

Getting Started with TakeFlight Academy

What is TakeFlight Academy?

Imagine having a Virtual Flight Instructor that was ready to deliver quality flight instruction, anytime. Well now you do! TakeFlight Interactive’s Virtual Flight Instructor will guided through short and highly re-playable lessons in your favorite simulator. You’ll learn the same maneuvers and techniques used in the real airplane.

You will hear clear verbal instructions on what do to, and get real-time feedback on how well you’re performing, and graded against Federal Aviation Administration (FAA) Airmen Certification Standards. All of your scores and progress are stored in the cloud, so you can take it with you anywhere. Use it at home, classroom, or the flight school.

TakeFlight Academy will have you climbing into the real cockpit with greater confidence, making your time in the aircraft a lot more fun!



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How do I Get Started?

You will need a Windows computer and simulation software that meets the minimum requirements shown in the [Installation Guide](#) section below.

1. Sign Up

Create an account at Academy.TakeFlightInteractive.com.

2. Licensing

You may receive a TakeFlight license code directly from your organization, or a license can be purchased at Store.TakeFlightInteractive.com. After you have verified your email address, you can log in and redeem your license code here: Academy.TakeFlightInteractive.com/Account/Redeem.

3. Download & Install

TakeFlight Academy can be downloaded at TakeFlightInteractive.com/Download and installs like most other PC desktop applications. Please review the detailed [Installation Guide](#) below, before installation!

3. Fly!

Launch TakeFlight Academy from the desktop icon, log- in, and experience TakeFlight Academy's fun and rewarding Virtual Flight Instruction!

General guidelines for Simulator Proficiency

Below are some general guidelines for getting the most out of Virtual Flight Instruction. Keeping these things in mind will make the transitions from simulated to actual flight much easier.

1. Make a concerted effort to use outside queues for visual flight reference when performing VFR maneuvers in the simulator. Situational awareness is much easier to maintain in a real aircraft cockpit environment.
2. Maintain coordinated flight in the simulator to compensate for not having the benefit of 'seat of the pants' awareness. During actual flight, your body senses even the slightest changes in motion due to aerodynamic forces. Desktop flight simulation cannot duplicate those sensory triggers.
3. Apply control inputs like you would in the real aircraft, smoothly and with a light touch. Keep in mind that PC controllers generally have less travel or 'throw' than controls in the real aircraft, thus requiring less input for a desired result.
4. Pretend that traffic awareness and vigilance are as important in simulated environments as they are in the real world. As much as is practical, apply safe, real-world practices and procedures to the simulation.
5. Place as much emphasis as possible on the use of checklists and safety oriented procedures to develop and enforce great habits.
6. Practice as much as you like! Repetition will only make you better.
7. Flight simulation/Virtual flight instruction is what you make of it, you will be amazed at how engaging, challenging, transferable, and fun it is!
8. It can take some time to "get over the hump" of getting used to the flight controls. But once you do, you'll have access to boundless aviation experiences in the infinite world of flight simulation.

How do I use TakeFlight Academy?

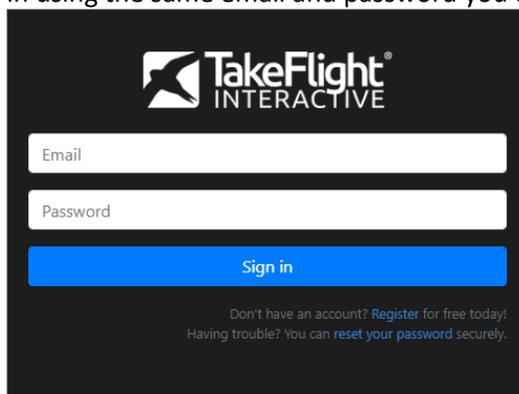


1) Launch

- a) After successful installation, launch TakeFlight Academy using the desktop icon

2) Log-In

- a) Log in using the same email and password you created at Academy.TakeFlight.com



TakeFlight
INTERACTIVE

Email

Password

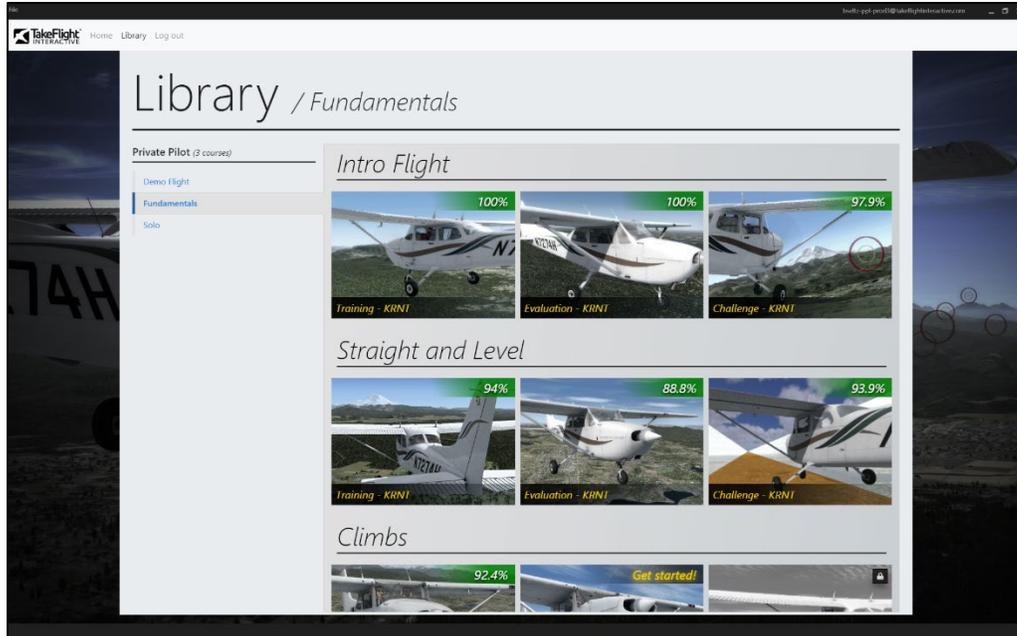
[Sign in](#)

Don't have an account? [Register for free today!](#)
Having trouble? You can [reset your password](#) securely.

- i) If you've forgotten or lost your password, you can reset it here:
Academy.TakeFlightInteractive.com/Account/ForgotPassword

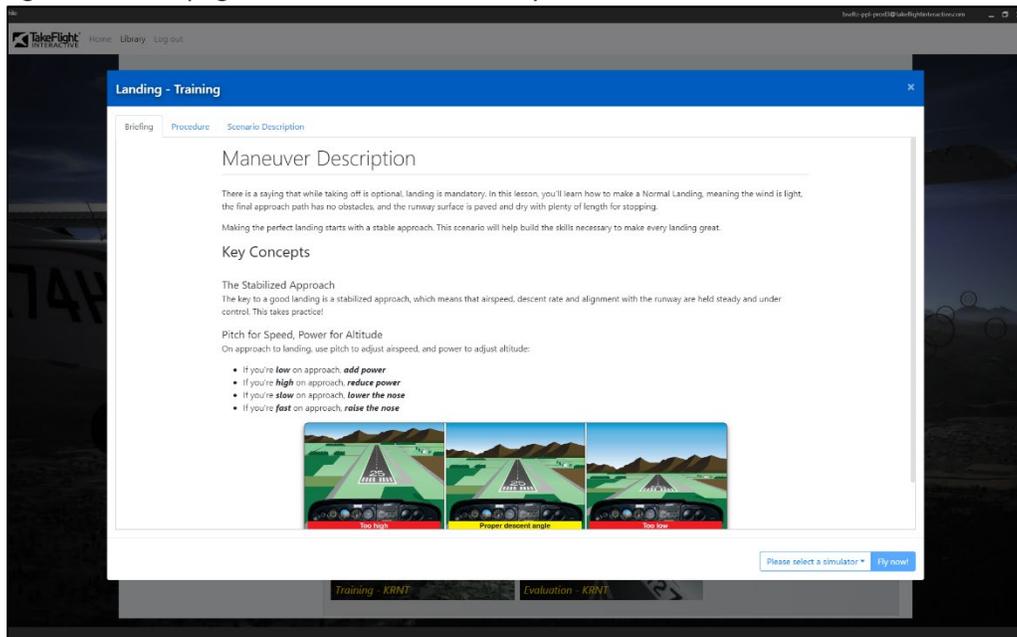
3) Select a lesson

- a) It is recommended that you perform the lessons in order. The Virtual Instructor expects you have the knowledge and skills presented in previous lessons.



4) Review the briefing

- a) Select an unlocked lesson to view the briefing page.
b) Note the separate tabs across the top for additional briefing materials. Use the X in the top right to close a page and return to the Library, or...



5) Fly Now!

- a) Select your preferred simulator from the drop-down, then select Fly Now!
b) Most lessons have 3 scenario types: Training, Evaluation and Challenge.

- i) Training – Training scenarios offer full instruction, feedback and scoring.
- ii) Evaluation – Evaluations are a test of the skills you learned in the Training scenarios. They are scored the same as the Training scenario, but without verbal instructions and feedback.
 - Note:** You should only attempt Evaluation scenarios after you are very familiar with the format of the Training scenario. The virtual instructor will provide only limited prompts and feedback, while you perform the required procedure.
- iii) Challenge – Challenge scenarios build on the same skills learned in the Training scenarios, but in a game-like or real-world situation.

TAKEOFF DISTANCE
MAXIMUM WEIGHT 2,400 LB

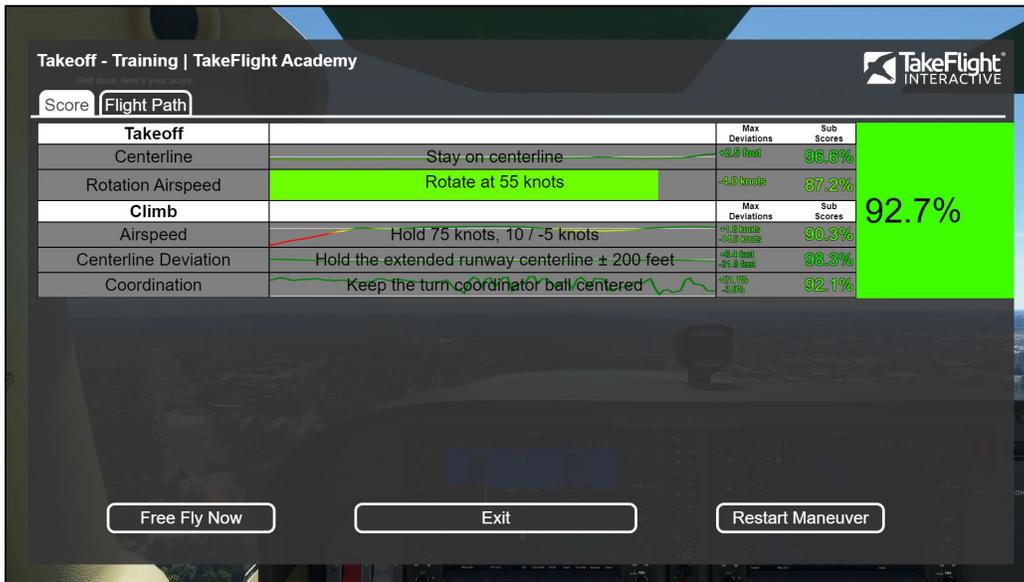
Weight (lb)	Takeoff speed (ft/min)	Pressure Altitude (ft)	6 °C			10 °C			20 °C			30 °C			40 °C		
			Ground roll (ft)	Total height (ft)	Distance to clear 50 ft obstacle (ft)	Ground roll (ft)	Total height (ft)	Distance to clear 50 ft obstacle (ft)	Ground roll (ft)	Total height (ft)	Distance to clear 50 ft obstacle (ft)	Ground roll (ft)	Total height (ft)	Distance to clear 50 ft obstacle (ft)	Ground roll (ft)	Total height (ft)	Distance to clear 50 ft obstacle (ft)
2,400	51	56	811	1,400	860	1,570	815	1,480	880	1,610	820	1,500	890	1,640	830	1,530	900
2,000	47	51	700	1,250	750	1,400	705	1,310	770	1,340	710	1,250	780	1,280	720	1,190	790
1,600	43	46	600	1,100	650	1,250	605	1,160	670	1,190	610	1,100	680	1,130	620	1,040	710
1,200	39	41	510	950	560	1,100	515	1,010	580	1,040	520	950	600	980	530	860	630
800	35	37	430	800	480	950	435	860	500	900	440	810	510	840	450	760	540

- c) Select the scenario start point
 - i) Using your mouse on the start menu, click the phase of the scenario from which you'd like to start. For example, if you've flown Normal Takeoff several times, you've likely heard and understand the Introduction dialog and would rather skip right to the takeoff.



- d) Scoring Screen

- i) Select Restart Maneuver to reload the scenario, or Exit to return to the TakeFlight Academy Library. We do not expect anyone to master maneuvers on their first try. Don't hesitate to try again and again until proficient!



- e) Note: To quickly restart a scenario, press the [Ctrl] & [;] keys simultaneously

Installation Guide

TakeFlight Academy requires one of the following simulators to be installed and configured before installation:

- Microsoft Flight Simulator (MSFS, FS2020), or
- X-Plane version 11 or greater (X-Plane), or
- Lockheed Martin Prepar3D version v4 or greater (P3D), or

We suggest using X-Plane or P3D for flight training (required if training against an approved curriculum).

Please see installation instructions specific to your simulator below:

Microsoft Flight Simulator (MSFS/FS2020)

MSFS Installation Instructions

- 1) Install and run MSFS before installing TakeFlight.
- 2) Configure your simulator and flight controls.
 - a) Check that your flight controls are properly configured and that you are able to fly the aircraft with your controller to manipulate the throttle and all control surfaces, including elevator trim (see the Flight Controls section below).
 - b) This is a good time to adjust the graphics settings to suit your PC (see the Graphics & Performance section below).
 - c) Once you are happy with the performance of the simulator and peripherals, continue to step 3.
- 3) Install TakeFlight Academy

- a) Download and run the TakeFlight Academy installer. Downloaded files are often found at C:\Users\YourUsername\Downloads.
- b) Follow the prompts to install TakeFlight Academy:
- 4) (!) Launch TakeFlight Academy from inside the MSFS user interface:
 - a) Launch MSFS from the start menu or desktop icon.
 - b) Once MSFS has loaded to the Welcome screen, select the Activities tile. Scroll right until you see Custom Content and select it. You should see the TakeFlight Academy tile there.



- c) Select the TakeFlight Academy tile, then Fly.
- d) Once the flight starts, MSFS will open the TakeFlight Academy application.
- e) Log in with your TakeFlight account credentials (email address and password).
- f) From the Courses menu, select a maneuver and Fly Now!

Laminar Research X-Plane 11+

TakeFlight Academy requires [X-Plane](#) version 11 or 12.

X-Plane Installation Instructions

- 5) Install and run X-Plane before installing TakeFlight.
 - a) Purchase X-Plane from [the online store](#) and install if needed.
- 6) Configure your simulator and flight controls.
 - a) Check that your flight controls are properly configured and that you are able to fly the aircraft with your controller to manipulate the throttle and all control surfaces, including elevator trim (see the Flight Controls section below).
 - b) This is a good time to adjust the graphics settings to suit your PC (see the Graphics & Performance section below).
 - c) Once you are happy with the performance of the simulator and peripherals, continue to step 3.
- 7) Download and install TakeFlight Academy
 - a) Run the TakeFlight Academy installer. Downloaded files are often found at C:\Users\YourUsername\Downloads.
 - b) Follow the prompts to install TakeFlight Academy.
- 8) Launch TakeFlight Academy
 - a) Double-click the TakeFlight Academy application from the desktop icon.
 - b) Log in with your TakeFlight account credentials (email address and password).
 - c) From the Courses menu, select a maneuver and Fly Now!

Lockheed Martin Prepar3D

TakeFlight Academy requires [P3D version 4 or greater](#), as well as the excellent [A2A 172 add-on aircraft](#) which provides high-fidelity flight modeling.

P3D Installation Instructions

- 1) Install and run P3D before installing TakeFlight.
 - a) Purchase P3D from [Lockheed's online store](#) and install if needed.
 - i) Make sure it runs well before you continue.
- 2) If installing with the A2A C172 add-on aircraft, install before using TakeFlight.
 - a) Purchase the C172 add-on aircraft from [A2A's online store](#) and install if needed.
 - b) Make sure you can fly the A2A 172 before continuing.
- 3) Configure your simulator and flight controls.
 - a) Check that your flight controls are properly configured and that you are able to fly the aircraft with your controller to manipulate the throttle and all control surfaces, including elevator trim (see the Flight Controls section below).
 - b) This is a good time to adjust the graphics settings to suit your PC (see the Graphics & Performance section below).
 - c) Once you are happy with the performance of the simulator and peripherals, continue to step 4.
- 4) [Download](#) and install TakeFlight Academy
 - a) Run the TakeFlight Academy installer you downloaded by using the browser, or by double-clicking the file. Downloaded files are often found at C:\Users\YourUsername\Downloads.
 - b) Follow the prompts to install TakeFlight Academy into P3D.
- 5) Launch TakeFlight Academy
 - a) Double-click the TakeFlight Academy application from the desktop icon.
 - b) Log in with your TakeFlight account credentials (email address and password).
 - c) From the TakeFlight Academy Library, select a maneuver and start flying!

Getting the Most out of your Simulator

Flight Controls

Good flight controller peripherals are critical to getting the most out of your sim. Familiarity with your controls is a large part of this. If you are new to simulation, be patient. Once you become familiar with your flight controls, you'll be able to focus more on the flying.

Choosing a Controller

We at TakeFlight Interactive believe there are advantages in using a joystick versus inexpensive yokes. The lack of control pressure on consumer yokes can lead to poor transfer to the aircraft. The joystick allows you to focus on learning the maneuver, without learning incorrect muscle-memory on a yoke that does not exhibit realistic control pressures. That said, many prefer to fly using a yoke with their sim, and that's perfectly fine. Consumer yokes are getting better all the time.

For serious training, rudder pedals are strongly recommended.

*See a few of our recommended flight controllers below.

Controller Settings

Sensitivity

Control sensitivity has a huge impact on how the virtual aircraft “feels”. Unfortunately, the preferred sensitivity setting for each controller (and person) can vary.

If the aircraft banks, pitches or yaws too quickly when you manipulate the controls, then lower the sensitivity settings for that control surface. If it feels too sluggish, increase the sensitivity.

Calibration

A properly calibrated controller returns to center with hands off. If your well-trimmed aircraft will not fly straight, or the brakes will not disengage, it’s probably time to calibrate your controller(s). You can access calibration settings through the settings menu.

Default Controller Mappings for Common Controllers
Logitech Extreme 3D Pro



Thrustmaster T.16000M



CH Yoke



Simulation Performance Tips

There is always a balance to strike between the best graphics, and higher performance. By performance, we mean how fast the simulation refreshes the screen, this is also called frame-rate. If you turn the graphics up too high for your computer hardware, you will get slow frame-rates. This makes the simulator run slow and stutter, making it much harder to fly. It's always better to scale back graphics settings to sufficiently increase frame-rate. 30 frames per second (FPS) or greater should provide a smooth and fluid flight experience.

To display your current frame-rate on-screen in P3D, while the sim is running, press [Shift] + [Z] simultaneously two times.

Display and Graphics Settings

Much debate has occurred among engineers and sim enthusiasts alike about optimizing the multitude of configuration settings for any simulator. These settings will depend on your unique system configuration. However, the key to smooth, fluid graphics performance is to maintain a reasonably high frame-rate. Simply put, if your simulator is not running smoothly, turn down the graphics settings!

*Note, TakeFlight makes some non-graphical changes to your simulators configuration files at run-time. We back-up and restore your personal settings, thus any graphics setting changes you make during a TakeFlight scenario will not "stick". Please change your graphics settings while running the simulator outside of TakeFlight.

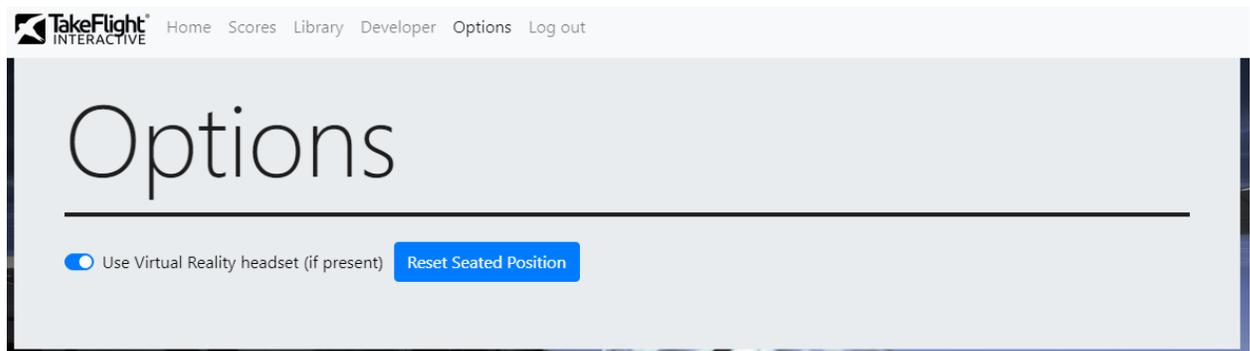
Instructions for using TakeFlight in VR

We are assuming your VR hardware is pre-configured for X-Plane/P3D. We have been designing for and testing with the HP Reverb G2 HMD, but should be compatible with any Windows Mixed Reality/SteamVR compatible simulator.

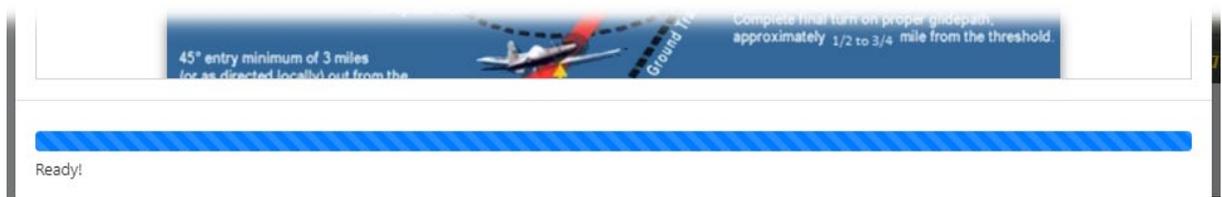
Note: VR in MSFS is not currently supported.

Make sure these system settings are correct:

- a. Windows Mixed Reality - Input Switching = Manual
 - b. Turn User Access Control (UAC) to Level 0
 - i. This is because applications can't show UAC pop-ups in VR (Windows issue)
 - c. X-Plane Settings
 - i. VR Mouse = Off
 - ii. Check the box "don't ask on exit", or you could end up in the X-Plane hangar
2. Power-On your HMD (if not already)
 - a. Give the Windows Mixed Reality Portal time to start up and show the 3D environment
 3. Launch TakeFlight and log-in
 4. Turn VR mode On in the TakeFlight UI:
 - a. Go to Options on the top bar
 - b. Set the slider to Use VR



- c. If necessary, select the Reset Seated Position button to reposition the VR overlay
 - i. Note: The head positions are different for TakeFlight and the simulator. So it's possible to end up with a menu above, below or behind you in the cockpit.
5. If TakeFlight is running in VR mode, it will apply the proper settings to X-Plane and P3D so they start VR mode also.
 - a. Note: TFA has to be "in front" on the desktop. We force this, but is possible to minimize
6. Due to X-Plane's long load times. We find it best to don the HMD once the simulator is loaded and ready. You'll see a new status bar that shows when a lesson is ready to fly:



7. Once in the sim in VR, you'll see the start menu appear in front. Use the mouse to select a start menu option as usual.
8. Upon completion of the mission, you'll see the score screen in VR and can select the option to Free Fly, Exit, or Restart the maneuver
9. You can always press Ctrl+; to restart a lesson, or exit the simulator to get back to the TakeFlight application

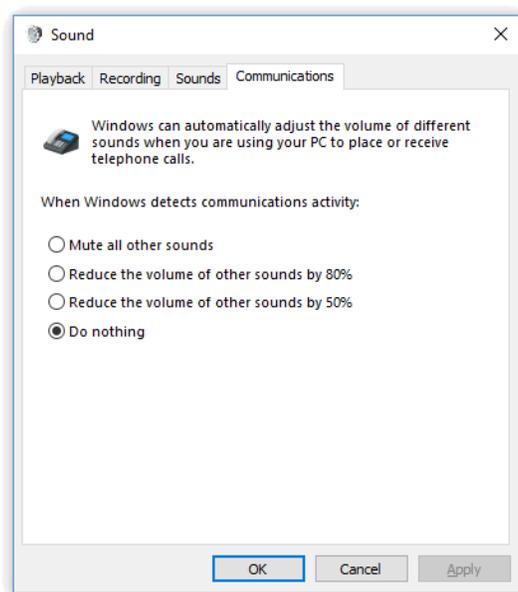
Control Mappings for VR

Since the outside world disappears when donning the HMD, it's important to have needed controls mapped. We suggest the following controls be mapped to a button:

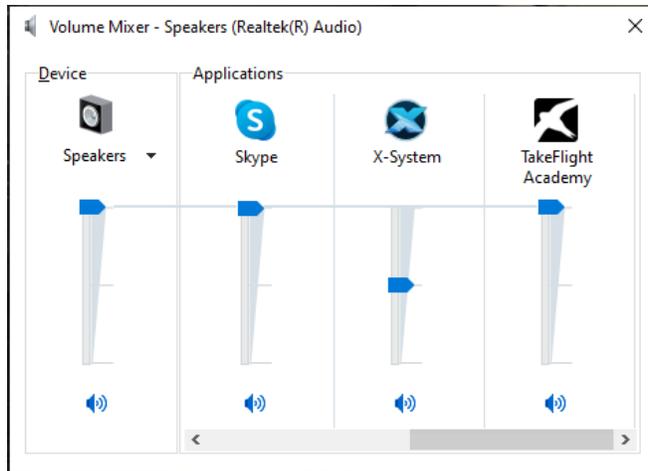
- Throttle, Flight Controls, Flaps, and Trim
- Reset Head Position (sim command)
- VR Mouse Toggle
- Reload Flight

Frequently Asked Questions

- Why does the instructor voice mute or quiet the sounds on my PC?
 - This is a Windows Sound setting. To fix, go to the Sound Control Panel in Windows, select the Communications tab, then select Do Nothing.



- The Virtual Instructors voice is too quiet, can I make it louder?
 - You can adjust the volume of applications separately. Right-click the speaker icon on your Windows task bar, then select Volume Mixer.
 - Lower the volume of the simulator to better hear the instructor, as in this example:



- You can also adjust the aircraft engine volume from within each simulator's interface.
- Do I need an internet connection for TakeFlight Academy?
 - For initial download of the software, a broadband internet connection is ideal. However, this can be done from a different computer and transferred to the simulator using a USB drive.
 - You will still need an internet connection for logging in to TakeFlight. However, this does not require much bandwidth, and many customers use a mobile hotspot on their phone to do so if the simulator is not connected to the internet.
- I heard "An error has occurred, please restart and try again".
 - With the simulator still running, press [Ctrl] + [;] (Control and semicolon keys simultaneously) to restart the scenario.
 - If restarting the scenario does not correct the issue, exit the sim, close TakeFlight Academy and restart the application.
- The TakeFlight Academy application appears to be frozen
 - Press [Ctrl] + [Alt] + [Del] (Windows Task Manager), find TakeFlight Academy, right-click it and select End Task.
- If none of these resolves your issue, see Support below to get help.
- If you're looking to uninstall TakeFlight Academy, it will be listed under "TakeFlight Academy" in Windows > Add or Remove Programs.

Support

Please contact us at support@takeflightinteractive.com if you have any questions, issues, or feedback.

TakeFlight Academy - Microsoft Flight Simulator Installation Checklists

Before Installation Checklist

- MSFS Compatible PC Checked
- Flight Controls Checked
- MSFS Installed Checked
- MSFS Flown and Configured
 - Controls Control Surfaces, Trim, Throttle Checked
 - Graphics and Performance Smooth Frame-Rate Achieved
- Download TakeFlight Academy Software Checked

Install TakeFlight Academy

- Run the TakeFlight Academy installer Checked
- Launch TakeFlight Academy from Desktop Icon Checked
- Log in with your TakeFlight account to download the courseware Checked
- Open MSFS to start TakeFlight. Select maneuver, view the briefing, and click Fly Now! Checked

TakeFlight Academy - X-Plane 11/12 Installation Checklists

Before Installation Checklist

- X-Plane Compatible PC Checked
- Flight Controls Checked
- X-Plane Installed Checked
- X-Plane Flown and Configured
 - Controls Control Surfaces, Trim, Throttle Checked
 - Graphics and Performance Smooth Frame-Rate Achieved
- Download TakeFlight Academy Software Checked

Install TakeFlight Academy

- Run the TakeFlight Academy installer Checked
- Launch TakeFlight Academy from Desktop Icon Checked
- Log in with your TakeFlight account Checked
- Select a maneuver, view the briefing, and click Fly Now! Checked
- Start flying! Checked

TakeFlight Academy – Prepar3D Installation Checklists

Before Installation Checklist

- Lockheed Prepar3D (P3D) Compatible PC Checked
- Flight Controls Checked
- P3D v4 or 5 Installed (any license type) Checked
- A2A 172 Installed (any license type) Checked
- P3D & A2A 172 Flown and Configured
 - Controls Control Surfaces, Trim, Throttle Checked
 - Graphics and Performance Smooth Frame-Rate Achieved
- License for TakeFlight Academy acquired Checked
- Download TakeFlight Academy Software Checked

Installation & Launch Checklist

- Run the TakeFlight Academy installer(s) Checked
- Launch TakeFlight Academy from Desktop Icon Checked
- Log in with your TakeFlight account Checked
- Select the first maneuver, view the briefing, and click Fly Now! Checked
- Start training! Checked