



# AirNav Systems

[www.airnavsystems.com](http://www.airnavsystems.com)

## AirNav RadarBox ComStation ADS-B, VHF, GPS Receiver

Installation Instructions  
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## Introduction

AirNav RadarBox ComStation is a fully integrated aviation tracking solution: It comes with all you need to track ADS-B equipped aircraft .

The receiver unit contains an ADS-B receiver (Automatic Dependence Surveillance Broadcast), a GPS receiver and a VHF Airband Receiver.

An outside antenna optimized for the received frequencies as well as all necessary cables and power supply.

### Package Contents:



- 1- RadarBox Receiver
- 2- External Antenna
- 3- Power Supply
- 4- Ethernet Cable

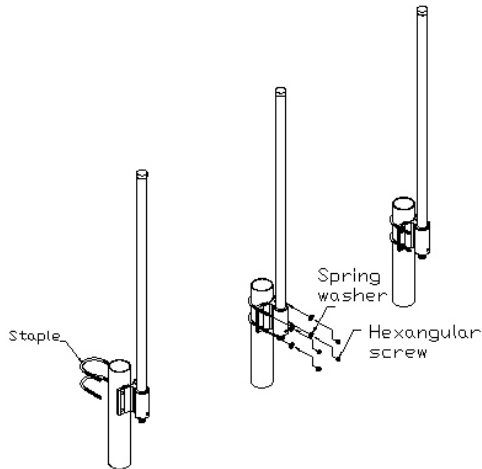
## Mounting the antenna

The place where the external antenna is mounted is VERY IMPORTANT as ADS-B signals are blocked by obstacles (walls, buildings). This means that if you have a building in front of the antenna, aircraft behind that building will not be tracked.

**The external antenna should be mounted outside with a clear view of the sky.**

There are two options to mount the antenna: on a pole or on a wall (even surface).

### Settle in a Pole



Picture 1

Picture 2

Picture 3

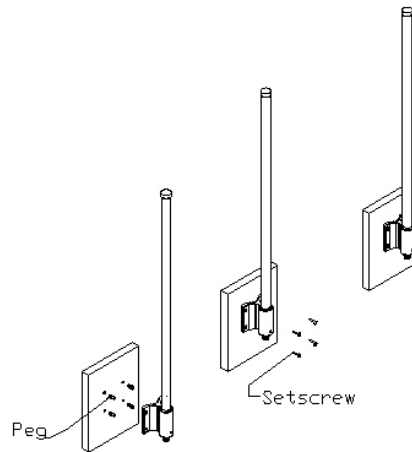
**Parts:**

1. Staple
2. Hexangular screw
3. Spring washer
4. Fix mount
5. Antenna body

**Antenna Mounting Steps (pole)**

- (1) To determine the position to set the antenna; fix mount lean against the pole.
- (2) To set the staple through the fix mount from the opposite side as picture 1.
- (3) To set the hexangular screw and spring washer with the staple and fix mount as picture 2.

### Settle in a Wall



Picture 1

Picture 2

Picture 3

**Parts:**

1. Peg
2. Setscrew
3. Fix mount
4. Antenna body

**Antenna Mounting Steps (wall):**

- (1) To determine the position to set the antenna.
- (2) To drill holes to set fix mount with antenna by peg as picture 1.
- (3) To set setscrew for the fix mount with antenna in the even surface as picture.

Examples of externally mounted antennas:



## Receiver Setup

Now that you have antenna mounted with a clear view of the sky, we need to connect it to the RadarBox ComStation receiver and connect the receiver to the internet and to a power supply.

- 1- Connect the antenna to the receiver
- 2- Connect the red ether cable to the receiver Ethernet plug and to your internet router
- 3- Connect one end of the USB power cable to the power supply
- 4- Connect the other end of the USB power cable to the other end of the power supply

That's it. Your receiver will now turn on and automatically connect to the internet.



## LED Light Indications

The LEDs indicate status of the system

Green LED	
Permanently Dark or permanently lit	Not powered up or crashed
Flashing	Unit operative
Red LED	
Permanently dark	No error
Flashing	Warning in operation of the unit
Permanently lit	Error preventing operation of the unit
Blue LED	
Dark	No communication activity via USB or Ethernet
Flashing/lit	Communication running (via USB or Ethernet)
White LED	
Dark	Unit does not receive any ADS-B packets – no antenna or no aircraft traffic
Lit (flickering in varying intensity)	Unit is successfully decoding Mode-S data. Higher intensity of LED indicates more data traffic
Orange LED	
Dark	No Audio Signal on VHF currently received (no antenna signal/no aircraft traffic around/audio signal below squelch)
Lit	Audio Signal above squelch received
Yellow LED	
Dark	No GPS signal
Flashing (more dark)	At least one satellite is being received, however no fix is available
Flashing (less dark)	2D position fix is available, time stamps are synchronized
Lit	3D fix available, time stamps are synchronized

### Special LED Functions:

Yellow and Blue LED lit, all others dark: Device is powering up in boot loader, boot sequence takes up to 30 seconds

Yellow LED Lit, all others dark: device is powering up, Linux is loading, boot sequence takes up to 30 seconds, usually 10-15 seconds until Linux loaded

All LEDs lit: operating system has booted, attempting to get time from net or GPS, receiver starting up (also LED Test).

## Watch the traffic received by your Unit

Your RadarBox unit shares real-time air traffic information with AirNav Systems servers. You can watch traffic received by your unit at **RadarBox24.com** website or using **RadarBox24 iOS** (iPad, iPhone) or **RadarBox24 Android** apps. Open the website apps and zoom in in to your desired location.

