# FX Composer

## System Requirements

- **NVIDIA GeForce FX series GPU or higher.**
- **Microsoft DirectX 9**
- **Windows 2000 or XP**

## About FX Composer

FX Composer allows the user to configure their development environment in several ways. The Text Editor panel is always displayed in main window. Each optional element of the UI is displayed in a separate panel that can be displace, hidden, resized, docked to the main window, or free float over the window. FX Composer supports systems with multiple displays, allowing free floating panels to be used on a second monitor. FX Composer can be configured to display any combination of the following panels:

- **Log** panel
- **Error** panel
- **Properties** panel
- **Object** panel
- **Materials** panel
- **Textures** panel
- **Shader Perf** panel
- **Scene Graph** panel
- **Scene** panel

## Panels

To display the various panels, use the **View ➔ Toolbars** and select the panels to be displayed in your work area.

Each panel is adjustable and can be dragged away from its docked position to float freely above the main window. Several panes have buttons at the top associated with their major functions.

The Panel Tool Icon table lists these buttons and provides a description of each. These buttons are only displayed in panels where they can be used.

**Note:** To move through playback of the animation one frame at a time, use **F9** (Previous Frame) and **F10** (Next Frame).

## Panel Tool Icons

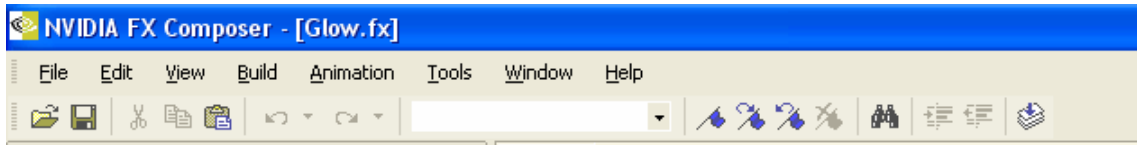| Tool Icon | Description | Shortcut Keys |
|---|---|---|
| | **Select Object**: Selects an object in the window. | |
| | **Rotate Scene:** Rotates a scene in the window. | **CTRL** |
| | **Pan Scene:** Pans over the scene in the window. | **SHIFT** |
| | **Dolly Scene:** Resizes an object from the center. | **CTRL+SHIFT** |
| | **Zoom Extents:** Zooms in on an object/scene. | |
| | **Apply Material:** Applies selected material to current mesh selection. | |
| | **Delete Material:** Removes material & closes corresponding .fx file. | |
| | **New Material:** Creates new materials & corresponding .fx file | |
| | **Small:** Changes object size to small representation. | |
| | **Medium:** Changes object size to medium representation. | |
| | **Large:** Changes object size to large representation. | |
| | **Actual Size:** Changes object to reflect actual size. | |
| | **Save:** Saves current selection | |
| | **Rotate Scene:** Rotates all objects in the window in the direction you drag | **CTRL + L-Mouse** |
| | **Pan Scene:** Moves camera up/down or left/right | **SHIFT + L-Mouse** |
| | **Zoon Scene:** Move the camera closer or further away. | **CTRL + SHIFT + L-Mouse** |
| | **Categorize:** Shows panel contents organized by category. | |
| | **Alphabetize:** Shows panel contents organized alphabetically | |
| | **Start Animation:** Begins playback of scene animation. | **CTRL+G** |
| | **Stop Animation:** Stops playback of scene animation. | **CTRL+H** |

## Quick Reference

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## Application Toolbar



## Application Toolbar Icons

| Tool Icon | Description | Shortcut Keys |
|---|---|---|
| | **Open File:** Used to open the browser to find a file. | **CTRL+O** |
| | **Save:** Used to save a file. | **CTRL+S** |
| | **Cut:** Use to delete or cut code from the .fx file. | **CTRL+X** |
| | **Copy:** Used to copy highlighted text. | **CTRL+C** |
| | **Paste:** Used to paste the last copied text. | **CTRL+V** |
| | **Undo:** Undoes the last action. | **CTRL+Z** |
| | **Redo:** Used to redo the last action. | **CTRL+Y** |
| | **Bookmarks:** Flags lines of code & skips quickly between flags.<br><br>Toggle (apply/delete) Bookmark<br><br>Go to Next Bookmark<br><br>Go to Previous Bookmark<br><br>Clears ALL Bookmarks | **CTRL+F2**<br><br>**F2**<br><br>**Shift+F2** |
| | **Find:** Finds specific words in a file. | **CTRL+F** |
| | **Indent:** Indents lines of code. | |
| | **Un-indent:** Un-indents lines of code | |
| | **Compile .fx:** Compiles the code displayed in the Text Editor panel. Note that the compiler stops at each instance of an error in the code and does not continue until the error is corrected. Click the **Compile** key again to continue compiling. | **CTRL+F7** |

## Window Panels

**Text Edit** Panel:  Contains the FX file code and is enabled with syntax highlighting (keywords in colors). It acts like the Microsoft Visual Studio. All Material files opened are listed as tabs across the top of the panel to allow you to switch between files easily. Use the scrollbars and bookmarks to move easily through the file.

**Properties** Panel: View and change object properties. Primarily used for material properties; however it can be used to view/change shapes, textures, and other items in the scene graph such as light.

**Materials** Panel: A collection of 3D viewports, displaying a preview of each material currently loaded, applied to a simple shape.  Allows visualization of material *and* ability to see it applied in 3D.

**Textures** Panel:  Displays the current textures for the *selected* material as well as any procedurally-generated textures and render targets. Also enables visualization of cubemaps and normal maps, and displays the textures in an FX file.

**Scene Graph** Panel: Used to browse through current scene transform hierarchy and select objects. Allows selection of items that wouldn't easily be available in the UI, such as individual bone transforms, etc. It is also useful to see how a scene is built.

**Scene** Panel: Displays the current scene and has the usual controls for manipulating scenes. FX Composer includes GeoPipe plug-ins that support importing scenes stored in .nvb and .x files, both of which can contain skinning information.

## More Keyboard Shortcuts

The following keyboard shortcuts do not have an Icon tool associated with it:

**F3** ..............Find Next
**SHIFT+F3** ..Find Previous
**CTRL+P** ......Print
**ALT** ............Switch from object X/Y to Z/X translation when in object translation mode