

Frequently Asked Questions

Aerial Robotics Virtual Lab

This document includes the most frequently asked questions about the Aerial Robotics Virtual Lab Application

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System Requirements

- Windows: 7/8/10
Mac: OS X 10.6 or newer
 - iOS
iPad 2 or newer
 - Android
Jelly Bean or newer
- 4GB Memory
Intel Core 2 Duo Processor or equivalent
Graphics card which supports DirectX 9 or newer (SM3 equivalent, 512MB RAM)
500Mb Free Storage Space

General

1. Are there descriptions of the onscreen controls?
 - Each lab has a help icon. In most labs, this is at the top left of the screen. Selecting this icon will display an overlay on the menus with descriptions of the controls. You can also select demo mode when starting the lab to receive the description of controls and functionality from the instructor avatar.
2. Can I change the format of the coordinates in the lab?
 - From the main menu, select the Settings button. You can select Decimal or DMS from the menu.
3. How can I change the difficulty?
 - You may change the difficulty at any point in the application by going to settings from the main menu and then clicking on “difficulty”
4. How do I adjust the volume
 - From the main menu, select the Settings button. The volume slider controls the volume. There is also a mute button.
5. How do I export data from each lab or assembly?
 - There are documents and videos that explain exporting data from each lab, step-by-step.
6. What do the difficulty settings do?
 - Demo mode walks you through the controls and functionality of the lab with help from the instructor avatar.
 - Basic mode provides prompts and advice as you progress through the lab at your own pace.
 - Assessment mode provides the minimum amount of avatar guidance
7. How do I delete unwanted screenshots?
 - Once you are in the screenshots folder, click on the checkboxes next to each image to select all screenshots you want to delete. Click on delete.



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Frequently Asked Questions

Assembly

8. Can I save a UAV assembly so that I can retrieve it later?
 - Once you are done assembling an aircraft, click on the wrench icon at the top right of your screen to access the settings. You may then click on Save to save your assembly with any name, and then load the assembly in the future by clicking on the load button in the same menu.
9. Can I see the UAV I just assembled at different angles?
 - You may use Free View in the settings menu of the assembly environment for a 360° view.

Communications Lab (Comms)

10. Can I edit the values of Pitch, Heading, Distance and Power without using the sliders?
 - You may enter values for the above antenna attributes by clicking on the number box. The values are highlighted to confirm that they are editable. You may then use your keyboard to enter an appropriate value.
11. What is dBm?
 - dBm, or decibel-milliwatt, is a measure of power in wireless communications. It is a variation of the more commonly used decibels (dB). It is a value of power in decibels, when referenced to 1 milliwatt.

Flight Planner

12. Can I save a flight plan so that I can retrieve it later?
 - There is save option under the flight planner menu that allows you to save your flight plan with a name that can be loaded in the future.
13. My UAV crashed before going to the flight environment. What do I do?
 - If this happened, it means that there is some vital component missing from your aircraft. Go back to the assembly environment and verify that you have installed critical components.



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Optics Lab

14. Where are the screenshots I just took?
- All screenshots are saved in the screenshots folder under the main menu. To access the screenshots folder from the Optics lab, click on Labs, click on Main Menu.

Power Plants Lab

15. I have entered all the values for my power plant design, but the propellers are not moving.
- Check if the values in your design conform to the requirements given to you in your coursework.
 - Ensure that the throttle is not at 0%.
 - Click on update outputs to ensure that your design parameters were recorded.
16. What is Reset Current?
- The reset current button can be used to reset all the design parameters before entering a new design.

