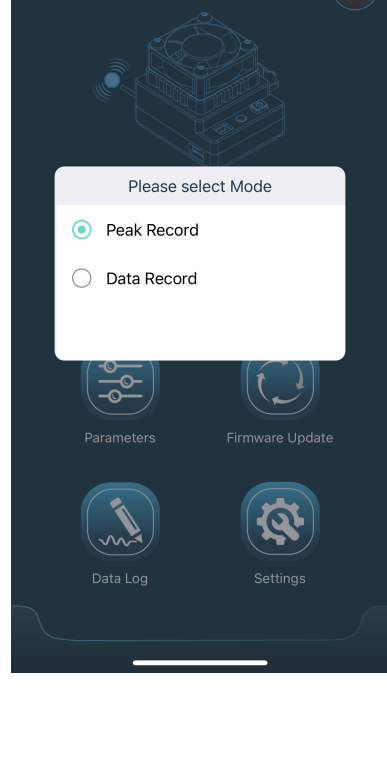


Clicking on the "Data Log" option on the HW LINK APP homepage will display two modes: "Peak Record" and "Data Record":



## Peak Record

Refers to the maximum/minimum values recorded during the last operation by the ESC, such as the Maximum ESC/Motor temperature, Minimum battery voltage, Maximum motor RPM, etc.

| Peak Record(Surface) |               |                 |                   |                |              |                  |    |
|----------------------|---------------|-----------------|-------------------|----------------|--------------|------------------|----|
| No.                  | Max. ESC Temp | Max. Motor Temp | Min. Battery Volt | Max. Motor RPM | Max. Current | Firmware Version |    |
| 1                    | 28.0°C/82.4°F | 0.0°C/32.0°F    | 7.4V              | 15221RPM       | 2.8A         | XR-3.1.04        | X  |
| 2                    | 24.0°C/75.2°F | 0.0°C/32.0°F    | 7.4V              | 16570RPM       | 1.8A         | SK-5.0.06        | 34 |

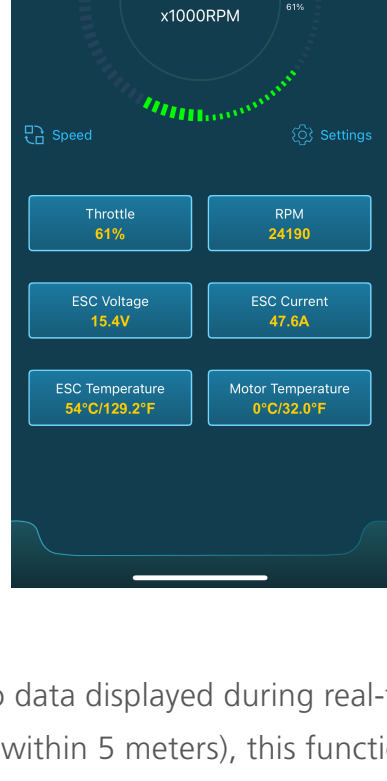
Since the peak data items differ between surface and airplane ESCs, select the appropriate option based on the ESC model being used.

**1.1. Surface:** If the ESC is for car or boat models (e.g., XERUN ,SEAKING V4 series), select this option.

**1.2. Aerial Models:** If the ESC is for airplane models (e.g., Platinum series), select this option.

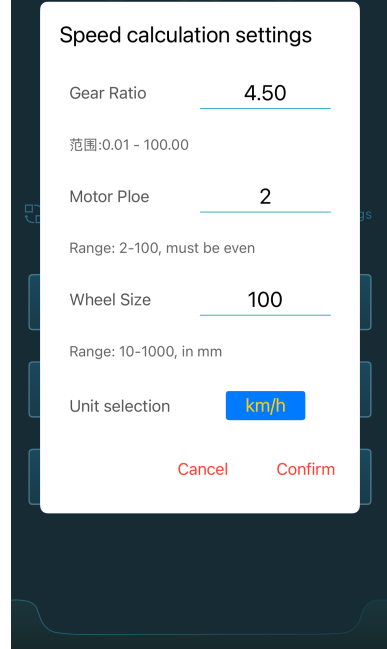
## Data Record

Selecting this option will take you to the viewing page for "Real-time Data" and "Data Log (Historical Data)."



**2.1. Real-time Data:** Refers to data displayed during real-time operation. Due to the limited Bluetooth range (typically within 5 meters), this function is suitable for close-range testing (e.g., bench or desktop testing).

**2.1.1. Setting:** Here, you can configure the gear ratio (Final Drive Ratio, FDR), motor pole, tire diameter, and speed unit. After setting these, the real-time data interface will display accurate speed data.



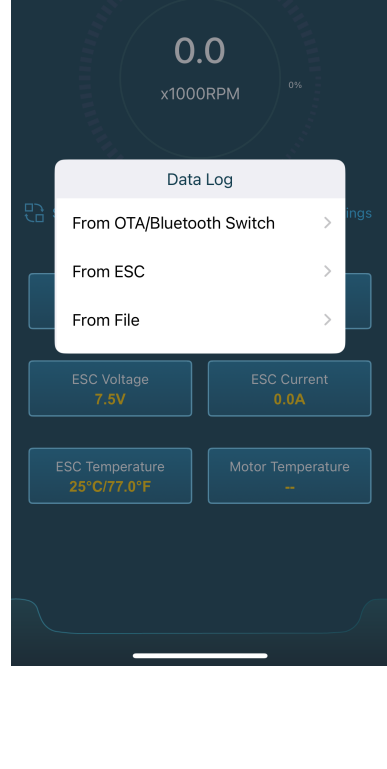
**2.1.2. RPM/Speed:** Toggle between RPM and Speed display.

**RPM:** Represents the electrical rpm of the motor. The correct motor pole count must be set in order to display the accurate mechanical speed of the motor.

**Speed:** Represents the vehicle's speed. This is calculated based on your settings.

**Note:** The "Settings" in the real-time data interface only affect the real-time data display and are not linked to the data in the Data Log.

**2.2. Data Log (Historical Data):** Refers to the historical data recorded during operation, displayed as a graph.



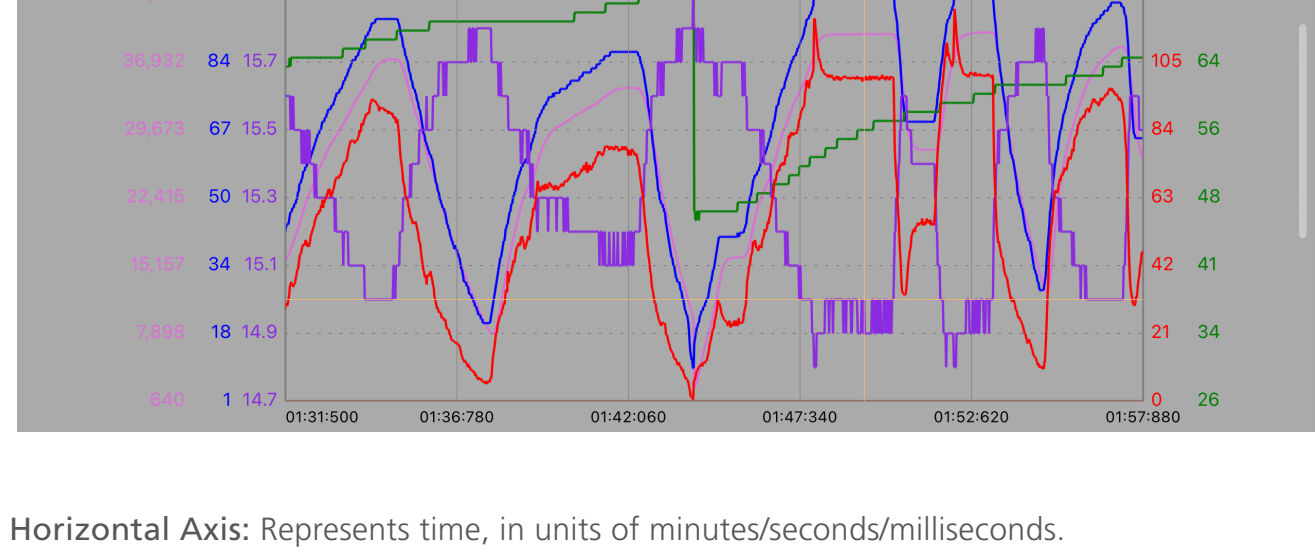
**2.2.1. OTA Module/Bluetooth Switch:** Refers to using an OTA Bluetooth module or Bluetooth switch to record operational data. Check whether your ESC requires a Bluetooth module during running or if it has a Bluetooth switch. If so, select this option. Currently, most Hobbywing ESCs fall into these two categories, such as the XERUN XR8 Pro G3 (OTA Bluetooth module), XERUN XR10 Pro G2S (OTA Bluetooth module), EZRUN MAX6 G2 (Bluetooth switch), and EZRUN MAX5 HV Plus G2 (Bluetooth switch).

**2.2.2. ESC:** Refers to operational data being recorded directly within the ESC. No OTA Bluetooth module is required during running (connect the OTA module only when viewing the data after operation), nor is there a Bluetooth switch. This method is currently rare, with the primary example being the XERUN XR10 Pro G2/G3X.

**2.2.3. File:** Local data storage file. After viewing the data log, a local file is automatically saved for future reference.

**Note:** The RPM displayed in the Data Log corresponds to the electrical rpm of a 2-pole motor. For a 4-pole motor, divide the displayed RPM by 2 to obtain the actual mechanical speed; For a 6-pole motor, divide by 3. Formula: Mechanical RPM = Displayed RPM / (Motor Pole / 2).

## Graph Data Explanation



**Horizontal Axis:** Represents time, in units of minutes/seconds/milliseconds.

**Vertical Axis:** Represents the recorded data items, such as RPM, throttle(%), input voltage(V), operating current(A), ESC temperature(°C/°F), and motor temperature(°C/°F).

Different colors represent different data items. For example, in the graph above, the red curve represents operating current, with a range of 0–126A and a peak of 126A. The green curve represents ESC temperature, with a range of 26–71°C and a peak of 71°C.

The data values in the top row represent the data at the moment you click, indicated by an orange vertical line. For example, the values above correspond to the data at approximately 1 minutes and 49 seconds: 39910 (RPM), 100% (throttle), 15.0V (input voltage), 100.2A (current), 56°C/132.8°F (ESC temperature).

When viewing graph data, you can use the touchscreen to perform operations such as stretching the view and moving the time-line, etc. The four-arrow icon in the upper right corner resets the view to its original state.

The pink icon in the upper left corner toggles between RPM and Speed display. The speed display requires correct settings for motor pole, gear ratio, and tire diameter in the ESC parameters to show accurate speed data. Currently, ESCs with this feature mainly include the XERUN XR10 Pro G3/G3X (The icon will not appear here if the ESC does not have this function).

**Note:** Not all data items will be available, as this depends on the ESC's capabilities. For example, sensorless ESCs or motors will not have motor temperature data, and some ESCs may lack current data. Please verify based on the specific ESC model being used.