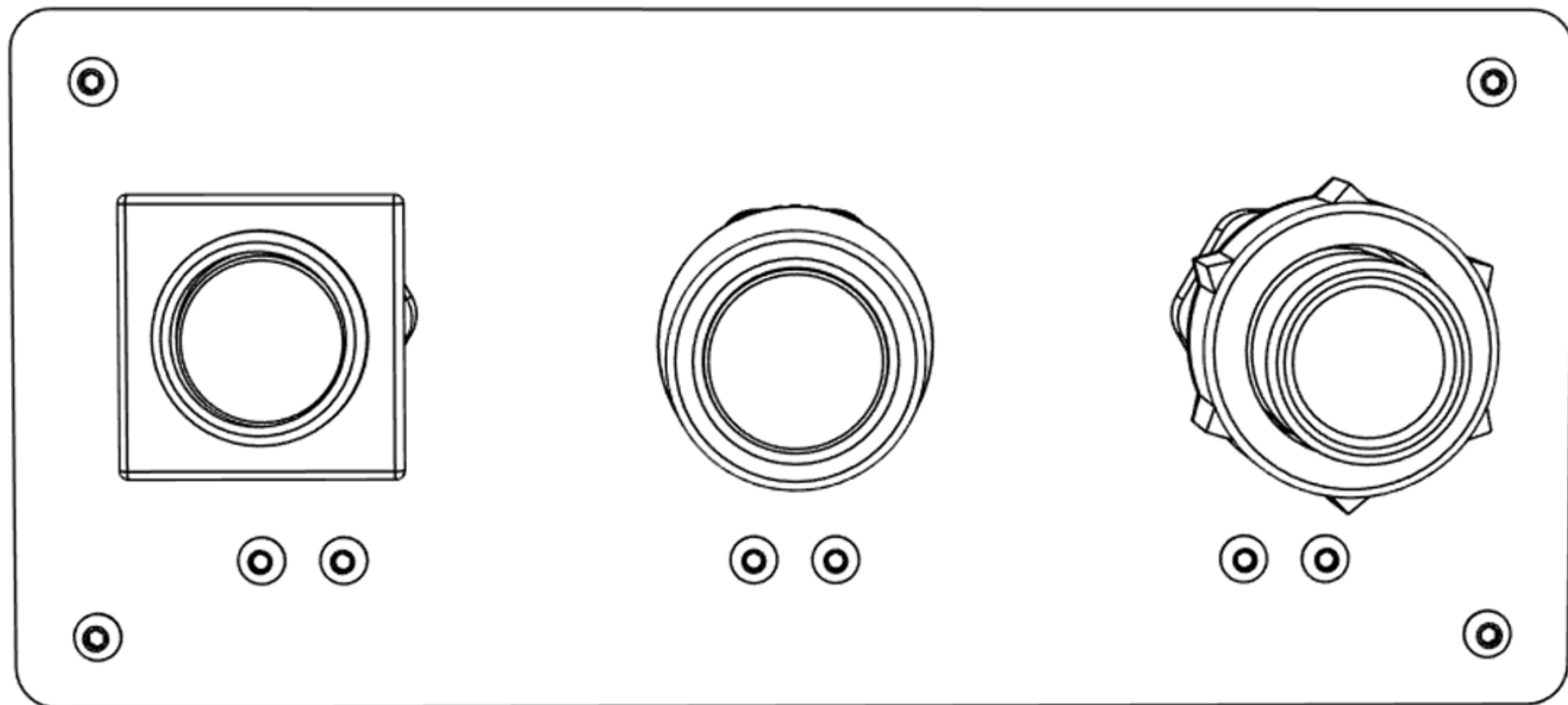


DESKTOP PILOT

Carb Vernier Throttle Quadrant

User Manual

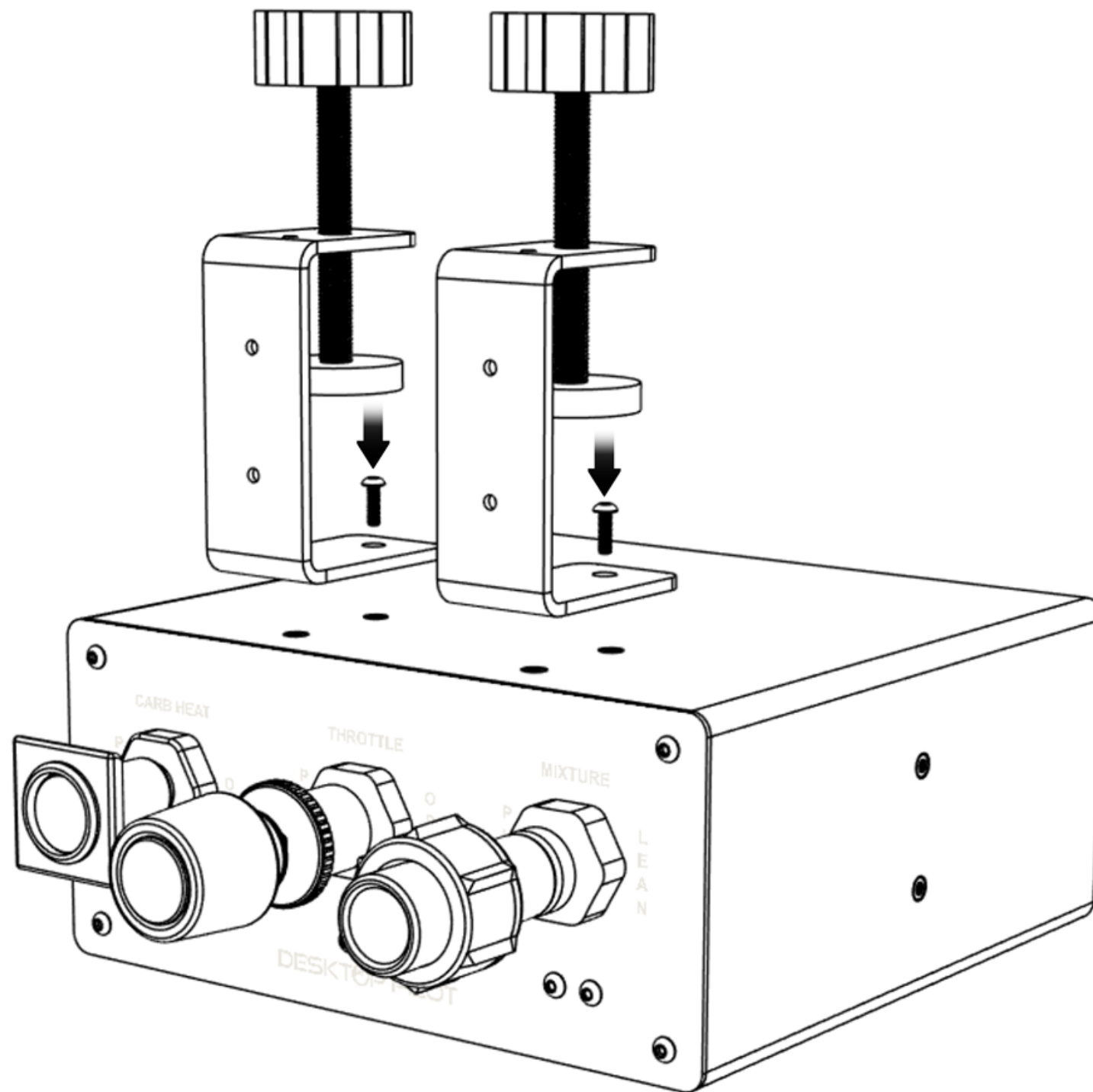


Joystick
Version 1.0

MOUNTING OPTIONS

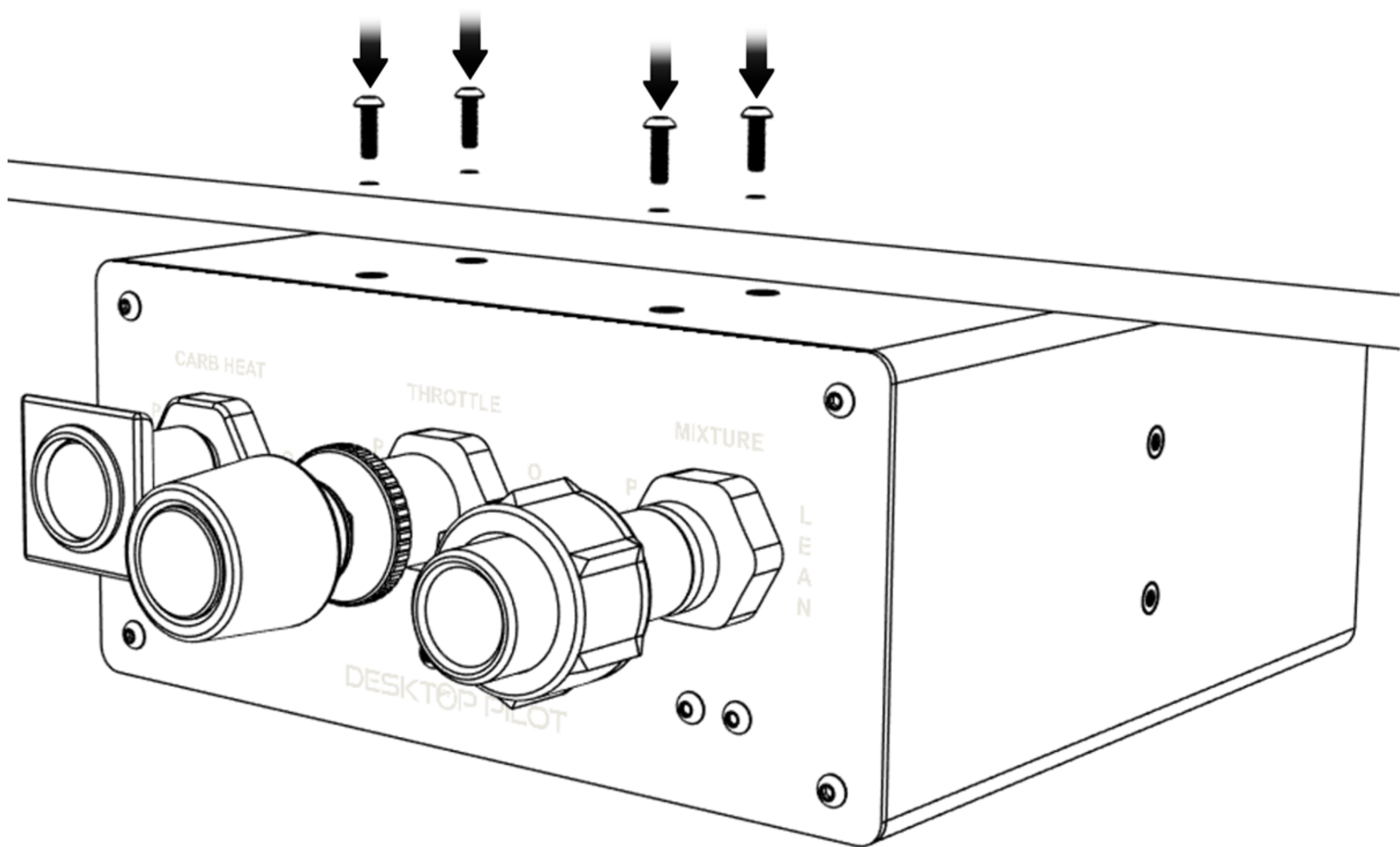
Clamp Mounting

Screw the clamp into any of the available mounting holes on the product located on the top, sides, or bottom depending on your preferred setup.



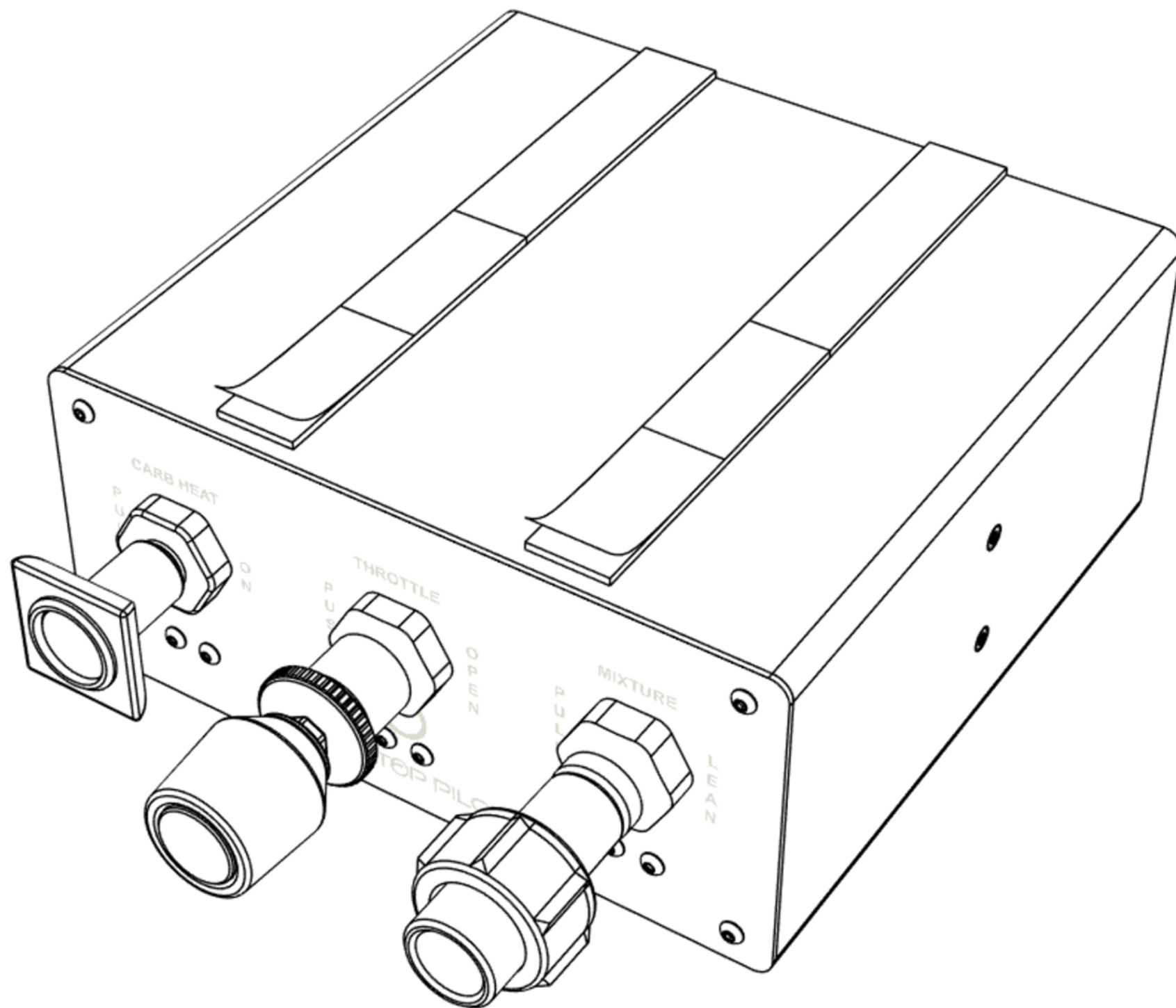
Screw Mounting

Secure the product directly to the desk using the mounting holes on its base. Use M3 screws to fasten it



Adhesive Mounting

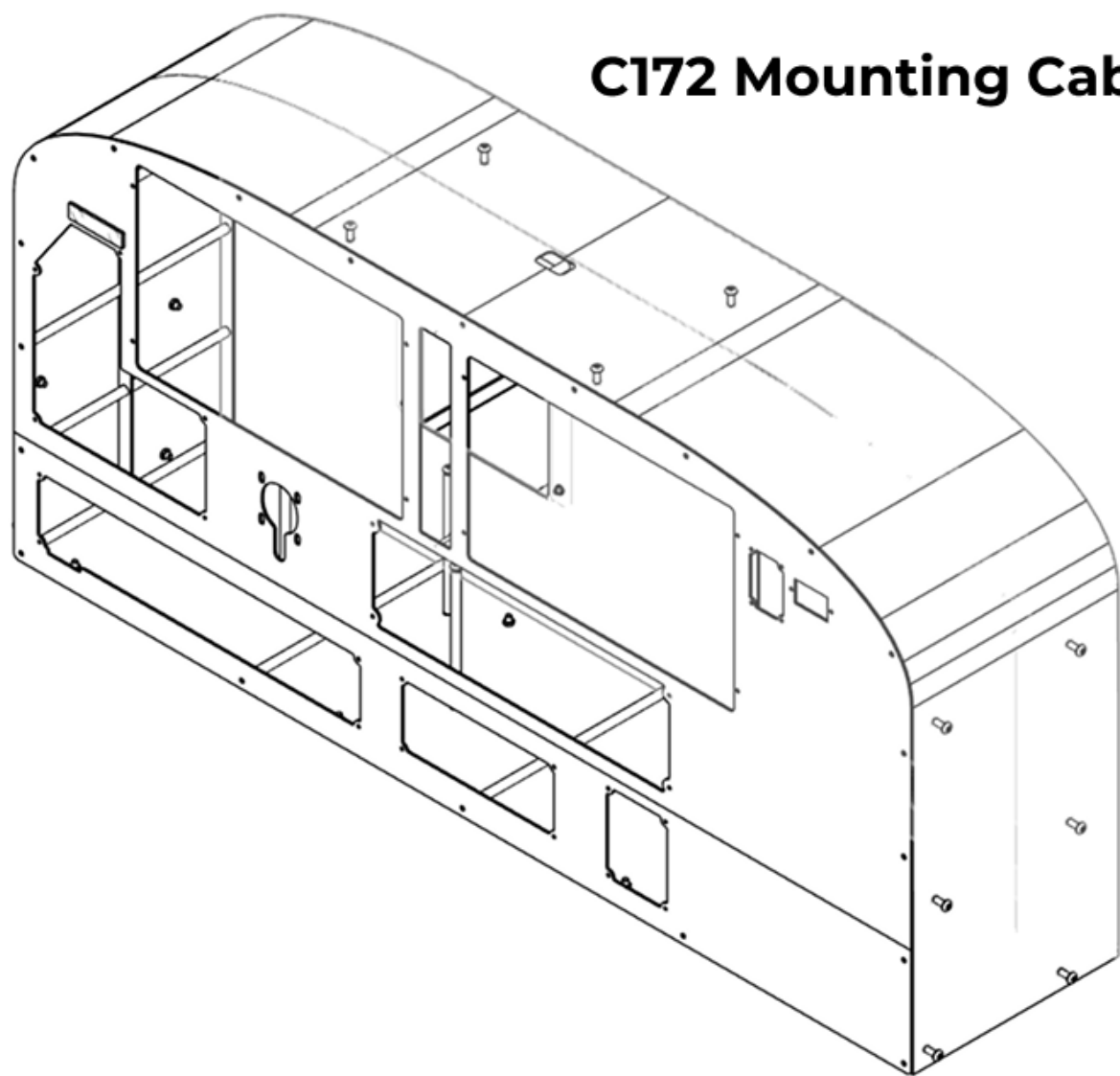
Stick the double sided tape to any side of the product.



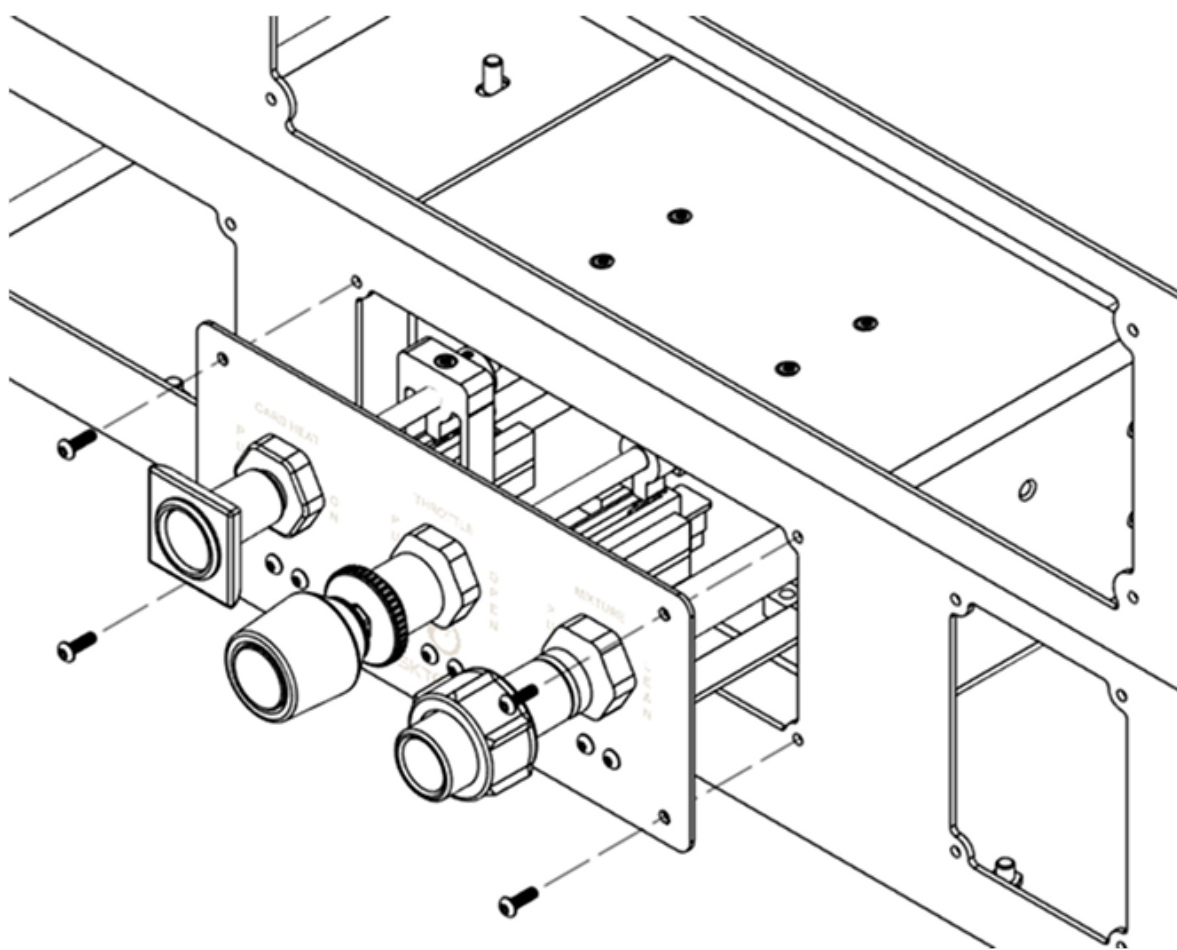
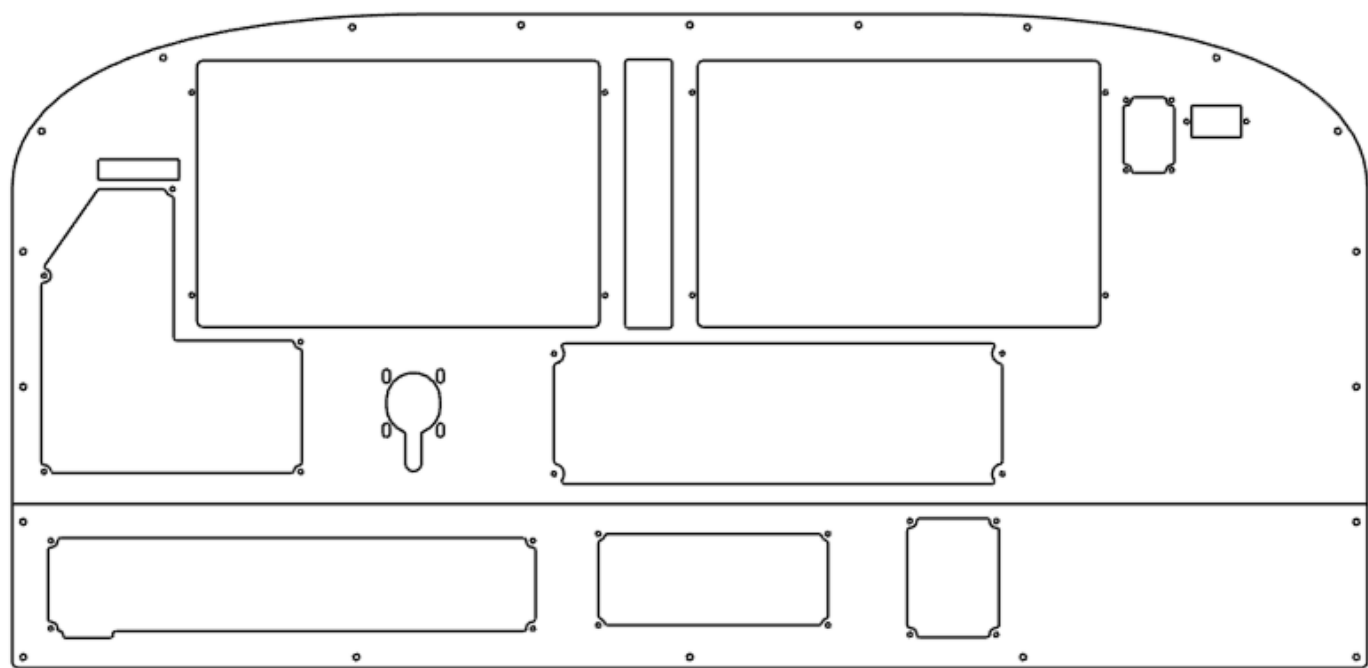
Cabinet Mounting / Panel Mounting

Screw the product directly to the cabinet or panel as shown here.

C172 Mounting Cabinet



C172 Mounting Panel



PRODUCT SPECIFICATIONS

What's in the box?

- USB Type-A to Type-B Cable
- Carb Vernier Throttle Quadrant
- Double-sided VHB Tape

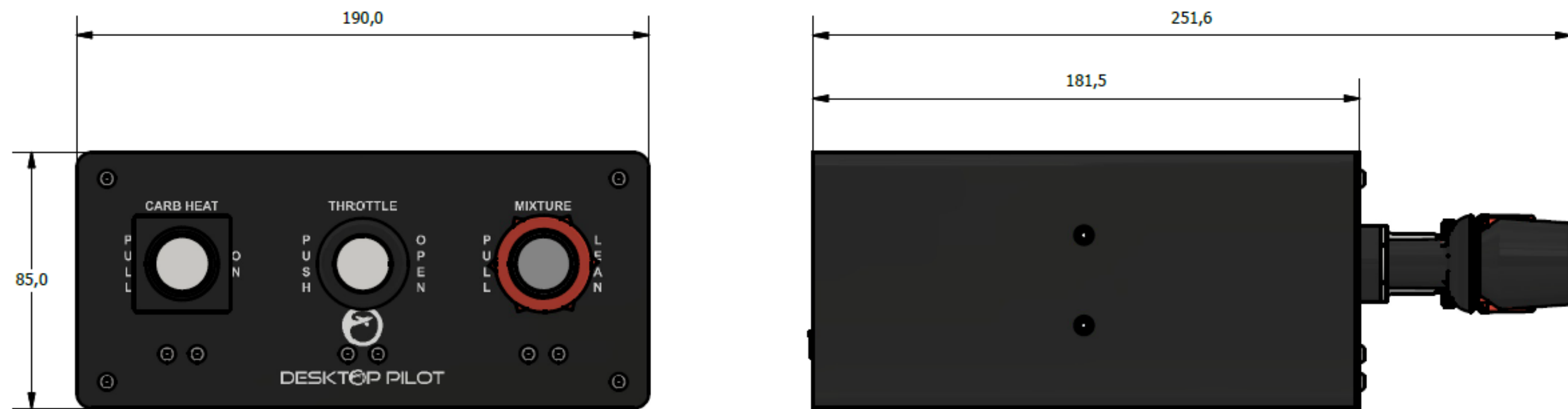
Product Weight/Dimensions

Dimensions (L x W x H):

190mm × 251.6mm × 85mm / 7.48in × 9.91in × 3.35in

Weight:

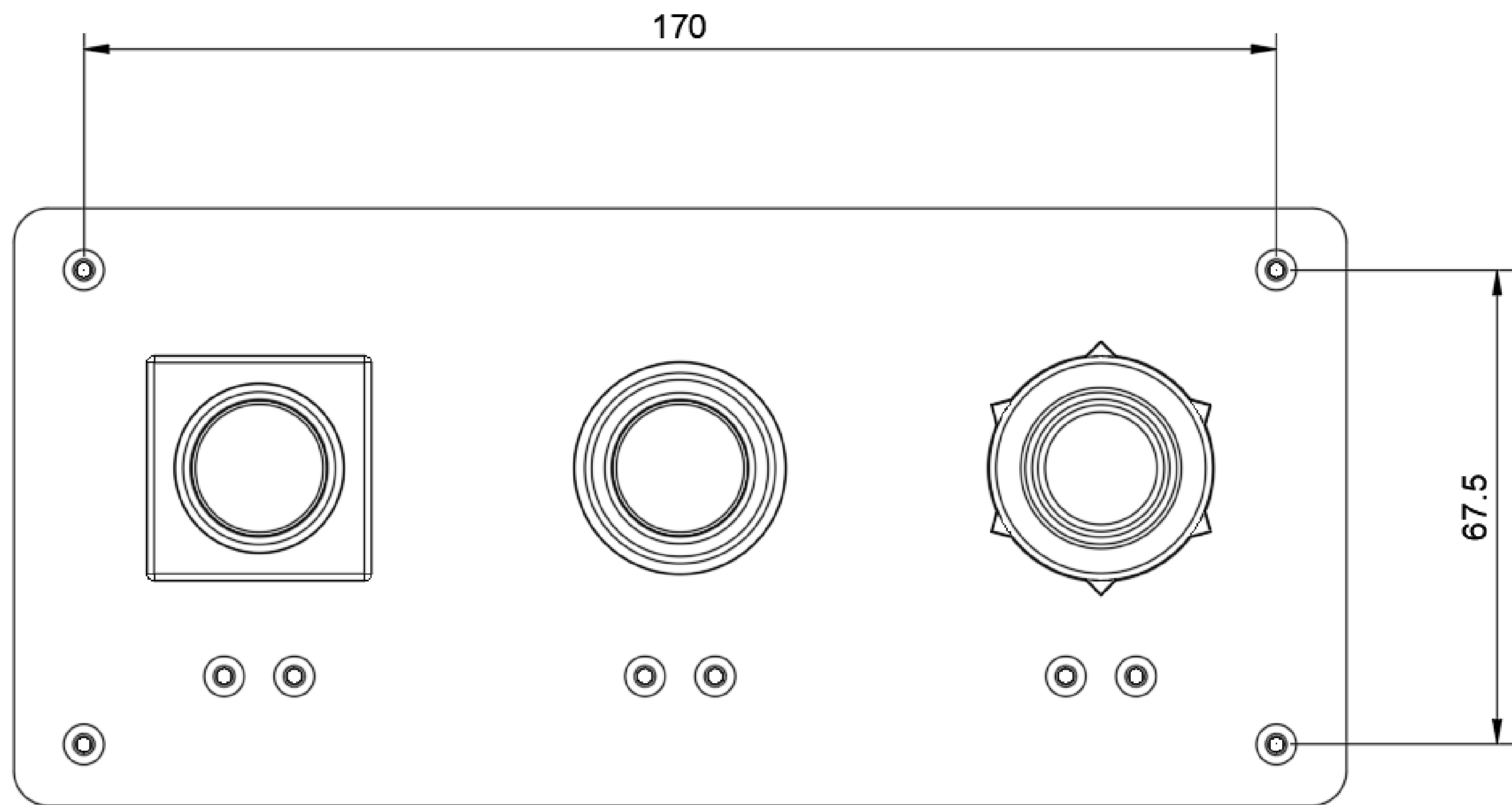
1.98lbs / 900g



All dimensions shown in the image are in **mm**

Panel hole dimensions (W x H):

170mm × 67.5mm / 6.69 in × 2.66 in



All dimensions shown in the image are in **mm**

Safety, Maintenance, and Care Guidelines

To ensure safe use and extend the lifespan of the **Carb Vernier Throttle Quadrant** follow these recommendations:

Safety Precautions

- **Proper Use:** Keep the unit dry and free from moisture. Use only certified USB power sources.
- **Heat & Ventilation:** Avoid placing the device near heat sources or in direct sunlight. Prolonged exposure may damage internal components and warp external plastic parts.
- **Material Sensitivity:** External components made from plastic materials will deform at temperatures above **60–65°C (140–149°F)**. Avoid contact with solvents or abrasive chemicals.
- **Handling:** Handle device carefully to avoid internal damage. Keep out of reach of children and pets.
- **Disposal:** Do not dispose with household waste. Follow local electronic and plastic recycling regulations.
- **Warranty:** Unauthorized modification or disassembly may void warranty. Contact support for approved repair or servicing.

Maintenance and Care

- **Surface Cleaning:** Use a soft, dry microfiber cloth to clean exterior surfaces. Avoid liquid cleaners and alcohol-based solutions.
- **USB Port Care:** Ensure USB Type B connection remains secure and free from debris. Minimize unnecessary unplugging to reduce port wear.
- **Storage:** Store in a dry, dust-free environment away from direct sunlight when not in use.

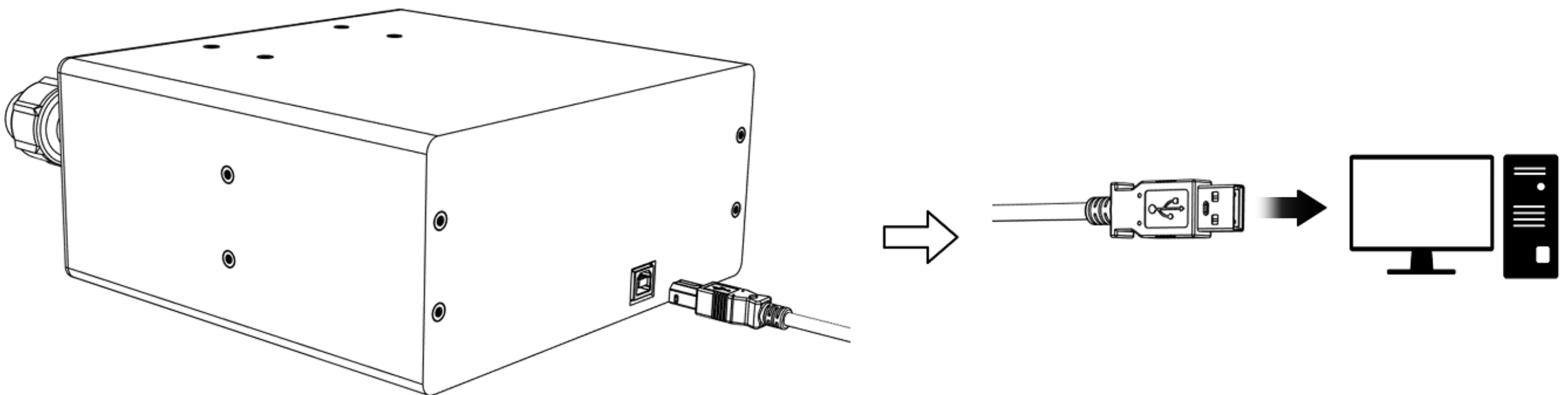
Setup Instructions

1)(Optional) Mount the Device

Refer to the **Mounting Options** section of this manual for instructions on securing the device.

2) Establish USB Communication

- a) Use a **USB Type-B to Type-A cable** included in the package.
- b) Connect the **Type-B** end to the display.
- c) Connect the **Type-A** end to your PC.



3) (Optional) Calibrate Device

Go to Start and type **“Set up USB Game Controllers”** and press **Enter**. Then double-click the Carb Vernier Throttle Quadrant. Then go to the **Settings** tab and click **Calibrate** and follow the on-screen prompts to complete the calibration process.

4) Configure in Flight Simulator

Open your preferred flight simulator and assign the controls in the settings menu. Ensure that there are no devices that may conflict with the **Carb Vernier Throttle Quadrant's** configuration.

Setup Instructions

Configuration for Flight Simulators:

For X-Plane 11/12:

- Go to **X-Plane's Settings** and navigate to the **Joystick** tab.
- In the device list, click the dropdown menu and select **“Carb Vernier Throttle Quadrant.”**
- Move each of the three control knobs (**Carb Heat, Throttle, Mixture**) to allow X-Plane to detect and calibrate their motion.
- Now assign the axes as follows:
 - **Axis 0 → Carb heat**
 - **Axis 1 → Throttle**
 - **Axis 2 → Mixture** (check the "Reverse Axis" box)
- Once assignments are complete, click **“Done”** in the bottom right corner of the screen.

For Microsoft Flight Simulator 2020:

- Go to the **MSFS's Options menu**.
 - Click on the **CONTROLS OPTIONS**.
 - From the device list at the top, select **“Carb Vernier Throttle Quadrant.”**
- Assign Button Controls:
 - In the search bar, look up each of the following:
 - **SET ANTI ICE ON → JOYSTICK L-AXIS Z+**
 - **SET ANTI ICE OFF → JOYSTICK L-AXIS Z+-**
 - **Throttle Axis → JOYSTICK L-AXIS Y (Reverse Axis)**
 - **Mixture Axis (-100 to 100%) → JOYSTICK L-AXIS X (Reverse Axis)**
 - Create and Save a New Profile
 - When prompted, create a new input profile (e.g., **“Desktop Pilot CBH”**).
- Once all three axes are properly assigned, click **“Apply & Save”** at the bottom left corner of the screen.

Setup Instructions

For Microsoft Flight Simulator 2024:

- Open the simulator and navigate to the **Settings menu** by clicking the **gear icon** in the upper right corner.
- Click on the **Controls** tab.
- Ensure the aircraft selected for configuration is **Cessna 172 Skyhawk** using the **G1000** variant.
 - If not, change the aircraft via the settings by pressing **G** or clicking the **Change Aircraft**.
- On the left side of the screen, select **“Carb Vernier Throttle Quadrant”** from the list of devices.
- Search and assign the following commands:
 - **SET ANTI ICE ON → JOYSTICK L-AXIS Z+**
 - **SET ANTI ICE OFF → JOYSTICK L-AXIS Z+-**
 - **Throttle Axis → JOYSTICK L-AXIS Y (Reverse Axis)**
 - **Mixture Axis (-100 to 100%) → JOYSTICK L-AXIS X (Reverse Axis)**
- Create and Save a New Profile
 - When prompted, create a new input profile (e.g., **“Desktop Pilot CBH”**). **Apply it to all aircraft and set it as default.**
- Click **“Save and Back”**, return to the simulator, and test each control to verify proper response.

Troubleshooting Guidelines

Input Feels Stiff or Too Loose (Throttle Only)

- **Problem:** The throttle control feels unusually tight or loose during operation.
- **Solution:**
 - Adjust the friction cap on the throttle control to increase or decrease resistance.
 - If adjustment doesn't help, inspect the mechanism for dust or obstruction and clean gently if needed.
 - Do not apply lubricants or chemicals, as this may damage internal components or 3D-printed parts.

Device Not Recognized by Computer

- **Problem:** The Carb Vernier Throttle Quadrant does not appear in the operating system's device list.
- **Solution:**
 - Use a different USB port and ensure the cable is fully inserted on both ends.
 - Try a known working USB cable (Type B to Type A).
 - Reboot your computer and reconnect the device after the system has restarted.
 - Test the device on another computer to rule out hardware failure.
 - If it's still unrecognized, the onboard USB controller or cable port may be damaged—contact support.

Device Disconnecting During Use

- **Problem:** The Carb Vernier Throttle Quadrant intermittently disconnects from the PC during use.
- **Solution:**
 - Check the USB cable for any visible damage or wear. Try using a different cable if necessary.
 - Try connecting the device directly to your PC's USB port instead of using a USB hub.

Troubleshooting Guidelines

Push/Pull Controls Aren't Registering Movement

- **Problem:** When pushing or pulling the throttle, carb heat, or mixture controls, there is no response in the simulator or analog movement.
- **Solution:**
 - Ensure that the USB connection is secure and the device is detected by the PC.
 - Confirm that the device is properly mapped in the simulator settings and calibrated if necessary.
 - Open your simulator's input settings and verify if any axis responds during the push/pull motion.
 - If no input is detected at all, try reconnecting the USB cable or using a different port.

Vernier Rotation Has No Effect (Mixture Only)

- **Problem:** Rotating the silver knob for fine-tuning doesn't adjust the control in the simulator.
- **Solution:**
 - Ensure the knob is not pressed while rotating—it must be released to engage the vernier mechanism.
 - Confirm that rotational adjustments are being read by the simulator—check for subtle input changes in axis testing.

Frequently Asked Questions

Is the Carb Vernier Throttle Quadrant compatible with simulator cockpit setups?

Yes, the Carb Vernier Throttle Quadrant is compatible with simulator cockpit setups. It supports clamp mounting, direct screw installation, and adhesive mounting with double-sided VHB tape. It can also be panel- or cabinet-mounted using screws or brackets, and is compatible with the C172 Mounting Panel and Mounting Cabinet (sold separately).

Is the Carb Vernier Throttle Quadrant compatible with Xbox?

No. The Carb Vernier Throttle Quadrant is currently not supported on Xbox platforms. Joystick devices without official Xbox licensing are not recognized by Xbox systems.

Is the Carb Vernier Throttle Quadrant compatible with other flight sim peripherals?

Yes. It functions as a standalone joystick and operates independently of other simulator hardware. Compatible with hardware such as yokes, pedals, trim wheels, switch panels, or throttle quadrants.

Are control assignments retained between simulator sessions?

Yes. Control profiles are saved within simulator configuration settings. No need for reconfiguration unless profiles are manually deleted or reset.

Are axis mappings fixed to Carb Vernier, throttle, and mixture?

No. Axes can be reassigned within simulator settings to control alternate analog inputs, including spoilers, cowl flaps, or custom functions depending on aircraft configuration.

Desktop Pilot

Your ticket to the virtual skies!

Need Help or Have Suggestions?

If you experience an issue not listed on the guidelines, want to report a bug, or have ideas for improvement, we're here for you!

✉ Contact Us: sales@desktoppilot.com or +1-888-296-9150

💬 Support Hours: **Monday–Friday, 10 AM – 6 PM EST**

🌐 Visit: <https://www.desktoppilot.com/>

Your feedback helps us improve the experience. Don't hesitate to reach out—we'd love to hear from you!



DESKTOP PILOT