Skylark AAT Suite

Skylark AAT Suite is aimed for FPV enthusiasts. It includes a Auto Antenna Tracker(AAT) unit and a Trace OSD unit.The AAT set up a simple , powerful, stable performance. Supported by the Trace OSD, it can track the plane automatically and quickly.

Basic principle

When the Trace OSD powers on, if GPS get over 4 satellite signals, OSD will save the position as HOME point.The Trace OSD calculates the angles that the AAT should rotate, according to the current position and HOME point. The Trace OSD send the angle information to Skylark AAT via Audio channel of TX..
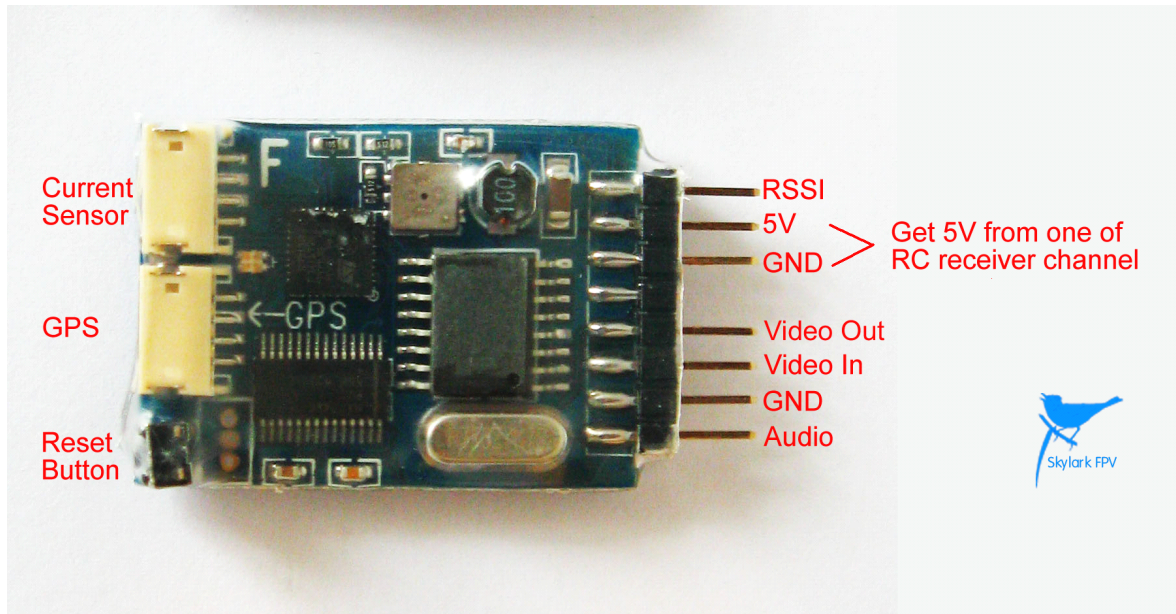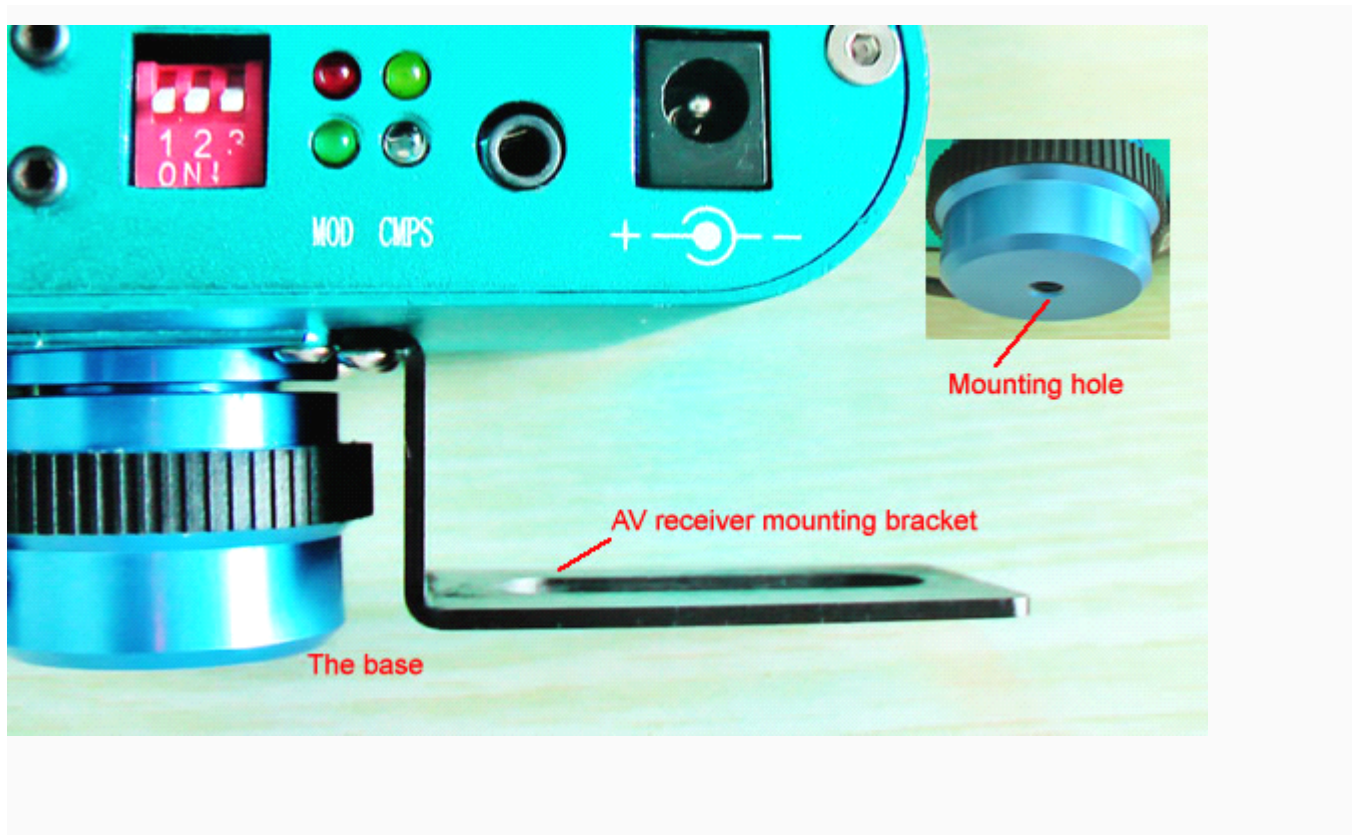

Features

- Easy to install and easy to use
- PAL/NTSC compatible
- 60A current sensor
- RSSI Auto detected | Auto "Setting Home"
- With barometer
- Free firmware upgrade
- Tracks 360º horizontally and 90º vertically
- Auto Antenna Tracker includes compass
- Open API | Support secondary development

Trace OSD Connection diagram
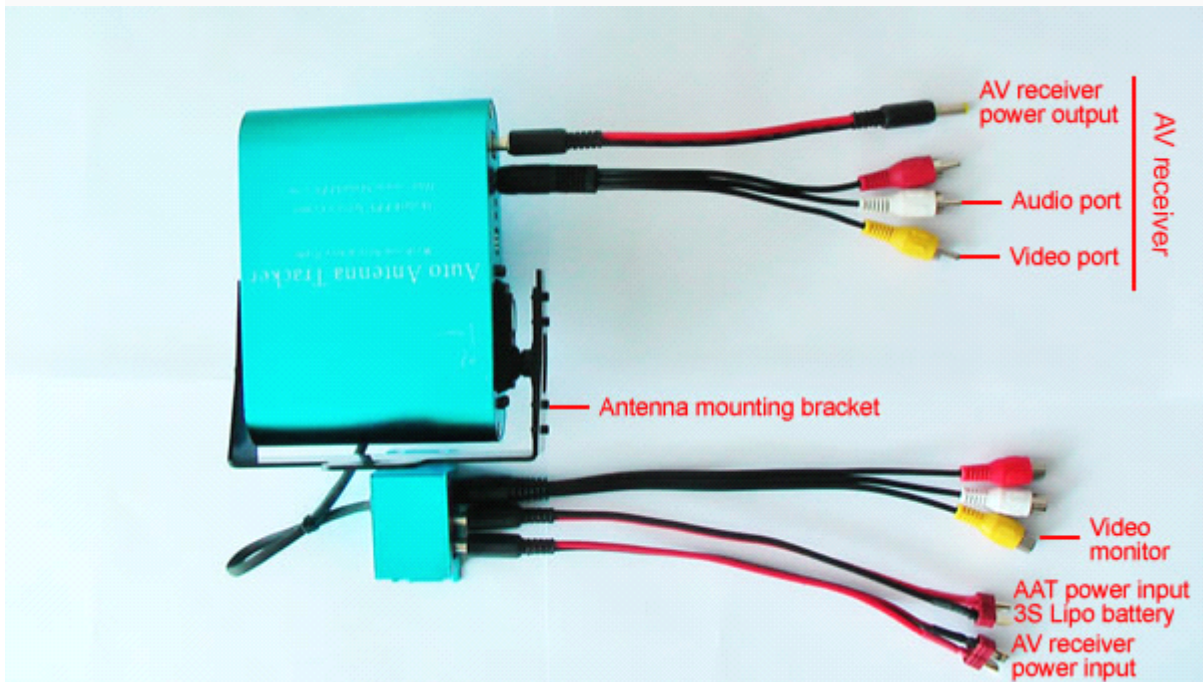

Current Sensor

GPS

Reset Button

RSSI
5V
GND
Get 5V from one of RC receiver channel

Video Out
Video In
GND
Audio

Skylark FPV

AAT Connection diagram

1 2 3
ON

MOD   CMPS

+   —

Mounting hole

AV receiver mounting bracket

The base

Skylark AAT Suite

AV receiver power output
AV receiver
Audio port
Video port
Antenna mounting bracket
Video monitor
AAT power input 3S Lipo battery
AV receiver power input
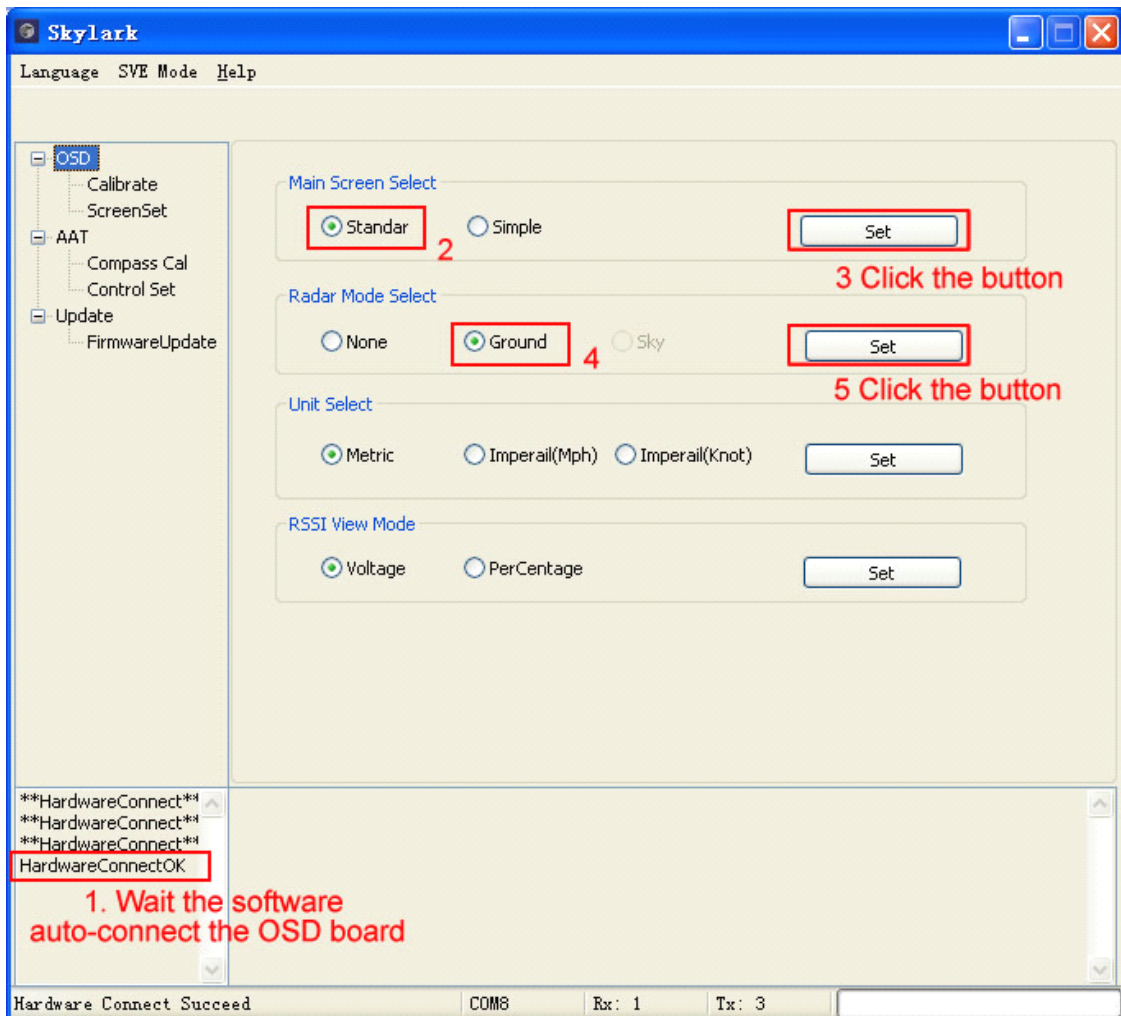

Skylark Antenna Tracker

Skylark AAT Suite

Recommended procedures

1. Keep the OSD closing your AAT
2. Power on Trace OSD or Reset Trace OSD, and get the HOME point.
3. Check the AAT orange light is blinking.
4. Start Flying
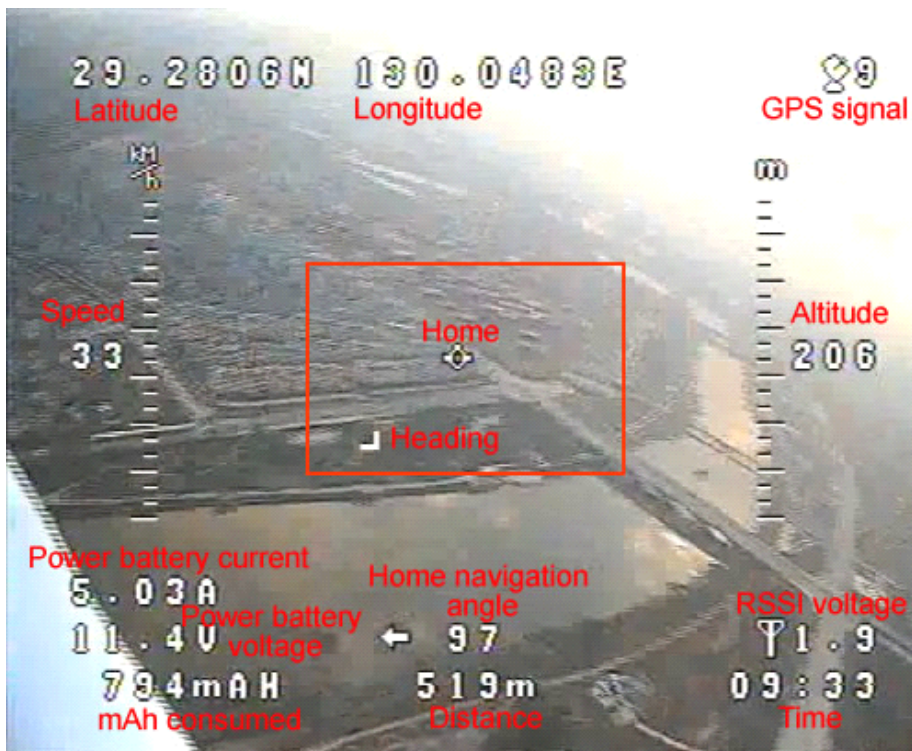
How to switch Trace OSD to F16 HUD

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OSD screen

Simple OSD screen

Standard OSD screen(F16 HUD)
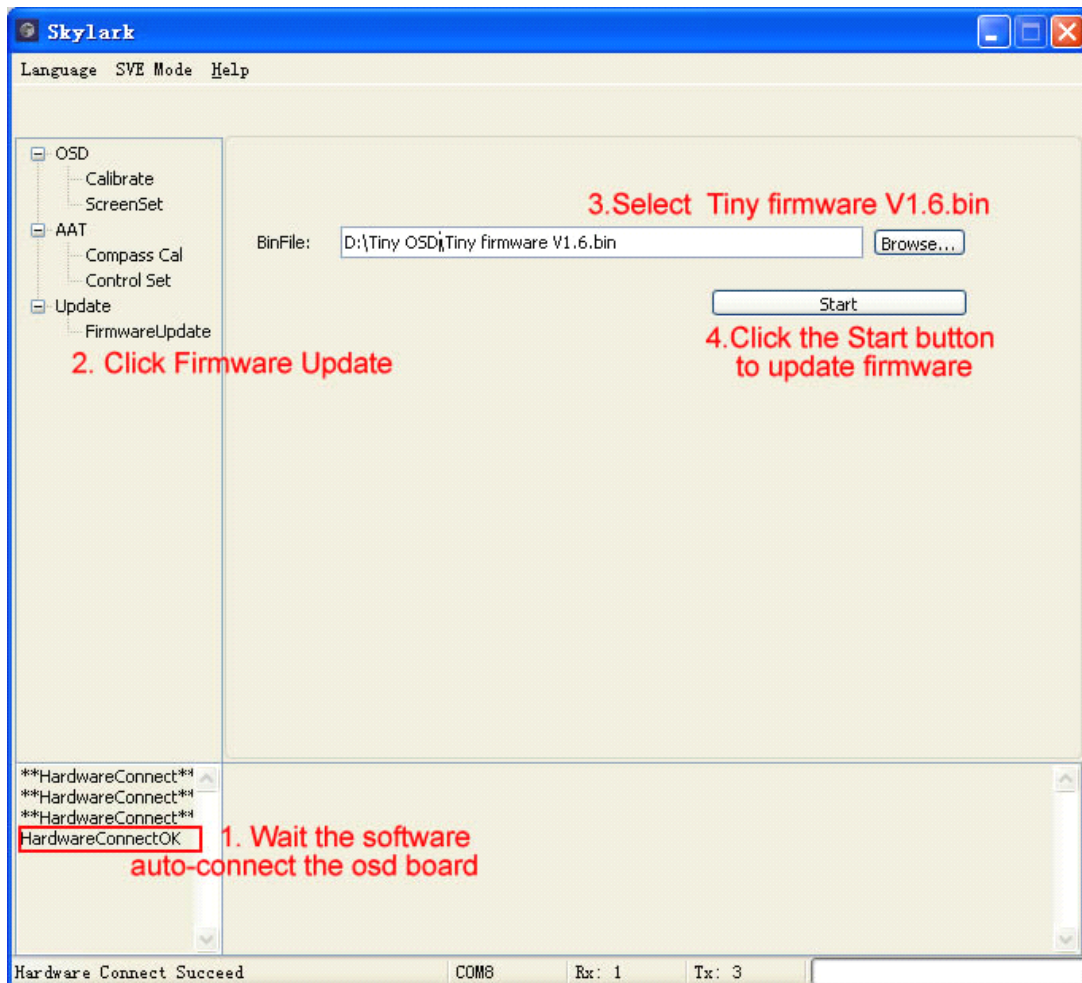
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How to Upgrade firmware for Skylark OSD

Download

Skylark Configuration Software
Trace OSD Firmware

Upgrade

1. Download rhe Skylark Configuration Software and the Trace OSD Firmware
2. Unzip the SkylarkSetup.zip
3. Double click the SkylarkSetup.exe and install the software to your computer
4. Use the Skylark USB Cable connect your computer and the GPS port of the Trace OSD board
5. Unzip Trace firmware.zip
6. Double click SkylarkFPV icon on your computer desktop

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Skylark Current Snesor Calibration

1. Connect your OSD[GPS Port] to PC by Skylark USB cable, and run Skylark configuration software
2. Keep throttle the lowest, and take note if the current reading in amps on your multimeter. Enter this into box A, then Click [Read]
3. Push and hold the throttle, keep the reading of your multimeter is 10A , enter this reading into box B, then Click [Read]
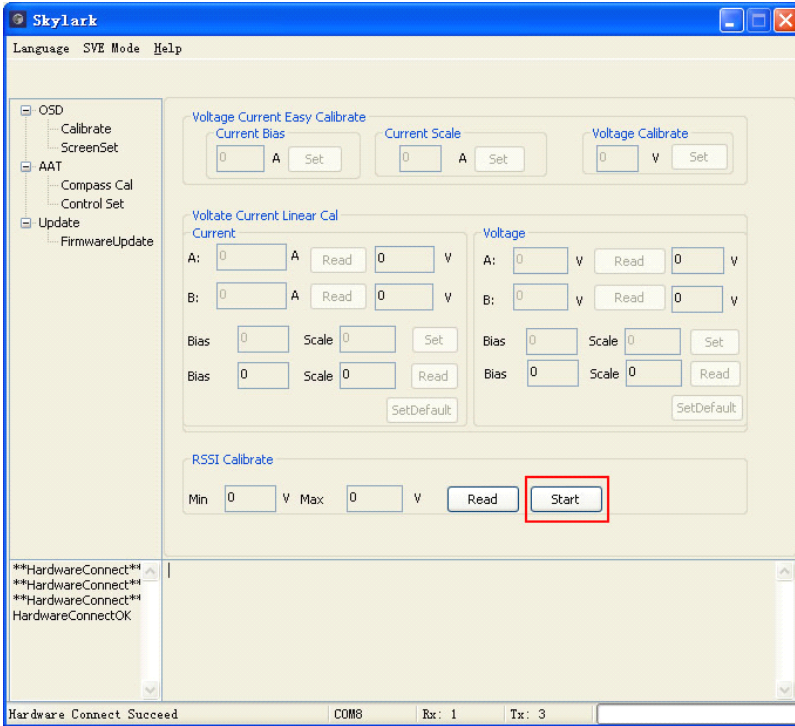4. Click [Set] to write the new Bias and Scale values to your OSD.
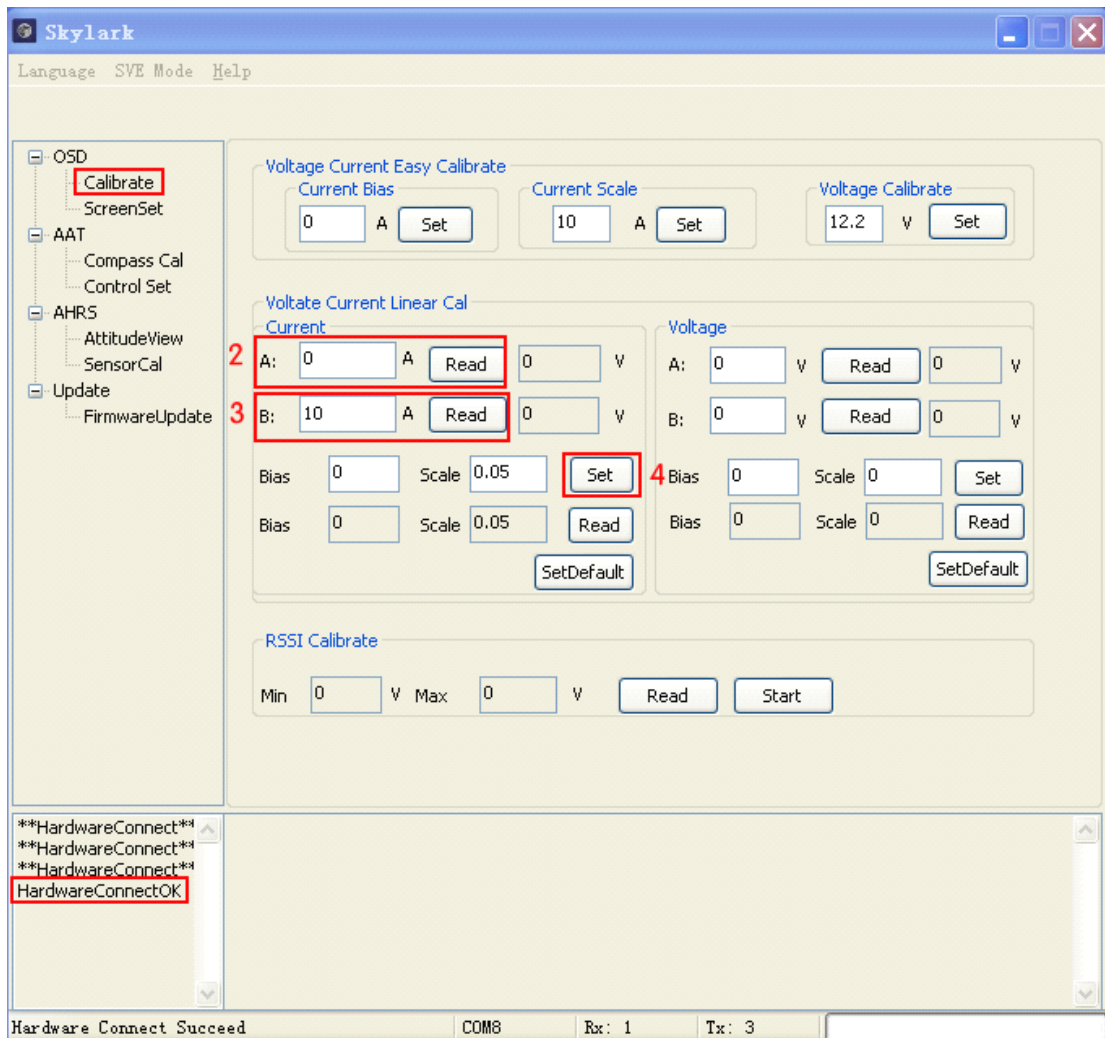
Skylark Trace OSD RSSI Calibration

1. Make sure the RC receiver RSSI is connected to the OSD board.
2. Use the Skylark USB Cable connect your computer and the GPS port of the Trace OSD board
3. Remote Control power on
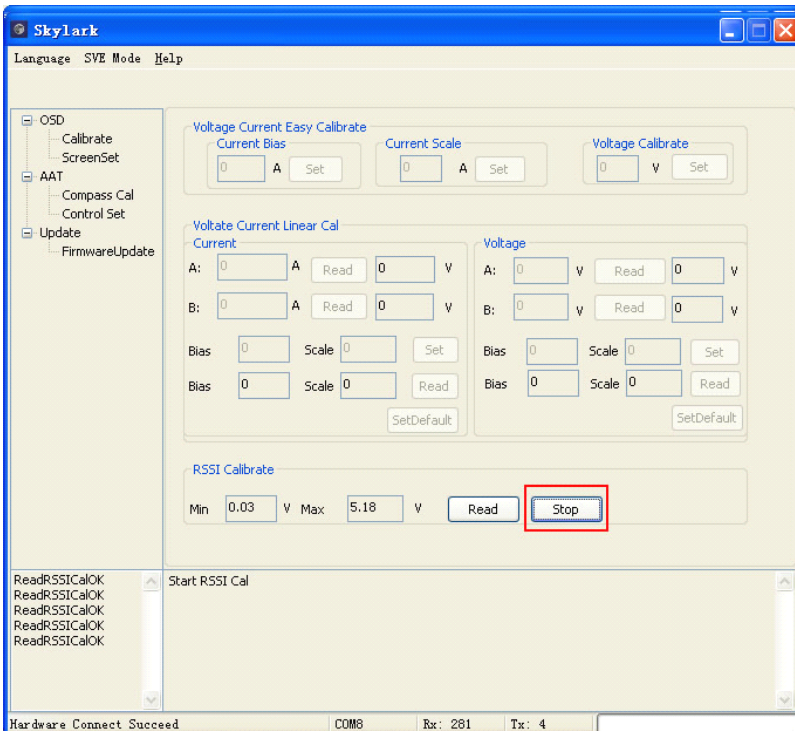4. RC receiver power on
5. Run Configuration Software

6. Click OSD->Calibrate

7. Click "Start" button

8. Remote Control power off
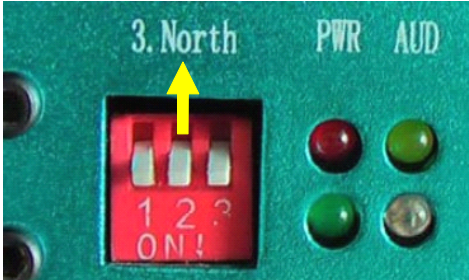
9. Click "Stop" button

10. Remote Control power on

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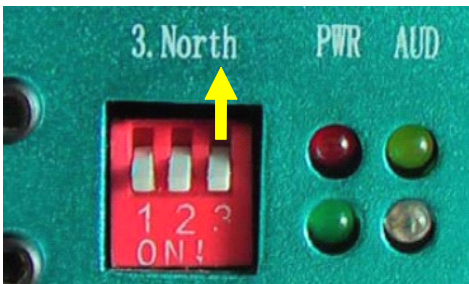## Skylark AAT Compass Calibration

1. Connect 3S battery with AAT [PWR] port
2. Toggle Switch2 from [ON] to [OFF]

3. Wait 3 second, the AAT will start rotating
4. Wait about 30 sencond, the AAT will stop rotating
5. Toggle Switch2 forn [OFF] to [ON]
6. The calibration end

Skylark AAT Advanced Calibration

1. Fix AAT to a tripod
2. Connect all FPV equipment(AAT/OSD/TX/RX)
3. Power on all FPV equipment
4. Wait Trace OSD locking [Home] position.
5. Move your airplane to >50meters from the AAT.
6. Toggle Switch3 from [ON] to [OFF]

7、Rotate the AAT to aim your airplane with hand
8、Toggle Switch3 from [OFF] to [ON]
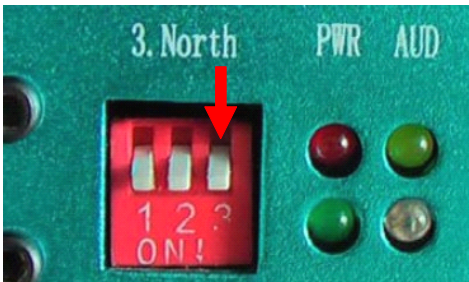
9、The calibration end.
Note: Step 6/7/8 must be finished within 2 minutes, otherwise, the calibration request will expire.

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Relevant specifications

1. When the AAT powers on, it will point the due north.

2. If the distance from the OSD to the AAT is less than 20 meters, the AAT will point the due north.

3. If the AAT cannot get the correct angle information, it will point the due north.

4. The AAT Switch1 is test mode switch, keeping it in down is OK. When the AAT powers on, if you toggle Switch1 from [ON] to [OFF], the AAT will auto rotate.

5. Skylark AAT light Status

Light	Status	
	Solid	Blink
PWR	Power ON	
AUD	No Data or Data exception	4Hz Blink. Get the correct angle data
MOD		1Hz Blink. Normal work mode
		5Hz Blink. Test mode/Calibration mode
CMPS	The AAT compass has a problem	5Hz Blink. The AAT compass work well

6. Track OSD LED Status

Red slow blink = OSD Power On

Blue slow blink = Detected GPS

Blue fast blink = GPS Locked Home

Skylark AAT Suite

Name	Skylark Auto Antenna Tracker
Weight	500g
Input voltage	12V
Vertical range	0~90 Degrees
Horizontal range	Unlimited (0~ ∞ Degrees
Size	128mm × 93mm × 66mm

Name	Skylark Trace OSD
Weight	23g
GPS	10Hz super sense GPS, with backup battery
Input voltage	5V
Voltage detection range	3S–4S
Current detection range	0–60A
With barometer	Y
PAL/NTSC auto detection	Y
RSSI	Y
Auto Antenna Tracker	Y
Firmware update	Y

Skylark AAT Suite

Skylark FPV

Wish you have a nice flight.

www.SkylarkFPV.com

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