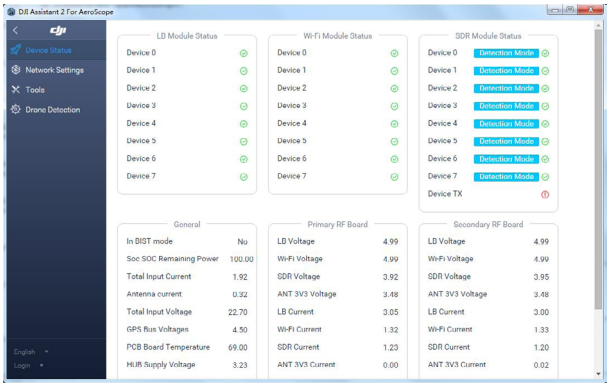
Usage

The Aeroscope icon will be shown in the app when Aeroscope is connected to the computer.

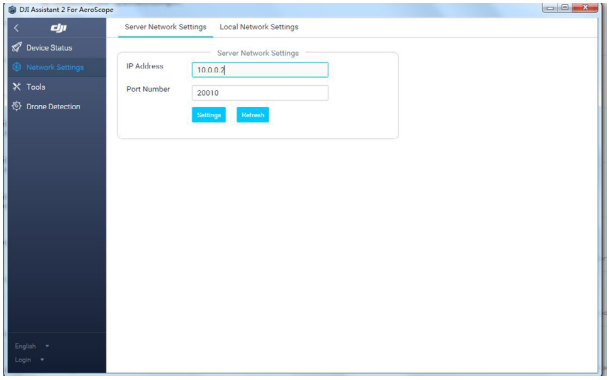
Device Status

The device status page lists the operation status and detailed parameters of each module.



Network Settings

Used to set up the server network and local network.
Server network: Please consult DJI after-sales service or a local agent to get the server IP address and port number.



Local network: Used to select the network connection method for the device. Select Wired Network if using a network cable to connect the device and the server. Select Wireless Network if using a dongle to connect the device and the server. For both network types, you can select Auto Mode or Manual Mode. Configure according to the requirements of the local network provider.

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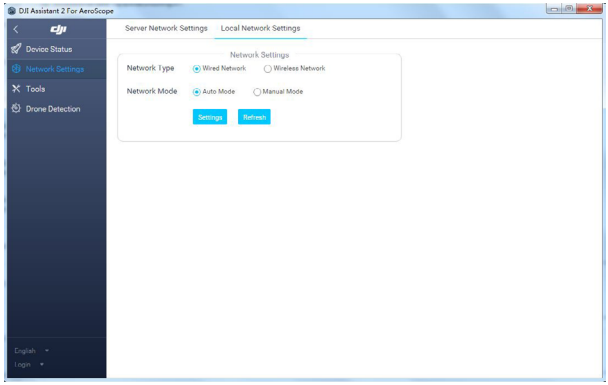


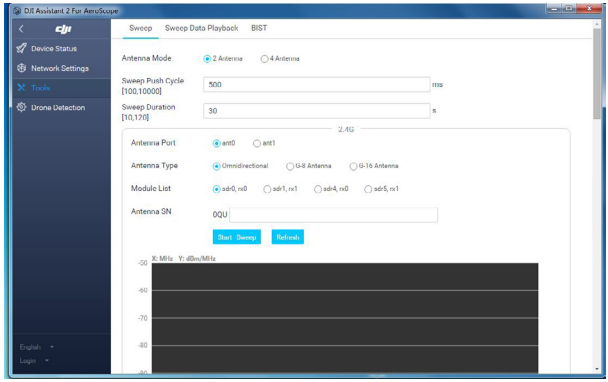
⚠ When set to wireless network, if no dongle is available, the device will automatically try to connect via a wired connection.

Tools

There are three functions in the toolbox: sweep frequency, sweep data playback, and BIST (self-test).

Sweep Frequency

1. Antenna Mode: select the 2 Antenna option when Aeroscope is installed with two antennas, and select the 4 Antenna option when four antennas are installed.
2. Sweep Push Cycle: length of time to push data during frequency sweeping.
3. Sweep Duration: Total duration of sweeping.
4. Select the Antenna Port, Antenna Type, and Module List according to the actual requirements.
5. Antenna SN: used during calibration.



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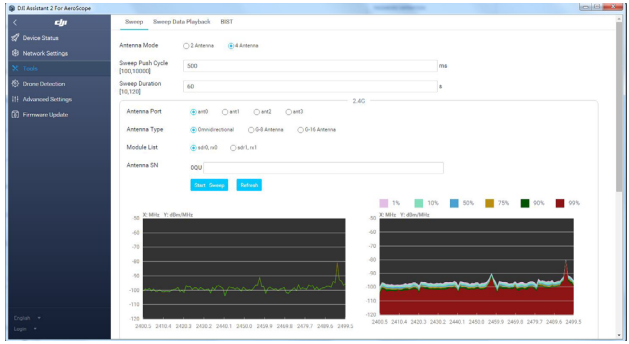
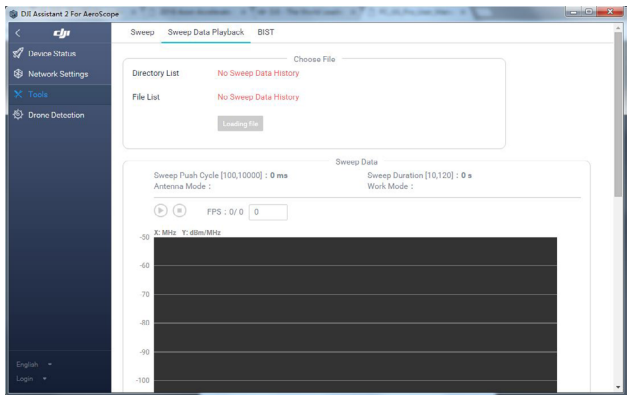


Sweep Data Playback

Used to display historical sweep data for easy comparison.



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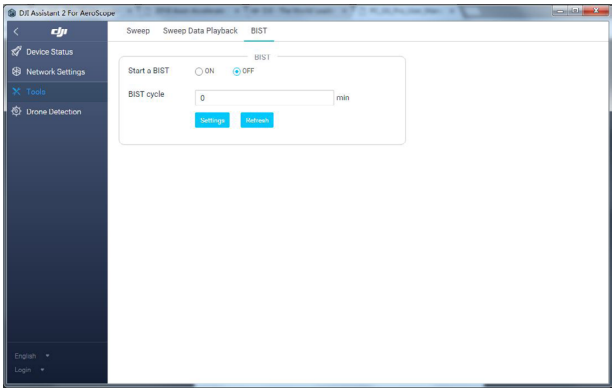
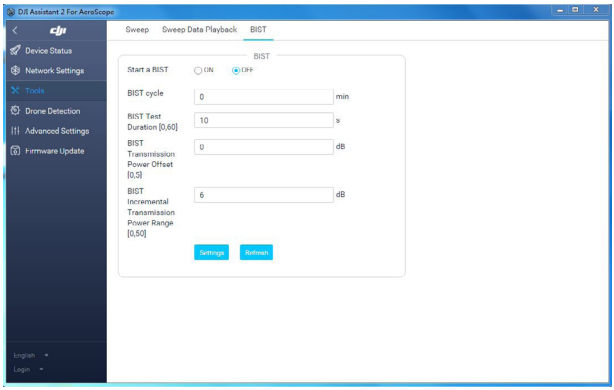
BIST

Used to detect the status of each of the eight receiving modules of the three protocols. You can only perform a BIST when opening Aeroscope or adjusting the settings to perform a BIST periodically.





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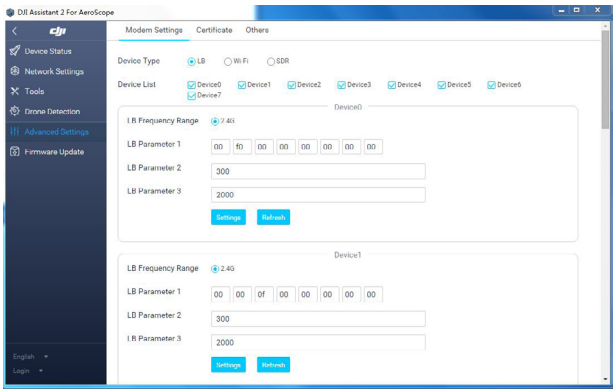
Below pseudo-language can be used to describe the BIST algorithm:
Start a BIST: Start one time BIST.
BIST cycle: Auto run BIST once for every BIST cycle.
Waiting time for one power setting: T_w
BIST transmission offset: P_o
Maximum increased transmission power: P_M
Assume the initial power P_i
J = 0 dB;
While J<= P_M
{
Set Timer to zero;
Set the transmission power as P_i +P_o+J;
If the Receiver module could receive the transmitted signal
successfully, return success;
Else, check if the receive is successful until timer exceeds T_w ;
J = J+1;
}
Return failed;

Drone Detection

Drone Detection is used to identify aircraft. The list of aircraft will not update automatically, however, and needs to be updated manually. For automatic updates, visit https://aeroscope.djiservice.org.

Advance Settings and Firmware Update

Advance Settings are used to hide some parameters that do not require user modification. When the Assistant is open, press the Ctrl and A keys at the same time to bring up the advanced settings and firmware update.
The Modem page in the advanced settings are reserved for use by advanced debuggers. Normal users should not attempt to modify them.



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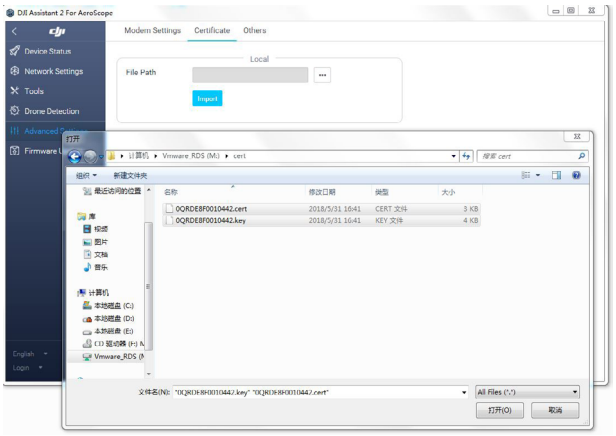
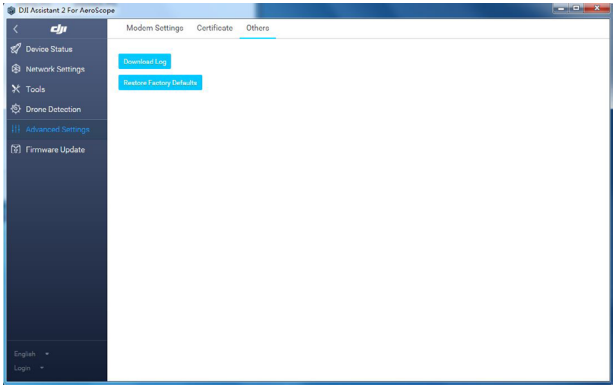
The Certificate page in the advanced settings imports device certificates. Note that when importing, you need to select both the extension cert file and the extension key file.



The Download Log and Restore Factory Default options are located on the Others page on the advanced settings. After clicking the Download Log, an FTP login page will pop up. Log in with the username “root" and password "Rc123456" to download the log.



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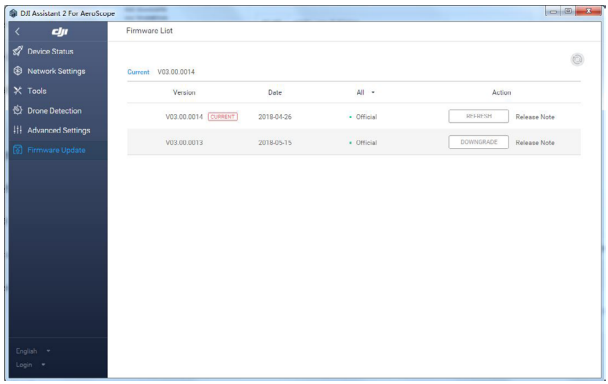
The firmware version can be updated or rolled back in the Firmware List.



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This content is subject to change.

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https://www.dji.com/aeroscope

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