



## ADS-B Antenna Housing



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updated 29. 1. 2024 | published 29. 1. 2024

### Summary

ADS-B Antenna Housing - cheap ADS-B antenna for mounting indoors or outdoors.

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ADS-B Antenna Housing - cheap ADS-B antenna for mounting indoors or outdoors.



Here is an easy to make cover for your aluminum can 1090 MHz ADS-B antenna.

### **Print files included:**

- **Top** - Cone shaped part with internal threads to thread onto the base.
- **Base** - Outward facing threads to thread into the top. Hole included for running cable out.
- **Base Zip Tie Connector** - A base mount with slots to accommodate medium sized zip ties in order to mount it to a pipe.

### **Optional Prints:**

- **Base Plug Thick SMA** - A plug designed to be printed in TPU filament. Can squeeze into the Base and has room to affix a zip tie.
- **1 Inch Pipe Wall Mount Standoff v1** (not pictured, yet)- A simple pipe mount standoff. Designed for 1" PVC. Has a captive nut holder for a #10-24 Hex Nut and #10-24 x 3/4" Machine Screw. Hole for mounting to the wall is ~4mm.

### **Materials needed:**

- Standard coke can
- x3 - 3mm x 12mm Screws (at least 10-12mm length)
- 18AWG solid copper wire
- N-Type Female to SMA Male - SMA Cable (or other types, hole on base can accommodate thicker cable)
- Zip ties
- ADS-B Receiver or SDR receiver

### **Optional Materials** (for use with wall mounts):

- #10-24 x 3/4" Machine Screws
- #10-24 Hex Nuts
- #8 (?) Screws

### **Suggested tools:**

- Calipers
- Drill and drill bits
- Soldering iron and solder
- Scissors
- Knife
- Flathead Screwdriver

### **Suggested print settings:**

- 0.2mm Layer Height
- 0.4mm Nozzle
- Default Prusaslicer PETG settings
- For the threads on the Top and Base; I slowed the print speed in half.

- May need to reorient the Base Zip Tie Connector in your slicer

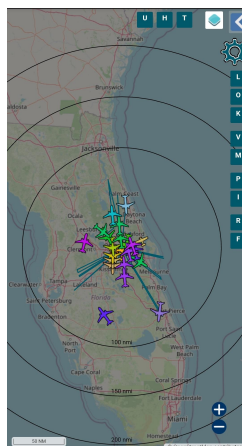
## Assembly Instructions:

1. Don't have instructions to make the antenna (yet); I suggest following the instructions found here: [Three Easy DIY Antennas for Beginners - FlightAware / ADS-B Flight Tracking - FlightAware Discussions](#)
2. Push can into Top part; it is a very snug fit. Get can just past the threads on the Top part.
3. Using the x3 - 3mm screws, screw the Base Zip Tie Connector onto the Base part.
4. Push cable through the hole in the base and bring it up to mate with the Top part.
5. Using the Base Connector part or the slot in the base, thread the Base into the Top while holding the Top Part steady. Stop when threads are flush.
6. Cut off the x4 tabs on the Top part.
7. If using the Base Plug, cut the little tab in the middle of the plug slot. Slip onto the SMA cable and slide it up to the base. Squish the plug and push into the Base Hole. Affix a zip tie if desired.
8. Feed zip ties through the slots and mount to pipe.

I used a female N-Type to SMA Male type SMA cable. It is connected to a Raspberry pi 3 and a Nooelec NESDR SMart v5.

## Coding:

SW Used: [GitHub - wiedehopf/tar1090: Provides an improved webinterface for use with ADS-B decoders readsb / dump1090-fa](#)



Eventually plan on doing a full write up for printing, manufacturing, assembly, and installing the SW - when time allows.

# Model files



## top.stl

☐ Print Qty: 1, Material: PETG or something for outdoors

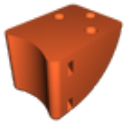
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## base.stl

☐ Print Qty: 1, Material: PETG or something for outdoors

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## base-zip-tie-connector.stl

☐ Print Qty: 1, Material: PETG or something for outdoors

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## base-plug-thick-sma.stl

☐ -Optional, Print Qty: 1, Material: TPU

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## 1-inch-pipe-wall-mount-standoff-v1.stl

☐ -Optional, Print Qty: X, Material: PETG or something for outdoors

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