You can read the recommendations in the user guide, the technical guide or the installation guide for APPLE MOTION 5. You'll find the answers to all your questions on the APPLE MOTION 5 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

Motion 5
User Manual

Manual abstract:

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ently asked questions for Motion, go to: • http://www.

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Html 16 Preface Welcome to Motion About Motion and Motion Graphics 1 Motion graphics are a type of visual effects work most commonly associated with title sequences and show openers, bumpers and interstitials, and interface design such as DVD menus. Motion graphics are also frequently used in technical settings for simulations of moving systems such as traffic patterns or scientific models. Sophisticated motion graphics artists often combine traditional layout and design techniques with tools borrowed from special effects work such as keying, masking, compo and Motion Graphics Replicator Another tool unique to Motion, the replicator, creates customizable, kaleidoscopic patterns from copies of an image layer, yielding intricate, dazzling design effects that would take hours to build in other applications.

Rigging A powerful new tool in Motion called rigging lets you manipulate multiple attributes in a composition with a single master control. Final Cut Pro X Templates Motion also lets you create effects, title, and transition templates for use in Final Cut Pro X, and when you publish the templates, you can include rigs, simplifying the task of parameter adjustment in Final Cut Pro. Heads-Up Display (HUD) A special floating window called the heads-up display (HUD), provides at-a-glance access to your most frequently used parameter controls. The HUD changes dynamically, depending on what is selected in your project. The HUD also provides access to unique visual controls for some of the behaviors.

Real-Time Feedback With the right hardware configuration, most effects in Motion can be viewed in real time. This means that you can watch how the various elements of your composition interact as you modify them. Rather than making a set of assumptions and then waiting to see how they turn out, you can immediately see how your ideas work, then make adjustments on the fly. Input Devices If you have a two- or three-button mouse connected to your computer, you can right-click to access the same controls specified by the Control-click commands in the user documentation. If you are working on a MacBook or MacBook Pro, some keyboard shortcuts require you to use the Function key (Fn—next to the Control key) in conjunction with the keys specified in the user documentation. For more information about keyboard shortcuts in Motion, see Keyboard Shortcuts. If you have a Multi-Touch device, such as a Magic Mouse or trackpad, you can use various gestures for interface navigation, scrolling, frame scrubbing, and zooming. You can also use gestures to change the size of icons in the File Browser and Library. These gestures are discussed in their relative sections of the documentation. Chapter 1 About Motion and Motion Graphics 19 About Motion Projects In Motion, you create 2D or 3D motion graphics and compositing projects with imported images (such as Adobe Photoshop or Illustrator files), image sequences, QuickTime movies, and audio files, as well as with objects created in Motion.

These objects include text, masks, shapes, particles, paint strokes, and so on. A Motion project is made up of groups that contain layers. All media imported into Motion, or elements created within a project (such as shapes or particles), are referred to as layers. a layer must live in a group. The group acts as a "parent" to its layers. You can select multiple layers in a group to create a nested group. a group can be 2D or 3D. For more information on layer and group basics, see Transforming Layers. Any item in Motion can be referred to as an object, but an item that you can see in the Canvas, such as an image, shape, or text, is generally referred to as a layer. When you add a camera to a project, you can switch the project to 3D mode or to remain in 2D mode (unless the project is empty or completely 2D, in which case it is switched to 3D mode).

When a 3D group is nested in a 2D group, the group is flattened. This means that the nested 3D group acts like a flat card and ignores the camera. In addition, the flattened group does not intersect with layers of the 2D group or other groups in the project. For more information on working in 3D, see 3D Compositing. Any transforms, filters, or behaviors applied to a group are applied to all layers in the group.

If you move or apply a filter or behavior to a group, all layers in that group are affected. you can also apply filters and behaviors to individual layers in a group. A filter is a process that changes the appearance of an image. For example, a blur filter takes an input image and outputs a blurred version of that image. For more information on using filters, see Using Filters.

A behavior is a process that applies a value range to an object's parameters, creating an animation based on the affected parameters. For example, the Spin behavior rotates an object over time at a rate that you specify. For more information on using behaviors, see Using Behaviors. Groups and layers can be moved and animated by using behaviors or by setting keyframes. For information about keyframing, see Keyframes and Curves. filters can also be animated. 20 Chapter 1 About Motion and Motion Graphics A project represents a single flow of image data built from the bottom up. In a composite with a single group, the layers in that group are stacked above one another. Filters and behaviors applied to a layer appear beneath the layer in the Layers list. The group represents the image that results from its combined layers and their applied behaviors, filters, and composite modes (blend modes).

For more information on building projects, see Creating and Managing Projects. For more information on basic compositing, see Basic Compositing. In a simple example, a group contains a single image with applied color correction and blur filters (in that order). The image provides the input data to the color correction filter. The output data of the color correction is the input data for the blur filter. The group represents the result of that image data flow. Groups and layers are also stacked one above the other in a project—the output of the lower layer is the input to the layer above it in the list. When working in 3D mode, a layer that is below another layer in the Layers list can appear above that layer in the Canvas if its Z (depth) position is closer to the camera. You can force the layers to respect their order in the Layers list by selecting the Layer Order checkbox in the Group pane of the Inspector. Chapter 1 About Motion and Motion Graphics 21 The Motion Interface 2 This chapter introduces you to the Motion interface and describes how to use all the basic tools you need to get started.

This chapter covers the following: • Project Browser (p. 121) 23 Project Browser Unless you specify a default project in Motion Preferences, the Project Browser appears every time you open Motion or when you create a project. The Project Browser is the main portal to Motion projects: Use it to create new projects, to open recent projects or templates (including templates for Final Cut Pro X), or to create a project from a specific file.

In the Project Browser, you can also search for projects based on assigned categories and themes. For more information on the Project Browser, see The Project Browser.

24 Chapter 2 The Motion Interface Workspace Overview When you open a Motion project, its workspace fills your screen. The interface is a single project window with dedicated areas that can be shown or hidden. File Browser, Library, and Inspector Project pane Canvas Toolbar Timing pane The Motion workspace contains the following major components: • File Browser, Library, and Inspector: The left side of the Motion workspace contains three panes: the File Browser, Library, and Inspector. Click the labels at the top of this area to show each pane. Use the File Browser to preview and add files to your project. Use the Library to locate and apply the effects, templates, and other content that Motion provides. Use the Inspector to modify elements in your project. For more information see File Browser, Library, and Inspector. ⬚ Toolbar: The toolbar—a horizontal gray bar spanning the center of Motion workspace—contains tools and controls for creating and editing elements in your project. The left side of the toolbar provides access to tools used to create and manipulate objects such as text, shapes, paint strokes, and masks. The center of the toolbar contains the timing display. The right side of the toolbar includes buttons to apply effects such as lights, filters, behaviors, particle systems and replicators. For more information, see Toolbar. Chapter 2 The Motion Interface 25 • Canvas: The Canvas, located in the upper-right corner of the Motion workspace, is the main work area of the interface, where you can view and manipulate elements, as well as control playback of your project. The Canvas also contains the status bar and the project view options.

For more information, see Canvas. ⬚ Project pane: The Project pane, located to the left of the Canvas, contains the Layers, Media, and Audio lists, which display items in your project. Click the labels at the top of this area to show each list. The Layers list shows all objects used in your composition; the Media list shows all external images, clips, and audio files linked to your project; and the Audio list displays all audio tracks in your project. The Project pane can be hidden to maximize the Canvas working area. For more information, see Project Pane. ⬚ Timing pane: The Timing pane, located underneath the toolbar, contains three modules: the Timeline, the Audio Timeline, and the Keyframe Editor. Each module lets you see and manipulate timing aspects of a project. The Timing pane can be hidden to maximize the Canvas working area. For more information, see Timing Pane.

file Browser The File Browser displays all files on your computer and networked disks. Navigating the File Browser is similar to navigating a window in the Finder. You can drag items from the File Browser to your project. The File Browser, Library, and Inspector share the same pane on the left side of the Motion workspace. To open the File Browser Do one of the following: µ µ Click File Browser in the top-left corner of the Motion workspace.

Note: If the File Browser is open, choosing Window > File Browser (or pressing Command-1) collapses the pane containing the File Browser, Library, and Inspector, maximizing the Canvas work area. To collapse or expand the pane containing the File Browser, Library, and Inspector Do one of the following: µ µ With the File Browser open, choose Window > File Browser (or press Command-1). Click the "i" button in the lower-left corner of the Motion workspace.

26 Chapter 2 The Motion Interface File Browser Preview Area The top area of the File Browser contains a preview of the selected file. The preview area includes a visual preview and text information about the file: filename, media type, file size, and frame rate.

If the file is a video or audio clip, the preview area also contains an audio mute button. Note: When displayed in the preview area, audio files contain a text description but no image preview. µ To play a preview of a file Select the file in the File Browser. If the file is a media clip, the preview starts playing. Note: If you do not want items to play automatically in the preview area when you click them, deselect the "Play items automatically on a single click" checkbox in the General pane of Motion Preferences. µ To pause or resume playback of a file Move the pointer over the visual preview, then click the Pause or Play button that appears over the thumbnail. To import a file displayed in the preview area 1 Select the file in the File Browser. 2 Click the Import button in the preview area. The file is added to the project (to the Canvas, Layers list, Timeline, and Media list). Note: For a larger preview, double-click any file listed in the File Browser.

This opens a viewer window where you can preview the file at its native size. You can also Control-click a file and choose Open in QuickTime Player from the shortcut menu. Chapter 2 The Motion Interface 27 File Browser Sidebar Directly underneath the preview area is the sidebar, which contains a list of servers, drives, and folders available on your computer. Clicking a drive or folder in the sidebar displays its contents in the file stack below. Above the list of drive and folder icons in the sidebar are controls to navigate and sort the contents of the window. Forward/Back buttons Path pop-up menu Forward and Back buttons: Steps backward and forward through the folders most recently viewed. If you have a Mac with a Multi-Touch trackpad, you can also swipe left or right with three fingers to navigate up or down the folder hierarchy. Path pop-up menu (unlabeled): Displays the file system hierarchy (folders inside of folders) for the current folder. File Browser Stack Underneath the File Browser sidebar is the file stack, which displays the contents of the folder selected in the sidebar. You can scroll through long stacks using a scroll bar or with a two-finger swipe on a Multi-Touch trackpad.

When you Control-click a file in the File Browser stack, shortcut menu displays the following commands: • Open in Viewer: Opens the file in a viewer window. • Open in QuickTime Player: Opens the file in a QuickTime window. ⬚ Reveal in Finder: Displays the location of the file in the Finder. ⬚ Rename: Turns the name of the file into an active text field so you can enter a new name. ⬚ Move to Trash: Moves the file into the Trash.

To view the contents of a folder displayed in the file stack Do one of the following: µ µ Double-click the folder. Select the folder, then press Return. 28 Chapter 2 The Motion Interface To return to a previously viewed folder Do one of the following: µ µ µ µ Click the Back button beneath the preview area (to the left of the Path pop-up menu). Choose a folder from the Path pop-up menu beneath the preview area.

Swipe left with three fingers on a Multi-Touch trackpad. Managing Files in the File Browser In the File Browser, you can rename, move, or delete files. You can also change how files are displayed. To rename a folder or file Do one of the following: µ µ Control-click the file or folder, then choose Rename from the shortcut menu. When the text field becomes active, enter the new name, then press Return. In the stack, click the name of the folder or file once to select it, then click it again to activate the text field. Enter the new name, then press Return. Warning: Renaming folders or files from the File Browser renames the item on your hard drive or networked hard disk. If projects use files from the originally named folder, Motion may list the footage as missing. To delete a folder or file Do one of the following: µ µ In the stack, Control-click the file, then choose Move to Trash from the shortcut menu.

Drag the file from the stack to the Trash icon in the Dock. Warning: Deleting folders or files from the File Browser removes the files from your hard disk or networked hard disk and places the files in your Trash. To create a folder Click the Add button (+) in the lower-left corner of the File Browser. µ µ To move a file into a folder Drag the file to the folder icon. The file is moved inside that folder. Chapter 2 The Motion Interface 29 Note: Changes you make to your file structure in the Motion File Browser are reflected in the Finder. µ To search for a file Click the Search button, then enter text in the Search field. The contents of the file stack are filtered to include only files whose names contain the entered text. Note: The Search field is not available unless the Search button is selected. µ To clear a file search Click the Clear button at the right side of the Search field.

Icon View and List View The file stack can be displayed in icon view or list view. Each view is useful for different situations. Icon view List view µ To view the File Browser in icon view Click the Icon View button in the lower-right corner of the File Browser. 30 Chapter 2 The Motion Interface µ To view the File Browser in list view Click the List View button in the lower-right corner of the File Browser. µ To change the size of the icons while in icon view Click the Icon Scale button in the lower-left corner of the File Browser, then drag the slider to the right to make the icons larger, or to the left to make them smaller. µ On a Multi-Touch trackpad, pinch open to make the icons larger or pinch closed to make the icons smaller. In list view, the contents of the folder appear as a series of columns at the top of the stack: Name, Date, Size, Duration, and Kind. You may need to expand the width of the File Browser, or use the scroll bar at the bottom of the stack (or a two-finger swipe on a Multi-Touch trackpad), to see all the columns. Sorting Columns When in list view, you can sort the list by any column. This can be helpful if you are looking for a specific file and you know the approximate size or modification date.

µ To sort the File Browser list At the top of the stack, click the header of the column to sort. The column header is highlighted and the contents of the window are sorted by that column. collapsing Animations Sometimes , animated sequences are delivered as a series of sequentially numbered still images. Motion can save you time by allowing you to import these sequences as a single object, with each image used as a sequential frame in a movie. To import a series of numbered still images as a single object 1 Click the "Show image sequences as collapsed" button in the lower-right corner of the File Browser. Chapter 2 The Motion Interface 31 The File Browser displays multiple items collapsed into a single object. 2 Drag the object from the File Browser to the Canvas, Layers list, Timeline, or Media list. Note: Images from digital cameras are often numbered sequentially but are not part of an animation sequence. You can turn off this option to import a single still image from a digital camera. Library The Library is similar to the File Browser, but rather than showing files on your disk, it shows effects, content, presets, fonts, music, photos, and other elements available in Motion.

Library content can be expanded by adding fonts, music, or photos, as well as by saving content that you create in Motion. You can also save modified versions of existing effects (such as customized behaviors or camera animations) as custom additions to the Library. Like the File Browser, the Library is divided into three sections. The top section is the preview area; the middle section is the sidebar; and the bottom section is the file stack, where effects and other objects are displayed. The Library, File Browser, and Inspector share the same pane on the left side of the Motion workspace. To open the Library Do one of the following: µ µ Click Library in the top-left corner of the Motion workspace. Note: If the Library is open, choosing Window > Library (or pressing Command-2) collapses the pane containing the Library, File Browser, and Inspector, maximizing the Canvas work area. To collapse or expand the pane containing the Library, File Browser, and Inspector Do one of the following: µ µ With the File Browser open, choose Window > Library (or press Command-2). Click the "i" button in the lower-left corner of the Motion window. 32 Chapter 2 The Motion Interface Library Preview Area The preview area contains a visual thumbnail showing the multiple frames of moving footage, as well as previews of filters, behaviors, generators, particle emitters, replicators, and so on.

The preview area also contains text information for the library item, such as a description of the behavior, filter, or generator. The Library preview area is almost identical to the File Browser preview area, but instead of an Import button it contains an Apply button. Note: When some particle emitters are selected in the stack, an animated preview plays in the preview area. µ To play a preview of an element such as a replicator In the Library, click the Replicators category, click a replicator subcategory, then click a replicator in the stack. The preview plays in the preview area.

Note: To automatically play items selected in the File Browser or Library, choose Motion > Preferences (or press Command-Comma), then select "Play items automatically on a single click" in the File Browser & Library section of the General pane. µ To pause or resume preview playback Move the pointer over the visual preview, then click the Pause or Play button that appears over the thumbnail. Chapter 2 The Motion Interface 33 Library Sidebar Underneath the Library preview area is the sidebar, which contains a list of folders of effect types and content available in Motion. Clicking a folder in the sidebar displays its contents in the file stack below.

Above the Library categories in the sidebar are several controls to navigate and sort the contents of the window.
Theme pop-up menu Forward/Back buttons Path pop-up menu Forward and Back buttons: Steps backward and forward through the folders most recently viewed. These buttons work similarly to the Forward and Back buttons in a web browser. If you have a Mac with a Multi-Touch trackpad, you can also swipe left or right with three fingers to navigate up or down the folder hierarchy. Path pop-up menu (unlabeled): Displays the file system hierarchy (folders inside of folders) for the current folder. theme pop-up menu: Lets you sort and organize Library content by theme. For more information about working with themes, see Working with Themes in the Library. Library File Stack Under the Library sidebar is the file stack, which displays the contents of the folder selected in the sidebar. You can scroll through long file stacks using the horizontal scroll bar or with a two-finger swipe on a Multi-Touch trackpad. To view the contents of a folder displayed in the file stack Do one of the following: µ µ Double-click the folder. Select the folder, then press Return.

The contents of the folder replace the current file stack view. To return to a previously viewed folder Do one of the following: µ µ µ 34 Click the Back button beneath the preview area. Choose a folder from the Path pop-up menu beneath the preview area. press Command–Up Arrow. Chapter 2 The Motion Interface µ Swipe left with three fingers on a Multi-Touch trackpad. library Content The Library contains all effects , presets , fonts , and other content available in Motion. These items are grouped into categories listed in the left sidebar. Choose any of these items to display a list of subcategories in the right sidebar. The Library also contains two additional categories—Music and Photos—that provide quick access to your iTunes and iPhoto libraries. For information on adding Library content to your project, see Adding Library Elements to a Project.
The Library contains the following categories: • Behaviors: Contains all behaviors, divided into individual subcategories. Some behaviors can only be applied to specific objects. For example, Text Animation and Text Sequence behaviors can only be applied to text objects. For more information on how to apply behaviors, see Applying Behaviors. ☐ Filters: Contains all filter special effects, divided into individual subcategories.
Third-party FxPlug filters appear in the category to which they belong. Most filters can be applied to any layer (text, images, shapes, footage, particles, and so on) or mask in your project. For more information on filters, see About Filters. • Image Units (Filters): Contains all processing plug-ins based on core image processing installed on your computer. ☐ Generators: Contains a selection of checkerboards, noise patterns, color rays, animated text objects, and other computer-generated elements for use in your projects.
For more information on generators, see About Generators. For more information on particle systems presets, see Using the Particle Library. • Replicators: Contains a selection of preset replicators organized into subcategories. For more information on preset replicators, see Using the Replicator Library Presets. For information on changing fonts in your project, see Changing Fonts. ☐ Text Styles: Contains a collection of preset type styles that can be applied to text. For more information, see Using and Creating Preset Text Styles. chapter 2 The Motion Interface 35 • Shape Styles: Contains a collection of preset shape styles that can be applied to shapes. For more information, see Using Shapes, Masks, and Paint Strokes. ☐ Music: Allows you to browse for and import audio files from your iTunes library.

The Music subcategories include the library and playlists created in iTunes. The contents of each playlist appear in the file stack. When displayed in list view, the Music category shows the Name, Artist, Album, Duration, and Size information created in iTunes. Note: Rights-protected AAC files cannot be imported into Motion and do not appear in the file stack. This includes music purchased from the iTunes Store. Video content from iTunes cannot be imported to a Motion project. ☐ Photos: Allows you to browse for and import image files from your iPhoto library. The Photos subcategories include the library and albums created in iPhoto. The contents of each album appear in the file stack. Note: When importing a large-scale image into Motion, you can scale the image to the size of the Canvas.
For more information, see Using High-Resolution Still Images. ☐ Content: Contains elements used in the templates and other presets that ship with Motion. Use these images, text elements, patterns, and animations to create custom elements, such as particles and replicators, which can be saved to the Library for later use. ☐ Favorites: Stores the custom versions of effects you create and save, including particle systems, customized filters, animation curves, cameras, groups, or layers. You can also add shortcuts to frequently used items.
by default , this folder is empty. Note: The preview area does not display descriptions of built-in presets copied to the Favorites category. Control-click the favorite, then choose Edit Description from the shortcut menu to add a description that will appear in the preview area of the Library. ☐ Favorites Menu: Stores custom effects that you want to appear in the Favorites menu in the menu bar. Working in the Library Although you can't modify the effects, elements, and folders built into Motion, you can manage custom content in the Library.
You can organize custom effects, elements, and folders in the Library stack in the same way you manipulate files in the Finder. You can create folders and delete certain files or folders. You can also easily create, save, and organize files and themes in the Library. µ To create a new folder Click the New Folder button (+) in the lower-left corner of the Library. 36 Chapter 2 The Motion Interface For more information on organizing custom folders and content, see Adding Content to the Library. To rename a folder or file Do one of the following: µ µ In the Library stack, Control-click the custom file or folder, then choose Rename from the shortcut menu. When the text field becomes active, enter a name, then press Return. Click the name of the folder or file once to select it, then click it again to activate the text field. Enter a name, then press Return. Warning: Renaming custom folders or files from the Library renames the item on your hard disk or networked hard disk.

If projects use files from the originally named folder, Motion may list the item as missing. To delete a folder or file In the stack, Control-click the custom file, then choose Move to Trash from the shortcut menu. Warning: Deleting custom folders or files from the Library removes the files from your hard disk or networked hard disk and places the files in your Trash.

To move a file into a folder Drag the file to the folder icon. The file is moved inside that folder. µ µ µ To search for a file Click the Search button, then enter text in the Search field. The contents of the file stack are filtered to include files whose names contain the entered text. folders containing no matches are filtered out. Note: The Search field is not available unless the Search button is selected. µ To clear a file search Click the Clear button at the right side of the Search field.

note: Folders are not filtered out. Icon View and List View The Library file stack can be displayed in icon view or list view. µ µ To view the File Browser in icon view Click the Icon View button in the lower-right corner of the Library. To view the File Browser in list view Click the List View button in the lower-right corner of the Library. Chapter 2 The Motion Interface 37 µ µ To change the size of the icons while in icon view Click the Icon Scale button in the lower-left corner of the Library, then drag the slider to the right to make the icons larger, or to the left to make them smaller.

On a Multi-Touch trackpad, pinch open to make the icons larger or pinch closed to make the icons smaller. Working with Themes in the Library The Library lets you create new custom themes (categories that contain effects and content), assign content to existing themes, edit how themes are displayed, remove themes, and search for themes. Library Themes and Project Browser Themes Library themes are different from Themes in the Project Browser. Project Browser themes are applied to entire Motion projects and shared between Motion 5 and Final Cut Pro X when creating templates. Library themes help you organize projects or related projects that may share elements by allowing you to label specific objects with a default theme, such as Abstract, Nature, or Sci-Fi, or to assign elements to a custom theme.

For more information on creating templates for Final Cut Pro, see Creating Templates for Final Cut Pro X. To create a new custom theme 1 In the Library, below the preview area, choose New Theme from the Theme pop-up menu. 2 In the Create New Theme dialog, type a theme name, then click OK. A new theme is added to the Library. New themes appear in the Theme pop-up menu. Custom themes are saved in the "themes" document in your /Users/username/Library/Application Support/Motion/Library/ folder. µ To assign custom content with a theme Control-click a custom item in the Library stack (such as a shape saved to the Favorites folder), choose Theme from the shortcut menu, then choose a theme from the submenu. An item must be saved in the Library before you can assign the item to a theme. For more information on saving items to the Library, see Saving and Sharing Custom Library Elements. Items that can be assigned a theme include the following: • Replicators • Emitters • Shapes • Gradients • Text styles • Shape styles 38 Chapter 2 The Motion Interface • Layers or groups Note: You cannot assign a theme to behaviors, filters, fonts, images, image sequences, or movies.

To sort using the Theme pop-up menu Do one of the following: µ µ Select a category in the Library sidebar or stack, then choose a theme from the Theme pop-up menu. To sort using the default themes, select the Content category, then choose an item from the Theme pop-up menu. To remove a custom theme 1 Choose the theme to remove from the Theme pop-up menu. The Remove Theme item becomes available in the Theme pop-up menu. 2 Choose Remove Theme from the Theme pop-up menu. The theme is removed from the list. note: You can only remove custom themes. Adding Library Elements to a Project Effects and content elements can be added to a project from the Library in two ways. You can drag an element from the Library stack to your project, or you can select an element in the Library stack and then click the Apply button in the preview area. note: To add behaviors and filters , a third option is available. You can select objects in the project and use the Add Behavior or Add Filter pop-up menus in the toolbar. You can also create custom particles and replicators (using an existing layer in your project) via the Make Particles and Replicate buttons in the toolbar. For more information on making custom particles, see Creating a Simple Custom Particle System. For more information on making custom replicators, see Creating a Simple Custom Replicator Pattern. To add a Library effect or element to a project 1 Select the layer or group (in the Canvas, Layers list, or Timeline layers list) to apply the effect or content element to.

2 Select the element in the Library. For example, click the Filters category, click a filter subcategory, then click the filter to apply from the stack. 3 Click the Apply button in the preview area. The filter is added to the layer or group in your project. If you apply an element such as a generator, the element is added to the selected group.

Chapter 2 The Motion Interface 39 You can also drag an effect or element from the Library to a layer or group in the Layers list, Canvas, or Timeline. For more information about placing and reordering objects in a project, see Organizing Groups and Layers in Motion. Saving and Sharing Custom Library Elements You can save nearly any object in Motion to the Library, including animated cameras and lights, customized behaviors, filters, particle systems or replicators, shapes and text, as well as layers and groups. After an object is placed in the Library, it can be added to a project like any other element in the Library. You can save multiple objects to the Library as one file or multiple files. For example, if you create an effect using multiple filters and you want to save the cumulative effect of those filters to apply to other objects, you can save the filters as one item in the Library. Although you can save custom objects into their namesake folders, it is better to save customized objects that you use frequently to the Favorites category. Because some Motion Library categories contain numerous items, placing custom items in Favorites or Favorites Menu categories can save you search time. In the Favorites category, you can create additional folders to better organize custom items. Note: You can create folders in the built-in categories, such as the Color Correction filters subcategory; however, those folders only appear in the Library stack and not the sidebar.

Folders added to the Favorites category appear in the Library sidebar. To save an object to the Library 1 Open the Library and select the Favorites, Favorites Menu, or other category. 2 Drag the customized object to save from the Layers list, Timeline, or Inspector into the stack at the bottom of the Library. Objects saved to the Favorites Menu category can be applied to objects using the Favorites menu. When you save a customized object, it is placed in the /Users/username/Library/Application Support/Motion/Library/ folder.

Note: Items dragged to the wrong category are placed into their namesake categories. For example, if a custom behavior is dragged to the Filters category, it is placed in the Behaviors category and the Behaviors category becomes active. To save multiple objects to the Library 1 Open the Library and select the Favorites, Favorites Menu, or another category. 2 In the Layers list, select all objects to save, then drag them to the stack, holding down the mouse button until the drop menu appears. 3 From the drop menu, choose "All in one file" or "Multiple files.

□ 40 Chapter 2 The Motion Interface "All in one file" saves all the objects together, listing them as one item in the Library. □Multiple files" saves the objects as individual objects in the Library. 4 To name the files, do one of the following: • Control-click the icon in the Library stack, choose Rename from the shortcut menu, then enter a name. □ Select the icon, click "Untitled," then enter name. You can enter custom notes about a saved item in the Library. To do so, Control-click the icon, choose Edit Description from the shortcut menu, enter notes in then dialog that appears, then click OK. Inspector In Motion, you modify images, clips, and effects by adjusting parameters—numeric attributes that define each characteristic of a project. The Inspector is where you find the controls to modify parameters: sliders, dials, pop-up menus, checkboxes, and so on. (For more information on Inspector controls, see User Interface Controls.) When you select an image, clip, or effect in Motion, its parameter controls become available in the Inspector, ready for adjustment.

In other words, the Inspector is contextual: what appears in the Inspector is based on the selected object. An object must be selected for its parameters to appear in the Inspector. The Inspector contains four panes, each of which displays parameter controls for the selected object. The first three panes, Properties, Behaviors, and Filters, are present for any selected object. The fourth pane, generically called the Object pane, changes its name and contents depending on the type of object selected. To open the Inspector Do one of the following: µ µ Click Inspector in the top-left corner of the Motion workspace. Note: If the Inspector is open, choosing Window > Inspector (or pressing Command-3) collapses the pane containing the Inspector, File Browser, and Library, maximizing the Canvas work area. To collapse or expand the pane containing the Inspector, File Browser, and Library Do one of the following: µ µ With the Inspector open, choose Window > Inspector (or press Command-3). Click the "i" button in the lower-left corner of the Motion workspace. Chapter 2 The Motion Interface 41 Some groups of parameters appear in a group that can be shown or hidden.

There are two ways to show or hide the controls. To show or hide a group of controls using the Show/Hide button 1 Position the cursor at the right end of the row that contains the group name (to the left of the Reset button). 2 Click Show to display the parameters or Hide to conceal the parameters. Click to show or hide a group of controls. µ To show or hide a group of controls by double-clicking Double-click the empty space in a row that contains a group name. 42 Chapter 2 The Motion Interface Inspector Preview Area The preview area contains a visual preview of the object and can show the multiple frames of moving footage. The Inspector preview area is similar to the File Browser and Library preview areas, but it has no Apply or Import button. Properties This pane, also referred to as the Properties Inspector, contains controls for setting basic attributes of the selected object, such as Transform controls (position, scale, rotation, and so on), Blending controls (opacity, blend mode, and so on), Shadows controls, Four Corner controls, Crop controls, and controls for designating the object's In and Out points. Note: Parameter controls are available in the Properties Inspector depending on the type of object selected. For example, when a 3D group is selected, the Lighting and Reflection controls appear in the pane, but the Crop, Drop Shadow, and Four Corner controls do not. When the Project object (located at the top of the Layers list) is selected, controls become available Inspector that allow you to modify the project's background color, aspect ratio, field rendering, motion blur, reflections, and so on. For more information on project properties, see Project Properties. Behaviors This pane, also referred to as the Behaviors Inspector, contains controls for adjusting attributes of applied behaviors. If the object has no applied behaviors, the Behaviors Inspector remains empty. If the object has multiple applied behaviors, grouped controls for each behavior appear stacked in this pane, with controls for the most recently applied behavior at the top.

Filters This pane, also referred to as the Filters Inspector, contains controls for adjusting attributes of applied filters. If the object has no applied filters, the Filters Inspector remains empty. If the object has multiple applied filters, grouped controls for each filter appear stacked in this pane, with controls for the most recently applied filter at the top. Chapter 2 The Motion Interface 43 Object This pane, also referred to as the Object Inspector, contains controls that vary depending on the type of object selected. The name of the pane is also context-sensitive, changing depending on the type object selected. The different Object Inspectors are described below: • Object: Appears when there is no selected object. There are no parameters in the Object pane. □ Image: Appears when an image, image sequence, movie, or drop zone is selected. When media is selected, this pane contains the Drop Zone checkbox, the state of which determines whether the image selected is a drop zone target. When the checkbox is selected, additional parameters become available. For more information, see Drop Zone Parameters. □ Group: Appears when a group is the selected object. The pane contains the Type parameter, which allows you to convert a group from 2D to 3D, and vice versa. A 2D group has different available parameters than a 3D group. When set to 2D, Fixed Resolution parameters become available, which allow you to manually define the size of a group.

By default, Fixed Resolution is disabled, and the size of the group is determined by the layers in that group. For more information, see Fixing the Size of a Group. Note: When selected, Fixed Resolution crops the group to the size specified in the Fixed Width and Fixed Height parameters around the anchor point of the group. When set to 3D, the Flatten and Layer Order parameters become available. When the Flatten checkbox is selected, all elements in the 3D group are flattened like a card or billboard. When the Layer Order checkbox is selected, the project elements are sorted by their order in the Layers list rather than their order in Z space.

For more information, see Layer Order and Depth Order. ☐ Project: Appears when the Project object (located at the top of the Layers list) is selected and contains the Publishing and Snapshots pane. The Publishing pane lists all parameters set to be published in a template (except for filter onscreen controls). The Snapshots pane is used to create different display aspect ratios for templates.

For more information on publishing and templates, see Creating Templates for Final Cut Pro X. ☐ Camera: Appears when a camera is selected and contains controls specific to a scene camera, including angle of view and depth of field parameters. For more information on using cameras, see Cameras. ☐ Light: Appears when a light is selected and contains controls to change the light type, color, intensity, and falloff. When the Shadows checkbox is selected, parameters become available that control the shadow cast by a Point or Spot light.

For more information on working with lights and shadows, see Lighting or Shadows. 44 Chapter 2 The Motion Interface • Rig: Appears when a rig is selected and contains buttons that allow you to choose widget types to map multiple parameters to a single control. For more information on rigging, see Using Rigs. ☐ Media: Appears when an item is selected in the Media list of the Project pane. (For more information see Project Pane.

) These parameters deal mostly with attributes of the file on disk or how the file is interpreted by Motion. Because multiple project objects can reference a single media file, the pane contains a list of linked objects. Making changes in this pane affects all objects that refer to the selected media file. For more information on working with media parameters, see Source Media Parameters. ☐ Text: Appears when text is selected and contains all controls that affect the text. The Text Inspector is divided into three panes: • Format: Contains standard controls to adjust font, size, tracking, kerning, justification, alignment, line spacing (leading), and so on. It also contains a large text-entry field where you can edit the contents of text used in your project. Each section is grouped and can be turned on or off by selecting the checkbox next to the category name. the Style pane also includes a pop-up menu of preset text styles. ☐ Layout: Contains paragraph style controls to set text on a path, direction, rendering, how text objects are affected when behaviors are applied, and how anchor points are used.

This pane also contains controls to create a type-on effect or to modify text path options. For more information on working with text parameters, see Creating and Editing Text. ☐ Mask: Appears when a mask is selected and contains controls to change the mask's shape, to define how multiple masks interact, to invert a mask, to smooth the shape of a mask or adjust its softness, or to change the color of the mask in the Canvas. This inspector also contains position value sliders for mask control points. For more information on working with mask attributes, see Mask Parameters. • Image Mask: Appears when an image mask is selected and contains Mask and Mask Options controls. These controls allow you to change the mask's source, reference frame (if the source is a clip), offset, wrap mode, source channel, blend mode, and so on. For more information, see Applying Image Masks to a Layer. ☐ Shape: Appears when a shape is selected and contains controls that affect the shape. The controls are divided into four panes: • Style: Contains controls to modify the fill and outline of a shape and the brush type of an outline or paint stroke.

this pane also includes a pop-up menu of preset shape styles. Chapter 2 The Motion Interface 45 • Stroke: Contains controls for modifying paint strokes. Use these controls to set stroke color and brush scale, and to adjust opacity, spacing, width, and other parameters. ☐ Advanced: Contains controls that allow the dabs of a paint stroke to be animated like particles. ☐ Geometry: Contains controls that allow you to change the shape type, to close or open a shape, to smooth a shape, and to adjust the position of a shape's control points using value sliders.

For more information on working with shapes, see Using Shapes, Masks, and Paint Strokes. ☐ Emitter: Contains controls for modifying a particle emitter, including emitter shape, space (2D or 3D), angle, and range. This pane also provides access to cell controls. For emitters with multiple cells, these controls affect all cells. For more information on using particles, see Working with Particles.

• Particle Cell: Contains controls for modifying particle cells. Particle cells can only be selected in the Layers list or Timeline layers list. This pane contains controls for attributes such as birth rate, speed, angle, and color. ☐ Replicator: Contains controls for modifying replicator attributes, including shape, space (2D or 3D), pattern, size, and cell controls. For more information on using the replicator, see Using the Replicator. • Replicator Cell: Contains controls for modifying replicator cells. Replicator cells can only be selected in the Layers list or Timeline layers list. This pane contains controls for attributes such as angle, color, and scale. ☐ Generator: Displays the parameters and attributes of the selected generator, such as the Center, Size, and Intensity parameters of a Lens Flare generator. The parameters listed depend on the selected generator.

For more information on generators, see Working with Generators. ☐ Audio Track: Contains controls for adjusting an audio file selected in the Audio list of the Project pane or in the Audio Timeline, including level, pan, and output bus. For more information on working with audio, see Working with Audio. ☐ Master: Contains controls for adjusting a Master audio track selected in the Audio list of the Project pane, including level, pan, and the output bus of audio tracks in the project. For more information on working with audio, see Working with Audio. Toolbar The toolbar, located in the center of the Motion workspace, provides access to the tools for manipulating objects in the Canvas, as well as controls for adding objects to a project. There are tools that transform objects in 2D or 3D space; tools that create text, shapes, and masks; buttons that add cameras, lights, and generators; pop-up menus that apply filters and behaviors to objects; and buttons that create particle systems and replicators. 46 Chapter 2 The Motion Interface Tool Groups Tools that have multiple modes or options are available in pop-up menus in the toolbar. For instance, a shape tools pop-up menu contains the Rectangle, Circle, and Line tools. Pop-up tool menus have a tiny downward arrow in the lower-right corner of the visible tool.

arrow indicates hidden tool states. The left side of the toolbar contains tools grouped into categories of use. The three tools on the far left let you modify the view and manipulation method in the Canvas.

The next four tools are used to add content to a project, including text, shapes, and paint strokes. Next are the mask tools, which are contained in a pop-up menu.

At the center of the toolbar is the timing display. For more information, see Timing Display. To the right of the timing display is the Show/Hide HUD button. The rest of the controls on the right side of the toolbar are used to add content and other objects to your project. The first set are object controls, used to add cameras, lights, or generator objects to a project.

The group farthest to the right are effects controls to add filters, behaviors, particles, or replicators to your project. The following tables itemize each tool and control (by group) in the toolbar, from left to right. Chapter 2 The Motion Interface 47 Note: After you select an object in the Canvas and select a tool, you can switch between tools by pressing Tab. Tabbing cycles the tools from the Select/Transform tool (the default) to the 3D Transform tool, to the remaining 2D transform tools (Anchor Point tool, Drop Shadow tool, and so on). Press Shift-Tab to cycle through the tools in the reverse order. 2D Transform Tools Choose a 2D transform tool from the pop-up menu at the far-left side of the toolbar to adjust and manipulate objects in the Canvas. Click and hold the tool to select a different mode from the pop-up menu. When you choose a 2D transform tool in the toolbar and then select an object in the Canvas, onscreen controls appear. Manipulate the onscreen controls to move or transform an object in the Canvas. icon Name Select/Transform tool (arrow) Keyboard shortcut S (Press Tab to cycle through tools.

An object must be selected before you can tab through the tools. Also scales objects (by dragging a corner point) and rotates objects (by dragging the center point). This is the default tool in the 2D transform tools pop-up menu. Anchor Point tool Drop Shadow tool Distort tool Changes the point around which an object scales or rotates (by dragging the current anchor point to a new position). changes the direction and offset of an object's drop shadow. This tool doesn't move the object. Shears or distorts an object in one of two ways: by moving two adjacent corners at the same time, leaving the other two corners locked into place; or by moving a corner point, leaving the other three corners locked into place. Hides portions of an object (by dragging the edge or corner of the object). modifies points and Bezier handles for masks , shapes , and motion paths. Modifies the position and X, Y, or Z rotation for characters (glyphs).) Description Modifies parameters such as the amount or angle of a Directional Blur, the shape of a particle emitter, or the start and end points of a gradient. Becomes available when a specific objects are selected. 3D Transform Tool Select the 3D tool to adjust and manipulate objects in the Canvas in 3D space. Icon Name 3D Transform tool Keyboard shortcut Q Description Manipulates objects in 3D space (by dragging the 3D transform and rotation controls). To display rotation controls in the Canvas, press the Command key.

View Tools Choose a view tool from the pop-up menu to pan and zoom in the Canvas. Icon Name Pan tool Keyboard shortcut H Description Drags the Canvas view in different directions (but never moves individual objects). To reset the pan, double-click the Pan tool (in the toolbar). To pan the Canvas without selecting the Pan tool, press the Space bar and drag in the Canvas. Zooms in and out in the Canvas.

Click the point in the Canvas to zoom toward or away from and drag right or left. to zoom in 50 percent increments , click in the Canvas. To zoom out in 50 percent increments, press Option and click in the Canvas. To reset the zoom, double-click the Zoom tool (in the toolbar). Navigates through a 3D scene from the camera's POV. After you select the Walk 3D View tool, use the Up Arrow, Down Arrow, Right Arrow, and Left Arrow keys to navigate. Zoom tool Z Walk 3D View tool None Shape Tools Choose a shape tool from the pop-up menu to create rectangles, circles, and lines. icon Name Rectangle tool Keyboard shortcut R Description Creates a rectangle shape (by dragging in the Canvas). Pressing Shift while you drag constrains the layer to a square. chapter 2 The Motion Interface 49 Icon Name Circle tool Keyboard shortcut C Description Creates a circle shape (click and drag in the Canvas).

Pressing Shift while you drag constrains the shape to a circle. Creates a new line shape (by dragging in the Canvas). Pressing the Shift key while you drag constrains the line to specific angles. Line tool None Path Shape Tools Choose a path shape tool from the pop-up menu to create Bezier or B-Spline shapes. Click repeatedly in the Canvas to create a shape. To close the shape, click the first point of the shape or press the C key. To create an open-ended shape, double-click the last point. Click repeatedly in the Canvas to create a shape. To close the shape, click the first point of the shape or press C. To create an open-ended shape, double-click the last point.

) Paint Stroke Tool Select the Paint Stroke tool to create paint strokes. icon Name Paint Stroke tool Keyboard shortcut P Description Creates shape-based paint strokes. Click and drag in the Canvas to draw strokes. Command-drag to adjust the size of the brush stroke before you create the stroke. text Tool Select the Text tool to add text to a project.

Icon Name Text tool Keyboard shortcut T Description Creates text and lets you edit the text of existing text layers. click in the Canvas and begin typing. Choose the Select/Transform tool (or press Esc) to grab or move the new text layer. To change existing text, select the Text tool (in the toolbar), then click the text in the Canvas. 50 Chapter 2 The Motion Interface Mask Tools Choose a mask tool from the pop-up menu to hide portions of a selected layer.

Mask tools can only be accessed when a layer (a visible object in the Canvas, such as an image, replicator, or flattened text) or 2D group is selected. By default, the area inside the mask remains visible. For more information about masks, see Using Shapes, Masks, and Paint Strokes. icon Name Rectangle Mask tool Circle Mask tool Freehand Mask tool Bezier Mask tool Keyboard shortcut Option-R Description Creates a rectangular mask (by dragging in the Canvas). Pressing the Shift key while you drag constrains the mask to a square. creates a circular mask (by dragging in the Canvas). Pressing the Shift key while dragging constrains the mask to a circle. Creates a freeform mask in the shape you draw in the Canvas. The shape closes the mask between the first and last points. creates a freeform mask with Bezier point vertices.

Click repeatedly in the Canvas to create a mask shape. To close the mask, click the first point of the mask or press C. To create an open-ended mask, double-click the last point. creates a freeform mask with B-Spline vertices. Click repeatedly in the Canvas to create a mask shape.