Portable ADS-B Receiver

Mode-S Beast Receiver

AvionixTech

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1. Introduction

Mode-S Beast Receiver is a high-performance portable ADS-B receiver made of Mode-S Beast ADS-B receiver board. Mode-S Beast Receiver can receive and decode ADS-B, Mode-S and Mode-A/C signals.
The Mode-S Beast Receiver allows you to receive the positions of the aircraft up to 400 km (220 nm) away. In addition, all you need is an antenna and a PC with freely available software for graphical representation.
The device is powered by USB.
The binary formats are supported by a variety of software, such as PlanePlotter and adsbscope.

2. Specifications

- Output DF17 & DF18 data
- Output Mode A/C/S transponder data
- Provide data format for customer development
- Output data with timestamp. But please note that this timestamp is internal 12MHz clock, rather than GPS time. So not OK for MLAT.
- USB for power and data output.
- Physical size: 113 x 81 x 31 mm

3. Driver Installation

When connected with computer, Mode-S Beast Receiver will automatically install drivers. If not, please download fdti drivers here.
http://www.ftdichip.com/Drivers/VCP.htm

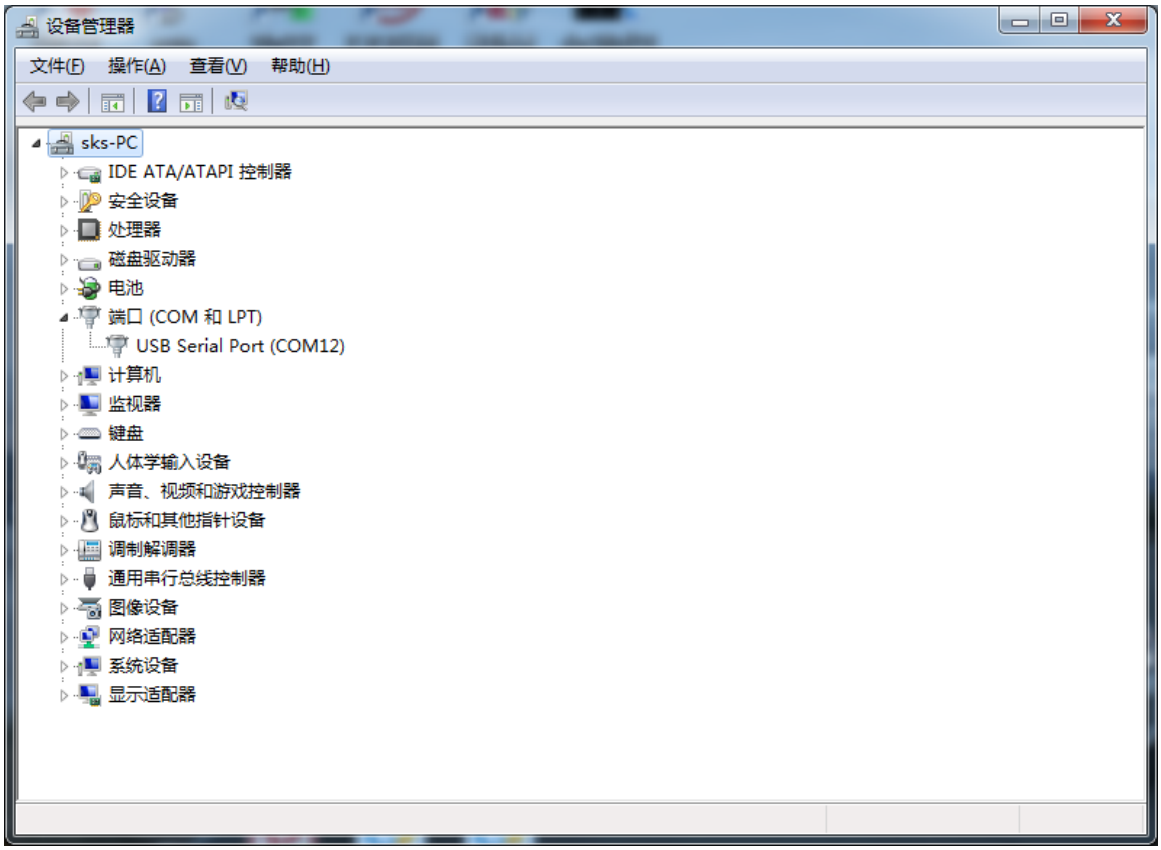
4. Data Format

The receiver can provide raw data in the so-called "AVR format", as showed below.

```
*8D4B1621994420C18804887668F9;
*02E1991058EF3100000000000000;
*20000CB10D89FB00000000000000;
*20001196553C2500000000000000;
*02E198BFAF86760000000000000;
*02C18CB14E2D980000000000000;
*02E198BFAF86760000000000000;
*200015301CB29600000000000000;
*20000F971E458200000000000000;
*200015B3EF457700000000000000;
*583E1BDABC273500000000000000;
*280008006C738F00000000000000;
*200010142CC4CB00000000000000;
*02E1941016FC9E00000000000000;
*02E1919653E46F00000000000000;
*200014101024D400000000000000;
*02C6081A5757E800000000000000;
*02E1941016FC9E00000000000000;
*8D4CA27A608145305B0B09EAD8B5;
*02E19838575F0A00000000000000;
*A0001014BC900030A8000038ED68;
*200015301CB29600000000000000;
*8D400A6658AB0540C701D9CA672E;
```

5. Check the serial port

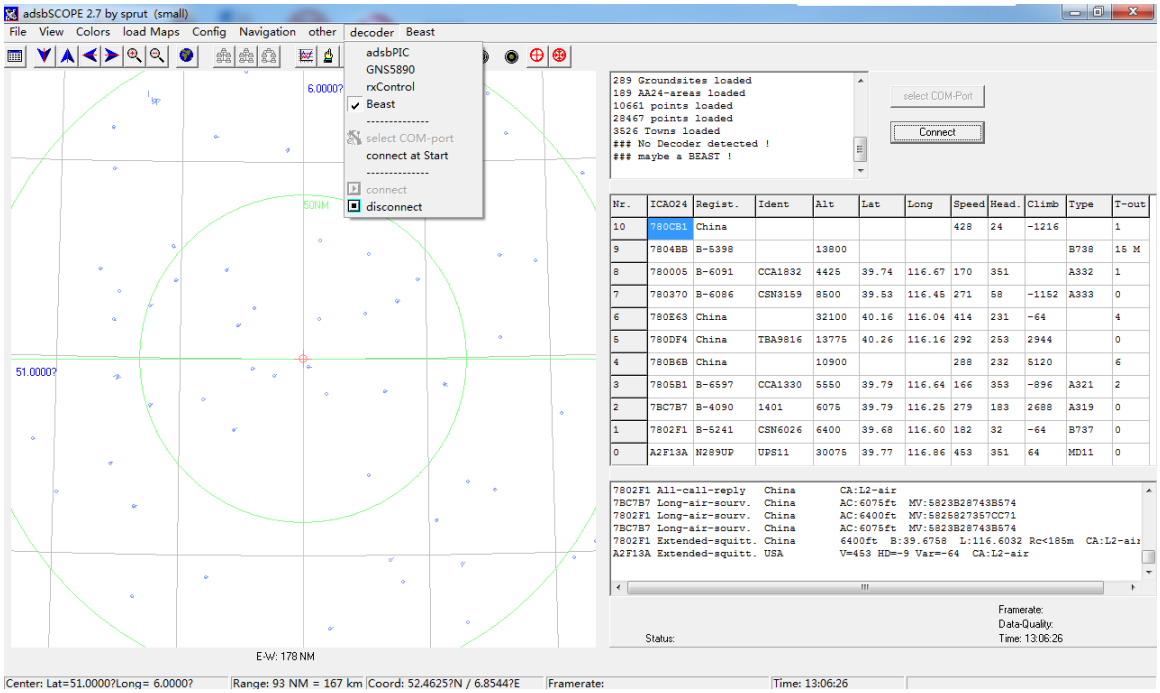
In this example it's COM12.



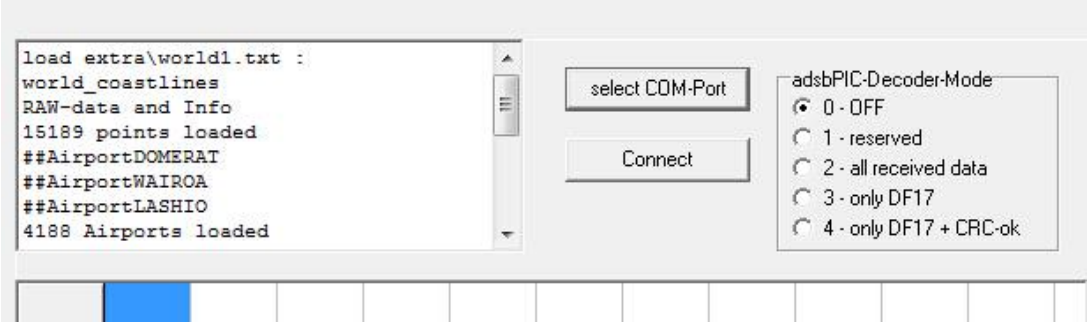
6. adsbscope ADS-B display software

No need for installation, just double click the .exe file would be OK. The two .exe files are different in that the _256.ext program can display 256 aircrafts at most, while the _16384.exe program can display 16384 aircrafts at most.

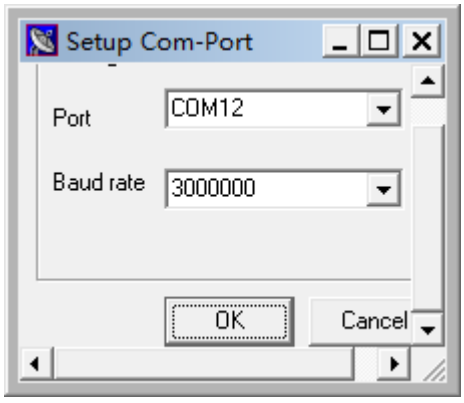
Choose decoder —> Beast



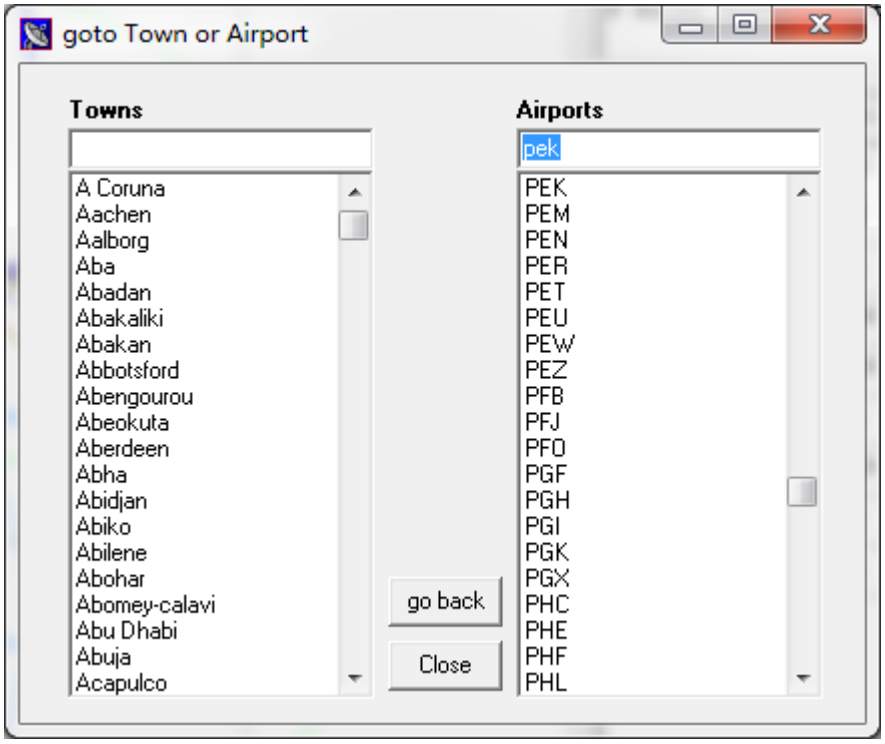
select COM-port



Input serial port and baud rate 3000000.



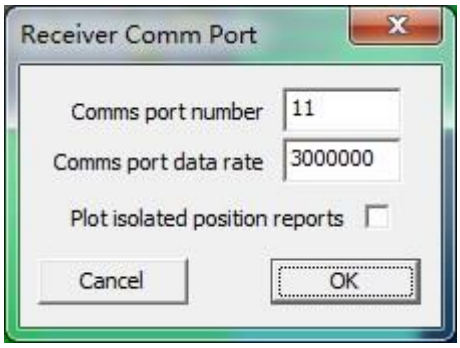
Then click Connect, it's connected.
Set an airport nearby. In navigation—>goto town or airport.



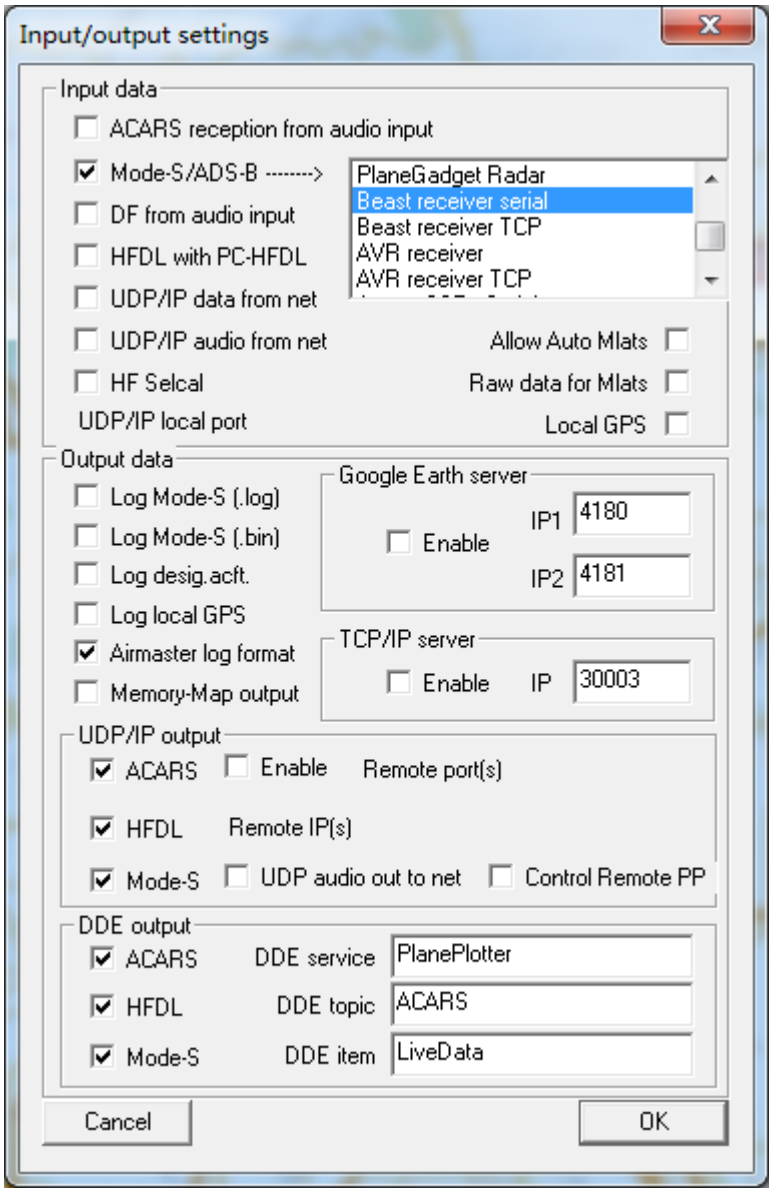
Done!

7. planeplotter ADS-B display software

In Options —> Mode-S Receiver —> Beast Receiver —> set serial comms port. Set port number and date rate 3000000.



In Options —> I/O setting
Set beast receiver serial as below



Process —>start. Done!