



Telemetry

Applied with Telemetry module WK-CTL01-D, the temperature, battery voltage, 5V operating voltage, RPM, longitude, latitude, speed can be monitored. The alarm value also can be set to monitor temperature, battery voltage, 5V operating voltage, RPM etc.

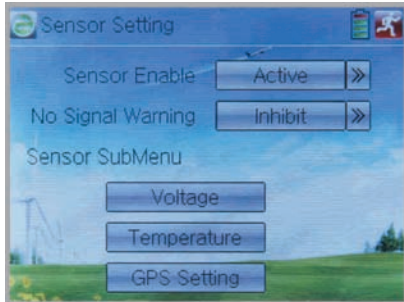
1.0 Sensor setting

setting method:

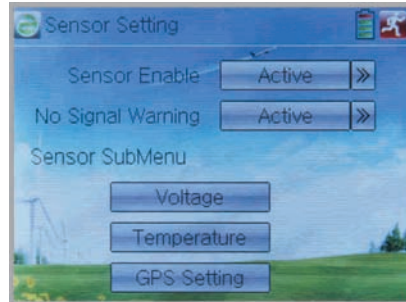
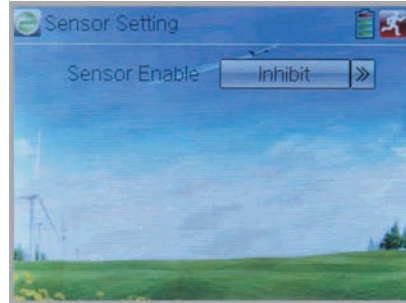
Touch the icon  to enter Model Menu and then click  to enter the Sensor setting interface.

1.1 Sensor Enable

Touch the navigation mark of "Sensor Enable" on the Sensor setting interface and pop up an expansion list including "Active" and "Inhibit". Touch the desired item. The default setting is "Inhibit". If you choose "Active", there are other selectable items including "No signal Warning" and "Sensor SubMenu" etc.



1.1 Sensor Enable



1.2 No Signal Warning

1.2 No Signal Warning

Touch the navigation mark of No signal Warning on the Sensor setting interface and pop up an expansion list including Active and inhibit. Touch the desired item (The default setting is Inhibit). If you choose Active, the Radio will alarm when telemetry signal lost. Refers to Illustration.

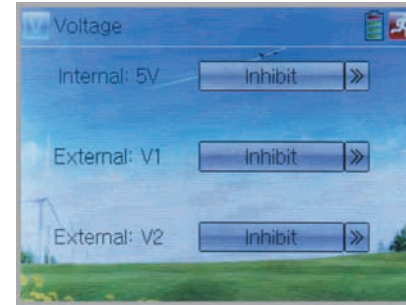
1.3 Sensor SubMenu

There are 3 items including voltage, Temperature and GPS setting under the Sensor SubMenu.

1.3.1 Voltage setting

There are 3 different types of voltage can be measured. It includes Internal 5V, External V1 and V2 which can be monitor two different external voltage (i.e. battery) respectively. Once the measured voltage is lower than the setting value, the Radio will alarm.

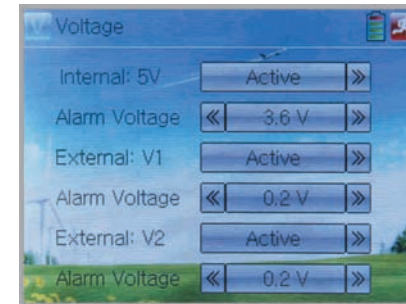
Receiver 5V (Internal) PFV (Power Feeding Voltage) Alarmed value can be set as 3.6-6V External V1 and V2 alarmed value can be set as 0.2-99.9V



Voltage setting:
Touch the mark of Voltage on the Sensor setting interface to enter the voltage interface.

1.3.1.1 Internal 5V setting

Touch the navigation mark of Internal 5V on the Voltage interface and pop up an expansion list including Active and inhibit. Touch the desired item (The default setting is Inhibit). If you choose Active, the Alarm Voltage item will be listed. Touch the left or right navigation mark of the item Alarm Voltage to decrease or increase, respectively. See below Illustration:



1.3.1.2 External V1

Touch the navigation mark of External V1 on the Voltage interface and pop up an expansion list including Active and inhibit. Touch the desired item. The default setting is Inhibit. If you choose Active, the Alarm Voltage item will be listed. Touch the left or right navigation mark of the item Alarm Voltage to decrease or increase, respectively. Refers to (1.3.1.1) Illustration.

1.3.1.3 External V2

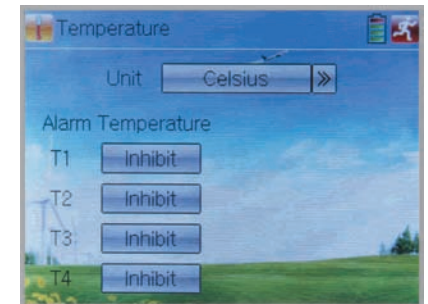
Refer to the step of "(1.3.1.2) External V1".

1.3.2 Temperature sensor

The temperature sensors can measure up to 4 different temperature (i.e. motors). You can choose Celsius or Fahrenheit. The alarmed value can be set for 4 different temperature. Once the measured value is higher than the setting value, the Radio will alarm.

Temperature setting:

Touch the mark of Temperature on the Sensor setting interface to enter the Temperature interface.



1.3.2.1 Unit

Touch the navigation mark of Unit on the Temperature interface and pop up an expansion list including Celsius and Fahrenheit. Touch the desired item.

1.3.2.2 Alarm Temperature settings

Touch the "Inhibit" next to Mark T1 on the Temperature interface. Inhibit will change to Active and Alarm temperature will be shown. Touch the left or right navigation mark to decrease or increase the temperature value, respectively. If you choose Inhibit, the Alarm temperature value won't be shown.



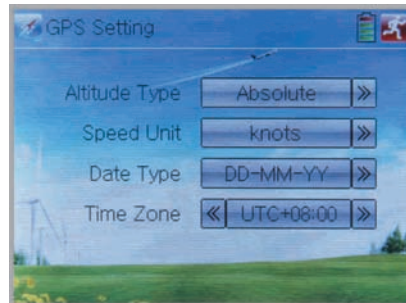
1.3.2.3 T2,T3,T4 setting

Refer to the step of "(1.3.2.2)T1".

1.3.3 GPS setting

There are 4 items including Altitude Type, Speed Unit, Date type and time Zone in the GPS receiver setting interface.

Touch the mark of GPS setting on the Sensor setting interface to enter the GPS setting interface.



1.3.3.1 Altitude Type

Touch the navigation mark of Altitude type on the GPS setting interface and pop up an expansion list including Absolute and relative Touch the desired item.



1.3.3.2 Speed Unit

Touch the navigation mark of Speed Unit on the GPS setting interface and pop up an expansion list including knots and km/h and relative. Touch the desired item.

1.3.3.3 Date Type

Touch the navigation mark of Date Type on the GPS setting interface and pop up an expansion list including DD-MM-YY, MM-DD-YY and YY-MM-DD. Touch the desired item.

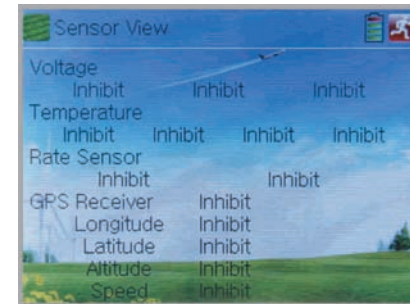
1.3.3.4 Time Zone

Touch the left or right navigation mark of Time Zone to set the desired Time Zone.

2.0 Sensor View

Setting method

Touch the icon to enter Model Menu and then click to enter the Sensor View interface. If all the sensors disconnect, inhibit or telemetry signal lost, there will be inhibit shown on the view. If all work normal, all the measured data will be shown.

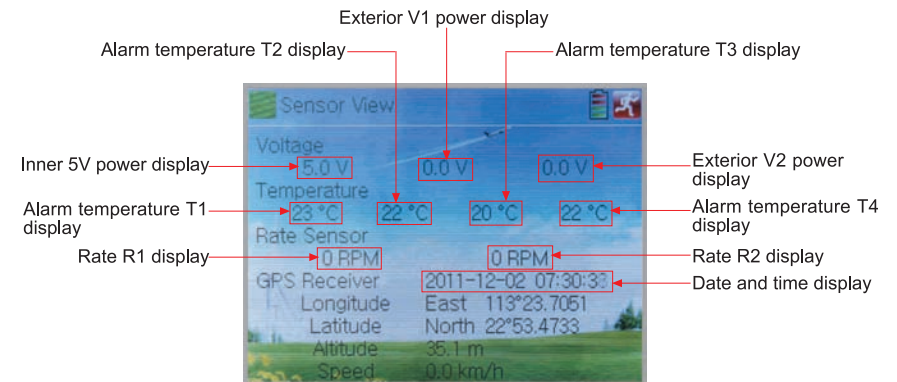


Voltage: shown Line 3 measured voltage value;

Temperature: shown Line 4 measured temperature value;

Rate: shown Line 2 measured RPM value;

GPS Receiver: shown located date, time, longitude, latitude, altitude and speed;



Telemetry module usage

1.0 Specifications

- Line 4 temperature sensor Range -20~220℃ or -4.0~428.0° F
- Line 3 voltage sensor Range
- Line 2 rate sensor range
- One GPS data connector Offer located date,time,longitude,latitude,altitude and speed;
Usage range:Altitude lower than 18,000m;
Warm start:38S cold start:48S;
- Line 1 connetors

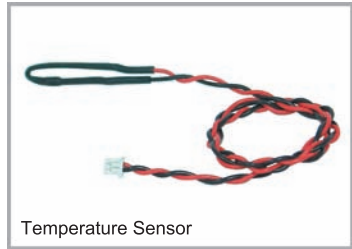
- Operating voltage 5-6V
- Transimition power ≤ 100mw
- Current < 100mA
- Dimension 43.5x28x9mm



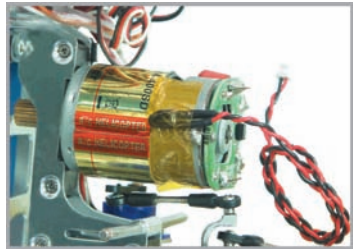
2.0 Sensor installation

2.1 Temperature Sensor

T1,T2,T3,T4 are the temperature sensor connectors.Held the sensor loops tightly on the devices.



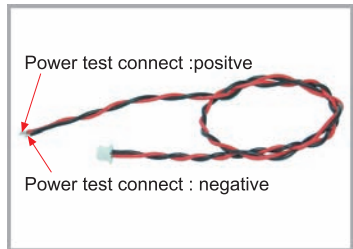
Temperature Sensor



2.2 Voltage measuring

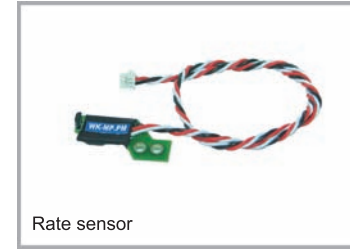
V1 and V2 are 2 external voltage wire connectors. Power is the measuring connector of operating current and voltage. Parallel connect the devices that need to be measured to V1 and V2 connectors(red is positive and black is negative)).

2.3 Spare connector

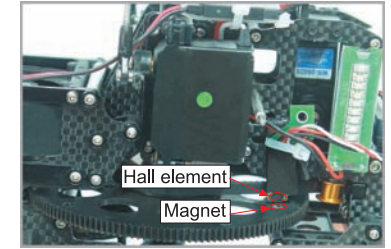


2.4 R1,R2 Rate sensor connectors

Make sure the hall element of the magnetic RPM sensor aimed at the magnet of the device that need to be measure the RPM.The distance between the Hall element and magnet is less than 2mm.The sensor magnet can be installed on the aircraft propellers, ducted fans,helicopter tail blades and main gears.



Rate sensor



Hall element

Magnet

2.5 GPS connectors

Connect the GPS receiver module to the fool proof GPS connetor. It needed to used under the circumstances where there are GPS signals.Warm start 38s while cold start 48s. The GPS receiver module can be installed on the airframe with double side tape.

2.6 POWER

Input DC voltage 4.8-6V.

3.0 Fixed ID Clearance

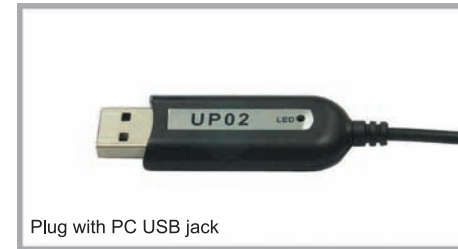
This equipment WK-CTL01-D can set fixed ID the same time with the receiver(see"Fixed ID" in the transmitter).

Clearence the fixed ID: When the receiver disconnects the power,press the CLEAN button, input 5V voltage to the Power,the receiver's red indicator flash slowly. That means the receiver's fixed ID has been eliminated,then release CLEAN button.

4.0 Upgrade

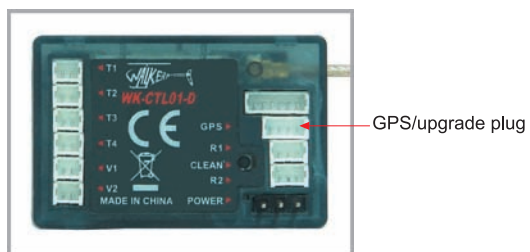
This device can be upgrade via UP02 upgrade tool.

(1) Connect UP02 with the PC.



Plug with PC USB jack

- (2) Drive the UP02 upgrade tool in the PC, please reference to UP02 upgrade user manual for more details about the upgrade steps.
- (3) Connect the \varnothing 3.5 plug with the GSP plug in the transform board, see below illustration for your reference: Connect with the GSP upgrade Plug.



FCC Information

This device complies with part 15 of the FCC results. Operations is subject to the following two conditions:

- (1) This Device may not cause harmful interface, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for CLASS B digital device, pursuant to part 15 of FCC Rules. These Limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, users 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 dose 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 contact the interference by one or more of the following measures:

- 1.1 Reorient or relocate the receiving antenna.
- 1.2 Increase the separation between the equipment and receiver.
- 1.3 Connect the equipment into an outlet on a circuit different from that two which receiver is connected.
- 1.4 Consult the dealer or experienced radio/TV technician for help.

WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

RF exposure statement

This module meets the requirements for a mobile device that may be used at separation distances of more than 20cm from the human body. It may be used in hand-held controllers that provide a separation distance of at least 5cm between the antenna and the body (excluding hands wrists). The instructions to the user for the host device must include information requiring the product be used in a manner to ensure the appropriate separation (20cm or 5cm) between antenna and body and requiring that the transmitter not be collocated with another transmitter device.