**SLVARC Talk on ADS-B and AIS by Jeff Liebermann 08/06/2021**

<http://www.learnbydestroying.com/jeffl/ADSB%20Talk%202021-08-06/ADSB%20Talk%202021-08-06.htm>

**What is ADS-B?**Automatic Dependent Surveillance-Broadcast (ADS-B)

Virtual radar for tracking airplanes. First use to replace expensive ground based radar in Alaska.

**Tech**

1090 MHz ES (Extended Squitter ) Traffic only

978 MHz UAT (Universal Access Transceiver) Traffic and Weather

Protocols and technology:

<https://www.faa.gov/nextgen/programs/adsb/>

**FlightRadar24**

[https://www.flightradar24.com/37.17,-122/11](https://www.flightradar24.com/37.17%2C-122/11)

Web site to track airplanes.

My FlightRadar24 feeder status:

<http://192.168.11.60:8754>

You need to register with FlightRadar24 to get an ID, login, password, etc.

If you continuously feed data to FlightRadar24, the business class web site service is free.

**Virtual Radar Server**

<https://www.virtualradarserver.co.uk>

Use with FlightRadar24 firmware in Raspberry Pi and web browser to decode ADS/B packets.

What I hear with my FlightRadar24 receiver via VRS:

<http://127.0.0.1/VirtualRadar/desktop.html>

**FlightAware**

<https://flightaware.com>

Web site to track airplanes.

<https://flightaware.com/adsb/>

<https://flightaware.com/adsb/stats/user/JeffLiebermann>

You need to register with FlightRadar24 to get an ID, login, password, etc.

If you continuously feed data to FlightRadar24, the Enterprise class service is free.

What I hear with my FlightAware receiver:

<http://192.168.11.77/skyaware/>

**ADS-B receiver and decoder for Android smartphone**

<https://hiz.ch/index.php/home/adsb-receiver>

<https://play.google.com/store/apps/details?id=bs.Avare.ADSB>

<https://play.google.com/store/apps/details?id=bs.Avare.ADSB.Pro> $3.00

**AIS – Automatic Identification System**

<https://en.wikipedia.org/wiki/Automatic_identification_system>

Marine channels 87B (161.975 MHz) and 88B (162.025 MHz).

Uses 9600 bits/sec [Gaussian minimum shift keying](https://en.wikipedia.org/wiki/Gaussian_minimum-shift_keying) (GMSK) [modulation](https://en.wikipedia.org/wiki/Modulation) in a 25 kHz channel using the [high-level data link control](https://en.wikipedia.org/wiki/HDLC) (HDLC) packet protocol. Sound familiar?

**Tech**

AIS receivers

<https://www.google.com/search?q=AIS+receiver&tbm=isch>

**AIS vessel tracking web sites**

<https://www.marinetraffic.com>

<https://www.vesselfinder.com>

<https://www.myshiptracking.com>

**Local stations**

Santa Cruz (at UCSC)

<https://www.marinetraffic.com/en/ais/details/stations/3455>

Mt Umunhum (Actually Bonny Doon. Burned in CZU fire 08/20/2020)

<https://www.marinetraffic.com/en/ais/details/stations/112>