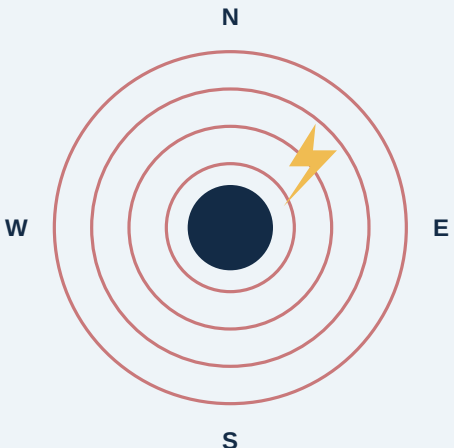


The Apple Silicon Mac User Manual

Install the right Mac edition, connect your data sources, and keep your weather history useful.



Your station. Your sources.

- Weather and history on your Mac
- API setup, lightning, AQI, and alerts
- Backups and optional private cloud sync

Illustrated review edition

macOS 14 Sonoma or later; 3 (4) installer revision

Manual updated September 9, 2026

Includes the dual-version installer, compatible older-Mac setup, fetch-age labels, Free/Pro callouts and a clickable index. Credentials and private account details are permanently concealed.

Contents

Click a chapter to jump to it. Expand its PDF bookmark for visual walkthroughs and troubleshooting details. An alphabetical index and feedback worksheet are at the back.

01 Welcome to Weather Wizard	3
02 Installation and first launch	6
03 Which key goes where?	12
04 Weather Underground: obtain access	15
05 Weather Underground: verify and recover	18
06 OpenWeather: create and save your key	19
07 OpenWeather lightning: access and expectations	22
08 AirNow: obtain an AQI fallback key	24
09 Ambient Weather Network: two keys	26
10 Other station connectors and their limits	28
11 Public weather and forecast services	29
12 Radar, website accounts, and Keychain	30
13 Reading the Weather dashboard	31
14 The wind vane and lightning rings	33
15 Lightning page: controls and history	35
16 AQI, weather warnings, and emergency pills	36
17 Refresh timing and API usage	38
18 Graphs, reports, and manual entries	39
19 Backups, restore, and private data	41
20 Supabase: account, project, and keys	44
21 Supabase: prepare and protect the repository	47
22 Supabase: verify, push, and pull	48
23 Settings, notifications, sleep, and Pro	50
24 Troubleshooting: start with the symptom	52
25 API errors, limits, and safe testing	55
26 Official API and account links	56
27 Quick reference and setup checklist	57
28 Feedback and feature requests	58
29 Alphabetical index	59

CHAPTER 01

Welcome to Weather Wizard

Weather Wizard brings station readings, forecasts, air quality, alerts, lightning and weather history together on your Mac. This manual covers Apple silicon Macs running macOS 14 Sonoma or later. It follows the shared 3 (4) installer candidate, including the September 9, 2026 condition-freshness correction. Both native editions share the same Free and Pro features.

Three kinds of information

Station observations are measurements supplied by the selected station provider. **Supplemental information** includes OpenWeather conditions and lightning, AQI, and public alerts. **Forecasts** describe predicted conditions for a location. They can have different timestamps and need not match the station's instruments exactly.

Free weather and Pro provider connections

Free includes nearby-station/local weather, primary station setup, and three saved stations. No physical station is required. **Additional provider accounts, API keys including OpenWeather, and custom radar/forecast sites require Pro.** The included no-key Open-Meteo feed stays Free. An active station-owner trial includes Pro provider access.

Choose your starting point

- **I own a station:** connect the station to its provider first, then enter the provider's reading credentials in Weather Wizard. Weather Underground is the default owned-station choice.
- **I do not own a station:** use the location-based setup or search for a public station. A forecast location is not a physical instrument in your yard.
- **I want lightning:** set a valid station location, enable the required Pro access, and configure your own OpenWeather key with lightning access.
- **I want shared history:** configure your own Supabase project after local operation is working. Cloud sync is optional and requires Pro.

About this edition

Provider websites and access terms can change. Follow the linked official instructions. Pro unlocks app features; it does not buy provider subscriptions.

This manual covers the Mac app. iPhone widgets and StandBy do not apply. Apple WeatherKit and Apple Nowcast are not current Mac data sources.

Historical app/provider captures show Pro active; FREE/PRO callouts explain access in this revised build. Captures date from September 7-8, 2026 and contain permanent privacy masks. No accounts, keys, or live transfers were created for the illustrations.

Weather Wizard is an informational display, not a guaranteed emergency notification, lightning detection, or life-safety service. Missing or delayed data does not establish safe conditions. Read official alerts and follow the instructions of the responsible authorities.

Supported Macs and a second life

Native support for both Mac processors

Your Mac	Minimum macOS	Installer selection
Apple silicon (arm64)	macOS 14 Sonoma or later	Weather Wizard Apple Silicon
Intel (x86_64)	macOS 15 Sequoia or later	Weather Wizard for Intel

macOS 15 Sequoia is the minimum for this Intel release. Your Mac must be able to run the required version. Check **Apple menu > About This Mac** for the processor and installed macOS version. The combined installer selects the matching native edition; you do not need both packages. Free and Pro feature options are the same on both.

Give a compatible older Mac a new role

Retiring a Mac from everyday work? Use it as a dedicated weather display at home, in a workshop, or at the office. Keep station readings, wind, rain and daily trends in view. This use case applies to compatible hardware; it does not change Apple's hardware-service or software-support policies.

1. Confirm the Mac meets its processor-specific minimum macOS version.
2. Start with one working station, correct units, and an accurate system clock.
3. Keep the Mac powered and online during the periods when you want data collected. Display sleep and computer sleep are different: a sleeping or powered-off Mac cannot continuously collect readings.
4. Choose readable window sizing and display scaling. Review launch refresh, sleep/wake controls, and backup settings for the way you use this Mac.
5. Make a Manual Backup and verify where it was saved before adding advanced services.

Release review: these minimums match the prepared app bundles and installer checks. The revised Intel tests ran under Rosetta; native testing on each minimum macOS version remains pending. An older Mac that cannot run the required macOS version is outside this release's compatibility range.

FEATURE ACCESS / CHAPTER 01

Free and Pro at a glance

FREE	Available without the app's Pro unlock; also included in Pro.
PRO	Requires the app's Pro unlock. API access and any provider fees remain separate.

Screenshots were captured with Pro active. The callouts identify shared and gated features; they do not simulate a separate Free screen. This table follows the current 3 (4) code, not planned tools or a final App Store offer.

Feature / control	Free	Pro
Saved stations	Up to 3	Up to 20
Current temperature, humidity, pressure, wind, rain and rain rate	Included	Included
Additional provider accounts/keys, custom sites and OpenWeather	Locked	Included; own provider access
Forecast and radar entry points; public WX and EMR warning pills	Included; source/location dependent	Included; source/location dependent
Dashboard Today graph	Included	Included
Dashboard 12 hr, Week, Month and Year ranges	Locked	Included
Graphs report workspace, CSV, PDF and print	Locked	Included
Add Entries and Manual Backup / restore	Included	Included
AQI refresh and AirNow fallback	Not enabled	Included with available source
Lightning refresh, dial marks, count and range controls	Locked / inactive	Included with lightning access
Rain YTD, dew point, feels-like, heat index, wind chill, UV / solar tiles	Blurred / locked	Included when source supplies values
Custom limit fields and detailed limit strip; voice limit alarms	Locked	Included
Fallback-chain controls and estimated gap repair	Locked	Included
Supabase repository connection and sync	Locked	Included; own protected project
Local history retention policy	Older than 7 days is pruned	Not subject to the Free 7-day prune

An eligible trial can temporarily enable Pro features. A visible button, a saved key or a provider's free account does not prove that the app feature is unlocked. See More > Pro for your current access.

CHAPTER 02

Installation and first launch

Before opening the app

Have your station's provider name, station ID, and reading API key available in a password manager. You do not need every optional service to begin. Check that your Mac is online and its date and time are correct. If you are upgrading, create a Manual Backup before changing station or cloud settings.

One installer for Apple Silicon and Intel

The combined installer carries both native editions and automatically selects the correct one. **Weather Wizard Apple Silicon** is selected on Apple-silicon Macs; **Weather Wizard for Intel** is selected on Intel Macs. The other package is skipped. There is no processor decision to make and no need to install both. Apple silicon requires macOS 14 Sonoma or later; Intel requires macOS 15 Sequoia or later. The minimum version is a compatibility setting, not a claim that every OS version has been individually tested.

1. Open the combined Weather Wizard .pkg. For this revised preparation, use **Weather-Wizard-Combined-3-4-PRO-PROVIDERS-20260909.pkg**. It is a local preparation package, not a public signed download or an App Store upload.
2. Read Introduction and Read Me, then continue to Destination Select. The installer targets this Mac's running startup disk, not an offline macOS image.
3. On **Installation Type**, confirm the matching processor package says **Install** and the other says **Skip**. The installer should reject an unsupported macOS version. Widen Package Name if a long label is abbreviated.
4. The default application folder is /Applications/Weather Wizard. The selected package's **Location** control lets you choose another empty folder on this startup disk. The app retains its bundle filename, **Weather Magic PWS.app**.
5. Continue when the destination is correct and authorize installation. Then answer the required Yes/No notices described on the next page; they appear before the app payload is copied.
6. After success, open the app from the chosen folder. The installer does not launch it or run it as administrator.

Existing-app protection: installation stops if **Weather Magic PWS.app** already exists at the chosen destination, including a symbolic link. Choose a different empty folder; do not delete your working app just to bypass this check. No automatic upgrade-overwrite, data reset, migration or support-file deletion is performed.

Installation and first-launch consent

Data-loss liability: both native editions

To the fullest extent permitted by applicable law, BigSkyAstro accepts no liability for lost, damaged or unavailable data, including weather history, settings, backup files and cloud data, arising from installing or using Weather Wizard. You are responsible for maintaining and verifying independent backups. Backup and cloud-sync features do not guarantee recovery. This does not exclude liability that cannot lawfully be excluded.

Do you understand and accept this data-loss liability disclaimer?

During installation

1. On Installation Type, confirm the automatically selected processor package and the destination folder.
2. Continue and provide macOS administrator authorization. The data-loss Yes/No prompt appears after the processor, OS and destination checks, before the app payload is copied.
3. Choose **Yes (Y)** to accept and continue. **No (N)**, closing/cancelling the prompt, a timeout, or a dialog error stops this installation before the app is copied. The existing app and weather database are not removed.
4. A signed-in desktop user must respond. This candidate does not support unattended or headless installation. If stopped, correct any display/session issue and restart the installer only if you intend to accept.

At the first launch of this consent revision

The app asks separately before constructing its weather store. Choose **Yes (Y)** to continue or **No (N) - Quit** to exit. Old privacy/setup checkboxes do not count as consent to this revision. After all required notices are accepted, the app remembers the revision and acceptance time in the current macOS user's preferences; the same revision does not ask at every launch. A new user profile or changed notice revision requires consent again.

Installer consent does not pre-accept app consent. Keep and verify independent backups; instructions are in **Backups, restore, and private data**. Cloud synchronization is not an independent backup.

Intel installations also require a separate final-Intel-revision acknowledgement. That Intel-only prompt is not shown by the Apple-silicon app or its native installer payload.

Support files, permissions and trial

The app belongs in the chosen installation folder. Preferences, weather history and credentials belong to the signed-in macOS user. For the current non-sandboxed preparation, the weather database is under `~/Library/Application Support/Weather Wizard Pro/WeatherWizard.sqlite3`. A signed sandboxed App Store edition uses its user container's Application Support instead; use the app's backup/export actions instead of assuming the same absolute path. Backup destinations are chosen separately in Settings.

The installer contains no personal database, API keys, passwords or pre-approved Keychain entries. It cannot grant privacy permissions for you. Location, notifications, Keychain and selected-folder prompts appear when the app requests those capabilities; check the requesting app and approve only what you intend to use. Denied access can leave the related feature unavailable without preventing basic use. Do not disable macOS security to avoid a prompt.

Installing into another folder does not create a clean data profile. For a clean first launch, use a new ordinary macOS account or a clean VM. The successful Intel installer test used a separate account on macOS 15.7.9; that is not the same as testing a freshly erased Mac. Your personal data is never included in a release package.

The same Free-use time gate on both processors

Both editions use the same one-time **30-day station-owner Pro trial**, beginning when an eligible owned PWS with a nonempty station ID and API key is saved. A public station or forecast-only setup does not start it. The expiry is 30 elapsed days from the stored start time, not 30 launches or a particular calendar month. Restarting the app or changing the installation folder does not restart the trial for that existing user profile.

At the exact expiry, trial-only Pro access ends; basic Free features remain. Free supports up to 3 stations and seven-day local history retention, while Pro supports up to 20 stations and its additional tools. The comparison page identifies individual feature gates. No developer, owner or family unlock password is bundled or accepted in these release copies. Purchase or restore Pro through **More > Pro**. Provider accounts and product subscriptions remain separate, during and after the trial.

Family Sharing is enabled for the App Store Pro non-consumable. A family member may need **Restore Purchase** using their own Apple account and an eligible sharing group. Family Sharing does not share your station passwords or buy third-party API services. Purchase/restore must still be qualified in Apple's sandbox before submission; an unsigned preparation package is not proof of a completed store transaction.

First launch after installation

1. Answer the new Yes/No consent prompt before the weather database opens. Intel also requires the final-revision acknowledgement. No quits. After Yes, continue with privacy and setup; review the provider overview.
2. Enter your country and location using the postal-code or map choices offered. Check the resolved place before accepting it; the location drives radar, lightning distance, and supplemental weather.
3. Choose the personal-station path if you own a PWS, or the local-forecast path if you do not.
4. For a PWS, enter the provider, station ID, and corresponding API credential. Keep website passwords out of the API field.
5. Review units, alert limits, optional services, and backup location. Approve only the permissions you want the app to use.
6. Open Weather and confirm the selected station and observation timestamp. Wait for a successful fresh reading before adding more services.

Add or edit later

Use **Add** for station setup and search. In **More > Settings**, the station list offers **Use**, **Home**, and **Edit** actions. Use selects the display station. Home designates the station used by the home-station policies and cloud upload. Do not assume that simply viewing another station changes Home.

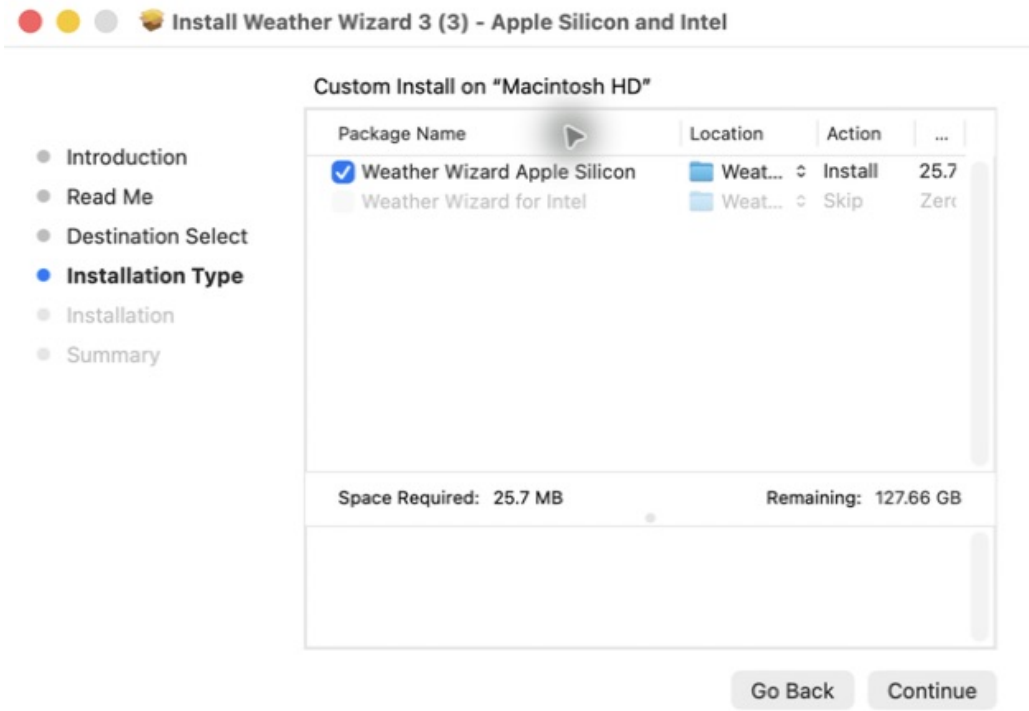
For optional credentials, open **More > Settings > Manage Other Site Data**. This screen has Weather, Radar, and Data Sources categories. Save changes before closing it. Cancel does not save the edited values.

Confirm the basics

- The station name and location are correct.
- Temperature, wind, and rain have plausible units and a recent timestamp.
- Home is the intended station, especially before cloud sync.
- Supplemental services are either current or clearly unavailable, not mistaken for instrument readings.
- A backup can be created in a folder you control.

Confirm the native installer package

Combined installer > Installation Type



Actual September 8 macOS Installer capture on Apple silicon: the native Apple Silicon package is selected and Intel is skipped. The revised candidate retains this selection flow. This is not a new Intel or September 9 installer capture.

FREE	Installing either processor package does not require Pro. Both use the same Free/Pro access policy.
PRO	The one-time 30-day owner trial and eligible App Store purchase/restore apply equally to both native editions.

1. Open the same combined package on either supported processor type. The installer chooses the native app automatically.
2. Confirm the Install and Skip states. On Intel, the Intel package is the selected one.
3. Use the selected row's Location control to choose an empty folder on the startup disk. Existing apps are protected.
4. Continue only after confirming the destination. This screenshot was captured before installation; no working app was changed.

Apple silicon requires macOS 14 Sonoma or later; Intel requires macOS 15 Sequoia or later. This is the direct-package workflow. The Mac App Store downloads and installs apps through its own workflow.

Start with the station form

Weather Wizard > Add > New Station

<

A new, unsaved station form in Tahoe 3 (3). The saved-station sidebar is outside this crop.

FREE	Primary station setup and the built-in local-weather feed; up to 3 saved stations.
PRO	Capacity rises to 20; custom limits and lightning controls require Pro.

1. Choose Add in the bottom action bar, then New Station for a separate station.
2. Under Owned PWS Setup, select the provider before entering its station identifier and reading key.
3. Review Units and Set As Home Station. A new station can inherit the existing Home refresh policy.
4. Complete the remaining form before saving. Do not change an existing station just to experiment.

Search Read-Only Stations and Owned PWS Setup are different paths. Use the owned-station fields only with credentials authorized for that station.

CHAPTER 03

Which key goes where?

An **Application Programming Interface (API) key** lets software request a particular service. A **website password** signs you into a website. A **station upload key** lets station hardware send readings to a provider. These are different credentials, even if all three appear on the same provider website.

What you want	Credential	Enter it here
Weather Underground PWS readings	Station ID and reading API key	Add > Owned PWS Setup > Weather Underground API Key
OpenWeather conditions and lightning supplement	Your OpenWeather API key	More > Settings > Manage Other Site Data > Data Sources > OpenWeather API Key
OpenWeather as the selected location provider	OpenWeather key for that saved location	Add > Provider: OpenWeather Current > OpenWeather API Key
AirNow AQI fallback	AirNow API key	Other Site Data > Weather > AirNow API Key
Ambient station readings	User API key plus application key	Add > Ambient API Key Application Key
Earth Networks station readings	Authorized subscription key	Add > Earth Networks Subscription Key
WeatherCloud connector	Provider-authorized read key/token and compatible endpoint	Add > WeatherCloud Key or Token; see connector cautions
Optional cloud repository	Project URL, compatible public key, repository user sign-in	More > Supabase
Radar website account	Website username and password, if desired	Other Site Data > Radar > Website Accounts

Do not buy the wrong product

The current conditions supplement uses OpenWeather's Current Weather endpoint, not One Call. Lightning is a separate access check. The current AQI path is Weather Underground first, AirNow second; buying OpenWeather Air Pollution access does not change that routing.

The **WeatherBug / Earth Networks AQI Key** field exists in Other Site Data, but the reviewed Mac AQI refresh path does not call an Earth Networks AQI client. Do not purchase that product expecting the field alone to enable it.

This manual contains no working credentials. Text such as YOUR_API_KEY is a placeholder, never a value to paste unchanged. No user password, owner key, private project URL, or account session is included.

External services: accounts and access

An **Application Programming Interface (API)** lets the app request provider data. An API key identifies authorized access; it is not your website password. Free app features and free provider access are separate things.

Source and purpose	Account / key	Access to check
Weather Underground: default PWS provider	Eligible provider account, station ID and reading API key	Station contribution and account eligibility; do not substitute an upload key
OpenWeather: supplemental current weather (Pro)	Create an account, verify email and obtain an API key	Pro is required in the app; provider free tiers and lightning access are separate
AirNow: AQI fallback	Register an account and obtain its API key	Public API data with service limits; AQI tools in Weather Wizard require Pro
Open-Meteo: native forecast and cloud layers	No customer key field in this app baseline	Public free endpoint is for non-commercial use; publisher commercial access is separate
National Weather Service: observations and public alerts	No personal API key; app sends request identity	Public API, with geographic coverage and usage limits
Weather.com: default radar website	Website account only when its site requires one	Browser-service terms apply; a website login is not an API key

Start with the configured defaults

Weather Underground is the default owned-station provider. The included radar link uses Weather.com; the native forecast uses Open-Meteo. These built-in services remain in Free. Configure additional accounts, keys, and custom sites only with Pro active. The installer supplies no personal accounts, passwords, API keys or paid provider plans.

Advanced Pro setup during installation

Additional-provider setup opens only with active Pro. Free users see a Pro explanation; they can finish basic setup without supplying extra provider credentials. Existing credentials remain saved when Pro expires, but locked configuration and OpenWeather requests do not become available just because a key exists.

Use the installation and first-launch walkthrough to review optional services, limits and backup choices. Provider registration and key generation happen on the provider's official site; save each issued key in its matching app field. The package installer does not create accounts or complete advanced configuration automatically.

Official access guidance: [OpenWeather API catalog](#), [AirNow account guide](#), [Open-Meteo pricing](#), and [NWS API guide](#). Detailed provider walkthroughs follow in the next chapters.

Provider setup: clickable starting points

Click a blue underlined link to open the provider's official page in your browser. Account pages may ask you to sign in. Finish registration on that site, then return to Weather Wizard to save the correct key. No shared provider credentials are supplied.

Provider and direct links	What to do next
Weather Underground: PWS overview , member API keys	Confirm your eligible station/account. Copy the station ID and reading key into Add > Owned PWS Setup. Website and upload passwords are different.
OpenWeather: create account , API keys , product catalog	Register and verify email. Obtain an active key. Save it in More > Settings > Manage Other Site Data > Data Sources. Verify current weather before checking separate lightning access.
AirNow: request account , Web Services	Complete registration and verification, obtain the API key, then save it under Other Site Data > Weather. Review station AQI ZIP. App AQI tools require Pro.
Supabase: sign up , dashboard , API-key guide	Create/select your project. Follow the Supabase chapters for compatible keys, protected tables, repository-user sign-in and connection checks before enabling cloud sync.
Open-Meteo: forecast guide , access and pricing	Native forecasts need station coordinates. This app has no customer Open-Meteo key field. Publisher commercial access is separate from the public non-commercial endpoint.
National Weather Service: API guide	Use a supported public station or alert location. No personal API key is required; the app supplies request identity. Verify coverage and observation time.
Weather.com: weather website	Use Radar with the correct station location. Sign in on the provider's site only when required. Optional saved website accounts are under Other Site Data > Radar.

Detailed instructions for these sources, plus Ambient, WeatherCloud and Earth Networks, remain in their individual chapters. OpenWeather, AirNow and Supabase use different keys; never copy one provider's key into another provider's field.

CHAPTER 04

Weather Underground: obtain access

Start at the correct account

Open [Weather Underground's station overview](#). Use its registration path to associate your station with your own account. Complete the manufacturer's upload configuration and confirm that your station has a recent reading on the provider's website before trying the Mac app.

Open the [member API-keys page](#). Sign in if redirected. Use the API credential offered for reading station data. If the key page is unavailable, confirm your station's contribution status and ask [Weather Underground support](#) about your account's API eligibility. Do not assume an ordinary website account or an ad-free subscription grants every Weather Company API product.

Three items to identify

Item	Purpose	Used by Weather Wizard?
Station ID	Identifies the station to read	Yes, in Weather Underground Station ID
Station key / upload credential	Configures hardware to send readings	Not a substitute for the app's reading API key
Reading API key	Authorizes data requests	Yes, in Weather Underground API Key

Enter the station in the Mac app

1. Choose **Add** and find **Owned PWS Setup**.
2. Enter a recognizable **Display Name** and **Location**.
3. Set **Provider** to **Weather Underground PWS**.
4. Paste the station ID into **Weather Underground Station ID** and the reading key into **Weather Underground API Key**. Remove accidental spaces before or after either value.
5. Set units and review the saved location. Add an **AQI ZIP** only if you want a particular AirNow reporting-area lookup.
6. Review **Set As Home Station** and the station limits, then save. If an existing Home policy controls a new station, use Settings to review which station is Home afterward.

The app reads current observations and can retrieve the current day's station history. This is not an instruction to enter a Weather Underground website password or to purchase a historical bulk-data subscription.

Sign in to the station provider

Weather Underground > Member API keys

Log In

Email

Password

[Forgot Password?](#)

If you're a Weather Underground member in the United States, your email address and password work seamlessly across wunderground.com, [weather.com](#) and The Weather Channel apps on iOS and Android. If you created your weather.com account using your Google account, then you may not have a password. Go to [Forgot Password?](#) to set one.

Log In

Don't have an account? [Sign up](#)

[Terms of Use](#) | [Privacy Policy](#)

The real Weather Underground sign-in form reached from the member API-keys link. This is a sign-in step, not an API-key dashboard.

FREE

Weather Underground station connection is available in both editions. Provider API eligibility is separate.

1. Open the member API-keys link in this chapter. If redirected, sign in using your own provider account.
2. After signing in, locate the reading API key offered for your eligible account and station. Keep the station ID separately.
3. If access is unavailable, verify station contribution and account eligibility with Weather Underground; a website password is not the reading key.

Official source: [Open provider page](#)

Match each station credential to its field

Weather Wizard > Add > Owned PWS Setup

Owned PWS Setup

Display Name

Home

Location

Provider

Weather Underground PWS

Available PWS sources: Weather Underground, WeatherCloud, Ambient Weather, and WeatherBug. Weather Underground is the default. Davis WeatherLink and Ecowitt Cloud are planned connectors.

Weather Underground Station ID

Weather Underground API Key

AQI ZIP

Units

System

Refresh

Managed automatically — every 5 minutes

Up to 3 Weather Underground stations are collected automatically at 00:00, 01:40, and 03:20 of each five-minute cycle.

Set As Home Station

Weather Magic PWS Pro supports up to 20 saved stations.

An existing Weather Underground setup. Private values are permanently removed beneath the blur-style masks.

FREE	Provider, station ID, reading key and units are shared setup fields.
PRO	AQI refresh and the custom limit controls are Pro features.

1. Provider selects the connector. The screenshot shows Weather Underground PWS.
2. Weather Underground Station ID identifies the instrument. Weather Underground API Key authorizes reading its observations.
3. AQI ZIP is a reporting-area preference, not a second station password. Units controls the display.
4. Review Home status and the remaining limits before saving. The refresh line describes the Home-controlled collection policy.

Copy your own values. Blurred fields in this manual are intentionally unusable.

CHAPTER 05

Weather Underground: verify and recover

A successful connection

Return to **Weather** and choose **Refresh Weather**. Compare the station ID, observation time, temperature, and wind with the station's own provider page. Allow for provider publication delay and differences between instantaneous, averaged, and historical readings.

Direct Weather Underground collection is managed on a five-minute cycle. Up to three station slots are staggered at 00:00, 01:40, and 03:20 within that cycle. This spreads requests across the cycle; it does not mean the app collects only at those clock times during a day.

When a reading fails

Symptom	Check first
Station is offline on the provider website too	Station power, network, upload settings, and provider status
Website works but app authorization fails	Reading API key, not upload key; correct account and station ID
Numbers are present but old	Observation timestamp, stale/cache indicator, network connectivity
Wrong city or lightning bearing	Saved station coordinates and selected station; location name alone is not sufficient
Different values in two panels	Instrument measurement versus forecast or OpenWeather supplement; compare timestamps

Fallback stations

In **More > Settings**, review the fallback-station controls. Search the intended area, review the candidate and distance, and use **Save Fallback Chain** when the choice is correct. These controls may require Pro. Use **Clear Fallback** only to remove that recovery selection, not as a way to repair an API key.

A fallback is a different observation source. It is useful during an outage but may measure different conditions. Check the visible source when comparing fallback data with your own station. Reconfirm the Home selection before pushing a recovered history to cloud storage.

Keep the original data

Do not delete and recreate your station as the first troubleshooting step. That can separate history from its original station identity. First verify the credentials and network, make a backup, and collect a redacted error message for support. A rate-limit response is a reason to wait and inspect provider usage, not to press Refresh repeatedly.

CHAPTER 06

OpenWeather: create and save your key

Obtain your own account and key

1. Open [OpenWeather sign-up](#) and register with an email address you control. Complete any email verification requested.
2. Sign in and open [API Keys](#). Copy an active key or create a clearly named key for Weather Wizard.
3. Review the [API catalog](#) and [current pricing](#). The current app uses Current Weather for conditions; lightning access must be checked separately.
4. If a new key is rejected, consult the provider's [FAQ](#) and allow for activation. Do not repeatedly create keys or assume the app needs your website password.

Save it in Weather Wizard

With Pro active, open **More > Settings > Manage Other Site Data**. Select **Data Sources**, paste the key into **OpenWeather API Key**, and choose **Save**. This dedicated key is stored in this Mac's Keychain. If the save fails, the screen reports the failure; do not assume closing the window saved it.

If macOS asks to permit access, confirm that the request is from the intended Weather Wizard app and concerns its saved item. Allow access if you want the feature to work. A remembered permission normally avoids repeat prompts, but an app identity/signature change, a locked Keychain, or revocation can cause another prompt.

Verify conditions first

Return to Weather, refresh, and inspect the supplemental condition/precipitation source. In the revised installer candidate it shows time since the last successful fetch, such as **OPENWEATHER · 1 MIN AGO**. Normal cache reuse preserves that time. Station temperature and wind remain station measurements.

The supplemental conditions request uses **/data/2.5/weather**, with a ten-minute normal refresh interval and a maximum compatible cache age of 90 minutes. Do not subscribe to One Call solely to satisfy this endpoint. OpenWeather may offer additional forecast, map, historical, and air-pollution products; those are not automatically enabled in Weather Wizard by entering a key.

OpenWeather Current as a saved station provider in Add also requires Pro. Its station credential is separate from the dedicated Keychain supplement field. Configure the dedicated field for lightning even if a location-based OpenWeather station already works.

Read the OpenWeather fetch age

The September 9 installer candidate replaces the ambiguous **OPENWEATHER CACHED** label with time since the last successful local fetch. The same rule applies to Apple silicon and Intel. Reusing a valid response or reloading saved history preserves that original fetch time.

Label	Meaning
OPENWEATHER · JUST FETCHED	The last successful fetch was less than one minute ago
OPENWEATHER · 1 MIN AGO	One completed minute since the fetch; the number increases with age
OPENWEATHER · 10 MIN AGO	Ten completed minutes since the fetch; reuse between normal requests is expected
OPENWEATHER · STALE	The last successful fetch is over 90 minutes old
OPENWEATHER · AGE UNKNOWN	This reading has no usable saved fetch timestamp
OPENWEATHER · CHECK CLOCK	The Mac clock is more than five minutes behind the saved fetch time

The label updates every minute while the view is running, even if the weather values stay the same. Hover over it for the explanation. A successful new fetch restarts the age; redisplaying the same response does not. Clock differences up to five minutes are tolerated, so check system time if the label looks inconsistent.

Fetch time is not observation time

Fetch age describes when this Mac last obtained the supplemental response. It is not the age of the station's sensor reading, the provider's observation time, or the cloud-layer model. Compare the station's observation timestamp separately. Station temperature, wind and rain readings are preserved when OpenWeather supplements the display.

Normal supplemental requests are throttled to ten minutes. A compatible saved response can be reused for up to 90 minutes, including after a temporary request failure. The age label does not report whether the latest attempted request failed. It shows the last successful fetch.

If an older installation says CACHED all day

Older builds label every cache reuse as cached, even just after fresh data arrived. That label alone does not prove a day-old response. The new labels appear after installing the revised build; updating this PDF does not update an installed app. For persistent stale data, check network access, the Mac clock, the intended OpenWeather key and account access. Preserve history instead of resetting the app.

Screenshots captured before this revision may still show the older **CURRENT** or **CACHED** wording. They illustrate navigation; this table describes the revised installer candidate's behavior.

VISUAL WALKTHROUGH 05 / CHAPTER 06

Find the active OpenWeather key

OpenWeather account > API keys

[New Products](#) [Services](#) [API keys](#) [Billing plans](#) [Payments](#) [Block logs](#) [My orders](#) [My profile](#) [Ask a question](#)

You can generate as many API keys as needed for your subscription. We accumulate the total load from all of them.

Key	Name	Status	Actions	Create key
	Default	Inactive	  	API key name <button>Generate</button>
	Weather Wizard	Active	  	New API keys may take up to 2 hours to become ready for use.

The actual signed-in API-keys page. Both key values were permanently removed; the Active and Inactive states are unchanged.

PRO

Connecting OpenWeather and saving additional provider keys require Pro. Provider access is separate.

PRO

Lightning uses separate Pro and provider access checks.

1. Select API keys in your OpenWeather account. Identify the row for the key you intend to use.
2. Check Status. Copy an Active key; do not copy an inactive row or the key's descriptive name.
3. In Weather Wizard, open More > Settings > Manage Other Site Data > Data Sources.
4. With Pro active, paste into OpenWeather API Key, choose Save, and check for a reported save failure. Then verify conditions in the app.

Create key is the provider's control for obtaining another key when needed. No key was generated for this manual. New keys may need activation time; a conditions key does not by itself prove lightning entitlement.

Official source: [Open provider page](#)

CHAPTER 07

OpenWeather lightning: access and expectations

Confirm the product, not just the key

The app calls the endpoint described in [OpenWeather's Historical Lightning Data documentation](#). That page currently documents individual events with time, coordinates, quality, and position uncertainty, with near-real-time availability within minutes. Its endpoint is hosted on **demo.openweathermap.org**. A working Current Weather key is not proof that lightning is enabled for the account.

Before purchasing anything, ask OpenWeather whether your account can use this lightning product in Weather Wizard and what usage and commercial-distribution terms apply. The public lightning page does not provide a simple account-specific price or quota that this manual can guarantee.

Enable and test in the app

1. Save the dedicated OpenWeather key in Other Site Data > Data Sources.
2. Confirm Pro access in the app and check the selected station's latitude and longitude.
3. Open **Lightning**. Keep the Mac awake and online for the next refresh opportunity.
4. Check for an authorization or location error. A successful response containing no events is different from a request that failed.
5. During a known local event, compare the provider status, event times, selected range, and map period. Never expect a bolt to be manufactured just to prove the connection.

What the app requests

The current client requests the previous **30 minutes** around the station, covering **20 miles** so all four vane rings can be populated. It calculates distance and bearing from coordinates and saves received events into history. The provider expects kilometers and UTC date parameters; the app handles those conversions.

The independent lightning request budget is **60 seconds** while the app is running, awake, and eligible. Opening the map, refreshing weather, and the background loop share the same gate. This is a polling interval, not a promise that the provider detects or delivers every strike in one minute.

Common outcomes

- **401:** key missing, incorrect, inactive, or not accepted by this endpoint.
- **403:** the request is forbidden; ask the provider to verify product access.
- **429:** rate limited; review all devices and services sharing the key.
- **No events:** may be a valid empty result for the requested time and area; it is not an all-clear.

Check the separate lightning product

OpenWeather > Historical Lightning Data documentation

OpenWeather Lightning API

Query Parameters

JSON Response

Field Descriptions

Error Handling

Documentation

Historical Lightning Data

The **OpenWeather Historical Lightning Data API** provides observed lightning events detected by a global sensor network.

The data is derived from the ERA5 reanalysis model, offering **global coverage** and a historical archive starting from 2023-06-26.

Each record represents an individual lightning discharge with geographic coordinates, timestamp, and an estimated positional uncertainty.

- **Data type:** Observed lightning strikes (cloud-to-ground and intra- cloud, where available).
- **Spatial input:** Point (lat/lon) + search radius ≤ 50 km. All parameters are required.
- **Temporal input:** start_date, end_date (UTC, ISO-8601) — **maximum 7-day** window.
- **Output:** List of lightning events, each with:
 - datetime — timestamp of detection
 - lat, lon — strike location
 - quality — detection confidence
 - error — horizontal location error
- **Update frequency:** Near-real-time, available within minutes of occurrence.
- **Historical range:** Historical lightning data available from 2023-06-26 to present

A focused capture of OpenWeather's public lightning documentation. Account navigation and the cookie banner are outside the capture.

PRO

Lightning events, vane marks, recent count and range settings require Pro plus working source access.

1. Confirm that the product is the lightning-events API, not just Current Weather or Air Pollution.
2. Check the current authentication, endpoint and account-access requirements with OpenWeather before treating the key as ready.
3. Return to Weather Wizard and review the Lightning page's status. No events, a rejected request and a delayed feed are different outcomes.

This screenshot documents the provider interface, not a successful entitlement test. The app's 60-second polling opportunity does not promise that new strikes reach the source within 60 seconds.

Official source: [Open provider page](#)

CHAPTER 08

AirNow: obtain an AQI fallback key

Register with AirNow

Open [Request an AirNow Account](#). Complete the required identity and contact fields, choose a password, and review the data-use agreement. Follow the activation email. AirNow's [API fact sheet](#) describes the confirmation-code process.

After signing in, open [Web Services](#). The API key appears in the upper-right portion of that page. AirNow also inserts it into generated query examples, so do not publish screenshots or copied example URLs without removing the key.

Enter and verify it

1. Open **More > Settings > Manage Other Site Data > Weather**.
2. Paste the key into **AirNow API Key** and save.
3. In **More > Settings > Station Controls**, review **AQI ZIP**. Use the station area's reporting ZIP if the automatic location resolves to an unsuitable reporting area.
4. Return to Weather and refresh. Open the AQI details to review the source, reporting area, value, and timestamp.

The current release first attempts Weather Underground AQI only for a Weather Underground station using that user-entered station key, then uses your AirNow key if needed. There is no shared or developer AQI key in the app. Your Weather Company account must authorize the AQI endpoint; an ordinary station-reading key may not include it. Seeing Weather Underground as the source does not mean your AirNow key failed. The ordinary successful AQI refresh budget is one hour; explicit Refresh Weather can request it earlier.

What hourly AQI means

AirNow recommends caching observations hourly because they normally update hourly, often after the hour rather than exactly at :00. Reporting-area AQI is not a measurement from your backyard PWS. A nearby ZIP may share the same reporting area. See the [AirNow FAQ](#).

AirNow provides public API access, but each web service has its own call limit and data-use conditions. You do not need an OpenWeather paid AQI plan for this AirNow integration. Check the selected AirNow service's current limit rather than assuming one rate applies to every endpoint.

Upcoming-release note: AirNow's Web Services page lists older ZIP/latitude-longitude endpoints for retirement in fall 2026. The release must be checked against the replacement service. This cannot be repaired by repeatedly changing your API key.

Request your AirNow API account

AirNow Developer Tools > Request an AirNow Account

PRO

AQI refresh, including AirNow fallback, is gated in this Mac baseline. An AirNow key alone does not unlock it.

Request an AirNow Account

First Name*

Last Name*

User Name*

Password*

E-Mail Address*

Phone*

Comment

I agree to the EPA AirNow Data Use Guidelines: ☐

Request Account

The actual blank registration fields and agreement checkbox. The guidelines pane is outside this detail crop; read it on the provider website before agreeing.

1. Use your own contact details and a unique account password. Read the EPA AirNow Data Use Guidelines before agreeing.
2. Complete Request Account and any verification requested by AirNow. Retrieve the API key through your approved account.
3. In Weather Wizard, open Other Site Data > Weather, enter AirNow API Key and save. Set the desired AQI ZIP on the station.

The API key is not the account password. AirNow is the current fallback AQI source; the app tries the configured Weather Underground AQI path first.

Official source: [Open provider page](#)

CHAPTER 09

Ambient Weather Network: two keys

Obtain the correct pair

The Ambient integration needs a **user API key** and an **application key**. The first identifies the weather account's permitted devices; the second identifies the consuming application. Neither is the Mac's hardware address or the station's Wi-Fi password.

For the user key, sign into your Ambient Weather Network account and use **Create API Key** in account settings. The provider's [user-key instructions](#) link to that screen. For the application key, follow the [application/development-key instructions](#) or obtain the approved application configuration from Weather Wizard support. Do not use an unrelated application's key.

Fill the Mac fields

1. Choose **Add** and set Provider to **Ambient Weather Network**.
2. Enter your weather device's MAC address in **Ambient Device MAC**, preserving the provider's displayed format. This is the weather device, not your Mac computer.
3. In **Ambient API Key | Application Key**, enter the user key first, then a vertical bar, then the application key.
4. Review the display name, location, units, and Home choice, then save.
5. Refresh and compare the station identity and observation timestamp against your Ambient dashboard.

Format example only: YOUR_USER_API_KEY | YOUR_APPLICATION_KEY

Check before troubleshooting the app

The device must already appear in your Ambient account and be uploading. Confirm that both credentials belong to the intended access arrangement and are not reversed. If the app reports an unsupported response, preserve a redacted message for support; do not paste private keys into a public forum.

Current reads use the devices endpoint and request the most recent observation. The desktop's general non-WU station refresh policy is ten minutes. The app having a provider choice does not certify your particular hardware/account combination; verify a fresh reading before relying on its history.

The selected station may not supply every sensor. UV and solar fields require actual available data. A missing sensor value is not evidence that an API key is invalid.

Keep Ambient's two keys separate

Ambient Weather > official API-key help

Product Page

An API Key is used to securely connect your weather station to applications created by outside developers.

We have listed a few here:

Community

To generate a User Key, visit your account settings:

<https://ambientweather.net/account>

and select the Create API Key button.

API Keys

Create API Key

An API Key is used to securely connect your weather station to applications created by outside developers. We've listed a few of them [here](#).

Developers: An Application Key is also required for each application that you develop. [Click here](#) to create one.

API Keys:

What is an API key?

The API key acts as both a unique identifier and a secure, secret token for authentication.

There are two types of API keys:

- **Developers:** An Application Key is required for each application that you develop. To create a device key, login to your account at AmbientWeather.net and visit: [AmbientWeather.net Account Settings](#).
- **Users:** A Device Key is required to connect your weather station to the application created by the developer. To create a device key, login to your account at AmbientWeather.net and visit: [AmbientWeather.net Account Settings](#).

The video below can assist in the API creation process.

Actual captures of the provider's public help pages. The Create API Key example in the upper image belongs to Ambient's own guide, not to a live user account.

FREE

Ambient station connection uses the shared Add flow. Station count remains 3 in Free or 20 in Pro.

1. Follow the account-settings link for your user/device key. The upper guide shows where its Create API Key control lives.
2. The application key identifies the software; the user/device key authorizes station access. Follow the release instructions for the compatible application key.
3. In Weather Wizard's Ambient setup, keep API Key and Application Key in their separate fields.

Official source: [Open provider page](#) | [Application-key guide](#)

CHAPTER 10

Other station connectors and their limits

WeatherBug / Earth Networks

Use the [Earth Networks developer portal](#) and [provider contact form](#) to obtain authorized current-observation access. Request the subscription key, station/provider identifier or coordinate format, current endpoint, and usage allowance. A consumer WeatherBug login is not an API subscription key.

In Add, choose **WeatherBug**. The fields are **WeatherBug Provider:Station ID or Lat,Lon** and **Earth Networks Subscription Key**. The client supports these target forms and a supplied API URL, but the provider must confirm the endpoint and response are compatible. Use only a provider-approved HTTPS URL: the app sends the entered credential to that endpoint.

Important: the WeatherBug / Earth Networks AQI field elsewhere in Settings is not wired into the reviewed Mac AQI fetch sequence. Lightning on the vane uses OpenWeather, not Earth Networks.

WeatherCloud

The app exposes **WeatherCloud Device ID or API URL** and **WeatherCloud Key or Token**. However, [WeatherCloud's public API documentation](#) describes submitting measurements, not the read endpoint assumed by this connector. A device upload key alone is not verified reading access.

Contact WeatherCloud through its official site and request a supported read API, credentials, response format, and permission for this use. Have Weather Wizard support confirm compatibility before entering them or purchasing a service. Do not treat this connector as a guaranteed working public read service merely because it appears in the picker.

Reserved connectors

Davis WeatherLink and **Ecowitt Cloud** are reserved in the data model for future official connectors and are not active owned-station choices in this baseline. Do not buy or enter credentials expecting these direct integrations to work now. If your hardware already sends to a supported network, use that network's supported read path instead.

What to ask a provider

- Can my account read this station through an API, rather than only upload to it?
- Which exact product, endpoint, and credential types are required?
- Is this use in a distributed Mac app allowed, and what are the current limits?
- Does the response include coordinates, observation time, and the sensors I need?

CHAPTER 11

Public weather and forecast services

National Weather Service

The current NWS API uses an application User-Agent rather than a customer API-key field. Weather Wizard supplies the request identity. Public station observations and active alerts come from **api.weather.gov**; no OpenWeather key is used for them. The official [NWS API guide](#) explains access and service behavior.

Use Add's station search for public observations. An NWS station is often an airport or other reporting installation, not a personal station at the entered ZIP. Verify the station and distance. NWS alert coverage is not worldwide just because another weather source has global coverage.

Forecast choices

On first use of **Forecast**, the app offers a service selection. **Open-Meteo Forecast** opens the native local forecast. **Weather.com in Browser** opens the website. **Keep Weather Underground + Open-Meteo Forecast** preserves the WU station while adding the separate forecast. Choose **Use Selected Service** to retain the selection.

The current native forecast requests ten days of daily highs/lows, precipitation probability and amount, wind, gusts, and weather codes. It needs saved coordinates. Selecting a forecast service does not replace the PWS reading key or turn modeled temperatures into measurements from your station.

Open-Meteo account and licensing distinction

The current client has no customer Open-Meteo key field and uses the public forecast endpoint. Open-Meteo's [pricing and licensing page](#) distinguishes non-commercial open access from a commercial subscription with a customer endpoint and API key. This is a publisher configuration requirement for the Apple release, not a reason to paste an Open-Meteo key into the OpenWeather field.

For a developer-managed commercial subscription, use the official pricing page and customer portal, choose the appropriate plan, and keep the issued key with the deployment configuration. Customers should not purchase this plan merely to fix a missing native forecast without first checking with Weather Wizard support.

The current feature baseline does not use Apple WeatherKit or Apple Nowcast. A website opened in a browser remains that website's service, with its own account, cookies, subscriptions, and terms.

CHAPTER 12

Radar, website accounts, and Keychain

Radar is a website surface

Choose **Radar** to open the station-local Weather.com radar surface. The owner-station coordinates are used for its location. If the location is wrong or missing, correct the saved station before trying to solve it with a website password.

You can choose **Sign In in Browser** or **Open Radar in Browser**. Your browser can use its own saved-password AutoFill. Weather Wizard does not need to extract the browser's password database for this path. Complete the provider's verification or subscription prompts directly on its official site.

Optional saved website account

1. Open **More > Settings > Manage Other Site Data** and select **Radar**.
2. Review the website's name and **Sign-in URL**. Use the provider's official HTTPS sign-in address.
3. Enter **Username or email** and, only if you want it saved, **Password**.
4. Choose **Save**. Website passwords are stored in this Mac's Keychain; account labels and URLs are local account settings.
5. When offered in Radar, choose **Sign In With Saved Account** only if you want the app to use that saved item. Read the disclosure and complete any website challenge yourself.

Merely saving a website account does not sign you in. The saved-account action is an explicit choice. A website may change its sign-in form, refuse embedded browsers, or require multifactor verification. In that case, use the browser sign-in route rather than weakening account security.

If macOS asks again

A locked login Keychain can prevent access. Unlock it through the normal macOS prompt and verify the requesting app. A remembered approval is not a guarantee across a changed app signature, reinstall, migration, or a reset Keychain. Do not disable Keychain protection or share the Mac login password to avoid a prompt.

Removing a website account and saving deletes its app-saved password item. A blank saved password removes that stored password. Neither action cancels the provider's subscription or changes the provider account password.

API fields and website fields serve different purposes. Saving an OpenWeather website login under Website Accounts does not configure the OpenWeather API Key field.

CHAPTER 13

Reading the Weather dashboard

Begin with identity and time

Confirm the selected station, source, and observation time before interpreting any number. A screen can repaint every second while the underlying provider reading is several minutes old. The computer clock is not the observation timestamp.

Dashboard area	How to read it
Temperature and humidity	Station measurements and available derived values; check units and observation age
Wind vane and speed	Selected-station wind; lightning marks are an independent overlay
UV / Solar	Combined block; UV index and solar radiation are different quantities
Rain totals	Station precipitation records such as today, rate, or year-to-date; check the specific label
Precipitation / condition panel	May show OpenWeather supplemental conditions or a fallback source
LOW / MID / HIGH cloud values	Cloud-layer coverage; not three rain probabilities
WX / EMR / AQI	Different kinds of alerts and environmental information; open details
Today graph	Saved history organized into display intervals; not a live oscilloscope

Rain labels matter

LAST HOUR is a recent precipitation amount. **PWS RATE** is the station's rate field, not a completed hour's accumulation. Today and year-to-date totals cover different periods. A condition icon from OpenWeather may disagree with a rain sensor at your exact location without either credential being wrong.

LOW, MID and HIGH are Open-Meteo cloud-layer estimates, not rain probabilities. Layers can overlap and need not sum to 100. A new OpenWeather fetch does not update the model time for those estimates.

Read freshness separately from source

The revised label shows time since the last successful fetch. History redisplay preserves that age; STALE means over 90 minutes. Check station observation time separately. Older captures show CURRENT or CACHED; see the new fetch-age table in the OpenWeather chapter.

Buttons and availability

The bottom actions lead to Weather, Forecast, Radar, Lightning, station setup, graphs, backup, and other facilities. Pro-only features may be locked or visually marked. Use **More > Pro** to inspect access and purchase/restore controls. The app's current purchase screen, not this manual, governs available offers and terms.

Read the dashboard from the top down

Weather Wizard > Weather



The running Tahoe 3 (3) dashboard, captured September 7, 2026. Readings, warning state and timestamps are examples from that moment.

FREE 1	Current temperature and humidity are shared dashboard readings.
PRO 2	Recent lightning count and strike plotting need Pro and source access.

1. Check the selected station and Last Updated before comparing readings.
2. Read the WX, EMR and AQI pills independently. The source strip identifies where the AQI value came from.
3. Keep station rain separate from the OpenWeather supplement. Older CURRENT/CACHED labels in this capture are replaced by fetch-age labels in the revised installer candidate.
4. Use the bottom action bar to open Forecast, Radar, Lightning, Graphs, Manual Backup and More.

Actual historical capture; no values or strike marks were staged. See the OpenWeather fetch-age table for the September 9 label change.

CHAPTER 14

The wind vane and lightning rings

Two independent displays on one dial

The center and vane show wind information. Yellow lightning marks represent received strike coordinates relative to the selected station. The lightning overlay stays geographically north-up; a wind-direction change does not rotate the strike locations.

There are four light-red distance rings: **1, 5, 10, and 20 miles**. The brighter red N, E, S, and W headings sit beyond the outer circle. These evenly spaced rings are range bands, not a uniformly scaled map. A straight-line measurement with a ruler across the dial will not produce miles.

Count and mark lifetime

The current vane and its active strike count use the same rolling **30-minute** event window and the same screen clock. When an event ages out, its vane mark and contribution to that count end together. This removes stale marks without deleting the event from saved history.

The active vane covers all four rings out to 20 miles. The **Range Around Station** selection of 1, 5, 10, or 20 miles governs the nearby flash alert and initial map filtering. It does not shrink the vane's full collection coverage to the inner selected ring.

What a flash means

A newly received, previously unsaved nearby event can briefly pulse the console. Repeated delivery of the same event does not keep that visual alert flashing indefinitely. The display is an indication of received data, not a precise alarm on the physical instant of a strike.

Settings that can be confusing

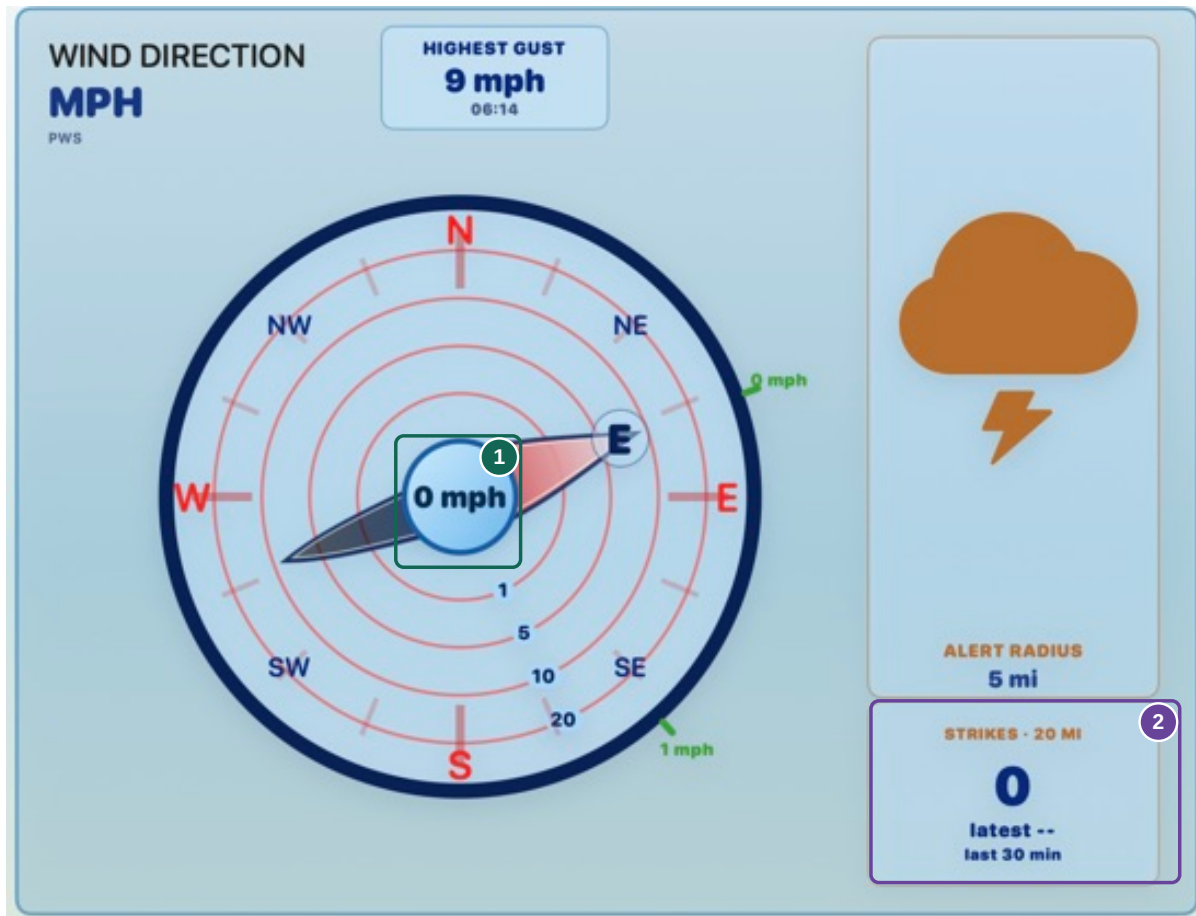
Settings currently includes a **Strike Count Hold** selector with several intervals. The reviewed current vane/count implementation uses the fixed 30-minute live window, so do not expect that older selector to change this vane's mark lifetime. This mismatch is identified for release cleanup.

If a strike seems misplaced

Check the station coordinates, selected station, event age, and range band. Strike records can include position uncertainty. The vane uses the coordinate-derived geographic bearing, not a handheld compass's magnetic correction. Open Lightning for a map-based review; the dial is a compact situational display, not a surveying instrument.

Use the rings and strike count together

Weather Wizard > Weather > wind vane



Detail from the same live dashboard. The small ring labels read 1, 5, 10 and 20 miles. The captured recent-strike count is zero.

FREE 1

The wind-speed center and wind direction remain shared features.

PRO 2

Lightning events and their count/range controls are separate Pro features.

1. The center speed and arrow describe the station wind. The concentric rings describe lightning distance.
2. Read the 20-mile strike count and the latest-event status beside the dial. The alert radius is a separate setting.
3. Open Lightning for the event list and map. A weather-condition lightning icon is not itself a plotted strike location.

Zero recent strikes or an empty dial does not establish safe conditions. Missing access, delayed data and the active time window all affect what can be shown.

CHAPTER 15

Lightning page: controls and history

Open the page

Choose **Lightning** from the main action bar. Read any credential, entitlement, or location error before interpreting an empty map. The page combines a map and saved strike information for the chosen station.

Time and Distance

Expand **Time & Distance** to choose the visible period and distance. The current desktop page offers 12 Hours, Today, Week, Month, and Year history choices. Collapse this area to reclaim space. The controls remain separate from the scrolling strike details, so the map is not pushed out of view simply by reading more rows.

Changing the period or range changes the view of saved history; it is not a request to download every strike in the world for that entire period. The app's live service fetch continues to request its recent local window. Longer map periods can only show events that have been retained or restored into history.

Map navigation

- Use **+** and **-** to zoom in or out.
- Pan to inspect nearby marks. Live updates preserve the current camera where possible.
- A station, range, or period change may recenter the map for the new context.
- Inspect event time and distance in the list before comparing a plotted point with the current active count.
- Use **Google Map** when the page offers an external map action. This is a browser action, not a Google API key you need to enter.

Print or save the review

The page offers **Save PDF** and **Print**. Choose the station, period, and distance first, then inspect the exported or printed result. A history report is a record of events available to the app, not a certificate that no other lightning occurred.

Why history and the vane differ

The vane represents the last 30 minutes within 20 miles. A Today or Week map can show older stored events, and a smaller distance choice can exclude events that remain on the full vane. These are different filters on event records. An expired active count does not mean history should be erased.

If the view is empty, compare the selected period, range, station, successful request status, and availability of stored history. Repeated refresh cannot fill time that was never collected while the app was offline.

CHAPTER 16

AQI, weather warnings, and emergency pills

AQI color follows the numeric reading

The AQI pill appears beside the other status pills, to the right of EMR. Its color is calculated from the reading rather than left at a fixed decorative color. The table below summarizes the U.S. EPA scale used by the app. See [AirNow AQI Basics](#) for official explanations and activity guidance.

AQI range	Category	Pill color
0-50	Good	Green
51-100	Moderate	Yellow
101-150	Unhealthy for Sensitive Groups	Orange
151-200	Unhealthy	Red
201-300	Very Unhealthy	Purple
301+	Hazardous	Maroon

An unavailable value is shown as a dash rather than a fabricated zero. Zero itself is a valid reading. A value that is at least two hours old is treated as stale and displayed neutrally rather than retaining a misleading current-condition color. Check details for the source and timestamp.

For Weather Underground AQI, the reviewed client records the fetch time as its observation timestamp. Do not assume that time is an independently verified sensor sampling time. AirNow reports a regional observation time and area; it is not necessarily the station's own sensor.

WX and EMR are not AQI

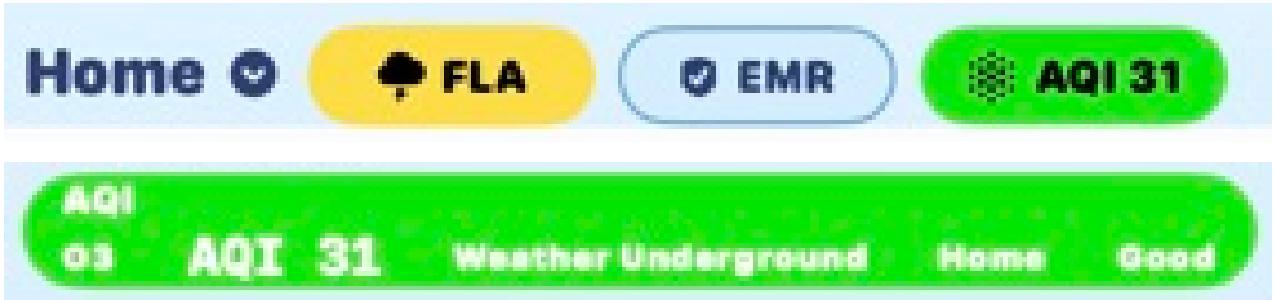
WX summarizes applicable weather alerts and can display an event abbreviation such as FFW for Flash Flood Warning. **EMR** represents the separate emergency-alert classification used by the app. Read the full event description, affected area, issue/expiry times, and instructions; an abbreviation alone is not enough.

The app retrieves active NWS alerts for the station location. **AMBER Alerts** in Settings controls whether those child-abduction alerts are included. Local threshold alarms for heat, cold, gusts, humidity, or pressure are separate from government-issued warnings.

A successful response with no active events can clear a previous alert. A short-lived cached alert may bridge a service error only while still valid for the same location. If you see a warning in another service but not here, compare location, source, timestamps, and event expiry before assuming a refresh problem.

Recognize the AQI pill and its source

Weather Wizard > Weather > status pills



Enlarged, unretouched details from the actual dashboard. AQI 31 was green and labeled Good at capture; Weather Underground was its source.

FREE	WX and EMR public-warning pills are not the custom station-limit system.
PRO	The AQI reading and its refresh/fallback path require Pro.

1. Read the AQI number and category together. Color follows the numeric reading, not the theme or a permanent green setting.
2. Use the source strip to distinguish the station provider's AQI from AirNow fallback data.
3. Treat the neighboring weather-warning and emergency pills as separate information. A good AQI does not cancel a flood warning or another emergency.

These are two crops from one capture, not separate live updates. The AQI color-range table on the preceding page explains other readings.

CHAPTER 17

Refresh timing and API usage

Different services have different clocks

Service / display	Current Mac behavior
Weather Underground PWS	Five-minute collection cycle, with up to three staggered station slots
Other selected station providers	Ten-minute managed refresh policy
OpenWeather condition supplement	Ten-minute normal refresh; compatible cache up to 90 minutes
OpenWeather lightning	Independent 60-second request gate while eligible and running; 60-second failure retry gate
AQI	One-hour successful gate; five-minute failed-attempt retry gate; explicit refresh can request earlier
Live vane count / marks	One-second display clock; this does not make one API call per second
Graph / cloud bucket	Thirty-minute history grouping; not the PWS polling interval

These are app policies, not guaranteed delivery times. Provider delays, rate limits, network failures, macOS scheduling, Pro access, and sleep can make updates later. Manually opening a page does not necessarily bypass its request budget.

Estimate OpenWeather usage

For one continuously eligible active location, one lightning attempt per minute is approximately **60 per hour** or **1,440 per 24 hours**. A ten-minute conditions schedule would add about **6 per hour** or **144 per day**. Together that illustrative baseline is about **1,584 requests/day** per continuously running Mac.

This is arithmetic from the app's timers, not a billed usage report or a guaranteed ceiling. Other devices, direct OpenWeather station requests, location changes, failed conditions requests, and product-specific accounting can alter the total. Keep the provider's own quota and product entitlement in view. A 60-second app timer does not establish that a lightning subscription permits that frequency.

Sleep and quit

When the Mac is off, the app cannot collect. Sleep and a closed laptop can interrupt networking. Wake scheduling may help collection resume, but it cannot guarantee uninterrupted minute-by-minute lightning delivery. Check the latest successful timestamp after waking.

The app no longer needs a Settings call-count display to function. Use your provider account's usage tools for authoritative quota information. Faster polling cannot create newer AQI observations or eliminate the lightning network's reporting delay.

CHAPTER 18

Graphs, reports, and manual entries

Review a graph

Open **Graphs**, choose the available period, data, and style controls, and confirm the station and date. The Today view starts with the midnight interval. A reading observed at 00:12 can belong to the 00:00-00:30 bucket; the underlying observation time is still meaningful and should not be confused with the bucket label.

Missing observations should remain missing rather than being interpreted as zero. A normal day has 48 half-hour intervals, but daylight-saving transitions can produce a shorter or longer local day. Compare dates and units before judging a gap or discontinuity.

Export a report

1. Select the desired station, period, and graph settings.
2. Choose **Save PDF** for a shareable report, **Save CSV** for spreadsheet analysis, or **Print** for a printer/print-dialog workflow.
3. Choose a destination you can find again, then open the result to check the station, period, columns, units, and page layout.
4. Keep the original database backup as well. A PDF graph is not a full database backup.

Use the Graphs export sheet for these actions. The separate Database facility in this baseline displays cached rows and some explanatory export text; do not assume every placeholder there is an implemented exporter.

Month-end and year-end

The graph tools include completed-period archive actions. Inspect the exported files before using any accompanying renewal or clearing action. Preserve a full Manual Backup first. A period archive and a full restore file serve different purposes.

Hand-written readings

Add Entries supports entering measurements after a station failure. Choose an eligible entry time, review the values that default from the latest reading, and replace only the fields you actually recorded. Use **Save Entry** when the time, units, and measurements are correct.

Do not invent readings to make a graph continuous. If no eligible time slot is offered, review the period and existing records rather than overwriting an observation blindly. Manual additions become part of your stored history and should be identifiable in any later review.

VISUAL WALKTHROUGH 12 / CHAPTER 18

Read the day graph, then open reports

Weather Wizard > Weather > Today Trend; bottom action bar



The dashboard's real Today Trend graph and report-related navigation controls. This is not the separate Graphs export sheet.

FREE	Today, Add Entries and Manual Backup are available without Pro.
PRO	12 hr / Week / Month / Year ranges and the Graphs report tools require Pro.

1. Use Today and the measurement selector to inspect the chosen metric. Midnight boundaries and 30-minute summary buckets appear along the graph.
2. Choose Graphs in the bottom action bar for the detailed graph and report tools described in this chapter.
3. Use Add Entries for manual observations. Create a Manual Backup before any archive or clearing operation.
4. Check the station, period and units in an exported report before sharing or printing it.

The latest observation time can differ from a bucket's label. The screenshot shows the collected portion of the day, not fabricated readings through midnight.

CHAPTER 19

Backups, restore, and private data

Make a backup before changing anything important

Back up before installing another version, editing station identity, restoring history, changing cloud direction, or retiring a Mac. Manual Backup and restore are available in Free and Pro. A backup is a dated copy of the local database; a graph PDF/CSV is only a report, and cloud sync is not an independent backup.

Procedure 1: create and check a manual backup

1. Confirm the intended Mac, selected station and latest reading. Stop any restore or cloud transfer already in progress.
2. Choose **Manual Backup** in the bottom action bar. Review Station and Latest Reading in the panel.
3. Choose **Choose Folder**. Select a writable folder you control. For a removable drive or network share, confirm it is connected and available. Prefer a separate protected storage location over the same disk as the live database.
4. Choose **Create Backup**. Wait for **Saved:** and the completed file path. If an error appears, fix the destination or available space and retry; an attempted backup is not a completed backup.
5. Choose **Show File**. In Finder, check the new `.sqlite3` file's date and nonzero size. Record which Mac and date it belongs to. File existence is a useful first check, not a complete restore test.
6. Keep the previous known-good backup. Before a major change, keep another copy on separate protected storage. If using an OS-managed cloud folder, confirm the file has actually finished uploading and is available from the destination before relying on it.

What this file does and does not protect

The backup copies database contents such as saved stations, readings, alert data and manual entries. It can contain station API credentials and precise locations. It does not guarantee transfer of Mac Keychain items, browser sessions, all preferences, app binaries or purchases. Keep provider access details securely and re-enter them through the normal app screens when needed.

Use the app's backup action instead of copying a live SQLite file in Finder; the live database can depend on companion transaction files. Store backups confidentially, preferably on encrypted storage. Do not send an unredacted backup to support.

Scheduled backups and routine checks

Procedure 2: set the daily backup schedule

1. Open **More > Settings** and find **Scheduled Backup**.
2. Choose **Choose Backup Folder**, select the destination, and check the displayed **Location**. Use **Show Folder** to confirm that it opens. Read any location warning.
3. Turn on **Enable scheduled database backup**. Set **Backup Time** and **Minute**. Choose a time when the Mac and destination are normally available.
4. Select **Back Up Now** once and wait for its status. Check that a new file appears in the selected folder. This verifies the current destination without waiting until the scheduled time.
5. Leave the app running and the Mac awake around the scheduled time. Recheck the status and file date after the first scheduled run.

The scheduler attempts a backup when enabled and due, at or after the chosen time, and normally records one successful automatic run per local calendar day. A Mac that is off, asleep, disconnected from the destination, or not running the app cannot complete it at that moment. It may run when the app next checks while awake and due; missed days are not separate historical snapshots.

Wake scheduling is an optional macOS power feature and can require administrator authorization. It is not a guarantee that networking, a closed laptop, or an external drive will be ready. Check actual backup results rather than relying on the wake setting alone.

Routine check and retention

- Check the latest backup date regularly and after any sleep, network or storage change.
- Keep several dated generations, including one before an installation or restore. Confirm available space; no retention promise is made by this manual.
- A backup on the live database's disk can be lost with that disk. Keep a separate copy when protecting against disk failure.
- “Saved locally” or “macOS will sync it” does not confirm remote upload. Check the cloud provider's completion status separately.
- For a restore test, use a separate macOS user or test environment and a copy of the backup. Installing the app into another folder alone does not isolate its user data.

Restore a backup and verify recovery

Procedure 3: restore deliberately

1. Create and locate a new manual backup of the current Mac before restoring an older one. Keep it separate from the file you intend to restore.
2. Check the source file's date, originating Mac and expected stations/history. A newer filename does not establish that it contains the history you want.
3. Open **Manual Backup > Choose Restore File** and select the intended `.sqlite3` backup.
4. If current data exists, read the choice carefully. Choose **Merge Missing Data Only** to retain current records and add missing data. It does not replace an existing record merely because the backup has a different value.
5. Choose **Replace Current Data** only when you want the backup to replace the current database. The app first creates a safety backup. If any error is reported, stop and preserve both files.
6. Wait for the restore result. If **Show Safety Backup** is offered, use it and record that file's location before continuing.
7. Verify the Home and selected station, units, latest observation and several older dates in history. Check that the expected stations and manual entries are present. Recheck provider keys and optional settings on a different Mac.
8. Refresh once with the intended provider and confirm a recent reading. Review cloud project/user and transfer direction before enabling sync or choosing Push/Pull. Keep all backup copies until you are satisfied with recovery.

When to cancel

Cancel if you cannot identify the source backup, if its date or station list is unexpected, or if the current Mac contains newer history you have not protected. Do not delete the live database, its container or your working app as a troubleshooting shortcut.

Moving to another compatible Mac

Install the matching native edition on the destination Mac, make a backup of any data already there, and use the app's restore workflow with a copy of the source backup. Verify provider access and Keychain prompts on that Mac. A copied app bundle or a new installation folder does not carry every setting, password or purchase entitlement with it.

Keep cloud sync off during a deliberate restore test so test data does not overwrite an active repository. Local backups protect history independently of an optional Supabase service or graph export.

CHAPTER 20

Supabase: account, project, and keys

Optional private cloud repository

Use Supabase only if you want cloud-backed history and understand which repository should be authoritative. Local SQLite remains available without it. The feature requires Pro; a Weather Wizard purchase and a Supabase plan are separate arrangements.

Start at [Supabase sign-up](#). Create an account and a project in an organization you control. Choose an appropriate region and plan. Store the project's database password securely; it is not the password to enter in Weather Wizard's repository-user sign-in.

Find the two project values

Supabase's current [API-key guide](#) directs users to the project's **Connect** dialog or **Settings > API Keys**. Copy the project URL and the compatible client/public key. The URL identifies the project; the key identifies the client, not the signed-in person.

The current Mac field is named **Anon Public Key** and its request code still uses the legacy JWT-style anon key in some Authorization paths. Use the legacy **anon** key only when available and approved for this version. New **sb_publishable_** keys are not documented here as a tested drop-in replacement. Supabase's current guidance is moving clients to publishable keys; release compatibility needs verification.

Never enter a service_role key, sb_secret_ key, database password, or personal management token into Anon Public Key. Those are not client credentials for this screen.

Save in the app

1. Open **More > Supabase**.
2. Enter **Project URL**, such as `https://YOUR_PROJECT.supabase.co`.
3. Enter the compatible **Anon Public Key**.
4. Choose **Save Local Settings**.
5. Leave **Use Supabase as primary cloud repository** off until the matching database schema and account protections have been configured.

The project owner/dashboard account and a repository user under that project's Authentication system are different accounts. Use **Create Account** or **Sign In** in the app for the repository identity, not your Supabase dashboard password simply because the email addresses happen to match.

Supabase: guided first connection

Supabase is optional Pro cloud storage. Start with working local weather and a Manual Backup. You need a project-owner dashboard account and a separate repository-user identity inside that project.

1. Open [Supabase sign-up](#), complete registration, then open the [dashboard](#). Create a dedicated project in your organization or select the existing Weather Wizard project. Keep the database password in your password manager.
2. Open the project's **Connect** dialog or **Settings > API Keys**. Follow the [official key guide](#). Copy the Project URL and the client key compatible with this app version. Do not enter a database password, secret key or service_role key in the app.
3. Read this chapter's **Anon Public Key** compatibility note before continuing. Current Supabase guidance prefers publishable keys; this app's legacy field is not proof that a new key format is supported. If only an unsupported key type is available, contact Weather Wizard support and leave sync off.
4. Have the project administrator review the supplied **Weather-Wizard-Supabase-Schema.sql** reference for the intended project. Follow the next chapter for the five required tables and owner-specific policies. Do not apply a new-project script blindly to existing data.
5. Check both [Data API table access](#) and [Row Level Security](#). Table grants and row ownership are separate requirements. Newly created tables may require explicit grants; an empty result is not a reason to disable protection.
6. Review the project's [email/password Authentication instructions](#). Create the repository user through the app's Create Account flow when enabled, complete any confirmation, then use Sign In. This is not the dashboard-owner password.
7. In **More > Supabase**, enter Project URL and the compatible Anon Public Key, then choose **Save Local Settings**. Use **Test Supabase**, **Check Records** and **Refresh Data Health** to confirm the intended project, user and records.
8. Follow **Supabase: verify, push, and pull** before the first transfer. Enable **Use Supabase as primary cloud repository** only after choosing which Mac has the authoritative history and verifying the initial transfer.

Station snapshots can include station credentials. Keep row protections enabled and retain independent local backups. A Supabase connection, its plan and its account permissions are not included in the app's Pro purchase.

Locate the existing Supabase project keys

Supabase Docs > API keys > Find your keys

Find your keys

Pick the path that matches where you are working.

Every path below reads keys that already exist. If your project has no publishable or secret key yet, create them first in the **Settings > API Keys** section of the Dashboard.

Dashboard Supabase CLI Management API Local stack

Use the Dashboard when you are setting up a project by hand. It needs nothing but a signed-in session.

- 1 Open your project's **Connect dialog**. It shows the URL and publishable key for the framework you select, ready to paste into `.env`.

The official public guide shows Connect and Settings > API Keys. It is not a capture of your private project dashboard.

PRO

Connecting Weather Wizard to Supabase requires Pro. A provider's free plan is not the app's Free edition.

1. Sign in to your own Supabase dashboard and select the intended project.
2. Use the project's Connect dialog for its URL, or Settings > API Keys for the specific key type.
3. For this Mac baseline, read the compatibility note in this chapter before selecting a key. The app's Anon Public Key field has not been documented as a tested drop-in for the newer publishable format.

Never place a secret key, service_role key, management token or database password into the app's client-key field.

Official source: [Open provider page](#)

CHAPTER 21

Supabase: prepare and protect the repository

Obtain the release-matched schema

Weather Wizard expects five tables: **weather_magic_metadata**, **weather_magic_stations**, **weather_magic_readings**, **weather_magic_lightning_strikes**, and **weather_magic_air_quality_readings**. Their keys, JSON columns, timestamps, and ownership policies must match the app. Generic example tables are not sufficient.

The review package accompanying this manual includes **Weather-Wizard-Supabase-Schema.sql**, transcribed from the current Mac repository definition. It is a setup reference for an empty dedicated project, not a tested migration for an older database. An administrator should review it before running it. The current Mac screen does not expose a Copy SQL action.

1. Open the intended project's SQL Editor in the Supabase dashboard. Confirm the project name; do not use a production project containing unrelated data for an experiment.
2. For a new, empty project, review the matched script and run it once. For an existing repository, back up and request a migration review instead.
3. Confirm all five tables exist, Row Level Security is enabled, and the authenticated role has explicit required table access. Follow the linked Data API guide for new-project grant settings.
4. Verify that each policy restricts reads and writes to the signed-in user's **owner_user_id**. Test that another user cannot access those rows before storing private station data.
5. Configure the project's email/password Authentication provider and confirmation process. Create the repository user and complete any email confirmation before signing in from the Mac.

Supabase's [Row Level Security documentation](#) explains why authentication alone is insufficient. A client/public key is not a secret wall around your data; table permissions and ownership policies enforce access. Do not disable RLS to make an empty result disappear.

What is sent to cloud

The current station snapshot serializes the station record, including its station API credential. Treat the repository as sensitive credential-bearing data, not a public weather feed. The dedicated OpenWeather Keychain item and website passwords are separate items, but that does not make the station JSON safe to publish.

For release readiness, credential handling and public-key compatibility need review. If you are not comfortable storing station credentials in your own protected cloud project, keep cloud sync off and use local backups.

CHAPTER 22

Supabase: verify, push, and pull

Connect before transferring

After schema setup, enter the repository user’s **Email** and **Password** and choose **Sign In**. Use **Test Supabase** to check access. A successful connection alone does not establish that row counts or the selected Home station are correct.

Choose **Check Records** and **Refresh Data Health**. Compare the local and cloud latest timestamps, weather bucket counts, AQI counts, and lightning records. The health summary distinguishes raw local rows from 30-minute cloud buckets; those totals need not be identical.

Understand the direction

Action	Meaning	Before you confirm
Push Local to Supabase	Upload the current home-station snapshot; merge matching cloud buckets	Verify this Mac has the wanted data and Home station
Pull From Supabase	Restore protected cloud records into the local display database	Make a local backup; compare cloud counts and latest timestamps
Check Records	Read repository counts and latest data information	Confirm you are signed into the intended project/user
Use Supabase as primary cloud repository	Enable ongoing cloud-backed behavior, including launch pulls	Resolve initial authority and conflicts first

A safe first sync

1. Create a Manual Backup on the Mac containing the authoritative history.
2. Verify the project, repository user, Home station, and cloud schema.
3. Run Check Records. For a truly new repository, empty counts are expected.
4. Push from the Mac with the wanted data and inspect completion status.
5. Check Records again and compare latest dates and bucket counts.
6. Before a second Mac pulls, back up that Mac too. Confirm it uses the same intended repository identity.

Matching weather entries are keyed by owner, station, and half-hour bucket. A stale local record can overwrite a cloud value for the same bucket during an upsert. Cloud sync is not an unlimited version-history system and should not be used as the only backup.

If sign-in works but records are empty, check user ownership, table grants, RLS policies, and project identity. If the project is paused or unavailable, restore service through the Supabase dashboard rather than deleting local history. Use **Sign Out** when you no longer want that repository session on this Mac.

Recognize the app's cloud connection fields

Weather Wizard > More > Supabase

Supabase
Primary cloud repository with local SQLite cache

Project

Project URL

Anon Public Key

Use the anon public key for this Mac app. Service-role keys should stay out of the app.

[Create a free Supabase project](#)

Account

Supabase Signed in

Protected Supabase repository is signed in as

Email

Password

Sign In Create Account Sign Out

Repository

Use Supabase as primary cloud repository ☐

The app keeps SQLite available offline, pulls Supabase rows on launch, and upserts only the home station back to Supabase. Cloud readings are unique by station and 30-minute bucket.

Cloud Repository Idle

Enable Supabase sync, then push or pull the shared weather repository.

Record Report Not Checked

An existing signed-in repository connection. Project and account values were permanently removed beneath the blur-style masks. This image does not prescribe enabling sync on a new project.

PRO

These repository connection and sync facilities require Pro; ordinary local backups do not.

1. Project URL and Anon Public Key identify the repository and its compatible client credential.
2. The Account section is the repository user's sign-in, not the Supabase dashboard or database password.
3. Save Local Settings and Test Supabase are below this captured section. Use them before a first push or pull.
4. Prepare the matching schema and protections, back up local history, then choose a transfer direction deliberately.

No Push, Pull, sign-out or repository-setting action was performed to obtain this screenshot.

CHAPTER 23

Settings, notifications, sleep, and Pro

Station controls

In **More > Settings**, review the selected and Home stations before editing units, limits, AQI ZIP, and lightning range. Changes to Home can affect new-station policies and cloud uploads. Temperature and pressure limits must be interpreted in the units shown; do not copy numbers from another unit system without checking.

Local sound and alert behavior

The bottom **Sound / Muted** action toggles alert audio. Muting does not mean an active weather condition ended. Local metric thresholds and selected sound choices are separate from the WX/EMR government-alert feed. Review macOS notification permissions if expected local notifications do not appear.

Notification Relay URL and **Notification Relay Token** in Other Site Data > Data Sources are optional advanced integration fields. Leave them blank unless an administrator supplies a compatible, trusted relay configuration. They are not OpenWeather or AirNow credentials, and a Supabase project URL by itself is not a relay endpoint. Do not enter an arbitrary webhook and expect verified delivery.

Sleep and collection

Settings offers **Refresh weather on launch**, **Wake Mac for data capture**, **Schedule Next Wake**, and **Install 30-Min Wake Plan**. The wake-plan action uses macOS power scheduling and may ask for administrator approval. Read the resulting status rather than assuming the schedule succeeded.

On wake, networking must reconnect before fresh requests and cloud sync can complete. A powered-off Mac cannot collect data. Laptop lid state, power conditions, macOS restrictions, and network availability can prevent the desired wake behavior. Wake capture is not a guarantee of continuous lightning monitoring.

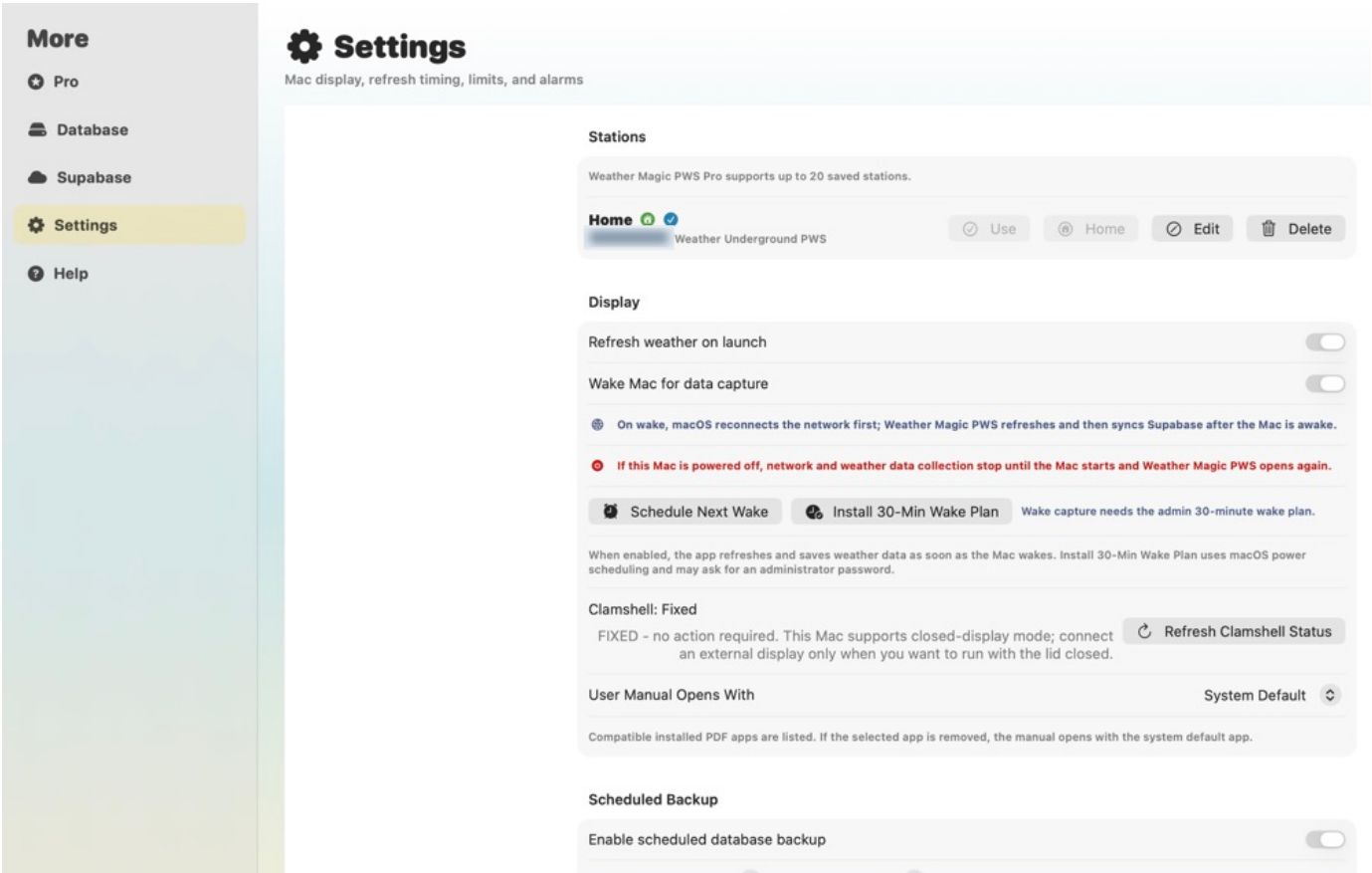
Manuals and help

Use **User Manual** to open the bundled PDF. Settings lets you choose among compatible installed PDF openers. Preview is a useful standard choice. In Preview, use page thumbnails, search, clickable contents, and links; use File > Print when you need a paper copy.

The **More** menu exposes Pro, Database, Supabase, Settings, and Help. Use the current Pro screen for purchase and restore options and the current App Store terms. These release copies do not include or accept local owner unlock codes; use the StoreKit purchase and restore controls. This documentation work does not sign, install, purchase, or submit an app.

Find the Mac's operating settings

Weather Wizard > More > Settings



The top of the current Settings page. The station identifier is concealed; the displayed switches and controls are unchanged.

FREE	General station, display, manual-viewer and backup settings are shared.
PRO	Custom limits, fallback-chain controls, lightning settings and limit-alert audio are gated.

1. Use More > Settings to review saved stations and the current Home selection.
2. Review Refresh weather on launch and Wake Mac for data capture separately. Installing a wake plan is an intentional system change, not a required step for reading this manual.
3. User Manual Opens With selects the PDF viewer. The Scheduled Backup section begins below it.
4. Scroll farther down for Manage Other Site Data, where optional API credentials are configured.

Do not copy every switch position from an illustration. Choose collection and backup behavior appropriate for your Mac.

CHAPTER 24

Troubleshooting: start with the symptom

Symptom	Likely checks and next step
All weather is old	Confirm Mac is awake/online; compare provider website and observation time; refresh once
PWS works, OpenWeather does not	Check Data Sources key, coordinates and access; read fetch age in the OpenWeather chapter
Conditions work, lightning does not	Verify Pro, lightning entitlement, location, response status, and selected period/range
Lightning count clears but history remains	Expected: active 30-minute vane window and longer saved history differ
Strike Count Hold does not change vane	Current vane/count is fixed at 30 minutes; legacy selector needs release cleanup
AQI is gray or a dash	Check age, availability, source/reporting area, AirNow key and endpoint status
AQI source is not OpenWeather	Expected current routing: Weather Underground, then AirNow
Rain amount differs from PWS rate	Compare amount versus rate, location, source, and time period
LOW/MID/HIGH add above 100%	They are separate cloud layers, not portions of one rainfall probability
A warning differs from another app	Compare station coordinates, provider, event text, issue time, and expiry
Radar will not sign in	Use browser sign-in; complete MFA; review URL and saved-account disclosure
Keychain save/access fails	Confirm app identity; unlock the intended login Keychain through macOS; retry Save
Graph begins at a surprising time	Check local date/time zone, bucket versus observation time, and missing data
Cloud counts differ	Compare raw rows with buckets, Home station, user, project, and latest times
Restore is uncertain	Cancel; back up current data; choose Merge unless replacement is deliberate

A useful support report

Record the Weather Wizard version/build, macOS version, provider, affected feature, selected location region, observation time, and the exact error text. Describe one reproducible action and what you expected. Include a redacted screenshot if helpful.

Do not include complete API keys, passwords, Keychain screenshots, cloud tokens, database exports, or URLs containing authentication query parameters. A station ID and exact coordinates can identify a private location; share only what is needed. The current app's support contact is **support@bigskyastro.com**.

Troubleshooting: access and live readings

Start with these five checks

1. Confirm the selected station, its Home status, and the affected provider. A working PWS reading does not establish access to a separate lightning or AQI service.
2. Check the observation time, not only the screen's refresh time. Keep the Mac awake and online for one normal refresh opportunity.
3. In More > Pro, check whether this feature is unlocked. Free/Pro app access and a provider's product access are separate checks.
4. Read the exact error, including a status such as 401, 403 or 429. Do not repeatedly press Refresh or regenerate keys before identifying the failure.
5. Preserve the existing settings and make a local backup before changing station identity, replacing history or adjusting cloud settings.

Can't add a station or get PWS readings

Check that the station is already reporting on its provider's website. In Add, choose the correct provider and match each credential to its field: a station ID identifies the instrument; a reading API key grants data access. An upload key or website password is not interchangeable. Ambient requires its separate user/device and application keys. Also check the Free limit of 3 saved stations versus 20 with Pro. If search has no match, verify provider coverage and location rather than changing to an unrelated station.

Can't save an API key or sign in

Use Save in Manage Other Site Data; closing or canceling does not save a changed value. If macOS asks for Keychain access, verify the intended Weather Wizard app and key item. Unlock the login Keychain through the normal macOS prompt if needed. A provider browser login, its API key, and the Supabase repository-user login are different credentials. For browser-only verification or MFA, finish the process on the provider's official site. Never disable Keychain protection to silence a prompt.

Can't see lightning or AQI

For lightning, confirm Pro, the dedicated OpenWeather key, separate lightning-product access, station coordinates, and the map's selected time and distance. An empty successful result is different from an authentication error; a cloud-and-bolt weather icon is not a plotted strike. The vane/count covers the recent 30-minute window while saved history can cover longer periods.

For AQI, confirm Pro and the displayed source, reporting area and age. The current path tries Weather Underground, then AirNow; an OpenWeather key alone does not configure this fallback. A gray pill or dash means stale or unavailable data, not clean air. Avoid repeated polling while waiting for the next source observation.

If a provider reports an outage, keep the last known data and retry later. Zero strikes, missing AQI or an empty warning pill is not a safety clearance. Consult official alerts for real-world decisions.

Troubleshooting: history and app controls

Can't see expected graph points or periods

Today is shared; additional dashboard periods and the separate Graphs report workspace require Pro. Confirm the selected date, station and local time zone. Graphs group observations into 30-minute buckets: the first bucket is midnight even when its first reading arrived later. Missing readings should remain gaps. A sleeping, powered-off or disconnected Mac cannot collect observations it never received. Free local history older than seven days is pruned; do not expect a longer range to recover deleted records.

Can't export, print, back up or restore

Use the actual Graphs export sheet for CSV, PDF and Print, not the Database placeholder text. Check Pro access for the report workspace, the selected period, and whether the save destination exists and is writable. An external drive must be mounted. Open the exported file to verify that it contains the expected station, dates and units.

Manual Backup and restore are shared features. Select a folder and wait for completion, then use Show File to verify the result. Before restoring, back up the current data. Merge Missing Data Only preserves existing rows; Replace Current Data is a deliberate replacement, not a routine repair step. A graph PDF is not a database backup. If a backup fails, do not delete the working database to retry.

Can't sync or reconcile cloud counts

Confirm Pro, the intended project URL, the compatible client key, and the repository-user sign-in. Do not substitute a database password or privileged server key. Use Test Supabase, Check Records and Refresh Data Health before a transfer. Compare raw rows with like-for-like rows, not with grouped half-hour buckets, and confirm the Home station and latest timestamps. For permission errors, review the release-matched schema and row-ownership policies; do not turn off Row Level Security to make records appear. Back up before choosing Push or Pull.

Can't hear alerts or see the expected warning

Check Sound / Muted, macOS volume and the app's notification permission. Custom station-limit controls and audio are Pro features; WX and EMR public-warning pills use a different source and classification. Compare the selected station's coordinates, full event text, issue time and expiry. Muting sound does not dismiss an event, and a successful no-alert response can legitimately clear an older warning.

Can't read a control, open the manual or use a button

Check whether the feature is Pro-only, unavailable for the selected source, or waiting for a required location. For a clipped or overlapping control, record the window size and macOS display scaling; attach a redacted screenshot. For the manual, review User Manual Opens With in Settings and choose an installed PDF viewer. Do not reset the app to fix a layout problem. Use the dedicated Feedback page to report the exact action, expected result, actual result and frequency.

Stop before erasing data, changing cloud ownership, turning off security or purchasing another provider product. When uncertain, send a redacted report and preserve the last working backup.

CHAPTER 25

API errors, limits, and safe testing

Interpret the response before changing settings

Status / outcome	General interpretation	Safe next step
200 with usable data	Request succeeded	Check returned station/location and timestamp
200 with an empty list	Request succeeded but no matching records	Check coverage, time, filters, and source status
400	Request parameters not accepted	Recheck location/ID format; report redacted details
401	Authentication not accepted	Verify key type, activation, copied value, and product
403	Access forbidden	Ask provider to verify endpoint entitlement and account permissions
404	Endpoint or requested resource not found	Check provider documentation and station identifier
429	Too many requests	Wait; review usage across devices and product limits
5xx / timeout	Service or network failure	Retry later; preserve cached history and inspect provider status

These are general interpretations; a provider's own error text can be more specific. Avoid repeated refresh while rate limited. Changing a station ID to work around authorization does not grant access to that station.

Test without exposing your key

The ordinary user test is to save the credential in the app, refresh once, and compare source and timestamp. If provider support requests a direct API test, use its official documentation or query tool. URLs often carry API credentials and can be saved in browser history, proxy logs, or screenshots. Redact them before sharing.

For Current Weather, the app uses an **appid** query parameter. The documented lightning endpoint uses **apikey**. AirNow's current legacy request path uses **API_KEY**. A provider test copied from a different product can fail even with the right underlying key; let the app construct normal requests.

Rotating an exposed key

If a secret was posted publicly, revoke or replace it through that provider's account controls, then update each configured device and test again. Changing your website password does not necessarily revoke existing API keys. For a cloud repository, distinguish the public client key from private user sessions and privileged server keys; do not solve an access problem by placing a privileged key in the app.

CHAPTER 26

Official API and account links

Core registration, API-key and Supabase guidance links were rechecked September 9, 2026; other reference links retain the September 7 review. Sign-in-only pages were checked for their public entry/redirect, not by creating or purchasing an account. Provider terms, availability, and website labels may change. Use these pages to confirm requirements, not search advertisements offering shared keys.

Service	Official starting points
Weather Underground	PWS overview ; member API keys ; support
The Weather Company	API authentication and access requests
OpenWeather	Sign up ; API keys ; API catalog ; pricing
OpenWeather products	Current Weather ; lightning ; FAQ
AirNow	Create account ; Web Services ; FAQ ; AQI Basics
Ambient Weather	User API key ; application key
Earth Networks	Developer portal ; contact
WeatherCloud	Public API documentation - read/upload distinction discussed in this manual
NWS	API guide
Open-Meteo	Forecast documentation ; plans and licensing
Supabase	Sign up ; API keys ; RLS ; plans

Buying only what you need

Check three things separately: **app feature entitlement**, **provider product entitlement**, and **provider call allowance**. An app upgrade does not enroll you in an API subscription. An API key's existence does not grant every product. A service's free tier does not establish permission for every commercial distribution model.

Keep provider-required notices and licensing obligations under review for the Apple release. This manual's provider links help users find setup information; they are not a substitute for checking the application's distribution terms.

Account addresses for a printed copy

- WU keys: www.wunderground.com/member/api-keys
- OpenWeather keys: home.openweathermap.org/api_keys
- AirNow registration: docs.airnowapi.org/account/request/
- Ambient key help: ambientweather.com/faqs/question/view/id/1834/
- Supabase registration: supabase.com/dashboard/sign-up

CHAPTER 27

Quick reference and setup checklist

Terms you will see

Term	Meaning in this manual
PWS	Personal weather station; physical measurements sent to a provider
Provider	Service that supplies a particular reading, forecast, or event
Home station	Station designated for home policies and current cloud-upload scope
Selected station	Station currently chosen for display; not necessarily a changed Home
Observation time	Time associated with the underlying reading; different from screen refresh
Cache	Saved response reused temporarily or while offline
Bucket	History grouping interval, commonly 30 minutes for weather records
AQI	Air Quality Index; not a percentage or a rain probability
Bearing	Direction from station to strike calculated from coordinates
RLS	Row Level Security; rules limiting which cloud records a user can access
Push / Pull	Upload local records / bring cloud records into the local database
Pro	App feature access; separate from external data-service subscriptions

Before calling setup complete

- I have confirmed the station and Home identity, coordinates, and units.
- The provider website and app both show a plausible recent observation.
- Each key is in its own provider's field, not a website-password field.
- OpenWeather fetch age is recent; lightning access is checked separately.
- AQI shows the expected source/area or clearly indicates unavailable/stale data.
- I understand the difference between a rolling live lightning window and saved history.
- I have created and located a Manual Backup.
- If using cloud sync, I have reviewed privacy, schema, ownership policies, counts, and transfer direction.
- I have not included private credentials in screenshots, shared reports, or this manual.

Daily readout sequence

Station -> observation time -> source -> value -> details. This simple order prevents most confusion between cached weather, measurements, forecasts, and alert summaries. When something looks wrong, preserve data and check the source before resetting anything.

CHAPTER 28

Feedback and feature requests

Use this page as an email checklist or print-and-fill worksheet. Send it to support@bigskyastro.com. This PDF does not submit a report automatically. Please describe one issue or feature per message.

1. Choose the closest category

- | | |
|--|---|
| ☐ New Feature / improvement | ☐ Can't add or find a station |
| ☐ Can't get fresh PWS readings | ☐ Can't save an API key / sign in |
| ☐ Can't get OpenWeather conditions | ☐ Can't see lightning / correct count |
| ☐ Can't get AQI / correct pill | ☐ Can't view graphs / expected history |
| ☐ Can't export PDF / CSV or print | ☐ Can't back up or restore |
| ☐ Can't sync / cloud counts differ | ☐ Can't hear alerts / see a warning |
| ☐ Can't read a control / layout overrun | ☐ Can't open the manual / other |

2. Include the details needed to reproduce it

Subject / feature idea

App version/build; macOS; Free or Pro

Affected screen/provider; date, time and zone

Steps taken / task a new feature would help

Expected result

Actual result / exact redacted error

How often; last worked; workaround tried

Reply email (optional); redacted screenshot attached?

Send only the information needed to reproduce the issue. Remove API keys, passwords, tokens, exact home coordinates and private station/account identifiers from screenshots and copied URLs. Do not attach an unredacted database or backup. For a New Feature request, explain the task it would help you finish and your current workaround.

CHAPTER 29

Alphabetical index

Page numbers are clickable. Entries point to instructions and visual walkthroughs; use the PDF's search for a specific error message or control label.

A

Add Entries (manual readings) [39](#), [40](#)
AirNow account and fallback [24](#), [25](#), [53](#)
Alerts: sound and limits [50](#), [54](#)
Ambient Weather: two keys [26](#), [27](#)
API errors: 401, 403, 429 [55](#)
API keys: which field? [12](#), [53](#)
AQI colors, source and age [36](#), [37](#)

B

Backup: daily schedule [42](#)
Backup: manual procedure [41](#)
Backups and restore [41](#), [54](#)
Bearings and distance rings [33](#), [34](#)

C

Cached data [31](#), [38](#)
Can't: common failures [52](#), [53](#), [54](#)
Cloud sync [48](#), [49](#), [54](#)
Compatible older Macs [4](#)
Consent: installation and first launch [7](#)
Credentials and privacy [12](#), [41](#), [58](#)

D

Dashboard and callouts [31](#), [32](#)
Data-loss liability disclaimer [7](#)
Database and report exports [39](#), [54](#)

E

Earth Networks / WeatherBug [28](#)
EMR warning pill [36](#), [37](#)

F

Family Sharing and Restore Purchase [8](#)
Feedback and New Feature [58](#)
Fetch age: OpenWeather [20](#)
First launch [6](#), [11](#)
Forecast sources [29](#)
Free and Pro comparison [5](#)
Free sources and API accounts [13](#)

G

Graphs: midnight and gaps [39](#), [40](#), [54](#)

H

Home versus selected station [6](#), [57](#)

I

Installation folder and support files [6](#), [8](#)
Installer: native processor selection [6](#), [10](#)

K

Keychain access [30](#), [53](#)

L

Lightning: access and refresh [22](#), [38](#), [53](#)
Lightning: count and vane [33](#), [34](#)
Lightning: map and history [35](#)

Alphabetical index: M-W

M

macOS minimum versions [4](#)
Manual: opening and printing [50](#), [54](#)
Missing or stale readings [52](#), [53](#)
Moving to another Mac [43](#)

N

New Feature request [58](#)
NWS and public warnings [29](#), [36](#)

O

Open-Meteo forecasts [29](#)
OpenWeather key setup [19](#), [21](#)

P

PDF, CSV and Print [39](#), [54](#)
Pro: gates and station limits [5](#), [50](#)
Provider links and fees [56](#)
Provider links: setup steps [14](#)
Push / Pull cloud direction [48](#), [54](#)

Q

Quick setup checklist [57](#)

R

Radar and browser sign-in [30](#)
Rain amount versus rate [31](#)
Refresh intervals and usage [38](#)
Restore: merge or replace [43](#)

S

Settings and notifications [50](#), [51](#)
Sleep and wake capture [38](#), [50](#)
Stale or unknown condition age [20](#)
Supabase keys and schema [44](#), [46](#), [47](#)
Supabase: first connection [45](#)
Support report and privacy [52](#), [58](#)

T

Trial: same 30-day time gate [8](#)
Troubleshooting [52](#), [53](#), [54](#)

U

UV / solar and enhanced tiles [5](#), [31](#)

W

Weather Underground setup [15](#), [17](#), [18](#)
WeatherCloud limitations [28](#)
Wind vane and lightning rings [33](#), [34](#)
WX warning pill [36](#), [37](#)