Panamation Manual

PLAY®

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Chapter 1

Document Overview

This chapter provides information on how this manual is organized. It also covers conventions within the manual.

Inside, you'll find the following sections:

- Introduction 2
- Conventions 3
- Contact information 5

Introduction

This manual gives you an overview of what Panamation is, and how to efficiently use it. It also shows what you see when you navigate through the Panamation interface.

Within these pages are instructions on how to use, create, and alter strokes, digitize clips, create transitional effects, and much more. All of Panamation's, buttons, panels, and functions are covered here as well.

Conventions

Before you get too far into the manual, some of the conventions that appear within need to be explained.

General Conventions

The following formats are used to identify special instructions or important points in this manual.

1. (numbered)	Indicates step-by-step instructions to follow.
Bold Type	Indicates words you should type, buttons you should click, names of menus, panels, or windows, and file path names.
Italic Type	Indicates emphasis of important points.

This manual covers both versions 1.3 and 2.1. When a feature is only available in 2.1, this icon appears in the margin to let you know that this feature is not available in the 1.3 software. If you decide later you would like these features, your Trinity dealer can sell you the Trinity 2.1 software upgrade kit. Version 2.1 is required for Time Machine users, and it includes many new features for users without Time Machine as well. Contact your dealer for more information.

The Trinity software version 1.3 is a free upgrade available on the Play web site (www.play.com) or from your Trinity dealer. The 1.3 software patch upgrades version 1.2 to 1.3. It includes many enhancements and bug fixes, and is recommended for all 1.2 users.

Mouse Conventions

Trinity is designed for use with a two-button mouse. The following table explains mouse commands used in this manual.

Click	Place the mouse pointer over an object. Press the *left* mouse button and immediately release.
Click-and-drag	Place the mouse pointer over an object. Press the *left* mouse button. While holding the button down, move the mouse around. This is used mainly to draw boxes over objects to select them.
Double-click	Place the mouse pointer over an object. Press the *left* mouse button twice quickly and immediately release.
Drag-and-drop	Place the mouse pointer over an object. Press the *left* mouse button and hold it down. Drag (move) the object anywhere on your screen. When you release the mouse button, the object is dropped where the mouse pointer is aimed.
Right-click	Place the mouse pointer over an object. Press the *right* mouse button and immediately release.

Contact Information

If you have questions about Trinity and its applications or hardware, there are a number of ways to contact Play's friendly, knowledgeable support staff.

Email	General Questions:	customerservice@play.com
	Trinity Support:	trinitysupport@play.com
Mail	Play's Intergalactic Headquarters	Play Incorporated 2890 Kilgore Road Rancho Cordova CA 95670-6133
Phone & Fax	Technical Support:	916.636.2444 (7:00 AM to 6:00 PM PST, Monday-Friday)
	Corporate Office:	916.851.0800
	General Fax:	916.851.0801
	Customer Support Fax:	916.853.9831
	Sales Department Fax:	916.631.0705
Web Pages	Trinity Updates:	http://www.play.com/trinity/updates
	Main Page:	http://www.play.com
	Contact Page:	http://www.play.com/play/trinity/phone.cfm
	Knowledge Base and FAQ	http://www.play.com/cgi-bin/rightnow
	Trinity Forum:	Go to cf.play.com/play/trinity, click on Discussion Forum in the left column under User Resources.
	Trinity Q & A	cf.play.com/play/support

Chapter 2

Quick Start

This chapter is designed to give you an overview of Panamation. As you follow along, you will learn how to create a background, add and animate objects in the workspace, and save a project. When you finish this quick start, remember that there are many more features that you can explore on your own.

This chapter covers the following topics:

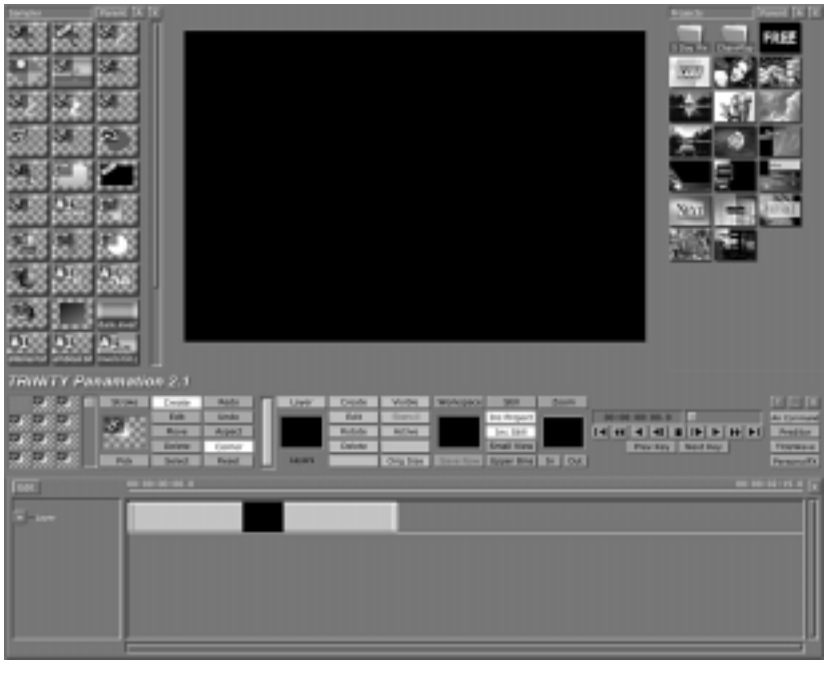
- Introduction to the interface 8
- Preparing the workspace 9
- Creating a background 12
- Creating a simple animation 17
- Adding text to the workspace 20
- Animating text 22
- Saving the project 33

Introduction To The Interface

Welcome to the Panamation Quick Start tour. By following along with the tour, you'll learn how to put together a Panamation project and try your hand at some powerful Panamation features. With these features, you will create an animated space scene with text that can be used as a transition between shows. In this tour, you'll see the various ways to bring objects and strokes into the workspace and change their properties.

NOTE This tour uses brush strokes and elements from the Panamation Tutorials bin, which may not be currently open. To find it, click the Parent button at the top of one of the bins, which takes you to the Panam bin. Double-click on the Tutorials folder there, and then double-click on the Space Scene folder.

To get to Panamation from the Air Command, click on the Panamation button. It's a button in the lower right corner of Air Command. This brings up the Panamation interface.



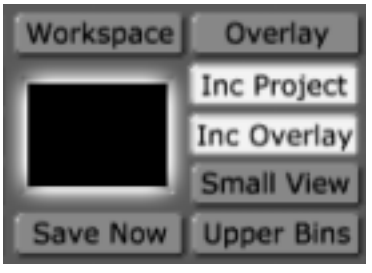
The Panamation Interface

Preparing The Workspace

The first thing you should do is tell Panamation to display its workspace on Trinity's Program monitor. By doing this, you will be able to see exactly what your project will look like on a television screen.

To prepare the workspace, follow these steps:

1. Right-click on the Workspace picon (following figure) and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

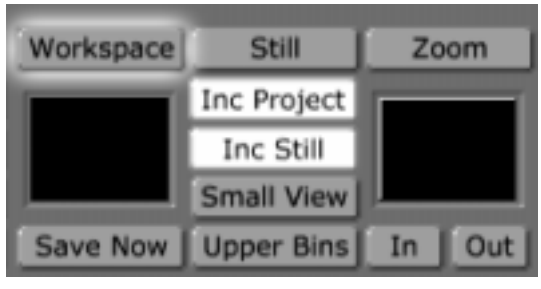


The Workspace Picon

Choosing New Project

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a message box comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

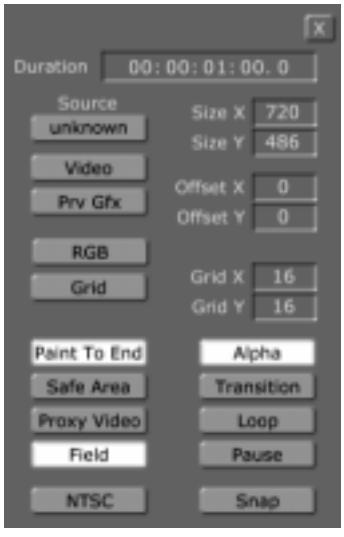
2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can

set the length of your effect, change how it is displayed in the workspace, and how it acts when it is run back in Air Command.



The Workspace Properties Panel

3. Click the Video button (following figure) on. This tells Panamation to display its workspace on the Program monitor.

The Video Button

In your Program monitor, you see the Panamation workspace.

4. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

Continue on to create a background that is a star field.

Creating A Background

The easiest way for you to create your scene, will be to create the background first, then work your way forward. In this case, you'll create a star field to serve as your background. By doing this, you will get a feel for how to use the Scatter Settings panel to scatter the particles of a spray stroke.

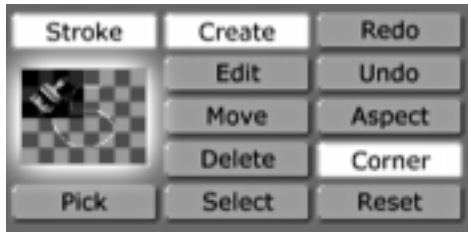
To create a background, follow these steps:

1. Locate the following picon in the Trinity\Bins\Panam\Tutorials\Space Scene bin. It is the picon with the white line and a paintbrush on it.

Brush Stroke Picon

2. Click on this picon to select it as the current stroke.

   When you click a stroke as you just did, nothing appears in the workspace right away, but the picon does show up as the Current Stroke picon (following figure) on the toolbar.



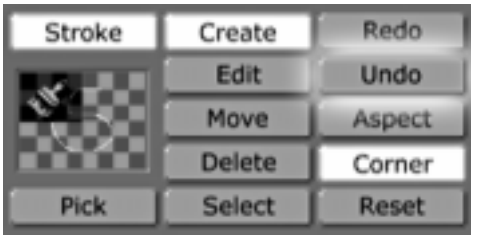
The Current Stroke Picon

3. Draw a stroke in the workspace by clicking in the workspace and dragging.

   In the workspace, you see the thin line that you drew.

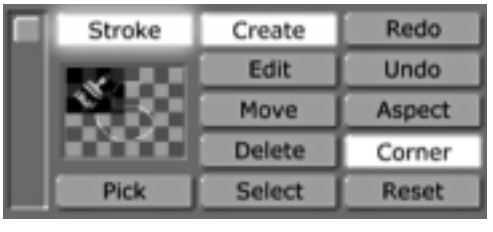
Hold on, that doesn't look like stars – it's just a thin white line. How could you possibly make stars with this stroke? Easy! By changing one of its properties.

4. Click the Undo button on the toolbar (following figure) to remove the stroke you just drew. You're going to change the properties of the current stroke, and then draw a new stroke in the workspace.



The Undo Button

5. Bring up the Stroke Properties panel by clicking the Stroke button (following figure).



The Stroke Button

You see the Stroke Properties panel (following figure) in the upper left corner of the screen. From this panel, you can change the size, shape, and position of a stroke, and animate these properties. You can also create a text stroke from this panel. For more information about using this panel, see “Stroke Properties Panel” on page 45.

The Stroke Properties Panel

6. Click the Tool Settings button (following figure) to bring up the Scatter Settings panel.

The Tool Settings Button

You see the Scatter Settings panel (following figure) in the upper left corner of your screen. From this panel, you can scatter, or spread out, the particles of the stroke. To make stars, you need to adjust the Scatter value of the stroke to a higher number. For more information about using the Scatter Settings panel, see “Scatter Settings Panel” on page 63.

The Scatter Settings Panel

7. Set the Scatter value to 768 by either clicking and dragging the Scatter slider (following figure) all the way to the right, or by selecting the numeric value to the right of the slider, typing in 768, and pressing Enter on your keyboard.

The Scatter Settings Slider Set at 768

8. Paint a stroke across the center of the workspace. Do this a few times to fill the workspace with “stars.”

   You see a scattered dot pattern drawn in your workspace.

   The following figure illustrates what the workspace should look like with the scattered stroke drawn in it.

The Workspace with the Scattered Stroke

9. Close the Scatter Settings panel by clicking the X button in the upper right corner of the panel.

That's how you can turn a thin white stroke into a universe of stars! Now you're ready to add planet earth and its moon to the workspace.

Creating A Simple Animation

Now that you have a proper star field in your workspace, you can add objects to it. In this tour, you will be dragging-and-dropping pre-made elements into the workspace to create a simple space scene.

To add objects to the workspace to create a space scene, follow these steps:

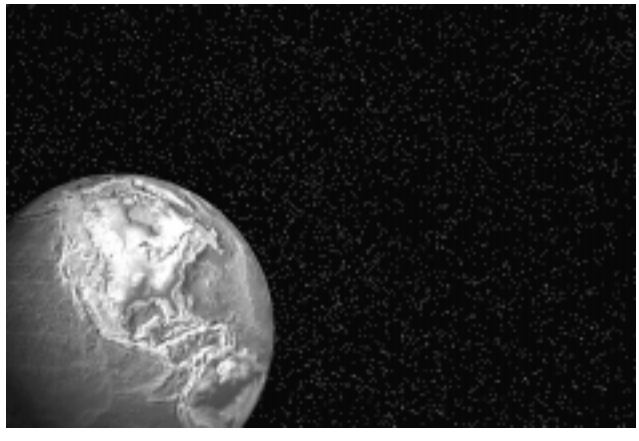
1. Locate the following picon in the Trinity\Bins\Panam\Tutorials\Space Scene bin. It is the picon with the planet Earth on it.

Earth Graphic Picon

2. Double-click on the Earth graphic picon to add the Earth object to the workspace.

   You see the Earth graphic in the lower left corner of your workspace.

   The following figure illustrates what your workspace should now look like.



The Earth Graphic in the Workspace

3. Locate the following picon in the Trinity\Bins\Panam\Tutorials\Space Scene bin. It is the picon with the moon on it.

Moon Graphic Picon

4. Double-click on the moon graphic picon to add the moon object to the workspace.

   You see the moon graphic in the upper right corner of your workspace.

   The following figure illustrates what your workspace should now look like.

The Earth Graphic in the Workspace

TIP As you move items into and around the workspace, you may decide you want to return a graphic to its exact original location in the workspace. To do this, do either of the following:

   a. Delete the graphic from the workspace by clicking on it and pressing Delete on your keyboard. Then double-click on its picon in the bin.

b. Delete the graphic from the workspace by clicking on it and pressing Delete on your keyboard. Press Shift on your keyboard, then drag-and-drop the picon from its bin into the workspace.

Both methods restore the graphic to its original location, or its location when the file was last saved.

Continue on to add text objects to the workspace.

Adding Text To The Workspace

Now, it's time to add text objects to the Panamation workspace. With Panamation, you could easily create custom text, but for this tour, you will be adding pre-made text to the workspace.

To add the text to your workspace, follow these steps:

1. Locate the following picon in the Trinity\Bins\Panam\Tutorials\Space Scene bin. It is the picon with the words Coming Up on it.

Coming Up Graphic Picon

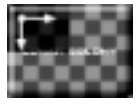
2. Double-click on the Coming Up picon to add the text to the workspace.

   You see the words Coming Up in the lower left corner of your workspace.

   The following figure illustrates what your workspace should now look like.

The Coming Up Text in the Workspace

3. Locate the following picon in the Trinity\Bins\Panam\Tutorials\Space Scene bin. It is the picon with the words Lunar Colony on it.



Lunar Colony Graphic Picon

4. Double-click on the Lunar Colony picon to add the text to the workspace.

   You see the words Lunar Colony in the lower left corner of your workspace, under the words Coming Up.

   The following figure illustrates what your workspace should now look like.

The Lunar Colony in the Workspace

Continue on to learn how to animate the text you just brought into the workspace.

Animating Text

Now that you have a nice still space scene with some type in it, it's time to animate the text. That's right, with Panamation it's easy to animate any stroke in the workspace, including text. That's just what you'll do now.

As you prepare to animate the text, recall that the Coming Up text is one object and the Lunar Colony text is another. By creating the text as two separate objects, you can animate each one separately.

Fading In the First Line of Text

As they appear now, your two text objects are where they should be at the end of the animation, so you should work backward in time. What you want to do first is make the words Coming Up gradually fade in over the course of your animation. This means you need to animate the Alpha property for the text.

To animate the Alpha property for the text, follow these steps:

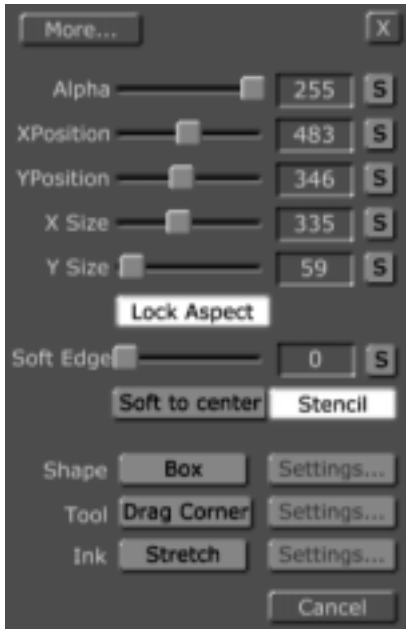
1. Bring the effect to the end of the animation by clicking the Last Frame button (following figure).

Last Frame Button

2. Bring up the Stroke Properties panel for the Coming Up text stroke by right-clicking on the white part of any of the letters of the text and choosing Properties from the pop-up menu (following figure).

Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel (following figure) in the upper left corner of the screen.



The Stroke Properties Panel

Near the top of this panel is a slider labeled Alpha. To the right of this slider is a box displaying the alpha (or transparency) value. To the right of

that is a button with the letter S on it. This is the Animation Status button. The S means the property is static, or not animated.

TIP You can change a number of different properties for each of your objects from this panel.

3. The alpha value for the Coming Up text should be set at 255 already (following figure). If it's not, select the value, type the new value of 255, and press Enter on your keyboard. You can also use the slider to set alpha values.

The Alpha Value set at 255

An alpha value of 255 means that the object is completely opaque.

4. Animate the alpha value by clicking the Animation Status button (following figure) next to the Alpha value and selecting Animated from the pop-up menu (following figure).

The Animation Status Button

Choosing Animated from the Pop-Up Menu

You see the S on the Animation Status button has changed to an A, for animated.

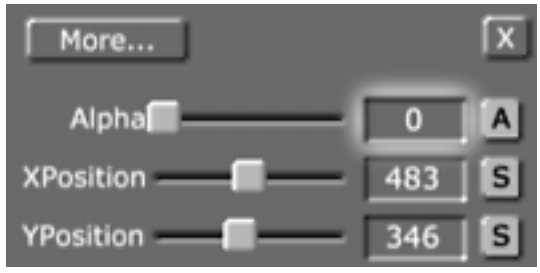
NOTE When a stroke's property, such as position, is animated, a key frame is automatically added for the stroke's position in the effect. Whenever you alter a stroke's property that is animated at another point in the timeline, a keyframe is automatically added at that point in the effect.

Leave the Stroke Properties panel open for the time being.

5. Bring the effect to the beginning of the timeline by clicking the First Frame button in the Transport Controls (following figure). This button brings the animation to the beginning of the effect.

The First Frame Button

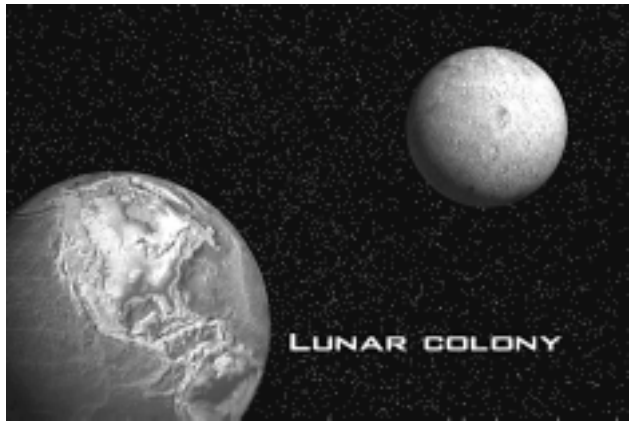
6. Change the alpha value for the Coming Up text to 0 by selecting the alpha value (following figure), typing the new value of 0, and pressing Enter on your keyboard. You can also use the slider to set alpha values. By changing this value, a keyframe is automatically added for the text's transparency in the workspace.



The Alpha Value set at 0

An alpha value of 0 means that the object is completely transparent.

You see that the Coming Up text is completely transparent in the workspace (following figure).



The Workspace with the Coming Up Text Transparent

7. Close the Stroke Properties panel by clicking the X button in the upper right corner of the panel.

8. Preview the animation at this point in the project by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In your workspace, you see the words Lunar Colony slide in from the right.

To summarize what you've done so far, you set the alpha value of the Coming Up text to go from 0 (transparent) at frame 00:00:00:00.0, to 255 (opaque) at frame 00:00:00:29.1. You did this by turning on the animate option for this property, which automatically adds a key at each frame when a property is changed.

Slide In the Rest Of The Text

The animation is almost done now. You just need to tell the Lunar Colony text to slide in from off screen. To do this, you will animate one of the text stroke's properties, similar to how you animated the alpha value for the Coming Up text.

To slide the Lunar Colony text in from off the screen, follow these steps:

1. Bring the effect to the end of the animation by clicking the Last Frame button (following figure).

Last Frame Button

2. Bring up the Stroke Properties panel for the Lunar Colony text stroke by right-clicking on the white part of any of the letters of the text and choosing Properties from the pop-up menu (following figure).

Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel (following figure) in the upper left corner of the screen.

The Stroke Properties Panel

Near the top of this panel is a slider labeled XPosition. To the right of this slider is a box displaying the XPosition (or horizontal position) value. To

the right of that is a button with the letter S on it. This is the Animation Status button. The S means the property is static, or not animated. Since the animation is at the end of the effect, you do not have to change the XPosition value.

3. Animate the XPosition value by clicking the Animation Status button (following figure) next to the XPosition value and selecting Animated from the pop-up menu (following figure).

The Animation Status Button

Choosing Animated from the Pop-Up Menu

You see the S on the Animation Status button has changed to an A, for animated.

NOTE When a stroke's property, such as position, is animated, a key frame is automatically added for the stroke's position in the effect. Whenever you alter a stroke's property that is animated at another point in the timeline, a keyframe is automatically added at that point in the effect.

Leave the Stroke Properties panel open for the time being.

4. Bring the effect to the beginning of the timeline by clicking the First Frame button in the Transport Controls (following figure). This button brings the animation to the beginning of the effect.

The First Frame Button

5. Change the XPosition value for the Lunar Colony text to 1000 by selecting the XPosition value (following figure), typing the new value of 1000, and pressing Enter on your keyboard. You can also use the slider to set the XPosition value. By changing this value, a keyframe is automatically added for the text's position in the workspace.

The XPosition set at 1000

In this project, a value of 1000 means that the object's position is off the screen.

You see the Lunar Colony text move off screen, so that it is out of the workspace (following figure).

The Workspace with the Lunar Colony Text Off Screen

6. Close the Stroke Properties panel by clicking the X button in the upper right corner of the panel.

7. Preview the animation in Panamation to see how it will behave when it is run in Air Command or loaded into Preditor by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In your workspace, you see the words Coming Up fade in and the words Lunar Colony slide in from the right. When it finishes playing, the workspace should look like the following figure.

The Animation at its End in the Workspace

Continue on to the next section to learn how to save your project

Saving The Project

Now that you've completed your animation, you will need to add a pause point to the animation. By adding a pause point to the effect, when it is run in Air Command, it will pause at a certain point until it is run again. Once you add a pause point, you will then save this effect to one of the bins. This allows you to load the project into Air Command and play it back as an effect whenever you wish.

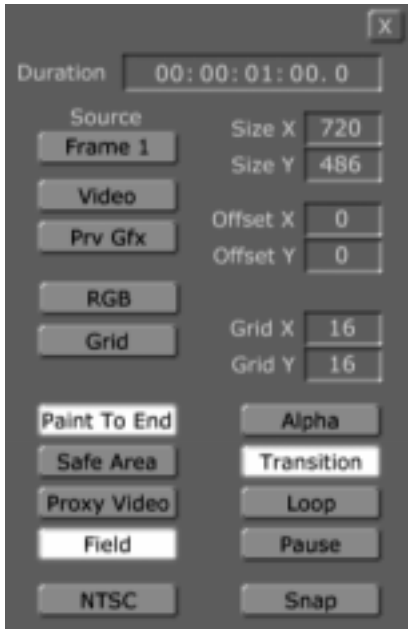
1. Click the Last Frame button (following figure) on the transport controls to ensure that you are at the last frame of your effect. This is where you will add a pause point to the effect.

Last Frame Button

2. Bring up the Workspace Properties panel by clicking the Workspace button (following figure) in the Workspace Controls.

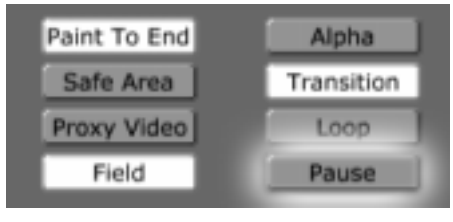
The Workspace Button

You see the Workspace Properties panel (following figure) in the upper left corner of your screen.



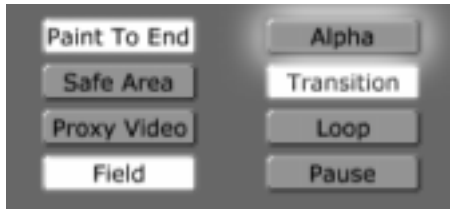
The Workspace Properties Panel

3. In the Workspace Properties panel, select the Pause button (following figure) to add a pause point to the last frame in your effect. This causes the effect to pause at the end when playing back in Air Command or Preditor. Otherwise, the effect would play through without stopping.



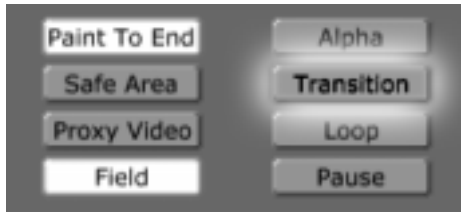
The Pause Button

4. Make sure the Alpha button (following figure) is *not* selected. If the Alpha button is selected, the background of the effect will be transparent, and a video source will show up behind the star field. Since you want the background to be black, you don't want the Alpha button selected.



The Alpha Button

5. Make sure that the Transition button (following figure) is *not* selected. If the Transition button is selected, your effect will be saved as a transition rather than an overlay.



The Transition Button

6. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

7. In the Workspace Controls, click the File Type button (following figure) and choose Overlay from the pop-up menu (following figure).

The File Type Button

Choosing Overlay from the Pop-Up Menu

The File Type button should now read Overlay. With Overlay selected as the file type, when the project is run in Air Command it will act as an overlay. If you had left the file type as a Still, then the would be saved as a framestore. If you had chosen Wipe from the pop-up menu, your project would be saved as a wipe.

8. Drag-and-drop the Workspace picon (following figure) into a bin.

The Workspace Picon

Panamation steps through the frames of the animation as it compiles them into an effect. Once the picon appears in the bin, the project is saved, and can be loaded into Air Command and played as an effect.

NOTE Clicking the Save Now button (following figure) below the Workspace picon saves your effect in the default bin, which is trinity/bins/panam/ projects.

This tour is over now, but you can learn much more about Panamation by experimenting. An unlimited variety of effects can be created by moving objects around, adjusting their alpha values, etc. Your Panamation adventure is just beginning!

Chapter 3

Reference

This chapter provides reference information for Panamation. It describes buttons, panels, and pop-up menus grouped by task. It is arranged this way so that you can access all the information related to a given topic without flipping through the entire book. Tutorials are located in chapter 4.

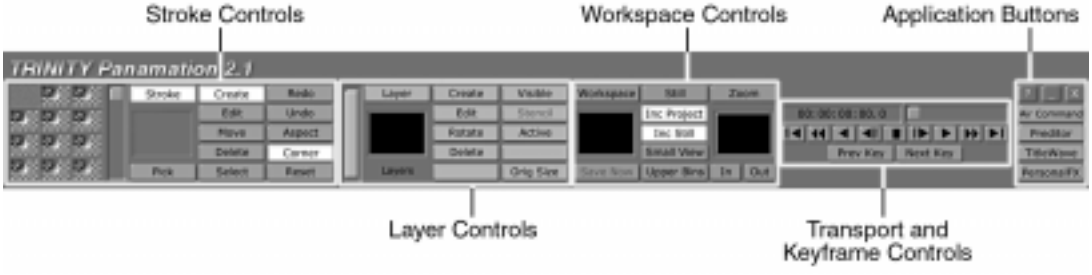
The following topics are covered:

- The Panamation interface 40
- Working with strokes 41
- Working with layers 147
- Working with the workspace 167
- Working with the timeline 192
- Using the application buttons 213

The Panamation Interface

Panamation is a revolutionary tool for paint and animation that, because of its flexibility, you the user can use it to create and animate an unlimited variety of projects. In Panamation, every object, whether it is a digitized clip, text, or a drawn object, is a stroke. That means that every object can be scaled, animated, color corrected, or moved individually. With this and many more features, you the artist have the power to create your vision.

The following figure illustrates Panamation's function controls.



Working With Strokes

Before you dive into each screen and pop-up menu within the program, some basic concepts of how Panamation's strokes operate need to be covered.

Every brush stroke is an object

When you are in the Create mode, every time you click the mouse button down, drag the mouse, and release the mouse button, you are creating a new brush stroke. Each stroke is independent of others around it. This means if you draw the letter T with one stroke for the vertical line and another stroke for the horizontal line at the top, each part of the T could be moved or animated separately.

Brush strokes that alter other objects are objects themselves

Brushes that reverse colors, erase, remove colors, etc. create independent objects in the workspace that can be picked up and moved independently of any object they are modifying.

Even while using an erase tool in the workspace, you are creating individual objects. Instead of erasing sections of other objects, the erase tool creates new objects that make underlying objects disappear. The erase objects can actually be picked up and moved independently of the objects underneath. This can create a "flying hole" type of effect.

All objects are created equal

There is no difference between a picture dragged into the workspace and the brush strokes that you make on top of it. Both can be selected, moved, altered, etc. This is true of file imports as well, such as AVI clips and BMP files. Once the object is in the workspace, it acts like any other object.

Any object can be a brush stroke

This is an extremely powerful part of Panamation. You can turn the object into a brush by right-clicking-and-dragging any object in the workspace into the Texture Properties panel. This enables you to copy styles, use image extraction, and more.

Any object can be altered

Each object has its own set of properties that can be changed or moved. These properties include transparency, color, etc. Shape and size can also be altered. There is even a Shadow Properties panel to add or modify a stroke's shadow. To pull up these properties panels, simply right-click on the object and choose Properties.

Brushes are also altered by changing the properties of the brush itself. You are not limited by the types of brushes that come with the software. You can create the exact type of brush you need. Is the brush stroke too thin? Change it. Need a fuzzy edge on the brush? Add it. The properties panels for a brush are identical to the ones for the individual objects. Just right-click on the Stroke picon to get to the appropriate properties panels.

Any Part of a Brush Stroke can be Animated

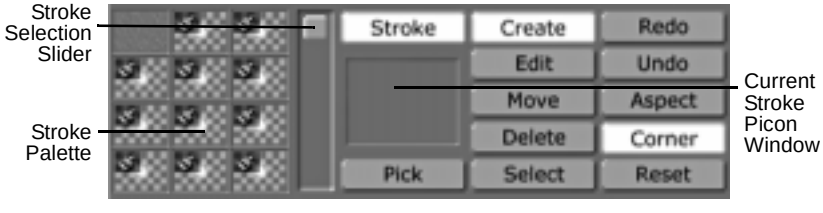
Panamation uses keyframe animation to animate each brush stroke. The idea behind keyframe animation is simple. Pick a starting point and an ending point, and the computer fills in the rest. The type of keyframe animation can be adjusted in the timeline.

Want to move an object around the screen? Just tell Panamation to animate the object's position by right-clicking on the object and selecting animate position. Move the object to the starting point, adjust the timeline slider to the end, and move the object to the ending point. Panamation fills in the frames in between.

Animating movement of strokes is powerful, but just about every property a stroke has can be animated as well. By animating the transparency of a stroke, you can make a stroke fade in or out at your whim.

Stroke Controls

With Panamation's Stroke Controls (following figure), you can control how your strokes behave when applied to the workspace. From these controls, strokes can be created, altered, moved, deleted, animated, etc. This is also where you select the mode you are working in. For example, choosing the Move mode allows you to move objects around in the workspace.



The Stroke Controls

The following list explains how to use the Stroke Controls:

Current Stroke Picon Window	This is where the current stroke picon is loaded. To load a stroke into this window, click once on the picon of the stroke you wish to use, or drag-and-drop the picon into the window. The selected stroke shows up as the Current Stroke picon. Now you can paint on the screen with the selected brush stroke. Strokes that are created in Panamation and saved in a bin have a small graphic in the upper left corner indicating the type of brush stroke. Right-clicking the picon brings up a pop-up menu, from which you can bring up the Stroke Properties panel (see “Stroke Properties Panel” on page 45 for more information about this panel). From this panel, you can alter the properties, such as shape and size. To save this stroke permanently, drag this picon into a bin. If you have an object in the workspace and want to paint more objects with the same properties, right-click-and-drag the object on to the toolbar. The object appears as the Current Stroke picon.
Stroke Palette	Stores up to 12 of your favorite, most frequently used strokes. Drag-and-drop your stroke picon into one of the twelves slots to create a mini-picon shortcut to the stroke. Click on a mini picon to load it as the Current Stroke.
Stroke Selection Slider	Selects each object on the screen in turn. Useful for selecting objects in the background that would be difficult or impossible to select otherwise. When the slider is all the way down, no objects are selected.
Stroke	Opens the properties panel for the current stroke.
Pick	Selects the properties, such as color and shape, of an object in the workspace as the properties for the current stroke. To use this function, click the Pick button on and then click on an object in the workspace.
Create	With Create selected, the cursor is in create mode. When in create mode, dragging the left mouse button in the workspace creates new strokes or objects.

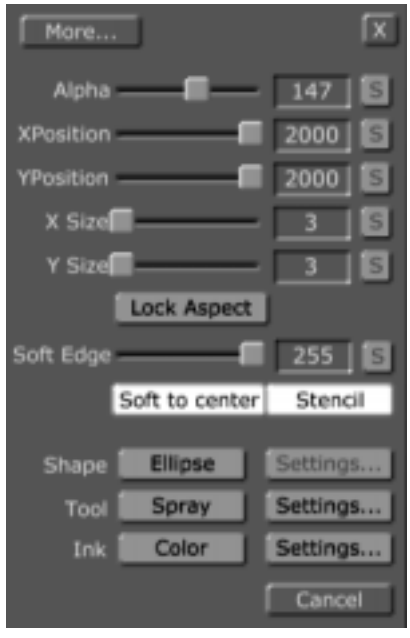
Edit	With Edit selected, the cursor is in edit mode. This allows you to resize a stroke. To do this, click on a stroke in the workspace, and a set of scaling tabs appear around the stroke. Click-and-drag these tabs to resize the stroke. If the selected stroke is a line, clicking on it in edit mode adds scaling tabs to the center of the object. Clicking-and-dragging these tabs changes the shape of the object. This button function can be used in conjunction with others.
Move	With Move selected, the cursor is put in move mode. This mode lets objects be moved around the Panamation workspace. A shortcut to use the move function is to right click and hold on an object. This allows you to move the object, no matter what mode is selected.
Delete	Deletes the selected stroke from the workspace. If no stroke is selected, the last stroke placed in the workspace is deleted.
Select	This mode allows objects to be selected. With Select on, click on the object in the workspace to select it. You see a bounding box appear around the selected object.
Redo	Brings back the last undone object.
Undo	Deletes the last object created if no objects are selected. If an object is selected, clicking the Undo button removes the selected object.
Aspect	Used in conjunction with the Edit button. When this button is clicked on, objects that are scaled maintain their aspect ratio. This means that when Aspect is selected, resizing an object changes only its size, and its shape stays the same.
Corner	Used in conjunction with the Edit button. When this button is clicked off, an object being scaled is resized from a fixed point at its center. When this button is clicked on, an object being scaled is resized from a fixed point adjacent to the corner scaling tab being dragged.
Reset	Resizes the selected stroke so that it fills the entire workspace.

Stroke Properties Panel

The Stroke Properties panel (following figure) can be used in two different ways: to alter your brush, or to alter an object already created. If this panel is brought up by clicking the Stroke button, or by right-clicking on the Current Stroke picon and choosing Properties from the pop-up menu, you are altering your brush for future strokes you make in the workspace. To alter existing items in the workspace, right-click on the object itself and choose Properties from the pop-up menu. This panel now affects the existing object. Even though these two panels look identical, they perform two different functions, so keep in mind where you've opened the Stroke Properties panel.

Part of the power of Panamation is that any of the properties in this panel can be animated. Simply click on the Animation Status button for the property and choose Animate from the pop-up menu. Once a property has been animated, add a keyframe by clicking on the Animation Status button and choosing Add Keyframe from the pop-up menu.

Once the Stroke Properties panel is brought up, other property panels can be selected by clicking on the button labeled More at the top of the panel. These panels are the Stroke, Shadow, Wipes, Particles, Texture, and Advanced Color panels. We'll cover those panels later in this chapter.



The Stroke Properties Panel

NOTE Numeric values in this panel are changed by typing in a new value or by clicking-and-dragging up or down in the box for the value. The values can also be changed by clicking-and-dragging the value's slider left or right.

Following is a list of how to use the buttons and functions in the Strokes Properties panel:

More... Allows you to access other stroke properties panels. Clicking this button brings up a pop-up menu with the options to bring up these panels: Stroke, Shadow, Wipes, Particles, Texture, or Advanced Color. Browse ahead in this chapter for more information on these panels.

Alpha	Changes the transparency (alpha value) of a stroke. A value of 255 is completely opaque, while a value of 0 is completely transparent. The following figure illustrates a stroke with alpha applied to it.

Stroke with a Transparency Value of 164

XPosition	Adjusts the horizontal position of an object.
YPosition	Adjusts the vertical position of an object.
X Size	Adjusts the width of an object or particles for the stroke. This value ranges from 1 to the full width of the workspace.
Y Size	Adjusts the height of an object or particles for the stroke. This value ranges from 1 to the full height of the workspace.
Lock Aspect	Locks the aspect ratio of the selected object so that the object keeps its original shape if it is resized.

Soft Edges

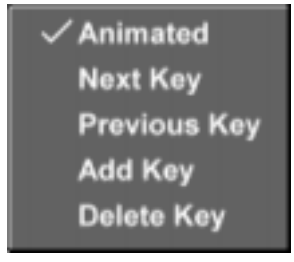
Adjusts the sharpness of a stroke's edge. A value of 1 is a hard edge. The higher the value, the more diffused the edge is. The highest soft edge value is 255.

The following figure illustrates a stroke with a soft value applied to it.

Stroke with a Soft Edge Value of 94

S/A (Animation Status)

Brings up a pop-up menu from which you can animate a property of an object, such as position and transparency. The animation status pop-up menu offers these choices: Animated, Next Key, Previous Key, Add Key, and Delete Key.



Animation Status Pop-Up Menu

If the Animation Status button is labeled S, for static, then all choices in the pop-up menu, except Animated, are ghosted out.

- Choosing Animated changes the button's label to A, for animated, and animates the object. Clicking on this button again brings up the pop-up menu with all of the choices active.
- Choosing Add Key adds a key at the point selected on the timeline.
- Choosing Next Key skips to the next key set on the timeline.
- Choosing Previous Key skips to the previous key on the timeline.
- Choosing Delete Key deletes the selected key.

Soft to center

Affects the way a soft edge works. Normally, soft edge only affects the edge of a stroke. By turning on the Soft to center function, the Soft Edge value diffuses the stroke all the way to the center. The higher the Soft Edge value, the closer to the center of the stroke the diffusion goes.

Stencil

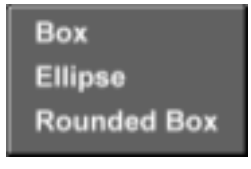
Makes the selected object a stencil. This object *must* be in a stencil layer for it to work as a stencil (see “Layer Controls” on page 147 for more information about making a stencil layer). When a stencil stroke is in a layer, anything drawn in that layer only appears within the borders of the stencil stroke. Using the stencil function is how you would create a mask.

NOTE: A layer must have an alpha channel to be used as a stencil layer. With the exception of the first layer, all layers automatically have an alpha channel. To use the first layer of a project as a stencil layer, Alpha must be turned on in the Workspace Properties panel.

To complete a tutorial that uses the stencil function to create an alpha map, see “Using The Stencil Function To Create A Mask” on page 279.

Shape

Controls the overall shape of an object. This also controls the shape of the particles created when using the Spray tool. Clicking the button brings up a pop-up menu with these shape options: Ellipse, Box, or Rounded Box (see “Panamation Shapes” on page 53 for more information about these shapes).



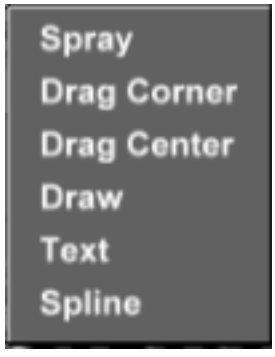
The Shape Pop-Up Menu

Shape Settings

No current function.

Tool

Controls what type of stroke is created when drawing a stroke in the workspace. Clicking the Tool button brings up a pop-up menu with these options: Spray, Drag Corner, Drag Center, Draw, Text, and Spline (see “Panamation Tools” on page 57 for more information about these tools).



The Tool Pop-Up Menu

Tool Settings

Clicking this button brings up a properties panel, from which you can adjust the properties of a tool. Not all Panamation tools have properties panels. Currently, the Text and Spray tools are the only tools that have a settings panel. With Text set at the tool, clicking the Settings button brings up Text Settings panel (see “Text Settings Panel” on page 69 for more information about this panel). With Spray set at the tool, clicking the Settings button brings up Scatter Settings panel (see “Scatter Settings Panel” on page 63 for more information about this panel). If a selected tool does not have one, the Tool Settings button is ghosted out.

Ink

Selects the ink of the brush stroke or object. Clicking on this button brings up a pop-up menu from which you can choose an ink style. The choices are: Color, Lighten, Darken, Mono, Randomize, Smear, Image, Pantograph, Colorize, Magnify, Stretch, Erase, Correct, LumaColor, AlphaMap, AlphaMap2, and Blur (see “Panamation Inks” on page 71 for more information about these inks).

The Ink Pop-Up Menu

Ink Settings	Clicking this button brings up a properties panel, from which you can adjust the properties of an ink. Not all Panamation inks have properties panels. If a selected ink does not have one, the Ink Settings button is ghosted out.
Cancel	Cancels any changes made in this panel and closes it.

Panamation Shapes

From the Shapes pop-up menu (following figure), you can adjust the shape of a stroke in the workspace, or choose the shape of a stroke before it is drawn in the workspace.

NOTE Custom shapes, such as a star, octagon, etc., are created with the Spline tool. For more information on creating spline-based shapes, see the section “Panamation Tools” on page 57.

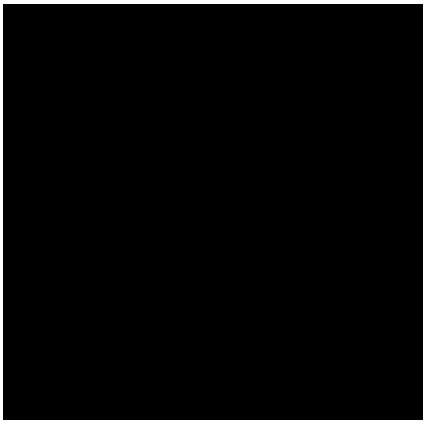
Bring up the Shapes pop-up menu by clicking the Shape button in the Stroke Properties panel.

The Shapes Pop-Up Menu

The following list details the choices in this pop-up menu:

Box — Chooses a square as the shape for a stroke.

The following figure illustrates a stroke with the box shape applied.

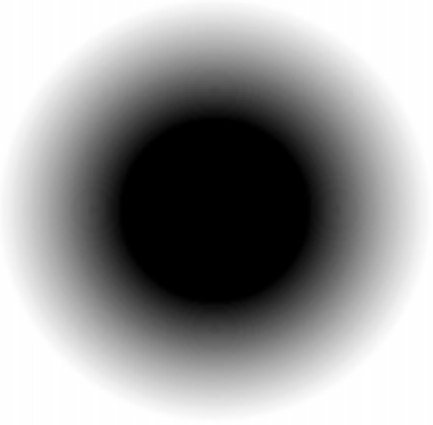


A Typical Box Stroke

Ellipse

Chooses an ellipse with soft edges as the shape for a stroke.

The following figure illustrates a stroke with the ellipse shape applied.

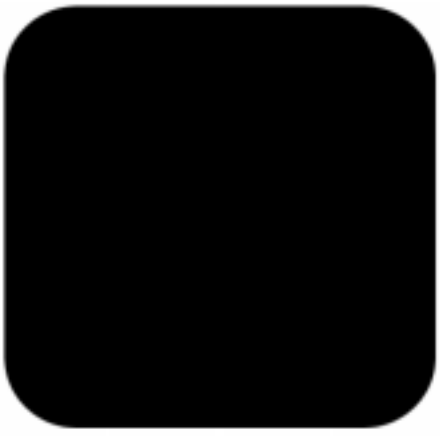


A Typical Ellipse Stroke

Rounded Box

Chooses a box with rounded corners, or squarcle, as the shape for a stroke. Adjusting the Soft Edge value in the Stroke Properties panel adjusts the roundness of the corners of a squarcle.

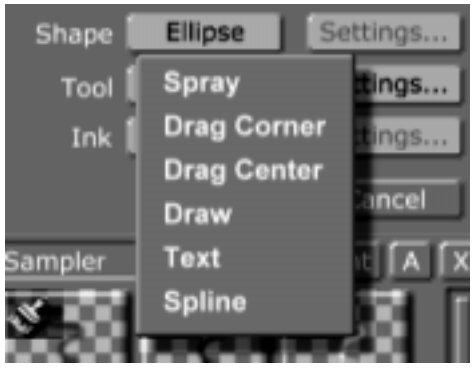
The following figure illustrates a stroke with the rounded box shape applied.



A Typical Rounded Box Stroke

Panamation Tools

From the Tool pop-up menu, you can control what type of stroke is created in the workspace when dragging the mouse, or change the type of a stoke after it is created. All of the tools, except the Spray and Text tools, create single objects. The spray and text tools create a objects made up of particles.



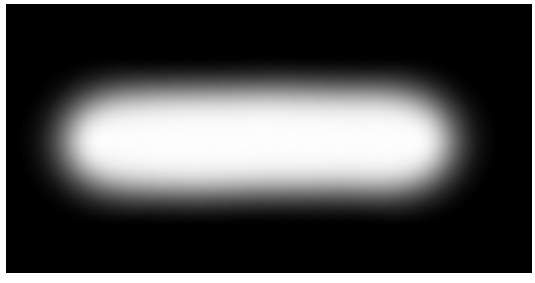
The Tool Pop-Up Menu

Bring up the Tool pop-up menu by clicking the Tool button in the Stroke Properties panel.

Following is a list that explains how the tools function:

Spray — If Spray is selected, drawing a stroke creates a series of objects, called particles, on the workspace. These particles are linked together to form a single object. With Spray selected, clicking the Tool Settings button brings up the Scatter Settings panel (see “Scatter Settings Panel” on page 63 for more information about this panel).

The following figure illustrates a stroke that was drawn with the spray tool.



A Stroke Drawn in the Workspace with the Spray Tool

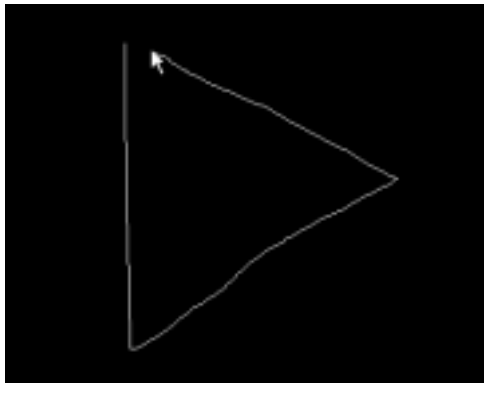
Drag Corner — If Drag Corner is selected, drawing a stroke creates an object that is stretched from its corner.

Drag Center — If Drag Center is selected, drawing a stroke creates an object that is stretched from its center.

Draw

If Draw is selected, clicking-and-dragging in the workspace draws a thin white line. This line represents the outline of a shape. When the mouse button is lifted, the start and end points are joined and the shape is filled in with the selected ink.

The following figure illustrates a stroke that was drawn with the draw tool.



A Stroke Drawn in the Workspace with the Draw Tool

Text

If Text is selected, add text to the workspace by clicking in the workspace and typing. With Text selected, clicking the Tool Settings button brings up the Text Settings panel (see “Text Settings Panel” on page 69 for more information about this panel).

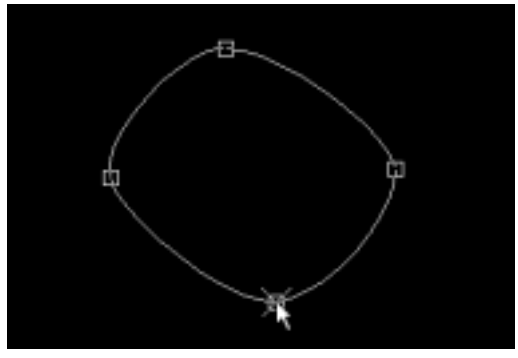
The following figure illustrates a stroke that was drawn with the text tool.

A Stroke Drawn in the Workspace with the Text Tool

Spline

If Spline is selected, a stroke that is drawn is made up of splines. A spline is a smooth curve that passes through two or more points. Splines are generated with mathematical formulas.

The following figure illustrates a stroke that was drawn with the spline tool.



A Spline Stroke Drawn in the Workspace with the Spline Tool

Drawing a spline stroke in the workspace allows you to click and create control points for an object. The spline automatically creates the lines for the object between the control points.

To create a spline made up of straight lines, or to straighten one of the splines edges, right-click on a line and choose Linear from the pop-up menu. To change it back to a curved edge, right-click on the line again and choose Spline from the pop-up menu.

To add points to the spline, click in the spot where you want the new point. To delete a point, right-click on the point and choose Delete Point from the pop-up menu.

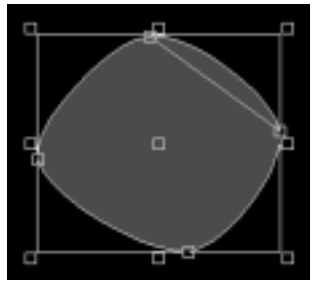
To complete the shape so that it can have an ink applied to it, right-click in the object and choose Complete Shape, or press Enter on the keyboard. Once the object is created, it is filled in with the selected ink.

The following figure illustrates a completed spline in the workspace.

A Completed Spline

Once a shape is completed, spline points can be added or edited by clicking the Edit button on in the Stroke Controls and then clicking on the spline stroke. Clicking on the spline puts edit points around it. Spline edit points can be added, deleted, or moved the same way they were before the shape was completed.

The following figure illustrates a spline that was clicked on with the Edit button selected in the Stroke Controls.



Completed Spline with Edit Points

To do a tutorial that teaches how to use the spline tool, see “Creating A Custom Brush” on page 216.

Scatter Settings Panel

From the Scatter Settings panel (following figure) you can break up the particles of an object. If the panel was brought up for a spray stroke, then changing the scatter settings breaks the stroke up into particles, or dots. If it was brought up for a text stroke, then changing the scatter settings breaks up the individual letters in the stroke.

Bring up the Scatter Settings panel by choosing Spray as the tool in the Stroke Properties panel, and then clicking the Tool Settings button. The Scatter Settings panel appears in place of the Stroke Properties panel. The Scatter Settings panel for text is brought up the same way.

The Scatter Settings Panel

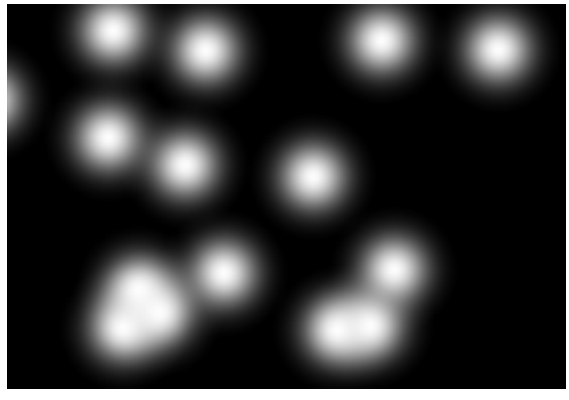
The following list explains how to use the Scatter Settings panel:

More... Allows you to access other properties panels. Clicking this button brings up a pop-up menu with the options to bring up these panels: Stroke, Shadow, Wipes, Particles, Texture, or Advanced Color. Browse ahead in this chapter for more information on these panels.

Scatter

Breaks up the particles in a stroke, or breaks up the letters of a text stroke. The higher the value (positive or negative), the greater the distance between the particles or letters is. The scatter value can be changed by clicking-and-dragging the slider left or right, or by clicking on the numeric value, typing in a new value, and hitting Enter on your keyboard.

The following figure illustrates a stroke with its particles scattered.



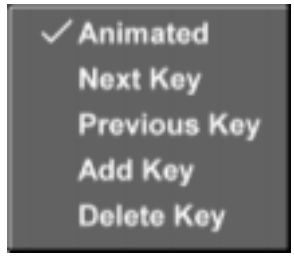
A Scattered Stroke

The following figure illustrates a text stroke with its particles scattered.

A Scattered Text Stroke

S/A (Animation Status)

Brings up a pop-up menu from which you can animate a property of an object, such as position and transparency. The animation status pop-up menu offers these choices: Animated, Next Key, Previous Key, Add Key, and Delete Key.



Animation Status Pop-Up Menu

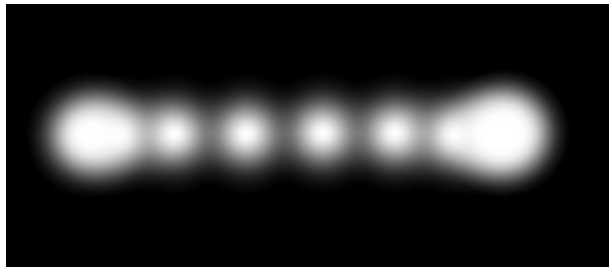
If the Animation Status button is labeled S, for static, then all choices in the pop-up menu, except Animated, are ghosted out.

- Choosing Animated changes the button's label to A, for animated, and animates the object. Clicking on this button again brings up the pop-up menu with all of the choices active.
- Choosing Add Key adds a key at the point selected on the timeline.
- Choosing Next Key skips to the next key set on the timeline.
- Choosing Previous Key skips to the previous key on the timeline.
- Choosing Delete Key deletes the selected key.

Smoothing

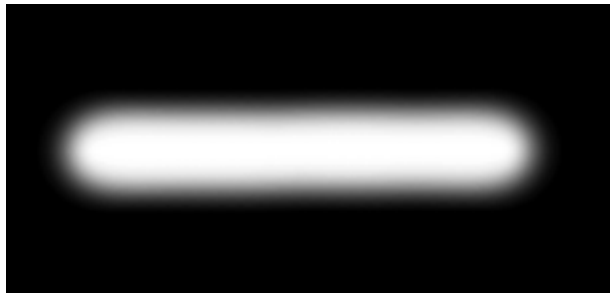
With Smoothing selected, the particles of an object have a consistent size and shape so that if you draw a straight line, it has a consistent thickness. Also, with Smoothing selected, Panamation tries to fill in the gaps between particles.

The following figure illustrates a stroke with Smoothing off.



A Stroke with Smoothing Off

The following figure illustrates a stroke with Smoothing on.



A Stroke with Smoothing On

Cancel

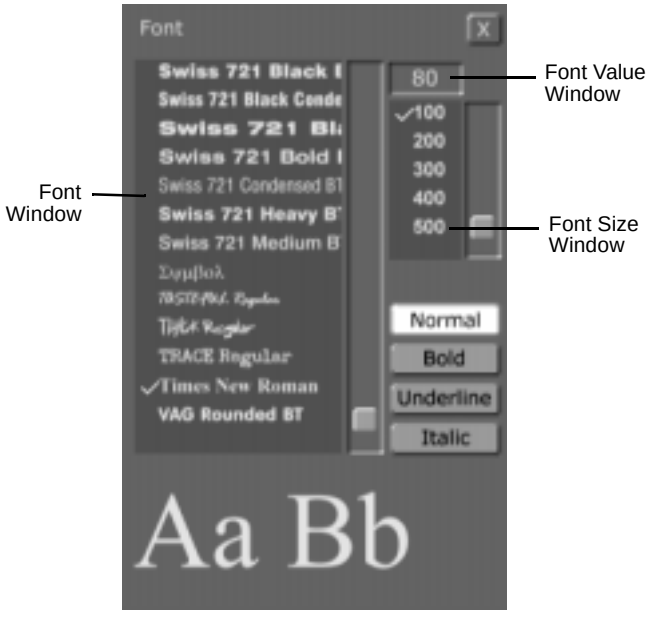
Cancels any changes made in this panel and closes it.

Text Settings Panel

From the Text Settings panel (following figure), you can choose a font and size for your text stroke, or change the font and font size for a text stroke that was already created.

NOTE Fonts are added in Windows by installing fonts in the winnt/fonts directory. See your Windows manual for more information on installing fonts in Windows.

Bring up this panel by choosing Text as the tool in the Stroke Properties panel, and then clicking the Text Settings button. The panel appears just below the Stroke Properties panel.



The Text Settings Panel

The following list details how to use this panel:

Font Window Lists the available fonts. Apply a font to a text stroke by clicking on the name of a font. Right-clicking on a font name brings up a pop-up menu containing the font's full name.

Font Value Window	Displays the size of the font. Change this value by clicking on it, typing a new value, and pressing Enter on your keyboard, or by clicking on it and dragging up or down. The font size is also changed by clicking a preset value in the Font Size window.
Font Size Window	This window displays the preset font sizes. Choose one of these font sizes by clicking on it.
Normal	Keeps the text at its normal default settings, or reverts it to the default settings if changes were made. The default setting has not underline, and is not bold or italic.
Bold	Makes the text bold.
Underline	Puts an underline under the text.
Italic	Makes the text italic.

Panamation Inks

From the Ink pop-up menu (following figure) you can choose the ink of a stroke in the workspace, or alter the ink of a stroke that has already been created. The ink determines the how the stroke behaves. For example, the Magnify ink makes a stroke magnify objects underneath it. Panamation has many built-in inks with specialized uses. Some inks are designed to modify the look or texture of other objects.

Bring up the Ink pop-up menu by clicking the Ink button in the Stroke Properties panel.

The Ink Pop-Up Menu

The following list explains how the inks behave when applied to strokes:

Color — Adds a color or gradient to a stroke. This color or gradient is defined in the Color Palette panel, which is accessed by selecting Color as the ink and clicking the Ink Settings button (see “Color Palette And Gradient Editor Panel” on page 93 for more information about the Color Palette panel).

The following figure illustrates a stroke with the Color ink applied to it.

A Stroke with a Color Ink Applied

Lighten

Lightens the colors in objects underneath the stroke. This ink can be used to add additional lighting to an image after it was taken. To adjust the amount of lighting, change the **Transparency** value of the stroke in the **Stroke Properties** panel (see "Stroke Properties Panel" on page 45 for more information about this panel).

The following figure illustrates a stroke with the **Lighten** ink applied to it.

A Stroke with a Lighten Ink Applied

Darken

Darkens the colors in objects underneath the stroke. This ink can be used to add additional shadows. To adjust the darkness, change the Transparency value of the stroke in the Stroke Properties panel (see “Stroke Properties Panel” on page 45 for more information about this panel).

The following figure illustrates a stroke with the Darken ink applied to it.

A Stroke with a Darken Ink Applied

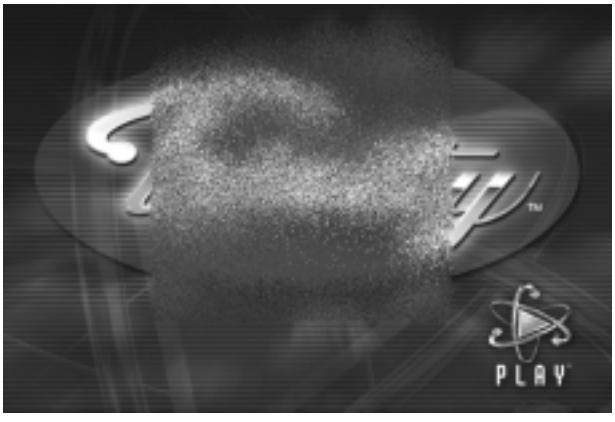
Mono

Strips the color out of the area under the stroke. This is useful for changing an object to black and white.

Randomize

Randomizes the pixels under the stroke. This gives the stroke a random noise effect.

The following figure illustrates a stroke with the Randomize ink applied to it.



A Stroke with a Randomize Ink Applied

Smear — Smears the colors under the stroke.

The following figure illustrates a stroke with the Smear ink applied to it.

A Stroke with a Smear Ink Applied

Image

Reproduces the image loaded in the workspace, starting in the upper-left corner.

The following figure illustrates a stroke with the Image ink applied to it.

A Stroke with an Image Ink Applied

Pantograph

Gives the ability to duplicate sections of an image. The Pantograph ink allows part of an image to be offset and copied at the new offset point. By holding down the Ctrl key and dragging the mouse, you set the amount of offset the image has when you use the Pantograph ink.

The following figure illustrates a stroke with the Pantograph ink applied to it.

A Stroke with a Pantograph Ink Applied

Colorize

Replaces the color from the area under the stroke with color selected in the Color Palette and Gradient Editor panel (see the section “Color Palette And Gradient Editor Panel” on page 93 for more information about this panel).

To use this function, the Gradient Style in the Color Palette and Gradient Editor panel must be set as Solid.

The following figure illustrates a stroke with the Colorize ink applied to it.

A Stroke with a Colorize Ink Applied

Magnify — Magnifies the area under the stroke.

The following figure illustrates a stroke with the Magnify ink applied to it.

A Stroke with a Magnify Ink Applied

Stretch

Uses a selected graphic as the ink. This is the default ink for any type of still image, ClipMem, Time Machine clip, or AVI file, as the graphic is stretched across the surface of the brush stroke. To use the Stretch ink, a graphic must be loaded into the graphics window in the Texture Properties panel (See “Texture Properties Panel” on page 118 for more information about this panel).

The following figure illustrates a stroke with the Stretch ink applied to it.

A Stroke with a Stretch Ink Applied

Erase

Erases the layer behind the stroke. Since the erase stroke is an object, it can be moved around or even animated.

The following figure illustrates a stroke with the Erase ink applied to it.

A Stroke with an Erase Ink Applied

Correct

Color corrects underlying objects using the gradient scale in the Color Palette and Gradient Editor panel. Clicking the Correct Settings button, right of the Ink button, brings up the Color Palette panel (see “Color Palette And Gradient Editor Panel” on page 93 for more information about this panel).

The following figure illustrates a stroke with the Correct ink applied to it.

A Stroke with a Correct Ink Applied

LumaColor

Functions similarly to the Correct ink, except that the correction is based on the luminosity values of the underlying image. This ink strips the existing color from the underlying object before adding new colors.

The following figure illustrates a stroke with the LumaColor ink applied to it.

A Stroke with a LumaColor Ink Applied

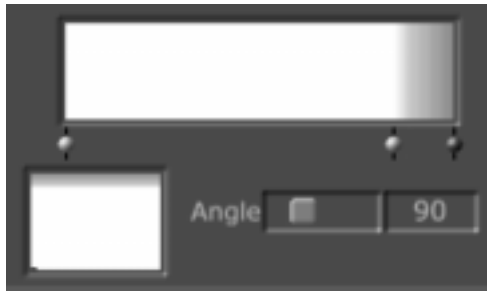
2.1 only

AlphaMap

Works in conjunction with the Soft Edge value in the Stroke Properties panel and the functions of the Color Palette and Gradient Editor panel to add a glowing border around a stroke. For more information about adjusting the Soft Edge value, see the section “Stroke Properties Panel” on page 45. For more information about using the Color Palette and Gradient Editor panel, see the section “Color Palette And Gradient Editor Panel” on page 93.

To use the AlphaMap ink once it is applied to a stroke, first adjust the Soft Edge value for the selected stroke so that the stroke has a soft, blurred edge. Next, add and adjust colors for the stroke in the Color Palette and Gradient Editor panel. To achieve a well-defined border for the stroke, there must be at least three color dots in the Gradient Editor (following figure).

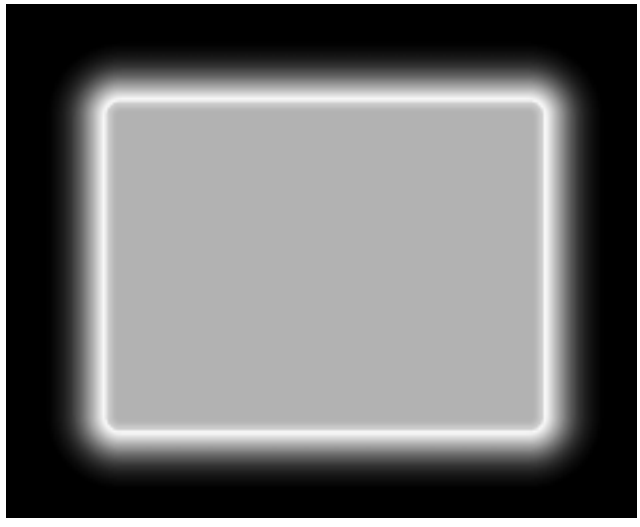
The following figure illustrates the Gradient Editor settings in the Color Palette and Gradient Editor panel for the strokes in following illustrations.



The Gradient Editor settings for the Stroke

The left-most color in the Gradient Editor is the color that is applied to the soft border around the stroke. By doing this, a glowing border is applied to your stroke (following figure).

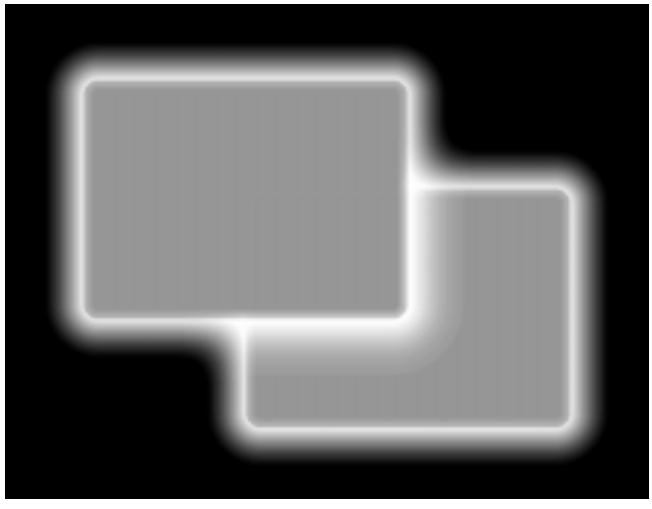
The following figure illustrates the AlphaMap ink applied to a stroke.



The AlphaMap Ink Applied to a Stroke

The following figure illustrates the AlphaMap ink applied to two overlapping strokes.

When the AlphaMap ink is applied to overlapping strokes, the strokes remain separated (following figure). This differs from the AlphaMap2 ink, which combines overlapping strokes.



Overlapping Strokes with the AlphaMap Ink Applied to Them

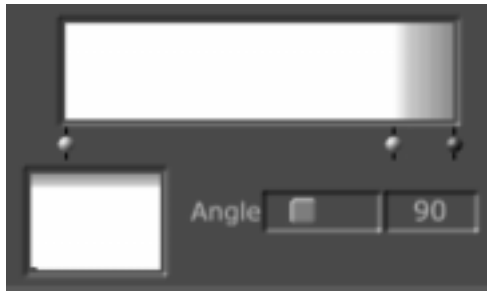
AlphaMap 2

Works in conjunction with the Soft Edge value in the Stroke Properties panel and the functions of the Color Palette and Gradient Editor panel to add a glowing border around a stroke. For more information about adjusting the Soft Edge value, see the section “Stroke Properties Panel” on page 45. For more information about using the Color Palette and Gradient Editor panel, see the section “Color Palette And Gradient Editor Panel” on page 93.

NOTE: To use the AlphaMap2 ink, the ink must be applied to a stroke that is on a layer with an alpha channel. To use this ink on the first layer of a project, the Alpha must be turned on in the Workspace Properties panel (see “Workspace Properties Panel” on page 176 for more information about using this panel). Additional layers that are created in Panamation have built-in alpha channels.

To use the AlphaMap ink once it is applied to a stroke, first adjust the Soft Edge value for the selected stroke so that the stroke has a soft, blurred edge. Next, add and adjust colors for the stroke in the Color Palette and Gradient Editor panel. To achieve a well-defined border for the stroke, there must be at least three color dots in the Gradient Editor (following figure).

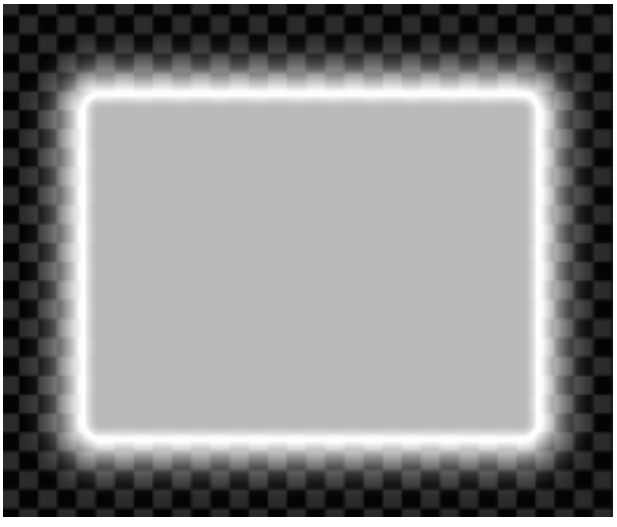
The following figure illustrates the Gradient Editor settings in the Color Palette and Gradient Editor panel for the strokes in following illustrations.



The Gradient Editor settings for the Stroke

The left-most color in the Gradient Editor is the color that is applied to the soft border around the stroke. By doing this, a glowing border is applied to your stroke (following figure).

The following figure illustrates the AlphaMap2 ink applied to a stroke.



The AlphaMap2 Ink Applied to a Stroke

When the AlphaMap2 ink is applied to a stroke that overlaps another stroke, the overlapping strokes are combined (following figure). For the strokes to be combined, the underlying stroke does *not* need to have the AlphaMap2 ink applied to it. The way this ink functions differs from the AlphaMap ink, which keeps overlapping strokes separated.

The following figure illustrates the AlphaMap2 ink applied to two overlapping strokes.

Overlapping Strokes with the AlphaMap2 Ink Applied to Them

Blur

Blurs the area under the stroke. The value of the blur can be adjusted by changing the Soft Edge value in the Stroke Properties panel (see “Stroke Properties Panel” on page 45 for more information about this panel).

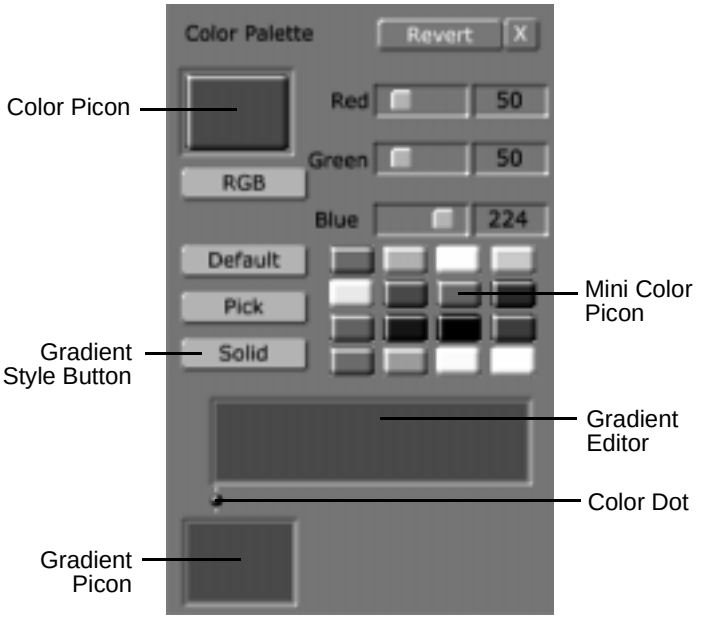
The following figure illustrates a stroke with the Blur ink applied to it.

A Stroke with a Blur Ink Applied

Color Palette And Gradient Editor Panel

The Color Palette and Gradient Editor panel has many functions, depending on which ink was selected when this panel was brought up. If this panel was brought up with Color chosen as the ink, then making adjustments in the panel adjusts the color of the stroke. If it was brought up with Correct chosen as the ink, then making adjustments in the Color Palette adjusts color correction for the object under the stroke. If it was brought up with LumaColor chosen as the ink, then making adjustments in the panel adjusts the color applied to the luminosity values of the object under the stroke. If the panel was brought up with AlphaMap or AlphaMap2 chosen as the ink, then making adjustments in the panel adjusts the color applied to the stroke and the color applied to the soft edge of the stroke.

Bring up this panel by choosing Color, Colorize, Correct, LumaColor, AlphaMap, or AlphaMap2 as the ink in the Stroke Properties panel, and then clicking the Ink Settings button. The panel appears just below the Stroke Properties panel.



The Color Palette and Gradient Editor Panel

The following list explains the functions of the Color Palette and Gradient Editor panel:

Revert	Removes any changes made and resets to its original color.
Color Picon	Represents the current color. When you click one of the Mini Color picons, that color loads automatically as this picon. You can then drag the value sliders to change the color. You can also drag this picon onto one of the Mini Color picons to place it there for later use. You can also drag-and-drop the picon into the Gradient Editor. Save this color picon by clicking-and-dragging it into a bin.
RGB/HSV	Allows you to choose which format you want to change a color in. Click on the button and select RGB or HSV from the pop-up menu that appears. RGB is the three additive primary colors used to construct video images (Red, Green, Blue). HSV is the three properties of color (Hue, Saturation, Value). You can get almost any color by changing these values.
Value Sliders	Clicking-and-dragging a slider changes the values of the color. If RGB was selected with the RGB/HSV button, the sliders adjust the red, green, and blue values. If HSV was selected with the RGB/HSV button, the sliders adjust the hue, saturation, and value. These values can also be adjusted by typing a new value in the boxes to the right of the sliders and pressing Enter on your keyboard.

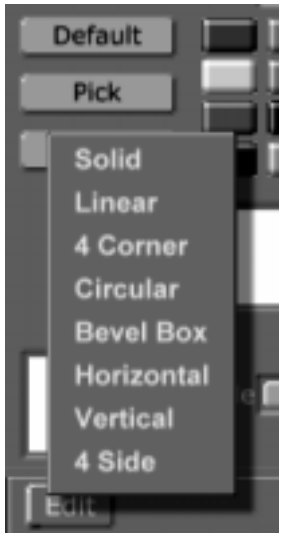
Mini Color Picons	A set of small picons in the panel. You can drag-and-drop them into the Color picon, or click them to load them for editing. You can also drag-and-drop the Color picon into one of these mini-picons to save colors you create for later use. Finally, you can drag-and-drop any of the Mini Color picons into the Gradient Editor. A color picon saved in a bin can be dragged-and-dropped onto any of the mini color picons. If at any time you want to clear out saved mini-picons, click the Default button. The mini-picons are restored to default colors, and *all* custom colors are deleted.
Default	Resets the mini-color picons to default colors. If you click this, you loose any custom colors you have loaded into the Mini Color picons.
Pick	Lets you select any color that is on your computer screen. To do this, click on the Pick button and drag the mouse pointer around the monitor. As you do so, the color that is directly under the mouse pointer appears in the Color picon. Release the mouse button to select a color. You can then edit the color.
Gradient Style Button	Selects the shape or style of the color or gradient. The current style is displayed on the button's face. The default is Linear. Clicking on the Gradient Style button brings up a pop-up menu with these options: Solid, Linear, 4 Corner, Circular, Bevel Box, Horizontal, Vertical, and 4 Side (see “Gradient Styles” on page 97 for more information about the gradient styles).

Gradient Editor	A small workspace where you create gradients. You can drag-and-drop Mini Color picons or Color picons into any spot on the editor to add the color to the gradient you are making. The color appears in the editor, and a dot (the Color dot) appears below the color. Panamation then creates a gradient transition from one color to another. The first color you drop into the editor appears on the far right side. A transition is then created between the color on the far left and this new color. Any other colors you drop into the editor appear where your mouse pointer is aimed.
Color Dot	Represents the position of a color in the Gradient Editor. Position the dots within the editor by clicking-and-dragging them. (The only dots you cannot move are the one on the far left and the one on the far right. These have fixed positions.) You can change the color of any dot. Click on a dot (the bar behind it turns white) to select it. Next, click on a Mini Color picon or Color picon of the color you want. The selected dot changes to that color. You can delete a dot by right-clicking on it and selecting Delete from the pop-up menu. The left- and right-most color dot cannot be deleted, but it can be changed to another color.
Gradient Picon	Represents the gradient created with the Gradient Editor. As you alter your gradient, this picon updates. Save the Gradient picon by dragging-and-dropping it into a bin. You can use this gradient later by clicking-and-dragging it from the bin to the gradient picon window.

Gradient Styles

Choosing one of the eight gradient styles from the Gradient Styles pop-up menu (following figure) determines the direction of the gradient and how the colors of a gradient blend together. For example, choosing Linear as the blend style creates a gradient that blends from one color into another.

The Gradient Styles pop-up menu is brought up by clicking the Gradient Styles Button in the Color Palette and Gradient Editor panel.



The Gradient Styles Pop-Up Menu

The following list explains the gradient styles:

Solid — Applies a solid color to selected stroke.

The Gradient Editor with Solid Selected as the Gradient Style

The following figure illustrates a stroke with a Solid gradient applied to it.

A Stroke with a Solid Gradient Applied

Linear — Applies a linear blend to selected stroke.

The Gradient Editor with Linear Selected as the Gradient Style

The following figure illustrates a stroke with a Linear gradient applied to it.

A Stroke with a Linear Gradient Applied

Change the angle of the blend by clicking-and-dragging the Angle slider (following figure). The angle can also be changed by clicking on the numeric value and typing a new value. The angle value represents the angle's measurement in degrees.

The Angle Slider

4 Corner

Adds a blend that blends in from each corner of an object. Adding four colors to the Gradient Editor best shows how this function works, as each color blends in from a separate corner.

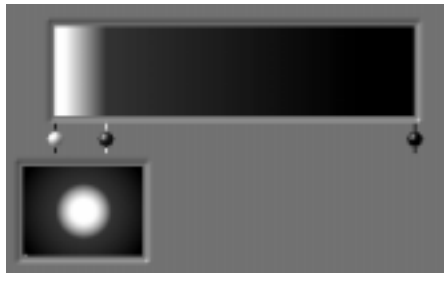
The Gradient Editor with 4 Corner Selected as the Gradient Style

The following figure illustrates a stroke with a 4 Corner gradient applied to it.

A Stroke with a 4 Corner Gradient Applied

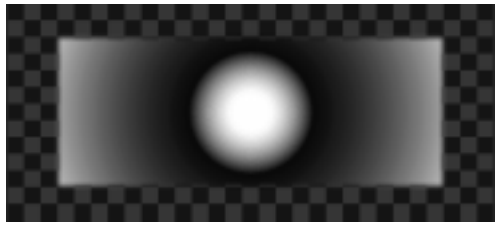
Circular

Adds a circular blend to a selected stroke. The center of the blend can moved by right-clicking on the gradient picon and dragging the center to a new position.



The Gradient Editor with Circular Selected as the Gradient Style

The following figure illustrates a stroke with a Circular gradient applied to it.

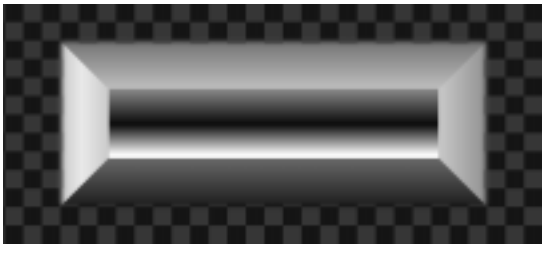


A Stroke with a Circular Gradient Applied

Bevel Box — Adds a beveled edge to a selected stroke.

The Gradient Editor with Bevel Box Selected as the Gradient Style

The following figure illustrates a stroke with a Bevel Box gradient applied to it.

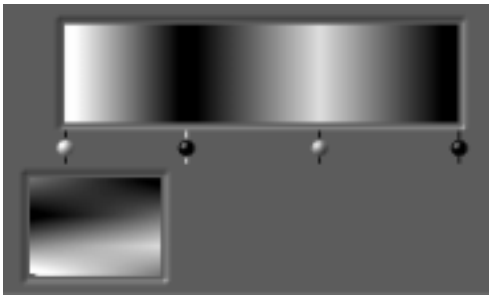


A Stroke with a Bevel Box Gradient Applied

Change the size of the bevel by clicking-and-dragging the Size slider (following figure). The bevel's size can also be changed by clicking on the numeric value and typing a new value. The higher the value, the larger the bevel.

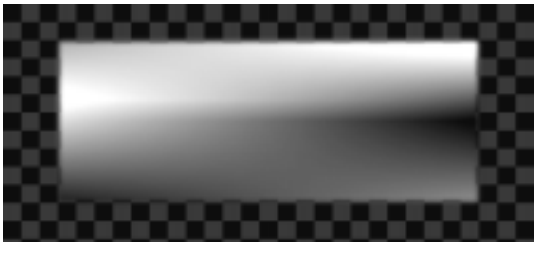
The Size Slider

Horizontal — Adds a blend that looks similar to a disco lighting effect. Moving a color dot right or left in the gradient editor moves the color left or right in the object.



The Gradient Editor with Horizontal Selected as the Gradient Style

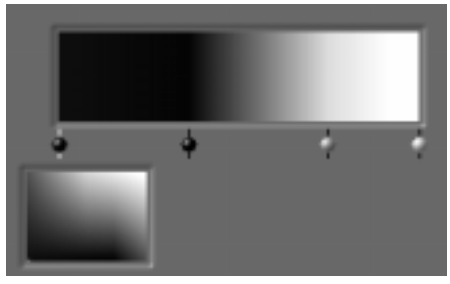
The following figure illustrates a stroke with a Horizontal gradient applied to it.



A Stroke with a Horizontal Gradient Applied

Vertical

Adds a blend that looks similar to a disco lighting effect. Moving a color dot right or left in the gradient editor moves the color up or down in the object.

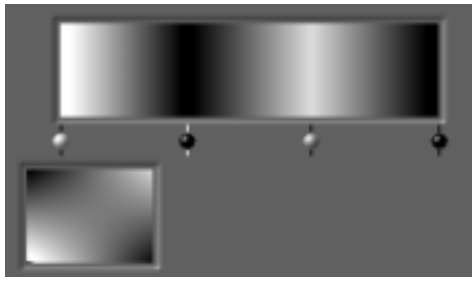


The Gradient Editor with Vertical Selected as the Gradient Style

The following figure illustrates a stroke with a Vertical gradient applied to it.

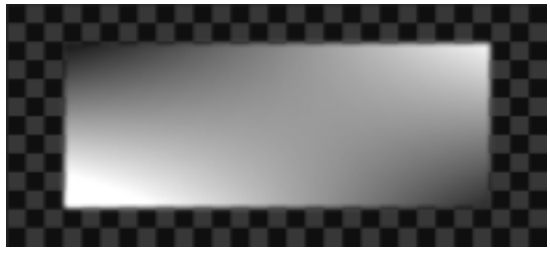
A Stroke with a Vertical Gradient Applied

4 Side — Adds a subtle blend to an object in which the colors blend in from the sides of the object.



The Gradient Editor with 4 Side Selected as the Gradient Style

The following figure illustrates a stroke with a 4 Side gradient applied to it.



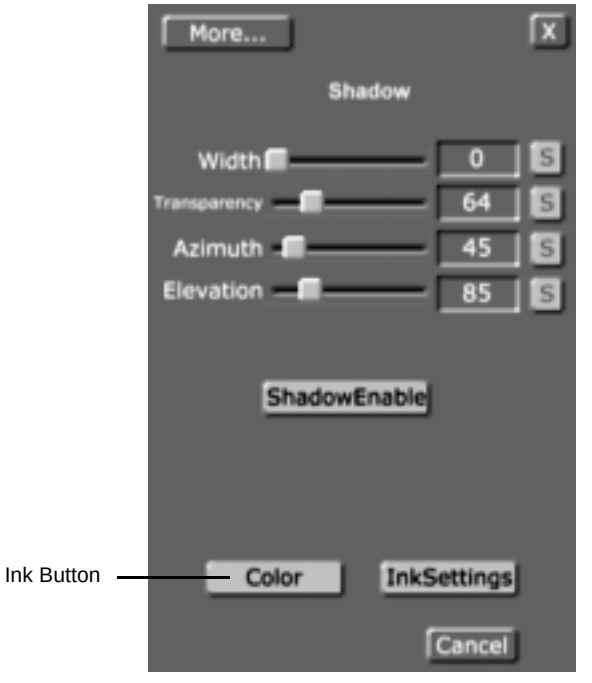
A Stroke with a 4 Side Gradient Applied

Shadow Properties Panel

In Panamation, shadows are actually built into each object. The Shadow Properties panel (following figure) gives you the power to modify the shadow to your exact specifications. From this panel, you can enable the shadow and adjust its size, position, transparency, and even its ink.

To do a tutorial that uses the Shadow Properties panel to add a shadow to a text stroke, see “Creating A Text Stroke With Shadow” on page 298.

Bring up the Shadow Properties panel by clicking the Stroke button in the Stroke Controls, clicking the More button in the upper left corner of the Stroke Properties panel, and choosing Shadow from the pop-up menu.

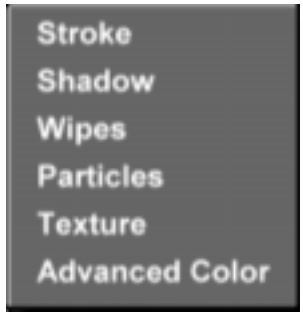


The Shadow Properties Panel

NOTE Numeric values in this panel are changed by typing in a new value or by clicking-and-dragging up or down in the box for the value. The values can also be changed by clicking-and-dragging the value's slider left or right.

The following list explains the functions of the Shadow Properties panel:

More... Allows you to access other properties panels. Clicking this button brings up a pop-up menu (following figure) with the options to bring up these panels: Stroke, Shadow, Wipes, Particles, Texture, or Advanced Color. Browse ahead in this chapter for more information on these panels.



The More... Pop-Up Menu

Width

Adjusts the softness of the shadow's edges. The higher the width value, the softer the shadow's edge. A value of 0 is a special value that results in no shadow.

The following figure illustrates an object with a shadow that has a Width value of 31.

Object with Shadow that has a Width Value of 31

Transparency

Adjusts the transparency of the shadow. The higher the transparency value, the darker the shadow.

The following figure illustrates an object with a shadow that has a Transparency value of 39.

Object with Shadow that has a Transparency Value of 39

Azimuth

Adjusts the position of the shadow to simulate a change in the position of the light source falling on the object.

The following figure illustrates an object with a shadow that has an Azimuth value of 218.

Object with Shadow that has an Azimuth Value of 218

Elevation

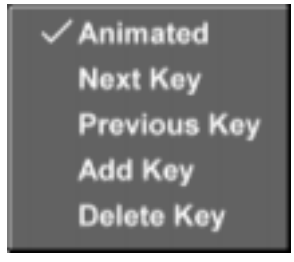
Adjusts how far away the shadow is from the object. The higher the value, the farther the shadow is from the object.

The following figure illustrates an object with a shadow that has an Elevation value of 49.

Object with Shadow that has an Elevation value of 49

S/A (Animation Status)

Brings up a pop-up menu from which you can animate a property of an object, such as position and transparency. The animation status pop-up menu offers these choices: Animated, Next Key, Previous Key, Add Key, and Delete Key.



Animation Status Pop-Up Menu

If the Animation Status button is labeled S, for static, then all choices in the pop-up menu, except Animated, are ghosted out.

- Choosing Animated changes the button's label to A, for animated, and animates the object. Clicking on this button again brings up the pop-up menu with all of the choices active.
- Choosing Add Key adds a key at the point selected on the timeline.
- Choosing Next Key skips to the next key set on the timeline.
- Choosing Previous Key skips to the previous key on the timeline.
- Choosing Delete Key deletes the selected key.

Shadow Enable

Adds a shadow to the selected object. A typical shadow uses the darken ink, but cool effects can be created using other styles of ink for the shadow.

Ink

Selects an ink for the shadow. Clicking on this button brings up a pop-up (following figure) from which you can choose an ink style. The choices are: Color, Lighten, Darken, Mono, Randomize, Smear, Image, Pantograph, Colorize, Magnify, Stretch, Erase, Correct, LumaColor, AlphaMap, AlphaMap2, and Blur (see “Panamation Inks” on page 71 for more information about these inks). The face of the button displays the selected ink for the shadow.

The Ink Pop-Up Menu

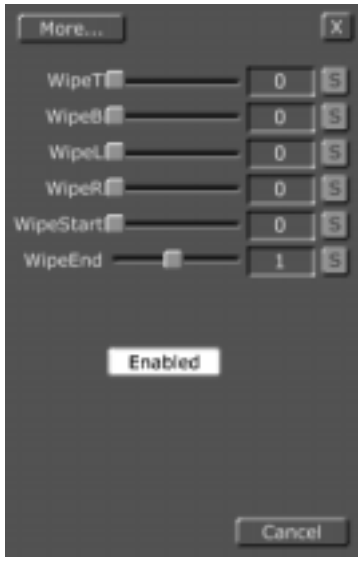
Ink Settings	Clicking this button brings up a properties panel, from which you can adjust the properties of an ink. Not all Panamation inks have properties panels. If a selected ink does not have one, the Ink Settings button is grayed out.
Cancel	Cancels any changes made in this panel and closes it.

Wipes Properties Panel

Use the Wipes Properties panel (following figure) to create a wipe transition that can be loaded into Air Command or Preditor. With this panel, you can customize how your wipe transitions when it loaded as an effect. This panel can also be used to wipe a stroke on or off. Properties that can be customized include the direction of the wipe and where it starts and ends.

To complete tutorials that use the Wipe Properties panel to create wipe transitions, see “Creating A Simple Wipe” on page 367 and “Creating Animated Wipes With Graphics” on page 382.

Bring up the Wipes Properties panel by clicking the Stroke button in the Stroke Controls, clicking the More button in the upper left corner of the Stroke Properties panel, and choosing Wipes from the pop-up menu.



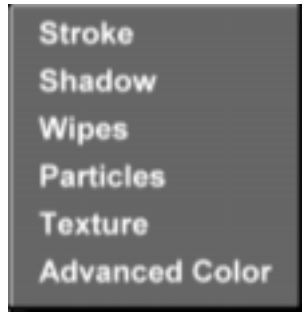
The Wipe Properties Panel

Wiping an object makes the object disappear from the screen, starting from any given direction. Wiping a text stroke makes the letters disappear from the screen, starting from any given direction. If you are creating an actual wipe effect, the wipe values in layer 1 of any project are used to transition between Program and Preview video. The object represents Preview video, and the area underneath it represents Program video.

NOTE Numeric values in this panel are changed by typing in a new value or by clicking-and-dragging up or down in the box for the value. The values can also be changed by clicking-and-dragging the value's slider left or right.

Following is a list of the functions of the Wipe Properties panel:

More... Allows you to access other properties panels. Clicking this button brings up a pop-up menu (following figure) with the options to bring up these panels: Stroke, Shadow, Wipes, Particles, Texture, or Advanced Color. Browse this chapter for more information on these panels.



The More... Pop-Up Menu

WipeT Makes the object disappear starting at the top of the object.

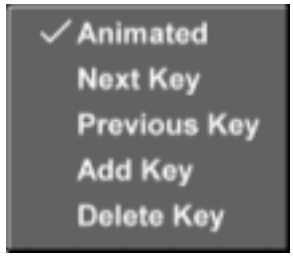
WipeB Makes the object disappear starting at the bottom of the object.

WipeL Makes the object disappear starting at the left side of the object.

WipeR	Makes the object disappear starting at the right side of the object.
WipeStart	This function only works with strokes that were created with the Spray tool. With a spray stroke, adjusting the WipeStart slider to the right causes the stroke to disappear starting at the beginning of the object and follows the object to the end of the stroke. By animating the WipeStart value, you can make it appear as if a stroke is being drawn over time.
WipeEnd	This function only works with strokes that were created with the Spray tool. With a spray stroke, adjusting the WipeEnd slider to the right causes the stroke to disappear starting at the ending of the object and follows the object to the beginning of the stroke. By animating the WipeEnd value, you can make it appear as if a stroke is being drawn or erased over time.

S/A (Animation Status)

Brings up a pop-up menu from which you can animate a property of an object, such as position and transparency. The animation status pop-up menu offers these choices: Animated, Next Key, Previous Key, Add Key, and Delete Key.



Animation Status Pop-Up Menu

If the Animation Status button is labeled S, for static, then all choices in the pop-up menu, except Animated, are ghosted out.

- Choosing Animated changes the button's label to A, for animated, and animates the object. Clicking on this button again brings up the pop-up menu with all of the choices active.
- Choosing Add Key adds a key at the point selected on the timeline.
- Choosing Next Key skips to the next key set on the timeline.
- Choosing Previous Key skips to the previous key on the timeline.
- Choosing Delete Key deletes the selected key.

Enabled

Turns the wipe on.

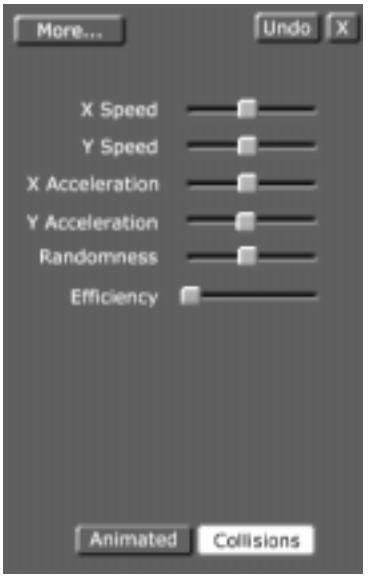
Cancel

Cancels any changes made in this panel and closes it.

Particles Properties Panel

Use the Particles Properties panel (following figure) to control and animate the particles of an object created using the spray tool. It can also be used to animate the letters in a text stroke. Any object created using the spray or text tools is made up of small individual parts, called particles. Normally, these particles are stationary, but they can have movement added to them using the values in this panel.

Bring up the Particles Properties panel by clicking the More button at the top of the Stroke Properties panel and choosing Particles from the pop-up menu. The panel appears in place of the Stroke Properties panel.



The Particles Properties Panel

NOTE Values in this panel are changed by clicking-and-dragging the value's slider left or right.

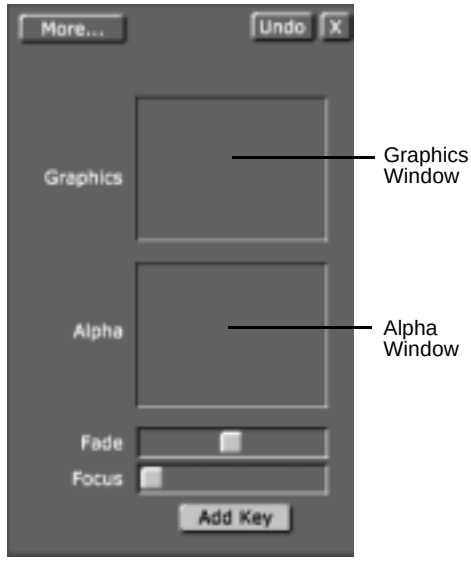
The following list explains how to use the Particles Properties panel:

More...	Allows you to access other properties panels. Clicking this button brings up a pop-up menu with the options to bring up these panels: Stroke, Shadow, Wipes, Particles, or Texture. Browse through this chapter for more information on these panels.
Undo	Undoes the last modification performed.
X Speed	Controls the horizontal movement speed of the particles. A negative value indicates movement to the left, while positive values indicate movement to the right.
Y Speed	Controls the vertical movement speed of the particles. A negative value indicates movement down, while positive values indicate movement up.
X Acceleration	Controls how quickly the object accelerates horizontally. An acceleration value of zero means that the particles travel at a constant speed.
Y Acceleration	Controls the vertical acceleration. In essence, this value acts like gravity for the particles. An acceleration value of zero means that the particles travel at a constant speed.
Randomness	Randomizes the movement speed of the particles. You may not want all particles to have the same initial velocity. A value of zero in each of these sliders indicates that all particles have the same velocity. Increasing the numbers increases the degree of random speeds.
Efficiency	Sets how much velocity is absorbed by collisions. This is a percentage value. A value of 0 means that a particle stops upon impact. Set Efficiency to 50 to get a nice “bounce” to the particles when they collide with the border.
Animated	Enables particle animation for the stroke. If this is not selected, none of the values in the Particles Properties panel can be adjusted.
Collisions	Creates borders around the edges of the workspace that the particles bounce off when they reach the edge of the workspace.

Texture Properties Panel

Use the Texture Properties panel to control any type of texture mapping on the object. Remember how we said that all objects in Panamation are created equal? Panamation treats Still image files and AVI files as brush strokes with a "skin" texture mapped onto the surface of the object. By using the Stretch ink setting in the Stroke Properties panel, the graphic or AVI information is stretched to fit the size of the object.

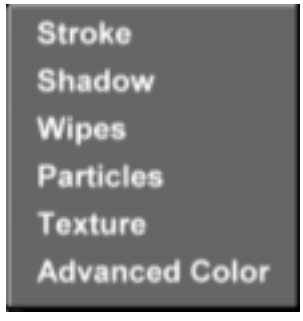
Bring up the Texture Properties panel by clicking the More button at the top of the Stroke Properties panel and choosing Texture from the pop-up menu. The panel appears in place of the Stroke Properties panel.



The Texture Properties Panel

Following is a list that explains the functions of the Texture Properties panel:

More...	Allows you to access other properties panels. Clicking this button brings up a pop-up menu (following figure) with the options to bring up these panels: Stroke, Shadow, Wipes, Particles, Texture, or Advanced Color. Browse through this chapter for more information on these panels.



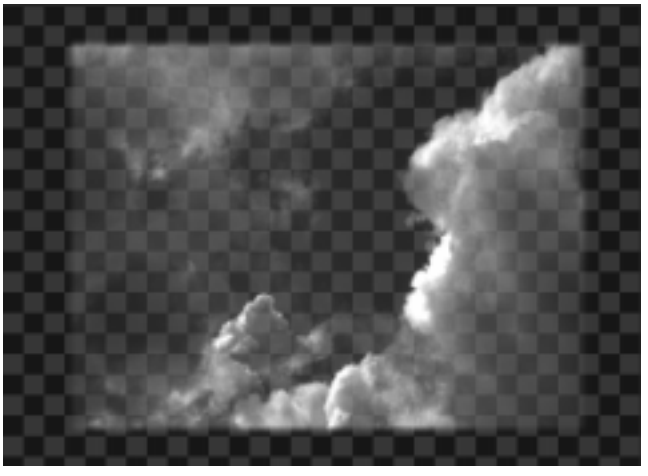
The More Pop-Up Menu

Undo	Undoes the last modification performed.
Graphics Window	Defines which graphic is used as the stretch ink for the object or brush. To add a graphic, ClipMem, Time Machine Clip, or AVI file, drag-and-drop one into the window. Right-clicking the window brings up a pop-up menu from which you can define the frame rate of a clip (see “Frame Rate Adjustment Pop-Up Menu” on page 123 for more information about this pop-up menu).
Alpha Window	Embeds the luminance information from the graphic onto the stroke when you drag-and-drop a graphic here. This enables you to use a graphic as a matte or alpha map.

Fade Slider

Adjusts the amount of transparency, or alpha, applied to an object. For the Fade slider to work, a graphic must be loaded into the Alpha window. Adjust the fade by clicking-and-dragging the slider left or right.

The following figure illustrates Fade applied to a graphic of a cloud.



Cloud Graphic with Fade Applied

Focus Slider

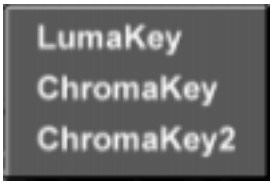
Blurs the graphics applied to an object. Adjust the focus by clicking-and-dragging the slider left or right. The further the slider is dragged to the right, the more out of focus the object is.

The following figure illustrates Focus applied to a graphic of a cloud.

Cloud Graphic with Focus Applied

Add Key

Brings up a pop-up menu (following figure) from which you can choose to bring up the LumaKey, ChromaKey, or ChromaKey2 panels (see “LumaKey Panel” on page 125, “ChromaKey Panel” on page 131, and “ChromaKey2 Panel” on page 135 for more information about these panels).

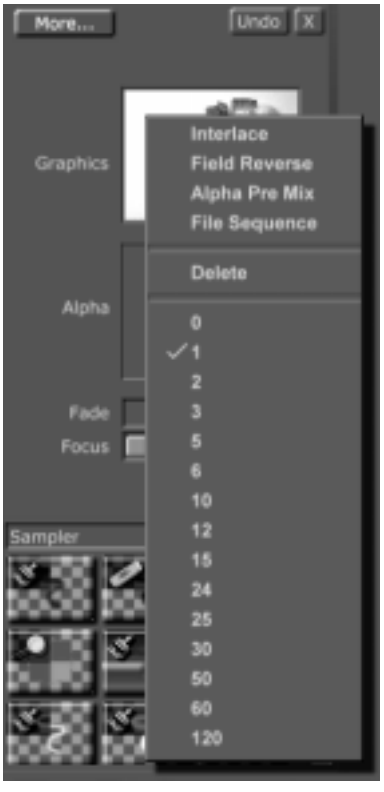


The Add Key Pop-Up Menu

Frame Rate Adjustment Pop-Up Menu

From the Frame Rate Adjustment pop-up menu (following figure) you can can define the frame rate of an imported AVI file, ClipMem, or Time Machine clip. From this panel, you can also adjust the interlacing properties for the file.

Bring up the Frame Rate Adjustment pop-up menu by clicking the More button in the Stroke Properties panel, choosing Texture from the pop-up menu, and right-clicking in either the Graphics or Alpha box.



The Frame Rate Adjustment Pop-Up Menu

Following is a list that explains the Frame Rate Adjustment pop-up menu's choices:

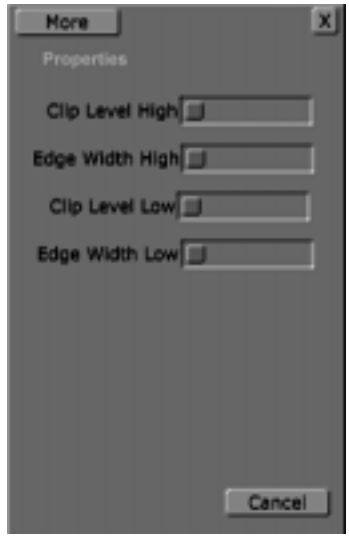
Interlace	Treats the selected AVI file, ClipMem, or Time Machine clip as though it were interlaced. Interlacing is a method of scanning alternate lines of pixels on a display screen. The odd lines are scanned first from top to bottom and left to right. The electron gun goes back to the top and makes a second pass scanning the even lines. Interlacing requires two scan passes to construct a single image.
Field Reverse	Reverses the order that the alternate lines of pixels on a display screen are scanned, scanning the even lines first and then the odd.
Alpha Pre Mix	Used with 32-bit images that have alpha pre-mixed with the graphics. If you load a file of this type, you see dark pixels around the edge of the image. Turning on the Alpha Pre Mix causes the image to display correctly.
File Sequence	Used with an animation file that is made up of a sequence of individual pictures. To use this type of file, drag-and-drop the first still from the sequence into the workspace, bring up the Texture Properties panel for it by right-clicking on the More button in the Stroke Properties panel and choosing Texture from the pop-up menu, right-click on the still in the Graphics window, and choose File Sequence from the pop-up menu. For this series of stills to play back at the proper rate, the field playback rate for the file should be set at 60.
Delete	Deletes the file from the selected window.
0, 1, 2, 3, etc.	Choosing one of these values sets the field playback rate of the AVI file at that value. By changing this value, you can determine the speed the AVI file plays at.

LumaKey Panel

Use the LumaKey panel (following figure) to adjust the luminance values of a key for a stroke. A key is an electronic matte that places a second image, such as video footage, under part of a primary image. By adjusting the luminance values of a key, the luminance values of an object are replaced by the second image.

To complete a tutorial that uses the LumaKey panel to key colors out of a still, see “Using The LumaKey Panel” on page 253.

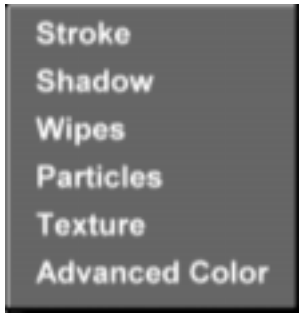
Bring up the LumaKey panel by clicking the More button in the Stroke Properties panel, choosing Texture from the pop-up menu, clicking the Add Key button at the bottom of the Texture Properties panel, and choosing LumaKey from the pop-up menu.



The LumaKey Panel

The following list details the functions of the LumaKey panel:

More... Allows you to access other properties panels. Clicking this button brings up a pop-up menu (following figure) with the options to bring up these panels: Stroke, Shadow, Wipes, Particles, Texture, or Advanced Color. Browse through this chapter for more information on these panels.

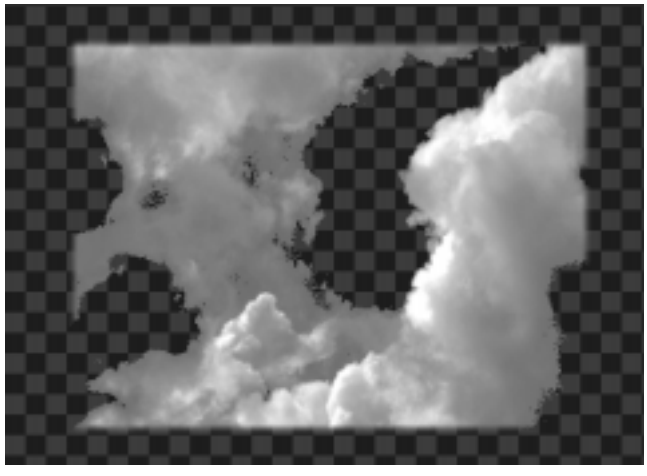


The More... Pop-Up Menu

Clip Level High

Keys out the darkest parts of the object, leaving the brightest parts. Dragging the slider to the right increases the sensitivity of the keyer, causing more and more of the image to be keyed out. If the slider is moved all the way to the right, the entire image is keyed out.

The following figure illustrates a Clip Level High value applied to a graphic of a cloud.



Clip Level High Value Applied to Cloud Graphic

Edge Width High

Works in conjunction with the Clip Level High slider to adjust the softness of the edge of the key. Before using this slider, always set the Clip Level High slider.

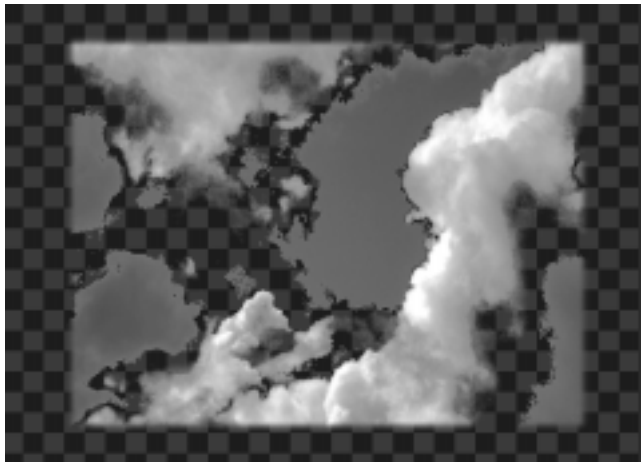
The following figure illustrates a Edge Width High value applied to a graphic of a cloud.

Edge Width High Value Applied to Cloud Graphic

Clip Level Low

Works in conjunction with the Clip Level High slider to perform a low level luma key. Before using this slider, always set the Clip Level High slider.

The following figure illustrates a Clip Level Low value applied to a graphic of a cloud.



Clip Level Low Value Applied to Cloud Graphic

Edge Width Low	Adjusts the softness of the edge of the key. Use this to clean up the edges of a low level luma key. The following figure illustrates a Edge Width Low value applied to a graphic of a cloud.

Edge Width Low Value Applied to Cloud Graphic

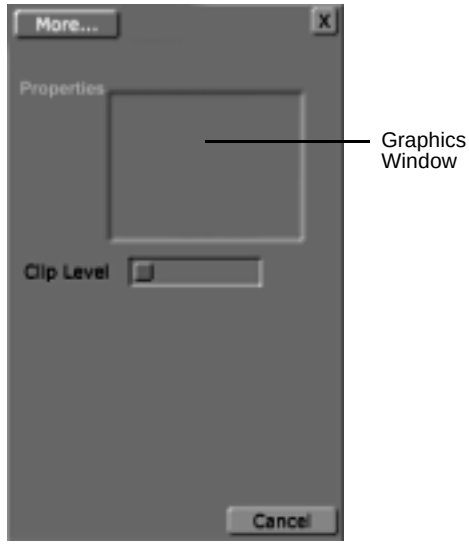
Cancel	Cancels any changes made in this panel and closes it.

ChromaKey Panel

Use the ChromaKey panel (following figure) to adjust the clip level of a key for a stroke based on the chrominance values for that key. A key is an electronic matte that places a second image, such as video footage, under part of a primary image. By adjusting the chrominance values of a key, the chrominance values of an object are replaced by the second image.

To complete a tutorial that uses the ChromaKey panel to key colors out of a still, see “Using The ChromaKey Panel” on page 261.

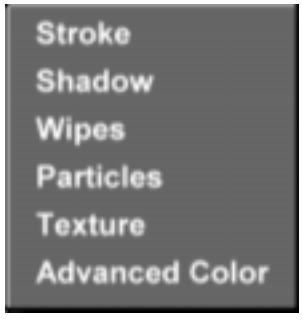
Bring up the ChromaKey panel by clicking the More button in the Stroke Properties panel, choosing Texture from the pop-up menu, clicking the Add Key button at the bottom of the Texture Properties panel, and choosing ChromaKey from the pop-up menu.



The ChromaKey Panel

The following list details the functions of the ChromaKey panel:

More... Allows you to access other properties panels. Clicking this button brings up a pop-up menu (following figure) with the options to bring up these panels: Stroke, Shadow, Wipes, Particles, Texture, or Advanced Color. Browse through in this chapter for more information on these panels.

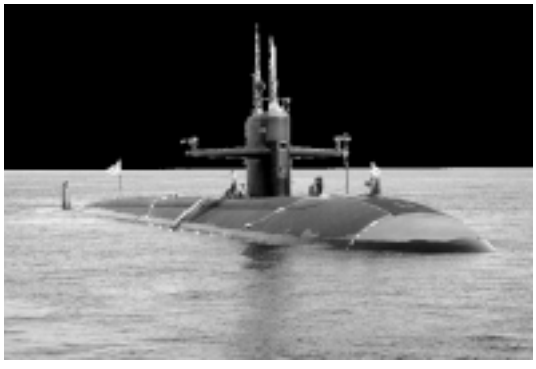


The More Pop-Up Menu

Graphics Window

The Graphics window contains the graphic applied to the selected stroke. To key out a color from this graphic, click on that color in the Graphics Window.

The following figure illustrates a graphic in the workspace that had a color keyed out by selecting a color from the Graphics window.

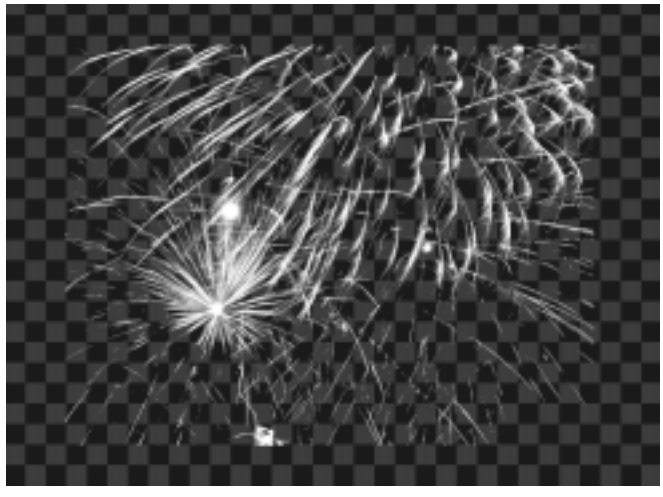


Graphic with Color Keyed Out

Clip Level

To use this function, first click on a color in the image in the Graphics window. This chooses which color is keyed out of the image. Adjusting the Clip Level adjusts the range of the color that is keyed out.

The following figure illustrates a Clip Level value applied to a graphic of fireworks.



Clip Level Value Applied to Fireworks Graphic

Cancel

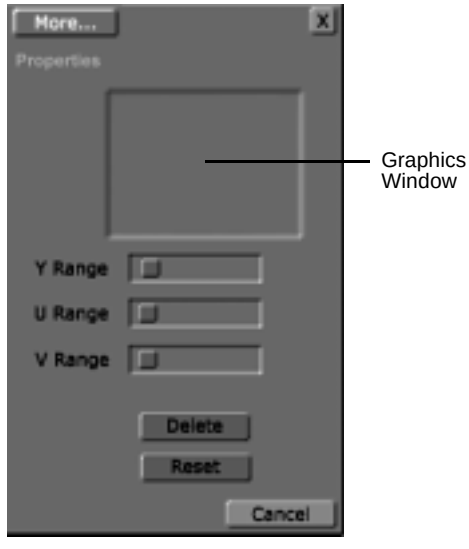
Cancels any changes made in this panel and closes it.

ChromaKey2 Panel

Use the ChromaKey2 panel (following figure) to adjust the luminance and chrominance values for the key of a stroke. A key is an electronic matte that places a second image, such as video footage, under part of a primary image. By adjusting the luminance and chrominance values of a key, the luminance and chrominance values of an object are replaced by the second image.

To complete a tutorial that uses the ChromaKey2 panel to key colors out of a still, see “Using The ChromaKey2 Panel” on page 269.

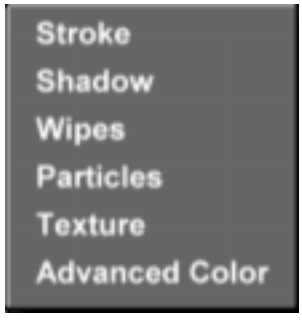
Bring up the ChromaKey2 panel by clicking the More button in the Stroke Properties panel, choosing Texture from the pop-up menu, clicking the Add Key button at the bottom of the Texture Properties panel, and choosing ChromaKey2 from the pop-up menu.



The ChromaKey 2 Panel

The following list details the functions of the ChromaKey panel:

More... Allows you to access other properties panels. Clicking this button brings up a pop-up menu (following figure) with the options to bring up these panels: Stroke, Shadow, Wipes, Particles, Texture, or Advanced Color. Browse through this chapter for more information on these panels.



The More Pop-Up Menu

Graphics Window

The Graphics Window contains the graphic applied to the selected stroke. To key out a color from this graphic, click on that color in the Graphics window. Multiple colors can be keyed out this way.

The following figure illustrates a graphic in the workspace that had a color keyed out by selecting a color from the Graphics window.

Graphic with Color Keyed Out

Y Range

Adjusts the luminance value of the chroma key. Before this value can be adjusted, a color must be selected in the graphic in the Graphics window.

U Range

Adjusts the chrominance value for the chroma key. Both the U and V values make up the chrominance value. Before this value can be adjusted, a color must be selected in the graphic in the Graphics window.

V Range

Adjusts the chrominance value for the chroma key. Both the U and V values make up the chrominance value. Before this value can be adjusted, a color must be selected in the graphic in the Graphics window.

Delete

Deletes the part of the picture indicated by the keyer settings.

Reset	Restores the YUV settings to the levels they were when the panel was first opened.
Cancel	Cancels any changes made in this panel and closes it.

Advanced Color Panel

Use the Advanced Color panel (following figure) to randomize the colors of a stroke. If the stroke is made of particles, such as a spray stroke, then each particle has a different color. If the stroke is made up of a solid object, then the stroke is filled with a single random color.

Bring up the Advanced panel by clicking the More button at the top of the Stroke Properties panel and choosing Advanced Color from the pop-up menu. The panel appears in place of the Stroke Properties panel.

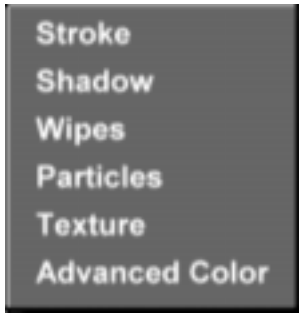
NOTE This panel can only be brought up for a stroke that has a color ink applied to it.

The Advanced Color Panel

NOTE Numeric values in this panel are changed by typing in a new value or by clicking-and-dragging up or down in the box for the value. The values can also be changed by clicking-and-dragging the value's slider left or right.

The following list explains how to use the Advanced Color panel:

More... Allows you to access other properties panels. Clicking this button brings up a pop-up menu (following figure) with the options to bring up these panels: Stroke, Shadow, Wipes, Particles, Texture, or Advanced Color. Browse this chapter for more information on these panels.

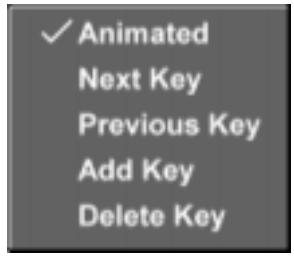


The More... Pop-Up Menu

X Closes the panel

S/A (Animation Status)

Brings up a pop-up menu from which you can animate a property of an object, such as position and transparency. The animation status pop-up menu offers these choices: Animated, Next Key, Previous Key, Add Key, and Delete Key.



Animation Status Pop-Up Menu

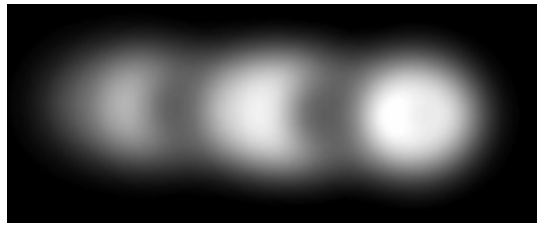
If the Animation Status button is labeled S, for static, then all choices in the pop-up menu, except Animated, are ghosted out.

- Choosing Animated changes the button's label to A, for animated, and animates the object. Clicking on this button again brings up the pop-up menu with all of the choices active.
- Choosing Add Key adds a key at the point selected on the timeline.
- Choosing Next Key skips to the next key set on the timeline.
- Choosing Previous Key skips to the previous key on the timeline.
- Choosing Delete Key deletes the selected key.

Random Color

Random colors are added to each particle of the stroke when changing this value for a spray stroke, which is made up of particles. The higher the value, the larger the variation is from the original color. Also, if the particles of a stroke are scattered, this function changes the pattern of the particles.

The following figure illustrates a spray stroke with the Random Color value set at 768.



Spray Stroke with Random Color Set at 768

When changing this value for a solid stroke, the color applied to the stroke is darkened. The higher the value, the darker the color is. Change this color by adjusting the Color/Scatter Seed value.

The following figure illustrates a solid stroke with the Random Color value set at 768.

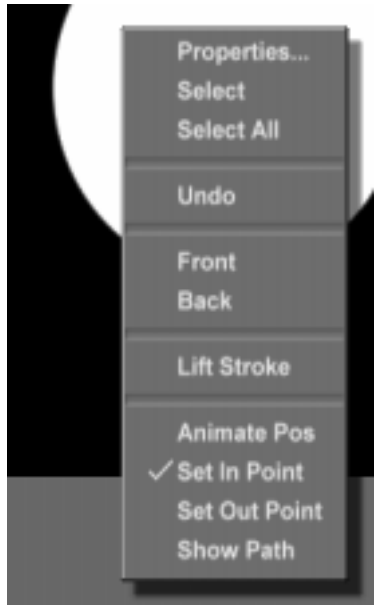
Solid Stroke with Random Color Set at 768

Color/Scatter Seed	Used with the Random Color function. Changing this value randomly changes the color of the stroke. When changing this value for a spray stroke, the color of each particle changes randomly. When changing this value for a solid stroke, it changes the single color randomly. Panamation performs this function by changing the starting position of the random number generator. That means that if you draw two strokes, the particles of both strokes go through the same sequence of random colors, and the colors of the particles will be identical. By setting each stroke to a different seed, each stroke goes through its own unique sequence of colors.
Settings	Brings up the Color Palette and Gradient Editor panel for the selected stroke (see “Color Palette And Gradient Editor Panel” on page 93 for more information about this panel).
Cancel	Cancels any changes made in this panel and closes it.

Object Pop-Up Menu

The Object pop-up menu gives options to adjust the animation and placement of an object, as well as a choice to bring up the properties panel for that object. For example, you can change the objects' placement in the workspace by sending it to the back, or bringing it to the front.

The Object pop-up menu (following figure) can be brought up for any object in the workspace. Simply right-click on the object.

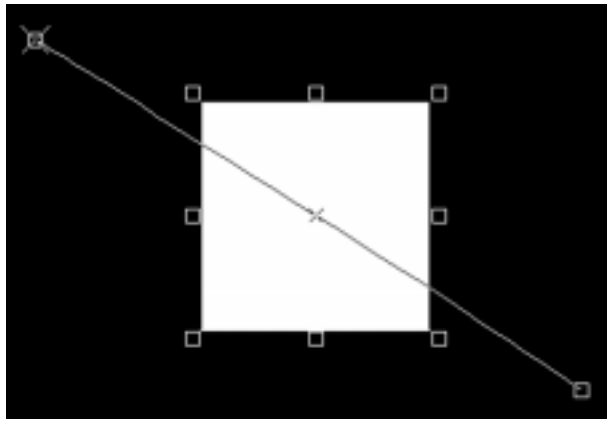


The Object Pop-Up Menu

The following list explains the pop-up menu's choices:

Properties	Brings up a properties panel for that brush stroke.
Select	Selects the object. A check mark indicates that object is currently selected.
Select All	Selects all brush strokes in the workspace.
Undo	Removes the selected brush stroke from the workspace.
Front	Moves the object to the front of the layer.

Back	Moves the object to the back of the layer.
Lift Stroke	Gives the brush stroke the same look as the area underneath it. Useful for extracting elements of a still. NOTE: The Lift Stroke function only works on the currently selected layer.
Animate Pos	Turns on the animate function for position for all selected strokes. Each object that you wish to animate must have this option selected.
Set In Point, Set Out Point	Used for trimming the length of the stroke on the timeline. When a brush stroke is created, it usually lasts from the point it was created to the end of the timeline. By changing the in and out point, you can control when the object appears and when it disappears.
Show Path	Shows the animation path of the selected stroke (following figure). This path can be edited by clicking the Edit button in the Stroke Controls and then clicking-and-dragging the edit points on the path.



The Animation Path of the Selected Stroke

Select Properties To Copy Panel

Use the Select Properties to Copy panel (following figure) to customize how an object is copied. Do you want to copy just the color and ink of an object, and not its shadow? This is simple with the Select Properties to Copy panel.

This menu is brought up when you select an object and push Ctrl+c on your keyboard to copy an object. After you've made your copy choices, click the OK button. When you push Ctrl+v to paste the object, the new object has only the properties you selected.

This menu is also brought up when you drop an object into the workspace and choose Replace Properties from the menu. The object dropped into the workspace this way will only retain the properties you select in the panel.

The Select Properties to Copy Menu

The following list explains how to use the Select Properties to Copy menu:

Properties Buttons	Clicking in the box next to a property selects that property to be copied.

Select All	Selects all properties to be copied.
Path Mode	No current function.
OK	Click OK when you have made the necessary selections in this menu.
Select None	Deselects all of the properties.
Save	Saves the properties set in this menu so that the next time you copy an object, the settings are retained.
Cancel	Cancels any changes made in this panel and closes it.

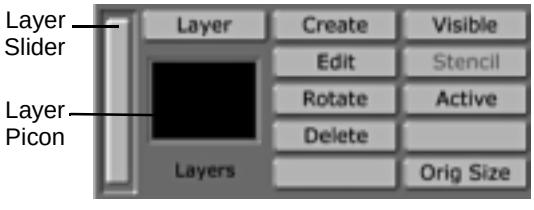
Working With Layers

Layers are used in Panamation to separate objects. By placing objects on different layers, you can easily select and manipulate the desired object. A good example of this is a reusable animated overlay for basketball scores. The elements of the background are stored on one layer, while the scores themselves are on another layer. This ensures the background objects won't be accidentally moved around.

The first layer of the workspace has some special properties that the other layers do not have. The first layer has an opaque background, unless the Alpha is turned on. Other layers always have Alpha turned on, which means that the layer is transparent, except for the objects.

Layer Controls

Use Panamation's Layer Controls (following figure) to rotate and scale lots of objects together in three dimensions. This allows quick and easy perspective scaling of an entire scene.



The Layer Controls

The following list explains the functions of the Layer Controls:

Layer Picon — A picon-size picture of the selected layer. Right-clicking on this picon brings up the Layer Properties panel.

Layer Slider — Lets you choose which layer is active. The title below the Current Layer picon tells you which layer is active. When you are clicking-and-dragging the slider, only the objects on the selected layer are displayed in workspace.

Layer — Brings up the Layer Properties panel (see “Layer Properties Panel” on page 150 for more information about this panel).

Create	Adds a new layer to the workspace. The first layer is labeled Layer 1 and subsequent layers are numbered accordingly. If an object is selected when the Create button is pushed, that object is removed from its original layer and placed on the newly created layer.
Edit	Changes the size of the layer. Clicking on a layer and dragging the mouse up or down resizes the height of the layer. Dragging the mouse right or left resized the width of the layer.
Rotate	Rotates each layer in three dimensions. Dragging the left mouse button rotates the layer on the x- and y-axis. Holding down the shift button and dragging the mouse allows z axis rotation. The following figure illustrates a layer that was rotated.

A Rotated Layer

Delete	Deletes the active layer.

Visible	Makes the selected layer visible or invisible. This is very useful when you are working with several layers and you need to turn off a middle layer to see how objects interact between the top and bottom layers.
Stencil	Only works on layers that have an alpha channel. To use this function for the first layer of a project, the Alpha button must first be selected in the Workspace Properties panel. Additional layers that are created in Panamation automatically have their alpha turned on. Turning Stencil on gives new brush strokes the stencil property. If the stencil property is turned on, the stroke only shows up if it overlaps an object in the same layer. This is useful if you want to paint on top of another object, but don't want to worry about "staying in the lines." The Stencil property can be turned on for any existing object by bringing up the object's properties panel and turning the Stencil button on in the panel. To complete a tutorial that uses the stencil function to create and alpha map, see "Using The Stencil Function To Create A Mask" on page 279.
Transparent/ Active/All	Brings up a pop-up menu with choices that affect how layers are displayed in the workspace. These choices are: Transparent, Active, and All. • If Transparent is selected, the current layer is shown at full opacity, and other layers show up as faint outlines of objects. • If Active is selected, only the active layer is shown. • If All is selected, all layers are shown.
Orig (Original) Size	Returns the selected layer to its original size, undoing any rotation, scaling, etc. you may have done to it.
Blank Buttons	No current function.

Layer Properties Panel

Use the Layer Properties panel (following figure) to move, rotate, and size layers. Clicking on the buttons allows you to move, rotate, and size the active layer in the workspace. These values can also be animated by right-clicking on the numeric displays and choosing Animate from the pop-up menu. Each individual value is animated separately. Animation of the layers is done using sub-pixel positioning. You may want to use the animation and rotation functions of this panel to make it appear as if your layer is spinning into the workspace.

Bring up this panel by clicking on the Layer button in the Layer Controls, or by right-clicking on the Layer picon and selecting Properties from the pop-up menu.

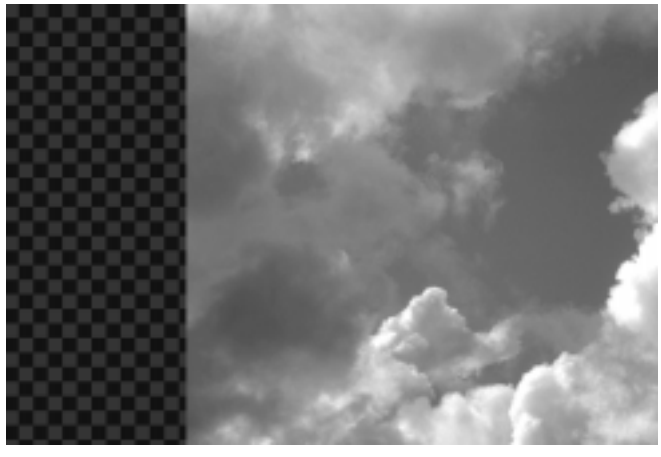
The Layer Properties Panel

NOTE Numeric values in this panel are changed by typing in a new value or by clicking-and-dragging up or down in the box for the value. Animate these values by right-clicking on on the numeric displays, choosing Animate On from the pop-up menu, right-clicking on the value again, and choosing Add Key from the pop-up menu.

Following is a list of the Layer Property panel's buttons and functions:

Move — Moves an active layer or changes its size in the workspace. Changing the X value moves the layer left or right in the workspace. Changing the Y value moves the layer up or down in the workspace. Changing the Z value reduces or enlarges the layer's size.

The following figure illustrates a layer that was moved using the Move function. The X position of this figure has a value of 200.

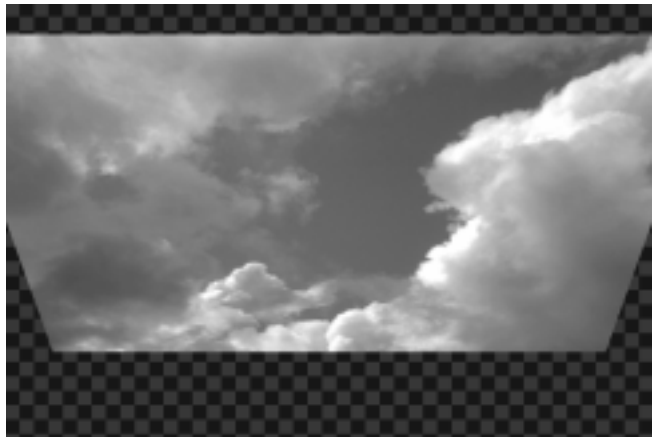


A Layer that was Moved with an X Value of 200

Rotate

Rotates an active layer in the workspace. The numeric values represent a number in degrees. For example, typing in a value of 90 rotates an object 90 degrees. Changing the X value rotates the layer three-dimensionally along the X axis. Changing the Y value rotates the layer three-dimensionally along the Y axis. Changing the Z value rotates the layer clockwise or counter-clockwise.

The following figure illustrates a layer that was rotated using this function.



A Layer Rotated with an X Value of 45

Size

Resizes an active layer in the workspace. The numeric values represent a percentage. Changing the X value affects the width of the layer. Changing the Y value affects the height of the layer.

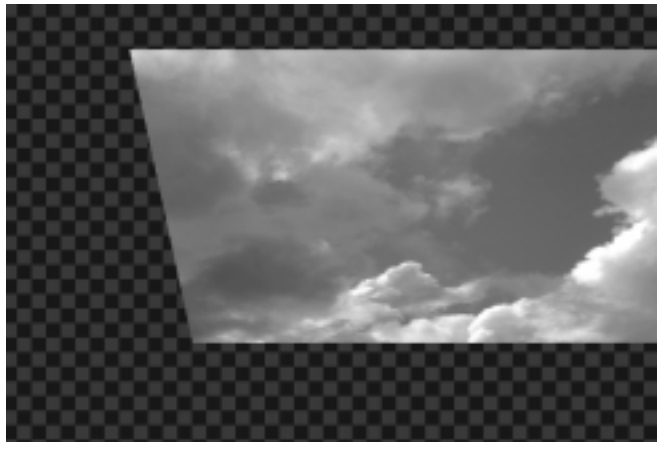
The following figure illustrates a layer that has an X size value of 60.

A Layer with an X Size Value of 60

Axis Center

These values show the location of the center point that the rotate function works on. The default values indicate the center of the layer. When you set the values to 0, the layer rotates around the lower left corner.

The following figure illustrates a layer that was rotated with its X axis center set at 180.

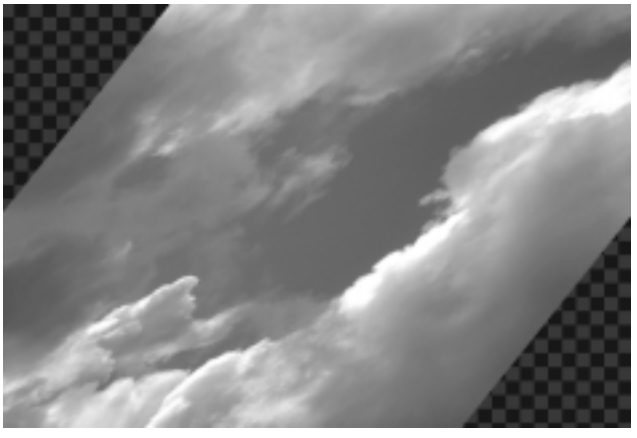


A Rotated Layer with an X Axis Center Set at 180

Shear X

Changing this value skews the layer left and right.

The following figure illustrates a layer with a Shear X value of 80.

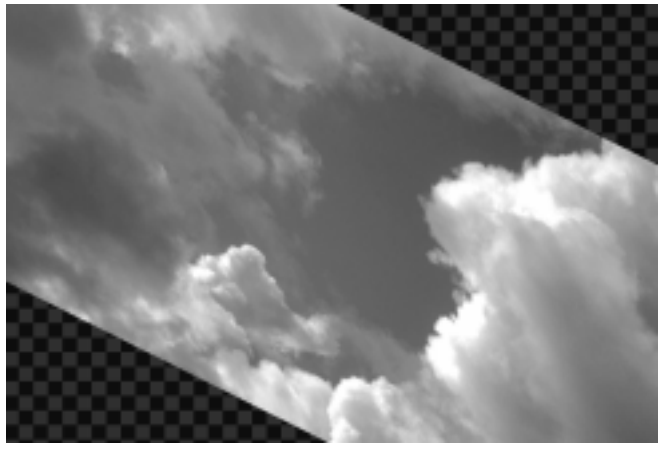


A Layer with a Shear X Value of 80

Shear Y

Changing this value skews the layer up and down.

The following figure illustrates a layer with a Shear Y value of 50.

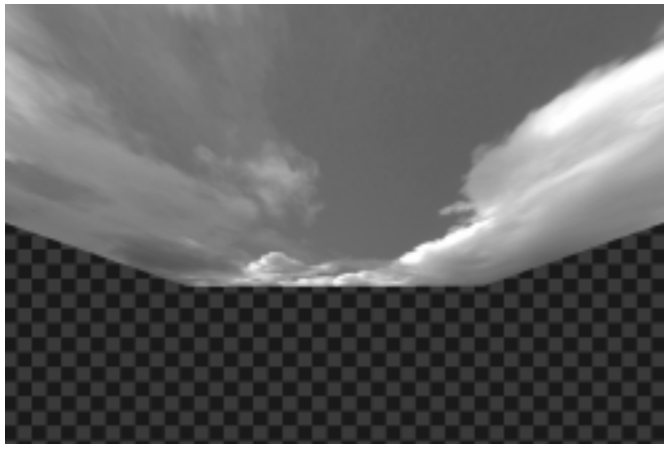


A Layer with a Shear Y Value of 50

Focal Length

Represents the distance between the viewer's eye and the projection plane. This numerical value shows how close the layer appears when the layer is rotated. A higher number means the layer appears longer as it is rotated. If you want a wide-angle lens effect, use a smaller number.

The following figure illustrates a layer that was rotated with a Focal Length value of 150.



A Layer Rotated with a Focal Length Value of 150

2.1 only

Stencil Layer Sets a layer to act as a stencil. If there are several layers on your workspace, clicking the Stencil Layer button brings up a pop-up menu from which you can choose which layer you want to use as the stencil layer.

NOTE: A layer must have an alpha channel to be used as a stencil layer. With the exception of the first layer, all layers automatically have an alpha channel. To use the first layer of a project as a stencil layer, Alpha must be turned on in the Workspace Properties panel.

To complete a tutorial that uses the Stencil function to create and alpha map, see “Using The Stencil Function To Create A Mask” on page 279.

2.1 only

Displacement Layer Enables a displacement layer. This allows you to use the opacity of one layer to displace objects and graphics on another layer. With this function, objects can be created that appear as if they being pulled up from a graphic.

3D When this button is turned off, it makes the rotation and sizing invisible. The rotation and sizing values are still there, however. This is a handy way to paint additional objects on a layer after the layer has been rotated and sized.

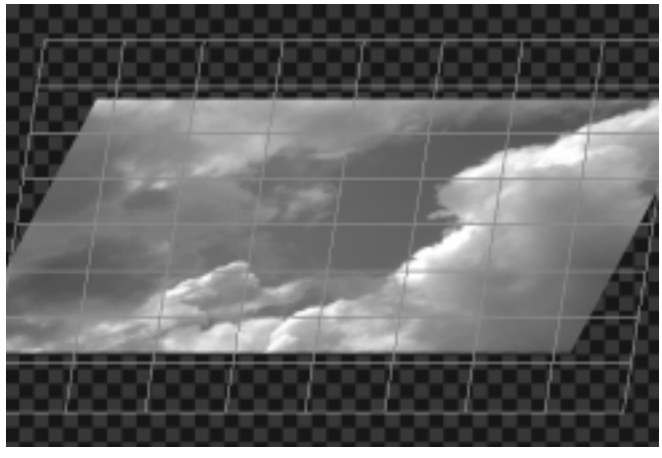
Animate All Turns on the animation for every layer property, such as size, position, and rotation. To animate an individual property, right-click on that property in the Layer Properties panel and choose Animate On from the pop-up menu.

Wireframe

Changes the workspace to show only the wireframe of the selected layer. The wireframe effect only occurs as a layer is moved or rotated.

The following figure illustrates a layer that was rotated with the WireFrame function turned on.

TIP: The Wireframe function makes it easier to rotate layers on a slow host PC.



A Layer Rotated with the WireFrame Function On

MapMode

Brings up the MapMode panel in place of the Layer Properties panel (see “MapMode Panel” on page 160 for more information about this panel).

Scale 1:1

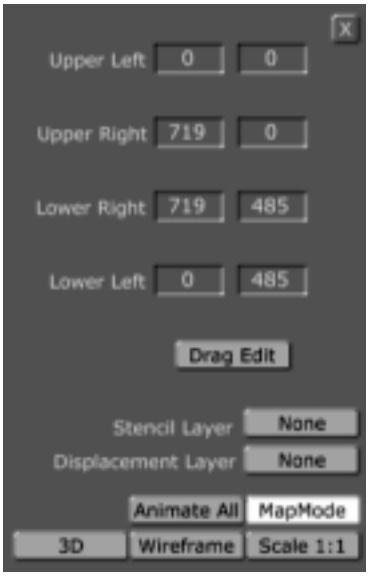
Snaps the layer back to full-screen size, rotation, and position. This does not bring the values of Scale, Move and Rotate back to 0. Instead, the value jumps to the nearest 1:1 value, such as 360 or -360 or 0. This allows you to spin a layer in and use the 1:1 button to frame it properly at the end, without worrying about the animation “unwinding” at the end.

MapMode Panel

Use the MapMode panel (following figure) to skew or distort a selected layer, giving a layer a three-dimensional look.

To complete a tutorial that uses the MapMode panel to distort and animate a layer's properties, see “Animating A Layer's Properties” on page 413.

To bring up the Map Mode panel, first bring up the Layer Properties panel by clicking the Layer button in the Layer Controls. Then, click the MapMode button.



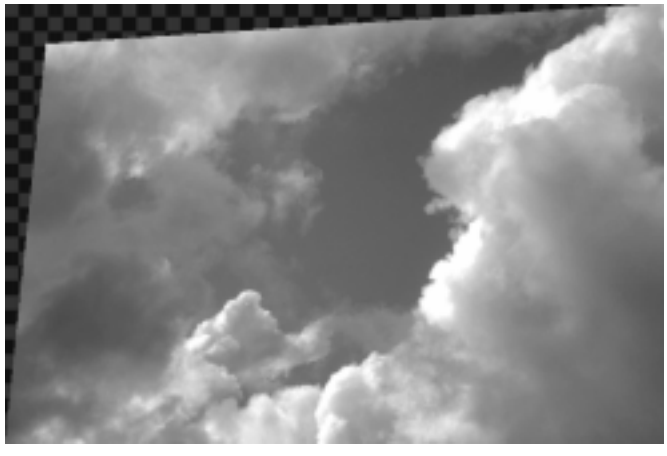
The Map Mode Panel

NOTE Numeric values in this panel are changed by typing in a new value or by clicking-and-dragging up or down in the box for the value. Animate these values by right-clicking on on the numeric displays, choosing Animate On from the pop-up menu, right-clicking on the value again, and choosing Add Key from the pop-up menu.

Following is a list that details the functions of the MapMode panel:

Upper Left — Changing these values adjusts the position of the upper left corner of the selected layer. The first number affects the X (horizontal) position of the corner. The second number affects the Y (vertical) position of the corner.

The following figure illustrates a layer with its Upper Left values adjusted. In this figure, the X position value is 45 and the Y position value is 45.

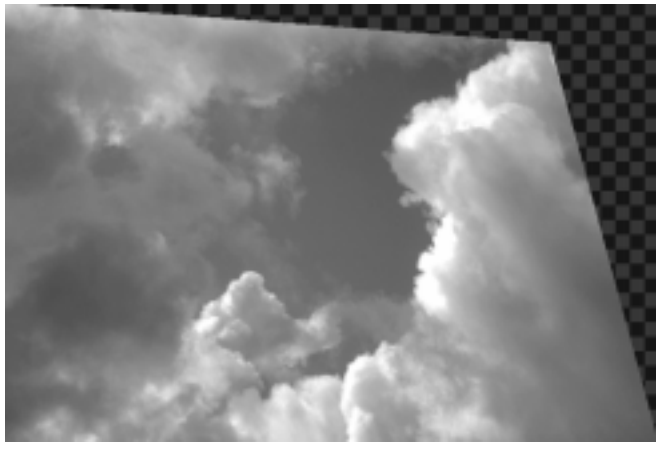


A Layer with its Upper Left Values Adjusted

Upper Right

Changing these values adjusts the position of the upper right corner of the selected layer. The first number affects X position of the corner. The second number affects the Y position of the corner.

The following figure illustrates a layer with its Upper Right values adjusted. In this figure, the X position value is 600 and the Y position value is 45.



A Layer with its Upper Right Values Adjusted

Lower Right

Changing these values adjusts the position of the lower right corner of the selected layer. The first number affects X position of the corner. The second number affects the Y position of the corner.

The following figure illustrates a layer with its Lower Right values adjusted. In this figure, the X position value is 600 and the Y position value is 400.

A Layer with its Lower Right Values Adjusted

Lower Left

Changing these values adjusts the position of the lower left corner of the selected layer. The first number affects X position of the corner. The second number affects the Y position of the corner.

The following figure illustrates a layer with its Lower Left values adjusted. In this figure, the X position value is 45 and the Y position value is 400.

A Layer with its Lower Left Values Adjusted

Drag Edit

With this button selected, you can click-and-drag the four corners of a layer in the workspace. Dragging the corners bends and twists the object.

The following figure illustrates a layer with its Upper Left values adjusted. In this figure, the X position value is 45 and the Y position value is 45.

2.1 only

Stencil Layer Sets a layer to act as a stencil. If there are several layers on your workspace, clicking the Stencil Layer button brings up a pop-up menu from which you can choose which layer you want to use as the stencil layer.

NOTE: A layer must have an alpha channel to be used as a stencil layer. With the exception of the first layer, all layers automatically have an alpha channel. To use the first layer of a project as a stencil layer, Alpha must be turned on in the Workspace Properties panel.

To complete a tutorial that uses the Stencil function to create an alpha map, see "Using The Stencil Function To Create A Mask" on page 279

2.1 only

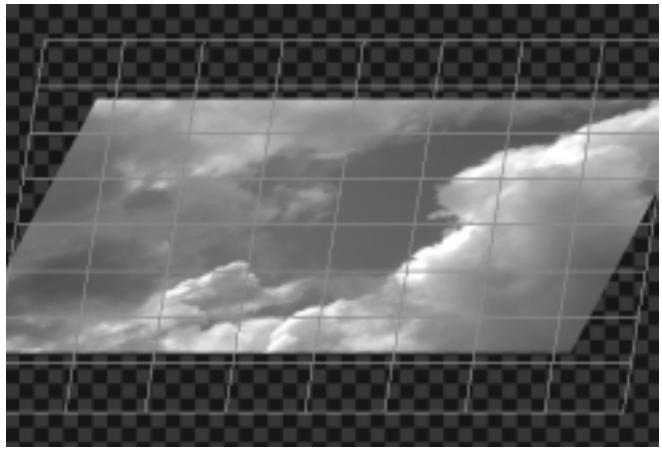
Displacement Layer Enables a displacement layer. This allows you to use the opacity of one layer to displace objects and graphics on another layer. With this function, objects can be created that appear as if they being pulled up from a graphic.

3D When this button is turned off, it makes the rotation and sizing invisible. The rotation and sizing values are still there, however. This is a handy way to paint additional objects on a layer after the layer has been rotated and sized.

Animate All Sets keyframes for layers. After moving a layer around on the workspace, clicking this button animates the movement.

Wireframe — Changes the workspace to show only the wireframe of the selected layer.

The following figure illustrates a layer that was rotated with the WireFrame function turned on.



A Layer Rotated with the WireFrame Function On

MapMode — Brings up the MapMode panel in place of the Layer Properties panel (see “MapMode Panel” on page 160 for more information about this panel).

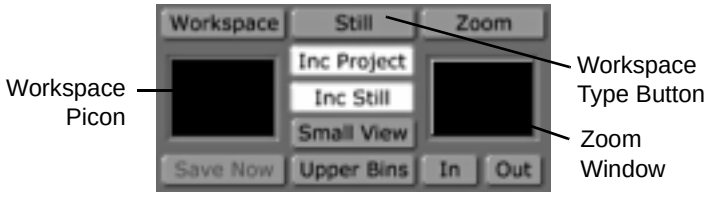
Scale 1:1 — Snaps the layer back to full-screen size, rotation, and position. This does not bring the values of Scale, Move and Rotate back to 0. Instead, the value jumps to the nearest 1:1 value, such as 360 or -360 or 0. This allows you to spin a layer in and use the 1:1 button to frame it properly at the end, without worrying about the animation “unwinding” at the end.

Working With The Workspace

The Panamation workspace is where you see all of your hard work come together. It's where your strokes are displayed as you draw them, and it's from here that you choose how all that hard work is saved.

Workspace Controls

Use the Workspace Controls (following figure) to determine how your project is saved, and how it is viewed in the workspace. Want to save your document as a TIFF or JPEG? Want to zoom in on the workspace? The workspace controls are where you do this.



The Workspace Controls

The following list explains the functions of the Workspace Controls:

Workspace Picon — This picon shows a miniature version of your workspace. Drag and drop this picon into a bin to save your work. Right-click on the picon to bring up the Workspace pop-up menu (see "Workspace Pop-Up Menu" on page 172 for more information about this pop-up menu).

Workspace — Brings up the Workspace Properties panel (see the section "Workspace Properties Panel" on page 176 for more information about this panel).

Save Now — Saves the workspace in the default bin, which is Trinity/Bins/Panam/Projects. The workspace can also be saved by dragging-and-dropping the Workspace picon into a bin. The Save Now button updates the last file saved. This button is ghosted out if the workspace has been saved and no new changes have been made.

Workspace Type	Defines the format that a project is saved in. Click on the button and choose the desired format from the Workspace Type pop-up menu. The format types at the top of the list are Trinity native formats, while the ones listed at the bottom are PC formats (see “Workspace Type Pop-Up Menu” on page 170 for more information about these format types. The selected format type appears on the face of the Workspace Type button.
Inc (Include) Project	When Inc Project is selected, the instructions, such as timeline information, that makes up the project are included when the project is saved. This timeline file can be brought back into Panamation for later modification. Turning this button off means the file creates something that cannot be changed.
Inc (Include) Still	When Inc Still is selected, saving a project saves the actual effect file. This button should be turned off if you are creating a stationary graphic, and don't want a usable effect for the Air Command or Preditor.
Small View	Shrinks the workspace and bins, allowing more room for the timeline. This is helpful when adjusting keyframes and strokes from within the timeline, as there is more room to display all of the expanded tracks.
Upper Bins	Toggles the bins to the right and left of the workspace on and off. If the bins are toggled off, a new bin window can not be opened in the space to the left and right of the workspace.

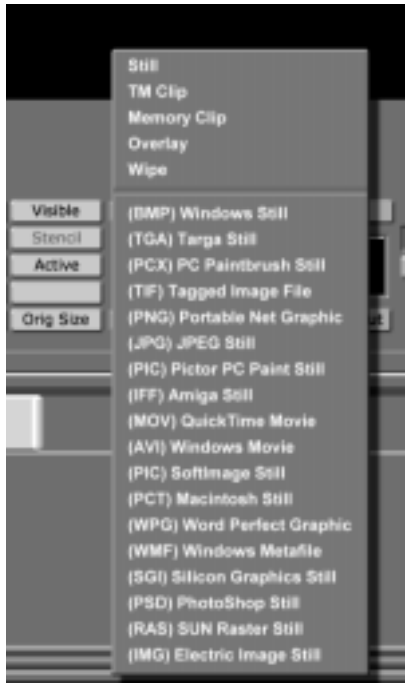
Zoom Window	Click-and-drag the picon in the Zoom Window to move the workspace around. Right-clicking in the Zoom window brings up a pop-up menu with the options of Zoom Off, Zoom x2, Zoom 1/2, or Select Area. • Choosing Zoom Off returns the workspace display to its original size. • Choosing Zoom x2 doubles the size the workspace is displayed. • Choosing Zoom 1/2 halves the size the workspace is displayed. • Choosing Select Area gives you a magnifying glass cursor that allows you to select the area you wish to zoom in on.
In	Zooms in on the workspace, magnifying it.
Out	Zooms the workspace out, making it smaller.

Workspace Type Pop-Up Menu

The Workspace Type pop-up menu (following figure) is where you choose the format that a project is saved in. The format types at the top of the pop-up menu are Trinity native formats, while the ones listed at the bottom are PC formats. The selected format type appears on the face of the Workspace Type button.

NOTE Some Trinity formats in this pop-up menu may be greyed out if the workspace dimensions in the Workspace Properties panel are set to 720x486 (NTSC) or 720x576 (PAL).

Bring up this pop-up menu by clicking on the Workspace Type button.



The Workspace Type Pop-Up Menu

The following list explains the formats listed in this menu:

Still With Still selected, when a project is saved, it is saved as a Trinity framestore. This framestore can be dragged-and-dropped into any Trinity workspace.

2.1 only

TM (Time Machine) Clip	With TM Clip selected, when a project is saved, it is saved as a Time Machine clip (if a Time Machine is installed). This clip can then be loaded and played back in Air Command or Preditor.
Memory Clip	With Memory Clip selected, when a project is saved, it is saved as a ClipMem. ClipMems are clips that are recorded directly into RAM on the Warp Engine card. ClipMems are saved to the hard drive. This clip can then be loaded and played back in Air Command or Preditor.
Overlay	With Overlay selected, when a project is saved, it is saved as a graphic overlay. If you were creating a corner bug or graphic overlay, this is the format you want your project saved in.
Wipe	With Wipe selected, when a project is saved, it is saved as a wipe transitional effect. This effect can be loaded and played back in Air Command or Preditor.
Other Formats	The other formats on this pop-up menu are non-Trinity-native formats. You may want to choose one of these formats if you are using your Panamation project with another program. Of course, Trinity can open and work with any one of these formats.

Workspace Pop-Up Menu

From the Workspace pop-up menu (following figure), you can change how the workspace behaves and is displayed by choosing options or bringing up other panels from this menu. From this pop-up menu, you can also choose to clear the workspace and start a new project.

Bring up the Workspace pop-up menu by right-clicking on the Workspace picon in the Workspace Controls.

The Workspace Pop-Up Menu

Following is a list that details the choices of this pop-up menu:

Properties...	Brings up the Workspace Properties panel (see “Workspace Properties Panel” on page 176 for more information about this panel).
Stats...	Brings up the Stats panel, from which you can choose to display objects' properties, such as size and location, within the workspace (see “Stats Panel” on page 185 for more information about this panel).
Select All	Selects every stroke in the workspace.

About...	Brings up a pop-up menu that tells you information about Panamation, including which version of Panamation you are using.
Workspace Visible	Toggles the workspace on or off. If the workspace is toggled off, a new bin, help window, or timeline can be opened in its place by right-clicking in the empty space and choosing an option from the pop-up menu.
SafeArea	Turns Safe Areas on or off. Your workspace is actually bigger than what can be displayed by an average television. The boundaries show what is actually seen on a typical television. The inner border is called the Safe Title Area, and the outer color border is called the Safe Action Area. Everything within the Safe Title Area will fit on any television screen. The keyboard command to toggle the Safe Area on and off is the Esc key. The following figure illustrates how the workspace is displayed with SafeArea turned on.

Workspace with SafeArea On

Record — Brings up the Digitize Clip panel, where you can record a ClipMem or a clip digitized with Time Machine, if a Time Machine is installed in your Trinity (see “Digitize Clip Panel” on page 190 for more information about this panel).

Cubic — Sets the motion of an object between its keyframes. A cubic interpolation means that the animation steps in between keyframes follow a curved path, and the acceleration of the object increases. Cubic is the default setting for object motion.

The following figure illustrates a keyframe track in the timeline with a cubic interpolation.

Keyframe Track with Cubic Interpolation

Linear — Sets the motion of an object between its keyframes. A linear interpolation means that the animation steps in between keyframes follow the straightest path possible, and the object moves at a constant velocity.

The following figure illustrates a keyframe track in the timeline with a linear interpolation.

Keyframe Track with Linear Interpolation

Hold

Sets the motion of an object between its keyframes. With Hold selected, an object stays at its current position until the next keyframe, where it jumps to its new position.

The following figure illustrates a keyframe track in the timeline with a hold interpolation.

Keyframe Track with Hold Interpolation

New Project

Clears the workspace and starts a new project.

Workspace Properties Panel

From the Workspace Properties panel (following figure), you can set how the workspace is viewed and how a saved transition or effect behaves when played back in Air Command. From this panel, you can also set the Program source without having to launch the Air Command application.

Bring up this panel by clicking the Workspace button, or by right-clicking on the Workspace picon and selecting Properties from the pop-up menu.

The Workspace Properties Panel

The following list explains the Workspace Properties panel's buttons and functions:

Duration Window — Shows the length of the animation, overlay, AVI, Wipe, etc. in a standard timecode readout (HH:MM:SS:FF). Set the length of the project by clicking on any of the timecode numbers and typing the desired time. Trinity defaults to a time of 1 second (30 frames/60 fields).

Source	Acts as a mini-switcher, allowing you to set the Program video source from within Panamation, without having to go back to Air Command. To do this, click on the Source button and choose the desired source from the pop-up menu. Whatever source is chosen here as the Program source is what is digitized from the Digitize Clip panel (see “Digitize Clip Panel” on page 190 for more information on this panel). The keyboard commands for the video sources are the F1 through F10 keys on the keyboard.
Size X, Size Y	Displays the size of the workspace in pixels. Size X is the width, and Size Y is the height. The default size is 720x486 for NTSC and 720x576 for PAL, which are the standard sizes for video.

Video

When the Video button is selected, the workspace is shown over the Program Out source. This option is helpful if you want to paint over live video or preview a transition or effect you just created. To paint over live video, Alpha must be turned on.

The following figure illustrates a stroke painted over a live video source with alpha turned on.

Stroke Painted Over Live Video

Prv Gfx (Preview Graphics)

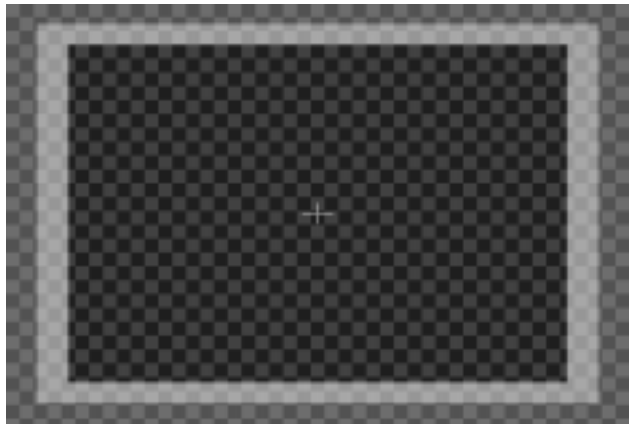
Works in conjunction with painting over live video. To use the Preview Graphics function, the Video button in the Workspace Properties panel must be selected. With the Prv Gfx button selected, strokes drawn in the Panamation workspace are displayed in the Preview monitor. When this function is on, the video displayed in the Program monitor is also displayed in the Preview monitor. This function is useful if you want to paint over live video and want to preview what you have drawn before you display it over your Program out video.

Offset X, Offset Y	Sets the beginning point of a grid in the workspace. Offset X sets how far in from the left the grid begins. Offset Y sets how far down from the top the grid begins. The default is 0 for both of these values.
Grid X, Grid Y	These values adjust the size of the grid. The Grid X value sets the width of the grid. The Grid Y value sets the height of the grid.
RGB/YUV Selector	Sets the working color format for your project. Clicking this button brings up a pop-up menu, from which you can select RGB or YUV.
Grid	Turns the snap-to-grid function on. By adjusting the grid values, you can easily line up objects using this tool. To see the grid, click the Alpha button on.
Paint To End	When selected, every brush stroke lasts until the end of the effect. If Paint To End is off, each object lasts for only one frame. With Paint To End off, you can create rotoscope-style animation.

Safe Area

Displays the maximum safe viewing area of the workspace. Your workspace is actually bigger than what can be seen by an average television. The boundaries show what is actually seen on a typical television. The inner border is called the Safe Title Area, and the outer color border is called the Safe Action Area. Everything within the Safe Title are will fit on any television screen.

The following figure illustrates how the workspace is displayed with SafeArea turned on.



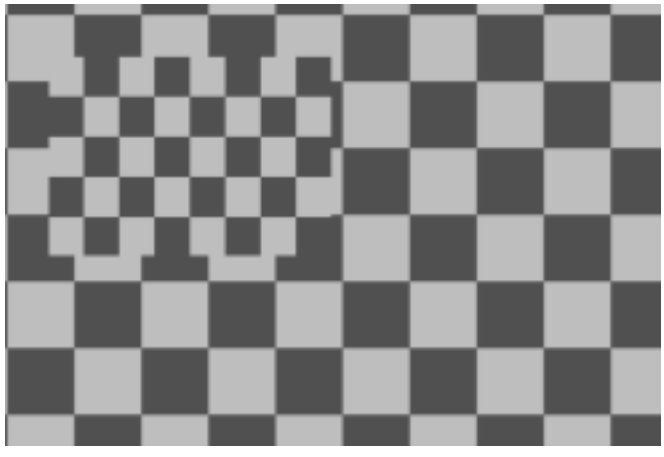
Workspace with SafeArea On

Proxy Video

Turning this function on replaces animated textures; such as AVIs, ClipMems, and Time Machine clips; with a proxy checkerboard pattern.

TIP: The Proxy Video function makes it easier to work with complex effects on a slow host PC. Be sure to turn Proxy Video off before you save the final version of your project.

The following figure illustrates animated textures in the workspace with Proxy Video on.



The Workspace with Proxy Video On

Field

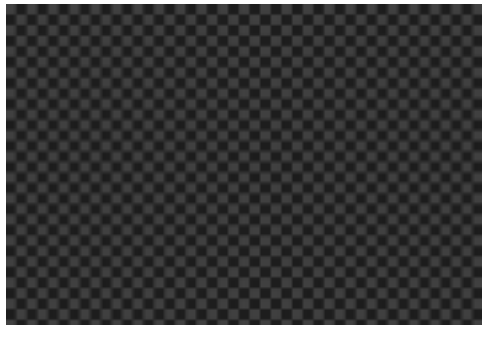
This button has no function unless the Paint To End button is deselected. If the Field button is deselected, a stroke drawn in the workspace only appears for one frame. If the Field button is selected, a stroke drawn in the workspace only appears for one field. There are 60 fields in a second of video in NTSC format, and 50 fields in a second of video in PAL format. There are 30 frames in a second of video in NTSC format, and 25 frames in a second of video in PAL format.

NTSC/PAL	Switches between NTSC and PAL video formats. Click the button and select which format you want from the pop-up menu. NTSC format is composed of 30 frames of video per second. PAL format is composed of 25 frames of video per second. The default workspace size for NTSC is 720x486. The default workspace size for PAL is 720x576.

Alpha

With Alpha selected, the first layer in your workspace is given an alpha channel. This option should be turned on if you want to create an overlay effect such as a corner bug or lower third. With Alpha selected, you also have the option of painting over live video. To do this choose your program out source with the Source button, and then click the Video button. You can now paint directly onto live video.

The following figure illustrates how the workspace is displayed with Alpha selected.



The Workspace with Alpha Selected

The following figure illustrates how the workspace is displayed with Alpha off.

The Workspace with Alpha Off

Transition	Affects how a project behaves after it is saved and run in Air Command. If this button is selected, a saved effect transitions between Program and Preview at the end of the effect when it is run in Air Command. This gives you the ability to create transitional effects with graphics.
Loop	Affects how a project behaves when it is saved and run in another application, such as Air Command. With Loop selected, the effect repeats indefinitely while it is when running.
Pause	Affects how a project behaves when it is saved and run in another application, such as Air Command. With Pause selected, a pause point is added on the current frame in the animation. This means that if the effect is played back in Air Command, it pauses until the auto button is clicked to start it back up or turn it off. Adding a pause point to an effect also allows an overlay to be stretched once it is dragged into a Preditor timeline. When stretching an overlay with a pause point in it in Preditor, the overlay is stretched at the pause point.
Snap	Grabs a still of the image on the input selected with the Source button. This still is placed in the workspace. If the Snap button is clicked again, another still is placed in the workspace over the first still that was snapped.

Stats Panel

From the Stats panel (following figure), you can change the way strokes are displayed in the workspace. Depending on what button you select from this panel, stokes will display their numeric position in the workspace or their size. You can also choose to display the mouse's numeric position in the workspace.

Bring up this panel by right-clicking on the Workspace picon and selecting Stats from the pop-up menu.

The Stats Panel

The following list explains the functions of the buttons in the Stats panel:

Show Size — When Show Size is selected, values representing the size of a selected object are displayed just outside the bounding box around the object. The height is to the right of the bounding box. The width is just above the bounding box.

The following figure illustrates a stroke that was selected with the Show Size function turned on.

Selected Stroke with Show Size Function On

Show Positions

When Show Positions is selected, numbers indicating a selected object's position in the workspace is displayed just inside the top of the object's bounding box. The first number represents the X position of the object. The second number represents the Y position of the object.

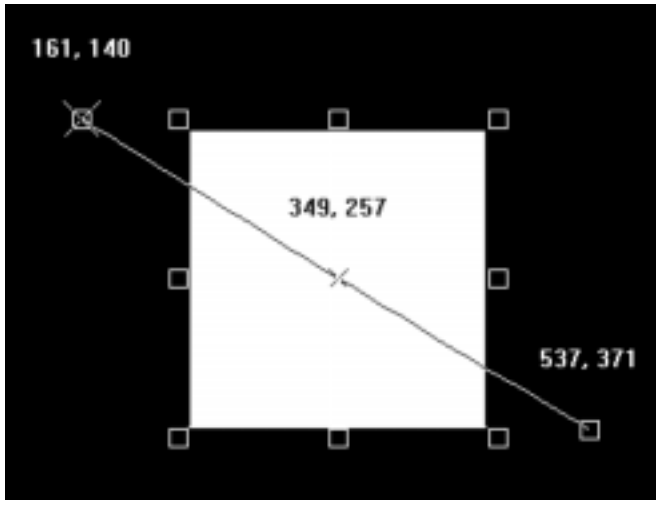
The following figure illustrates a stroke that was selected with the Show Positions function turned on.

Selected Stroke with Show Positions Function On

Show Keyframes

Works in conjunction with the Show Path function. To use this function, first right-click on the selected stroke and choose Show Path from the pop-up menu. This shows the animation path of the selected stroke. Clicking the Show Keyframes button displays numbers above the keyframes, indicating the position of the keyframes in the workspace. The first number represents the X position of the object. The second number represents the Y position of the object.

The following figure illustrates a stroke that was selected with the Show Path and Show Keyframes functions turned on.

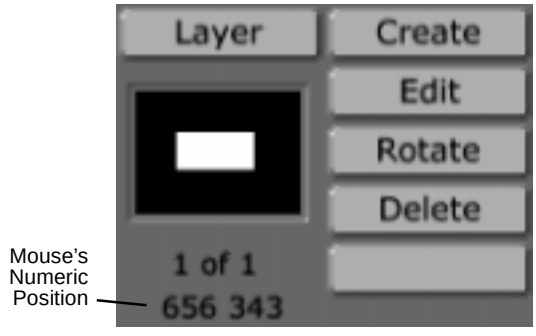


Selected Stroke with Show Path and Show Keyframes Functions On

Show Mouse

When Show Mouse is selected, the mouse's numeric position in the workspace is displayed just below the Layer picon in the Layer Controls. The first number represents the X (horizontal) position of the mouse. The second number represents the Y (vertical) position of the mouse.

The following figure illustrates the mouse's position in the workspace, which is displayed in the Layer Controls.



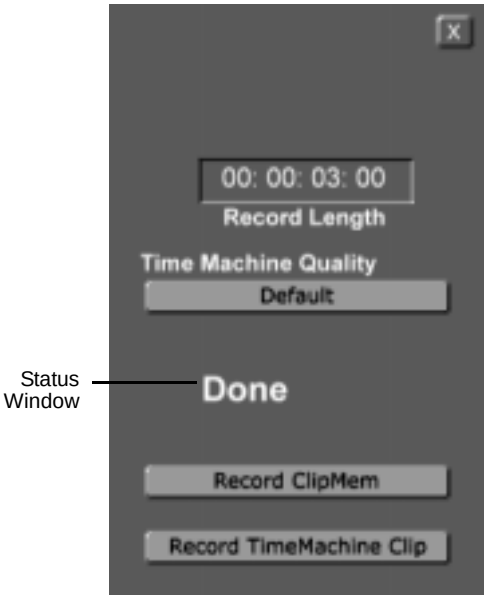
The Mouse's Numeric Position Displayed in the Layer Controls

Digitize Clip Panel

With the Digitize Clip panel (following figure) you can record ClipMems or digitize clips to Time Machine, if one is installed. ClipMems are clips that are recorded directly into RAM on the Warp Engine card. They can be saved out directly, enabling playback as a clip in Preditor. With Time Machine clips in Panamation, Time Machine records whatever is set as the Program out source, so you must first set the Program out source in the Workspace Properties panel (see the section “Workspace Properties Panel” on page 176 for more information on this panel).

To complete a tutorial that uses the Digitize Clip panel to digitize clips, see “Recording ClipMem/Time Machine Clips” on page 395.

Bring up the Digitize Clip panel by right-clicking on the Workspace picon and selecting Record from the pop-up menu.



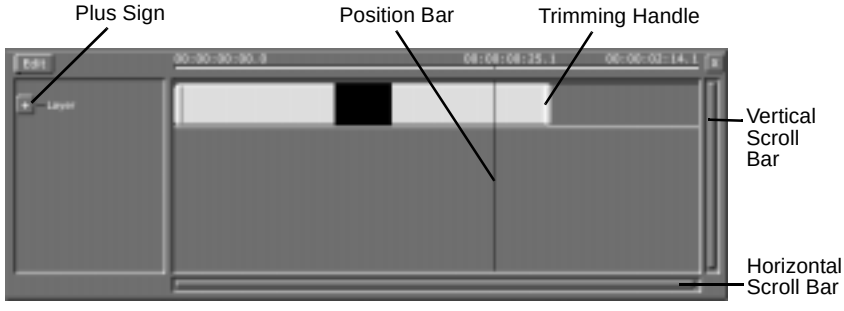
The Digitize Clip Panel

The following list explains the functions of the Digitize Clip panel:

Record Length	Sets the length of the clip that is recorded. To change this value, click on the number and type in a new one, or click on the number and drag up or down.
Time Machine Quality	Clicking on this button brings up a pop-up menu, from which the quality of the recorded clip can be chosen. The quality choices are Default, and 1 through 6. The lower the number, the better the quality is. This button has no function without a Time Machine installed in your Trinity.
Status Window	Displays the status of the clip being recorded, such as "Recording."
Record ClipMem	Records a ClipMem clip. ClipMems are clips that are recorded directly into RAM on the Warp Engine card. The length a ClipMem is determined by the amount RAM you have installed on the Warp Engine card. With the maximum 128MB of RAM installed, 6.3 seconds of video can be recorded at a time. If you have 16MB of RAM installed on the Warp Engine card, you can record 20 frames of NTSC video. ClipMems that are recorded in Panamation are saved in the bin directory Trinity/Bins/Panam/Projects.
2.1 only Record TimeMachine Clip	Records a clip to Time Machine. Time Machine clips are clips that are recorded to Time Machine's hard drives. With a Time Machine installed in your Trinity, you can record digital clips that are of any length. For Time Machine clips that are digitized in Panamation, a shortcut picon to this clip is saved in the bin directory Trinity/Bins/Panam/Projects.

Working With The Timeline

The Panamation timeline (following figure) is a representation of every still, stroke, layer, etc. in the workspace. In the timeline, these objects are displayed as events, and any of these events can be altered and adjusted directly from the timeline. Simply right-click on an event and select Properties from the pop-up menu. This brings up a properties panel for the selected event.



The Panamation Timeline

To complete a tutorial that uses the functions of the timeline to adjust the animation properties of strokes, see “Animating A Lower Third Using The Timeline” on page 457.

The following list explains the timeline's interface:

Edit	Allows you to cut, copy, or paste objects in the timeline. Click on the Edit button and choose Cut, Copy, or Paste from the pop-up menu.
Plus Sign	Drops down the selected track, displaying any stroke, animation keyframes, etc. tracks contained within. These tracks are called child tracks.
Trimming Handle	Clicking-and-dragging these handles adjusts the length of an event. Some events have a fixed length, and dragging the handle has no function.

Position Bar	Represents the current position in the timeline. Clicking-and-dragging the Position Bar right and left scrubs through the timeline. This is handy if you wish to go to a certain point in the timeline. The current position in the timeline is displayed as timecode above the Position Bar.
Vertical Scroll Bar	Clicking-and-dragging this bar up or down allows you to view tracks that are hidden when there are too many to fit on the interface all at once.
Horizontal Scroll Bar	Clicking-and-dragging this bar left or right moves the timeline display forward or backward. Clicking-and-dragging this bar up or down zooms the timeline in or out, changing its displayed size. Clicking-and-dragging diagonally does both at once.

Timeline Tracks

In a Panamation timeline, tracks are a region that runs across the timeline. This region denotes a specific channel of video, effects, strokes, or animation properties. Clicking on the plus sign next to a track opens up any child tracks that may be contained within that track. For example, clicking on a layer track opens the tracks for strokes contained within that layer.

When you start a new project in Panamation, only a layer track is visible (following figure).

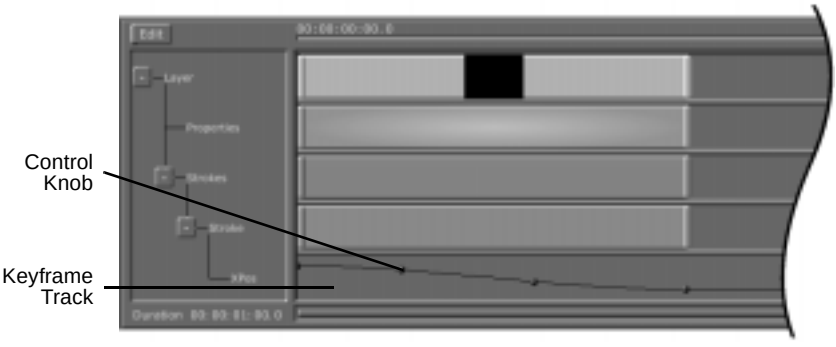
A Layer Track on the Timeline

To open the Properties and Strokes tracks, click on the plus sign next to the name of the layer or stroke track, or right-click in the track and choose Expand Tree or Expand All from the pop-up menu. If you have drawn any

strokes in your workspace, you see the Stroke track under the Properties track (following figure).

Stroke and Keyframe Tracks on the Timeline

In addition to the stroke tracks, there is also a Keyframe track for each animated property for a stroke. By clicking-and-dragging the control knob for a keyframe, you can adjust the property value for that keyframe. Right-clicking on a control knob brings up the Event panel, which gives you precise control over the property's value (see “Event Panel” on page 199 for more information about this panel). To open the Keyframe track (if there is one), click on the plus sign next to the stroke, or right click on the stroke track and choose Expand Tree from the pop-up menu. You see the Keyframe track under the Stroke track (following figure).



A Typical Keyframe Track

When you click on the control knob for a keyframe, a box appears that indicates the property value for that keyframe (following figure).

A Keyframe Property Value

Clicking-and-dragging a control know left or right changes that keyframes position in the timeline.

You can also adjust the relative property value by dragging the control knob up or down. This value can also be adjusted by right-clicking the control knob and selecting Edit Key from the pop-up menu. This brings up the Event Panel, from which you can type in a specific value (see “Event Panel” on page 199 for more information about this panel).

Keyframe Pop-Up Menu

The Keyframe pop-up menu (following figure) gives control over an individual keyframe. From this pop-up menu, you can adjust the interpolation of the keyframe and bring up the Event panel or properties panel for that keyframe.

Bring up this pop-up menu by right-clicking on a control knob in a Keyframe track.

The Keyframe Pop-Up Menu

The following list details the choices of this pop-up menu:

Linear

Sets the motion of an object between its keyframes. A linear interpolation means that the animation steps in between keyframes follow the straightest path possible, and the object moves at a constant velocity.

The following figure illustrates a keyframe track in the timeline with a linear interpolation.

Keyframe Track with Linear Interpolation

Cubic

Sets the motion of an object between its keyframes. A cubic interpolation means that the animation steps in between keyframes follow a curved path, and the object accelerates. Cubic is the default setting for object motion.

The following figure illustrates a keyframe track in the timeline with a cubic interpolation.

Keyframe Track with Cubic Interpolation

Hold	Sets the motion of an object between its keyframes. With Hold selected, an object stays at its current position until the next keyframe, where it jumps to its new position. The following figure illustrates a keyframe track in the timeline with a hold interpolation.

Keyframe Track with Hold Interpolation

Delete Key	Deletes the selected keyframe.
Edit Key	Opens the Event panel, where you can precisely adjust the level of the selected keyframe (see the section “Event Panel” on page 199 for more information about this panel).
Properties...	Opens the properties panel for the selected keyframe (see “Stroke Properties Panel” on page 45 for more information about this panel).
Set Picon	Creates a picon for the event on its track in the timeline. Setting a picon here is an easy way to keep track of all the elements in an effect.

Event Panel

The Event panel (following figure) gives you precise control over the value of a keyframe. From this panel, you can adjust the keyframe's value, change its position in the timeline, or alter the interpolation of the keyframe. As you adjust these values, you see the position of the keyframe change in the timeline.

Bring up this panel by right-clicking on a control knob and choosing Edit Key from the pop-up menu.

The Event Panel

The following list explains how to use the Event panel:

Delete Event — Deletes the control knob and keyframe from the timeline.

Linear

Sets the motion of an object between its keyframes. A linear interpolation means that the animation steps in between keyframes follow the straightest path possible, and the object moves at a constant velocity.

The following figure illustrates a keyframe track in the timeline with a linear interpolation.

Keyframe Track with Linear Interpolation

Cubic

Sets the motion of an object between its keyframes. A cubic interpolation means that the animation steps in between keyframes follow a curved path, and the acceleration of the object increases. Cubic is the default setting for object motion.

The following figure illustrates a keyframe track in the timeline with a cubic interpolation.

Keyframe Track with Cubic Interpolation

Hold	Sets the motion of an object between its keyframes. With Hold selected, an object stays at its current position until the next keyframe, where it jumps to its new position. The following figure illustrates a keyframe track in the timeline with a hold interpolation.

Keyframe Track with Hold Interpolation

Event Value Slider	Clicking-and-dragging this slider right or left adjusts the value set for the selected key. For example, if the key is set for horizontal placement, then adjusting this slider adjusts the object horizontally in the workspace. This value can also be adjusted by clicking on the numeric value and typing in a new one, or by clicking on the numeric value and dragging up or down with the mouse.
Time Slider	Clicking-and-dragging this slider right or left adjusts the key's position in the timeline. This value can also be adjusted by clicking on the numeric value and typing in a new one, or by clicking on the numeric value and dragging up or down with the mouse.

View Keyframe Track Pop-Up Menu

From the View Animation Track pop-up menu (following figure) you can change how a Keyframe track is displayed. For example, you can change the height of the track or zoom in or out on it. This is helpful if you want to click-and-drag a control knob for a keyframe property, and want more precise control.

Bring up this pop-up menu by right-clicking in the empty space of a Keyframe track.

The View Keyframe Track Pop-Up Menu

The following list explains the choices of this pop-up menu:

Halve track height	Changes the height of the selected animation track so that it is displayed at half its size. The following figure illustrates a keyframe track with its size halved.

Keyframe Track with its Size Halved

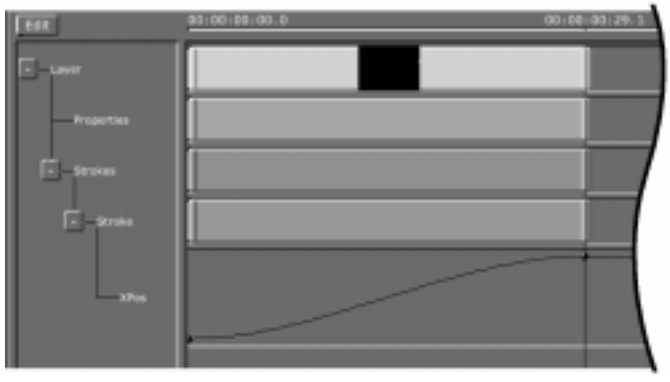
Reset track height

Resets the height of the selected animation track to its original size.

The following figure illustrates a keyframe track with its size reset to its original height.

Keyframe Track with its Size Reset

Double track height	Changes the height of the selected animation track so that it is displayed at double its size. The following figure illustrates a keyframe track with its size doubled.



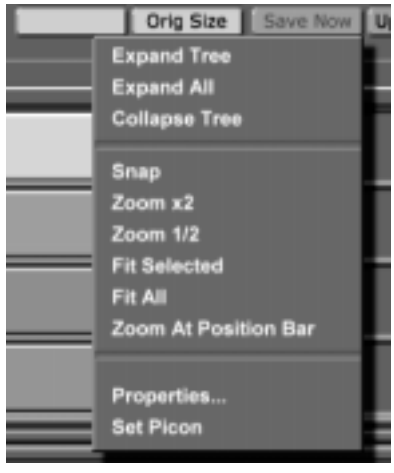
Keyframe Track with its Size Doubled

The other choices in this pop-up menu function the same as in the View Timeline pop-up menu (following section).

View Timeline Pop-Up Menu

With the View Timeline pop-up menu (following figure) you can affect how the timeline is displayed on your screen. You can expand the tree for the track you selected or zoom in or out on a timeline. This pop-up menu also gives the flexibility to bring up the properties panel for a track or set a picon for that track.

Bring up this pop-up menu by right-clicking in an empty area next to a track. Depending on whether you click on a track for a stroke, property, or layer, some of the options may not be available. However, all of the options in this pop-up function are the same for each track.



The View Timeline Pop-Up Menu

The following list explains how to use the View Timeline pop-up menu:

Expand Tree	Expands the track in the timeline to make all elements within that directory visible. This display is called a tree.
Expand All	Expands all the tracks to make them visible in the timeline.
Collapse Tree	Closes all the tracks below the selected track so that they are no longer visible in the timeline.

Snap	Works in conjunction with the position bar when moving events in the timeline. Selecting Snap from the View Timeline pop-up menu brings up another pop-up menu, from which you can select Snap Off, or a number of frames. Selecting a frame number causes the position bar to turn yellow when they are within the set number of frames. You can then release the event, and it jumps (or snaps) into position.
Zoom x2	Zooms the timeline to view events at twice their length.
Zoom 1/2	Zooms the timeline to view events at half their length.
Fit Selected	Zooms the timeline so that all selected events are visible on the screen.
Fit All	Zooms the timeline so that the entire timeline is visible on the screen.
Zoom At Position Bar	Enlarges the display of the area of the timeline where the position bar is.
Properties...	Opens the properties panel for the selected event. The type of properties panel that is opened depends on the nature of the event. For example, right-clicking on the track for a stroke and selecting Properties from the pop-up menu brings up the Stroke Properties panel.
Set Picon	Sets a picon for the event on its track in the timeline. Setting a picon here is an easy way to keep track of all the elements in an effect.

Event Pop-Up Menu

The Event pop-up menu (following figure) is where you can make choices about which tracks are selected. For example, if you had one track selected, but wanted to select every track but that one, you could choose Invert Selection. This would deselect the track you clicked on, and select all other tracks. Other such selection choices can be made from this pop-up menu.

The Event Pop-Up Menu

Bring up the Event pop-up menu by right-clicking on an event in the timeline.

The following list explains the choices in this menu:

Delete Event	Removes a selected event from the timeline.
Delete Selected Events	Removes all selected events from the timeline. To select more than one event in the timeline, click on the first event to select it, then push the Shift key on the keyboard and click on any additional tracks you want selected. To deselect an individual event, push the Shift key on the keyboard and click on the desired event.

Snap	Works in conjunction with the position bar when moving events in the timeline. Selecting Snap from the View Timeline pop-up menu brings up another pop-up menu, from which you can select Snap Off, or a number of frames. Selecting a frame number causes the position bar to turn yellow when they are within the set number of frames. You can then release the event, and it jumps (or snaps) into position.
Select All	Selects all events in the timeline.
Select Track	Selects the track that your mouse is clicked on.
Select None	Deselects all selected events.
Invert Track	Deselects the event(s) selected in a single track, and selects all other events in that track. Use this when an event or group of events is selected in a single track.
Invert Selection	Deselects the events that have been selected in the entire timeline, and selects all other events. Use this when an event or group of events is selected in the timeline.
Select From Here	Selects all events starting from where your mouse is pointed, to the end of the timeline.
Select From Here on This Track	Selects all elements, from where your mouse is pointed (on a single track) to the end of the timeline.
Expand Tree	Expands the directory in the timeline to make all elements within that directory visible. This display is called a tree.
Expand All	Expands all the directories to make them visible in the timeline.
Collapse Tree	Closes all the sub-directories below the selected track so that they are no longer visible in the timeline.
Properties...	Opens the properties panel for the selected event. The type of properties panel that is opened depends on the nature of the event. For example, right-clicking on the track for a stroke and selecting Properties from the pop-up menu brings up the Stroke Properties panel.

Set Picon	Sets a picon for the event on its track in the timeline. Setting a picon here is an easy way to keep track of all the elements in an effect.

Transport And Keyframe Controls

The Transport and Keyframe controls (following figure) give you control over the timelime. With these controls you can jump to the beginning or end of the timeline, or play your clip (forward or reverse).

The Transport and Keyframe Controls

The following lists explains how to use these controls:

Transport Controls

These controls provide you with complete control over the timeline. For example, when you are creating an animation and need to move between keyframes, these controls help get the job done. The buttons, in order from left to right, are:

- First Frame

  Skips to first frame

- Rewind

  Rewinds

- Reverse Play

  Plays in reverse

- Jog Back 1 Field

  Moves back one field at a time

- Stop

  Stops play

- Jog Forward 1 Field

  Moves ahead one field at a time

- Play

  Plays normally

- Fast Forward

  Fast forwards

- Last Frame

  Skips to last frame

Timecode Display	A timecode representation of which frame you are on in an effect. Jump around to different frames by clicking in the window, changing the number, and pressing Enter on your keyboard. Timecode is in standard SMPTE format (HH:MM:SS:FF). The number after the decimal point indicates the current field
Timecode Slider	Click-and-drag the Timecode Slider to shuttle through the animation you are creating. As you drag, the numbers in the Timecode Display change to let you know which frame you are on.
Prev Key	Moves the timeline back to the last place a keyframe was added.
Next Key	Skips the timeline to the next keyframe on the timeline.

Using The Application Buttons

Click on any of the four application buttons (following figure) to close Panamation and open the appropriate application. To leave Panamation open, hold down the Shift key while you click the application button.

The Application Buttons

Following is a list of how these buttons function:

_	Minimizes the Trinity application you are in.
?	Brings up the Help window. This window guides you through tours of each activity and helps you learn each application.
X	Closes the Trinity application you are in.
Air Command, Preditor, TitleWave, PersonalFX	Closes Panamation and opens the desired application.

Chapter 4

Tutorials

With Panamation you can create an unlimited variety of projects. This chapter contains tutorials that will teach you how to create these projects. The tutorials will take you step-by-step through many of Panamation's functions.

Included in these tutorials are lessons on creating animated wipes with graphics and creating multiple animated windows in Panamation using ClipMems and alpha channels.

These tutorials give you the foundation for your own projects. They also teach you how to use the functions contained within the tutorial to create other projects.

The tutorials in this chapter progress in difficulty as you work through the chapter. Every tutorial is designed to be informative to both the beginning and advanced user. That means that you could skip to the last tutorials, but they are easier if you complete prior tutorials.

The tutorials contained in this chapter are:

- Creating a custom brush 216
- Creating an alpha map 232
- Using Panamation's keyer panels 252
- Using the stencil function to create a mask 279
- Creating a looping text crawl 292
- Creating a reusable motion path for flying text 317
- Extracting custom graphics with the lift stroke function 350
- Creating a simple wipe 367
- Creating animated wipes with graphics 382
- Recording ClipMem/Time Machine clips 395
- Creating multiple animated windows using ClipMems 408
- Rotoscoping a stenciled text stroke 434
- Animating a lower third using the timeline 457

Creating A Custom Brush

A common application for paint programs is cutting out a small area of an image and creating a brush out of it. This is called a custom brush. Often, custom brushes are irregularly shaped and you can't simply key out the background to obtain the brush. You have to literally cut around what you want to use and save it as a brush.

In this tutorial, you will create a custom brush by drawing a spline stroke around a portion of a graphic and then turn it into a stroke using the lift stroke function. By creating a custom brush, you will get a feel for how Panamation's spline tool functions. You will also learn how to load stroke objects into the workspace.

The following figure illustrates a stroke drawn in the workspace using the custom brush created in this tutorial.

The Custom Brush Stroke in the Workspace

This tutorial is broken up into four steps. These steps are:

1. Preparing the workspace
2. Creating your custom brush
3. Saving the custom brush
4. Using the custom brush

Preparing The Workspace

Before you actually begin creating your custom brush, you need to first prepare the workspace. In this section of the tutorial, you will begin a new project in the workspace and load a graphic into the workspace.

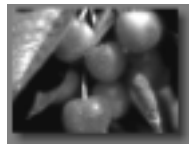
Follow these steps to prepare the workspace:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a message box comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

2. Locate the following picon for a picture of cherries on a cherry tree. It is located in the bin directory Trinity/Bins/Stills/Sampler.



The Cherries Graphic Picon

3. Load this graphic into the workspace by double-clicking its picon. This is how you load any still into the workspace.

   You see the graphic fill the entire workspace.

Now that you've prepared your workspace, you are ready to create your custom brush stroke.

Creating Your Custom Brush

You are now ready to create your custom brush. In this section of the tutorial, you will draw a spline object around the cherry you want to cut out. You will then use the lift stroke function to pull the cherry up onto your spline stroke. This will give you a feel for how the spline tool works. For additional information on working with splines, see "Panamation Tools" on page 57.

To create your custom brush, follow these steps:

1. Locate the spline stroke picon in the directory Trinity/Bins/Panam/Sampler. It is the stroke picon with a green shape on it.

The Spline Stroke Picon

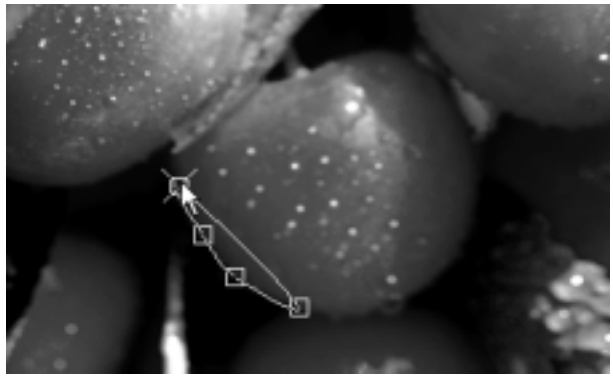
2. Load this stroke as the current stroke by clicking on it.

   You see the picon in the Stroke Controls, indicating that it is loaded as the current stroke.

3. In the workspace, begin clicking around the edge of the center cherry. As you click, you see spline points added. As you add spline points, the shape of the stroke adjusts itself.

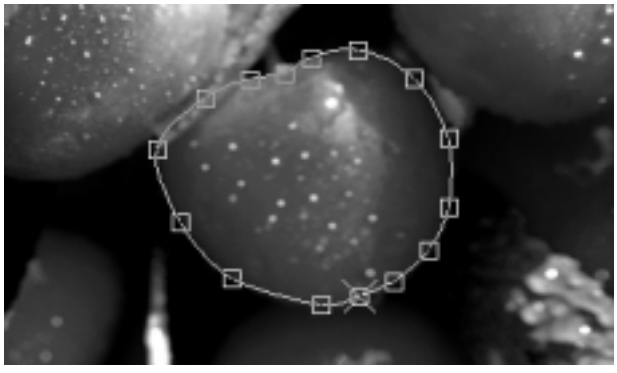
NOTE It is not important to be incredibly accurate when you add spline points in this step. You can go back later and adjust any point's position to create a more accurate spline shape.

The following figure illustrates spline points drawn around the cherry in the center of the graphic.



Spline Stroke Drawn in the Workspace

4. Continue adding spline points until you have completely drawn around the cherry. The shape you drew should look similar to that in the following figure.



Spline Shape Drawn Around the Cherry

5. Adjust the spline points for your stroke so that the stroke's outline better frames the cherry's shape.

   There are four ways you can adjust a spline shape. They are:

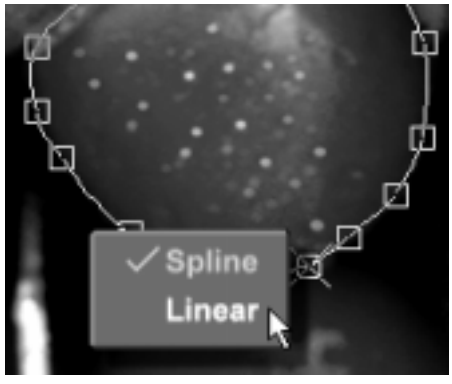
   a. Click-and-drag the desired point.

   b. Add a spline point by clicking on the stroke outline at the position where you want a new spline point. This new point can be adjusted like any spline point.

   c. Delete spline points by right-clicking on the desired point and choosing Delete Point from the pop-up menu (following figure).

Choosing Delete Point from the Pop-Up Menu

d. You can change the behavior of the outline's shape so that a section of the outline consists of a straight line, instead of a curved line. Do this by right-clicking on a section of the outline and choosing Linear from the pop-up menu (following figure).



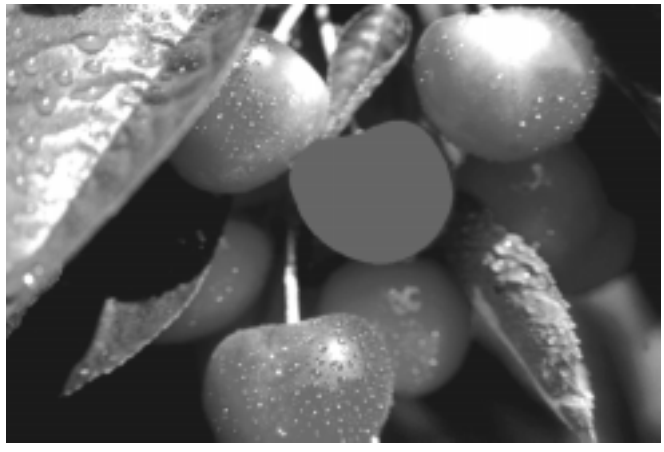
Choosing Linear from the Pop-Up Menu

6. Complete the spline shape by right-clicking in the middle of the stroke and choosing Complete Shape from the pop-up menu (following figure). You can also complete the shape by pushing Enter on your keyboard.

Choosing Complete Shape from the Pop-Up Menu

In the workspace, you see the shape fill with green. For this tutorial, the color of the stroke is unimportant since you will lift the underlaying picture onto the stroke. If you want to change the color you can do so by bringing up the Color Palette for this stroke.

The following figure illustrates the completed spline stroke in the workspace.



The Completed Spline Stroke in the Workspace

NOTE It is important to note that once a spline's shape is completed, you can still edit the spline points for the shape. Do this by selecting the shape by clicking on it and then clicking the Edit button in the Stroke Controls. In the workspace, you see the spline points for your object.

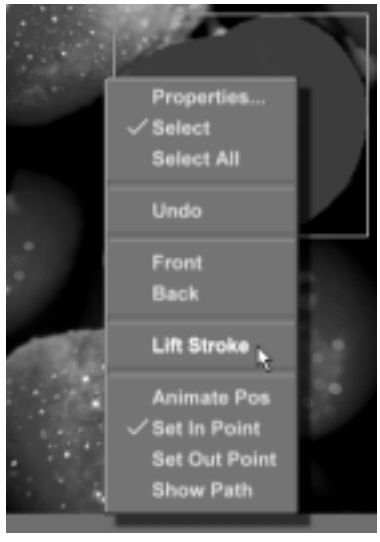
7. Click the Select button (following figure) in the Stroke Controls so that the button is selected. By clicking the Select button, you are putting Panamation in select mode. In this mode, you can select individual strokes in the workspace.

The Select Button

8. In the workspace, click on the spline stroke to select it.

   In the workspace, you see a bounding box around the stroke, indicating that it is selected.

9. In the workspace, right-click on the spline stroke and choose Lift Stroke from the pop-up menu (following figure). By doing this, you are lifting the picture underneath your stroke onto your stroke.



Choosing Lift Stroke from the Pop-Up Menu

NOTE The Lift Stroke function only works on the currently selected layer.

In the workspace, it appears as if the spline stroke disappears, but it did not. Since it has a piece of the picture's image on it, it blends in perfectly with the background. If you click on it again, you see a bounding box around the stroke.

You now have a stroke with the image of a cherry on it. This is the image we want our custom brush to draw once the brush is saved. Move ahead in this tutorial to save the stroke as a custom brush.

Saving The Custom Brush

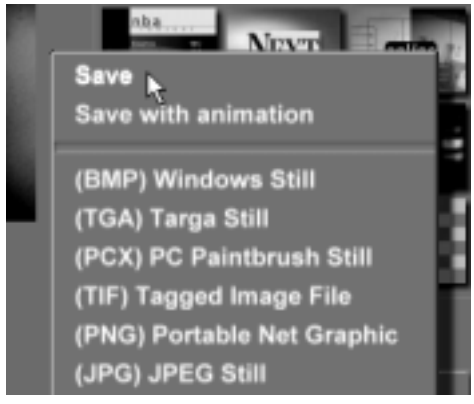
Now that you have a stroke with the image of a cherry on it, you can save it as a brush stroke. By following the steps in this section of the tutorial, you will learn how to save any stroke as a brush stroke.

To save your custom brush, follow these steps:

1. In the workspace, click-and-drag your stroke from the workspace into a bin. Drop this picon into the bin directory Trinity/Bins/Panam/Projects. Saving the custom brush in this bin makes it easier to find when you use it later in this tutorial.

   Notice that when you drag the stroke past the borders of the workspace, it becomes a picon.

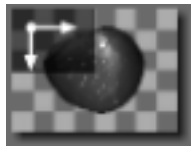
2. Choose Save from the pop-up menu (following figure) that comes up when you drop the stroke picon into the bin.



Choosing Save from the Pop-Up Menu

If you animated any of the stroke's properties, such as horizontal position, you can save that information with the stroke by choosing Save with animation from the pop-up menu. The choices below this selection are not native Trinity formats. Choose one of these formats if you want to export a Trinity graphic into another program.

You see the picon for your stroke (following figure) in the bin you saved it in.



The Custom Brush Stroke's Picon

You now have a stroke of the cherry graphic that can be loaded into the workspace or loaded as the current stroke in the Stroke Controls. To learn how to use this stroke, continue on to the next section of this tutorial.

Using The Custom Brush

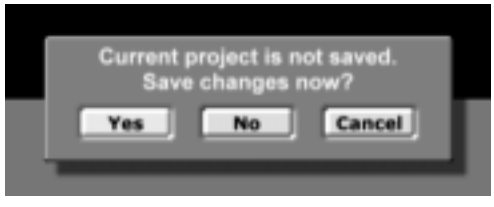
In this section of the tutorial, you will learn how to use your custom brush. The brush's stroke can be loaded into the workspace as a stroke that retains the original stroke's size and shape. It can also be loaded as the current stroke in the Stroke Controls and drawn in the workspace as you would use any brush.

To bring the custom brush stroke into the workspace and have it retain its original size and shape, follow these steps:

1. Start a new project in the workspace by right-clicking on the Workspace picon and choosing New Project from the pop-up menu (following figure).

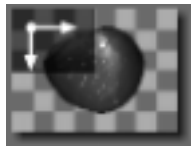
Choosing New Project

You see a window come up (following figure) asking if you want to save the current project. Click the No button.



The Save Project Window

2. Locate the custom brush's picon (following figure) in the directory Trinity/Bins/Panam/Projects.



The Custom Brush Stroke's Picon

3. While holding the Shift key on your keyboard, drag-and-drop the custom brush's picon from the bin into the workspace. By doing this, you are dropping a stroke into the workspace that has the same position, size, and shape that the original stroke had before it was saved.

   You see the stroke in the workspace. Note that it has the same position, size, and shape that the original stroke had before it was saved.

   The following figure illustrates a custom brush stroke that was dragged-and-dropped into the workspace while holding the Shift key on the keyboard.

The Stroke in the Workspace

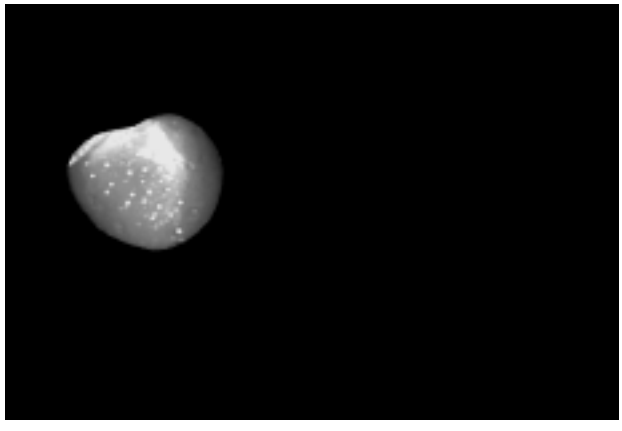
4. Delete the stroke by pushing Delete on your keyboard. Pushing Delete deletes the last stroke created in the workspace.

5. Now, bring this stroke into the workspace by dragging-and-dropping the custom brush's picon from the bin into the workspace. By doing this, you are dropping a stroke into the workspace that has the same size and shape

that the original stroke had before it was saved, but the stroke's position in the workspace depends on where you drop the stroke.

You see the stroke in the workspace. Note that it has the same size and shape that the original stroke had before it was saved.

The following figure illustrates a custom brush stroke that was dragged-and-dropped from a bin into the workspace.

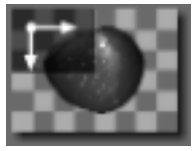


The Stroke in the Workspace

6. Delete the stroke by pushing Delete on your keyboard. Pushing Delete deletes the last stroke created in the workspace.

The custom brush can also be loaded as the current stroke. By doing this, you can draw this stroke into the workspace, giving you control over the stroke's size and shape. To load the custom brush as the current stroke in the Stroke Controls, follow these steps:

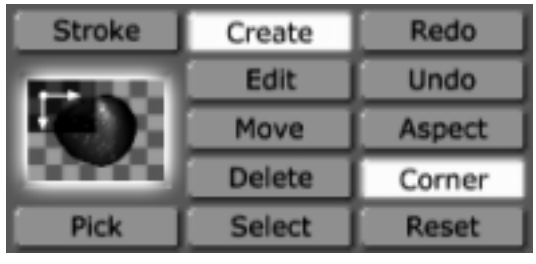
1. Locate the custom brush's picon (following figure) in the directory Trinity/Bins/Panam/Projects.



The Custom Brush Stroke's Picon

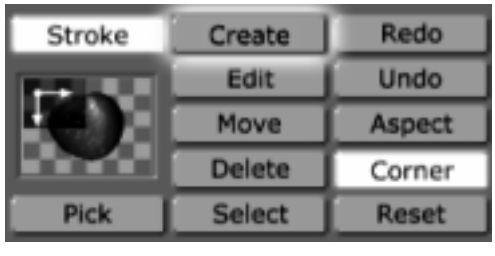
2. Load the custom brush as the current stroke by clicking on its picon in the bin.

   You see the custom brush loaded as the current stroke in the Stroke Controls (following figure).



The Custom Brush Loaded as the Current Stroke

3. Make sure that the Create button (following figure) is selected in the Stroke Controls. If it isn't, click the button to select it.



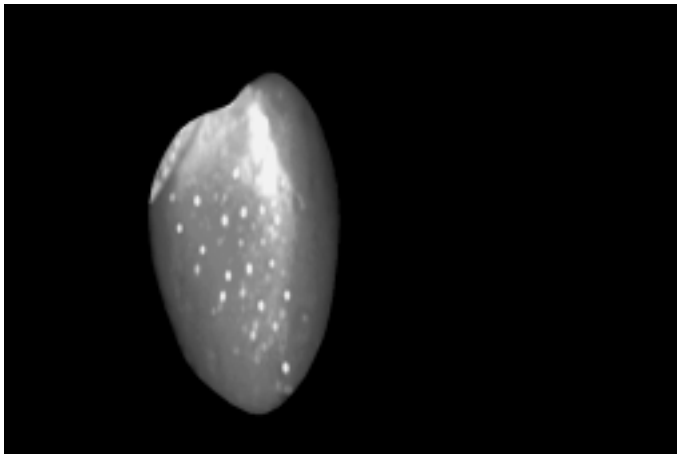
The Create Button

4. In the workspace, click-and-drag to draw a stroke with your custom brush. If you hold the Shift key on your keyboard as you click-and-drag,

the stroke you draw retains its original aspect ratio. That means it retains the shape of the original stroke before it was saved in a bin.

You see the stroke with an image of a cherry on it drawn in the workspace.

The following figure illustrates a custom brush stroke that was drawn into the workspace.



The Stroke Drawn in the Workspace

You now have a custom brush stroke that can be dragged-and-dropped or drawn in the workspace. By repeating the steps in this tutorial, you can created an unlimited number of your own custom brushes.

Now that you've created your own custom brush, it's time to move on to the next tutorial.

Creating An Alpha Map

In this tutorial, you will learn how to create an alpha map that can later be applied to a graphic to define its transparency values.

An alpha map is an image that defines the transparency of an object by its luma intensity. When this image is applied to a graphic, black values in the alpha map cause the graphic to be completely transparent, while white values in the alpha map cause the graphic to be completely opaque. Gray values in the alpha map cause the graphic to be partially transparent.

One use for an alpha map is to add transparency values to a graphic image so that the graphic blends from being completely opaque to completely transparent.

The alpha map you create in this tutorial is made up of an image that blends from white to black. That way, when the alpha map is applied to a graphic, you can see how each alpha map value affects the transparency of the graphic.

As you follow this tutorial, you will get a feel for how the Color Palette/ Gradient Editor and Texture Properties panels function. You will also learn how to save a project as a still.

This tutorial is broken up into four parts. They are:

1. Preparing the workspace
2. Creating an alpha map
3. Saving the alpha map
4. Applying the alpha map to a graphic

Preparing The Workspace

Before you actually begin creating your alpha map, you need to first prepare the workspace. In this section of the tutorial, you will begin a new project in the workspace.

Follow these steps to prepare the workspace:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the

first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

Now that you've prepared your workspace, you are ready to create your alpha map. Move on to the next section of this tutorial.

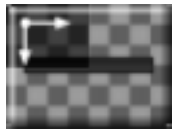
Creating An Alpha Map

In this section, you will create your alpha map. To do this, you will use the Color Palette/Gradient Editor to apply a gradient, which blends from black at the top to white on the bottom, to a stroke that fills the entire workspace. By doing this, you will create an alpha map that will cause a graphic to be transparent at its top and opaque at its bottom.

This stroke will be saved later in this tutorial as a still that can be applied to a graphic by using the functions of the Texture Properties panel.

To create your alpha map, follow these steps:

1. Locate the following stroke picon in the bin directory Trinity/Bins/Panam/Boxes. It is the picon that has the solid blue horizontal box on it.



The Stroke Picon

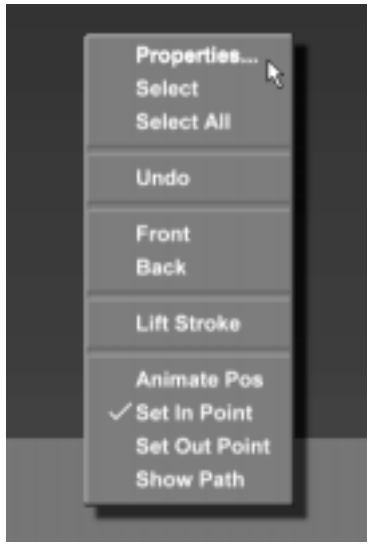
2. Load this picon as the current stroke by clicking on it.

   You see this picon load in the Current Stroke picon window.

3. Draw a box that fills the entire workspace by clicking just outside the upper left corner of the workspace and dragging to just outside the lower right corner of the workspace.

   You see a blue shape that fills the entire workspace.

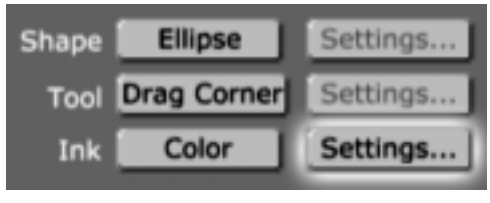
4. In the workspace, bring up the Stroke Properties panel by right-clicking on the blue stroke and choosing Properties from the pop-up menu (following figure).



Choosing Properties from the Pop-Up Menu

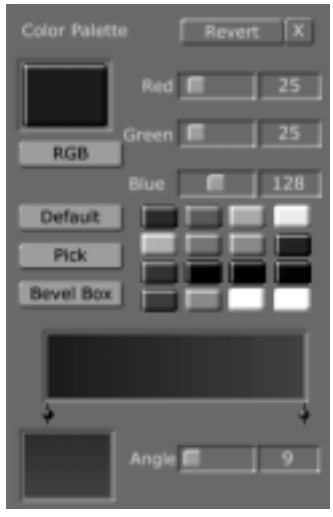
You see the Stroke Properties panel in the upper left corner of your screen. From this panel, you can adjust the properties of a stroke, such as size and position. You can also animate any of a stroke's properties from this panel.

5. In the Stroke Properties panel, bring up the Color Palette and Gradient Editor panel by clicking the Ink Settings button (following figure).



The Ink Settings Button

You see the Color Palette and Gradient Editor panel (following figure) just below the Stroke Properties panel. For additional information on using the Color Palette and Gradient Editor panel, see "Color Palette And Gradient Editor Panel" on page 93.



The Color Palette and Gradient Editor Panel

6. In the Color Palette and Gradient Editor panel, change the gradient type of your stroke to a linear blend by clicking the Gradient Type button (following figure) and choosing Linear from the pop-up menu (following figure). This pop-up menu offers a variety of gradients that can be applied to a stroke, including a bevel box gradient.

The Gradient Type Button

Choosing Linear from the Pop-Up Menu

In the workspace, you see a gradient applied to your stroke. The gradient blends from a dark blue at the right side of the workspace to a lighter blue at the left side of the workspace.

7. In the Color Palette and Gradient Editor panel, change the angle of the blend by selecting the angle value (following figure), typing in 90, and pushing Enter on your keyboard. This value could also be changed by clicking and dragging the Angle slider to the left until the value was 90.

The Angle Value

The angle value is a degree value for the gradient. By typing in 90 for the value, you told the gradient's angle to change to 90 degrees. The gradient now blends from top to bottom, instead of from right to left.

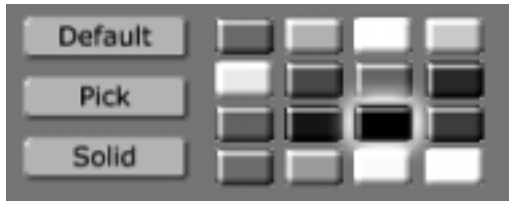
In the workspace, you see the new angle value applied to your stroke. The gradient now blends from a dark blue at the bottom of the workspace to a lighter blue at the top of the workspace.

8. In the Color Palette and Gradient Editor panel, click on the right color dot (following figure) in the gradient editor once so that the line through it turns white. Doing this selects that color dot so that its color can be edited or changed.

The Color Dot in the Gradient Editor

When the line through the color dot is white, you can adjust the color for that color dot. By adjusting the colors this way, you are changing the colors in the gradient for your stroke.

9. In the Color Palette and Gradient Editor panel, click on the black mini picon (following figure). This adds the color black to your gradient.



The Black Mini Picon

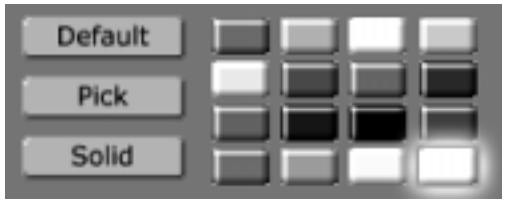
In the gradient editor, you see the gradient blend from blue on the left to black on the right.

In the workspace, you see the gradient applied to your stroke blend from blue at the bottom of the workspace to black at the top of the workspace.

10. In the Color Palette and Gradient Editor panel, click on the left color dot (following figure) in the gradient editor once so that the line through it turns white. Doing this selects that color dot so that its color can be edited or changed.

The Color Dot in the Gradient Editor

11. In the Color Palette and Gradient Editor panel, click on the white mini picon (following figure). This adds the color white to your gradient.



The White Mini Picon

In the gradient editor, you see the gradient blend from white on the left to black on the right.

In the workspace, you see the gradient applied to your stroke blend from white at the bottom of the workspace to black at the top of the workspace.

12. In the Color Palette and Gradient Editor panel, add another color dot to the gradient editor by clicking-and-dragging a black mini-picon into the gradient editor near the right side.

The following figure illustrates what your gradient editor should now look like. If the color dot isn't quite in the right spot, you can click-and-drag a color dot right or left to change its position in the Gradient Editor.

The Gradient Editor

By adding another color dot, you are adding another color to your gradient. This is how you create a gradient that has multiple blends in it. Since you added another black to your gradient, your gradient now transitions from white at the bottom of the workspace to a thick band of black at the top of the workspace.

The following figure illustrates the gradient applied to your stroke in the workspace. This is what your alpha map will look like when you save it.

The Gradient Applied to a Stroke

13. Close the Color Palette and Gradient Editor and Stroke Properties panels by clicking the X button in the upper right corner of each panel.

Now that you've created your alpha map, you are ready to save this project. To do this, move ahead to the next section of this tutorial.

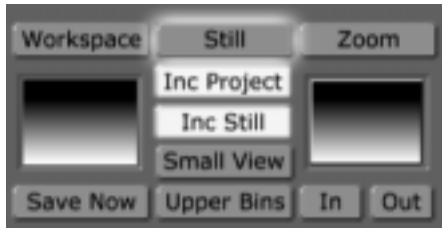
Saving The Alpha Map

In this section of the tutorial, you will save the stroke with the gradient you created as a still. By saving it as a still, you can apply it as an alpha map to a graphic in the Texture Properties panel.

By following the steps in this section, you will learn how to save any Panamation project as a still.

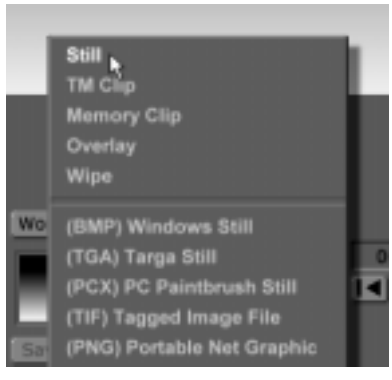
Follow these steps to save your alpha map as a still:

1. In the Workspace Controls, check to make sure that the file type is set to Still (following figure). This is the default setting for how a file is saved.



File Type Set at Still

If it isn't set to Still, click the File Type button (the button directly to the right of the Workspace button) and choose Still from the pop-up menu (following figure). In this menu, the first file types are formats that are native to Trinity. The others are formats for other programs.



Choosing Still from the Pop-Up Menu

2. Click-and-drag the workspace picon (following figure) into the bin Trinity/Bins/Panam/Projects. By dropping the picon into this bin, it will be easier for you to find it when you use it later in this tutorial.

   Be sure to save this project, as you will use it later in this tutorial.

The Workspace Picon

You see the following picon in the bin Trinity/Bins/Panam/Projects.

The Saved Alpha Map Still Picon

The alpha map you created can now be applied to any graphic by using the functions of the Texture Properties panel. To do this, continue on to the next section of this tutorial.

Applying The Alpha Map To A Graphic

In this section of the tutorial, you will apply the alpha map you created to a graphic. You will also get a feel for how to use the Texture Properties panel to apply a texture map to a graphic.

The Texture Properties panel can use any still, such as the one you just created, to set the transparency values for a graphic or stroke. This means that you can use any still picture, such as a picture of the White House, as an alpha map.

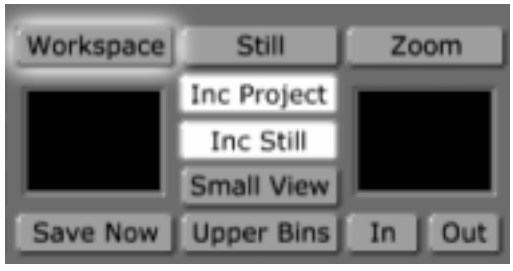
Follow these steps to apply your alpha map to a graphic:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

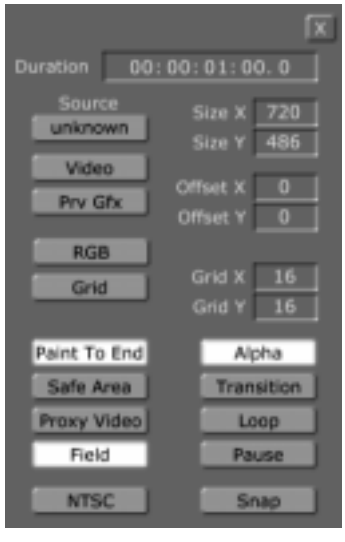
Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



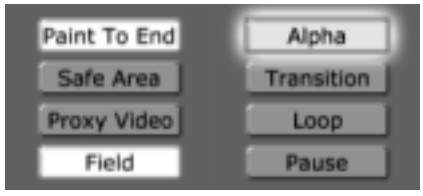
The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel you can affect how the workspace is displayed. See "Workspace Properties Panel" on page 176 for more information about using this panel.



The Workspace Properties Panel

3. In the Workspace Properties panel, click the Alpha button (following figure) on.



The Alpha Button

This makes the background of the layer transparent. That way, it is easier to identify how the alpha map affects the transparency of a graphic.

You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of a layer is transparent.

4. Close the Workspace Properties panel by clicking the X button in the upper right corner of the screen.

5. Locate the following still picon in the bin directory Trinity/Bins/Stills/Sampler. It is the picon with clouds on it.

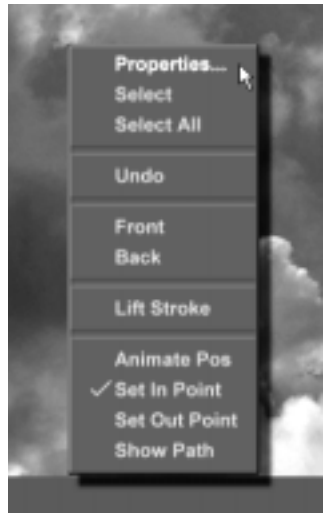
The Clouds Still Picon

6. Load this still into the workspace by double-clicking its picon.

   You see the image of the clouds fill the workspace.

7. Bring up the Texture Properties panel for the cloud graphic stroke (remember all objects in the Panamation workspace are strokes). To bring up the panel:

   a. Bring up the Stroke Properties panel for the clouds still by right-clicking in the workspace and choosing Properties from the pop-up menu (following figure).

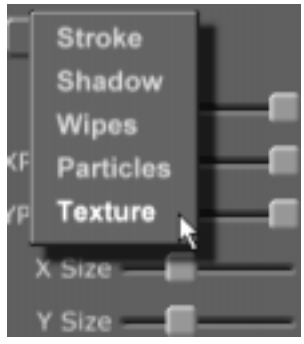


Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel (following figure) in the upper left corner of the screen.

The Stroke Properties Panel

b. Bring up the Texture Properties panel by clicking on the More button in the upper right corner of the Stroke Properties panel and choosing Texture from the pop-up menu (following figure).



Choosing Texture from the Pop-Up Menu

You see the Texture Properties panel (following figure) in place of the Stroke Properties panel. From this panel, you can add an alpha map or graphic to a stroke or access the keyer panels in Panamation. See "Texture Properties Panel" on page 118 for more information about using this panel.

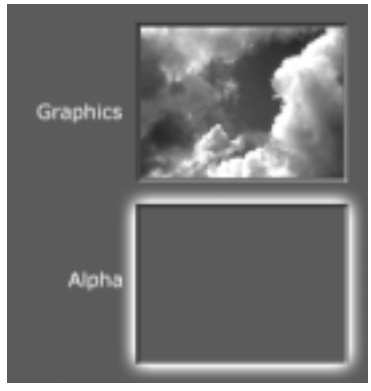
The Texture Properties Panel

In the Texture Properties panel, note the cloud graphic in the Graphics window. This means that the cloud graphic is applied to the stroke in the workspace. If you wish to change this graphic, drag-and-drop a different graphic into this window.

8. Locate the following picon in the bin directory Trinity/Bins/Panam/Projects. This is the picon for the alpha map you created earlier in this tutorial.

The Alpha Map Still Picon

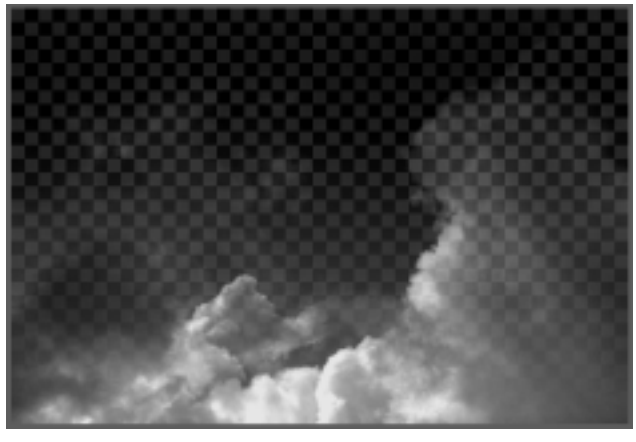
9. Load the alpha map into the Alpha window in the Texture Properties panel (following figure) by clicking-and-dragging the picon from the bin into the Alpha window.



The Alpha Window in the Texture Properties Panel

You see that the Fade slider in the Texture Properties panel is set in the middle.

In the workspace, you see that your cloud graphic blends from opaque at the bottom of the workspace to being completely transparent at the top of the workspace (following figure).



The Cloud Graphic with the Alpha Map Applied

10. In the Texture Properties panel, adjust the transparency of the alpha map by clicking and dragging the Fade slider (following figure) right or left.

The Fade Slider

The further left you drag the slider, the more transparent the graphic in the workspace becomes. If the slider is dragged all the way to the left, the graphic is completely transparent.

The following figure illustrates the graphic in the workspace with the Fade slider all the way to the left.

Completely Transparent Graphic

The further right you drag the slider, the more opaque the graphic in the workspace becomes. If the slider is dragged all the way to the right, the graphic is completely opaque.

The following figure illustrates the graphic in the workspace with the Fade slider all the way to the right.

Completely Opaque Graphic

11. Close the Texture Properties panel by clicking the X button in the upper right corner of the panel.

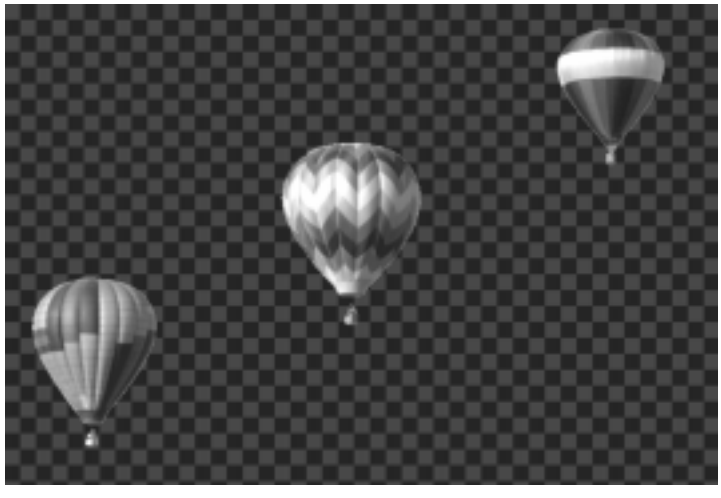
In this tutorial, you learned how to create an alpha map and applied that alpha map to a graphic. You now have a feel for how the Color Palette/Gradient Editor and Texture Properties panels function. Using these skills, you can create an unlimited number of custom alpha maps.

Using Panamation's Keyer Panels

There are times when you are working with Panamation that you will want to remove a specific color or luminosity value from a graphic. You may want to change a sunny blue sky in a picture of a landscape to a cloudy sky. You can use one of the keyer panels to "remove" the blue of the sunny sky, then replace it with the cloudy sky.

In Panamation, you have a choice of three different keyer panels. Each keyer works differently to key out colors in a graphic. In this tutorial, you will use these panels to remove colors and values from two different graphics. By doing this, you will get a feel for how to use these panels.

The following figure illustrates a still whose background was keyed out using one of Panamation's keyer panels.



Still with Background Keyed Out

This tutorial is broken up into three sections. These sections are:

1. Using the LumaKey panel
2. Using the ChromaKey panel
3. Using the ChromaKey2 panel

Using The LumaKey Panel

With the LumaKey panel, you can key out the luminosity values in a graphic. That means that you can key out the lightest or darkest areas in a graphic.

To get a feel for how this panel works, in this section of the tutorial you will first key out the darkest values in a still, then key out the lightest values in that still.

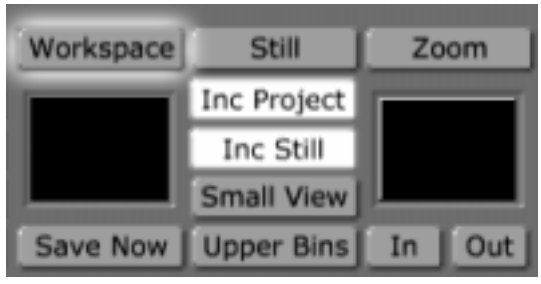
To use this panel to key a color out of a graphic, follow these steps:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

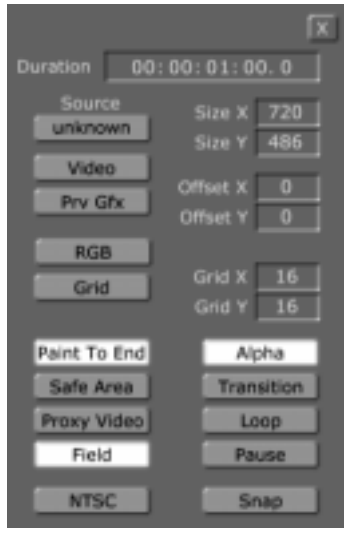
Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



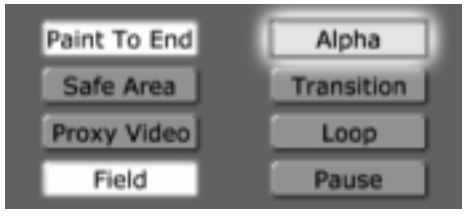
The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can change how your project is displayed in the workspace. For more information on how to use this panel, see “Workspace Properties Panel” on page 176.



The Workspace Properties Panel

3. In the Workspace Properties panel, click the Alpha button (following figure) on.



The Alpha Button

This makes the background of the layer transparent. This makes it easier to see the areas you key out of the graphics.

You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of a layer is transparent.

4. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

5. Locate the following still picon in the bin directory Trinity/Bins/Stills/Sampler. It is the picon with the silhouette of a lighthouse on it.

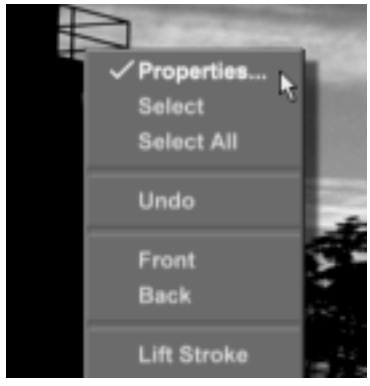
The Lighthouse Still Picon

6. Load this still into the workspace by double-clicking its picon.

   You see the lighthouse still fill the entire workspace. Remember that any object in the workspace is a stroke.

7. Bring up the LumaKey panel for this stroke. Follow these steps to bring up this panel:

a. Bring up the Stroke Properties panel for the lighthouse stroke by right-clicking on it in the workspace and choosing Properties from the pop-up menu (following figure).

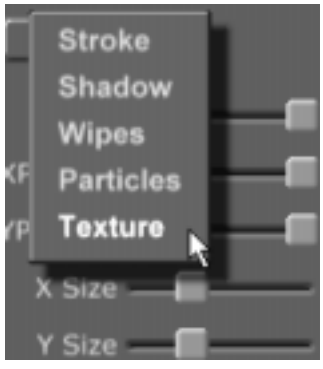


Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel (following figure) in the upper left corner of your screen.

The Stroke Properties Panel

b. In the Stroke Properties panel, bring up the Texture Properties panel by clicking the More button in the upper left corner and choosing Texture from the pop-up menu (following picture).



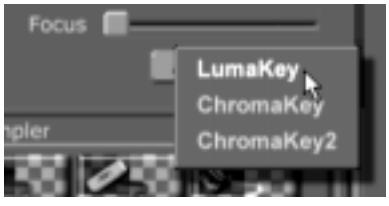
Choosing Texture from the Pop-Up Menu

You see the Texture Properties panel (following figure) in the upper left corner of your screen, in place of the Stroke Properties panel. From this panel, you can access the keyer panels. For more information on using the Texture Properties panel, see “Texture Properties Panel” on page 118.

The Texture Properties Panel

c. Bring up the LumaKey panel by clicking the Add Key button (following figure) and choosing LumaKey from the pop-up menu (following figure).

The Add Key Button



Choosing LumaKey from the Pop-Up Menu

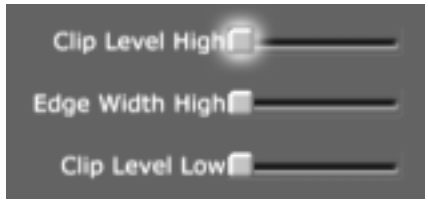
You see the LumaKey panel in the upper left corner of the screen in place of the Texture Properties panel. For additional information on using the LumaKey panel, see “LumaKey Panel” on page 125.

The LumaKey Panel

In the workspace, you see your lighthouse stroke with some of the dark areas keyed out (following figure).

The Lighthouse Stroke with Areas Keyed Out

8. In the LumaKey panel, click-and-drag the Clip Level High slider (following figure) to the right. Stop dragging the slider when all of the black of the silhouette is keyed out.



The Clip Level High Slider

By clicking-and-dragging the Clip Level High slider, you are adjusting the luminosity value that is keyed out. The darkest areas are keyed out first, followed by the middle values, and then lightest areas in the stroke. If you drag the slider all the way to the right, the entire image is keyed out.

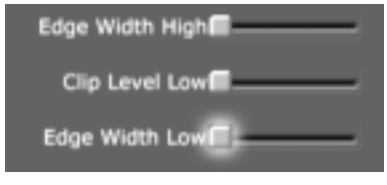
The following figure illustrates what the lighthouse stroke should now look like in the workspace.

The Keyed Image in the Workspace

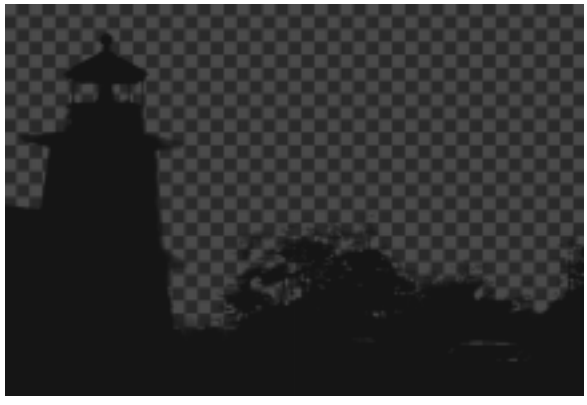
9. In the LumaKey panel, click-and-drag the Clip Level High slider all the way to the right. By doing this, you can now set the key to remove the lightest values in the image.

   In the workspace, you see the entire image keyed out.

10. In the LumaKey panel, click and drag the Edge Width Low slider to the right. As you drag the slider to the right, notice that the darkest areas of the image return. Stop dragging this slider when the workspace looks like the following figure. This is how you key out the lightest values in an image.



The Edge Width Low Slider



The Workspace with the Lightest Values Keyed Out

TIP Adjusting the Clip Level Low slider sharpens the edge of a key. For this project, adjusting this slider is not necessary since you have already achieved a sharp edge for the key.

11. Close the LumaKey panel by clicking the X button in the upper right corner of the panel.

Now that you keyed out the luminosity values of an image using the LumaKey panel, move on to the next section of the tutorial.

Using The ChromaKey Panel

With the ChromaKey panel, you can choose a specific color to be keyed out of your image. Once this color is selected, you can adjust that key's clip level.

In this section of the tutorial, you will use the ChromaKey panel to key out the blue sky from an image. By doing this, you will get a feel for how this panel works. See “ChromaKey Panel” on page 131 for additional information on using this panel.

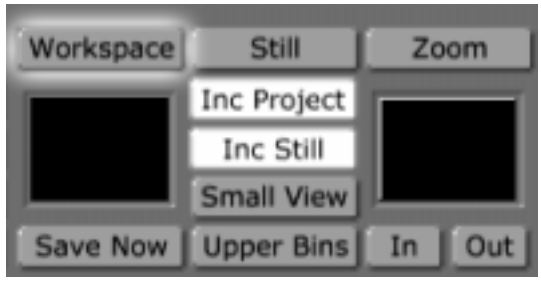
To use this panel to key a color out of a graphic, follow these steps:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

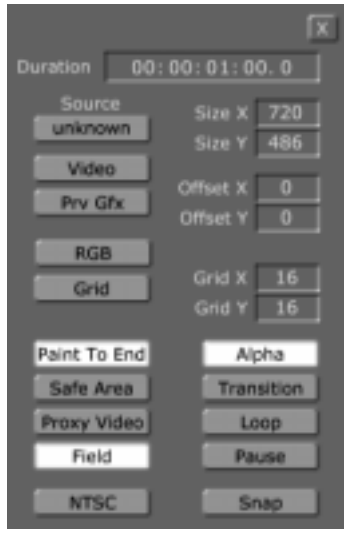
Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



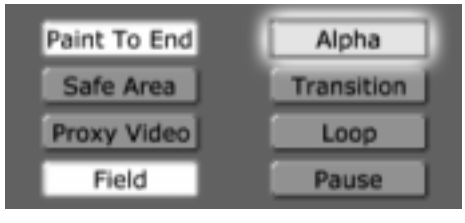
The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can change how your project is displayed in the workspace.



The Workspace Properties Panel

3. In the Workspace Properties panel, click the Alpha button (following figure) on, if it isn't already selected.



The Alpha Button

This makes the background of the layer transparent. This makes it easier to see the areas you key out of the graphics.

You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of a layer is transparent.

4. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

5. Locate the following still picon in the bin directory Trinity/Bins/Stills/Sampler. It is the picon with three balloons on it.

The Balloons Still Picon

6. Load this still into the workspace by double-clicking its picon.

   You see the three balloons still fill the entire workspace. Remember that any object in the workspace is a stroke.

7. Bring up the ChromaKey panel for this stroke. Follow these steps to bring up this panel:

   a. Bring up the Stroke Properties panel for the three balloons stroke by right-clicking on it in the workspace and choosing Properties from the pop-up menu (following figure).

Choosing Properties from the Pop-Up Menu

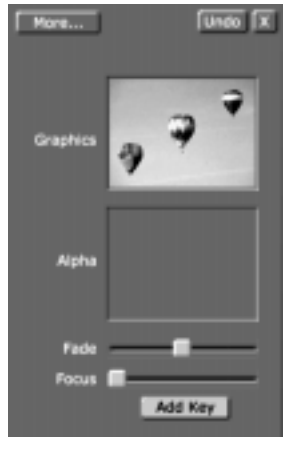
You see the Stroke Properties panel (following figure) in the upper left corner of your screen.

The Stroke Properties Panel

b. In the Stroke Properties panel, bring up the Texture Properties panel by clicking the More button in the upper left corner and choosing Texture from the pop-up menu (following figure).

Choosing Texture from the Pop-Up Menu

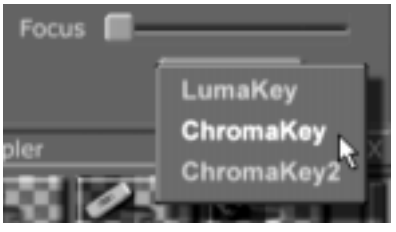
You see the Texture Properties panel (following figure) in the upper left corner of your screen, in place of the Stroke Properties panel. From this panel, you can access the keyer panels.



The Texture Properties Panel

c. Bring up the ChromaKey panel by clicking the Add Key button (following figure) and choosing ChromaKey from the pop-up menu (following figure).

The Add Key Button



Choosing ChromaKey from the Pop-Up Menu

You see the ChromaKey panel in the upper left corner of the screen, in place of the Texture Properties panel. For more information on using the ChromaKey panel, see “ChromaKey Panel” on page 131.

The ChromaKey Panel

8. In the ChromaKey panel, select the color you want to key out (in this case it is blue) by clicking on that color in the picon for the three balloons (following figure).

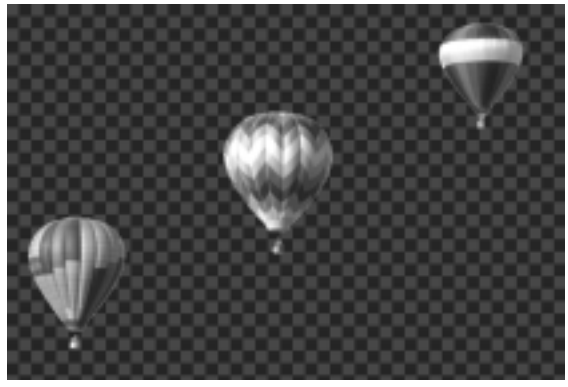
Selecting a Color from the Picon

In the workspace, your cloud stroke is unchanged. Before the blue is keyed out, you need to adjust the Clip Level to set how much blue is keyed out.

9. In the ChromaKey panel, adjust how much of the color blue is keyed out by clicking-and-dragging the Clip Level slider (following figure) to the right until all of the blue of the sky is keyed out.

The Clip Level Slider

The following figure illustrates what your three balloons stroke should look like in the workspace.



The Workspace with Blue Keyed out of the Image

10. Close the ChromaKey panel by clicking the X button in the upper right corner of the panel.

You now know how to key out a specific color using the ChromaKey panel. To key out a specific color in your own graphic, repeat these steps using your graphic.

Using The ChromaKey2 Panel

With the ChromaKey2 panel, you can choose a specific color or colors to be keyed out of your image. Once colors are selected, you can adjust the YUV levels to clean up the key. Adjusting these levels gives more control over the key than the ChromaKey panel. The Y Range level affects the luminance value of the chroma key. The U Range and V Range levels affect the chrominance value of the chroma key. By using this panel, you can key out specific colors from an image.

In this section of the tutorial, you will use the ChromaKey2 panel to key out the blue sky from an image. By doing this, you will get a feel for how this panel works. For additional information on using this panel, see “ChromaKey2 Panel” on page 135.

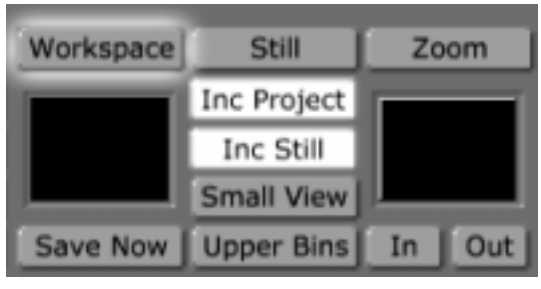
To use this panel to key a color out of a graphic, follow these steps:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

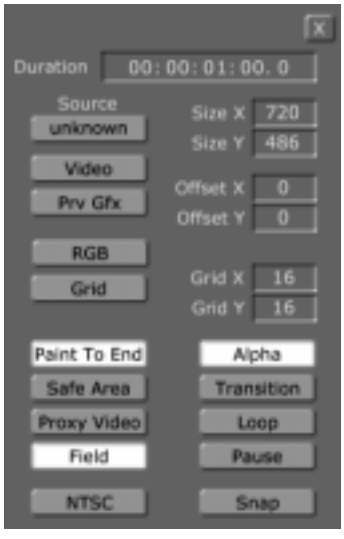
2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



The Workspace Button

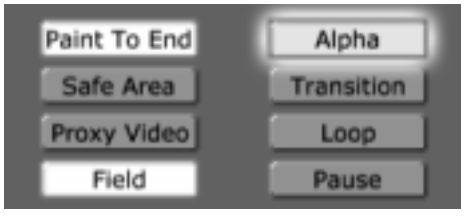
You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can

affect how your project is displayed in the workspace. See “Workspace Properties Panel” on page 176 for more information about using this panel.



The Workspace Properties Panel

3. In the Workspace Properties panel, click the Alpha button (following figure) on, if it isn't already selected.



The Alpha Button

This makes the background of the layer transparent. This makes it easier to see the areas you key out of the graphics.

You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of a layer is transparent.

4. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

5. Locate the following still picon in the bin directory Trinity/Bins/Stills/Sampler. It is the picon with three balloons on it.

The Balloons Still Picon

6. Load this still into the workspace by double-clicking its picon.

   You see the three balloons still fill the entire workspace. Remember that any object in the workspace is a stroke.

7. Bring up the ChromaKey2 panel for this stroke. Follow these steps to bring up this panel:

   a. Bring up the Stroke Properties panel for the three balloons stroke by right-clicking on it in the workspace and choosing Properties from the pop-up menu (following figure).

Choosing Properties from the Pop-Up Menu

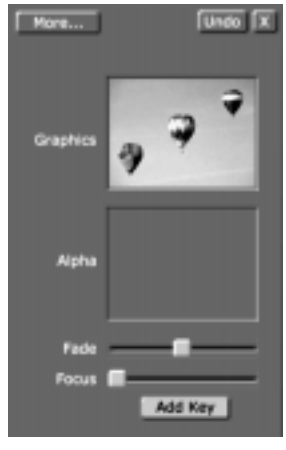
You see the Stroke Properties panel (following figure) in the upper left corner of your screen.

The Stroke Properties Panel

b. In the Stroke Properties panel, bring up the Texture Properties panel by clicking the More button in the upper left corner and choosing Texture from the pop-up menu (following figure).

Choosing Texture from the Pop-Up Menu

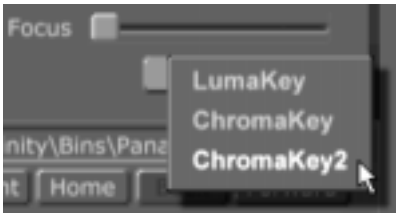
You see the Texture Properties panel (following figure) in the upper left corner of your screen, in place of the Stroke Properties panel. From this panel, you can access the keyer panels.



The Texture Properties Panel

c. Bring up the ChromaKey2 panel by clicking the Add Key button (following figure) and choosing ChromaKey2 from the pop-up menu (following figure).

The Add Key Button



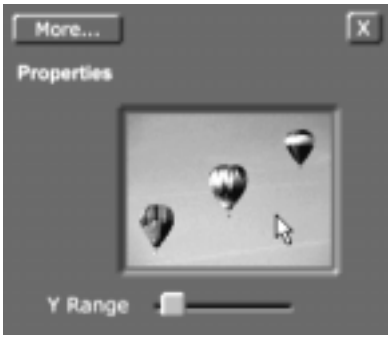
Choosing ChromaKey2 from the Pop-Up Menu

You see the ChromaKey2 panel in the upper left corner of the screen in place of the Texture Properties panel. For additional information about using the ChromaKey2 panel, see “ChromaKey2 Panel” on page 135.

The ChromaKey2 Panel

8. In the ChromaKey2 panel, select the color you want to key out (in this case it is the color blue) by clicking on that color in the picon for the three balloons (following figure).

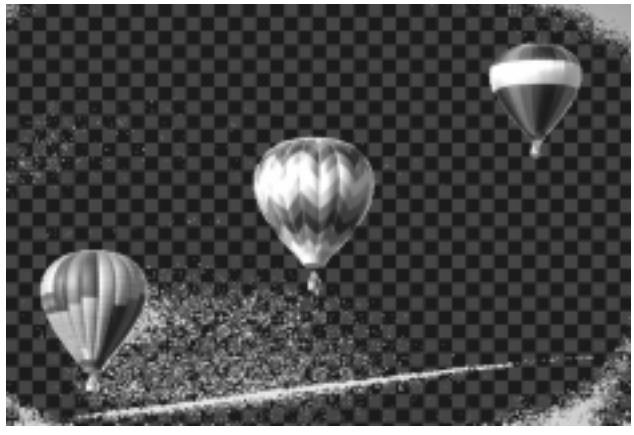
NOTE In the ChromaKey2 panel, multiple colors can be keyed out. To key out multiple colors, click again in the picon for the image. This selects an additional color to be keyed out.



Selecting a Color from the Picon

In the workspace, you see a dotted pattern in the blue areas. This indicates that blue was selected as the color to be keyed out. Next, you'll expand how much blue is keyed out.

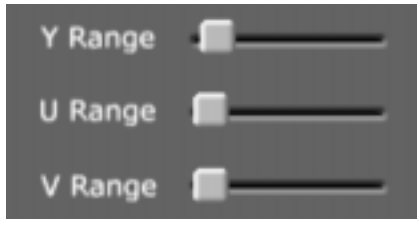
The following figure illustrates what your workspace should look like.



The Workspace with some of the Blue of the Still Keyed Out

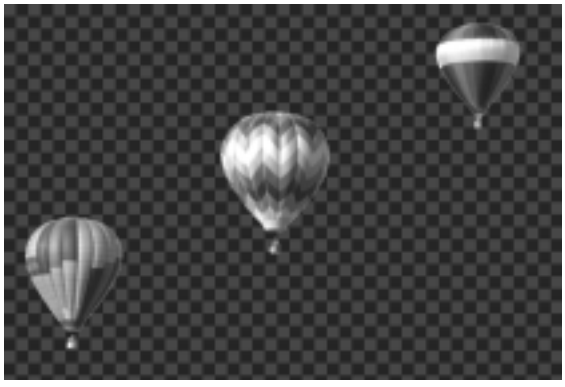
9. In the ChromaKey2 panel, clean up the key by adjusting the Y Range, U Range, and V Range sliders (following figure).

   Adjusting the Y Range slider adjusts the luminance value of the key. Adjusting the U Range and V Range adjusts the chrominance value of the key. Adjusting these values cleans up the key. Adjust these until the image in your workspace looks like the following figure.



The Y Range, U Range, and V Range Sliders

   The following figure illustrates what the image should look like in the workspace with the blue keyed out.



The Workspace with Blue Keyed out of the Image

10. Close the ChromaKey2 panel by clicking the X button in the upper right corner of the panel.

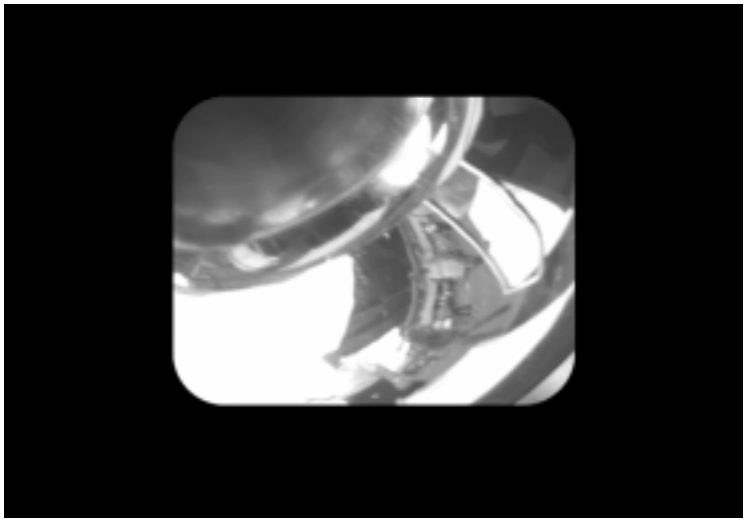
You now know how to key out colors using the ChromaKey2 panel. To key out a specific color in your own graphic, repeat these steps using your graphic. Continue on to the next tutorial to learn about more of Panamation's functions.

Using The Stencil Function To Create A Mask

A mask is a common element that is created when using a paint program such as Panamation. A mask is used when you want to create strokes that stay within a specific shape, such as a circle or square. Sure, you could carefully draw a stroke in the shape of a circle, but it would be much easier to create a mask in the shape of a circle and paint your stroke over it.

In this tutorial, you will use Panamation's stencil function to create a mask. By doing this, you will learn to create a stencil layer, use the stencil by drawing an object in it, and how to adjust the stencil once it is created.

The following figure illustrates the mask created in this tutorial with a still of a trumpet drawn over it.



The Stencil Mask in the Workspace

This tutorial is broken up into three sections. These sections are:

1. Preparing the workspace
2. Creating a mask
3. Working with the mask

Preparing The Workspace

Before you actually begin creating a stencil mask, you need to first prepare the workspace. By doing this, you tell Panamation to start a new project in the workspace.

Follow these steps to prepare the workspace:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

Creating A Mask

In this section of the tutorial, you will draw a stroke, which will become your stencil, in the workspace. However, before you create your stencil, you will be creating a second layer.

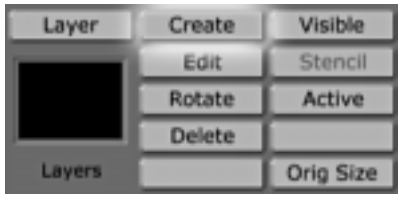
NOTE

A layer must have an alpha channel to be used as a stencil layer. With the exception of the first layer, all layers automatically have an alpha channel. To

use the first layer of a project as a stencil layer, Alpha must be turned on in the Workspace Properties panel.

To create a mask using the stencil functions, follow these steps:

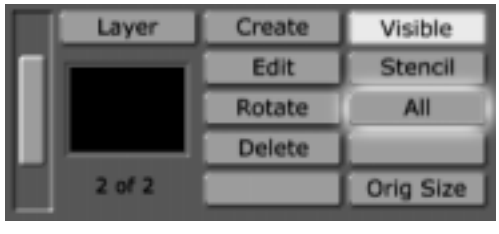
1. Add a layer to your project by clicking the Create button (following figure) in the Layer Controls. You can create an unlimited number of layers by clicking the Create button.



The Create Button

2. Click the Active button in the Layer Controls to make all layers visible.

   You see the Active button change to read All (following figure).



The All Button

   If you click this button again, it changes to read Transparent and all objects on layers other than the active layer are transparent.

3. Locate the following stroke picon in the bin directory Trinity/Bins/Panam/Sampler. It is the stroke picon with the orange squarcle, or box with rounded corners, on it.

The Stroke Picon

4. Load this picon as the current stroke by clicking it.

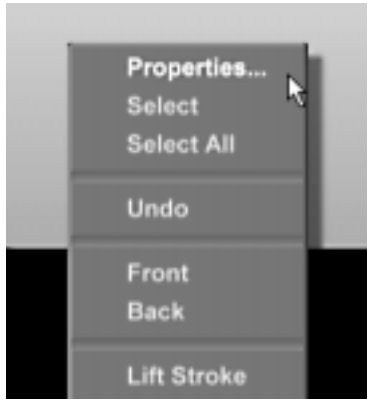
   You see this picon load in the Current Stroke Picon window in the Stroke Controls.

5. In the second layer you just created, draw a squarcle in the center of the workspace by clicking-and-dragging through the workspace.

   You see a squarcle in the center of the workspace (following figure).

The Box in the Workspace

6. Bring up the Stroke Properties panel for the stroke by right-clicking on the stroke in the workspace and choosing Properties from the pop-up menu (following figure).

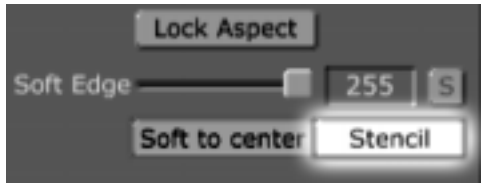


Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel (following figure) in the upper left corner of your screen. From this panel, you can change the properties of a stroke, such as size and position in the workspace, and animate those properties. See “Stroke Properties Panel” on page 45 for more information on using this panel.

The Stroke Properties Panel

7. In the Stroke Properties panel, make sure that the Stencil button is selected (following figure).

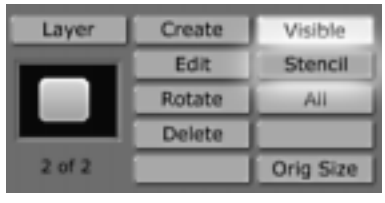


The Stencil Button

If this button isn't selected, click it. The Stencil button must be selected to make a stroke a stencil.

8. Close the Stroke Properties panel by clicking the X button in the upper right corner of the panel.

9. In the Layer Controls, click the Stencil button (following figure). By clicking this button, you are making that layer a stencil layer and your stencil stroke now acts as a mask. If you don't do this, you cannot create a stencil, and your stroke behaves like a normal stroke.



The Stencil Button

You now have a stencil that can be used as a mask. Continue to the next section of the tutorial to learn how to use this mask.

Working With The Mask

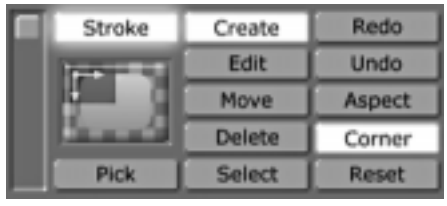
In this section of the tutorial, you will draw a stroke over your stencil mask to get a feel for how to work with stencils. You will also learn how to alter your stroke once it is applied to the stencil, and how to adjust the size of the stencil stroke.

By following this tutorial, you will learn how to apply a graphic stroke to any stencil mask. To do this, you will first apply a graphic still to a stroke, and then draw it in the workspace.

Follow these steps to work with your mask:

1. Bring up the Texture Properties panel for the current stroke in the Stroke Controls. To do this, follow these steps:

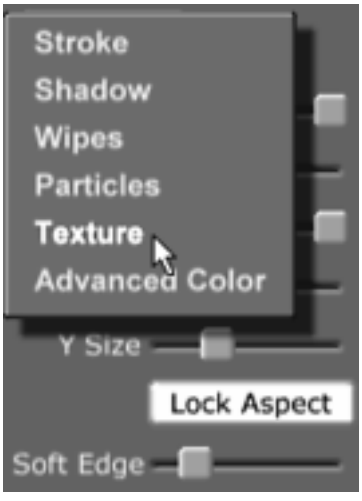
    a. Bring up the Stroke Properties panel for the current stroke by clicking the Stroke button in the Stroke Controls (following figure).



The Stroke Button

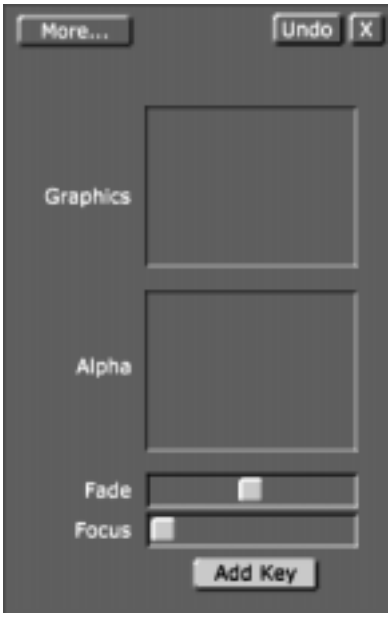
    You see the Stroke Properties panel in the upper left corner of your screen. From this panel, you can access other panels, such as the Texture Properties panel.

    b. In the Stroke Properties panel, bring up the Texture Properties panel by clicking the More button in the upper left corner of the panel and choosing Texture from the pop-up menu (following figure).



Choosing Texture from the Pop-Up Menu

You see the Texture Properties panel (following figure) in place of the Stroke Properties panel. From this panel, you will apply a graphic to the current stroke. For additional information about the Texture Properties panel, see “Texture Properties Panel” on page 118.

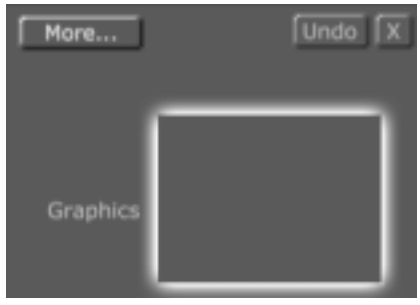


The Texture Properties panel

2. Locate the following still picon in the bin directory Trinity/Bins/Stills/Sampler. It is the picon with the trumpet on it. This is the graphic you will apply to the current stroke.

The Still Picon

3. Click-and-drag the trumpet picon into the Graphics window (following figure) in the Texture Properties panel. By doing this, you are applying the trumpet graphic to the stroke, so that when you draw a stroke in the workspace, it is filled with the graphic.



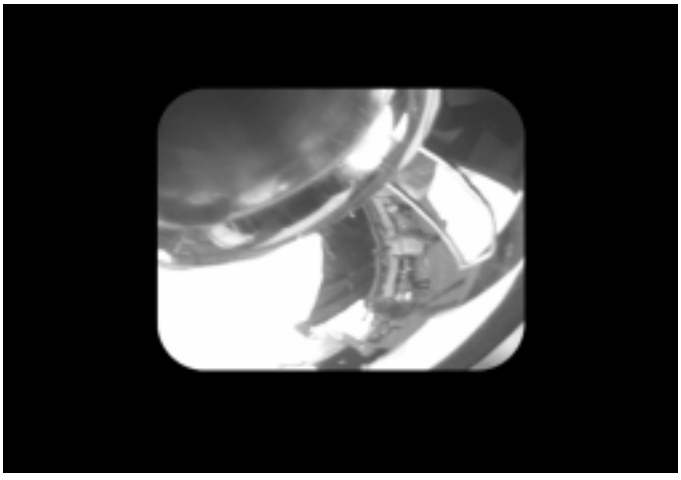
The Graphics Window

You see the trumpet still picon in the Graphics window.

4. Close the Texture Properties panel by clicking the X button in the upper right corner of the panel.

5. Draw a stroke that fills the entire workspace by clicking just outside the upper left corner of the workspace and dragging to just outside the lower right corner.

   In the workspace, you see the graphic (following figure). Note that only a section of the graphic shows up where the stencil stroke is. This is how a stencil mask works. If you draw this stroke in a layer without a mask, the entire still fills the workspace.



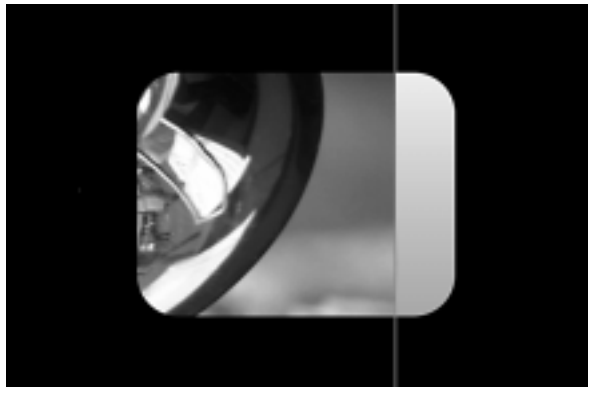
The Stroke in the Workspace

6. In the Stroke Controls, click the Move button (following figure). By clicking this button, you can select and move strokes around in the workspace.

The Move Button

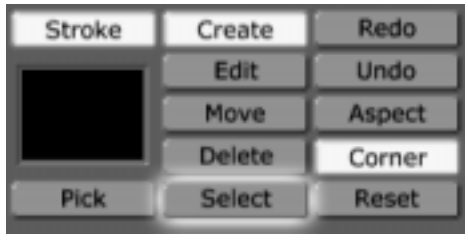
7. In the workspace, click in the middle of the stencil and drag the trumpet stroke around. You can also edit stencil strokes by clicking the Edit button instead of the Move button in the Stroke Controls.

   Continue dragging the trumpet stroke until a section of the stencil stroke is exposed. When a section of a stencil stroke is exposed (following figure), you can adjust and edit the stencil stroke as you would any stroke.



The Strokes in the Workspace

8. Click the Select button (following figure) to select it. With this button selected, you can select any object in the workspace by clicking on the stroke.

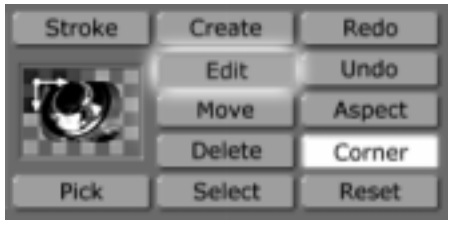


The Select Button

9. In the workspace, click in the area of the stencil stroke that isn't covered by the trumpet graphic

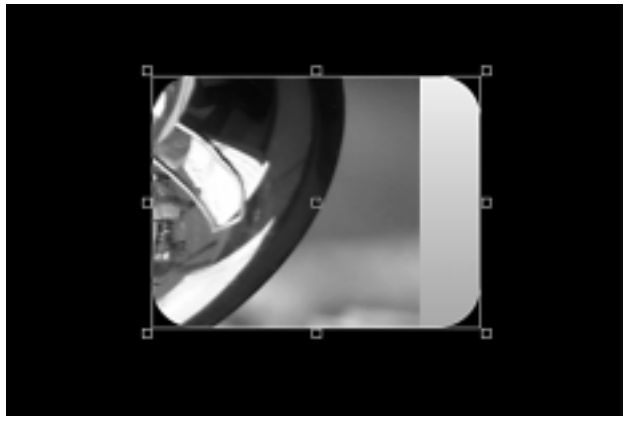
   You see a bounding box around the stroke, indicating that it is selected.

10. In the Stroke Controls, click the Edit button (following figure). With this button selected, you can edit the size, shape, and position of a stroke by clicking on the stroke.



The Edit Button

In the workspace, you see edit points around the stroke (following figure). By clicking-and-dragging these edit points, you can scale the size of the stroke. This is how you edit a stencil stroke that is already created.



Edit Points around the Stencil Stroke

Now that you completed this tutorial, you know how to create a stencil mask. You can create this type of mask while working with any type of Panamation project by following these steps with your own strokes.

Creating A Looping Text Crawl

In this tutorial, you will create a looping crawl in Panamation that will repeatedly play back when the effect is run in Switcher. You may use this type of effect if you wish to have an important message, or even emergency information, continuously scroll across the bottom of your screen.

To create this effect, this tutorial takes you through the process of creating type with a shadow, animating that type, and saving the effect so that it will continuously loop when it is run in Switcher.

The following figure illustrates what the finished project looks like when run in Switcher.

The Finished Project Run in Switcher

This tutorial is broken up into four sections. These sections are:

1. Preparing the workspace
2. Creating a text stroke with shadow
3. Animating your text stroke
4. Saving your effect

Preparing The Workspace

Before you actually begin creating your text stroke with shadow, you need to first prepare the workspace. By doing this, you tell Panamation how to display the workspace, and how the effect will be displayed after you save it and run it in Switcher.

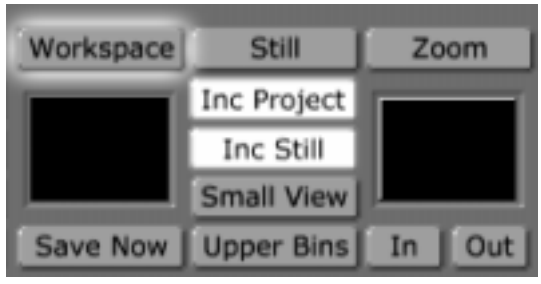
Follow these steps to prepare the workspace:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

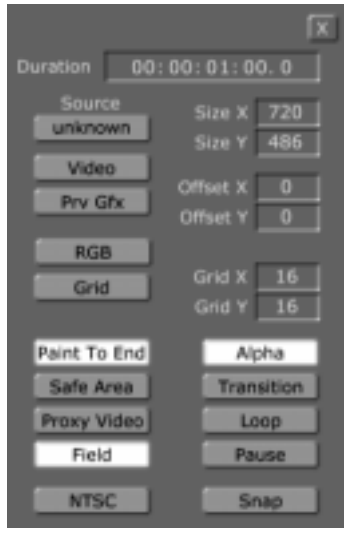
Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



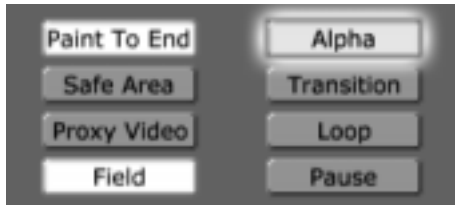
The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can set the length of your effect, how it is displayed in the workspace, and how it acts when it is run in Switcher. For more information on using this panel, see “Workspace Properties Panel” on page 176.



The Workspace Properties panel

3. In the Workspace Properties panel, click the Alpha button (following figure) on. This makes the background of the layer transparent.



The Alpha Button

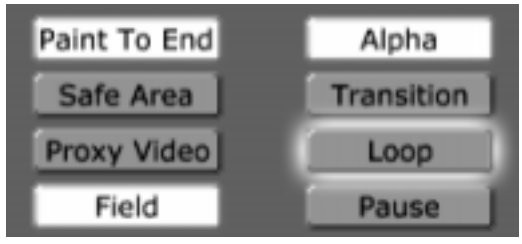
You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of a layer is transparent.

4. Deselect the Transition function by clicking on the Transition button (following figure). With Transition selected, a project is saved as a transition. Selecting this is necessary if you are creating an effect such as a wipe, but is not needed when creating an overlay, such as the one you will create in this tutorial.

The Transition Button

You see the Transition button turn blue, indicating that the function is turned off.

5. In the Workspace Properties panel, turn the Loop function on by clicking the Loop button (following figure). By turning the Loop function on, when the effect runs in Switcher it loops continuously until turned off. If the Loop function remains off, when the effect is run in Switcher, the text only crawls across the screen once.

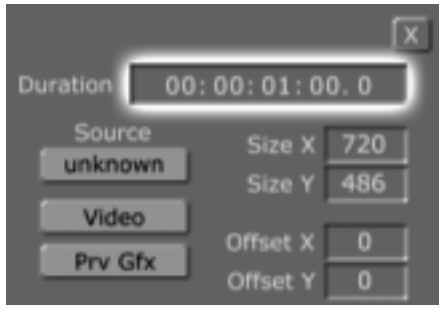


The Loop Button

You see that the Loop button is selected, indicating that the Loop function is turned on.

6. In the Workspace Properties panel, change the duration of your effect from 1 second to 2 seconds. To do this:

   a. Click on the 1 in the timecode (following figure). Timecode is in standard SMPTE format (HH:MM:SS:FF). That means that the 1 is the seconds value.



Timecode in the Workspace Properties Panel

   b. Type in the new value for the seconds, which is 2.

   c. Press Enter on your keyboard.

7. In the Workspace Properties panel, turn on the safe title area by clicking the Safe Area button.

The Safe Area Button

You see the safe title area in the workspace. The boundaries show what is actually seen on a typical television. The inner border is called the Safe Title Area, and the outer color border is called the Safe Action Area. Everything within the Safe Title Area fits on any television screen.

By turning on this area, you ensure that the looping text you create is visible on any television screen.

8. Close the Workspace Properties panel by clicking the X in the upper right corner of the panel.

9. In the Workspace Controls, change the interpolation of the effect's motion by right-clicking the Workspace picon and choosing Linear from the pop-up menu (following figure).

Choosing Linear from the Pop-Up Menu

The interpolation of the effect's movement determines how the motion path of the stroke behaves when it is animated.

A cubic interpolation means that the animation steps between keyframes follow a curved path. If you select Cubic as the interpolation for this effect, when the effect crawls across the screen, it starts out at a slow pace, speeds up, and then slows down again as the effect ends.

A linear interpolation means that the animation steps between keyframes follow a straight path. By selecting Linear as the interpolation for this effect, when the effect crawls across the screen, it moves at a continuous rate of speed.

Now that you've prepared the workspace, you are ready to create your text with shadow.

Creating A Text Stroke With Shadow

With the workspace prepared, you can now create your text stroke with shadow. In this section of the tutorial, you will create a colored text stroke and then apply a shadow to it using the Shadow Properties panel.

To create your text stroke with shadow, follow these steps:

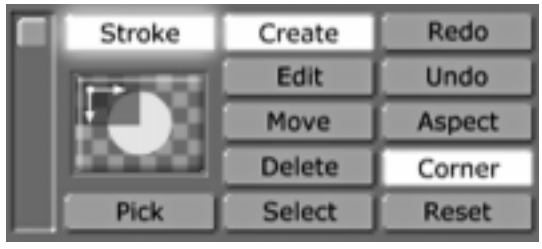
1. Locate the following picon for a stroke in the directory Trinity/Bins/Panam/Sampler.

The Stroke Picon

2. Load this stroke as the current stroke by clicking on it.

   You see the picon in the Stroke Controls, indicating that it is loaded as the current stroke.

3. Bring up the Stroke Properties panel by clicking the Stroke button (following figure) in the Stroke Controls.



The Stroke Button

You see the Stroke Properties panel (following figure) in the upper left corner of your screen. From this panel, you can adjust the properties of a stroke, such as the X and Y position of the stroke or the type of stroke. You can also animate any of the stroke's properties from the Stroke Properties panel. For more information about using the Stroke Properties panel, see "Stroke Properties Panel" on page 45.

The Stroke Properties Panel

4. In the Stroke Properties panel, click on the Soft Edge slider (following figure) and drag it all the way to the left so that the Soft Edge value is 0. You can also change this value by clicking on the numeric value, typing in a new value, and pushing Enter on your keyboard.

The Soft Edge Slider

By changing the Soft Edge value to 0, you are changing the edge of the text you will create. If you type in a higher value, you get text that has a soft, blurred edge.

5. Click on the Tool button (following figure) and choose Text from the pop-up menu (following figure). This pop-up menu is where you set the shape of your stroke.

The Tool Button

Choosing Text from the Tool Pop-Up Menu

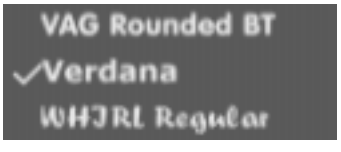
6. From the Stroke Properties panel, bring up the Text Settings panel by clicking on the Settings button to the right of the word Tool.

You see the Text Settings panel just below the Stroke Properties panel. The Text Settings panel is where you choose the font and size of your text stroke. See “Text Settings Panel” on page 69 for more information about using this panel.

The Text Settings Panel

7. In the Text Settings panel, change the font to Verdana by scrolling through the font list and clicking on the font name.

   You see a check mark next to the word Verdana (following figure), indicating that the font was selected.

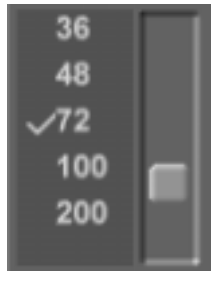


The Selected Font

8. In the Text Settings panel, change the font size to 72 by scrolling through the font sizes and clicking on the font size. The font size can also be changed by selecting the font size in the Font Size window (following figure), typing in a new font size, and pushing Enter on your keyboard.

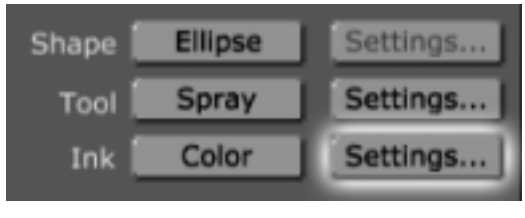
The Font Size Window

You see a check mark next to the font size 72 (following figure), indicating that the font size is selected.



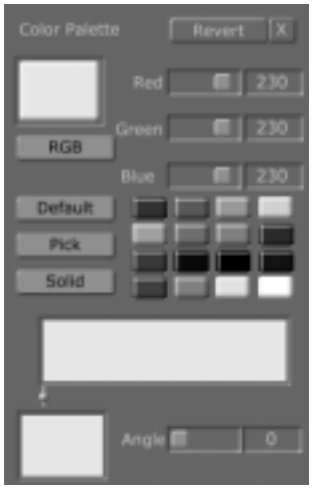
The Selected Font Size

9. In the Stroke Properties panel, bring up the Color Palette by clicking the Settings button (following figure) to the right of the word Ink. If an ink other than the Color ink was selected, clicking the Settings button brings up the Settings panel for that ink.



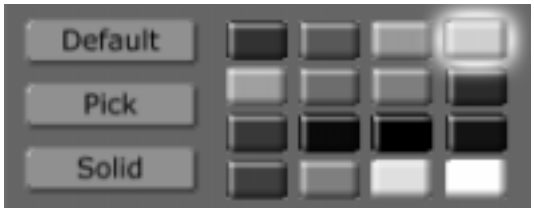
The Settings Button

You see the Color Palette and Gradient Editor panel (following figure) appear in place of the Text Settings panel. The Color Palette and Gradient Editor panel is where you change the color of a stroke or add a gradient to a stroke. For more information about using this panel, see “Color Palette And Gradient Editor Panel” on page 93.



The Color Palette

10. In the Color Palette and Gradient Editor panel, change the color of the text stroke to yellow by clicking on the yellow mini picon (following figure). This loads the color as the current color for the stroke. If you want to create your own custom color, you can adjust the sliders for the Red, Green, and Blue values. The adjusted color is automatically selected as the color of the stroke.



The Yellow Mini Picon

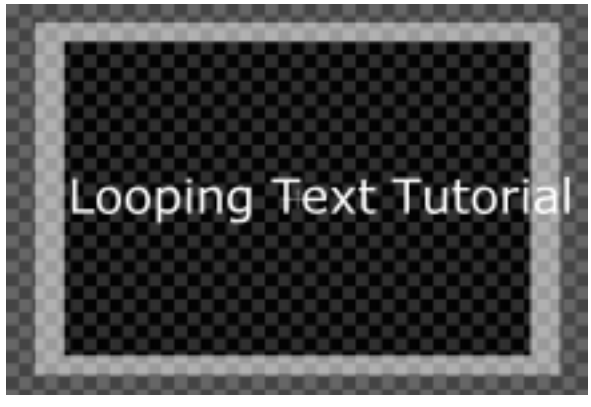
In the Stroke Controls, you see the color on the Current Stroke picon change to yellow, indicating that when the stroke is drawn in the workspace, it will be yellow.

NOTE The stroke you just created (and any custom stroke, for that matter) can be saved for further use by dragging-and-dropping its picon from the Stroke Controls into a bin. Load this stroke as you would any other stroke, by clicking on it.

11. Close the Stroke Properties and Color Palette and Gradient Editor panels by clicking on the X in the upper right corner of each panel.

12. Click anywhere in the workspace and type the words Looping Text Tutorial.

    You see the words Looping Text Tutorial in the workspace (following figure).



Looping Text Tutorial in the Workspace

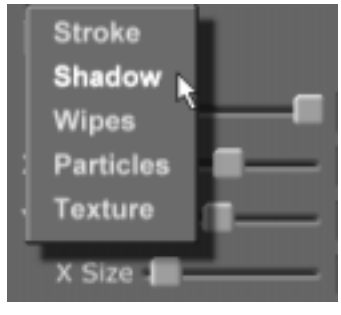
Since the text you typed is rather long, it may not be entirely visible in the workspace. This is alright, since you will later change the text's position in the workspace.

13. Bring up the Shadow Properties panel for the Looping Text Tutorial stroke. To do this:

a. Bring up the Stroke Properties panel for your text by right-clicking on the Looping Text Tutorial text and choosing Properties from the pop-up menu (following figure).

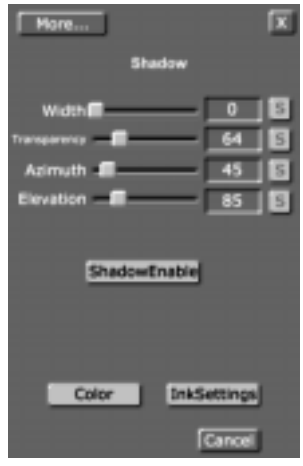
The Properties Pop-Up Menu

b. From the Stroke Properties panel, bring up the Shadow Properties panel by clicking on the More button and choosing Shadow from the pop-up menu (following figure).



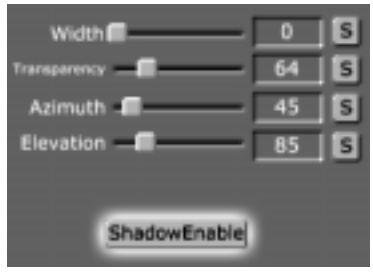
The More Pop-Up Menu

You see the Shadow Properties panel (following figure) in place of the Stroke Properties panel in the upper left corner of your screen. From the Shadow Properties panel, you can give a stroke a shadow and then adjust the shadow's properties, such as transparency and width. For more information about this panel, see "Shadow Properties Panel" on page 106.



The Shadow Properties Panel

14. In the Shadow Properties panel, add a shadow to your text by clicking the ShadowEnable button (following figure).



The ShadowEnable Button

You see the ShadowEnable button is highlighted, indicating that a shadow was added to your text stroke. In the workspace you will not see the shadow until you adjust the shadow's properties.

15. Change the ink for the shadow by clicking the button labeled Darken and choosing Color from the pop-up menu (following figure)

Choosing Color from the Ink Pop-Up Menu

By changing the ink to Color, you have more control over the transparency of the shadow. If you keep Darken as the ink, the shadow is very light.

Black is the default color for the Color ink. If you want to change this color, click the InkSettings button and create or select a new color in the Color Palette panel. For this tutorial, you want to keep black as the color for your shadow's ink.

16. In the Shadow Properties panel, change the Width value (following figure) to 5 by selecting the Width value, typing 5, and pushing Enter on your keyboard. You could also change this value by clicking-and-dragging the slider to the right of the word Width.

The Width Value Set at 5

By changing the width value from 0 to 5, you have made the text stroke's shadow visible. A width value of 0 is a special value that results in a completely invisible shadow.

In the workspace, you see a light shadow with soft edges behind your text stroke.

17. In the Shadow Properties panel, change the Transparency value of your text stroke by clicking-and-dragging the Transparency slider (following figure) all the way to the right until the value is 255. You can also change

the transparency value by selecting the value, typing 255, and pushing Enter on your keyboard.

The Transparency Slider with Value Set at 255

In the workspace, you see the shadow behind your text stroke darken.

18. In the Shadow Properties panel, change the Azimuth value for your text stroke's shadow to 20 by selecting the Azimuth value (following figure), typing 20, and pushing Enter on your keyboard. Changing the Azimuth value changes the position of the shadow to simulate a change in the position of the light source falling on an object.

The Azimuth Value Set at 20

In the workspace, you see the shadow for your text stroke move slightly up and to the right.

19. In the Shadow Properties panel, change the Elevation value for your text stroke's shadow to 88 by selecting the Elevation value (following figure), typing 88, and pushing Enter on your keyboard. Changing the elevation value changes how far away the shadow is from the object.

The Elevation Value Set at 88

In the workspace, you see the shadow for your text stroke move closer to your text.

NOTE The stroke you just created (and any custom stroke, for that matter) can be saved for further use by dragging-and-dropping its picon from the Stroke Controls into a bin. Load this stroke as you would any other stroke, by clicking on it.

20. Close the Shadow Properties panel by clicking the X button in the upper right corner of the panel.

You now have a text stroke with shadow that is ready to be animated. Continue to the next section of this tutorial to animate your text stroke.

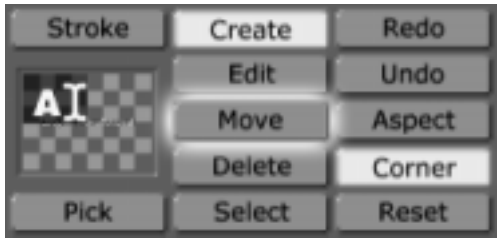
Animating Your Text Stroke

Now that you created your Looping Text Tutorial text stroke, it's time to animate the stroke.

In this section of the tutorial, you will animate the text so that it crawls from off the screen, moves left across the workspace, and then crawls off the left side of the screen. To do this, you will use the functions of the Stroke Properties panel to animate the text stroke.

To animate your text stroke, follow these steps:

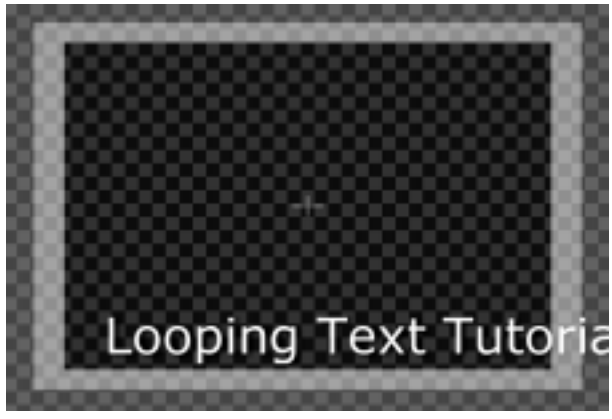
1. In the Stroke Controls, change Panamation to move mode by clicking the Move button (following figure).



The Move Button

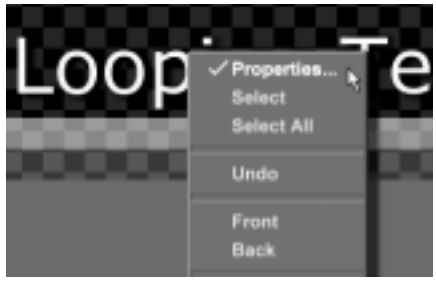
You see that the Move button is selected, indicating that Panamation is now in move mode. In this mode, you can move strokes by clicking-and-dragging them in the workspace.

2. In the workspace, click-and-drag your text stroke down until it is just above the Safe Title Area. Your workspace should now look like the following figure.



The Text Stroke Inside the Safe Title Area

3. Bring up the Stroke Properties panel by right-clicking on your text stroke and choosing Properties from the pop-up menu (following figure).



Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel in the upper left corner of your screen. For additional information about the Stroke Properties panel, see "Stroke Properties Panel" on page 45.

4. In the Transport Controls, bring your effect to its starting point in the timeline by clicking the First Frame button (following figure).

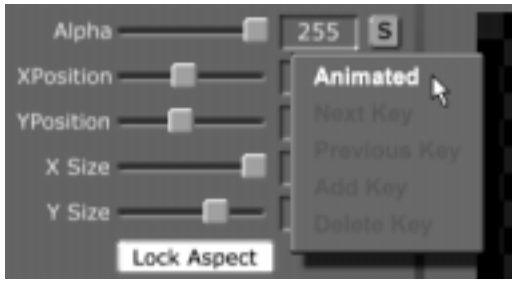
The First Frame Button

5. In the Stroke Properties panel, click-and-drag the XPosition slider (following figure) to the right until the text stroke in the workspace is just outside the workspace. This is where the text stroke will be at the beginning of the effect when you run it in Switcher.

The XPosition Slider

In the workspace, you see your text stroke move to the right until it is just outside the workspace.

6. In the Stroke Properties panel, animate this position of your text by clicking on the Animation Status button to the right of the word XPosition and choosing Animated from the pop-up menu (following figure).



Choosing Animated from the Pop-Up Menu

NOTE When a stroke's property, such as size or position, is animated, a keyframe is automatically added for the stroke's position in the timeline. Whenever you alter a property that is animated at another point in the timeline, a keyframe is automatically added at that point in the timeline.

You see the Animation Status button change from S for static to A for animated.

7. Go to the end of the effect by clicking the Last Frame button in the Transport Controls (following figure).

The Last Frame Button

8. In the Stroke Properties panel, click-and-drag the XPosition slider (following figure) to the left until your text stroke is just outside of the workspace. This is where the text stroke will be at the end of the effect when you run it in Switcher. In the timeline, a keyframe is added for the stroke's new position at this point in the animation.

The XPosition Slider

In the workspace, you see your text stroke move to the left until it is just outside the workspace.

9. Close the Stroke Properties panel by clicking the X button in the upper right corner of the panel.

10. Preview how your effect will play back when it is run in Switcher. To do this:

    a. Bring the effect to its beginning by clicking the First Frame button in the Transport Controls.

The First Frame Button

You see the effect at its beginning in the workspace.

    b. Play the effect by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In the workspace, you see your text stroke continuously loop as it crawls across the bottom of your workspace.

NOTE When a project is previewed in Panamation, the speed at which it plays back is slower than its actual speed when run in Switcher or Preditor. How slow this effect is played in Panamation is determined by how complex the strokes and animation are on each frame.

c. Stop the effect from playing in Panamation by clicking the Stop button (following figure) in the Transport Controls.

The Stop Button

In the workspace, you see your text stroke stop playing.

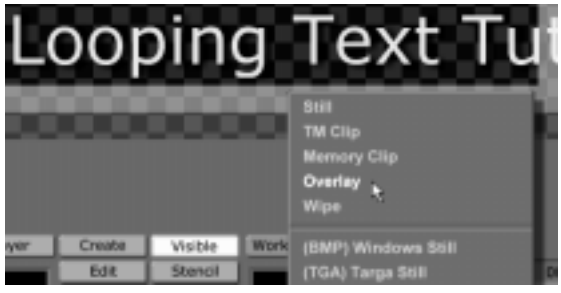
Now that you've animated your text stroke, you're ready to save it in a format that can be run in Switcher.

Saving Your Effect

Now that you have an effect in which your text crawls across the bottom of your screen, it's time to save your project. This section of the tutorial teaches you how to save an effect as an overlay.

To save the project, follow these steps:

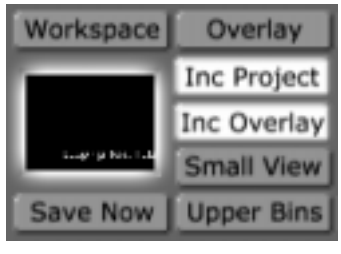
1. In the Workspace Controls, click the File Type button (the button to the right of the Workspace button) and choose Overlay from the pop-up menu (following figure).



Choosing Overlay from the Pop-Up Menu

The File Type button should now read Overlay. With Overlay selected as the file type, when the project is saved it will act as an overlay. If you chose Wipe from the pop-up menu, your project is saved as a wipe.

2. In the Workspace Controls, click-and-drag the workspace picon (following figure) into the bin directory Trinity/Bins/Panam/Projects. By saving the project in this bin, it will be easier to find it when you use it later in the tutorial “Recording ClipMem/Time Machine Clips” on page 395.



The Workspace Picon

You see a window come up indicating that the project is being saved (following figure).

The Saving Project Window

When this window disappears, your project is saved.

You now have an effect that can be run in Switcher (see the Switcher Manual for more information about running effects in the Switcher application).

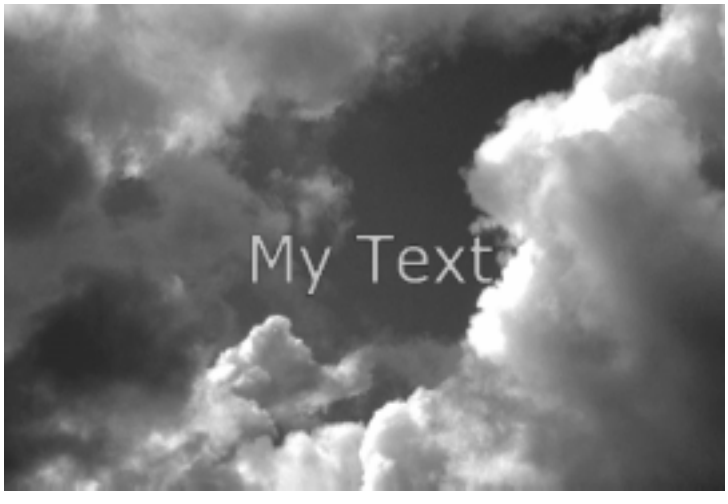
Now that you've completed this tutorial, it's time to move on to the next tutorial.

Creating A Reusable Motion Path For Flying Text

After creating some animated text in Panamation, you'll probably like the effect so much that you will want to use it again with other text. In this tutorial, you'll learn how to create text that flies on and off the screen, a common technique used in commercials.

This tutorial is set up so that the effect created can be used again with other text. You will do this by first creating your text and then saving it as a still. This still can be brought back into Panamation and animated. Since the animated text is saved as a still, it can easily be replaced with other text that was also saved as a still.

The following figure illustrates what the finished project looks like when run in Switcher.



The Finished Project Run in Switcher

This tutorial is broken up into six parts. These parts are:

1. Preparing the workspace
2. Creating text in Panamation
3. Saving text as a still

4. Animating the text still

5. Saving the project

6. Reusing the text's motion path

Preparing The Workspace

Before you actually begin creating your graphic, you need to first prepare the workspace. By doing this, you tell Panamation how to display the workspace, and how the text still will be displayed after you save it and load it into the workspace so that you can animate it.

Follow these steps to prepare the workspace:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

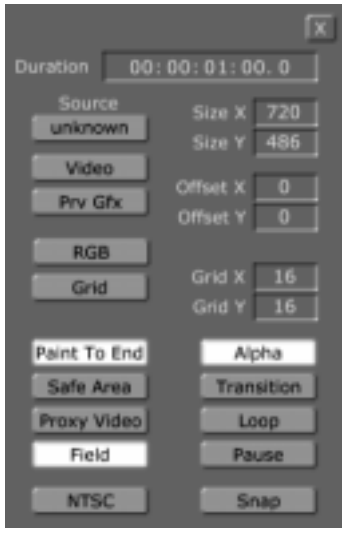
Choosing New Project from the Pop-Up Menu

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.

The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. See "Workspace Properties Panel" on page 176 for more information on using this panel.



The Workspace Properties Panel

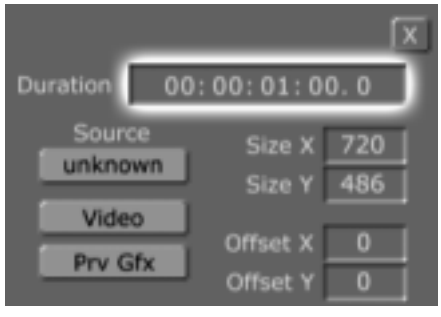
3. In the Workspace Properties panel, click the Alpha button on.

This makes the background of the layer transparent. That way, when you bring your text still into another workspace, you can see the video source behind the text. Otherwise, the background behind the text is black.

You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of a layer is transparent.

4. In the Workspace Properties panel, change the duration of your effect from 1 second to 2 seconds. To do this:

   a. Click on the 1 in the timecode (following figure). Timecode is in standard SMPTE format (HH:MM:SS:FF). That means that the 1 is the seconds value.



Timecode in the Workspace Properties Panel

   b. Type in the new value for the seconds, which is 2.

   c. Press Enter on your keyboard.

5. Close the Workspace Properties panel by clicking the X in the upper right corner of the panel.

Now that you've prepared the workspace, you're ready to create your text.

Creating Text In Panamation

You now want to create the text that you will later animate. In this section of the tutorial, you will create a text stroke and change the type style and color of the letters. If you want to create your own custom text, you could modify these steps to create your own custom text.

To create your text in Panamation, follow these steps:

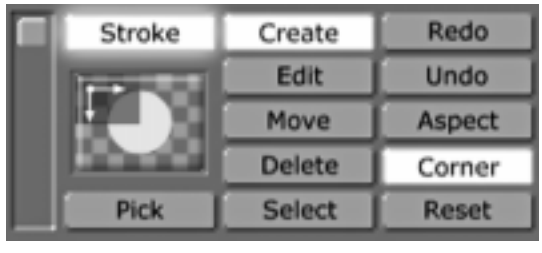
1. Locate the following picon in the bin Trinity/Bins/Panam/Sampler. This is the picon for a stroke that you will alter so that it is a text stroke.

The Stroke Picon

2. Load this stroke as the current stroke by clicking on its picon.

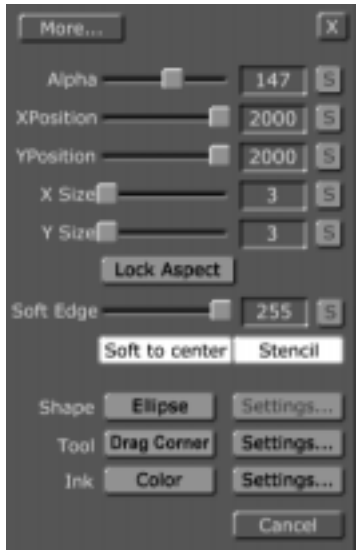
   You see the picon loaded in the Stroke Controls. This is where the current stroke is displayed.

3. Bring up the Stroke Properties panel by clicking the Stroke button (following figure) in the stroke controls.



The Stroke Button

You see the Stroke Properties panel (following figure) in the upper left corner of your screen. From this panel, you can adjust the properties of a stroke, such as the X and Y position of the stroke. You can also animate any of the stroke's properties from the Stroke Properties panel. For more information on using this panel, see “Stroke Properties Panel” on page 45.



The Stroke Properties Panel

4. In the Stroke Properties panel, click on the Soft Edge slider (following figure) and drag it all the way to the left so that the Soft Edge value is 0. You could also change this value by clicking on the numeric value, typing in a new value, and pushing Enter on your keyboard.

The Soft Edge Slider

By changing the Soft Edge value to 0, you are changing the softness of the edge of the text you will create. If you typed in a higher value, you would get text that has a soft, blurred edge.

5. Click on the Tool button (following figure) and choose Text from the pop-up menu. This pop-up menu is where you set the shape of your stroke.

The Tool Button

Choosing Text from the Tool Pop-Up Menu

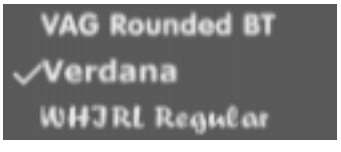
6. From the Stroke Properties panel, bring up the Text Settings panel by clicking on the Settings button to the right of the word Tool.

   You see the Text Settings panel (following figure) just below the Stroke Properties panel. The Text Settings panel is where you choose the font and size of your text stroke. For more information on using the Text Settings panel, see “Text Settings Panel” on page 69.

The Text Settings Panel

7. In the Text Settings panel, change the font to Verdana by scrolling through the font list and clicking on the font name.

   You see a check mark next to the word Verdana (following figure), indicating that the font was selected.

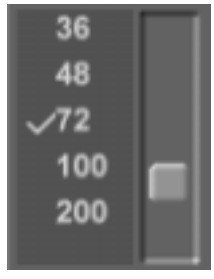


The Font Verdana Selected

8. In the Text Settings panel, change the font size to 72 by scrolling through the fonts sizes and clicking on the font size 72. The font size can also be changed by selecting the size in the Font Size window (following figure), typing in a new font size, and pushing Enter on your keyboard.

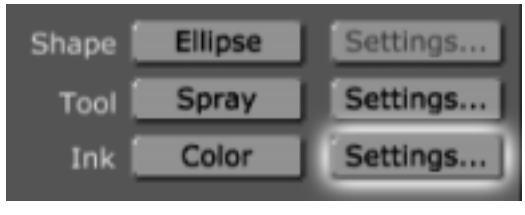
The Font Size Window

You see a check mark next to the font size 72 (following figure), indicating that the font size was selected.



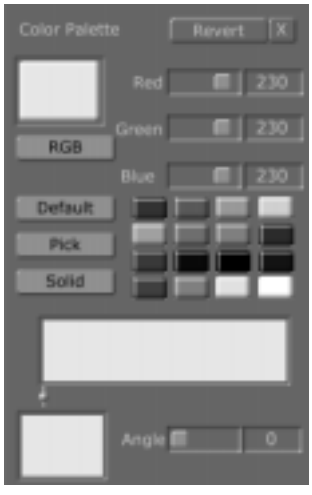
The Font Size 72 Selected

9. In the Stroke Properties panel, bring up the Color Palette by clicking the Settings button (following figure) to the right of the word Ink. If an ink other than the Color ink is selected, clicking the Settings button brings up the Settings panel for that ink.



The Settings Button

You see the Color Palette and Gradient Editor panel (following figure) appear in place of the Text Settings panel. The Color Palette and Gradient Editor panel is where you change the color of a stroke or add a gradient to a stroke. See “Color Palette And Gradient Editor Panel” on page 93 for more information on using this panel.



The Color Palette and Gradient Editor Panel

10. In the Color Palette and Gradient Editor panel, change the color of the text stroke by clicking on the red mini picon (following figure). This loads the color as the current color for the stroke. If you want to create your own custom color, you can adjust the sliders for the Red, Green, and Blue values. The adjusted color is automatically selected as the color of the stroke.

The Red Mini Picon

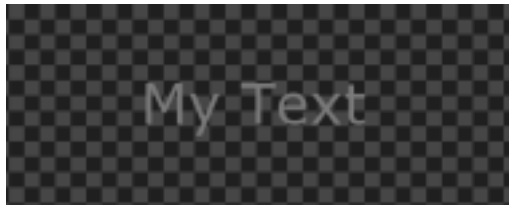
In the Stroke Controls, you see the color in the Current Stroke picon turn red.

11. Close the Stroke Properties and Color Palette and Gradient Editor panels by clicking on the X in the upper right corner of each panel.

NOTE The stroke you just created (and any custom stroke, for that matter) can be saved for further use by dragging-and-dropping its picon from the Stroke Controls into a bin. Load this stroke as you would any other stroke, by clicking on it.

12. Click in the middle of the workspace and type the words My Text.

You see the words My Text in the workspace (following figure).



The My Text Stroke in the Workspace

You now have text in the workspace and you are ready to save it as a still that will later be animated.

Saving Text As A Still

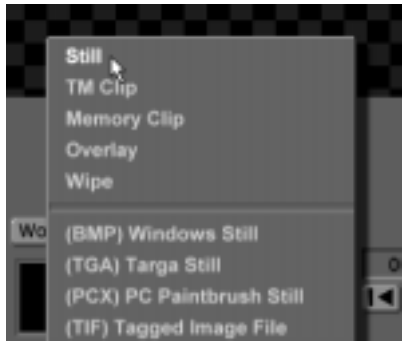
Now that you have created the text you will animate later in this tutorial, it's time to save it as a still. By saving this text as a still, you can make it the graphic texture for a stroke and then animate it. Since the texture of the stroke is a still, it is extremely easy to replace with another still when you reuse the motion path.

But before you get too far ahead of yourself, it's time to save your text as a still. To do this, follow these steps:

1. In the Workspace Controls, check to make sure that the file type is set as a Still (following figure). This is the default setting for how a file is saved.

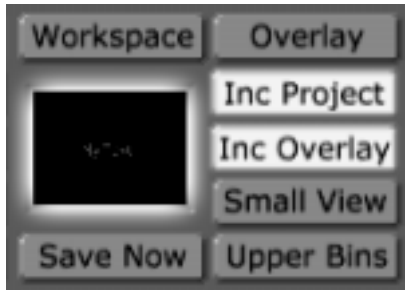
File Type Set as a Still

If it isn't set at Still, click the File Type button and choose Still from the pop-up menu (following figure). In this menu, the first file types are formats that are native to Trinity. The others are formats for other programs.



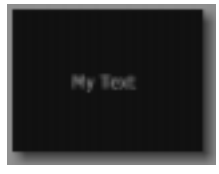
Choosing Still from the Pop-Up Menu

2. Click-and-drag the workspace picon (following figure) into the bin Trinity/Bins/Panam/Projects. By dropping the picon into this bin, it will be easier for you to find it when you use it later in this tutorial.



The Workspace Picon

You see the following picon in the bin Trinity/Bins/Panam/Projects.



The Saved Text Still Picon

You now have a text still that can be dragged-and-dropped into any workspace. Now it's time to move on to the next part of the tutorial, where you will bring this still into the Panamation workspace and animate its motion.

Animating The Text Still

Now that you have saved a still of your text, it's time to animate that text. In this part of the tutorial, you will animate your text so that it flies in from the left from off the screen, pauses in the middle, and then flies to the right off the screen.

To animate your text, follow these steps:

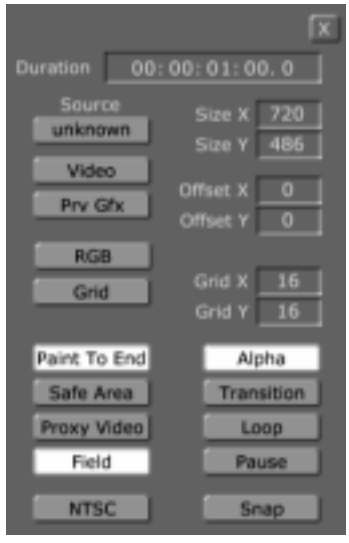
1. Clear the project from the workspace and start a new project by right-clicking on the Workspace picon and choosing New Project from the pop-up menu (following figure).

Choosing New Project

2. Bring up the Workspace Properties panel by clicking the Workspace button (following figure) in the Workspace controls.

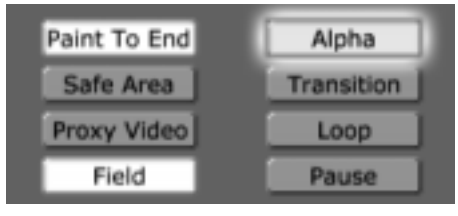
The Workspace Button

You see the Workspace Properties panel (following figure) in the upper left corner of your screen. From the Workspace Properties panel, you can adjust how the workspace is displayed, and how your effect behaves when it is played back in Switcher or Preditor. See “Workspace Properties Panel” on page 176 for additional information about this panel.



The Workspace Properties Panel

3. In the Workspace Properties panel, click the Alpha button (following button) so that it is on. By turning the Alpha button on, the background of your effect is transparent when it is run in Switcher or Preditor. If Alpha is not turned on, then the background is black when the effect is run in Switcher or Preditor.



The Alpha Button

You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of a layer is transparent.

4. In the Workspace Properties panel, change the duration of the effect by clicking on the 1 in the Duration window (following figure), typing 2,

and pressing Enter on your keyboard. This changes the duration of the effect to 2 seconds. This is how you change the duration of any effect you are creating.

The Duration Window

5. In the Workspace Properties panel, turn off the Transition function by clicking the Transition button (following figure). If the project is saved with the transition function turned on, when it is played back in Switcher or Preditor, it transitions from one video source into another. Since you want your text to act as an overlay, you want this function turned off.

The Transition Button

6. Close the Workspace Properties panel by clicking the X in the upper right corner of the workspace.

7. Locate the following picon in the directory Trinity/Bins/Panam/Boxes. It is the picon with the solid blue horizontal box on it.

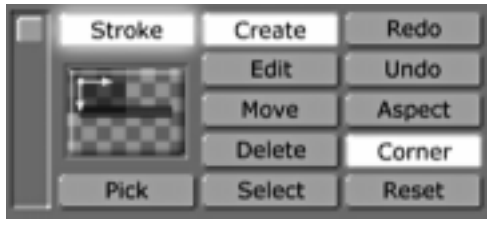
The Stroke Picon

8. Load this picon as the current stroke by clicking on it.

You see the picon load as the current stroke picon in the Stroke Controls.

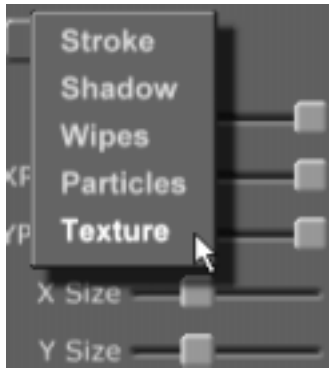
9. Bring up the Texture Properties panel for the current stroke. To do this:

   a. In the Stroke Controls, bring up the Stroke Properties panel by clicking the Stroke button (following figure).



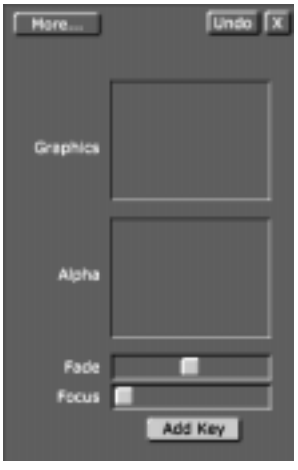
The Stroke Button

   b. From the Stroke Properties panel, bring up the Texture Properties panel by clicking the More button and choosing Texture from the pop-up menu (following figure).



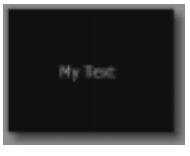
Choosing Texture from the Pop-Up Menu

You see the Texture Properties panel (following figure) in place of the Stroke Properties panel. From this panel, you can add a graphic to a stroke or access the keyer panels for Panamation. For more information about the Texture Properties panel, see “Texture Properties Panel” on page 118.



The Texture Properties Panel

10. Locate the picon for the text still that you created (following figure). It is in the directory Trinity/Bins/Panam/Projects.



The Text Still Picon

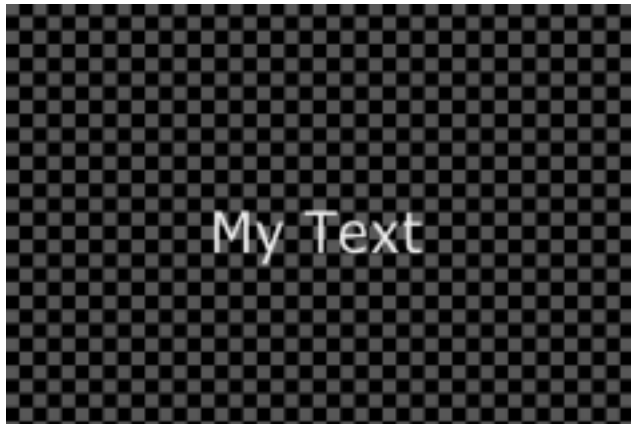
11. Drag-and-drop the picon for the text still into the Graphics Window (following figure) in the Texture Properties panel. By doing this, you are applying the graphic to the stroke when you draw it in the workspace.

The Graphics Window

12. Make sure that the Create button in the Stroke Controls is selected. With the Create button selected, you can draw strokes in the workspace.

13. In the workspace, click-and-drag to draw a text stroke. You should drag until the My Text type is roughly the size it was when you originally created it.

    You see the My Text type in the workspace. The following figure illustrates what the workspace should look like.



The My Text Stroke Drawn in the Workspace

14. In the workspace, right-click on the My Text stroke and choose Properties from the pop-up menu (following figure) to bring up the Stroke Properties panel for the stroke. Be sure to right-click on the letters in the stroke, or the Workspace Properties panel is brought up.

Choosing Properties from the Pop-Up Menu

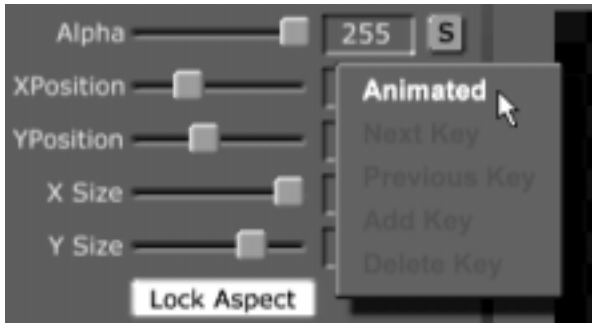
You see the Stroke Properties panel in the upper left corner of your screen. You will use this panel to animate the position of the My Text stroke.

15. In the Stroke Properties panel, click and drag the XPosition slider (following figure) to the left until the My Text type is just out of the workspace. If you want the text to scroll down, you can adjust the YPosition slider instead.

The XPosition Slider

You see the My Text Type Slide to the left, out of the Workspace.

16. In the Stroke Properties panel, click the Animation Status button for the XPosition and choose Animated from the pop-up menu (following figure).



Choosing Animated from the Pop-Up Menu

NOTE When a stroke's property, such as size or position, is animated, a keyframe is automatically added for the stroke's position in the timeline. Whenever you alter a property that is animated at another point in the timeline, a keyframe is automatically added at that point in the timeline.

You see the Animation Status button change from S for static to A for animated (following figure). That means that the position of the My Text stroke is now animated.

The Animation Status Reading A for Animated

17. In the Transport Controls, click the Last Frame button (following figure) to bring the effect to its end. By doing this, you can set the position of the My Text stroke at the end of the effect.

The Last Frame Button

18. In the Stroke Properties panel, click-and-drag the XPosition slider to the right, until the My Text type is just out of the workspace. This is where you want the text to be at the end of the effect. In the timeline, a keyframe is added for this stroke's position at this point in the animation.

    You see the My Text stroke move from left to right, until the text is out of the workspace.

19. Close the Stroke Properties panel by clicking the X button in the upper right corner of the panel.

20. Click-and-drag the Timecode slider (following figure) to the left, until the Timecode display reads 00:00:01:00.0. This is where you will add a pause point to the effect. That way, when the effect is run in Switcher, it pauses halfway through.

The Timecode Slider

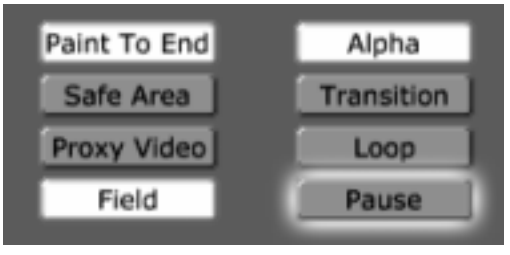
    In the workspace, you see the My Text stroke in the middle of the screen.

21. In the Workspace Controls, click the Workspace button to bring up the Workspace Properties panel.

    You see the Workspace Properties panel in the upper left corner of the screen.

22. In the Workspace Properties panel, click the Pause button (following figure). This adds a pause point at this point in the effect. When the effect is run in Switcher, it pauses at this point in the effect.

TIP Adding a pause point to an effect also allows an overlay to be stretched once it is dragged into a Preditor timeline. When stretching an overlay with a pause point in it in Preditor, the overlay is stretched at the pause point.



The Pause Button

23. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

24. Preview the animation in Panamation to see how it will look when it is run in Switcher or loaded into Preditor. To do this, follow these steps:

    a. Bring the animation to its beginning by clicking the First Frame button (following figure) in the Transport Controls.

The First Frame Button

In the workspace, you see the animation at its starting point, with the My Text stroke out of the workspace.

    b. Play the animation by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In the workspace, you see the animation as it plays. You see the My Text stroke crawl across the screen. Note that the effect does not pause where you added a pause point. The effect will not pause unless it is run in Switcher.

NOTE When a project is previewed in Panamation, the speed at which it plays back is slower than its actual speed when run in Switcher or Preditor. How slow this effect is played in Panamation is determined by how complex the strokes and animation are on each frame.

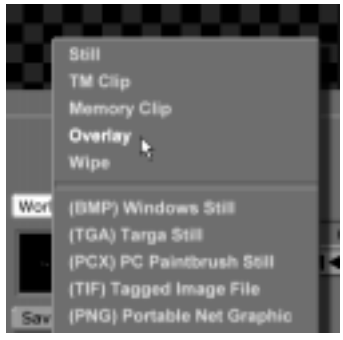
You now have an effect where your My Text stroke moves into the workspace from the left, pauses, and then moves to the right, out of the workspace. Before you can run it in Switcher, you need to save it. Continue on to the next section of this tutorial to save your project.

Saving The Project

Now that you have an effect where your text flies in off the screen, pauses, and then flies off the screen, it's time to save your project. This section of the tutorial teaches you how to save an effect as an overlay.

To save the project, follow these steps:

1. In the Workspace Controls, click the File Type button (the button to the right of the Workspace button) and choose Overlay from the pop-up menu (following figure).



Choosing Overlay from the Pop-Up Menu

The File Type button should now read Overlay. With Overlay selected as the file type, when the project is run in Switcher it acts as an overlay. If you chose Wipe from the pop-up menu, your project is saved as a wipe.

2. In the Workspace Controls, click-and-drag the workspace picon (following figure) into the bin Trinity/Bins/Panam/Projects. Saving the project in this bin makes it easier to locate it when you use it later in this tutorial.

The Workspace Picon

You see a window come up indicating that the project is being saved (following figure).

The Saving Project Window

When this window disappears, your project is saved.

You now have an effect that can be run in Switcher (see the Switcher Manual for more information about running effects in Switcher). Continue ahead to find out how to reuse the motion path of this effect.

Reusing The Text's Motion Path

Now that you saved your project, you have an effect that can be run in Switcher. You can also go back into Panamation and reuse the motion path you created in this project.

To reuse the motion path you created, follow these steps:

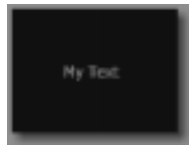
1. Clear the project from the workspace and start a new project by right-clicking on the Workspace picon and choosing New Project from the pop-up menu (following figure).

Choosing New Project

2. Repeat the steps in the sections “Creating Text In Panamation” on page 321 and “Saving Text As A Still” on page 327 to create a new text still. This time, instead of typing My Text, create your own phrase or words.

   You can also create a text still in TitleWave (see the TitleWave Manual for more information on creating a text still in TitleWave). Be sure to save this text still in the directory Trinity/Bins/Panam/Projects. This makes it easier to locate your still when you need it later in this tutorial.

3. Locate the following picon in the directory Trinity/Bins/Panam/Projects. This is the picon for the effect you created earlier in this tutorial.



The Saved Effect Picon

4. Load this picon as the current project by double-clicking on it.

You see the project load in the workspace.

NOTE When projects are loaded into Panamation they are automatically brought to the last frame.

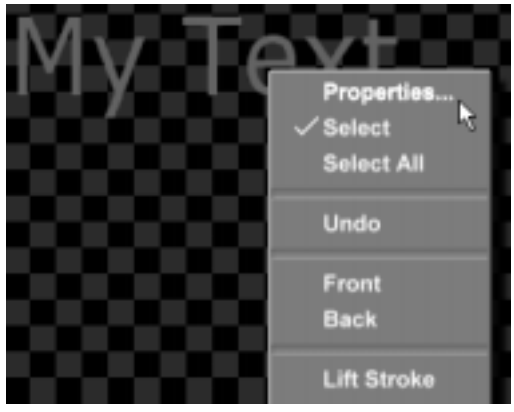
5. Bring the project to its middle by clicking-and-dragging the Timecode slider (following figure) until the Timecode display reads 00:00:01:00:0. You can also bring the project to its middle by clicking in the timecode display, typing in a new timecode, and pressing Enter on your keyboard.

The Timecode Slider

You see the words My Text in the middle of the workspace. Remember, this is the position of the text in the middle of the effect.

6. Bring up the Texture Properties panel for the My Text stroke. To do this:

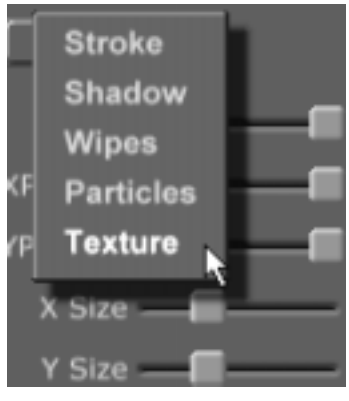
   a. Bring up the Stroke Properties panel by right-clicking on the My Text stroke and choosing Properties from the pop-up menu (following figure). Be sure to click on the letters in the My Text stroke. Otherwise, the Workspace Properties panel is brought up.



Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel in the upper left corner of your screen.

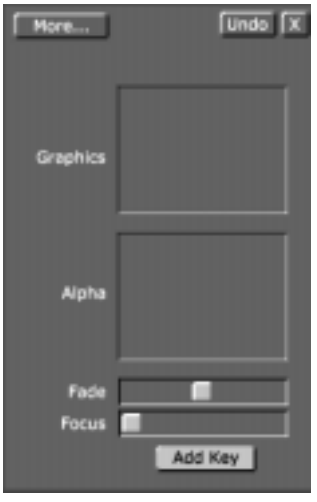
b. In the Stroke Properties panel, click on the More button in the upper left corner and choose Texture from the pop-up menu (following figure). This brings up the Texture Properties panel, where you will change the graphic still applied to the stroke.



Choosing Texture from the Pop-Up Menu

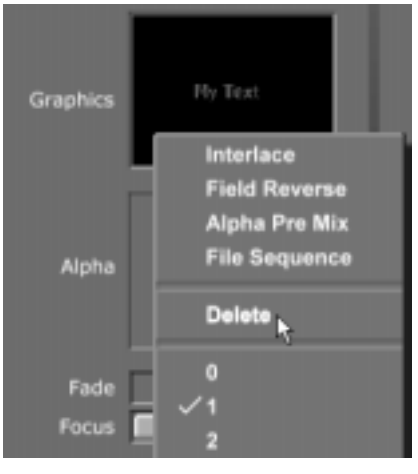
You see the Texture Properties panel (following figure) in place of the Stroke Properties panel in the upper left corner of your screen. For

additional information about the Texture Properties panel, see “Texture Properties Panel” on page 118.



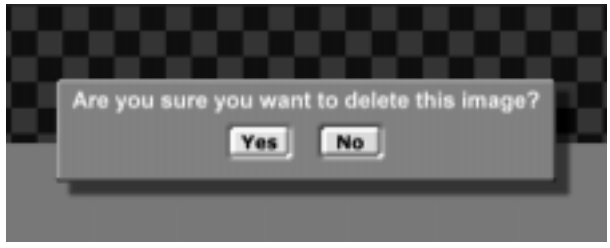
The Texture Properties Panel

7. In the Texture Properties panel, delete the text still applied to your stroke by right-clicking in the Graphics Window and choosing Delete from the pop-up menu (following figure).



Choosing Delete from the Pop-Up Menu

You see a window come up (following figure) asking if you want to delete the image. Click the Yes button.



The Delete Image Window

In the workspace, you see the text still disappear from your stroke and you see the workspace turn blue. Remember, you originally applied your text still to a stroke that was blue. Panamation is remembering the original appearance of the stroke.

8. Locate the picon for the new text still you created and placed in the directory Trinity/Bins/Panam/Projects.

9. Make this text still the texture for your stroke by dragging-and-dropping its picon into the Graphics Window (following figure) in the Texture Properties panel.

The Graphics Window

You see your new text still in the workspace, indicating that it is the new texture for your stroke.

This stroke retains all of its original animation properties, so when you run this new effect in Switcher it behaves exactly as your original effect did.

10. Preview the animation in Panamation to see how it will look when it is run in Switcher or loaded into Preditor. To do this, follow these steps:

    a. Bring the animation to its beginning by clicking the First Frame button (following figure) in the Transport Controls.

The First Frame Button

In the workspace, you see the animation at its starting point, with your custom stroke out of the workspace.

    b. Play the animation by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In the workspace, you see the animation as it plays. You see your custom text stroke crawl across the screen. Note that the effect does not pause where you added a pause point. The effect will not pause unless it is run in Switcher.

NOTE When a project is previewed in Panamation, the speed at which it plays back is slower than its actual speed when run in Switcher or Preditor. How slow this

effect is played in Panamation is determined by how complex the strokes and animation are on each frame.

11. Save this new effect by repeating the steps in the section “Saving The Project” on page 340.

Congratulations! You now have a reusable motion path for flying text. If you wish, you can also use the skills learned in this tutorial to create a reusable motion path for graphics. If you used this project with graphics, you would simply use a graphic still as the texture for the stroke instead of a text still.

You could also animate other properties of the motion path, such as transparency and particle scatter. The animation properties you can apply to your reusable motion path are only limited by your imagination.

Now that you've created your reusable motion path for flying text, it's time to move on to the next tutorial.

Extracting Graphics With The Lift Stroke Function

There will be times when you are working with Panamation that you will want to save a group of objects, or an entire project, as a single stroke that can be dragged and dropped into the workspace at a later time. For example, you would use this function if you wanted to create a custom graphic to use in a wipe effect where the graphic wipes away one source of video.

In fact, this is exactly the type of graphic you will create in this tutorial. In this tutorial you will create a tall, thin graphic of a flag with blurred edges. In a following tutorial you will use this graphic to create a custom wipe with a graphic (see “Creating Animated Wipes With Graphics” on page 382 for more information about this tutorial).

The following figure illustrates what the finished graphic will look like when you complete the tutorial.

The Finished Graphic.

But before you get too far ahead of yourself, first create your graphic. This tutorial is broken up into three part. These parts are:

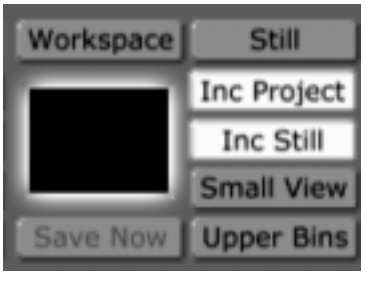
1. Preparing the workspace
2. Creating the custom graphic
3. Saving the graphic

Preparing The Workspace

Before you actually begin creating your graphic, you need to first prepare the workspace. By doing this, you are telling Panamation how to display the workspace, and how the graphic will be displayed after you save it and load it into another workspace.

Follow these steps to prepare the workspace:

1. Right-click on the Workspace picon (following figure) and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

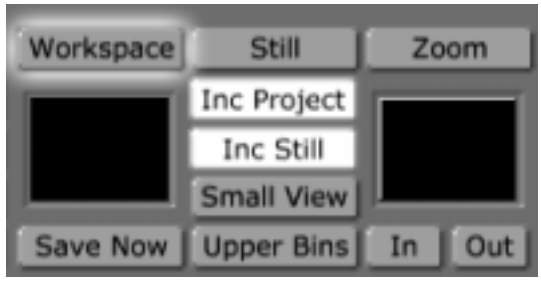


The Workspace Picon

Choosing New Project

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

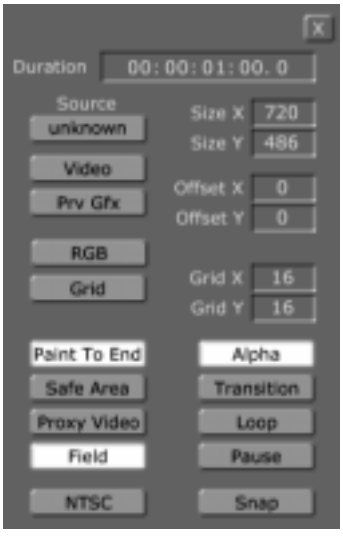
2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



The Workspace Button

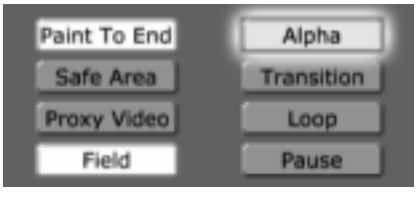
You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can

set the length of your effect, change how it is displayed in the workspace, and how it acts when it is run in Switcher. See “Workspace Properties Panel” on page 176 for additional information on using this panel.



The Workspace Properties Panel

3. In the Workspace Properties panel, click the Alpha button (following figure) on. This makes the background of the layer transparent.



The Alpha Button

You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of a layer is transparent.

4. Make sure that the Paint To End, Field, and Transition buttons are clicked on.

Having these buttons clicked on is the default setting for Panamation, but if you are continuing after building another project, you may need to click them on again.

With Paint To End selected, any stroke you draw at the beginning of the timeline lasts the entire length of it. If this button is not selected, then any object drawn in the workspace only lasts for a single frame. If you are rotoscoping, you do not want Paint To End selected.

With Field selected, all timecode is displayed in fields. Having this selected is not necessary, but since it is the default, you'll keep it at these settings for this project.

With Transition selected, a project is saved as a transition. Selecting this is necessary if you are creating an effect such as a wipe, but is not necessary for creating a still. Since this is the default, you'll leave it at this setting. When you save this project you will save a single stroke, so how the entire project is saved is unimportant.

5. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

Now that you've prepared the workspace, you're ready to create your graphic.

Creating The Custom Graphic

When you finish, you will have a graphic of a tall, thin flag that has blurred edges. To do this, you will put many elements together to build what your graphic will look like. Once you've done this, you will use the lift stroke function to "pull" these elements onto a single stroke.

Follow these steps to create your custom graphic:

1. Locate the following stroke picon, located in the directory Trinity/Bins/Panam/Boxes. It is the picon with the solid blue horizontal box on it.

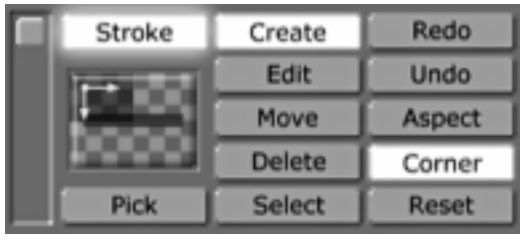
The Stroke Picon

2. Load this picon as the current stroke by clicking on it.

   You see this picon load in the Current Stroke picon window.

3. Bring up the Texture Properties panel. To do this:

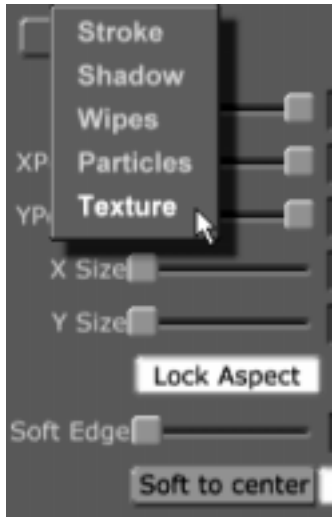
   a. Click the Stroke button in the Stroke Controls (following figure).



The Stroke Button

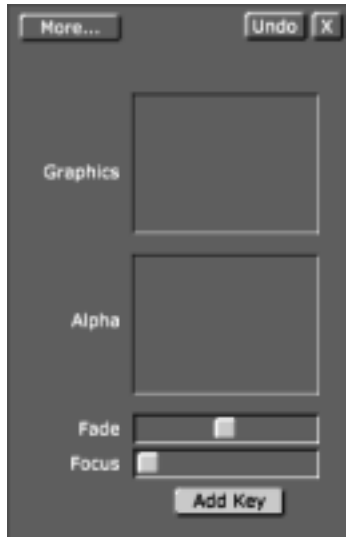
   You see the Stroke Properties panel in the upper left corner of the screen.

   b. Click the More button in the upper left corner of the Stroke Properties panel and choose Texture from the pop-up menu (following figure).



Choosing Texture from the Pop-Up Menu

You see the Texture Properties panel (following figure) appear in place of the Stroke Properties panel. The Texture Properties panel is where you apply a graphic, ClipMem, Time Machine clip, or AVI to a stroke. From this panel, you can also bring up Panamation's keyer panels by clicking the Add Key button and selecting a keyer from the pop-up menu. For additional information about the Texture Properties panel, see "Texture Properties Panel" on page 118.



The Texture Properties Panel

4. Locate the following picon in the bin directory Trinity/Bins/Panam/Projects. It is the picon with the American flag on it.

The Flag Picon

5. Drag the flag picon into the window to the right of the word Graphics in the Texture Properties panel. By doing this, the texture of your stroke is now the American flag. That means that when you draw a stroke in your workspace, an American flag is drawn.

   Any graphic can be drawn in the workspace by repeating these steps with the desired graphic.

NOTE The stroke you just created (and any custom stroke, for that matter) can be saved for further use by dragging-and-dropping its picon from the Stroke

Controls into a bin. Load this stroke as you would any other stroke, by clicking on it.

6. Close the Texture Properties panel by clicking the X button in the upper right corner of the panel.

7. Draw an American flag stroke that fills the entire workspace by clicking just outside the upper left corner of the workspace and dragging just outside the lower right corner of the workspace.

   You see an American flag that fills the entire workspace (following figure).

The American Flag Drawn in the Workspace

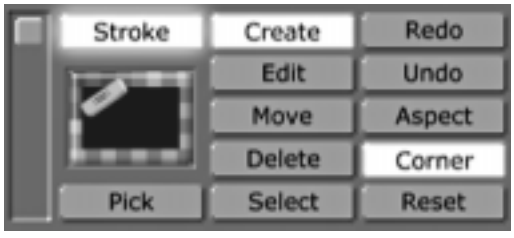
8. Locate the erase picon (following figure) in the directory Trinity/Bins/Panam/Sampler.

The Erase Picon

9. Load this picon as the Current Stroke by clicking on it.

   You see the picon in the Current Stroke picon window.

10. Bring up the Stroke Properties panel by clicking the Stroke button (following figure) in the Stroke Controls.



The Stroke Button

You see the Stroke Properties panel in the upper left corner of the screen. See “Stroke Properties Panel” on page 45 for more information about this panel.

11. In the Stroke Properties panel, click and drag the Soft Edge slider (following figure) so that the value next to the slider is 40. You can also change this value by selecting the value, typing in 40, and pressing Enter on your keyboard.

The Soft Edge Slider

By changing the Soft Edge value, you've added a soft edge to your erase stroke. A soft edge can be added to any stroke by adjusting this value.

NOTE The stroke you just created (and any custom stroke, for that matter) can be saved for further use by dragging-and-dropping its picon from the Stroke Controls into a bin. Load this stroke as you would any other stroke, by clicking on it.

12. Close the Stroke Properties panel by clicking the X button in the upper right corner of the panel.

13. Draw a stoke that covers roughly half of the American flag (following figure). Do this by clicking just outside the upper right corner of the

workspace and dragging down so that the stroke ends just outside the center of the lower edge of the workspace.

Erase Stroke Covering Half the Flag Graphic

If you don't draw the stroke quite right, don't worry. Since every stroke in Panamation can be moved and edited, including erase strokes, you can easily edit the box to your specifications the way you would any stroke.

14. In the Stroke Controls, select the Create button (following figure).

The Create Button

15. Draw a second stoke that covers nearly all of the other half of the American flag, leaving a roughly 2-inch wide stripe of flag showing (following figure). Do this by clicking just outside the upper left corner of the workspace and dragging down so that the stroke ends just outside the center of the lower edge of the workspace.

Stripe of Flag Showing

This is what your graphic will look like when you finish. But the graphic is still made up of individual objects, and you want a graphic that is made up of one single object, so you still have some work to do.

If you don't draw the stroke quite right, don't worry. Since every stroke in Panamation can be moved and edited, including erase strokes, you can easily edit the box to your specifications the way you would any stroke.

16. Locate the following picon in the directory Trinity/Bins/Panam/Boxes. It is the picon with the solid blue horizontal box on it.

The Stroke Picon

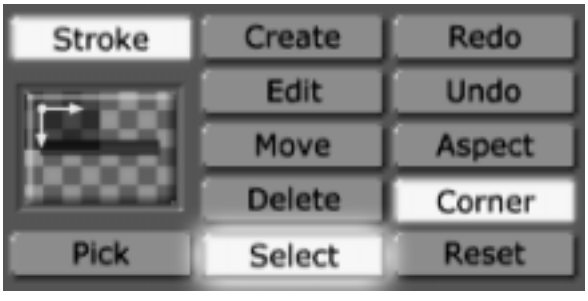
17. Load this picon as the current stroke by clicking on it.

    You see this picon load in the Current Stroke picon window.

18. Draw a stroke that covers the entire workspace by clicking just outside the upper left corner of the workspace and dragging just outside the lower right corner of the workspace.

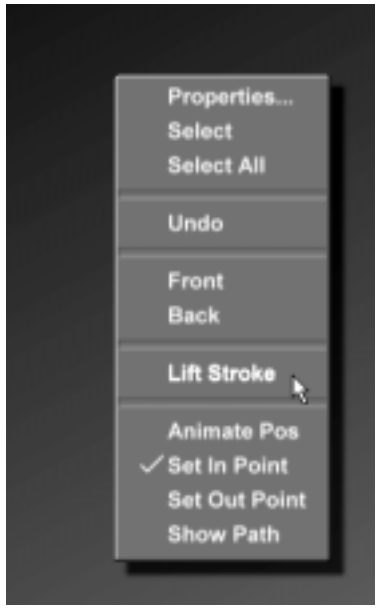
    In the workspace, you see a stroke covering the entire workspace.

19. Select the stroke you just drew by clicking the Select button in the Stroke Controls (following figure) and then clicking anywhere on the stroke.



The Select Button

20. Right-click anywhere on the stroke and choose Lift Stoke from the pop-up menu (following figure).



Choosing Lift Stroke from the Pop-Up Menu

NOTE The Lift Stroke function only works to lift strokes on the currently selected layer.

21. In the workspace, it appears as if the stroke you right-clicked on has disappeared. In actuality, every stroke underneath the stroke you clicked on was "lifted" onto the stroke. This means that this stroke is now a copy of everything underneath it. If you wish, you can copy any group of objects onto a single stroke by repeating these steps with your own strokes in the workspace.

Now that you've "lifted" your graphic onto a single stroke, you're almost finished with this tutorial. But first, you need to save that individual stroke.

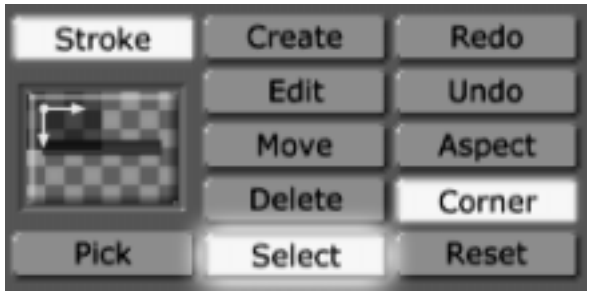
Saving The Graphic

When you save a Panamation project, typically you click-and-drag the workspace picon into a bin, saving the entire project. Since you only want to save an individual object in the workspace, you'll save it a little differently.

Remember, any individual stroke in the workspace can be saved this way.

To save the graphic, follow these steps:

1. Click the Select button in the Stroke Controls (following figure) so that it is selected.



The Select Button

2. Select the stroke you just created by clicking in the workspace. Since the stroke you just created fills the entire workspace, you can click anywhere.

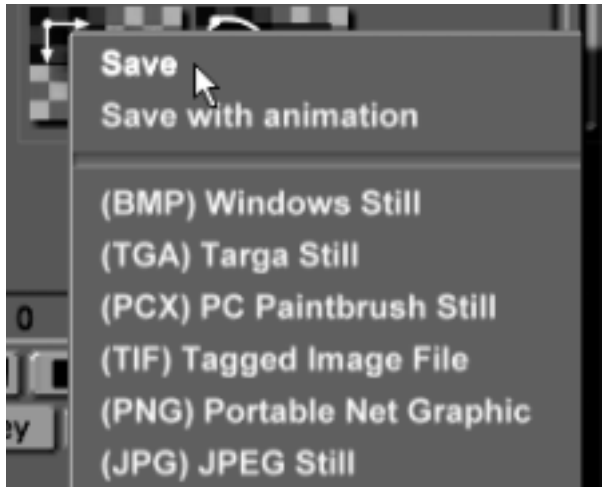
   In the workspace, you see a bounding box around your stroke, indicating that it is selected.

3. Click-and-drag the stroke into the bin directory Trinity/Bins/Panam/Projects.

   Saving your project in this bin makes it easier to locate it when you use it later to create an animated wipe with graphics.

   You see a pop-up menu appear (following figure) that asks which format you wish to save the graphic in.

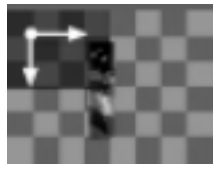
4. Choose Save from pop-up menu.



Choosing Save from the Pop-Up Menu

5. This saves the graphic as a Panamation object. If you were saving a graphic that you wanted to import into another program, this menu is where you would choose the format.

6. Check to make sure that your graphic is saved. You should see this picon (following figure) in the bin you dragged the graphic into.



The Saved Graphic's Picon

   If you do not see the saved graphic's picon in the bin, repeat the steps for saving the graphic.

You now have a saved version of the graphic you created. This graphic can now be dragged-and-dropped into the Panamation workspace at any time. Be sure to save this graphic, as you'll be using it in another tutorial in this chapter (see "Creating Animated Wipes With Graphics" on page 382 for more information about this tutorial). In that tutorial, you will create a wipe with a

graphic (your flag graphic) that wipes away one video source, transitioning into another.

Creating A Simple Wipe

With Panamation, you can create a variety of wipes. A wipe is a transition from one video source to another. It is named this because as the transition occurs, one video source wipes away another.

Sure, there are a number of pre-made wipes contained within Trinity's bins, but wouldn't it be more fun to create your very own wipe. This tutorial teaches you to do just that.

In this tutorial, you'll create a simple wipe that when played back in Switcher or loaded into the Preditor timeline wipes the Preview video source in from the right, replacing the Program source.

The following figure illustrates the finished wipe as it is being run in Switcher. The video on the left is the Program video source, while the video on the right is the Preview video source that is being wiped in.

The Finished Wipe as it is Run in Switcher

This tutorial is broken up into three parts:

1. Preparing the workspace

2. Building the wipe

3. Saving the wipe

Preparing The Workspace

Before you actually begin creating your wipe, you need to first prepare the workspace. By doing this, you are telling Panamation how the transitional effect will behave when it is run in Switcher or loaded into Preditor.

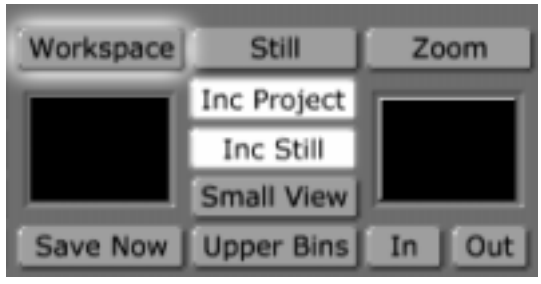
Follow these steps to prepare the workspace:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project from the Pop-Up Menu

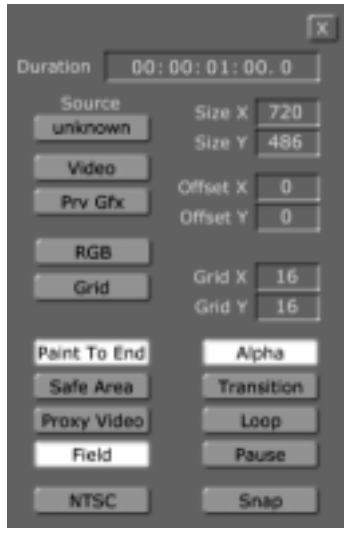
Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project click Yes. If you don't wish to save it click No.

2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can set the length of your effect, change how it is displayed in the workspace, and set how it acts when it is run in Switcher. For additional information about this panel, see “Workspace Properties Panel” on page 176.



The Workspace Properties Panel

3. In the Workspace Properties panel, click the Alpha button on.

   This makes the background of the layer transparent. That way, when your wipe transitions, you can see the video source behind the wiping video.

Otherwise, the background remains black until the transition is finished running.

You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of a layer is transparent.

4. Make sure that the Paint To End, Field, and Transition buttons are clicked on.

   Having these buttons clicked on is the default setting for Panamation, but if you are continuing on after building another project, you may need to click them on again.

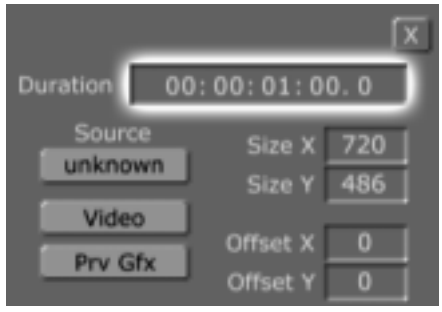
   With Paint To End selected, any stroke you draw at the beginning of the timeline lasts the entire length of it. If this button is not selected, then any object drawn in the workspace only lasts for a single frame.

   With Field selected, all timecode is displayed in fields. Having this selected is not necessary, but since it is the default, you'll keep it at these settings for this project.

   With Transition selected, a project is saved as a transition. Selecting this is necessary when creating an effect such as a wipe (like this project), but is not necessary for creating a still.

5. In the Workspace Properties panel, change the duration of the transition from 1 second to 2 seconds. To do this:

   a. Click on the 1 in the Duration Window (following figure). Timecode is in standard SMPTE format (HH:MM:SS:FF). That means that the 1 is the seconds value.



Duration Window in the Workspace Properties Panel

b. Type in the new value for the seconds, which is 2.

c. Press Enter on your keyboard.

6. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

Now that the workspace is ready, it's time to start building your wipe.

Building The Wipe

Now it's time to build your wipe. In this step you'll create a box that covers the entire workspace and animate it so that it slides into the workspace. When a project is saved as a wipe in Panamation, the first layer of the project has certain special properties. Any stroke drawn in the workspace represents the preview video source, and the transparent layer underneath represents the program source of video. That means that if you create a box that slides into the workspace, you are setting the preview video to slide in over the program video, replacing it.

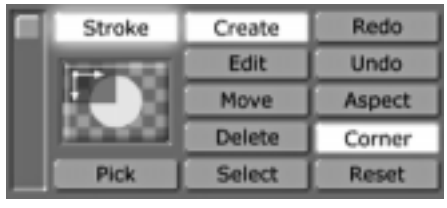
Follow these steps to build the wipe:

1. Locate the stroke picon from the following figure. It is located in the bin directory Trinity/Bins/Panam/Sampler.

The Stroke Picon

2. Load this picon as the Current Stroke by clicking it. This automatically loads it as the Current Stroke picon.

3. Bring up the Stroke Properties panel by clicking on the Stroke button (following figure), located in the Stroke controls.

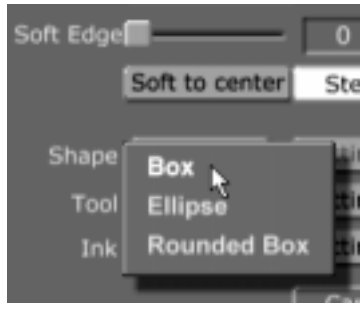


The Stroke Button

You see the Stroke Properties panel (following figure) in the upper left corner of the screen.

The Stroke Properties panel

4. Click on the button directly to the right of the word Shape (the button reads Ellipse) and choose Box from the pop-up menu (following figure).



Choosing Shape from the Pop-Up Menu

This changes the shape of the box you'll draw to a square.

If you wish, you can leave Ellipse as the shape. This allows you to create a wipe that has a curved edge. However, for this project, you'll stick to the square. For additional information about the stroke shapes available in Panamation, see “Panamation Shapes” on page 53.

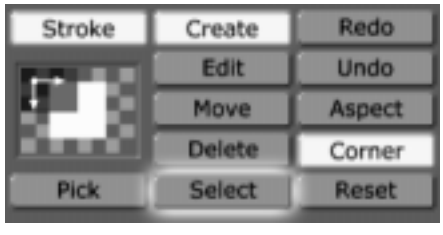
NOTE The stroke you just created (and any custom stroke, for that matter) can be saved for further use by dragging-and-dropping its picon from the Stroke Controls into a bin. Load this stroke as you would any other stroke, by clicking on it.

5. Close the Stroke Properties panel by clicking the X button in the upper right corner of the panel.

6. Draw a stroke that fills the entire workspace by clicking in the upper left corner of the workspace and dragging the mouse to the lower right corner of the workspace.

   You see a white stroke that covers the entire workspace. This stroke represents the preview video source that will transition in over the program video source when the effect is run in Switcher.

7. Select the white box stroke by first clicking the Select button (following figure) in the Stroke Controls, and then clicking on the box.



The Select Button

In the workspace, you see a bounding box around the stroke, indicating that it is selected.

8. Make sure that the timeline is at the end of the effect. Do this by clicking the Last Frame button in the Transport Controls (following figure). This button jumps the effect to the end of the timeline.

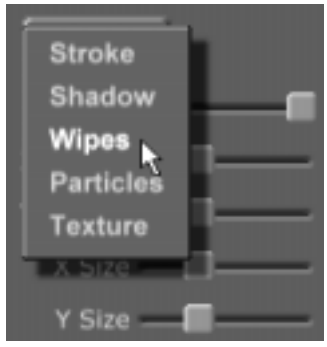
The Last Frame Button

9. Bring up the Wipes Properties panel. This panel is where you set the direction of your wipe. To bring up this panel:

    a. Bring up the Stroke Properties panel by right-clicking anywhere on the white box in the workspace and selecting Properties from the pop-up menu (following figure).

Choosing Properties from the Pop-Up Menu

    b. Click on the More button in the upper left corner of the Stroke Properties panel and choose Wipes from the pop-up menu (following figure).



Choosing Wipes from the Pop-Up Menu

You see the Wipes Properties panel (following figure) in the upper left corner of the screen, in place of the Stroke Properties panel.

The Wipes Properties Panel

The Wipes Properties panel is where you set the direction of your wipe. You want your video to wipe in from the right of the screen, so you'll be working with the WipeL value. If you want the wipe to wipe from the bottom to the top, you would work with the WipeT value. If you want the wipe to start at the top and wipe towards the bottom of the screen, you would work with the WipeB value. If you want your wipe to transition

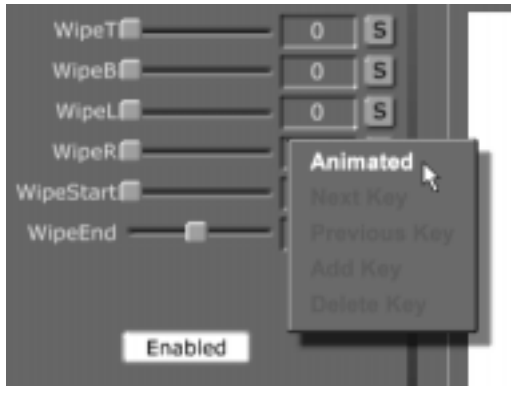
from the left of the screen towards the right, you would adjust the WipeR value. See “Wipes Properties Panel” on page 112 for more information on using this panel.

10. Make sure that the Enabled button (following figure) is selected. If it isn't, you won't be able to set any of the wipe's properties.

    If it isn't selected, click it to select it.

The Enabled Button

11. To the right of the word WipeL, click on the Animation Status button (the button with the S on it) and select Animated from the pop-up menu (following figure).



Choosing Animated from the Pop-Up Menu

Choosing Animated turns on the animation for the WipeL value. Adjusting the WipeL value causes the video to transition in from the right of the screen to the left. Since this is where you want the stroke to be at the end of the animation, you do not need to adjust the WipeR value. If you adjust the WipeR value, the video transitions in from the left of the screen to the right.

You see the Animation Status button change from S for static to A for animated.

NOTE When a stroke's property, such as size or position, is animated, a keyframe is automatically added for the stroke's position in the timeline. Whenever you alter a property that is animated at another point in the timeline, a keyframe is automatically added at that point in the timeline.

12. Bring the effect to the beginning of the timeline by clicking the First Frame button in the Transport Controls (following figure).

The First Frame Button

13. Click and drag WipeL slider (following figure) all the way to the right.

The WipeL Slider

You see the white box slide from the left to the right, where it is completely out of the workspace. This is where you want the animation to be at the beginning of the timeline.

Once you change the WipeL value, a keyframe for this position is automatically added to the timeline. Again, the white box represents the preview video. At the beginning of the effect you set a key for the white

box while it is outside of the workspace. That means that when the effect runs in Switcher or Preditor, the preview video is not seen until it slides into the workspace.

14. Close the Wipes Properties panel by clicking the X button in the upper right corner of the panel.

15. Preview the animation in Panamation to see how it looks when it is run in Switcher or loaded into Preditor by clicking the Play button (following figure) in the Transport Controls. For additional information on using the Transport Controls, see “Transport And Keyframe Controls” on page 210.

The Play Button

In the workspace, you see the animation as it plays. You see the white box wipe across the screen from right to left.

NOTE When a project is previewed in Panamation, the speed at which it plays back is slower than its actual speed when run in Switcher or Preditor. How slow this effect is played in Panamation is determined by how complex the strokes and animation are on each frame.

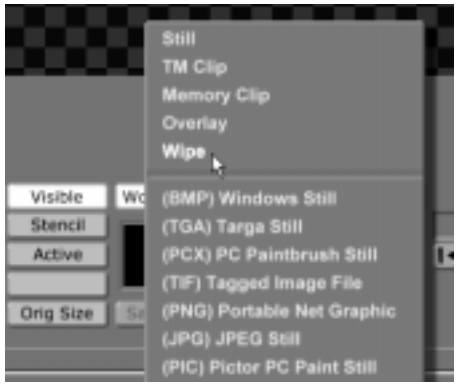
Now that you've created your simple wipe, it's time to save it so that you can load it in Switcher or Preditor.

Saving The Wipe

Now that you've built your transition, it's time to save it into one of Trinity's bins. It's important that you save this wipe, as you'll be using it in the next tutorial, where you'll add a graphic overlay to the effect.

To save the wipe, follow these steps:

1. Click on the File Type button (the button labeled Still) in the Workspace Controls and choose Wipe from the pop-up menu (following figure).



Choosing Wipe from the Pop-Up Menu

Choosing this option sets how the file will be saved. In this case it will be saved as a wipe. However, this project could have easily been saved as a framestore by choosing Still from the pop-up menu.

2. Click-and-drag the Timeline slider (following figure) right or left so that it scrubs through the timeline.

The Timeline Slider

You see the picture on the Workspace picon (following figure) change as you scrub through the timeline. Stop dragging the slider when you see an image on the picon that will help you identify the effect when it is saved in a bin. The image on the Workspace picon when the effect is saved becomes the picon for the effect.

The Workspace Picon

3. Click-and-drag the workspace picon into the bin directory Trinity/Bins/Panam/Projects to save the effect.

   Saving your project in this bin makes it easier to locate it when you use it later to create an animated wipe with graphics.

4. You see the Save Project window (following figure) appear. This window gives the status of the effect as it is compiled. When this window disappears, your wipe effect is saved.

The Save Project Window

Congratulations! You now have a simple wipe that can be loaded into Switcher or Preditor (see the Switcher and Preditor manuals for more information about how to load and run effects).

Now it's time to move on to the next tutorial.

Creating Animated Wipes With Graphics

Now that you have created a graphic and a simple wipe, this tutorial teaches you how to combine the two into an animated wipe with graphics. When you finish this tutorial, you will have a transitional wipe where the American flag wipes away the program out video source, replacing it with the preview video source.

The following figure illustrates the finished wipe as it is being run in Switcher. The video on the left is the Program video source, while the video on the right is the Preview video source that is being wiped in.

The Finished Wipe as it is Run in Switcher

NOTE It is important to note that when creating a transition effect in Panamation, the first layer contains the alpha information and the video that is transistioned. Any additional layers are where you place graphics.

This tutorial is broken up into three parts:

1. Preparing the workspace
2. Adding graphics to the wipe
3. Saving the wipe

Preparing The Workspace

Before you begin putting together the elements to create your animated wipe with graphics, you need to first prepare the workspace by telling Panamation to start a new project. You will also set up a second layer, which is the layer that the graphics will be placed on.

Follow these steps to prepare the workspace:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project from the Pop-Up Menu

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project click Yes. If you don't wish to save it click No.

2. Locate the following picon in the bin Trinity/Bins/Panam/Projects.

The Simple Wipe Picon

This is the picon for the wipe you created in an earlier tutorial. If you haven't created this wipe already, go to the section "Creating A Simple Wipe" on page 367 and build the wipe in the tutorial.

3. Load the simple wipe as the current project by double-clicking on the picon.

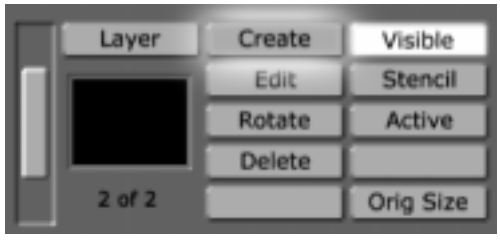
   You see the simple wipe load into the workspace as the current project.

4. Bring the wipe to the beginning of the effect by clicking the First Frame button in the Transport Controls (following figure). For additional information about using the Transport Controls, see "Transport And Keyframe Controls" on page 210.

The First Frame Button

By bringing the effect to the first frame, you can later add your graphic to the effect and have it appear throughout the effect. If you added the graphic to the last frame of the effect, it would only appear in the effect on the last frame.

5. Create a new layer by clicking the Create button in the Layer Controls (following figure).

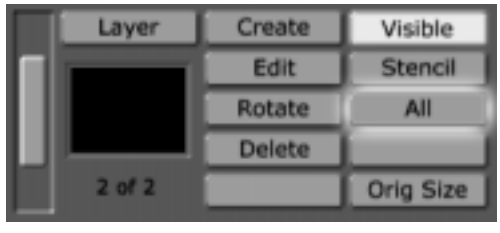


The Create Button

When creating a wipe with animated graphics, it is necessary to create a second layer to put your graphics on. When a project is saved as a wipe, any strokes on the first layer represent Preview video. So if you place the flag graphic on the first layer, it is replaced by Preview video when the transitional effect is run.

6. Click the Active button in the Layer Controls to make all layers visible.

   You see the Active button change to All (following figure).



The All Button

If you click this button again, it changes to Transparent and all objects on layers other than the active layer are displayed transparent.

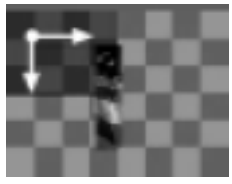
Now that your workspace is ready, you are ready to move on to the next step.

Adding Graphics To The Wipe

With the workspace prepared and your wipe brought to its first frame, you are now ready to add the flag graphic to your wipe.

Remember, by repeating these steps with your own custom graphic, you can create an unlimited number of custom animated wipes with graphics.

1. Locate the following picon in the bin Trinity/Bins/Panam/Projects.



The Picon for the Flag Graphic

This is the picon for the flag graphic you created in an earlier tutorial. If you haven't yet created this graphic, go to the section "Extracting Graphics With The Lift Stroke Function" on page 350 and follow the tutorial.

2. While holding the Shift key on your keyboard, drag-and-drop the flag graphic picon into the workspace.

By holding the Shift key down while you drag-and-drop the picon, you place the object in the exact spot it was in when it was originally saved. If you didn't hold the Shift key, the graphic would be placed wherever you dropped it in the workspace. This applies to all objects dropped in the workspace.

You see the flag graphic in the center of your workspace (following figure).

The Flag Graphic in the Workspace

3. Click the Select button in the Stroke Controls (following figure).

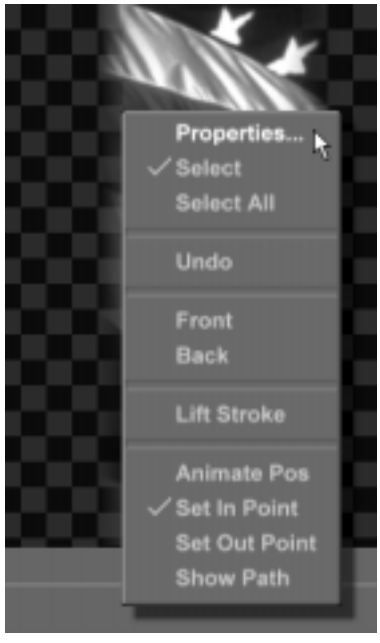
The Select Button

With the Select button selected, you can select any object in the workspace by simply clicking on it.

4. Select the flag graphic by clicking on it.

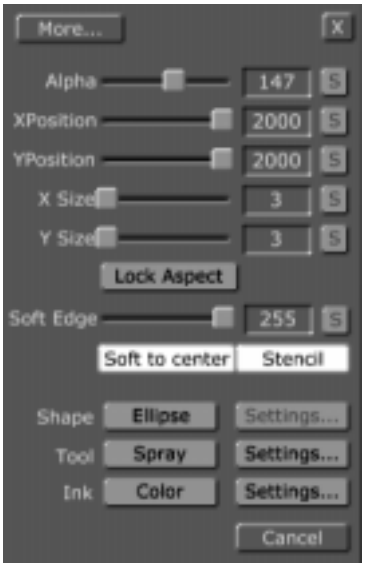
You see a bounding box around the entire flag graphic, indicating that it is selected.

5. Bring up the Stroke Properties panel by right-clicking on the flag graphic and choosing Properties from the pop-up menu (following figure).



Selecting Properties from the Pop-Up Menu

6. You see the Stroke Properties panel (following figure) in the upper left corner of the screen. From this panel, you can change the position of the flag stroke, then animate it. See “Stroke Properties Panel” on page 45 for additional information about using this panel.

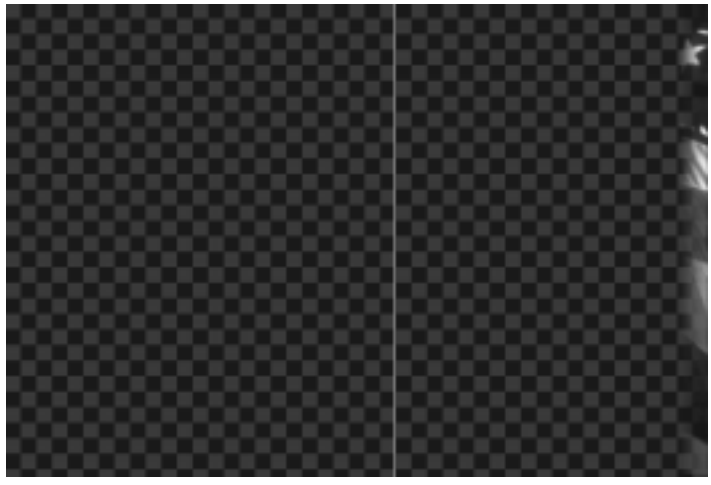


The Stroke Properties Panel

7. In the Stroke Properties panel, click-and-drag the XPosition slider (following figure) to the right until the flag graphic is just barely in the workspace. This is where the flag graphic will be at the beginning of the effect when you run it in Switcher.

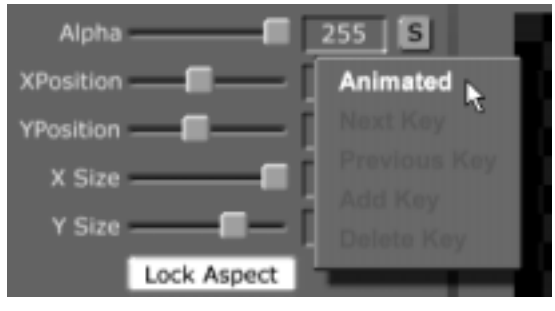
The XPosition Slider

You see about a quarter-inch strip of the flag graphic in the workspace (following figure). Since this strip of graphic is outside of the safe viewing area, when the effect is run in Switcher, the edge of the graphic will not be seen.



Flag Graphic at the Right Edge of Your Workspace

8. In the Stroke Properties panel, click the Animation Status button to the right of the word XPosition and choose Animated from the pop-up menu (following figure).



Choosing Animated from the Pop-Up Menu

By choosing Animated from the pop-up menu, you tell Panamation to animate the X position (or horizontal position) of the flag graphic.

NOTE When a stroke's property, such as size or position, is animated, a keyframe is automatically added for the stroke's position in the timeline. Whenever you alter a property that is animated at another point in the timeline, a keyframe is automatically added at that point in the timeline.

You see the Animation button change from S for static to A for animated.

9. Go to the end of the effect by clicking the Last Frame button in the Transport Controls (following figure).

The Last Frame Button

In the workspace, you see the end of the effect, with the white box representing the preview video source covering the entire workspace.

10. In the Stroke Properties panel, click-and-drag the XPosition slider (following figure) to the left until the flag graphic is just barely in the workspace. This is where the flag graphic will be at the end of the effect when you run it in Switcher. By changing this position, a keyframe is automatically added to the timeline.

The XPosition Slider

You see about a quarter-inch strip of the flag graphic in the workspace (following figure). Since this strip of graphic is outside of the safe viewing area, when the effect is run in Switcher, the edge of the graphic will not be seen.

Flag Graphic at the Left Edge of Your Workspace

11. Close the Stroke Properties panel by clicking the X button in the upper right corner of the panel.

12. Preview the transitional effect in Panamation to see how it will look when it is run in Switcher or loaded into Preditor. To do this, follow these steps:

    a. Bring the animation to its beginning by clicking the First Frame button (following figure) in the Transport Controls.

The First Frame Button

In the workspace, you see the animation at its starting point.

    b. Play the animation by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In the workspace, you see the animation as it plays. You see the flag graphic move across the screen from right to left.

Now that you've added the flag graphic to your wipe, it's time to move on to the next section, where you will save your wipe.

Saving The Wipe

Now that you've built your animated wipe with a graphic, it's time save it into one of Trinity's bins.

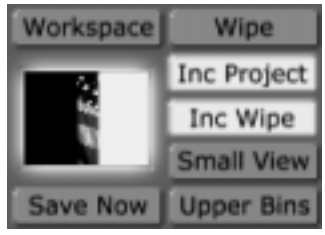
By following this section of the tutorial, you will learn how to save a Panamation project as a wipe.

To save the wipe, follow these steps:

1. Click-and-drag the Timeline slider (following figure) right or left so that it scrubs through the timeline.

The Timeline Slider

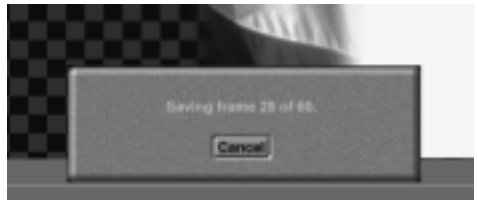
You see the picture on Workspace picon (following figure) change as you scrub through the timeline. Stop dragging the slider when you see an image on the picon that will help you identify the effect when it is saved in a bin. The image on the Workspace picon when the effect is saved becomes the picon for the effect.



The Workspace Picon

2. Click-and-drag the workspace picon into any bin to save the effect.

3. You see the Save Project window (following figure) appear. This window gives the status of the effect as it is compiled.



The Save Project Window

When this window disappears, your wipe effect is saved, and you see the following picon in the bin you chose to save the effect in.

The Saved Effect's Picon

Congratulations! You now have an animated wipe with graphics that can be loaded into Switcher or Preditor (see the Switcher and Preditor manuals for more information about how to load and run effects).

Now it's time to move on to the next tutorial.

Recording ClipMem/Time Machine Clips

In this tutorial, you will learn how to digitize clips in Panamation. While digitizing clips in Panamation, you will familiarize yourself with the Digitize Clip panel. From this panel you can create ClipMems or Time Machine clips.

ClipMems are clips that are recorded directly into RAM on the Warp Engine card. The length a ClipMem can be is determined by the amount RAM you have installed on the Warp Engine card. With the maximum 128MB of RAM installed, 6.3 seconds of video can be recorded at a time. If you have 16MB of RAM installed on the Ward Engine card, you can record 20 frames of NTSC or PAL video.

Time Machine clips are clips that are recorded to Time Machine's hard drives. With a Time Machine installed in your Trinity, you can record digital clips of any length.

Two ways to record digital clips in Panamation

In Panamation, there are two ways to record digital clips. One way is to digitize what is set as the Program Out video source. The other way is to save the Panamation project as a ClipMem or Time Machine clip.

This tutorial is broken up into two sections to better teach you how to digitize clips using both methods. The sections of this tutorial are:

1. Digitizing clips with the Digitize Clip panel

2. Saving a project as a digitized clip

Digitizing Clips With The Digitize Clip Panel

When digitizing clips with the Digitize Clip panel, whatever is set as the Program Out video source is what is digitized. This section of the tutorial teaches you how to set the Program Out video source from within Panamation. It also teaches you how to digitize ClipMem and Time Machine clips with the Digitize Clip panel.

You may want to use this function to digitize a clip while you are still in Panamation.

The clips digitized with this panel can be brought into the Panamation and Preditor workspaces, and can be played back in Switcher (see the manuals for Preditor and Switcher for more information about working with digitized clips from within these applications).

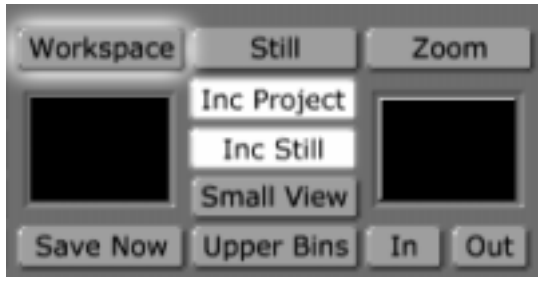
To digitize clips with the Digitize Clip panel, follow these steps:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

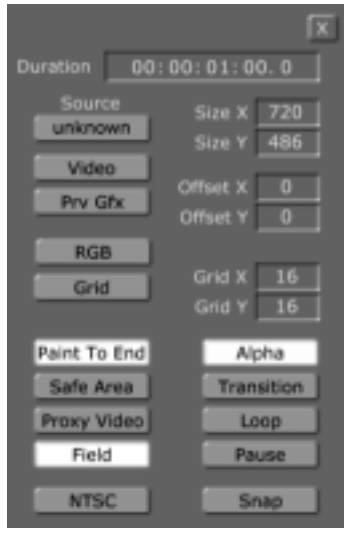
Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can set the length of your effect, change how it is displayed in the workspace, and set how it acts when it is run in Switcher. From this panel, you can also set the Program Out video source. See “Workspace Properties Panel” on page 176 for more information about using this panel.

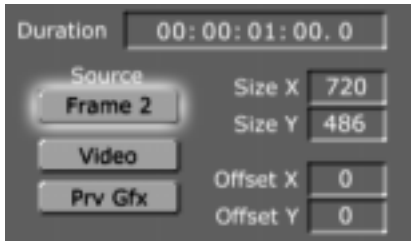


The Workspace Properties Panel

3. In the Workspace Properties panel, click on the Source button (following figure) and select your video source from the pop-up menu (following

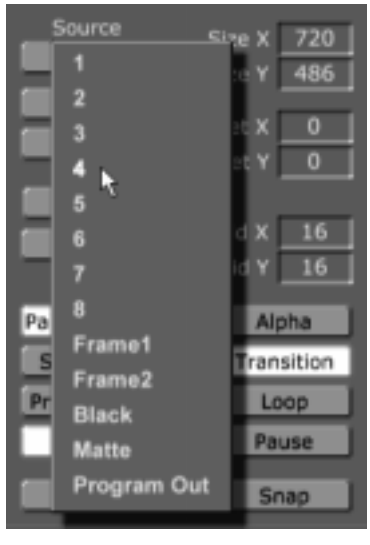
figure). This pop-up menu acts as a mini-switcher, allowing you to set what is displayed as the Program Out video source.

This tutorial will show you digitized clip created from a live video source. However, you can choose any video source you wish, including a framestore. You will use the clip created in this tutorial later in the tutorial “Creating Animated Windows Using ClipMems” on page 408.



The Source Button

The following figure illustrates selecting input 4 as the Program Out video source. Remember, to complete this tutorial you can choose any video source.

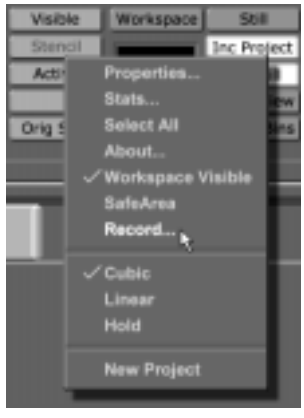


Choosing Input 4 as the Video Source

You see the video source you selected in your Program monitor.

4. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

5. Bring up the Digitize Clip panel by right-clicking on the Workspace picon in the Workspace Controls and choosing Record from the pop-up menu (following figure).



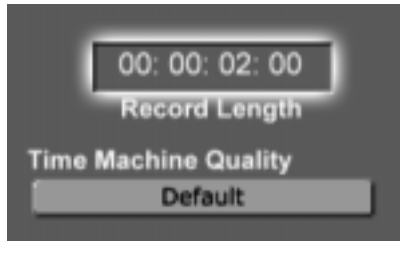
Choosing Record from the Pop-Up Menu

You see the Digitize Clip panel (following figure) in the upper left corner of your workspace. From this panel, you can choose which format to use to digitize your clip. You can also set the duration of the clip before it is digitized. For additional information on using the Digitize Clip panel, see “Digitize Clip Panel” on page 190.

The Digitize Clip Panel

6. In the Digitize Clip panel, set the duration of the clip to 2 seconds by clicking in Record Length window (following figure), typing the new duration, and pressing Enter on your keyboard.

   The timecode in this window is in standard SMPTE format (HH:MM:SS:FF).



The Record Length Window with the Record Length set at 2 Seconds

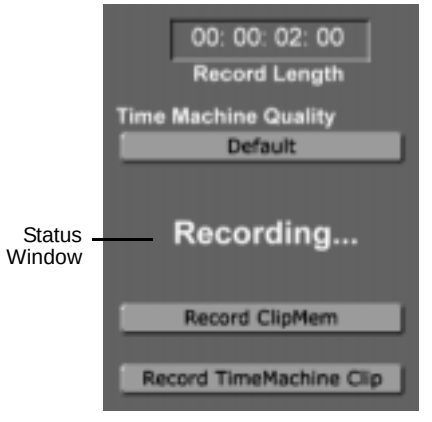
7. In the Digitize Clip panel, click the Record Clipmem button to begin recording your ClipMem.

NOTE

2.1 only

If you were recording a Time Machine clip from this panel, you would click the Record TimeMachine Clip button. When recording a Time Machine clip, you can set the quality level by clicking the Time Machine Quality button and choosing a setting from the pop-up menu (see “Digitize Clip Panel” on page 190 for more information about these settings). It is important to note that when a Time Machine clip is saved in a bin, its picon is a shortcut to the actual clip that is saved on Time Machine's hard drives.

In the Status Window, a message shows that Trinity is recording your ClipMem.



“Recording” Message in the Status Window

When this window reads Done, your digitized clip is saved and you see a picon for it (following figure) in the bin Trinity/Bins/Panam/Projects. This is the default bin for clips digitized using the Digitize Clip panel in Panamation. Be sure to save this digitized clip as you will use it in the tutorial “Creating Animated Windows Using ClipMems” on page 408.

The ClipMem Picon

NOTE The .601 file extension in the file's name indicates that the file is saved as a ClipMem. Only saved ClipMems use this file extension.

8. Name the picon for this clip by right-clicking on the picon in the bin, choosing Rename from the pop-up menu (following figure), typing a new name (name this clip MyClip1), and pressing Enter on your keyboard.

Choosing Rename from the Pop-Up Menu

You see the new name under the ClipMem picon.

9. Close the Digitize Clip panel by clicking the X button in the upper right corner of the panel.

In this section of the tutorial, you learned how to digitize a clip of the Program Out video. In the next section, you will learn how to save a Panamation project as a digitized clip.

Saving A Project As A Digitized Clip

In Panamation you can also save an entire project as a digitized clip. In this section of the tutorial, you will learn how to do just this. To learn this, you will save a project created in an earlier tutorial as a ClipMem. This tutorial will also teach you how to save that same project as a Time Machine clip.

To save a project as a digitized clip, follow these steps:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

2. Locate the following picon in the bin Trinity/Bins/Panam/Projects.

The Picon for the Looping Text Crawl Effect

This is the picon for the looping text crawl you created in an earlier tutorial. If you haven't yet created this project, go to the section "Creating A Looping Text Crawl" on page 292 and follow the tutorial.

3. Load the looping text crawl as the current project by double-clicking its picon.

   You see the project load into the workspace.

4. In the Workspace Controls, click the File Type button (following figure) and choose Memory Clip from the pop-up menu (following figure). By selecting Memory Clip from this menu, when you save the project again it is saved as a ClipMem.

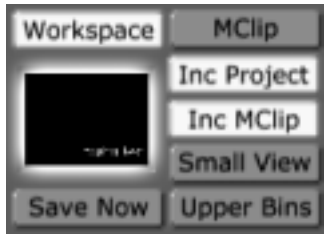
The File Type Button

Choosing Memory Clip from the Pop-Up Menu

You see the button that read Overlay now read MClip, indicating that when the project is saved, it will be saved as a ClipMem.

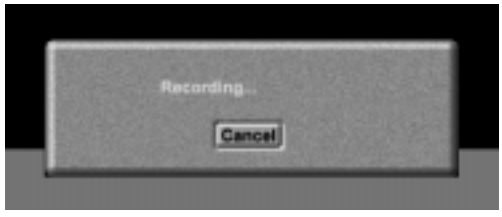
NOTE If you want to save this project as a Time Machine clip, choose TM Clip from the pop-up menu, instead of Memory Clip. When saved in a bin, the picon for a Time Machine is actually a shortcut to the clip, which is saved on Time Machine's hard drives.

5. In the Workspace Controls, click-and-drag the workspace picon (following figure) into the bin directory Trinity/Bins/Panam/Projects. By saving the project in this bin, it is easier to find when you use it later in the tutorial “Creating Animated Windows Using ClipMems” on page 408.



The Workspace Picon

In the workspace, you see a window that indicates that your digitized clip is being recorded.



The Recording Window

When this window disappears, your digitized clip is saved and you see a picon for it (following figure) in the bin you dragged it into.

The ClipMem Picon

NOTE The .601 file extension in the file's name indicates that the file is saved as a ClipMem. Only saved ClipMems use this file extension. A Time Machine shortcut is saved with a file extension of .lcp. Only Time Machine files use this file extension.

6. Name the picon for this clip by right-clicking on the picon in the bin, choosing Rename from the pop-up menu (following figure), typing a new name (name this clip MyClip2), and pressing Enter on your keyboard.

Choosing Rename from the Pop-Up Menu

You see the new name under the ClipMem picon.

In this section of the tutorial, you learned how to save a Panamation project as a digitized clip. This digitized clip can be brought into the Panamation and Preditor workspaces, and can be played back in Switcher (see the manuals for Preditor and Switcher for more information about working with digitized clips from within these applications).

Now that you've completed this tutorial, it's time to move on to the next tutorial.

Creating Animated Windows Using ClipMems

There will be times when you work with Panamation that you will want to create multiple animated windows using ClipMems. In this tutorial, you will create a project that does just this. You will also create multiple layers and learn how to change the shape of a layer. To do this, you will use the functions of the Layer Properties panel.

The following figure illustrates the finished project as it is played over a video source in Switcher.

The Finished Project as it is Run in Switcher

NOTE When creating this project, you could also use Time Machine clips instead of the ClipMems. If you do use Time Machine clips, note that they behave identically to ClipMems, since they are both digitized clips.

This tutorial is broken up into five sections. These sections are:

1. Preparing the workspace
2. Animating a layer's properties
3. Creating a layer
4. Animating a ClipMem window
5. Saving the project

Preparing The Workspace

Before you actually begin creating your graphic, you need to first prepare the workspace. By doing this, you tell Panamation how to display the workspace, and how the graphic will be displayed after you save it and load it into another workspace.

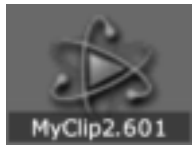
Follow these steps to prepare the workspace:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

2. Locate the following ClipMem picon in the bin directory Trinity/Bins/Panam/Projects. This is the picon for the ClipMem you created in the tutorial "Saving A Project As A Digitized Clip" on page 403. This ClipMem is named MyClip2.

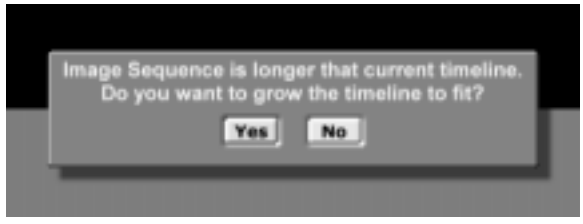


The ClipMem Picon

3. Load this ClipMem into the workspace by double-clicking its picon.

   You see a window (following figure) that says "Image sequence is longer than current timeline. Do you want to grow the timeline to fit?" Choose

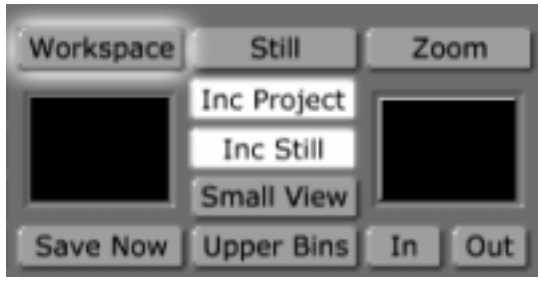
Yes from this window. The timeline expands to fit the entire length of the ClipMem.



The Image Sequence Length Window

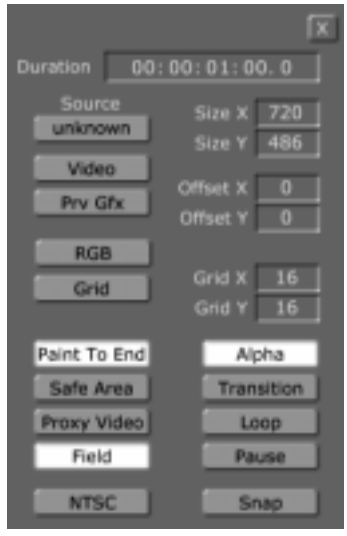
You see the ClipMem in the workspace. Remember that all objects in the workspace are strokes, including the stroke for this ClipMem. This stroke can be animated or altered like any stroke.

4. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



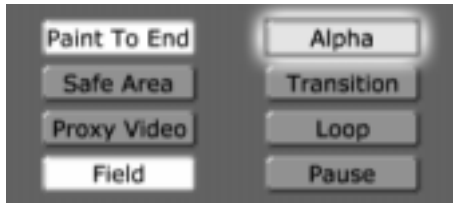
The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can set the length of your effect, how it is displayed in the workspace, and how it acts when it is run in Switcher. For more information about using this panel, see “Workspace Properties Panel” on page 176.



The Workspace Properties Panel

5. In the Workspace Properties panel, click the Alpha button (following figure) on. This makes the background of the layer transparent.



The Alpha Button

6. Deselect the Transition function by clicking on the Transition button (following figure). With Transition selected, a project is saved as a transition. Selecting this is necessary if you are creating an effect such as a wipe, but is not needed when creating an overlay, such as the one you will create in this tutorial.

The Transition Button

7. Close the Workspace Properties panel by clicking the X button in the upper right corner of the screen.

Now that you've prepared the workspace, you're ready to animate the properties of the layer your ClipMem is on.

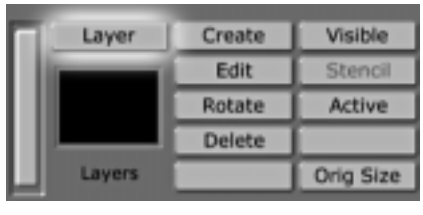
Animating A Layer's Properties

In this section of the tutorial, you will animate the properties of the layer your ClipMem is on. To do this, you will use the functions of the Layer Properties panel to add dimension to the layer. This will give you a feel for how this panel works.

You will also learn to create multiple layers, select these layers, and adjust how they are displayed in the workspace.

To animate a layer's properties, follow these steps:

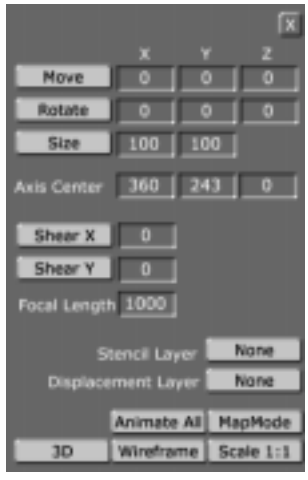
1. Bring up the Layer Properties panel by clicking the Layer button in the Layer Controls.



The Layer Button

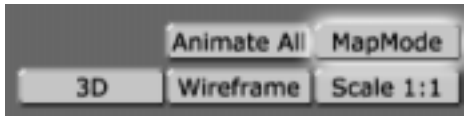
You see the Layer Properties panel (following figure) in the upper left corner of your screen. From the Layer Properties panel, you can move,

rotate, scale, or change the position of your layer. See “Layer Properties Panel” on page 150 for more information about using this panel.



The Layer Properties Panel

2. In the Layer Properties panel, bring up the MapMode panel by clicking the MapMode button (following figure).



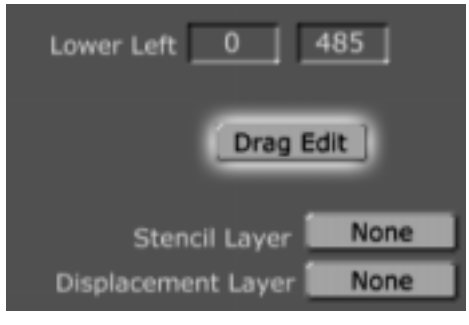
The MapMode Button

You see the MapMode panel in place of the Layer Properties panel. From the MapMode panel, you can change the position of each corner of a layer. For additional information about using the MapMode panel, see “MapMode Panel” on page 160.

The Map Mode Panel

3. In the MapMode panel, click the Drag Edit button (following figure). By clicking this button, you can click-and-drag each corner to a new position.

   Without Drag Edit selected, you must type in a numeric value for the new position. For each corner, the first number represents the X position of the corner. The second number represents the Y position of the corner.

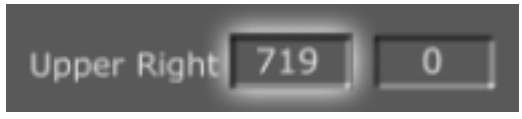


The Drag Edit Button

4. In the MapMode panel, right-click in the X position value window for the Upper Right corner (following figure) and choose Animate on from the

pop-up menu (following figure). By choosing Animate on, you are animating this value.

NOTE When a layer's property, such as size or position, is animated, a keyframe is automatically added for the stroke's position in the timeline. Whenever you alter a layer's property that is animated at another point in the timeline, a keyframe is automatically added at that point in the timeline.



The X Position Value Window

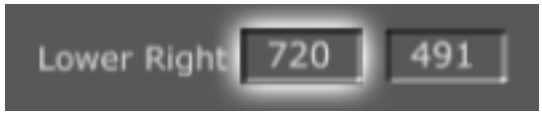
Choosing Animate On

5. In the Map Mode panel, right-click in the Y position value window for the Upper Right corner (following figure) and choose Animate on from the pop-up menu (following figure). By choosing Animate on, you are animating this value.

The Y Position Value Window

Choosing Animate On

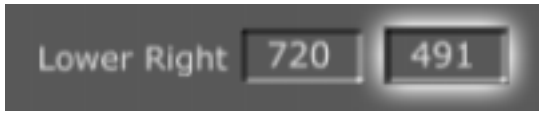
6. In the MapMode panel, right-click in the X position value window for the Lower Right corner (following figure) and choose Animate on from the pop-up menu (following figure). By choosing Animate on, you are animating this value.



The X Position Value Window

Choosing Animate On

7. In the MapMode panel, right-click in the Y position value window for the Lower Right corner (following figure) and choose Animate on from the pop-up menu (following figure). By choosing Animate on, you are animating this value.



The Y Position Value Window

Choosing Animate On

8. Bring the animation to the end of the effect by clicking the Last Frame button (following figure) in the Transport Controls. For additional information about using the Transport Controls, see “Transport And Keyframe Controls” on page 210.

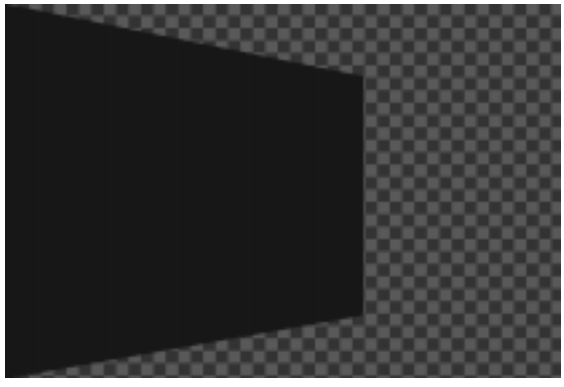
The Last Frame Button

9. Click in the lower right corner of the workspace and drag the corner of the layer up and to the left until it looks like the following figure.

The Lower Right Corner Dragged Up and Left

10. Click in the upper right corner of the workspace and drag the corner of the layer down and to the left until it looks like the following figure. In

the timeline, a keyframe is added for the layer's properties at this point in the animation.



The Upper Right Corner Dragged Down and Left

11. Close the MapMode panel by clicking the X button in the upper right corner of the panel.

12. Preview the animation in Panamation to see how it will be have when it is run in Switcher or loaded into Preditor. To do this, follow these steps:

    a. Bring the animation to its beginning by clicking the First Frame button (following figure) in the Transport Controls.

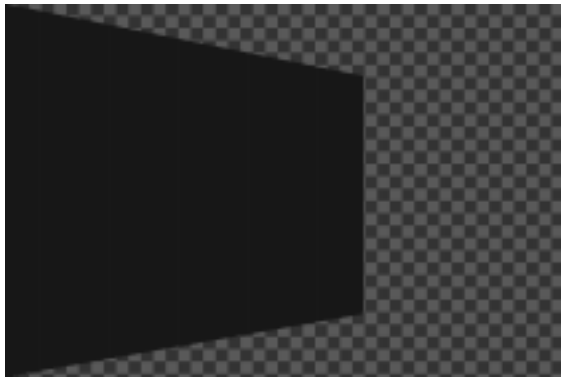
The First Frame Button.

In the workspace, you see the animation at its starting point. The stroke for the ClipMem fills the entire workspace.

    b. Play the animation by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In the workspace, you see the animation as it plays. When it finishes playing, the workspace should look like the following figure.



The Animation at its End in the Workspace

NOTE When a project is previewed in Panamation, the speed at which it plays back is slower than its actual speed when run in Switcher or Preditor. How slow this effect is played in Panamation is determined by how complex the strokes and animation are on each frame.

In this section of the tutorial, you learned how to animate and resize a layer using the Map Mode panel. Continue to the next section to learn how to add a layer to your project.

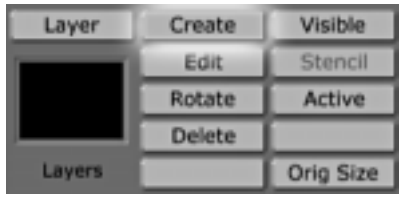
Creating A Layer

There are times when you will want to work with multiple layers in Panamation. Using multiple layers makes it easier to group objects together and separate components of your project.

In this section of the tutorial you will learn to work with layers by adding a layer to your project, changing how the layer is displayed in the workspace, and selecting a layer. For additional information about using layers in Panamation, see “Working With Layers” on page 147.

Follow these steps to create a layer:

1. Add a layer to your project by clicking the Create button (following figure) in the Layer Controls. You can create an unlimited number of layers by clicking the Create button.

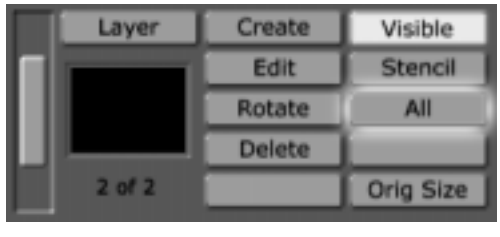


The Create Button

In the workspace, it appears as if your project disappeared, but it didn't. The new layer is covering the project so that you cannot see it.

2. Click the Active button in the Layer Controls to make all layers visible.

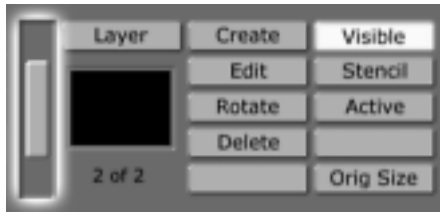
You see the Active button change to read All (following figure).



The All Button

If you click this button again, it changes to read Transparent and all objects on layers other than the active layer are transparent.

3. Select layer 1 by clicking-and-dragging the Layer slider (following figure) up until layer 1 is selected. You can tell that it is selected because the number below the Current Layer picon changes from 2 of 2 to 1 of 2.



The Layer Slider

You now have an additional layer in your project. In the next section you will bring a ClipMem into this layer.

Animating A ClipMem Window

Now that you created a second layer in your project, you are ready to add a ClipMem to it. Once the ClipMem is in your workspace, you will resize the stroke for the ClipMem and then animate it so that it crawls from the top of the screen to the bottom. By doing this, you will get a feel for how to animate a ClipMem window.

To animate a ClipMem window, follow these steps:

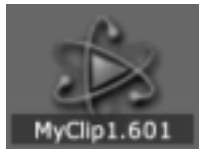
1. Bring the timeline to the beginning of the effect by clicking the First Frame button (following figure) in the Transport Controls. By bringing the effect to its beginning, you can bring the ClipMem into the workspace and be sure that it will last the entire duration of the effect. If you bring the ClipMem into the workspace while it is at the end of the effect, the ClipMem only appears on the last frame of the effect.

The First Frame Button

2. Select layer 2 by clicking-and-dragging the Layer slider (following figure) down until layer 2 is selected. You can tell that it is selected because the number below the Current Layer picon changes from 1 of 2 to 2 of 2.

The Layer Slider

3. Locate the following ClipMem picon in the bin directory Trinity/Bins/Panam/Projects. This is the picon for the ClipMem you created in the tutorial “Digitizing Clips With The Digitize Clip Panel” on page 395. This ClipMem is named MyClip1.



The ClipMem Picon

4. While holding the Shift key on your keyboard, drag-and-drop the ClipMem picon into the workspace. If you hold the Shift key, the stroke has the same shape, size, and position it had when it was originally saved.

   You see the ClipMem in the workspace. Remember that all objects in the workspace are strokes, including the stroke for this ClipMem. This stroke can be animated or altered like any stroke.

5. Bring the timeline to the end of the effect by clicking the Last Frame button (following figure) in the Transport Controls. See “Transport And Keyframe Controls” on page 210 for more information about using the Transport Controls.

The Last Frame Button

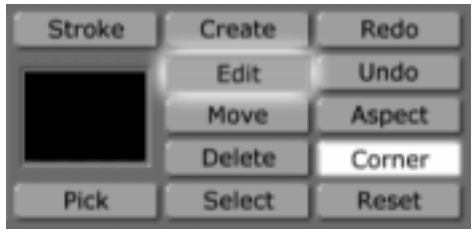
6. Click the Select button (following figure) in the Stroke Controls so that the button is selected. With this button on, you can select any object in the workspace by clicking on it.

The Select Button

7. In the workspace, select the ClipMem stroke by clicking on it.

   You see a bounding box around the stroke, indicating that it is selected.

8. In the Stroke Controls, put Panamation in edit mode by clicking the Edit button (following figure) so that it is selected. By putting Panamation in edit mode, you can scale and move strokes in the workspace.

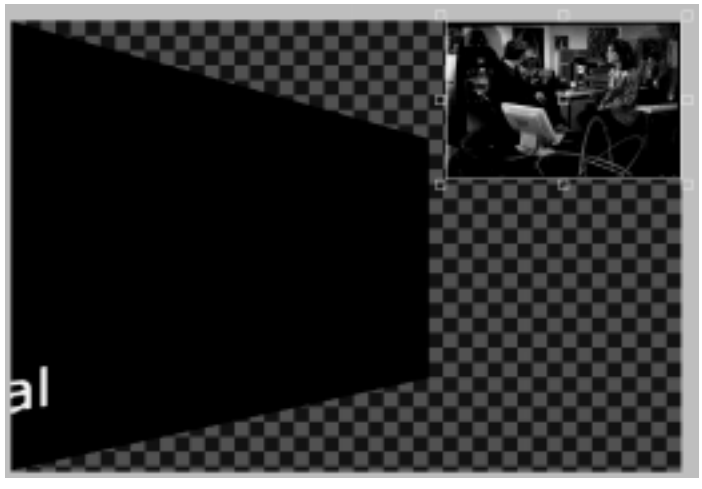


The Edit Button

In the workspace, you see edit points added to the bounding box around your stroke. By clicking-and-dragging these edit points, you can change the size and position of the stroke.

9. While holding the Shift key on your keyboard, drag the lower left edit point of the stroke up and to the right until your workspace looks similar to the following figure. By holding the Shift key, the aspect ratio of the stroke stays proportional. If you don't hold Shift, when you drag the corner the height and width of the stroke do not stay proportional.

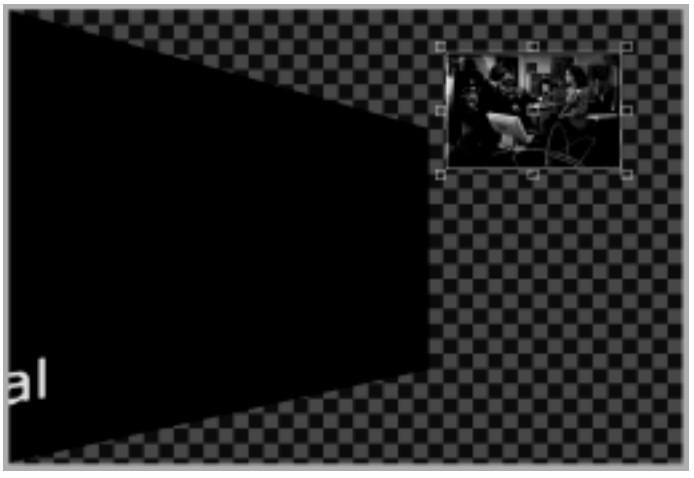
   Remember that the ClipMem you grabbed in an earlier tutorial was of live video, so it won't look like the video in the figure.



The Workspace with the Stroke Size Adjusted

10. While holding the Shift key on your keyboard, drag the upper right edit point of the stroke down and to the left until your workspace looks similar to the following figure. By holding the Shift key, the aspect ratio of the stroke stays proportional. If you don't hold Shift, when you drag the corner, the height and width of the stroke do not stay proportional.

    Remember that the ClipMem you grabbed in an earlier tutorial was of live video, so it won't look like the video in the figure.



The Workspace with the Stroke Size Adjusted

11. Bring the effect to the first frame of the animation by clicking the First Frame button (following figure) in the Transport Controls.

The First Frame Button

12. Bring up the Stroke Properties panel for the ClipMem stroke on layer 2 by right-clicking on the stroke and choosing Properties from the pop-up menu (following figure).

Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel in the upper left corner of your screen.

13. In the Stroke Properties panel, change the vertical position of the ClipMem stroke by clicking-and-dragging the Y Position slider (following figure) to the right until the stroke is just outside the workspace. This is the position the stroke will be in at the beginning of the effect.

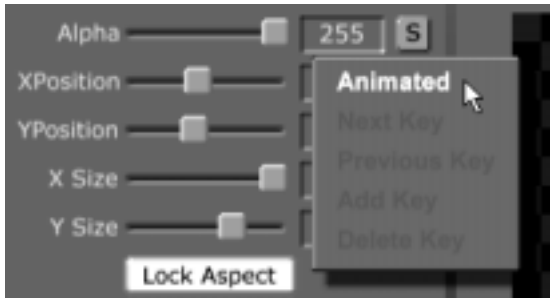
The Y Position Slider

In the workspace, you see the stroke move down until it is just outside the workspace.

14. In the Stroke Properties panel, click the Animation Status button to the right of the word YPosition and choose Animated from the pop-up menu (following figure).

NOTE When a stroke's property, such as size or position, is animated, a keyframe is automatically added for the stroke's position in the timeline. Whenever

you alter a stroke's property that is animated at another point in the timeline, a keyframe is automatically added at that point in the timeline.



Choosing Animated from the Pop-Up Menu

By choosing Animated from the pop-up menu, you are telling Panamation to animate the Y position (or horizontal position) of the ClipMem stroke.

You see the Animation button change from S for static to A for animated (following figure). In the timeline, a keyframe is added for the stroke's position at this point in the animation.

The Animation Status Reading A for Animated

15. In the Transport Controls, go to a point about two-thirds through the effect by clicking in the Timecode window (following figure), typing 00:00:01:15.0, and pressing Enter on your keyboard. For more information about using the Transport Controls, see “Transport And Keyframe Controls” on page 210.

The Timecode Window

In the workspace, you see the effect at position two-thirds of the way through the animation.

16. Click the Animation Status button to the right of the word YPosition and choose Add Key from the pop-up menu (following figure).

Choosing Add Key from the Pop-Up Menu

By choosing Add Key from the pop-up menu, you are adding a keyframe for the stroke's position on the timeline. For this effect, you still want the ClipMem stroke off the screen at this point in the effect. If you didn't add this key, the ClipMem stroke would already be crawling across the screen at this point in the animation. Since you don't want it to begin crawling until this point in the animation, you had to add an extra key.

17. Go to the end of the effect by clicking the Last Frame button in the Transport Controls (following figure).

The Last Frame Button

In the workspace, you see the end of the effect.

18. In the Stroke Properties panel, change the vertical position of the ClipMem stroke by clicking-and-dragging the YPosition slider (following figure) to the left until the stroke is just outside of the workspace. This is the position where the stroke will be at the end of the effect. In the timeline, a keyframe is added for the stroke's position in the animation.

The Y Position Slider

In the workspace, you see the stroke move up until it is just outside the workspace.

19. Preview the animation in Panamation to see how it will look when it is run in Switcher or loaded into Preditor. To do this, follow these steps:

    a. Bring the animation to its beginning by clicking the First Frame button (following figure) in the Transport Controls.

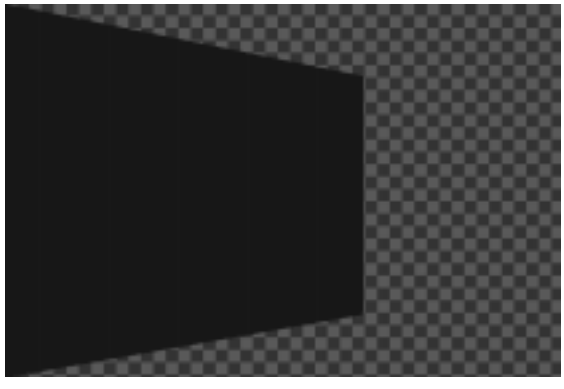
The First Frame Button

In the workspace, you see the animation at its starting point. The stroke for the Looping Text ClipMem should fill the entire workspace. The other ClipMem should be out of the workspace.

b. Play the animation by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In the workspace, you see the animation as it plays. You see the Looping Text ClipMem pull back, while the ClipMem stroke moves up the right side of the workspace beginning at two-thirds through the effect. When it finishes playing, the workspace should look like the following figure.



The Animation at its End in the Workspace

NOTE When a project is previewed in Panamation, the speed at which it plays back is slower than its actual speed when run in Switcher or Preditor. How slow this effect is played in Panamation is determined by how complex the strokes and animation are on each frame.

Now that you've created your effect, it's time to save it.

Saving Your Effect

Now that you have an effect where one ClipMem pulls back, while another ClipMem crawls up the side of the screen, it's time to save your project. This section of the tutorial teaches you how to save an effect as an overlay.

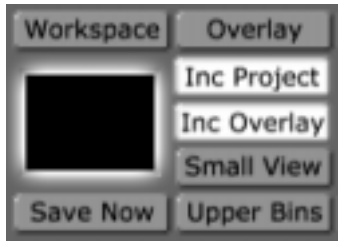
To save the project, follow these steps:

1. In the Workspace Controls, click the File Type button (the button to the right of the Workspace button) and choose Overlay from the pop-up menu (following figure).

Choosing Overlay from the Pop-Up Menu

The File Type button should now read Overlay. With Overlay selected as the file type, when the project is saved it will act as an overlay. If you chose Wipe from the pop-up menu, your project is saved as a wipe.

2. In the Workspace Controls, click-and-drag the workspace picon (following figure) into the bin directory Trinity/Bins/Panam/Projects.



The Workspace Picon

You see a window come up indicating that the project is being saved (following figure).

The Saving Project Window

When this window disappears, your project is saved.

You now have an effect where one ClipMem pulls back, while another ClipMem crawls up the side of the screen. This effect can be run in Switcher (see the Switcher Manual for more information about running effects in the Switcher application). By creating this effect, you learned how to alter the properties of a layer and animate those properties. You also learned how to composite ClipMems and animate them.

Now, continue to the next tutorial.

Rotoscoping A Stenciled Text Stroke

Rotoscoping is a commonly used effect that can be created using Panamation. Rotoscoping is a process involving painting over video, frame by frame. Remember the lightsaber battles in “Star Wars”? The glowing lightsaber effect was created by rotoscoping the glow onto the video frame by frame.

In this tutorial, you will create a simple animation by rotoscoping a texture over a stenciled text stroke. In each frame, a slightly different texture will be drawn. The text in the finished project will have an electric look to it and will loop continuously when it is run in Switcher. By making the project loop, you only need to rotoscope 10 frames of video.

Using the functions of the Workspace Properties panel, you will learn how to set up a project so that you can paint on each frame individually. By doing this, you will learn the foundation for creating your own more complex rotoscoped project.

The following figure illustrates what the finished project looks like when played back over a video source in Switcher.

The Finished Project as it is Played Back in Switcher

This tutorial is broken up into three sections. These sections are:

1. Preparing the workspace

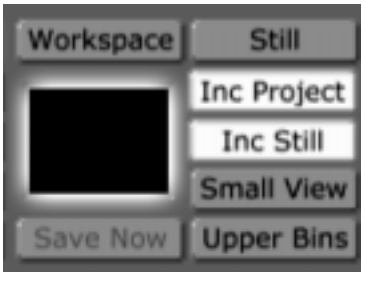
2. Rotoscoping the text

3. Saving the project

Preparing The Workspace

Before you begin rotoscoping text, you need to first prepare the workspace. By doing this, you are telling Panamation how to display the workspace, and how the effect is displayed after you save it and load it into another workspace.

1. Right-click on the Workspace picon (following figure) and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

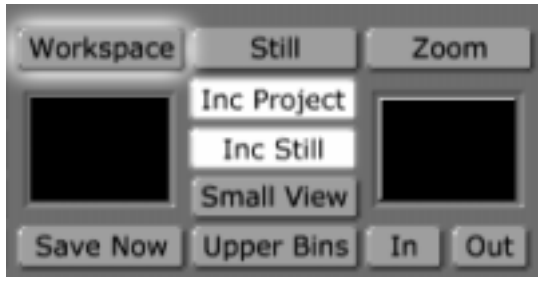


The Workspace Picon

Choosing New Project

Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

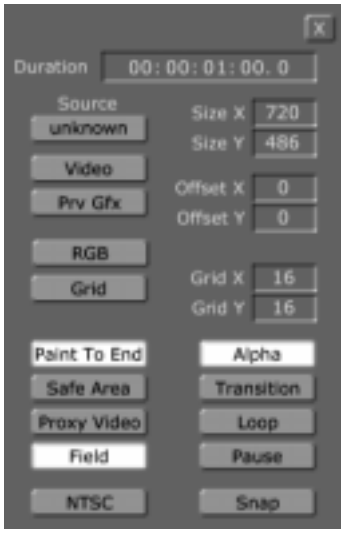
2. Click the Workspace button (following figure) above the Workspace picon to bring up the Workspace Properties panel.



The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can

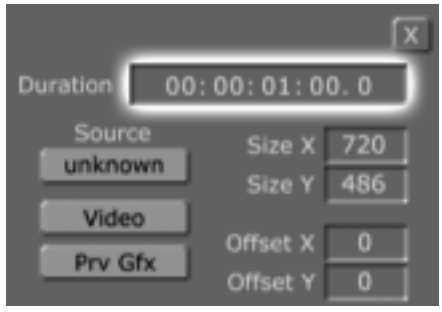
set the length of your effect, change how it is displayed in the workspace, and set how it acts when it is run in Switcher. For more information about using this panel, see “Workspace Properties Panel” on page 176.



The Workspace Properties Panel

3. In the Workspace Properties panel, change the duration of the effect from 1 second to 10 frames. To do this, follow these steps:

    a. Click on the 1 in the Duration Window (following figure). Timecode is in standard SMPTE format (HH:MM:SS:FF). That means that the 1 is the seconds value.

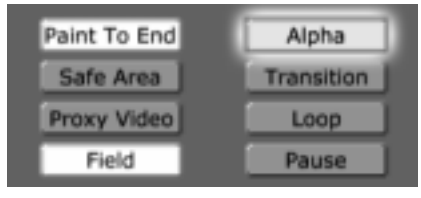


Duration Window in the Workspace Properties Panel

b. Type in the new value for the for the duration, which is 10 frames. The duration value should read 00:00:00:10.0.

c. Press Enter on your keyboard.

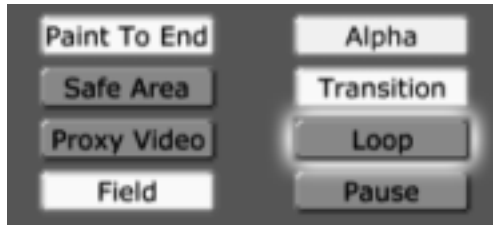
4. In the Workspace Properties panel, click the Alpha button (following figure) on. This makes the background of the layer transparent.



The Alpha Button

You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of a layer is transparent.

5. In the Workspace Properties panel, click the Loop button (following figure) on. By doing this, when the effect is run in Switcher, it continuously loops until the effect is stopped.

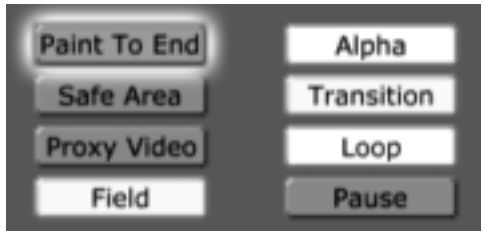


The Loop Button

6. In the Workspace Properties panel, take note of the Paint To End Button (following figure). This button controls the duration of strokes that are drawn in the workspace.

   If the Paint To End button is selected, a stroke drawn in the workspace lasts the entire length of the effect.

   If the Paint To End button is not selected, a stroke drawn in the workspace lasts for only a frame or field, depending on whether or not the Field button is selected. If the Field button is *not* selected, the stroke lasts for one frame. If the Field button is selected, the stroke lasts for only one field. Also, the Field button has no function if the Paint To End button is selected.



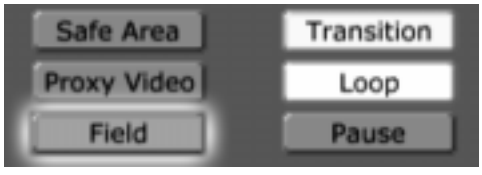
The Paint To End Button

   Right now, you want to keep the Paint To End button selected. You will first draw a stencil stroke in the workspace that you want to last the entire effect. You will come back to this panel later and deselect this button.

7. In the Workspace Properties panel, deselect the Field button (following figure). When you begin rotoscoping, you want the strokes to last an

entire frame. With the Field button selected, they only last for one field. Leaving this button selected gives you the ability to create more detailed rotoscoping projects, since you can paint on each field of video.

This button has no function now, since the Paint To End button is selected. But as long as you're in the Workspace Properties panel now, go ahead and deselect it.



The Field Button

8. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

Rotoscoping The Text

In this section of the tutorial, you will create a text stroke that will be used as a stencil mask. Then, frame by frame, you will paint a texture into the text. By doing this, you will get a feel for how to rotoscope. When you finish this section of the tutorial, you will have an effect with text that has an electric, jittery look to it.

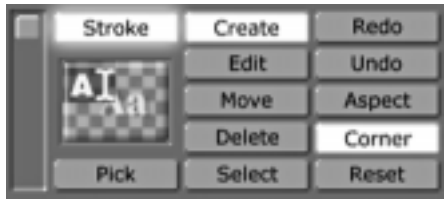
1. Locate the following text stroke picon in the bin directory Trinity/Bins/Panam/Sampler. It is the picon with the yellow letters on it.

The Text Stroke Picon

2. Load this picon as the Current Stroke by clicking on it.

   You see the picon in the Current Stroke Picon window in the stroke controls, indicating that it was loaded as the Current Stroke.

3. Bring up the Stroke Properties panel for the Current Stroke by clicking the Stroke button (following figure) in the Stroke Controls.

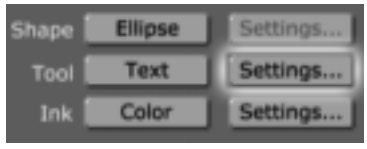


The Stroke Button

You see the Stroke Properties panel (following figure) in the upper left corner of your screen. For additional information about using the Stroke Properties panel, see “Stroke Properties Panel” on page 45.

The Stroke Properties Panel

4. From the Stroke Properties panel, bring up the Text Settings panel for the Current Stroke by clicking the Tool Settings button (following figure).



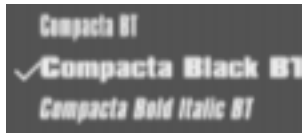
The Tool Settings Button

You see the Text Settings panel (following figure) just below the Stroke Properties panel. From this panel, you can change the font and size of a text stroke. See “Text Settings Panel” on page 69 for additional information about this panel.

The Text Settings Panel

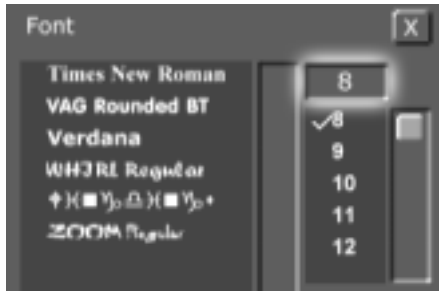
5. In the Text Settings panel, change the font to Compacta Black BT by scrolling through the font list and clicking on the font name.

   You see a check mark next to the font Compacta Black BT (following figure), indicating that the font was selected.



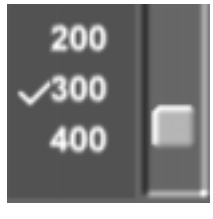
The Font Compacta Black BT Selected

6. In the Text Settings panel, change the font size to 300 by scrolling through the fonts sizes and clicking 300. The font size can also be changed by selecting the size in the Font Size window (following figure), typing in a new size, and pushing Enter on your keyboard.



The Font Size Window

You see a check mark next to the font size 300 (following figure), indicating that the size was selected.



The Font Size 300 Selected

NOTE The stroke you just created (and any custom stroke, for that matter) can be saved for further use by dragging-and-dropping its picon from the Stroke Controls into a bin. Load this stroke as you would any other stroke, by clicking on it.

7. Close the Text Settings and Stroke Properties panels by clicking the X button in the upper right corner of each panel.

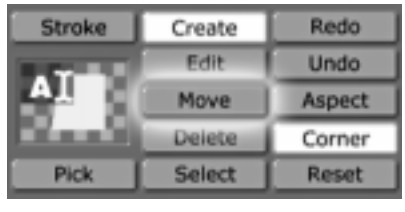
8. Click in the workspace and type the word TEXT in all caps.

   The stroke you just drew should look like the following figure.

The Text Stroke

9. Move the stroke you just created so that it is in the center of the workspace. To do this, follow these steps:

   a. Select the Move button (following figure) in the Stroke Controls.



The Move Button

   b. In the workspace, click-and-drag the TEXT stroke so that the workspace looks like the following figure.

The Text Stroke in the Center of the Workspace

10. Select the TEXT stroke. To do this:

    a. Select the **Select** button (following figure) in the Stroke Controls.

The Select Button

    b. In the workspace, click the TEXT stroke.

    You see a bounding box around the TEXT stroke (following figure), indicating that it was selected.

The Selected Text Stroke

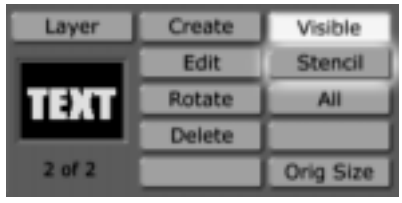
11. Click the Create button (following figure) in the Layer Controls. By doing this, you have created a second layer. You are going to make the TEXT stroke a stencil on the second layer of your project.

    Since the TEXT stroke was selected when you created the second layer, it was pulled up onto the new layer.

The Create Button

12. In the Layer Controls, select the Stencil button (following figure). By doing this, you have turned the layer into a stencil layer. This means that when you draw a stroke in the workspace, it only appears within the boundaries of any stroke in the layer. So when you draw a stroke, it will only appear within the letters of the TEXT stroke.

NOTE A layer must have an alpha channel to be used as a stencil layer. With the exception of the first layer, all layers automatically have an alpha channel. To use the first layer of a project as a stencil layer, Alpha must be turned on in the Workspace Properties panel.



The Stencil Button

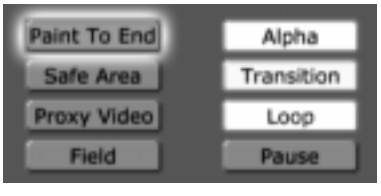
13. Bring up the Workspace Properties panel by clicking the Workspace button (following figure) in the Workspace Controls.

The Workspace Button

You see the Workspace Properties panel (following figure) in the upper left corner of the screen. From this panel, you will change how drawing in the workspace works by making it so that strokes only last for one frame. For more information about using the Workspace Properties panel, see “Workspace Properties Panel” on page 176.

The Workspace Properties Panel

14. In the Workspace Properties panel, deselect the Paint To End button (following figure). By doing this, when you draw a stroke in the workspace, it only lasts for one frame. This allows you to paint on video frame by fame.



The Paint To End button

15. Close the Workspace Properties panel by clicking the X button in the upper right corner of the panel.

16. Locate the following stroke picon in the bin directory Trinity/Bins/Panam/Sampler. It is the picon with the light blue particles on it.

The Stroke Picon

17. Load this picon as the Current Stroke by clicking it.

    You see the stroke in the Current Stroke Picon window, indicating that it is loaded as the Current Stroke.

18. In the workspace, draw a stroke over the TEXT stencil stroke. Continue drawing until the entire stencil stroke is filled and looks similar to the following figure. You may have to make a few passes to completely fill the stroke.

The Project in the Workspace

19. In the Transport Controls, click the Next Field button (following figure). Clicking this button advances the timeline ahead one field.

The Next Field Button

You see that the workspace does not look any different than at the beginning of the effect. This is because you set it up so that strokes drawn in the workspace last for one frame. That means that the previous field and this one are filled with the stroke, since frames have two fields. The next field has only the TEXT stencil stroke in it.

20. Click the Next Field button again to bring the effect to the next field in the timeline.

    In the workspace, you see that the TEXT stencil stroke is not filled with a stroke.

21. In the workspace, draw a stroke over the TEXT stencil stroke. Continue drawing until the entire stencil stroke is filled and looks similar to the following figure. You may have to make a few passes to completely fill the stroke.

The Project in the Workspace

22. Repeat steps 19, 20, and 21 until you reach the end of the animation. When you reach the end of the effect, you will have painted on every frame in the short animation.

23. Preview the animation in Panamation to see how it will look when it is played back in Switcher or loaded into Preditor. To do this, follow these steps:

    a. Bring the animation to its beginning by clicking the First Frame button (following figure) in the Transport Controls.

The First Frame Button

    In the workspace, you see the animation at its starting point.

    b. Play the animation by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In the workspace, you see your effect continuously loop as it plays. Notice that the random particles drawn on each frame give the effect an electric, jittery look.

NOTE When a project is previewed in Panamation, the speed at which it plays back is slower than its actual speed when run in Switcher or Preditor. How slow this effect is played in Panamation is determined by how complex the strokes and animation are on each frame.

c. Stop the effect from playing in Panamation by clicking the Stop button (following figure) in the Transport Controls. For more information about using the Transport Controls, see “Transport And Keyframe Controls” on page 210.

The Stop Button

In the workspace, you see your effect stop playing.

Now you're ready to save the project in a format that can be played back in Switcher.

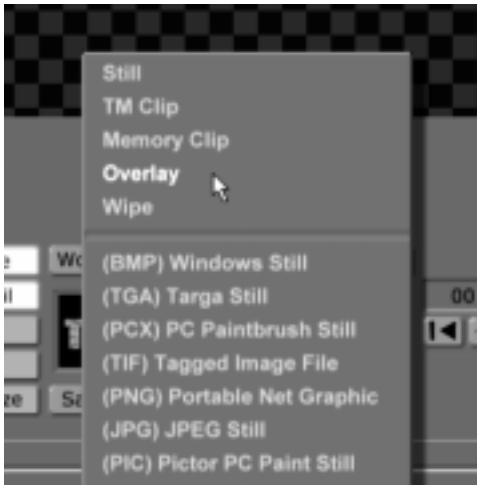
Saving The Project

Now that you have a rotoscoped effect that loops, it's time to save your project. This section of the tutorial teaches you how to save an effect as an overlay.

To save the project, follow these steps:

1. In the Workspace Controls, click the File Type button (following figure), and choose Overlay from the pop-up menu (following figure).

The File Type Button



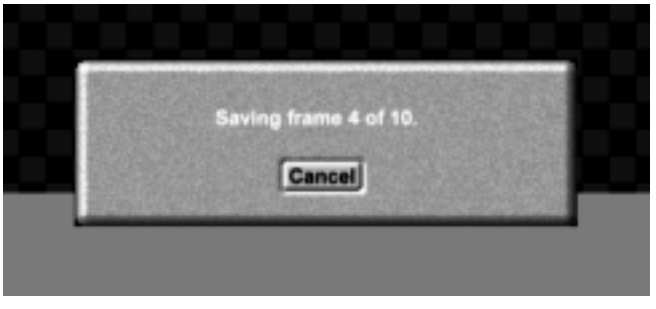
Choosing Overlay from the Pop-Up Menu

The File Type button should now read Overlay. With Overlay selected as the file type, when the project is run in Switcher it acts as an overlay. If you chose Wipe from the pop-up menu, your project is saved as a wipe.

2. In the Workspace Controls, click-and-drag the workspace picon (following figure) into the bin Trinity/Bins/Panam/Projects. Saving the project in this bin makes it easier to locate it when you use it later in this tutorial.

The Workspace Picon

You see a window appear that indicates that the project is being saved (following figure).



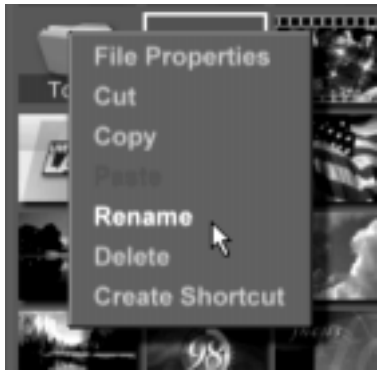
The Saving Project Window

When this window disappears, your project is saved and you see a picon for it (following figure) in the bin.

The Saved Project's Picon

3. Name the project you just saved. To do this, follow these steps:

    a. Right-click on the picon for the project and choose Rename from the pop-up menu (following figure).



Choosing Rename from the Pop-Up Menu

    In the bin, you see that the name for the picon is selected. The .tfx extension means that the project is saved as a Trinity effect.

    b. Type in the name Rotoscope for the project.

    You see the new name in the picon.

    c. Press Enter on your keyboard.

In the bin, you see the picon with the new name you just typed on it.

The Named Picon

You now have an effect that can be run in Switcher (see the Switcher Manual for more information about running effects in Switcher).

Animating A Lower Third Using The Timeline

In television, a lower third is a commonly used graphic. Most often used for talk shows and news programs, a lower third graphic appears in the lower third of the screen. This type of graphic usually contains information such as a person's name or the location of a live shoot.

In this tutorial, you will create your own lower third graphic. While creating this graphic, you will animate the elements in the graphic and use the functions of the timeline to edit the keyframes for this animation. By following this tutorial, you will get a feel for how the timeline is used to edit keyframes.

The following figure illustrates what the lower third graphic looks like when it is competed and played back over a video source in Switcher.

The Finished Project Over Live Video

TIP This tutorial is intended for the more advanced user. It is written so that any level of user can follow it, but you may want to complete earlier tutorials before tackling this one. Also, this tutorial takes more time to complete than earlier tutorials.

This tutorial is broken up into five sections. These sections are:

1. Preparing the workspace

2. Saving the project

3. Adding elements to the workspace

4. Animating the elements

5. Editing the animation using the timeline

Preparing The Workspace

Before you actually begin creating your lower third graphic, you need to first prepare the workspace. By doing this, you are telling Panamation how to display the workspace, and how the effect is displayed after you save it and run it in Switcher.

Follow these steps to prepare the workspace:

1. Right-click on the Workspace picon and choose New Project from the pop-up menu (following figure). If you are starting up Panamation for the first time, this is unnecessary since there is no project loaded into the workspace.

Choosing New Project

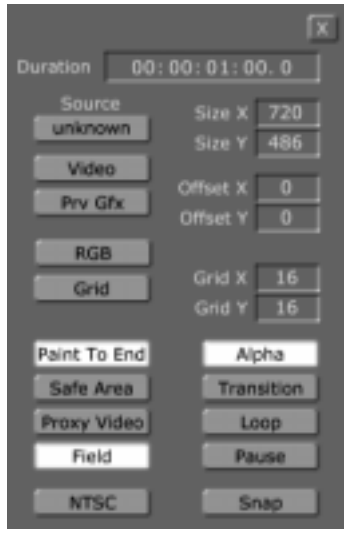
Choosing New Project clears the workspace, making it ready to start a new project. If an unsaved project is in the workspace, a menu comes up

asking if you want to save the current project. If you wish to save this project, click Yes. If you don't wish to save it, click No.

2. Click the Workspace button (following figure) in the Workspace Controls to bring up the Workspace Properties panel.

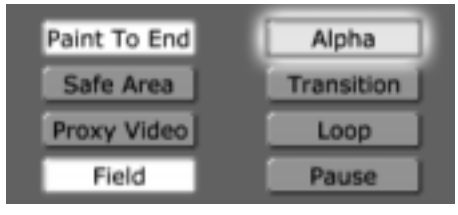
The Workspace Button

You see the Workspace Properties panel (following figure) in the upper-left corner of the screen. From the Workspace Properties panel, you can set the length of your effect, how it is displayed in the workspace, and how it acts when it is run in Switcher. For more information about using this panel, see "Workspace Properties Panel" on page 176.



The Workspace Properties Panel

3. In the Workspace Properties panel, click the Alpha button (following figure) on. This makes the background of the layer transparent.



The Alpha Button

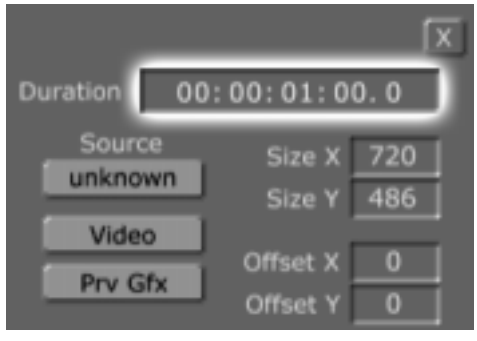
You see the workspace change from solid black to a checkerboard pattern. The checkerboard pattern indicates that the background of the layer is transparent.

4. Deselect the Transition function by clicking on the Transition button (following figure). With Transition selected, a project is saved as a transition. Selecting this is necessary if you are creating an effect such as a wipe, but is not needed when creating an overlay, such as the one you are creating in this tutorial.

The Transition Button

5. In the Workspace Properties panel, change the duration of your effect from 1 second to 1 1/2 seconds. To do this:

   a. Click on the first number in the timecode (following figure). Timecode is in standard SMPTE format (HH:MM:SS:FF). That means that the number is the hours value.



Timecode in the Workspace Properties Panel

   b. Type in the new value for the effect's duration, which is 00:00:01:15.0. This means that the effect lasts 1 second and 15 frames of NTSC video.

   c. Press Enter on your keyboard.

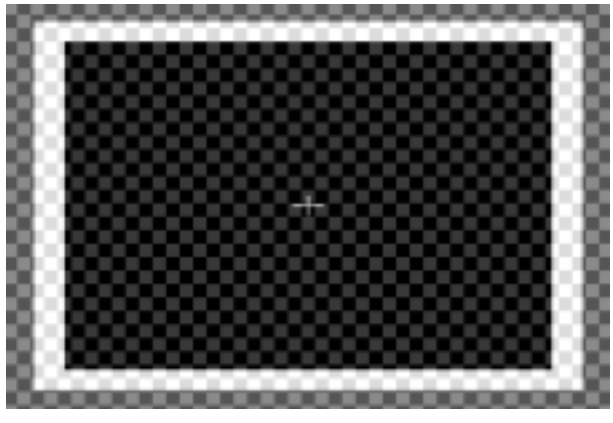
6. In the Workspace Properties panel, turn on the safe title area by clicking the Safe Area button.

The Safe Area Button

You see the safe title area in the workspace. The boundaries show what is actually seen on a typical television. The inner border is called the Safe Title Area, and the outer color border is called the Safe Action Area. Everything within the Safe Action Area will fit on any television screen.

By turning on this area, you ensure that the lower third you are creating will be visible on any television screen.

The following figure illustrates what the workspace looks like with the Safe Area turned on.



The Workspace with the Safe Title Area On

7. Click-and-drag the Timecode slider (following figure) to the left, until the Timecode display reads 00:00:01:00.0. This is where you are going to add a pause point to the effect. That way, when the effect is run in Switcher, it will pause at this point in the effect.

The Timecode Slider

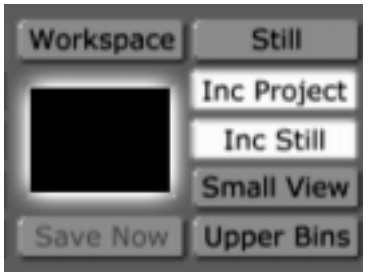
8. In the Workspace Properties panel, click the Pause button (following figure). This adds a pause point at this point in the effect. When the effect is run in Switcher, it will pause at this point in the effect.

TIP Adding a pause point to an effect also allows an overlay to be stretched once it is dragged into a Preditor timeline. When stretching an overlay with a pause point in Preditor, the overlay is stretched at the pause point.

The Pause Button

9. Close the Workspace Properties panel by clicking the X in the upper right corner of the panel.

10. In the Workspace Controls, change the interpolation of the effect's motion by right-clicking the Workspace picon (following figure) and choosing Linear from the pop-up menu (following figure).



The Workspace Picon

Choosing Linear from the Pop-Up Menu

The interpolation of the effect's movement determines how the motion path of the stroke behaves when it is animated.

A cubic interpolation means that the animation steps between keyframes follow a curved path. If you select Cubic as the interpolation for this effect, the animated properties start out at a slow pace, speed up, and then slow down again as the effect ends. Cubic is the default setting.

A linear interpolation means that the animation steps between keyframes follow a straight path. By selecting Linear as the interpolation for this effect, the animated properties move at a constant rate of speed.

Now that you've prepared the workspace, you are ready to save the project.

Saving The Project

Instead of saving the effect at the end of the tutorial, the way you have in earlier tutorials, you will save the project now. Since this is a more time-consuming project, you want to save it while you are creating it. Once the project is saved in a bin, you only need to click the Save Now button to save the progress you've made. Clicking the Save Now button for a project that wasn't already saved in a bin saves the project in the default bin, which is Trinity/Bins/Panam/Projects.

In this section of the tutorial, you will save the project in progress as an overlay.

Follow these steps to save your project:

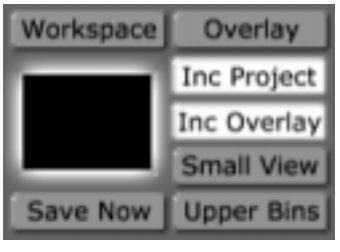
1. In the Workspace Controls, click the File Type button (following figure) and choose Overlay from the pop-up menu (following figure).

The File Type Button

Choosing Overlay from the Pop-Up Menu

The File Type button should now read Overlay. With Overlay selected as the file type, when the project is saved, it acts as an overlay.

2. In the Workspace Controls, click-and-drag the workspace picon (following figure) into the bin directory Trinity/Bins/Panam/Projects.



The Workspace Picon

You see a window come up indicating that the project is being saved (following figure).

The Saving Project Window

When this window disappears, your project is saved. You see the following picon in the Projects bin. The picon is blank now, but when you later add strokes to the workspace and save the project again, the picon will have a mini representation of the workspace on it.

The Picon for the Project

Now that you saved your project in progress, you can now press the Save Now button in the Workspace Controls to save your project.

You're now ready to move on to the next section of this tutorial.

Adding Elements To The Workspace

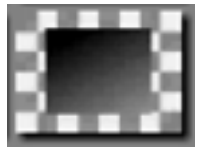
In this section of the tutorial, you will add all of the elements of your lower third. These are the boxes, text, and graphics that make up the project. To create the elements, you will make custom stroke brushes using the Stroke Properties and Color Palette and Gradient Editor panels. By doing this, you will get a feel for how to use the functions in these panels.

To add elements to your workspace, follow these steps:

1. Bring the effect to the beginning of the timeline by clicking the First Frame button in the Transport Controls (following figure).

The First Frame Button

2. Locate the following stroke picon in the bin directory Trinity/Bins/Panam/Sampler. It is the picon with the gradient that blends from black to blue.



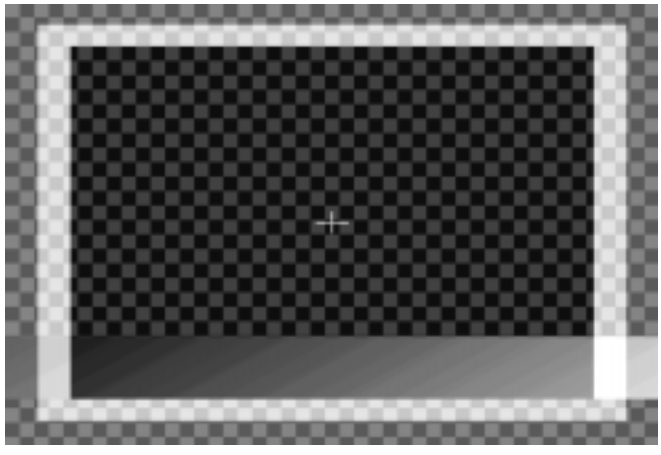
The Stroke Picon

3. Load this picon as the Current Stroke by clicking on it.

   In the Stroke Controls, you see this picon in the Current Stroke Picon window, indicating that it is the current stroke.

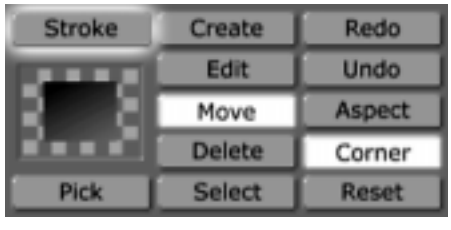
4. Draw a thin horizontal stroke in the workspace by clicking just outside the left side of the workspace and dragging just outside the right side of the workspace.

The stroke should look like the following figure. If it doesn't, you can edit it so that it does. To edit a stroke, select the Edit button in the stroke controls then click the desired stroke. You see edit handles on the stroke. By clicking and dragging these handles, you can edit the size, shape, and position of the stroke.



The Stroke in the Workspace

5. Bring up the Stroke Properties panel for the current stroke by clicking the Stroke button (following figure). From this panel, you will alter the Current Stroke loaded in the Stroke Controls. This will be the brush for the next stroke you draw in the workspace.



The Stroke Button

You see the Stroke Properties panel (following figure) in the upper left corner of your screen.

The Stroke Properties Panel

6. From the Stroke Properties panel, bring up the Color Palette and Gradient Editor panel by clicking the Ink Settings button (following figure).

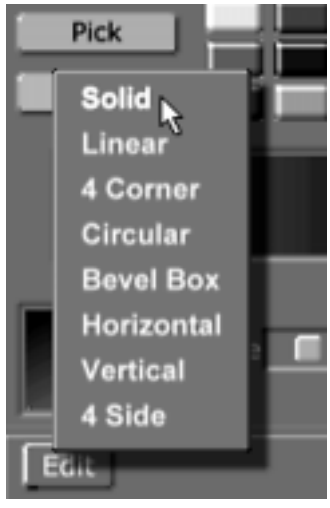
The Ink Settings Button

You see the Color Palette and Gradient Editor panel (following figure) just below the Stroke Properties panel. From this panel, you can add a gradient to a stroke or change the color of the stroke. For more information about using the Color Palette and Gradient Editor panel, see “Color Palette And Gradient Editor Panel” on page 93.

The Color Palette and Gradient Editor Panel

7. Give the Current Stroke a solid color by clicking the Gradient Style button (following figure) and choosing Solid from the pop-up menu (following figure). Choosing any of the other options adds various gradients to a stroke.

The Gradient Style Button



Choosing Solid from the Pop-Up Menu

You see the colors in the Gradient Editor (following figure) change to a solid blue color.

The Gradient Editor

8. In the Color Palette and Gradient Editor panel, change the color of the Current Stroke to red by clicking on the red mini picon (following figure). You can also change the color of a stroke by clicking-and-dragging the red, blue, and green sliders.

The Red Mini Picon

You see the color in the Gradient Editor and the box on the Current Stroke picon turn to red, indicating that red was selected as the stroke brush's color.

NOTE The stroke you just created (and any custom stroke, for that matter) can be saved for further use by dragging-and-dropping its picon from the Stroke Controls into a bin. Load this stroke as you would any other stroke, by clicking on it.

Leave the Color Palette and Gradient Editor panel up for now, as you will use this panel again.

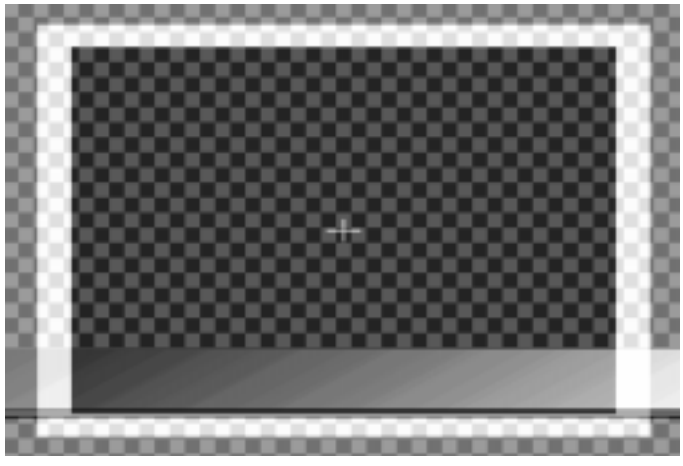
9. Click the Create button (following figure) in the Stroke Controls.

The Create Button

By clicking this button, you can draw strokes in the workspace. When you load a stroke, this button is automatically selected. Since you drew a stroke in the workspace, then changed the properties of the Current Stroke, you need to select the Create button again.

10. Draw a thin red line across the workspace by clicking just outside the left side of the workspace and dragging just outside the right side of the workspace. The red line should cover up the bottom edge of the blue gradient stroke you drew earlier.

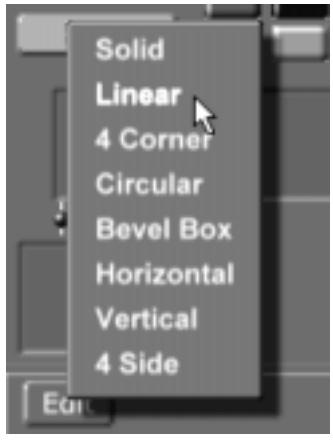
The stroke should look like the following figure. If it doesn't, you can edit it so that it does.



The Stroke in the Workspace

11. In the Color Palette and Gradient Editor panel, give the Current Stroke a linear blend by clicking the Gradient Type button (following figure) and choosing Linear from the pop-up menu (following figure). By doing this, you are adding a gradient to the Current Stroke.

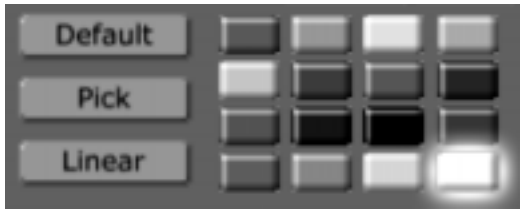
The Gradient Type Button



Choosing Linear from the Pop-Up Menu

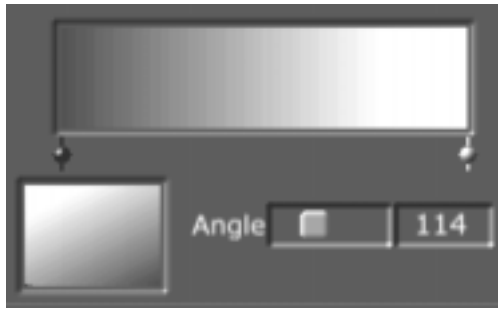
In the Gradient Editor, you still see a solid red color filling it. It remains this way until you add another color to it.

12. In the Color Palette and Gradient Editor panel, click-and-drag the white mini picon (following figure) into the right edge of the Gradient Editor. By doing this, you added a second color to the gradient, so you now have a blend instead of a solid color.



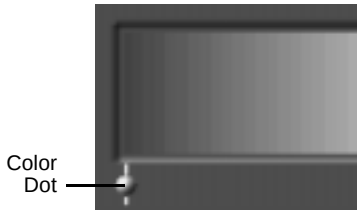
The White Mini Picon

The following figure illustrates what your Gradient Editor should look like with the white added.



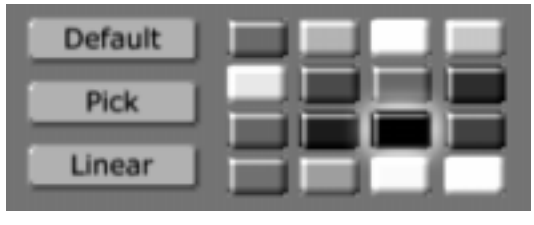
The Gradient Editor

13. In the Gradient Editor, select the color dot for the red color (following figure) by clicking on it. Color dots that are selected have a white line through them. Once a color dot is selected, you can change its color, which is what you will do.



The Selected Color Dot for the Red Color

14. Change this color in the Gradient Editor to black by clicking the black mini picon (following figure)



The Black Mini Picon

In the Gradient Editor, you see the gradient blend from black on the left to white on the right.

15. In the Color Palette and Gradient Editor panel, change the angle of the blend by selecting the angle value (following figure), typing 90, and pushing Enter on your keyboard.

    The angle value is measured in degrees. That means that with a value of 90, the gradient blends from top to bottom. The value you replaced (114) causes the gradient to blend from one corner of a stroke to the opposite corner.

The Angle Value Set at 90

NOTE The stroke you just created (and any custom stroke, for that matter) can be saved for further use by dragging-and-dropping its picon from the Stroke Controls into a bin. Load this stroke as you would any other stroke, by clicking on it.

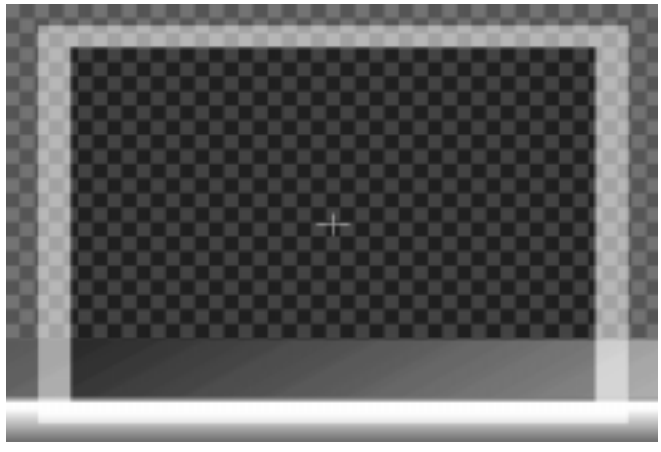
16. Close the Color Palette and Gradient Editor and Stroke Properties panels by clicking the X button in the upper right corner of each panel.

17. Click the Create button (following figure) in the Stroke Controls. By clicking this button, you can draw strokes in the workspace. When you load a stroke, this button is automatically selected. Since you drew a stroke in the workspace, then changed the properties of the Current Stroke, you need to select the Create button again.

The Create Button

18. Draw a thin box across the workspace by clicking just outside the left side of the workspace and dragging just outside the right side of the workspace. The box should start just outside of the bottom of the workspace and end in the middle of the red line you drew earlier.

    The stroke should look like the following figure. If it doesn't, you can edit it so that it does.



The Stroke in the Workspace

19. The stroke you just drew isn't exactly in the position you want it in. You want it to be behind the other two strokes. Send it to the back by right-clicking on the stroke and choosing Back from the pop-up menu (following figure).

Choosing Back from the Pop-Up Menu

You see the stroke move to the back of the workspace, behind the other strokes.

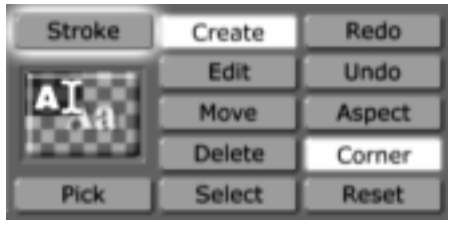
20. Locate the following text stroke brush picon in the bin directory Trinity/Bins/Panam/Sampler. It is the picon with the yellow letters on it.

The Text Stroke Brush Picon

21. Load this stroke brush as the Current Stroke by clicking the picon.

    You see the picon in the Current Stroke Picon window in the Stroke Controls.

22. Bring up the Stroke Properties panel for the Current Stroke by clicking the Stroke button (following figure) in the Stroke Controls.



The Stroke Button

You see the Stroke Properties panel (following figure) in the upper left corner of your screen. For more information about using the Stroke Properties panel, see “Stroke Properties Panel” on page 45.

The Stroke Properties Panel

23. In the Stroke Properties panel, bring up the Text Settings panel for the Current Stroke by clicking the Text Settings button (following figure).

The Text Settings Button

You see the Text Settings panel just below the Stroke Properties panel. From this panel you can change the font and size of your text stroke. See “Text Settings Panel” on page 69 for more information about using this panel.

The Text Settings Panel

24. In the Text Settings panel, select Arial as the font for the Current Stroke by scrolling through the list of fonts and clicking on the font name.

    You see a check mark next to the font name (following figure) indicating that the font was selected.

The Selected Font

25. In the Text Settings panel, make the font for the Current Stroke bold by clicking the Bold button (following figure).

The Bold Button

26. In the Text Settings panel, make the font for the Current Stroke italic by clicking the Italic button (following figure).

The Italic Button

NOTE The stroke you just created (and any custom stroke, for that matter) can be saved for further use by dragging-and-dropping its picon from the

Stroke Controls into a bin. Load this stroke as you would any other stroke, by clicking on it.

27. Close the Text Settings and Stroke Properties panels by clicking the X button in the upper right corner of each panel.

28. Create a text stroke in the workspace by clicking and typing My Name.

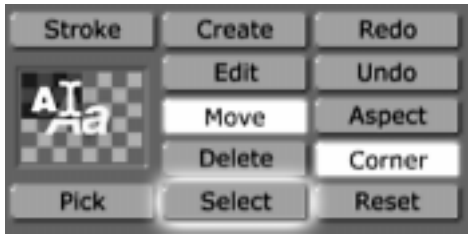
29. Move the text stroke so that your workspace looks like the following figure. Move the stroke by clicking the Move button (following figure) in the Stroke Controls and then clicking-and-dragging the stroke.

The Move Button

The Text Stroke in the Workspace

30. In the workspace, edit the blue stroke so that its top edge is just above the top edge of the My Name text. To do this:

    a. Click the Select button (following figure) in the Stroke Controls.



The Select Button

    b. Click on the blue stroke in the workspace.

    You see a bounding box around the stroke, indicating that it is selected.

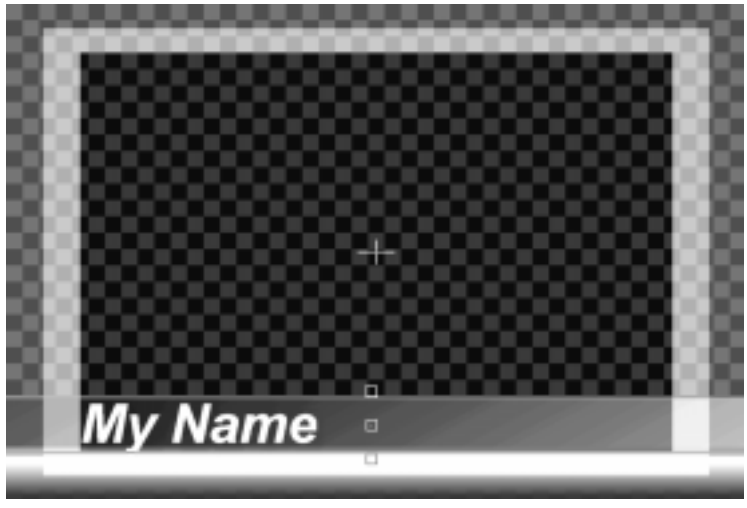
    c. Click the Edit button (following figure) in the stroke controls.

The Edit Button

    You see edit points added to the bounding box around the stroke. Clicking-and-dragging the edit points changes the size and shape of the stroke.

    d. Click the middle edit point that is along the top edge of the stroke and drag it so that the edge of the blue stroke is just above the edge of the text stroke.

    The following figure illustrates what the workspace should now look like.



The Edited Stroke in the Workspace

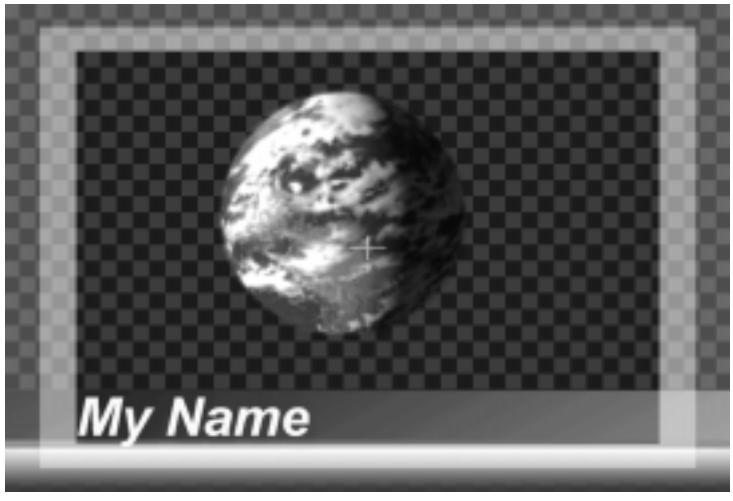
31. Locate the following stroke picon in the bin directory Trinity/Bins/Panam/Sampler. It is the picon with the Earth graphic on it.

The Stroke Picon

32. Load this stroke brush as the Current Stroke by clicking the picon.

    You see the picon in the Current Stroke window in the Stroke Controls.

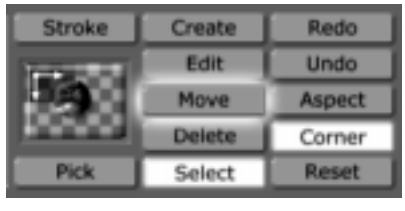
33. While holding the Shift key on your keyboard, draw an Earth stroke in the workspace that is roughly the same size as the following figure. By holding the Shift key, the stroke you draw keeps the proportions that the Earth should have.



The Earth Stroke in the Workspace

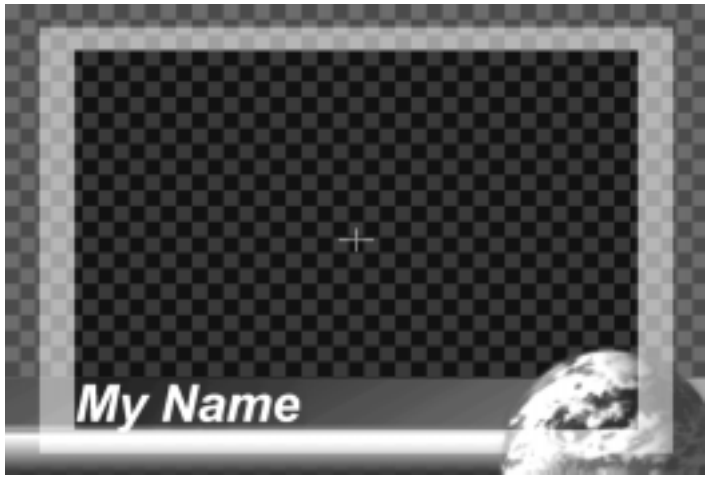
34. Move the Earth stroke into the lower right corner of the workspace. To do this:

    a. Select the Move button (following figure) in the Stroke Controls.



The Move Button

    b. Click-and-drag the Earth stroke down and to the right until it is in the same position in the workspace as the following figure.

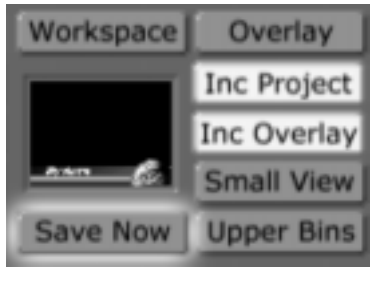


The Earth Stroke in the Workspace

You now have all of the elements of the lower third in your workspace. Once you save this project, you can begin animating the elements.

35. Save the project in progress by clicking the Save Now button (following figure) in the Workspace Controls. Once a project has been saved, clicking the Save Now button saves any changes made to the project since it was last saved.

TIP When a project is saved, it is brought to the last frame of the effect. Be sure to bring the effect back to the point in the effect that you working at. Otherwise, any changes you make are applied to the last frame of the effect.



The Save Now Button

Move ahead to the next section of this tutorial to animate the elements in your lower third graphic.

Animating The Elements

In this section of the tutorial, you will animate all of the strokes in your lower third graphic. You will use the animation functions of the Stroke Properties panels to make some of the elements fade in and out of the workspace, while others wipe in and out of the workspace.

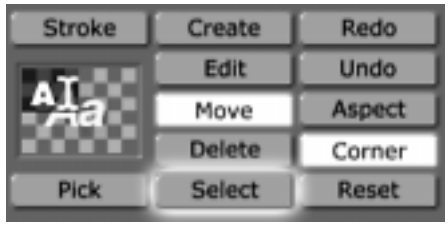
When you are finished with this section of the tutorial, you will have a lower third graphic in which the strokes fade and wipe into the screen until they are completely visible at roughly two-thirds through the effect. This is where you added the pause point to the effect. All of these strokes will then fade and wipe off the screen until the effect ends.

Follow these steps to animate the elements in your workspace:

1. Click-and-drag the Timecode slider (following figure) to the left, until the Timecode display reads 00:00:01:00.0. This is where you added a pause point to the effect. At this point in the effect, you want all of the elements of the lower third to be completely visible in the workspace. By bringing the effect to this point, you can add keyframes for the stroke's properties while they are completely visible.

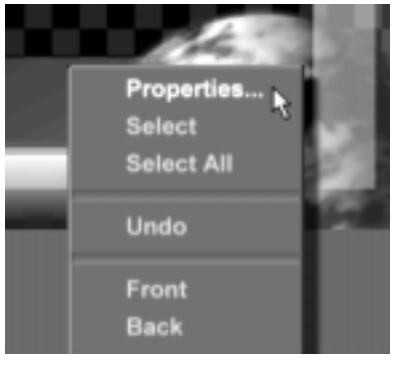
The Timecode Slider

2. In the Stroke Controls, click the Select button (following figure). By clicking this button, you can select individual strokes in the workspace.



The Select Button

3. Bring up the Stroke Properties panel for the Earth stroke by right-clicking on the stroke and choosing Properties from the pop-up menu (following figure).



Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel in the upper left corner of the screen.

4. In the Stroke Properties panel, animate the transparency value of the Earth stroke by clicking the Animation Status button (following figure) for the Alpha value and choosing Animated from the pop-up menu.

The Animation Status Button

Choosing Animated from the Pop-Up Menu

NOTE When a stroke's property, such as size or position, is animated, a keyframe is automatically added for the stroke's position in the timeline. Whenever you alter a property that is animated at another point in the timeline, a keyframe is automatically added at that point.

You see the Animation Status button change from S for static to A for animated (following figure). That means that the transparency of the Earth stroke is now animated.

The Alpha Animation Status Reading A for Animated

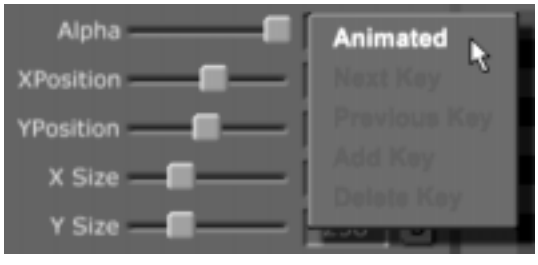
5. In the workspace, click the My Name stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

You see a bounding box around the stroke, indicating that it is selected.

You see that the Strokes Properties panel now displays the properties for the My Name stroke.

6. In the Stroke Properties panel, animate the transparency value of the My Name stroke by clicking the Animation Status button (following figure) for the Alpha value and choosing Animated from the pop-up menu.

The Animation Status Button



Choosing Animated from the Pop-Up Menu

You see the Animation Status button change from S for static to A for animated (following figure). That means that the position of the My Name stroke is now animated and that a keyframe was added for the property's position in the timeline.

The Alpha Animation Status Reading A for Animated

7. In the workspace, click the thin red stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

   You see a bounding box around the stroke, indicating that it is selected.

   You see that the Strokes Properties panel now displays the properties for the thin red stroke.

8. In the Stroke Properties panel, animate the transparency value of the thin red stroke by clicking the Animation Status button (following figure) for the Alpha value and choosing Animated from the pop-up menu.

The Animation Status Button

Choosing Animated from the Pop-Up Menu

You see the Animation Status button change from S for static to A for animated (following figure). That means that the position of the thin red stroke is now animated and that a keyframe was added for the property's position in the timeline.

The Alpha Animation Status Reading A for Animated

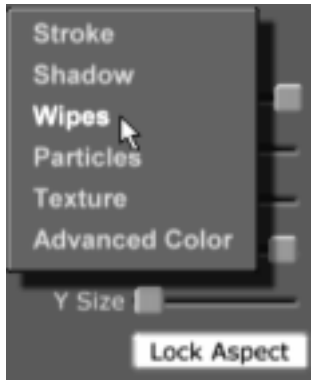
9. In the workspace, click the blue stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

   You see a bounding box around the stroke, indicating that it is selected.

   You see that the Strokes Properties panel now displays the properties for the blue stroke.

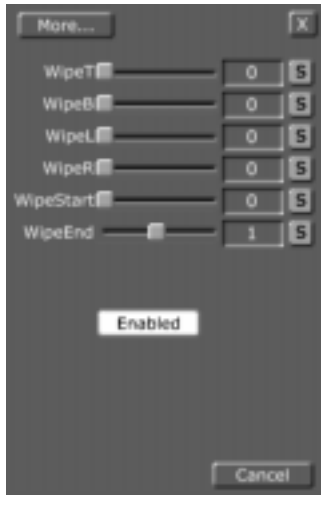
10. In the Stroke Properties panel, bring up the Wipes Properties panel for the blue stroke by clicking the More button (following figure) and choosing Wipes from the pop-up menu (following figure).

The More Button



Choosing Wipes from the Pop-Up Menu

You see the Wipes Properties panel in the upper left corner of your screen, in the place of the Stroke Properties panel. From this panel, you can make a stroke a wipe. You will use this panel to make the blue stroke wipe onto the screen. For more information about using the Wipes Properties panel, see “Wipes Properties Panel” on page 112.



The Wipes Properties Panel

11. In the Wipes Properties panel, animate the WipeL value of the blue stroke by clicking the Animation Status button (following figure) for the

WipeL value and choosing Animated from the pop-up menu. The WipeL value makes a stroke wipe from the left of the object to the right.

The WipeL Animation Status Button

Choosing Animated from the Pop-Up Menu

You see the Animation Status button change from S for static to A for animated (following figure). That means that the WipeL property of the blue stroke is now animated and that a keyframe was added for the property's position in the timeline.

The WipeL Animation Status Reading A for Animated

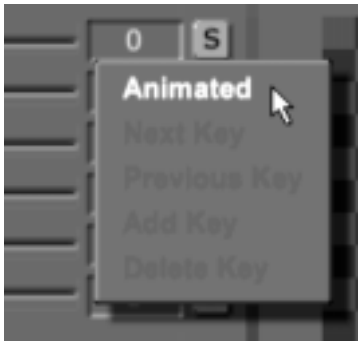
12. In the workspace, click the white stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

    You see a bounding box around the stroke, indicating that it is selected.

    You see that the Wipes Properties panel now displays the properties for the white stroke.

13. In the Wipes Properties panel, animate the WipeB value of the blue stroke by clicking the Animation Status button (following figure) for the WipeB value and choosing Animated from the pop-up menu. The WipeB value makes a stroke wipe from the bottom of the object to the top.

The WipeB Animation Status Button



Choosing Animated from the Pop-Up Menu

You see the Animation Status button change from S for static to A for animated (following figure). That means that the WipeB property of the white stroke is now animated and that a keyframe was added for the property's position in the timeline.

The WipeB Animation Status Reading A for Animated

14. In the Transport Controls, bring your effect to its starting point in the timeline by clicking the First Frame button (following figure). You are now going to adjust all of the stroke properties for this point in the effect.

The First Frame Button

15. In the Wipes Properties panel, click-and-drag the WipeB slider (following figure) all the way to the right. Since the white stroke is still selected, this causes the stroke to wipe so that it is no longer visible in the workspace. This is what you want the stroke to look like at the beginning of the effect.

The WipeB Slider

In the workspace, you see that the white stroke is no longer visible. However, you still see a bounding box for the stroke.

Since the WipeB value is animated, a keyframe is added for the property's new value.

16. In the workspace, click the blue stroke to select it.

    You see a bounding box around the stroke, indicating that it is selected.

    You see that the Wipes Properties panel now displays the properties for the blue stroke.

17. In the Wipes Properties panel, click-and-drag the WipeL slider (following figure) all the way to the right. Since the blue stroke is selected, this causes the stroke to completely wipe so that it is no longer visible in the workspace. This is what you want the stroke to look like at the beginning of the effect.

The WipeL Slider

    In the workspace, you see that the blue stroke is no longer visible. However, you still see a bounding box for the stroke.

    Since the WipeL value is animated, a keyframe is added for the property's new value.

18. In the workspace, click the My Name stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

    You see a bounding box around the stroke, indicating that it is selected.

    You see that the Wipes Properties panel now displays the properties for the My Name stroke.

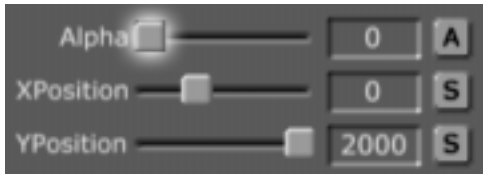
19. In the Wipes Properties panel, bring up the Stroke Properties panel for the My Name stroke by clicking the More button (following figure) and choosing Stroke from the pop-up menu.

The More Button

Choosing Stroke from the Pop-Up Menu

You see the Stroke Properties panel in place of the Wipes Properties panel.

20. In the Stroke Properties panel, click-and-drag the Alpha slider (following figure) all the way to the left. Since the My Name stroke is selected, this causes the stroke to completely fade out so that it is no longer visible in the workspace. This is what you want the stroke to look like at the beginning of the effect.



The Alpha Slider Slid All the Way Left

In the workspace, you see that the My Name stroke is no longer visible. However, you still see a bounding box for the stroke.

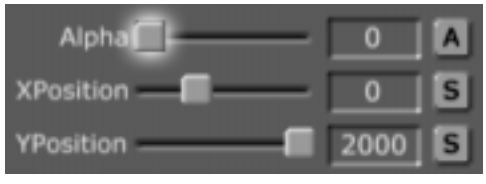
Since the Alpha value is animated, a keyframe is added for the property's new value.

21. In the workspace, click the thin red stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

    You see a bounding box around the stroke, indicating that it is selected.

    You see that the Stroke Properties panel now displays the properties for the thin red stroke.

22. In the Stroke Properties panel, click-and-drag the Alpha slider (following figure) all the way to the left. Since the thin red stroke is selected, this causes the stroke to completely fade out so that it is no longer visible in the workspace. This is what you want the stroke to look like at the beginning of the effect.



The Alpha Slider Slid All the Way Left

    In the workspace, you see that the thin red stroke is no longer visible. However, you still see a bounding box for the stroke.

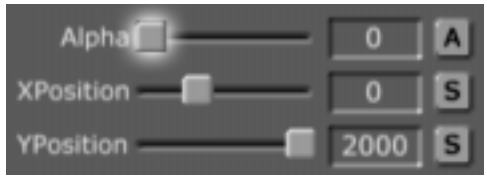
23. In the workspace, click the Earth stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

    You see a bounding box around the stroke, indicating that it is selected.

    You see that the Stroke Properties panel now displays the properties for the Earth stroke.

24. In the Stroke Properties panel, click-and-drag the Alpha slider (following figure) all the way to the left. Since the Earth stroke is selected, this causes the stroke to completely fade out so that it is no longer visible in the

workspace. This is what you want the stroke to look like at the beginning of the effect.



The Alpha Slider Slid All the Way Left

In the workspace, you see that the Earth stroke is no longer visible. However, you still see a bounding box for the stroke.

You have now finished setting all of the properties for the first frame of the animation.

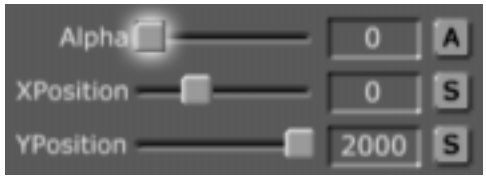
25. Save the project in progress by clicking the Save Now button (following figure) in the Workspace Controls. Once a project has been saved, clicking the Save Now button saves any changes made to the project since it was last saved.

    When a project is saved, it is brought to the last frame of the effect. This is where you want to be in the effect, since you will be changing the strokes' properties so that the strokes look like what you want at the end of the effect.

The Save Now Button

26. Right now, the Earth stroke is still selected and the Stroke Properties panel is brought up for that stroke. So animate this stroke's properties

first. In the Stroke Properties panel, click-and-drag the Alpha slider (following figure) all the way to the left. Since the Earth stroke is selected, this causes the stroke to completely fade out so that it is no longer visible in the workspace. This is what you want the stroke to look like at the end of the effect.



The Alpha Slider Slid All the Way Left

In the workspace, you see that the Earth stroke is no longer visible. However, you still see a bounding box for the stroke.

27. In the workspace, click the My Name stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

    You see a bounding box around the stroke, indicating that it is selected.

    You see that the Stroke Properties panel now displays the properties for the white stroke.

28. In the Stroke Properties panel, click-and-drag the Alpha slider (following figure) all the way to the left. Since the My Name stroke is selected, this cause the stroke to completely fade out so that it is no longer visible in the workspace. This is what you want the stroke to look like at the end of the effect.

The Alpha Slider Slid All the Way Left

In the workspace, you see that the My Name stroke is no longer visible. However, you still see a bounding box for the stroke.

Since the Alpha value is animated, a keyframe is added for the property's new value.

29. In the workspace, click the thin red stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

    You see a bounding box around the stroke, indicating that it is selected.

    You see that the Stroke Properties panel now displays the properties for the thin red stroke.

30. In the Stroke Properties panel, click-and-drag the Alpha slider (following figure) all the way to the left. Since the thin red stroke is selected, this causes the stroke to completely fade out so that it is no longer visible in the workspace. This is what you want the stroke to look like at the end of the effect.

The Alpha Slider Slid All the Way Left

In the workspace, you see that the thin red stroke is no longer visible. However, you still see a bounding box for the stroke.

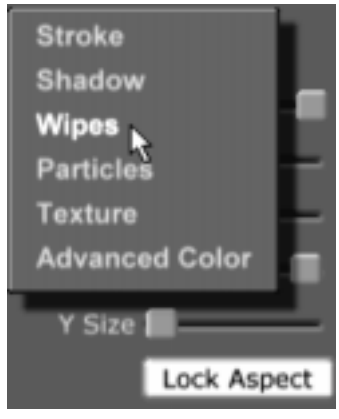
31. In the workspace, click the blue stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

    You see a bounding box around the stroke, indicating that it is selected.

    You see that the Stroke Properties panel now displays the properties for the blue stroke.

32. In the Stroke Properties panel, bring up the Wipes Properties panel for the blue stroke by clicking the More button (following figure) and choosing Wipes from the pop-up menu.

The More Button



Choosing Wipes from the Pop-Up Menu

You see the Wipes Properties panel in place of the Stroke Properties panel.

33. In the Wipes Properties panel, click-and-drag the WipeL slider (following figure) all the way to the right. Since the blue stroke is selected, this causes the stroke to completely wipe so that it is no longer visible in the workspace. This is what you want the stroke to look like at the end of the effect.

The WipeL Slider

In the workspace, you see that the blue stroke is no longer visible. However, you still see a bounding box for the stroke.

Since the WipeL value is animated, a keyframe is added for the property's new value.

34. In the workspace, click the white stroke to select it. Remember, with the Select button selected, you can click on any stroke in the workspace to select it.

    You see a bounding box around the stroke, indicating that it is selected.

    You see that the Wipes Properties panel now displays the properties for the white stroke.

35. In the Wipes Properties panel, click-and-drag the WipeB slider (following figure) all the way to the right. Since the white stroke is still selected, this causes the stroke to completely wipe so that it is no longer visible in the workspace. This is what you want the stroke to look like at the end of the effect.

The WipeB Slider

In the workspace, you see that the white stroke is no longer visible. However, you still see a bounding box for the stroke.

Since the WipeB value is animated, a keyframe is added for the property's new value.

36. Close the Wipes Properties panel by clicking the X button in the upper right corner of the panel.

37. Preview the effect in Panamation to see how it will look when it is run in Switcher or loaded into Preditor. To do this, follow these steps:

    a. Bring the animation to its beginning by clicking the First Frame button (following figure) in the Transport Controls.

The First Frame Button

In the workspace, you see the animation at its starting point.

    b. Play the animation by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In the workspace, you see the animation as it plays. You see the red line, Earth, and My Name strokes fade so they are completely opaque in the workspace, while the blue and white strokes wipe into the workspace. You then see the red line, Earth, and My Name strokes fade so they are not visible in the workspace, while the blue and white strokes wipe out of the workspace.

NOTE When a project is previewed in Panamation, the speed at which it plays back is slower than its actual speed when run in Switcher or Preditor. How slow this

effect is played in Panamation is determined by how complex the strokes and animation are on each frame.

38. Save the project in progress by clicking the Save Now button (following figure) in the Workspace Controls. Once a project has been saved, clicking the Save Now button saves any changes made to the project since it was last saved.

NOTE When a project is saved, it is brought to the last frame of the effect. Be sure to bring the effect back to the point in the effect that you working at. Otherwise, any changes you make are applied to the last frame of the effect.

The Save Now Button

Move ahead to the next section of this tutorial to edit the animation of the elements in your lower third graphic.

Editing The Animation Using The Timeline

Right now, all of the animated strokes in your lower third graphic fade or wipe into the workspace at the same rate. In this section of the tutorial, you will use the timeline to edit the animation of the strokes so that they come into the workspace at different times. This is the order that the strokes will appear and disappear in the workspace when you finish this tutorial:

- The Earth stroke fades into the workspace until it is completely opaque.
- The blue stroke wipes into the workspace.
- The My Name and thin red strokes appear in the workspace.
- The white stroke wipes so that it is visible in the workspace.
- The effect pauses.
- The white stroke wipes so that it is not visible in the workspace.
- The My Name and thin red strokes disappear from the workspace.
- The blue stroke wipes out of the workspace.
- The Earth stroke fades out of the workspace until it is completely transparent.

Since you have animated the properties of the strokes in your lower third graphic, you can use the timeline (following figure) to fine tune these animations. For additional information about using the timeline, see “Working With The Timeline” on page 192.

Before you animate these properties, there are a few things about the timeline that should be covered.

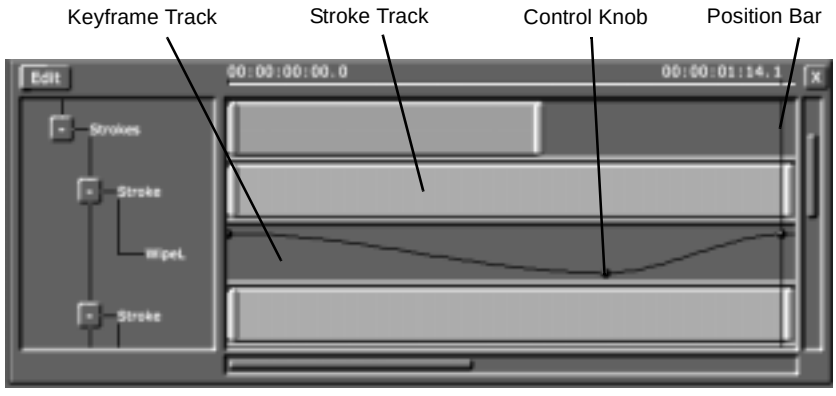
Keyframe tracks in the timeline

Whenever you animate the property of a stroke, a keyframe track is added to the timeline. A separate track is added for every property that is animated. That means that if you animated the X and Y positions of a stroke, two keyframe tracks appear on the timeline for that stroke.

Keyframes in the timeline

Keyframes for an animated property appear in the timeline as Control Knobs. Moving these Control Knobs in the keyframe track alters their value and position in the timeline. Clicking-and-dragging a Control Knob up or down changes the value of the animated property. Clicking-and-dragging a Control Knob left or right in the track changes the position of the keyframe in the effect. This is how you edit animation using the timeline.

The following figure illustrates the elements in the timeline.



The Timeline

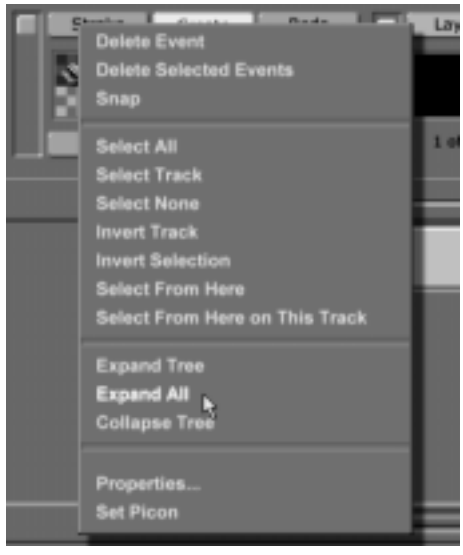
This section of the tutorial is broken up into two parts: editing the animation for the first half of the effect and editing animation for the second half of the effect.

Editing the animation for the first half of the effect

To use the timeline to edit the animation for the first half of the effect, follow these steps:

1. Expand the timeline by right-clicking on the Layer event (following figure) (all elements in a timeline are called events) and choosing Expand All from the pop-up menu (following figure). By doing this, you make every track visible in the timeline. You can open or close individual tracks by clicking the +/- buttons to the left of a track's name.

The Layer Event



Choosing Expand All from the Pop-Up Menu

You see all of the tracks expanded in the timeline.

2. Set picons for the stroke events in your timeline. Doing this makes it easier to identify the strokes. To set picons for the stroke events:

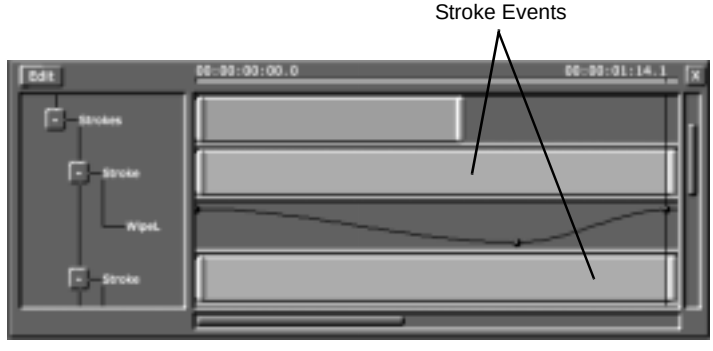
    a. Click-and-drag the Timecode slider (following figure) until the Timecode display reads 00:00:01:00.0. This is a point 1 second into the animation. This is the point in the animation where all of the strokes are visible in the workspace.

NOTE When you set a picon for a stroke event, whatever the stroke looks like in the workspace is what appears on the picon. By bringing the effect to a point where all the strokes are visible, it ensures that the picons you set will be recognizable.

The Timecode Slider

In the workspace, you see that all of the strokes are visible.

b. Click on a stroke event (following figure) in the timeline to select it.

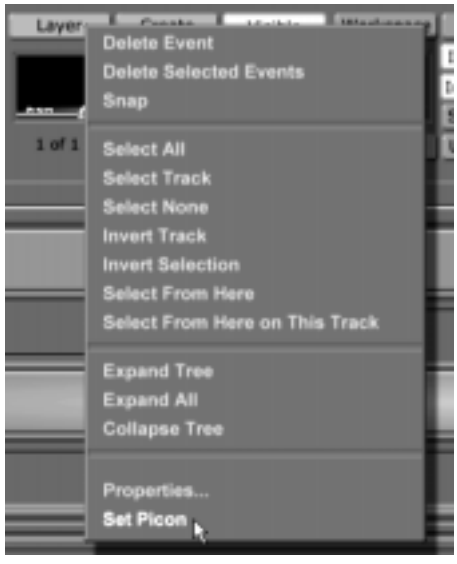


Stroke Events in the Timeline

In the timeline, you see the selected event highlighted, indicating that it was selected.

In the workspace, you see a bounding box around the stroke for the stroke event you selected.

c. Right-click on the event and choose Set Picon from the pop-up menu (following figure). This sets a picon for the stroke.



Choosing Set Picon from the Pop-Up Menu

You see a picon on the selected event (following figure).

Picon Set for the Earth Stroke

d. Repeat steps b and c for each stroke event in the timeline.

3. Click-and-drag the Timecode slider (following figure) until the Timecode display reads 00:00:00:03.0. This is a point 3 frames into the animation.

The Timecode Slider

In the workspace, you see the effect at 3 frames into the animation.

In the timeline, you see the position bar at 3 frames into the animation. At this point in the animation, you want the Earth stroke to be completely opaque in the workspace. You do not want any of the other strokes' animations to start until this point.

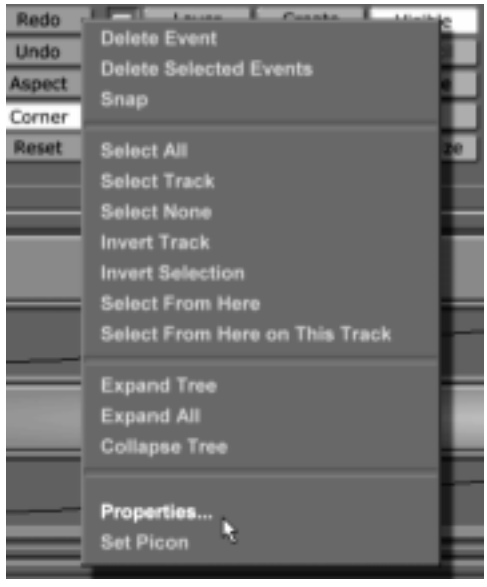
4. In the timeline, select the Earth stroke by clicking on it.

   In the timeline, you see the stroke event highlighted, indicating that it is selected (following figure) and you see the Position Bar at 3 frames into the effect.

The Selected Stroke Event

   In the workspace, you see a bounding box around the Earth stroke. However, you do not see the Earth stroke in the workspace, since it is completely transparent at this point in the effect.

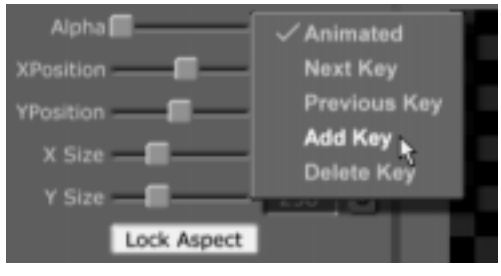
5. In the timeline, bring up the Stroke Properties panel for the Earth stroke by right-clicking on the Earth event and choosing Properties from the pop-up menu (following figure). That's right, the Stroke Properties panel for a stroke can be opened from the timeline.



Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel in the upper left corner of your screen.

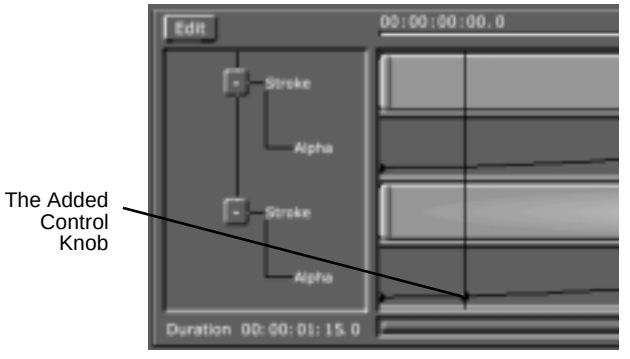
6. In the Stroke Properties panel, click the Animation Status button for the Alpha property and choose Add Key from the pop-up menu (following figure). This is how you add additional keyframes for a property.



Choosing Add Key from the Pop-Up Menu

By adding a keyframe for the Earth stroke's Alpha value, you can adjust that value in the timeline and make it so that the stroke is completely opaque at this point in the effect.

In the timeline, you see a Control Knob added in the keyframe track (following figure).



The Control Knob Added in The Keyframe Track

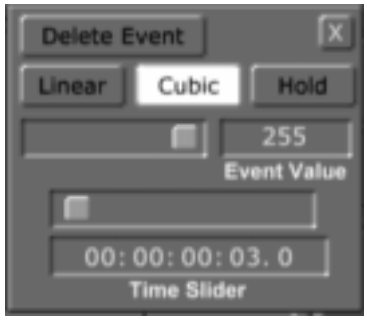
Leave the Stroke Properties panel up for now.

7. In the timeline, adjust the Control Knob for the keyframe you just added so that the Control Knob is at the top of the track. For this track, which is for the Alpha property, moving the Control Knob to the top of the track makes the stroke completely opaque. As you drag the Control Knob down, the stroke becomes more transparent until it is completely transparent when the Control Knob is at the bottom of the track.

   There are two ways to adjust a Control Knob. They are:

   a. Click-and-drag the Control Knob up, down, left, or right in the timeline. Dragging the knob up or down adjusts the value of the property for the keyframe track. Dragging the knob left or right changes the keyframe's position in the timeline.

   b. Right-click on the Control Knob and choose Edit Key from the pop-up menu to bring up the Event panel (following figure).



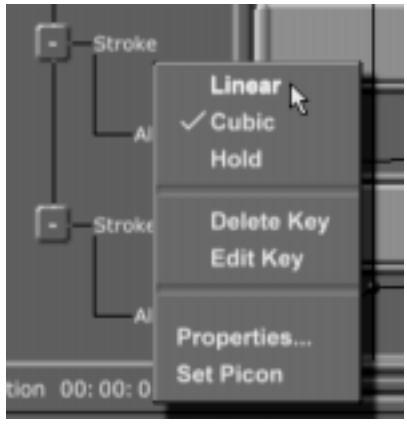
The Event Panel

Clicking-and-dragging the Event Value slider left or right adjusts the value of the property for the keyframe track. Clicking-and-dragging the Time Slider left or right changes the keyframe's position in the timeline.

Once you move the Control Knob to the top of the keyframe track, you see the Earth stroke completely opaque in the workspace.

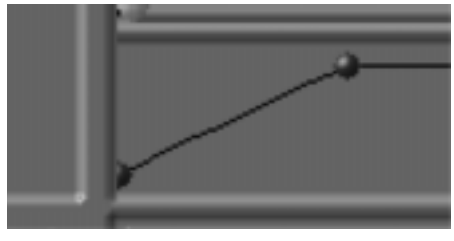
Right now, the interpolation between the keyframe at the beginning of the effect and the keyframe at 3 frames into the effect is set at Cubic. You can tell that it is Cubic because the line between the Control Knobs is a curved line. A Cubic interpolation means that the animation in between the keyframes follows a curved path, and the animation accelerates as the effect progress. A Cubic interpolation is the default setting.

8. Change the interpolation to Linear by right-clicking the left-most Control Knob and choosing Linear from the pop-up menu (following figure). When changing the interpolation between keyframes, you must right-click the first of the two Control Knobs in the timeline. Otherwise, you change the interpolation between the next two keyframes.



Choosing Linear from the Pop-Up Menu.

In the timeline, you that see the line between the two points is to a straight line (following figure), indicating that the interpolation is set as Linear. A Linear interpolation means that the animation in between keyframes follows the straightest path possible, and the animation moves at a constant rate.



A Linear Interpolation Between Keyframes

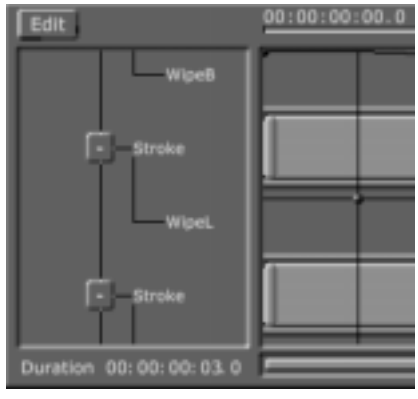
9. In the timeline, select the event for the blue stroke.

   In the timeline, you see that the event for the blue stroke is highlighted, indicating that it is selected.

   In the workspace, you see a bounding box around the blue stroke. However, you do not see the blue stroke in the workspace, since it is wiped out of the workspace at this point in the effect.

10. In the timeline, click-and-drag the left-most Control Knob in the keyframe track for the blue stroke to the 3 frame position in the timeline (following figure). Since the Position Bar is at the 3 frame position, the Control Knob will snap into place when it gets close to the Position Bar.

    By doing this, the blue stroke does not start wiping into the workspace until the Earth stroke is completely opaque in the workspace. This makes it looks as if the blue line is wiping from the edge of the Earth stroke once the stroke is opaque.



The Control Knob at the 3 Frame Position in the Timeline

11. In the timeline, select the event for the My Name stroke.

    In the timeline, you see that the event for the My Name stroke is highlighted, indicating that it is selected.

    In the workspace, you see a bounding box around the My Name stroke. However, you do not see the My Name stroke in the workspace, since it is completely transparent in the workspace at this point in the effect.

12. In the timeline, right-click the left-most Control Knob in the keyframe track for the My Name stroke and choose Hold from the pop-up menu (following figure).

Choosing Hold From the Pop-Up Menu

By choosing Hold from the pop-up menu, you changed the interpolation between the keyframes to Hold (following figure).

A Hold Interpolation Between Keyframes

A Hold interpolation means that the property will stay at its current value until the next keyframe, where it jumps to the new value. This means that the My Name stroke is completely transparent in the workspace until the next keyframe, when it becomes completely opaque. Later in this tutorial, you will make it so that the thin red stroke becomes opaque as soon as the blue stroke has completely wiped into the workspace.

13. In the timeline, select the event for the thin red stroke.

    In the timeline, you see that the event for the thin red stroke is highlighted, indicating that it is selected.

In the workspace, you see a bounding box around the thin red stroke. However, you do not see the thin red stroke in the workspace, since it is completely transparent in the workspace at this point in the effect.

14. In the timeline, right-click the left-most Control Knob in the keyframe track for the thin red stroke and choose **Hold** from the pop-up menu (following figure).

Choosing Hold From the Pop-Up Menu

15. Click-and-drag the Timecode slider (following figure) until the Timecode display reads 00:00:00:22.0. This is a point 22 frames into the animation.

The Timecode Slider

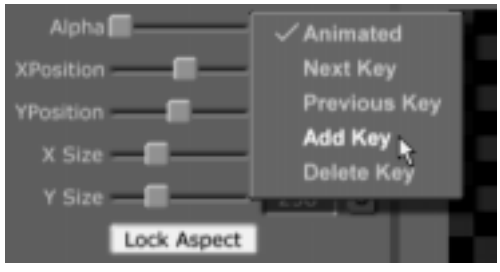
In the workspace, you see the effect at 22 frames into the animation.

In the timeline, you see the position bar at 22 frames into the animation. At this point in the animation, you want the blue stroke to be completely wiped into the workspace. You also want the My Name and thin red

strokes to become opaque and the white stroke to begin wiping into the workspace at this point in the timeline.

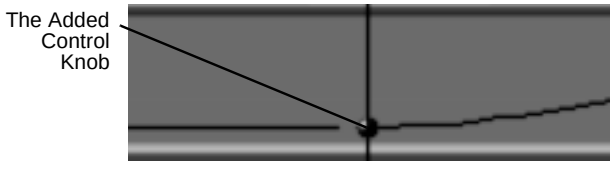
16. In the Stroke Properties panel, click the Animation Status button for the Alpha property for the thin red stroke and choose Add Key from the pop-up menu (following figure). This adds an additional keyframe for a property.

    By adding a keyframe for the thin red stroke's Alpha value, you can adjust that value in the timeline and make it so that the stroke is completely opaque at this point in the effect.



Choosing Add Key from the Pop-Up Menu

    In the timeline, you see a Control Knob added in the keyframe track (following figure).



The Control Knob Added in the Keyframe Track

    Leave the Stroke Properties panel up for now.

17. In the timeline, click-and-drag the Control Knob for the keyframe you just added so that the Control Knob is at the top of the track. For this track, which is for the Alpha property, moving the Control Knob to the top of the track makes the stroke completely opaque. Dragging the Control Knob down causes the stroke becomes transparent until it is

completely transparent when the Control Knob is at the bottom of the track.

In the workspace, you see that the thin red stroke is completely opaque.

18. In the timeline, select the event for the My Name stroke.

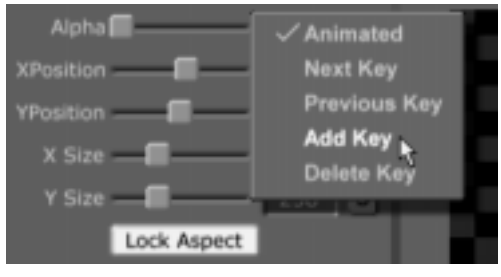
    In the timeline, you see that the event for the My Name stroke is highlighted, indicating that it is selected.

    In the workspace, you see a bounding box around the My Name stroke. However, you do not see the My Name stroke in the workspace, since it is completely transparent in the workspace at this point in the effect.

    The Stroke Properties panel is now for the My Name stroke.

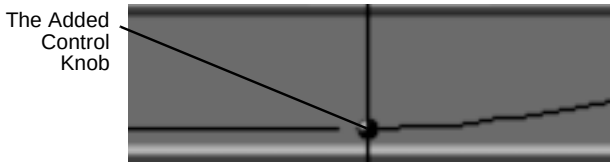
19. In the Stroke Properties panel, click the Animation Status button for the Alpha property for the My Name stroke and choose Add Key from the pop-up menu (following figure). This adds an additional keyframe for the property.

    By adding a keyframe for the My Name stroke's Alpha value, you can adjust that value in the timeline and make it so that the stroke is completely opaque at this point in the effect.



Choosing Add Key from the Pop-Up Menu

In the timeline, you see a Control Knob added in the keyframe track (following figure).



The Control Knob Added in the Keyframe Track

Leave the Stroke Properties panel up for now.

20. In the timeline, click-and-drag the Control Knob for the keyframe you just added so that the Control Knob is at the top of the track. For this track, which is for the Alpha property, moving the Control Knob to the top of the track makes the stroke completely opaque. Dragging the Control Knob down causes the stroke becomes transparent until it is completely transparent when the Control Knob is at the bottom of the track.

    In the workspace, you see that the My Name stroke is completely opaque.

21. In the timeline, select the event for the blue stroke.

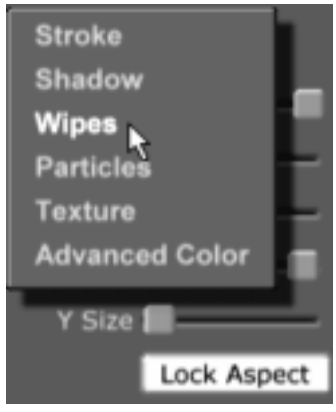
    In the timeline, you see that the event for the blue stroke is highlighted, indicating that it is selected.

    In the workspace, you see a bounding box around the blue stroke.

    The Stroke Properties panel is now for the blue stroke.

22. In the Stroke Properties panel, bring up the Wipes Properties panel for the blue stroke by clicking the More button (following figure) and choosing Wipes from the pop-up menu (following figure).

The More Button

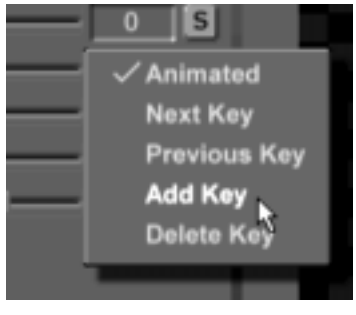


Choosing Wipes from the Pop-Up Menu

You see the Wipes Properties panel in the upper left corner of the screen, in place of the Stroke Properties panel.

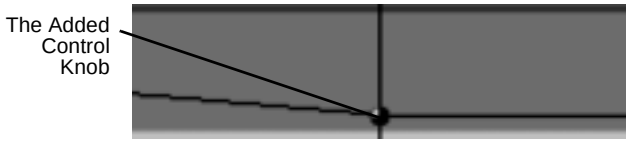
23. In the Wipes Properties panel, click the Animation Status button for the WipeL property for the blue stroke and choose Add Key from the pop-up menu (following figure). This adds an additional keyframe for the property.

    By adding a keyframe for the blue stroke's WipeL value, you can adjust that value in the timeline and make it so that the stroke is finished wiping onto the workspace at this point in the effect.



Choosing Add Key from the Pop-Up Menu

In the timeline, you see a Control Knob added in the keyframe track (following figure).



The Control Knob Added in the Keyframe Track

Leave the Wipes Properties panel up for now.

24. In the timeline, click-and-drag the Control Knob for the keyframe you just added so that the Control Knob is at the bottom of the track. For this track, which is for the WipeL property, moving the Control Knob to the bottom of the track makes the stroke so that it is completely wiped into the workspace. Dragging the Control Knob up causes the stroke to wipe out of the workspace until it is completely out of the workspace when the Control Knob is at the top of the track.

    You see that the blue stroke is completely wiped into the workspace.

25. In the timeline, select the event for the white stroke.

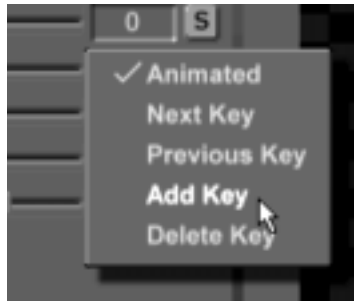
    In the timeline, you see that the event for the white stroke is highlighted, indicating that it is selected.

    In the workspace, you see a bounding box around the white stroke.

    The Wipes Properties panel is now for the white stroke.

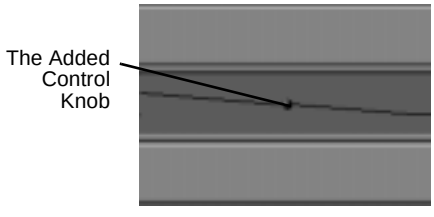
26. In the Wipes Properties panel, click the Animation Status button for the WipeB property for the white stroke and choose Add Key from the pop-up menu (following figure). This adds an additional keyframe for the property.

    By adding a keyframe for the white stroke's WipeB value, you can adjust that value in the timeline and make it so that the stroke begins wiping onto the workspace at this point in the effect.



Choosing Add Key from the Pop-Up Menu

In the timeline, you see a Control Knob added in the keyframe track (following figure).

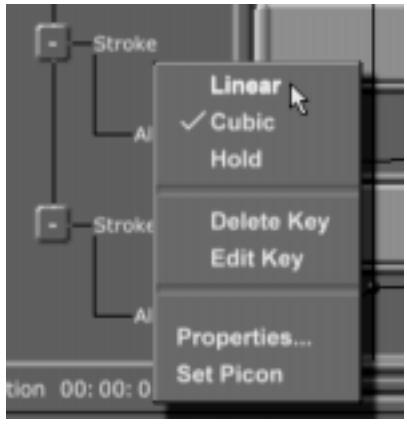


The Control Knob Added in the Keyframe Track

27. In the timeline, click-and-drag the Control Knob for the keyframe you just added so that the Control Knob is at the top of the track. For this track, which is for the WipeB property, moving the Control Knob to the top of the track makes the stroke so that it is completely wiped out of the workspace. Dragging the Control Knob down causes the stroke to wipe onto the workspace until it is completely visible in the workspace when the Control Knob is at the bottom of the track.

    You see that the white stroke is completely wiped out of the workspace.

28. Change the interpolation of the Control Knob to Linear by right-clicking on it and choosing Linear from the pop-up menu (following figure).

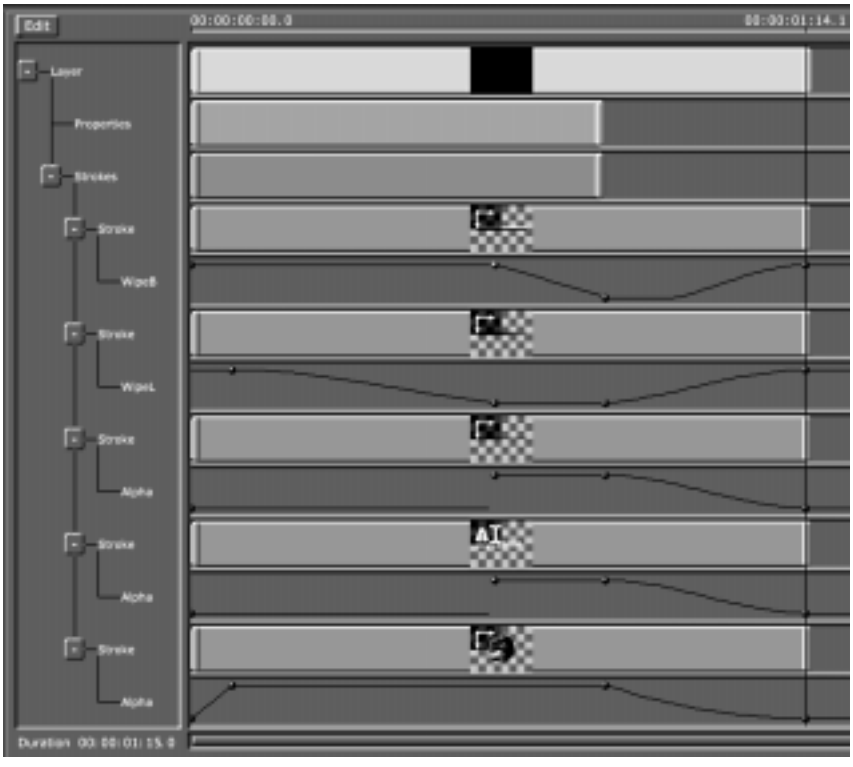


Choosing Linear from the Pop-Up Menu.

In the timeline, you that see the line between the two points is a straight line (following figure), indicating that the interpolation is set at Linear. A Linear interpolation means that the animation in between keyframes follows the straightest path possible, and the animation moves at a constant rate.

A Linear Interpolation Between Keyframes

29. Now that you've animated all of the values for the first half of your effect, the tracks in your timeline should look like the following figure. If they don't, edit the tracks in the animation so that they do.



The Timeline

30. Preview the effect in Panamation at this point to see how it will look when it is run in Switcher or loaded into Preditor. To do this, follow these steps:

    a. Bring the animation to its beginning by clicking the First Frame button (following figure) in the Transport Controls.

The First Frame Button

In the workspace, you see the animation at its starting point.

b. Play the animation by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In the workspace, you see the animation as it plays. You see, in this order, the Earth fade into the workspace, the blue stroke wipe into the workspace, the thin red stroke and My Name stroke become opaque, and the white stroke wipe into the workspace. You then see the red line, earth, and My Name strokes fade so they are not visible in the workspace, while the blue and white strokes wipe out of the workspace.

NOTE In Panamation, when you play an animation that has a pause point, the effect does not pause. However, when the effect is run in Switcher, it does pause where you set the pause point.

31. Save the project in progress by clicking the Save Now button (following figure) in the Workspace Controls. Once a project has been saved, clicking the Save Now button saves any changes made to the project since it was last saved.

TIP When a project is saved, it is brought to the last frame of the effect. Be sure to bring the effect back to the point in the effect that you working at. Otherwise, any changes you make are applied to the last frame of the effect.

The Save Now Button

Continue to edit the animation for the second half of the effect.

Editing the animation for the second half of the effect

To use the timeline to edit the animation for the second half of the effect, follow these steps:

1. In the Transport Controls, click-and-drag the Timecode slider (following figure) to the left, until the Timecode display reads 00:00:01:00:0. You are going to edit all of the Control Knobs for the keyframes at this point in the timeline.

The Timecode Slider

2. In the timeline, select the event for the white stroke.

   In the timeline, you see that the event for the white stroke is highlighted, indicating that it is selected.

   In the workspace, you see a bounding box around the white stroke.

3. Right-click on the Control Knob for the WipeB property at this point in the timeline and choose Linear from the pop-up menu (following figure). This changes the interpolation between this Control Knob and the next to Linear.

Choosing Linear from the Pop-Up Menu.

In the timeline, you that see the line between the two points is a straight line (following figure), indicating that the interpolation is set at Linear. A Linear interpolation means that the animation in between keyframes follows the straightest path possible, and the animation moves at a constant rate.

A Linear Interpolation Between Keyframes

4. In the timeline, select the event for the blue stroke.

   In the timeline, you see that the event for the blue stroke is highlighted, indicating that it is selected.

   In the workspace, you see a bounding box around the blue stroke.

5. Bring up the Event panel by right-clicking on the Control Knob for the WipeL property at this point in the timeline and choosing Edit Key from the pop-up menu (following figure).

Choosing Edit Key from the Pop-Up Menu.

You see the Event panel (following figure) on the left side of your screen. This is a floating panel that can be dragged to any spot on the screen. With the Event panel, you can change the value of a keyframe's property, the interpolation of the keyframe, or the keyframe's position in the timeline. For more information about using the Event panel, see "Event Panel" on page 199.

The Event Panel

6. In the Event panel, click-and-drag the Time Slider (following figure) right until the timecode below it reads 00:00:01:05.0. By doing this, you have moved the keyframe so that it is 1 second and 5 frames into the

effect. This means that the blue stroke does not start wiping out of the workspace until this point in the effect.

The Time Slider

In the timeline, you see the Control Knob move to the right until it is in position.

7. Close the Event panel by clicking the X button in the upper right corner of the panel.

8. In the timeline, select the event for the thin red stroke.

   In the timeline, you see that the event for the thin red stroke is highlighted, indicating that it is selected.

   In the workspace, you see a bounding box around the thin red stroke.

9. In the timeline, right-click the Control Knob for the Alpha property at this point in the timeline and choose Hold from the pop-up menu (following figure).

Choosing Hold From the Pop-Up Menu

10. In the timeline, select the event for the My Name stroke.

    In the timeline, you see that the event for the My Name stroke is highlighted, indicating that it is selected.

    In the workspace, you see a bounding box around the My Name stroke.

11. In the timeline, right-click the Control Knob for the Alpha property at this point in the timeline and choose Hold from the pop-up menu (following figure).

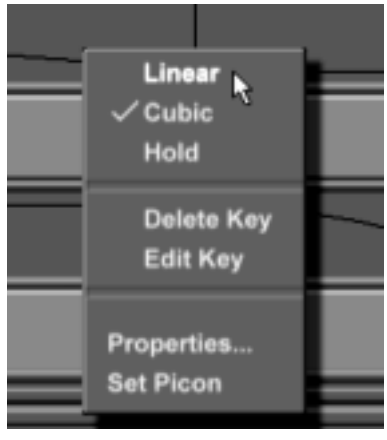
Choosing Hold from the Pop-Up Menu

12. In the timeline, select the event for the Earth stroke.

    In the timeline, you see that the event for the Earth stroke is highlighted, indicating that it is selected.

    In the workspace, you see a bounding box around the Earth stroke.

13. Right-click on the Control Knob for the Alpha property at this point in the timeline and choose Linear from the pop-up menu (following figure). This changes the interpolation between this Control Knob and the next to Linear.

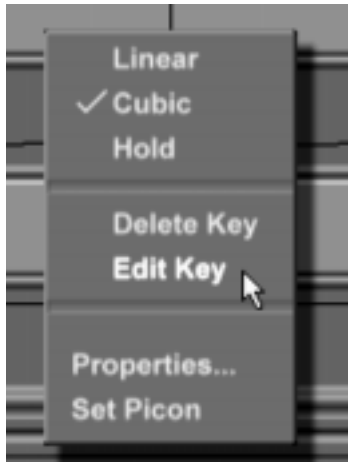


Choosing Linear from the Pop-Up Menu.

In the timeline, you that see the line between the two points is a straight line (following figure), indicating that the interpolation is set at Linear. A Linear interpolation means that the animation steps in between keyframes follows the straightest path possible, and the animation moves at a constant rate.

A Linear Interpolation Between Keyframes

14. Bring up the Event panel by right-clicking on the Control Knob for the Alpha property at this point in the timeline and choosing Edit Key from the pop-up menu (following figure).



Choosing Edit Key from the Pop-Up Menu.

You see the Event panel (following figure) on the left side of your screen. This is a floating panel that can be dragged to any spot on the screen. With the Event panel, you can change the value of a keyframe's property, the interpolation of the keyframe, or change the keyframe's position in the timeline. For more information about using the Event panel, see "Event Panel" on page 199.

The Event Panel

15. In the Event panel, click-and-drag the Time Slider (following figure) right until the timecode below it reads 00:00:01:13.0. By doing this, you have moved the keyframe so that it is 1 second and 13 frames into the effect. This means that the Earth stroke does not start becoming transparent until this point in the effect.

The Time Slider

In the timeline, you see the Control Knob move to the right until it is in position.

16. Close the Event panel by clicking the X button in the upper right corner of the panel.

17. In the Transport Controls, click-and-drag the Timecode slider (following figure) to the left, until the Timecode display reads 00:00:01:05.0. You are going to edit all of the Control Knobs for the keyframes at this point in the timeline.

The Timecode Slider

18. In the timeline, select the event for the My Name stroke.

In the timeline, you see that the event for the My Name stroke is highlighted, indicating that it is selected.

In the workspace, you see a bounding box around the My Name stroke.

19. Bring up the Stroke Properties panel for the My Name stroke by right-clicking on the event and choosing Properties from the pop-up menu (following figure).

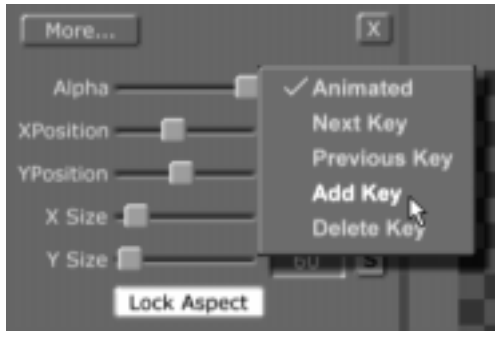
Choosing Properties from the Pop-Up Menu

You see the Stroke Properties panel in the upper left corner of your screen. You will use this panel to add a keyframe for the Alpha property to the timeline.

20. In the Stroke Properties panel, click the Animation Status button for the Alpha property (following figure) for the My Name stroke and choose Add Key from the pop-up menu (following figure). This adds an additional keyframe for the property.

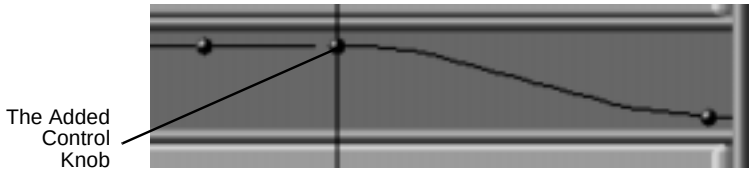
By adding a keyframe for the My Name stroke's Alpha value, you can adjust that value in the timeline and make it so that the stroke is completely transparent at this point in the effect.

The Animation Status Button



Choosing Add Key from the Pop-Up Menu

In the timeline, you see a Control Knob added in the keyframe track (following figure).



The Control Knob Added in the Keyframe Track

Leave the Stroke Properties panel up for now.

21. In the timeline, click-and-drag the Control Knob for the keyframe you just added so that the Control Knob is at the bottom of the track. For this track, which is for the Alpha property, moving the Control Knob to the bottom of the track makes the stroke completely transparent.

    In the workspace, you see that the My Name stroke is completely transparent.

22. In the timeline, select the event for the thin red stroke.

    In the timeline, you see that the event for the thin red stroke is highlighted, indicating that it is selected.

    In the workspace, you see a bounding box around the thin red stroke.

    The Stroke Properties panel is now applied to the thin red stroke.

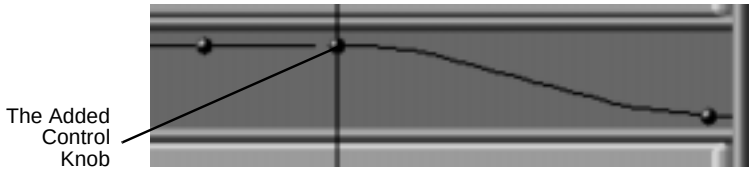
23. In the Stroke Properties panel, click the Animation Status button for the Alpha property (following figure) for the thin stroke and choose Add Key from the pop-up menu (following figure). This adds an additional keyframe for the property.

    By adding a keyframe for the thin red stroke's Alpha value, you can adjust that value in the timeline and make it so that the stroke is completely transparent at this point in the effect.

The Animation Status Button

Choosing Add Key from the Pop-Up Menu

In the timeline, you see a Control Knob added in the keyframe track (following figure).



The Control Knob Added in the Keyframe Track

24. In the timeline, click-and-drag the Control Knob for the keyframe you just added so that the Control Knob is at the bottom of the track. For this track, which is for the Alpha property, moving the Control Knob to the bottom of the track makes the stroke completely transparent.

    In the workspace, you see that the thin red stroke is completely transparent.

25. Close the Stroke Properties panel by clicking the X button in the upper right corner of the panel.

26. Go to the end of the effect by clicking the Last Frame button in the Transport Controls (following figure).

The Last Frame Button

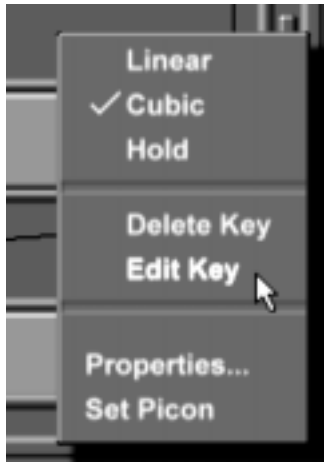
In the workspace, you see the end of the effect. You are going to edit all of the Control Knobs for the keyframes at this point in the timeline.

27. In the timeline, select the event for the white stroke.

    In the timeline, you see that the event for the white stroke is highlighted, indicating that it is selected.

    In the workspace, you see a bounding box around the white stroke.

28. Bring up the Event panel by right-clicking on the Control Knob for the WipeB property at this point in the timeline and choosing Edit Key from the pop-up menu (following figure).



Choosing Edit Key from the Pop-Up Menu.

You see the Event panel (following figure) on the left side of your screen. This is a floating panel that can be dragged to any spot on the screen.

With the Event panel, you can change the value of a keyframe's property, the interpolation of the keyframe, or change the keyframe's position in the timeline.

The Event Panel

29. In the Event panel, click-and-drag the Time Slider (following figure) left until the timecode below it reads 00:00:01:05.0. By doing this, you have moved the keyframe so that it is 1 second and 5 frames into the effect. This means that the white stroke is wiped out of the screen at this point in the effect.

The Time Slider

In the timeline, you see the Control Knob move to the left until it is in position.

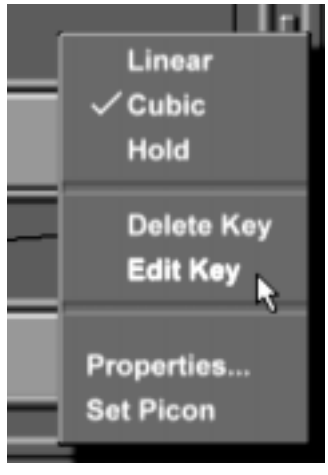
30. Close the Event panel by clicking the X button in the upper right corner of the panel.

31. In the timeline, select the event for the blue stroke.

    In the timeline, you see that the event for the blue stroke is highlighted, indicating that it is selected.

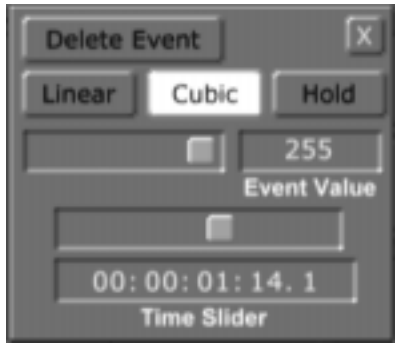
    In the workspace, you see a bounding box around the blue stroke.

32. Bring up the Event panel by right-clicking on the Control Knob for the WipeL property at this point in the timeline and choosing Edit Key from the pop-up menu (following figure).



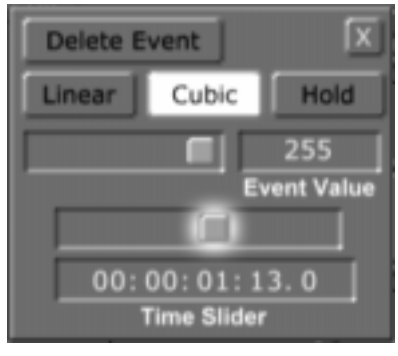
Choosing Edit Key from the Pop-Up Menu.

You see the Event panel (following figure) on the left side of your screen. This is a floating panel that can be dragged to any spot on the screen. With the Event panel, you can change the value of a keyframe's property, the interpolation of the keyframe, or change the keyframe's position in the timeline.



The Event Panel

33. In the Event panel, click-and-drag the Time Slider (following figure) left until the timecode below it reads 00:00:01:13.0. By doing this, you have moved the keyframe so that it is 1 second and 13 frames into the effect. This means that the blue stroke is wiped out of the screen at this point in the effect.

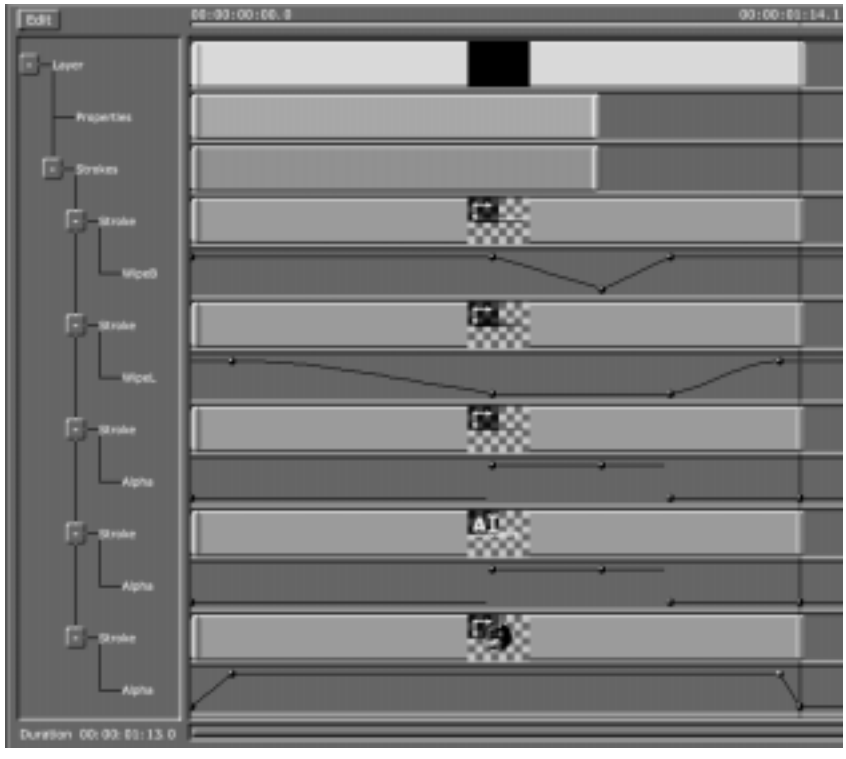


The Time Slider

In the timeline, you see the Control Knob move to the left until it is in position.

34. Close the Event panel by clicking the X button in the upper right corner of the panel.

35. Now that you've animated all of the values for the first and second halves of your effect, the tracks in your timeline should look like the following figure. If they don't, edit the tracks in the animation so that they do.



The Timeline

36. Preview the effect in Panamation at this point to see how it will look when it is run in Switcher or loaded into Preditor. To do this, follow these steps:

    a. Bring the animation to its beginning by clicking the First Frame button (following figure) in the Transport Controls.

The First Frame Button

In the workspace, you see the animation at its starting point.

b. Play the animation by clicking the Play button (following figure) in the Transport Controls.

The Play Button

In the workspace, you see the animation as it plays. You see, in this order: the Earth fade into the workspace, the blue stroke wipe into the workspace, the thin red stroke and My Name strokes become opaque, and the white stroke wipe into the workspace. You then see the white stroke wipe out of the workspace, the thin red stroke and My Name strokes become transparent, the blue stroke wipes out of the workspace, and the Earth stroke fades out of the workspace.

NOTE In Panamation, when you play an animation that has a pause point, the effect does not pause. However, when the effect is run in Switcher, it does pause where you set the pause point.

37. Save the finished project by clicking the Save Now button (following figure) in the Workspace Controls. Once a project has been saved, clicking the Save Now button saves any changes made to the project since it was last saved.

The Save Now Button

You now know how to create an animated lower third graphic in Panamation. Using these skills, you can also create any animated overlay effect, such as a corner bug. You also learned how to use the timeline to edit and custom tailor the animation of a project.

Appendix 1: Keyboard Commands

Keyboard commands are a cool way to navigate through applications and perform functions with near light-speed swiftness. In this appendix, you find keyboard commands for Panamation:

Ctrl + Z	Undo
Ctrl + U	Undo
Delete	Undo
Ctrl + A	Redo
Ctrl + Delete	Redo
Ctrl + F12	Perform a Air Command cut from Preview to Program source
F1 to F8	Select a program out source from inputs 1 through 8
F9	Selects Mat1 as the program out
F10	Selects FS1 at the program out
F11	Selects FS2 as the program out
F12	Selects Out as the program out
Shift + Left Arrow	Previous frame
Ctrl + F2	Previous frame
Shift + Right Arrow	Next frame
Ctrl + F3	Next frame
Ctrl + F9	Clears all strokes from the workspace
Esc	Turns on the Safe Area
Home	Zoom in on the workspace
Page Up	Zoom out on the workspace
Ctrl + C	Copy a stroke's properties
Ctrl + V	Paste a stroke's copied properties

Arrow Keys	Move selected object
Ctrl + Arrow Keys	When creating a text stroke, adjusts the kerning for the next character
Ctrl + Tab	Refreshes the workspace and redraws all objects
Ctrl + Back Space	When working with a spline, completes the spline shape
Enter	When working with a spline, completes the spline shape

Appendix 2: Trinity Technical Support

Play has spent a lot of effort to make Trinity durable and reliable, and you should expect to spend many happy years with it. But because we are aware that things go wrong from time to time, we have established a support system for Trinity owners that puts help close at hand.

If you should ever need technical support for your Trinity, you should contact your Trinity dealer. We understand that you can't afford any downtime with your Trinity, so we have empowered the Trinity Dealer Network to directly provide you with rapid service for any problem that may occur.

Each Trinity dealer has been through extensive training on all aspects of Trinity, and has at his or her disposal a wealth of resources to quickly handle all your technical support requirements.

Should you find it necessary to contact Play directly, there are several methods at your disposal.

- Via the Internet

  For updates on Trinity documentation and software, point your browser to:

  www.play.com/products/trinity/updates

  For answers to FAQ's (frequently asked questions) or to contact the Trinity technical wizards via e-mail, go to the following web page:

  www.play.com/cgi-bin/rightnow

- By Phone:(916) 636-2444

  Trinity technical experts are on hand from 7:00AM to 6:00PM Pacific Time, Monday thru Friday, excluding major national holidays.

- By Mail or Fax

  Play Incorporated
  Attn: Trinity Support
  2890 Kilgore Road
  Rancho Cordova, CA 95670-6133
  Fax: (916) 853-9831

Appendix 3: Troubleshooting Guide

One of the most important questions to ask yourself when troubleshooting is what has changed since the system last worked correctly? This question applies to both hardware and software. Sometimes it's the smallest change to the system that causes everything to stop operating properly. When troubleshooting, remember that the Trinity software relies on a correctly functioning PC. If the PC is not working correctly or does not meet the minimum requirements for a Trinity system, then it could affect the Trinity software or VideoNet drivers and cause unpredictable results.

This section is a troubleshooting guide to problems and possible solutions for Panamation.

The following topics are covered in this appendix:

- Troubleshooting Panamation 554
- Frequently asked questions 555

Troubleshooting Panamation

When I load a still or paint on the workspace I can't see it on my program monitor.

Right click on the workspace border, select Properties, turn on Video (to see on the video monitor what you are doing in Panamation) and turn on Alpha (to key the images over live video).

When I use the spline tool to cut out an object, I right-click and choose Complete Shape and choose Lift Stroke. When I try to move it, it's a square rather than the shape I carefully traced.

Go to Workspace Properties and make sure Video and Alpha are turned off.

Frequently Asked Questions

Is image processing also a part of Trinity?

Yes! Panamation includes a collection of sophisticated image processing functions, all of which can be applied with any stroke or brush, including the real-time airbrush. Image processing tools include; lighten, darken, emboss, monochrome, false color, contrast and gamma.

Can a still frame with an alpha channel (32-bit Targa file) be used in Trinity?

Yes. Targa files with alpha channels can be brought into Panamation for manipulation. Panamation can easily extract the image from the background and save the resulting image as a native Trinity file for use with Trinity's applications.

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