FlyingDream AAT

Quick Guide

V1.1

Thank you for purchasing the FlyingDream Auto Antenna Tracker.

Please follow this guide to get familiar with the tracker and operate it correctly. The tracker is a precision mechanical and electronic device. Please read this guide carefully to avoid device damage or body injury.

New versions of this document will be available at our website: www.MyFlyDream.com

1. Specifications and Main features

The basic function of the tracker is to accept serial commands and drive the load(a directional antenna in most case) to point to the correct direction.

With a build-in high quality slipring, the tracker has the unrestrained, continuous panning capability. There is also a build-in digital compass module which make it as a Plug-and-Play system without extra initialization.

Specifications:

Weight	900g
Size	165*107*40mm (L*W*H)
Input voltage	10~14v
Current consumption	< 2A
MAX. Load	1KG(without balancing)/3KG(with balancing)
Pitch range	0~90 degree
Tile range	0~360 degree without limit
Pitch speed	90deg/0.8s
Tile speed	360deg/1.5s
Available signal channels	3~9

Waning: the reliability of the tracking system depends on a number of factors. A strong electromagnetic interference; bad GPS status and other reasons may cause a bad tracking result. Please consider the risk and take it yourself. Any lost cause by the tracker system is not our responsibility.

2. Basic test

There are 3 optional solutions to drive the tracker

1. Drive the tracker yourself by the open serial protocol.
2. Drive the tracker by **FlyingDream AAT Driver**
3. Drive the tracker by **FlyingDream OSD GroundStation**

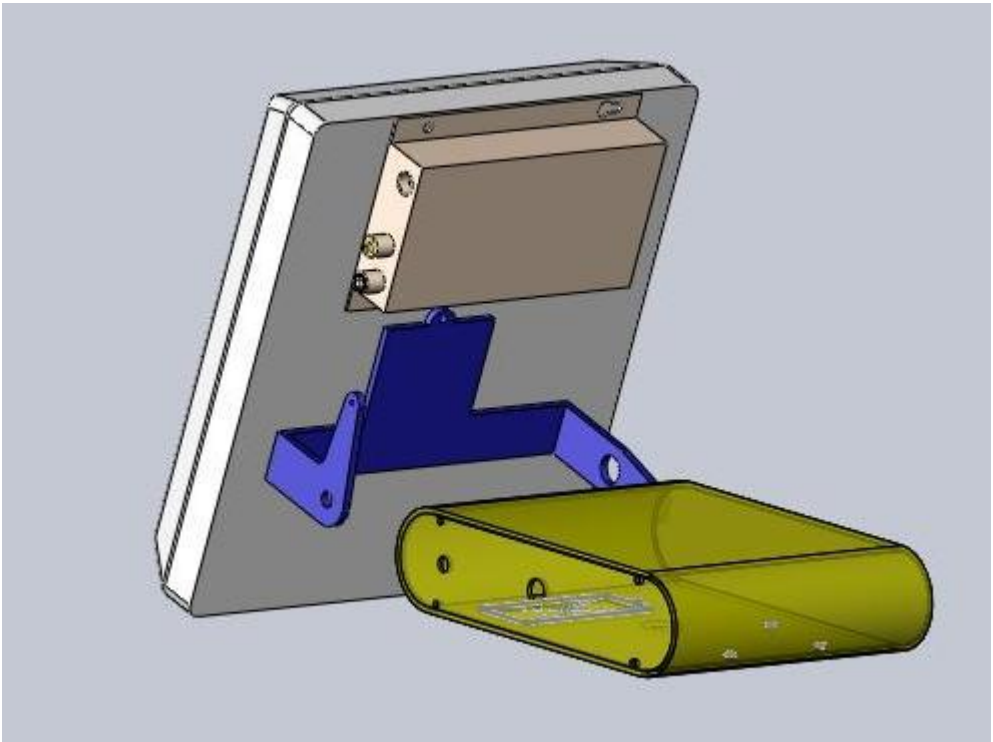
We will take solution 2 as an example to describe how to test the tracker step by step.

1. Mount the tracker on the tripod. Please use a high quality tripod. Don't ever try to hold the tracker in hand to test it. That will maybe hurt you.
2. Connect the AAT Driver to the tracker.

3. Power on the driver with 12V DC. The red LED and yellow LED on the driver should fast blink for 5 times.
4. The tracker should “wake up” in 2 seconds. The antenna handler should turn to 30 degrees, and the red LED(offline indicator) on the tracker should blink. That means the tracker is ready.
5. Press the test button on the driver, the red LED on the tracker will turn on to indicate that it is in TEST mode. The tracker should turn to North/0 degree. Press the test button again and again, the tracker should turn to East/30 deg -> South/60 deg -> West/30 deg. Press the test button again, the driver quits TEST mode.

3. Mounting the antenna and the AV receiver

Please mount your antenna on the handler firmly. The microwave AV receiver is suggested to be mounted on the antenna. Mounting methods may be different depending on your antenna. These pictures may inspire you to get the job done.



Only audio signal and compose video signal output from the receiver will pass thought the slipring. This solution avoids RF signal attenuation. Please connect the yellow RCA plug to the video output jack, the white one to the audio output. The barrel power plug is directly connected to the tracker power input. **So the input voltage of the tracker should fit to the AV microwave receiver.**

4. How to operate

1. Setup all equipments and use the test button on the driver to check the tracker. Check the GPS status to ensure a good tracking condition.
2. Place the plane near the tracker then press the “set home” button on the TeleFlyLite module. The tracker should play a “Beep ----” sound. As the same time, the red LED on the tracker starts to blink. And the antenna should pitch up to about 30 degrees angle. That means the tracker is in “STAND BY” mode now. It’s ready to go.
3. You can spin the tracker towards the taking off direction while it’s in “STAND BY” mode. Take off you plane now. Once the plane leaves you 10 meters away, the tracker should start to trace. The red LED on the tracker turns off.

- If the downlink is broken or the GPS is in a very bad status, the tracker will play the “Beep...Beep…” sound, and the red LED blinks. In this situation you can spin the tracker by hand if you want. The system will resume tracking as soon as things go well.
- You can press the “off-line” button on the tracker at anytime. Once the red LED on the tracker is on, you can manually spin the tracker to any direction you want. Press the button again to make the tracker to quit the “off-line” mode.

5. Indicate LEDs and buttons

There are 3 LED indicators and 3 buttons on the right side of the tracker.
From left to right, the Buttons(LEDs) are:
OffLine(Red) North(Yellow) Cal.(Green)

Instructions

Functions	How to operate
Toggle off-line mode	Press the “OffLine” button.
Hard iron calibration	Press the “Cal.” button, wait for 2 seconds. The tracker will automatically spin for a while. Please wait until it finish.
North calibration	Press the “North” button The tracker will take the current direction as it’s North.
Restore factory-preset values	Press “Cal”, then press “North” in 2 seconds.

6. A Demo video clip：

http://v.youku.com/v_show/id_XMTM5OTQ5MDg4.html