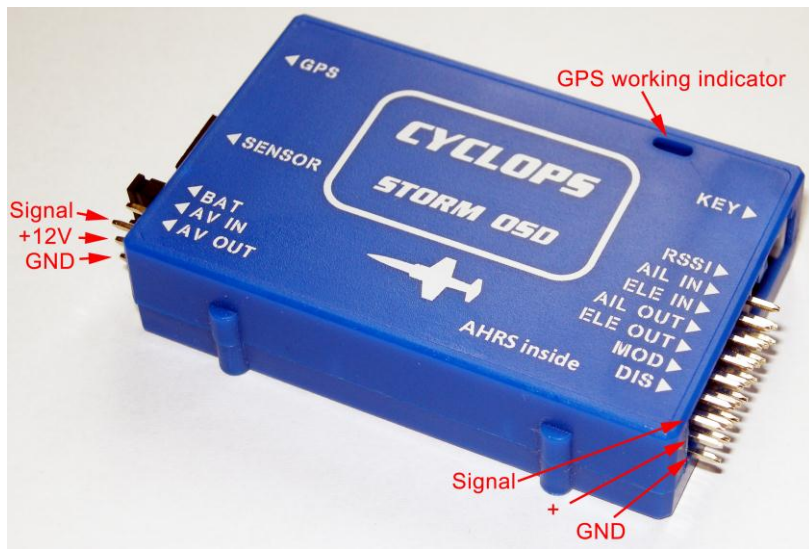
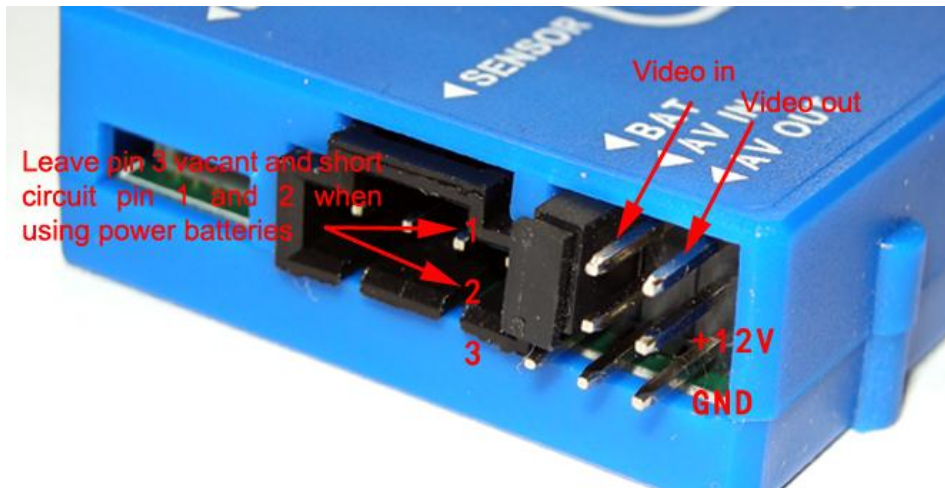


CYCLOPS STORM OSD V1.03-1.04 manual

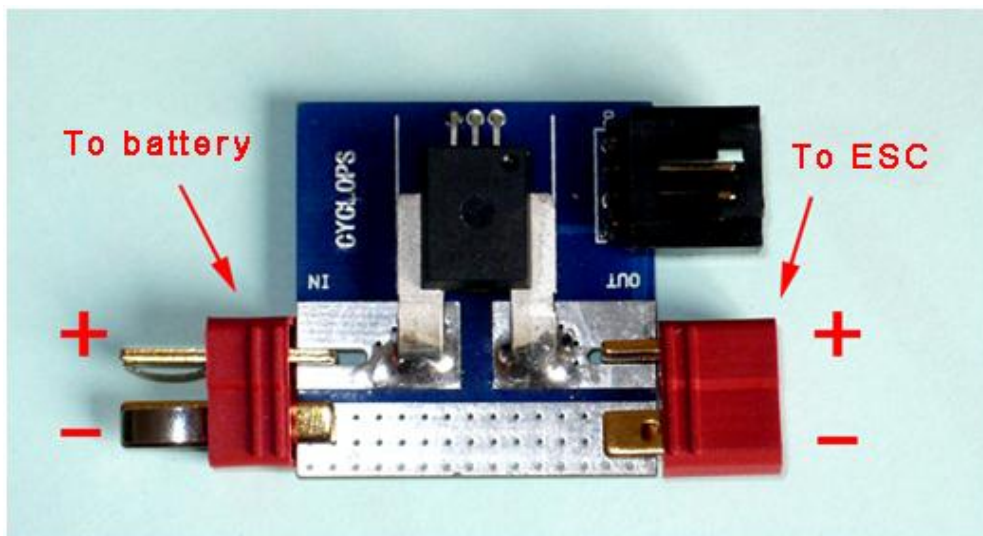
Thanks for buying and using CYCLOPS OSD series products, please read this manual carefully before use.

Installation of connections





Important: select Jumper instructions: 1, 2 short circuit for using power batteries(which must be 12V, or 3S Lipo batteries); remove the jumper cap, and connect 2 and 3 to power up OSD and wireless video equipments separately with additional 12V power supply. When mounting OSD main board to the aircraft, please check whether the position is installed correctly, namely the nose of the small white plane design on the main board points to the direction of the aerial carrier's nose.



Current sensor wiring Diagrams (with a T plug)

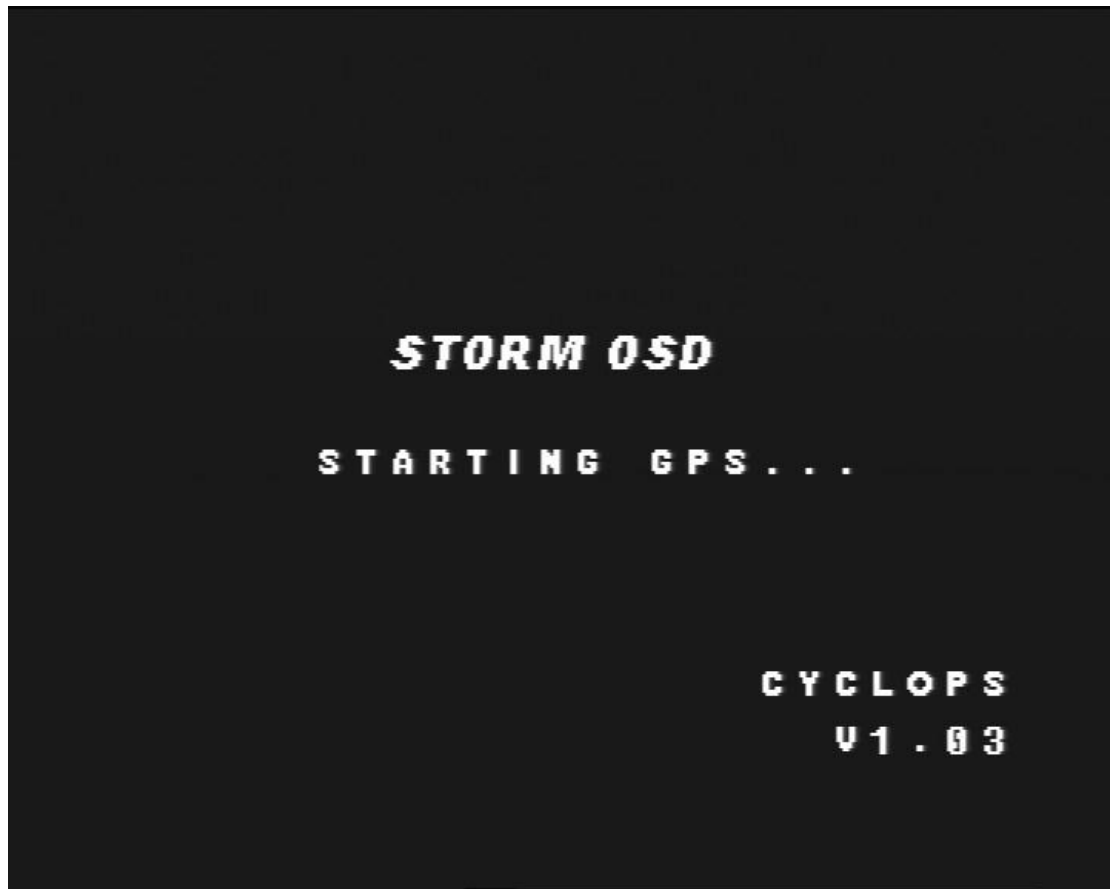


This surface must be up

GPS Module Installation

System parameter setting

Connect the GPS module and OSD correctly according to the above instructions, switch on the power, the red light on the OSD main board flashes, then it will enter the following boot interface:



Press the "UP" and "DOWN" buttons on the switchboard at the same time to enter the main menu settings. Press the "UP" and "DOWN" can move the cursor, "OK" button used to confirm the options.

MENU

▶ BAT SCALE 1000 MAH 100%
RESET CURRENT OK
SEV CENTER AIL ELE
TRIM AUTO P 0 R 0
ELEVON N
ROLL GAIN 70% ANG 25°
PITCH GAIN 70% ANG 10°
RTH ALT 100M
RESET GYRO OK
RSSI MAX MIN

▶ MAX RECORDING Y
HEADING HOLD Y
RTH ALT HOLD Y
VIDEO FORMAT AUTO
EXIT

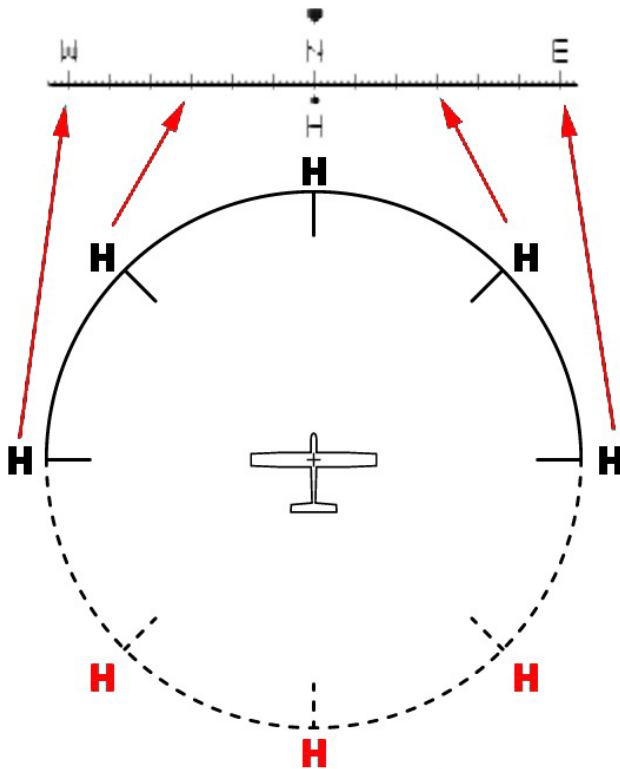
Menu setup instructions

Options		Setup instructions	Comments
BAT SCALE		mAh alarm value	When the power consumption reaches the set value in flight, the battery capacity symbol and value will flash to indicate it. The mAh consuming can be adjusted by 0%-200%.
RESET CURRENT		Reset the current sensor to zero	At first use or after replacing the current sensor, it needs to set this option
SEV	CENTER	Servo center confirmation	Please make a test flight of the model aircraft test and adjust the center point of the control surface before confirming this option. After replacing the model plane, the servo centers need reconfirmation.
	AIL	Aileron reverse setting	With error-free connection and power, switch the flight mode to PA, sway model aircraft to the lateral and pitch direction, check the rudder of each control surface is correct, if the rudder is adverse, adjust the option to make it right.
	ELE	Elevator reverse setting	
TRIM		Fine adjustment of main board installation levelness	Put the model aircraft with STORM OSD flat and power it on , observe posture angle parameters at the surface. If due to the installation errors, the P, R parameters are not 0, you can adjust this option, such as P-3, R+5, then adjust the P to -3 , R to +5 in the TRIM, exit the menu and observe the posture parameters again , until all are 0. This only needed to be sett once after the installation of OSD main board, unless the replacement of aircraft or reinstallation of OSD main board. Auto-calibration of stabilization position function is added, put your plane on the ground horizontally, and enter this option, the OSD will reset the center point of roll and pitch.
ELEVON		ELEVON linkage function	It is used for flying wing model planes. When selecting Y, you must close the mixed controls of the ELEVON on the remote transmitter.
ROLL	GAIN	Roll sensitivity	Adjustment of the roll control sensitivity
	ANG	Maximum turn Angle	Default20°, Maximum 45°
PITCH	GAIN	Pitch sensitivity	Adjustment of the pitch control sensitivity
	ANG	Maximum pitch angle	Default10°, Maximum 20°
RTH ALT		Automatic return height	Default 100m, Maximum 500m
RESET GYRO		Gyro calibration	It needs to recalibrate when it is used for the first time (very important!!!) or it is placed for a long time, during calibration, OSD main board must be placed horizontally, and strictly remains still!!!

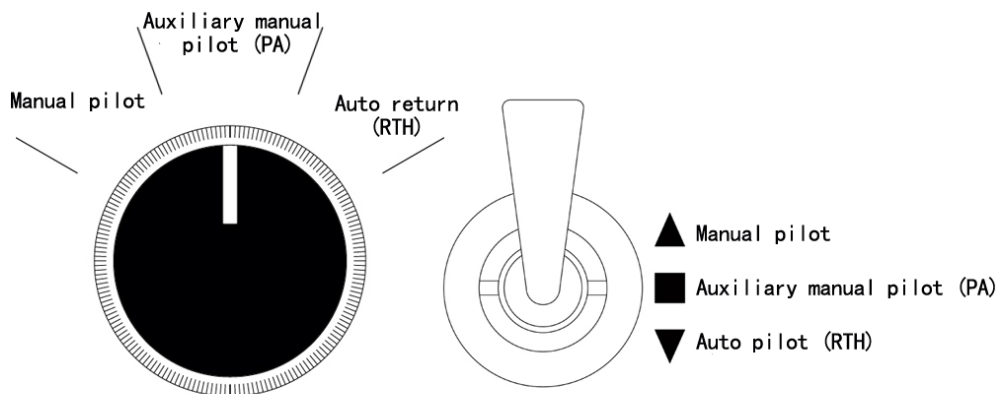
RSSI	Signal strength indicator	You need to confirm the max and min value in the configuration menu. When the RSSI value is under 5%, the display will disappear, and the radio icon will flash to warn you that the signal is too low or lost. The RSSI will not show up when the min and max settings of RSSI are equal.
MAX RECORDING	The record of max values of flight data.	When selected to be set "ON", the OSD will record the max speed, max distance, max height and max lift rate after the plane's taking off. When detect the speed is lower than 10km/h (6.2MPH) and the height is lower than 10m (32.8ft), the OSD screen will display the max records, at the meantime, a word MAX will flash on the screen.
HEADING HOLD	Heading mode selection	It's optional to lock the course when in PA mode; you can choose to disable it.
RTH ALT HOLD	RTH mode selection	You can choose to lock the height of current height or preset height in RTH mode, if this option is set to be off(set to N), the plane will climb to the preset height if the current height is lower than preset value, if not, the plane will maintain the current height to RTH.
VIDEO FORMAT	Video format selection	Video input format options between PAL, NTSC and AUTO, when choosing AUTO option, the OSD will automatically adjust the OSD display according to the input video format, default PAL when no video input.
EXIT	Exit the setting menu	When exit menu, the system will save all settings

Directions for use

- 1、 Exit the menu, then enter the flight surface. Pressing the UP button can switch between display modes and save the mode, carry out the last saved display mode next time you start.
- 2、 As GPS beginning to search satellites, the satellite number is indicated by the GPS strength icon on the upper right corner. A flashing icon indicates weak or unreliable GPS strength and cannot be used as positioning parameters. With good GPS signal, the satellite searching would last 1-5 minutes depending on different circumstances.
- 3、 Press and hold the OK button for 3 seconds can make a metric -inch interconversion. Last unit's setup will be reserved next time you start the main board. (Automatic return height in the menu will also switch to metric units automatically)
- 4、 Please connect the flight mode interface to any three-way switch or knob channel on the remote control unit. After GPS receives the signals, through this switch, the flight mode can be switched. Manual mode, manual stabilization model (PA), automatic return mode (RTH).The user can set the mode switching channels as runaway with the remote control F/S (Fail Safe) runaway protection function, it will automatically switches to the RTH (automatic return) mode after closing the transmitter, which can improve the safety during flight. When OSD lead the model aircraft to return automatically, the aircraft will first fly straightly near the take-off point, after getting close to the take-off point, it begins to hover anticlockwise with the take-off point to the center, counterclockwise circling flight, hovering height is RTH ALT value set in the menu. If GPS have not found the satellite signal, the system is permitted to perform only Manual and PA model, and unable to switch to RTH to navigate return.
- 5、 Before taking off, press reset button to reset all parameters. (This operation will reset altitude, distance, timer, current and mAh consumed). But don't press the button for long, or it can make a metric -inch interconversion.
- 6、 When OSD detect 0 voltages on the power battery, it will not display voltage, current and mAh consumed of power battery.
- 7、 STORM OSD can display RSSI voltage (receiver signal strength indicating voltage) measuring range: 0.1-3.3V, when this voltage is below 0.1v, OSD will not display this parameter. In order to display RSSI voltage, the user has to open the receiver and to solder wires by him, so the manufacture bears no responsibility for all consequent damage due to this operation.
- 8、 Screen Display Control Surface (DIS port) can be connected to any switch on the remote control unit to switch between fighter and concise surfaces. In concise surface, directions designation of returning to the take-off point indicates H in the screen represent the take-off point; When H is in the middle and not flash, it indicates the plane is heading directly to the take-off point; When the H is in the middle and flash, it indicates the plane is flying 180 degree away from the take-off point. Switch between interfaces with the remote control will not be stored.

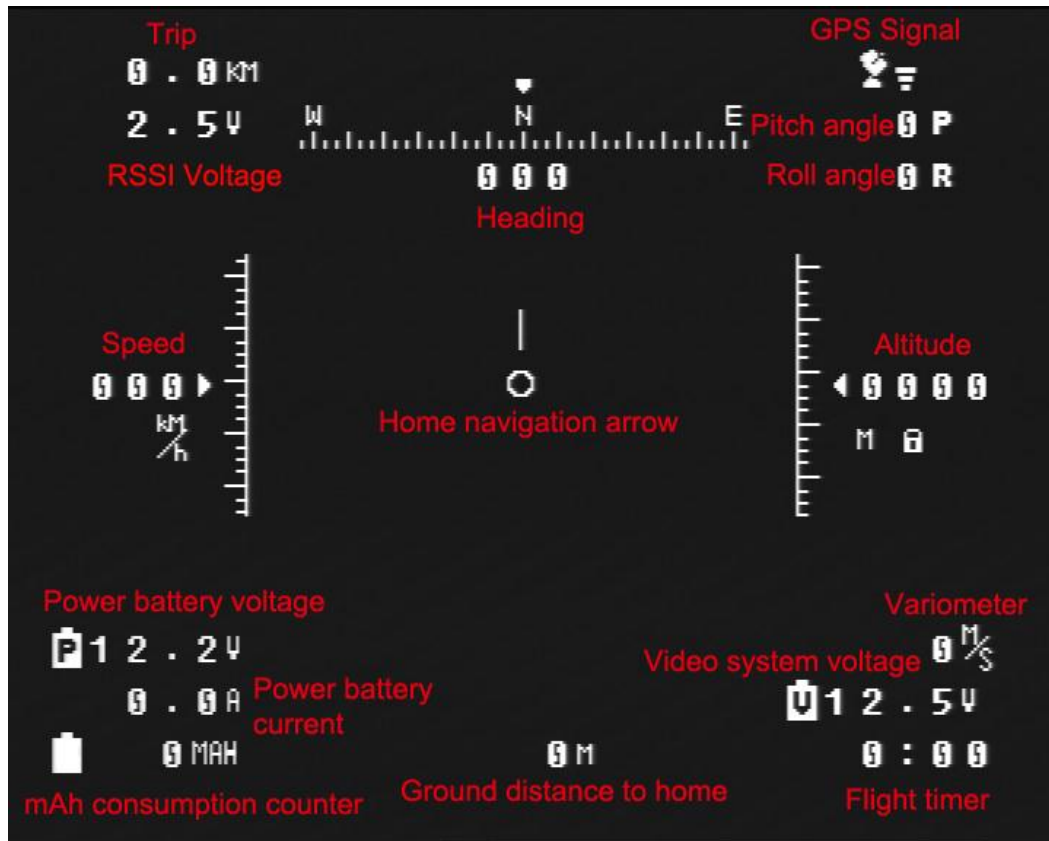


Dotted line indicates the "H" is flashing

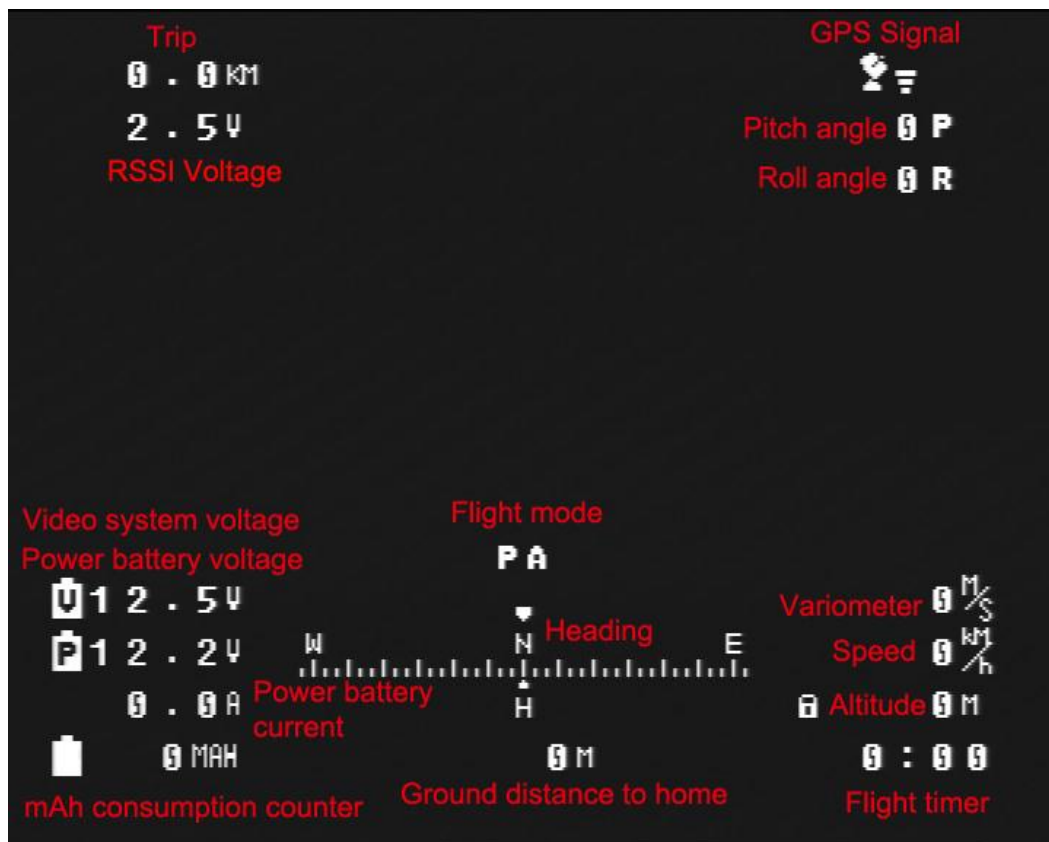


Use the knob or switch to control the flight mode

- 9、 STORM OSD will detect video signal automatically, support both PAL and NTSC signal and store the display format automatically, which will be retained next time you start.OSD heats up during working, which is normal.



Parameter specification of fighter surface



Parameter specification of concise surface

Notes of other special symbols



Power alarm symbol. When the power consumption of the dynamic system reaches the set value BAT SCALE in the menu, this symbol will appear and flash to alarm.



Semi manual stabilization mode symbol, when the flight mode switch switches to the stabilization mode, this symbol will appear, at this time, the aileron is in auto-balance operating mode, and the OSD automatic will automatically begin the fixed altitude flight.



Height locks of automatically fixed altitude flight symbol. When switch Flight mode to PA, the system will record the switching time, altitude values and in the PA mode, it will automatically maintain the altitude in flight.

When the manipulator control the elevator joystick, height lock symbol disappears, and can change the flight altitude; when the joystick returns to the neutral position, height lock symbol appears again and re-lock the current altitude value and begin the auto fixed altitude flight.



Automatic return symbol



Posture alarm symbol. The occurrence of this symbol indicates the system's measurement of posture value is not accurate, and can only manipulate the aircraft manually, switching flight mode to PA and RTH is forbidden by the system.

Possibilities of the occurrence of posture alarm symbol:

- 1、 Excessive aircraft vibration
- 2、 The first 10 seconds after starting the OSD
- 3、 The aircraft's lateral posture tilt exceeds 70 degrees
- 4、 After the aircraft's violent flight actions (such as spiral, long-time inverted flight etc.)

STORM OSD accessories

Name	Number	Parameters
STORM OSD main board	1	
GPS module	1	10Hz
GPS cable	1	20cm-long
Current and voltage sensors	1	30V 100A
Current sensor cable	1	20cm-long
Servo cable	4	20cm-long
Switch board	1	
Switch board cable	1	40cm-long
Settings button	1	

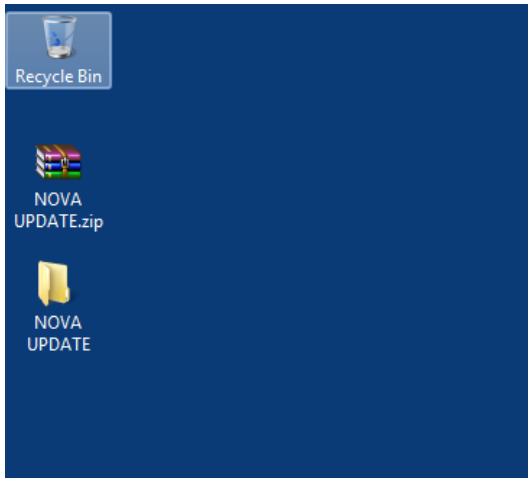
Please use this product strictly complying with relevant state laws and regulations. This manual provides the detailed instructions of the product's installation and debugging use it correctly on the basis of full understanding. During the flight, please stay away from the crowd or the buildings, CYCLOPS shall not be liable for any losses caused by improper use. When there is updated software, modified version, or renewed instructions, please pays close attention to the agent's website updates in time. CYCLOPS reserves the rights to the final explanation of this manual.

The following conditions are not covered by warranty:

1. Repair, change specification, replaces components by yourself and etc.
2. Damage caused by improper use, such as connection error.

STORM OSD update guide

- 1、Unpack the file



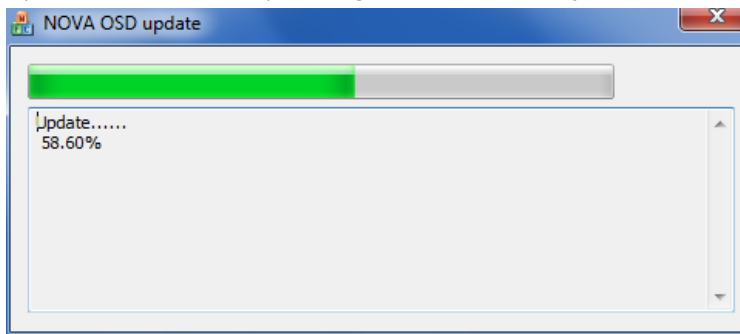
- 2、Install the driver



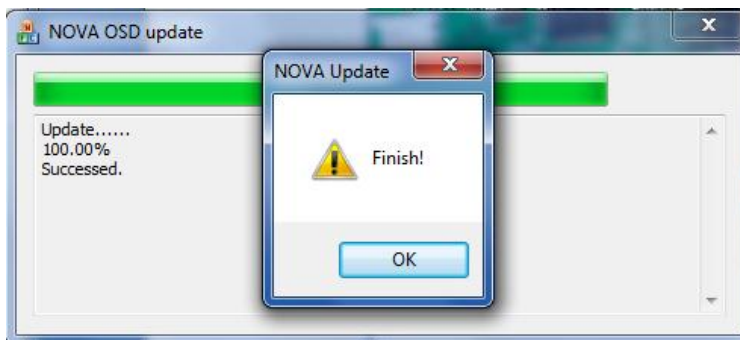
- 3、Power on the STORM OSD and connect the update kit to the main board as shown on the pictures below.



- 4、 Update the firmware by clicking on **STORM OSD update.exe**.



The update progress is as above, DO NOT disconnect the update kit or cut off the power supply of STORM OSD.



Click on OK to finish the update then cut off the power of STORM OSD and remove the update kit.