

## *Installation Guide*



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## Welcome

Welcome to RealFlight® Generation 2 with USB InterLink™ controller — the most advanced radio-control simulation available. G2 and G2 Lite create a virtual R/C world with such realistic sights and sounds, you'll hardly believe it's all a simulation!

This Installation Guide provides you with a brief overview of your new software; answers some of the most frequently asked questions; and assists you with installing and starting up your respective G2 software. For complete details and in-depth explanations of your simulator's features and functions, refer to the comprehensive RealFlight G2 manual. It will be located on your hard drive once the installation procedure has been completed.

Although RealFlight G2 and G2 Lite are similar in many ways, each does contain some features and functions that are program-specific. How you access and use those functions may differ depending on which software you've purchased. If a section of this guide makes no distinction between the programs, then that information is the same for both G2 and G2 Lite. If a difference is mentioned, however, please then refer to the section(s) of the guide that applies to your specific software.

**Note: Great Planes® is continually striving to make an already delightful product even more incredible thanks to the introduction of features which elevate both the performance and enjoyment of this simulation.**

**In fact, there are probably updates to the program that have occurred since this disk was manufactured. To take advantage of these enhancements we suggest that you update your RealFlight G2 software frequently. Updates are FREE and will only take a few minutes of your time. For information on how to update the software, please refer to page 14 of this Installation Guide.**

**Additionally, we strongly recommend updating the drivers for your video and sound cards prior to installing the RealFlight G2 software. For information on how to do so,**

please see the owner's manual that accompanied your PC, or visit  
<http://www.gpssoftware.com/kb/q01-1038.htm>

# Installing the Software

## Installing the RealFlight Generation 2 Software and the InterLink Controller

### Software Installation:

1. Close ALL open applications. This includes virus checkers and other such applications.
2. Insert the RealFlight G2 CD-ROM into the appropriate CD-ROM drive.
3. If "Auto-Play" is active setup will begin automatically when you close the CD-ROM drive. However, if "Auto-Play" is not active, click the Windows **Start** button, then click **Run**; when a dialog box appears type **d:\setup**, assuming that "d:" is your CD-ROM drive.
4. Follow the on-screen instructions to complete the setup procedure. The setup procedure will ask you for the serial number of the RealFlight software. This number is located on the back of the CD-ROM jewel case. It will also ask for the serial number for the InterLink controller. This number is located on the rear of the InterLink controller itself. Please be sure to enter the numbers exactly as they appear. When entering the serial numbers please make sure that you include all dashes, letters, etc. as found on the product serial numbers. Failure to enter the serial numbers correctly will not allow you to proceed to the next step. Once the serial numbers have been appropriately entered, the **Next** button will become active. Click on the **Next** button to continue with the installation procedure.
5. Upon completion of the RealFlight G2 setup, the installation process will continue by inquiring if you would like to install Microsoft's DirectX on your computer. If you are unsure as to whether your PC has the appropriate version of DirectX, we suggest that you allow RealFlight to install DirectX onto your computer at this time. DirectX will automatically install only the appropriate files on your computer. DirectX is necessary in order to run your RealFlight software. If, however, you do not wish to install DirectX, please click **No** at this time.
6. Click **Finish** to complete this portion of the software installation procedure. Upon the completion of the InterLink controller installation (as described below), RealFlight will need to finalize the software installation.

### InterLink Controller:

1. Since the InterLink controller uses the USB (Universal Serial Bus) port there is little to do in the way of setup. With the software installation procedure complete, plug the InterLink controller into one of the USB ports on your computer. These ports are usually labeled accordingly. Additionally, the USB port allows the controller to be plugged in with the PC "on". Therefore, there is no need to power down the computer in order to connect the InterLink.
2. The amber light on the front of the InterLink controller should begin to flash "on" and "off". This indicates that the controller is properly connected. If the light does not "blink", please remove the controller from the USB port and plug in firmly once again.  
**Note:** It is possible that Windows® will need to install the appropriate files for the InterLink controller to function correctly. Please have your Windows CD available in case it is required.

### Starting the RealFlight Generation 2 Program

1. Make sure that no other programs are currently running.

2. With the RealFlight CD-ROM in the CD-ROM drive, double click on the RealFlight Generation 2 icon located on your desktop.
3. The program will now guide you through the final installation steps and the calibration of your controller.
4. Upon completion of these final steps, RealFlight Generation 2 will start the program with a default airplane and a default flying site.

**Note:** The procedure above will allow you to pilot the RealFlight aircraft using the InterLink controller. The InterLink controller may also be used as an interface unit, allowing you to pilot the aircraft with your own R/C transmitter. *For information on how to use your InterLink controller as an interface to your transmitter, please refer to the section entitled "Using Your Own R/C Radio to Control RealFlight" of the complete manual located on the hard drive of your PC. To access this manual, click the Windows **Start** button, and then select **Programs/RealFlight/RealFlight Control Panel** from the start menu. When the RealFlight Control Panel appears on your screen, select **rflightlt.doc** or **rflight.doc** from the pull-down list located next to the **Read Document** button. After selecting the appropriate document from the list, click the **Read Document** button.*

## First Flight- Changing Aircraft and Flying Sites

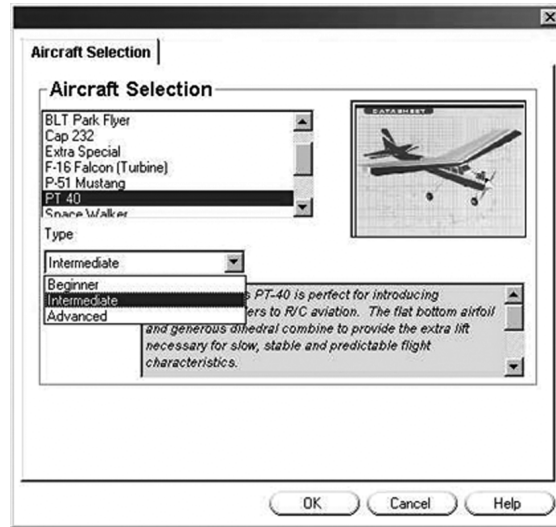
To begin your first flight with the RealFlight program, double click on the icon located on your desktop. The program will initialize the necessary items, and will then start using the pre-set defaults (including pilot perspective, flying site and aircraft).

Upon completing the initialization process, the program will go through a brief flyby. Using the default aircraft, a PT-40®, take off and fly briefly to ensure that RealFlight is functioning correctly. *If you are new to radio control, please refer to the "R/C Basics" and "Virtual Flight Instructor" sections located on pages 9 and 10 of this guide for more information on flying a radio control aircraft.*

If you wish to change aircraft, choose **Select Aircraft** from the **Aircraft** menu. When the **Aircraft Selection** dialog appears (see below), choose the aircraft that you wish to pilot. Click **OK** to return to your flight with the new aircraft selection.



G2 Shown



G2 Lite Shown

G2 Lite owners may select from any of the three skill level options for each of the available aircraft. Each of these skill level selections will vary the aircraft performance accordingly. For example, if the **Beginner** option is selected, the aircraft will appear larger on the screen and will respond somewhat slower to control inputs. If the **Advanced** skill level selection is chosen, the aircraft will respond more realistically to any control inputs given.



RealFlight G2 owners may vary aircraft performance by selecting from any combination of the several hundred adjustable parameters. These parameters may be used to accurately re-create a modeler's particular aircraft. For information on how to modify the parameters for your aircraft, please refer to the RealFlight manual located on the hard drive of your computer.

Changing flying sites is very similar to the process used when changing aircraft. Simply choose **Select Airport** from the **Airport** menu, and choose from the list of available airports.

If you feel that the performance of RealFlight is not running at its optimum on your computer, you may want to turn off a few airport objects. There are two ways you can do this. The first way is to select **Item Visibility** from the **Airport** menu. This brings up a submenu containing a list of objects. Objects marked with a check are visible; you can "uncheck" them by selecting the object from the list. The second way of turning off objects is to choose **Select Airport...** from the **Airport** menu. When the **Airport Selection** dialog appears (see diagram above), de-select the objects you want to turn off. Click **OK** to finish. The second method is preferable if you want to turn off several objects at once, since the airport will not reload until you click **OK**.

Turn to page 11 for more suggestions on improving the performance of RealFlight.

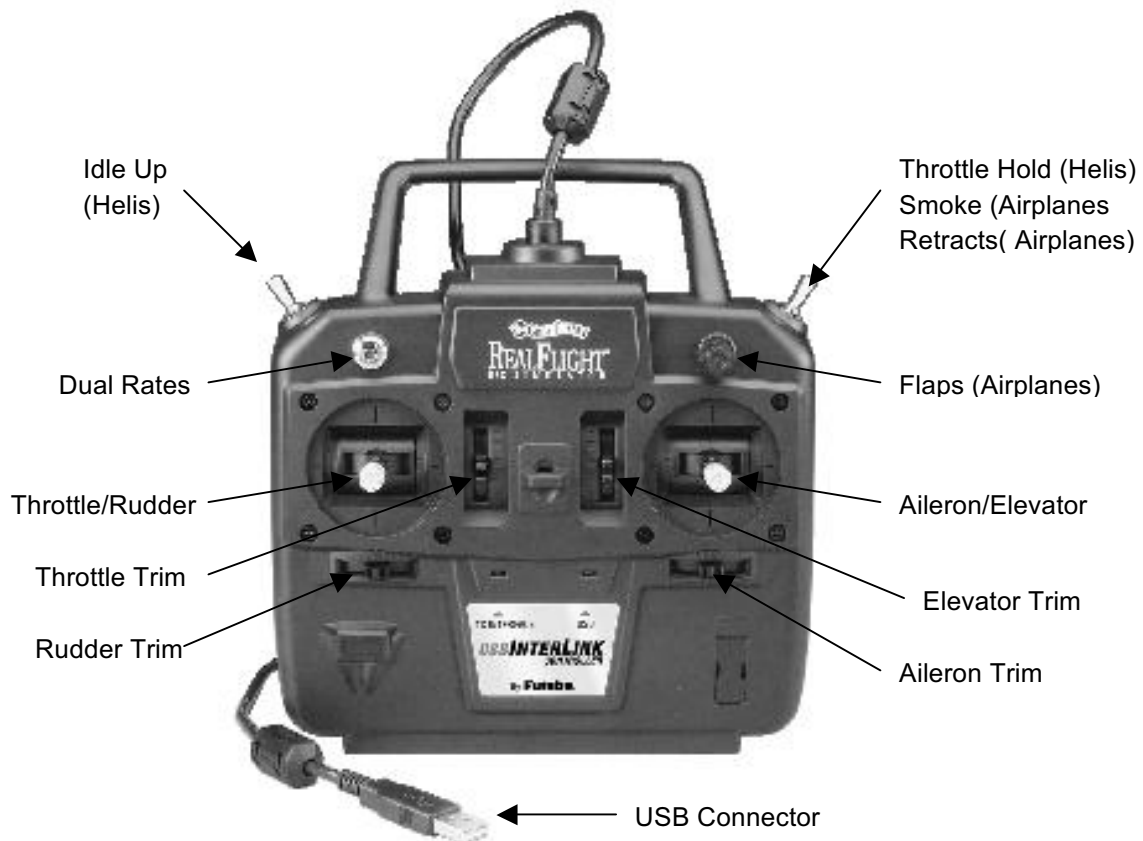
These are just a few of the basic changes that you can make with RealFlight G2. The possibilities are numerous. To discover more of what can be changed, please refer to the complete manual on the hard drive of your computer.

## RealFlight's USB InterLink Controller

The R/C transmitter is a key component to all types of R/C flying. This unique method of control is one aspect that separates R/C from every other type of aviation. Consequently, a realistically simulated transmitter is therefore, an important key to an authentic simulation of the R/C experience. As such, the InterLink has been designed from the ground up to meet the needs of the R/C purist.



Stick/trim input shown is from a Mode 2 InterLink controller. This will vary if using an alternate Mode such as Mode 1. Please note, not all aircraft will take advantage of each feature or function of the InterLink controller. Callouts shown are the standard default settings and may be customized in RealFlight Generation 2 only.



Mode 2 InterLink Shown





# Introduction to Radio Control

## Radio Control Basics

Entry-level pilots will benefit greatly from a brief introduction to R/C flight.

First of all, it is important to learn the function of each of the controls on your InterLink controller. Holding the InterLink in front of you so that the cable exits the top, you will notice that there are two sticks. These sticks are commonly referred to as gimbals. They will be used to provide the primary input to your R/C aircraft.

It is probably easiest to picture yourself as the pilot of the aircraft (with the aircraft upright) when discussing the input directions.

**Note:** The following input directions are written for Mode 2 transmitters.

Moving the left stick up or down will increase or decrease the **throttle** (or engine) speed of your aircraft. The further forward (away from you) that it is pushed, the faster the aircraft will travel. The opposite is also true. Pulling the throttle stick towards you will decrease the throttle, slowing the aircraft. In helicopters, this will not only increase/decrease the throttle accordingly, but will also control the collective pitch to move the helicopter up/down.



The left/right motion of the left stick will cause the **rudder** control surface to move left/right accordingly. When viewed from the pilot's perspective, this causes the airplane to turn left or right — on the ground and in the air. Or, in the case of a helicopter, this changes the tail rotor pitch itself to turn the helicopter left/right.



Moving the right stick up or down changes the pitch of the aircraft. Pulling the stick back, for example, causes the **elevator** control (or fore-aft cyclic for helicopters) to rise — forcing the nose to point up and thereby increasing altitude.



Moving the right stick left and right manipulates the **aileron** (located on each wing) and makes the plane tip toward one side or the other. That's how you're able to "bank" into a turn. In a helicopter, moving the right stick controls the left-right cyclic which leans or rolls the helicopter to the right/left accordingly.



There are also three switches and a rotary knob located on the InterLink controller.

The purpose or functionality of each of the switches and the knob are dependent upon which aircraft you have selected to pilot. For example, if piloting the P-51 Mustang, the rotary knob will control the position of the flaps. When piloting the PT-40 Trainer, the rotary knob does not have any effect, as this aircraft is not equipped with flaps. Additionally, RealFlight lets you edit the function of each switch or knob, to perform a variety of functions in the simulation.

Please remember, the control movements mentioned assume that the aircraft is facing away from you (tail closest to you) and that the aircraft is in the upright position. If the aircraft is coming towards you,

right input appears to be left and left appears to be right. Again, picture yourself in the pilot's seat to avoid any confusion.

Also, if the aircraft is inverted (upside down) with the wheels/landing skids facing skyward, the forward movement of the elevator will increase altitude rather than decreasing altitude. To decrease altitude, simply pull the elevator stick towards you.

A general rule of thumb for R/C is that slight, fluid movements of the stick are best. Rapid, jerky movements will cause the aircraft to respond too dramatically. The best way to learn precise control over the aircraft is to practice frequently.

## Virtual Flight Instructor

RealFlight G2 Lite includes a variety of basic, pre-recorded maneuver lessons for helicopter and airplane pilots. RealFlight G2 includes the same basic lessons, but adds a variety of pre-recorded intermediate and advanced maneuver lessons for both helicopter and airplane pilots. Whichever lesson level you choose, each lesson is narrated by a skilled, award-winning R/C pilot, who talks you through the key points of the maneuver. These pre-recorded maneuvers can be utilized to both learn new maneuvers as well as perfecting those that you already know.

During the lesson, you can use RealFlight's Advanced Flight Recorder controls to speed up, slow down, and loop segments of the maneuver, enabling you to study each phase of the maneuver in-depth. You can even view the instructor's stick movements in real time, using an onscreen digitized controller. As the instructor's aircraft is a "live" part of your simulated world, you may choose to either watch his aircraft, or fly your aircraft alongside to mimic the pro's.



To activate the pre-recorded maneuvers, select **Virtual Flight Instructor** from RealFlight's **Options** menu. This will bring up a list of pre-recorded training maneuvers. From the list, please select the recording that *G2 Shown* you wish to view. More information regarding the Virtual Flight Instructor (VFI) and the Advanced Flight Recorder is available in the complete RealFlight G2 manual, located on the hard drive of your PC.

## RealFlight G2: Menu-Based Programs

RealFlight G2 and G2 Lite are menu-driven programs. As such, you will note that there are menus that appear across the top of the screen. Clicking on a menu will, in turn, bring-up the items in the respective menu. Use the menus to access virtually any RealFlight feature with a click of the mouse.

Below you will find a brief introduction to each of the menus and their contents as found in RealFlight G2 and G2 Lite. For complete details and information pertaining to the menus, please refer to the RealFlight G2 manual located on the hard drive of your PC.

### RealFlight G2

**Airport** Click on this menu to access all of the Airport-related options.

Aircraft	This menu brings forth all of the Aircraft-related commands and options.
Events	This menu allows you to access the Events-related menus and options.
Options	This menu allows you to access a variety of Options regarding miscellaneous RealFlight G2 features and functions.
View	This menu allows you to control the view-related options such as view location/direction, etc.
Multiplayer	This menu lets you create, manage or join a Multiplayer session.
Help	As the name suggests, the Help menu is used to access a variety of options that are designed to assist you in further understanding and enjoying the RealFlight G2 simulator.

## RealFlight G2 Lite

Airport	Click on this menu to access all of the Airport-related options.
Aircraft	This menu enables access to all of the Aircraft-related commands and options.
Options	This menu allows you to access a variety of Options regarding miscellaneous RealFlight G2 features and functions.
View	This menu allows you to control the view-related options such as view location/direction, etc.
Help	As the name suggests, the Help menu is used to access a variety of options that are designed to assist you in further understanding and enjoying the RealFlight G2 simulator.

## Improving RealFlight G2 performance

Upon installation, RealFlight G2 attempts to optimize the configuration in order to achieve the best possible performance based upon your computer's specifications. If performance is less than you'd expect, below you will find some suggestions for improving the speed of the simulation:

**Note:** Please refer to the RealFlight G2 manual for detailed information on improving the performance.

- § Ensure that the drivers for the video and sound cards are up-to-date.
- § Close all other programs, especially virus checkers and network applications such as Instant Messengers, while running RealFlight. Use CTRL-ALT-DELETE to ensure that nothing else is running in the background. The process for turning off additional applications varies by operating system. For information on how to do so, we suggest that you consult the owner's manual for your particular operating system.

- § Run the simulation in **Full Screen Mode** rather than using the **Run In Window** option. To do so, uncheck the **Run In Window** item in the **Options** menu. If the **Run In Window** item is checked, you are already running in **Full Screen Mode**.
- § If running RealFlight in **Window Mode**, alter the screen resolution from 32-bit to 16-bit color. Also, decrease the size of the window.
- § Reduce the texture quality as this can have a profound effect on cards that do not have a high texture memory. To reduce the quality, select **Graphics Optimizations** from the **Options** menu, and then move the **Texture Quality** slider to the left.
- § Use PhotoField rather than the 3D Terrain option. To do so, uncheck the **3D Terrain** item in the RealFlight **Airport** menu. Note: if the **3D Terrain** item is not checked, then you are already using the PhotoField option. Alternatively, if you wish to remain in the 3D Terrain mode, you may lower the resolution of the landscape. To do so, select **Graphics Optimizations** located in the **Options** menu.
- § Eliminate shadows from the airport objects. In the **Options** menu, select **Graphics Optimizations**.
- § Eliminate the detail textures. In the **Options** menu select **Graphics Optimizations** and uncheck the **Use Detail Textures** box.
- § Reduce the graphics quality used by RealFlight. To do so, select **Graphics Optimizations** in the **Options** menu, and then move the **Graphics Quality Slider** to the left to decrease quality.
- § Reduce the number of open Gadgets. Click the “X” on each Gadget that you wish to close.
- § Eliminate the aircraft smoke. Press the `` (accent) key on the keyboard.
- § Remove the trees from the airport. In the **Airport** menu, remove the check from the **Show Trees** item. If the item does not have a check, the trees have already been removed from the airport. To restore the trees, select the **Show Trees** item and check it.
- § Eliminate airport items. In the **Airport** menu, select the **Item Visibility** item. This brings up a sub-menu containing a list of airport scenery categories. Visible categories will be noted with a checkmark. To remove a category from the airport, select the item to eliminate the checkmark next to it. Categories may be reinstated later by re-selecting them.
- § Reduce the number of recordings that are in use. Note: this is not applicable to G2 Lite.
- § Eliminate collisions. In the **Options** menu, remove the checkmark from the **Enable Collisions** menu. If the **Enable Collisions** menu item is not checked then collisions were not active previously.

You may require additional RAM for your particular computer. Check with the RealFlight Control Panel/Technical Support to see how much System RAM (Not Video Ram) you have. If you have 64MB or less of RAM, you may need to upgrade.

## If you experience difficulty with RealFlight

As mentioned previously, we strongly suggest that you update the drivers for your sound and video cards prior to attempting any further resolutions. Outdated drivers are a common cause for difficulties. Even if the computer is brand new, some manufacturers include drivers that are quite old and should be updated.

Additionally, updating the RealFlight G2 software may also resolve any difficulties you are experiencing. *For information on how update your software, please see the “Online Updates” section of this Installation Guide.*

There are a variety of resources that are available to assist you in resolving any difficulties that might arise during the installation and/or use of your RealFlight software.

**Manual-** The RealFlight G2 manual, installed on the hard drive of your PC, is a comprehensive guide that includes a wealth of information and advice on resolving difficulties, accessing features and so forth.

**Online Help-** The entire content of the manual is also available by selecting **Contents...** from RealFlight's **Help** menu. Accessing the manual by selecting **Contents...** provides you with additional indexing and cross-referencing.

**Knowledge Base-** Visit <http://www.gpsoftware.com> this site includes an indexed, searchable collection of articles that describe a variety of difficulties and solutions for G2 owners.

**Message Boards-** Peer assistance is available at: <http://www.knifeedge.infopop.net>. These discussion boards are frequently visited by knowledgeable computer users and RealFlight patrons alike and contain answers to many frequently asked questions.

**Product Support-** Generally speaking, the resources above will assist you in overcoming any potential difficulties. If, however, you are not successful in locating a solution please contact our Product Support staff.

Product Support can more efficiently assist you in solving the difficulty if you provide the following information: detailed specifications regarding your computer system (including make, model, amount of RAM, video and sound card specifications, etc.); RealFlight serial number; RealFlight InterLink Controller serial number; RealFlight simulator version number being used; and the nature of the difficulty as well. Of particular assistance would be any onscreen error messages that might appear.

If communicating via e-mail, please be sure to include a valid return e-mail address. Additionally, if you have not submitted your system information when registering online, we suggest that you also include system information at this time. This will assist our staff in rapidly diagnosing the difficulty and determining a solution.

To gather system information, for our technical support personnel, do the following:

1. In the Windows **Start** menu, select **Program Files/RealFlight/Real Flight Control Panel**.
2. Click the **Technical Support** button.
3. Click the **Assemble System Information** button.

Having generated your system report, there are two ways to send it to us. The first, preferred, method is to attach the file 'c:\cpaneloutput.txt' to an email. The second method is to click on the **Copy to Clipboard** button in the **System Information** dialog, then paste the information into the body of the email.

Should you choose to write us, please include your address and a daytime telephone number so that we can call you back or send you the relevant information. If you choose to call Product Support, please try to be at the computer that is having problems, as this will assist us in resolving the situation efficiently.

RealFlight Product Support

1610 Interstate Drive  
 Champaign, IL 61822  
 Phone (217) 398-8970 (option 1)  
 FAX (217) 398-7721  
 E-mail: [rfsupport@greatplanes.com](mailto:rfsupport@greatplanes.com)  
 Internet: <http://www.realflight.com>  
 Searchable knowledge base: <http://www.gpsoftware.com>

## Online Updates

RealFlight Generation 2 owners can download the latest version through the RealFlight Control Panel. Click the **Start** button on your Windows Taskbar, then move your cursor the **Programs** item, and then to **RealFlight**. Choose **RealFlight Control Panel**. Then click the **Online Update** button.

From the **Online Update** screen you can choose to update to the latest version or update to a specific version.

You can also choose to check the **Check for Updates Before Starting RealFlight** item. This option will look for updates one time each day RealFlight is run, and automatically update it if there is a new version available. Note: This requires that the PC has Internet access and is already connected to the Internet.

## Keyboard Mapping

### RealFlight Generation 2 Lite

Default Mappings	Key	Default Mappings	Key
Create New View	N	Edit Radio	Insert
Hide All Gadgets	H	Kill Engine	K
NavGuides	9	Pilot and Viewport Options	O
Reset Position	Space bar	Run in Window	Tab
Select Aircraft	A	Select Airport	L
Default Mappings	Key	Show Trees	T
Smoke	` (accent)	Take screen shot	Backspace
View: Look at Location	F10	Default Mappings	Key
View: Look at my Plane	F9	View: Pilot at Fixed Position:	
Named Positions	F12	Set to Current Aircraft	F11
Set to Pit Area	F4	Set with Mouse	F8
Set with Overhead View	F7	View: Pilot behind Aircraft	F6
View: Pilot in Aircraft	F5	View: Quick Look: Ground	Down arrow
View: Quick Look: Wind Sock	Left arrow	View: Zoom In	F2
View: Zoom Out	F3	View: Zoom Reset	F1
Virtual Flight Instructor	V	Weather Conditions	W

Please note the above hotkeys represent only those assignments that are active in the default settings, there are many additional options and assignments available. In order to view the complete lists please refer to the complete RealFlight G2 manual located on the hard drive of your PC

## RealFlight Generation 2

Almost every key on your keyboard may be assigned to control a function or feature on RealFlight G2. Below you find the default settings. It is also important to note that these assignments are completely customizable. That is, you can assign the hotkeys to suit your personal taste.

Default Mappings	Key	Default Mappings	Key
Chat Window	-	Advanced NavGuides	0
Edit Aircraft	E	Create New View	N
Edit Radio	Insert	Edit Airport	D
Hide All Gadgets	H	Flight Failure	F
Look At Other 1	1	Kill Engine	K
Look At Other 3	3	Look At Other 2	2
NavGuides	9	Look At Other 4	4
Playback Gadget	7	Pilot and Viewport Options	O
Recording Gadget	8	Radio Gadget	=
Run in Window	Tab	Reset Position	Space bar
Select Airport	L	Select Aircraft	A
Send Chat Message	Enter	Show Trees	T
Smoke	` (accent)	Start (Stop) Recording	R
Take screen shot	Backspace	View: Look at Location	F10
View: Look at my Plane	F9	View: Pilot at Fixed Position:	
Named Positions	F12	Set to Current Aircraft	F11
Set to Pit Area	F4	Set with Mouse	F8
Set with Overhead View	F7	View: Pilot behind Aircraft	F6
View: Pilot in Aircraft	F5	View: Quick Look: Ground	Down arrow
View: Quick Look: Wind Sock	Left arrow	View: Zoom In	F2
View: Zoom Out	F3	View: Zoom Reset	F1
Virtual Flight Instructor	V	Weather Conditions	W

Please note the above hotkeys represent only those assignments that are active in the default settings, there are many additional options and assignments available. In order to view the complete lists please refer to the complete RealFlight G2 manual located on the hard drive of your PC.

### IT IS ILLEGAL TO MAKE UNAUTHORIZED COPIES OF THIS SOFTWARE

This software contains copyrighted material and is protected under United States copyright law. Duplication of this software for any reason including sale, loan, rental or gift is a Federal crime. Any violation of this agreement shall be prosecuted to the fullest extent of the law.

**Note:** We strongly suggest that you retain your RealFlight G2 packaging, or at least the Proof(s)-of-Purchase from the packaging. These may be required to participate in future RealFlight promotions and/or rebates.

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