

# Digital Combustion



## Fire Studio 7 User Guide

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(v1.1a October 30, 2021 )

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# New in Fire Studio 7

## **What's New?**

Microsoft Windows and Apple are constantly changing the way graphics are handled on your computer. To meet those changes, Fire Studio's graphics system was once again rebuilt to handle the upcoming changes to both platform's operating systems. The result for you, the end-user is a much more robust and efficient graphics experience. Fire Studio 7 is faster on most existing machines, and will become even faster as computers are upgraded.

- Increased stability
- Smoother animations

## **Incredible New Fire Layers**

- Show specific elements of a structure burning
- Horizontal/Vertical/angled beams and posts
- Window fires front and side views
- Right-angle wood structure components

## **Default Animation Layers Now Optimized**

- Creates a much smaller simulation size
- Less stress on hardware systems

## **Unique New Layers To Create Multiple Types Of Incidents**

- New Animated Victims
- New Smoke Animation including a long building column
- New Strobe Light layer for interior alarm effects
- Additional Explosions

## **New Publish Option**

- Allow you to publish your simulation into one single file instead of two.

## **New Log Report for Libraries and Simulations**



# Installation

## **Upgrading from an Earlier Version of Fire Studio**

If you have a previous version of Fire Studio on your computer, please uninstall it before installing Fire Studio 7. Even with an upgrade purchase, the new software does not “build upon” your old version; instead, your upgraded license fully replaces it.

## **Demo Mode**

Fire Studio 7 has a free demo mode built into the software. While in Demo mode, the software functions normally with the exception of loading and saving simulations. Entering a License Number is not required when running the software in demo mode.

## **Administrator Privileges (Windows Users Only)**

Fire Studio 7 must be installed and run once using an account with full administrator privileges. Upon running the software for the first time, right-click on the Fire Studio 7 icon and choose Run as Administrator. This allows several files and/or registry entries to be created during the installation process.

Once Fire Studio 7 has been installed and run once, it can be used by non-administrator accounts. However, additional permissions may be required depending on the level of security on the system and the version of Windows you are using.

In order to run properly, users of Fire Studio 7 should have FULL PERMISSIONS (read, write, modify, delete, etc.) to the “Fire Studio 7” folder and all of its sub-folders. The default location for this folder is C:\Documents\FireStudio7.

## Installation (cont.)

By default, a FireStudio7 folder will be created in the Documents library in Windows to help eliminate many of the security restriction problems that sometimes arise.

### **Remote Desktop Installations \*Not Supported\***

Fire Studio 7 is not designed to be remotely installed and Digital Combustion, Inc. cannot provide technical support, nor guarantee the software will work correctly if an installation or activation is attempted in such a way. Please install Fire Studio 7 locally on the machine that will be running the software.

### **Installing on a Server \*Not Supported\***

Fire Studio 7 is not designed to be installed and run remotely from a server. In other words, it must be installed and used by someone physically located at the device. Digital Combustion, Inc. cannot provide technical support nor guarantee the software will work correctly if the end-user attempts to use the software from a remote terminal or similar configuration. Furthermore, it is a violation of the EULA should more than one person be running the software remotely in excess of the number of purchased licenses.

Example of a Server Setup: Installing software onto a shared server or cloud server, which end-users log into from their remote stations.

# Installation (cont.)

## Windows

### Installing Fire Studio 7 (Windows)

#### Step 1: Finding the Files

After downloading your software from the online Customer Portal, navigate to the folder where you extracted the files from the downloaded ZIP file. You should have the following files:

When you download Fire Studio 7, the installation files are all in a single compressed file commonly called a "Zipped" file. The installation files MUST be extracted first before you can install the software. If you are unsure of how to do this, do an internet search for "extracting zipped files" in your favorite search engine.

Once you extract the files, you should see the files pictured below:

Name	Date modified	Type	Size
 FS7IN1.CAB	9/16/2021 9:59 AM	Cabinet File	204,800 KB
 FS7IN2.CAB	9/16/2021 9:59 AM	Cabinet File	204,800 KB
 FS7IN3.CAB	9/16/2021 9:59 AM	Cabinet File	204,800 KB
 FS7IN4.CAB	9/16/2021 9:59 AM	Cabinet File	204,800 KB
 FS7IN5.CAB	9/16/2021 9:59 AM	Cabinet File	168,352 KB
 FS7Install.msi	9/16/2021 9:59 AM	Windows Installer ...	1,926 KB
 setup.exe	9/16/2021 9:59 AM	Application	511 KB

#### Step 2: Launching setup.exe

Begin installation by double-clicking on setup.exe and follow the instructions presented on the screen.

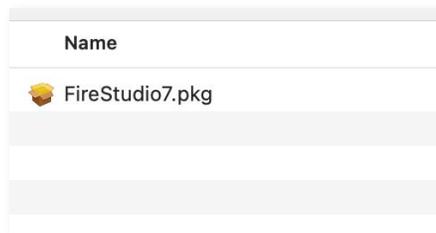
# Installation (cont.)

## Mac

### Installing Fire Studio 7 Mac

#### Step 1: Finding the Files

After downloading your software from the online Customer Portal, navigate to the folder where you extracted the files from the downloaded ZIP file. You should have the following file:



Begin installation by double-clicking on FireStudio7.pkg file and follow the instructions presented on the screen. You may have to allow the software to install if Digital Combustion shows as an unknown developer. Allow this in your Privacy and Security settings.



Click on Open Anyway. Fire Studio will begin installing.

# Activating Your Software

**License ID and Activation Password will be required for activation.**

You can find this information on your invoice or receipt, as well as through the new Customer License Portal. These credentials will be provided by Digital Combustion, Inc. when your order has been processed (after purchasing). Please keep this information securely in your records to protect against unauthorized use and also for future activation or deactivation purposes.

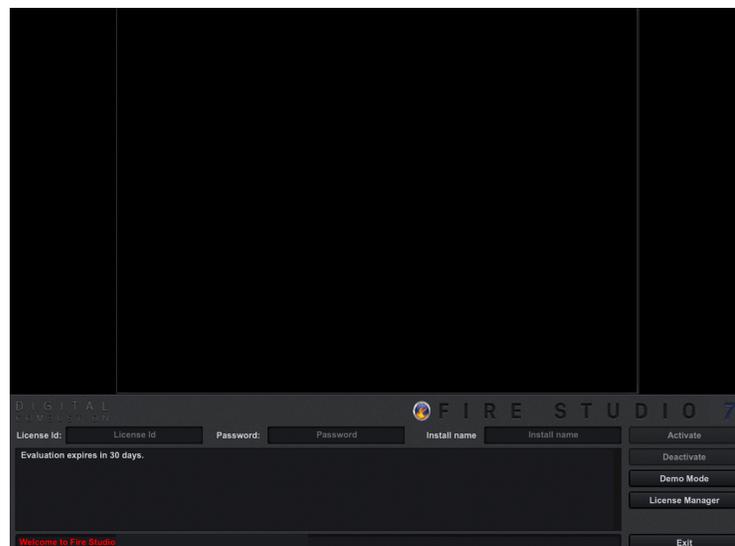
**An Internet connection is required for activation.**

Purchasing a license for a Fire Studio product allows 1 activation per license. If you follow the instructions in this manual correctly, you can move your active license an unlimited number of times.

When you activate, the software will configure itself according to the entered code. Player codes will set the software to a Player Edition, an Instructor code to an Instructor Edition, and a CommLink code to CommLink software.

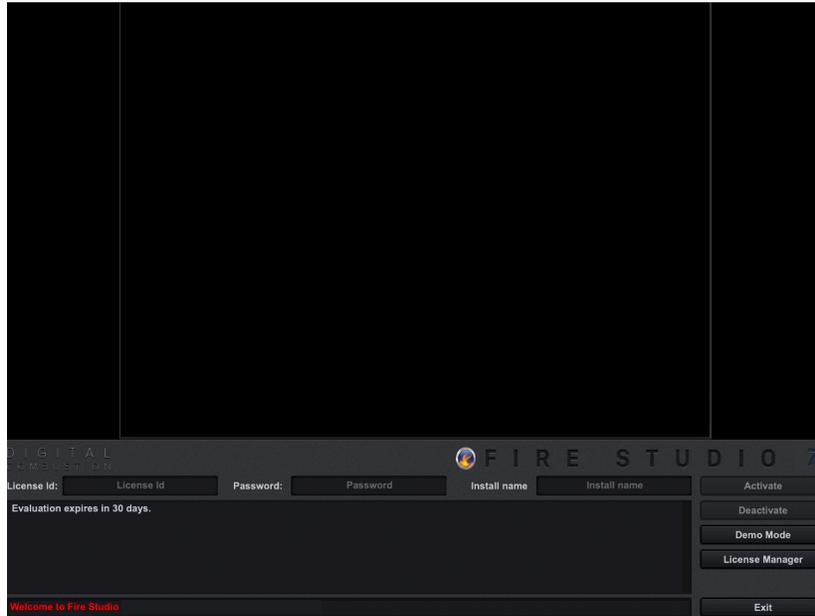
## **Report/License Panel**

When you are ready to activate the software for the first time, you must display the License Panel. The License Panel is displayed every time you start the program until you activate the software. It also displays the currently installed version of the software.

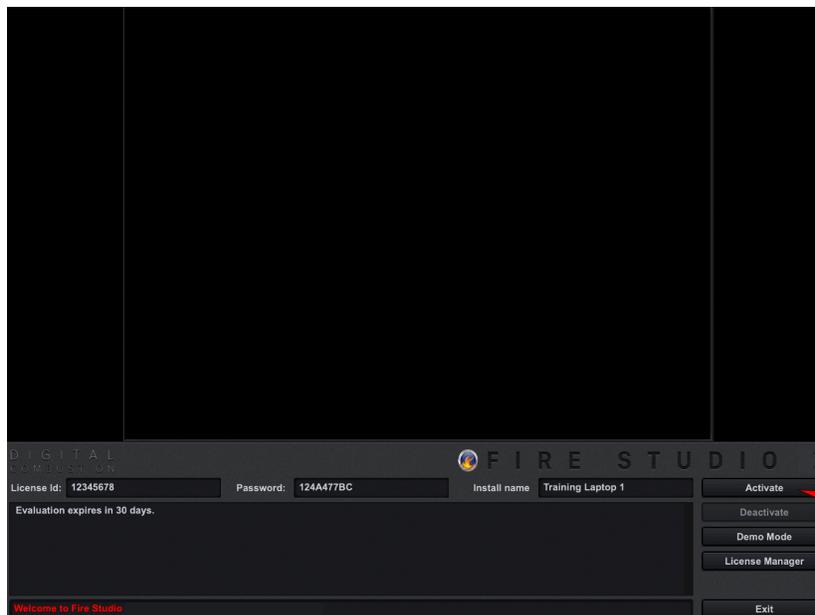


# Activating Your Software Report/License Panel

After starting the software, the License Panel will be displayed. You will see this screen:



Enter your License ID and Password. This information can be found in your email receipt or in your Customer Portal. Also, fill in the Install Name to identify this installation:

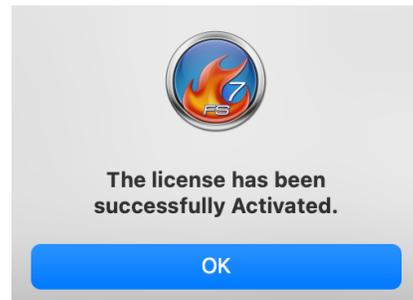


# Activating Your Software Continued...

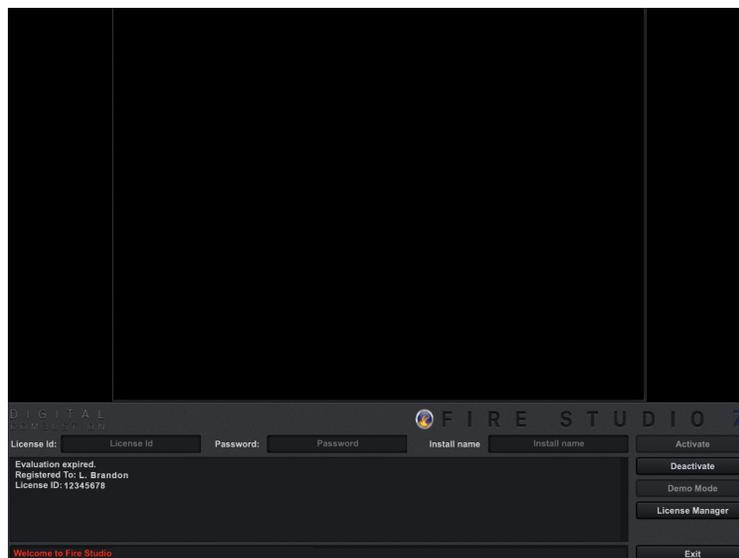
You should see this dialog box:



Followed by this dialog box:



Once you click "OK", Fire Studio will automatically quit. When you restart Fire Studio, it will start in the licensed version that you purchased. Press the "**R**" key at any time to see your license information and software version number.

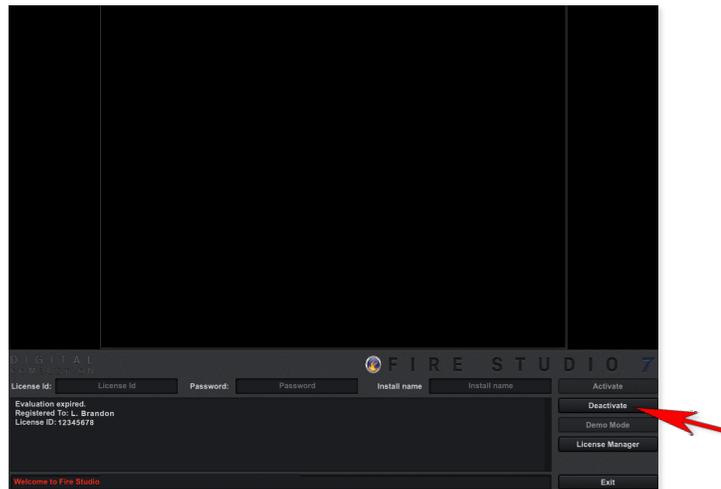


Once your software is activated, you should not need to do it again unless you update your computer's operating system. Your license can only be activated on one computer. If you wish to move your software to a different computer, see the next section entitled "Moving/Deactivating Fire Studio."

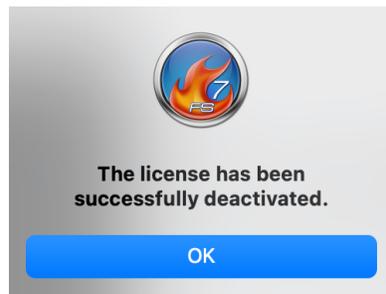
# Moving/Deactivating Fire Studio

## Moving your software to another Computer

If you wish to remove Fire Studio from your computer, your first step should be to deactivate the license so that it may be used on another computer. All activations and deactivations are handled through the Report/License Panel. NOTE: You **MUST** deactivate **BEFORE** uninstalling the program!



Start Fire Studio and Press the “R” key on your keyboard to show the Report/License Panel. Click the “**Deactivate**” button. You should see this dialog box:



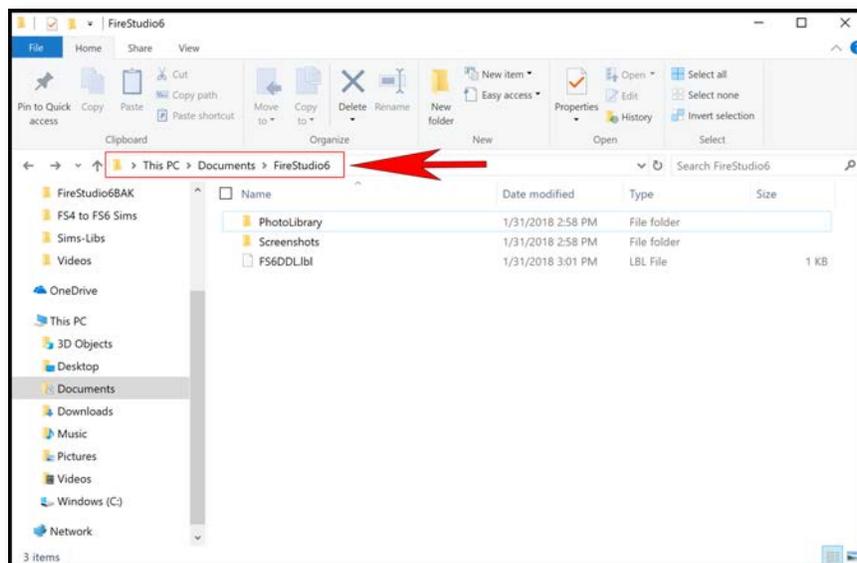
Fire Studio will automatically exit. Your license will be available to install somewhere else. You can leave the deactivated program on your computer if you think you might want to move it back at some point. Otherwise, it is safe to uninstall Fire Studio from this computer.

# File Management

## Keeping Track of Your Files

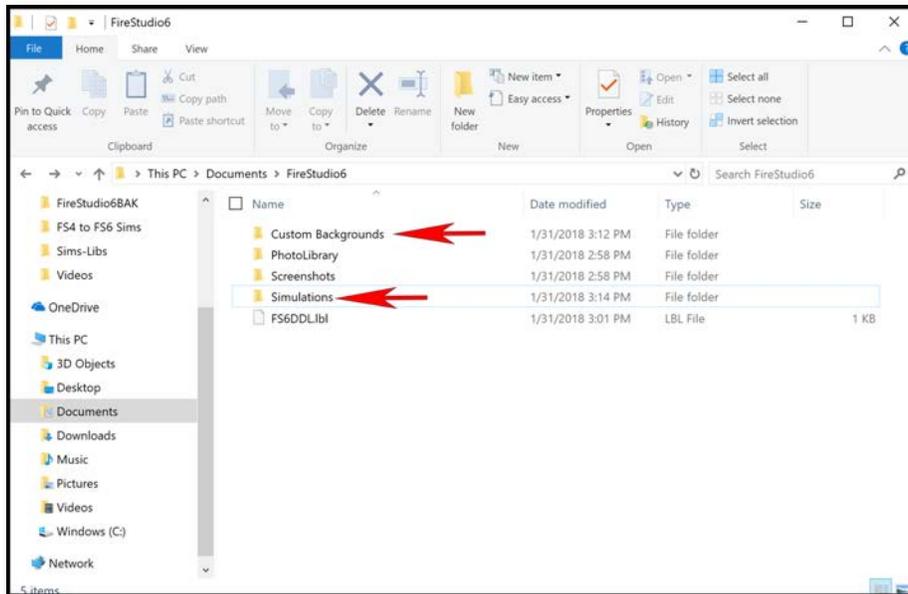
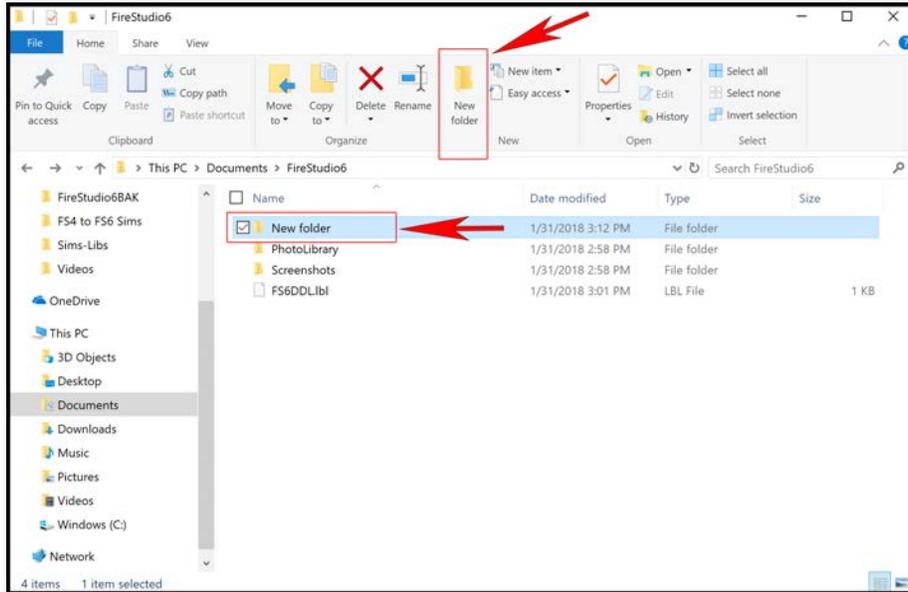
Before you start using Fire Studio, it's a good idea to take a look at your file management. Once you start creating and saving simulations, you will need to save files onto your hard drive. This will include the actual simulation files, but will also include any custom files that you bring into the program. Initially, you will probably want to bring in your own custom backgrounds. It's important to start organizing these files right from the start. Once you place your custom files in a location, Fire Studio will look in that same location each time you use the program. If you decide to move those files later, some of your simulations may not open properly.

When you start Fire Studio for the first time, a set of folders are created under **Your PC/Documents/FireStudio7**.



You can see that a couple of other folders are created. This is a great location to add as many other folders as you want. This includes folders for different backgrounds, sounds and simulations.

Here is an example:



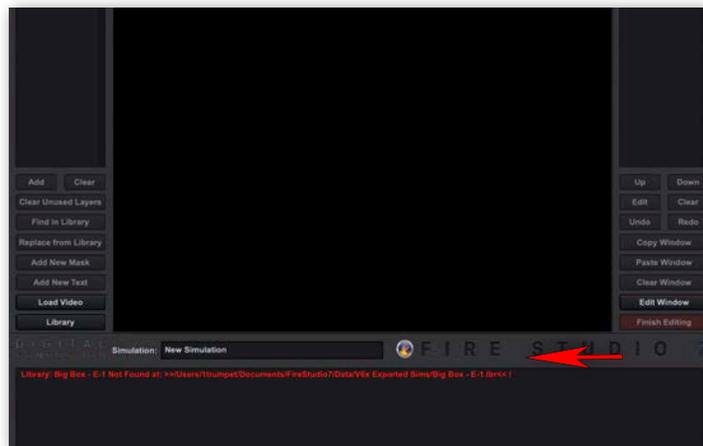
In this example, we've added a couple of folders (Custom Background and Simulations). You can add as many folders as you need now, and as many as you need later.

\* It is recommended that you **DO NOT** store your files on your desktop! On computers where there are multiple users, files may not be located properly, or may be moved or deleted by other users.

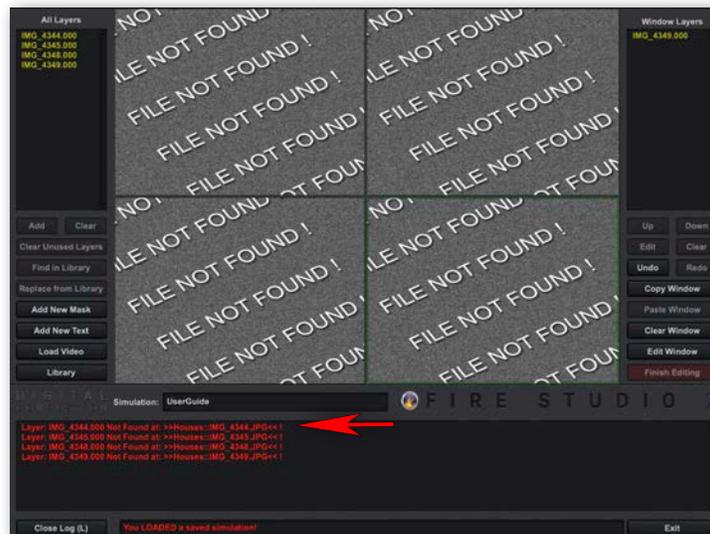
# Log Panel

## Finding Missing Files

When you first start Fire Studio 7, the program checks to see if everything needed to run is there. If it finds missing Libraries, a Log Panel will pop up reporting the missing libraries. In the example below, it is reporting that the Library named BigBox-E-1 is missing. It also reports where the file was supposed to be found by showing the path of the specific files. This will happen if any of the currently loaded libraries were deleted or moved to a different location. You should **NOT** move libraries after they are loaded. If you still have the files, you can move them back to their original location. Otherwise, you will need to remove that library and build a new one. To hide the log panel, press the "L" key on your keyboard. To see the log panel, press the "L" key again at any time you are in Author Mode.

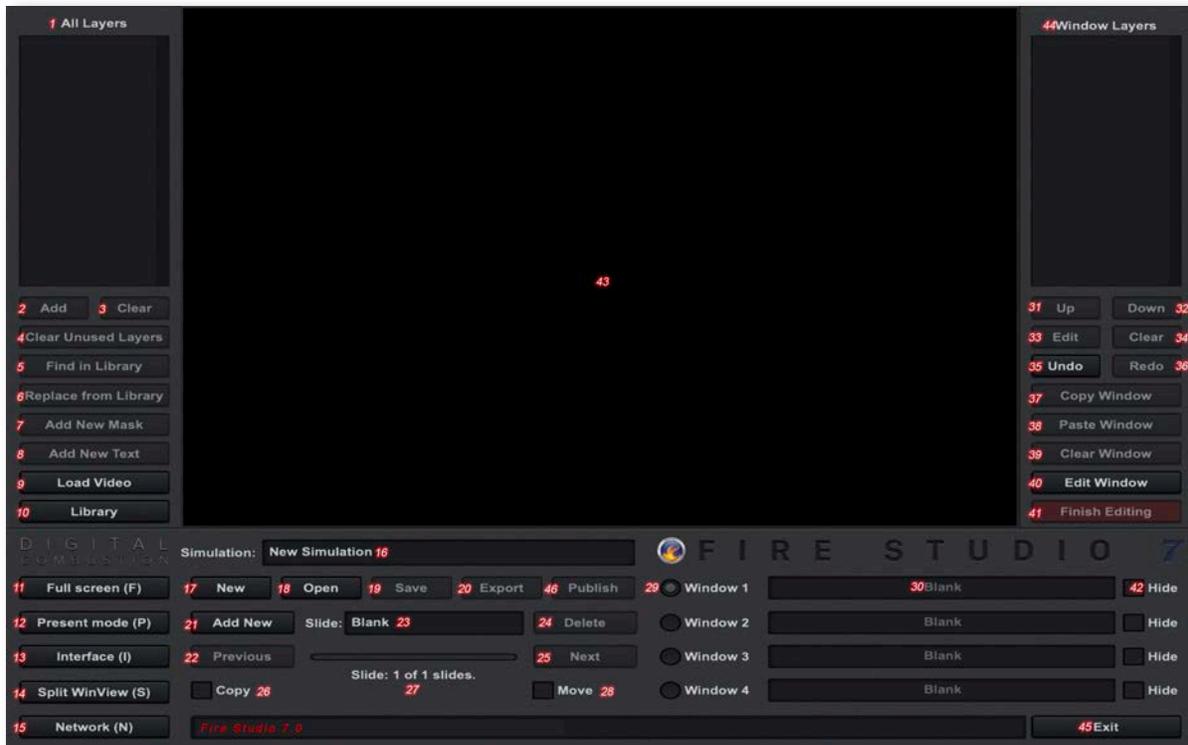


The information shown in the Log Panel can be very helpful if you are getting "File Not Found" errors in your simulation (see below). If you are sharing a computer, someone else may have moved your files to another location without you knowing it, or you cleaned up your files and moved them accidentally. This is why we always recommend keeping all of your files and folders under **Documents/FireStudio7/**. See the section "**File Management**"



# Interface Overview

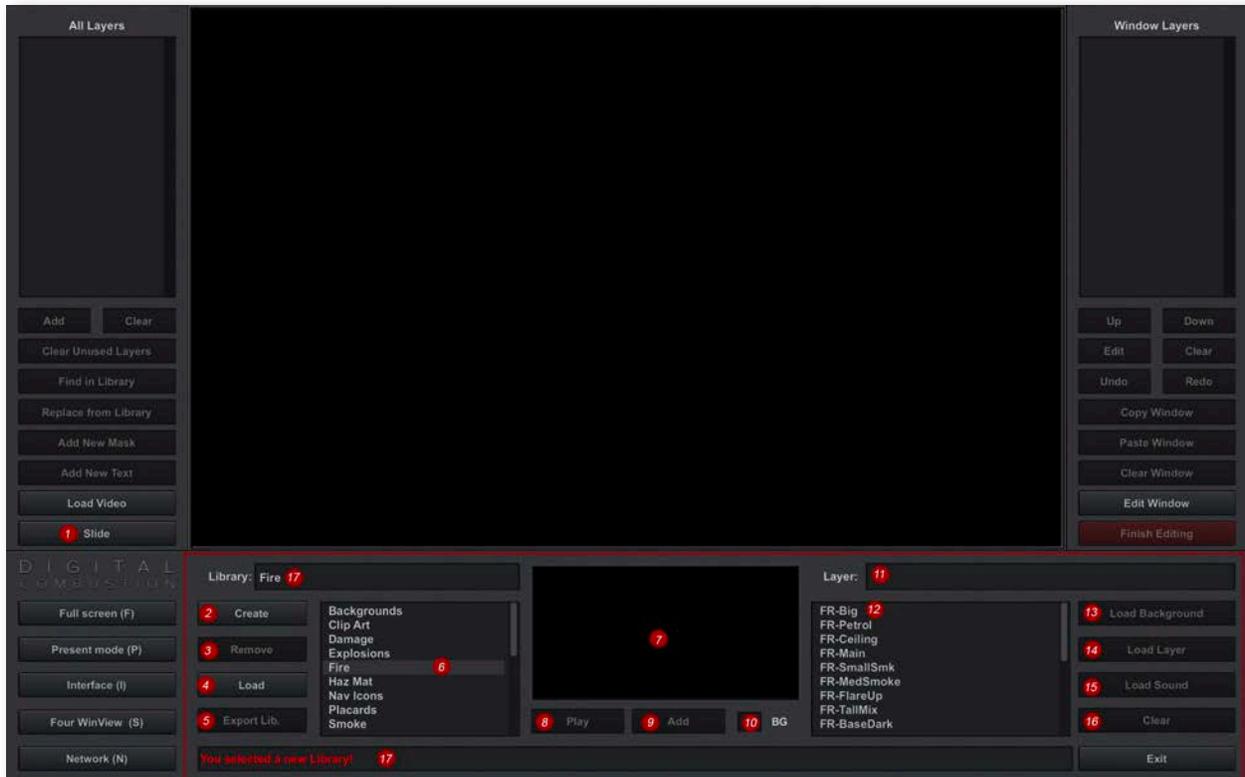
## Slide Panel



1. **All Layers List** - Shows every layer in the entire simulation.
2. **Add** - Add the selected layer to the screen.
3. **Clear** - Clear the selected layer from the list.
4. **Clear Unused Layers** - Clears all unused layers from the list.
5. **Find In Library** - Attempts to find selected layer in the Library.
6. **Replace From Library** - Replaces the selected layer.
7. **Add New Mask** - Adds a new Mask to the screen.
8. **Add New Text** - Adds a new Text Layer to the screen.
9. **Load Video** - Loads a video background to the screen.
10. **Library** - Toggles between the Slide and Library Panel.
11. **Full Screen** - Puts the Interface in full screen mode.
12. **Present Mode** - Enters Present Mode. (Removes interface)
13. **Interface** - Removes Interface, preserves editing mode.
14. **Four Win View** - Enters Split Screen Mode.
15. **Network** - Enters the Network Panel (CommLink Connect)
16. **Simulation** - Displays the name of current simulation.
17. **New Sim** - Opens a new empty simulation.
18. **Open** - Opens a saved, exported or published simulation.
19. **Save** - Saves the current simulation.
20. **Export** - Exports the current sim into 2 files for moving.
21. **Add New** - Adds a new slide to your current simulation.
22. **Previous** - Navigates to the previous slide.
23. **Slide** - Displays the name of the current slide.
24. **Clear** - Clears the current Slide from the simulation.
25. **Next** - Navigates to the next slide forwards in the simulation.
26. **Copy** - When checked, copies the current slide with Add New.
27. **Slide Number** - Shows the current Slide number.
28. **Move** - When checked, moves the current slide when needed.
29. **Window** - Shows which window is active/selected.
30. **Window Name** - Shows the Window name.
31. **Up** - Moves selected layer up on the list (back).
32. **Down** - Moves the selected layer down on the list (forward).
33. **Edit** - Enter Edit mode for the selected layer.
34. **Clear** - Clears (removes) the selected layer from the Window.
35. **Undo** - Steps back the last edit that was made.
36. **Redo** - Steps the last edit forward.
37. **Copy Window** - Copies the entire contents of the Window.
38. **Paste Window** - Pastes the contents of the Clipboard.
39. **Clear Window** - Clears the entire content of selected Window.
40. **Edit Window** - Enters into Edit Mode for the current Window.
41. **Finish Editing** - Finishes editing and closes Edit Panel.
42. **Hide** - Hides the Window in Present Mode when checked.
43. **Simulation Display** - This is where the simulation is displayed.
44. **Window Layers** - Shows every layer in selected Window.
45. **Exit** - Exits the program.
46. **Publish** - Publish the open sim to a single file for moving.

# Interface Overview

## Library Panel



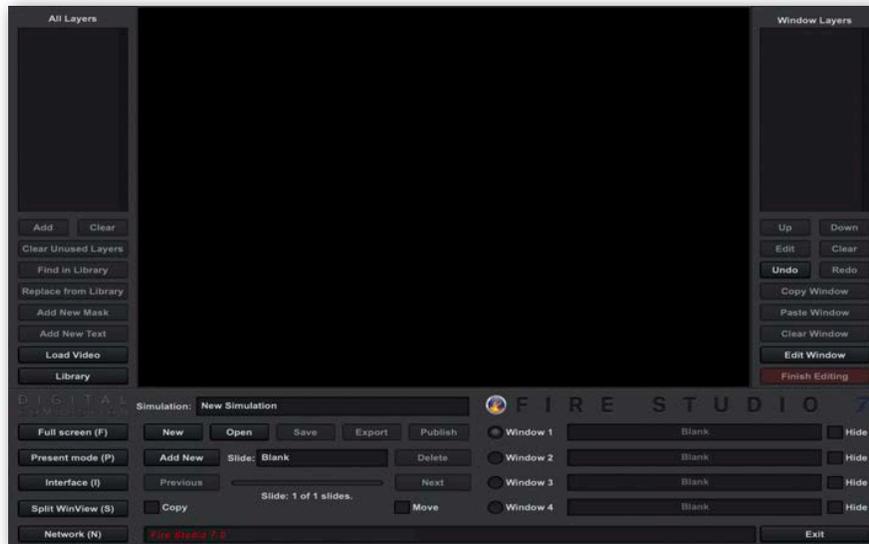
1. **Slide Button** - Toggles between Slide/Library Panel.
2. **Create** - Creates a new Library.
3. **Remove** - Removes selected Library from list.
4. **Load** - Loads a saved Library.
5. **Export Lib** - Exports legacy Library. (Rarely used)
6. **Loaded Libraries** - Lists the currently loaded Libraries.
7. **Layer Viewer** - Shows a preview of the selected Layer.
8. **Play** - Plays the selected audio layer.
9. **Add** - Adds the selected layer to the Simulation Window.
10. **BG** - Toggles between black/transparent viewer backgrounds.
11. **Layer** - Displays the currently selected Layer.
12. **Layer List** - This is the layer list of currently selected Library.
13. **Load Background** - Loads a new Background to the Library.
14. **Load Layer** - Loads a new DCA file to the Library.
15. **Load Sound** - Loads an audio layer to the Library.
16. **Clear** - Removes selected layer from Library.
17. **Library** - Displays currently selected Library.

There are other panels on the interface that we will discuss later in the manual. The diagrams above are good references to refer to as you first start to explore Fire Studio.

# Interface Overview

## Author and Present Modes

When you first start Fire Studio, you will see the screen shown below:



This is known as **“Author Mode”**. This is the mode you will be in to create your simulations. The keyboard shortcut **“A”** will get you back to Author Mode if you are in a different mode. On the left side of the main panel there is a button labeled **“Present Mode”**. (See below).



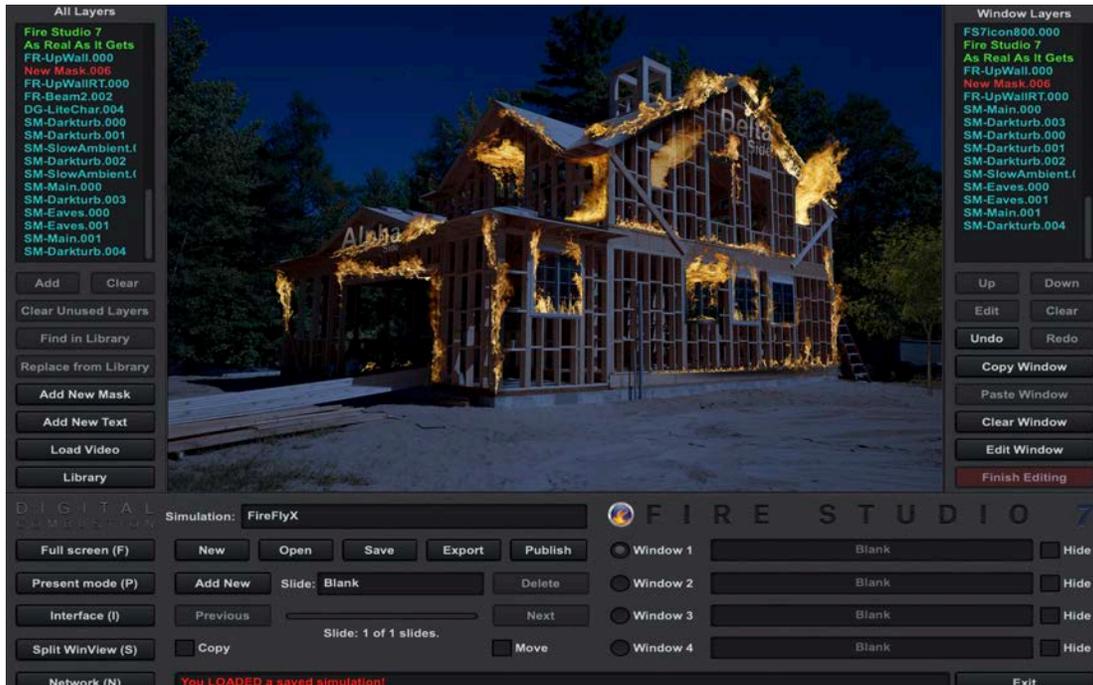
**“Present Mode”** is used to remove the interface and “Present” your simulation. You can use the keyboard shortcut **“P”** to enter Present Mode. Once you are in Present Mode, the only way to return to Author Mode is to use the **“A”** keyboard shortcut, since the button is not showing.

If you enter Present Mode before you have a simulation opened, the screen will be black. Simply press the “A” key to return to Author Mode.

# Interface Overview

## Author and Present Modes (Cont.)

The screen below shows a simulation displayed while in Author Mode. All of the interface elements are available to edit the simulation.



This next screen shows the same simulation displayed in Present Mode. Note that all of the interface controls are hidden.



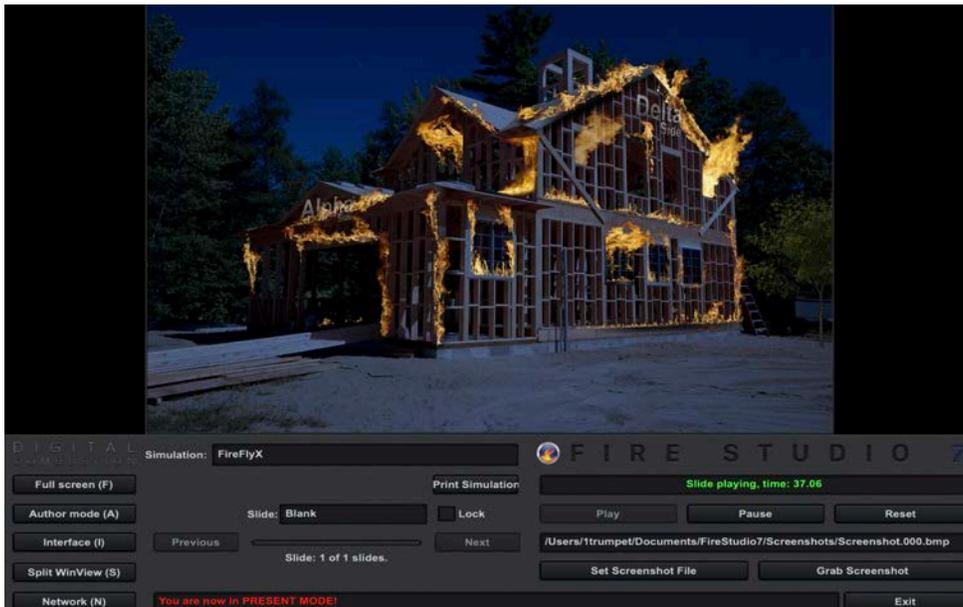
# Interface Overview

## Optional Interface in Present Mode

The simulation below is in Present Mode. There is another interface option that is only available while in this mode. It is activated with the “I” (for Interface) keyboard shortcut.



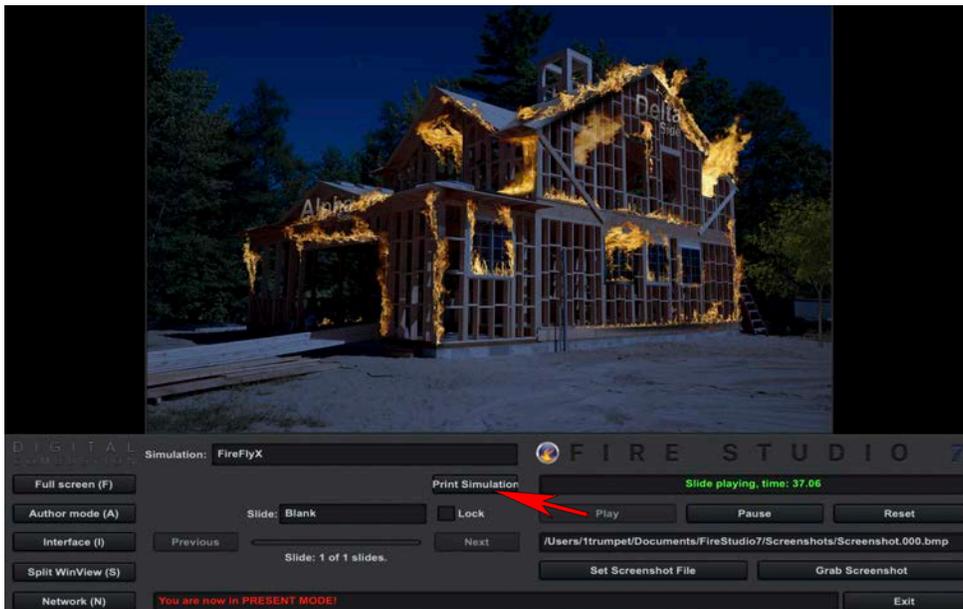
Pressing the “I” key will bring up the interface shown below:



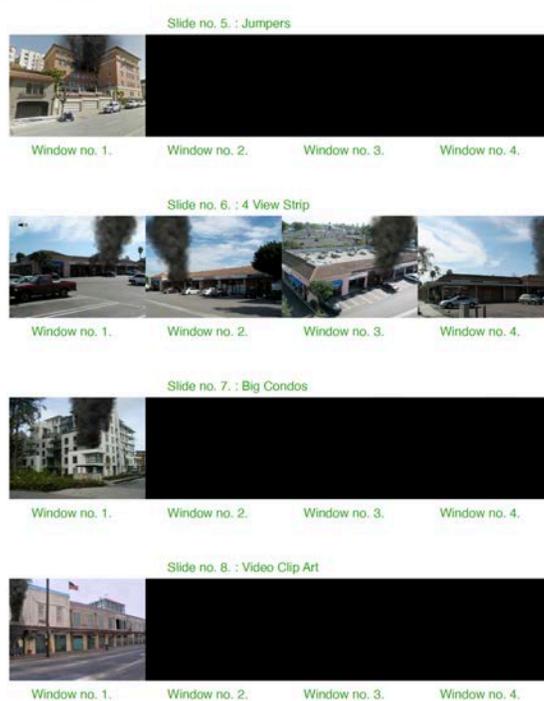
This interface gives you some basic controls that are also found on the main panel. In addition, it allows you to set a location for saving screenshots as well as a button for grabbing screenshots. You can also print your simulation from here.

# Interface Overview

## Print Simulation



Clicking the "Print Simulation" brings up a dialog box asking where you want to save your printed simulation. The printed simulation is a PDF file with thumbnails of every slide in your simulation. Here is an example page from a printed simulation:



Printing your simulation is helpful for keeping track of large simulations. You can also write notes on your printed sim.

# Interface Overview

## Mini Navigation Panel



While you are in Presentation Mode, press the “tab” key on your keyboard.



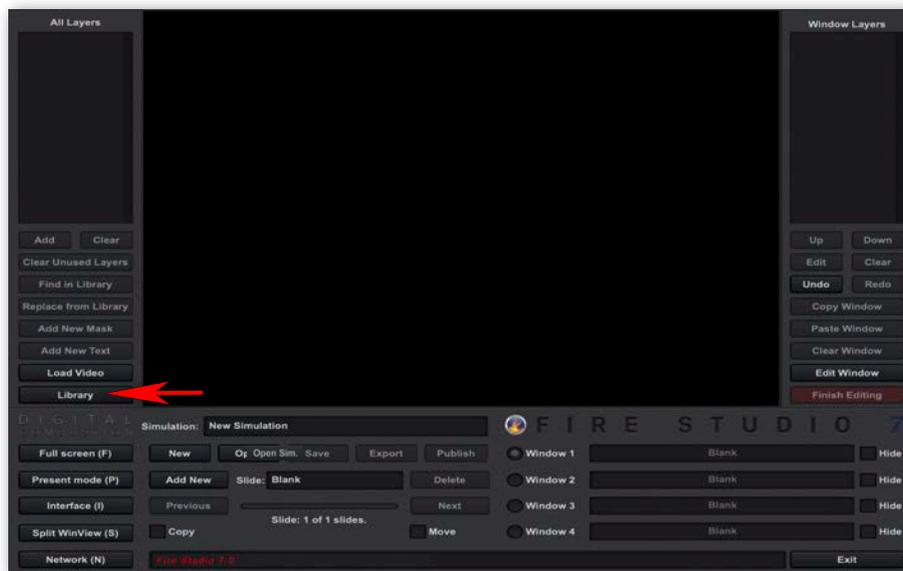
A mini navigation panel will appear. Press the “tab” key again to hide the mini-panel. Checking the “Lock” box will allow you to scroll through your slides without changing the slide that is displayed. Unchecking the “Lock” box will cause the simulation to jump to that slide.

# Layers

## Backgrounds

Building simulations in Fire Studio is achieved by stacking different *Layers* together to create a realistic view of an emergency incident. The first layer is started with a **background** image as the base. It can be a still image or a video clip. For now, we will focus on the still image. The most common format is **.jpg** or JPEG. You can also use **.bmp**, but .jpg is much more common.

Open Fire Studio and find the Library Button. This button toggles between the Slide and Library Panels. When Fire Studio first opens,



After clicking on the Library button, you will see the Library Panel. This is where you will see the Library list. The first library on the list is Backgrounds. Fire Studio comes with over 140 images in the default **Background Library**.



# Layers

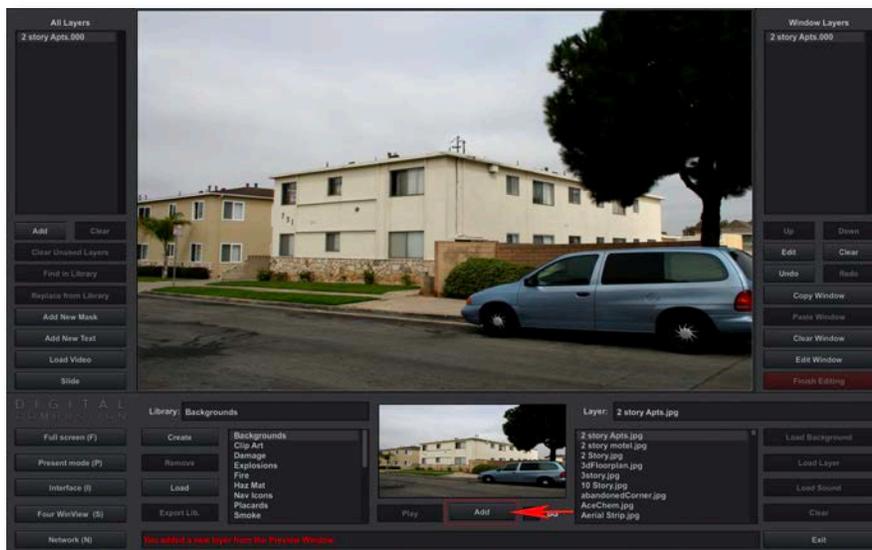
## Backgrounds (Continued)



The Layer List on the right side of the Layer viewer shows the contents of the selected Library. In this case, you can scroll down the list to see all of the images contained in the Background Library. When you click on one of the image names, the image will show in the Viewer. In the example above, 2 story Apts.jpg is selected.

## Adding Backgrounds

To add the selected image to your simulation window, click the **Add** button. It will look like the screen below:

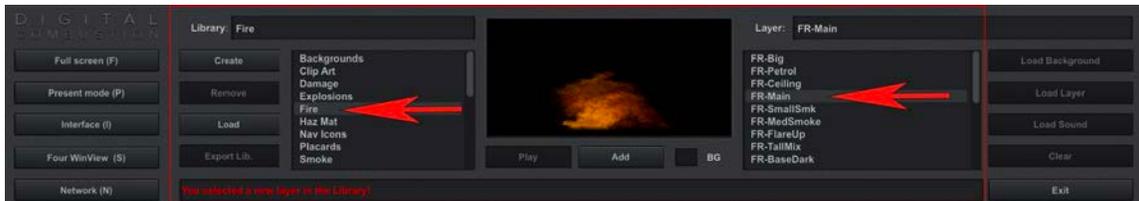


Your image is now being used as the background for your simulation. You can select a different image and select **Add** again. The current image will be replaced by the new image.

# Layers

## Animations (DCA Files)

One of the most powerful features of Fire Studio is the realistic animation layers that are used to create your simulations. These layers include smoke, fire, haz-mat elements, victims and more. These proprietary files have a DCA extension, which stands for Digital Combustion Animation. There are hundreds of DCA files included in Fire Studio. Take a look at the different Libraries in your Library List:



The image above shows the **Fire Library** (left) selected. On the **Library List** (right), the layer named FR-Main is selected. Anything with the "FR" prefix lets you know that this is a fire layer.

Clicking the "Add" button will add the layer to the screen.



There is a green box around the added fire layer. This box lets you know which layer is selected. You can toggle the green box on and off by using the space bar on your keyboard.

# Layers

## Moving Layers



Once you add a layer to the screen, you can move it around by clicking and holding down your left mouse button. Move the layer, placing it wherever you want it. Try adding more layers to the screen. Move them around. That's all there is to it moving a Layer!

# Layers

## Scaling Layers



Click on the **"Edit"** button as shown above. This will open the **Layer Edit Panel**.

# Layers

## Scaling and Rotating Layers



When you open the **Edit Panel**, you will see all of the options you have for modifying a layer. The red **Position** button on the left is the default starting point for editing a layer. For now, we will look at the **Scale** option, highlighted above. Move the Scale slider and watch the size of the fire on the screen. You may have to move the layer if it scales up and moves off screen.



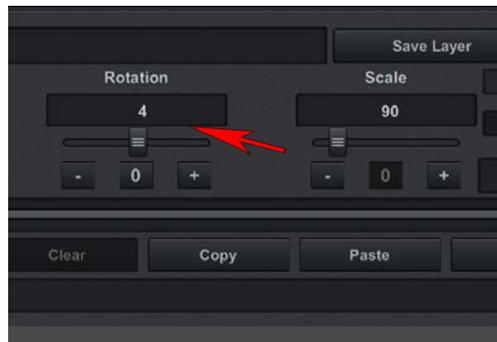
Use the slider to scale the fire back down to around 90. Move the layer to the window shown on the image on the next page. Next, we'll learn how to rotate a layer.

# Layers

## Scaling and Rotating Layers



You can see that the layer is up in the window, but doesn't quite line up.



Move the Rotation slider to the right about 4 degrees.



Now the fire is even with the bottom of the window.

Now you should be able to scale and rotate any layer in Fire Studio. In addition to using the slider, you can also use the + and - buttons. You can also use the scroll wheel on your mouse by holding the left mouse button + scroll wheel to scale, and the right mouse button + scroll to rotate.

# Custom Content

## Adding your own Backgrounds

The ability to use your own photos is one of the most important features of Fire Studio.

One of the first things you should do before creating your own simulation is set up a custom content folder on your computer. As seen in the previous section "**File Management**" in this User Manual.

Thinking ahead, plan on organizing your folders and subfolders for the simulation you are going to build. Then, add all of the custom photos you plan on using in your folder for organization. Set up your folders in a way that makes most sense to you.

### **\*Important Note on Image Size:**

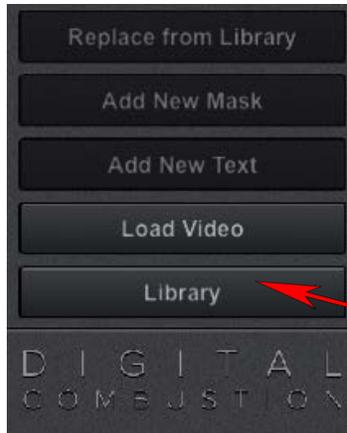
Many cameras are able to take very high resolution pictures, some over 5000 pixels in width or height or larger. This may overwhelm some graphics cards and cause the background to **fail to display**. Keep the maximum pixel count of the width somewhere around 2000 as a maximum to avoid (unnecessarily) using too much of your resources.

**Tip:** When saving, save your simulations to the *Documents/Firestudio7* folder. This keeps your files separate from what other users see. This will keep potential candidates from seeing the simulations or background photos. However, if you should desire to share your content with other users, you will want to place your folder somewhere public such as directly in a shared folder.

**Note:** *Wherever you decide to save your libraries must be a permanent location and should not be moved at a later time, as this will cause your simulations to fail loading, and show missing layers.*

# Custom Content

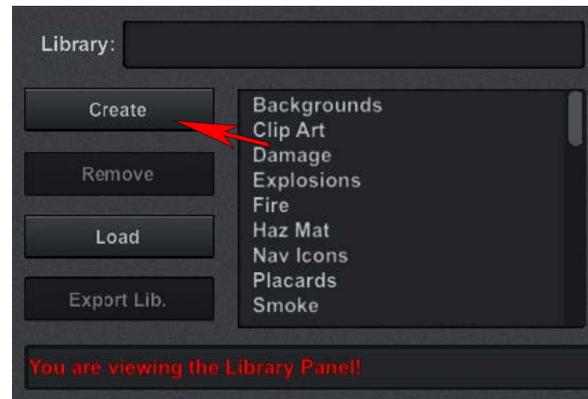
## Adding your own Backgrounds (continued)



**Step 1:** Start Fire Studio so you're at the main console view. On the left side click on the button that reads **Library** to change the interface at the bottom to the *Library Panel*.

1. To the left of the *Preview box* is the **Library List** that shows all of the libraries you currently have loaded. When you first use Fire Studio, only the default libraries that came with the software will be listed, but **you will need to create a new Library in order to add your own content.**

2. Click on the **Create button.**
3. A file explorer window will appear. Navigate to the location where you'd like to create your new library file, type in a name for the library in the File name box, and then click *Save*.



4. You will be brought back to the Fire Studio screen. Scroll down the Library List and you will see your new library at the **bottom.**



# Custom Content

## Adding your own Backgrounds (continued)



6. Click on the library to highlight it and you'll notice there is no content listed to the right as we have yet to load any. Let's do that now!

### Step 2: Load Backgrounds into your Library

1. With your Library selected, click on the *Load Background* button located at the far right of the Library Panel. **Note:** If you were adding clip-art or any new fire or smoke layers, you would use the *Load Layer* Button. And for adding a sound clip, *Load Sound*.



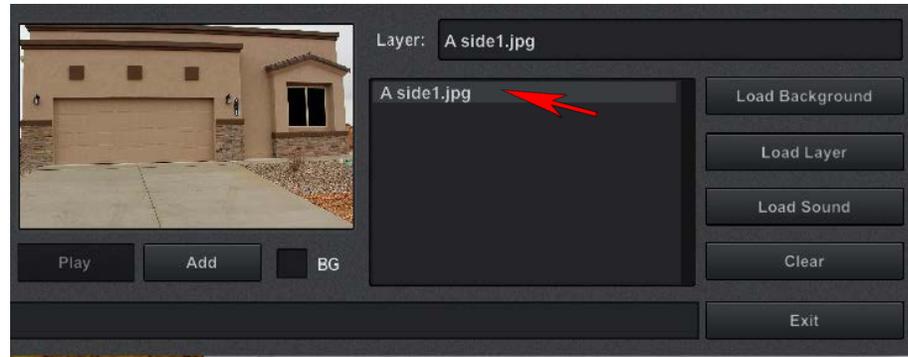
2. A file explorer window will appear. Navigate to the location where you placed your photos.

3. Select your photo and click on the *Open* button.

# Custom Content

## Adding your own Backgrounds (continued)

4. You will be brought back to the Fire Studio console and will now see your photo listed in the box to the right of the *Preview Box*. Selecting the photo will show you a preview of the image.



5. To add your photo to the current active window, simply click the **Add** button located just below the Preview Box.



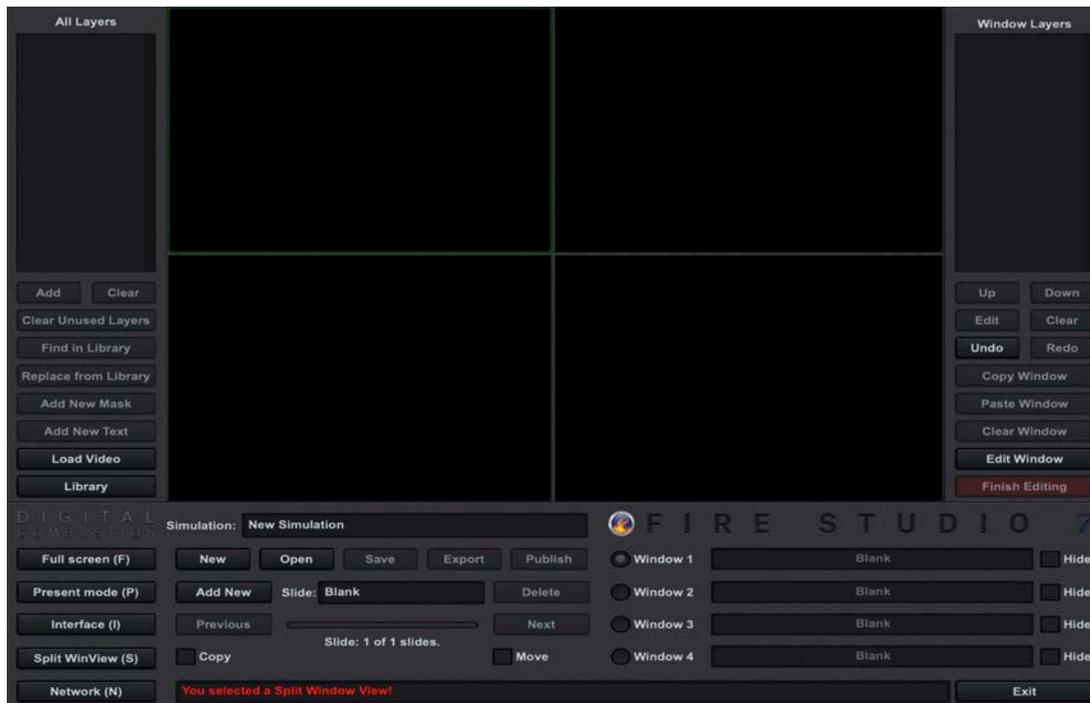
Congratulations! You've now added your custom background photo. Feel free to add more photos to your library.

# Custom Content

## Add Backgrounds to Split Window View

The Split Window View allows you to view up to four sides of a structure. You will first need to take photos of all sides of the structure you want to use in your simulation.

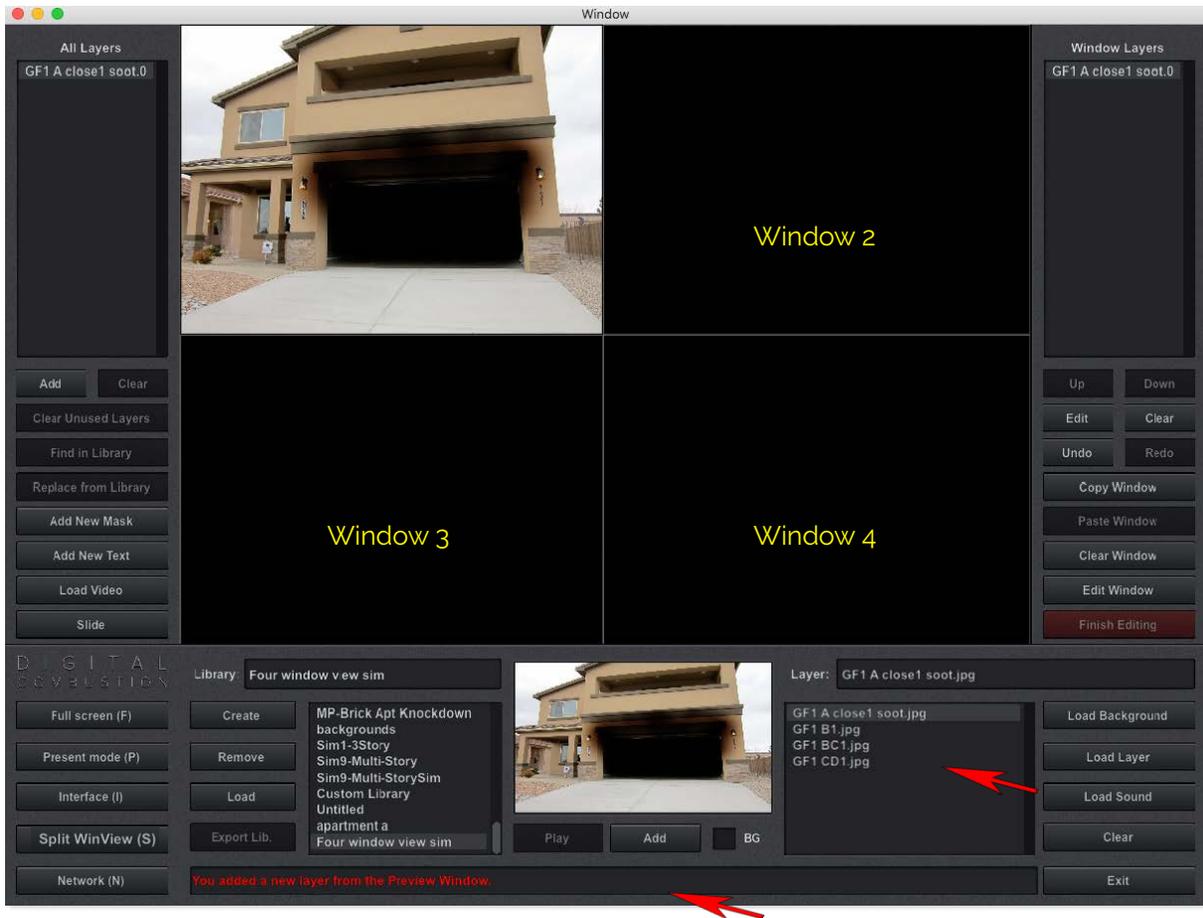
To create a Split Window View slide *select* the **Split WinView** button the the left or press the letter **"S"** button.



# Custom Content

## Add Backgrounds to Split Window View

You will now see four blank windows. Select the **first window** by clicking in the window. Next, select the **background image** you want to add to the first window and **click Add**. Repeat these steps for the other windows. You may add up to 4 different views.



The first image should now be seen in the first window. We want to add backgrounds to the other three windows. Do so by *clicking* each window and adding the background using the same steps.

### Follow these Guidelines:

Add your B Side picture to **Window 2**

Add your C Side picture to **Window 3**

Add your D Side picture to **Window 4**

# Custom Content

## Add Backgrounds to Split Window View

Once all backgrounds have been added to each window, your screen should resemble the one below.



To view your *Split Window View* in *Present Mode*, select the **"P"** on your keyboard or the **Present Mode** button. You will now view all *Four Window Views*. To see just one view at a time, select the **"S"** button on the keyboard. To switch between slides you will select the *number keys at the top of your keyboard* 1, 2, 3, 4 to view those windows. To toggle between the *Split Window View* or *Single View*, select the **"S"** button on your keyboard.

Windows are primarily used to show different views of the location, but other uses include overhead maps, pre-plans, teaching points, or close-ups.

# Navigating Split Views

## Rotating Four Windows

### Rotating Between the Four Windows

We setup four sides of the structure within the four available windows. Now let's look at changing between them, while only showing one view at a time. This is perfect for when the participant requests a 360° walk-around.

To change to another window, you merely need to press 1-4 on the keyboard. Use the numbers located above Q, W, and E; *not* the numbers on the keypad.



# Custom Content

## Adding your own Layers

### Add Customized clip-art and sound Layers

At first, you will probably only be using the layers that were included with Fire Studio. Later, you might start creating your own custom clip-art or sound layers. These custom layers will need to be added to a custom Library before you can use them in Fire Studio.

### Step 1: Change to the Library Panel and Create a Library

Click on the **Library** button on the left-side of the console to bring up the *Library Panel*.

Select **Create** and name the Library for your Layers. Ensure that you save this folder in your *Documents/Firestudio7* folder or subfolder.



### Step 2: Add Layers to your Library

Click on the new Library folder you have created. Now, to the right you will see the Load Layer and Load Sound buttons. Select the **Load Layer** (for Clip-Art) or **Load Sound** (for Sounds) button and add the Layers you wish to add to your simulation or Library.

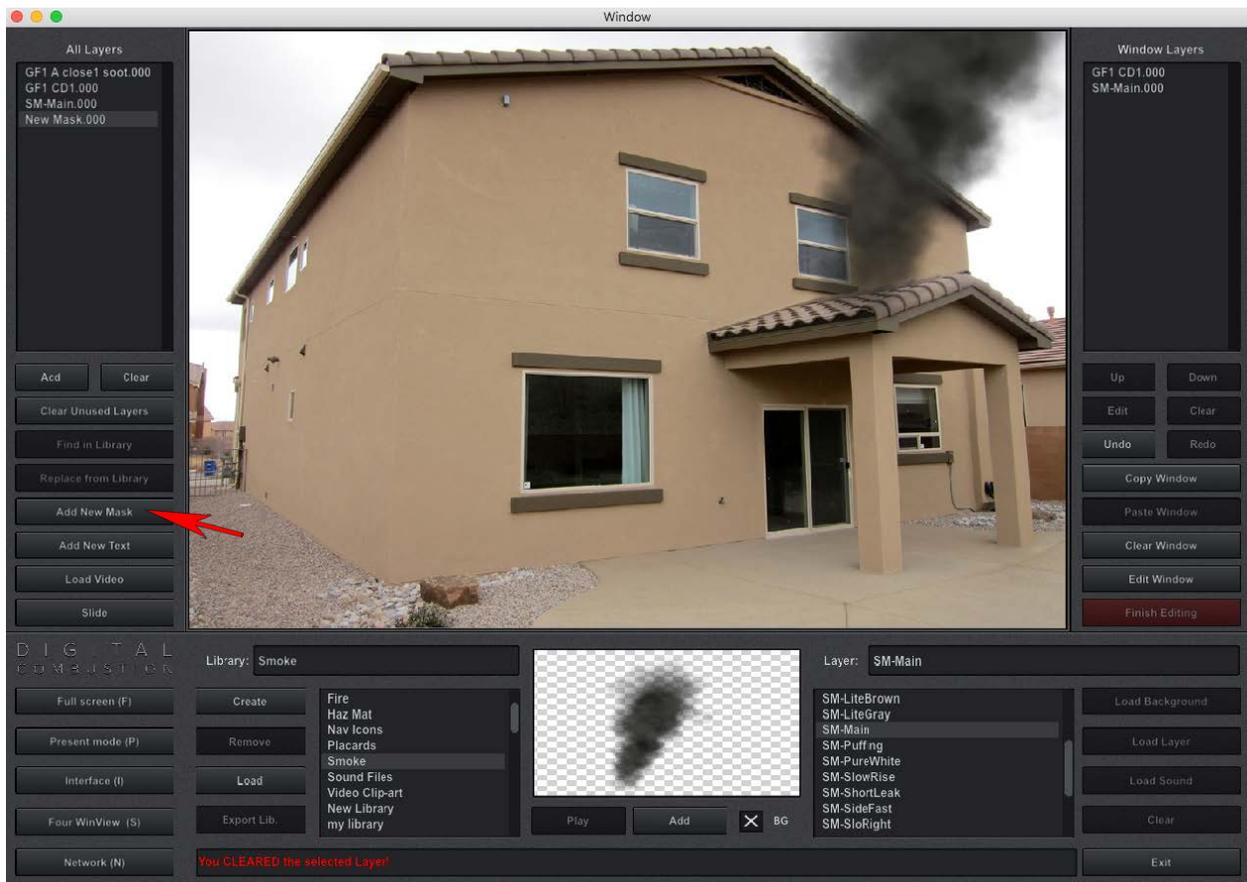


Once your new Layers are listed, *select* the layer you want to add and then press the **Add** button. You have now added your custom Layer.

# Creating a Mask

A mask is a four-sided, shape-able layer that allows you to hide other layers from a selected portion of your screen excluding the background.

Below is an example of how a mask can be used. We want to make the smoke appear to be behind the house.



To create the Mask select the **Add New Mask** button on the left panel. You can click and drag the mask by left-clicking within the mask and moving the mask near the desired location.

# Creating a Mask

## Continued



After clicking and dragging the four sided Mask to where you want it, you can now *select* each corner (one at a time) and move it to follow the shape of your object. After adding the Mask in this example, you can see the smoke now appears to be behind the building. You can only form the mask into a four point shape, so if you need to work with a complicated shape, you'll need to use additional masks.

# Adding a New Slide

## Adding a *Blank* New Slide

In some simulations, you may want to use several slides to show your scene evolve, and also provide alternate “paths” for progression. You may also want to show additional views of the incident such as rooms inside the structure, key equipment, stairwells, and so on. Fortunately, adding additional slides is very easy.

### Step 1: Adding a Blank New Slide

On the **Slide Panel**, make sure that both the *Copy* and *Move* boxes are unmarked. Note that the number of slides here show “1 of 1 Slides”.



Now click on the **Add New** button to create a new blank slide. The new slide will be placed at the *end* of your simulation.



The 1-slide simulation becomes 2-slide simulation and you are moved to slide 2 to begin working. The previous button also lights up to allow you to change back to the previous slide.

The *Blank* text written next to the *Slide* is where you can name your slide (optional). It does not necessarily mean the slide does not contain any content - although in this case it IS blank because we created a new blank slide. Next we'll look at creating a copied slide.

# Adding a New Slide

## Adding a *Copied* New Slide

There are times when you want to create a copy of the current slide instead of creating a blank slide.

On the Slide Panel, make sure both the Copy and Move boxes are unmarked (for now).

Navigate to the slide you want to copy. Now, click on the **Copy** box to place a mark there.



When you click and activate the **Copy** box, you will see that a new box appears called **Link**. Leave that unchecked for this procedure. We will explain the Link box in the next section.

Now click **Add New**. The new slide, (a duplicate of the slide you were on) will be placed at the end of your simulation. This is useful if you want to modify the original slide to use as an alternate path in a branching simulation.



# Adding a New Slide

## Adding a Copied & *Linked* New Slide

In the previous example, we created a copy of a Slide that included everything contained in that slide. Pictures, layers, sounds - everything was copied. All of the layers of that new slide are identical, but *independent* of the original Slide. If you move a layer on either the original or copied slide, it will not effect the other Slide.

There may be a situation where you want the copied Slide to be "Linked" to the original Slide. That way, if you move a layer on one slide, it will also move on the other. This process will create "Linked Layers".

### **Here's how:**

On the Slide Panel, make sure both the Copy and Move boxes are unmarked (for now).

Navigate to the slide you want to copy and click on the **Copy** box. When the Copy box is checked, a new box appears called **Link**. Select the **Link** box in addition to the **Copy** box.

Now click the **Add New** button. A new copied Slide will be placed at the end of your simulation. Everything on the newly created slide is now linked with the original. Changing something on either Slide will also change on the other Linked Slide.

If you click on any layers in those linked slides, they will have a red selection box around them instead of green. This is how you can determine if a layer is linked to another Slide.



Unlinked Layer -Green Selection Box



Linked Layer -Red Selection Box

# Working With Layers

## Unlinking a Layer - Make Layer Unique

### Making a Layer Instance Unique (Unlinking a Layer)

In the last example, we copied a Slide with the **Link** box selected. This created a new Slide with Linked Layers. In some cases you may not want all of the layers linked. You may want to have some grow larger, smaller, or in some other way change without affecting the counterpart layers in the original. There is a process to make a specific layer "**Unique**"

First you'll need to identify which layer you want to make unique. You can select the layer directly from the viewing area or click on its label in the right-side Window Layers panel. You'll notice the box surrounding the layer is red instead of green. This signifies a linked layer.

Select the linked layer and click the Layer **Edit** button. This will bring up the Layer Edit Panel.



There are a few places in the Layer Edit Panel where we can complete this operation. For now, we will select the **Resource** Panel as shown above.



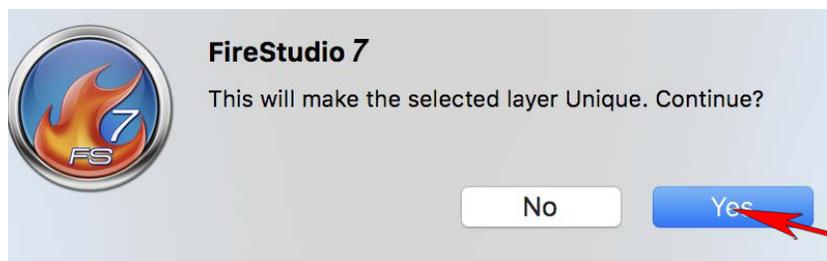
On the right side we can see the box labeled "Slides with Layer Instances". This shows all of the slides where the selected layer is linked. In this case, it is linked on Slide 1 and Slide 2.

# Working With Layers

## Unlinking a Layer - Make Layer Unique (Cont.)



Click on the **Make This Instance Unique** button. You will see the following message:



Select Yes. This will unlink this layer from all of the layers it was previously linked to. You will now be able to edit this layer without affecting any other layers.



You can see that now the Layer has only one instance on 1 Slide instead of 2. The selection box will turn from red to green.



# Working With Slides

## Setting a Slide to Advance Automatically

Whenever we have 2 or more Slides in our simulation, we have the ability to have one Slide automatically advance to the next Slide at a set time. For this example, we will have the slide advance after 2 minutes. Make sure you have a simulation open that has at least 2 Slides. In Author Mode, while on the Slide you want to advance from, click on the **Edit Window** button on the right-side of the console.



The Edit Window panel appears at the bottom. The time slider scale default is one minute. See below:



We need to change the Time Slider Scale. This will make it possible to use the Slider to create longer durations. Click on the + button under the 01:00 green text until it reads 05:00.



Next, move the slider bar all the way to the right until the indicated time reaches the 5 minute mark.

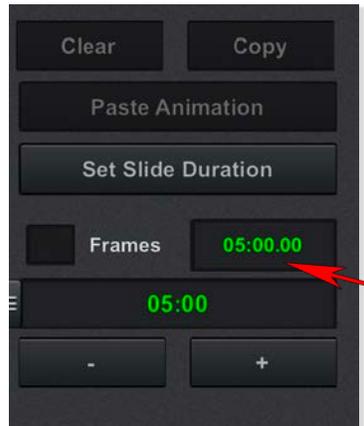


The Time Slider now shows that the scale is set to 5 minutes.

# Working With Slides

## Setting a Slide to Advance Automatically (cont.)

Now click on the **Set Slide Duration** button. The slide duration time will change from "Unlimited" to 05.00.00 minutes.



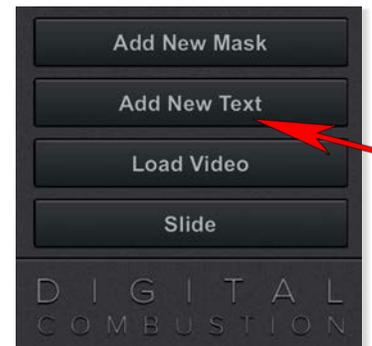
Click on **Finish Editing** and you're done!

**Remember that the automatic Slide timer will not start until you change to Present Mode. When setting a slide duration for the first time, it is usually best to try it first with a shorter time to ensure you've set it up properly. You can always go back and change the time again afterwards.**

# Working With Text Layers

## Adding Text

On the left side of the console click on the button labeled **Add New Text**. This will place a text layer into your active window, which for now will merely say "New Text". Also note that the new layer appears in both the All Layers and Window Layers panels. on each side of the console.



### Edit the Text

First, we need to Edit the text in the Edit Layer panel. *Click* in the text box where it currently says **New Text**. Highlight and delete the old text. Type in your desired new text. **IMPORTANT!** Press **"Enter"** on the keyboard to accept the changes. **Text will not change unless you press Enter to commit your changes! DO NOT click on the Save Layer button!** That is for a different process that we will discuss later in the manual.

# Working With Text Layers

## Change Text Color

**Select the Text Layer and click the Edit button**

This will bring up the Edit Layer Panel. Click on the **Diffuse Color** button.



The panel will change to show the Diffuse Color options. By moving the red, green and blue sliders, you can create many different colors. You can refer to the Color Chart in this manual for values on achieving specific colors.



# Working With Text Layers

## Change Text Size

Next let's enlarge the text layer. Click on the **Position** button.



You can make it larger or smaller depending on your needs. We will set the value to 275, but feel free to set your *scale* to whatever looks best on your screen. You can use the *scroll bar*, the + / - buttons, or click on the *number* directly to change it.



After enlarging the text you may want to adjust its position. Feel free to do so by clicking and dragging, or adjusting the Position X and Position Y fields in the same panel.

When you are finished with the editing of your text select **Finish Editing**.

# Managing Layers

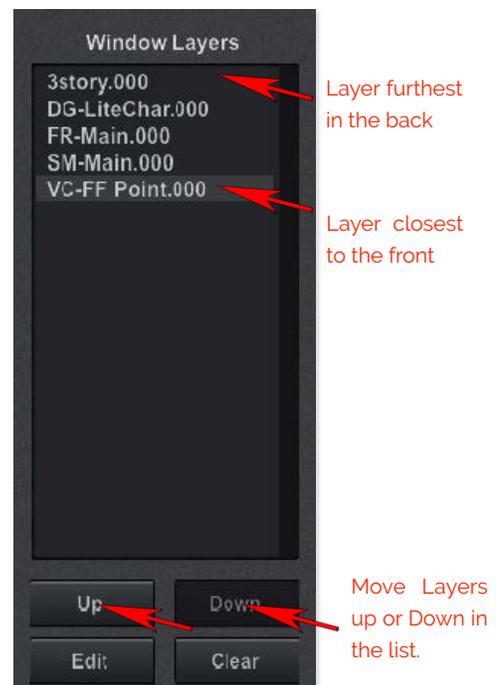
## Moving Layers Forward and Back

For the most part, you'll be using the **Edit Layer** panel to edit the various properties of your selected layer. But before we get to that, let's take a look at a few commands on the main console which also apply to layers.

### Moving Layers in Front of or Behind Other Layers

Sometimes you will need to move a layer in front of another or vice versa; perhaps you want smoke in front of a fire, or a fire fighter in front of a water stream. The Window Layers panel on the right-side of the console is not just a list of all the layers in the window, but a stack order of all the layers as well. The layers listed are in order from furthest behind to furthest in front. The background layer will **always** listed first, since all other layers are added after the background. Your front-most layer will be at the very bottom of the list. *(You cannot change the position of the background layer.)*

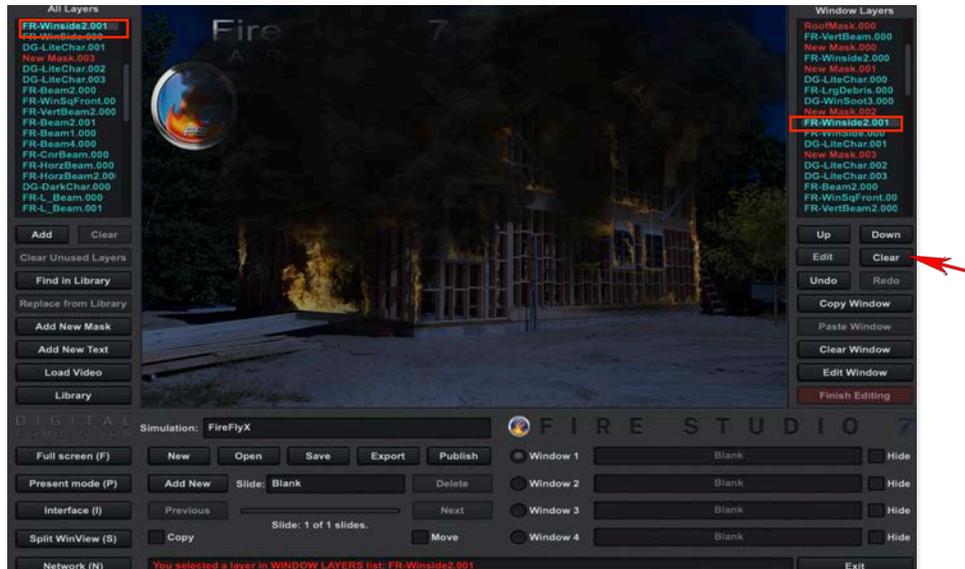
To move a layer behind an object select the **Up** button. To move a layer in front of another layer select the **Down** button until it is moved to where you want it.



# Managing Layers

## Removing a Layer

If you need to remove a layer from your simulation, you merely need to *select it* and then click on the **Clear** button located at the left-side of the console.



The layer is now gone from the window as well as the Window Layers panel on the right. However, note that it is still listed in the All Layers panel on the left side.

In order to delete the layer from the All Layers panel, *select the layer* and then select **Clear**.

### Clearing All Unused Layers

Over the course of your simulation, you may add and remove many layers. As a result, you could end up with many unused layers, though you might not remember which are unused. Instead of clicking on each layer to find the unused one, you can simply wipe them all out. Fortunately, it is very easy to clean out these layers by clicking on the **Clear Unused Layers** button, which lights up when any unused layer exists, regardless of what layer you have currently selected.

# Managing Layers

## All Layer Panel

### Adding a Layer from the All Layers Panel

If you have a layer in the All Layers panel you'd like to duplicate and place into your current active window, you can do so by *selecting the layer* and clicking the **Add** button just below the panel. This will add a copy of the selected layer, including any adjustments already made to that layer. This can save a lot of time.



### Finding a Layer in Your Libraries

The **Find in Library** command allows you to locate the selected layer amongst all of the libraries you currently have loaded. If you've modified a layer, but want to add the original, this command will locate that layer for you to add.

*Select a layer* in the All Layers panel; you'll be searching for the original version of this selected layer. If you don't have a library loaded that contains the original, or you've selected a mask, the Find in Library button will not be active.

Your Layer Library will be opened and the original Layer will be highlighted for you to **Add** to your simulation.

# Managing Layers

## Replace Layer

### Replacing One Layer with Another

The Replace from Library command allows you to swap a layer present in your simulation with one from the library. What makes this method unique is that the new layer retains the same values as the old. Size, rotation, animation speed, and so on, are all examples of values which would carry over. Doing this would allow you to test different layers in your scene without losing any property adjustments made to it.

Select the layer you want to replace in your current window. Next, find the layer you want to replace it with (in the Library Panel) and select that one as well. You can only replace a layer with another of the same type: background with background and sound with sound. Any of the other types of layers such as fire, smoke, clip-art, etc. can be replaced by any of those as well: fire with smoke, clip-art with fire, video clip-art



Click on the **Replace From Library** button. Your Layer will change to the new one selected. All properties kept the same.

# Editing Layers

## Make Visual Changes

Fire Studio allows for many properties of the layers to be customized in the Edit Layer panel. Layers can be made larger, smaller, rotated, and skewed. You can change the color, opacity and speed. Due to differences in layers, not all of the same features are found for each type of layer. A sound layer would not need an animation speed setting, for example. Keep this in mind when you are editing a layer and don't see a particular value to change; the software is intentionally designed to hide features that are not applicable. That being said, many, if not most, of the same values are available for all types of layers.

### Common Controls

To edit any kind of layer you merely need to *select it*, then click on the **Edit** button located on the right-side of the main console. This will bring up the **Edit Layer** panel appropriate to the layer you have selected. When you are done editing the layer, you will need to click on the **Finish Editing** button on the right-side of the main console, which will now be highlighted in red.

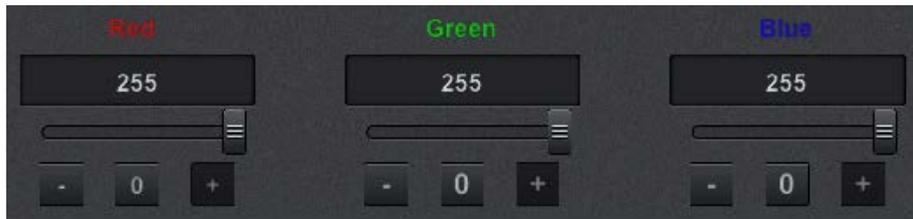


# Editing Layers

## Overview

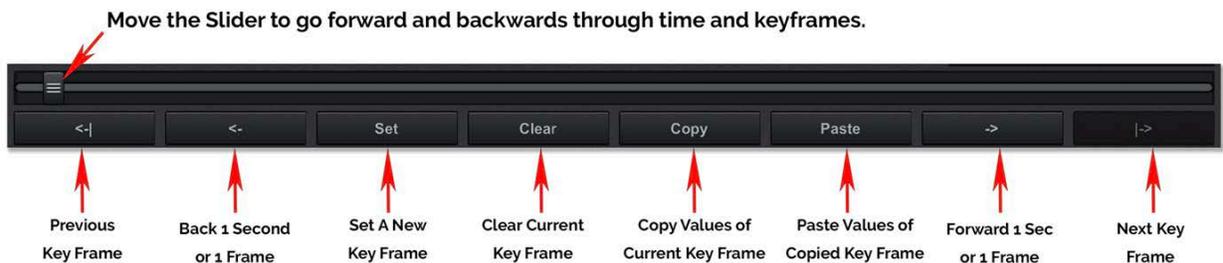
### Changing Values

You have several methods for changing the various properties in each category. Below are the standard interfaces you'll use.



### Working with Key Frames

At the bottom of the panel is a **slider bar**. This one specifically can be called the Timer or Timeline Bar. You will use this when setting your timeline for lighting and camera changes, as well as for slide duration. The buttons below it all perform functions related to the Timer Bar.



		Moves to the previous or next key frame, respectively.
		Moves forward or back 1 second or 1 frame, depending on your setting.
<b>Set</b>		Sets a new key frame at the current point in the timeline.
<b>Clear</b>		Removes a key frame from the current point in the timeline.
<b>Copy</b>		Copies the values at the current key frame.
<b>Paste</b>		Sets a new key frame at the current point in the timeline with the values copied.

# Editing Layers

## Controls



### Changing Values

You have several methods for changing the various properties in each category. Below is the standard interface you'll use.

#### Slider Bar

Click and hold on the slide bar toggle, then drag left and right to adjust.

#### Mouse Wheel

Click on the slider bar toggle once, then you can use the scroll wheel on your mouse to adjust the value.

#### Plus and Minus Buttons

Increases and decreases the value by 1, respectively.

#### Type in the Value

Click where the value is listed and then type in a new value. **Press Enter** when done.

#### Set to 0 Button

Click this button to set the value to 0.

Some values are merely on and off boxes: marked for on, unmarked for off. Click on them to change the settings.



# Editing Layers

## Ambient Color



\*Ambient Color is used mainly for **Background** layers.

### Red

Adjusts the red level in the selected layer. For backgrounds, Fire Studio detects full ambient color to start and so sets the value to 255. Other visual layers such as clip-art, fire, smoke, etc. are interpreted to having no ambient color, so values begin at 0.

### Green

Adjusts the green level in the selected layer. For backgrounds, Fire Studio detects full ambient color to start and so sets the value to 255. Other visual layers such as clip-art, fire, smoke, etc. are interpreted to having no ambient color, so values begin at 0.

### Blue

Adjusts the blue level in the selected layer. For backgrounds, Fire Studio detects full ambient color to start and so sets the value to 255. Other visual layers such as clip-art, fire, smoke, etc. are interpreted to having no ambient color, so values begin at 0.

### Copy & Paste (Ambient Color & Resource)

The Copy and Paste buttons allow you to copy the values within the current data panel so it may then be pasted onto that of another layer. Only the values of the same category can be pasted. For example, Ambient Color values of one layer can only be pasted into the Ambient Color fields of another layer. Resource values of one layer can only be pasted into the Resource fields of another layer.

# Editing Layers

## Diffuse Color



\*Diffuse Color is used mainly for **Layers**, not backgrounds.

### Red

Diffuses the red color from the selected layer. For backgrounds, Fire Studio does not detect ambient color to start and so sets the value to 0. Other visual layers such as clip-art, fire, smoke, etc. are interpreted to having full ambient color, so values begin at 255. You cannot diffuse color from a background until you've added to its ambient color.

### Green

Diffuses the green color from the selected layer. For backgrounds, Fire Studio does not detect ambient color to start and so sets the value to 0. Other visual layers such as clip-art, fire, smoke, etc. are interpreted to having full ambient color, so values begin at 255. You cannot diffuse color from a background until you've added to its ambient color.

### Blue

Diffuses the blue color from the selected layer. For backgrounds, Fire Studio does not detect ambient color to start and so sets the value to 0. Other visual layers such as clip-art, fire, smoke, etc. are interpreted to having full ambient color, so values begin at 255. You cannot diffuse color from a background until you've added to its ambient color.

### Alpha

This property adjusts the transparency of the layer. By default, the layer will begin at its highest level, which means it isn't transparent at all. As you lower the Alpha value, you'll be able to see through the layer as it fades. Setting the value to 0 makes it completely invisible. In other programs, this feature is sometimes referred to as opacity.

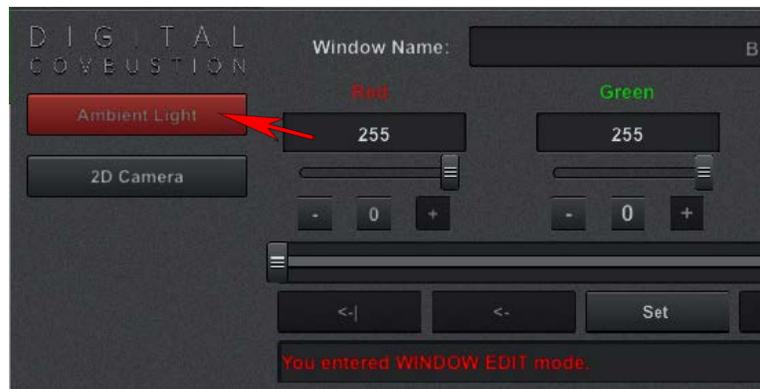
# Editing Layers

## Lighting (Cont.)

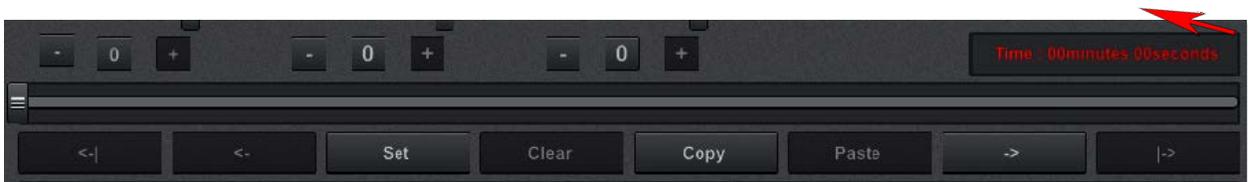
### Changing Ambient Lighting in your Scene

If you'd like to change your background image into a night, dusk, or dawn scene, you can modify the ambient lighting to achieve a decent rendition of the location at those times of day.

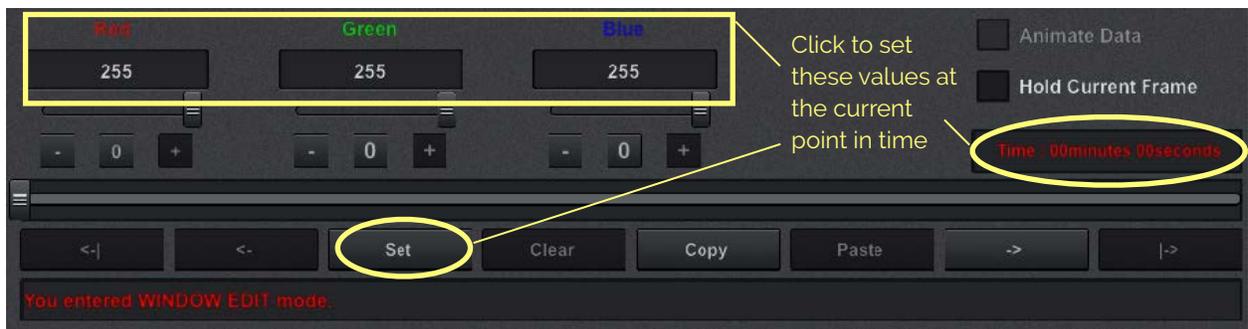
If you aren't already viewing the Ambient Light properties, click on the **Ambient Light button** on the left-side of the panel so it is highlighted in red.



Be sure the timer bar is all the way to the left and the time reads 0 minutes, 0 seconds.



Adjust the Red, Green, and Blue values until you've achieved the lighting you desire.



Click on **Finish Editing** and you're done!

# Editing Layers

## Position



### **Position X**

Adjusts the X coordinate of the layer: moves the layer left and right.

### **Position Y**

Adjusts the Y coordinate of the layer: moves the layer up and down.

### **Rotation**

Turns the layer in a clockwise or counter-clockwise direction.

### **Scale**

Makes the layer smaller or bigger, maintaining the dimensional ratio.

### **Point 1/Point 2/Point 3/Point 4**

These are the four corner point coordinates for a mask. Adjust the X point to move the corner left and right. Adjust the Y point to move the corner up and down.

# Editing Layers

## Resource Panel



### Resource Path

An informational value only, the Resource Path field displays the selected layer name and the library it is located in. This information can be very helpful if you ever end up with missing content, giving you the details necessary to find the media, and put it back into the library it needs to be in.

### Slides with Layer Instances

This panel shows the occurrences of the selected layer in the entire simulation. Only linked layers and backgrounds which were copied with Add Slide will appear more than once however.

### Width

Increases or decreases the width of the layer. Adjustment occurs symmetrically from the center of the layer. This field changes between Width, ScaleX, or blank depending on the type of layer selected.

### Height

Increases or decreases the height of the layer. Adjustment occurs symmetrically from the center of the layer. This field changes between Height, ScaleY, or blank depending on the type of layer selected.

### ScaleX (Text Layer)

Stretches a text layer to the right, anchoring the left border where it is. This field changes between Width, ScaleX, or blank depending on the type of layer selected.

### **ScaleY (Text Layer)**

Stretches a text layer down, anchoring the top border where it is. This field changes between Height, ScaleY, or blank depending on the type of layer selected.

### **Animation Loop**

An on or off value that determines if the layer repeats its animation forever **(On)** or plays just once **(Off)**.

This field changes between Animation Loop, Sound Loop, or blank depending on the type of layer selected.

### **Sound Loop**

An on or off value that determines if the sound repeats forever (on) or plays just once (off). This field changes between Animation Loop, Sound Loop, or blank depending on the type of layer selected.

### **Anim. Speed**

Animation speed changes the number of frames per second for the layer. This value can be set higher to make the animation faster, to 0 to make the layer freeze, or to a negative value to reverse how it plays. This field changes between Anim. Speed, Volume, or blank depending on the type of layer you have selected.

### **Volume**

When controlling volume for a sound layer, it will be used to reduce the default sound value of 100 down to 0. This field changes between Anim. Speed, Volume, or blank depending on the type of layer you have selected.

### **Copy & Paste (Ambient Color & Resource)**

The Copy and Paste buttons allow you to copy the values within the current data panel so it may then be pasted onto that of another layer. Only the values of the same category can be pasted. Resource values of one layer can only be pasted into the Resource fields of another layer. The steps of copying and pasting values will be looked at in more detail in other chapters as well.

# Editing Layers

## Effect Panel



### **Skew**

Moves the bottom and top of the layer in opposing directions along the X axis.

### **Perspective**

Rotates the layer around the Y-axis.

### **Horizontal Flip**

Flips the layer across the Y-axis (left/right).

### **Vertical Flip**

Flips the layer across the X-axis (up/down).

# Basic Layer Edits

## Common Controls

### Changing Ambient Lighting over Time

If instead of having one set time for your scene and you'd like to show the changing light as the sun comes up or down—or perhaps the weather starting to darken—you can setup your scene to change ambient lighting as time passes.

As with the 2D camera, key frames will determine the points in time when your color settings will be achieved. Similarly, the lightning will transition between key frames, with a larger gap of time being a slow transition, and a short span of time being faster.

If necessary, adjust the light settings at time 0 and click Set. This will be how the scene looks when the slide first begins.



Now move the slider bar until the time displayed reaches the point where you want the scene to finish transitioning. **Do not click Set yet!**



Adjust the Red, Green, and Blue values until you've achieved the lighting you desire. Click on **Set** to set the key frame at that point in time.

# Basic Layer Edits

## Common Controls (Continued)

If you want any further transitions, repeat the above steps to set additional key frames and lighting settings in your scene.

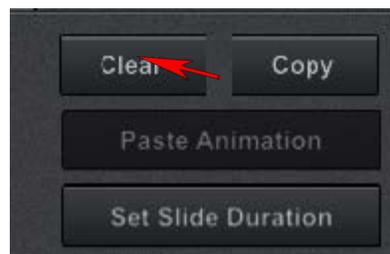
In order to initiate the transition, you must check the **Animated Data** box. Without this box checked, the key frames will be setup, but Fire Studio will not initiate the timed changes. This may be useful if you want to make further edits without watching the lighting change since transitions will be displayed in both Author and Present Mode. Transition changes to the window with Ambient Lighting and the 2D Camera distinguishes itself from most other Fire Studio features by displaying timed changes even while in Author Mode.



Click on **Finish Editing** and you're done!

### Clearing All Ambient Light Key Frame Settings

If you want to remove all of the ambient light key frame settings, click on the **Clear** button located on the right-side of the panel. Although you will use the same button to clear 2D camera key frames, it won't clear those unless you're viewing that panel.



*A warning message will appear. Choose OK to proceed.*

# Basic Layer Edits

## Ambient Color Panel

### Copy and Paste All Ambient Light Key Frame Settings

You can copy all of your key frames for ambient light and paste them into a different window to replicate the exact same lighting transitions. Once you have all of your key frames setup, click on the **Copy** button located on the right-side of the panel.

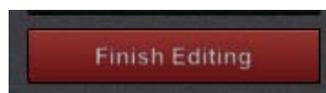


Now change to the window where you'd like to paste the settings. If the window is in the same slide, you can switch to Split Window View mode, and click on the window without having to leave the edit panel. However, if you need to change slides, then you'll first need to click **Finish Editing**, change the slide, select the window, and click **Edit Window** again.

Be sure you're viewing the Ambient Light panel and click **Paste Animation**. This window will now have all of the key frame settings you just copied from the original window.



Click on **Finish Editing** and you're done!



# Basic Layer Edits

## Position Panel



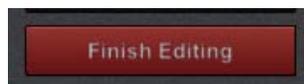
Be sure the timer bar is all the way to the left and the time reads 0 minutes, **0 seconds**.

Adjust the **X**, **Y**, and **Zoom** values until the view is exactly the way you want it.



Even though we aren't changing the camera over time, we are still going to use the **Set** button at the bottom of the panel to lock in the view change. When the time is at 0, you set the key frame, and do not add any other key frames, the scene will maintain the view setting as long as this window is being viewed. Click on the Set button.

Click on **Finish Editing** and you're done!



### Moving the Camera over Time

If you aren't already viewing the 2D Camera properties, click on the **2D Camera** button on the left-side of the panel so it is highlighted in red.



# Basic Layer Edits

## Resource Panel

Be sure the timer bar is all the way to the left and the time reads 0 minutes, 0 seconds.



Click on the **Set** button. This will make our camera be in the default position when the slide begins. If you want it moved, you could adjust the settings first, then click Set.



Now move the **slider bar** until the time displayed reaches the point where you want the camera to stop moving. This will represent how long it takes for the camera to move across the screen or zoom. The shorter the time and further the distance, the faster it will move. **Do not click Set yet!**



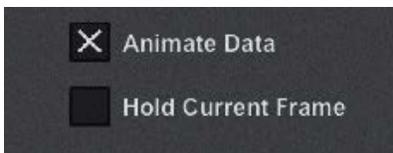
Adjust the **X**, **Y**, and **Zoom** values until you've positioned the camera where you want it, and then click on the **Set** button.

Between the previous key frame and the one you've just set, the camera will move to reach the new location. In our example, we have a 20-second period of time between the start—first key frame—and our second key frame. You can continue to add more key frames if you wish. Just be sure to move the slider bar first, adjust the camera position, and then click **Set**.

# Basic Layer Edits

## Resource Panel

In order to initiate the camera movement, you must check the **Animated Data** box. Without this box checked, the key frames will be setup, but Fire Studio will not initiate the timed changes. This may be useful if you want to make further edits without the camera moving since camera movement will commence in both Author and Present Mode. Transition changes to the window with Ambient Lighting and the 2D Camera distinguishes itself from most other Fire Studio features by displaying timed changes even while in Author Mode.



Click on **Finish Editing** and you're done!

### Copy and Paste All 2D Camera Key Frame Settings

You can copy all of your key frames for the 2D camera and paste them into a different window to replicate the exact same camera movement. Once you have all of your key frames setup, click on the **Copy** button located on the right-side of the panel.



Now change to the window where you'd like to paste the settings. If the window is in the same slide, you can switch to Split Window View mode, and click on the window without having to leave the edit panel. However, if you need to change slides, then you'll first need to click **Finish Editing**, change the slide, select the window, and click **Edit Window** again.

Be sure you're viewing the 2D Camera panel and click **Paste Animation**. This window will now have all of the key frame settings you just copied from the original window.



Click on **Finish Editing** and you're done!

# Advanced Layer Edits

## Saving a Layer

### Saving a Layer

If you've adjusted a layer (color, scale, speed etc), and you would like to bring into other simulations, you can save it as a DCD file. This way, you won't have to repeat all of the adjustments over again later.

Once you have the layer the way you'd like it, click on the **Save Layer** button.



A navigation screen will appear to allow you to browse to the folder you want to save the layer in. Type in a name for your layer and then click **Save**.

At this point, the layer DCD file is saved as a separate file, but you will need to first Load the DCD file into a custom Library before you can add it to a different simulation. Keep in mind that DCD files do not contain the entire animation, but all of the modification settings of the original animation file. You will always need the original DCA file present for the new DCD file to work. Make sure you do not delete the original DCA file.

# Advanced Layer Edits

## Copying/Pasting Color Values

### Copying Diffuse Color Values from one Layer to Another

Sometimes you may want to modify the color of several layers in your scene in order to make them look similar, despite using different animations. For example, you may want several kinds of smoke to have the same color, but flow differently using different smoke animations. Instead of manually changing the color for each layer, you can adjust colors on one layer, then copy the Diffuse Color settings and paste onto others.

Select the layer whose color you want to copy. In the example below, we've selected the greenish smoke release and want to match other smoke layers to it.

Click on the Edit button to bring up the Edit Panel.



# Advanced Layer Edits

## Copying/Pasting Color Values

Change to the Diffuse Color category. You can see the settings we've changed to the three diffuse colors to achieve the greenish appearance.



Click on the **Copy** button to copy the color properties. *Select* the new layer whose colors you want to change.

If the Edit Panel is not showing, click on the **Edit** button to enter the Edit Panel. Click the **Diffuse Color** button. The current settings are all 255 which reflects the default color of the layer.



Click on the **Paste** button to paste the color properties. The new diffuse color settings will now be applied. Click **Finish Editing**. Note: If you apply colors from one layer to another, the colors may not match exactly due to the different base colors of each layer.

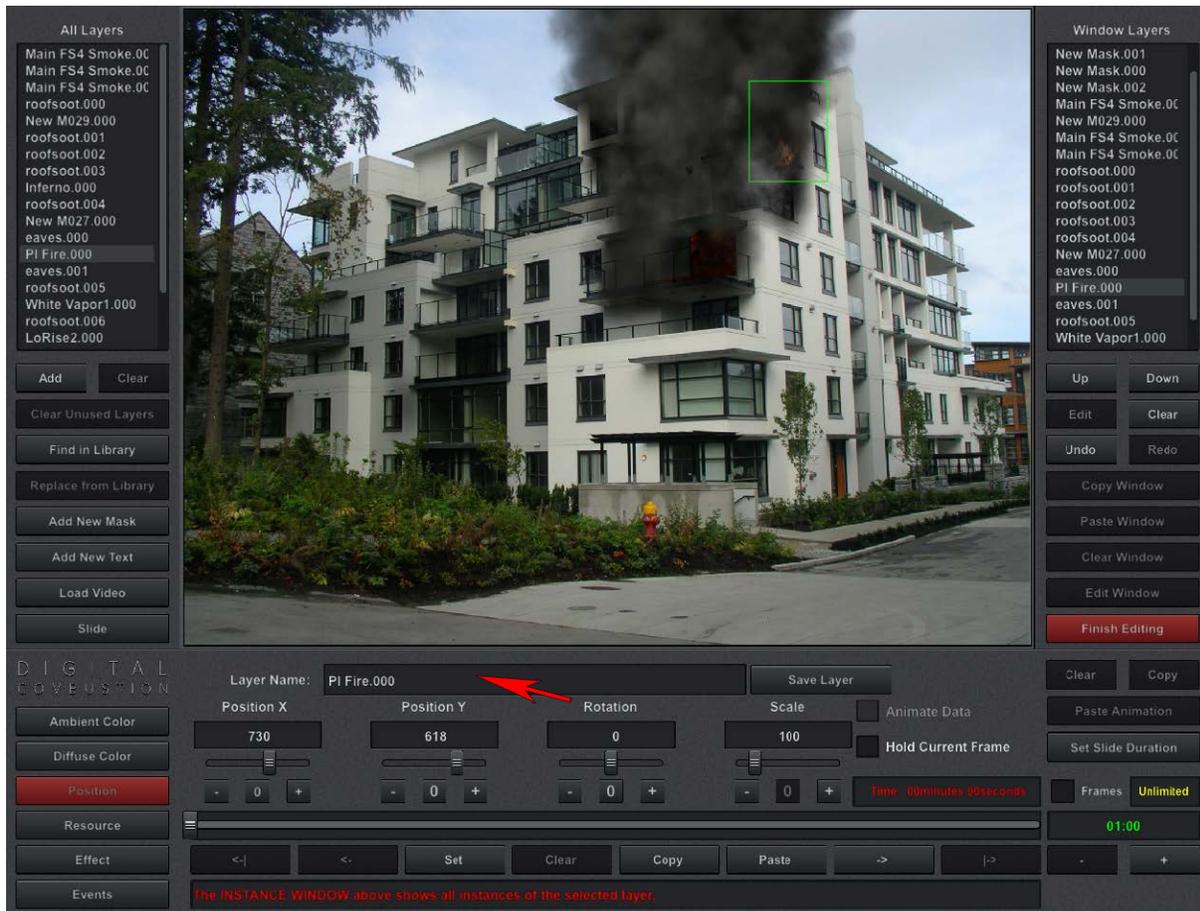
**Use this same process for copying/pasting values from other settings throughout Fire Studio Edit panels..**

# Advanced Layer Edits

## Renaming a Layer

Sometimes you want to label your layers in order to easily differentiate one from another. Instead of the default name that Fire Studio assigns, you can set your own!

Select the layer you want to rename and click **Edit**.



Click in the field labeled **Layer Name**. A blinking cursor will appear. Edit the text to whatever you would like and press “**Enter**”. You will immediately notice the name change take effect in both layer panels.

**DO NOT** click on the **Save Layer** button! This is a different feature for saving the layer to a file a DCD file.

# Advanced Layer Edits

## Changing a Layer's Color over Time

In Fire Studio 7, you can set any layer to change its color over a period of time. The coloring and speed of the change are entirely up to you.

Select the layer you want to work with and click **Edit** to enter the Edit Panel.

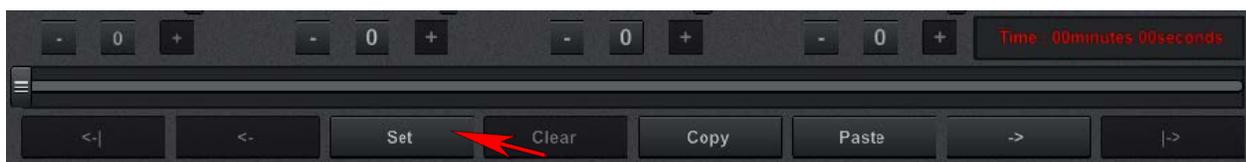


Change to the **Diffuse Color** category.

(Optional): Modify the values for Red, Green, Blue, and Alpha until the layer appears how you initially want it to



Click on **Set** to make this appearance your starting point.



Move the time slider bar to the point where you want the color change to be complete. In the picture below, it's been set to 10 seconds. So at the 10 second mark, the layer will be finished transitioning to the new color settings we'll set in the next step.

Adjust the *Red*, *Green*, *Blue*, or *Alpha* properties to the desired end result. In the example below, only the Alpha property has been changed. The selected layer will darken as a result.



Click on **Set** to lock in the values at the appointed time. If you only want one transition, then you are done!

### Multiple Transitions over Time

By repeating steps 5-7, you can setup multiple changes in your layer over time. You can have smoke darken, hold at a specific color for a time, then change color as the fuel changes. Similarly, you can fluctuate the color of clip-art to simulate warning lights or other

### Deleting Key Frames

If you make a mistake or want to change how a layer transitions, you can easily delete any of the key frames you've setup for the layer. Move to the specific key frame using either the slider bar or the arrow buttons. The Key Frame Forward and Key Frame Back buttons are typically the best way. Note that when you're at a key frame the time will change color to red. Click on the **Clear** button to remove that key frame. Done!

# Advanced Layer Edits

## Changing a Layer's Position over Time

### Changing a Layer's Position or Size over Time

In Fire Studio 7, you can set any layer to move across the screen over a period of time. The direction, stopping points, and speed of the movement are entirely up to you. You may want to show an engine arriving on-scene or perhaps someone moving amidst a smoke-filled window.

#### STEP 1

Select the layer you want to work with and click **Edit** to enter the Edit Panel. In the example below, we've moved the engine off-screen so it does not initially appear. Our objective will be to have it arrive on-scene from the left.



## STEP 2

The Edit Panel begins on the Position category, which is what we want. You can see the current positional settings of the engine and also note that we are currently at the zero-second mark.



## STEP 3

Next we want to move the time bar to reflect the moment we want the engine to arrive at the location we'll set in the next step. In the example, we've set this to 10 seconds.



## STEP 4

Now we need to move the engine to the position we want it in at the 10-second mark. In this example, since we've moved the engine off the screen, we'll need to use the buttons or slider bars to bring it back into view. At that point we can continue to use the sliders and buttons, or click and drag the layer directly in the viewing area.

## CLICK AND DRAG

If you click and drag, once you release the mouse button, you will hear a clicking noise. The selection border around the layer will also turn yellow. This represents the selected layer has an animation associated with it. If you make a mistake and let it go in the wrong spot, don't worry! Just move it where it needs to be and Fire Studio will remember.

## SLIDERS AND BUTTONS

If you use the slider bars or buttons to move the clip art, you will not automatically get the *clicking noise* or the *yellow highlight*. This is because it would do so after every press or slight movement. Therefore, move the layer to the position you want, and then when ready, click on the **Set** button to lock in that position.

Regardless of whichever method you use, you will notice the time has changed to red. This indicates a key frame has been set at that point in time.



## STEP 5

Click on Finish Editing to see the results of your work!

# Advanced Layer Edits

## Changing a Layer's Size over Time

### Evolving Size

Having a layer change its size over a period of time works in the same way as position, but instead of moving the layer to a new position, you need to change the **Scale** value. However, as the size of the layer increases, the position may shift from where you want it to be. Often times, you will also need to slightly adjust the positioning as well.

Add your layer then select **Edit**



### STEP 1

**Set** the time bar for the amount of time you want your layer to grow. That means over the course of seconds, the layer will grow to the size we set in the next step.



## STEP 2

Now increase the **Scale** of the layer to your desired size.



You may notice how the layer moves out of place.



## STEP 3

**Click and drag** the smoke layer back to the correct position. The first time you release the mouse you'll get the clicking sound that represents a key frame being set. Don't worry if you need to move it again. You can always adjust it at the 10-second mark and the location (and other settings) will be updated.

## STEP 4

Click on **Finish Editing**



# Events

## Timed Starts and Finishes

Events in Fire Studio 7 refers to special actions associated with a layer. Applying a timed delay to the start of a layer as well as a timed duration. In other words, the layer will appear after X amount of time, and disappear after Y amount of time, respectively.

### STEP 1

First insert your background and place the layer you wish to appear after a delay. *Select* the layer if it isn't already.

### STEP 2

Click on the **Edit** button located at the right of the console. This will bring up the Edit Layer panel.



### STEP 3

Click on the **Events** button on the far left to change to the Events category.

## STEP 4

Check the **Events Enabled** box to bring up all Event options.



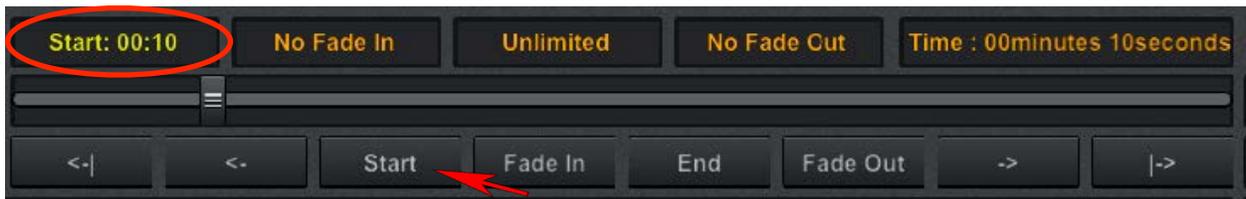
## STEP 5

Move the **slider bar** to the right until the time displayed reaches the point you want the layer to appear. For this example, we will set it to 10 seconds. If you wanted to fade in the layer, this time would represent when the fade process begins.



## STEP 6

Click on the **Start** button to make this point where the layer starts. After doing so, you will see the start time displayed in **yellow**.



## STEP 7

Now that we have a start time, we'll proceed to setup an end time. Move the **slider bar** to the right until the time displayed reaches the point you want the layer to disappear. For this example, we will set it to 20 seconds, which means 20 seconds from the start of the slide. If you wanted to fade out the layer, this time would represent when the fade process begins. Fading will be discussed in the next section.

## STEP 8

Click on the **End** button to make this point where the layer ends. After doing so, you will see the end time displayed in **yellow**.



## STEP 9

Click on **Finish Editing** and you're done! To confirm your layer is appearing and/or disappearing correctly, you'll need to switch to Present Mode by pressing the letter "P" on your keyboard.

# Events

## Fading a Layer In/Out - Timed

**STEP 1:** First insert your background and place the layer you wish to fade in.

**STEP 2:** Click on the **Edit** button located at the right of the console. This will bring up the Edit Layer panel.



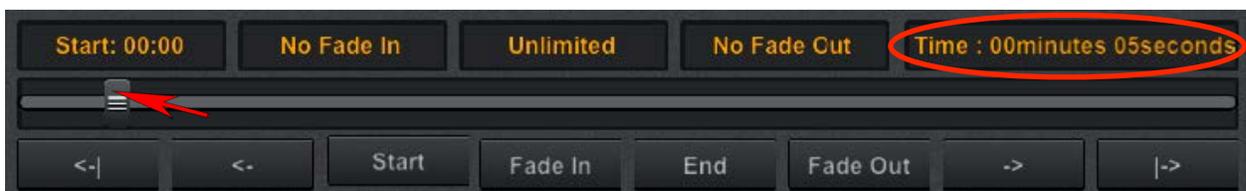
**STEP 3:** Click on the **Events** button on the far left to change to the Events category.



**STEP 4:** Check the **Events Enabled** box to bring up all Event options.



**STEP 5:** Move the **slider bar** to the right until the time displayed reaches the point you want the layer to be fully in view. For this example, we will set it to 5 seconds. That means the layer will fade in over a period of 5 seconds at which point it will be completely visible. In this case the layer will begin fading in once this slide begins. If we wanted a delay before the fade begins we would set a start time to the layer. Refer to Events (part 1) for details.



**STEP 6:** Click on the **Fade In** button. After doing so, you will see the fade in time displayed in yellow.



**STEP 7:** Now that we have the layer fading in, we will setup the layer to fade out. Move the **slider bar** to the right until you reach the time at which you want the layer to begin fading out. In this example, we'll set the time to 15 seconds. Then select **End** button.

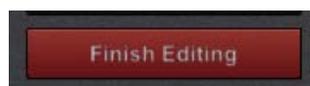


**STEP 8:** Now move the **slider** to the right again until you reach the point where you want the layer to be completely gone. In this example, we'll set it to the 20-second mark. In other words, it will take 5 seconds for the layer to fade out.



**STEP 9:** Click on the **Fade Out** button. After doing so, you will see the fade out time displayed in **yellow**.

**STEP 10:** Click on **Finish Editing** and you're done! To confirm your layer is appearing and/or disappearing correctly, you'll need to switch to Present Mode. You can bring up the interface with the I key to check the timing of the fades.



# Events

## Fading a Layer In & Out by Keystroke

Events in Fire Studio 7 refers to special actions associated with a layer. This section, Events (part 2b), will cover applying a fade-in and fade-out to a layer, activated by a button on the keyboard; also referred to as an Event Key.

**STEP 1:** Insert your background and place the layer you wish to fade in. Select the layer if it isn't already.

**STEP 2:** Click on the **Edit** button located at the right of the console. This will bring up the Edit Layer panel.



**STEP 3:** Click on the **Events** button on the far left to change to the Events category.



**STEP 4:** Check the **Events Enabled** box to bring up all Event options.



**STEP 5:** Move the **slider bar** to the right until the time displayed equals the amount of time you want it to take for the layer to fade in. For this example, we will set it to 5 seconds. That means the layer will fade in over a period of 5 seconds at which point it will be completely visible. Note that when using Event Keys, the times you are setting represent a slightly different meaning compared to timed layers. Instead of setting a starting or ending point, you are setting the duration of the fade, which may be activated at any time the slide is up.



**STEP 6:** Click on the **Fade In** button. After doing so, you will see the fade in time displayed in **yellow**.

**STEP 7:** To set the fade to begin with a keystroke, *click* on the box next to **Start Layer on Key**, then *select* the **number** you want as the assigned key. By default it will be set to 1. Note that these numbers refer to the numbers on your number pad or by a combination keypress of Ctrl + **<number above the letters>**.

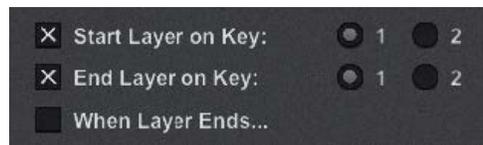


**STEP 8:** Now that we have the layer fading in, we will setup the layer to fade out. Move the **slider bar** to the right until you reach the time at which you want the layer to begin fading out. In this example, we'll set the time to 10 seconds. Remember that we are setting a fade out duration, so if we wanted the fade out time to be a shorter period than the fade in, we would move the slider to the left until we reached the duration we wanted (2 seconds for example). Or if we wanted the same length of time we would leave the slider as is on the 5 second mark.

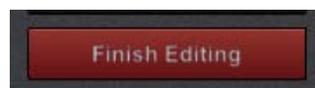


**STEP 9:** Click on the **Fade Out** button. After doing so, you will see the fade out time displayed in yellow.

**STEP 10:** To set the fade out to begin with a keystroke, click on the box next to **End Layer on Key**, then *select* the *number* you want as the assigned key. By default it will be set to 1. Note that these numbers refer to the numbers on your number pad or by a combination keypress of Ctrl + <number above the letters>. You can set this number to be the same as the fade in if you like or a different number.



**STEP 11:** Click on **Finish Editing** and you're done! To confirm your layer is appearing and/or disappearing correctly, you'll need to switch to Present Mode. You can bring up the interface with the I key to check the timing of the fades.



**FINAL NOTE:** *If you decide to remove a fade in or fade out, you can move the slider bar all the way left to the 0 time mark and then click on the Fade In or Fade Out buttons according to which you wanted to remove.*

# Events

## Automatic Slide Change upon Event Conclusion

Events in Fire Studio 7 refers to special actions associated with a layer. This section will cover setting up the layer to trigger a slide change when it has completed: faded-out, timed out, or completed its animation cycle. This feature can be especially useful if you want to show a change in the scene based off of the event, such as damage after an explosion or knockdown smoke after a spraying a fire.

**STEP 1:** Using what you've learned from this guide so far, setup your basic scene that includes the layer in which you want to trigger the automatic slide change. In the example we are using, we've setup a hose line applying water to the fire. Our goal is to automatically have this scene change to the next slide after 2 minutes of water application, which will show the fire knocked down. You could also setup the fire and smoke to fade out gradually, and the knockdown smoke to fade in. However, for this example, we want the knockdown on its own slide in the event as we may want to jump to it from other slides in the scenario. The image below represents slide 1 in our scenario.



**STEP 2:** Before setting the automatic change on the layer, we need to have the knockdown slide in place. You can always edit it further later, but at least the slide has to be created. In the example below, we've already set it up how we want it to appear. The image below represents slide 2 in our scenario.



**STEP 3:** Change back to Slide 1 and select the layer that will trigger the automatic change—in this case the water jet. Click **Edit**.



**STEP 4:** Click on the **Events** button on the far left to change to the Events category.

**STEP 5:** Check the **Events Enabled** box to bring up all Event options.



**STEP 6:** Move the **slider bar** all the way to the right. Notice that it caps out at 1-minute?

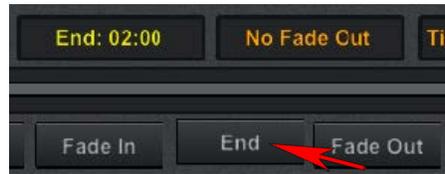


**STEP 7:** Just to the right you'll notice a box with 01:00 (1-minute) shown in green. This shows us the current maximum time limit. By default it is set to 1-minute to allow for an easier time with precise settings by seconds. But in this case we need to extend that time—which will in turn adjust the scale of the slider bar. Click on the + button just above Exit and you'll notice the maximum time in green change to 02:00. Additionally, the slider bar moves back to the middle since it is still at the 1-minute mark out of a maximum 2-minutes.

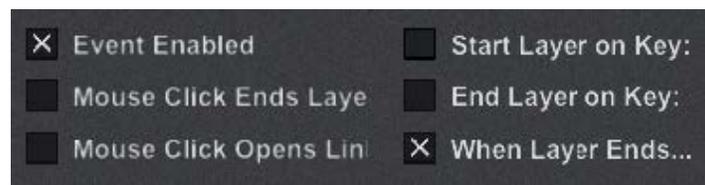


**STEP 8:** Slide the bar all the way to the right now and we'll see the time set to 2 minutes.

**STEP 9:** Click on the **End** key. This sets the layer to end at the 2 minute mark we just set. You will see the end time displayed in yellow.



**STEP 10:** Next check the **When Layer Ends** box. This setting tells Fire Studio that an event will occur when the selected layer has ended.



**When Layer Ends Options:** Once you check the When Layer Ends box, a new property will appear allowing you to specify what will occur. The options will include: **RestartSlide**, **GoToNext**, **GoPrevious**, **GoToSlide**, and **RestartLayer**. All of them are fairly self-explanatory but here is a quick rundown of what each will do:

**RestartSlide** : **GoToNext:** Refreshes the current slide, starting timers, layers, and events over again. Advances to the next slide (numerically) in the simulation. Example: Slide 1 to 2.

**GoPrevious:** Moves to the previous slide (numerically) in the simulation. Example: Slide 2 to 1.

**GoToSlide:** Jumps to any slide & windows of your choice.

**RestartLayer:** Resets events and the animation of the currently selected layer.

**STEP 11:** Click on the **right arrow** key to change the event to **GoToNext**.



**STEP 12:** Click on **Finish Editing** and you're done! To confirm your simulation is advancing properly, you'll need to switch to Present Mode. Go to the slide which has the layer you've edited and after the set time (2 minutes for the example) has passed, you should see the slide automatically change to the next one.



**FINAL NOTE:** *We could have also used GoToSlide to accomplish the same task and to even set a specific window to change to. For most simple simulations, however, GoToNext will work fine.*

## Events

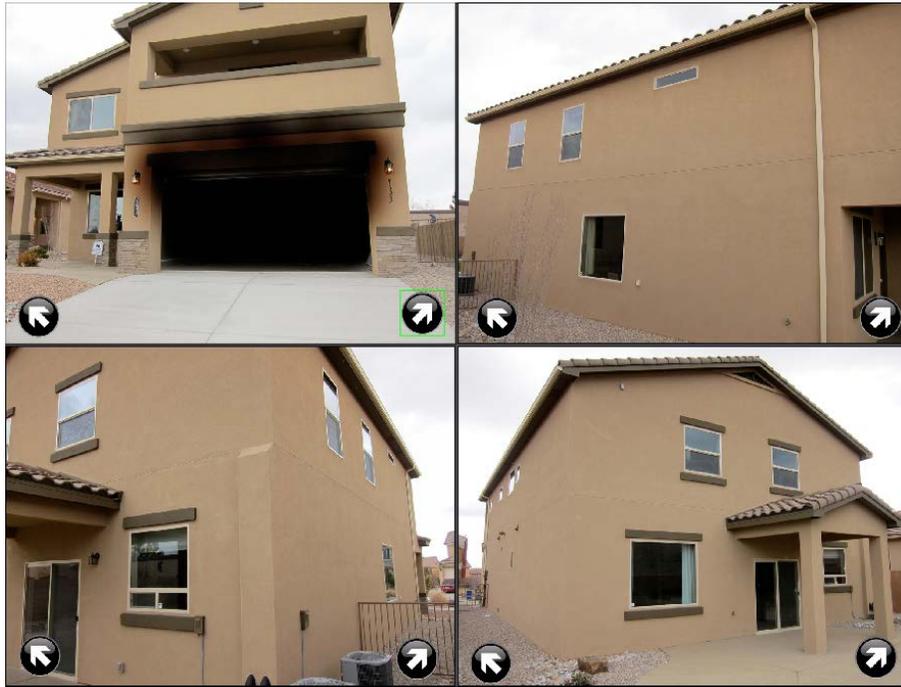
### Clickable Layers (Nav Icons, Text, Clip-Art)

Events in Fire Studio 7 refers to special actions associated with a layer. In this section, Events (part 4), we will look at setting up clickable layers. That is, triggering some kind of action by clicking on the layer with the mouse. For this section, we'll use as an example, creating buttons to simulate moving around a structure.

**STEP 1:** Start by changing to **Split WinView**, adding backgrounds for the front, right, back, and left views, in that order, windows 1-4.



**STEP 2:** Next we'll add the *navigation icons* that will change the window and thus the view. In this step we just add all the icons found in the library under Nav Icons. We will be adding them in the corner to click to walk around the building. Select each window in the Split WinView to add the arrows to each view.



**STEP 3:** Now it is time to configure the icons. In the window 1, *select the icon pointing in a Northeasterly direction.*

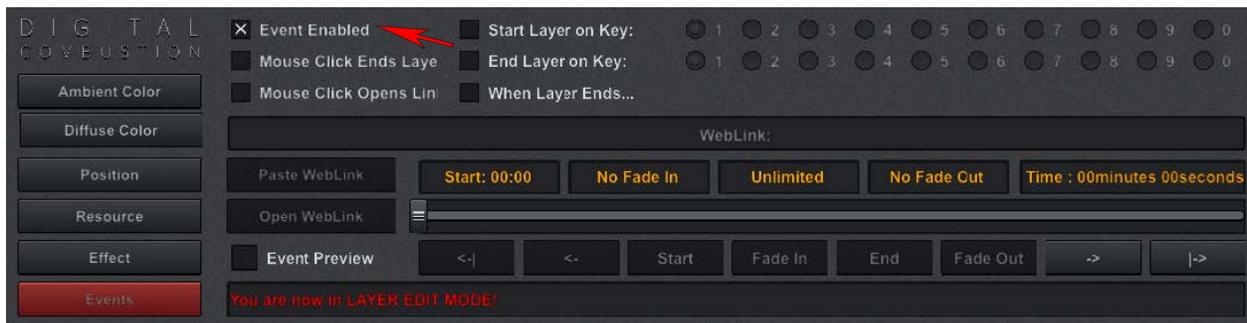


**STEP 4:** Click on the **Edit** button located at the right of the console. This will bring up the Edit Layer panel.

**STEP 5:** Click on the **Events** button on the far left to change to the Events category.



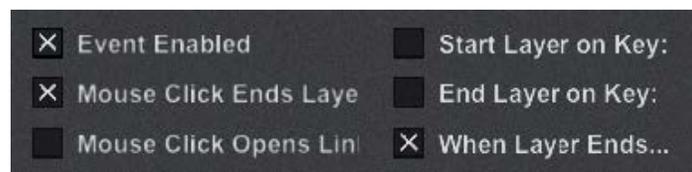
**STEP 6:** Check the **Events Enabled** box to bring up all Event options.



**STEP 7:** Now check the **Mouse Click Ends Layer** option. In some cases you may want the layer to simply disappear, which is why it is listed as ends layer. If that were the case, you would be done with the icon at this point. But since we are creating navigation icons, we want to trigger a change in views with the mouse click.



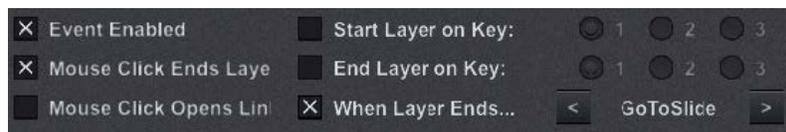
**STEP 8:** Check the **When Layer Ends** box. This setting tells Fire Studio that an event will occur when the selected layer has ended.



**When Layer Ends Options:** Once you check the When Layer Ends box, a new property will appear allowing you to specify what will occur. The options will include: **RestartSlide, GoToNext, GoPrevious, GoToSlide, and RestartLayer.** All of them are fairly self-explanatory but here is a quick rundown of what each will do:

- RestartSlide**      Refreshes the current slide, starting timers, layers, and events over again. Advances to the next slide (numerically) in the simulation. Example: Slide 1 to 2.
- : GoToNext:**
- GoPrevious:**      Moves to the previous slide (numerically) in the simulation. Example: Slide 2 to 1.
- GoToSlide:**      Jumps to any slide & windows of your choice.
- RestartLayer:**    Resets events and the animation of the currently selected layer.

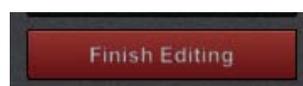
**STEP 9:** Click on the **right arrow** until it changes to **GoToSlide.**



**STEP 10:** We do not need to change the slide number as we're merely creating a walk-around using the 4 windows of this slide. Instead, change the window setting to **window: 02.**



**STEP 11:** All of the changes are complete for this navigation icon. Click on **Finish Editing.**



**STEP 12:** Repeat the steps for each of the other navigation icons, setting the respective window setting for each. Below is a cheat sheet showing which window number should be set for each icon. We've also labeled the four windows for reference.



**STEP 13:** Now that we've setup each icon, we'll want to change back to the single window mode. We want the viewer to see only one at a time after all. First click on window 1 so that it is selected, as in the picture above.

**STEP 14:** Now click on the **Split WinView** button or press S. Your image should appear like the screenshot below.



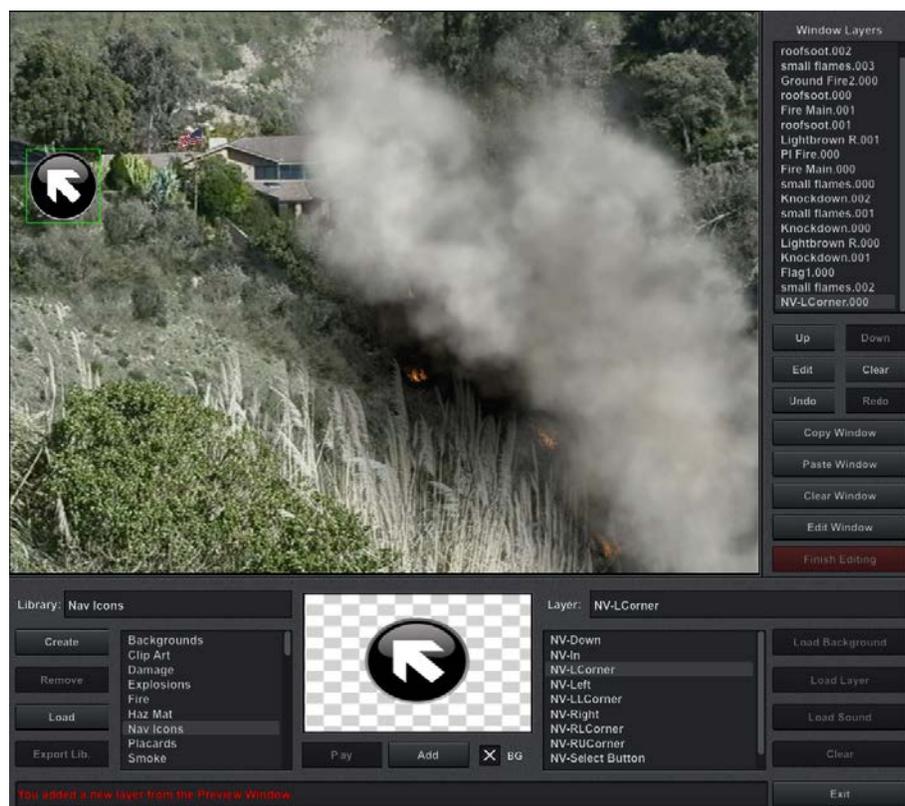
**STEP 15:** Click on **Finish Editing** if you're still in the Edit Panel and then press P to change to *Present Mode*. Test your settings by clicking on the navigation icons. If everything is setup correctly, they should simulate walking around the structure. Keep in mind that if you copy this slide, the icons will transfer over, but you'll need to copy over the Event properties separately.

## Events

### Opening a Web Page by Mouse-Click

Events in Fire Studio 7 refers to special actions associated with a layer. In this section, we will cover opening up a web page by clicking on a layer with the mouse.

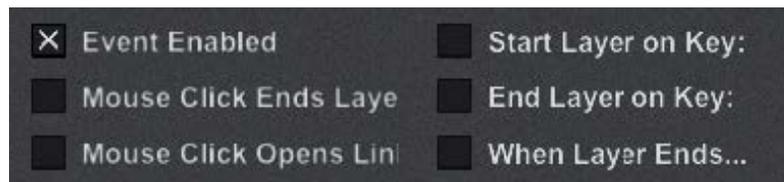
**STEP 1:** Insert the layer you want to use to trigger the website. In the example below, we'll be using a navigation icon to represent moving to another



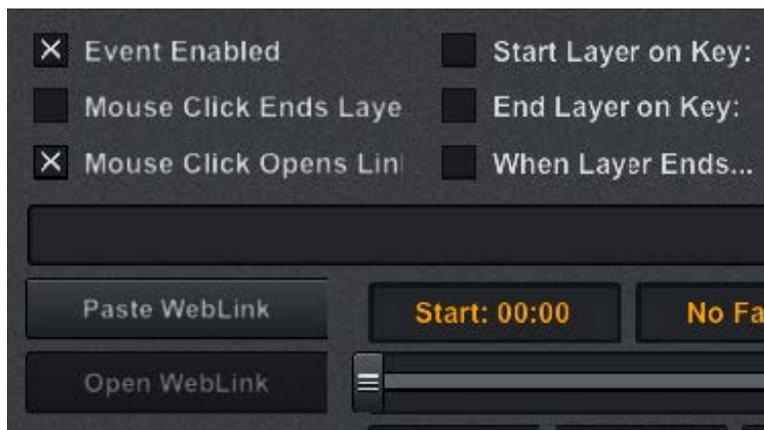
**STEP 2:** Click on **Edit** to bring up the Layer Edit panel, and then click on **Events** to change to that interface.



**STEP 3:** If the select the **Event Enabled** box. Marking this box will light up the other options.



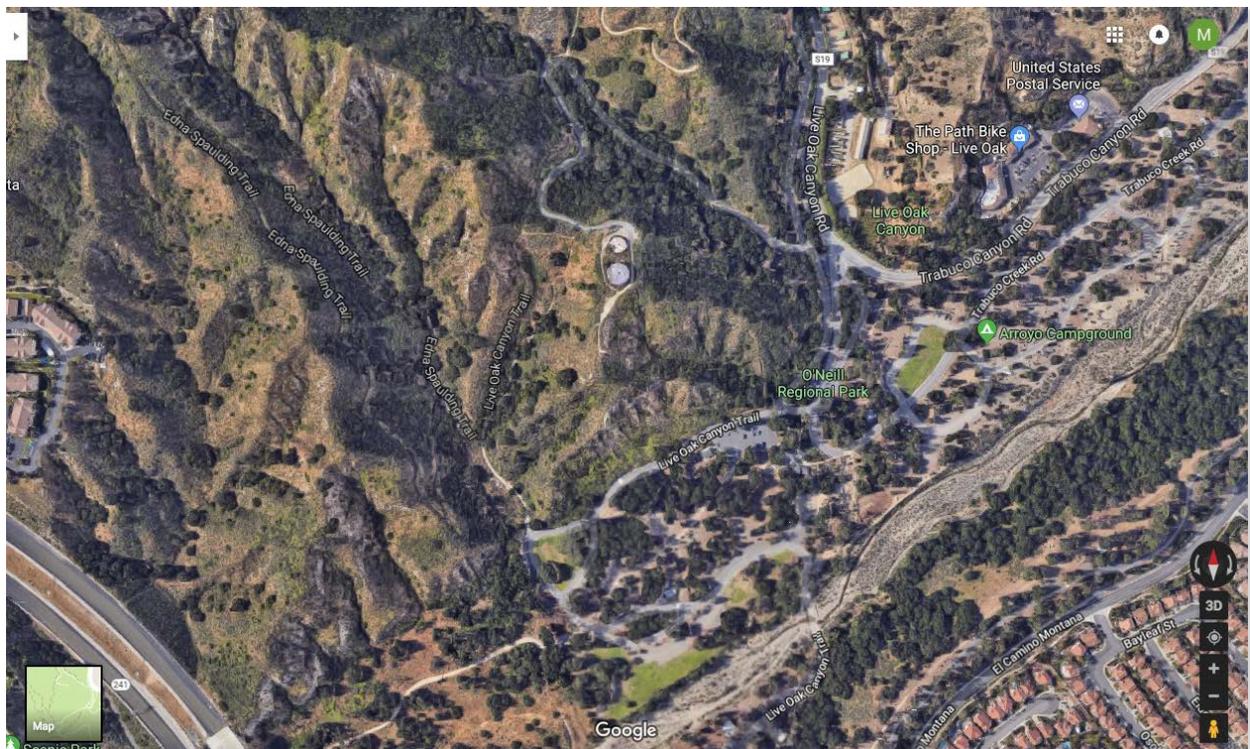
**STEP 4:** To setup this layer to open a website, check the box labeled **Mouse Click Opens Link**.



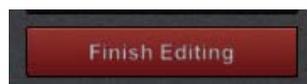
**STEP 5:** Now we will **paste the URL** from our browser into the long text field located just between the check boxes and the **Paste WebLink** button. You can copy the URL just like you would copy any text: Ctrl + C for PC users and Command + C for Mac users. Once you have copied the URL text, click on Paste WebLink. This will paste the copied URL into the field. In the example below, you can see the URL is very long and continues beyond the edge to the right. That is ok.



**STEP 6:** You should now test the link to make sure it opens to the exact website you intended. Click on **Open WebLink** to do so. Your browser should launch and navigate to the website URL you pasted. In this example, we've used Google Maps® as our URL to show a different view. You could have easily shown an overhead map view or anything else you have setup on a website.



**STEP 7:** The last step is to click on **Finish Editing**. Remember that clickable or keypress events are not active in Author Mode, but can be tested in Present Mode.



# Window Editing

## Lights, Camera, Action

In this chapter we'll learn how to apply lighting changes and camera positioning to your scenes, both statically and dynamically. In other words, you can change the lighting of a scene, and retain that lighting throughout your entire simulation, or you can have the lighting change over time, such as if the sun were coming up or going down. Similarly, you can zoom in and focus on a certain part of your scene, and do so from the start, or over a period of time. Finally, we'll also look at setting up your slides to automatically progress your simulation over time.

### Edit Window

Use the Edit Window button located on the right-side of the console. *Be sure to select the window you want to edit first!* Just as with editing layers, you will also use the *Finish Editing* button when you are done.



# Window Editing

## Ambient Light

### Ambient Light

#### **Red**

Adjusts the ambient red lighting in the selected window. For backgrounds, Fire Studio detects full ambient color to start and so sets the value to 255. Lowering this value will remove red coloring from the scene. Changing the ambient light effects only the background image and not any of your layers placed on it. You'll need to adjust the ambient settings of the layers individually if you want them to match.

#### **Green**

Adjusts the ambient green lighting in the selected window. For backgrounds, Fire Studio detects full ambient color to start and so sets the value to 255. Lowering this value will remove green coloring from the scene. Changing the ambient light effects only the background image and not any of your layers placed on it. You'll need to adjust the ambient settings of the layers individually if you want them to match.

#### **Blue**

Adjusts the ambient blue lighting in the selected window. For backgrounds, Fire Studio detects full ambient color to start and so sets the value to 255. Lowering this value will remove blue coloring from the scene. Changing the ambient light effects only the background image and not any of your layers placed on it. You'll need to adjust the ambient settings of the layers individually if you want them to match.

#### **Animated Data**

Turns on transitions for the lightning setting key frames you've set. When this box is checked, you will see the configured lightning changes occur in both Author and Present Mode.

#### **Hold Current Frame**

Freezes the window at a particular frame allowing you to do other edits while the image remains as it would appear at that frame. In the case of Ambient Lighting, the scene will hold the current lightning configuration, even if it's X number of seconds in the middle of the transition. You will use this only when Animated Data is marked.

# Editing Windows

## 2D Camera

### **The Virtual 2D Camera**

Sometimes you may want to show one particular section of your scene instead of seeing it all at once. You may not want the viewers to see other parts yet or maybe there are parts of the background (civilians, a light post, your finger) you want to omit completely, but don't want to edit the photo permanently and rebuild your library. At the most basic level, you can reposition the 2D camera in Fire Studio to a new, static view. This virtual camera can be moved on the 2D XY plane, and can also be zoomed in and out. There are only a few controls to learn which are explained below.

### **X**

Controls the position of the camera in the window along the horizontal or X-axis. You can make the camera move left or right when this setting is used in conjunction with key frames.

### **Y**

Controls the position of the camera in the window along the vertical or Y-axis. You can make the camera move up or down when this setting is used in conjunction with key frames.

### **Zoom**

Causes the camera to zoom into the window. You can be zoomed in from the start, or have the camera zoom over the course of the scenario playback.

### **Animated Data**

Turns on movement for the 2D camera key frames you've set. When this box is checked, you will see the camera move in both Author and Present Mode, according to the settings you've configured with key frames.

### **Hold Current Frame**

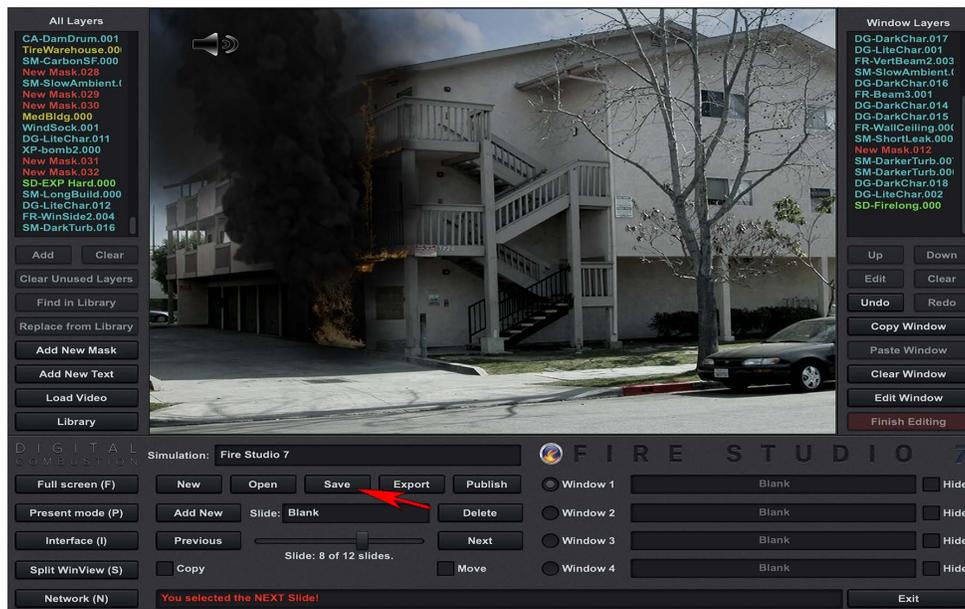
Freezes the window at a particular frame allowing you to do other edits while the image remains as it would appear at that frame. In the case of the 2D camera, the scene will hold the current view configuration, even if it's X number of seconds in the middle of the slide. You will use this only when Animated Data is marked.

If you aren't already viewing the 2D Camera properties, click on the **2D Camera** button on the left-side of the panel so it is highlighted in red.

# Saving/Exporting/Publishing

It is important to understand the difference between Saving and Exporting a simulation. "**Saving, Exporting** and **Publishing** are three *different* functions used for different purposes.

**Saving** a simulation causes the program to save all of the information needed for a simulation to run on the computer *where it was created*. **Exporting** a simulation allows you to move the finished simulation to another computer that has Fire Studio Installed, while still retaining the ability to edit the simulation. **Publishing** a simulation allows you to move it to another computer but locks the ability to edit the simulation.



You can find both the **Save, Export** and **Publish** buttons on the Slide Panel under the Simulation Display screen Fire Studio first opens upon launching. First, we will talk about Saving a simulation. Remember, Saving is used while you are building your simulation on your computer. It is best used when your simulation is still a "work-in-progress".

# Saving/Exporting/Publishing

## Saving Simulations

It is always good practice to save your simulation often while you are building. If you are working on your simulation you may currently be viewing the **Library Panel** where your content is located. In order to save, we need to change to the **Slide Panel**. You can do so by clicking on the **Slide** button that appears on the left-side of the console.



Select the **Save** button. A pop up screen will appear. You can choose which folder to save your simulation to, and then type in a name for your simulation. Click **Save**.

**WARNING:** It is not advisable to save directly to an external device such as a USB stick. Save your simulation directly to the hard drive. Saving your simulation only saves it for use on the computer where it was created. To move your simulation to another computer, you will need to Export it. See the next section:

# Saving/Exporting/Publishing

## Saving Simulations Continued

You can *save* your simulation in any folder you like, but our recommendation is to save it in a sub-folder you create under the *FireStudio7* folder located under *Documents*. Wherever you choose to save, just be sure to remember where you put it so you can load it again later. File management is *very* important in order for simulations to function correctly. **Once you have saved your simulation in a folder, DO NOT move it!**



Once you've clicked the Save, you'll be returned to the Fire Studio screen where your simulation name will now be listed as indicated in the screenshot. At this point, your simulation is now *saved* and you can continue working, or exit the program.

**Note:** When deciding on a name for your saved simulation, choose something unique to that particular simulation (like an address) instead of a common name such as "Garage Fire". By choosing common names, it is very likely that same name will be used more than once. This is even more common when multiple people are creating simulations. If you save sims with the same name, it will cause functional issues later on when trying to open your simulation. Try to be consistent in your naming procedure.

# Saving/Exporting/Publishing

## Exporting Simulations

Eventually, you may need to move a simulation to another computer. *Exporting* a simulation is different from *Saving*. When you Export a simulation, Fire Studio looks at any custom layers and backgrounds you have loaded in that simulation. The layers can come from different saved libraries, and files in different locations on your hard drive. Fire Studio gathers "copies" of any custom layers and backgrounds and creates a new Library (**lbr**) file with the same name as the exported sim (**dcs**) file. **It is best to wait until until you are certain that your simulation is finished, and that no further changes are needed before Exporting a simulation.**

### How to Export a Simulation:

If you have already been working on your simulation and it's ready to go, navigate to the **Slide Panel**, click on the **Slide** button.



If you are not working on your simulation, you will need to load it. On the **Slide Panel** you will need to click the **Open** Button. Navigate to your simulation and Open it.



# Saving/Exporting/Publishing

## Exporting Simulations Continued

From the **Slide Panel** select the **Export** button. A pop up screen will appear. You can choose which folder to save your simulation to. You can *Export* your simulation in any folder you like, but our recommendation is to place it in a *FireStudio7* subfolder located under *Documents*. You will then need to type in a name for your simulation. We recommend it to be a unique name related to that simulation, so you will not get it mixed up with another sim with a similar name. Click *Save* when done. It's also a good idea to use a name that denotes that it is an exported sim, such as "123MainStreetX". Then, when you see a sim with an X, you will know it has already been exported by you.



Once you **Export**, you'll be back at the Fire Studio screen. If you chose a new file name it will be listed in the simulation name box. A message will appear in red at the bottom indicating a successful export. As seen below.



# Saving/Exporting/Publishing

Moving Exported Sim to New Computer:

When you **Export** a simulation, two files will be created with the same name, but different extensions: **.dcs** and **.lbr** files. If you named the sim 123MainStX, the following files will be created: 123MainStX.dcs and 123MainStX.lbr.\*

*\*NOTE: There is an exception. If you are NOT using any custom content such as your own background photos, clip art or sounds, a custom library file (.lbr) will NOT be generated as it is NOT needed. You will only need to move the copy of the dcs file in that scenario.*

You *must* copy both of these files and move them to the other computer's hard drive, (preferably under the Documents Folder) to play the simulation successfully. **Note: You must keep the two .dcs and .lbr files together in the same folder on the other computers hard drive!**

**\*\*NOTE: If you use any video files in your exported simulation, they are not included in the exported library. You must manually copy any video files into the same folder as the dcs and lbr files.**

An Exported sim can be played on an Instructor or Player Edition of Fire Studio. If an Exported sim is opened on an Instructor Edition, the user on that computer will still be able to edit that simulation.

## **IMPORTANT!!**

**NEVER open a simulation from a USB or other external drive!!**  
You must first **COPY** the files to a folder on the new computer and then Open the simulation. FAILURE TO FOLLOW THIS PROCEDURE WILL CAUSE YOUR SIMULATIONS TO OPEN WITH MISSING BACKGROUNDS AND LAYERS!!

## Editing an Exported File

When editing an **Exported Sim**, you must "**Export**" again not "**Save**" after editing it. If you 1st exported a sim and named it 'House Fire 1', two files would be created: House Fire 1.dcs and House Fire 1.lbr. Typically, you would then copy those files and transfer them to a 2nd computer. If you decided to edit the sim and Export it again, you should **Export** it under a *different name* like "House Fire 1a". This would create the .dcs and .lbr with the new name.

**Warning:** If you re-export with the same name you used before, you can run into problems. Now you have 2 libraries with the same name of House Fire 1.lbr. Fire Studio might not find your newest sim.

**Note:** Again, **Never** open a simulation directly from a USB flash drive! You **MUST** first copy the .dca and .lbr files to the computer's hard drive.



Do **NOT** open a simulation from a flash drive!  
Copy it to your hard drive first.

# Publish

## Publishing a Sim to a Single File

Starting with Fire Studio 7, a new feature was added called "Publish". Publishing a sim is similar to Exporting a sim with a couple of big differences. First, when you Export a sim, 2 files are created (a .dcs and a .lbr). When you Publish a sim, only **one file** is created called a **DCX file**. This includes all of the simulation data as well as all of the custom library files. This makes it much easier to move your sims from one computer to another. Why would you ever Export a sim now that you have the Publish feature? The answer comes from the second difference in Publishing a sim - the simulation is locked from further editing. You can no longer make changes to the sim. Publishing is meant for sims that are completely finished and need no further editing. With that being said, you can still have saved and exported sims on your computer so that if you need to change anything down the road, you can open a saved version. The saved version can be edited and then you can simply Publish it again with a new name.

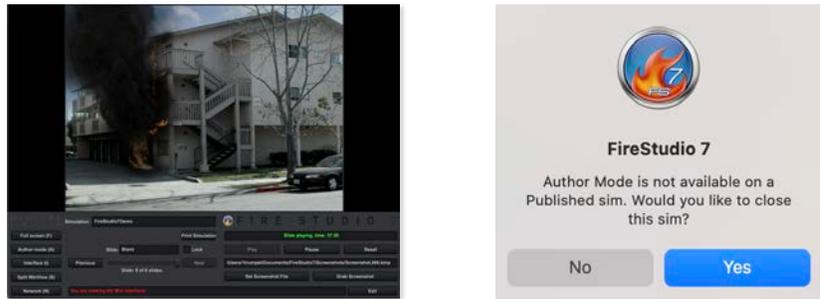


## Publish (cont.)

### Publishing a Sim to a Single File

From the **Slide Panel** select the **Publish** button. A pop up screen will appear. You can choose which folder to save your simulation to. You can *Publish* your simulation in any folder you like, but our recommendation is to place it in a *FireStudio7* subfolder located under *Documents*. You will then need to type in a name for your simulation. We recommend it to be a unique name related to that simulation, so you will not get it mixed up with another sim with a similar name. Click *Save* when done.

Remember, a Published simulation is locked from editing. You will not be able to edit the Published file. When you open the Published file on an Instructor Edition, the program will operate in Player mode. When you click the "A" key to return to Author mode from Present Mode, you will get a dialog box shown here:



If you select YES, Fire Studio 7 will close the simulation and return to Author Mode where you can then open another sim, or work on a new one. If you select NO, the sim will continue playing in Player mode.

To remove the interface and only display the simulation, press the "I" key (for Interface). Pressing the "I" key again brings back the interface.

## Publish (cont.)

### Sims That Contain Video Backgrounds

If your simulation contains video backgrounds, they will not be included in the DCX file. You will need to place them in the same folder you place the DCX file when opening the published simulation. The reason for this is to manage the file size of published (and Exported) simulations.

When moving a Published simulation to another computer, or sharing it with another user, you must remember to also send the video file(s) with the simulation.

NOTE: If you are using Fire Studio on both Macs and PCs, you may run into issues due to the different video file requirements. Windows uses AVI while Mac uses MOV primarily.

You may need to create videos in 2 different formats to have the sims available on both platforms. MP4 videos may display on both Windows and Mac depending on the software installed on those machines.

# Fire Studio Dialog Boxes

## Append Simulation

If you have a saved simulation open in Fire Studio and want to open another simulation, click on the “Open Sim” button:



If you already have a simulation open, Fire Studio will present you with the following dialog box:



The program is asking if you want to add another simulation to the end of the current simulation. If you choose YES, the new simulation will be added to the end of your current simulation. If you select NO, the new simulation will replace the current simulation.

Appending a simulation is helpful if you wish to combine multiple simulations into one. Once you combine (append) all of the desired sims, you can save the combined sims into one large simulation. This is useful in a classroom setting where you want to run students through multiple simulations. It is also very useful in a testing situation where you do not want to open and close sims in front of a candidate during the test.

# File Types

## Files related to Fire Studio

This page will give you a quick reference to files that are related to Fire Studio.

- DCS** - This is a simulation file.
- LBR** - This is a custom Library file. This file must be placed in the same folder as the matching DCS file.
- DCX** - This is a Published simulation file that contains the simulation and the library file in a single file.
- AVI** - This is a video file that is used on Windows computers.
- MOV** - This is a video file used on Mac computers.
- PNG** - This is a graphics file with a transparent background used as Fire Studio clip-art.
- JPG** - Graphics file used when importing backgrounds.
- WAV** - Sound file used in imported audio (Windows/Mac)
- ZIP** - This is a compressed file. The installation files are contained in a zipped file on both Windows and Mac versions. You must extract the files first before installing the software.

# Photo Information

## Background Photos

When photographing buildings for Fire Studio, here are some tips to ensure high-quality results:

Today's cameras and phones can capture extremely high-resolution images, but this level of detail is usually excessive for Fire Studio and can consume significant graphics memory.

Many phones default to a resolution of 4000 x 3000 pixels, but images at half this size—around 2000 x 1500—are typically more than sufficient. If your phone doesn't allow you to adjust resolution, you may need image-editing software to resize the photos.

JPG is the preferred format for Fire Studio backgrounds. Always take photos in landscape orientation, rather than portrait.

Aim to photograph buildings with minimal obstructions, like trees or power lines, as these elements are difficult to mask for adding smoke or fire effects behind them.

For realistic simulations, avoid capturing people in your photos. Stationary figures can disrupt the illusion and realism of the scene.

# Keyboard Shortcuts

What you want to do	Key	Author	Present
Change between Four Window view and Single Window view	S	X	X
Open/Close the Network Panel	N	X	X
Show/Hide the Fire Studio Interface	I	X	X
Change to Present Mode	P	X	
Change to Author Mode	A		X
Show Fire Studio in a Window or in Full Screen	F	X	X
Show/Hide selection rectangles	Space	X	
Pause the Slide (when Interface not shown)	Space		X
Move to next Slide	Right Arrow	X	X
Move to previous Slide	Left Arrow	X	X
Move to next item in a selected scroll-down menu	Down Arrow	X	
Move to previous item in a selected scroll-down menu	Up Arrow	X	
Show/Hide the Mini Panel (when Interface not shown)	Tab		X
Show/Hide window information overlay	F2	X	X
Change window information overlay between black & white	F3	X	X
Change Language Settings	F5	X	X
Jump to Slide. Use: [J] then [Slide #] then [Enter]	J		X
Select one of the four Windows in the current Slide	1 to 4	X	X
Hide/Unhide Windows 1-4 in the current Slide	Shift 1 - 4	X	X
Event Key (Numeric Keypad)	Num 0 to 9		X
Event Key (Typewriter Keys)	Ctrl 0 - 9		X
Screenshot to Memory (Desktop), MS Windows	PrtScn	X	X
Screenshot to Memory (Active Window), MS Windows	Alt + PrtScn	X	X
Screenshot to File (Desktop), MS Windows 8.1 or newer	 + PrtScn	X	X
Screenshot to File (Desktop), Apple OS	 + Shift + 3	X	X
Screenshot to File (Part of Screen), Apple OS	 + Shift + 4	X	X
Screenshot to File (Selected Window), Apple OS	 + Shift + 4 then Space Bar	X	X