

Meridian™ Quick Start, Beta

Version 0.2.0 · 2026-09-14 · app tip 7863ffe · Beta pilots

Meridian™

Offline mission planning
Mission planning for time, fuel, and darkness.

Quick Start Guide

Current beta: Access, install, databases, and paper.

What this is

Meridian is a flight planning app that puts the power of a mission planning computer in your pocket or flight bag and works without a connection. It runs on your phone, tablet, or laptop.

Build your route leg by leg, enter your aircraft numbers, and Meridian gives you detailed planning for the whole flight: wind-corrected headings, leg times, fuel, and gross weight. It stays live once you're airborne. Update your actual time and fuel at a checkpoint, or change the route, and the rest of the plan updates with it.

The aviation database is already loaded, and terrain packs download by region when you want them. This guide covers installing, updating your database, setting your defaults, and building an aircraft profile.

Checklist

1. **Access.** Open the beta link, enter the email used for beta access, receive a one-time PIN, and enter the PIN. Access lasts about a month after the PIN.
2. **Install / Add to Home Screen** (device steps below).
3. **Open Databases** while online and confirm the aviation database is present (and any terrain you want). Without the aviation database you cannot look up airports.
4. **Create an aircraft profile.**
5. **Build a short plan** on Flight Plan (TDH). Look at the Route Card for a cockpit-usable view.
6. **Save PDF** if you want paper: on the Route Card, **Save PDF · Portrait** or **Save PDF · Landscape**. Print that Letter PDF.

Getting Meridian on your device

Beta install (not the final method)

Meridian will ship as an installed application. For the beta it is a Progressive Web App (PWA) at <https://beta.meridianav.ai>, behind Cloudflare Access. It is not on the App Store or Google Play yet. These steps are temporary and will be replaced when real installers exist.

Access

Open the beta address in a browser on the device you intend to use. Clicking the beta link opens a Cloudflare page. Enter your email. You receive a one-time PIN at that address. Enter the PIN to open Meridian.

- Only the email admitted for beta works.
- The PIN is single use. Ask for another if it expires.
- Access lasts about a month after you enter the PIN. You may be asked again sooner if you clear site data or cookies, use a different browser or profile, or Access ends the session early.

Install (Add to Home Screen)

Installing gives you a normal app icon. Meridian then opens without the browser address bar and tabs. Prefer the installed icon over a loose browser tab.

Device	How
iPhone / iPad	Open in Safari . Chrome cannot install a PWA on iOS. Tap Share (square with an arrow pointing up) → Add to Home Screen → Add .
Android	Open in Chrome. Take the Install prompt if it appears, or browser menu (three dots) → Install app or Add to Home screen .
Windows	Open in Chrome or Edge. Look for an install icon (computer/monitor or download) in the address bar, or browser menu → Install Meridian / Install app . It launches from the Start menu.
Mac	Chrome or Edge: same install or download icon in the address bar, or menu → Install Meridian / Install app . Safari: File → Add to Dock .

Offline after install

Once installed, planning and data already on the device work offline. When you are online again, Meridian itself may update. Close the app after each use so the next open can pick up those updates when online.

Build ID, updates, and local data

A short build line sits at the bottom of the screen. Example:

v0.9.0-beta · 7863ffe · 2026-09-14

Include that line when you report a problem.

If the app does not seem to be working correctly, the issue may already be fixed in a newer build. Try these in order and stop when it is fixed:

1. Close and reopen the app.
2. **Settings** → **Check for updates**.
3. **Settings** → **Repair**.
4. **Report issue**.

Reinstall last. If you must reinstall, export Aircraft Profiles and User Waypoints CSV first.

Plans, profiles, and waypoints live in browser site storage for **beta.meridianav.ai**. Clearing cookies or site data for that site can wipe local work. If you clear browsing data often, export CSV from Aircraft Profiles and User Waypoints first.

Tour of the top of the screen

Left to right at the top of the app:

- **Report issue**: opens the in-app report form (details at the end of this guide).
- Display modes live at the top of the screen: **Light**, **Dark**, **Night Red**, **NVG Mode**.
 - **Night Red** preserves natural night vision (software dimming).
 - **NVG Mode** uses an NVG-friendly software palette. Meridian is not certified NVG compatible. Phone and OS system bars (battery, signal, and similar) belong to the device; Meridian cannot control them.

Main screens

Six screens sit along the top:

- **Flight Plan**: mission/callsign block (mission/callsign, date, profile, tail), PLAN SETUP, Route Summary, TDH input table, Route Card, flight log and timers, Fuel consumption checks, Reset TDH.
- **Aircraft Profiles**: Add, Import, Export, Delete.
- **User Waypoints**: Add, Import, Export, Edit, Delete.
- **Tools**: fuel volume/mass, temperature F ↔ C, altitude ft ↔ m, distance NM ↔ SM ↔ km, **Point from bearing and distance**. Tools do not change the flight plan.
- **Databases**: airport/navaid lookup, navigation data, magnetic variation, terrain, Replace all elevations. Detail in Databases below.
- **Settings**: Communications Policy, Check for updates, Repair, Timezone, Primary coordinate, Secondary coordinate, default units, RESET AND CLEAR (Reset All, Zeroize All). Display modes live at the top of the screen.

Databases

Open **Databases** while online to update or verify what you need.

- **Airport / aviation database**. A baseline set ships with the app. Online, Meridian can download or refresh the FAA NASR cycle for US airports and nav aids (often on first open, or from Databases → Update Database). Settings → Check for updates refreshes the app. Databases → Update Database refreshes navigation data. Without an aviation database you cannot look up airports. If it is missing or looks outdated, open Databases while online and use Update Database.
- **Magnetic variation**. Expect it to be available with the app, without a separate download you have to hunt for. If something is missing, open Databases while online.
- **Terrain**.
 - **Worldwide terrain**: optional baseline. Coarser and smaller. Download needs stable internet; once downloaded, it works offline. **Not mandatory**.
 - **Regional terrain packs**: optional. Higher accuracy and larger. Download needs stable internet; once on the device, they work offline. **Not mandatory**.
 - Terrain packs let Meridian fill waypoint elevation automatically using the best available source, for elevation awareness in planning (not obstacle clearance). Hierarchy: FAA field elevation where it exists, then OurAirports, then the finest covering

terrain pack. Terrain never replaces surveyed airport or navaid elevation. Typed pilot elevations are kept unless you run **Replace all elevations**.

- If a regional pack you need is missing, use **Report issue** to request priority for terrain packs.
- **Currency.** The app still works with an outdated database. OurAirports worldwide coverage can lag FAA NASR; outdated information is possible. NOTAMS, the aircraft flight manual, current charts, and your judgment still govern. (FAA NASR overrides OurAirports if a point exists in both.)
- **Read-only.** Database records are not editable in the app. If you need a point under a name that collides with a database identifier, save it as a **User Waypoint**.

User Waypoints

Save points that are not in the aviation database, or points that differ from a database entry.

You cannot use an identifier that already exists in the aviation database. If the name you want matches a database identifier, modify it (for example, .KBNA or KBNA1). Identifiers accept letters, digits, and . - _ /, max 10 characters, forced uppercase.

Import and export as CSV from the User Waypoints screen.

Aircraft Profiles

A profile stores planning parameters: fuel type and density, usable fuel, reserve, burn rate, and zero-fuel weight. Applying a profile pre-fills the plan. You can keep several profiles and switch between them.

Import and export as CSV from the Aircraft Profiles screen.

Flight Plan / TDH

Open **Flight Plan**. Top to bottom you will see:

- Mission/callsign block: mission/callsign, date, profile, and tail.
- **PLAN SETUP**: collapsible. Overrides the applied profile for this flight only; overrides never change the saved profile. **Speed basis** lives here: **TAS** or **GS** (TAS default). TAS: enter TAS; wind computes GS, Mag HDG, and WCA; time uses that GS. GS: enter GS; time uses that GS; wind computes TAS, Mag HDG, and WCA. One speed field. A destination-leg speed overrides Plan Setup for that leg.
- **Route Summary**: totals for the current plan, including PNR.
- **TDH table**: Time, Distance, Heading. One row per route point. Enter coordinates (or look up an identifier); course, distance, and time fill in. Course and distance are great-circle. Magnetic variation is applied where available. The fillable TDH table is large by design.
- **Route Card**: the cockpit-usable presentation. More like a traditional kneeboard TDH: neat, compact, and meant for use in the aircraft. Prefer this view when you want something you can actually work from in the cockpit.
- **Flight log and timers**: live alongside the plan.
- **Fuel consumption checks**: standalone math aid (see Fuel below).
- **Reset TDH**: clears the current route.

Everything calculates live. Blank fields are valid. There is no Calculate button. Blank, pilot-entered, and calculated values are styled differently so you can see where a number came from.

HARD TIME

Tick **Hard time?** on one destination. One per plan. The ETA block becomes a Hard time clock. Meridian back-plans **Required ETD** at Leg 0 and required ETAs ahead of that leg, and projects times after it. HARD TIME does not change TAS or GS to meet the time. You adjust speed if you want different times. With a HARD TIME set, ATD and ATA update the ahead/behind strip only. Untick and confirm to clear it.

PNR

PNR is the decision point past which the aircraft cannot return to departure with reserve intact. Return is to departure. You will see it on ROUTE SUMMARY, the Route Card masthead, and as a mark in the **Leg #** column on the destination whose segment contains it. The value is distance along the route from departure. When it cannot be computed, those surfaces show an empty PNR mark.

Save PDF

On the Route Card, **Print**, **Save PDF · Portrait**, and **Save PDF · Landscape** sit together. For paper in this beta, use **Save PDF · Portrait** or **Save PDF · Landscape**. Each downloads a Meridian-built US Letter PDF of the current card.

- **Save PDF · Portrait**: one portrait card per Letter sheet. Extra legs continue on the next sheet.
- **Save PDF · Landscape**: two portrait cards side by side on one landscape Letter sheet. A leftover single card stays on the left.

Open the PDF and print it the way you print any PDF. The file is always a light sheet: white background, dark text.

Fuel

Fuel consumption checks

Fuel consumption checks on Flight Plan is a standalone math aid from numbers you enter. Unit hints come from Settings → Fuel-check rate unit (the rate with /hr removed). Plan Setup fuel units and Aircraft Profile fuel units do not drive it.

Plan fuel advisories

Plan fuel advisories use the plan and the applied profile (usable fuel, burn, reserve). Reserve is the number you enter; you own meeting regulatory minimums.

- If **reserve** is left blank, no below-reserve advisory appears.
- A **fuel exhaustion** warning can still appear when projected fuel runs out, even if reserve is blank.

Worth knowing

- **Planning aid.** Not for primary navigation. No GPS and no moving map.
- **On-device.** No telemetry. Planning data stays on your device.
- **Meridian does not** fly the aircraft, file a flight plan, fetch weather, or show a moving map.
- **Garbage in, garbage out.** Wrong or incomplete inputs, or values beyond aircraft capability, produce wrong planning results.
- **Blank is valid.** Nothing is required before you can use the rest of the app. Where a result depends on something you have not entered, it tells you what it is waiting on.

On the way

Specified and being built:

- Flight plan import and export
- Illumination and astronomical data
- Weight and balance
- In-app manual
- Leg types beyond cruise; route overview; more tools

Report issue

Tap **Report issue** at the top of the screen.

1. Write a short description of what happened (required).
2. Optionally attach one screenshot or photo when it helps. The app shrinks the image for sending. Video is not supported. Leave blank for a text-only report.
3. Email is optional, only if you want a notice when it is fixed. Leave blank for an anonymous report.
4. Submit. Confirmation appears in the same place as the report form. Reports are one-way; there is no reply thread.

The report includes your build identifier when possible.

If tail numbers, aircraft profiles, user waypoints, or flight-plan locations are sensitive, omit or blur them in the text and in any image. We handle reports carefully; please only send what you are comfortable sharing.

If something looks off, use the recovery steps under **Build ID, updates, and local data**, then **Report issue**. When you leave an email, we will get back as soon as we can.

Meridian™. Offline mission planning. Beta documentation, subject to change without notice.

Planning aid. Not for primary navigation. On-device · no telemetry.

Beta URL: <https://beta.meridianav.ai> · Cloudflare Access. Not on App Store / Play yet.