

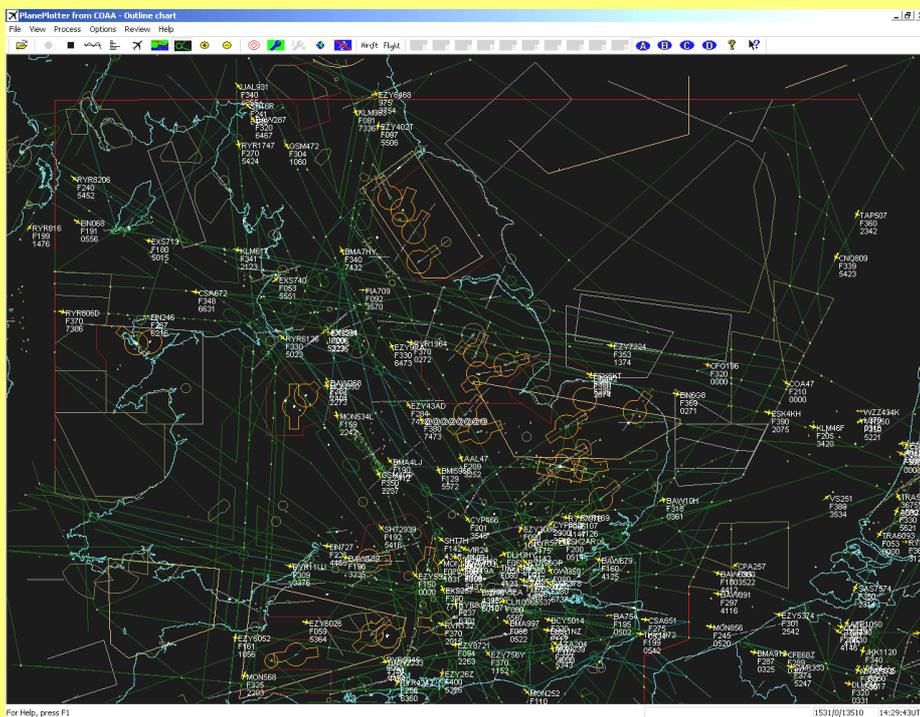
PlanePlotter



PlanePlotter receives and decodes live digital position reports from aircraft and plots them on a chart.

Using PlanePlotter, you can see a radar-like display of all those aircraft around you that are transmitting the appropriate digital messages including ACARS, ADS-B and HFDL.

Google Ads



PlanePlotter - Features

The animated screen grab from PlanePlotter (left) was kindly provided by John Locker.

Message display
PlanePlotter shows a table display of messages received and decoded from live aircraft transmissions.

Data saving
PlanePlotter archives all the digital data that it receives and decodes to a log file.

Chart display
PlanePlotter plots aircraft positions, altitudes and times decoded from the message traffic that it receives. These include

embedded position reports, AMDAR reports and ADS reports contained in ACARS messages, ADS-B position reports received by the Kinetic SBS1(tm) or AirNav System RadarBox(tm) Mode-S receivers, and position reports on HF using Charles Brain's PC-HFDL software. The plot can be superimposed on a suitable aeronautical chart that you have prepared, or PlanePlotter can download satellite imagery and plot the aircraft symbols on that. Where altitude information is available (eg Mode-S messages), you can select the data by altitude band to distinguish low level and high level traffic.

Google Earth server

If you are receiving Mode-S ADS-B position reports, PlanePlotter can interface to Google Earth to display aircraft positions over the Google Earth base map. It can even give you a dynamic real-time view from the flight deck of an aircraft that you designate.

Direction finding

PlanePlotter can determine and display the direction of any transmission using a simple passive antenna switch. This allows aircraft to be located even if they are not equipped with ACARS or Mode-S/ADS-B.

Input signals

PlanePlotter can decode ACARS messages, display the message content and plot any positions on a chart.

PlanePlotter can process and display Mode-S/ADS-B position reports captured by the Kinetic SBS1(tm), the AirNav Systems RadarBox(tm), the RxControl Mode-S receiver, the PlaneGadget Radar, the miniADSB, the microADBS and the FPGA Beast.

PlanePlotter can also work in conjunction with Charles Brain's PC-HFDL software (<http://www.chbrain.dircon.co.uk/pchfdl.html>) by automatically extracting position reports from the log file and plotting them in real time on the same chart display. PlanePlotter adds value by calculating course and heading from successive reports from the same aircraft and plotting the predicted position between reports (right).

PlanePlotter can drive a passive antenna switch and display the direction (QDM) of any aircraft voice transmission.

GPX overlays

PlanePlotter can display waypoints, tracks or routes over the current chart using data from a user-defined GPX format file.

Alerts

PlanePlotter can generate visible and audible alerts on detection of a specified registration, flight number or ADS identifier, on detection of any new aircraft, or on detection of an aircraft whose position is inside a user-defined Alert zone polygon.

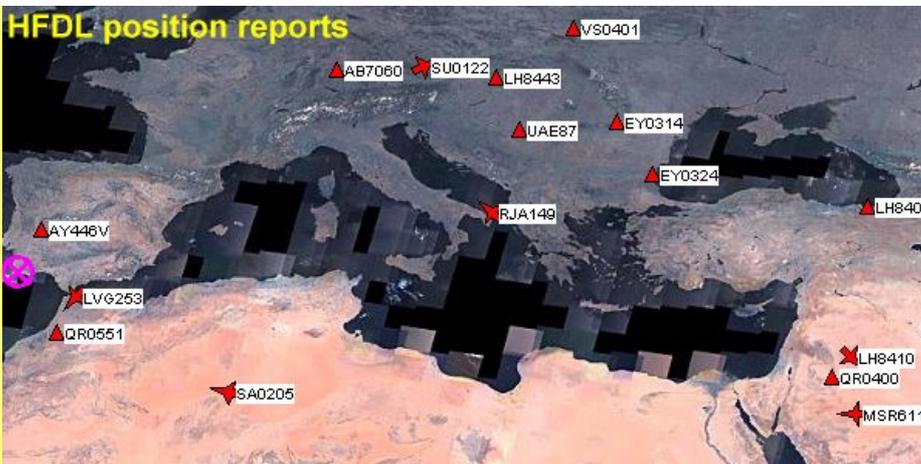
Memory-Map Navigator support

PlanePlotter can direct the Memory-Map Navigator program (www.memory-map.com) to display dynamic aircraft position symbols over its proprietary maps using data from either ACARS or Mode-S ADS-B (in conjunction with the SBS1 receiver).

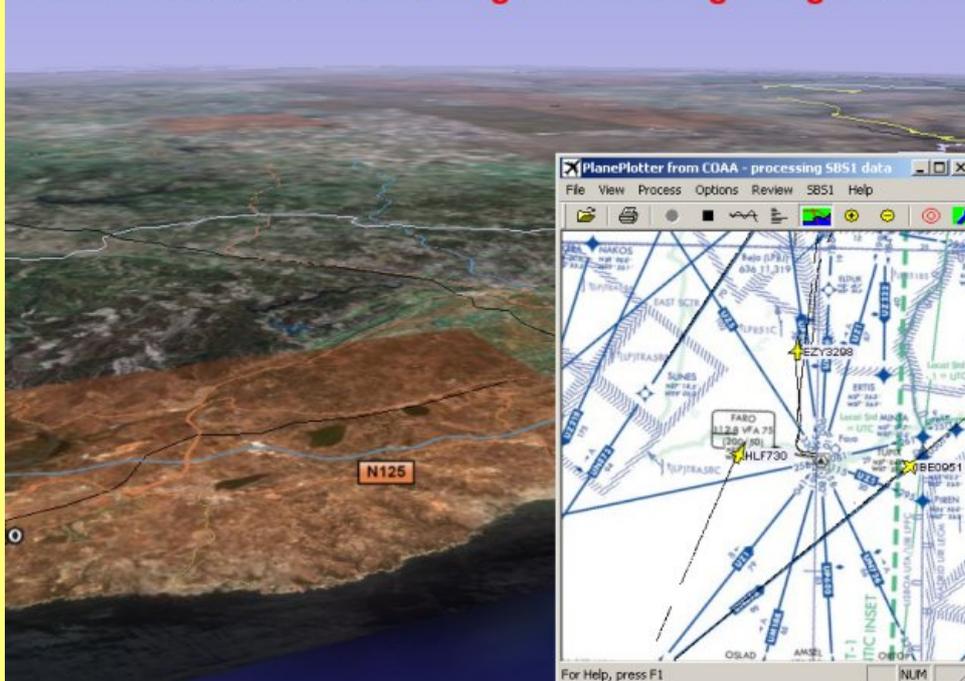
OLE/COM interface

You can access the position and other data for each aircraft known to PlanePlotter using a simple VB script or other OLE/COM capable program. You can use the same interface to update data held by PlanePlotter and to control the user interface.

HFDL position reports



PlanePlotter view from the flight deck using Google Earth



DDE access

You can access ACARS, HFDL and Mode-S messages received by PlanePlotter using DDE. This facility makes PlanePlotter an ideal front end for other ACARS software.

Peer-to-peer output

PlanePlotter can send its message data to another remote instance of PlanePlotter using UDP/IP datagrams. You can send ACARS messages, HFDL messages, Mode-S (ADS-B) messages and Direction finding measurements so that another computer displays the same data as your computer.

Peer-to-peer audio

PlanePlotter can send audio to another remote instance of PlanePlotter using UDP/IP datagrams. This means that a remote user can hear the ATC instructions that you are hearing on your local air band receiver.

Internet sharing

PlanePlotter can send its message data to a shared server so that messages that you have received locally (ACARS, HFDL or ADS-B), can be seen by other PlanePlotter users in different areas. In this way, each user enjoys the reception coverage of all the cooperating users together. Consult the software licence for the special terms and conditions applicable to this feature.

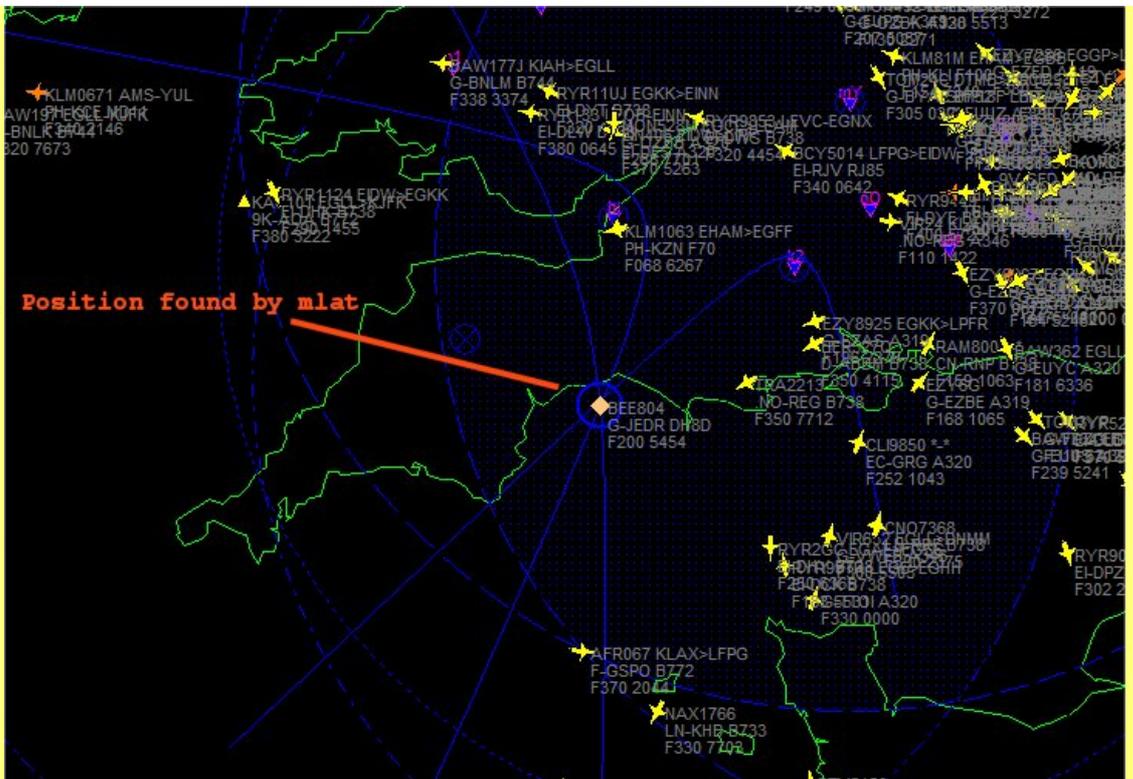
HF selcal decoding

PlanePlotter can decode HF selcal tones that can be used to identify an aircraft communicating on the HF air bands. No position reports are carried by HF selcal but it provides yet another means of monitoring aircraft that PlanePlotter can perform.

Report generator
PlanePlotter can generate a text file containing user-defined data fields for aircraft received during the session.

Movie generator
PlanePlotter can generate an AVI movie file showing a speeded up version of the display window. You can review aircraft movements, including those received by sharing, at a later date by playing the AVI file in, for example, Windows Media Player.

Graphical file output
PlanePlotter can generate a JPG graphic file of the current



window at regular intervals. You can use the same file repeatedly (to upload it to a web page, for example) or a succession of sequential file names for later processing. It can also generate a time-lapse AVO movie file of any of the display screens.

Localizing aircraft without positions

PlanePlotter can even give you an idea of where aircraft are that are not radiating positions. By combining the information from all the sharers who are receiving the aircraft, Planeplotter can shade in the area on the chart in which the unknown is located.

Automatic registration from 24-bit hex code

Although Mode-S ADS-B messages do not include the aircraft registration letters, PlanePlotter can determine the registration letters algorithmically, from the 24-bit hex address, for most aircraft registered in France, Germany, Belgium, Denmark, Finland, Switzerland, Portugal, Greece, Turkey, Romania, Yugoslavia, Russia, South Africa, Australia, Canada and United States.



Multilateration of aircraft without ADS-B

Some aircraft transmit Mode-S messages without transmitting the ADS-B formats that include position. Provided that there are sufficient suitable users receiving such an aircraft, PlanePlotter can determine the position using the arrival time of the Mode-S transmissions at each user. In the diagram at right, the blue lines are hyperbolic curves based on each pair of participating users. The intersection of the hyperbolae indicates the position of the selected aircraft. See below for more details on using this feature. Note that the special licence conditions applicable to the Internet sharing feature, also apply to Multilateration.

SMS Alerts

You can configure PlanePlotter to send details of aircraft that trigger your specified alerts, to a mobile phone number as a text message. This feature requires you to specify your mobile phone number and to buy message credits for the texts that you want to receive using [this link](#).

Shell Alerts

You can configure PlanePlotter to run any batch file or application whenever an Alert occurs. For example, you can make it send an

email to a chosen address whenever a user-defined alert occurs..

My Sky View

PlanePlotter is able to display a perspective view of the sky, as seen from your home location. It allows you to make positive identification of aircraft contrails during the day and of aircraft strobe lights at night. The daytime view shows the position of the Sun and Moon and the nighttime view shows the Moon, bright stars and planets for reference purposes.

Manual Position Reports

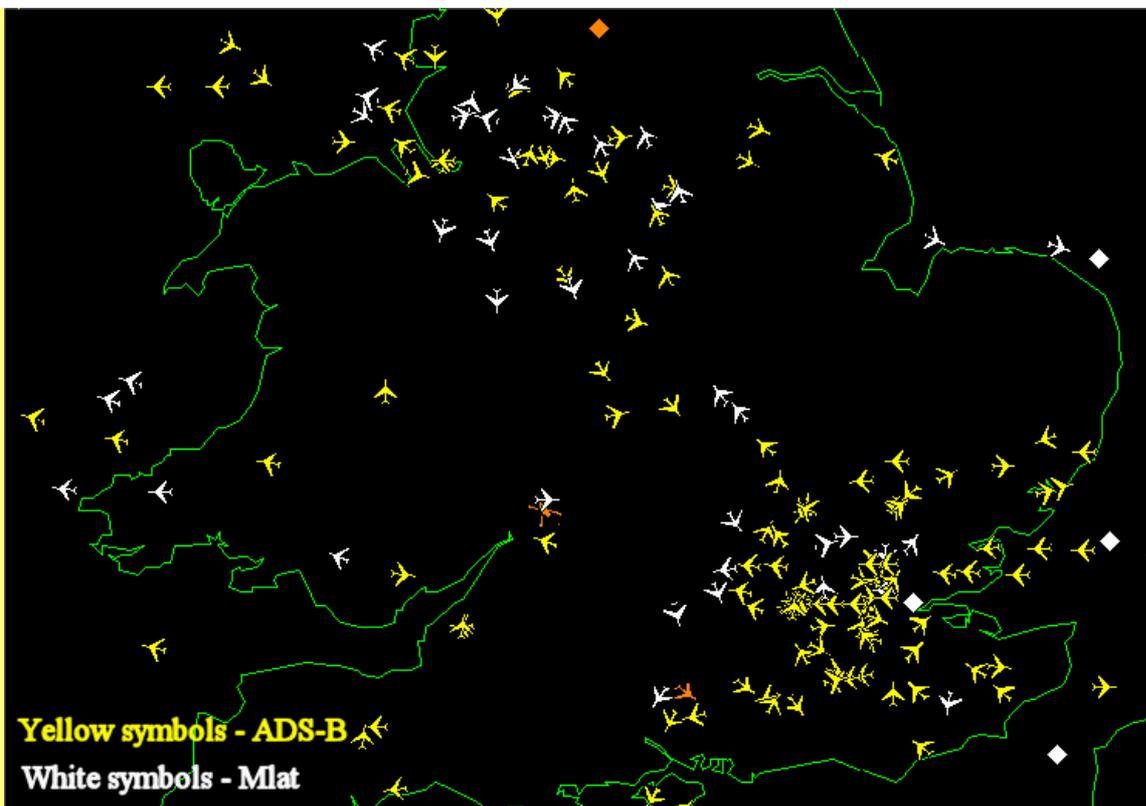
You can insert position reports that you have heard (eg reports from oceanic crossings picked up on HF) and PlanePlotter will plot the aircraft on the chart and, if the format includes the next waypoint, will calculate its ongoing track between the waypoints.

Hypersharing

PlanePlotter sharing normally updates once per minute. Hypersharing increases the refresh rate to once per second for a designated aircraft, depending on the availability of suitable Ground Stations. Hypersharing is only available to Master Users.

NoniMapView support

PlanePlotter can read maps generated by NoniMapView including satellite images and roads from Google, Yahoo, OpenStreetMaps and Virtual Earth.



Multiple symbols

PlanePlotter can display different aircraft symbols for different aircraft or different aircraft types.

Automatic Multilateration

PlanePlotter can perform automatic Multilateration attempts when not otherwise in use. In this way, large numbers of "position-less" targets can be harvested. The image (right) shows how many more aircraft are available with Mlat (white symbols) than simply with ADS-B alone (yellow symbols).

Reporting features

PlanePlotter provides a number of reporting features including an optional daily first/last SQLite database.

Customised data display

PlanePlotter displays aircraft data in a floating window using user-defined layout (below).

Local GPS input

PlanePlotter can process serial (or virtual serial) data from a local GPS receiver to correct the Home location and, if desired, to centre the chart/outline on the current GPS position or plot the current GPS position as an aircraft symbol.

Flight Deck View

PlanePlotter can display the currently selected chart in a perspective view as seen from the flight deck of a selected aircraft. An example can be seen further down this page.

Vignette View

PlanePlotter can display the an extra window showing a small part of the main chart or outline at an expanded scale (see example below).

Profile View

PlanePlotter can display the an extra window showing the profile (vertical history) of selected flights. This can be particularly illuminating for non-ADS-B aircraft.

Beamfinder, Beamfinder Plus and Beamfinder Plus S

PlanePlotter can use the pings from known radar stations to calibrate the rotating beam and to use that information to locate aircraft not transmitting position. Beamfinder Plus can even locate an aircraft without Mode-S transponder. The animated screen grab (right) shows a designated aircraft being picked out by the beams from up to six Mode-A/C radar sites. In

the example, the Gulfstream was not transmitting position but the Beamfinder Plus technique allows it to be tracked from the Mode-A/C radar returns.

Signal strength

PlanePlotter can display the received signal strength for each aircraft if your receiver is providing that information. The information can be displayed numerically or graphically, where the symbol size is related to the signal strength. The ability to sort by signal strength makes it easy to see which aircraft are closest to you.

Remote control

If you have two instances of PlanePlotter running on the same LAN you can now display the PP screen of one machine on the other instance of PP and remotely control the displays and settings.

Conditional expressions

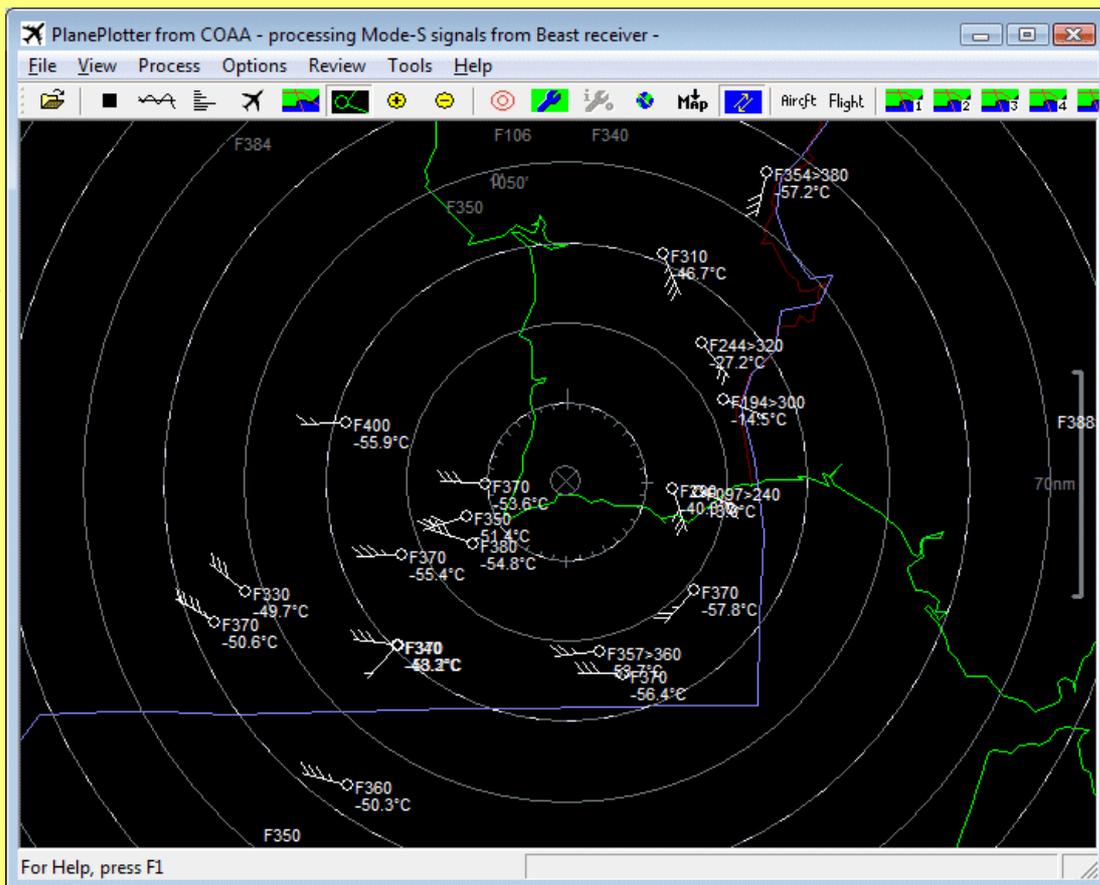
You have complete control over which aircraft are displayed, listed, logged or alerted using logical expressions like: *flight number equal to "BAW%" and course greater than 90 and course less than 270 and vertical speed less than 0* which would display only British Airways flights that were descending on a southerly heading.

Wind display

If you are located in an area where the aircraft are being interrogated to give the relevant information in their Mode-S replies, PlanePlotter can display a chart or outline (see right) of the upper winds as reported by the aircraft within range.

ATC sector frequencies

You can define a set of ATC sectors with their horizontal and vertical boundaries and communications frequencies. If you designate an aircraft and it is found to be inside one or more of the defined sector boundaries, the corresponding sector frequencies will be displayed in the status bar. If you have an SBS3 receiver



connected via a network (not via USB), then PlanePlotter will tune the available SBS3 SDRs to the frequencies given so that you can automatically monitor communications with the designated aircraft as it moves from sector to sector.

Company flags

If you have a collection of company or type flags, PlanePlotter can display those in the aircraft data windows. You will need to identify the flag to be used in the SQB database for each aircraft.

Requirements to run PlanePlotter

- Windows PC running WinXP/Vista/Win7/Win8/Win10
- For ACARS : VHF receiver tuned to an appropriate ACARS channel in AM mode and Aircraft within VHF range that are transmitting the messages and a compatible sound card
- For Mode-S/ADS-B :
 - [Kinetic SBS1 series and SBS3 Mode-S receivers.](#)
 - [AirNav Systems RadarBox\(tm\) receiver system.](#)
 - [PlaneGadget Radar](#) (No longer in production).
 - [Aurora SSRx receiver.](#)
 - [Mode-S Beast.](#)
 - [miniADSB and microADSB.](#)
 - [RxControl Mode-S receiver system \(kit built\).](#)
 - [GNS-5890 ADS-B receiver stick.](#)
 - [RTL2832 DVB-T dongle with RTL1090 utility \(by jetvision.de\).](#)
- For real-time flight deck views : Google Earth software
- For direction finding : DF antenna switch and a compatible sound card

Reg.	Flg.	Flight	Type	Route
G-NIKO		TCX76TG	A321	
EI-DWL		RYR8HA	B738	GCRR-EGBB
EC-JOY			CRJ2	
D-AHFU			B738	
EI-DLI		RYR8838	B738	LIME-GCTS
EI-EMB			B738	
PH-TFA		TFL162	B738	
HB-IOW		BER384E	A320	
EC-KLI		VLG3001	A320	
F-GZCG		AFR766	A332	
EI-DHP			B738	
EC-KEV			A319	
HB-IOP		BER958D	A320	
EC-HGO			B738	
EI-DCC			B738	
EI-DCE		RYR6208	B738	
EC-JNC		JKK8627	A320	
G-BYAO			B752	
EI-EBV		RYR4009	B738	GMMX-LEZL
EI-EKW		RYR8178	B738	EBCI-GCTS
CN-RNM			B737	
D-ABBI			B738	
G-MRJK		MON429	A320	
EI-DCB		RYR8132	B738	EGSS-GCLP
G-THOP		TOM485	B733	GMMX-EGCC
OY-PSA		PRI636	B738	
EC-GXU		JKK5115	MD83	
G-EZBI		EZY7870	A319	
I-EEZE		ISS7403	A320	
EC-JKJ		IBE372M	A319	
EC-IIZ		JKK5009	A320	
EC-ILR			A320	
D-ABBF		BER341J	B738	
.NO-REG				
SE-DZV			B738	
EC-JQP			A320	
EC-LEI		IBE1541	A319	
G-RJXM		BMR375Q	E145	
EI-EDS		EIN778	A320	EIDW-GCRR
EI-EMM		RYR6397	B738	
N948AC		AVA011	A332	
PH-BTA			B734	
CS-TTO		TAP839	A319	
OO-JAR		JAF178	B737	
G-FLBB		BEE6BX	DH8D	
G-BVWZ			PA32	
G-SJES		GSJES	HMNY	
PH-MCS			MD11	
OE-LEO		NLY7612	A320	
G-BUSK		SHT6R	A320	EGLL-EGPF
EI-EMN		RYR5GA	B738	LEGE-LEMD
PH-MCL			B763	
EI-IXH		AZA060	A321	
CS-TOI			A332	
CS-TNU			A320	

- For HFDDL plotting : PC-HFDDL software (<http://www.chbrain.dircon.co.uk/pchfdl.html>) and an HF SSB receiver
- For HF selcal decoding : HF receiver with USB mode and fine tuning steps and a compatible sound card
- To share local ATC calls : VHF receiver with AM mode tuned to your local ATC frequencies and a compatible sound card
- Some of the advanced features in PlanePlotter are relatively complex and may involve unfamiliar concepts. There is an implicit requirement that PlanePlotter users have some familiarity with routine Windows operations, file manipulation etc., that they understand something about firewalls, routers and networks, that they are able to find their own latitude and longitude, and that they are prepared to spend time diligently studying the Help file to understand how to get the best out of these advanced features.

Download PlanePlotter

PlanePlotter can be downloaded freely and comes in a self-extracting EXE file which automatically installs itself. The download file size is a modest 4.5 Mb.

- [Download PlanePlotter \(version 6.4.3.5\) for Win2k, XP, Vista, Win7 and Win8/8.1.](#)
- [Télécharger PlanePlotter en français \(Version 6.3.9.2fr\) pour Win2k, XP, Vista, Win7 et Win8.](#)

Registration of PlanePlotter

PlanePlotter can be downloaded and used free of charge for 21 days to process and display data from your own receiver. To display other users' data using the Internet sharing feature, or to continue to use the program after 21 days requires payment of the licence fee. Payment can be done swiftly and securely on-line and costs only Euro ?25 (plus VAT for EU residents) for personal use. A higher fee applies to professional or commercial use of PlanePlotter. We strongly recommend that you ensure that PlanePlotter performs to your satisfaction *before* registering.

- [Register PlanePlotter Now.](#)

Multilateration in PlanePlotter

Multilateration to locate Mode-S aircraft that are not transmitting ADS-B position reports, is a premium service within PlanePlotter. Only "Master Users" of PlanePlotter can initiate multilateration requests.

Users who are regular raw data providers are automatically Master Users. If you have a suitable receiver and if you have set up your system to provide raw data to the multilateration scheme and your system has been validated and you make it generally available for other users' benefit, then in return for your contributing raw data, you are automatically entitled to Master User status and there is no additional fee for using this

feature. Note that providing raw data is not the same as the routine Internet sharing of aircraft data between users and very occasional or intermittent provision of raw data does not qualify. Only regular raw data providers have automatic Master User status.

If you are a PlanePlotter licence holder but you cannot contribute raw data regularly, you can request temporary Master User status for an experimental period of 21 days using the link below. If you request the 21 day trial, you are not committed to paying any fee unless you want to continue to use it after the end of 21 days. After that, you may choose to pay a small annual fee of Euro 12.00 (plus VAT in EU countries) to continue as a Master User. To request your 21 day free trial, please follow the link below.

- [Request free 21 day Master User trial or extend Master User status](#)

Click [here](#) for more information on Multilateration in PlanePlotter.

New ! - PlanePlotter Mobile

PlanePlotter mobile is a PlanePlotter viewing companion for your Android 4+ device. Transform your mobile device into a virtual radar screen, with plane positions updated in real time.

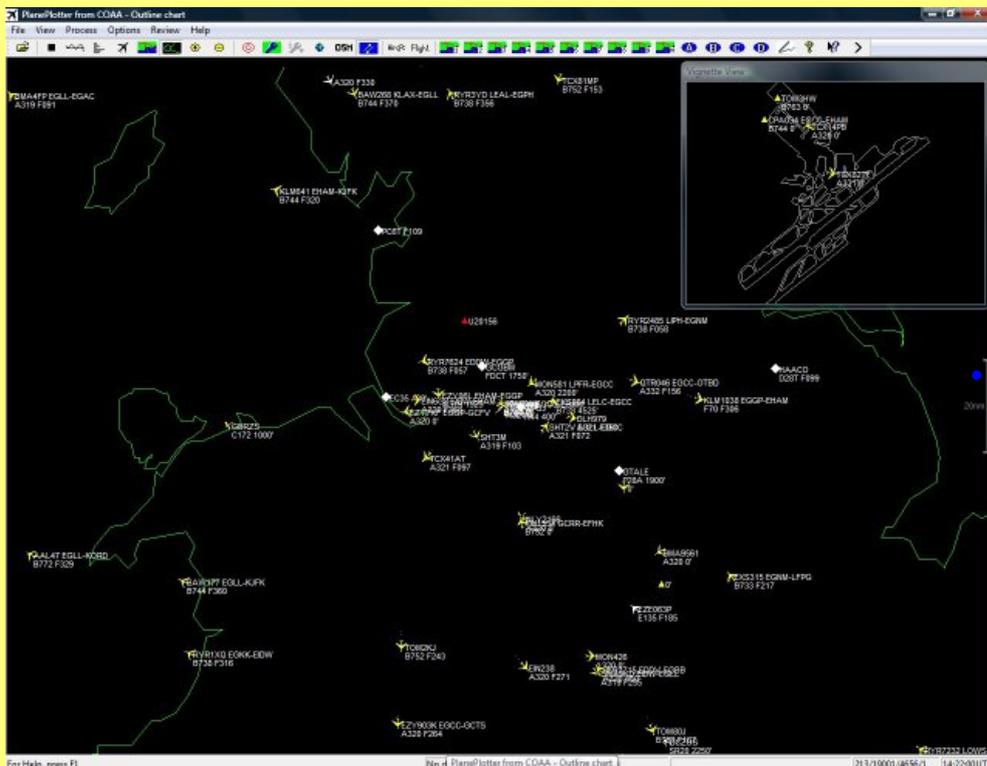
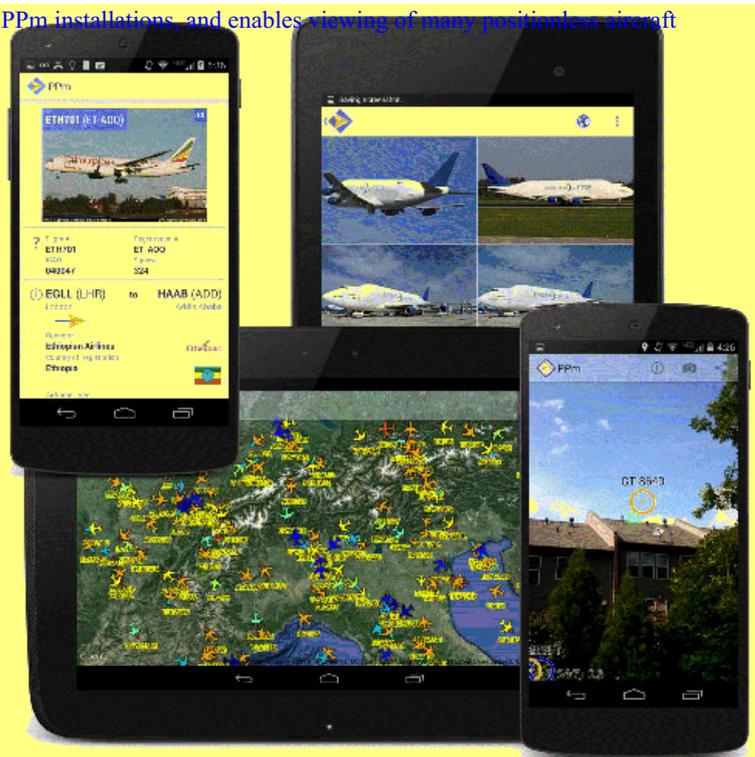
- Map view: virtual radar screen of live plane positions
- Table View: full plane message information from COAA PP server
- SkyAR: identify overhead planes by pointing your device's camera at them
- Info: aircraft message information cross-referenced with local and web resources
- Gallery: access a gallery of plane photos from a variety of web sources
- Locations: save and restore your favourite world locations

The PP Master User (MUs) licence is valid for both PP and PPM installations, and enables viewing of many positionless aircraft (e.g. military, private). PlanePlotter mobile enables you to customize its behaviour and appearance:

- Plane marker colour and style
- Mlat plane marker highlight colour (for Master Users)
- Plane text fields (Flight, Reg, ICAO, etc.)
- Add aircraft silhouettes and operator flags
- Optional airport marker display
- Select from a range of map types
- Multiple map overlays (weather, airspaces)
- **PlanePlotter Mobile.**

Support for PlanePlotter users

- You can find a list of support information, animated guides and much else on this page. [PlanePlotter Support Page.](#)
- David Taylor has orchestrated an invaluable wikipedia for PlanePlotter that you will find here. [PlanePlotter wikipedia.](#)
- There is a lively user group on Yahoo groups where you can find useful files, charts, utilities and answers to a wide range of questions. [PlanePlotter user group.](#)
- The ManTMA group maintains an invaluable resource for PlanePlotter users at www.mantma.co.uk/pp_support.html.
- Animated tutorials by Nic Storey on various aspects of setting up PlanePlotter [Nic's animated tutorials on PlanePlotter.](#)



Plug-ins for PlanePlotter

CombiPlotter provides you with a low-overhead means of displaying the aircraft data known to PlanePlotter on another chart view. It will plot simultaneous data from ShipPlotter, PlanePlotter, OrbcommPlotter and SondeMonitor on a single chart.

- **CombiPlotter.**

PP2GM shows you your PlanePlotter aircraft on a Google-Map display. The late, and sorely missed, Curt Deegan exercised his skill with scripting languages to extract the current aircraft displayed on the PlanePlotter chart and to display them instead on a local Google-Map presentation. This add on requires a recent version of PlanePlotter and an Internet connection for Google-Maps but

it does not require a web server.

- **Curt's PP2GM.**

FindFlight is another of the late Curt Deegan's outstanding scripts. FindFlight uses a flight number to retrieve flight and airport details from Internet on-line databases. PP designated plane feature used to select which flight to look up and can add the result to the PP database Route field. PP Route time stamp used to update old routes. Allows changing options while running. Will look up and set reg.num. and a/c type. Manual, automatic, and unattended modes. Includes AutoZoom function. Now with mouse-over pop-up route info display.

- **Curt's FindFlight.**

PP Outline Navigator contributed by Keith, a new add-on author, is a simple one click navigation toolbox that enables you to pan, zoom save and restore in Outline View with just one click. NOTES - requires .NET Framework version 2 (or possibly the latest version 3.5 to be safe), also PP must be running BEFORE you run this executable!

- [Keith's PP Outline Navigator](#).

PPDetails written by Ian Hubbard, pops up one or more information windows on selected aircraft in PlanePlotter.

- [Ian's PPDetails](#).

Disclaimer

There are considerable variations in the legislation concerning radio reception in the different administrations around the world. It is your responsibility to determine whether or not your local administration permits the reception of radio signals from aircraft. It is specifically forbidden to use PlanePlotter for any illegal purpose whatsoever. The existence and the availability of PlanePlotter is not to be construed as an incitement to commit any unlawful act. It is for use only in those states and regions where such use is permitted.

The peer-to-peer data exchanges are to be used only where the users at both ends of the link are situated in jurisdictions where such use is permitted.

The Internet sharing and multilateration features are to be regarded as experimental and may be withdrawn at any time.

If you use PlanePlotter on board your own aircraft you must understand that, while PlanePlotter may provide you with some potentially useful information about some of the aircraft in your vicinity, COAA does not make any warranties whatsoever that PlanePlotter is fit or appropriate for any application, including but not limited to, applications where the safety of life is at stake. On the contrary, your primary means of navigation, collision avoidance and airmanship in general must place no reliance whatsoever on PlanePlotter or any of the data that it generates. Not all aircraft carry Mode-S equipment; not all aircraft that carry it can be relied upon to have it operational; the radio receiver to which PlanePlotter is connected may not be delivering all messages in a decodable form; PlanePlotter may not decode or display messages correctly. PlanePlotter code is reliability tested to an extent that is adequate for entertainment and educational use but is neither warranted nor tested for any operational use whatsoever.

Your privacy on this web site

We use third-party advertising companies to serve ads when you visit this website. These companies may use information (not including your name, address, email address or telephone number) about your visits to this and other websites in order to provide advertisements about goods and services of interest to you. If you would like more information about this practice and would like to know your options in relation to not having this information used by these companies, click [here](#).

Contact us: support@coaa.co.uk

PlanePlotter PAD file [planeplotterpad.xml](#)