PilotCharts User Manual

1. Introduction

PilotCharts is a single-screen VFR moving map. It shows your live GPS position as a rotating plane marker over an OpenStreetMap-based map with an aeronautical chart overlay (airspaces, navaids, obstacles, airports, reporting points). Everything else (airport details, routes, weather, your own files and notes) opens as a panel on top of that one map, so you never leave it.

It is built for pilots who fly VFR and want their chart, their documents and their flight plan in one place, online or offline.

> ⚠ **Safety notice**
>
> PilotCharts is an aid to situational awareness. Data may be incomplete, out of date or wrong. Traffic, terrain and weather information is advisory only and is not for collision avoidance, terrain clearance or navigation. Always check official sources (AIP, NOTAMs, official charts) before and during flight.

How this manual is organised

Sections 4 to 10 cover the map and airports, 11 and 12 how to bring in files and plan routes, 13 to 18 the other tools, 19 to 22 offline use, sync, simulators and settings, and 23 to 25 languages, privacy and troubleshooting.

2. Getting started

Welcome popup

On the first launch a popup asks for:

- **Language:** automatic (follows the device) or any supported language.
- **Theme:** automatic, light or dark.
- **Map type:** the base map you want to start with.

- **Anonymous usage statistics:** off until you allow it. You can change it later in Settings.

Language, theme and map type apply immediately so you can preview them. Tap **Get started** to finish.

Location permission

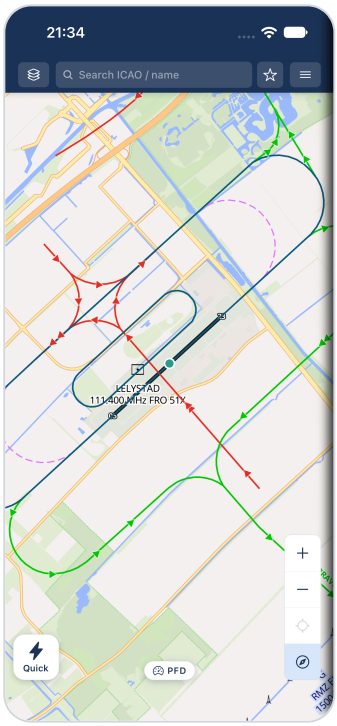
PilotCharts needs your location to show your position. Allow it when asked. Without it the map still works, but there is no plane marker and no follow mode.

Supported devices

iPhone, iPad and Apple-silicon Macs (the iPad app runs on the Mac). Android is also supported.

A tour of the screen

- **Header bar (top):** layers, themes, airport search in the centre, favorites, and the main menu on the right.
- **Map:** your position, airports, airspaces and everything you toggled on.
- **Map controls:** zoom buttons and the *center on my location* button, in a corner you can choose.
- **Quick actions rail:** the **Quick** handle on the edge of the screen (left by default) opens a column of one-tap buttons (section 4).
- **Bottom cockpit panel:** flight instruments (section 15), which you can collapse or hide.
- **Side panels:** airport, routes, library, notepad, planes, settings and others slide in from the right.



Download your area first

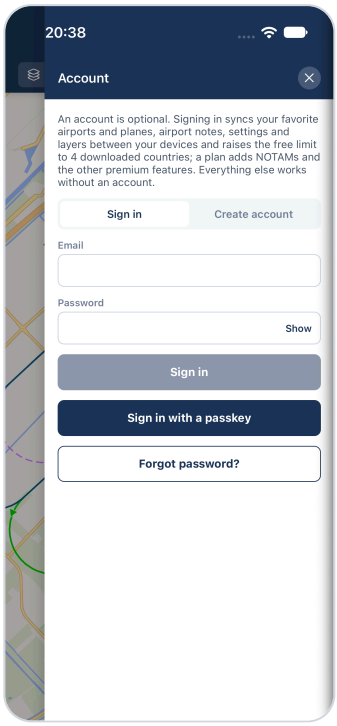
For the best experience, open **Menu > Data** and download the countries you fly in (section 19).

3. Account

An account is optional for the basic map, but it is needed for NOTAMs and for syncing your data between devices.

Create an account

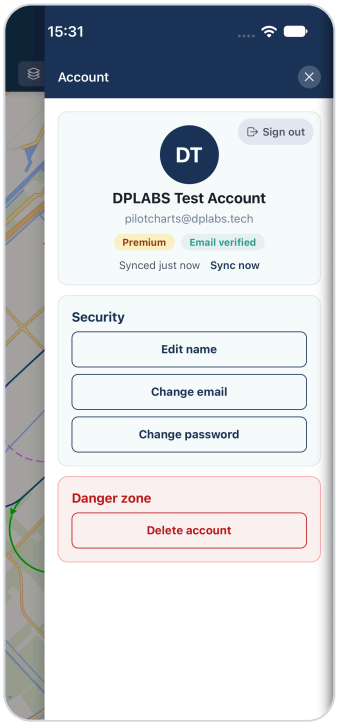
Open **Menu > Account**, choose **Create account** and enter your first and last name, email and a password of at least 10 characters (typed twice). Confirm your email with the link we send you, then tap **I've confirmed my email** in the app.

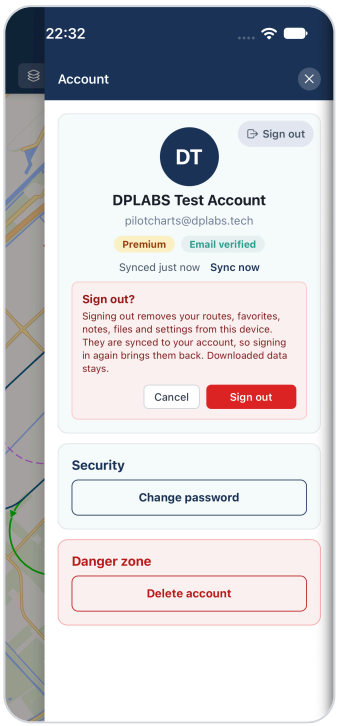


Sign in and out

Use the **Sign in** tab with your email and password. **Forgot password?** sends a reset link by email; the reset itself happens on the website. **Sign out** (top corner of the Account panel) asks for confirmation.

> ⚠ **Sign-out removes your data from the device**
>
> Signing out removes your routes, notes, files, favorites, settings and Notepad notes from this device, so the next person does not see them. Anything already synced stays on your account and comes back when you sign in again. If some changes have not been synced yet, the confirmation says so and the button reads **Sign out and lose changes**. Downloaded country data and offline maps are kept.





Change your name or email

In the **Security** group of the Account panel, **Edit name** changes your first and last name; the new name shows at once.

Change email asks for the new address and your password (and, with two-factor authentication on, a code, see below), then sends a confirmation link to the new address. Until you open that link the Account panel shows **Waiting for confirmation** with the new address and your current email keeps working for signing in. Opening the link replaces the email and marks it as verified. We also write to your previous address when you ask for the change and when it is done, so a change you did not make does not go unnoticed. If you ask again, the newest link replaces the previous one. An address that already belongs to another account is refused. The Account panel reads the account again when you open **Change email**, so the new address appears there after you confirmed it; the panel header may show the old one until then.

Change password

In the Account panel choose **Change password** and enter the new password twice. Your other devices are signed out.

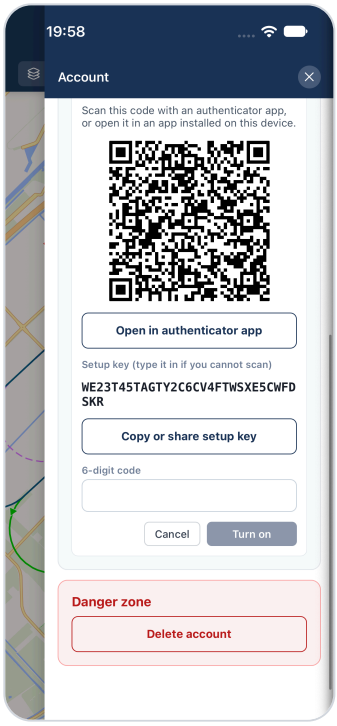
Two-factor authentication and passkeys

Two-factor authentication adds a second step to signing in: besides your password, the app asks for a 6-digit code from an authenticator app on your phone (for example the one built into your password manager, Google Authenticator or Microsoft Authenticator). It is optional and works the same on phones and tablets. You need an internet connection to turn it on or off and to sign in.

Turn it on

1. Open the main menu, choose **Account** and, in the **Security** group, find the **Two-factor authentication** card. Tap **Turn on two-factor authentication**.
2. Enter your password and tap **Continue**. The app tells you that your other devices will be signed out when you turn it on; you sign in again there with a code.
3. Add the account to your authenticator app in one of three ways:
   - scan the QR code with the authenticator app (on another device or from a screenshot);
   - tap **Open in authenticator app** to hand the account to an authenticator app installed on this device;
   - tap **Copy or share setup key**, or type the **Setup key (type it in if you cannot scan)** into the app by hand.
4. Type the 6-digit code that the authenticator app shows into **6-digit code** and tap **Turn on**.
5. The app now shows ten **recovery codes**. Each one lets you sign in once if you lose your authenticator app. They are shown only now and the app does not store them: tap **Copy or share codes** to save them in a safe place (a password manager, or print them), then tap **I saved them**.

Turning it on signs you out of every other device. On this device you stay signed in.



Signing in with a code

After your email and password, a **Two-factor authentication** step appears. Type the 6-digit code from your authenticator app and tap **Verify**. If you cannot use the app, tap **Use a recovery code instead** and type one of your recovery codes (like `abcde-fghjk`); each recovery code works only once. **Back to sign in** starts over; the step also expires after a few minutes, and you then enter your email and password again. Staying signed in on a device never asks for a code: only a new sign-in does.

Turn it off

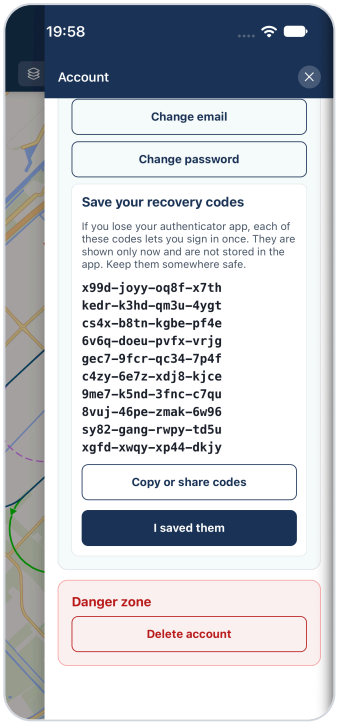
In the **Security** group, tap **Turn off two-factor authentication**, enter your password and a current code (or a recovery code) and tap **Turn off**.

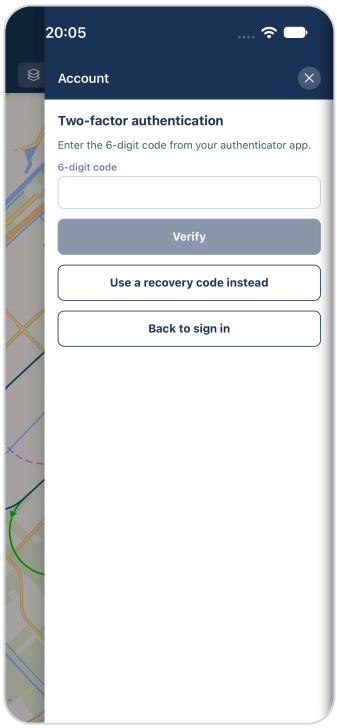
Codes for sensitive changes

With two-factor authentication on, **Change email** and **Delete account** also ask for a code (from your authenticator app, or a recovery code), after your password. Removing a passkey asks for it too.

If you lose your authenticator app and your recovery codes

Use **Forgot password?** on the sign-in form: resetting the password through the link we email you also turns two-factor authentication off, and you can turn it on again afterwards.





Passkeys

A passkey lets you sign in with your fingerprint, your face or your screen lock instead of typing a password. The passkey stays on your device, or in your password manager or cloud keychain (for example iCloud Keychain or Google Password Manager), so it can be available on your other devices too. Passkeys work on phones and tablets with a recent system (iOS 15 or later, Android 9 or later). Where this device does not

support them, the passkey buttons do not appear. You need an internet connection to add, rename, delete or use a passkey.

A passkey is an alternative to your password: when you sign in with one, the app does not ask for a two-factor code. Your password keeps working, so a passkey never locks you out.

Add a passkey

1. Open the main menu, choose **Account** and, in the **Security** group, find the **Passkeys** card. Tap **Add a passkey**.
2. Enter your password. If you have two-factor authentication on, also enter a code from your authenticator app (or a recovery code). You can also type a **Name (optional)** such as "My iPhone"; if you leave it empty the passkey is named after the device.
3. Tap **Create passkey**. Your device shows its own sheet; confirm with your fingerprint, face or screen lock. If you close the sheet, nothing is added.

Sign in with a passkey

On the **Sign in** tab, tap **Sign in with a passkey**. You do not have to type your email: choose the passkey on the sheet your device shows and confirm. You are signed in at once.

Your passkeys

Each passkey in the card shows its name, when it was created and when it was last used, and a badge: **Synced** means it can be used from your other devices through your password manager or cloud keychain, **This device only** means it exists only on this device or on a security key. Tap the pencil to rename a passkey (tick to save, cross to cancel). Tap the bin to delete it: enter your password (and, with two-factor authentication on, a code from your authenticator app or a recovery code) and confirm. You can have up to 20 passkeys.

If you lose access

Use **Forgot password?** on the sign-in form and follow the email we send you. Resetting your password also removes all your passkeys, and you can add new ones afterwards.

Security emails

To make a takeover easy to notice, we email the address of your account when something about its security changes: a password reset or change, a request to change the email address (and, to the old address, its completion), two-factor authentication turned on or off, a passkey added or removed, and the deletion of the account. If it was you, there is nothing to do. If it was not, reset your password right away from the sign-in screen. The same emails are sent if our team has to turn off your two-factor authentication or remove your passkeys because you lost access.

Delete account

In the **Danger zone** enter your password (and, with two-factor authentication on, a code) and confirm. The account and the files stored for it on our servers are deleted; data already on this device stays, but it is no longer synced.

Offline

If you start the app without a connection while signed in, you stay signed in.

4. The map

Your position and the plane marker

The plane marker shows your GPS position and rotates with your heading. The map follows it. A compass ring can be drawn around the plane (it is off by default; switch it on under **Menu > Map settings > Base map & aircraft**): a scale with a tick every 10°, the letters **N**, **E**, **S**, **W** and the headings 03, 06, 12, 15, 21, 24, 30 and 33 (tens of degrees). The ring turns with the map so **N** always points to true north, and the text always stays upright. It does not react to taps, so the map stays usable under it. To pick another aircraft icon or colour, or to show or hide the ring, see section 8.



Following and centering

- The camera follows you at a zoom level you can set in Settings (12 by default).
- Pan or zoom the map and it stops following. Tap the **center on my location** button to follow again.
- **Map orientation:** north up (default) or heading up, in Settings.

Zoom and controls

Use pinch gestures or the **+** / **-** buttons. The control group can be moved to any corner in Settings.

Tapping things on the map

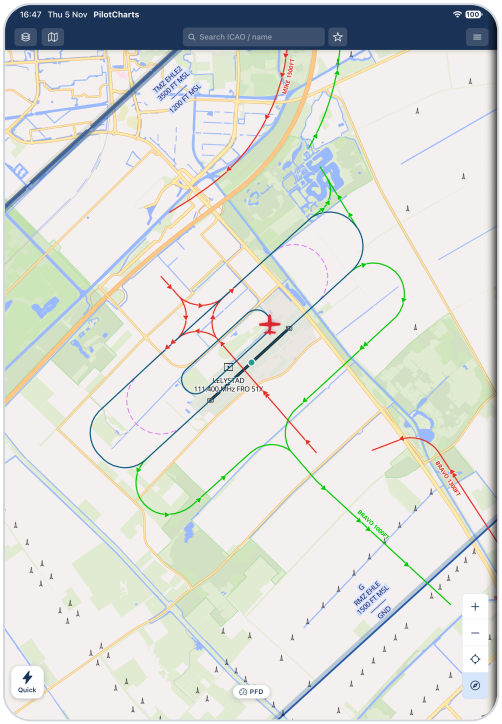
- **Airports:** tap the dot to open the airport panel (section 9).
- **Airspaces:** a popup shows name, class, limits and, when available, NOTAM status (section 7).
- **Reporting points, navaids, obstacles, model airfields, hang gliding sites, hotspots:** a popup with its details.
- **Aircraft (live traffic):** opens the Planes panel (section 16).
- **Long-press a bare spot:** opens **Spot details** for that point: an **Airspace** tab listing the airspaces there and the ground elevation, and a **Weather** tab with the forecast for that point (section 7). While editing a route it adds a waypoint instead (section 12).

Flight timer

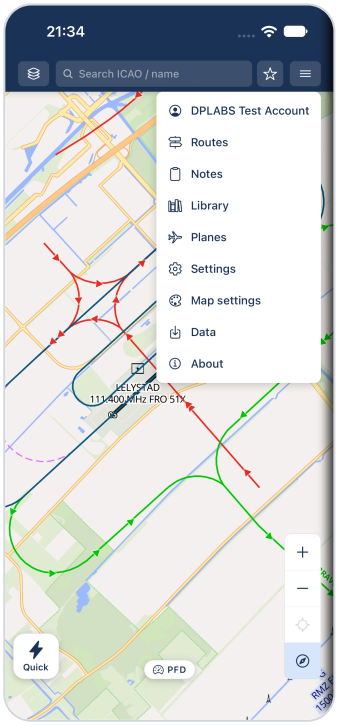
A stopwatch with start/pause and reset. Choose its corner, layout and transparency in Settings.

Header toolbar

Button	What it does
Layers	Show or hide map layers (section 6)
Search	Find airports by ICAO, IATA or name
Star	Jump to your favorite airports
Menu	Account, Routes, Notes, Library, Planes, Settings, Map settings, Data, About



On phones the toolbar is kept short. On tablets and wide windows there is room for one more button, **Themes** (map icon, section 5). Routes, Notes (the Notepad), Library and Planes are in the main menu on every device; Notes is also on the quick rail.

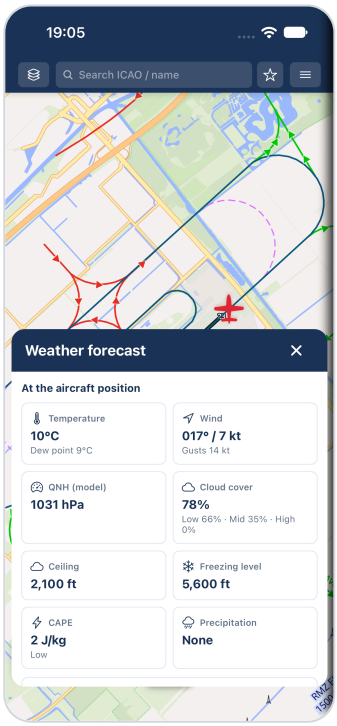


Quick actions

The **Quick** handle (a lightning bolt) sits on the left edge of the map. Tap it, or swipe inward from the edge it is docked to (from the left edge for a left rail, from the right edge for a right rail, up from the bottom edge for a bottom rail), and a column of one-tap buttons opens; tap **Close** at the end of the column, pan or zoom the map, or wait a few seconds and it folds away by itself. It is available all the time, with or without a route, and it keeps clear of the other buttons on the map. The buttons, in the default order:



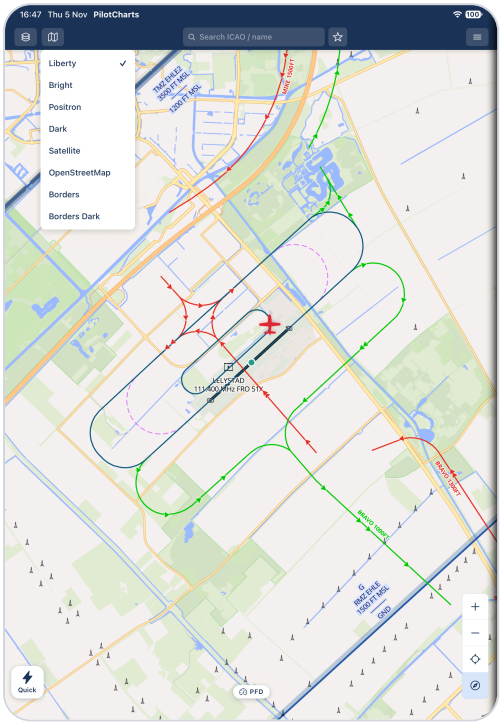
- **Route:** opens the Routes panel (see section 12).
- **Notes:** opens the Notepad (section 18).
- **Docs:** opens the Library panel (section 17).
- **Nearest:** lists the closest airports to your position (as many as set under **Closest airports to show** in Settings); tap one to open its airport panel.
- **Timer:** a large stopwatch with **Start** / **Pause** and **Reset**. It is the same stopwatch as the flight timer above, so it keeps running when you close the sheet.
- **Forecast:** opens the **Weather forecast** sheet for your position (the plane marker): conditions now, the next hours and the winds aloft. It needs a connection; if it asks you to sign in, see section 3.
- **Radar:** switches the rain radar layer on or off (not available offline).
- **Traffic:** switches the live traffic layer on or off (not available offline).
- **Day/Night:** switches the map between its light and dark version and back.



Which buttons are shown, their order, the edge (left, right, bottom or hidden), the height along the edge and how long it waits before folding away are set in **Settings > Quick rail** (section 22). On a phone in landscape the column scrolls when it does not fit. A sheet (Nearest, Timer, Forecast) shows at the bottom of the screen; close it with its cross. The buttons give a light vibration when your device supports it.

5. Base maps and themes

Pick the base map in **Menu > Map settings > Default map type**. On tablets and wide windows there is also a **Themes** button (map icon) in the header.



- **Liberty, Bright, Positron, Dark:** vector maps from OpenFreeMap. Positron is the cleanest for reading airspaces; Dark is meant for night flying.
- **Satellite:** Esri World Imagery.
- **OpenStreetMap:** classic raster map.
- **Borders and Borders Dark:** only country outlines on a plain background. They need no data connection at all.

Default map and dark options

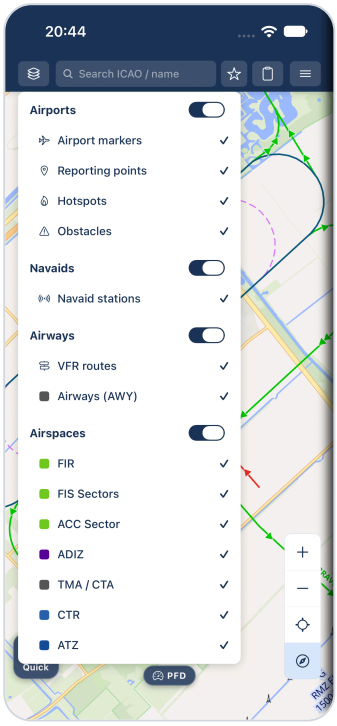
Your default map is chosen in **Map settings**. You can also let the map follow a dark app appearance (**Dark map with dark appearance**) and switch to a dark map automatically when weather layers are on.

Offline behaviour

Without internet, Satellite and OpenStreetMap are greyed out because they cannot be downloaded. If you have downloaded a country's offline map, the OpenFreeMap themes keep working there; otherwise PilotCharts switches temporarily to Liberty or Borders and returns to your choice when the connection is back. Small notices on the map tell you when no offline map covers the view or when detail is limited at the current zoom.

6. Layers

Open **Layers** (layers icon) in the header. Each group has a header switch that toggles everything in it. Your choices are remembered between launches and, when you are signed in, shared with your other devices (section 20).



Airports

Airport markers, reporting points, hotspots and obstacles. Airport dots come from your downloaded countries.

Navaids

VOR, NDB, DME and similar stations.

Airways

VFR routes and airway airspaces.

Airspaces

One row per category, each with a colour swatch matching how it is drawn: CTR, TMA/CTA, restricted, prohibited, danger, temporary (TSA, TRA), low-level (helicopter training, low flying), gliding, FIR, FIS

sectors, ATZ and more. Turning a category off also removes its labels. An **Airspace elements guide** link at the bottom explains the elements.

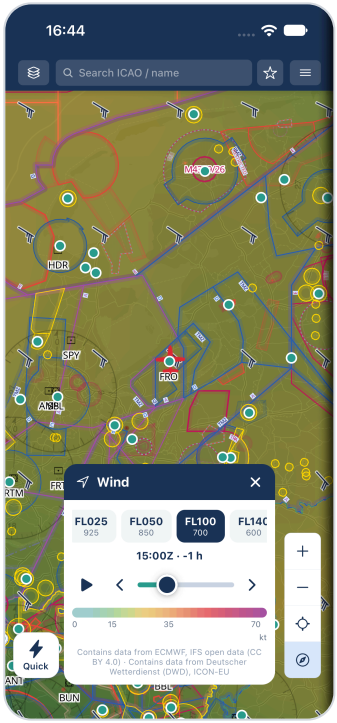
Weather

Rain radar, wind, clouds, temperature and pressure. Each is switched on individually and is off by default. A small attribution appears over the map while they are visible.

Forecast

Model forecast layers drawn over the map, in the **Forecast** section right after Weather. One layer is on at a time: tap a row to show it, tap it again to turn it off. The layers are **Wind**, **Temperature**, **Cloud cover**, **Precipitation**, **Thunderstorm energy (CAPE)**, **Freezing level** and **Cloud ceiling**. They need a connection and are off by default.

While a forecast layer is on, a card at the bottom of the map has:



- a **time slider** over the forecast hours, with step buttons and a **Play** button that animates the layer (it waits for each image, so a slow connection plays slower); the label shows the time in UTC and the hours from now;
- level buttons for **Wind** and **Temperature**: **Surface**, then FL025 up to FL300;
- a colour legend with its unit, and the credit of the model in use.

Wind is drawn in colour with wind barbs on top: the staff points to where the wind comes from, a full barb is 10 kt, a half barb 5 kt and a pennant 50 kt. Under **Menu > Map settings > Forecast layers > Wind symbols** you can choose arrows (pointing to where the wind goes) or colours only.

Over Europe the layers come from the DWD ICON-EU model (up to 30 hours ahead, and the only one with **Cloud ceiling**); everywhere else from the ECMWF global model (up to 48 hours ahead). With **Dark map for weather layers** on in Map settings, the map switches to its dark version while a forecast layer is shown, like with the other weather layers.

These are model forecasts, not observations or an official briefing. Not for navigation. This has not been verified on every device.

Traffic

Live ADS-B aircraft near you (section 16). Advisory only.

Terrain

A colour heatmap of ground elevation built from your downloaded elevation data, with a legend. It works offline and is for situational awareness only.

Offline

While you have no connection, layers that need live data (weather, forecast, traffic) are greyed out and come back automatically with the connection. Airspaces, navaids, obstacles and airports keep drawing from downloaded data.

7. Airspace details and NOTAM status

Reading airspaces

Airspaces are drawn with a coloured border and, at closer zoom, a stacked label: class, name, upper limit and lower limit. At lower zoom the label is a single line. The zoom where labels become stacked can be changed in Map settings.

Tap an airspace to see its details in a popup. If several overlap, step through them.



Dimmed by altitude

Special-use areas (restricted, danger and similar) fade when they are wholly above or below your planning altitude (the default flight level in Settings), so only relevant areas stand out. This can be switched off with **Dim areas out of my altitude** in **Menu > Map settings > Airspaces > Special-use areas**.

NOTAM status

For airspaces in your downloaded countries, the popup can show whether a NOTAM makes the area **active** or **not active** right now, when it is next active, and which NOTAMs apply. Areas with no information are shown as usual with *Status unknown*. Areas that are not in effect are drawn greyed with a hatch and dashed border; they are never removed unless you choose to.

Notices when entering or leaving a control zone

When you fly into or out of a control zone (CTR), PilotCharts shows a banner at the top of the map with its name, type and limits and the **frequencies to call**. The banner appears for a CTR whose airport has a frequency, and for any other airspace whose NOTAMs state a frequency (the frequencies of NOTAMs are read for signed-in users, together with the NOTAM status above). If you enter or leave several airspaces at once, they share one banner, and every frequency the NOTAMs state is listed. Tap the banner to dismiss it; it also goes away by itself after a few seconds.

The notice follows your position (GPS, the flight simulator or the route preview) and your altitude when it is known: flying above or below an airspace does not count as being in it. Starting a flight inside an airspace gives no notice. Areas that their NOTAMs say are not in effect are not announced. In **Settings > Alerts and airports**, **Airspace notices** switches the banner on or off; it is on by default. The altitude is compared with the published limits as they are, so treat the notice as a reminder and not as a substitute for your own awareness of the airspace. Not verified on a device yet.

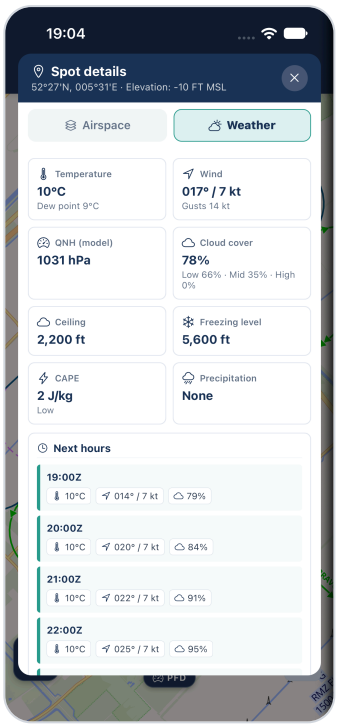
Hide areas not in effect

In **Menu > Map settings > Airspaces > Special-use areas**, **Hide areas not in effect** removes inactive areas from the map. Route planning tools still see every area.

Spot details and the weather at a point

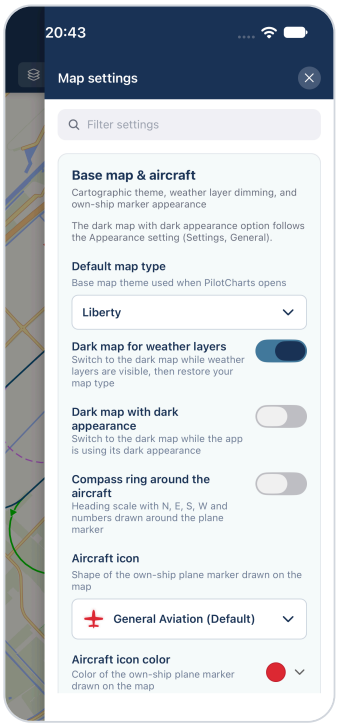
Long-press a bare spot on the map to open **Spot details**. It has two tabs: **Airspace** (the airspaces at that point, with their limits, and the ground elevation) and **Weather** (the forecast for that point: conditions, the next hours and the winds aloft). The tab content scrolls.

The forecast is a model forecast (DWD ICON-EU in Europe, ECMWF elsewhere), not an observation or an official briefing.



8. Map settings and colors

Open **Menu > Map settings**. The **Filter settings** box at the top narrows the list to the settings that match what you type. Your map settings and colours follow your account to your other devices when you are signed in (section 20). It is organised in sections:



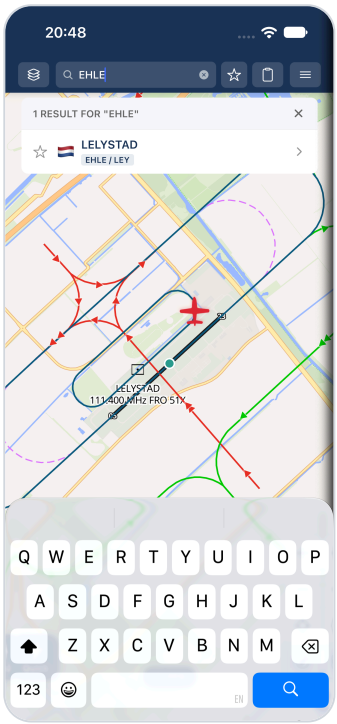
- **Base map and aircraft:** default map theme, dark map for weather layers, aircraft icon (general aviation, high-wing, jet, jumbo) and its colour, and the **Compass ring around the aircraft** switch (off by default). A line under the title points to the **Appearance** setting (**Settings > General**), which the **Dark map with dark appearance** option follows.
- **Airspaces:** three groups. **Special-use areas:** colours for restricted, prohibited, danger, temporary and low-level areas, **Dim areas out of my altitude** (section 7) and **Hide areas not in effect** (NOTAM status, section 7). **Controlled airspace:** colours for CTR, gliding, and TMA/CTA per ICAO class. **Labels and style:** border thickness, fill opacity, border stripes and shading.
- **Aerodromes, navaids and obstacles:** chart symbols, airport marker dots and their size, reporting-point and navaid labels, obstacle opacity and labels.
- **Flight routes:** colour of the route being edited and of the active route, line thickness and style.
- **Forecast layers: Wind symbols** for the forecast wind layer (section 6).
- **Zoom and detail:** minimum zoom for airports, reporting points and VFR routes, and the label detail zoom.

- **Reset map styling to defaults:** asks for confirmation twice.

9. Airports

Finding an airport

Type in the search bar at the top: ICAO code, IATA code or name. Results appear as you type. Airports from your downloaded countries come first; when online, PilotCharts also searches the whole world and marks those results with a cloud icon. Tap a result to centre the map and open its panel.



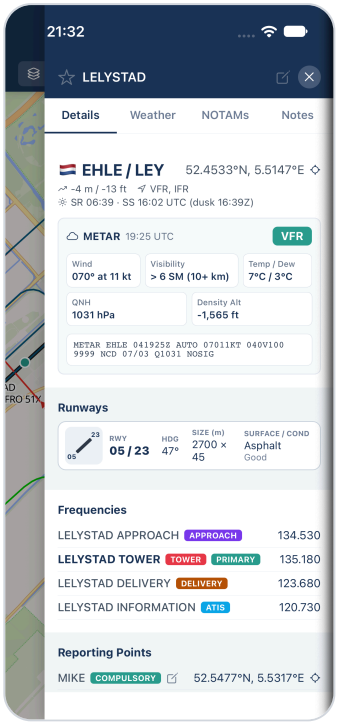
Favorites

Tap the star next to a name to favorite an airport. The star button in the header lists your favorites. When you are signed in, your favorite airports are kept in step across your devices (section 20).

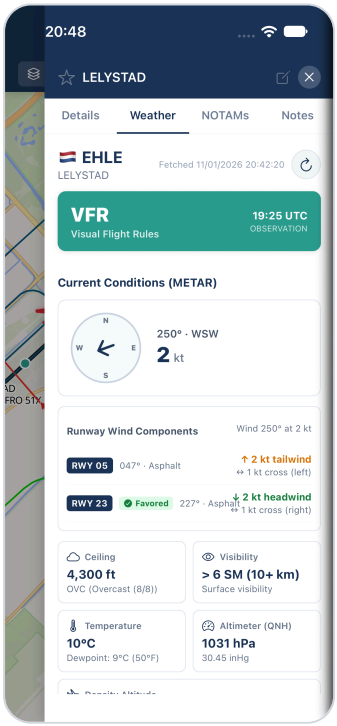
The airport panel

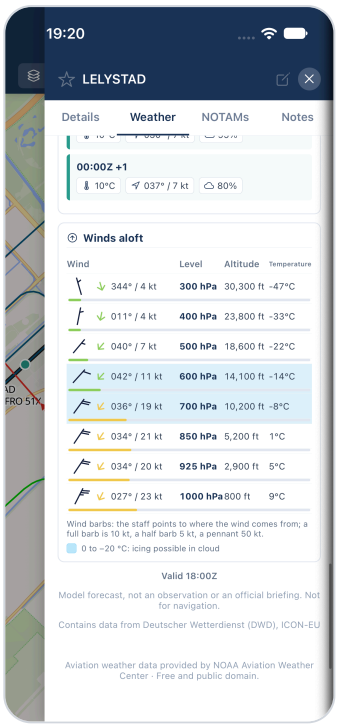
- **Details:** elevation, runways, frequencies, PPR, contact details (links are tappable), opening hours, photos and the nearest aerodromes with distance and bearing. Weather sits at the top.
- **Control zone:** when the airport has a CTR, a **Control zones** block after the services shows its name, class and limits, the NOTAM status for signed-in users and a **Show on map** button that fits the zone on the map and opens its details. An airport with several parts shows each one. The frequencies to call are in the airport's own **Frequencies** block, not in this one. Uncontrolled airports have no such block.
-

- **Weather:** the latest METAR with flight category (VFR, MVFR, IFR, LIFR), decoded wind, visibility, temperature, QNH and clouds, the raw text, previous observations and the TAF forecast grouped by day.
- **Model forecast at the airport:** below the TAF, the forecast of the weather model for the airport position: conditions now, the next hours and a **Winds aloft** table from the highest level (300 hPa) down to the lowest (1000 hPa). Each row starts with a wind barb, then the arrow, the direction and speed, the pressure level, the altitude and the temperature; rows between 0 and -20 °C are tinted blue (icing is possible in cloud). It is a model forecast and does not replace the METAR and TAF above; outside the model's area the block is left out.
- **NOTAMs:** the airport's NOTAMs, for signed-in users. Tap one to centre the map on it. Use refresh for a fresh live query (limited to a few per minute).
- **Notes tab:** your note and files (section 10).



Charts: official ADC/VAC links where the country publishes them, and your own files of the same type. Official charts open in your browser or PDF viewer, never inside PilotCharts.





An airport that is not downloaded

You can open a world-wide search result without its country data. The panel shows the basics (name, codes, country, position, elevation) and works for weather and NOTAMs. A banner offers to download the country, and the panel turns into the full one when done.

10. Airport notes and files

Airport notes

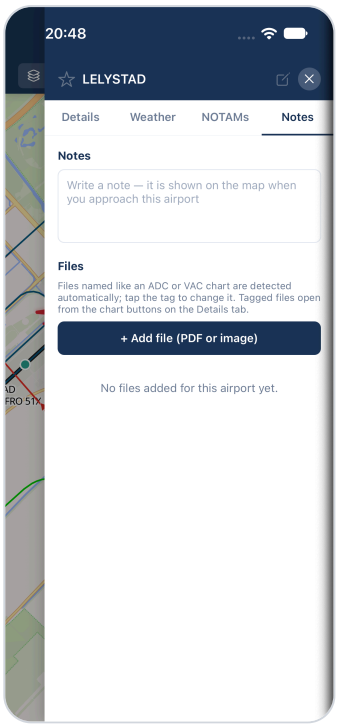
Each airport has a free-text note on its **Notes** tab. When your GPS position is within 5 NM of an airport that has a note, a banner shows the note; dismiss it and it comes back after you leave the area. Notes for reporting points are edited in the airport's reporting-points list. Notes on waypoints (section 12) are shared with these.

Your own files

On the **Notes** tab choose **Add file** and pick a PDF or image. Files are filed under that airport. Open one to view it inside the panel, with a full-screen option. PilotCharts detects whether a file is an ADC, a VAC or other from its name, and you can change it. Files you add of ADC/VAC type are shown next to the official links and can be appended to route PDFs.

If a file is on this device but your account does not hold it yet (another device keeps saying *Waiting for the other device to upload*), a **Retry upload** link under the file name uploads it again.

To bring in files from other apps see section 11.



11. Importing files from other apps

PilotCharts can receive PDFs and images from other apps, so a chart you downloaded in Safari, received by email or keep in the Files app ends up where you need it, without going through the in-app file picker.

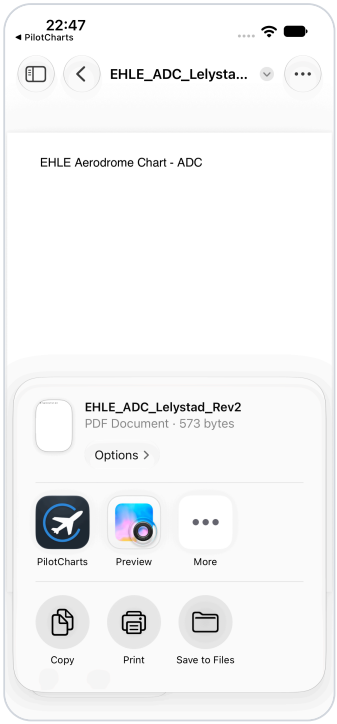
11.1 Overview

- **What you can import:** PDF files and images (JPEG, PNG and similar). Each file can be up to 100 MB.
- **Where it can go:** to the files of a specific **airport** (shown in that airport's panel), or to your **Library** (general documents not tied to an airport).
- **Two ways in:** the **Share** sheet ("Share to PilotCharts") and **Open with PilotCharts**. Both end in the same import dialog (see 11.5).

11.2 From the iOS Share sheet

1. In the other app (Safari, Files, Mail, Messages, a PDF viewer...) open the PDF or image and tap the **Share** button.
2. Pick **PilotCharts** in the row of apps. If it is not visible, scroll the row to the end, tap **More** and enable PilotCharts.
3. PilotCharts opens and shows the import dialog.

> **Tip**
>
> In Files you can select several files and share them at once (see 11.6).



11.3 "Open with PilotCharts"

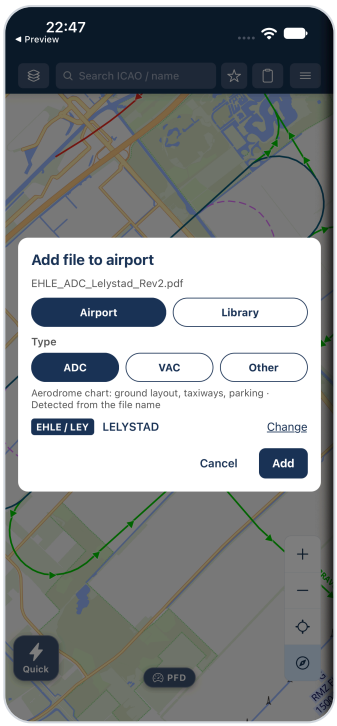
1. In Files (or any app that lists the file), long-press the PDF and choose **Share** > **PilotCharts**, or open the file and use **Open in...** / **Open with**.
2. PilotCharts opens with the import dialog. Open with is available for **PDF** files.

11.4 Android

- **Share:** use the system Share button and pick PilotCharts.
- **Open with:** open a PDF from any file manager or browser and choose PilotCharts in the "Open with" list.

11.5 The import dialog

- **Destination:** the **Airport** and **Library** chips choose where the file goes ("Add file to airport" / "Add file to Library").
- **Airport:** if an airport panel is open, that airport is preselected. Otherwise search by ICAO code, IATA code or name and tap the result.
- **Type (airports only): ADC** (aerodrome chart: ground layout, taxiways, parking), **VAC** (visual approach / VFR chart: arrival, departure and circuit routing) or **Other** (any document, not used as a chart). PilotCharts guesses the type from the file name and says "Detected from the file name"; tap **Change** to correct it.
- The chosen airport is shown with a **Change** link. Tap **Add** to import, or **Cancel** to discard. For an airport, its panel opens so you can see the file.



11.6 Importing several files at once

Share or open several files together and they can only go to the **Library**: the Airport destination is disabled with a note. If some files fail, a message lists which ones; the others are still added. To attach a file to an airport, share it on its own.

11.7 Importing routes from other apps

Routes are not imported through Share / Open with. Save the KML or GPX file somewhere you can reach it (for example Files), then in PilotCharts open **Routes** and tap **Import file**. Format and details are in section 12.11.

11.8 After the import

- Files added to an airport appear in that airport's panel, in the files area, and the type you chose decides where they appear next to the official chart links.
- Files added to the Library appear in the Library list (see section 17).
- Files you import are available offline, and they sync to your other devices when sync is on (section 20).

11.9 Troubleshooting imports

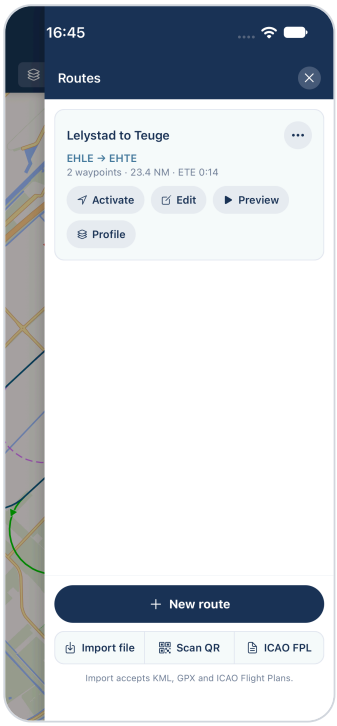
- **PilotCharts is missing from the Share sheet:** scroll the app row, tap More and enable it.
- **"Couldn't save the file":** try again; check the device has free space and that the file is below 100 MB.
- **The file is a different type than expected:** only PDFs and images are accepted.

- **Wrong chart type:** open the file's menu in the airport panel and change the type.

12. Creating routes

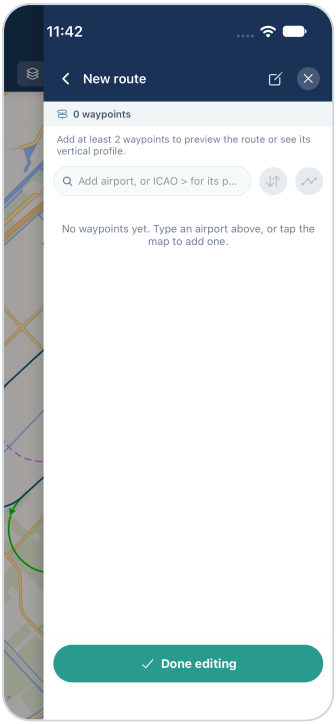
12.1 Opening the Routes panel

Open the main menu (top right) and choose **Routes**. The panel lists your routes; each row shows its name, number of waypoints, distance and estimated time en route (ETE), with the buttons **Activate**, **Edit**, **Preview** and **Profile** and the **...** menu. Tap a row to activate the route (the panel closes unless it is pinned); tap **Edit** to open it for editing. With no routes it says "No routes yet. Create one to start adding waypoints."



12.2 Creating a new route

1. In the Routes panel tap **New route**.
2. The route is created at once, called **New route**, and opens for editing. Nothing asks for a name yet, so the keyboard stays out of the way.



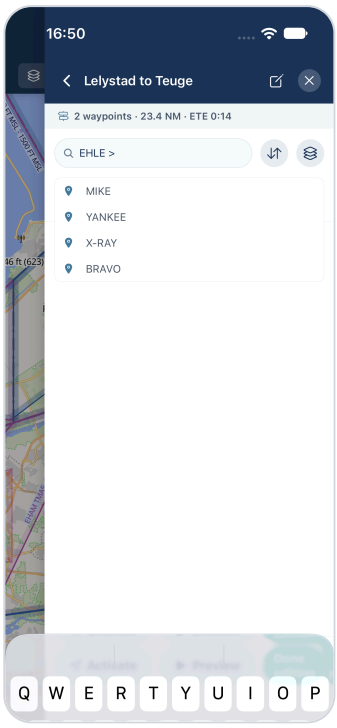
3. The panel shows a short hint for the empty route, and the map shows the **Editing** pill with the route line drawn on it (see 12.4).

12.3 Adding waypoints

There are four ways, and you can mix them:

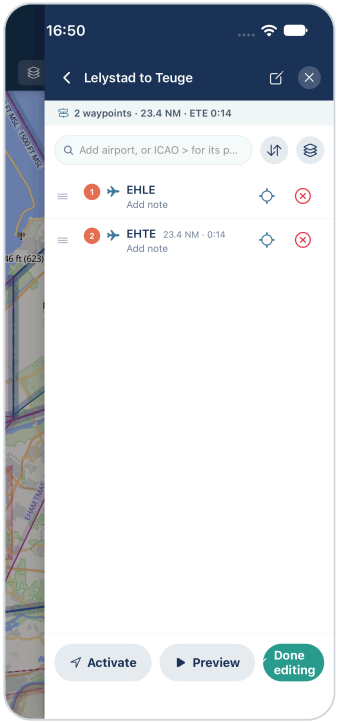
- **Tap the map:** while a route is being edited, a tap on a bare spot adds a waypoint at the end of the route (a long press does the same). If the tap lands close to an airport, reporting point or navaid, the waypoint snaps to it and keeps its name and type.
- **Tap the route line:** tapping the line between two waypoints inserts a new one in that leg, in the right order.
- **Search:** in the panel, type in the *Add airport* field an airport name or ICAO/IATA code and pick the result. To use one of an airport's reporting points, type its ICAO followed by `>` (for example `EHLE >`) and pick the point, or tap the arrow on an airport result to list its reporting points.
- **Centre button:** the **+** button in the **Editing** pill adds a waypoint at the centre of the map.

After you remove a waypoint, or add one by tapping the map, the line or the centre button, an **Undo** bar appears for five seconds.



12.4 Editing waypoints

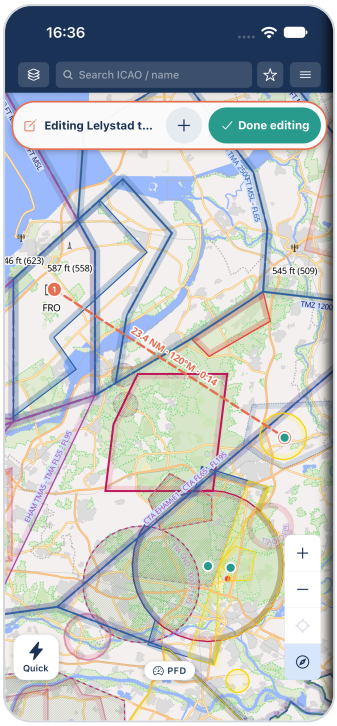
Each row shows the number, kind, leg distance and time, a note field, a locate button (centres the map on the waypoint) and a remove button. Next to the search field are **Reverse route** and **Vertical profile** buttons, and the bar at the bottom has **Activate** (**Active** once active), **Preview** (from two waypoints on) and **Done editing**. Preview and the vertical profile need at least two waypoints; until then they are greyed out and say why.



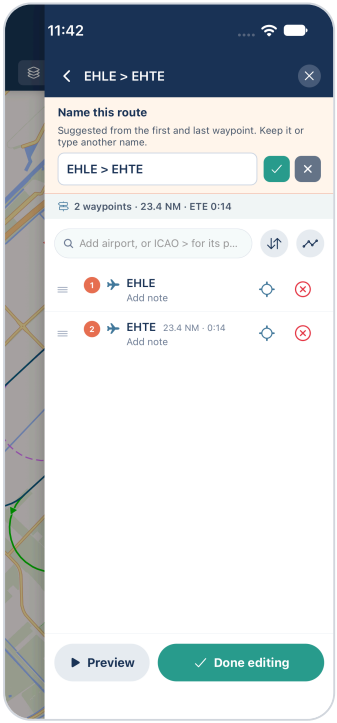
- **Move:** drag a waypoint marker on the map to a new place.
- **Edit an existing route:** tap **Edit** on the route's row in the Routes panel and close the panel. The route is drawn in orange on the map while you edit.
-
-
-

Editing pill: when you close the panel while editing, **Editing <name>** stays at the top of the map with **Done editing** and the **+** button. On a phone it is the way back into the route. While the route has

fewer than two waypoints it also reminds you to tap the map.

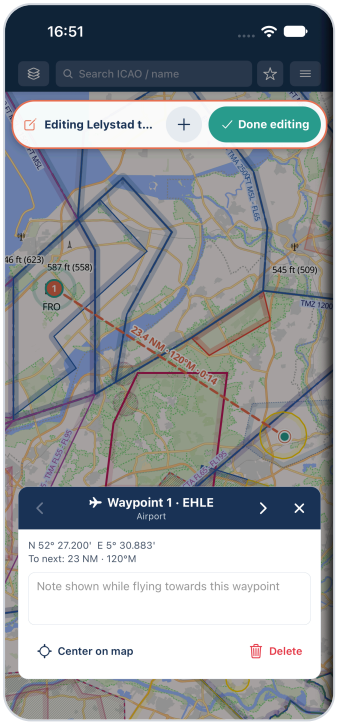


Naming: from two waypoints on, the route is named after its first and last waypoint (for example *EHLE > EHTE*). **Done editing** shows the proposed name in a field at the top of the route: the tick saves the name as typed and the cross keeps the proposal. A name you typed yourself is never changed automatically. Rename later with the pencil in the route's header or **Rename** in the **…** menu.



Open the editor: tap a waypoint marker on the map. A sheet opens at the bottom. Its navy title bar shows *Waypoint n · name* and the kind of waypoint (Airport, Reporting point, Navaid or Point), with

arrows to go to the previous or next waypoint. Under it are the position, the distance and heading from the previous waypoint and to the next one (magnetic or true as set in Settings), a note field, **Center on map** and **Delete**.



- **Note:** add a note to any waypoint with **Add note**. The note is shown while you fly towards that waypoint.
- **Delete:** use **Delete** in the editor or the remove button on its row. There is no confirmation: the **Undo** bar puts the waypoint back.
- Notes of airports and reporting points are stored with the place, so they appear in every route that uses it.

12.5 Reordering waypoints

In the waypoint list, press and hold the drag handle of a row and move it up or down. Release to drop it; the legs and totals update at once.

12.6 Reading the route

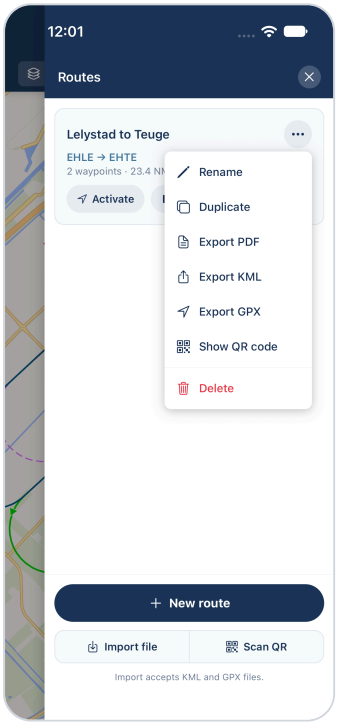
Each leg on the map is labelled with its length and heading (for example "12.3 NM · 087°M"). The route summary shows the number of waypoints, total distance and ETE. Headings are magnetic by default; change to true in Settings (*Heading reference*).

12.7 Cruise speed and flight level

ETEs are durations at your **cruise speed** (Settings > Flight routes, 100 kt by default, 30-500 kt). The **default flight level** in the same section is used for the vertical profile and for dimming airspaces that are above or below your altitude. No absolute clock times are ever shown for the planned flight.

12.8 Reverse, duplicate, rename and delete

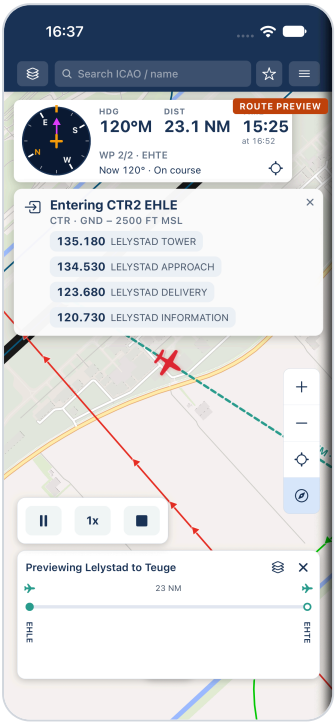
- **Reverse route** (in the route detail) flips the order of the waypoints.
- The **...** menu on a route row offers **Rename**, **Duplicate**, **Export PDF**, **Export KML**, **Export GPX**, **Show QR code** and **Delete** (see section 14 for the exports). Exports are greyed out for an empty route.



- **Delete** asks for confirmation (**Confirm delete**) and removes the route with all its waypoints.

12.9 Previewing a route

Tap **Preview** on a route row (it needs at least two waypoints) to play the route on the map without flying. The controls let you pause or resume, change the speed (1x and up) and stop. A timeline at the bottom shows your progress along the route and its waypoints, and the **ROUTE PREVIEW** badge is shown at the top right. Use the cross to close the preview. The preview assumes 90 kt.



12.10 Activating a route and flying it

Tap **Activate** on a route's row to make it the **Active** route: the map zooms to it and the button turns into a green **Active** button. Tap **Active** again to deactivate it. A route needs at least two waypoints to be activated. While a route is active, the next-waypoint card (top left, as in the preview picture above) shows the heading to the waypoint, the distance, the time left and the waypoint's note, and the cockpit compass shows a bug pointing at it (section 15). Only one route is active at a time.

You can also reach your routes from the map: tap **Quick > Route** to open the Routes panel.

12.11 Other ways to get a route

- **Import file:** in the Routes panel tap **Import file** and pick a **KML** or **GPX** file (third-party files work too).
- **Scan QR:** tap **Scan QR** and point the camera at the QR code in a PilotCharts route PDF. Camera access is requested the first time.
- **ICAO FPL:** tap **ICAO FPL** and paste an ICAO flight plan or a Home briefing text in the box. The departure and destination aerodromes, coordinates, reporting points (for example `EHLEB`) and named fixes become waypoints; airway connectors such as `DCT` and speed or level changes are ignored. The route is named *departure > destination - aircraft - date*.

- Files from other apps: see 11.7.

12.12 Tips and common mistakes

- Finish editing with **Done editing** (in the panel or on the **Editing** pill) so the route stops reacting to map taps.
- A long press while *not* editing opens Spot details for that spot instead of adding a waypoint.
- Waypoints snap to nearby airports and points: zoom in before pressing if you want a plain coordinate.
- Plan with downloaded countries (section 19) so airspaces and the vertical profile (section 13) are complete.

13. Vertical profile

The vertical profile shows a route in cross-section: the planned altitude, the waypoints, the ground terrain under the route and the airspaces it crosses stacked by their lower and upper limits.



Opening it

Use the **Profile** button on a route row, the vertical profile button in the route detail, or the button in the preview controls.

Reading it

- Terrain comes from downloaded elevation data (approximate, about 450 m resolution) and is advisory only.

- Airspaces are listed under the diagram as cards (type and class, for example *CTR · Class D*) with their vertical limits, frequencies and NOTAM status and the part of the route that crosses them.
- Summary figures: average and maximum flight level.

Filtering

- Drag the handles on the diagram to restrict the distance range. **Reset filter** restores the full route.
- Toggles show or hide controlled areas (CTR/TMA/CTA), restricted/prohibited/danger areas and spaces above the maximum flight level.
- **Show all** lists every crossed airspace.
- The focus button on a card centres the map on that airspace and closes the modal.

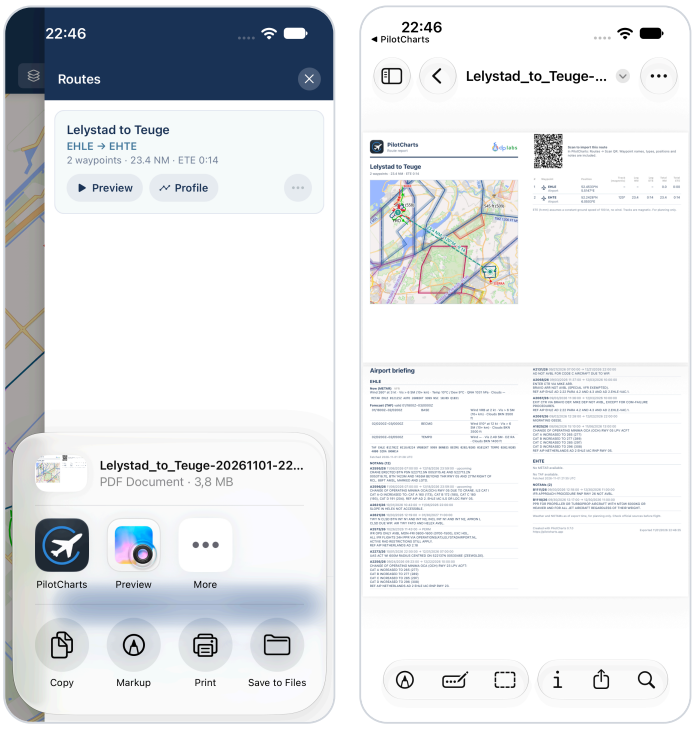
If nothing shows, download the countries along the route (section 19).

14. Sharing and exporting routes

Open the **...** menu on a route row.

PDF report

Export PDF builds a printable briefing: a map page with the route, a waypoint table (positions, true tracks, leg and total distance and ETE, notes), a QR code of the route, and, optionally, your own ADC/VAC files of the airports on the route. The sheet is laid out two pages per landscape sheet so it folds like a kneeboard. Choose in Settings: page size (automatic, A4, Letter), the map style used in the PDF and whether to include airport charts. The PDF opens the share sheet so you can print, save or send it.



KML and GPX

Export KML and **Export GPX** write a file that can be opened in other tools and re-imported by PilotCharts.

QR code

Show QR code displays a QR that another PilotCharts device can read with **Routes > Scan QR**. If a route is too big for a full code, the code carries only names and positions; if even that is too big, export a KML instead.



Importing

See sections 11.7 and 12.11.

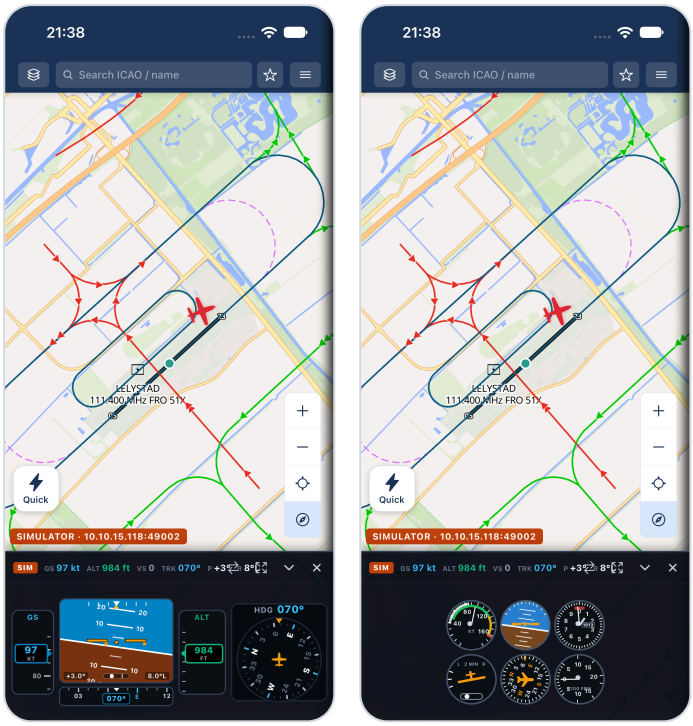
15. Cockpit instruments

Instrument styles

- **Modern PFD:** artificial horizon, speed tape, altitude tape, vertical speed, compass tape and a rotating compass rose.
- **Six-pack:** classic round gauges (airspeed, attitude, altimeter, turn coordinator, directional gyro, vertical speed).
- **Hybrid:** a combination of both.

Pick which PFD instruments are shown. Attitude comes from the flight simulator (section 21); from GPS the panel shows speed, altitude, vertical speed and track.

Choose in **Settings > Flight instruments**:



Using the panel

- Collapse it to a compact data strip, or dismiss it completely and reopen it with the small button (its corner is configurable).
- The size button makes the panel taller and scales the instruments. The size, mode and visibility are remembered.

Compass view

A circular rotating compass at the right of the panel with a fixed aircraft symbol. With an active route it shows a waypoint bug with the bearing, distance and ETA of the next waypoint.

Next-waypoint card

With a route active (or previewed), a card at the top left shows heading, distance and time to the next waypoint, a heading-up dial and the waypoint's note. A locate button on the card centres the map on that waypoint.

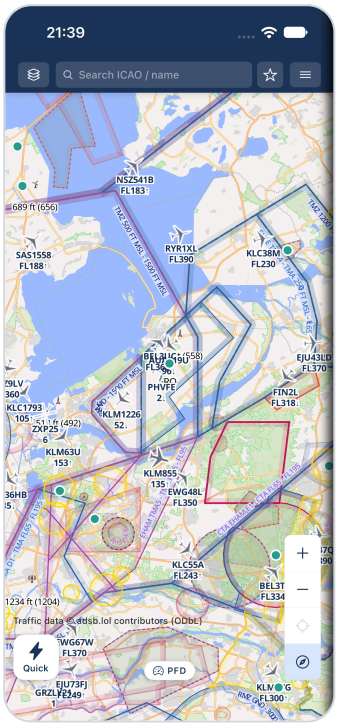
Flight timer

The stopwatch from section 4.

16. Live traffic and planes

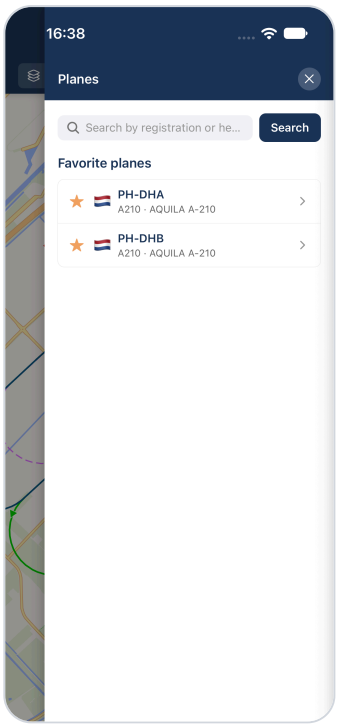
Live traffic layer

Switch on **Traffic** in Layers to see nearby ADS-B aircraft from adsb.lol. Icons show the aircraft type and are coloured by altitude relative to you (red within 1,000 ft, amber within 3,000 ft, blue above, teal below). Labels show callsign or registration and altitude. Positions are updated every few seconds and extrapolated between updates. Traffic needs zoom 7.5 or closer and an internet connection. It is advisory only and not for collision avoidance. Your approximate position is sent to the data provider to get nearby traffic.



Planes panel

Open **Menu > Planes** or tap an aircraft on the map. Search by registration, ICAO hex or callsign. For a selected aircraft the panel shows a photo (Planespotters.net), identity (registration, type, year, owner, country of registration), live status (in flight / on ground, altitude, vertical speed, ground speed, track) and a link to more photos. A military or notable badge appears when applicable.

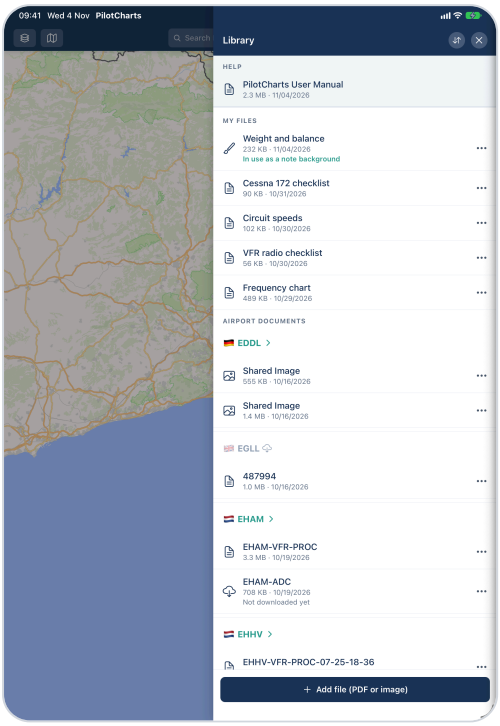


Favorites and following

Tap the star to save an aircraft. **Locate and follow** centres the map on the aircraft and keeps following it until you pan, zoom, or tap the button again.

Identity data comes from an offline aircraft database, so it works without a connection; live data needs one.

17. Library



The Library holds your own PDFs and images that are not tied to one airport (checklists, performance tables, scanned documents).

- Open it with **Menu > Library**.
- **Add file** picks a PDF or image (up to 100 MB). You can also send files from other apps (section 11).
- Tap a file to view it in the panel, with full-screen.
- Use the **...** on a row to rename (the extension is kept), pin or delete. If a file is on this device but your account does not hold it yet, the **...** menu also has **Retry upload**, and a row whose upload failed shows a **Retry upload** link under its status. Use it when another device keeps saying *Waiting for the other device to upload*.
- **Sort** by name, upload date (default) or free order. In free order, drag the handle on a row to reorder.
- **Pin to quick docs** (in the **...** menu of a row) marks a file with a pin icon; a pinned file shows a pin icon, and **Unpin** removes it. Pinning is for the Library only and syncs to your other devices.
- Images used as a Notepad background show a brush icon and cannot be deleted while in use.
- While you write a note, you can keep a Library file open next to it (checklist, cheat sheet): see **Reference window** in section 18.
- Files sync to your other devices; a file that has not been downloaded on this device shows a cloud icon. Tap the cloud icon to only download it, or tap the name to download it and open it.

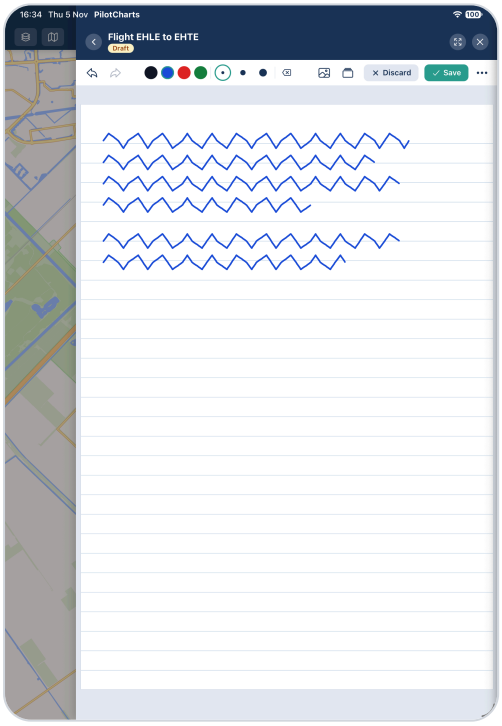
Airport documents

Below your Library files, **Airport documents** lists the files you added to airports (section 10), grouped by airport: the country flag and the ICAO code head each group. Tap the flag and code (**Open airport page**) to open that airport's panel; its header then has a back button that returns to the Library. An airport that is not in your downloaded data is shown faded with a cloud-download icon and cannot be opened. The rows work like Library rows: the cloud icon only downloads, tapping the name downloads and opens, and the **...** menu offers the same actions except Pin. The section only appears when you have airport files; switch it off with **Airport documents in the Library** in **Settings > Alerts and airports**.

Quick documents

Tap **Quick > Docs** on the map to open the Library panel without going through the menu.

18. Notepad



The Notepad is for handwritten notes with a finger or stylus.

Writing

The page is an A5 sheet. Choose a pen colour and tip width in the toolbar, with undo and redo. The defaults for new notes come from **Settings > Notepad**.

Eraser

In the editor toolbar, next to the pen colours and tip widths, tap **Eraser**. While it is highlighted, drag a finger or the Apple Pencil over the page: every line you touch is erased as you move, and lifting your finger finishes the erase. The whole drag is one step, so **Undo** brings back everything you erased with it and **Redo** erases it again. Touching an empty part of the page does nothing. Putting a second finger down cancels the erase in progress, and the two fingers zoom or move the page as usual.

Tap a pen colour or a tip width to go back to drawing. The eraser is off each time you open a note. Erasing counts as an edit, like drawing: a saved note becomes a draft until you press **Save**, and **Discard** restores the saved version. After you close and reopen a draft, an erase can no longer be undone, but **Discard** still restores the saved version.

This is described from how the app is built and has not yet been checked with a finger or the Apple Pencil on a device.

Zooming and moving the page

One finger or the Apple Pencil draws. Use **two fingers** to look closer or to move the page, without leaving the note:

- **Pinch** to zoom in or out (up to 5 times). **Drag with two fingers** to move the page. You can do both at once.
- **Double-tap with two fingers** to go back to the whole page, or tap **Reset zoom** (top right of the page, shown only while zoomed).
- The page never moves past its edges, and zoom starts again from the whole page when you open another note or when the window changes size (full screen, pinned panel, rotating the device).
- If you put a second finger down while you are drawing, the line you were drawing is cancelled (no dot or stray line is left) and the two fingers move the page instead. After lifting back to one finger, nothing is drawn until all fingers have left the screen.
- With the setting **Draw with a finger** switched off (**Settings > Notepad**), only the Apple Pencil or a stylus draws: one finger moves the page, and while the pencil is on the page any finger touching it, such as a resting palm, is ignored. With the setting on (the default), a finger draws as well.

This is described from how the app is built and has not yet been checked with every device and pencil; the palm handling in particular.

Drafts and saved notes

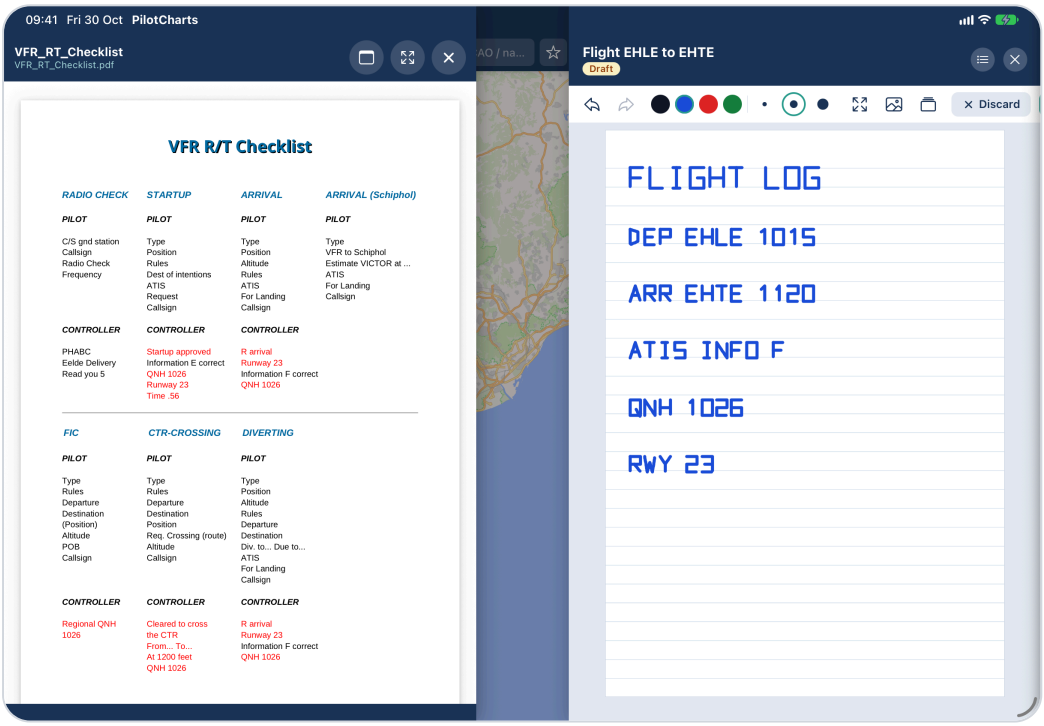
A new note is a **draft** that autosaves on the device. Press **Save** to keep it and let it sync. Editing a saved note turns it back into a draft until you press Save again. **Discard** throws away the changes since the last save (for a never-saved draft it deletes the note). Closing the panel never asks anything: your draft stays as it is.

Backgrounds

The background button offers **None**, ruled lines, squares, dots, or an image from the Library (you can upload a new one). For images choose how they fit: Centered, Fit width, Fit height, Crop or Stretch.

Reference window

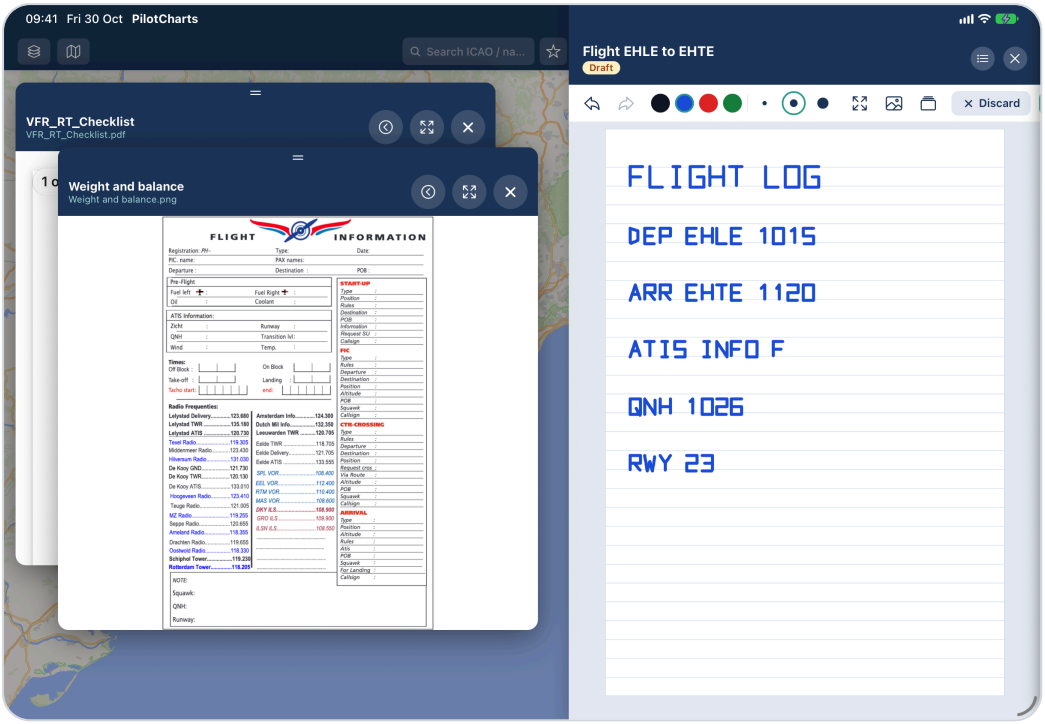
Keep a checklist or cheat sheet open while you write. In the editor toolbar, tap **Reference** (to the right of the background button) and choose a file from **Open beside the note**. The list shows the PDFs and images of your Library that are on this device; a file that has not been downloaded yet is not listed, so open it once in the Library first.



The file opens **docked**: a panel as tall as the screen and as wide as the note, at the left edge of the screen, which slides in from the left. On a tablet held in landscape it sits beside the note, so you can read it and write at the same time. On a tablet held in portrait the note is almost as wide as the screen, and on a phone it fills the screen, so the panel covers most or all of the note; close the panel, or float it, to get back to the note.

The buttons in the bar over the file, from left to right:

- **Float window** turns the panel into a card in the middle of the screen. Drag the card by the thin bar at its top to move it out of the way. The same button then reads **Dock window** and puts it back at the left edge.
- **View full screen** shows the file over the whole screen; **Exit full screen** goes back. A floating window has **Dock window** in the full-screen view too, which leaves full screen and docks it in one step.
- **Close preview** closes the window.

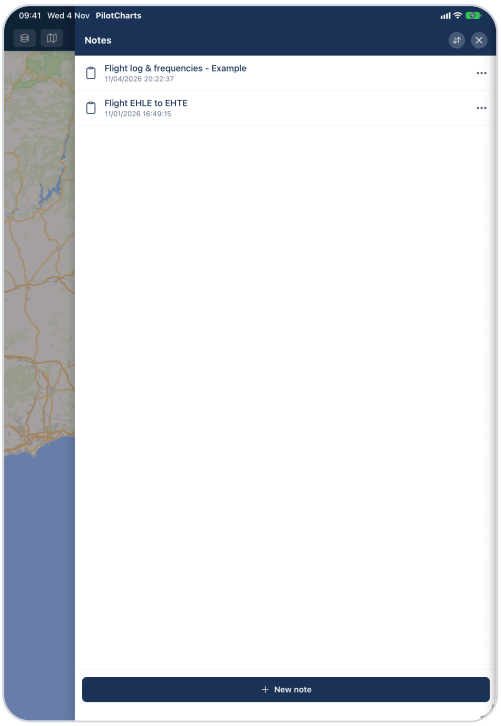


You can open several files. Only one window can be docked at a time, so opening another file docks the new one in place of the docked one, while floating windows stay open (each new floating card appears a little lower and to the right of the last). Opening a file that is already open brings its window to the front, and touching a window raises it above the others. Touches inside a PDF are handled by the PDF itself, so to raise a window that is behind another one, touch its title bar or its edge.

To move a floating window, drag the thin bar at the top of its card. Inside the file, scroll and pinch as usual: only that top bar moves the card.

Reference windows are only for looking: they are not saved with the note and close when you close the Notepad. Only Library files can be used, not airport files.

The list of notes



The list button in the editor header shows all notes. The list has no back button: open a note, tap **New note** or close the panel to leave it. The sort button in its header sorts by **Name** or **Last modified** (newest first, the default) and remembers your choice. Rename a note by tapping its title in the header. The **...** menu of a row offers Rename, Discard pending changes and Delete.

Rename or delete the open note

The last button of the editor toolbar, after **Discard** and **Save**, is a **...** menu with the same **Rename** and **Delete** as in the list. **Rename** opens the title field in the header, as if you had tapped the title. **Delete** asks for confirmation, then deletes the note and stays in the editor, on your latest draft or on a new blank note.

Full screen and pinning

The expand button makes the page as wide as the window. Panels can also be pinned (section 22).

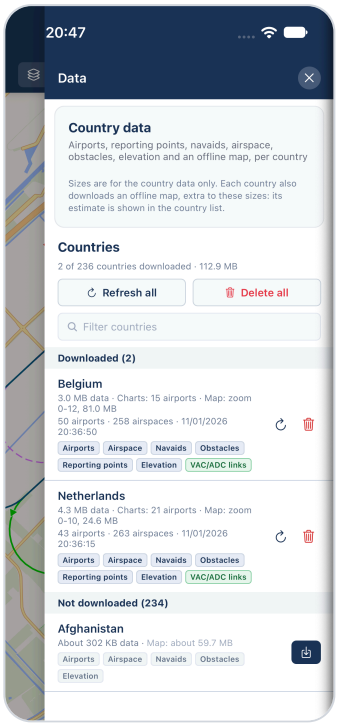
Notes that are too large to sync are kept on the device only and marked.

19. Offline use

Open **Menu > Data**.

What a country download contains

Airports, reporting points, navaids, airspace, obstacles and elevation, then the official chart links (where available), the Netherlands' runway and route data, and an **offline base map**. All of it is downloaded together per country.



Downloading

Find your country (the list can be filtered by name or code), tap download and wait for the stages to finish. Downloads run one at a time. Downloaded countries are listed first. Sizes are shown per country; the offline map is extra and its estimate is in the list.

Refresh and delete

Each downloaded country has a refresh button (to get the latest data and chart links) and a delete button. **Refresh all** and **Delete all** (with confirmation) act on every downloaded country. If a country's offline map says *missing* or *failed*, refresh it.

The "download this area" banner

When you look at a country you have not downloaded, a banner offers to download it, showing what is missing and the estimated size. While a download runs, and while the Data page is closed, the same place on the map shows its progress. If a download was interrupted, the banner says so and offers **Resume**, which runs the download again (files already up to date are skipped); the cross forgets it.

A download only runs while the app is open: when you switch to another app or lock the screen it pauses, and it carries on when you come back. If the app was closed meanwhile, use **Resume**.

Offline map

The offline base map is a vector map per country (zoom 0 to 10 for most countries, deeper for small ones). Satellite and OpenStreetMap are never downloaded.

What works offline

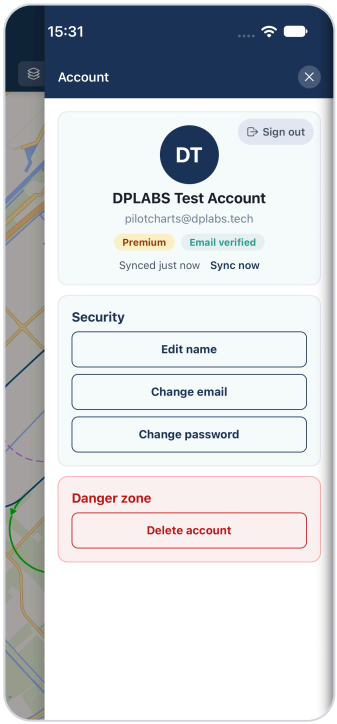
Airports, airspaces, navaids and obstacles of downloaded countries, the offline base map, your files and notes, routes, the Terrain heatmap, METAR/TAF and NOTAMs you looked at earlier (cached), and the cockpit panel. Weather overlays, live traffic, new weather and new downloads need a connection. A small cloud-off badge in the header shows when you are offline.

Visited areas

Map tiles you view are also cached automatically, so places you have looked at before keep working offline.

20. Sync across devices

When you are signed in, these are kept in step across your devices: routes, airport and reporting-point notes, favorite airports and planes, airport files, Library files, Notepad notes, your settings, your layer choices (Layers menu) and your map settings and colours.

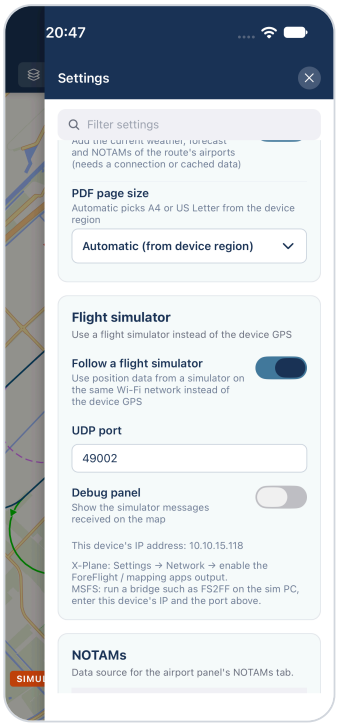


- Changes are pushed a couple of seconds after you make them, and pulled when you open the app, every few minutes while it is open, and when you reconnect.
- Offline, changes are queued and sent later.
- If the same item was changed on two devices, the most recent change wins.
- Settings that depend on the device stay on it: pinned panels, the position of the map buttons, timer and PFD button, the cockpit panel size, mode and visibility, the quick rail, the flight simulator connection and the Notepad tool defaults. The active route is not synced.
- On a new device, settings you chose before signing in do not replace the ones already on your account: the account's settings are applied.
- The sync line in the Account panel shows *Synced just now*, *Syncing...*, *Offline, will sync later* or *Couldn't sync, will retry*, with a **Sync now** button.
- Files upload in the background after their details; a file shows a cloud icon on another device until it is downloaded there.
- A different account always starts from an empty device. See the sign-out note in section 3.

21. Flight simulator input

PilotCharts can use a flight simulator as the position source.

1. In **Settings > Flight simulator**, switch on **Follow a flight simulator**. The plane now follows the simulator and a badge shows the device IP and port. The **UDP port** is 49002 by default.
2. Port **49002** uses the ForeFlight simulator UDP format.
3. **X-Plane:** Settings > Network > ForeFlight / mapping apps output, with your device IP.
4. **MSFS:** needs a bridge program on the PC that sends the same format, for example FS2FF.
5. Enter the device IP (shown in the settings) in the bridge or X-Plane. Broadcast is not supported yet, so use the device IP.



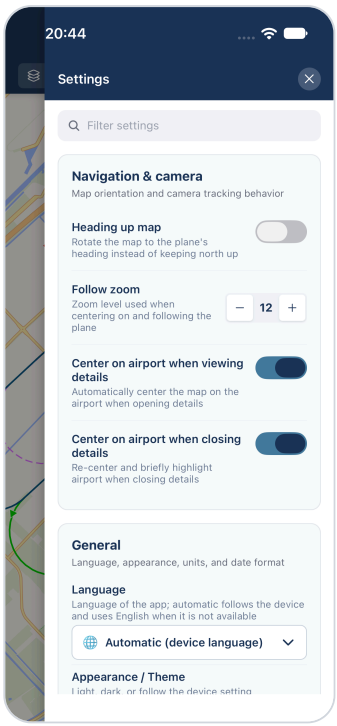
The simulator supplies position, track, speed, altitude and heading, and attitude if available, so the cockpit panel shows it. Simulated traffic is shown. If the signal stops for five seconds, a *Simulator signal lost* message appears and the last position is kept; PilotCharts never falls back to the GPS. The optional **Debug panel** switch shows the simulator messages received on the map. iOS asks for local network permission the first time.

22. Settings

Open **Menu > Settings**. The **Filter settings** box at the top narrows the list to the settings that match what you type. When you are signed in, most settings follow your account to your other devices (section 20); the ones that depend on the screen or the hardware stay on each device. Groups:

- **Navigation and camera:** map orientation, follow zoom, centre on the airport when viewing or closing details.
- **General:** language, appearance (automatic, light, dark), the unit for heights and elevations, date format.
- **Screen layout:** map controls position, timer position and layout, and **Pin side panels** (hidden on narrow screens).
- **Quick rail:** the edge, height along the edge, auto-close time, and which buttons it shows and in what order.
- **Flight instruments:** show the panel, instrument style, which instruments are shown, and the position of the cockpit button.
- **Alerts and airports: Airspace notices**, the banner with the frequencies when you enter or leave a control zone (on by default); the number of closest airports; **Airport documents in the Library** (on by default).
- **Notepad:** default ink colour and pen width, and **Draw with a finger** (switch it off to draw only with the Apple Pencil or a stylus and use one finger to move the page).

- **Flight routes:** default flight level, heading reference (magnetic or true), cruise speed, PDF map style, include airport charts, PDF page size.
- **Flight simulator:** use a flight simulator instead of the device GPS (section 21).
- **NOTAMs:** the NOTAM source and its login.
- **Privacy:** anonymous usage statistics.
- **Reset settings:** with two-step confirmation.



Wind symbols, dimming areas by altitude and hiding areas not in effect are in **Map settings** (section 8).

Pinning side panels

On wide windows (700 dp or more, such as an iPad or Mac) **Pin side panels** keeps a panel open next to the map, which stays usable.

Settings are stored on the device and are not synced between devices.

23. App languages

PilotCharts is available in English, Spanish (Español), Catalan (Català), Dutch (Nederlands), German (Deutsch), French (Français), Italian (Italiano), Romanian (Română) and Greek (Ελληνικά).

Change it in **Settings > General > Language**. *Automatic* follows your device and uses English if the device language is not supported. Each language is shown in its own name. Aviation terms such as ICAO, METAR, TAF, NOTAM, ADC and VAC are never translated, and dates follow the separate date-format setting.

24. Privacy and data sources

Your data

Your routes, notes, files and settings are stored on your device. If you have an account and are signed in, routes, notes, files, favorites, Notepad notes, settings, layer choices and map colours are also stored on the PilotCharts servers so they sync. Passwords are not stored on the device; sessions use secure storage.

Anonymous usage statistics

Off until you opt in (welcome popup or **Settings > Privacy**). When on, PilotCharts sends only aggregated counters (for example *a country was downloaded* or *a layer was toggled*), with no free text, airport codes, positions or identifiers. Turning it off deletes unsent counters.

Error reports

When you are signed in and the app detects a problem (a crash, an unexpected error, repeated connection problems to the PilotCharts servers, or something that is clearly not working, such as the map failing to load or sync being stuck), it can offer to send a report to the PilotCharts team. **Nothing is sent unless you agree.** A sheet titled **Send an error report?** shows exactly what would be sent:

- the error message and its details;
- your most recent actions in the app (names of panels and options, never text you typed);
- the latest warning and error lines of the app log;
- a screenshot of the app at that moment, shown as a thumbnail (a crash reported at the next start has no screenshot);
- your app version, platform and device model.

Tap **Show everything that will be sent** to read it all, then **Send report** or **Don't send**. If sending fails you can try again from the sheet. The sheet does not appear more than once a minute, and the same problem is not offered again for ten minutes. Without an account, or while offline, nothing is offered.

Reports are read only by the PilotCharts team, are kept for 30 days and are deleted with your account. A screenshot shows whatever was on screen, so check the thumbnail before you send.

What is sent to third parties

- Live traffic sends your approximate position (rounded to a coarse grid) to adsb.lol.
- Weather overlays request tiles from RainViewer and OpenWeatherMap.
- The forecast layers and the weather at a point send the position (the plane, or the point or airport you looked at) to the PilotCharts servers, which read the model data of the DWD and ECMWF; nothing is

sent to those services by the app.

- Aircraft photos come from Planespotters.net.
- Everything else (airspaces, airports, weather text, NOTAMs, charts links, tiles of the aeronautical overlay) goes through the PilotCharts servers.

Data sources and credits

openAIP (airports, airspace, navaids, obstacles), OpenStreetMap, OpenFreeMap, Esri, MapLibre, Natural Earth, GEBCO (elevation), NOAA Aviation Weather Center (METAR/TAF), Deutscher Wetterdienst (ICON-EU model forecasts), ECMWF (global model forecasts, CC BY 4.0), FAA (NOTAMs), LVNL, RainViewer, OpenWeather, adsb.lol, Planespotters.net, and the national authorities that publish the chart links. Full credits are in **Menu > About**.

25. Troubleshooting and FAQ

The plane marker does not move

Check that location permission is allowed. If the flight simulator is switched on, the marker follows the simulator only.

Some layers are blank

Weather, forecast and traffic layers need an internet connection and are greyed out offline. Airspaces, navaids and obstacles are drawn from downloaded data: download your country (section 19). Check the layer is switched on and that you are zoomed in enough.

An airport has no chart button

The country's official chart links are not available, or you have not refreshed the country since they were added. Refresh the country in the Data page. Airports without links never show a chart button.

A download failed

Check your connection and storage, then refresh the country. The country data still counts as downloaded if only the offline map failed; refresh retries the map.

The offline map is missing

Refresh the country. If you cleared the device's cache or storage, maps need to be downloaded again.

My changes are not on the other device

Make sure both devices are signed in to the same account and online, open the Account panel and tap **Sync now**.

I cannot see NOTAMs

NOTAMs need you to be signed in and online. In the airport panel, tap *Sign in* if asked.

A window asks me to send an error report

The app detected a problem and offers to send the details to the PilotCharts team. Nothing leaves your device unless you tap **Send report**; **Don't send** closes it. See section 24.

Import does not show PilotCharts

See section 11.9.

Known limitations

Planes that are not in the aircraft database show only live data. Terrain is approximate. Radar, forecast layers and traffic are advisory only; the forecast is model data, not an observation.

Appendices

A. Glossary

Term	Meaning
ADC	Aerodrome chart: ground layout, taxiways and parking
VAC	Visual approach chart: arrival, departure and circuit routing
AIP / AIRAC	Aeronautical Information Publication / the 28-day cycle in which it is updated
CTR	Control zone around an aerodrome
TMA / CTA	Terminal / control area
ATZ	Aerodrome traffic zone
FIR	Flight information region
TSA / TRA	Temporary segregated / reserved area
NOTAM	Notice to Air Missions: temporary changes and warnings
METAR / TAF	Aerodrome weather observation / forecast
QNH	Altimeter setting that makes the altimeter read elevation
FL	Flight level, altitude in hundreds of feet at standard pressure
ETE	Estimated time en route
ADS-B	Broadcast of an aircraft's own position, used for the Traffic layer
PFD	Primary flight display
PPR	Prior permission required

B. Country coverage for chart links

Official chart links are available for the countries whose aviation authority publishes them in a form PilotCharts can follow, for example the Netherlands, Spain, Germany, France, the United Kingdom, Austria, Portugal, Poland, Romania, Hungary, Estonia, Finland, Latvia, Norway, Iceland, Slovenia, Czechia, Serbia, Albania, Sweden, Denmark, the United States, Canada, Thailand and others. A green *VAC/ADC links* badge in the Data page marks the countries that have them. The list grows over time; the Data page is always current.

C. Gesture reference

Gesture	Action
Drag	Pan the map
Pinch	Zoom
Tap	Open airport, airspace or feature details
Tap (bare map, editing a route)	Adds a waypoint
Long-press (bare map)	Spot details (airspaces and weather) for that spot; adds a waypoint while editing a route
Tap on route line (editing)	Insert a waypoint in that leg
Drag a waypoint marker	Move the waypoint
Drag a row handle	Reorder waypoints, Library files
Tap the aircraft marker on the map (traffic)	Open the Planes panel
One finger or Apple Pencil on a Notepad page	Draw (with **Draw with a finger** off, only the pencil draws and one finger moves the page)
Pinch on a Notepad page	Zoom the page
Two-finger drag on a Notepad page	Move the zoomed page
Two-finger double-tap on a Notepad page	Back to the whole page
Drag the top bar of a floating reference window	Move the window
Touch a floating reference window	Bring it in front of the others

List of figures

The pictures of this manual, in order of appearance. The picture name is the one used by the capture process.

No.	Picture	Section	Caption
1	02-map-overview	2	The main screen
2	03-account-panel	3	Account panel
3	03-account-signed-in	3	The signed-in Account panel
4	03-sign-out-confirm	3	Sign-out confirmation
5	03-two-factor-setup	3	Two-factor setup: QR code and setup key
6	03-two-factor-recovery	3	Recovery codes
7	03-two-factor-signin	3	Two-factor sign-in
8	04-compass-ring	4	Compass ring around the plane
9	04-tablet-overview	4	The header on a tablet
10	04-main-menu	4	The main menu
11	04-quick-rail	4	The quick actions rail
12	04-quick-forecast	4	The quick Forecast sheet
13	05-themes-menu	5	The Themes menu on a tablet
14	06-layers-menu	6	The Layers menu
15	06-forecast-wind	6	A forecast layer with its controls
16	07-airspace-popup	7	Airspace popup
17	07-spot-weather	7	The Weather tab of Spot details
18	08-map-settings	8	Map settings
19	09-airport-search	9	Airport search
20	09-airport-panel	9	The airport panel
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24	11-share-sheet	11	PilotCharts in the iOS Share sheet
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No.	Picture	Section	Caption
27	12-new-route-form	12	New route form
28	12-add-reporting-point	12	Searching reporting points
29	12-route-with-waypoints	12	Route with waypoints
30	12-route-edit-map	12	A route in edit mode
31	12-new-route-named	12	The name confirmation
32	12-waypoint-editor	12	The waypoint editor
33	12-route-actions-menu	12	Route actions menu
34	12-route-preview	12	Route preview
35	13-vertical-profile	13	Vertical profile
36	14-pdf-share-sheet	14	Share sheet after exporting a PDF
37	14-pdf-report	14	The PDF report
38	14-route-qr	14	Route QR code
39	15-cockpit-pfd	15	Modern PFD
40	15-cockpit-six-pack	15	Six-pack
41	16-traffic-map	16	Live traffic over the Netherlands
42	16-planes-panel	16	The Planes panel
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44	18-notepad	18	The Notepad
45	18-notepad-reference	18	A Library file docked next to the note
46	18-notepad-reference-floating	18	Two Library files open at the same time as floating windows next to the note
47	18-notes-list	18	The list of notes
48	19-data-page	19	The Data page
49	21-simulator-settings	21	Flight simulator settings
50	22-settings	22	Settings