

FFB-BRIDGE PRO

# Pro PDF manual

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Rohsam Inc. · [ffb-bridge.com](https://ffb-bridge.com)

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The same guides are online at [ffb-bridge.com/docs/pro](https://ffb-bridge.com/docs/pro).

# FFB-Bridge Pro

Pro is a separate app built on the same force engine as FFB-Bridge. It adds tools for finding the feel you want: a live view of every force, voice commands, response curves, flight recording and a companion page for your tablet.

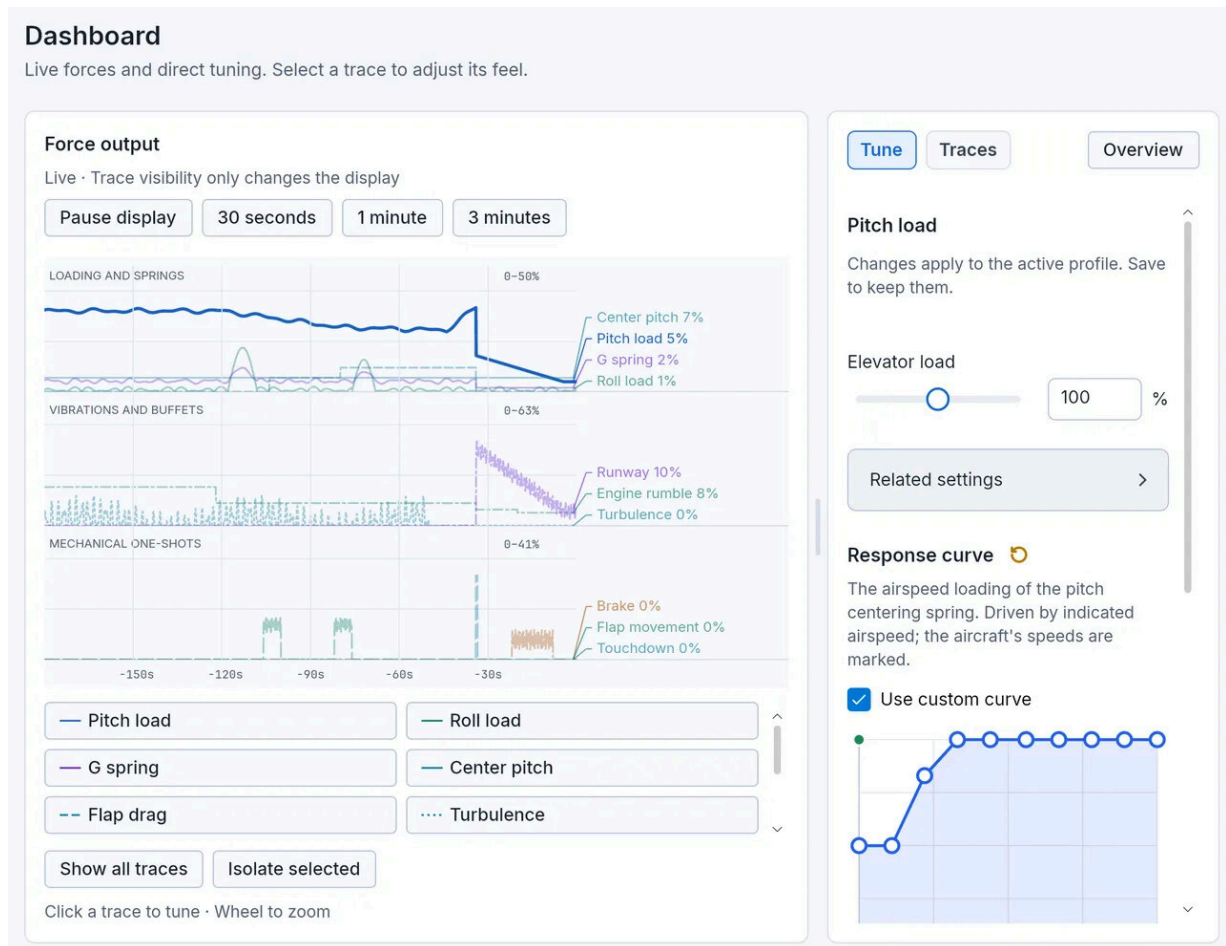


Figure 1. The Live Dashboard during a Cessna 172 approach and landing. Each trace is one force effect; the panel on the right tunes the selected one.

## Get started

1. [Install Pro](#) on Windows, macOS or Linux. It installs alongside FFB-Bridge Free and keeps its own settings and profiles.
2. Open **Pro License** and enter the license key from your beta email. See [Pro license](#).
3. Set up your stick and simulator the same way as in Free: [hardware](#), [MSFS](#) or [X-Plane](#).
4. Pick a profile for your aircraft, start a flight and click the arm button at the top of the window.

# What Pro adds

## Live Dashboard

Every force over the last few minutes. Click a trace to tune that effect.

## Voice Control

Change forces and ask questions by voice while you fly.

## Advanced Tuning

A response curve for every effect, with the aircraft's V-speeds marked.

## Black Box

Record flights, review every force and try new settings against them.

## Cockpit Web

Live forces and quick adjustments on your phone or tablet.

## Profile Library

Browse and install community profiles from inside the app.

## Profile History

Go back to an earlier version of a saved profile.

## Profile Recovery

Private copies of the profiles you choose, ready to restore on another computer. Preview.

## Base settings

Your base's own feel, travel stops, controls and lights.

# Free and Pro on one computer

Pro and Free are separate apps. Each has its own settings and profile folder, and Pro does not copy anything from Free.

To use a profile you made in Free, find its file in the Free profile folder, then click **Import file...** on the **Profiles** page in Pro.

- Windows: %APPDATA%\ffb-bridge\profiles

- macOS and Linux: `~/.config/ffb-bridge/profiles`

Run one app at a time. Quit Free before you start Pro, so only one of them controls your stick.

## What Pro sends over the internet

Pro works offline once it is set up. It goes online to:

- activate and refresh your license, and check for updates
- download voice models and map packs, when you ask for them
- browse and install profiles in the Profile Library
- keep private copies of your profiles, if you turn on Profile Recovery
- send a problem report, when you choose to

Voice recognition runs on your computer. Black Box recordings stay on your computer unless you export them, and Cockpit Web runs on your local network.

## Beta

Pro is in beta and access is by invitation. Your beta license works for 14 days from the day it was emailed to you.

The **Controls** item in the sidebar is greyed out: Controls is coming soon. To report a problem, click **Report an Issue** in the sidebar. The report includes the app's logs, so describe what you did and what you expected.

# Install and activate

Install Pro on the computer you fly with, enter the license key from your beta email, and set up your stick the same way as in FFB-Bridge Free.

## What you need

- A supported force-feedback stick or yoke. Check yours on the [hardware page](#).
- Windows 11 (64-bit), macOS 13 or later on an Apple Silicon Mac, or a 64-bit Linux distribution on an Intel or AMD processor.
- Your license key. It arrives in the email titled “Your FFB-Bridge Pro beta license”.
- An internet connection the first time you start Pro, to activate the key.

Pro connects to these simulators:

| Simulator                                | Windows | macOS | Linux                            |
|------------------------------------------|---------|-------|----------------------------------|
| Microsoft Flight Simulator 2024 and 2020 | Yes     | No    | Yes, with MSFS running in Proton |
| X-Plane 11 and 12                        | Yes     | Yes   | Yes                              |

On Linux, Pro runs as a normal Linux app outside Proton and connects to MSFS over the network. The [MSFS guide](#) shows the connection setup, and the [X-Plane guide](#) covers X-Plane.

## Install on Windows

The Windows installer is signed by Rohsam Inc. Besides Pro itself, it installs two components for **Controls**, which is coming soon:

- the FFB-Bridge Control Routing driver, made by Rohsam
- HidHide, a free third-party tool that can hide a game controller from other programs. If HidHide is already installed and working, Setup leaves it as it is.

Both are described in [Drivers and third-party software](#).

1. Quit FFB-Bridge Free and any copy of Pro that is running, from its window or its tray icon. Setup stops while either app is open, because both drive the same stick.
2. Run the installer, for example `ffb-bridge-pro-setup-1.0.0-rc.2-x64.exe`. Windows asks for administrator permission because Setup installs a driver. Check that the publisher shown is Rohsam Inc.

3. Accept the End User Terms and follow the steps. Pro installs to `C:\Program Files\Rohsam\FFB-Bridge Pro`.
4. On the last page, leave **Launch FFB-Bridge Pro** ticked, or start Pro later from the Start menu.

If Windows needs a restart to finish installing HidHide, Setup tells you and does not start Pro. Restart Windows, then start **FFB-Bridge Pro** from the Start menu.

Two other messages can stop Setup before it changes anything:

- **An older per-user installation is still registered.** You have an earlier Pro test build. Uninstall FFB-Bridge Pro in Settings → Apps, answer **No** when it asks about removing data, then run the new installer. Your profiles, settings and license stay.
- **Windows reports an existing HidHide installation, but its driver is not healthy.** Repair HidHide with its official setup, restart Windows, then run the Pro installer again.

If SmartScreen warns about a new file, the [FFB-Bridge install guide](#) explains how to check the publisher and continue.

## Install on macOS

1. Open the disk image, for example `FfbBridge-Pro-1.0.0-rc.2-arm64.dmg`.
2. Drag **FFB-Bridge Pro** onto the **Applications** folder in the window that opens.
3. Eject the disk image and open FFB-Bridge Pro from your Applications folder.

Pro is signed by Rohsam Inc. and notarized by Apple, so macOS opens it normally. Connect to the internet for the first launch so macOS can complete its check.

Voice Control listens through your microphone. When macOS asks whether FFB-Bridge Pro may use the microphone, allow it. If you denied access, open **System Settings** → **Privacy & Security** → **Microphone**, turn on FFB-Bridge Pro, then quit and reopen Pro.

## Install on Linux

Pro for Linux is an AppImage. Make it executable, then let it add itself to your application menu:

```
chmod +x FfbBridge-Pro-1.0.0-rc.2-x86_64.AppImage
./FfbBridge-Pro-1.0.0-rc.2-x86_64.AppImage --install
```

`--install` copies the AppImage to `~/Applications` and adds **FFB-Bridge Pro** to your application menu. Use the file name of your download if it differs.

Linux needs a device permission, a udev rule, before Pro can drive your stick. Free and Pro use the same rule, so a current rule installed for Free also covers Pro. Pro checks the rule when it starts and warns you if it is missing or out of date. To install it:

1. Click **Review and fix now** in the warning, or open **Support** and then **Health checks**.
2. Click **Fix...** on the **udev rule** row and enter your password when the system asks.

3. Click **Restart now** so Pro reopens the stick with the new permission.

The [FFB-Bridge install guide](#) shows the rule and the steps for NixOS.

## First launch: activate Pro

The first time you start Pro, it asks for your license key. Pro stays locked until the key is activated.

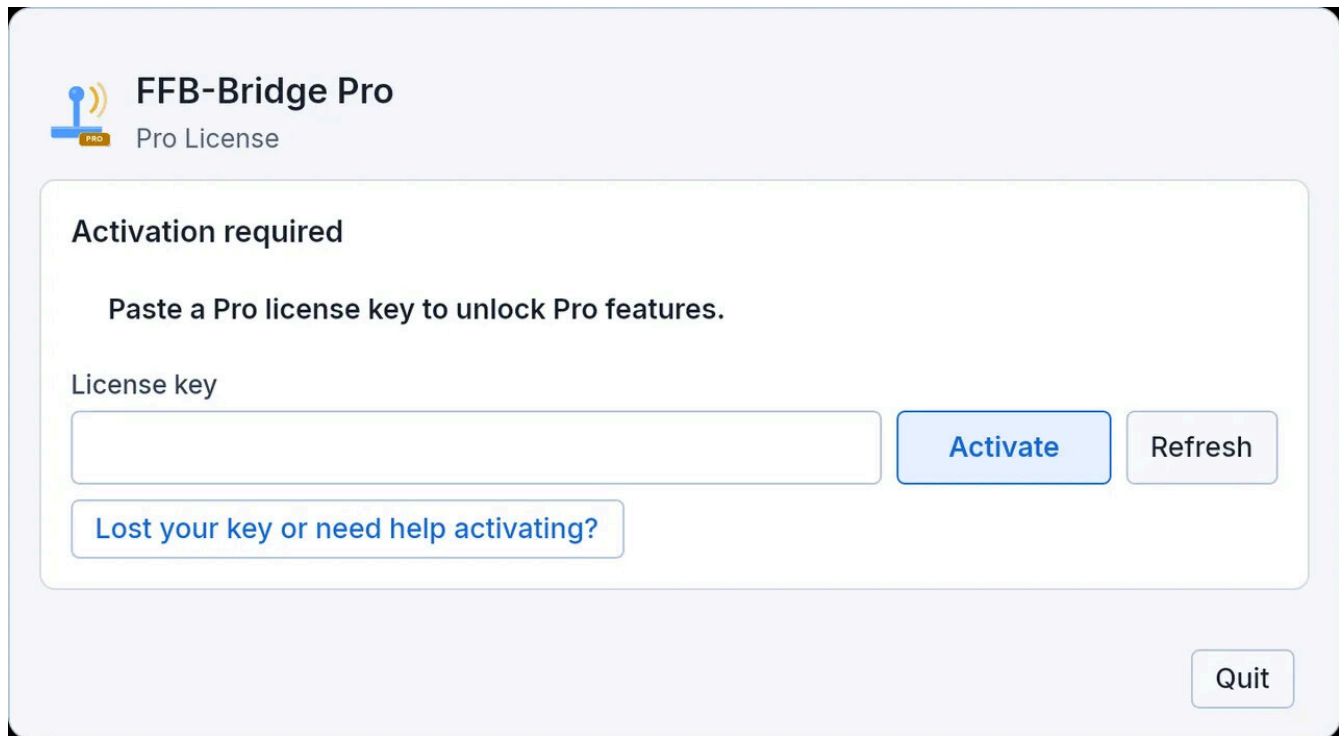


Figure 1. The activation window Pro shows until a license key is activated.

1. Open your beta license email and copy the key. It starts with `FFBP-`.
2. Paste it into **License key**. The key shows as dots.
3. Click **Activate**.

When the key is accepted, the main Pro window opens. Set up your stick and simulator as you would in Free: see [hardware](#), [MSFS](#) or [X-Plane](#).

Opening Pro never arms your stick. Forces start only when you click the arm button at the top of the window.

If you cannot find your key, click **Lost your key or need help activating?** and follow the recovery steps in [Pro license](#). **Quit** closes Pro without activating.

## Free and Pro side by side

Pro installs next to FFB-Bridge Free and does not replace it. Each app keeps its own settings and profiles, and Pro does not copy anything from Free.

Run one app at a time. Quit Free, from its window or its tray icon, before you start Pro, so only one app controls your stick.

To bring a profile you made in Free into Pro, see [Free and Pro on one computer](#).

## Updates

Pro checks for a new version when it starts. When one is available, the **Update available** window opens. Click **What's new** to read the release notes first.

- **Windows and the Linux Appliance:** click **Update now**. Pro downloads the update, checks the file, installs it and starts again.
- **macOS:** click **Open download page** and install the new disk image the same way as the first time.

**Later** asks again at the next start. **Skip this version** stops the reminder for that version.

The update settings are in **Settings** → **Updates**. Leave the channel on **Beta**, because Pro updates arrive on the beta channel during the beta. If you turned off **Check for updates at startup**, click **Check now** from time to time.

## Uninstall

If you are moving Pro to another computer, first click **Deactivate** on the **Pro License** page, as described in [Pro license](#).

On Windows:

1. Quit Pro.
2. Open Settings → Apps, find **FFB-Bridge Pro** and choose **Uninstall**.
3. The uninstaller asks whether to also remove all FFB-Bridge Pro data: profiles, settings, recordings and downloaded content. **Yes** deletes it. **No** keeps it for a later reinstall. **Cancel** stops the uninstall.

Your FFB-Bridge Free data is not touched. HidHide stays installed, because other programs may use it. If nothing else on your computer needs it, uninstall HidHide separately in Settings → Apps.

On macOS, drag FFB-Bridge Pro from Applications to the Trash. On Linux, run the Appliance with `--uninstall` to remove the menu entry, then delete the Appliance. Both keep your profiles and settings.

# Pro license

Your license key unlocks Pro on one computer. The **Pro License** page in the sidebar is where you activate the key, check its status and move it to another computer.

## Pro License

Activation, entitlement status, and safe support metadata for Pro features.

**Pro is active**

All Pro features are unlocked on this machine.

ACTIVE

**Simulator support**

Atomic simulator grants control connection access. Named packs are shown separately and never unlock a simulator by themselves.

LICENSED PACKS

Additional simulator packs are not available in this beta.

**Activate**

Use the license key from the Pro receipt email.

License key

ActivateRefreshDeactivateReport issue

**Recover**

Send a recovery email for device resets or a lost key.

Purchase email

Send recoveryPro page

**Entitlement**

|               |                  |               |                      |
|---------------|------------------|---------------|----------------------|
| KEY SUFFIX    | 9QX2-K7M3        | LICENSE ID    | ... 8f3a9c21         |
| ACTIVATION ID | ... 4e7b15d2     | SIGNING KEY   | ffb-pro-prod-2026-06 |
| REFRESH AFTER | 2026-07-15 09:42 | OFFLINE GRACE | 2026-07-30 09:42     |

Figure 1. The Pro License page with an active license: status at the top, the Activate and Recover sections, and the license details at the bottom.

## Activate

You activate Pro the first time in the window it shows at startup, as described in [Install and activate](#). The **Activate** section on this page does the same job, for example when you receive a new key.

1. Copy the key from your email titled “Your FFB-Bridge Pro beta license”. It starts with `FFBP-`.
2. Paste it into **License key**.
3. Click **Activate**. Pro needs an internet connection for this step.

When the key is accepted, the status changes and the **ACTIVE** badge appears. Pro clears the key from the field once it is activated.

## The beta period

A beta license lasts 14 days from the day the license email was first sent. The email shows the exact expiry date. Activating later, or having the email sent again, does not extend it.

When the beta ends, Pro turns off its forces, gives your base back its own centering and shows the activation window. The same happens if the **Offline grace** date passes before Pro can check your license. Your profiles and recordings stay on the computer.

## License details

The bottom of the page lists details about your license and this computer:

| Detail        | What it shows                                                                              |
|---------------|--------------------------------------------------------------------------------------------|
| Key suffix    | The last characters of your license key.                                                   |
| License ID    | The end of your license's ID.                                                              |
| Activation ID | The end of the ID for this computer's activation. Each computer you activate gets its own. |
| Signing key   | The name of the key that signed your license.                                              |
| Refresh after | When Pro next checks your license online. For a beta license, this is about once a day.    |
| Offline grace | The date until which Pro keeps working without an internet connection.                     |

These details let support find your license and this computer without seeing your key. If support asks for them, copy them from this page.

Keep your full license key private. Never post it in a forum, a chat or a public report. Anyone who has the key can use it to activate Pro.

The **Simulator support** section is for simulator packs. Additional simulator packs are not available in this beta.

## Refresh

Pro checks your license online by itself when it starts and whenever the **Refresh after** time passes.

**Refresh** runs the same check immediately. Use it:

- after a few days offline, to renew the **Offline grace** date before it runs out
- when the status reads **Online refresh required** or **Online check required**

- after support tells you they changed something on your license

## Working offline

Once Pro is activated, it keeps a signed copy of your license on the computer, so you can fly without an internet connection. It keeps working until the **Offline grace** date shown on the page. For a beta license that is up to three days after the last successful check, and never past the end of the beta.

If the date passes before Pro can check in, connect to the internet and click **Refresh** in the activation window.

## Deactivate and move to another computer

A beta license works on one computer at a time. To move Pro:

1. On the old computer, open **Pro License** and click **Deactivate**. Pro locks on that computer.
2. On the new computer, install Pro and activate it with the same key.

Click **Deactivate** also before you reinstall Windows, and before you uninstall Pro and remove its data. Otherwise your next activation counts as a second computer. Deactivating does not delete your profiles or recordings. To take profiles with you, use [Profile Recovery](#) or copy the profile files.

If the old computer is gone or does not start, free its activation with the recovery email described below.

## Recover a lost key

Use recovery when you lost the license email, or when you need to free the activation of a computer you can no longer use.

1. In the **Recover** section, enter your address in **Purchase email**. Use the address your beta license email was sent to. In the activation window, click **Lost your key or need help activating?** to reach the same field.
2. Click **Send recovery**. Pro shows “If that email has a Pro license, a recovery link will arrive shortly.”
3. Open the link in the recovery email within 30 minutes. It opens a page on [ffb-bridge.com](#) that shows your license and the computers it is activated on.
4. Choose what you need:
  - **Reset this device** frees the activation of a computer you can no longer reach.
  - **I lost this key** emails you a new key. The old key stops working for new activations. Computers that are already activated keep working.

Recovery does not change the end date of your beta.

# Report a license problem

Use **Report issue** for a license problem you cannot solve here. In the activation window, click **Lost your key or need help activating?** and the button appears next to **Send recovery**.

1. Click **Report issue**. The **Report an Issue** window opens with the subject "License Issue" filled in.
2. In **Description (optional)**, write what happened and the message Pro showed.
3. If Pro is not activated, enter your email address in **Purchase email**. Support uses it to reply.
4. Click **Send report**.

The report includes your license status, the app version and Pro's logs. It carries the key suffix, not the full key. When the report is sent, Pro shows a reference. Keep it if you write to support.

## Problems

| Problem                                             | What to do                                                                                                                                                                     |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| "License key is not valid."                         | Copy the whole key from the email, including <b>FFBP-</b> at the start. If you used <b>I lost this key</b> , use the newest key.                                               |
| "This license has reached its active device limit." | Your key is active on another computer. Click <b>Deactivate</b> there, or use <b>Reset this device</b> from the recovery email.                                                |
| Pro cannot reach the license server.                | Check your internet connection and any firewall that blocks Pro. An activated Pro keeps working until the <b>Offline grace</b> date.                                           |
| The status reads <b>Online refresh required</b> .   | The offline grace date has passed. Connect to the internet and click <b>Refresh</b> .                                                                                          |
| The status reads <b>Online check required</b> .     | Your computer's clock moved backwards. Correct the date and time, then click <b>Refresh</b> .                                                                                  |
| "This license is no longer active."                 | The beta period has ended or the license was deactivated. Check the expiry date in your license email. If it has not passed, click <b>Report issue</b> .                       |
| The recovery email does not arrive.                 | Check your spam folder and make sure you used the address your beta license email was sent to. A recovery link expires after 30 minutes. If yours has expired, send a new one. |

# Live Dashboard

The Live Dashboard draws each force effect as a trace over the last few minutes of your flight. Click a trace and the panel beside the graph tunes that effect, so you can try a change on the next approach.

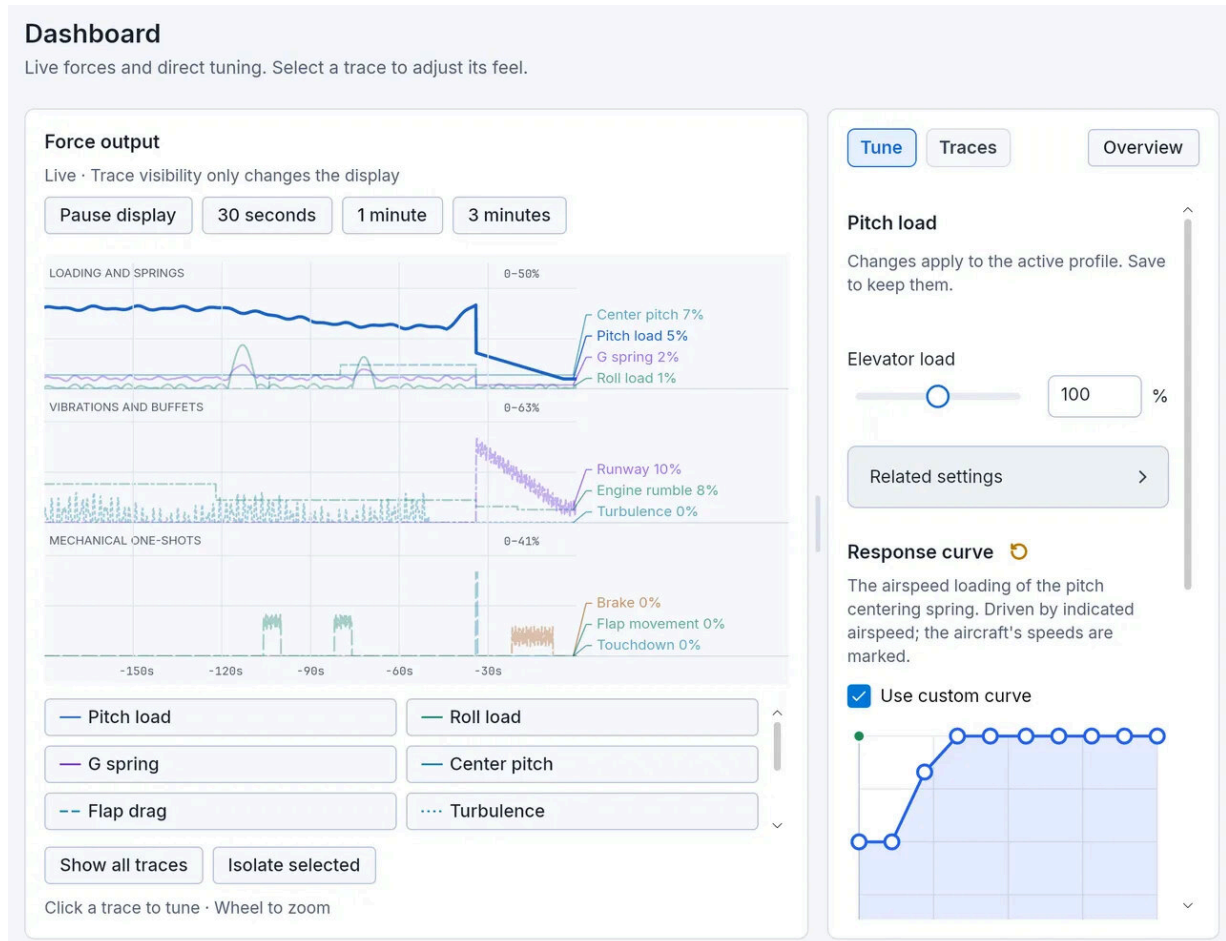


Figure 1. The Live Dashboard after a landing: force traces in three lanes on the left, the Tune panel for Pitch load on the right.

## Open the Live Dashboard

1. Click **Dashboard** in the sidebar.
2. Click **Live Dashboard** at the top right of the **Stick activity** card.

To go back to the standard dashboard, click **Overview** at the top of the panel on the right. The standard dashboard is described in [Dashboard](#).

Opening the Live Dashboard never arms the stick. The traces move only while forces are on, so arm the stick and fly to see them.

The graph records while the Dashboard page is open. Keep it open through the part of the flight you want to study, such as the approach and landing.

## Read the graph

The graph has three lanes. Each trace is one effect, drawn in its own color and line style.

| Lane                          | What it shows                                                                                                                                   |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Loading and springs</b>    | The steady forces you hold against: pitch and roll load, the centering spring, G spring, rate damping and the drag of flaps, spoilers and gear. |
| <b>Vibrations and buffets</b> | Runway and engine rumble, turbulence, stall, flap and gear buffet, nosewheel shimmy.                                                            |
| <b>Mechanical one-shots</b>   | Touchdown, gear and flap movement, gear bumps, brakes, reverse thrust and other short events.                                                   |

- Each lane has its own scale, shown at its top right, such as 0–50%. The scale grows as soon as a force gets stronger and shrinks slowly after it calms down, so a light trace stays readable in a lane of its own.
- The labels at the right edge name each trace that is active now, with its current level, such as **Runway 10%**.
- Traces show strength, not direction. A push and a pull of the same size draw at the same height.
- The time axis along the bottom counts back from now, which is the right edge: –30s, –60s and so on.
- A lane with nothing happening shrinks to a thin strip marked **No activity in this window**.

## Choose the time window

Click **30 seconds**, **1 minute** or **3 minutes** to set how much of the flight the graph shows. To zoom, turn the mouse wheel over the graph. The window goes from 5 seconds to 3 minutes, and 3 minutes is also the most the graph keeps.

Click **Pause display** to freeze the graph, for example to look at a landing once you have stopped on the runway. The forces keep running and the stick keeps its feel. Click **Return to live** to bring the graph up to date.

## Choose which traces to show

- Click a trace on the graph, or its label at the right, to select it. The selected trace draws thicker, the others fade, and the panel on the right switches to that effect.
- The buttons below the graph list the traces that were active in the current window. Click one to select it.
- **Isolate selected** hides every trace except the selected one. **Show all traces** brings them all back.

- The **Traces** tab in the panel lists every effect with a check box. Clear a box to hide that trace.

Hiding a trace changes the graph only. The effect still runs on the stick.

## Tune the selected effect

The **Tune** tab shows the settings for the trace you selected. Changes apply to the active profile as soon as you make them, so you feel them on the stick straight away if it is armed.

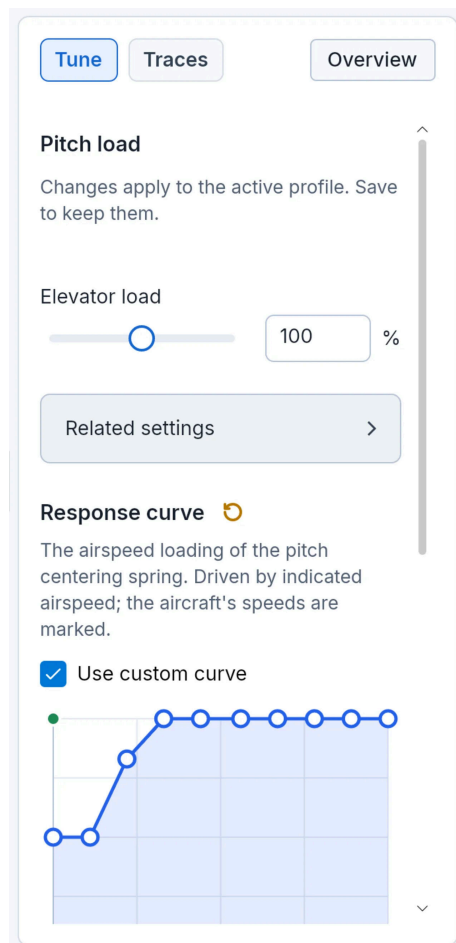


Figure 2. The Tune tab for Pitch load: the Elevator load slider, Related settings and the response curve.

| Control                 | What it does                                                                                                                                                                                                |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main slider             | Sets the strength of the effect. It is named after the setting it changes, such as <b>Elevator load</b> for Pitch load or <b>Runway rumble</b> for Runway. Type in the box beside it to set an exact value. |
| Arrow beside a slider   | Appears after you change the slider. Click it to return to the value saved in the profile.                                                                                                                  |
| <b>Related settings</b> | Other sliders that shape the same feel. For Pitch load these are <b>Force gain</b> , <b>Master gain</b> , <b>Spring strength</b> and <b>Cruise reference</b> .                                              |

| Control                                  | What it does                                                                                                                      |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Response curve</b>                    | How strongly the effect responds across its input, such as pitch load against airspeed. It appears for effects that have a curve. |
| <b>Use custom curve</b>                  | Uses your curve. When it is cleared, the effect uses its built-in response.                                                       |
| <b>Linear, Progressive, Built-in law</b> | Replace the curve with a starting shape. <b>Built-in law</b> appears for effects that have one.                                   |
| <b>Add point, Undo curve</b>             | Add a point to the curve, or undo the last change to it.                                                                          |

On the curve graph, drag a point to reshape the curve. Click an empty spot and choose **Add point here**, or click a point and choose **Delete point**. For a bigger editor with the aircraft's speeds marked, use [Advanced Tuning](#).

## Save or discard your changes

- **Save changes** writes your changes into the active profile.
- If the active profile is a built-in starter, a name box appears above the buttons, filled in with **My flight profile**. Type a name, then click **Save changes**. Pro creates a new profile with that name and the starter stays as it was.
- **Discard changes** returns every unsaved change to the saved profile.
- While you have unsaved changes, the **Tune** button at the top right of the window reads **Save**. It saves too, and then opens the Tuning page.

## Example: runway rumble is too strong on the rollout

1. Open the Live Dashboard, arm the stick and fly a landing. Keep the Dashboard page open.
2. Once you have slowed down, click **Pause display**.
3. In the **Vibrations and buffets** lane, find the **Runway** trace. It jumps at touchdown and falls away as you slow down.
4. Click the trace. The Tune tab shows Runway with the **Runway rumble** slider.
5. Lower **Runway rumble**.
6. Click **Return to live**, then taxi or fly another landing. Watch the Runway trace and feel the difference.
7. When the rollout feels right, click **Save changes**.

If the rumble feels right while you taxi and too strong only at speed, change the curve instead of the slider. Runway rumble follows ground speed, so lower the points at the right, high-speed end of the curve.

To find out what an effect represents, see [Effects](#).

## When something looks wrong

| Problem                                                | What to do                                                                                                                                                                                                    |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Every lane says <b>No activity in this window</b> .    | The forces are off. Arm the stick and make sure the simulator is connected. The traces stay flat while the stick is disarmed.                                                                                 |
| The graph has stopped moving.                          | The display is paused. Click <b>Return to live</b> .                                                                                                                                                          |
| A trace is missing from the graph.                     | A trace appears only while its effect is doing something. If the effect is running, the trace may be hidden: click <b>Show all traces</b> , or select its box on the <b>Traces</b> tab.                       |
| An effect is missing from the buttons below the graph. | The buttons list only traces that were active in the current window. Find the effect on the <b>Traces</b> tab instead.                                                                                        |
| The traces have a gap.                                 | The graph records only while the Dashboard page is open. The gap is the time you spent on another page.                                                                                                       |
| The panel on the right is missing.                     | In a narrow window the panel moves behind a <b>Tune and traces</b> button above the graph. Click <b>Graph</b> to go back. In a wider window, drag the divider between the graph and the panel to resize them. |
| There is no <b>Response curve</b> section.             | The selected effect has no curve. Use its slider instead.                                                                                                                                                     |

# Voice Control

Talk to Pro while you fly. Turn the runway rumble down on rollout, ask why you don't feel the stall buffet, or ask how hard that landing was, without letting go of the stick.

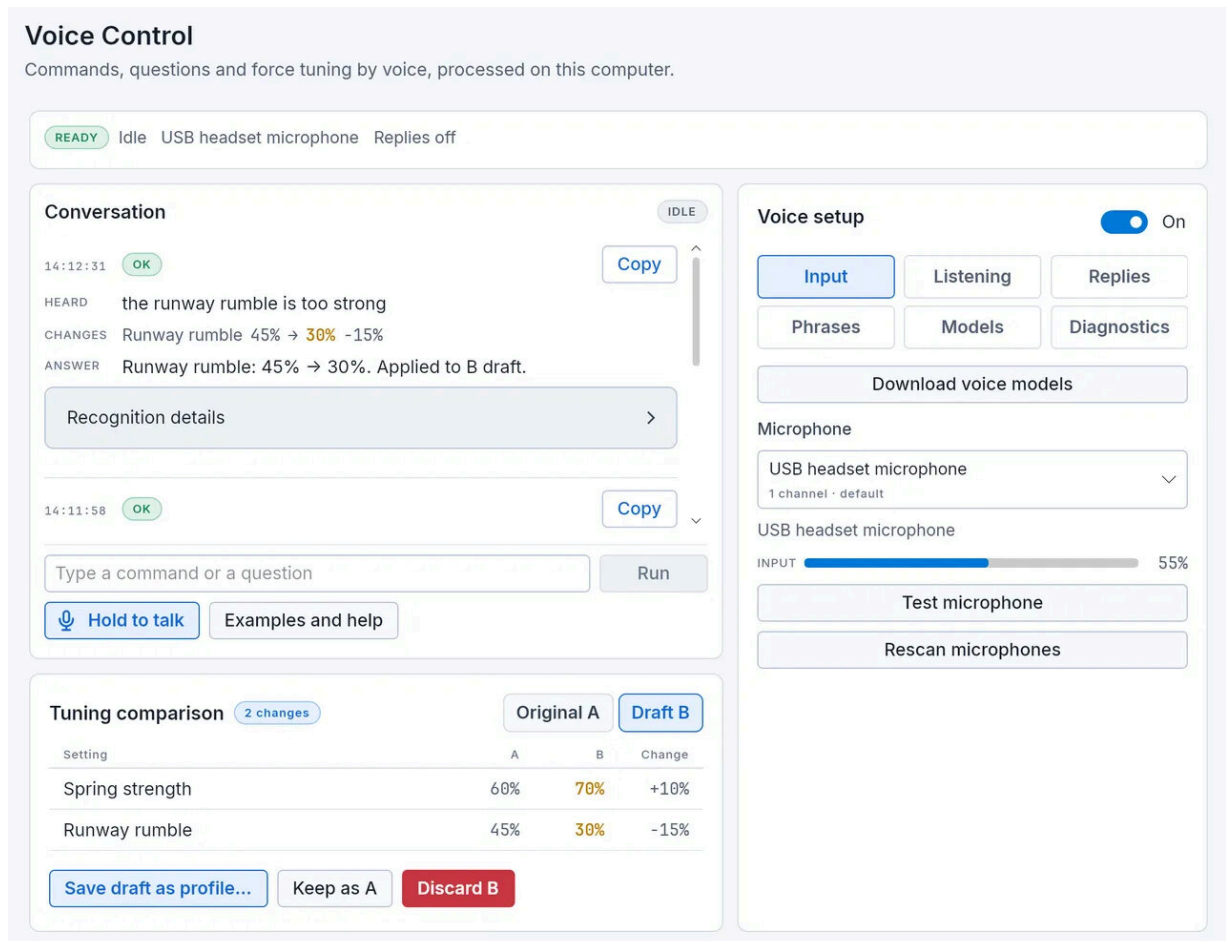


Figure 1. The Voice Control page: the conversation and the Tuning comparison on the left, Voice setup on the right.

## What it does

You hold a key, say one request and let go. Pro shows what it heard, makes the change or answers, and keeps every change in a draft you can compare with your original settings.

You can change forces, ask what a setting is set to or what it does, get help from the app's manual, and read values from the current flight, such as altitude or your last touchdown.

Commands are English only, whatever language the app is set to. Recognition runs on your computer after a one-time download of the voice models, and works offline after that.

# Set up Voice Control

1. Click **Voice Control** in the sidebar.
2. Turn on the switch next to **Voice setup**.
3. Click **Download voice models**. The download window always includes the two models you need: the recognizer model, which turns your speech into text, and the understanding model, which works out what you meant. Select the natural voice or the wake word model as well if you want them, then click **Download**.
4. On the **Input** tab, choose your headset or desk microphone under **Microphone**. On macOS, allow microphone access when macOS asks.
5. Click **Test microphone** and speak. The **INPUT** meter should move with your voice. Click **Stop microphone test**.
6. On the **Listening** tab, look at **Talk key**. The keyboard key is **F9**. To talk with a button on your stick or yoke, click **Bind** next to **JOYSTICK** and press the button.
7. Type `turn down runway rumble` in **Type a command or a question** and click **Run**. When the change appears in the conversation, hold the talk key and say the same thing.

Whether the talk key works while the simulator is in front depends on your system:

- **Windows:** it works whichever window is in front.
- **macOS:** give Pro the Input Monitoring permission in System Settings. Without it, the key works only while Pro has focus.
- **Linux:** your desktop asks you to approve the talk key as a global shortcut. If you decline, or your desktop has no shortcut dialog, the key works only while Pro has focus. Click **Bind** again to retry.

A talk button on your stick or yoke works on every system, whichever window is in front.

## Listening modes

Choose how Pro listens under **Listening mode** on the **Listening** tab.

| Mode                                 | How it works                                                                                                                          |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hold to talk</b>                  | The default. Hold the talk key, say your request and release. Pro acts when you let go.                                               |
| <b>Tap to talk</b>                   | Tap the key and speak. Pro stops listening when you stop talking or tap again. A long press works like Hold.                          |
| <b>Always on, with the wake word</b> | Pro listens all the time and starts a request when you say “Hey Bridge”. Download the wake word model on the <b>Models</b> tab first. |

**Require wake phrase** is off by default, because pressing the talk key already tells Pro you are speaking to it. Turn it on if you want a second check: Pro then ignores any spoken request that does not start with Bridge, Tune or FFB, as in “Bridge, turn down runway rumble”. The option has no effect in Always on mode, and typed requests never need it.

# Talking to Pro

Hold the talk key, say one request and release. You can also press and hold the **Hold to talk** button with the mouse. To check your wording without speaking, type the request in **Type a command or a question** and click **Run**.

Each exchange in **Conversation** shows:

- **HEARD**: the words Pro recognized
- **CHANGES**: each setting it changed, with the old and new value
- **ANSWER**: the reply, with any steps, tables and manual links below it

Open **Recognition details** to see how Pro understood the request. **Copy** puts the exchange on the clipboard, and **Show earlier** brings back older exchanges.

Change one setting per request. Pro remembers the last change for a short while, so “a little more” or “halfway between those” continue it, and “I meant engine rumble” corrects it.

Some requests wait for your approval: saving a profile, trying another profile, and changes to autopilot follow, the watchdog or the control system. Click **Confirm command** or **Cancel**, or say “yes” or “cancel”. If Pro is unsure what it heard, it asks you to say the request again instead of guessing.

**Examples and help** shows sample requests. Click one to put it in the typed box.

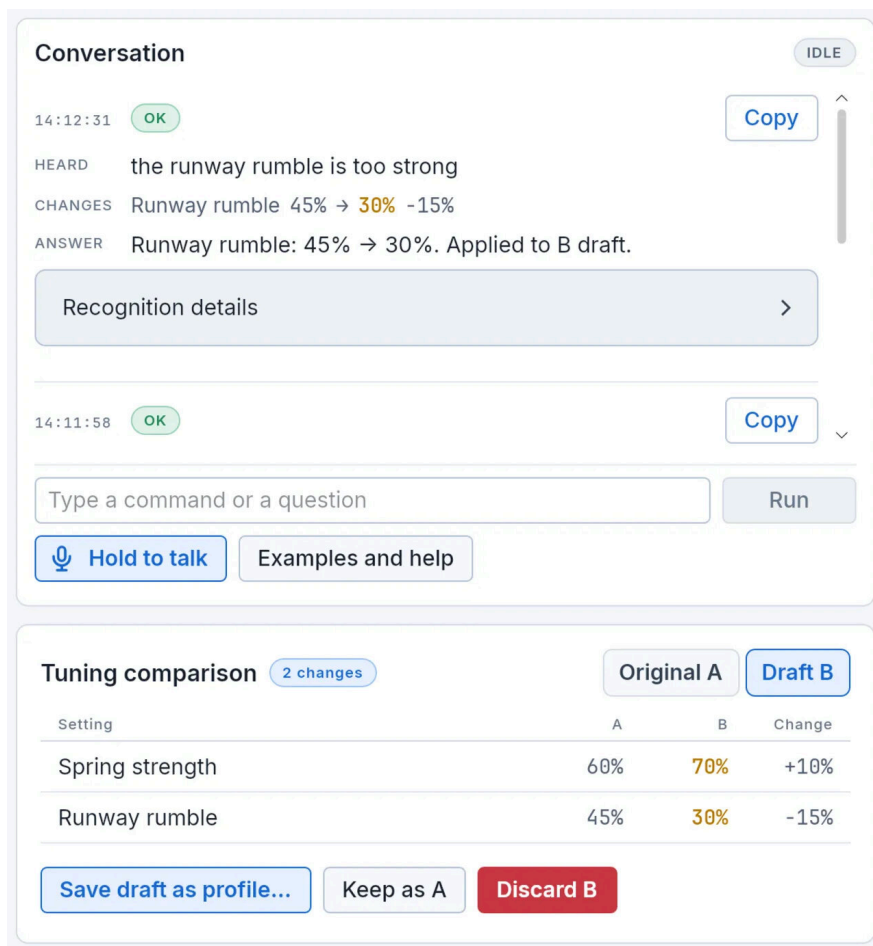


Figure 2. The conversation after “the runway rumble is too strong”, and the Tuning comparison with two changes in draft B.

## Original A and draft B

Every change you make by voice goes into a draft called B. Your settings from before the first change stay as A. You feel B on the stick as soon as a change is made.

**Tuning comparison** lists each changed setting with its A value, its B value and the difference. Use the controls under it to decide what to keep:

| Control                         | What it does                                                                                                              |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Original A and Draft B</b>   | Switch the stick between the two, so you can fly the same approach with each.                                             |
| <b>Keep as A</b>                | Makes B your current settings and clears the draft. Save the profile on the Tuning page to keep them for the next flight. |
| <b>Save draft as profile...</b> | Asks for a name, such as “C172 soft ride”, and saves B as a new profile when you click <b>Save</b> .                      |
| <b>Discard B</b>                | Throws the draft away and returns the stick to A.                                                                         |

| Control | What it does                                                        |
|---------|---------------------------------------------------------------------|
| Undo    | Takes back the last voice change. Saying “undo that” does the same. |

Saying “undo everything we changed” takes back up to ten voice changes from the last two minutes, after you confirm.

## What you can say

Use the setting names from the [Tuning page](#): “runway rumble”, “stall buffet”, “spring strength” and so on.

### Changing forces

| Say                               | What happens                         |
|-----------------------------------|--------------------------------------|
| “turn down runway rumble”         | Lowers runway rumble one step.       |
| “engine rumble up a little”       | Raises engine rumble a small amount. |
| “set engine rumble to 15 percent” | Sets an exact value.                 |
| “reduce turbulence by 10 percent” | Lowers turbulence by that amount.    |
| “turn off nosewheel shimmy”       | Sets the effect to 0%.               |

### Quick fixes

These change a group of related settings at once.

| Say                         | What happens                                                                                     |
|-----------------------------|--------------------------------------------------------------------------------------------------|
| “too much vibration”        | Turns down ground, buffet, turbulence and engine vibration. The main stick force stays the same. |
| “taxi rumble is too strong” | Calms ground rumble, brake shudder, gear bumps, nosewheel shimmy and the taxi acceleration cue.  |
| “trim feels wrong”          | Turns trim relief back on, at full strength on both axes.                                        |
| “too harsh”                 | Softens centering, airspeed load, the output ceiling and the strongest vibrations.               |
| “too weak”                  | Raises the main stick forces and the strength of the effects you feel.                           |

## Questions

| Say                                                 | What happens                                                                          |
|-----------------------------------------------------|---------------------------------------------------------------------------------------|
| “what is engine rumble set to”                      | Reads the current value.                                                              |
| “what makes it shake”                               | Names the forces you are feeling most right now.                                      |
| “why don't I feel the stall buffet”                 | Explains why an effect is not playing.                                                |
| “what does stick drop do”                           | Explains a setting.                                                                   |
| “how do I fix a stick that does not move”           | Answers from the manual and links to the section.                                     |
| “what changed since takeoff”                        | Lists the settings changed during this flight.                                        |
| “what's my altitude” or “how hard was that landing” | Reads the value from the simulator. If the simulator does not report it, Pro says so. |
| “open Black Box”                                    | Opens that page.                                                                      |

## A, B and profiles

| Say                               | What happens                                                                                                                  |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| “switch to A” or “switch to B”    | Same as the <b>Original A</b> and <b>Draft B</b> buttons.                                                                     |
| “keep B”                          | Same as <b>Keep as A</b> .                                                                                                    |
| “discard B”                       | Same as <b>Discard B</b> .                                                                                                    |
| “save as soft ride”               | Saves your settings as a new profile called “soft ride”, after you confirm.                                                   |
| “save profile”                    | Saves your settings to the current profile, after you confirm. <a href="#">Profile History</a> keeps the version it replaced. |
| “try the 737 profile”             | Loads that profile into B so you can compare it with A, after you confirm.                                                    |
| “remember this for this aircraft” | Saves a copy of your settings and uses it whenever you fly this aircraft, after you confirm.                                  |
| “mark that”                       | Adds a marker to the flight <a href="#">Black Box</a> is recording.                                                           |

## Safety

| Say                                    | What happens                                                          |
|----------------------------------------|-----------------------------------------------------------------------|
| “stop forces”, “forces off” or “panic” | Disarms the stick at once. Pro accepts these without the wake phrase. |

## Tune it for me

Say “help me tune engine rumble”, or click **Tune it for me** under **Examples and help**. Pro sets two values as A and B, you answer “A” or “B”, and it narrows the choice over a few rounds. It runs in [Mock Sim](#) or [Flight Check](#), not during a live flight.

## Requests Pro refuses

Voice Control does not do things that are hard to undo or that work around a safety limit. Pro replies that the request is blocked. Do these in the app instead:

- deleting or renaming a profile
- changing the hardware mode or the talk key
- downloading models, changing your license, exporting diagnostics or moving app data
- sending raw force commands, turning off safety limits, or “max everything”

## Spoken replies

Spoken replies are off by default, and every answer appears on the page either way. To hear them, open the **Replies** tab and turn on **Spoken replies**.

| Control                          | What it does                                                                                                                       |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Voice</b>                     | <b>System voice</b> uses your computer's own voice. For a more natural voice, click <b>Download natural voices</b> and choose one. |
| <b>Speaking speed and Volume</b> | Set how fast and how loud Pro speaks.                                                                                              |
| <b>Preview voice</b>             | Speaks a sample reply. <b>Stop Preview</b> ends it.                                                                                |
| <b>Confirmation tones</b>        | A short tone confirms a command or asks you to repeat it. On by default.                                                           |

For a long answer, Pro speaks the first part and leaves the rest on the page. Click **Stop speaking** or press `ESC` to cut a reply short.

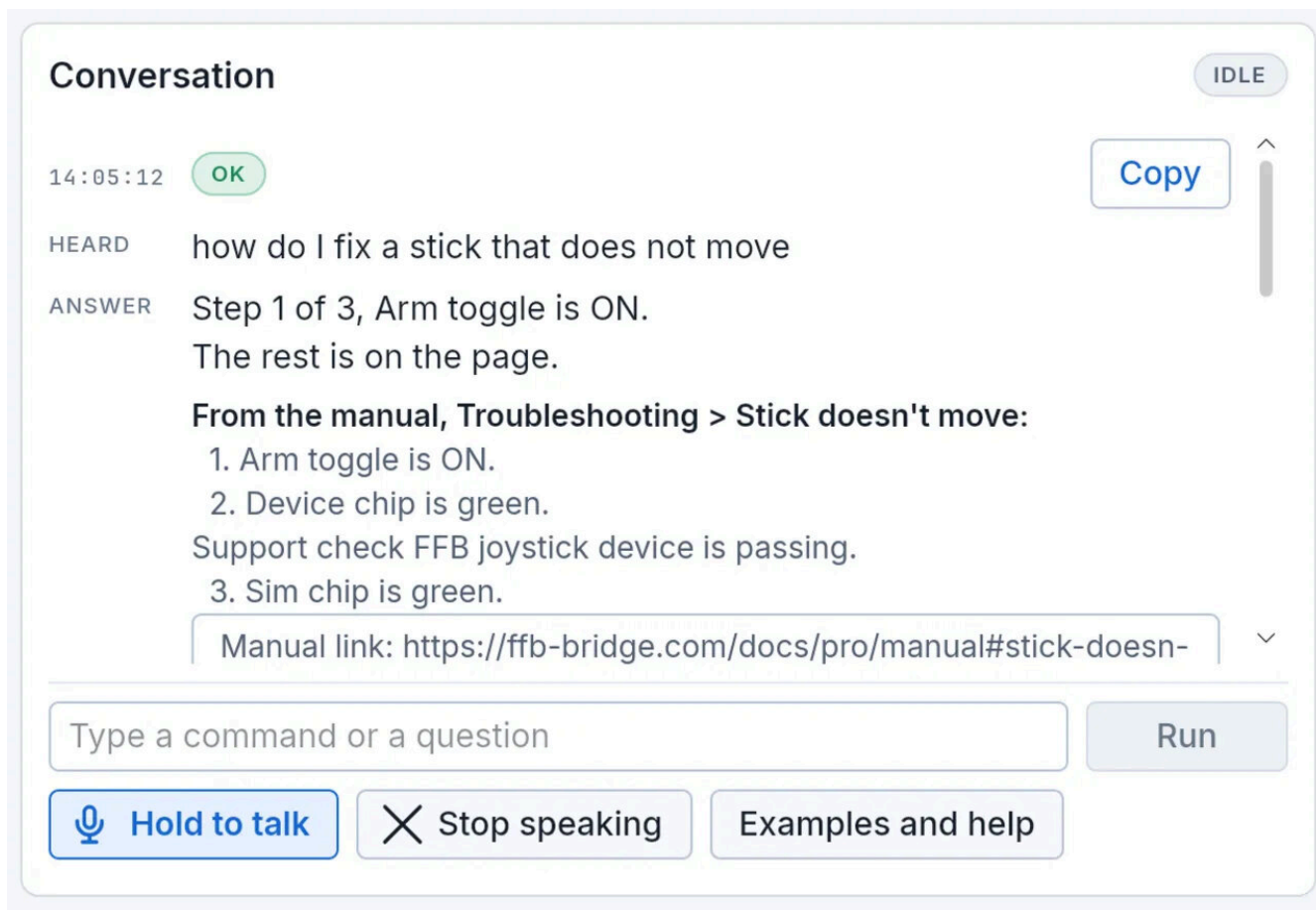


Figure 3. An answer from the manual: Pro speaks the first step, shows all the steps and a manual link, and offers Stop speaking while it talks.

## Phrases and Diagnostics

The **Phrases** tab holds two lists:

- **Personal voice shortcuts:** your own phrase for a command. For example, save “bumpy day” as “reduce turbulence by 10 percent” and click **Save shortcut**. Pro asks for confirmation every time you use one.
- **Corrections:** words Pro keeps mishearing. Enter the **Misheard words** and the **Intended words**, then click **Add correction**. Saying “I said engine rumble” after a wrong result adds one too.

The **Diagnostics** tab shows which part of the chain is working: the microphone, the recognizer, the understanding model, the reply voice and the talk key. **CONFIDENCE** shows how sure Pro was of the last spoken request. Below 0.50 it does not act and asks you to repeat.

**Store unresolved transcripts locally** is a separate setting, off by default. When it is on, Pro keeps the text of requests it could not handle, so you can fix the words with **Correct words** or copy them into a report. It never stores audio.

# Privacy

Pro processes your voice on your computer. Audio is never uploaded. Pro goes online for voice only when you download or update the models.

To report a voice problem, click **Report an Issue** in the sidebar. The report contains text, never recordings, so write what you said, what Pro heard and what you expected.

# Safety

Do not rely on voice alone to stop forces. “stop forces” needs the microphone and the voice models to work. Keep another way to disarm within reach: the arm button at the top of the window, **Disarm** in the tray menu, or an arm button on your stick (see [Settings](#)).

# When something goes wrong

| Problem                                            | What to do                                                                                                                                                                                                                                                                         |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The talk button reads <b>Need model</b>            | Open the <b>Models</b> tab and click <b>Download voice models</b> . Wait until each model reads Ready. A cancelled download continues where it stopped.                                                                                                                            |
| The <b>INPUT</b> meter does not move               | Check the microphone chosen under <b>Microphone</b> and that it is not muted. Click <b>Rescan microphones</b> if you plugged it in after opening the page. Allow microphone access for Pro in Windows Settings or macOS System Settings under Privacy & Security, then reopen Pro. |
| The meter moves but nothing happens                | Hold the talk key until you finish speaking. If <b>Require wake phrase</b> is on, start with Bridge, Tune or FFB. If the key works only while Pro is in front, see the talk key notes in <a href="#">Set up Voice Control</a> .                                                    |
| A typed command fails too                          | Check that Voice Control is switched on. Name one setting per request, using its name from the Tuning page, or try a request from <b>Examples and help</b> .                                                                                                                       |
| Pro ignores a command or changes the wrong setting | Open <b>Recognition details</b> to see what Pro understood. Say “undo that”, then add a correction on the <b>Phrases</b> tab for the misheard word.                                                                                                                                |
| Replies are silent                                 | Turn on <b>Spoken replies</b> , check <b>Volume</b> and your computer's sound output, and click <b>Preview voice</b> . On Linux the system voice needs Speech Dispatcher with a working voice; the natural voice works without it.                                                 |

For other problems, see [Pro troubleshooting](#).

# Advanced Tuning

The sliders on the Tuning page set how strong each effect is. Advanced Tuning shapes how that strength changes through the flight, such as a lighter stick on approach and a firmer one near Vne, or a stall buffet that starts earlier.

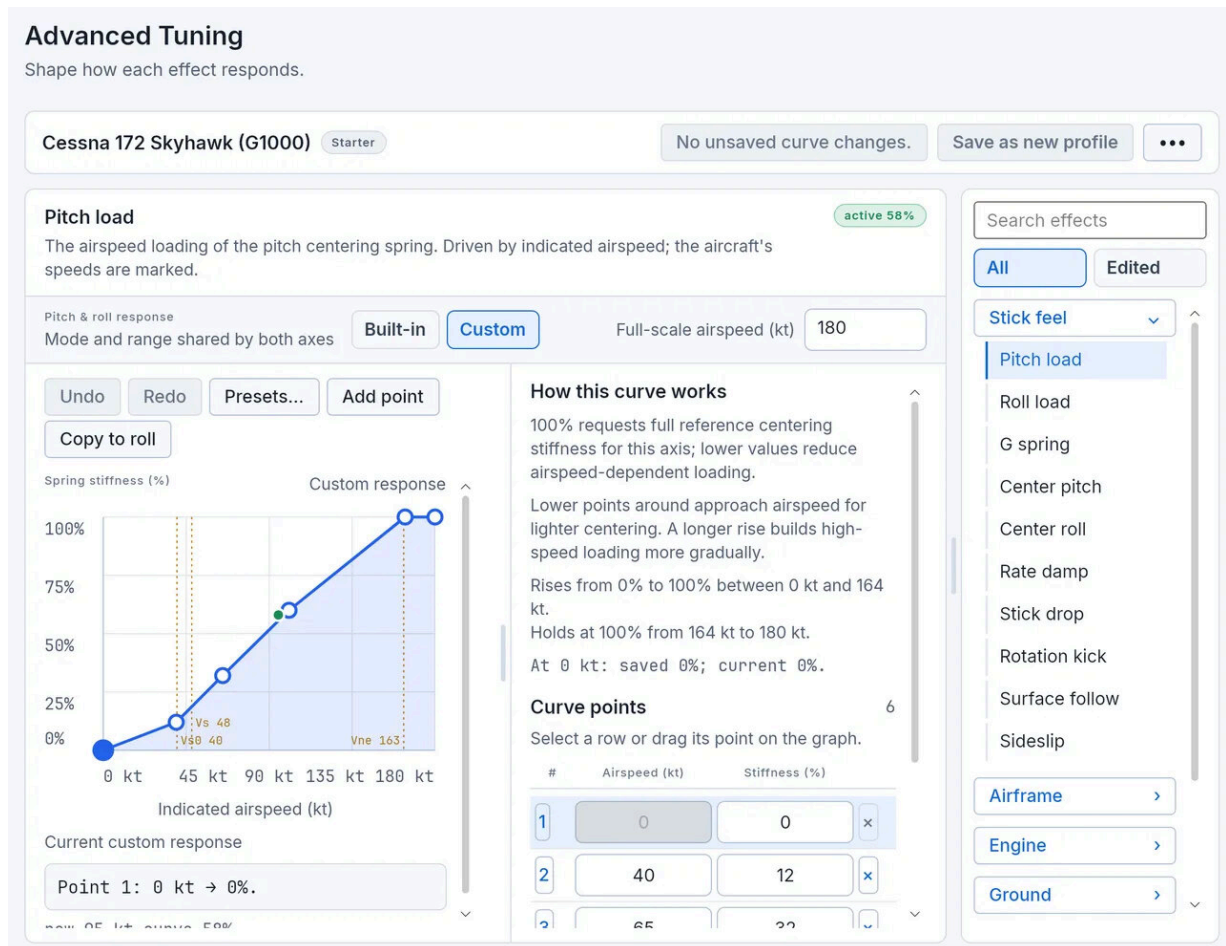


Figure 1. Advanced Tuning with the Cessna 172 Skyhawk (G1000) starter: the pitch load curve against indicated airspeed, its guidance and points, and the effect list on the right.

## What a response curve is

A response curve plots an effect's strength, going up, against the thing that drives it, going across. Some examples:

- **Pitch load** against indicated airspeed. A low curve at approach speed gives a light stick; a high curve near Vne gives a stiff one.
- **Stall buffet** against the margin to the stall angle. The less margin is left, the stronger the buffet.

The curve sets the shape. The effect's slider on the Tuning page still sets the overall level, so 100% on most curves means the full level of that slider.

To open the page, click **Advanced Tuning** in the **PRO** section of the sidebar. It edits the active profile, named at the top left with a **Starter** or **Saved** tag. To edit another profile, choose it from the profile menu at the top of the window. Opening the page never arms the stick.

## Find an effect

- The effect list on the right is grouped, such as **Stick feel**, **Airframe**, **Engine**, **Ground**, **Mechanical** and **Helicopter**. Click a group name to open or close it.
- Type in **Search effects** to find an effect by name.
- **All** lists every effect. **Edited** lists only the effects with unsaved changes, which also carry an orange dot.

A tag at the top right of the curve shows what the effect is doing now. Point at it to see the reason.

| Tag                 | What it means                                                                                       |
|---------------------|-----------------------------------------------------------------------------------------------------|
| <b>active 58%</b>   | The effect is running now, at 58%.                                                                  |
| <b>off now</b>      | The effect can run, but its input gives it nothing to do at the moment.                             |
| <b>event</b>        | A one-shot effect, such as touchdown, waiting for its next event.                                   |
| <b>n/a</b>          | The simulator does not send the input this effect needs.                                            |
| <b>rotorcraft</b>   | A helicopter effect, and the profile is set up for a fixed-wing aircraft.                           |
| <b>No live data</b> | No simulator data is arriving. Connect a simulator and arm to see where the effect is on its curve. |

## Built-in or Custom

Every effect has a built-in response. Click **Custom** in the band above the graph to use your own curve instead, or **Built-in** to go back. Your curve stays in the profile while **Built-in** is selected.

When you change the shape of a curve, **Custom** switches on by itself and the page says **Custom curve enabled. Undo restores the previous settings.**

Pitch load and roll load share this choice and the full-scale airspeed, but keep separate shapes. Center pitch and center roll share the choice too.

## Read the graph

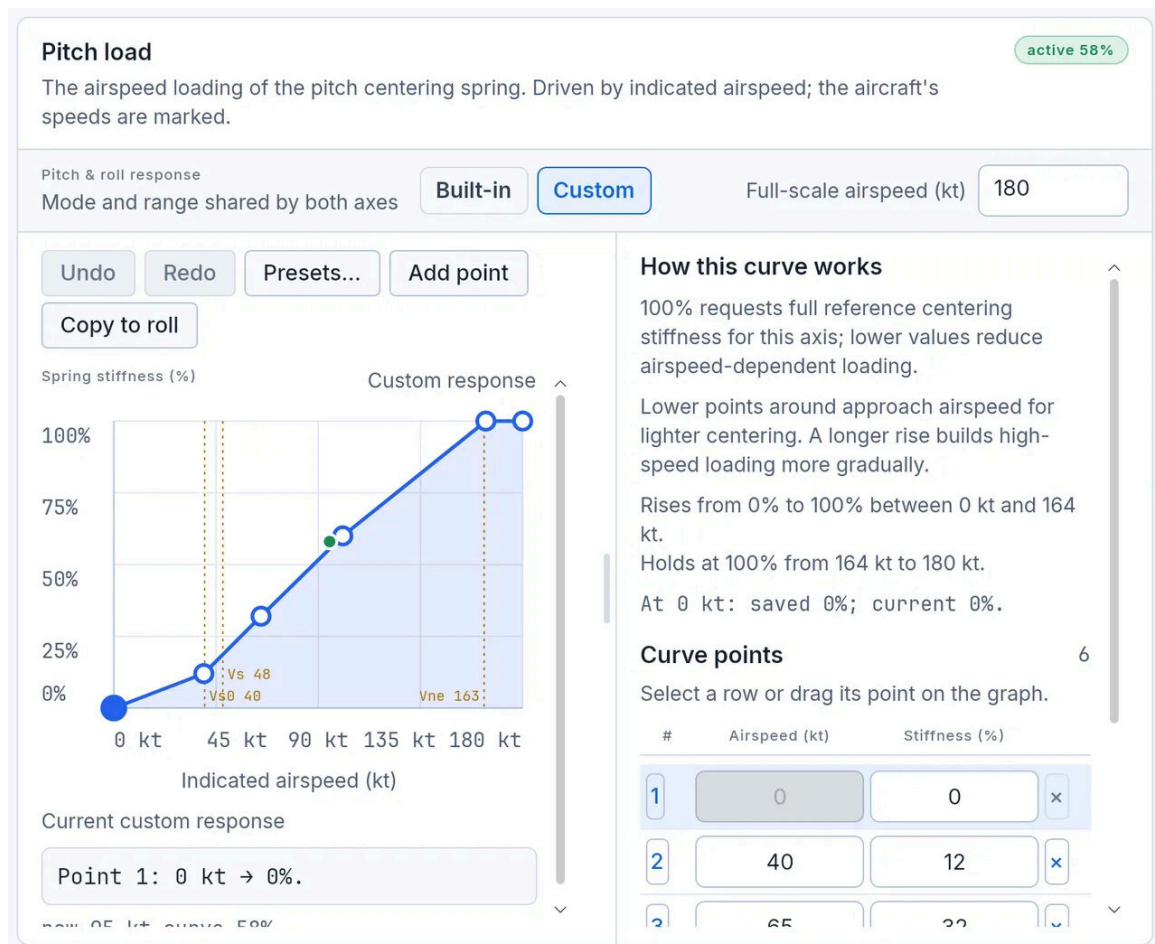


Figure 2. The pitch load editor: the curve with Vs0, Vs and Vne marked, the How this curve works guidance and the Curve points table.

- The axis across the bottom is the input, with its unit, such as **Indicated airspeed (kt)**. On the stall buffet curve, the stall is at the right edge.
- The axis going up is the output in percent. The label above the graph says what 100% means for this effect, such as **Spring stiffness (%)** or **Strength (% of the slider level)**.
- On airspeed curves, dashed lines mark the aircraft's speeds, such as Vs0, Vs and Vne. They come from the Aircraft Library and the simulator.
- The green dot and dotted line show where the flight is now. The line under the readout box gives it in numbers, such as `now 95 kt curve 58%`. It says `law` in place of `curve` while the built-in response is in use.
- A grey dashed line shows the saved curve, or the built-in law when the profile has no saved curve. Clear **Saved curve** or **Built-in law** under the graph to hide it.
- Point anywhere on the graph and the readout box gives the response at that input.

**How this curve works** explains what 100% means for this effect and which points to move for the feel you want. Its last line compares the saved and current response at the selected point.

Center pitch has two curves. Click **Travel** for the centering force against stick travel, or **Trim** for the pitch spring stiffness against the trim position.

## Edit a curve

| To do this                      | Do this                                                                                                                                                                              |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Move a point                    | Drag it on the graph, or type new values in its row of the <b>Curve points</b> table. Click a point or its number to select it.                                                      |
| Add a point                     | Click <b>Add point</b> to add one halfway between the selected point and the next. You can also click an empty spot on the graph and choose <b>Add point here</b> .                  |
| Remove a point                  | Click ✕ in its row, or click the point on the graph and choose <b>Delete point</b> .                                                                                                 |
| Undo a change                   | <b>Undo</b> and <b>Redo</b> step through the changes to the selected curve, up to 50 steps.                                                                                          |
| Start from a standard shape     | Click <b>Presets...</b> and choose <b>Linear</b> , <b>Progressive</b> or, for most effects, <b>Built-in law</b> .                                                                    |
| Use the same shape on both axes | On a pitch curve, click <b>Copy to roll</b> . On a roll curve, the button reads <b>Copy to pitch</b> .                                                                               |
| Change the airspeed range       | Type a new value in <b>Full-scale airspeed (kt)</b> . This sets the right end of the pitch and roll load curves. Both curves stretch or shrink, and each point keeps its percentage. |

Inputs must increase from one point to the next, and outputs stay between 0 and 100%. On the airspeed curves and some others, the first and last inputs stay fixed. The note under the table tells you which rule applies.

## Save or discard your changes

Changes apply to the active profile as soon as you make them, so you feel them on the stick straight away if it is armed. Save to keep them.

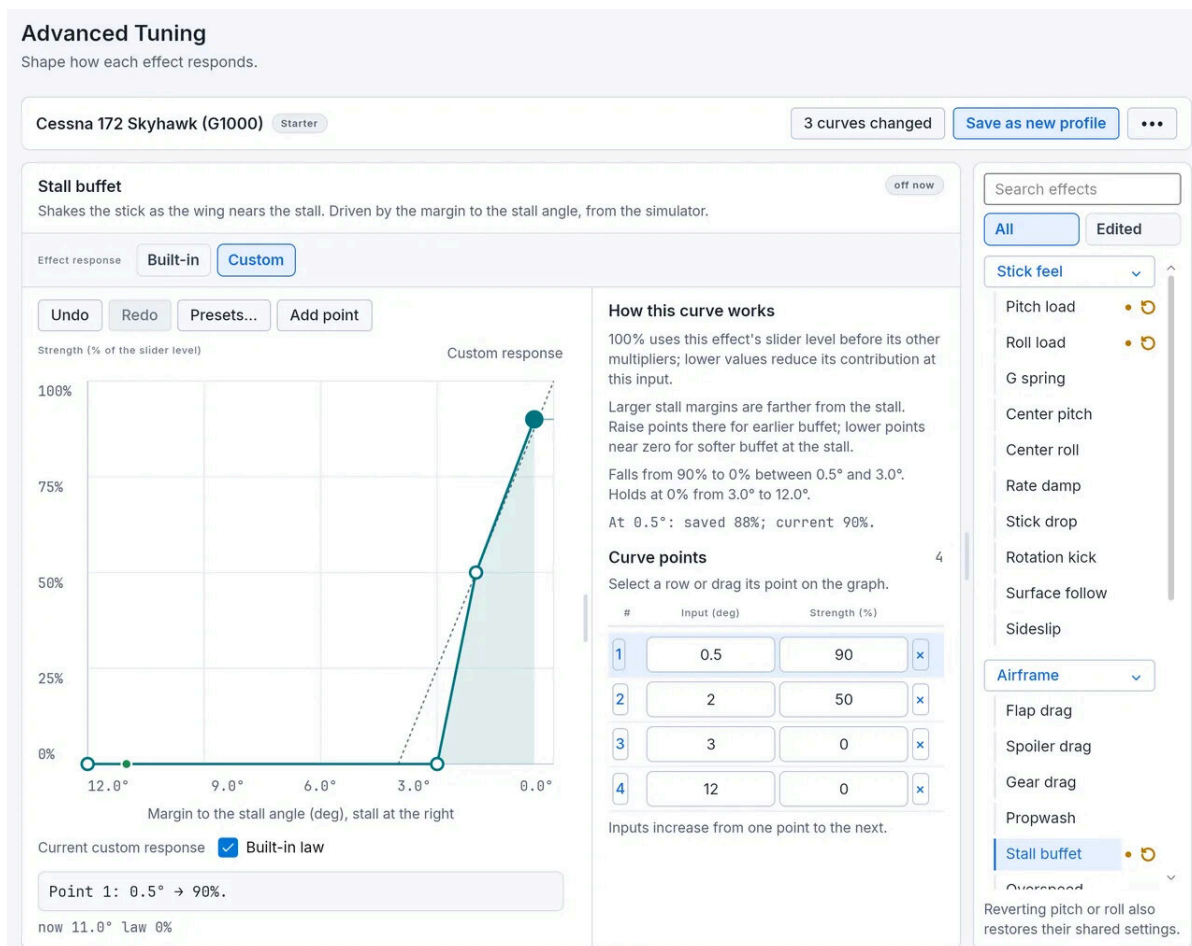


Figure 3. Three curves changed on the C172 starter: the stall buffet curve is being edited, and orange dots mark the edited effects in the list.

- The button at the top shows how many curves you have changed, such as **3 curves changed**. Click it to list only the edited effects.
- **Save changes** writes the curves into the active profile, together with any other unsaved changes from the Tuning page.
- On a built-in starter the button reads **Save as new profile**. Type a **Profile name** and click **Save profile**. Pro creates a new profile and never overwrites the starter.
- Click the arrow beside an edited effect in the list to return that curve to the saved profile. Reverting pitch load or roll load also restores the settings they share.

The **...** button holds three more actions:

- **Save as...** saves the active settings as a new profile under a name you choose.
- **Discard all...** returns every unsaved change, on Tuning and on Advanced Tuning, to the saved profile. Pro asks you to confirm first.
- **Open Tuning** opens the Tuning page.

To go back to an earlier saved version of a profile, see [Profile History](#).

## Example: a C172 that is lighter on approach and firmer near Vne

1. Load a Cessna 172 in the simulator and pick its profile, such as the **Cessna 172 Skyhawk (G1000)** starter.
2. Open **Advanced Tuning** and click **Pitch load** under **Stick feel**.
3. Click **Custom** if it is not already selected.
4. Find the point nearest your approach speed, about 65 kt in a C172. Lower its value in the **Stiffness (%)** column, or drag the point down.
5. Find the **Vne 163** line. Select the last point before it and click **Add point**. The new point lands halfway to the next one.
6. Drag the new point up, so the stiffness climbs earlier on the way to Vne.
7. For the same shape in roll, click **Copy to roll**.
8. Arm the stick and fly a circuit. Watch the green dot move along the curve as your speed changes.
9. Click **Save as new profile**, type a name and click **Save profile**.

This curve tops out at 100% of the aircraft's reference stiffness. To make the whole pitch axis heavier, raise **Elevator load** on the Tuning page or in the [Live Dashboard](#).

## When something looks wrong

| Problem                                       | What to do                                                                                                                                                                                |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The aircraft's speeds are not marked.         | The marks appear only on airspeed curves, and only once the aircraft is loaded in the simulator. An aircraft without an Aircraft Library entry may have none.                             |
| There is no green dot.                        | No live data is arriving. Connect a simulator and arm. A missing dot does not mean the effect is at zero.                                                                                 |
| A changed curve feels no different.           | Check that <b>Custom</b> is selected and the tag says <b>active</b> . A curve shapes an effect but cannot switch it on, and it has nothing to shape while the effect's slider is at zero. |
| The roll curve changed when you edited pitch. | Pitch load and roll load share <b>Built-in</b> , <b>Custom</b> and the full-scale airspeed. Their point shapes stay separate.                                                             |
| A point will not move or cannot be added.     | Read the message under the graph. Points must stay in order and the end points of some curves are fixed. Airspeed curves hold 4 to 10 points; other curves hold up to 32.                 |

To find out what each effect represents, see [Effects](#). The sliders are described in [Tuning](#).

# Black Box

Black Box records your flights on your computer. Open one afterwards to see every force on a timeline beside the route, try a different setting against that exact flight, and feel the result through your stick.

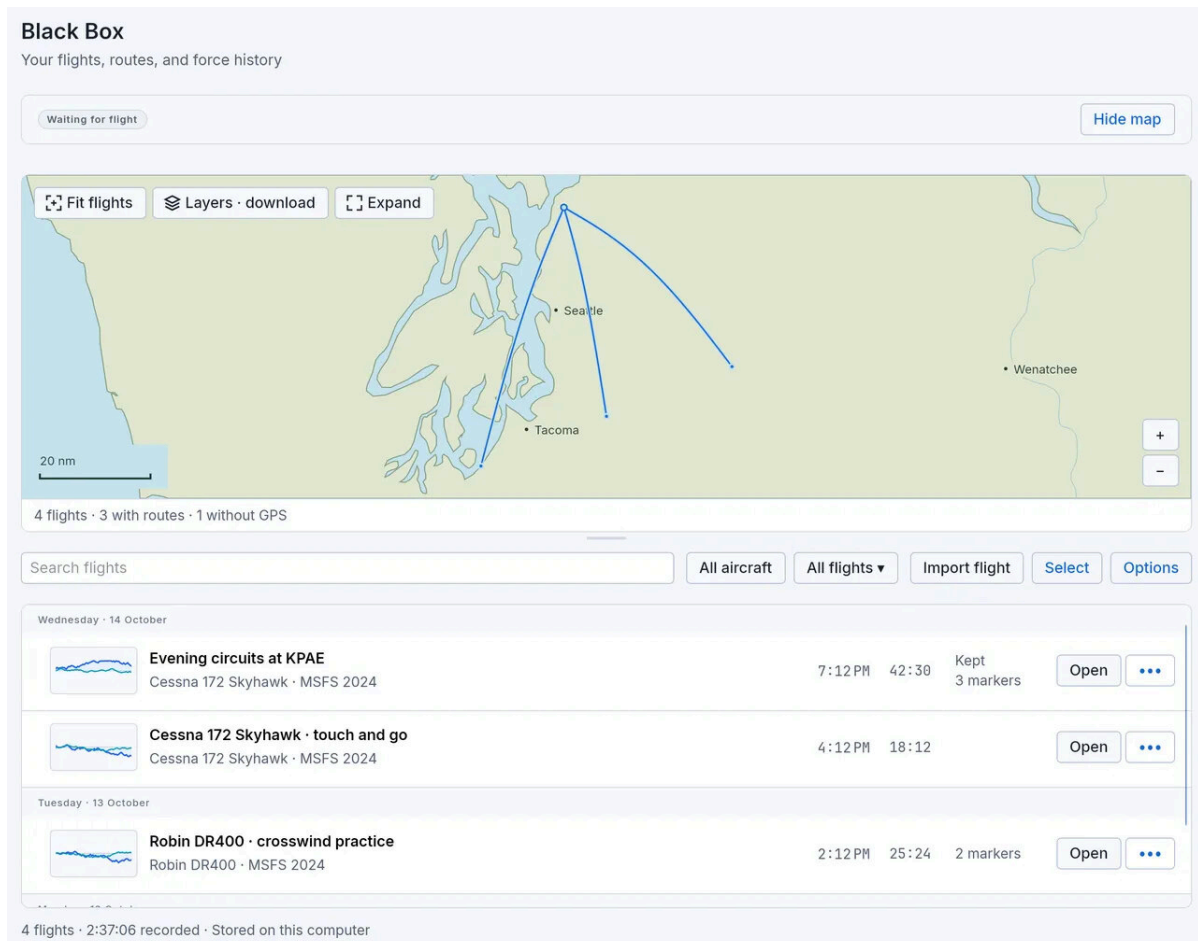


Figure 1. The Black Box flight library: saved routes on the map, and the flights listed by day below it.

## What Black Box records

Each saved flight holds:

- the route, when the simulator sends position data
- every force effect, sample by sample
- the settings in use, including any you changed during the flight
- events such as takeoff, touchdown, gear and flap changes, and autopilot on and off

Black Box records no audio and no video. The files stay on your computer unless you export them.

## Turn recording on

Recording is off until you turn it on. Pro asks once, in the **Flight recordings** step the first time you start it.

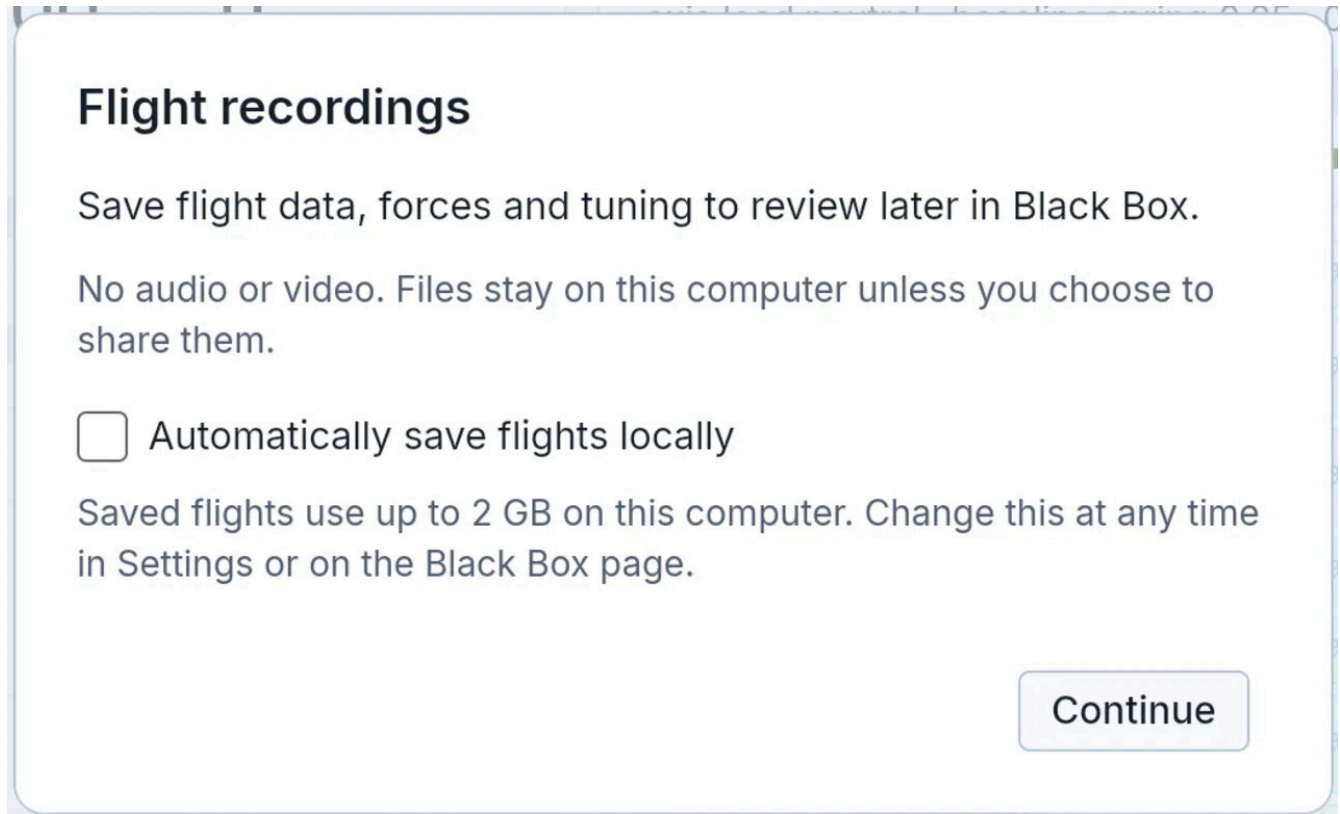


Figure 2. The Flight recordings step at first start. Tick the box to save your flights on this computer.

1. Tick **Automatically save flights locally** and click **Continue**.
2. Start the simulator and fly. At the top of the Black Box page, the status changes from **Waiting for flight** to **Recording** and shows the elapsed time.
3. End the flight. Pro saves it about 30 seconds after the simulator stops sending data.

While a flight is recording, **Keep this flight** at the top of the page saves the flight so far and carries on in a new recording. If you pause the simulator for 30 seconds or more, Pro saves the flight so far and starts a new recording when you continue.

If you skipped the step, open **Black Box**, click **Options**, then **Storage settings**, and tick the same box. While the library is empty, the page also shows **Turn on automatic capture**.

### Storage settings

**Storage settings** shows where flights are saved, how much space they use and how much is free on the disk.

| Setting                            | Default | What it does                                                                                                                            |
|------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Automatically save flights locally | Off     | Records your flights while Pro is running.                                                                                              |
| Storage allowance                  | 2 GB    | The most space saved flights may use. Choose from 1 GB to 50 GB.                                                                        |
| Age limit                          | 30 days | Flights older than this are removed, unless you keep them. <b>Until the allowance is full</b> removes flights only when space runs out. |
| Maximum size per recording (MB)    | 500     | When a recording reaches this size, Pro saves it and turns recording off.                                                               |

A typical flight uses about 40 MB per hour. Some use 80 to 105 MB per hour or more. At those rates, a 500 MB recording holds roughly 5 to 12 hours.

When the allowance or the age limit is reached, Pro removes the oldest flights you have not kept. Recording also stops when the disk has less than 16 MB free.

## The flight library

Black Box opens on your flights, newest first and grouped by day. Each row shows a small force trace, the title, aircraft, simulator, start time and length. **Kept**, **Incomplete** and the number of markers appear on the right.

### The map

| Control           | What it does                                                       |
|-------------------|--------------------------------------------------------------------|
| Fit flights       | Zooms the map to show every route in the list.                     |
| Layers · download | Opens the map downloads. See <a href="#">Maps</a> .                |
| Expand            | Gives the map the whole page. <b>Restore</b> brings the list back. |
| + and –           | Zoom in and out. Drag the map to move it.                          |
| Hide map          | Hides the map and leaves the list. <b>Show map</b> brings it back. |

Point at a flight in the list to highlight its route. Click a route to select its flight, then click **Open flight**. Where routes overlap, Pro asks which flight you mean. Drag the bar under the map to change its height.

### Find a flight

- **Search flights** matches the title, the aircraft or the simulator.
- **All aircraft** limits the list to one aircraft.

- **All flights** switches between all flights, **Kept flights** and **Needs attention**, which lists flights marked **Incomplete**.

The map shows the same flights as the list. The list holds 100 flights at a time; use **Older** and **Newer** to move between pages.

## Look after your flights

**Open** opens a flight for review. The **...** button on each row holds the other actions:

- **Keep** protects the flight from automatic clean-up. On a kept flight the same item reads **Unpin**.
- **Rename...** gives the flight a title you will recognise, such as "Evening circuits at KPAE".
- **Flight summary (CSV)**, **Flight track (CSV)** and **FFB-Bridge flight...** export the flight. See [Export a flight](#).
- **Move to Recently deleted...** asks you to confirm, then removes the flight from the list. **Undo delete** brings it straight back.

Kept flights still count toward the storage allowance. If only kept flights are left, recording stops until you free space or raise the allowance.

Deleted flights stay in **Recently deleted** for up to seven days, or less when the allowance needs the space. Open it from **Options** and click **Restore** to bring a flight back.

The buttons next to the search box:

- **Import flight** adds a `.ffbflight` file, for example one you exported on another computer.
- **Select** puts a checkbox on each flight. **Select visible** ticks every flight on the page, and **Export summaries (CSV)** saves one file with a row for each. Click **Done** when you have finished.
- **Options** holds **Refresh**, **Recently deleted** and **Storage settings**.

## Review a flight

Click **Open** on a flight. The header shows the aircraft, date, time, simulator and the area you flew in. Opening a flight and playing it on screen never moves your stick. **Back to flights** returns to the library.

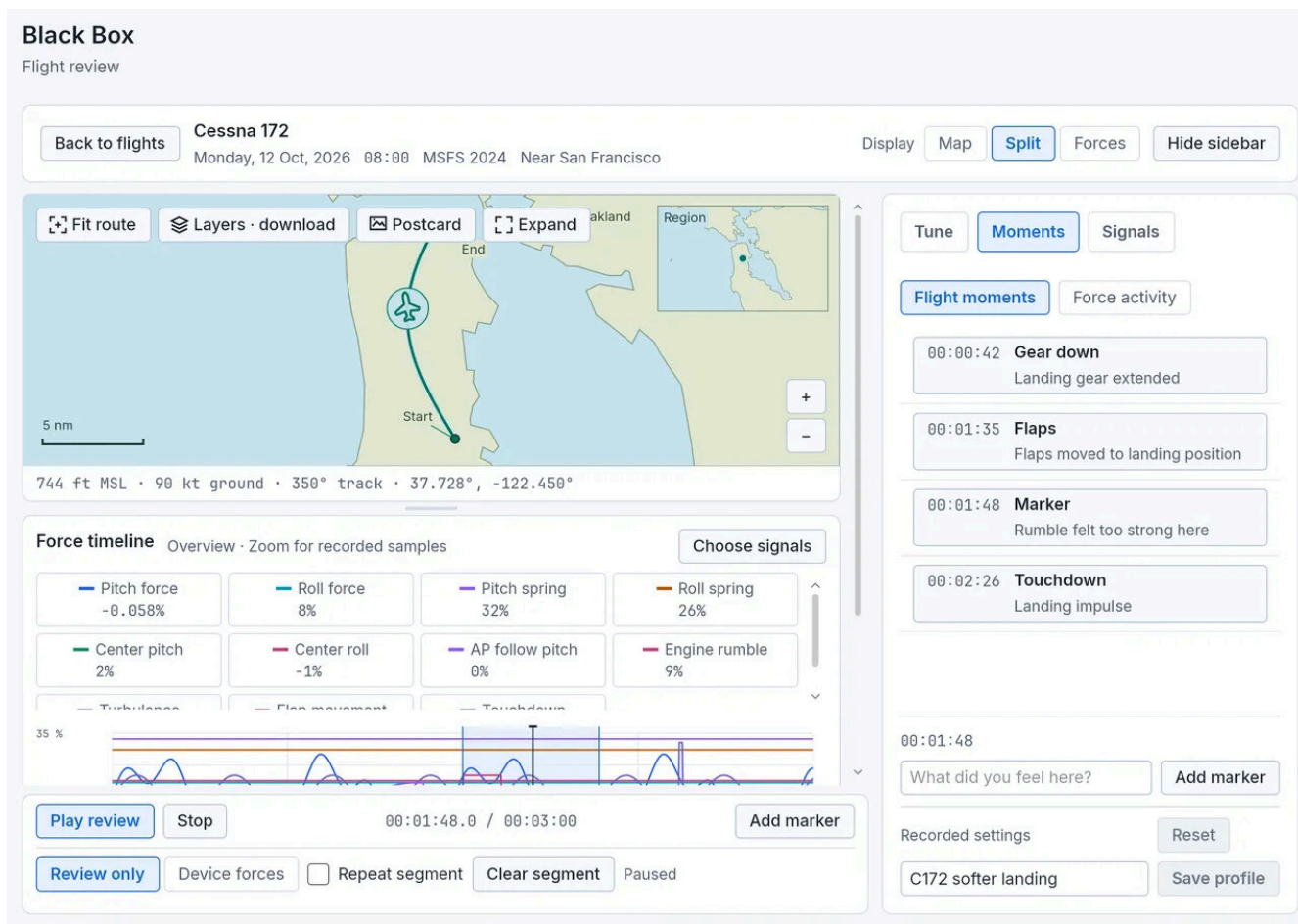


Figure 3. A Cessna 172 approach in Split view: the route above, the force timeline below and the flight moments on the right.

**Display** sets the layout: **Map**, **Split** or **Forces**. These buttons appear when the flight has a route. **Hide sidebar** gives the map and timeline the full width.

The aircraft on the map marks where you were at the playhead. The line under the map gives the altitude, ground speed, track and position at that moment. Click the route to move the playhead there, and click **Fit route** to see all of it. If the simulator stopped sending positions for a while, **Next position** jumps to where the route picks up again.

## Play and select

| Control                                     | What it does                                                                                       |
|---------------------------------------------|----------------------------------------------------------------------------------------------------|
| <b>Play review</b>                          | Plays the flight on screen. While it plays, the button reads <b>Pause</b> .                        |
| <b>Stop</b>                                 | Stops playback.                                                                                    |
| Time                                        | The playhead position and the length of the flight.                                                |
| <b>Add marker</b>                           | Adds a note at the playhead.                                                                       |
| <b>Review only</b> and <b>Device forces</b> | Play on screen only, or through your stick. See <a href="#">Feel a flight through your stick</a> . |

| Control        | What it does                                             |
|----------------|----------------------------------------------------------|
| Repeat segment | Plays the selected segment in a loop.                    |
| Clear segment  | Removes the selection and goes back to the whole flight. |

To select a segment, drag across the force timeline. You can also move the playhead and press **I** to set the start and **O** to set the end. Other keys: **Space** plays and pauses, **Esc** stops, and **M** adds a marker.

### The force timeline

Each line is one force effect, in percent of full force. The chips above the graph name each signal and show its value at the playhead. Click a chip or a line to select that signal. The sidebar then switches to **Tune** so you can change it.

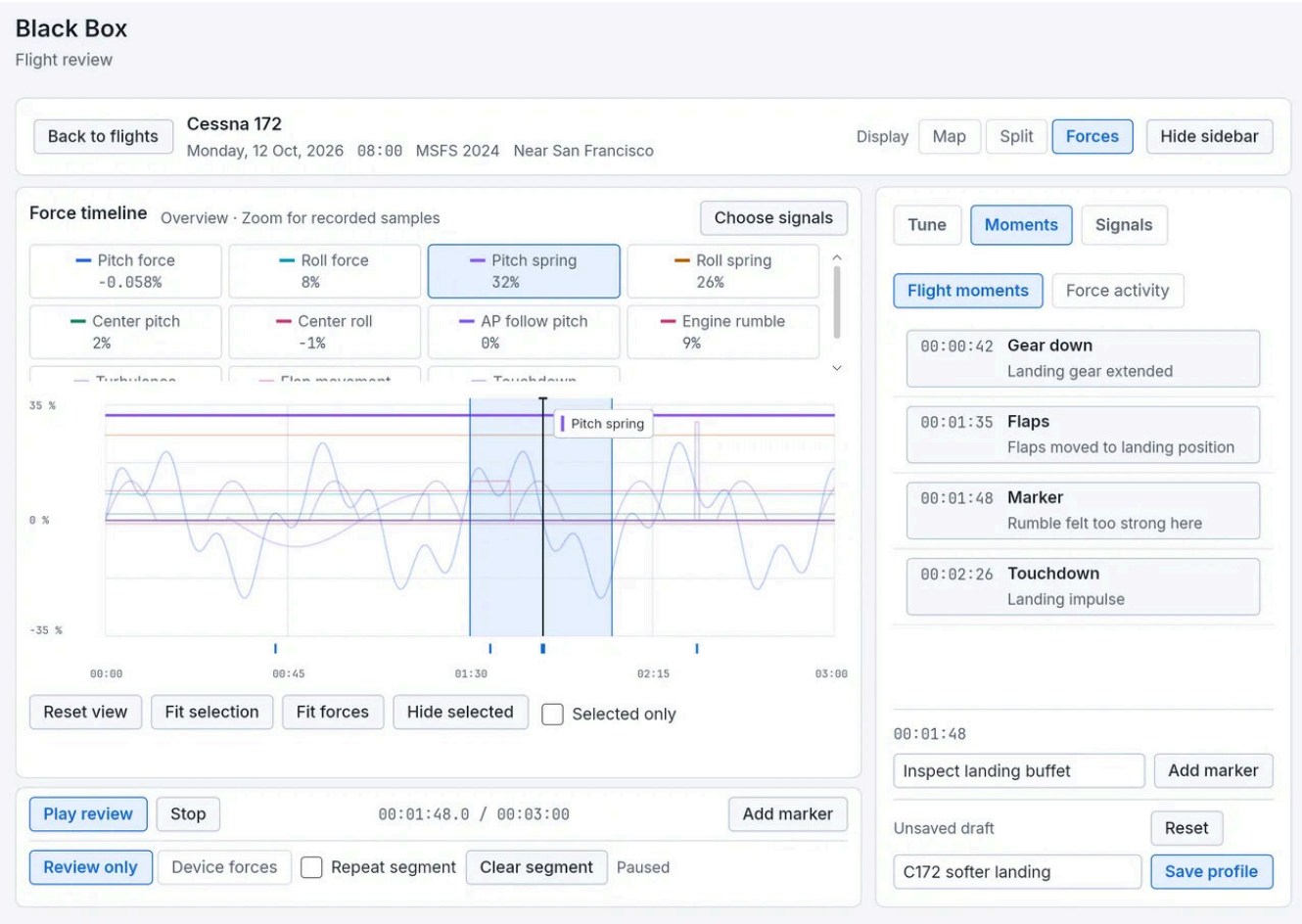


Figure 4. Forces view with a segment selected around a marker and the Pitch spring signal highlighted.

| Control        | What it does                                                                                                                                                                            |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Choose signals | Opens the <b>Signals</b> tab, where you show or hide whole groups such as <b>Loading and springs</b> or <b>Vibrations and buffets</b> . <b>Show all signals</b> brings everything back. |

| Control              | What it does                                                                                     |
|----------------------|--------------------------------------------------------------------------------------------------|
| <b>Reset view</b>    | Shows the whole flight at the default force scale.                                               |
| <b>Fit selection</b> | Zooms the time axis to the selected segment.                                                     |
| <b>Fit forces</b>    | Scales the force axis to the lines on screen.                                                    |
| <b>Hide selected</b> | Removes the selected signal. Bring it back under <b>Hidden traces</b> on the <b>Signals</b> tab. |
| <b>Selected only</b> | Shows only the selected signal.                                                                  |

The mouse wheel zooms the time axis. `Ctrl` with the wheel zooms the force axis, `Shift` with the wheel moves along the flight, and `Ctrl+Shift` with the wheel moves the force axis. Click the time ruler to move the playhead.

Zoomed out, the heading reads **Overview · Zoom for recorded samples**. Zoom in to see each recorded sample. The line under the buttons then gives the exact value at the cursor.

## Moments and markers

The **Moments** tab lists what happened during the flight. Click a moment to move the playhead there.

- **Flight moments** shows events such as gear down, flaps and touchdown, your markers, and settings you changed in flight.
- **Force activity** lists each time an effect came on, with its peak level.

To mark a moment, move the playhead and click **Add marker** or press `M`. Type what you felt, for example "Rumble too strong on rollout", and click **Add marker**. You can also type the note in the box at the bottom of the **Moments** tab.

You can mark a flight while you fly. With [Voice Control](#) on, say "mark what just happened" to mark the last 30 seconds, or "mark this" for the current moment. To add a note, say "as" and the note, for example "mark what just happened as buffet too strong".

## Try a different setting

The **Tune** tab shows how the same flight would have felt with a different setting. Your changes go into a draft; the recording never changes.



Figure 5. The Tune tab with three draft changes: Elevator load lowered from 100% to 70%, and custom pitch and roll load curves.

1. Select a signal on the timeline, or click the setting button at the top of **Tune** and pick a setting. **Find a force or setting** narrows the list.
2. Move the slider or type a value. If the effect has a response curve, tick **Use custom curve** and drag the points, or edit the **Input** and **Response %** columns.
3. Pro recalculates the forces with your draft for the selected segment, or for the whole flight when nothing is selected.
4. Click **Draft** to draw the draft's lines beside the recorded ones. Click **Recorded** to go back.

For example, if the elevator felt too heavy on a C172 approach, select the approach, lower **Elevator load** to 70% and compare **Recorded** with **Draft**.

**Your draft** lists every change with its recorded and draft values. **Revert** undoes one change, **Reset curve to A** puts a curve back the way it was recorded, and **Reset** at the bottom discards the whole draft.

To keep the result, type a name in the box under **Reset** and click **Save profile**. Pro saves a new profile with your draft settings. It does not change the profile you fly with. To fly with the new profile, choose it on the [Profiles](#) or [Tuning](#) page.

# Feel a flight through your stick

**Device forces** plays the recorded forces, or your draft, through your stick or yoke. Feel the runway rumble on rollout again, lower it in your draft, and feel the difference.

Close the simulator before you play a recording through your stick. Pro does not start playback while MSFS or X-Plane is running, and stops if one starts. Keep a hand on the stick or yoke while playback runs; the recorded forces can move it.

1. Close the simulator. If your stick is armed, disarm it.
2. Open the flight. Select a segment if you want one, and tick **Repeat segment** to loop it.
3. Click **Device forces**, then **Arm & play**. Pro checks the recording, then arms the stick, and the status reads **Forces active**.
4. To switch versions, click **Recorded** or **Draft** on the **Tune** tab. A draft change takes effect from the playhead.
5. Click **Stop** or press `ESC` to end playback. The stick returns to its own centering.

**Pause** depends on your base. Where the base supports it, the stick holds your profile's centering spring and the button changes to **Resume forces**. On other bases, Pause ends playback and the stick returns to its own centering. Leaving the review or the Black Box page also ends playback, and so does **Safety Stop**.

## Maps

Pro includes a basic offline map, so your routes show without an internet connection. For more detail, click **Layers · download** on either map to open **Map layers & downloads**. Once terrain is installed, the button reads **Layers**.

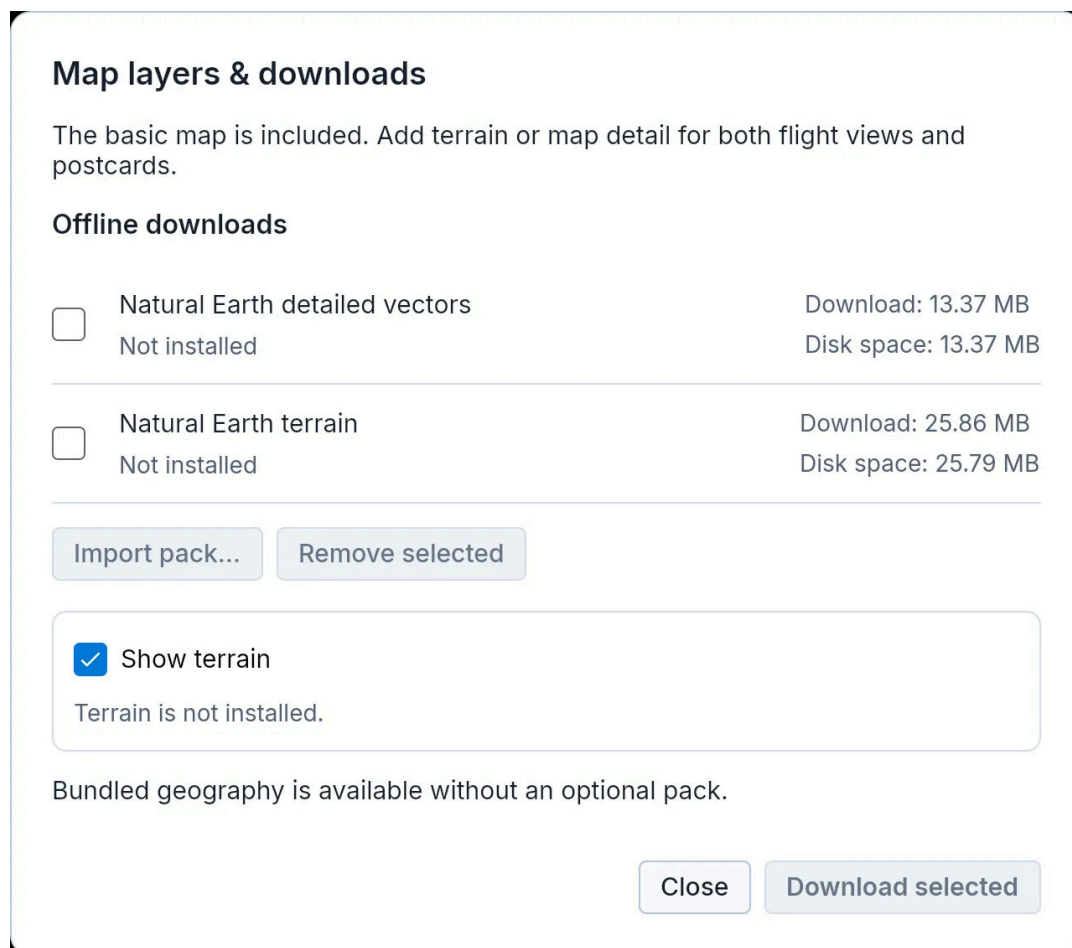


Figure 6. Map layers & downloads with neither Natural Earth pack installed.

| Pack                                  | Adds                                                                                         | Download    |
|---------------------------------------|----------------------------------------------------------------------------------------------|-------------|
| <b>Natural Earth detailed vectors</b> | Province borders, more inland water, major roads, urban areas and approximate airport points | About 13 MB |
| <b>Natural Earth terrain</b>          | Terrain colour and shaded relief                                                             | About 26 MB |

Tick a pack and click **Download selected**. **Import pack...** installs a pack file you already have, and **Remove selected** deletes an installed pack. **Show terrain** turns the terrain layer on and off. Packs apply to both maps and to postcards.

Neither pack shows runways or streets. Reviewing a flight sends no position data anywhere; only the pack downloads go online.

## Export a flight

| Export                        | Where                        | What you get                                                                                                                                                                                       |
|-------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Flight summary (CSV)</b>   | The flight's ⋮ menu          | One row: title, aircraft, simulator, start and end time in UTC, recorded length, sample counts, distance and the first and last position.                                                          |
| <b>Export summaries (CSV)</b> | <b>Select</b> in the library | One summary row for each flight you tick.                                                                                                                                                          |
| <b>Flight track (CSV)</b>     | The flight's ⋮ menu          | One row for each recorded position, about once a second: time, latitude, longitude, altitude, ground speed, track and pause state. A flight without a route gives a file with only the header row. |
| <b>FFB-Bridge flight...</b>   | The flight's ⋮ menu          | The recording as a <code>.ffbflight</code> file. Open it in Pro on another computer with <b>Import flight</b> .                                                                                    |
| <b>Postcard</b>               | The map in a flight review   | A picture of the route with up to three force traces, as PNG (2400 × 2080) or SVG.                                                                                                                 |

A `.ffbflight` file does not include your marker notes or the route. Export the flight track or a postcard if you want those too.

The CSV files are UTF-8, separated by commas, with a full stop for decimals in every language. The recorded length is the time Pro recorded, not block time.

## Create a flight postcard

FLIGHT JOURNAL / FFB-BRIDGE

Cessna 172 · Approach and landing

Cessna 172 · 2026-10-12 UTC · MSFS 2024

00:03:00 DURATION · 11.6 NM RECORDED · 1,500 FT MAX MSL · 90 KT MAX GROUND

The feel of the flight

Pitch force

Roll force

Pitch spring

FFB-BRIDGE · Recorded traces (1% reference) · Gaps excluded · Natural Earth public-domain geography

Title

Cessna 172 · Approach and landing

Caption

Optional caption

Recorded force traces (up to 3)

☒ Pitch force
 ☒ Roll force
 ☒ Pitch spring
 ☐ Roll spring

File name

2026-10-12\_Cessna-172\_Flight-postcard

Format

PNG - 2400 x 2080

Preview matches the saved image. Stored locally.

Cancel

Save postcard...

Figure 7. Create a flight postcard: the preview on the left, and the title, traces, file name and format on the right.

To make a postcard, open a flight with a route and click **Postcard** on the map. Edit the **Title**, add a **Caption** if you like, and tick up to three force traces. The preview shows exactly the image you will get. Choose the **Format**, then click **Save postcard...** and pick where to save it.

## Problems

| Problem                            | What to do                                                                                                                                                                                                                                      |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No flights appear                  | Click <b>Options</b> , then <b>Storage settings</b> , and check that <b>Automatically save flights locally</b> is ticked. A flight appears about 30 seconds after the simulator stops sending data, or when you click <b>Keep this flight</b> . |
| A flight has no route on the map   | The simulator sent no position data for that flight. The forces are still there: use the <b>Forces</b> display. A map pack cannot add a missing route.                                                                                          |
| <b>Device forces</b> is greyed out | This recording cannot be played through the stick, for example because it has missing samples. <b>Review only</b> , the timeline and the exports still work.                                                                                    |

| Problem                                                                               | What to do                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Playback through the stick will not start                                             | Read the message under the transport. "Close the simulator before force playback." means MSFS or X-Plane is still running: quit it completely. "Disarm and release the active force session before playback." means the stick is armed for flying: disarm it with the arm button at the top of the window. Then click <b>Arm &amp; play</b> again. |
| Recording stopped and the status reads <b>Needs attention</b> because storage is full | Raise the <b>Storage allowance</b> , or delete flights you no longer need and click <b>Unpin</b> on old kept flights. Then tick <b>Automatically save flights locally</b> again.                                                                                                                                                                   |
| The status reads <b>File limit reached</b>                                            | The flight reached <b>Maximum size per recording (MB)</b> and was saved. Raise the limit if you fly long sessions, then turn recording back on.                                                                                                                                                                                                    |
| The draft looks the same as the recording                                             | Check that <b>Draft</b> is selected, not <b>Recorded</b> . Check that the effect you changed was active in that part of the flight: a stall buffet change does nothing on a flight without a stall. With a segment selected, the draft covers only that segment.                                                                                   |

# Cockpit Web

Cockpit Web puts your live forces and quick tuning on a phone, tablet or second screen. Pro serves the page itself over your local network, so there is no app to install and nothing goes through the internet.

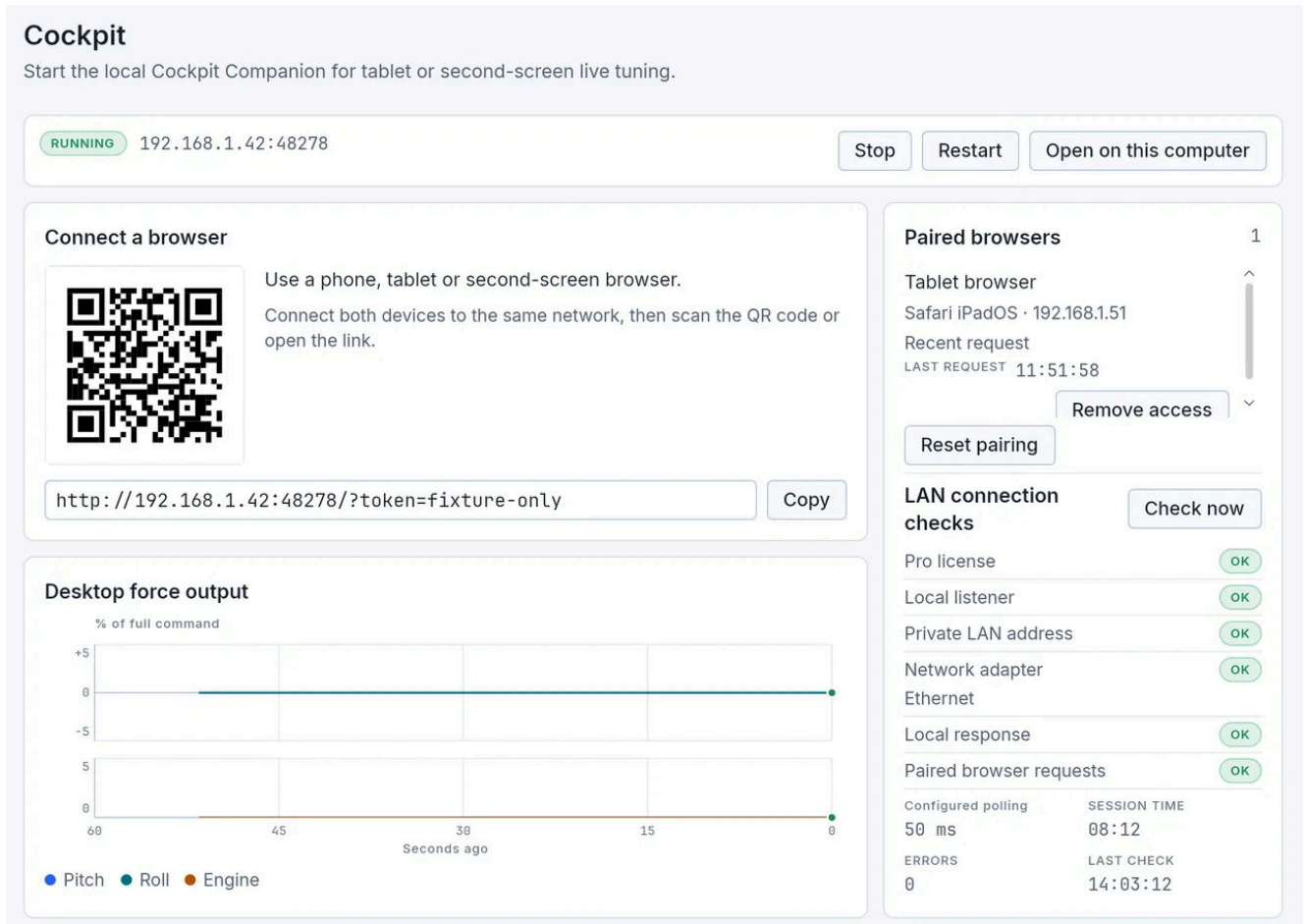


Figure 1. The Cockpit page in Pro with Cockpit Web running: the QR code and link, one paired tablet, and the LAN connection checks.

## Start Cockpit Web

1. Connect the computer running Pro and your phone or tablet to the same network, for example your home Wi-Fi.
2. In Pro, open **Cockpit** in the sidebar and click **Start**. The status changes to **RUNNING** and shows the address, such as 192.168.1.42:48278.
3. On the phone or tablet, scan the QR code with the camera. To use a laptop or another screen, click **Copy** and open the link in that browser.
4. The page opens on the **Fly** tab, and the device appears under **Paired browsers** on the desktop.

To test Cockpit Web before you pick up the tablet, click **Open on this computer**. It opens the same page in a browser on your computer.

A paired browser stays paired while Cockpit Web runs, so reloading the page does not need a new scan. Quitting Pro stops Cockpit Web.

Cockpit Web never arms your stick. You arm in the desktop app. The browser has a **Disarm** button at the top of the page that turns forces off at once.

## The browser page

The strip at the top shows the aircraft, the profile, the simulator, your stick and how fresh the simulator data is. A phone shows the aircraft and profile only. Tap a cell for details.

The gear button holds the display options (**Night**, **Daylight**, **High contrast** and the language) and **Report an issue**.

| Tab             | What it is for                                                                           |
|-----------------|------------------------------------------------------------------------------------------|
| <b>Fly</b>      | Watch the forces while you fly, try quick feel changes and mark moments.                 |
| <b>Tune</b>     | Change any setting by group, then keep or save the result.                               |
| <b>Compare</b>  | Switch between your original settings and your changes during the same flight.           |
| <b>Profiles</b> | Browse your profiles, the Online Library, History and Recovery, and try another profile. |
| <b>Aircraft</b> | Read about the aircraft you are flying and find profiles for it.                         |

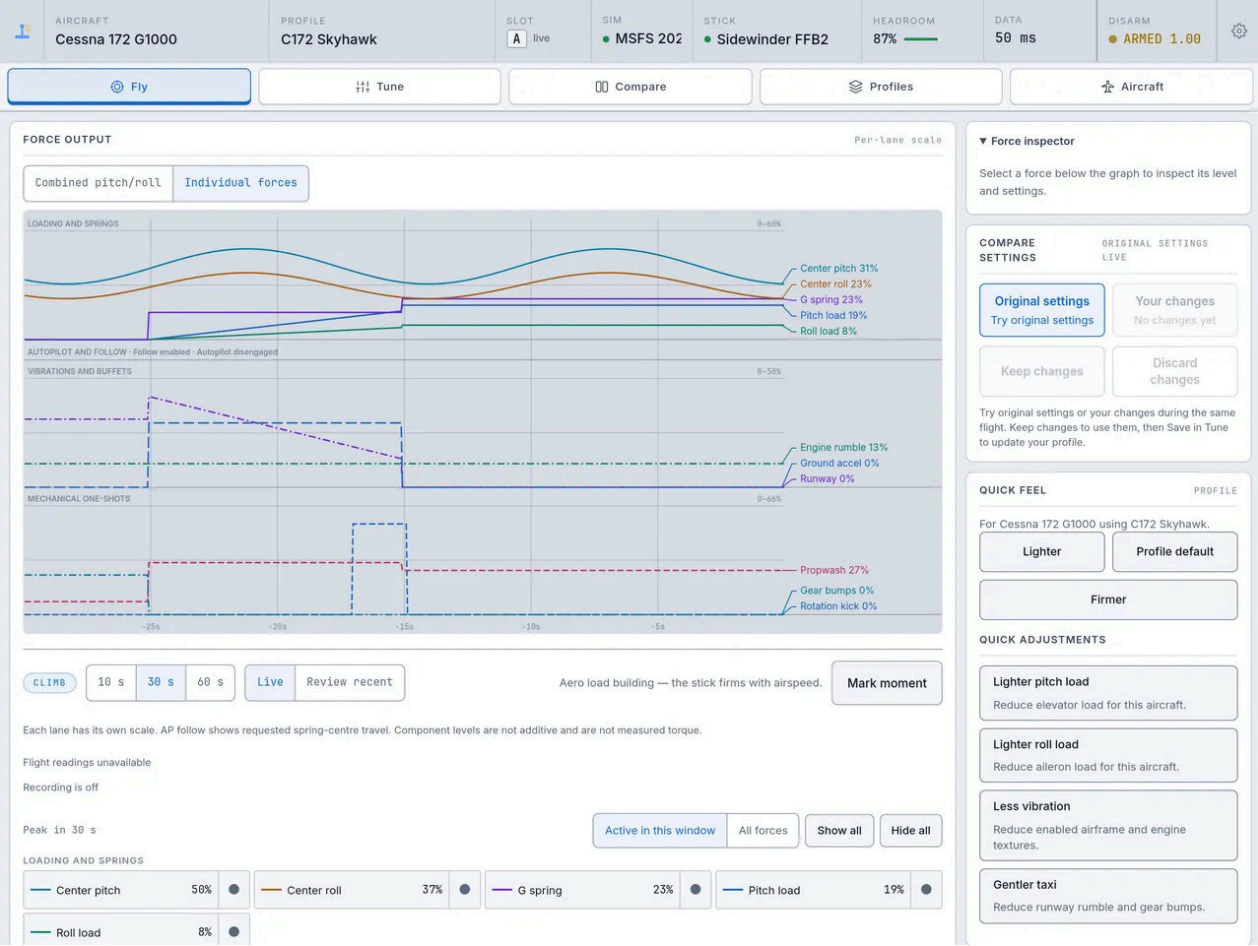


Figure 2. Cockpit Web on a tablet during a Cessna 172 climb. The Fly tab shows each force in its lane, with Compare settings, Quick feel and Quick adjustments on the right.

# Fly

The **Force output** graph shows what your stick is doing over the last **10 s**, **30 s** or **60 s**. On rollout you see runway rumble rise and fall with speed; on a stall you see the buffet start.

| Control                                   | What it does                                                                                                                                                                                              |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Combined pitch/roll and Individual forces | Show the total pitch and roll output, or each force on its own line in three lanes: loading and springs, vibrations and buffets, and mechanical one-shots.                                                |
| Live and Review recent                    | Follow the forces as they happen, or drag back through the last few seconds.                                                                                                                              |
| Force inspector                           | Select a force below the graph to see its level and the settings that drive it.                                                                                                                           |
| Compare settings                          | Switch between <b>Original settings</b> and <b>Your changes</b> , then <b>Keep changes</b> or <b>Discard changes</b> .                                                                                    |
| Quick feel                                | <b>Lighter</b> sets the centering spring, airspeed load and G-load to 80% of the profile's values. <b>Firm</b> sets them to 115%. <b>Profile default</b> puts them back. Other settings stay as they are. |

| Control                  | What it does                                                                                                                                                                                                         |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Quick adjustments</b> | One-tap fixes such as <b>Less vibration</b> , lighter pitch or roll, less taxi rumble or stronger buffet cues. Only the ones that apply to your profile appear. <b>Undo last adjustment</b> takes the last one back. |
| <b>Mark moment</b>       | Saves the current time with a title and a note on what happened. If <a href="#">Black Box</a> is recording, the moment goes into that flight.                                                                        |

Quick feel and quick adjustments go into **Your changes**, so your profile is not touched. For example, if a C172 feels too heavy in the flare, tap **Lighter**, fly the next approach, and switch between **Original settings** and **Your changes** on short final.

## Tune and save

**Tune** lists every setting Cockpit Web can change, in groups. Use **Setting groups** to jump to a group, the search box to find a setting, and **Active**, **Changed** or **All** to filter the list. Select a setting to see what it affects and its recent trace.

Your first change creates **Your changes**. Your original settings stay as they were, so you can always go back.

| Button                 | What it does                                                                                               |
|------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Keep changes</b>    | Makes your changes the current settings. The profile file does not change yet.                             |
| <b>Discard changes</b> | Drops your changes and returns to the original settings.                                                   |
| <b>Save</b>            | Writes the settings you are flying with to the profile. A built-in starter profile is saved as a new copy. |
| <b>Revert</b>          | Reloads the profile as it was last saved, dropping unsaved changes.                                        |

Each time you save over a profile, Pro keeps the previous version. See [Profile History](#).

## Compare

**Compare** lists every setting where **Your changes** differ from **Original settings**. The original settings are the ones in use when you started experimenting, including unsaved edits from the desktop.

Both run against the same live flight, so you can switch between them on one approach and feel the difference. When you prefer your changes, click **Keep changes**, then **Save** in Tune. To go back, click **Discard changes**.

## Profiles and Aircraft

**Profiles** has four sections: **My profiles**, **Online Library**, **History** and **Recovery**. Select a profile and click **Try as your changes** to fly it against your current settings before you keep it.

**Aircraft** shows reference material from AirframeDB for the aircraft you are flying, and lists the profiles that name it. Click **Show in Profiles** to open one.

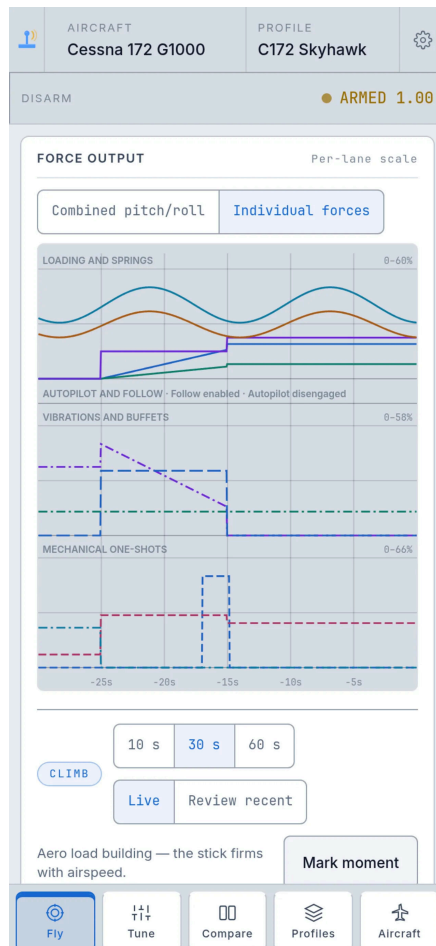


Figure 3. Cockpit Web on a phone. The Disarm button sits below the aircraft and profile, and the tabs move to the bottom of the screen.

## Manage access

You control access from the Cockpit page in Pro.

| Control         | What it does                                                                         |
|-----------------|--------------------------------------------------------------------------------------|
| Paired browsers | Lists each paired device with its browser, address and the time of its last request. |
| Remove access   | Removes one browser. To use it again, scan the QR code again.                        |

| Control              | What it does                                                                                         |
|----------------------|------------------------------------------------------------------------------------------------------|
| <b>Reset pairing</b> | Removes every browser and creates a new QR code and link. Pro asks you to confirm first.             |
| <b>Stop</b>          | Stops Cockpit Web. Every paired browser loses access.                                                |
| <b>Restart</b>       | Stops and starts Cockpit Web with a fresh address and a new pairing code. Every browser pairs again. |
| <b>Check now</b>     | Runs the <b>LAN connection checks</b> again.                                                         |

The LAN connection checks show **OK**, **Check** or **Waiting** for each step a tablet needs:

| Check                          | What it tests                                                                       |
|--------------------------------|-------------------------------------------------------------------------------------|
| <b>Pro license</b>             | Your license includes Cockpit Web.                                                  |
| <b>Local listener</b>          | Cockpit Web is listening on the address shown.                                      |
| <b>Private LAN address</b>     | The address is a local network address, starting 10., 172.16 to 172.31, or 192.168. |
| <b>Network adapter</b>         | The address belongs to a physical network adapter, not a VPN or virtual network.    |
| <b>Local response</b>          | Cockpit Web answers a connection from this computer.                                |
| <b>Paired browser requests</b> | A paired browser has asked for data in the last 12 seconds.                         |

**Desktop force output** shows pitch, roll and engine output for the last 60 seconds, so you can see Pro producing forces while you set up the tablet.

## Keep it private

Anyone who opens the QR code or link can change your force settings. Share them only with your own devices. Do not forward Cockpit Web's port on your router or open it to the internet.

If a device you no longer use is still listed, click **Remove access**. If you think someone else has the link, click **Reset pairing**.

# Problems

| Problem                                             | What to do                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The phone or tablet cannot open the page            | Put both devices on the same network. Guest Wi-Fi often stops devices from seeing each other, so use your main network. If Windows or macOS asks whether FFB-Bridge Pro may accept incoming connections, allow it on your private network. Turn off any VPN on the computer, click <b>Restart</b> , and scan the new QR code. Click <b>Check now</b> and read any check that does not say <b>OK</b> . |
| <b>Open on this computer</b> does not open the page | Check that the status says <b>RUNNING</b> , then click <b>Restart</b> .                                                                                                                                                                                                                                                                                                                               |
| An old QR code or link no longer works              | <b>Reset pairing</b> , <b>Restart</b> or <b>Stop</b> replaced it. Scan the QR code shown on the Cockpit page now.                                                                                                                                                                                                                                                                                     |
| The browser shows "Pair with the desktop app"       | This browser no longer has access. Scan the current QR code again.                                                                                                                                                                                                                                                                                                                                    |
| The browser shows "Desktop not reachable"           | Check that Pro is running, Cockpit Web is started and the device is still on the same Wi-Fi. Tap <b>Retry now</b> .                                                                                                                                                                                                                                                                                   |
| Cockpit Web stopped after a license change          | Cockpit Web stops and removes every browser when your license no longer includes it. Open <a href="#">Pro License</a> and click <b>Refresh</b> , then click <b>Start</b> and pair again.                                                                                                                                                                                                              |
| A change shows in the browser but you feel nothing  | Check in the desktop app that the stick is armed and the simulator is connected. Then check whether <b>Original settings</b> or <b>Your changes</b> is live.                                                                                                                                                                                                                                          |

# Profile Library

The Online Library lets you browse profiles other pilots have shared and install them without leaving Pro. An installed profile is an ordinary local profile: you fly it, tune it and save it like your own.

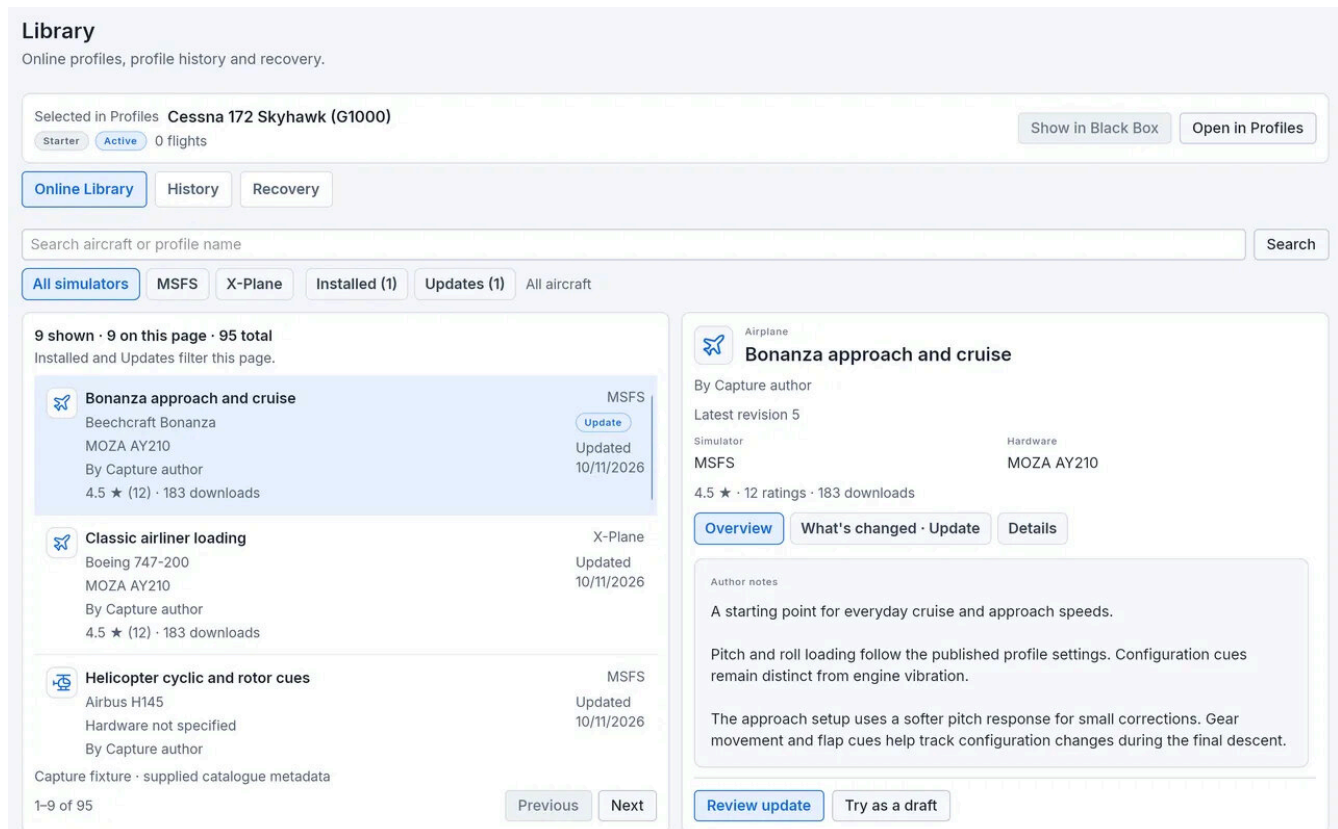


Figure 1. Library, Online Library tab: the search box, simulator filters and the profile list, with a Bonanza profile selected that has an update waiting.

## The Library page

Open **Library** in the sidebar. It has three tabs:

- **Online Library:** community profiles to browse and install.
- **History:** earlier versions of your saved profiles. See [Profile History](#).
- **Recovery:** private copies of profiles you choose, kept with your account. See [Profile Recovery](#).

The bar above the tabs shows the profile selected on the **Profiles** page, labelled **Starter**, **Saved** or **Active**, and how many recorded flights started with it. **Open in Profiles** takes you to that profile, and **Show in Black Box** lists those flights.

The Online Library needs an internet connection and an active Pro license. The profiles you have installed keep working offline.

## Find a profile

1. Type an aircraft or profile name in **Search aircraft or profile name** and click **Search**.
2. Click **All simulators**, **MSFS** or **X-Plane**.
3. Click a profile in the list to open its details on the right.

Each row shows the profile name, the aircraft, the stick or yoke base the author used, the author, the rating and the number of downloads. An **Installed** label means you have it; **Update** means a newer revision is out.

**Installed** and **Updates** narrow the list to profiles you have installed, or to those with an update. The number in brackets counts them. Both filters work on the page you are looking at, so use **Previous** and **Next** to check the other pages.

If the list opened for one aircraft, the filter row reads **Aircraft first** and the aircraft's name. Click **Show all aircraft** to see the whole library.

## Read the details

The details panel shows the author, the latest revision, the simulator, the hardware the author tuned it on, the rating and the downloads. Check **Hardware** first: a profile tuned on a MOZA AY210 yoke base may need adjusting on a SideWinder stick.

| Tab            | What it shows                                                                                                                                                                  |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Overview       | The author's notes: what the profile is for and how it should feel.                                                                                                            |
| What's changed | Each revision with the author's change notes. The tab reads <b>What's changed</b> · <b>Update</b> when a newer revision is waiting.                                            |
| Details        | When it was updated, the minimum app version, where your installed copy is saved, and buttons to install a single revision, pin a revision or open the profile on the website. |

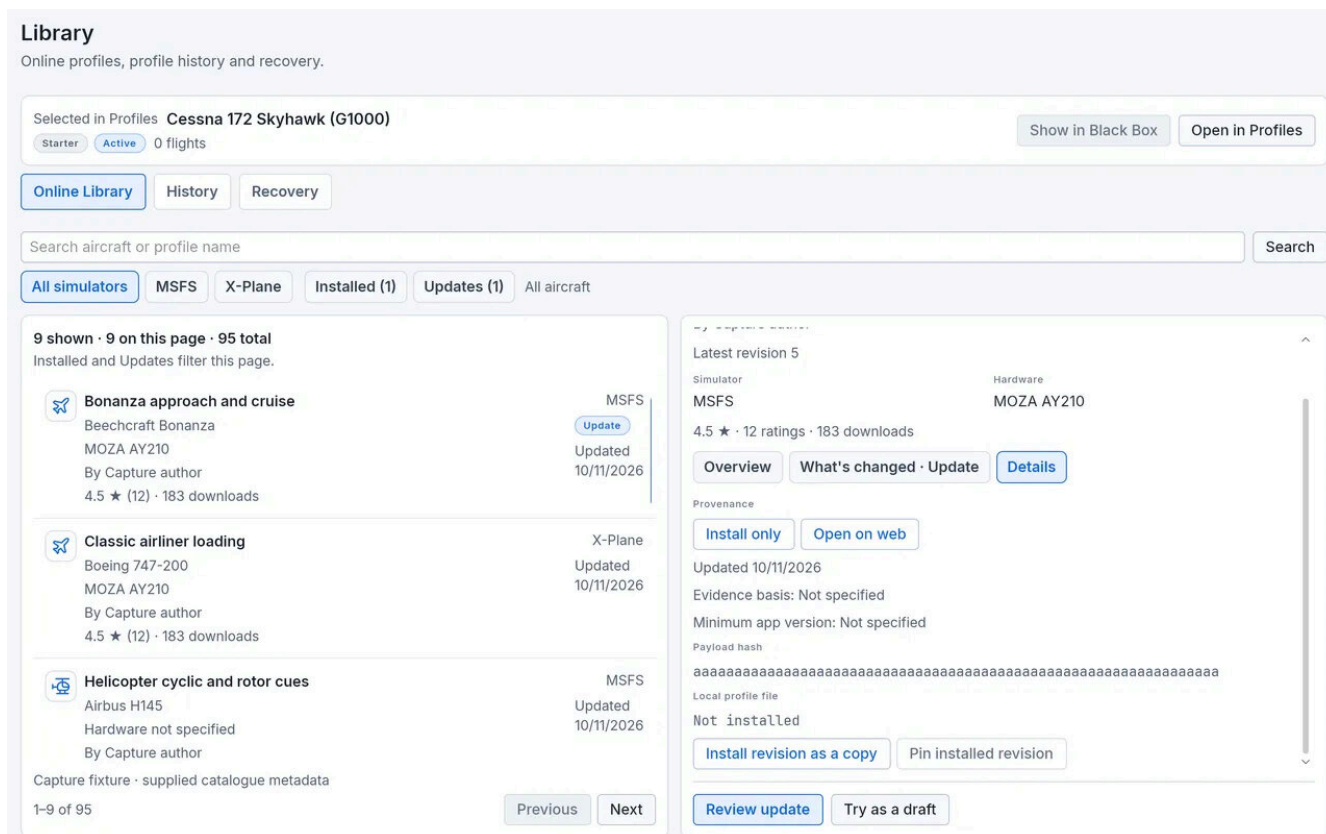


Figure 2. The Details tab for the selected profile: Install only, Open on web, the minimum app version, the local profile file, Install revision as a copy and Pin installed revision.

## Install a profile

| Button                   | What it does                                                                                                                                        |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Install &amp; use</b> | Downloads the profile, saves it as a new local profile and makes it the profile you fly with.                                                       |
| <b>Install only</b>      | On the <b>Details</b> tab. Saves the profile without changing the one you are flying.                                                               |
| <b>Try as a draft</b>    | Loads the profile as draft B beside your current tuning, A. Nothing is saved. Open <b>Tuning</b> to switch between A and B, then keep or discard B. |
| <b>Review update</b>     | Appears when a newer revision is out. It opens <b>What's changed</b> , and the button then becomes <b>Update &amp; use</b> .                        |
| <b>Open on web</b>       | Opens the profile's page on ffb-bridge.com.                                                                                                         |

Before Pro writes anything, it checks that the download matches the copy the library published and that the profile is valid. If either check fails, nothing is installed.

**Install & use** disarms your stick before it switches profile and does not arm it again. Arm in the desktop app when you are ready to fly.

If you change aircraft or tuning while the download runs, Pro installs the file but does not switch to it. Select it on the **Profiles** page when you want it.

## Updates

When the author publishes a new revision, the profile shows **Update**. Click **Review update**, read **What's changed**, then click **Update & use**. What happens next depends on whether you have edited your copy:

- If you have not edited it, the update replaces your copy. Pro keeps the old version in [Profile History](#) first.
- If you have edited it, Pro leaves your copy alone and installs the update as a new profile.

To stay on the revision you have, open **Details** and click **Pin installed revision**. Pro then does not update that copy. You can still install another revision beside it with **Install revision as a copy**.

To take some of the author's changes and keep some of yours, open **What's changed**, pick the revision and click **Compare with my setup**. For each setting that differs, choose **Yours** or **Incoming**, then click **Save merged personal copy**. The result is saved as a new profile.

## Share your own profile

Sharing happens on the website. Select a saved profile on the **Profiles** page and click **Share....** The app opens the submission form on [ffb-bridge.com](https://ffb-bridge.com) with the profile attached. You sign in to the community site there, add a short note and publish.

Built-in starter profiles can't be shared. Duplicate a starter first and share your copy. The [Profiles guide](#) has the details, and the public library is at [ffb-bridge.com/profiles](https://ffb-bridge.com/profiles).

## Import a profile file

To use a profile file someone sent you, or one you made in FFB-Bridge Free, open **Profiles** and click **Import file....** Pro checks the file and adds it as a new profile. Free and Pro keep separate profile folders, listed in the [Pro overview](#).

## Problems

| Problem                                          | What to do                                                                       |
|--------------------------------------------------|----------------------------------------------------------------------------------|
| The tab says "Online installs are a Pro feature" | Open <a href="#">Pro License</a> and activate or refresh your license.           |
| The status reads "Library unavailable"           | Check your internet connection, then click <b>Search</b> to load the list again. |

| Problem                                                                   | What to do                                                                                                                     |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| "No matching profiles"                                                    | Try a shorter search or another simulator. If <b>Installed</b> or <b>Updates</b> is on, click it to turn it off.               |
| The update was installed as a new profile                                 | You had edited your copy, so Pro kept it. Both are on the <b>Profiles</b> page; delete the one you don't want.                 |
| "This profile revision is pinned"                                         | Click <b>Unpin installed revision</b> on <b>Details</b> , or install the new revision with <b>Install revision as a copy</b> . |
| "The profile was installed as a file, but the aircraft or tuning changed" | The profile is saved. Select it on the <b>Profiles</b> page.                                                                   |
| "Keep or discard the current B draft before trying another profile"       | Finish the draft you are trying in <b>Tuning</b> first, then click <b>Try as a draft</b> again.                                |

# Profile History

Pro keeps the previous version of a saved profile each time you save over it. If an evening of tuning makes your favourite C172 profile worse, you can go back to the version you flew last week.

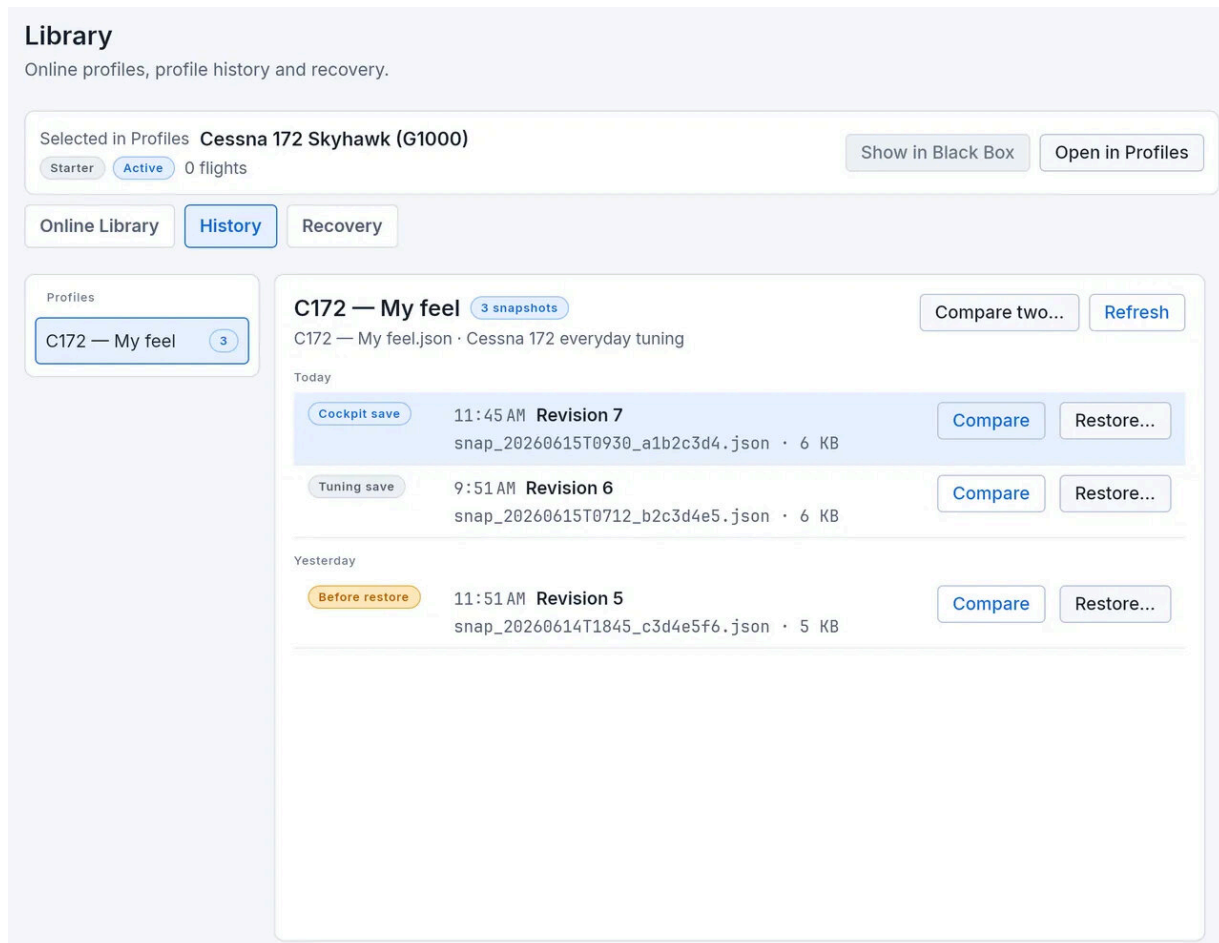


Figure 1. Library, History tab for the profile C172 — My feel: three earlier versions grouped by day, each with Compare and Restore...

## When Pro keeps a version

Before a saved profile is overwritten, Pro copies the old file into its history. The label on each entry tells you what replaced it:

| Label        | Saved over by                                                 |
|--------------|---------------------------------------------------------------|
| Tuning save  | Save on the Tuning or Advanced Tuning page.                   |
| Cockpit save | A save from Cockpit Web, Voice Control or the Live Dashboard. |

| Label                       | Saved over by                                        |
|-----------------------------|------------------------------------------------------|
| <b>Before online update</b> | An update from the <a href="#">Profile Library</a> . |
| <b>Before restore</b>       | A restore from this page.                            |

A new profile has nothing earlier to keep, so its history starts with the second save. Saving a built-in starter creates a new profile, and that copy's history starts the next time you save over it.

## Find a version

1. Open **Library** in the sidebar and click **History**.
2. Under **Profiles**, select the profile. The number beside each name is how many versions Pro has kept.
3. Read the list on the right. Versions are grouped by day, newest first, with the label, the time and the revision number.

Click **Refresh** if you saved the profile while this page was open.

## Compare versions

Click **Compare** on an entry to list every force setting where your saved profile and that version differ, with your current value first.

To compare two older versions with each other, click **Compare two...**, choose one under **Older** and one under **Newer**, and click **Compare**. Click **Close** when you are done.

If the comparison says the force settings are unchanged, the two versions differ at most in the profile's name, notes or other details.

## Restore a version

1. Click **Restore...** on the version you want.
2. Read the question: it names the version's date and time and the profile it goes back into.
3. Click **Restore**, or **Cancel** to leave everything as it is.

Pro saves the current file as a **Before restore** entry first. If the older version is not what you remembered, restore that entry to undo.

If you are flying with the profile you restore, Pro disarms your stick first, then loads the restored settings. It does not arm again, so arm in the desktop app when you are ready. Restoring any other profile changes only its file.

## Where history is kept

History stays on this computer, in a folder named `.history` inside your Pro profile folder:

- Windows: `%APPDATA%\ffb-bridge-pro\profiles\.history`
- macOS and Linux: `~/.config/ffb-bridge-pro/profiles/.history`

Each computer keeps its own history, and it covers Pro profiles only. History is not a backup of your computer: if the disk fails, the history goes with it. To keep copies somewhere else, use [Profile Recovery](#) or include the profile folder in your normal backups.

## Problems

| Problem                                                                | What to do                                                                                                                   |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| "No rollback points yet"                                               | Nothing has saved over this profile since it was created. The first entry appears the next time you save over it.            |
| "No saved profile selected" or "No profiles"                           | Built-in starters have no history. Save your settings as your own profile on the Tuning page, then save over it as you tune. |
| "Profile History is locked"                                            | Open <a href="#">Pro License</a> and activate or refresh your license.                                                       |
| A renamed profile shows no earlier versions                            | History follows the profile's file name. Versions kept before the rename are not listed, and new saves start a new list.     |
| "Restore stopped because force output could not be confirmed disarmed" | Pro could not confirm the stick was disarmed, so it left the profile unchanged. Disarm in the desktop app and try again.     |
| "This history snapshot is missing or damaged"                          | Choose another version. The damaged one cannot be restored.                                                                  |

# Profile Recovery

Profile Recovery keeps private copies of the profiles you choose on FFB-Bridge's server, so you can restore them on another computer or after a reinstall. It is a preview feature in this beta.

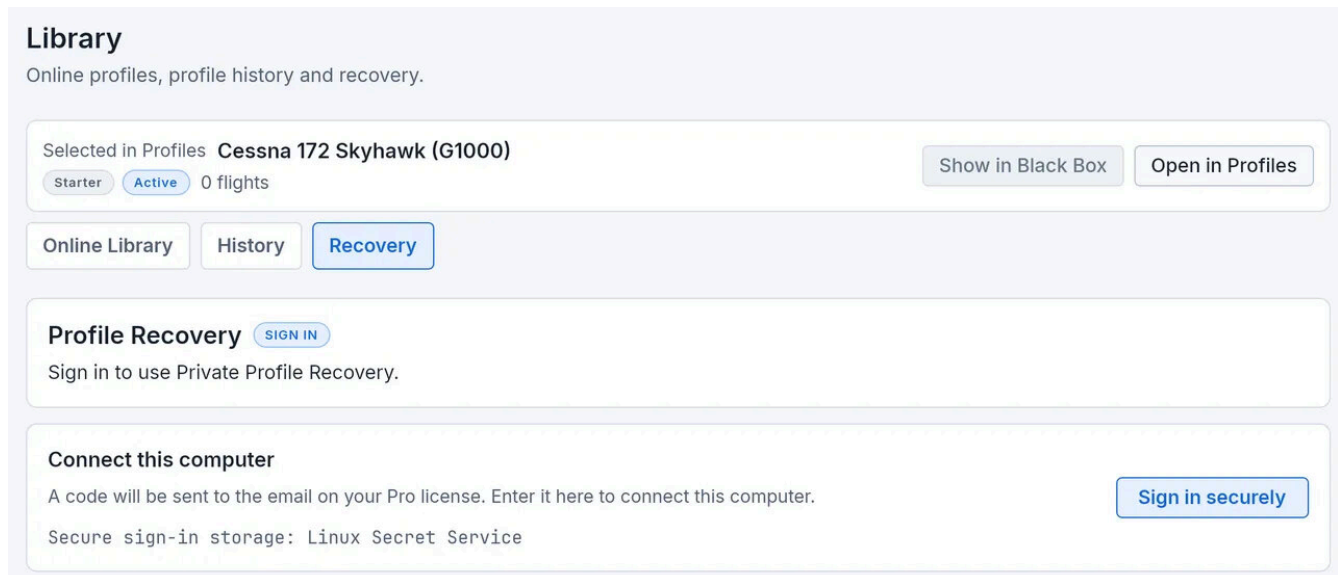


Figure 1. The Recovery tab in Library before you sign in, with the Sign in securely button.

## What it does

Your profiles live in the Pro profile folder on your computer. Profile Recovery copies the ones you pick to your private recovery account and keeps earlier versions of each.

Your local profiles always keep working. Pro loads, saves and flies them whether you are online or offline, signed in or signed out.

[Profile History](#) is different: it keeps snapshots on this computer only.

## Sign in

1. Click **Library** in the sidebar, then the **Recovery** tab.
2. Click **Sign in securely**. Pro sends an eight-digit code to the email on your Pro license and shows that address partly hidden, so you can check it.
3. Type or paste the code from the email into the app.
4. Click **Verify and sign in**.

A code expires after ten minutes. If the email does not arrive, click **Resend code**. It becomes available 60 seconds after the last email. Use the code from the newest email.

Each computer signs in separately. Signing in connects this computer to your recovery account, but it does not copy anything yet.

## Choose the profiles to copy

After you sign in, the page lists the profiles on this computer under **Review the first private remote copies**.

1. Tick each profile you want to keep a copy of. **Select all** and **Select none** help with a long list.  
Unticked profiles stay on this computer only.
2. Tick **I reviewed this list and want FFB-Bridge Pro to create the selected private remote copies**.
3. Click **Create private remote copies**.

Nothing is uploaded until you confirm. Profiles you create later are not added on their own. To add one, click **Review local profiles** and tick it.

An older profile can appear in the **Needs review** list because it has no identity yet, the ID that ties its copies together. Click **Prepare identity**. Pro keeps the old file in Profile History, gives the profile an identity, and you can then tick it.

## What is copied

Only profile files are copied. Profile Recovery does not copy:

- hardware settings, calibration, axis direction or button assignments
- MOZA base settings and output limits
- simulator paths and other app settings
- logs, support bundles and crash reports
- Black Box recordings
- Voice Control data and audio
- license keys

Your private copies never appear in the Online Library.

## Keeping copies up to date

When you save a profile you included, for example after retuning the C172's elevator load, Pro copies the new version shortly afterwards. To send waiting changes right away, click **Sync now**.

If you are offline, your local save is already done and the copy waits. The line under the title shows how many copies are pending, when the last one finished and how much storage you use.

## Versions and conflicts

The service keeps up to 10 versions of each profile. Select a profile in the list of remote copies to see its versions on the right.

If you change the same profile on two computers before either one syncs, both versions are kept and neither is overwritten. The profile shows **CHANGES PRESERVED**. Restore the version you want as a new profile.

## Restore a profile

1. On the computer that needs the profile, sign in and open **Library** → **Recovery**.
2. Select the profile in the list of remote copies.
3. In its versions list, click the button of the version you want. Each button shows the version number, for example **Get r3**.
4. Click **Import new local profile** to confirm.

The version arrives as a new local profile. It never overwrites a profile you have, never makes itself the active profile and never arms the stick. Find it on the **Profiles** page and select it when you want to fly it.

## Pause, trash and download

| Control                                         | What it does                                                                                                                                                                                                                               |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Stop new remote copies</b>                   | Stops uploads from this computer. Copies already on the server stay. To start again, click <b>Review local profiles</b> and create the copies again.                                                                                       |
| <b>Move remote copy to recoverable trash...</b> | Moves the selected copy to trash after you click <b>Move to trash</b> . Your local profile does not change, and its changes stop being copied. The copy stays in <b>Recoverable trash</b> for 30 days. Click <b>Restore</b> there to undo. |
| <b>Export all</b>                               | Saves every copy and version in your account, trash included, as one ZIP file. It does not change anything or free storage.                                                                                                                |
| <b>Manage recovery account</b>                  | Opens your recovery account in the browser. There you see your approved computers, export your data or erase it permanently. Permanent erasure asks you to sign in again in the browser.                                                   |
| <b>Disconnect...</b>                            | Signs this computer out after you click <b>Sign out</b> . Your remote copies stay.                                                                                                                                                         |
| <b>Refresh</b>                                  | Reloads your account status, versions and storage use.                                                                                                                                                                                     |

Signing out, deleting a local profile or uninstalling Pro never deletes your remote copies.

## Limits

| Item                      | Limit              |
|---------------------------|--------------------|
| Profiles with copies      | 1,000              |
| Storage                   | 50 MiB, compressed |
| Versions kept per profile | 10                 |
| Time in recoverable trash | 30 days            |

Copies in trash count toward your storage until their 30 days are over.

## Encryption and sign-in storage

Your copies are encrypted on the server with keys the service manages. This is not end-to-end encryption: the FFB-Bridge service can decrypt a copy to check it, list it, export it or restore it for you.

Pro keeps your recovery sign-in in your operating system's secure storage. The page names the one in use, for example `Secure sign-in storage: Linux Secret Service`.

- Windows: protected by your Windows user account
- macOS: Keychain
- Linux: Secret Service, the desktop keyring

If secure storage is not available, the page shows a warning and the sign-in lasts until you close Pro. You sign in again the next time.

## Troubleshooting

| Problem                                           | What to do                                                                                                                                    |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| The page says <b>Profile Recovery is locked</b> . | Open <b>Pro License</b> and click <b>Refresh</b> . Your license needs Private Profile Recovery.                                               |
| The code email does not arrive.                   | Check that the partly hidden address is the email on your license, and look in your spam folder. After 60 seconds, click <b>Resend code</b> . |
| "That code did not match."                        | Use the code from the newest email.                                                                                                           |
| "This code has expired." or "Too many attempts."  | Click <b>Cancel</b> , then <b>Sign in securely</b> to get a new code.                                                                         |
| "This license has no email address."              | Click <b>Report an Issue</b> in the sidebar and ask support to add your email to the license.                                                 |

| Problem                                                 | What to do                                                                                                                                                            |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A warning says the sign-in lasts only for this session. | On Linux, make sure a desktop keyring is running and <code>secret-tool</code> is installed. On macOS, check that Pro can use Keychain. Restart Pro and sign in again. |
| The badge shows <b>OFFLINE</b> or copies are pending.   | Your local saves are complete. Click <b>Sync now</b> when you are back online.                                                                                        |
| The badge shows <b>STORAGE FULL</b> .                   | Click <b>Export all</b> to keep a copy, then move copies you no longer need to trash or erase them in <b>Manage recovery account</b> .                                |
| A profile is missing from the list to tick.             | Look in the <b>Needs review</b> list and click <b>Prepare identity</b> . Damaged or unsupported files stay on this computer.                                          |
| The restored profile has a different name.              | Restore never overwrites, so it picks a free name when the original name is taken.                                                                                    |

# Base settings

Base settings is where you set your base's own feel, travel stops, buttons and lights. Pro puts your saved settings on the base when you arm and gives the base its own values back when you disarm.

**MOZA Base**  
Base settings for all aircraft. Save changes for the next Arm.

AY210 FFB Yoke Base · MFY yoke handle  
PORT OWNED Disarmed  
Capture fixture. No hardware connected.

Read base Discard Review and save 8 unsaved changes

Feel Force configuration Travel Trim Controls Lights Base profiles Journal

**Feel**  
What the hand meets before any flight force: the base's own values, with what the base reads back after each write.

Start from MOZA factory Light GA yoke Airliner column Trainer, firm

| Strength     | Set | Base reads |
|--------------|-----|------------|
| Overall      | 100 | 100        |
| Torque limit | 100 | 100        |

| Resistance          | Set | Base reads |
|---------------------|-----|------------|
| Damper<br>30 → 45   | 45  | —          |
| Friction<br>10 → 25 | 25  | —          |
| Inertia             | 10  | —          |

**Test feel**  
Tests these settings with a four-second pitch movement. Confirmation is required. Original settings return afterward.

Test edits Test saved settings

The stick does not report its position on this backend.

What the hand feels, from these values  
breakout 25 over zone 50 · friction band ±25 · spring floor 0 while armed

pull

Figure 1. The MOZA Base page for an AY210 with an MFY yoke handle, on the Feel tab, with the Airliner column preset and eight unsaved changes.

## Open the page

The sidebar item carries the name of your connected base: **MOZA Base** for any MOZA base, or the stick's short name for other sticks, such as **SideWinder FFB2**. With no stick selected it reads **Device**; click **Open Hardware** on the page to choose one.

Opening the page never arms the stick. A MOZA base is read when you open the page, and reading changes nothing on the base. For first-time MOZA setup, see [MOZA bases](#).

These settings apply to every aircraft. Aircraft forces such as airspeed load, trim and autopilot follow are set in [Tuning](#).

## Save your changes

Changes wait on the page until you save them. The header counts them, for example "8 unsaved changes".

1. Disarm. Saving is refused while you are armed.
2. Click **Review and save**. The **Save base settings** window lists each change with its saved and next value.
3. Click **Save**.

Saved settings go on the base at the next Arm, and Pro reads each value back after writing it. When you disarm, the base gets its own values back exactly.

| Control                      | What it does                                                                      |
|------------------------------|-----------------------------------------------------------------------------------|
| <b>Discard</b>               | Throws away all unsaved changes.                                                  |
| <b>Read base</b>             | Reads the base's values again. It is available when there are no unsaved changes. |
| <b>Other base or grip...</b> | Opens the device picker to choose a different base.                               |
| <b>Device details</b>        | Shows the connection, the firmware version and the live yoke position and force.  |

## MOZA Base tabs

A MOZA base has up to eight tabs: **Feel**, **Force configuration**, **Travel**, **Trim**, **Controls**, **Lights**, **Base profiles** and **Journal**. The sections below follow that order.

### Feel

Feel sets the resistance the base itself adds, underneath every force the aircraft makes.

- **Start from** fills the rows from a preset: **MOZA factory**, **Light GA yoke**, **Airliner column** or **Trainer, firm**. Nothing is saved until you review and save.
- The **Set** column is the value you are setting. **Base reads** is what the base reported after the last read or write.
- Strength rows are **Overall** and **Torque limit**. Resistance rows are **Damper**, **Friction** and **Inertia**. A changed row shows its old and new value; the arrow button resets it.
- Under **Centre behaviour**, **Hands-off: ease when released** eases resistance when you let go, and **Adaptive centering** changes how the base centres. On the AY210 you also set **Breakout force** and **Breakout zone**.
- **Strength by direction** makes one direction lighter: drag the end of fwd, aft, left or right in from the edge.

The graph **What the hand feels, from these values** shows the result, with the breakout zone in amber and the friction band in blue.

## Test feel

Test feel lets you feel values on the bench before you fly with them.

1. Disarm and disconnect the simulator.
2. Click **Test edits** to feel your unsaved values, or **Test saved settings** to feel the saved ones.
3. Read the confirmation, put a hand on the yoke and click **Start**.

The yoke moves for four seconds: aft, through centre to forward, and back to centre. The base's own values return afterwards and nothing is saved. Click **Stop** to end it early.

The yoke moves on its own during Test feel. Keep a hand on it and keep the area around it clear. Click **Stop** to end it at any time.

## Force configuration

This tab lists the settings sections your base reports, such as **Travel and direction**, **Direction balance**, **Spring limits**, **Breakout**, **Motor force correction** and **Simulator axis response**.

Most sections start as **Managed**, which means FFB-Bridge sets them. Click **Custom** to edit a section, then drag the curve points or type values. **Use captured values** puts back what the base reported, and **Bridge defaults** puts back FFB-Bridge's values. Sections under **Diagnostics** show values only.

# Travel

## MOZA Base

Base settings for all aircraft. Save changes for the next Arm.



### AY210 FFB Yoke Base · MFY yoke handle

PORT OWNED Disarmed

Other base or grip... Device details

Capture fixture. No hardware connected.

Read base Discard Review and save 4 unsaved changes

Feel

Force configuration

Travel

Trim

Controls

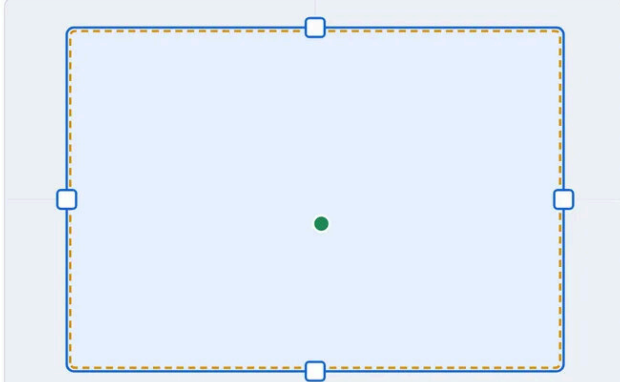
Lights

Base profiles

Journal

### Travel

The envelope the yoke may move in. Drag a side of the box, or let the aircraft's control throw set it. Written only while disarmed, read back, never changed by a flight.



Set from

This aircraft

Full range

Airliner column

Roll stops

left

80

right

80

%

Pitch stops

fwd

85

aft

85

%

☐ Reverse roll

☐ Reverse pitch

Centre offset

pitch

0

roll

0

Set from current

Follow the aircraft

☐ Off

Cessna 172 Skvhawk (G1000) · Airliner column ·

Figure 2. The Travel tab: the box of travel stops, with roll and pitch stops, Reverse roll, Reverse pitch and Centre offset on the right.

Travel sets the box the yoke can move in. The blue box shows the stops the base enforces, the amber dashes show the aircraft's control throw, and the green dot shows where the yoke is now.

- **Set from** picks a starting box: **This aircraft**, **Full range** or **Airliner column**.
- Drag a side of the box, or type **Roll stops** (left, right) and **Pitch stops** (fwd, aft) in percent.
- **Reverse roll** and **Reverse pitch** reverse the direction the base reports for that axis.
- **Centre offset** moves the reported centre. **Set from current** uses the yoke's present position.
- **Follow the aircraft** makes the box follow the loaded aircraft's control throw.
- **Calibrate...** runs MOZA's own calibration steps.

The base accepts travel changes and calibration only while you are disarmed.

## Trim

The Trim tab covers the base's own hardware trim. **Rate and limits** sets how fast and how far base trim moves. **Following and reporting** holds the base's trim and autopilot following values and how it reports trim.

# Controls

MOZA Base

Base settings for all aircraft. Save changes for the next Arm.



AY210 FFB Yoke Base · MFY yoke handle

PORT OWNED

Disarmed

Other base or grip... Device details

Capture fixture. No hardware connected.

Read base

Discard

Review and save

No unsaved changes

Feel

Force configuration

Travel

Trim

Controls

Lights

Base profiles

Journal

Controls

Every control on the handle and the base, where it is. Press one on the hardware and its pin lights; click a pin to say what the app does with it.



| # | Control          | App function | Base button |        |
|---|------------------|--------------|-------------|--------|
| 1 | Left hat         | —            | hat         | Assign |
| 2 | Left trim wheel  | —            | button 5    | Assign |
| 3 | Right hat        | —            | not taught  | Assign |
| 4 | Right trim wheel | —            | button 6    | Assign |
| 5 | HDG              | —            | not taught  | Assign |
| 6 | NAV              | —            | not taught  | Assign |
| 7 | ALT              | —            | not taught  | Assign |

Handle. Green: the control just pressed. Teach each control once: press Assign, then press the

Figure 3. The Controls tab: numbered pins on the MFY yoke handle and the table of controls with their app function and base button.

The Controls tab shows every button, hat and switch on the handle and base, numbered on a picture. Press one on the hardware and its pin lights green.

Teach each control once, then give it a job:

1. Click **Assign** on the control's row, or click its pin on the picture.
2. Click **Teach**, then press that control on the hardware.
3. Choose what the app does with it: **Beep trim, pitch and roll, Force trim release (rotorcraft), Force trim on/off, Trim reset** or **Push to talk, Voice Control**. Each one opens its own setup, which asks you to press the control and checks it.

Once a control is taught, click **Press a control to assign it** and press it to go straight to the list in step 3. The helicopter functions are explained in [Helicopters](#), and push to talk in [Voice Control](#).

A control with no app function stays free, so you can bind it in MSFS or X-Plane as usual. Some bases also offer base trim bindings, such as **Base trim: nose up**. These use the base's own hardware trim, which is off while Pro holds the base, so they work only outside a session.

This tab is separate from the [Controls](#) item in the sidebar, which is coming soon.

# Lights

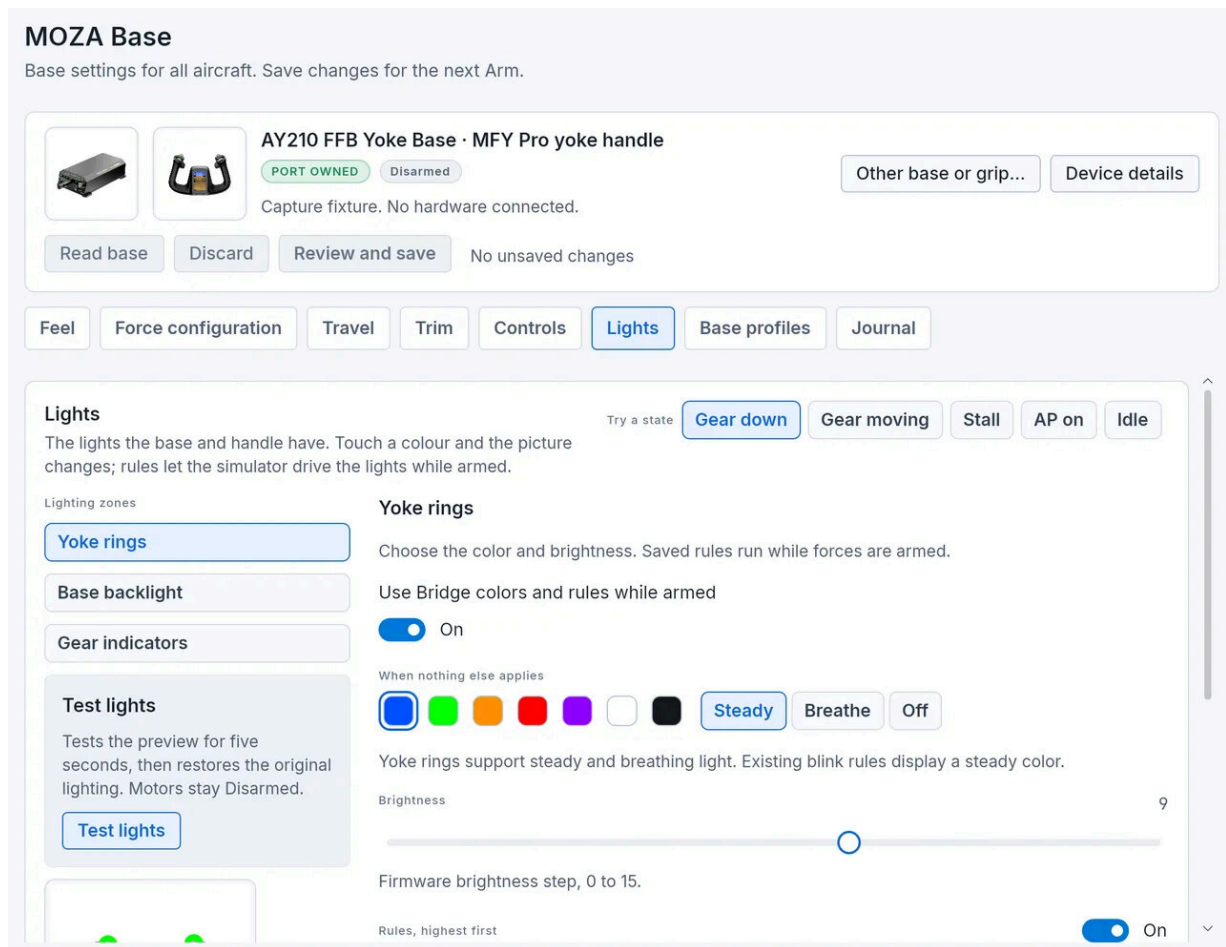


Figure 4. The Lights tab with the Yoke rings zone selected: colours, Steady, Breathe and Off, brightness and Test lights.

The Lights tab appears only when your base and handle have lights you can set.

- Pick a zone under **Lighting zones**, such as **Yoke rings**, **Base backlight** or **Gear indicators**.
- Turn on **Use Bridge colors and rules while armed**, then choose a colour, a pattern (**Steady**, **Breathe** or **Off**) and a **Brightness** from 0 to 15.
- Under **Rules, highest first**, click **Add rule**. Choose a condition under **When the simulator says**, such as stall warning, gear in transit or autopilot engaged, and what to **Show**. Drag rows to change which rule wins.
- **Try a state** previews a state on the picture, for example **Gear down** or **Stall**.
- **Test lights** shows the preview on the base for five seconds, then restores the original lighting. Disarm first; the motors stay off.

Gear indicators are green when the gear is down and locked, red while it moves and off when it is up. Rules drive the lights while you are armed. When you disarm, the base shows its own lighting again.

# Base profiles

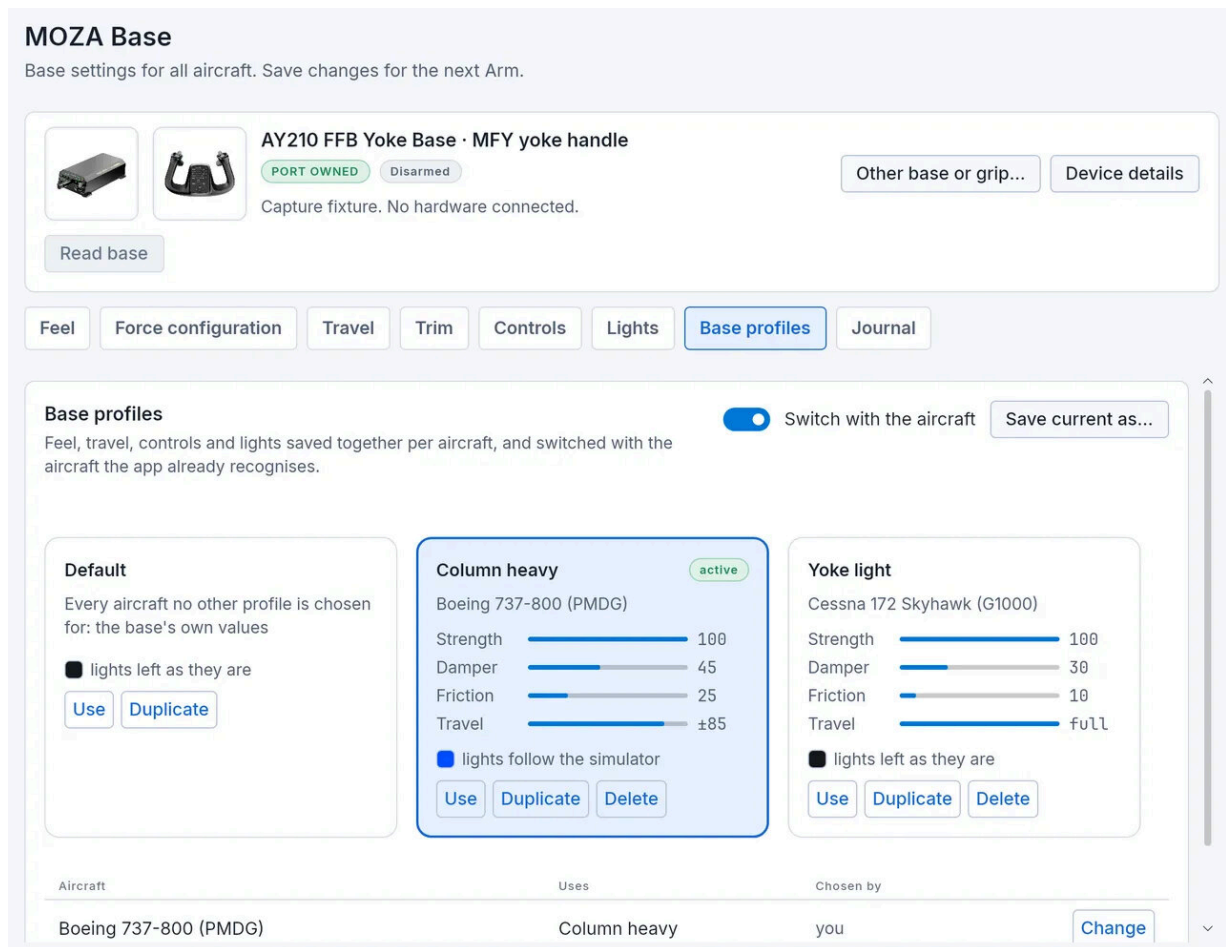


Figure 5. The Base profiles tab with Default, Column heavy for the PMDG 737-800 and Yoke light for the Cessna 172.

A base profile saves feel, travel, controls and lights together, for example a heavy column for an airliner and a light yoke for the C172. Base profiles are separate from the aircraft profiles on the **Profiles** page.

1. Load the aircraft in the simulator and set the base the way you want it.
2. Click **Save current as...**, enter a name and click **Save**. With an aircraft loaded, the profile is chosen for that aircraft.
3. Leave **Switch with the aircraft** on.

When you load an aircraft Pro recognises, its base profile goes on the base for the next Arm. If you are armed when the aircraft changes, the switch waits until you disarm. **Default** covers every aircraft without its own profile and uses the base's own values.

Each profile card has **Use**, **Duplicate** and **Delete**. The table under the cards lists each aircraft and the profile it uses; click **Change** to pick another.

# Journal

## MOZA Base

Base settings for all aircraft. Save changes for the next Arm.



### AY210 FFB Yoke Base · MFY yoke handle

PORT OWNED Disarmed

Other base or grip... Device details

Capture fixture. No hardware connected.

Read base

Feel

Force configuration

Travel

Trim

Controls

Lights

Base profiles

Journal

### Journal

Every write to the base, in order, with the value read back. Undo restores the exact previous value.

All

Writes

Arm and hand-back

Refused

Undo last

Undo all

|       |                                                         |                                       |      |
|-------|---------------------------------------------------------|---------------------------------------|------|
| 14:09 | Damper<br>Saved on the page                             | 45 % → 40 %                           | Undo |
| 14:04 | Light group 1 color<br>handed back                      | #00FF00 → #FFFFFF · read back #FFFFFF |      |
| 14:04 | Disarm: the base's own feel and settings handed back    | handback                              |      |
| 13:58 | Light group 1 color<br>lighting rule, acknowledged      | #0050FF → #00FF00                     |      |
| 13:50 | Pitch positive travel (%)<br>armed; nothing changed     | 85 → 85 kept                          |      |
| 13:46 | Light group 1 color<br>applied at Arm                   | #FFFFFF → #0050FF · read back #0050FF |      |
| 13:46 | Arm: the base's feel taken over, saved settings applied | snapshot                              |      |
| 13:46 | Originals journaled before the first write              | values: 2                             |      |

Figure 6. The Journal tab: each write with its old and new value, the Arm and Disarm entries, and Undo.

The Journal lists every write to the base this session, in order, with the value the base read back. Use it to see what changed and to go back.

- Click **Undo** on a row to restore the exact previous value. **Undo last** and **Undo all** undo more than one. Undo is refused while you are armed.
- The buttons at the top filter the list, for example **Writes** or **Refused**.
- A refused write shows both values and changes nothing else.
- Green marks show each Arm. Grey marks show the base getting its own values back at Disarm.

## Other sticks

### Microsoft Sidewinder Force Feedback 2

The same page, sized to what this stick can be told: the four PID conditions, the grip sensor, a measured calibration. No travel stops, no lights.



#### Microsoft Sidewinder Force Feedback 2

045E:001B · raw HID/PID · hardware effects · direction certified (ADR-0057) · output ceiling 100%

stick pitch +0.08 · roll +0.01 · force pitch -0.31 · roll +0.06

NO Vendor Channel

Other stick...

Feel it in Flight Check

Feel
Calibration
Controls
Journal

#### Feel

The four conditions every force-feedback stick renders. This stick keeps no settings of its own: the resistance floors are saved for this stick and applied while armed; the centre values belong to the profile.

Start from

Light GA
Warbird
Airliner
Helicopter

| Resistance             | Set | Rendered     |
|------------------------|-----|--------------|
| Damper floor<br>0 → 15 | 15  | yes          |
| Friction floor         | 0   | yes          |
| Inertia floor          | 0   | not rendered |

What the hand feels, from these values

native spring from the profile

pull

push

full fwd      centre      full aft

● deadband 5    ● now

1 unsaved change

Feel it now applies them while armed without saving. Disarm returns the stick to its own centring.

Discard
Review and save

Figure 7. The page for a Microsoft SideWinder Force Feedback 2 on the Feel tab, with the Airliner preset and one unsaved change.

For other sticks, such as the SideWinder FFB2, the page has four tabs: **Feel**, **Calibration**, **Controls** and **Journal**. These sticks have no travel stops or lights to set.

| Tab         | What it does                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Feel        | <b>Start from</b> offers <b>Light GA</b> , <b>Warbird</b> , <b>Airliner</b> and <b>Helicopter</b> . <b>Damper floor</b> , <b>Friction floor</b> and <b>Inertia floor</b> are saved for this stick and applied while armed. The <b>Rendered</b> column shows whether the stick produces each one. <b>Spring deadband</b> and <b>Spring saturation</b> belong to the active profile, so save the profile to keep them. |
| Calibration | <b>Measure...</b> drives the stick with known forces for about two minutes and records how it responds. On a SideWinder FFB2, tape over the grip sensor for the run and remove the tape afterwards.                                                                                                                                                                                                                  |
| Controls    | Works as on a MOZA base: press a control, then choose its app function.                                                                                                                                                                                                                                                                                                                                              |
| Journal     | What the app applied to the stick this session, with <b>Undo</b> and <b>Undo last</b> .                                                                                                                                                                                                                                                                                                                              |

On the Feel tab, **Feel it now** applies your unsaved floors while you are armed so you can try them in flight, and **Compare with saved** switches back to the saved ones. Neither saves anything; use **Review and save** to keep the change. **Feel it in Flight Check** opens [Flight Check](#).

## Troubleshooting

| Problem                                                                  | What to do                                                                                                                                                                             |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The page says <b>No MOZA base selected</b> or <b>No stick selected</b> . | Click <b>Open Hardware</b> and choose your base. See <a href="#">Hardware</a> .                                                                                                        |
| "Armed; nothing changed.<br>Disarm to save base settings."               | Disarm, then click <b>Review and save</b> again.                                                                                                                                       |
| <b>Read base</b> is greyed out.                                          | Save or discard your changes first, and check that the base is connected.                                                                                                              |
| <b>Test edits</b> is greyed out and a message explains why.              | Do what it says: read the base, disarm, disconnect the simulator or clear the Safety Stop. If it says the stick does not report its position, Test feel cannot run on this connection. |
| "Button 5 is not taught to a pin yet."                                   | Click the control's pin or <b>Assign</b> , then <b>Teach</b> .                                                                                                                         |
| A base trim binding does nothing in flight.                              | Base trim works only outside a session. Assign the button to an app function or bind it in the simulator.                                                                              |

# Controls (coming soon)

Controls will be the place to set up every controller in your cockpit and decide how the simulator sees them. It is not available in this beta.

## What Controls is for

Many cockpits have more than one controller: a force-feedback stick or yoke, a separate throttle, rudder pedals, a button box. Controls is planned as one workspace where you:

- see each controller you have and check that its axes and buttons work
- combine a base, a throttle and pedals into one setup
- pass a controller through Pro, so the simulator reads a steady FFB-Bridge controller instead of the physical one
- shape inputs, such as curves and calibration, before the simulator reads them
- see your MSFS and X-Plane bindings and print a reference sheet

## In this beta

The **Controls** item in the sidebar is greyed out and cannot be opened. Your controllers reach the simulator directly, as they do in FFB-Bridge Free.

The Windows installer already includes the drivers Controls will use: Rohsam's Control Router and Native Consumer drivers, and the HidHide input filter. Pro does not use them until Controls is available. See [Drivers and third-party software](#) for details.

## Button assignments today

To choose what a button on your base or handle does in the app, such as force trim release or push to talk, use the **Controls** tab in [Base settings](#). That tab works now and is separate from the sidebar item.

# Troubleshooting

Find your problem in the tables below. Each row says what to try first, and the links lead to the full guide for that feature.

## Stop forces first

If the stick pushes in a way you don't expect, turn the forces off before you look for the cause.

- Click the arm button at the top of the window. The stick disarms at once.
- If the window is hidden, right-click the FFB-Bridge Pro icon in the system tray and choose **Disarm**.
- If you set up a stick button to arm and disarm (**Settings** → **Session**), press it.

Disarm and Safety Stop turn Pro's forces off and give the base back its own centering. If the arm button shows **SAFETY STOP**, the automatic Safety Stop turned the forces off. Check what happened before you arm again.

Saying "stop forces" to Voice Control, or tapping **Disarm** in Cockpit Web, also turns the forces off. Don't make them your only way to stop: a microphone or a phone can drop out. Keep the window, the tray icon or a stick button within reach.

During Black Box playback, click **Stop** to end playback and return the stick to normal.

## License and access

| Problem                                                       | What to do                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pro opens to the license window, or a page says <b>Locked</b> | Connect to the internet and click <b>Refresh</b> . If your license should be active, click <b>Report issue</b> . It works from the license window, so you can report a problem before Pro opens.                                                               |
| The beta has expired                                          | A beta license runs for 14 days from the day it was emailed to you. Installing or activating later does not move that date. The expiry date is in your license email. If the license stopped working earlier than your email says, click <b>Report issue</b> . |

| Problem                                                                    | What to do                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Activate</b> is refused                                                 | Paste the whole key, starting with <code>FFBP-</code> . A beta license works on one computer at a time. On the computer you used before, open <b>Pro License</b> and click <b>Deactivate</b> , then activate on the new one. If you can no longer reach the old computer, type the email address your license was sent to in <b>Purchase email</b> and click <b>Send recovery</b> . The recovery email lets you reset the old activation. |
| Pro can't reach the license server, or says <b>Online refresh required</b> | Pro keeps working offline for a while with the license it already has. The <b>Pro License</b> page shows until when, under <b>OFFLINE GRACE</b> . After that, Pro needs to go online once. Check your connection and firewall, then click <b>Refresh</b> .                                                                                                                                                                                |
| Pro says the local clock moved backwards                                   | Set your computer's date and time correctly, then click <b>Refresh</b> while you are online.                                                                                                                                                                                                                                                                                                                                              |
| <b>Controls</b> is greyed out in the sidebar                               | Controls is coming soon. It is not part of this beta.                                                                                                                                                                                                                                                                                                                                                                                     |

For activation and recovery step by step, see [Pro license](#).

## Stick and simulator

Pro uses the same force engine, stick support and simulator connection as FFB-Bridge Free, so the Free guides apply.

| Problem                                                | What to do                                                                                                                                                                                                 |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The stick is not found, or you feel no forces          | Work through <a href="#">Troubleshooting</a> and <a href="#">Hardware setup</a> . MOZA owners also see <a href="#">MOZA</a> .                                                                              |
| Microsoft Flight Simulator does not connect            | Follow <a href="#">MSFS setup</a> .                                                                                                                                                                        |
| X-Plane does not connect                               | Follow <a href="#">X-Plane setup</a> .                                                                                                                                                                     |
| Forces behave oddly while FFB-Bridge Free is also open | Run one app at a time. Quit Free before you start Pro, so only one of them controls your stick.                                                                                                            |
| Your Free profiles are missing in Pro                  | Pro keeps its own profile folder. Click <b>Import file...</b> on the <b>Profiles</b> page and pick the profile from the Free folder. The <a href="#">Pro overview</a> lists where Free keeps its profiles. |

## Voice Control

| Problem                                                 | What to do                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Voice Control says its models are missing               | Click <b>Download voice models</b> and wait for the download to finish. After that, recognition runs on your computer without an internet connection.                                                                                                                                                  |
| The <b>INPUT</b> meter does not move when you speak     | Check that the switch next to <b>Voice setup</b> is <b>On</b> . On the <b>Input</b> tab, choose your headset in <b>Microphone</b> , or click <b>Rescan microphones</b> . Make sure your system's privacy settings allow FFB-Bridge Pro to use the microphone.                                          |
| It hears you but does nothing                           | Hold the talk key ( <b>F9</b> unless you changed it) until you finish the sentence. If <b>Require wake phrase</b> is on, start with "Bridge", "Tune" or "FFB". To test the wording, type the same command in <b>Type a command or a question</b> and click <b>Run</b> . Commands work in English only. |
| It keeps mishearing a word                              | On the <b>Phrases</b> tab, under <b>Corrections</b> , enter the <b>Misheard words</b> and the <b>Intended words</b> , then click <b>Add correction</b> .                                                                                                                                               |
| You hear no spoken reply                                | On the <b>Replies</b> tab, turn on <b>Spoken replies</b> , click <b>Preview voice</b> and check <b>Volume</b> . Replies also appear as text in the <b>Conversation</b> .                                                                                                                               |
| On Linux, the talk key works only while Pro is in front | Approve the shortcut when your desktop asks. <b>Bind</b> opens the desktop's shortcut settings again. A joystick talk button works in every window.                                                                                                                                                    |

For setup and example commands, see [Voice Control](#).

## Black Box

| Problem                                                     | What to do                                                                                                                                                                                                        |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A flight was not saved                                      | On the Black Box <b>Storage</b> tab, turn on <b>Automatically save flights locally</b> . Pro saves flights while it runs and the simulator is connected.                                                          |
| New flights stop saving                                     | Kept flights are never removed automatically. When only kept flights remain and the <b>Storage allowance</b> is full, recording stops. Delete flights you no longer need, or raise the <b>Storage allowance</b> . |
| A flight is missing from the list                           | Click <b>Clear filters</b> . Then look on the <b>Recently deleted</b> tab, which keeps deleted flights for up to seven days.                                                                                      |
| The map shows no route                                      | The flight was saved without position data. Map packs add detail to the map but cannot add a route that was not recorded. You can still review the forces in the <b>Forces</b> view.                              |
| <b>Device forces</b> is greyed out, or playback won't start | Close the simulator first. Read the message under the transport: some older recordings can be reviewed but not played through the stick.                                                                          |

For recording, review and playback, see [Black Box](#).

## Cockpit Web

| Problem                                            | What to do                                                                                                                                                                                                                                                              |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The phone or tablet can't open the page            | Click <b>Open on this computer</b> on the desktop <b>Cockpit</b> page. If it opens there, the problem is the network. Put both devices on the same network, not a guest network. Allow FFB-Bridge Pro through the firewall on private networks, and disconnect any VPN. |
| A browser that worked before can no longer connect | Stopping Cockpit Web or clicking <b>Reset pairing</b> disconnects every browser. Scan the new QR code.                                                                                                                                                                  |
| A browser should no longer have access             | Under <b>Paired browsers</b> , click <b>Remove access</b> next to that browser. The others stay connected.                                                                                                                                                              |
| Changes on the phone don't change the feel         | Check that the simulator is connected and the stick is armed. You arm from the desktop app; Cockpit Web can only disarm.                                                                                                                                                |

**Check now** under **LAN connection checks** tests the desktop side of the connection. For pairing and tuning, see [Cockpit Web](#).

## Profiles, History and Recovery

| Problem                                                             | What to do                                                                                                                                               |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| The forces stopped after <b>Install &amp; use</b>                   | Install & use disarms before it applies a profile, and it never arms again on its own. Click the arm button when you are ready.                          |
| <b>Library</b> → <b>History</b> shows <b>No rollback points yet</b> | Snapshots appear after a Pro Tuning or Cockpit save overwrites a saved profile. A profile you have saved only once has no earlier version.               |
| <b>Restore...</b> did not change the feel                           | Restore reloads tuning only when that profile is the active one. Select the profile to fly with it.                                                      |
| <b>Profile Recovery is locked</b>                                   | Your license must include Profile Recovery. Click <b>Refresh</b> on the <b>Pro License</b> page. Your profiles on this computer keep working either way. |
| The sign-in code is refused                                         | Use the most recent code you received. If the code has expired, cancel and start again with <b>Sign in securely</b> .                                    |
| Remote copies are waiting to upload                                 | Your local saves are already complete. Click <b>Sync now</b> when you are back online.                                                                   |
| A restored profile has a different name                             | Restore always creates a new local profile next to your existing ones. It never overwrites or applies a profile, and it never arms the stick.            |

See [Profile Library](#), [Profile History](#) and [Profile Recovery](#).

## Send a report

If none of the above helps, send a report from the app. It reaches FFB-Bridge support with the logs needed to find the cause.

1. Click **Report an Issue** in the sidebar.
2. Type a **Subject**, for example "Stall buffet missing in the C172".
3. Describe the problem under **Description (optional)**.
4. Click **Send report**. Nothing is sent until you click it.

The report includes the app's logs and settings, local file paths, and information about your aircraft and stick. It never includes your license key or microphone audio. Pro adds the email address of your license, so support can reply to you. A copy of the report's ZIP file stays on your computer.

A good description covers four things:

- what you did
- what you expected
- what happened instead
- the aircraft and simulator, for example "C172 in MSFS 2024, on approach"

For a Voice Control problem, also write what you said and what the app heard.

To attach diagnostics yourself, open **Support** → **Diagnostics** and click **Support bundle**. Click **Reveal file** to find the ZIP, then attach it to the [feedback form](#). [Support bundles](#) lists everything a bundle contains.

# Drivers and third-party software

On Windows, Pro installs drivers for Controls, its upcoming input-routing feature. Here is what each driver does, and which third-party components Pro uses under which licenses.

## What the Windows installer adds

The Windows installer adds two driver packages: Rohsam's own Control Routing drivers and HidHide. Both serve **Controls**, which is coming soon. Until Controls is available, Pro does not route or hide your controllers, and your stick reaches the simulator directly.

### FFB-Bridge Control Routing drivers

Rohsam Inc. wrote these drivers for Pro. The package contains two of them:

- **Control Router** lets Pro present a virtual controller to the simulator. Pro can then combine and shape the inputs from your physical controls before the simulator sees them. The virtual controller can also accept force-feedback effects from a simulator that sends its own, so Pro can pass them on to your base.
- **Native Consumer** watches which program sends force-feedback effects to that virtual controller. It tells Pro when that program stops or closes, so Pro can end those forces.

Microsoft certified both drivers through the Windows Hardware Compatibility Program for Windows 11 version 25H2 (x64), and both carry Microsoft's signature. In Device Manager, the router appears under **System devices** as **FFB-Bridge Pro Controls**.

| Item                 | Detail                       |
|----------------------|------------------------------|
| Control Router       | Version 2.0.0.4              |
| Native Consumer      | Version 1.0.0.2              |
| Certified for        | Windows 11 version 25H2, x64 |
| Microsoft submission | 1152921505701980449          |

Setup uses Microsoft's DevCon tool to create the FFB-Bridge Pro Controls device, and deletes the tool when it finishes. Uninstalling Pro removes the device.

## HidHide

HidHide is an open-source filter driver from the Nefarius project, written by Eric Korff de Gidts and Benjamin Höglinger-Stelzer and released under the MIT license. It hides a physical controller from the programs you choose.

When Pro routes your stick through a virtual controller, HidHide hides the physical stick from the simulator. The simulator then receives your input once, from the virtual controller, instead of twice.

- Pro installs the official HidHide 1.5.230 package, unmodified, and only if HidHide is missing.
- If HidHide 1.5.230 is already installed and working, setup leaves it as it is.
- Uninstalling Pro leaves HidHide in place, because other programs may use it.

If Windows needs a restart after installing HidHide, setup says so and does not open Pro. Restart Windows, then open Pro.

If setup finds a different or damaged HidHide installation, it stops without changing it. Repair HidHide with its official setup, restart Windows and run the Pro installer again.

## How the drivers differ

| Driver          | From                          | What it does                                                                                    |
|-----------------|-------------------------------|-------------------------------------------------------------------------------------------------|
| Control Router  | Rohsam Inc.                   | Creates the virtual controller the simulator sees                                               |
| Native Consumer | Rohsam Inc.                   | Tells Pro which program sends force feedback to the virtual controller, and when it closes      |
| HidHide         | Nefarius project, open source | Hides a physical controller from chosen programs. It creates no controller and sends no forces. |

## macOS and Linux

Pro installs no drivers on macOS or Linux. Your stick works through the operating system's own support, the same way as in FFB-Bridge Free. See [Hardware setup](#).

## Components Pro uses

Pro is built on the components below. The voice models are not part of the installer. Pro downloads speech recognition and command understanding when you click **Download voice models**, and the natural voice and wake word only if you choose them.

| Component           | Used for        | License |
|---------------------|-----------------|---------|
| .NET 10 (Microsoft) | Running the app | MIT     |

| Component                                             | Used for                                  | License                       |
|-------------------------------------------------------|-------------------------------------------|-------------------------------|
| Avalonia, SkiaSharp, HarfBuzz, CommunityToolkit.Mvvm  | The app window, drawing and text          | MIT and BSD-style             |
| Inter, JetBrains Mono, Noto Sans fonts                | Interface text in 16 languages            | SIL Open Font License         |
| libevdev                                              | Reading your stick on Linux               | X11 license                   |
| PortAudio, PortAudioSharp2                            | Microphone input and spoken replies       | PortAudio license, Apache 2.0 |
| ONNX Runtime (Microsoft)                              | Running the voice models on your computer | MIT                           |
| Moonshine (Useful Sensors), tuned by Rohsam           | Speech recognition                        | MIT                           |
| Whisper base.en, whisper.cpp, Whisper.net             | Backup speech recognition                 | MIT                           |
| all-MiniLM-L6-v2, tuned by Rohsam                     | Understanding voice commands              | Apache 2.0                    |
| Kokoro-82M voices and misaki word lists               | Optional natural spoken replies           | Apache 2.0                    |
| openWakeWord feature models                           | Optional wake word                        | Apache 2.0                    |
| System.Speech (Microsoft)                             | Spoken replies with the Windows voice     | MIT                           |
| Natural Earth                                         | Black Box maps and map packs              | Public domain                 |
| Net.Codecrete.QrCodeGenerator (Manuel Bleichenbacher) | The Cockpit Web pairing code              | MIT                           |
| HidHide                                               | Hiding controllers on Windows             | MIT                           |

## Full notices

The [Pro third-party notices](#) contain the copyright notice and full license text for every component. They also cover smaller items such as the aircraft icons and device artwork.