

User Guide

for Macintosh and Windows

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Credits.
Poser was originally created by Larry Weinberg. MetaCreations Poser was created by Larry Weinberg, Seath Ahrens, Jianhua Shen, Sree Kotay, Yann Corno, Eric Brayet; Engineering Support: Thierry Buffenoir, Francois Huet, Mark Yang, Pascal Belloncle.

Interface Design by Phil Clevenger.

Quality Assurance testing by Jason Green, Steve Yatson, Joe Grover, Adam Croston, Michael Spinella, Meredith Keiser, Brian Romero, Clement Holloman, with assistance from Dan Huver, Randy Hollingsworth, Stanley Vealé. Quality Assurance Management by Michael Cinque

Thanks to Technical Support Lead:Todd Burlingame, Karena Vance, and Mary Wagener.

Product management by Steve Cooper.

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Poser 3 models created by Zygote Media Group Inc.



WELCOME TO POSER 3.

Poser 3 is an easy-to-use figure design and animation tool. With Poser 3 you'll produce lifelike 3D illustrations and animations of human figures in action—dancing ballet, climbing a cliff, meditating, even walking.

Poser 3 is great for anyone who wants to add realistic human and animal figures to an art project. It's a welcome companion to your favorite graphics, illustration, 3D, animation, and multimedia applications.

HUMAN FIGURE MODELS AND MORE.

The human body is one of the most beautiful additions you can make to almost any art project. With Poser 3, quickly and easily position a wide variety of figures to suit any art project.

The built-in Poser figures include male and female adults as nudes, in business attire, casual clothing, and as skeletons.

Now in Poser 3, you also have animals. Horses, cats, dogs, and even a Raptor can all be posed to suit any 3D illustration. Created by Zygote Media Group™ expressly for Poser 3, these models have exquisite detail.

ANIMATE REALISTIC HUMAN MOTION.

Poser 3 is an easy tool to use for animating figures. All the models in Poser have Inverse Kinematics, meaning that limbs interact in Poser just as they do in the real-world. Move a hand, and the arm will follow. With this incredible feature built into every model, animation is a snap. All you need to do is set up a pose, move to a different point in time, and set up another pose. Poser 3 creates the illusion of motion by filling in the gaps between the two poses.

Using the various Animation Controlss, you can refine and customize your figure animation. In addition, Poser 3's new Walk Designer lets you set up incredibly realistic walking motion.

AN EXCELLENT TOOL FOR 2D AND 3D ARTISTS.

Poser 3 can render figures at any resolution, complete with anti-aliasing and mask information. You can open your rendering in MetaCreations Painter® or another image-editor and collage it with other images.

The new incredibly life-like models make Poser 3 the ideal tool for medical or scientific illustrations. You can import your Poser rendered figures into other image-editing applications for compositing or enhancement.

Save Poser animations as QuickTime™ or AVI movies and open them with your favorite motion graphics applications. Poser 3 saves the movie with an alpha channel masking the figure, so compositing into digital movies is easy.

Poser 3 was designed to work well with your favorite 3D applications like Ray Dream Studio®, Painter 3D, Bryce 3D, and others. Poser 3 exports 3D geometry in numerous file formats, including OBJ, DXF, and 3DMF.

WHAT'S NEW IN POSER 3?

If you're a user of Poser 2, the following information describes the sections of this manual that contain the new features in Poser 3.

A NEW WAY OF WORKING IN POSER.

Poser 3's entire interface has been completely redesigned to help you work much more smoothly and easily with all the features in the application. Refer to "The Poser Workspace." on page 1 for more.

NEW MODELS.

Poser 3 has a host of new human and animal models that you can use to pose and animate. For more information about Poser 3's new library of models, refer to "Placing a Figure in the Studio." on page 12

POSEABLE HANDS AND FACES.

The new Poser 3 people models now have fully articulated hands and faces, making it possible to simulate speech and position hands in a variety of poses. Refer to "Posing Hands." on page 85 and "Posing Faces." on page 87 for more information.

NEW CAMERAS.

Now that you have more flexibility in posing a figure, Poser 3 has new cameras that let you see your figure much more clearly. For example the Hand and Face Cameras. Refer to "Cameras and Views." on page 109 for more information.

NEW ANIMATION CONTROLS.

New Animation Controlss that let you edit almost every figure property precisely. Controls include: a Walk Designer, BVH Motion Capture and features for importing sound and syncing sound and motion. Refer to zot for more information.

ABOUT YOUR USER GUIDE.

This manual provides all the information you'll need to get the most out of Poser 3. It will help you learn the application and serve as a reference as you attempt more sophisticated procedures.

This guide assumes you are already familiar with basic Macintosh® and Windows® concepts—menus, dialogs, and mouse operations, such as clicking and dragging. If you need

more information on these subjects, or on the Macintosh Finder or the Windows desktop, refer to the Macintosh User's Manual or the Microsoft Windows User's Guide, respectively.

The best way to learn Poser 3 is to read zot and then complete zot. This tutorial leads you through the basics of posing and other key operations you'll need to use Poser 3 effectively.

After you've completed the tutorial, open up a new file and start posing a figure from the preset poses in the Libraries palette. The new interface makes experimenting incredibly easy.

Conventions.

The Poser Users Guide is for both Macintosh and Windows. By convention, Macintosh commands precede Windows commands in the text. For example, Command/Ctrl+I, is equivalent to the Macintosh Command-I and the Windows Ctrl+I. For simplicity, the term "folder" refers to directories as well as folders. The Poser interface for Macintosh and Windows platforms is identical, unless otherwise specified.

There are also several conventions used to identify paths to certain tools and controls. The convention to a menu follows the rules of the **menu name> menu item**. The convention to a palette follows the rules of the **palette name**: **subpalette name**. The convention to a palette menu follows the rule of **palette name: palette menu> menu item**.

Modifier Keys.

When a modifier key differs between the Macintosh and Windows platform, the Macintosh modifier is listed first followed by a slash and the Windows modifier key. **Option**/**Alt** means Macintosh users press the **Option** key and Windows users press **Alt**.

CUSTOMER SUPPORT.

Technical support is free* to registered users of Poser. There are many easy ways to contact technical support for questions about installation, configuration or functionality. These options are Web, e-mail, phone, and fax support.

* MetaCreations does not currently charge for technical support for Poser. The only expense to the user is telephone toll charges.

You will find the answers to most of your questions within the pages of this User Guide. If you need further assistance, you can contact MetaCreations's Technical Support in any of the following ways:

WEB SUPPORT.

Many of the answers to your questions are available 24 hours a day on our Web site:

http://www.metacreations.com/support

In addition to frequently asked questions (FAQs), the Web site provides troubleshooting techniques, late breaking product news, and other resources to help you get the most out of Poser.

E-MAIL SUPPORT.

To answer your technical support question most effectively and quickly, please use the e-mail form provided to you on our Web site:

http://www.metacreations.com/support

PHONE SUPPORT.

Phone support hours are Monday–Friday, 8:00 AM–5:00 PM Pacific Standard Time, excluding holidays.

Call (408) 430-4061. When calling, please have your serial number handy and be at the computer where you need assistance.

FAX SUPPORT.

Dial (408) 438-9672 to send a fax.

Please include your name and serial number on all correspondence.

MetaCreations reserves the right to change its support policies at any time.

WHO IS METACREATIONS?

MetaCreations is a major force in 2D and 3D graphic software, developing and marketing next generation products that unite traditional art, and design techniques with digital technology. MetaCreations products are engineered to deliver real-time interaction, intuitive functionality, and creativity to design professionals, graphics hobbyists, and consumers who work on desktop computers.

MetaCreations' focus is maintained by three product values:

- Faithfully replicate Natural-Media and real world looks in the digital medium.
- Facilitate and extend the range of creativity by allowing artists to do things they couldn't do before.
- Capture human expression and allow the artist's perspective and intent to show through.

FOR MORE INFORMATION.

For more information about MetaCreations' products, see our Web site on the Internet:

http://www.metacreations.com

APPLICATION OVERVIEW.

HOW POSER 3 WORKS.

Poser is the easiest and most effective tool you can use to pose and animate figures. It is the perfect compliment to any 3D illustration or animation tool. With Poser you can add a customized figure to any 3D illustration or create dazzling figure illustrations.

The are five easy steps to working with Poser:

- Add a figure from the vast number of pre-built models included in the Poser 3 Libraries
- Pose the figure using the posing tools
- Add colors or textures to your figures giving them a realistic or fantastic look
- Set up poses to use as key frames for an animation
- Render your figure as a still image or animation.

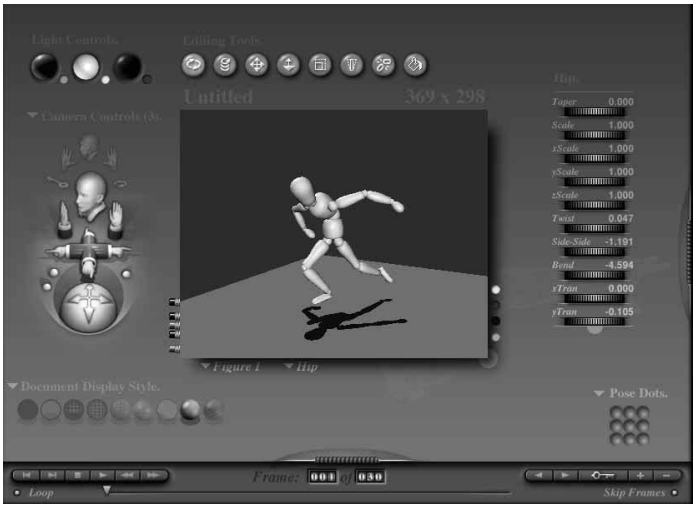
THE POSER WORKSPACE.

This section leads you through the entire Poser Workspace. If you are a previous Poser user or new to Poser, this section will familiarize you with Poser's new Workspace.

The first thing you'll notice about Poser 3 is that it doesn't traditional floating palettes and toolbars. All of Poser's features are integrated into the Workspace, which takes over your entire screen. This helps keep everything uncluttered and easy to locate.

The new Workspace is incredibly flexible. All of the feature controls in Poser float over top of the Workspace. Controls can be moved to any location and their position can be saved for later use. You can also change the color of the Workspace and add stylistic elements to the Workspace background. For more information on setting up the Workspace, refer to "Setting Up Poser 3." on page 7.

Fig. 1—The new Poser 3 Workspace completely takes over your screen and provides access to all of Poser's controls.

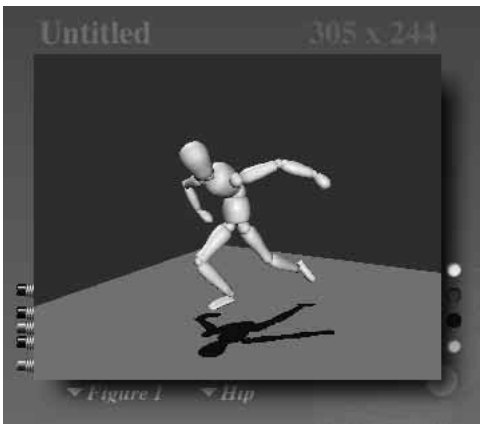


THE DOCUMENT WINDOW.

The Document window is where you'll view and pose your figure. It acts like a photographer's studio. You can move lights and shift between cameras to get a different perspective on your figure.

The view of your figure shown in the Document window is taken through a camera. You can use this camera to view your figure from any angle. Since you're in a three dimensional space, you can even view your figure from below or above.

Fig. 2—The Document window displays the current view of your figure.

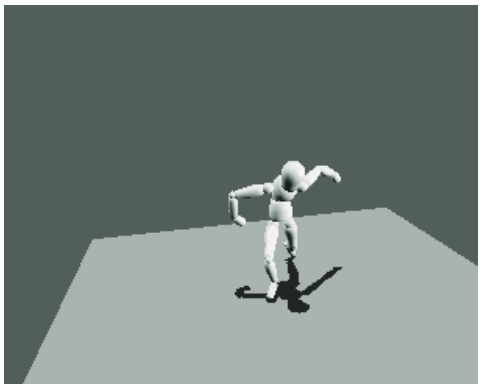


The Document window can be resized to suit how your work best. In addition, there are several controls around the window that let you change the appearance of the elements within the window, like the ground plane and the background.

The Ground Plane.

The Ground plane within the Document window represents the floor of your posing studio. This plane helps you orient the figure in 3D space. It can also help you orient your view of the figure. As you move the camera, the ground plane tilts or rotates to indicate the new orientation.

Fig. 3—The Ground Plane in the Document window helps you orient your figure in 3D space.



CAMERA CONTROLS.

The Camera Controls set the view of your figure in the Document window. There are two portions to the Camera Controls: the View controls and the Positioning controls.

Fig. 4—Use the Camera Controls to set the view of your scene.



The View controls let you move between a number of preset views. By clicking or dragging this control you can move between all the available views in Poser 3.

Fig. 5—The View controls let you quickly move the camera to a preset position.

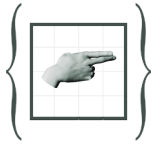


The Positioning controls let you move the camera interactively. There are two sets of positioning controls: the Camera Plane controls and the Rotation Trackball. The Camera Plane controls let you move the camera along specific planes. For example you can move the camera in only a vertical or horizontal direction.

Fig. 6—The Camera Plane controls let you move the camera along a plane in 3D space.

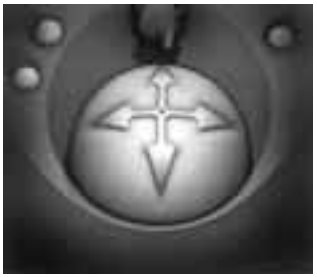


Tool titles indicate which two axes the camera is moving in.



The Rotation Trackball control lets you move the camera around a virtual trackball that surrounds your figure. Using this control you can move the camera to almost any position while still keeping the figure in the center of your field of view.

Fig. 7—The Rotation Trackball lets you move the camera around the figure in the Document window.



LIGHT CONTROLS.

The Light Controls let you set preset positions for the light in your virtual studio. Using these controls you can change light color, or have lights illuminate your figure from various angles.

Fig. 8—Use the Light Controls to set up the lighting for your figure.



DOCUMENT DISPLAY STYLE CONTROLS.

The Document Display Style controls let you set the preview quality of the figure in the Document window.

Fig. 9—The Document Display Style controls let you set how your figure is displayed in the Document window.



There are nine preview styles available. Different styles work best for different operations. The higher the preview quality, the more memory is required to display your figure. If you want to save on memory, use a lower quality preview style while you're posing and then switch to a higher style when you're ready to render

EDITING TOOLS.

The Editing Tools let you adjust the position of the figure's body parts to create specific poses. Each control moves the figure in a different way. Using a combination of controls you can create an infinite number of poses.

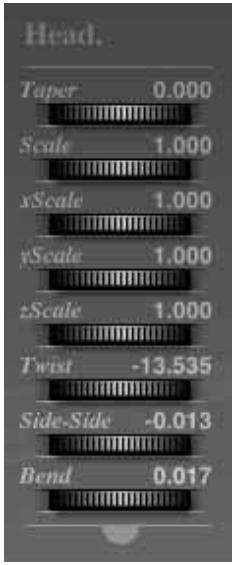
Fig. 10—The Editing Tools let you set the position of your figure's body parts.



The Parameter Dials.

The Parameter Dials work exactly like the Editing Tools except that they let you pose the figure numerically. These controls let you pose the figure much more precisely than the Editing Tools.

Fig. 11—The Parameter Dials let you precisely pose your figure using numerical values.



THE LIBRARIES PALETTE.

The Libraries palette contains all the models and props available in Poser 3. The palette provides access to all the categories of models and also provides previews of each model or prop.

Fig. 12—The Libraries palette contains all the models and props available in Poser.



You'll use the Libraries palette to add a new or additional models to the Document window.



ANIMATION CONTROLS.

The Animation Controls let you quickly set up key frames for a figure animation. Using these controls you can set a pose as a key frame, change the pose and then set the new pose as another key frame. When you play the animation, the figure appears to move from one pose to the other.

Fig. 13—The Animation Controls let you quickly set up key frames for your animation.

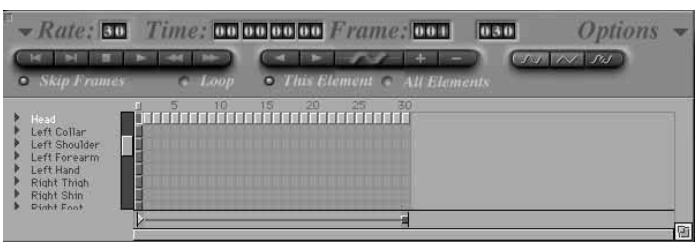


The Animation Controls let you set which poses are saved as key frames as well as allowing you to delete frames or preview your animation. The controls also provide access to the Animation palette.

Animation Palette.

The Animation palette displays the timeline of your animation and shows you all the key frames that have been created for the figure. You can use the palette to greatly refine your animation.

Fig. 14—The Animation palette lets you refine and edit your animations.



THE MENU BAR.

Although the Poser Workspace takes over the entire screen, you can still access several features through the Menu Bar. You can also switch between Poser and other applications. On the Mac, the Menu Bar appears when you move the cursor over the top of the Workspace.

POSER 3 BASICS.

INTRODUCTION.

This chapter describes how to setup Poser 3 and shows you some basic techniques you'll need to know when posing figures.

SETTING UP POSER 3.

LAUNCHING POSER.

The first time you launch Poser, a dialog appears requesting your name and serial number. In your Poser 3 package, you'll find a serial number card which contains copies of your serial number.

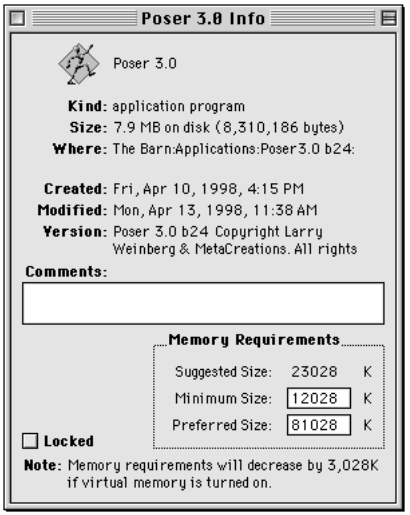
Once Poser 3 has been personalized, the start-up screen appears, followed by the Poser 3 Workspace.

Poser 3 is a color application. For the best preview display, use the Windows Setup options, or the Macintosh Monitors control panel, or your video adapter control panel to set your display to the highest color depth possible.

ALLOCATING MEMORY ON A MACINTOSH.

By default, the Macintosh version of Poser 3 is allocated a specific amount RAM appropriate for most systems. If you have more memory available, you should increase Poser 3's memory allocation. Application performance will improve if you allocate more RAM to Poser. You can check the application's memory allocation using the **Apple Menu> About this Macintosh** in the Finder.

Fig. 1—Use the Get Info dialog to allocate memory to Poser on the Macintosh



To increase Poser 3's memory allocation:

1. Make sure the application is not running.
2. From the Finder, click the Poser 3 program icon.
3. Choose **File menu> Get Info**. The Poser 3 Information dialog appears.

4. Increase the Preferred Size to a level appropriate for your system.

SETTING APPLICATION PREFERENCES.

Poser 3's preferences let you control how the application appears when it opens.

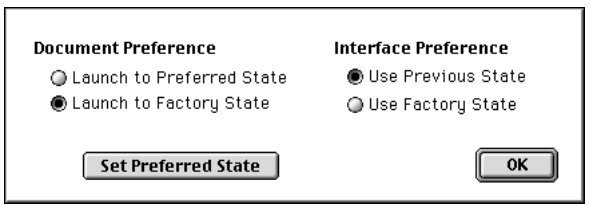
Document Preferences.

The Document Preferences control how the interface appears when you launch the application, or open an existing file. You can have the application appears as it did when you last closed it, or in its default state.

To set up launch preferences:

1. Choose **Edit menu> General Preferences**. The General Preferences dialog appears.

Fig. 2—Use the General Preferences dialog to set the appearance of the interface and the launch state of the application.



2. Enable either Launch to Preferred State or Launch to Factory State radio button.

   If you want the application to launch to the Preferred State you need to set the preferred sate using the Preferred State button.

To set the Preferred state:

1. Move the palettes and controls to the positions you want to use most often.
2. Choose **Edit menu> General Preference**. The General Preference dialog appears.
3. Click the Set Preferred State button.

Interface Preferences.

The Interface preferences let you control how the interface appears when you open the application without a using an existing document.

You can either have the application appear in its default state or revert to the state you left when you saved a file.

To have the application launch in its default state:

1. Choose **Edit menu> General Preferences**. The General Preferences dialog appears.
2. Enable the Use to Factory State radio button and click OK.

   If you want the application to appear as it did when you closed it, enable the Use to Previous State radio button.

SETTING UP YOUR WORKSPACE.

Your Poser 3 Workspace refers to the layout of controls and the size and placement of the Document window. Most controls within the Workspace an be customized to suit the way your work.

As you move your cursor over the controls, text labels for the Workspace elements appear.

SETTING UP THE POSER WORKSPACE.

Poser 3 controls can be placed anywhere in the Workspace, and you can store those changes for later use.

To re-position Workspace elements:

⌘ Select an element's title and drag it to a new position.

You can drag any of the controls, such as the Camera, Light, Display Style, or Parameter Dial controls.

To reposition the Document window:

⌘ Click the text labels above the Document window and drag it to a new location.

To save a Workspace layout:

⌘ In the bottom-right corner of the Workspace, click the arrow icon next to the UI Memory dots and choose UI dots from the menu that appears.

Fig. 3—Use the UI Memory dots to save Workspace layouts, Poses, and Camera positions.



To retrieve a Workspace layout:

⌘ Click on a full memory dot. The interface elements are re-arranged to conform to the stored layout.

To delete a saved Workspace layout:

⌘ Option/Alt-click a full memory dot. The current layout of palettes and controls is stored.

Workspace Backgrounds.

The Poser Workspace background can display a number of different stylistic elements. By default, a male figure and the Poser logo appear on the Workspace background at start up.

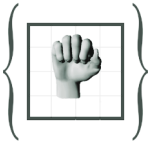
You can also reposition the background figure so that it doesn't interfere with the rest of the working area.

To change the Workspace background color:

1. Click the Color tool.
2. Click on the background and choose a color from the Gradient Color picker.

   You can also choose a color by dragging the tool over any element on the workspace.

To change the Workspace background image:



⌘ Option/Alt-click the background figure. Continue clicking until an image you like appears.

To reposition the background image:

⌘ Drag the figure to a new position.

SETTING UP THE DOCUMENT WINDOW.

The Document window provides a view of the studio where you'll pose and view your figure. You can set several parameters for the window that help you set its appearance to suit the way you work best.

To set the size of the Document window interactively:

⌘ Drag the size controls, located in the bottom-right corner of the Document window, down and to the right.

Fig. 4—Drag the size control to interactively resize the Document window.



Release the mouse button when the window is the desired size.

The dimensions of the window appear at the top-right corner of the Document window.

To set the size of the Document window numerically:

1. Choose **Window menu> Document Window Size**. The Set Window Size dialog appears.
2. Enter a Width value.
3. Enter a Height value and click OK.

To move the Document window:

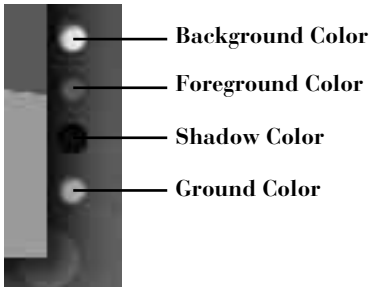
⌘ Drag the Document window's title to a new position.

Document Window Color.

Besides setting the size of the Document window, you can set its background, foreground, shadow, and ground color. These color settings can greatly improve your view of the figure.

The Color controls are located in the bottom-right corner of the window.

Fig. 5—Use the Color controls to set the color of Document window elements.



To set the background color of the Document window:

⌘ Click the first color button on the bottom-right corner of the Document window. Then drag the dropper icon over the color picker that appears.

Release the mouse button when the desired color is selected.

To set the foreground color of the Document window:

⌘ Click the second color button on the bottom-right corner of the Document window. Then drag the dropper icon over the color picker that appears.

Release the mouse button when the desired color is selected.

To set the color of shadows in the Document window:

⌘ Click the third color button on the bottom-right corner of the Document window. Then drag the dropper icon over the color picker that appears.

Release the mouse button when the desired color is selected.

To set color of the ground in the Document window:

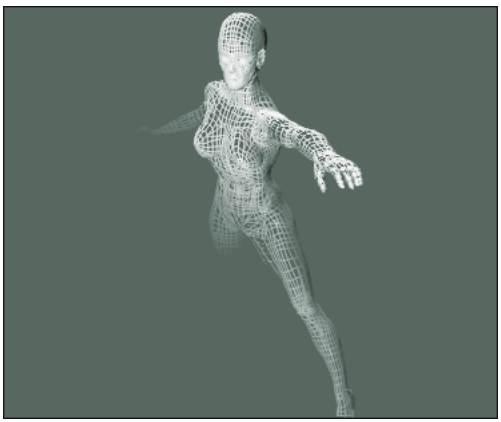
⌘ Click the last color button on the bottom-right corner of the Document window. Then drag the dropper icon over the color picker that appears.

Release the mouse button when the desired color is selected.

Depth Cueing.

Depth Cueing gives your view of the Document window a sense of dimension. When elements in the window are far away, their color gets lighter, as if they were fading off into the distance.

Fig. 6—An example of Depth Cueing using a figure in Wireframe display style.



To enable/disable Depth Cueing:

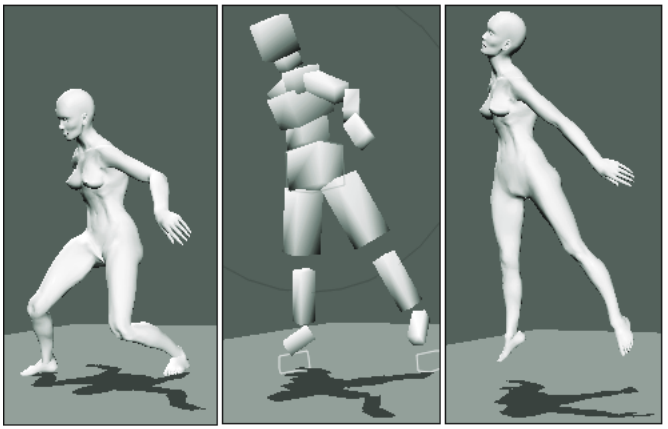
⌘ Click the top option button on the bottom-left corner of the Document window.

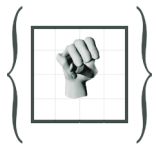
The button appears brighter when its active.

Figure Tracking.

Tracking is a memory saving feature, that changes the display of your figure as you reposition its parts. For example, if you use Fast Tracking, the figure's body parts are displayed as boxes when you're moving them, and then revert the their display style when they stop moving,

Fig. 7—An example of Fast Tracking using a figure in Flat Shaded display style.





There are three types of tracking you can use in the Document window:

- **Box Tracking** displays the figure as boxes at all times

- **Fast Tracking** displays the figure as boxes only when its moving
- **Full Tracking** displays the figure using a display style at all times.

To enable a tracking mode:

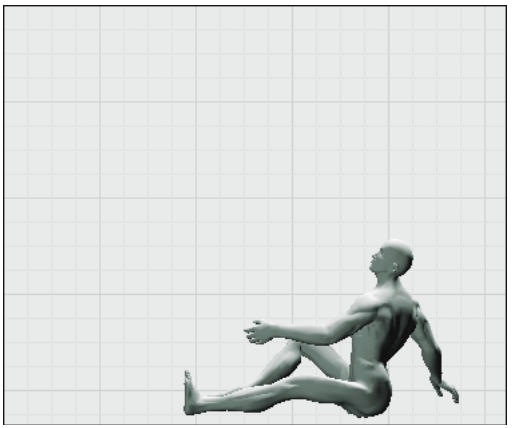
⌘ Click one of the tracking option buttons on the bottom-left corner of the Document window.

The name of each option appears above the Document window as you pass the cursor over a button.

Paper Textures.

Another tool you can use to enhance your view of the figure is the Paper Texture of the Document window. The texture of the window can have grid lines that can help you precisely position your figure.

Fig. 8—A figure in the Document window with a grid texture applied to the background.



To choose a paper texture for the Document window:

⌘ Choose **Display menu> Paper Texture>** *desired texture*.

To clear a paper texture:

⌘ Choose **Display menu> Paper Texture> None**.

Shadows.

The figures in the studio cast shadows on the ground plane. As you re-position lights, the shadows change. The shadows can help you orient the figure in 3D space.

You can turn the shadows off to save on redraw time.

To turn on/off shadows:

⌘ Click to toggle the Shadows option button on the bottom-left corner of the Document window.

PLACING A FIGURE IN THE STUDIO.

The main working area of the Poser Workspace is the studio contained within the Document window. The figure that appears in that studio is determined by the model you load from the poses in the Libraries palette.

The Libraries palette is the main tool you'll use to load models and props.

USING THE LIBRARIES PALETTE.

The Libraries palette provides access to all the preset models, props, light sets, and camera sets available in Poser 3.

The content on the libraries palette is divided into eight categories.

Within each category are a number of sub-categories which contain variations of the category. For example, the Figures category contains, Male Figure, Female Figures, Child Figures, etc. In each sub-category are a number of models you can choose from.

Some figures are more posable than others. The new People category of figures give you more control over hands and faces. Poser 2 figures have less control.

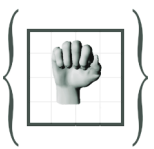
Fig. 9—The Libraries palette displays all the available content divided into categories. Within each category, the palette provides rendered previews of models.



Categories

Sub-Categories

Once you've loaded a model into your studio from the library you can customize it and save it back to the library where it will be easy to retrieve and use later.



To display the Libraries palette:

- Click the handle that appears on the far right side of the screen.

  or

  Choose **Windows menu> Libraries**.

To size the Libraries palette:

- Drag the palette's handles up or down. Release the mouse when the palette is the desired height.

Loading from the Libraries Palette.

Loading content is a matter of selecting a category, a sub-category and then a specific model. The Libraries palette is designed to make these selections easy. It displays categories using descriptive button icons and provides previews of each model.

To choose a category:

- Click a category button.

  If all the icons are not visible, move your cursor over the small dots next to the category icon. All the categories appear in sequence.

Fig. 10—Move your cursor over the small dots next to a category icon to cycle through all the available content categories.



  When the desired category appears click the mouse button.

To choose a sub-category:

- Click the arrow icon below the category icon and choose an item from the pop-up.

  The content within the selected category appears in the main body of the palette.

To add a specific piece of library content to the studio:

1. Click the category of content (i.e. Figures, Props, etc.) you want to use.
2. Choose a sub-category from the pop-up.
3. Click a preview in the main body of the palette.

   If the model you want is not displayed, use the scroll button to view additional previews.
4. Click the Change Figure icon at the bottom of the palette.

Fig. 11—Click the Change Figure icon to add a piece of content to the studio.



To add an additional model to the studio:

1. Click the category of content you want to use.
2. Choose a sub-category from the pop-up.
3. Click the preview of the model you want to add to the studio.

4. Click the Crate New Figure icon at the bottom of the palette.

Fig. 12—Click the Create New Figure icon to add an additional model to the studio.



Saving to the Libraries Palette.

You can save customized figures and poses to the Libraries palette to create your own set of content that can be easily retrieved and used in other illustrations. You can save camera positions, lights, poses and figures to the library.

When you save an item to the Libraries palette, you create a new set within the currently selected sub-category. For example, if you're in the Poses sub-category, the figure you save, is added as a new pose.

You can choose to save an item to an existing category, or create a new sub-category for your item.

To create a new sub-category:

1. Click the category of content to which you want to add a new sub-category.
2. Click the sub-category pop-up and choose Add category. The New Library dialog appears.
3. Enter a name for your new sub-category and click OK.

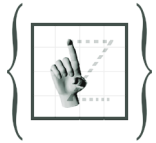
   Your new sub-category appears at the end of the menu.

To save an item to a library:

1. Click the category of content you want to save to. For example, if you want to save a pose, click the Poses category.
2. Choose a sub-category from the pop-up. The figure will be added to the sub-category you select.
3. Click the Add to Library (+) icon at the bottom of the palette. The New Set dialog appears.
4. Enter a name for your library item and click OK.

   If you're saving a pose or figure, a dialog appears asking if you want to save a single frame, or multiple frames.
5. Choose an option, a click OK.

   The item is added to the selected category.



Editing Libraries.

The categories displayed in the Libraries palette correspond to the folders stored within the libraries folder in the Poser 3 application folder. By editing the contents of these folders you can edit the content displayed in the palette.

New folders are added using the Add icon at the bottom of the palette. You can also delete category folders using the Delete icon.

To delete a category:

1. Choose a sub-category from the pop-up.
2. Click the Delete from Library (-) icon at the bottom of the palette.

WORKING IN THE STUDIO.

VIEWING YOUR FIGURE.

The view of your figure in the Document window is determined by the position of the camera. The Camera Controls let you quickly move the camera to different positions as you pose your figure.

Fig. 13—Use the Camera Controls to change the view of your figure.



The camera can be moved in any direction within the studio. However, positioning it be an involved process. This section outlines how to quickly move the camera to the most commonly used position. For more detailed instruction on positioning the cameras, refer to "Changing Your View of the Studio." on page 112.

There are eleven different camera views: Main Camera, Left, Right, Top, and Front Views, Right Hand Camera, Left Hand Camera, Face Camera, Dolly Camera and Flyaround View.

To select a camera view:

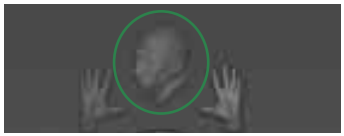
- Drag the cursor over the Select Camera control, until the desired Camera view appears.

  or

  Click the Select Camera pop-up and choose the desired view.

To zoom into the face:

- Click the Face Cam icon at the top of the Camera controls.



  or

  Click the Select Camera pop-up and choose Face Camera.

To zoom into a hand:

- Click either the right or left Hand Camera icons.



  or

  Click the Select Camera pop-up and choose either Right Hand Camera, or Left Hand Camera.

To view the entire figure:

- Click the Select Camera pop-up and choose either Main Camera or Posing Camera.

Flyaround View

In Flyaround view, Poser places the camera on an imaginary track above and away from the center of the studio, so that as it moves along the track your view circles the entire studio, displaying all the objects within it from various views. This is an excellent way of getting a sense of how the figure pose looks within 3D space.

To activate flyaround view:

- Click either the Flyaround View icon.



or

Click the Select Camera pop-up and choose Flyaround View.

Saving Camera Positions

Besides using the views, the quickest way to move between views of the studio, is by saving you're most commonly used views into the Camera Memory dots. That way, you can recall a view with a simple click of the mouse.

To save a camera position:

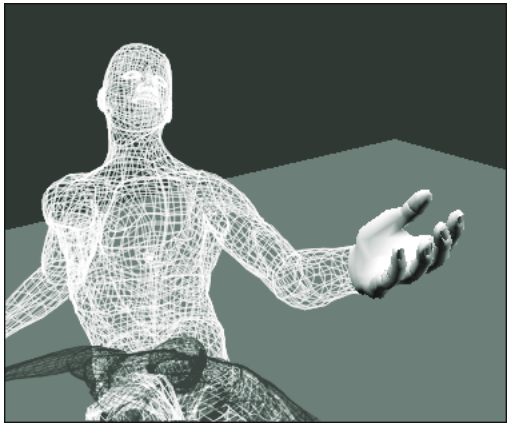
1. Position the camera as desired.
2. Click the Memory dots pop-up and choose Camera dots.
3. Click an empty memory dot.

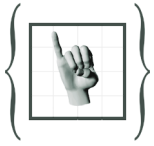
PREVIEWING YOUR FIGURE.

The Display Style of you choose for your figure determines how your figure is displayed in the Document window. Different modes have different purposes. Some save on memory, while others can be used to make positioning easier.

You can apply a Display Style to a figure, the entire document or a specific body part. Using different styles you can save on redraw time and help you isolate specific body parts while you're working.

Fig. 14—By applying different display styles to a specific element and the rest of figure, you can isolate portions of the figure you're working with.





An additional display style control appears when you assign a Figure or Element style. This control lets you quickly set the figure use the Document style, or a specific element use the

Figure style. This lets you quickly reset elements with different display styles to the same style, or figures with different styles to the same style.

To choose a display style:

- ⌘ Click one of the nine style icons available in the Display Style controls.

Fig. 15—Click a Display Style icon to switch to a different display style.



or

Choose **Display menu> Document Style>** *desired display style*.

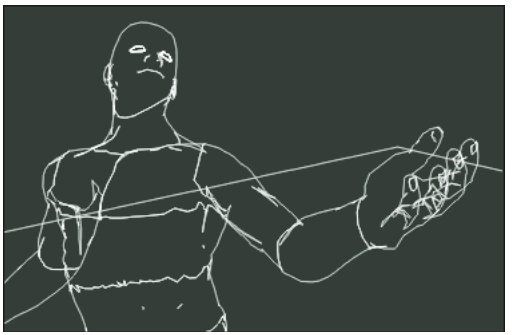
Silhouette displays figures only as a filed cutout. The figure looks like a shadow.

Fig. 16—An example of Silhouette style.



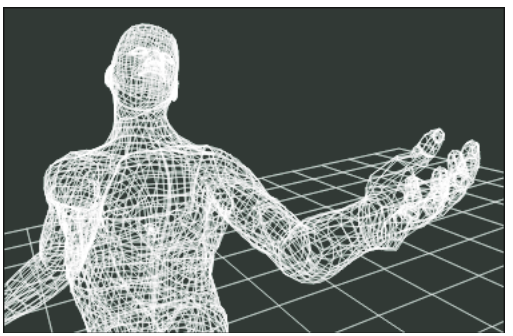
Outline displays only the outline of the figure.

Fig. 17—An example of Outline style.



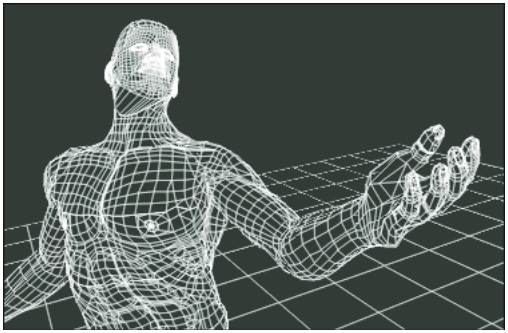
Wireframe displays the figure as a mesh.

Fig. 18—An example of Wireframe style.



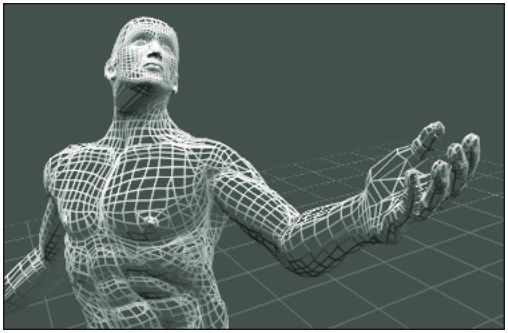
Hidden Line displays the figures as a mesh. However, portions of the mesh facing away from the camera are not displayed.

Fig. 19—An example of Hidden Line style.



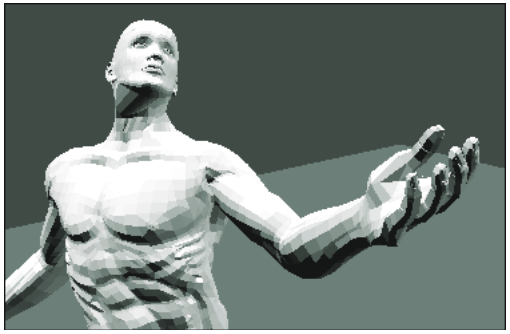
Lit Wireframe displays the figures as a mesh that reacts to light.

Fig. 20—An example of Lit Wireframe style.



Flat Shaded displays the figure with a colored surface, where the mesh facets are clearly visible.

Fig. 21—An example of Flat Shaded style.



Sketch displays figures using a hand-drawn style. The drawn figure is affected by lighting.

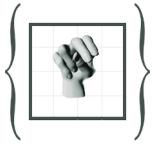
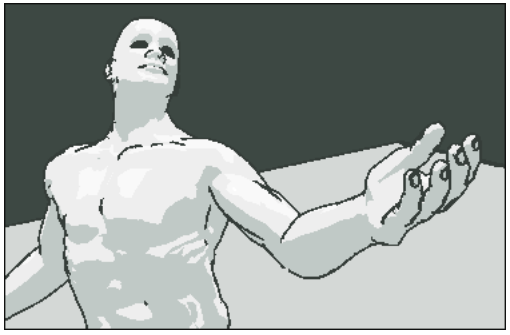


Fig. 22—An example of Sketch Shaded style.



Smooth Shaded displays the figure as a smooth continuous surface. This surface is affected by changes in lighting.

Fig. 23—An example of Smooth Shaded style.



Texture Shaded displays the figure using texture mapping. The figures's surface reacts to light.

Fig. 24—An example of Texture Shaded style.



To apply a display style to the entire document:

- ⌘ Click the pop-up next to the Display Style icons and choose Document Styles.

To apply a display style to the entire figure:

- ⌘ Click the pop-up next to the Display Style icons and choose Figure Styles.

To apply a display style to an element:

- ⌘ Click the pop-up next to the Display Style icons and choose Element Styles.

SELECTING BODY PARTS.

Before you can start posing a figure, you need to know how to select the part of the figure you want to move. You can select a body part using an Editing Tool, or you can select a portion of the figure using the menus located beneath the Document window.

Fig. 25—The Figure's body parts are posable elements.

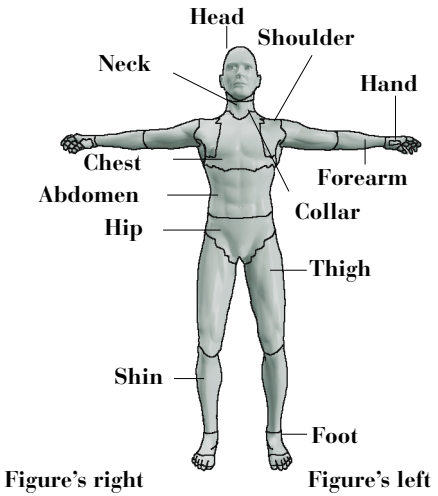


Fig. 26—Posable hand elements. The Right and Left hand have the same elements.

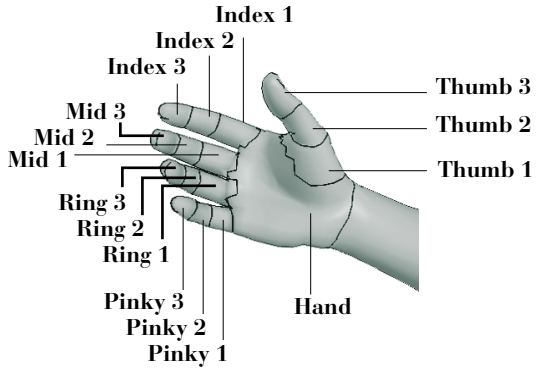
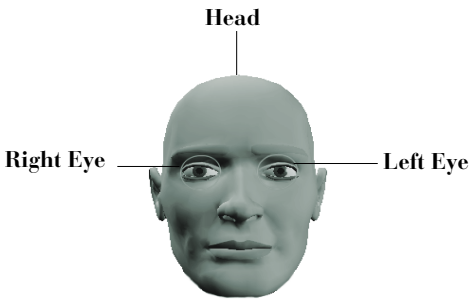


Fig. 27—Posable face elements. Face features are posed using Parameter Dials.



Body parts appear highlighted as you move the cursor over them.

To select a body part using an Editing Tool:

1. Click one of the Editing Tools.
2. Click one of the body parts of the figure.

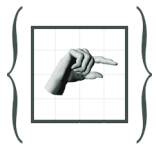
The selected body part is highlighted in the Document window and a checkmark appears next to its name in the Current Element pop-up menu.

To select a body part using the menus:

⌘ Click the Current Element pop-up located beneath the Document window and choose the desired body part from the menu.

PASTING A FIGURE ONTO THE STUDIO BACKGROUND.

At any point, you can paste an image of the figure onto the studio background. When you choose this command, the current view of the figure is "painted" onto the background.



At first glance, this command might seem to have no effect. That's because the figure itself blocks the background-pasted image. Any changes you make, however, like moving the figure or camera, reveal the background image.

To paste the figure onto the studio background:

1. Choose **Display menu> Paste onto Background**.
2. The figure is pasted over the background image.

To clear the background:

⌘ Choose **Display menu> Clear Background Picture**.

HIDING A FIGURE.

Hiding a figure makes it disappear temporarily from the Poser studio. This feature can help when you have two figures close together, and one keeps getting in the way when you try to select the other.

To hide a figure:

1. Click the Current Element pop-up and choose Body.
2. Choose **Edit menu> Properties**.The Element Properties dialog appears.
3. Disable the Visible option.

To hide a figure when you have two or more figures:

1. Click the Figure pop-up and choose the figure you want to hide.
2. Choose **Figure menu> Hide Figure**.

   This command is only available when you have more than one figure in the studio.

To display a hidden figure:

⌘ Choose **Figure menu> Show All Figures**.

DISPLAYING GUIDES.

Poser provides several guides to assist you while posing. Guides can help you achieve a particular perspective more easily. The guides Poser offers are a ground plane, horizon line, vanishing lines, the hip-shoulder relationship, and head lengths.

To display a guide:

⌘ Choose **Display menu> Guides** and select the guide you want.

To hide a guide:

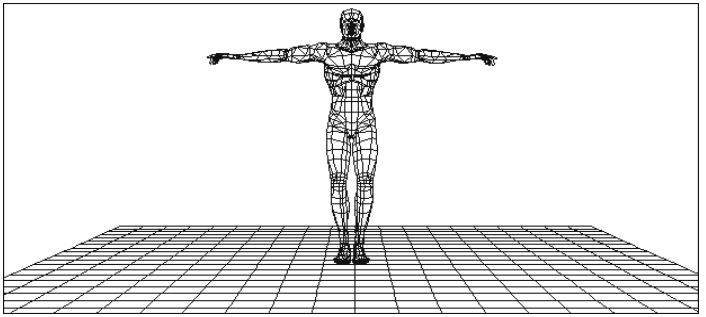
⌘ Choose **Display menu> Guides** again and de-select the guide.

Ground Plane.

The ground plane is a basic reference of the camera's perspective on the studio. As you rotate the camera, the ground plane can help you infer the camera's current position.

The display style of the ground place can be the same as the document or figure, or it can have its own element display style. Using the Wireframe style, the ground plane is a grid. Using the Flat Shaded display style, the ground plane is a solid color. When tracking or moving, the ground plane is displayed in Wireframe.

Fig. 28—The ground plane, shown in wireframe display.



Head Lengths.

The head lengths guide is a reference of the figure's height. You might want to use this guide when body shaping.

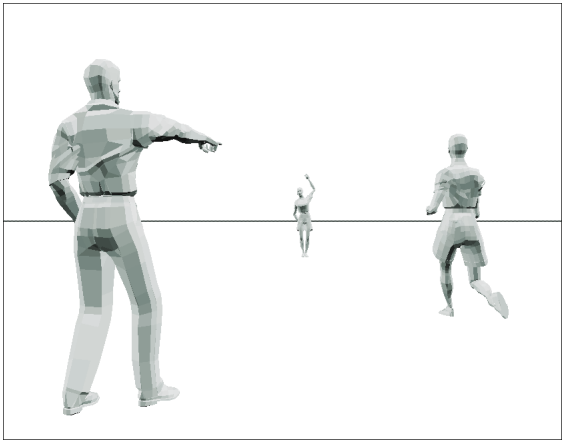
Horizon Line.

The horizon line provides a reference to the studio's horizon. When you use the x, y, and z orbit controls to move the camera, you can see how far you've gone by checking the horizon line.

The horizon line also helps in creating perspective between two figures when one is distant. The guideline to follow is that both figures should have the same relationship to the horizon. For example; if the horizon line crosses at the center of the near figure's chest, place the distant figure so that the horizon crosses at the center of its chest.

This arrangement contributes to the sense that all figures have their feet on the ground.

Fig. 29—Figures arranged in relation to the horizon line.



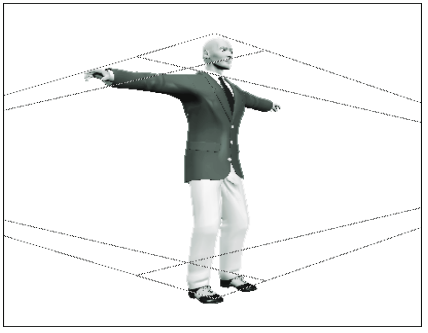
Hip-Shoulder Relationship.

The hip to shoulder relationship shows the alignment between the figure's upper and lower body. This guide can help you see the side-to-side, bend, and twist in the hip, abdomen, and chest. To see a particular aspect, try a different camera view.

Vanishing Lines.

Vanishing lines are an artist's technique for achieving realistic perspective. In Poser, the vanishing lines guide provides a reference of the perspective.Vanishing lines can be helpful when matching the view of the figure with the perspective in a background image.

Fig. 30—The vanishing lines guide.



UNDOING OPERATIONS.

You can reverse the effects of your last action using the Undo command.

To undo an operation:

⌘ Choose **Edit menu> Undo** or, press Command/Ctrl+Z.

Note: Not all operations can be undone.

RESTORING ELEMENTS TO DEFAULT SETTINGS.

You can restore the default settings for a body part, figure, lights, or camera. Restoring the lights resets their colors and positions. Restoring the current camera reset it's scale, position, and focal length. Restoring All resets all figures, cameras, and lights.

To restore a body part, figure, light, or camera to its default state:

1. Select the body part.
2. Choose **Edit menu> Restore> Element**.

To revert an object to its default setting:

⌘ Choose **Edit menu> Restore>** *the item you want restored*.

CHANGING DEFAULTS.

The default settings are what Poser uses to set up a new document. As you work, however, you may achieve a position that you'd prefer over Poser's default. Poser allows you use the settings in this current document as new default settings.

To change Poser defaults:

⌘ Choose **Edit menu> Memorize** and select the element you want to memorize. These new settings apply only to the current file.

PRINTING.

The Print command sends the contents of the Document window to your selected printer.

When printing, Poser always prints to the full page size.

When in Wireframe display style with a black background, Poser automatically inverts the colors. This prevents printing a huge black background.

IMPORTING AND EXPORTING.

Importing Content.

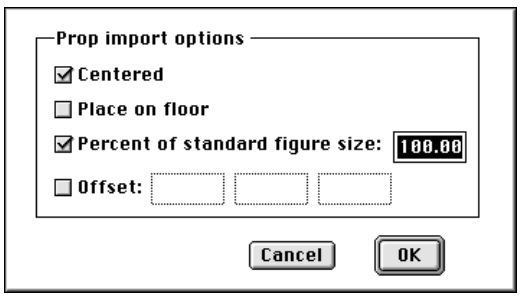
The Import commands lets you bring the contents of other files into the current document. You can import a PICT (Macintosh), TIF (Windows) or BMP (Windows) file as a background, or as texture/bump maps. You can import figures from a saved Poser document.

You can also import QuickTime (Macintosh) and AVI (Windows) files as background footage for an animation. In each case, Poser provides an Open dialog, so you can select the file you want to import.

If you're importing a figure, you'll select the Poser file that contains the figure you want. If that file contains more than one figure, Poser will import all of them.

You can import props in 3D file formats: DXF, Wavefront OBJ, 3D Studio, 3DMF, and Painter 3D text formats.

Fig. 31—When you import a prop, the import options dialog appears.



Exporting Files.

You can export the contents of the Document window to an image file at any time, from any display style. You might do this to save the wireframe image of a figure.

The exported image includes the highlighted body part and any guides currently displayed. If you don't want the highlight or guides, deselect the figure and hide the guides before exporting.

Export also allows you to save the contents of a Poser file in other formats. You can use these formats to transfer the posed figure to a 3D graphics program: DXF, RIB, Wavefront OBJ, 3D Studio, 3DMF, and Painter 3D text formats.

SAVING AND CLOSING.

To save your files:

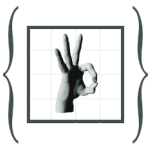
1. Choose **File menu> Save**. The Save dialog appears.
2. Choose a name and location for your file and click Save.

To save your file under a different name:

1. Choose **File menu> Save As**. The Save As dialog appears.
2. Choose a new name and location for your file and click Save.

To close the application:

1. Choose **File menu> Quit/Exit**.
2. If you have any changes, click Yes to save them or No to discard them.



TUTORIAL.

WELCOME.

Welcome to the Poser 3 Tutorial. This tutorial is designed to introduce you to the major features and functions of Poser 3. The main goal of the tutorial is to teach you all the basic techniques you'll need to pose and create images in Poser.

Each of the sections in the tutorial are self-contained, you can start at any point. So, if you already know how to add figures, you can start at posing and so on.

To help you follow along, each new section begins with a heading called the Story So Far, which summarizes the procedures that have been covered up to that point. It also lets you know where you can get files to help you complete the next lessons.

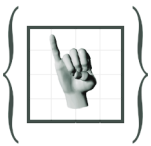
GETTING STARTED.

The first thing you'll need to do is launch the Poser 3 application. Once it appears, Poser displays the Workspace in its default configuration with a default figure in the Document window. With Poser 3, you can alter the arrangement of all the palettes and controls to suit how you work best. For this tutorial, you'll leave the controls in their default positions. Refer to "Setting Up Your Workspace." on page 8 for more on configuring the Poser Workspace.

The figure that appears in the Document window is the default figure. The Document window provides a view of the 3D space in Poser called the *studio*. The studio is where you'll pose figures and add other models to create an illustration.

LESSON 1: CHANGING FIGURES.

All the models available in Poser 3 are displayed in the Libraries palette. This palette is designed to allow you to quickly access all the content available in Poser. Besides models, the palette provides access to: poses, hands, faces, hair, props, cameras, and lights.



In this first lesson you'll use the Libraries palette to replace the default figure with a male figure.

To add a new figure:

1. Click the handle on the right side of the Workspace to display the Libraries palette or choose **Window menu> Libraries**.

   The palette appears displaying a series of category buttons. Each category contains a different type of content.

Fig. 1— The Libraries palette displaying the different categories of content.



2. Click the Figures category button. The Libraries palette expands to display a series of model previews.
3. Click the sub-category pop-up at the top of the palette and choose Tutorial.

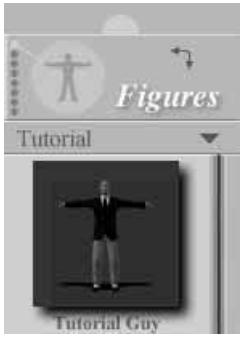
Fig. 2— The sub-category pop-up on the Libraries palette.



The previews display all the available Tutorial models.

4. Click the Tutorial Guy preview.

Fig. 3— The Tutorial Guy in the Libraries palette.



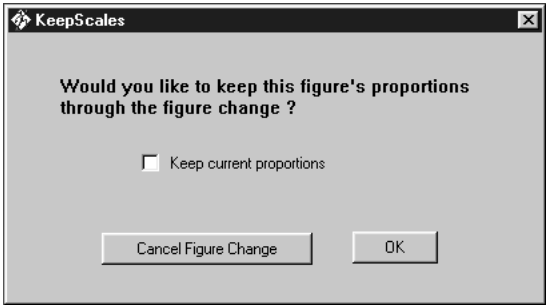
5. Click the Change Figure icon at the bottom of the palette.

Fig. 4— The Change Figure icon.



The KeepScales dialog appears. This dialog asks whether you want to maintain the proportions of the current figure. Since you're replacing the figure in your Workspace you don't want to keep the proportions of the figure.

Fig. 5— The KeepScales dialog.



6. Make sure the Keep Current Proportions is not enabled and click OK.

   The Tutorial Guy model replaces the default figure in the Document window.

Fig. 6— The Tutorial Guy figure in the Document window.



LESSON 2: ADDING ADDITIONAL FIGURES.

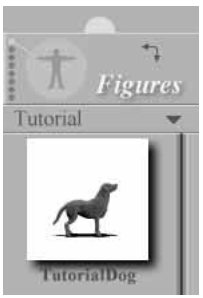
In Poser 3 you can add more than one figure to the studio. The number of figures you can add is limited only by your system's memory. Each figure has its own set of parameters and needs to be posed separately.

In this lesson you will add a dog figure to the studio.

To add an additional figure to the studio:

1. Make sure the Figures category and Tutorial sub-category are displayed in the Libraries palette.
2. Click the TutorialDog preview.

Fig. 7— The TutorialDog preview in the Libraries palette.



3. Click the Create New Figure icon at the bottom of the Libraries palette.

Fig. 8— The Create New Figure icon.



The dog is added to the studio.

Fig. 9— The dog model in the Document window.



LESSON 3: VIEWING YOUR FIGURE.

The Document window provides a view of the virtual studio where your 3D figure exists. The studio exists in 3D space, meaning that you can view the figure from almost any angle.

The view of the studio is taken through the lens of a virtual camera. By moving this camera, you can view your figure from different angles. The Camera Controls are designed to help you select and position a camera in the studio. These controls let you quickly switch between cameras. Refer to "Cameras and Views." on page 109 for more on cameras.

To switch camera views:

1. Click the Tutorial Guy figure in the studio to select it.
2. Click and drag the cursor over the Select Camera icon until the Posing Camera icon appears. The view of the studio changes to center on the Tutorial Guy figure.

Fig. 10— The Camera Controls displaying the Posing Camera.



Fig. 11— The view of the studio through the Posing Camera.



To rotate the view of your studio:

⌘ Click and drag the Rotation Trackball to the left, until the view of the studio looks like the one shown.

Fig. 12— Rotate the studio using the Rotation Trackball.



LESSON 4: PREVIEWING YOUR FIGURE.

The appearance of the figure in the Document window is controlled by the Document Display Style. These styles determine the display quality of figure. Higher quality display styles require more memory and take longer to redraw as you edit the figure.

In this lesson you'll switch to a lower display style to save on memory.

To choose a display mode:

⌘ Click the Outline style button.

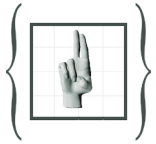
Fig. 13— The Document Display Style controls.



The figure switches to an outline.

Fig. 14— Display the figure in the Outline display style.





LESSON 5: CHANGING DISPLAY OPTIONS.

Poser has several display options that let you control how the figure looks in the studio. There are controls for displaying shadows, depth cueing, and changing the figure styles. Refer to "Previewing your Figure." on page 17 for more on display options.

In this lesson you'll make your figure easier to see by first turning off ground shadows and then hiding the figure you're not working on.

To turn off ground shadows:

⌘ Choose **Display menu> Ground Shadows**.

When you select Ground Shadows, the checkmark disappears and the option is disabled. A checkmark appears next to the command when ground shadows are enabled.

To hide a figure:

1. Click the dog model to select it. The view of the studio switches to center on the dog.
2. Choose **Figure menu> Hide Figure**. The dog model disappears from the studio. The view of the studio switches back to the Tutorial Guy figure.

POSING FIGURES.

The main purpose of Poser 3 is to pose figures for use as illustrations or for export to other applications. To that end, Poser has several tools and features to help you pose figures precisely.

The easiest way of creating a pose is to first move the body parts to the general positions of the pose and then refine those positions. The Editing Tools are good for creating the rough pose, then you can use the Parameter Dials, which let you position body parts in precise increments, to refine it.

The Story So Far.

So far in previous lessons, you've learned how to change and add a figure, position the view of your figure, and switch display styles. You'll be moving the camera several times throughout the course of this tutorial, so it's a good idea to familiarize yourself with the Camera Controls. Refer to "Cameras." on page 109 for more information.

If you're starting the tutorial at this point you'll need a file containing figures. On the Poser 3 CD-ROM, open the file **Poser: Tutorial: Posing: PosingFigures.PZ3**, using **File menu> Open**.

LESSON 1: POSING USING THE EDITING TOOLS.

The Editing Tools let you pose the figure interactively in the Document window. You can use the tools to pose a specific body part, or the entire figure.

In this lesson you'll use the Editing Tools to reposition the figure's body parts.

To reposition body parts:

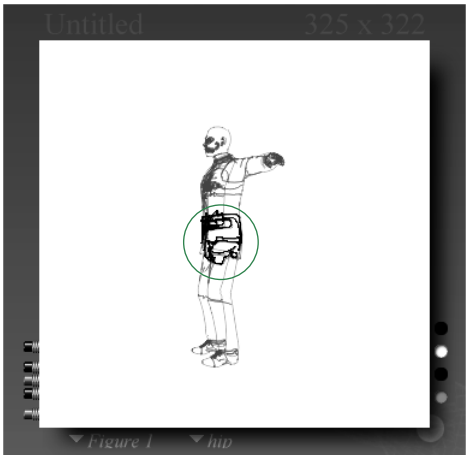
1. Choose the Translate/Pull tool from the Editing Tools. This tool repositions body parts.

Fig. 15— Choose the Translate/Pull tool.



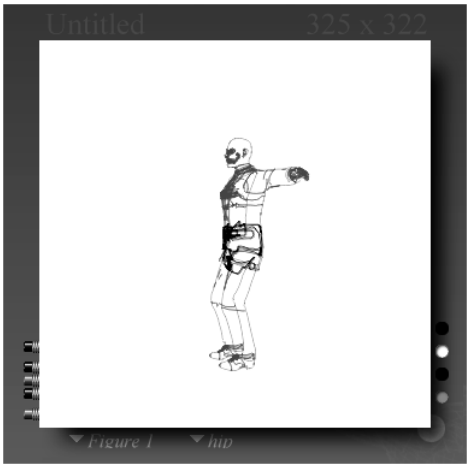
2. Select the hip on the figure in the Document window as shown.

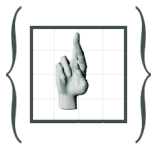
Fig. 16— Select the hip of the figure.



3. Drag the hip down until the figure appears as shown.

Fig. 17— Drag the hip down.





You'll notice that as you move the hip, the rest of the body part also move. This is due to Poser's Inverse Kinematics (IK) feature. IK simulates the motion of a real figure by attaching one body part to another. IK is used on most figures to help keep poses realistic. Refer to "About Translation and Inverse Kinematics." on page 69 for more.

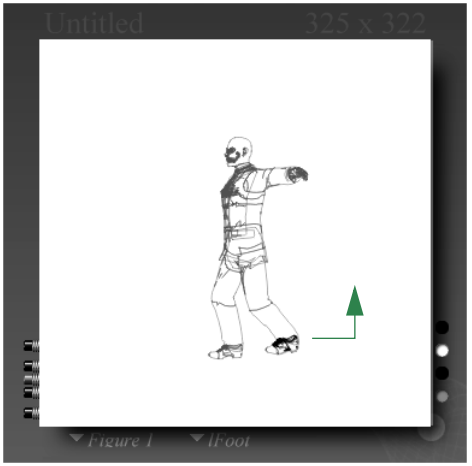
4. Click the Current Element pop-up at the bottom of the Document window and choose Left Foot.

Fig. 18— The Current Element pop-up.



5. In the Document window, drag the selected foot back and up as shown.

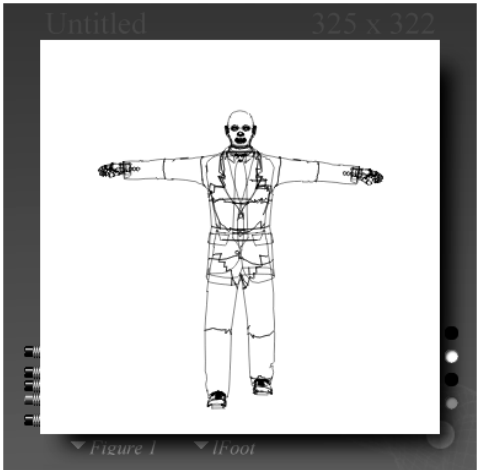
Fig. 19— Drag the Left Foot back and up to reposition.



To rotate a body part:

1. Choose **Display menu> Camera View> From Front** to change the view of the figure.

Fig. 20— Change the camera view to the front.



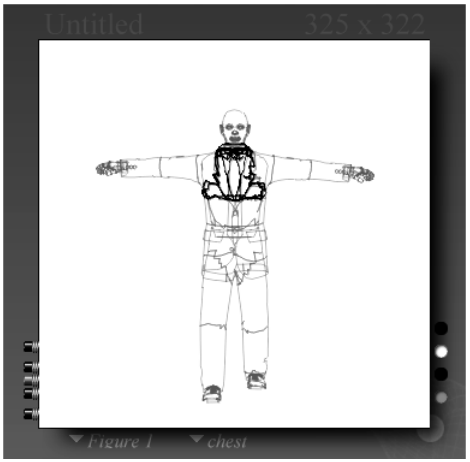
2. Choose the Rotate tool. This tool rotates the selected body part around its center.

Fig. 21— Choose the Rotate tool from the Editing Tools.



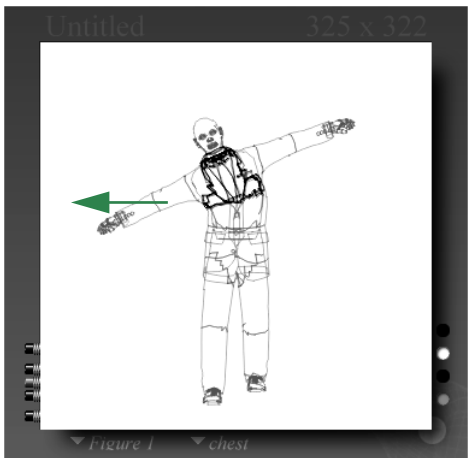
3. In the Document window, select the chest on the figure as shown.

Fig. 22— Select the figure's chest.



4. Drag the chest to the left as shown.

Fig. 23— The final position of the chest.



5. Choose **Display menu> Camera View> From Left**. This gives you a better view for working with the shoulder.

Fig. 24— Display the figure from the left side.

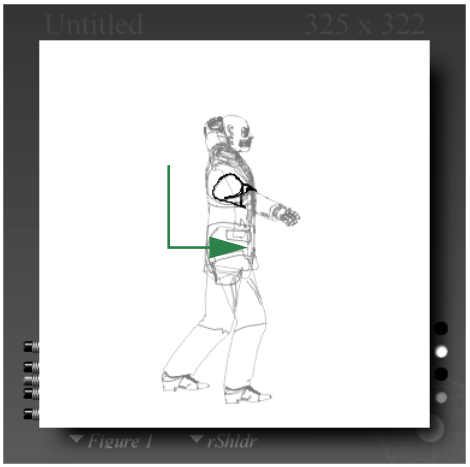




6. Click the Current Element pop-up beneath the Document window and choose Right Shoulder.

7. In the Document window, drag the right shoulder down and forward as shown.

Fig. 25— Drag the right shoulder down and forward.



To twist a body part:

1. Click the Select Camera menu located above the Camera Controls and choose From Front.
2. Choose the Twist tool. This tool twists the body part around its center.

Fig. 26— Choose the Twist tool from the Editing Tools.



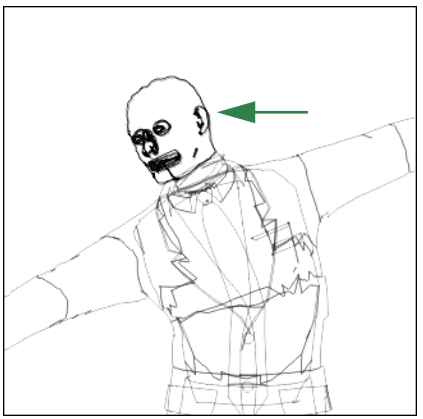
3. Select the head in the Document window as shown.

Fig. 27— Select the figures' head.



4. Drag the head to the left until its in the position shown.

Fig. 28— Drag the head to the left.



At the moment, your figure is in a somewhat awkward position, but all the parts are generally in the right position. The pose can be refined using the Parameter Dials.

LESSON 2: POSING USING THE PARAMETER DIALS.

The Parameter Dials let you adjust the parameters of a selected body part or figure, numerically. The number of parameters available for a body part vary, so the number of dials displayed changes as you select different elements.

In this lesson you'll refine the pose you created using the Editing Tools.

To bend a body part using the Parameter Dials:

1. Click the Select Camera pop-up above the Camera Controls and choose From Left.
2. Choose Abdomen from the Current Element pop-up beneath the Document window. The Parameter Dials for the Abdomen appear.

   You may need to click on the Libraries palette handle to close the palette in order to see the Parameter Dials.

Fig. 29— Drag the tab to view more controls.



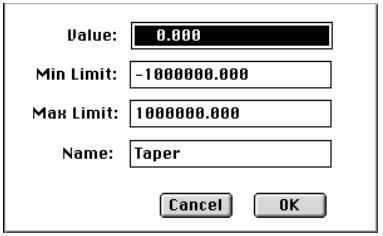
3. Double-click the Bend dial.

Fig. 30— Double-click the Bend dial.



The Edit Parameter Dial dialog appears.

Fig. 31— The Edit Parameter Dials dialog appears.



4. Enter Value = 25.00 and click OK. The figure's abdomen bends forward and down.

Fig. 32— The abdomen bends.



5. Choose Left Foot from the Current Element pop-up beneath the Document window.
6. Drag the Bend dial to the right until the number reads 35.

   The foot bends down to produce a more natural pose.

Fig. 33— The left foot bends down.



To twist a body part:

1. Click the Current Element pop-up below the Document window and choose Right Shoulder.
2. Drag the Twist dial to the left until the number reads -40.

Fig. 34— Twist the Right Shoulder using the Parameter Dials.



To refine a pose using the dials:

1. Make sure the Right Shoulder is still selected. The name of the element appears at the bottom of the Document window if it is still selected.
2. Double-click the Bend dial and enter Value = 3.3 in the dialog that appears and click OK.

3. Double-click the Front-Back dial and enter Value = 44 in the dialog that appears and click OK.

Fig. 35— The right shoulder is moved forward.



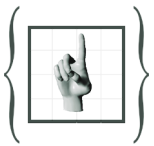
4. Click the Current Element pop-up and choose Body from the menu.
5. Double-click the zTrans dial and enter Value = -0.142 in the dialog that appears and click OK.

POSING HANDS.

The hands on all the models in Poser 3 are fully articulated, meaning that they have joints that can be posed just like any other body part. Like the rest of the figure, the hand joints are controlled by IK to help make your poses more realistic.

The Story So Far.

So far in this tutorial you've learned how to set up and refine the pose of the figure's major parts using the Editing Tools and the Parameter Dials. In this section, you'll learn how to pose hands using the same set of controls, so you'll need to be familiar with how these controls work. Refer to "Posing the Figure." on page 74 for more information on posing controls.



If you're starting the tutorial at this point you'll need a file containing a pre-posed figure. On the Poser 3 CD-ROM, open the file **Poser: Tutorial: Posing: PosingHands.PZ3**, using **File menu> Open**.

LESSON 1: USING PRESET HAND POSES.

The easiest way of posing a hand is to use a preset pose from the Hands category. This category contains a number of commonly used hand positions. The Hands category can be accessed through the Libraries palette.

To view the right hand:

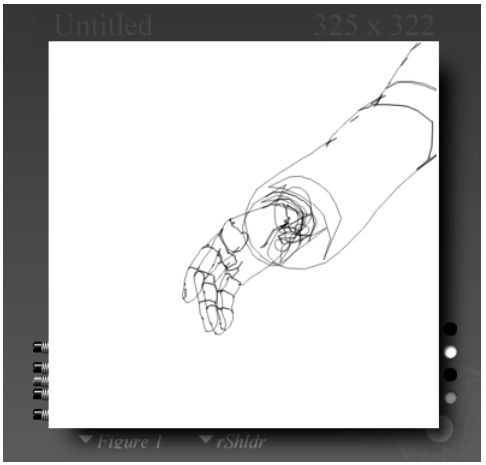
1. Drag over the Camera Controls until the Right HandCam icon appears.

Fig. 36— Choose the Right HandCam icon.



The view of the figure switches to display only the right hand of the figure.

Fig. 37— The Right HandCam display of the right hand.



2. Choose the Flat Shaded display style icon. This makes posing the hand easier.

Fig. 38— Choose the Flat Shaded display style icon.



To pose a hand using presets:

1. Click the handle on the right side of the screen to display the Libraries palette.
2. Move the cursor over the category dots at the top of the palette until the Hands category icon appears, then click the mouse button.

Fig. 39— Choose the Hands category icon from the Libraries palette category dots.



3. Click the sub-category pop-up and choose Basic Hands.

4. Scroll the previews until the Fist preset appears.

Fig. 40— Display the Fist preset preview in the Libraries palette.



5. Double-click the preview. A dialog appears asking if you want to apply the preset hand to the right or left hand.
6. Click Right Hand.
7. The preset replaces the right hand.

Fig. 41— The preset fist applied to the right hand.



8. Click the palette's handle to hide the Libraries palette.

LESSON 2: USING PARAMETER DIALS.

Like other body parts, you can use the Parameter Dials to numerically pose the hand. The hand has a special parameter called Grasp that makes positioning the hand easier.

To view the left hand:

1. Drag over the Camera Controls until the Left HandCam icon appears.

Fig. 42— The Left HandCam icon.





The view of the figure switches to display only the left hand of the figure.

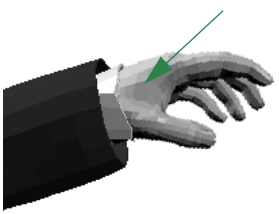
Fig. 43— The Left HandCam displays only the left hand.



To pose a hand using the Parameter Dials:

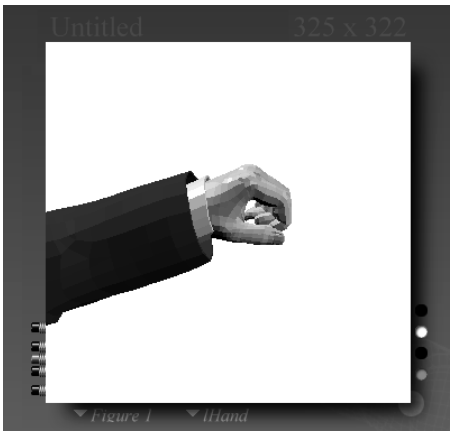
1. Click the main part of the hand to select it. The Left Hand dials appear.

Fig. 44— The main part of hand.



2. Double-click the Grasp dial.
3. Enter a value of 40 in the dialog and click OK.

Fig. 45— The position of the left hand after adjusting the Grasp parameter.



4. Click the Current Element pop-up beneath the Document window, and choose Left Index 1. This selects the left index finger.

5. Drag the Bend dial to the right until it reads 8.

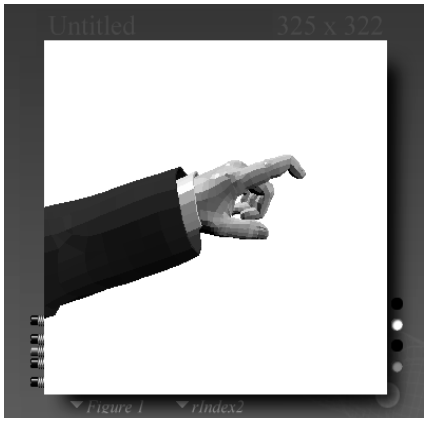
Fig. 46— The left index finger straightens out at the first joint.



6. Click the Current Element pop-up beneath the Document window, and choose Left Index 2. This selects the second joint of the left index finger.

7. Drag the Bend dial to the right until it reads 14.

Fig. 47— The finger straightens out at the second joint.



8. Click the pop-up again and choose Left Index 3.
9. Drag the Bend dial to the right until it reads 15.

Fig. 48— The final pose of the left hand.





POSING FACES.

The faces of the People figures in Poser 3 have several parameters that let you create facial expressions. These parameters are controlled by the Parameter Dials. They appear when you select the head.

In this section you'll create a basic expression. Creating a detailed facial expression is a process of combining several different facial parameters. Creating the right expression takes some practice. There are several preset faces available in the Libraries palette to help you see what you can achieve.

The Story So Far.

So far in this tutorial you've learned how to pose a figure and its hands using both the Editing Tools and the Parameter Dials, The dials are used extensively to pose a face, so you should be familiar with the setting parameters numerically. Refer to "Using the Parameters Dials." on page 81 for more information.

If you're starting the tutorial at this point you'll need a file containing a pre-posed figure. On the Poser 3 CD-ROM, open the file **Poser: Tutorial: Posing: PosingFace.PZ3** using **File menu> Open**.

LESSON 1: USING FACE PARAMETER DIALS.

The parts of the face can only be adjusted using the Parameter Dials. The face dials appear when you click the head of a figure.

To view the face:

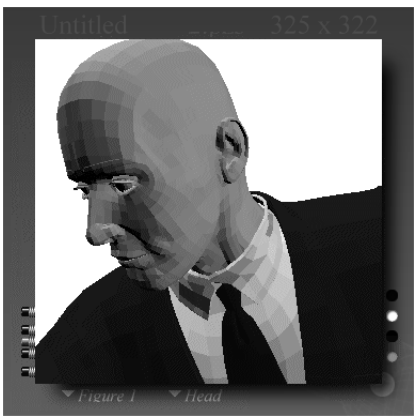
1. Click and drag over the Camera Controls until the FaceCam icon appears.

Fig. 49— Select the FaceCam icon.



The view of the figure switches to display only the head of the figure.

Fig. 50— Only the head of the figure appears when the FaceCam is selected.



To create a facial expression:

1. Click the Head to select it. The Head Parameter Dials appear.

2. Double-click the RBrowUp dial. The Edit Parameter Dial dialog appears.

   If this dial is not visible, you can expand the Parameter Dial palette by dragging on the tab at the bottom of the dials.
3. Enter Value= 0.80 and click OK. The right eyebrow moves up slightly.
4. Double-click the LBrowUp dial. The Edit Parameter Dial dialog appears.
5. Enter Value= - 0.80 and click OK. The left eyebrow moves up slightly]

Fig. 51— The result of repositioning the left and right brows with the Parameter Dials.



6. Double-click the Smile dial. The Edit Parameter Dial dialog appears.
7. Enter Value= 0.80 and click OK.

Fig. 52— The complete face pose.



PROPS.

Props are three-dimensional objects that your figure wears or interacts with. In Poser 3 a prop can be either a preset prop from the Libraries palette or an imported 3D object.

The Story So Far.

So far in this tutorial you've learned how to pose the figure, its hands, and its face using both the Editing Tools and the Parameter Dials. In this section you'll be adding and positioning a prop. You may want to familiarize yourself with posing before you move onto making your pose more complex. Refer to "Posing the Figure." on page 74 for more.

If you're starting the tutorial at this point you'll need a file containing posed figures. Use the file **Poser: Tutorial: Posing: Props.PZ3** on the Poser 3 CD-ROM.

LESSON 1: ADDING A PROP.

There are two ways of adding a prop to your studio: by importing an object, or by using a preset prop from the Libraries palette. In this lesson you'll add a prop from the Libraries palette. Refer to "Adding and Importing Props." on page 102 for instructions on importing props.

To switch the camera view:

⌘ Choose **Display menu> Camera View> Main Camera.**

Fig. 53— Change your view of the studio back to the Main Camera.



To add a basic prop from the Libraries palette:

1. Click the handle on the right side of the screen to display the Libraries palette.
2. Choose the Props category icon. If the icon is not available, move the cursor over the category dots at the top of the palette until the Props category appears, then click the mouse button.
3. Double-click the Torus preview.

Fig. 54— Double-click the Torus preview in the Libraries palette.



The Torus prop is added to the studio.

Fig. 55— The Torus prop appears in the studio.



4. Click the Libraries palette's handle again to hide the palette.

LESSON 2: EDITING A PROP.

Most props don't fit perfectly into the pose you're creating. They usually need to be edited to match the figure. In this lesson you'll learn how to edit a prop's geometry as well as repositioning the prop.

To edit a prop's geometry:

1. Make sure the Torus is still selected.
2. Drag the Fatness Parameter Dial to the left until it reads 0.008.
3. Drag the Scale dial to the right until it reads 140%.

Fig. 56— Use the Parameter Dials to change the Torus into a hoop.



To reposition a prop:

1. Make sure the Torus is still selected.
2. Drag the xRotate dial to the right until it reads 90.
3. Drag the xTran dial to the left until it reads -0.262.
4. Drag the yTran dial to the right until it reads 0.335.
5. Drag the zTran dial to the right until it reads 0.213.

   The hoop is now in the figure's hand.

Fig. 57— The hoop is positioned in the figure's hand.



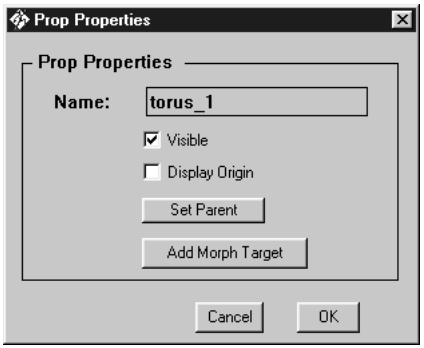
LESSON 3: SETTING A PROP PARENT.

When you add a prop it is treated as a separate object from the figure. So changes in the figure do not effect the prop. By setting a prop's parent, you can have the prop act as if it were part of the figure. Once it has a parent, the prop moves whenever the parent moves.

To set a parent for the Torus:

1. Make sure the Torus is still selected.
2. Choose **Edit menu> Properties**. The Prop Properties dialog appears.

Fig. 58— The Prop Properties dialog appears.



3. Click the Set Parent button. The Choose Parent dialog appears.

Fig. 59— The Choose Parent dialog appears.



4. Click the Parent pop-up, choose Right Hand, and click OK.
5. Click OK to exit the Prop Properties dialog.

   The Torus is now a part of figure so all the prop's parameters are now displayed in terms of the whole figure.

LIGHTS.

There are three lights in the Poser studio. These lights can be used for one of two purposes. The most useful is to make it easier to see your figure in the studio. The other use, is to match the shadows and highlights on a figure with those in a background image.

This section describes how to use lights to help you see the figure more clearly. Refer to "Aiming Lights." on page 122 for more on using lights to match a background.

Your figures must be in a lit display, style like Texture Shaded, to see the effects of lighting changes.

The Story So Far.

So far in this tutorial you've learned how to add figures and props, and how to pose figures using the Editing Tools and Parameter Dials. In this section you'll be using lights to help you see your figures more clearly. By this point you should be familiar with using the Camera Controls and Editing Tools. If you're not, refer to "Changing Your View of the Studio." on page 112 and "Using Editing Tools." on page 74.

If you're starting the tutorial at this point you'll need a file containing a posed figure with a prop. Use the file **Poser: Tutorial: Lights: Lighting.PZ3** on the Poser 3 CD-ROM.

LESSSON1: POSITIONING LIGHTS.

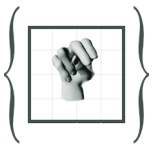
Lights can be positioned using either the Light Controls on the Workspace or the Light Indicator in the Document window.

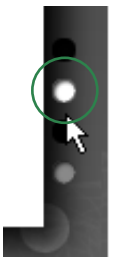
Before you start the lesson, you should change the background color so you can see the lighting effects better. Then, we'll display the hidden dog figure so that you can see the effects of lighting on the whole studio.

To change the background color:

- ⌘ Hold down the Background Color icon on the right side of the Document window. A color picker appears. Choose a color and release the mouse button.

Fig. 60— Hold down the Background Color icon to display the color picker.





To display hidden figures:

1. Choose **Figure menu> Show All Figures** to display all the figures in the studio.

To change to a light-sensitive display style:

⌘ Click the Lit Wireframe display style button.

Fig. 61— The figures are displayed in the Lit Wireframe display style.



To position a light using the Light Controls:

1. Move the cursor over the Light 1 control. The cursor changes to a rotate icon.

Fig. 62— The first Light Control.



2. Drag the control to the right as shown.

   As you drag over the Light Controls the reflection in the control itself moves, as well as the Light Indicator in the studio.

Fig. 63— Drag in the first Light Control to the position as shown.



To position a light using the Light Indicator:

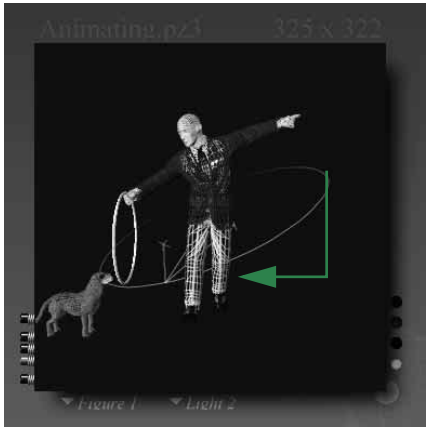
1. Click the Light 2 control. The Light Indicator appears in the Document window.

Fig. 64— The Light Indicator appears in the Document window.



2. Drag the Light Indicator down and to the left to highlight the male figure's facial expression.

Fig. 65— Drag the Light Indicator in the studio to the position as shown.



LESSON 2: CHANGING LIGHT COLOR.

You can quickly change the color of any of the three lights in the studio using the Light Controls. The color of the light interacts with the color of the figure. You can use light color to enhance the colors in a figure's surface material.

To change a light color:

- ⌘ Hold the Light 2 color dot (below the second Light Control) and choose a light blue color from the color picker that appears.

Fig. 66— Hold the Light 2 color dot and choose a color from the color picker.



ANIMATING.

Poser 3 uses key frame animation to simulate motion. In key frame animation, you set up a number of poses that are used to determine where motion begins and ends. Poser fills in the frames between these key frames to create the illusion of motion.

Poser has several tools to help you animate the figures in the Document window. The Animation Controls let you quickly create basic animations, while the Animation palette lets you edit animations. As well, there are several preset poses in the Libraries palette that are specifically designed as key frame poses for animations.

This section teaches you how to create basic animations using the Animation Controls and presets poses and models from the Libraries palette.

The Story So Far.

So far in this tutorial you've learned how to add and change figures, and pose figures, hands and faces. You've also learned how to position lights. In this next section you'll learn how to animate your figures. Animation requires several pose changes, so you'll need to know how to pose a figure before you can animate it. Refer to "How Posing Works." on page 69 for more on posing.

If you're starting the tutorial at this point you'll need a file containing a posed figures with a prop. On the Poser 3 CD-ROM, open the file **Poser: Tutorial: Animating: Basic Animation.PZ3**.

LESSON 1: SETTING UP AN ANIMATION.

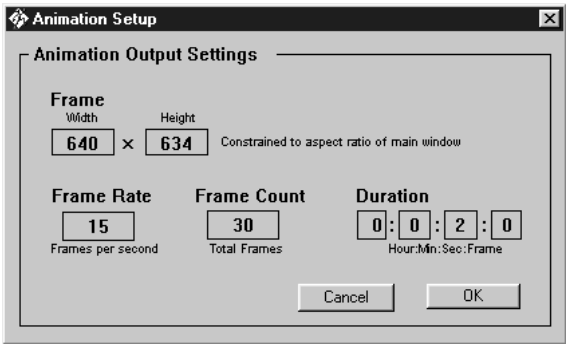
Before you begin animating, you'll need to set up the duration and frame rate of the final animation. You'll also need to set how the animation looks in the Document window.

To achieve better results when you're setting up poses and previewing an animation, you can switch the display style and Tracking mode. The Tracking mode determines how the figure is drawn as it moves. Refer to "Figure Tracking." on page 11 for more on Tracking modes.

To set up an animation:

1. Choose **Animation menu> Animation Setup**. The Animation Setup dialog appears.

Fig. 67— The Animation Setup dialog appears.



2. Leave the Frame size at default.
3. Set Frame Rate = 15.
4. Set Frame Count= 30 and click OK.

To change the display style:

⌘ Click the Smooth Shaded display style icon.

To change the Tracking mode:

- ⌘ Click the Full Tracking button on the left side of the Document window. In this mode, the figure remains in Smooth Shaded style when it moves.

Fig. 68— The Tracking style button.



LESSON 2: BASIC ANIMATION.

The easiest way to animate a figure is to change a pose at different points in time. The Animation Controls let you move to different points in time and the Editing Tools let you quickly change a pose.

To animate position changes using the Editing Tools:

1. Click the handle at the bottom of the screen to display the Animation Controls or choose **Window menu> Animation Controls**.
2. Make sure the timeline at the bottom of the screen is on the first frame. If its not, click the First Frame button.

Fig. 69— Click the First Frame button to position the animation at the beginning.



3. Click the Current Element pop-up below the Document window and choose Left Shoulder.

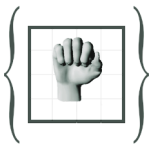
Fig. 70— Select Left Shoulder from the Current Element pop-up.



4. Choose the Rotate tool.

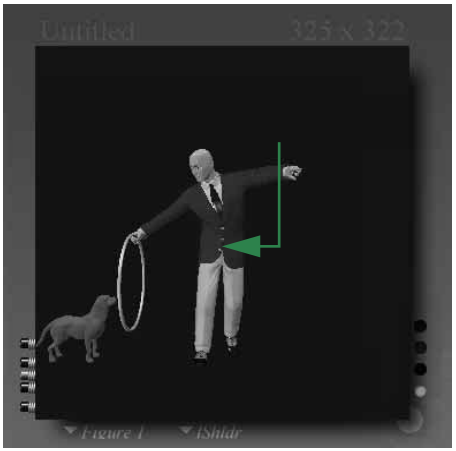
Fig. 71— The Rotate tool.





5. Drag the Left Shoulder down and to the left, until the arm is in the position shown. This will position the figure for frame 1 of your animation.

Fig. 72— Drag the Left Shoulder down and to the left for the first frame.



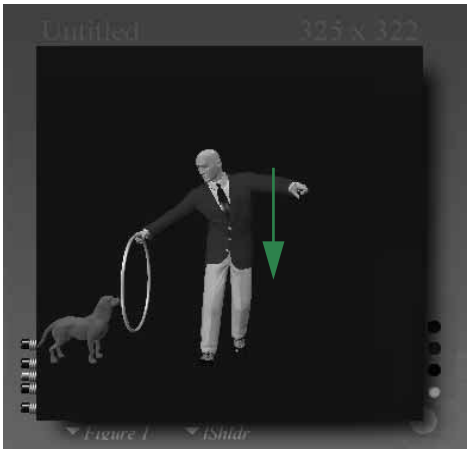
6. Move the Current Frame Indicator to the 15th frame. The frame number is indicated in the center of the Animation Controls.

Fig. 73— Move the Current Frame Indicator to frame 15.



7. Drag the Left Shoulder down, until the arm is in the position shown.

Fig. 74— Position the Left Shoulder for frame 15.



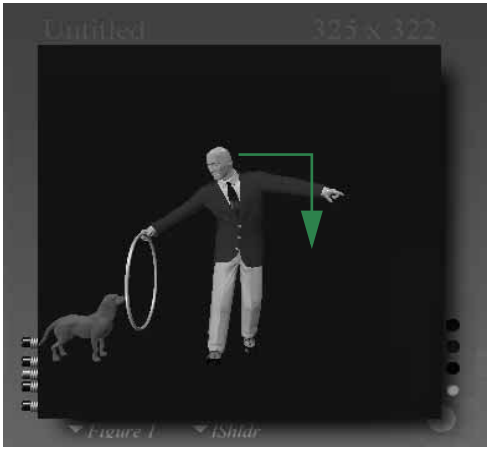
8. Move the Current Frame Indicator to the 20th frame.

Fig. 75— Move the Current Frame Indicator to frame 20.



9. Drag the Left Shoulder to the right and down, until the arm is in the position shown.

Fig. 76— Position the Left Shoulder for frame 20.



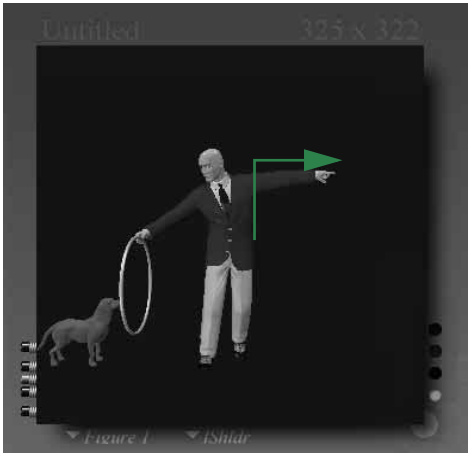
10. Move the Current Frame Indicator to the 25th frame.

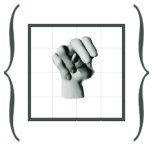
Fig. 77— The Current Frame Indicator at frame 25.



11. Drag the Left Shoulder up and to the right, until the arm is in the position shown.

Fig. 78— Position the Left Shoulder for frame 25.



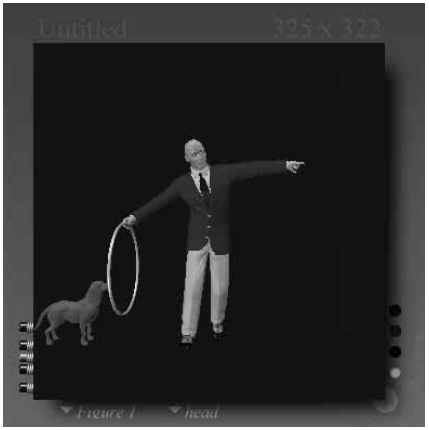


To animate position changes using the Parameter Dials:

1. Make sure you are still at frame 25.
2. Click the Current Element pop-up from the bottom of the Document window and choose Head.
3. Drag the cursor over the Twist dial until it reads 25.

   You may need to scroll the Parameter Dials to see the Twist dial.

Fig. 79— The final position of the head in frame 25.



4. Click Play to preview your animation.

Fig. 80— Click Play to preview your new animation.



5. Click Stop to stop your animation.

LESSON 3: ANIMATING USING PRESETS.

Some of the Poses in the Libraries palette are specifically designed for creating animations. For example the Dance Sets of poses are designed to create a dancing animation. In this lesson you'll use several preset dog poses to animate the Dog model.

To use preset poses to create an animation:

1. Click the First Frame button to move to the beginning of the Timeline.

Fig. 81— Click the First Frame button to return to the beginning.



2. Click the Dog model.

Fig. 82— Select the Dog model in the studio.



3. Click the handle on the right side of the screen to display the Libraries palette.
4. Click the Poses category icon. If its not visible, move the cursor over the category dots until the Poses category appears and then click the mouse button.
5. Click the Poses pop-up and choose Tutorial.

6. Double-click the Dog01 pose preview. The pose is applied to the dog.

Fig. 83— Double-click the Dog01 pose preview.



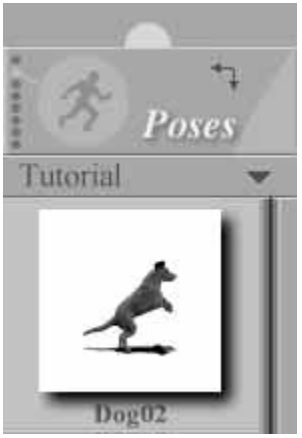
7. Move the Current Frame Indicator to the 15th frame. The frame number is indicated in the center of the Animation Controls.

Fig. 84— Move the Current Frame Indicator to frame 15.



8. In the Poses category, double-click the Dog02 pose preview.

Fig. 85— Double-click the Dog02 pose preview.



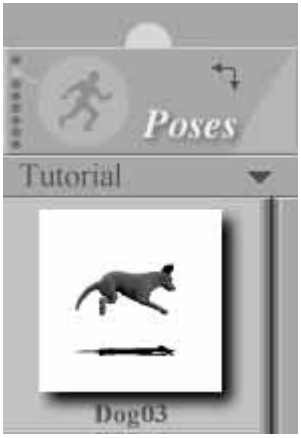
9. Move the Current Frame Indicator to the 20th frame.

Fig. 86— Move the Current Frame Indicator to frame 20.



10. In the Poses category, double-click the Dog03 pose preview.

Fig. 87— Double-click the Dog03 pose preview.



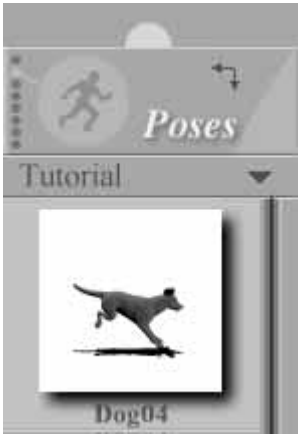
11. Move the Current Frame Indicator to the 25th frame.

Fig. 88— Move the Current Frame Indicator to frame 25.



12. In the Libraries palette, double-click the Dog04 pose preview.

Fig. 89— Double-click the Dog04 pose preview.



13. Move the Current Frame Indicator to the 30th frame.

Fig. 90— Move the Current Frame Indicator to frame 30.



14. In the Poses category, double-click the Dog05 pose preview.

Fig. 91— Double-click the Dog05 pose preview.



15. Click Play to preview the animation.

Fig. 92— Click Play button to preview your animation.



16. Choose **File menu> Save** to save the file.

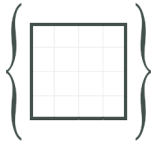
ADVANCED ANIMATION.

Poser 3 has several advanced animation features. The most spectacular of which is the Walk Designer. The Walk Designer lets you create and apply a realistic human walk to your figure. You can control everything from the length of the figure's stride to movement of its hips.

This section leads you through the process of designing and apply a walk to your figure. Refer to "Advanced Editing." on page 146 for more information on the other Poser 3 advanced animation features.

The Story So Far.

So far in this tutorial you've learned how to add and pose figures, hands, and faces using a variety of tools. You've also learned how to set up lights and create basic animations. This section builds on the principles discussed in basic animation so you may want to refer back to the previous lesson before moving on, or refer to "Creating Animations." on page 131.



This section of the tutorial starts with a brand new file. So you can start the Tutorial at this point without any special files.

LESSON 1: DRAWING A WALK PATH.

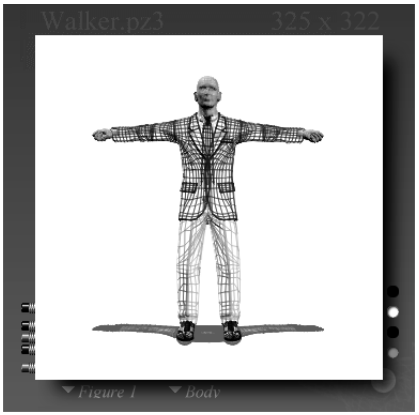
Designing a walk is a two step process: first you create a walk path, then you create a walk and apply it to the path. The Walk Path tells Poser where the figure begins walking and where it ends.

In this lesson you'll be drawing the Walk Path in the studio.

To open the preset tutorial file:

1. Choose **File menu> Open**. The Open dialog appears.
2. Locate the file **Poser 3:Tutorial:Adv Animating: Walker** and click Open. The Walker figure appears in the Document window.

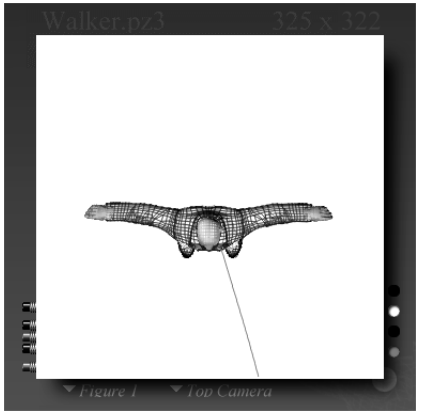
Fig. 93— The Walker figure appears in the Document window.



To set up a walk path:

1. Click the figure to select it.
2. Choose **Display menu> Camera View> From Top**.
3. Choose **Figure menu> Create Walk Path**. A path appears in the studio.

Fig. 94— A default walk path appears in the studio.



The path is difficult to see in this default position, so you'll have to move the camera out.

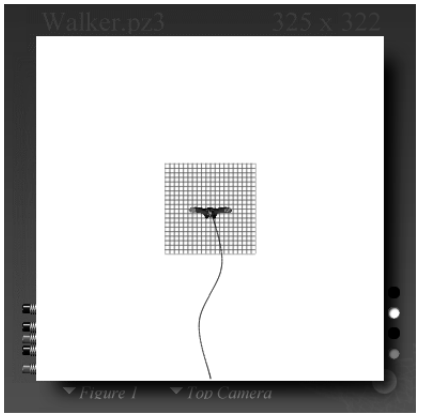
To view the path:

1. Drag the cursor to the left over the Scale button in the Camera Controls until you can see the entire path.

Fig. 95— The Scale control.



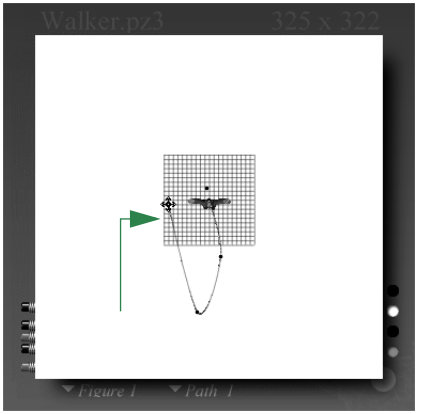
Fig. 96— Display the entire walk path in the studio. [mine has two lines?]



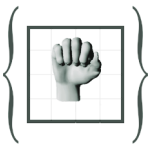
To edit the walk path:

1. Make sure the ground plane is displayed. If it's not, choose **Display menu> Guides> Ground Plane**. This gives you a reference for editing the path.
2. Click on the line to select it.
3. Click the last point on the path and move it up and to the left as shown.

Fig. 97— Adjust the end of the walk path as shown.

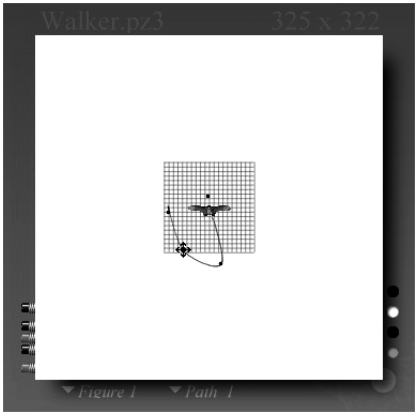


4. Click the second to last point on the path and move it to up and to the left as shown.



Your walk path is now complete.

Fig. 98— The completed path.



LESSON 1: DESIGNING A WALK.

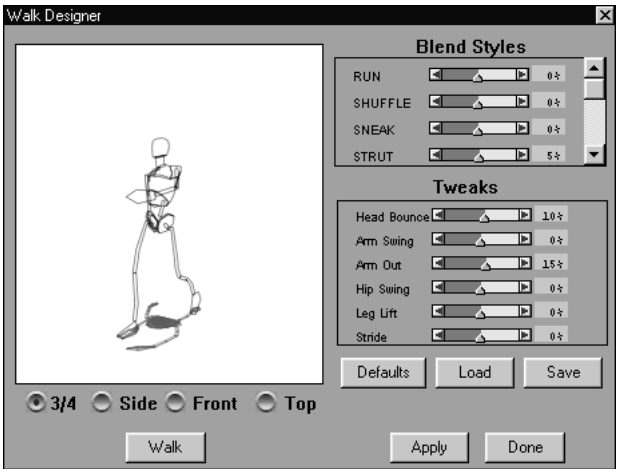
In this lesson you'll use the Walk Designer to create a custom walk for your figure.

The Walk Designer has several controls that let you set the basic movement of the figure as it moves. There are also tools for setting secondary motions for a walk like head and arm movements. As you're working the designer, you'll be able to see the affects of your changes in the real-time walk preview.

To design a walk:

1. Choose **Window menu> Walk Designer**. The Walk Designer appears.

Fig. 99— The Walk Designer.



2. Set the Strut slider in the Blend Styles area to 5%.

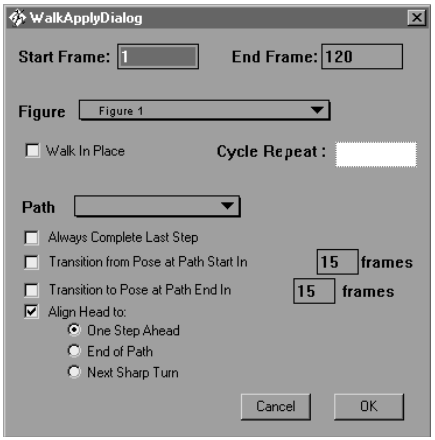
   You may need to click the scroll arrows on the ends of the slider.

3. Click the right scroll arrow on the Head Bounce slider in the Tweaks area until the value reads 10%.
4. Click the right scroll arrow on the Arm Out slider in the Tweaks until the value reads 15%.
5. Click the Walk button to preview your walk.

To apply a walk to a path:

1. Click Apply. The WalkApplyDialog appears.

Fig. 100— The WalkApplyDialog.



2. Make sure the Start Frame = 1.
3. Leave the rest of settings at their defaults and click OK. The Walk is applied to the path you created.
4. Click Done to close the Walk Designer.
5. Click Play in the Animation Controls to preview the walk.
6. You may want to move the camera, so that you can see your figure better. Try using **Display menu> Camera View> From Front**.

Fig. 101— Click Play to preview your animation.

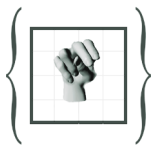


7. Save this file and close it.

SURFACE MATERIALS

A surface material defines the surface properties of an object. A material is what makes one surface look like wood and another stone. The surface of an object is determined by its texture and bump qualities. These properties are set by Texture and Bump maps.

Maps are little more than images that Poser uses to apply colors and bumps. Each figure in Poser has its own set of Bump and Texture maps. On some figures, each individual element of the figure has its own texture. You can customize a figure by applying your own texture or Bump maps to the figure or to part of the figure.



You can even design your own Texture maps. To help you do this, Poser provides several Texture templates. These templates provide guidelines for applying a texture to different elements of the figure. You can edit the template in an image editing program to create custom color or bump patterns.

Fig. 102— The Texture template used in this lesson.



In this section you'll learn how to apply a customized Texture map to your figure.

The Story So Far.

So far in this tutorial you've learned how to add and pose figures. You've also learned how to set up lighting and create both basic and advanced animations. In this section you'll apply surface materials to your figures.

This section uses a file included with Poser 3, so you can start the tutorial at this point.

LESSON 1: LOADING A CUSTOMIZED TEXTURE MAP

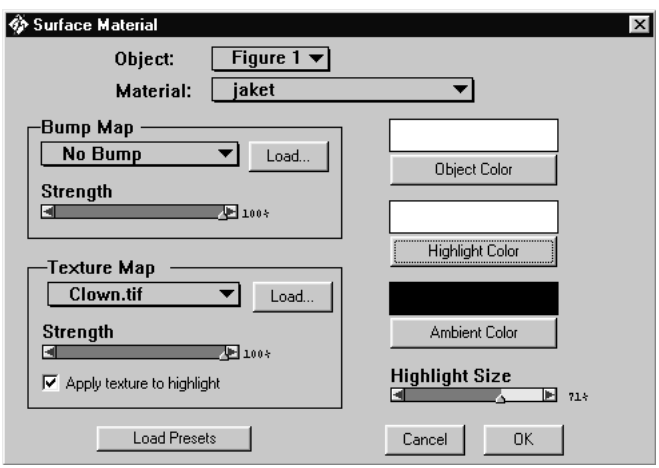
Figures can be customized by applying custom Texture maps created from images or from an edited Texture template.

In this lesson you'll apply an edited Texture template to the individual parts of a clown figure.

To apply a Texture template to individual parts:

1. Choose **File menu> Open**.
2. Locate the file **Poser 3: Tutorial: Textures: Clown.PZ3**.
3. Choose **Render menu> Surface Material**. The Surface Material dialog appears.

Fig. 103— The Surface Material dialog.



4. Click the Object pop-up at the top of the dialog and choose Figure 1.

5. Click the Material pop-up and choose Jacket.
6. Click the Load button in the Texture Map area of the dialog. An Open dialog appears.
7. Locate the file **Poser 3: Tutorial: Textures: CLOWN.BMP/PICT** and click Open.
8. Click the Texture Map pop-up and choose Clown.
9. Click OK.

   The different textures are applied to the face and jacket of Clown model.

Fig. 104— The figure with the custom texture applied.



RENDERING.

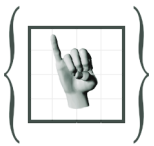
Rendering is the process of converting your 3D figure into a 2D image or animation. There are several options you can set for a rendering session. All the available options are displayed in the Render Options dialog.

In this section you'll render both a 2D image and an animation out of the clown and dog scene.

The Story So Far.

So far in this tutorial you've learned how to add and pose figures. You also learned how to set up lighting and create both basic and advanced animations. In this final section you'll learn how to finish your project by producing a rendering. The contents of your final rendering is determined by the view of the camera, so you may want to refer to "Changing Your View of the Studio." on page 112 before moving on.

If you're starting the tutorial at this point you'll need a file containing a posed figure with a surface material. On the Poser 3, open the file **Tutorial: Render: RCLOWN.PZ3**.



LESSON 1: RENDERING AN IMAGE.

When you render an image, the view in the Document window is converted into a 2D image which can be edited in other Image Editing applications.

To set up a rendering view:

1. Make sure the Main Camera is the current camera. Choose **Display menu> Camera View> Main Camera**.

2. Drag up and to the left over the Move X and Y tool until the view looks like one shown.

Fig. 105— Move the view in the studio using the Move X and Y tool.



3. Drag down and to the right over the Rotation Trackball until your view looks like the one shown.

Fig. 106— Reposition the view of the scene using the Rotation Trackball.

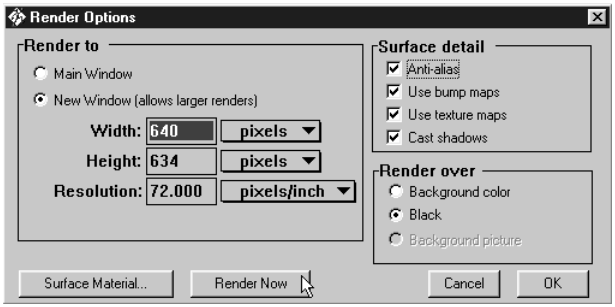


To render an image:

1. Choose **Render menu> Render Options**. The Render Options dialog appears.
2. In the Render To section, click the New Window radio button.
3. Leave the Width and Height values as is.
4. In the Render Over section, click the Black radio button.

5. In the Surface Detail section, enable the Anti-aliasing option.

Fig. 107— The Render Options dialog.



6. Click the Render Now button to start rendering.
7. When the render is complete, expand the Document window so you can see the entire image.

Fig. 108— The final rendered image.



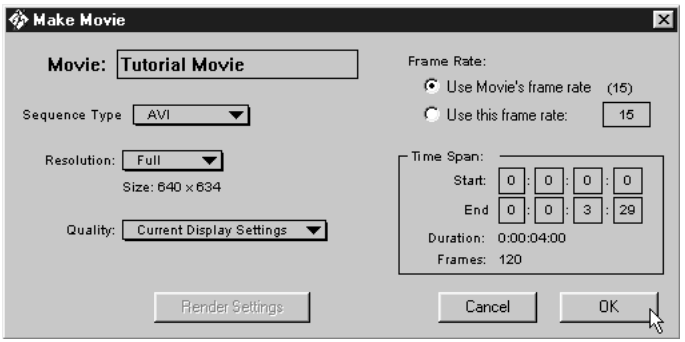
LESSON 2: RENDERING AN ANIMATION.

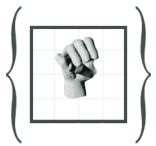
Rendering an animation creates a movie file that can be played by any multimedia application. Animations can be rendered as either a sequence of images or as a movie file in AVI (Win) or QuickTime (Mac) format.

To render an animation:

1. Make sure Full Tracking is enabled. If it's not click the Full Tracking button on the left side of the Document window.
2. Choose **Animation menu> Make Movie**. The Make Movie dialog appears.

Fig. 109— The Make Movie dialog appears.

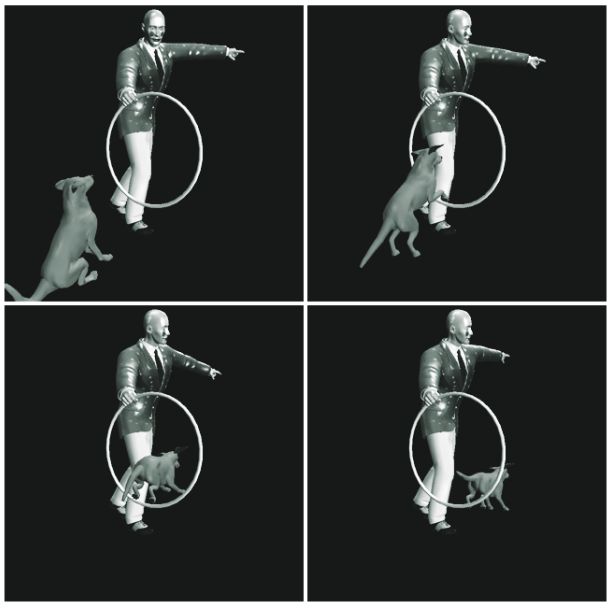




3. Enter Tutorial Movie as the name of the file.
4. Make sure the Sequence Type pop-up displays AVI/ QuickTime.
5. Make sure the Resolution pop-up displays Full.
6. Make sure the Quality pop-up displays Current Display Settings.

7. Leave the frame rate at default and click OK. The Save dialog appears.
8. Choose a save location and click OK. The Video Compression dialog appears.
9. Use the default settings and click OK. Poser starts the rendering.

Fig. 110— The Rendered animation.



MOVING ON.

Now that you've completed the tutorial, you're ready to explore the rest of Poser 3. The techniques you learned in this tutorial are only the beginning. You can use what you've learned to create more complex and interesting poses and animations.

Remember you can always use this tutorial as a reference to quickly review any area of the application you want to brush up on. The remaining chapters of this manual explain in detail all of the major features and functions of Poser 3.

POSING.

HOW POSING WORKS.

Posing is the process of bending, twisting, and pulling the figure into new and fantastic positions.

There are two aspects of a pose: how the body parts twist and bend, and where the body is in the studio. The Editing Tools let you move both a body part and the entire body simply using click and drag.

> *Posing works differently depending on the model you're using. You have more control over the hands and face of the new Poser 3 People models. Poser 2 models have fewer controls.*

Since you're working in three-dimensional space, you can pose your figure in almost any position. The only limits are those placed on an individual body part. Within a model, there are specific range of motion limits placed on the model's parts, to help keep your poses realistic. For example, in the human figure, you can't rotate the head 360°.

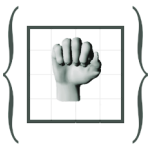
POSING AND CAMERA VIEWS.

With the new Poser 3 figures, you can also pose the hands and faces of your figures. There are two special cameras that automatically zoom into the hands and faces of a model.

When you're posing, it helps to get different views of the figure. Switch camera views to see and adjust the pose from different directions. Use the Posing Camera to view the figure close-up while preserving the position of the Main Camera. Refer to "Cameras." on page 109 for more on the Camera.

POSING AND THE LIBRARY.

As you create poses, you can add them to the Libraries palette. Once in the library, you can retrieve a pose and use it as the starting point for a new pose. Refer to "Loading from the Libraries Palette." on page 14 for more on adding poses to the library.



ABOUT TRANSLATION AND INVERSE KINEMATICS.

Translation moves multiple body parts, pulling them along in a chain.

To visualize this, think of a person lying relaxed. If you were to take hold of the hand and pull up, you'd lift the arm off the floor. Pull higher, and you'd lift the shoulder, then the chest.

This is how the Editing Tools work in Poser. Drag any part, and connected parts follow. Not only do the parts move, but they bend and twist as you would expect.

Fig. 1—Starting here...



Fig. 2—Dragging the hand up...



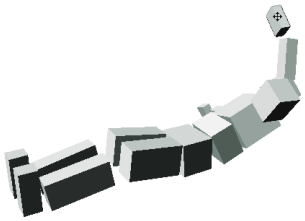
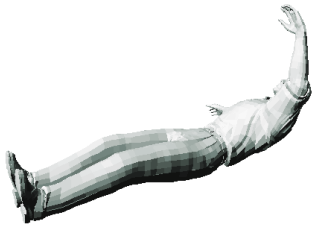


Fig. 3—Continuing to drag, lifting the arm, the shoulder, and starting to lift the body.



INVERSE KINEMATICS.

Poser 3's Inverse Kinematics (IK) features help you achieve realistic poses and natural motion in animations. The term can sound intimidating, but IK is easy to use and understand.

The effects of Inverse Kinematics are most apparent when using the Editing Tools. Translate the hip—the legs bend to accommodate the new hip position without changing the foot position. Translate a foot—the hips and other leg stay fixed in position.

The behavior of the arms under IK is similar. If you place the figure's hands against an imaginary wall, moving the hip toward the wall causes the arms to bend. The arms will bend while the hands remain fixed in position.

If you enable IK on a pose created with IK turned off, the rules of IK can force the pose to change.

Understanding IK.

Kinematics is the study of motion, velocity, rotation, and position. In terms of jointed structures, like an arm or leg, forward kinematics can be used to calculate how actions at the root of the structure determine the position and rotation of those at the end. For example, by raising your arm, the hand at the end of it is automatically translated to a new position and rotation. If you know the angle the arm raises, you can calculate the new position of the hand.

Inverse Kinematics uses the same kind of dependency, but in reverse. The extremity moves, and Inverse Kinematics determines how the objects joined to it (closer to the root) must respond to support the new placement. For example, if

someone was to grab your hand and push, your arm would automatically bend at the elbow, while your shoulder would stay fixed in position.

Poser supports Inverse Kinematics for the legs and arms. When IK is turned on, you can translate the hands and feet and achieve appropriate arm and leg positions automatically.

When IK is turned on for the arms or legs, the hands and feet have targets to indicate the end of the chain. When the hands or feet are moved, the target moves—it is reset to a new position. When you move any other body part, the targets remain fixed and the arms and legs reach for their targets. Once the target is reached, the end of the chain is fixed, and the other parts must bend to accommodate the hand or foot position. For example, a foot reaches its target and the knee bends.]

Fig. 4—Lift the foot and the leg bends naturally.

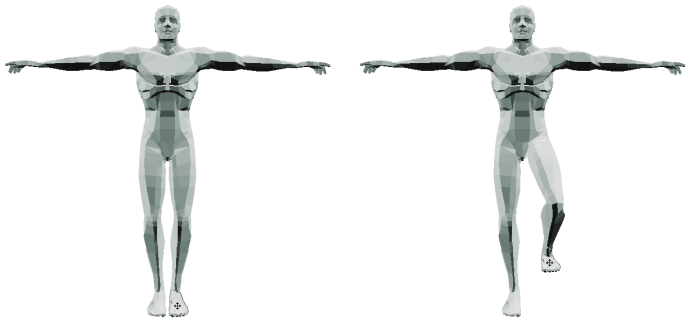
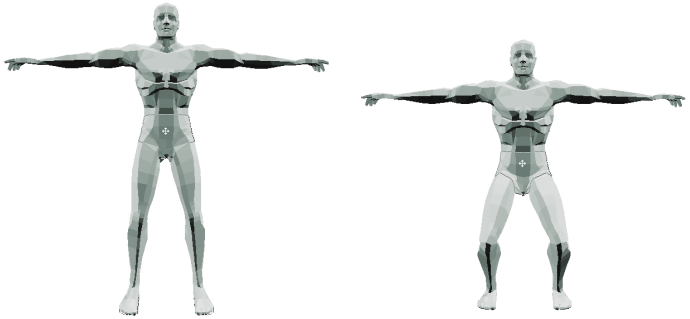
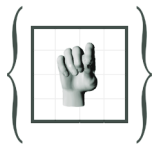


Fig. 5—Translate the hips down and the knees bend.



There are a few things you'll need to know to be effective with Inverse Kinematics:



- Inverse Kinematics applies when using the Editing Tools.
- The Rotate, Translate, and Twist tools might not behave as expected on some body parts. For example, you cannot easily rotate or translate a thigh or shin when Inverse Kinematics is on—the position of the foot takes precedence.

  This corresponds to the natural behavior of your limbs. When you're standing, your feet and legs support your body weight, so you cannot arbitrarily move or rotate them. This consideration applies to using Editing Tools and Parameter Dials.
- You can not use both the Chain Break tool and Inverse Kinematics (IK) on the same limb.

Turning IK On or Off.

Inverse Kinematics can be set for the legs and arms of any figure.

For a new figure, IK is enabled for the legs, but not the arms. For most artists, this setting offers the most useful way to work. You can enable IK for the arms or disable it for either or both legs.

To change the IK setting for the current figure:

- ⌘ Choose **Figure menu> Use Inverse Kinematics>** the limb you want to change. Inverse Kinematics is turned on when the menu item for that limb has a check beside it.

Limiting Motion.

The Use Limits option tries to keep body parts within a natural range of motion. This feature does not apply to parts involved in IK.

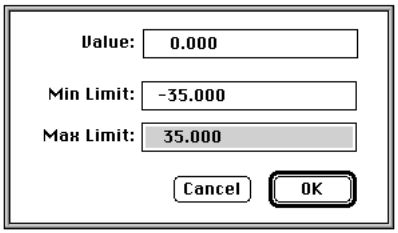
What is considered natural differs among individuals, and what Poser suggests might not look right to you. You need to think of the default limits as a rough guideline. Use Limits becomes more effective when you customize the range of motion by setting the maximum and minimum yourself.

In some cases, Use Limits might prevent you from posing a part where you want it. Keep this in mind when you choose Use Limits.

To turn Use Limits on or off:

- ⌘ Choose **Figure menu> Use Limits**. Use Limits is on when the menu item has a check beside it.

Fig. 6—Set the Min and Max Limits for Use Limits.



To change the range of motion allowed by Use Limits:

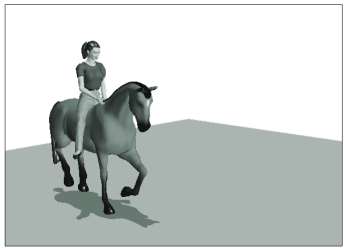
1. Select the body part whose range you want to adjust.
2. Double-click the Parameter Dial for twist, side-side, bend, or turn.
3. In the dialog, change the Max and Min values.
4. When you are done, click OK.

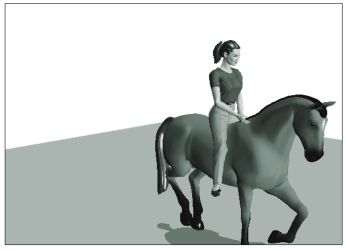
CREATING A FIGURE HIERARCHY.

If you're posing more than one figure, you may want to set up a hierarchical relationship between them.

A *hierarchy* refers the parent-child relationships between figures. For example, if you're posing a woman sitting on a horse, you'll want the female figure to move whenever the horse moves. To accomplish this, you would set the female figure as the child of the horse. This way whenever the horse, or the parent, moves so does the female figure, the child.

Fig. 7—Setup figure hierarchies so that parent and child figure can be posed together.





The child figure can be attached to the entire parent figure or to just a portion of the figure. So, following the example, the female figure can be attached to just the horse's abdomen.

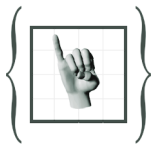
Once the hierarchy is set up, any rotation, translation, or twisting operation you perform on the parent figure, is also applied to the child figure.

To set up a figure hierarchy:

1. Click the Current Figure popup beneath the Document window and choose the figure you want to use as the child.
2. Click the Current Element popup and choose Body to select the entire figure.
3. Choose **Figure menu> Set Figure Parent**. The Set Parent dialog appears.
4. Click the Set Parent Figure popup and choose the figure you want to use as the parent.
5. Click the Sub Element popup and choose the element on the parent figure where you want the child to be attached.
6. Click OK to close the dialog.

POSABLE PARTS.

Like the human body, Poser figures are constructed of body parts, connected by joints. You'll manipulate the separate body parts to pose the figure. Because body parts are independent, each is considered an object, or element. The same hold true for the animal models. No matter how many legs an animal has, each leg is connected by joints which bend and extend.



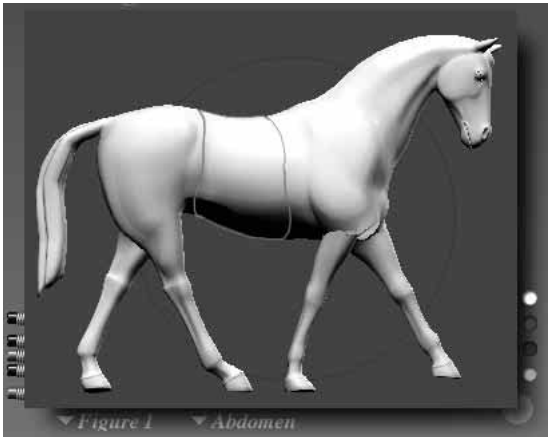
SELECTING PARTS.

You can select a part to pose in one of three ways:

- Click on the part in the studio.
- Use the Current Element pop-up beneath the Document window.

- Click the part's listing in the Hierarchy list in the Animation palette.

Fig. 8—An example of a selected body part.



POSING THE FIGURE.

The easiest way to pose the figure is to choose one of the Editing Tools, click on a body part to select it, and drag the mouse to move the part. How the part moves will depend on which part it is, which tool you're using, and the direction you drag. It will also depend on whether Inverse Kinematics (IK) is enabled. Refer to "About Translation and Inverse Kinematics." on page 69 for more information.

IK is a special posing feature that assists you in achieving realistic poses and natural animated actions more easily.

Remember, only one body part can be selected at a time. This part is highlighted on the figure and listed at the bottom of the Document window. It's a good idea to confirm which part is selected before using a tool.

If you are not satisfied with the result of a change, choose **Edit menu> Undo**.

As well, you can use the Pose Memory dots to store the changes in a pose as you create it. This way you can easily revert to a previous position if you make a mistake.

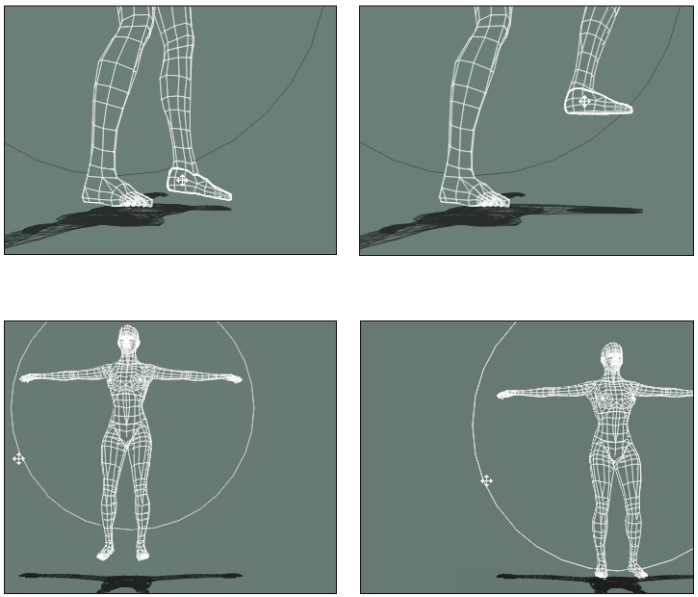
USING EDITING TOOLS.

The Editing Tools let you move body parts a number of different ways. The effect of each Editing Tool depends on whether IK is enabled. Each tool can be used in on of two ways: to pose a body part or to pose the entire figure.

When you want to pose a body part, select a part on the figure and drag. To pose the entire figure, select the Figure Ring that surrounds your figure and drag it. The ring appears highlighted when selected so that you can tell that your editing the whole figure.

While you're using a tool in the Document window, the cursor changes to a representation of the selected tool. This allows you to keep track of how you're moving the figure (i.e., rotating, twisting, etc.)

Fig. 9—Click a body part to move it, or click the Figure Ring to move the entire figure.



ROTATE TOOL.



The Rotate tool bends a body part at the joint. Click the Figure Ring to rotate the entire figure. Rotate is the most important tool for posing. It works in three dimensions, so you can make a lot of progress in only a few moves.

Rotating a Body Part.

The direction you drag determines how the part moves in each of the three dimensions.

- Drag perpendicular to the part to move it side-to-side or up and down.

Fig. 10—Drag perpendicular to the arm to move the arm down to the side.

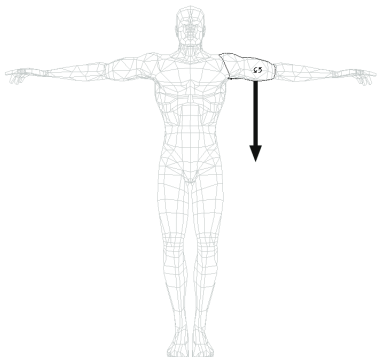
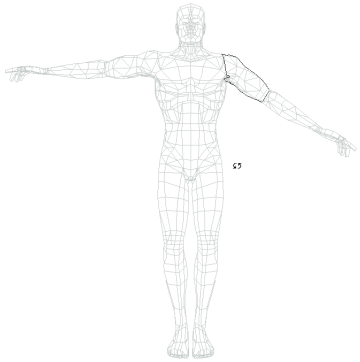




Fig. 11—After moving the arm down towards the side.



- Drag parallel to the part to move it toward or away from you.

Fig. 12—Drag parallel along the arm to move the arm around to the front.

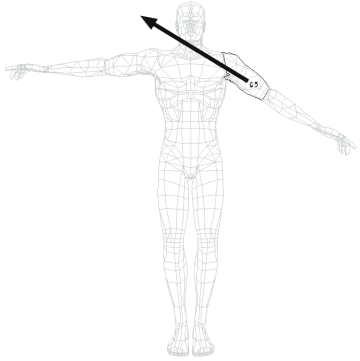
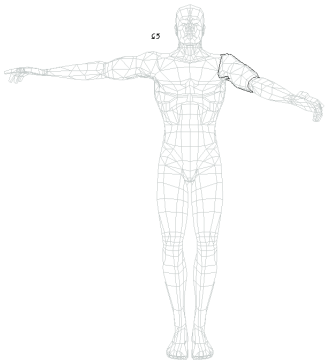
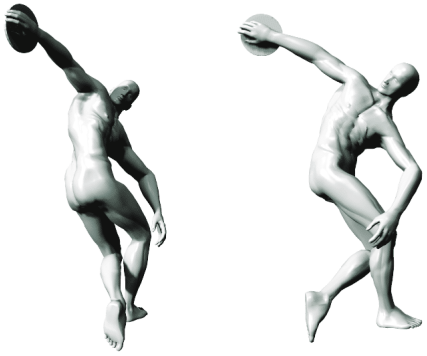


Fig. 13—After the arm is moved around to the front.



Rotating is easiest when looking at the bending part from the side. For example, to pose a discus thrower, it's easier to see the hand against the leg from the side, than from the front.

Fig. 14—Using Front, Left or Right views help you to pose the figure more easily.



For this reason, you'll probably switch cameras several times as you pose different parts of the figure.

Rotating the Entire Figure.

When you click the Figure Ring, the Rotate tool turns the figure in three dimensions.

It takes a little imagination to understand how a two-dimensional mouse rotates a figure in three dimensions. Imagine the figure enclosed in a glass trackball. Now use the mouse to drag the front of the trackball to rotate it in the direction you want to turn the figure. The location on the trackball where you begin dragging makes a huge difference in the direction the figure turns.

Fig. 15—Original position.



Rotation on the X Axis.

Drag down from the center of the window to view from above.

Fig. 16—Drag down to rotate on the x axis.



Rotation on the Y Axis.

Drag left or right from the center of the window to view from the other side.

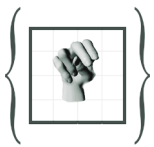
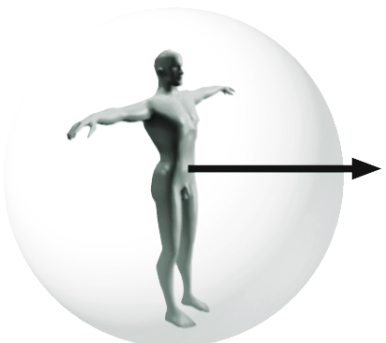


Fig. 17—Drag left or right to rotate on the y axis.



Rotation on the Z Axis.

Drag in a circle from a corner of the window to change which side is up.

Fig. 18—Drag in an arc to rotate on the z axis.



Rotation on Several Axes.

Drag at an angle to compound rotation.

Fig. 19—Drag at an angle to rotate on several axes.



TWIST TOOL.



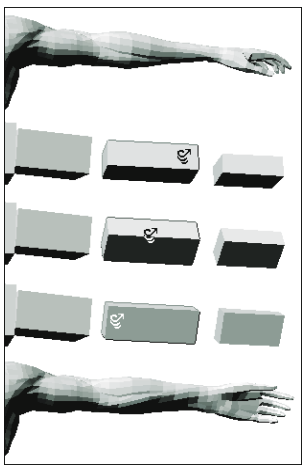
Twist rotates a body part along its own axis. If you click the Figure Ring, the entire figure twists around it own axis.

Twisting a Body Part.

Drag laterally when twisting a specific body part, regardless of the part's angle.

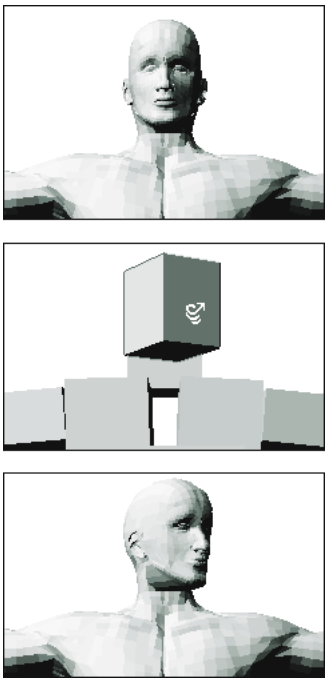
Many of the human body's joints don't allow for much twist. The forearm can twist nearly 180°, but the hand can hardly twist at all. Keep this in mind as you pose the figure.

Fig. 20—Twist the forearm to turn the palm up.



The axis of the head, neck, and trunk is in line with the spine. The axis of a part in an arm or leg is in line with its length.

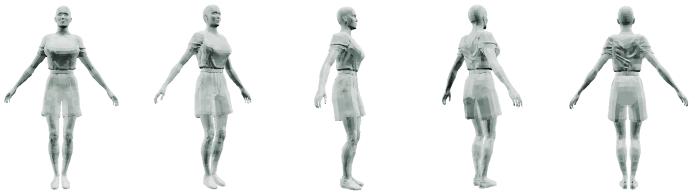
Fig. 21—Twist the head to turn it to the side.



Twisting the Entire Figure.

When you click the Figure Ring, the Twist tool rotates the figure around its own axis. Drag laterally, regardless of which way the figure is leaning.

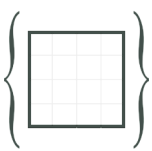
Fig. 22—When the figure is standing, the Twist tool spins it around.



If the figure is lying down, the Twist tool rolls it over, from its stomach to its back.

TRANSLATE/PULL TOOL.





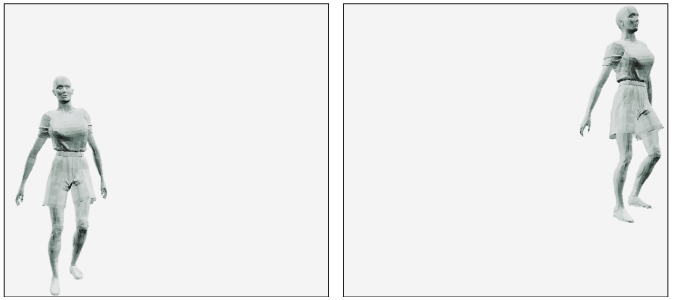
Translate/Pull moves the selected part or figure vertically or laterally (in the x and y dimensions), depending on how you drag.

Using Translate/Pull on the Entire Figure.

When you click the Figure Ring, the Translate/Pull tool moves the figure laterally or vertically (in the x and y dimensions) in relation to the camera.

Drag in the direction you want to move the figure.

Fig. 23—Translating moves the figure around the studio.



If you've rotated the figure to the edge of the window, you might want to move it back to the center. You'd also move a figure if you were working with more than one and wanted to place them relative to one another.

TRANSLATE IN/OUT TOOL.



Translate In/Out tool moves the selected part or figure in the z dimension.

Using Translate In/Out on a Body Part.

When you're translating a body part, drag down to pull the part toward you. Drag up to push the part away.

Hold down the Command/Ctrl key to toggle between the Translate/Pull and Translate In/Out tools.

Using Translate In/Out on the Entire Figure.

When you click the Figure Ring, the Translate In/Out tool moves the figure toward or away from the camera (in the z dimension).

Drag down to move the figure toward you. Drag up to move it away.

Moving the figure toward you makes it appear larger in the window and vice-versa.

Fig. 24—Translate In/Out moves the figure toward or away from the camera.



CHAIN BREAK TOOL.



A chain break, placed on a body part, ends the chain of parts affected by the Translate tools.

This feature is only available for limbs not using Inverse Kinematics. IK and translation with chain breaks cannot be used together.

The translation effect begins with the part you're dragging and progresses through the chain of body parts to the hip. You can break the chain of movement at any point by placing a chain break on a body part.

Poser automatically puts an unremovable chain break on the hips. You can place chain breaks on different parts to modify translation effects. For example, if you don't want to move the chest, put a chain break on it. Now, translating the hand will affect only the forearm, shoulder, and clavicle that you're pulling.

To add a chain break:

- ⌘ Choose the Chain Break tool and click on the part you want broken. Poser displays a Chain Break icon at that point.

To remove a chain break:

- ⌘ Choose the Chain Break tool and click on the chain break you want removed.

  You cannot remove the chain break at the hip.

USING THE PARAMETERS DIALS.

The Parameter Dials lets you pose your figure using precise numerical increments. By dragging on a dial you can move a body part in very small increments, allowing you to create precise poses. There are dials for each of the properties of a selected body part. The number of dials change as you select different parts. The Parameter Dials are displayed, by default, to the right of the Document window.

You can also enter values for the parameters, using the Parameter Dials dial which can be accessed from any Parameter Dial by double-clicking it.

When you select the Figure Ring, the Parameter Dials affect the entire figure.

To use the Parameter Dials:

1. Select the part you want to adjust.
2. Drag the dial for the parameter you want to adjust.

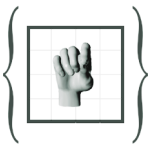
To enter a numeric value for a Parameter Dial:

1. Select the part you want to adjust.
2. Double-click the dial for the parameter you want to adjust.
3. Enter the value you want to use and click OK.

   This dialog also lets you set the Limits of the parameter, and change the name of the dial.

Twist.

Twist rotates a body part along its own axis. Twist the head and neck to turn the head. Used in the chest and abdomen, Twist shows the figure has a supple spine. Twist is also useful in the shoulder and forearm, where it turns the hand palm up.



Bend.

Bend rotates the part on its major axis. All parts—except the shoulder and hand—bend forward and back. The shoulder and hand bend up and down.

Side-to-Side.

Side-to-Side rotates the part perpendicular to its major axis. All the parts on the spine allow some side-to-side motion. The thigh has plenty of side-to-side motion, but the knee has very little.

Turn.

Turn is for the feet only. It rotates them outward or inward. Turning both feet in makes the figure pigeon-toed.

Front-to-Back.

Front-to-Back is for the shoulders and collars. It rotates them forward or back, perpendicular to their major axis.

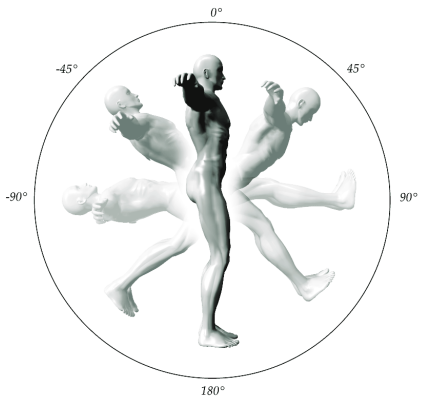
POSING PARAMETERS FOR THE BODY.

If you are working with more than one figure, remember to select the one you want to move before dragging a dial.

xRotate.

xRotate rotates the figure around the x axis (at the figure's hip). Drag the dial to the right to lean the figure toward you.

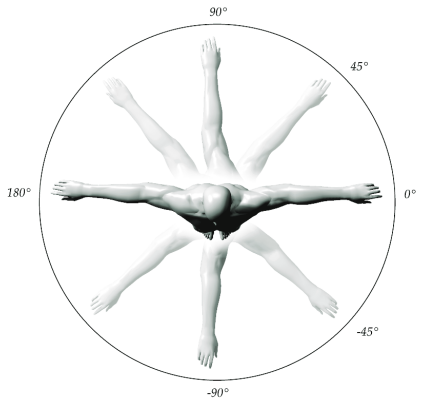
Fig. 25—xrot, side view.



yRotate.

yRotate rotates the figure around the y (vertical) axis. This works like the Twist tool when you twist the entire figure. Drag the dial to the right to rotate the figure counter-clockwise.

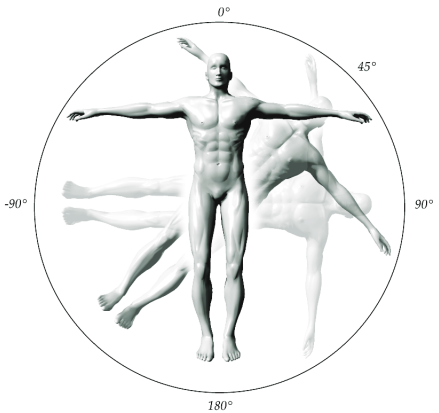
Fig. 26—yrot, top view.



zRotate.

zrot rotates the figure around the z axis. Drag the dial to the right to lean the figure to the right.

Fig. 27—zrot, front view.



xTran.

xtran moves the figure horizontally (in the x dimension). Drag the dial to the right to move the figure in that direction.

yTran.

ytran moves the figure vertically (in the y dimension). Drag the dial to the right to move the figure up in the window.

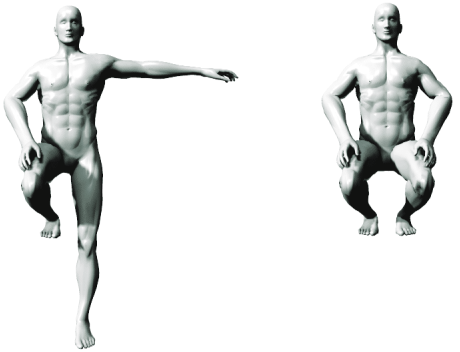
zTran.

ztran moves the figure toward or away from you (in the z dimension). Drag the dial to the right to move the figure toward you.

SYMMETRY.

The Symmetry command allows you to copy pose characteristics from one side of the body to the other. This is a great time saver. Pose one arm or leg, then use symmetry to immediately put the other arm or leg in a matching pose.

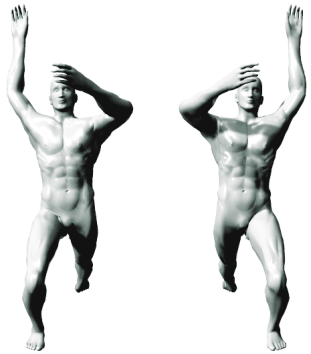
Fig. 28—Before and After Symmetry: Right to Left.





Another form of symmetry swaps the pose characteristics of the right and left. You can swap the arms, legs or both.

Fig. 29—Use Symmetry: Swap Right and Left to mirror the pose.



You can apply symmetry for both the arm and the leg (Left to Right or Right to Left). You can apply it to just the arm or just the leg. Or you can use it to straighten the torso.

To apply symmetry:

- Choose **Figure menu> Symmetry** and select the operation you want.

DROP TO FLOOR.

Poser lets you put the figure in any position, including mid-air leaps. There's nothing particularly wrong with having your figure in the air. But if a floating figure doesn't correspond to your sense of reality—or match your plans for the image—you can impose gravity on the figure with the Drop to Floor command.

To drop the selected figure to the floor:

- Choose **Figure menu> Drop to Floor**. This moves the body to contact its lowest point with the floor.

To view the floor:

- Choose **Display menu> Guides> Ground Plane**.

ELEMENT OPTIONS.

Poser offers a couple options for manipulating and displaying body parts. You can change their name, make them invisible, and stop them from bending.

To change options for a part:

1. Select the body part you want to work with.
2. Double-click the part in the window or choose **Edit menu> Properties**. The Properties dialog appears.
3. You can rename the part by typing a new name.
4. You can make the part invisible by disabling the Visible checkbox. This is how you'd amputate a part from the body.
5. You can stop this part from bending by disabling the Bend checkbox.

About Bending.

All of the body parts are separate elements, or objects. As you change their positions, Poser 3 tries to maintain the continuity of the body as a whole. The arm should connect to the body smoothly, and so on for every transition between parts.

Poser 3 achieves the smooth transitions in any pose by bending the body parts where they join.

However, the bending information for the human body might not work well for a body part replaced with a prop. You can disable bending for the body part replaced by the prop. For more information on bend, refer to "Replacing a Body Part with a Prop." on page 107.

When rendering an image created with Bend disabled, parts might appear disjointed. This might be useful for special effects, for example creating a robotic form.

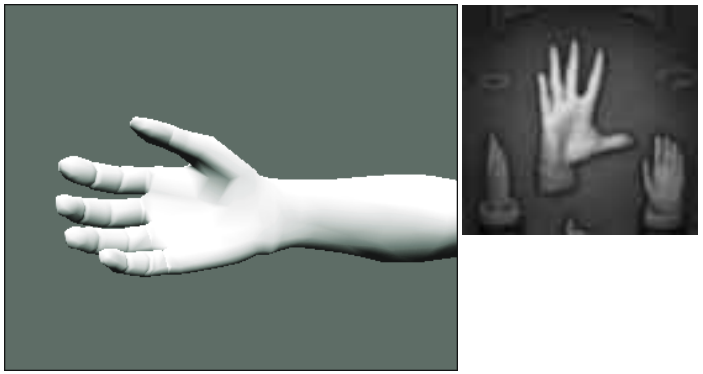
POSING HANDS.

Now that Poser's People figures are so detailed, you can pose a figure's hands just as you would any other body part. The hands on a figure are fully articulated, meaning that you can move a finger and its knuckle joints will bend naturally.

> *Only the People sub-category of figures have posable hands. Hands in all other models can be posed using the preset Hand positions in the Libraries palette.*

The new Left or Right Hand Cameras use the figure's hand as it center of rotation, so you can view a hand from any angle, making it easier to create precise poses.

Fig. 30—Use the Hand Cam to changes the view so that you can see the figure's hand more easily.



You can use the same Editing Tools you use on the rest of the body to pose a hand. The fingers are body parts just like an arm or leg. Once they're selected, fingers can rotated, twisted or positioned just like any other body part.



Locking Hand Parts.

After you've finished posing use the Lock Hand Parts option to protect the pose of the hand when you're working on the rest of the figure. The Lock Hand Parts option locks the hand in place. None of the finger parts can be selected or repositioned.

To lock an articulated hand pose:

1. Click the hand you want to lock.
2. Choose **Figure menu> Lock Hand Parts**.

   This command is only available if you're using a figure from the People category.

USING PARAMETER DIALS.

When you select the main potion of a hand, labeled Left/Right Hand in the Current Elements menu, a special set of hand Parameter Dials appear. These dials let you quickly refine your hand pose.

Grasp.

This dial lets you control the severity of the clench of the hand. The higher the value, the more closed the hand appears. Higher values can create a fist.

Thumb.

This dial lets you control the position of the upper thumb. Higher values move the thumb in, towards the rest of the hand, an lower values move it away from the hand. The rest of the thumb (i.e. the tip and middle of the thumb) can be positioned separately by selecting them.

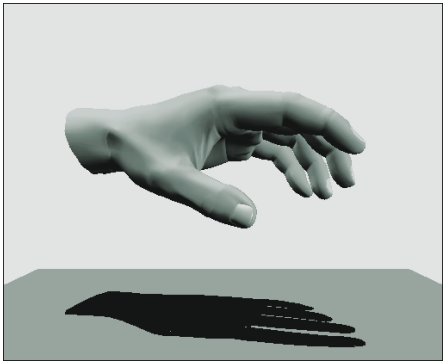
Spread.

The Spread dial controls the amount of space between the fingers. Higher values spread the hand out, while lower values push the fingers together.

USING THE HAND MODEL.

The Left and Right Hand models are designed specifically for posing hands. These models appears as disembodied hands floating in 3D space.

Fig. 31—The Hand model in the Document window.



The Hand models are ideal for creating a library of hand poses you can re-use on other figures. When you save a posed Hand model to the library, only the hand appears in the preview.

To access the Hand models:

1. Display the Libraries palette, by clicking its handle on the right side of the screen.
2. Select the Figures category.
3. Click the pop-up and choose the Additional Figures sub-category.
4. Double-click either the Left or Right Hand model.

USING PRESET HANDS.

After you're done posing a hand, you can save it as a preset hand pose in the Libraries palette. Hand poses are saved the same way a figure pose is saved. You can also use preset hand poses from the library to quickly pose a hand.

There are two categories of hand presets: Basic Hands and Poser 2 Fig Hands. You can only apply Basic Hands presets to the new People category of figures which have articulated hands. Poser 2 Fig Hands can only be applied to Poser 2 figures.

To use a hand pose:

1. Click the figure to select it.
2. Display the Libraries palette, by clicking its handle on the right side of the screen.
3. Click the Hands category button. If the button is not visible, move the cursor over the category dots at the top of the palette until the Hands icon appears.
4. Double-click the preview of the pose you want to use. A dialog appears asking whether you want to apply the hand to the left or right hand.
5. Click either Left Hand or Right Hand button and click OK.

POSING FACES.

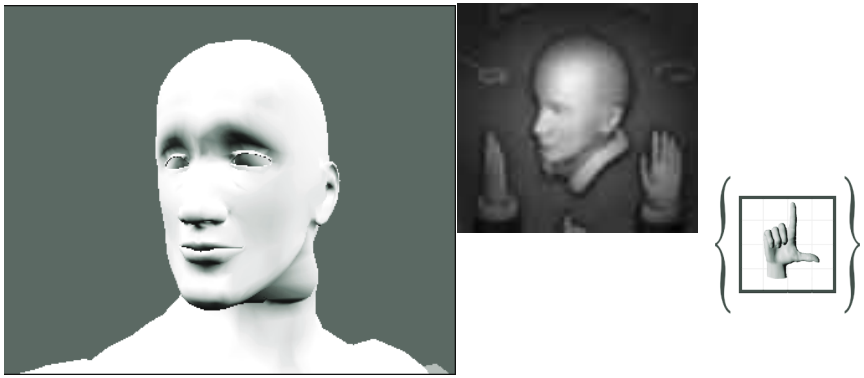
Poser figures have fully articulated faces, meaning that you can position facial muscles, like mouth, eyebrows, cheeks and eyes to create different facial expressions. You pose the figure's face using the Parameter Dials.

Only the People sub-category of figures have posable faces.

When you select the head a special series of Parameter Dials appear specifically for the face. Each dial controls a different aspect of the face. You can think of the dials as controlling the muscles in the face. An expression is made up of different muscle movements, so you'll need to adjust several parameters to create an expression.

A special camera called the Face Camera, which uses the figure's face as its center of rotation, lets you view the face from any angle. The Face Camera can make selecting face parts easier.

Fig. 32—Use the Face Camera to view the figure's face for posing.



USING THE PARAMETER DIALS.

The normal range of the facial Parameter Dials is from 0 to 1. This range represents the normal range of motion of the face and produce realistic expressions. Values above 1 produce an exaggerated pose, like a wide gapping mouth. Values below 0 (i.e. negative values) produce the opposite effect of the parameter. For example. a negative Frown value produces a slight smile.

Mouth Parameters.

This set of dials controls the mouth and tongue of the figure's face. Together the dials control most of the muscles in the lower face.

OpenLips.

Controls the distance between lips. Positive values spread the lips. Negative values move them closer together.

Smile.

Positive smile values raise the corners of the mouth and close the eyes slightly. Negative value produce the opposite effect.

Frown.

Positive values drop the corners of the mouth. Negative values produce a slight smile.

Mouth O.

When the Mouth O dial is set to 1, the lips are in the position they would need to be to produce the O sound. Positive values pucker the lips. Negative values stretch out the lips.

Mouth F.

When the Mouth F dial is set to 1, the lips are in the position they would need to be to produce the F sound. Using positive values, the lower lips tucks up under the upper teeth. With negative values, the lower lip juts out.

Mouth M.

When the Mouth M dial is set to 1, the lips are in the position they would need to be to produce the M sound. A positive value presses the lips together. A negative value spreads out the lips.

Tongue T.

When the Tongue T dial is set to 1, the tongue and mouth are in the position they would need to be to produce the T sound. Positive values press the teeth together and moves the lower lip down, opening the mouth. Negative values close the mouth and pull the lips together.

Tongue L.

When the Tongue L dial is set to 1, the tongue and mouth are in the position they would need to be to produce the L sound. Using positive values, the mouth opens and the tip of the tongue tucks in behind the front teeth. A negative value closes the lips.

Eyebrow Parameters.

This set of Parameter Dials control the position of the eyebrows and eyelids. The Eyebrow parameters control most of the muscles in the upper half of the face.

Left/Right Brow Down.

Positive values lower the brow down in a straight line. Negative values curves the brow up.

Left/Right Brow Up.

Positive values lift the inner brow (i.e. the part of the brow closest to the nose) up. Negative values lower the inner brow producing an angry look.

Left/Right Worry.

Positive values move the inner brow up and the outer brow down. Negative values have the opposite effect.

Blink.

When the Blink dial is set to 1, the eye is completely closed. At 0 the eye is completely open. Negative values produce extremely open eyes, like a horrified look.

POSING EYES.

The eyes within a face can be posed just like any other body part. They can be selected using the Editing Tools and they can be positioned using the Parameter Dials. Eyes also appear on the Current Elements popup menu.

FACES AND PHONEMES.

By posing the face, you can create the appearance of the phonemes associated with speech, which can create realistic facial animations. A *phoneme*, is a linguistic term for the position of the teeth and tongue as they makes sounds. To produce certain letter sounds, the mouth and tongue must be in specific positions. For example, to the produce the letter A sound, the mouth is open, and the tongue is behind the lower teeth.

Fig. 33—A series of examples of Phonemes.



A series of phonemes strung together, produce speech. By posing the face to represent different phonemes, you can simulate speech. This is very useful when you attach sound to figure. By setting up different animation frames with different phonemes you can synch up the face to the sound.

There are several preset phonemes included in the Faces: Phonemes category on the Libraries palette. You can use these presets to help you get started. Refer to "Loading from the Libraries Palette." on page 14 for more on retrieving phonemes from the Libraries palette.

USING PRESET FACES.

Like hands, you can save face poses into the Libraries palette. Once saved, a face can be easily applied to any number of figures. Refer to "Saving to the Libraries Palette." on page 15 for more information.

POSING ANIMALS.

Animal models can be posed using the same techniques you'd use to pose a human figure. The animal models have their own set of IK settings, Bend zones, and Limits, so not all the parts will act as you might expect. For example, moving the hip joint on the Horse model towards the ground does not make the animal sit, as it does in the human figure.

All the same Editing Tools and Parameter Dials you use on figures work on the animal models as well. The only real difference is that you have more body parts to work with. The Current Figure menu, at the bottom-left of the Document window, lists all the parts that make up the animal.

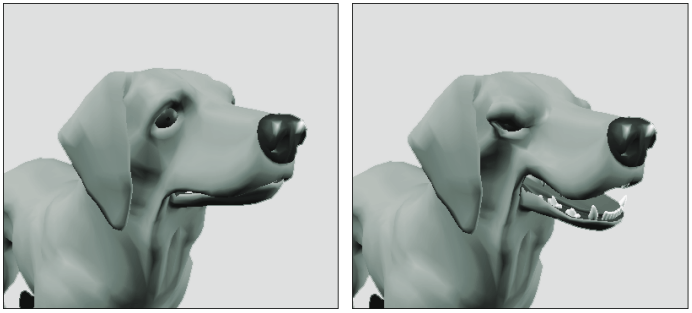
Fig. 34—An example of posing a dog figure.



POSING ANIMAL HEADS.

Several of the animal models have a number of posable parts in their heads. For example, the dog model has a posable mouth and ears. Like human figures, you use the Parameter Dials to pose the features on an animal model's head.

Fig. 35—An example of posing the dog's eyes and mouth.



When you click the head of an animal model, a series of special Parameter Dials appear that control all the posable parts of the head. Each model has different parts. To find out which parts are posable, click on the head.

SAVING POSES.

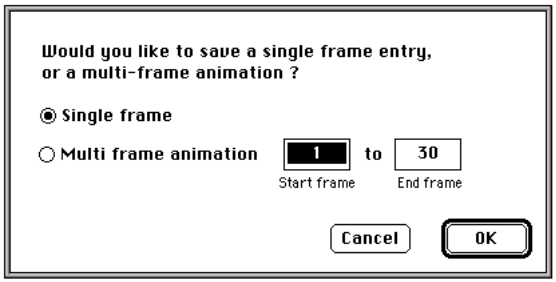
The Libraries palette lets you save poses and animations. Your saved poses are readily accessible so you can apply them to the current figure at any time.

In some cases, you'll save poses temporarily—for a few minutes. In other cases, you'll save poses indefinitely—you'll use them on other projects.

SAVING POSES TO THE LIBRARIES PALETTE.

When you add a pose to the Libraries palette, Poser asks whether you want to save a Single frame or a multi-frame animation.

Fig. 36—You can save a still or the entire animation.



- If you select the Single frame option, the current pose is saved.
- If you select the Multi-frame animation option, you can select a range of frames to save.

To save a pose to the Libraries palette:

1. Display the Libraries palette, by clicking its handle on the right side of the screen.
2. Click the Poses category button. If the button is not visible, move the cursor over the category dots at the top of the palette until the Poses icon appears.
3. Click the Add to Library (+) icon.
4. Choose either Single frame or Multi-frame animation from the dialog and click OK.

   A rendering of the pose appears in the Libraries palette.

USING THE POSE MEMORY DOTS

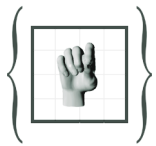
The Memory Dots are the quickest way of storing the position of the figure during a session. You can save up nine different poses. Memory dots are saved with the file, so your figure positions will be available the next time you open the file.

To save a figure position to a memory dot:

1. Setup a figure pose.
2. Click the popup menu above the memory dots and choose Pose Dots.
3. Click an empty memory dot. The figure position is stored into the dot you clicked.

To recall a stored position:

⌘ Click on a memory dot. The figre moves to the stored pose.



USING POSES FROM THE LIBRARIES PALETTE.

When you use a single frame pose from the Libraries palette, Poser applies it to the current frame.

When you use an animation from the library, Poser applies it to a series of frames, beginning with the current frame, and extends the full length of the applied multi-frame pose. Make sure you have enough frames ahead to accommodate the multi-frame pose. Otherwise, Poser will automatically extend the length of the animation to accommodate the poses.

To load poses from the Libraries palette:

1. Display the Libraries palette, by clicking its handle on the right side of the screen.

2. Click the Poses category button. If the button is not visible, move the cursor over the category dots at the top of the palette until the Poses icon appears.
3. Click the sub-category pop-up and choose the type of pose set you want to apply.

   Use the Animation Sets sub-category if you want to apply an animated pose to your figure.
4. Double-click the preview of the pose you want to use.

BODY SHAPING.

SHAPING YOUR FIGURES.

Human bodies come in all shapes and sizes. Starting with any of the Poser models, you can adjust its proportions to create a body of any description, from lifelike to absurd.

Fig. 1—Poser lets you shape the body any way you like.

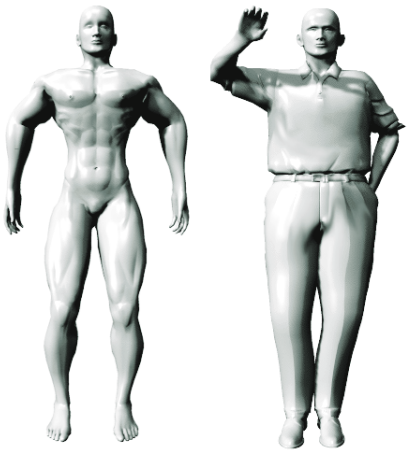
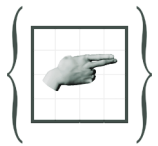


Fig. 2—You can create exaggerated body types.





Bodies exist in three dimensions: width, height, and depth. You shape the Poser model by changing the scale of the body, or its parts, in one, two, or all three dimensions.

Scaling all three dimensions equally maintains the proportions of the body. The figure looks the same, it's just bigger or smaller. By scaling in just one or two dimensions, you can change the actual shape of the body. For example, by increasing the height scale, you can make the figure taller. Or by increasing just the width and depth, you could make the figure stout—even rotund.

Working this way, with the body and each of its parts, a myriad of body shapes is possible.

You can taper parts of the body so they make smooth transitions.

As far as Poser is concerned, the body's shape is independent of its pose—a stout man can sit in the Lotus position just as well as a slim woman. In life, however, our bodies don't share the same degree of flexibility. You might keep this in mind when creating poses for an extreme body shape.

Poser also lets you customize the model by replacing body parts with props you've imported into your scene. In this case, the prop actually becomes part of the figure. You can also simply attach a prop to a figure—to give the figure a sword to hold or a pair of wings. These features are discussed in "Working with Props." on page 104.

As you create new bodies, save them to the Figures category in the Poser 3 library. You'll find the library is the easiest way to stockpile and retrieve body shapes. Entries into the Figures category contain specific figure and resolution information. To change this, call up the custom body first, then change the figure type and resolution afterward.

You can animate scaling a body or body part. For example you can make a small, thin figure grow larger and wider.

If you're thinking of scaling to create a sense of perspective, wait. An image conveys a strong sense of perspective when foreground elements appear large and distant elements appear small. This effect is properly achieved through adjusting the focal length of the camera. You can adjust Poser's camera lens to control the effect of foreshortening on the human figure.

You might want to render body parts without a body, or bodies without one or more body parts. To make a body part invisible, simply select the part and choose **Edit menu> Properties**. Deselect the Visible checkbox and click OK.

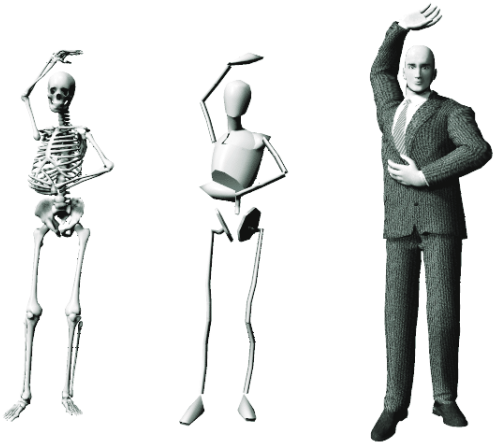
GENERAL CHARACTERISTICS.

FIGURE TYPE.

Poser offers several figures to work with. You can choose a male or female model—nude, in business attire, in casual clothes, or as a skeleton. You can also use a child—clothed or nude, and the traditional artist's mannequin, stick figure and animal figures.

Models in Poser 3 are divided into different categories. The major difference between these categories is that there are now Poser 2 models and Poser 3 models.

Fig. 3—Examples of the skeleton, stick figure and Poser 2 models.

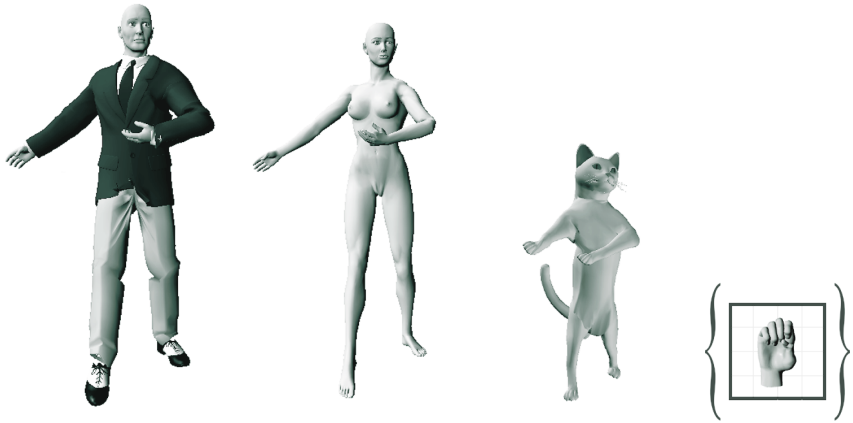


Models in the Poser 2.0 figure categories are available in high resolution and low resolution versions. The low resolution models take less memory and will load and display more quickly.

The high resolution models offer better detail. High resolution models have the word “Hi” in their titles and low resolution models have “Lo”.

Models in the Poser 3 “People” category are more detailed and have fully articulated hands and faces. As well, Poser 3’s Animals category contains, fully articulated animal models.

Fig. 4—Examples of the People models and animal figures.



You can use Poser 2 and Poser 3 models together to improve the way you work. The lower resolution models can be used while you’re posing and then replaced by the more detailed Poser 3 People models. This way, you can improve response time so you can pose more quickly, and then, when you’re ready to render, make the movie, or export the model, you can to switch to the high resolution models.

To change the figure type:

1. Display the Libraries palette.
2. Click the Figures category button. If the button is not available, move the cursor over the dots at the top the palette until the Figures icon appear, then click the mouse button.
3. Click the sub-category popup menu and choose the sub-category of figures you want to use.
4. Double-click the preview of the figure you want to use.

   A dialog appears asking if you want to replace the current figure with selected figure.
5. Click OK to change the figure type.

Genitals.

The male nude model is anatomically correct. You can turn display of his genitals on and off by choosing **Figure menu> Genitalia**.

FIGURE HEIGHT.

Poser provides several figure heights as starting points. You can modify any of these toward the body shape you want.

To set figure height:

Choose **Figure menu> Figure Height** and select the height you want.

SHAPING BODY PARTS INDIVIDUALLY.

Shaping individual parts can significantly change the appearance of the body. Enlarge the abdomen to give the model a big belly. Stretch the head wider to give the model a broad face.

Fig. 5—Fig- An example of shaping an individual body part.



Shaping is easiest when the figure is in the default pose—with arms out, facing the camera. In this pose, you can clearly see the proportions of the separate elements and the effects of your changes. After shaping the body in the default pose, save the body to the library or simply go ahead and pose the figure.

The easiest way to shape a part is to choose the Scale or Taper tool, click on the element you wish to adjust, and simply drag it. For more precise control of the scale in each dimension, use the Parameter Dials.

USING THE SHAPING TOOLS.

Scale.



Drag in (toward the selected element) to reduce the scale. Drag out (away from the element) to increase the scale.

- You will scale the three dimensions to varying degrees, depending on how you drag. Drag laterally to scale width and depth (x and z). Drag vertically to scale height (y dimension).
- To keep scaling uniform (proportional in all three dimensions), hold down the Shift key as you drag.

Taper.



Taper adjusts the scale of one end of an element only—the other end does not change. Taper affects the end of the element that is distant from the center of the body.

Drag to the right to increase the taper. Increasing the taper shrinks the end of the element farther from the center of the body. Drag to the left to decrease the taper. This “flares” the end of the element.

USING THE PARAMETER DIALS.

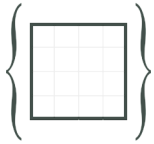
When you click a body part, the Parameter Dials change to display the appropriate scaling controls.

Taper.

Taper adjusts the scale of one end of an element only—the other end does not change. Drag to the right to increase taper. The end of the element farther from the center of the body shrinks. Drag to the left to decrease the taper. The end of the element farther from the center of the body swells.

Scale.

Scale adjusts all three dimensions proportionally. Drag the dial to the right to increase the scale.



xScale.

xScale adjusts the width scale (x dimension). Drag the dial to the right to increase the scale in this dimension.

yScale.

yScale adjusts the height scale (y dimension). Drag the dial to the right to increase the scale in this dimension.

zScale.

zScale adjusts the depth scale (z dimension). Drag the dial to the right to increase the scale in this dimension.

Breast Size.

The chest of the female models offers a Parameter Dial for changing her breast size. Drag the dial to the left to decrease breast size.

SYMMETRY.

Symmetry copies the shape and pose of one limb to the other. This will save you a lot of time and effort. Shape one arm or leg, then use Symmetry to give the other side the exact same proportions.

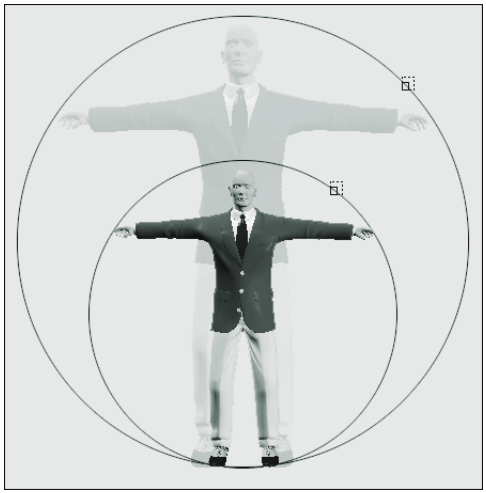
To apply Symmetry:

- ⌘ Choose **Figure menu> Symmetry** and select the type of symmetry you want.

SCALING THE BODY AS A WHOLE.

Scaling the body simply changes its size. The easiest way to scale the figure is to select the Figure Ring, select the Scale tool, and drag in the Document window. If you have more than one figure, select the figure you wish to scale.

Fig. 6— An example of scaling the entire body using the Figure Ring.



SCALING THE BODY USING THE SCALING TOOLS.

Scale.



Drag the Scale tool toward the figure to reduce its scale. Drag away from the figure to increase its scale.

- You will scale the three dimensions to varying degrees, depending on how you drag. Drag laterally to scale width and depth (x and z). Drag vertically to scale height (y dimension).

- To keep scaling uniform (proportional in all three dimensions), hold down the Shift key as you drag.

If the result is not what you expected, choose **Edit menu> Undo**.

For more precise control of the scale in each dimension, use the Parameter Dials.

Body Size—Uniform Scaling.

If you are posing a single figure, uniform scaling of the body is not necessary. If you have a single figure and want it larger or smaller in the window, scale the camera. If you're using the Main Camera, you could also Translate In/Out the camera closer to or away from the figure.

The size of a figure is significant only in relation to the size of another figure alongside it or other objects in the scene.

- If you want one figure smaller to show that it is in the distance, simply use the Translate In/Out tool to move it back. If you are scaling down a figure to make it appear to be in the distance, you'll probably want to display the Horizon Line guide.
- If you want the figure a certain size in the final rendering, set the Rendering Options to render at a specific resolution.

SCALING USING THE PARAMETER DIALS.

The Parameter Dials for body scaling are particularly useful. The values show the scale in that dimension as a percentage. The normal scale of a Poser model is 100%.

Scale.

Scale adjusts all three dimensions proportionally. Drag the dial to the right to increase the scale.

xScale.

xScale adjusts the figure's width (x dimension).

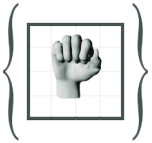
yScale.

yScale adjusts the figure's height (y dimension).

zScale.

zScale adjusts the figure's depth (z dimension).

FIGURE PROPERTIES.



Poser offers a couple options for figures. You can change the name and make it invisible.

To change options for a figure:

1. Click the Figure menu under the Document window and choose the figure you want to work with.
2. Click the Current Element popup beneath the Document window and select Body.
3. Choose **Edit menu> Properties.** The Properties dialog appears.
   - You can rename the figure by typing a new name. Giving your figures descriptive names will make them easier to locate in the Current Element pop-up and in the Animation palette.

- You can make the figure invisible by disabling the Visible checkbox. Visibility is global to the file. In an animation, you cannot make a part visible in one frame, but hidden in another.

SAVING FIGURES TO THE LIBRARY.

After you've shaped the body to your liking, you'll want to save the body to the Figures category in the Libraries palette. Your character will be easy to retrieve the next time you want it.

If you have modified the figure by replacing a part with a prop or by attaching one or more props, the Figures category maintains these customized geometries. Refer to "Using the Libraries Palette." on page 13 for more on saving figures to the library.

PROPS.

HOW PROPS WORK.

Poser lets you add props to your scenes. Props are three-dimensional objects that your figures can wear or interact with.

Props can be accessories that give the figure more realism or character—perhaps a wig, moustache, sunglasses, cigar, or briefcase. In some cases, the pose itself will depend on the prop—a figure leaning on a cane, tossing a ball, or climbing a ladder.

You can manipulate props as you do other elements. You can change their color, and apply texture and bump maps to them (if they have UV mapping). Props even cast shadows.

Poser's replaceable geometry feature allows you to replace a body part with a prop. The prop actually becomes part of the body and takes on the posing behavior of the part it replaces. This is a great way to create customized characters. For example, you could replace the figure's hand with a metal hook to create a pirate.

You can also attach a prop to a specific body part by setting a prop's "parent." This allows you to pose and animate the figure holding a prop, for example wielding a sword or carrying a briefcase.

Poser provides props in the Props library and allows you to import props in several popular 3D file formats. A catalog of props is displayed in the Libraries palette. You can also create your own props in a 3D modeling program, like Ray Dream Studio.

Fig. 1—Adding props helps add meaning to some poses.





ADDING HAIR.

Hair is a special kind of prop that is automatically attached to the head of the figure. Hair comes in different styles and moves with the figure. Once assigned, the hair on a figure moves as you move the head. Hair is static, meaning the you can't edit it to create your hair styles.

Fig. 2—Examples of male and female figures with different hair styles.



To add hair to a figure:

1. Display the Libraries palette.
2. Click the Hair category icon. If the icon is not visible, move your cursor over the category dots at the top of the palette until the Hair category appears and click the mouse button.
3. Choose a Hair sub-category from the pop-up.
4. Double-click the preview of the hair you want to use.

   You can edit the hair's scale and position using the Parameter Dials.

ADDING AND IMPORTING PROPS.

You can add a prop by either selecting a prop from the Libraries palette, or importing a 3D object created in another application.

USING PROPS FROM THE LIBRARY.

The Libraries palette displays all the props available in Poser 3. You can choose from a number of different types of props, including: a ball, box, cane, cone, cylinder, square, stairs, or torus. You can add any number of basic props to the studio. The only limit is your system's memory.

To apply a basic prop:

1. Display the Libraries palette.
2. Click the Props category icon. If the icon is not visible, move your cursor over the category dots at the top of the palette until the Props category appears and click the mouse button.
3. Double-click the preview of the prop you want to use.

IMPORTING PROPS.

Any 3D object saved in a 3D format supported by Poser 3 can be imported as a prop. This means that you can use a 3D modeling application, Ray Dream Studio, to create an object and then import it into Poser as a prop.

Poser uses a plug-in architecture for file import and export. Using plug-ins you can extend the types of file formats Poser 3 supports. Refer to the Read Me file and consult the MetaCreations Web site for the latest information.

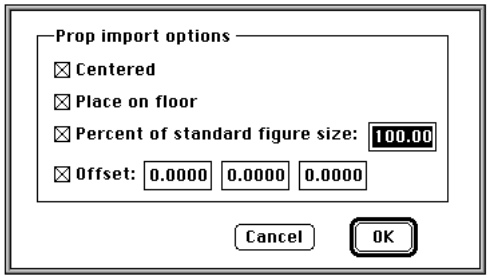
To import a prop:

1. Choose **File menu> Import** and select the 3D file format of the prop you want. The Import dialog appears.

   Poser imports model files in DXF, 3DMF, Wavefront OBJ, 3D Studio (Windows) and Painter3D (Detailer) text format.

2. Locate and open the file you want to use as a prop. The Prop Import Options dialog appears.

Fig. 3—When you import a prop, you can set its scale and location.



3. Enable the desired options:

   Centered centers the prop in the middle of the studio.

   Place on Floor positions the prop on the ground plane.

   Percent of standard figure size set scale of the prop.

   Scale is an important setting. Each 3D program has an independent sense of scale. Like Gulliver traveling to Lilliput, imported props might be disproportionately large or small in the Poser studio. To help offset this, Poser scales the prop in reference to the figure's height. The figure's height is 100%. If you scale a prop to 50%, it will import at 1/2 the size of the figure's height.

   The 3D program where you create your props might offer scaling control for exported models, but you'll probably need to set a scale factor when you import to Poser. Of course, after you add the prop, you can resize it with the Scale tool or Parameter Dials.

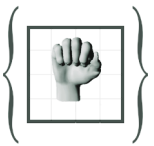
   Offset sets exact the position of the prop in the studio.

4. When you've set the prop import options, click OK.

   Poser places the prop in the studio, with the origin located as you specified.

   The origin, however, might not be where you expect it. Depending on where and how the prop was created and exported, the origin might not be placed where you want it. Refer to "The Prop Origin." on page 104 for more on prop origins.

If you import a prop, but don't see it in the studio, the prop is probably too large and the camera you're looking through is inside or in front of it.



When importing DXF, Poser considers one DXF unit equal to the male figure's height—about six feet. As well, you can't map onto DXF because it doesn't support UV coordinates.

DELETING PROPS

Props can only be deleted from within the Document window.

To delete a prop:

- ⌘ Select the prop from within the Document window, then choose **Edit menu> Delete Prop**.

WORKING WITH PROPS.

MOVING, ROTATING, AND RESIZING A PROP.

Props, including hair, function as elements in the studio, so you can control a prop just as you would any body part.

Before you can edit a prop you need to select it. Props are selected by clicking at the center of the prop. If you have difficulty selecting your prop, use the Current Element pop-up at the bottom-left of the Document window. Once a prop is selected you can move it.

To move, rotate, and resize a prop:

1. Select the prop by clicking on it. Or choose the prop from the Current Element pop-up.
2. Use one of the posing or shaping tools to move or modify the prop.
   - Use the Editing Tools to move the prop in the studio.
   - Use the Scale tool to resize the prop.
   - Use the Rotate tool to change the prop's orientation. Rotate turns the prop on its origin point. You can change how the prop rotates by adjusting its origin.
   - You can also use the Parameter Dials for more control over any adjustment. For example, you can use the dials to scale the prop in one dimension only.
   - The **Figure menu> Drop to Floor** works on the selected prop.

THE PROP ORIGIN.

The prop origin appears in the Document window as 3D cross-hairs. You can hide its display by choosing **Edit menu> Properties** and disabling the Display Origin checkbox. The Origin is used as the prop's center of rotation and scale. When you scale a prop it grows or shrinks from the origin point.

Fig. 4—The prop origin appears as an x, y, z cross-hair.

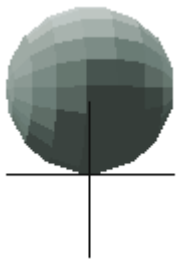
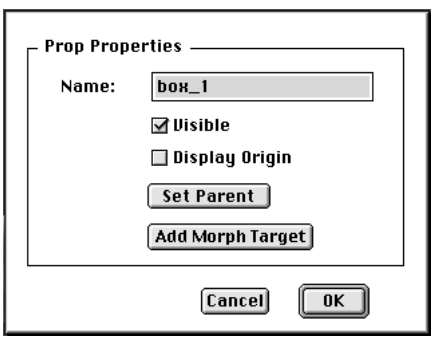


Fig. 5—Toggle the display of the prop origin in the Prop Properties dialog.



Changing the Prop Origin.

When a prop is selected, three Parameter Dials for moving the origin are available—originX, Y and Z.

The main reason for moving the origin is so that the prop will rotate on a different point. When you adjust the originX, originY and originZ dials, you move the origin with respect to its original location.

As you move the origin in the respective dimensions, you might want to switch camera views to see the relative positions of the origin cross-hairs and prop geometry.

PROP PROPERTIES.

Poser offers several options for props. You can change the name, make it invisible, and display the origin or set the prop's parent.

To change options for a prop:

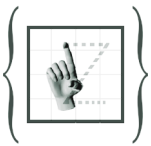
1. Select the prop you want to work with.
2. Double-click the prop in the Document window or choose **Edit menu> Properties**. The Prop Properties dialog appears:
   - Rename the prop by typing a new name. Giving your props descriptive names will make them easier to locate in the Current Element pop-up and in the Animation palette.
   - Set the prop invisible by disabling the Visible checkbox. In an animation, you cannot make a prop visible in one frame, but hidden in another.
   - Set the prop's parent so the figure can be posed or animated with the prop attached to a body part.

Prop Color and Surface Material.

You can set surface material characteristics for your props. For example, you can apply an image of marble as the texture map on a tall cylinder to create a pillar. You might also use a bump map to roughen the surface of a wig.

A prop you import might already have Texture and bump maps assigned. If possible, Poser keeps these maps attached to the prop.

Poser uses implicit (UV) mapping to apply texture and bump maps to the prop. This method requires the model to have UV coordinate data. Most 3D file formats carry this data. DXF, however, does not. If a prop does not have UV information, you can't apply texture or bump maps to it.



You can set the color of prop objects, apply texture and bump maps to them, and control highlights using the Surface Material dialog. The dialog is discussed in detail in "Applying Surface Materials." on page 164.

In the Surface Material dialog, you can select the prop just like you would a body part and assign surface property parameters to it. Refer to "Surface Materials." on page 163 for more on applying surface materials.

SET PROP PARENT.

Poser lets you attach props to body parts. When you pose the body, the attached prop maintains its contact and orientation with the parent prop. Props that have been attached do not bend like props that replace a body part. This makes a lot of sense for some props you might use—like sunglasses, a wristwatch, briefcase or sword.

It is best to set prop parents before posing. Once you start posing the figure, it becomes much harder to get props correctly positioned and keep them where you intended them.

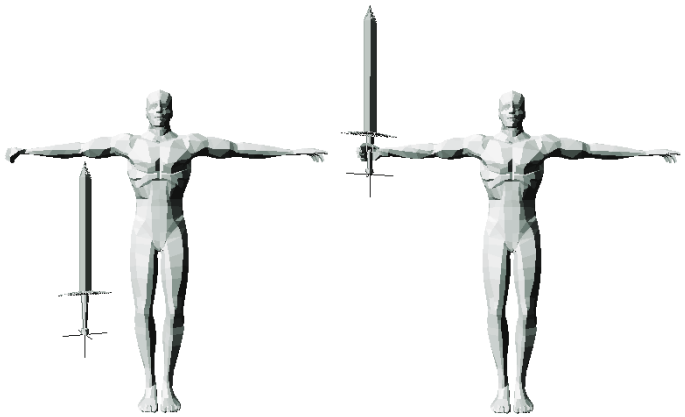
To attach a prop to a body element:

1. Add or import the prop you want to use. Rename it if you like.
2. Adjust the prop scale. If necessary, use the Scale tool or Parameter Dials.
3. Move the prop into position using the Translate/Pull tool or the Parameter Dials.

   Make sure the position and orientation of the prop and body part are exactly as you want them.

   - You might want to use a detailed preview style like Lit Wireframe or Flat Shaded.
   - Zoom in for a closer look. Zoom in with the Posing Camera to avoid changing or animating the Main Camera.
   - Do a test rendering to check the alignment.

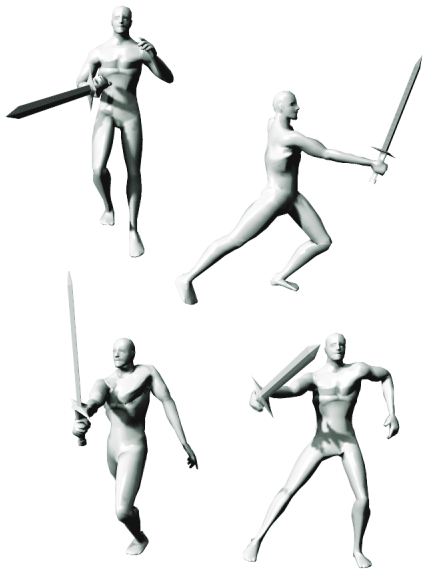
Fig. 6—Move the prop to the figure before setting the parent.



4. With the prop still selected, choose **Edit menu> Properties**. The Prop Properties dialog appears.
5. Click the Set Parent button. The Choose Parent dialog appears.
6. Click the pop-up choose the name of the element you want to attach the prop to. For example if you want to attach a sword to the hand, choose Left Hand from the menu.
7. Click OK to c lose the dialog.

If you want to release the prop from its parent, choose None.

Fig. 7—As the figure moves so does the prop.



REPLACING A BODY PART WITH A PROP.

One special feature allows you to replace a body part with a prop. You can import a model of a bull's head. Then you can replace the figure's head with the bull's—you've created the Minotaur. By replacing the body part, you can move the Minotaur's head as you would move any figure's head.

Fig. 8—Replace a body part with a prop to create custom characters, for example the Minotaur.



If a replaced a body part doesn't look right when you bend it, you can turn off bending for that replaced part. Select the part and choose **Edit menu> Properties** and disable the Bend checkbox in the Element Properties dialog.

Bend zones on the figure are very specific and editing them is a very technical process. Once a Bend zone is altered, the model is irreversibly changed. Use Bend zones with caution.

Its best to replace a body part before you start posing the figure, since it's harder to position a prop after you've moved the figure's body parts.

To replace a body part with a prop:

1. Add or import the prop you want to use.
2. Adjust the prop scale, if necessary.

3. Move the prop into position on the body using the Translate/Pull and Rotate tools, or the Parameter Dials.

   Make sure the positions and orientation of the prop and body are exactly as you want them. In most cases, you'll want to "overlap" the prop with the part it will be replacing.

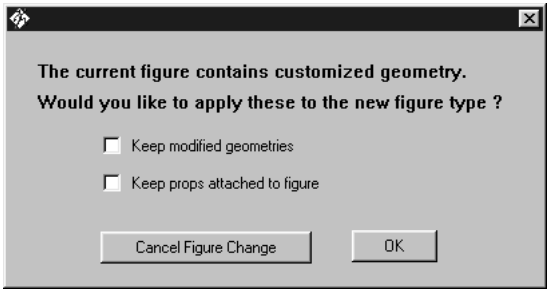
   - You might want to hide the part you are going to replace. This might make it easier to position the prop.
   - You might want to use a detailed display style like Lit Wireframe or Flat Shaded.
   - Zoom in for a closer look.
   - Do a test rendering to check the alignment.
4. Select the body part you are replacing.
5. Choose **Figure menu> Replace Body Part with Prop**. Poser displays a dialog with a pop-up of all props in this scene.
6. Choose the prop you are swapping in, then close the dialog. The prop takes the name of the part it replaces.

In terms of surface material, this prop remains independent of the body. You can use the Surface Material dialog to apply special texture and bump maps to the prop. Refer to "Surface Materials." on page 163 for more on surface materials.

Changing the Figure Type with a Prop Attached or Part Replaced.

If you try to change the model type of a figure that has an attached prop or replaced part, Poser will alert you. You can choose to keep these modifications (on the new figure) or start fresh.

Fig. 9—If you change the type of a customized figure with props, Poser alerts you.



If you want to keep props that replace parts on the figure, enable the checkbox Keep modified geometries.

If you want to keep props "with their parents," enable the checkbox Keep props attached to figure.

Restoring the Figure's Geometry.

You might replace a body part with a prop, then later decide that you want the original body part back. This is an easy change. All you have to do is reload the figure from the Library palette. When you load the original model, Poser displays a dialog asking if you want to Keep modified geometries. To restore, leave the checkbox disabled and click OK.

CAMERAS.

CAMERAS AND VIEWS.

Your view of the virtual Poser studio is taken through the lens of a camera. This camera can be repositioned anywhere in 3D space, allowing you to see the contents of the studio from almost any angle. In Poser 3 there are ten cameras within the studio: the Main, Top, Front, Right, Left, Face, Posing, Left Hand, Right Hand, and Dolly cameras. Each of these cameras has a unique purpose and acts differently. When you render, an image or movie, it is from the viewpoint of the current camera.

The cameras aim at the studio from different directions, so by switching cameras, you can see the studio—and the figures—from an entirely different viewpoint.

Fig. 1—View through the Main Camera.

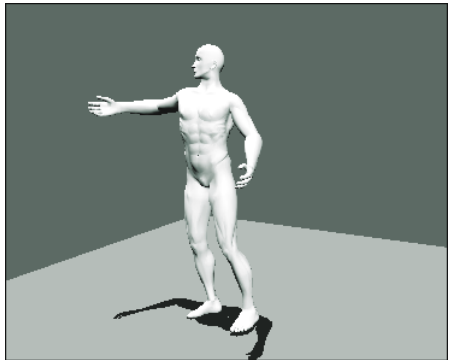




Fig. 2—View through the Posing Camera.

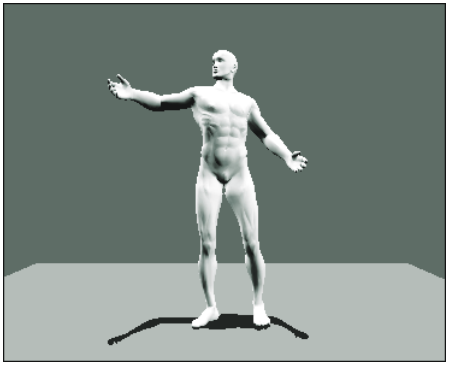
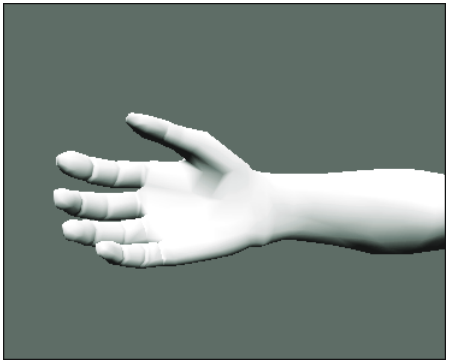




Fig. 3—View through the Right Hand Camera.





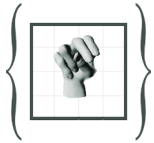
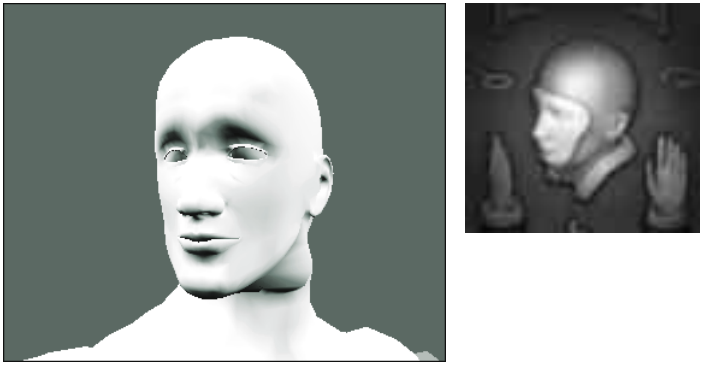


Fig. 4—View through the Face Camera.



Viewing the studio from different angles is a huge help as you work. An arm that reaches straight toward you in a front view reaches horizontally in a side view. Posing this arm might be difficult in the front view, but it will be much easier in the side view.

The Main and Posing Cameras.

The Main and Posing Cameras rotate around the center of the studio. When the figure is in its default position, it will always be in the center of the view as you rotate or re-position these cameras.

The main difference between the two cameras, is that the Posing Camera uses the figure as its center of rotation. This way the figure is always in view. Wherever the figure moves the Posing Camera will follow. The camera always centers on the currently selected figure. If you change figures the camera moves the selected figure.

The Hand and Face Cameras.

The two Hand Cameras and the Face Camera are specifically designed to help you pose the hands and face of a figure. They provide a close-up view of the hands and face of a figure. These cameras move just like the Main and Posing Cameras.

The Face Camera uses the face as its center of rotation, and the Left and Right Hand Cameras use their respective hands as the center of their rotation.

Like the Posing Camera, the Hand and Face Camera rotate around the currently selected figure's body parts. As well, when you're using an animal figure, the Hand Cameras rotate around the animal's paws, hooves, or claws.

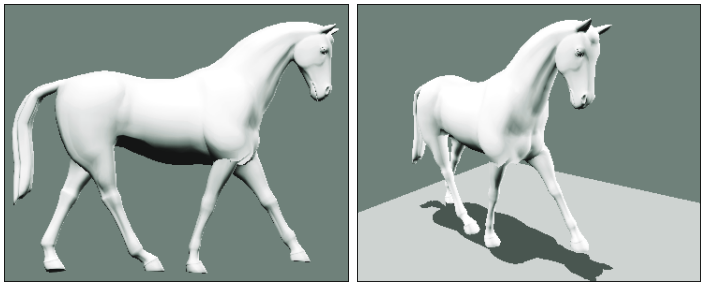
The Dolly Camera.

The Dolly Camera rotates around its own center which means it can move around, and between the figures in the studio. If you want to emulate a motion picture camera, use the Dolly Camera.

The Orthogonal Cameras.

The Left, Right, Top, and Front Cameras are called orthogonal cameras because they produce orthographic projections. In an orthographic projection, all objects appear flat. These camera are different from the perspective views provided by the other cameras. In a perspective view, the scale of objects diminishes as their distance from the camera increases.

Fig. 5—The difference between the orthogonal cameras is that they're flat perspective-free projects, as opposed to the views provided by the studio cameras.



Left (orthogonal) Camera view **Main Camera (perspective)**

The orthogonal cameras cannot be rotated. They are permanently aligned to these orientations in the studio. You can use these cameras for reference and when posing the figures.

FLYAROUND VIEW

The Flyaround view lets you see all the contents of the studio all at once. In this view the camera is placed on an imaginary track above and away from the center of the studio. When the view is active the camera continuously moves along this track so you can get a 360° view of the figures in the studio.

To activate flyaround view:

⌘ Click the Flyaround ring at the top of the Camera controls.

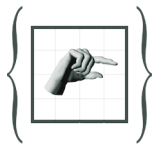


SELECTING A CAMERA.

You can select a camera in any of four ways:

- Using the Camera Selection control in the Camera Controls.
- Use the Current Elements pop-up under the Document window.
- Click the camera item in the Hierarchy List in the Animation palette.
- Choose **Display menu> Camera View>** *and choose a camera*.
- Press the camera's key shortcut:

Command/Ctrl	+	M	=	Main
Command/Ctrl	+	L	=	Left
Command/Ctrl	+	;	=	Right
Command/Ctrl	+	T	=	Top
Command/Ctrl	+	F	=	Front
Command/Ctrl	+	,	=	Figure
Command/Ctrl	+	/	=	Dolly



The Camera Selection Control

The Camera Selection control lets you graphically cycle through all the available cameras in Poser 3. The control can also be used to switch between specific camera and activate the Flyaround view.

Fig. 6—The Camera Selection control.



The Select Camera pop-up above the selection control lets you select a camera by name.

The Animating On/Off icon is used to enable or disable keyframing for a specific camera. When the control is disabled, the position of the camera is not included as a keyframe, which means that you can't animate the view of your figures. When it's enabled, any movement of the camera can be recorded as a keyframe. Refer to "Animating Cameras." on page 158 for more on animating the camera.

To switch to the Face Cam:

- Click the Face Cam icon at the top of the Camera Controls.

To switch to a Hand Cam:

- Click either the Right or Left Hand Camera icons.

To switch between cameras:

- Drag over the Select Camera icon until the icon for the desired camera appears.

Fig. 7—The Camera Selection icon.



To replace the Face or Hand camera icons:

- Option/Alt click on either the Face or Hand Camera icons. The icon is replaced with the currently selected camera.

CHANGING YOUR VIEW OF THE STUDIO.

The Main, Figure, and Dolly Cameras can rotate and move anywhere—even below the floor. The orthogonal views move laterally and vertically, so that you can bring a figure to the center of the field of view. You cannot Rotate or Translate In/Out (move in or out) the Right, Left, Top or Front views. You can scale them, however.

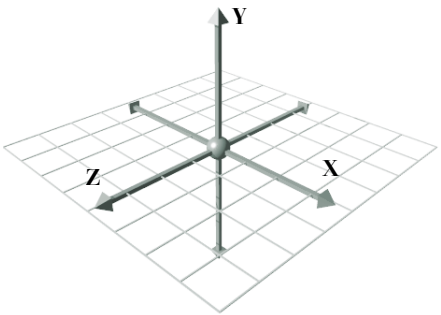
USING THE CAMERA CONTROLS.

The Camera Controls palette provides all the tools you'll need to quickly position a camera within the Poser studio. There are two sets of controls for positioning: the Camera Plane controls and the Rotation Trackball.

The Camera Plane Controls.

The Camera Plane controls constrain the movement of the camera to specific 3D planes. This helps you move the camera more precisely. 3D space is made up of three planes: X, Y, and Z.

Fig. 8—The X, Y, and Z planes that make up 3D space.



The Camera Plane controls constrain the movement of the camera along one or two of these planes.

Y and Z.

Fig. 9—The Y and Z control.



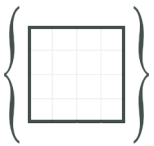
The Y and Z control constrains the movement of the camera to the Y and Z planes. With this control the camera can move backwards, forwards, up or down.

X and Y.

Fig. 10—The X and Y control.



The X and Y control constrains the movement of the camera to the X and Y planes. When you use this control, the camera only moves vertically or horizontally.



X and Z .

Fig. 11—The X and Z control.



The X and Z control constrains the movement of the camera to the X and Z planes. With this control the camera moves forwards, backwards, left or right.

Rotation Trackball.

Fig. 12—The Rotation Trackball.



The Rotation Trackball lets you rotate the camera around the studio. This control moves the camera around a virtual trackball that surrounds the entire studio. In the case of the Main Camera, it rotates around the center of the studio. The Figure, Face, and Hands Camera rotate around the figure, head, and hands.

The Rotation Trackball has no effect on the orthogonal cameras (top, left, right, and front).

You can also rotate your view by holding down Option/Alt and dragging directly in the Document window.

Scale.

Fig. 13—The Scale control.



The Scale control works like a zoom lens control. Drag right over the control to zoom into the center of the studio, or left to zoom out.

Focal Length.

Fig. 14—The Focal Length control.



The Focal Length control increase or decreases the focal length of the selected camera. Drag left to decrease the focal length of the camera.

Decreasing the focal length increases the sense of perspective. The effect is similar to a photographer using a fish-eye lens. Vanishing lines converge more sharply, and elements near the camera appear to "reach" toward you. The result can be dramatic.

Drag right to increase the focal length. This "flattens" the sense of perspective. The distance between objects appears to be less.

Display the vanishing lines guide to see how changing the focal length changes the perspective on the studio.

Roll.

Fig. 15—The Roll control.



The Roll control creates a banking motion in the camera that tilts your view of the studio. Drag right to roll the camera to the right or left to tilt the view to the left.

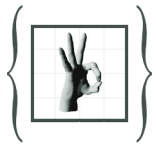
USING THE CAMERA PARAMETER DIALS.

When a camera is selected, the Parameter Dials let you precisely control the camera's position and orientation.

The Dolly, Figure, Face, and Hand Cameras have the standard 3D Pitch, Yaw, and Roll capabilities. The Main Camera has xOrbit, yOrbit, and zOrbit parameters instead.

Focal Length.

Focal Length changes the perspective of the view by adjusting the camera's lens. Drag the dial left to decrease the focal length, which increases the sense of perspective. Drag the dial to the right to increase the focal length and flatten the image.



xOrbit.

xOrbit tilts the camera forward or back. With the camera at a low xOrbit (-30°), the view looks up at the studio center—the camera is near, or beneath, the floor. With the camera at a high xOrbit (45°), the view looks down at the studio center—the camera is up near the rafters.

yOrbit.

yOrbit tips the camera to the left or right. Drag the dial in the direction you want to tip. If you continue to drag, the camera will orbit all the way around and return to the starting point.

zOrbit.

zOrbit orbits the camera around the studio. The camera continues to point at the center of the studio as it orbits.

Yaw.

Yaw rotates the Dolly Camera on its own y axis. The Dolly camera has 180° of yaw pointing away from the studio center.

Pitch.

Pitch tilts the Dolly Camera on its own axis. The camera stays in place, but changes the pointing angle.

Roll.

Roll tips the Dolly Camera to the left or right. Drag the dial in the direction you want to tip. If you continue to drag, the camera will roll all the way around and return to the starting point.

Scale.

Scale adjusts the dimensions of the studio in the window. Scaling the camera is like zooming in and out with a telephoto lens. Drag the dial to the right to zoom in. Drag the dial to the left to zoom out.

Changing the scale in only one dimension distorts the figure's appearance.

xScale.

xScale changes the camera's horizontal scale to distort the appearance of the figure in the window. Drag the dial to the right to increase the xScale. Drag the dial to the left to decrease the xScale.

yScale.

yScale changes the camera's vertical scale to distort the appearance of the figure in the window. Drag the dial to the right to increase the yScale. Drag the dial to the left to decrease the xScale.

zScale.

zScale changes the camera's depth scale to distort the appearance of the figure in the window. Drag the dial to the right to increase the zScale. Drag the dial to the left to decrease the zScale.

DollyX.

DollyX moves the camera laterally. Drag the dial to the right to move the camera to the right.

DollyY.

DollyY moves the camera vertically. Drag the dial to the left to move the camera up.

DollyZ.

DollyZ moves the camera in and out. Drag the dial to the right to move the camera toward the studio. Drag the dial to the left to move away.

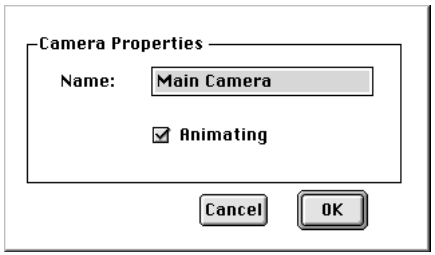
CAMERA OPTIONS.

Poser offers two options for cameras. You can change a camera name and set whether it can be animated.

To set camera options:

1. Select the camera you want to change.
2. Choose **Edit menu> Properties.** The Camera Properties dialog appears.

Fig. 16—Set camera options in the Camera Properties dialog.



3. Enter a new name for the camera.
4. Enable the Animating checkbox to have the camera's movements recorded as keyframes. When this option is disabled, the camera's movements cannot be animated.

A camera that can be animated can have different settings in several frames. If you want the camera to animate—to leave key frames when changes are made—enable the Animating checkbox.

SAVING CAMERA POSITIONS

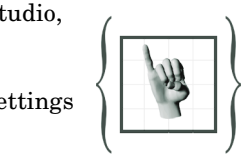
Camera positions can be stored in the library where they will be available for use as presets in any Poser 3 file, or in a memory dot, where it is stored along with the file.

SAVING CAMERA SETS TO THE LIBRARY.

The Camera category in the Libraries palette is a great feature. It lets you save camera positions, then jump to them with just a few mouse clicks.

The default Camera category provides several positions. Add your own custom positions to expand the library.

Remember—camera positions are in reference to the studio, not the figure.



The Camera category in the Poser 3 library saves the settings of all of the cameras at once. You cannot save only one camera.

To save a camera position to the Libraries palette:

1. Setup camera positions.
2. Display the Libraries palette, by clicking the handle on the far right side of the screen.
3. Click the Cameras category icon. If the icon is not available, move the cursor over the category dots at the top of the Libraries palette until the Cameras category appears, then click the mouse button.
4. Click the Add to Library button at the bottom of the palette. The Set Name dialog appears.

5. Enter a new name for the camera setting and click OK. Your camera settings are saved to the Cameras category.

USING THE CAMERA MEMORY DOTS

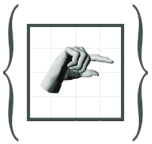
The Memory Dots are the quickest way of storing the position of the camera during a session. You can save up nine different positions. Memory dots are saved with the file, so your camera positions will be available the next time you open the file.

To save a camera position to a memory dot:

1. Setup a camera position.
2. Click the popup menu above the memory dots and choose Camera Dots.
3. Click an empty memory dot. The camera position is stored into the dot you clicked.

To recall a stored position:

⌘ Click on a memory dot. The camera moves to the stored position.



LIGHTS.

HOW LIGHTS WORK.

Poser has three lights in the studio. These lights illuminate your figure in renderings and in Lit Wireframe and Flat Shaded previews. In renderings, lighting adds color to the figure, reveals curvature of the form, and enhances the muscle contours. Lights also cast shadows, which adds realism to your scenes. Good lighting is essential to getting the right look in renderings.

Poser lights are distant lights. They shine into the studio in the same way the sun shines on the Earth. If you have multiple figures, the lights shine equally on each figure. No figure can be outside of a light's range or be lit differently from another.

Each light has two main aspects you'll set—rotation and color. In most cases, the direction of the light will help you decide its color. You can also turn off a light and set whether it casts shadows or not.

You can animate the lighting for a dramatic effect—a flash from a bolt of lightning or the flickering lights of a street sign.

Lighting effects are not visible in basic Wireframe or the low detail figure preview styles. When aiming a light, it helps to use Lit Wireframe or Flat Shaded preview styles. These preview styles demonstrate how the light illuminates the figure.

LIGHT PROPERTIES.

Poser offers several options for lights. You can change a light's name, turn it off, set whether it animates, and whether or not it casts shadows.

To set light options:

⌘ Double-click one of the Light Controls in the top left corner of the Poser Workspace.

You can also select the light from the Element pop-up at the bottom of the Document window or choose **Edit menu> Properties**. The Light Properties dialog appears.

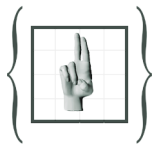
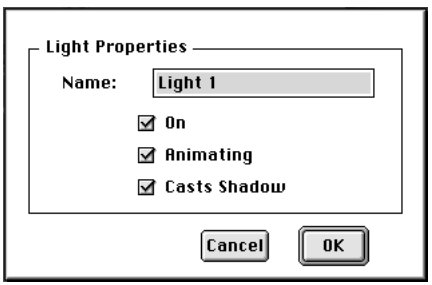


Fig. 1—The Light Properties dialog offers options for controlling lights.



- You can rename the light by typing a new name—for example, Morning Sun.
- You can turn off the light by disabling the On checkbox. You can also turn off a light by Option/Alt-clicking a Light Control.

- You can control whether the light adds key frames to the Animation palette with the Animated checkbox. When this option is off, this light does not create key frames.

  An animated light can have different settings in several frames. If you want the light to animate, enable the Animated checkbox.
- You can control whether this light casts shadows with the Casts Shadow checkbox.

AIMING LIGHTS.

The three lights in Poser's studio always shine into the studio. When you aim a light, you're actually setting the angle *from which* the light shines.

You'll probably want to finish posing the figure before aiming the lights. If you were to set the lights, then re-pose the figure, its appearance under the lights would change. For example, by rotating the figure 180°, the illumination that was shining on the figure's front would be shining on the figure's back. What had been well lit might now be shaded, and you'd have to set the lights again to compensate for moving the figure.

Traditional artists often place the brightest light above the figure and to the left (from the artist's point of view). Strong single-source lighting allows shading to develop on oblique and distant surfaces. This shading contributes significantly to the depth and curvature of the figure.

If you are creating a figure to match a background image, remember to position and color the lights to match the lighting in the studio background.

AIMING BY HAND.

There are two ways of aiming lights interactively in Poser 3: using the Light Controls or using the light indicator in the Document window.

Using the Light Controls.

The three Light Controls, located by default at the top-left of the Workspace, represent the current position and color of the lights in the Poser studio. By dragging over these controls you can quickly reposition a light. The Light Control automatically updates as you drag to show a preview of the new position. The Document window also updates as you drag.

Fig. 2—The Light Controls.



To reposition a light using the Light Controls:

1. Click the Light Control for the light you want to adjust.
2. Drag the control in the direction you want to move the light.

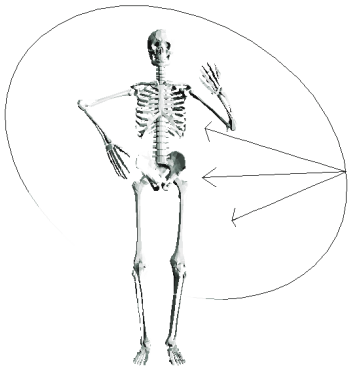
Using the Light Indicator.

When you select a light, Poser displays a light indicator to describe the light's position in the Document window. The indicator appears a ring around the figure.

By looking at this light indicator, you can see the position of the light. In some cases, it helps to view the indicator from a different perspective. Switch the window view to the Top or Left or Right to get a different view of the indicator ellipse.

To understand the light indicator, visualize it as the equatorial stripe of a transparent globe. The light aims toward the center of the globe from a point on the equator, shown by the arrows. When viewed from an oblique angle, the stripe appears as an ellipse, with the near side lit and the far side darkened. Knowing which side of the indicator ellipse is near, and which is far, helps show whether the light is in front of the figure or behind it.

Fig. 3—The light indicator describes the currently selected light.



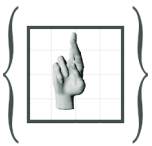
The light is not actually on the edge of the indicator line. If it were, you could move the figure to one side and out of the circle of light. *The indicator merely represents a larger globe* that encompasses the entire studio.

When you're ready to move the light, visualize the transparent globe and simply drag its near surface to put the arrows where you want the light.

You can start dragging anywhere in the Document window and continue dragging beyond it, all the way to the edge of the screen.

Adjusting the Indicator Using the Tools.

The Editing Tools can be used to adjust the position of the indicator in the Document window. Only the Rotate and Twist tools have any effect. These tools rotate and twist the indicator around the center of the studio.



Scaling the Indicator.

You can change the size of the light indicator with the Scale Parameter Dial. Scaling the light's indicator does not change lighting in the scene. It only changes the size of the indicator ellipse.

AIMING USING THE PARAMETER DIALS.

The Parameter Dials allow you to rotate the light in a specific plane or to a numerically defined position.

Before using the Parameter Dials, select the light you wish to adjust. You can either click the one of the Light Controls, select the light from the pop-up at the bottom of the Document window or click its listing in the Animation palette.

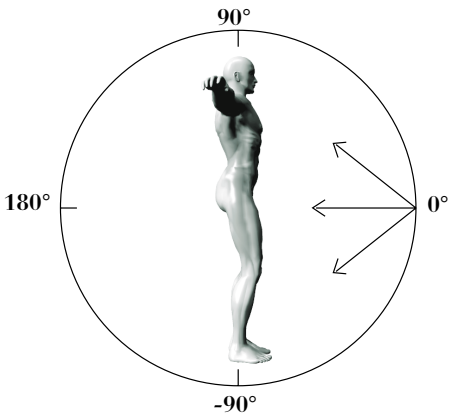
The xrot, yrot, and zrot dials orbit the light around the x, y, and z axes, respectively.

When xrot and yrot are set to 0°, the light aims directly at the front of the figure. zrot is significant only when xrot, yrot is not 0°, 0° or 180°, 180°.

The following diagrams should help you visualize the effect of each dial. In each case, the figure is in the default position.

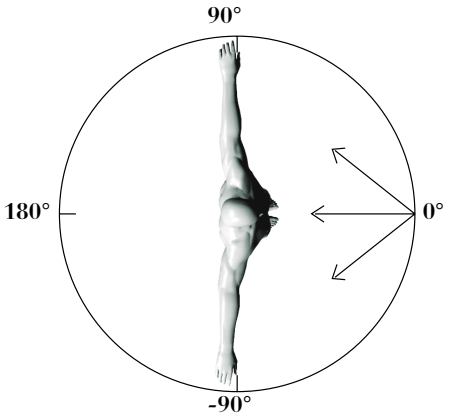
xrot.

Fig. 4—xrot, side view.



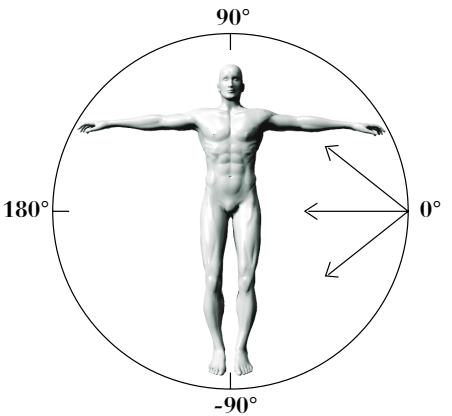
yrot.

Fig. 5—yrot, top view.



zrot.

Fig. 6—zrot, front view.



To set the light's position numerically:

1. Double-click the dial for the axis you want to rotate around.
2. Enter a value between zero and ±180°.
3. Click OK.

LIGHTING COLOR.

The color of the lights contributes to the color of the figure in renderings. The colors don't mix and add to one another, they multiply. For example, a blue figure with red lighting would not appear purple, it would be black.

If you don't want the lighting to influence the color of the figure, simply set the lights to white or gray.

Because the lighting and the surface color determine the appearance of the rendered figure, you might want to set the figure's color before spending time working with the color of lights. For more information on setting the color of the figure, refer to "Document Window Color." on page 10.

SETTING THE COLOR OF A LIGHT.

To set the color of a light:

1. Click the Color dot that appears at the bottom-right corner of a light control and choose a color from the palette that appears.

Fig. 7— Light control and Color dot.



To set the light's brightness:

1. Select a Light control.
2. Click the color dot that appears at the bottom-right corner of the control and choose a greyscale from the bottom of the palette that appears.

To turn off a light:

⌘ Option/Alt-click a light control.

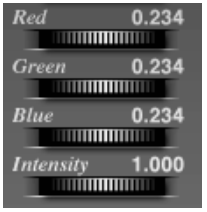
Light Color Parameters.



The Red, Green, and Blue Parameter Dials adjust the levels of these color components.

Drag the Intensity dial to adjust the brightness. Drag the dial to the right to increase the level, or drag left to decrease it.

Fig. 8— The light color Parameter Dials.



USING SHADOWS.

Poser lights cast shadows. Figures and props produce shadows on each other and on the ground plane when it is displayed. Shadows add interest and enhance realism. In animations, moving shadows can be highly cinematic.

Shadows result from each light. To change the cast of a shadow, change the angle of the light. You can control whether an individual light casts shadows in the Light's Properties dialog (**Edit menu> Properties**).

Fig. 9—Shadows are visible in renderings.



SHADOW PARAMETER DIALS.

The light Parameter Dials offer two controls for shadows.

Shadow.

Shadow controls the darkness of the shadow cast by this light. You can adjust between a faint shadow and a dark, 100% shadow.

You can animate the shadow strength. Set key frames of different shadow strength to fade shadow darkness in or out.

Map Size.

Map Size sets the resolution of the shadow map for this light. Shadow maps are square, and the value sets the number of pixels in a dimension. Larger values increase detail of the shadow shapes, but require more memory and take longer to render. Each map can take as much as 1 MB of memory and will add to the amount of memory the application needs to render.

Poser uses a map image to apply shadows to objects in the scene. It develops imagery (the shadows) in these maps during rendering. Poser can create shadow maps at resolutions up to 1024 pixels square.

Depth cannot be animated. The setting applies to the light throughout the file.

SAVING LIGHT SETS.

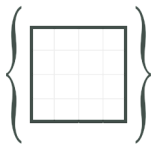
If you set the lights in a way that you want to use again, save the lighting environment as a light set to the Lights category in the Poser 3 Library, where you can easily retrieve it.

The Lights category saves the current settings for the three lights, including the map size. It does not store multi-frame settings (animated lights).

To save a light set up to the Libraries palette:

1. Set up your lights.
2. Display the Libraries palette by clicking the handle at the far right side of the screen.
3. Click the Lights category. If the category is not visible, move the cursor over the category dots until the Lights category appears and then click the mouse button.
4. Click the Add to Library (+) icon. The New Set Name dialog appears.
5. Enter a name for the new light set and click OK.

   The new light set appears in the Light category.



ANIMATING YOUR FIGURES.

Poser lets you animate your figures, adding motion to your scenes. You can use your work in multi-media, on Web pages, and in video projects.

When you've developed an animation in Poser, you can save it as movie. This renders each frame and saves the file as a QuickTime, AVI, or sequential image files. You can open animation files in a motion-graphics application, where you can add effects and perform other post-production tasks.

You can create Poser animations of any length; however, it's easier to create relatively short animations. You can also use a movie-editing program to splice animation clips together.

How Animation Works in Poser.

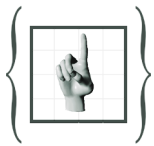
Poser uses a technique called *key frame animation* to simulate motion using figure poses. In key frame animation, you set up poses at different points in time, called *key frames*, and Poser fills in the gaps creating the illusion of motion. This way you don't have to move your figure each time you want to create a motion. All you have to do is setup the starting position of the action and the ending position. Poser takes care of the rest.

Poser's fills in the gaps between key frames using a process called interpolation. Interpolation determines how intermediate poses (that is, the poses in between the start and end poses you set up), are created. There are four types of interpolation:

- Spline, which places intermediate poses (and settings) on a curve.
- Linear, which places intermediate poses at equal increments so the motion is smooth and straight.
- Break Spline, which has no intermediate poses. Position changes abruptly only at the key frames.
- Constant interpolation maintains a key frame position, then instantly changes to the next pose.

Refer to "Key Frame Interpolation." on page 146 for more on interpolation.

Animation Tools.



There are two animation tools in Poser: the Animation Controls and the Animation palette. The Animation Controls let you quickly set up and preview animations using a simple click and drag interface. Refer to "Creating Animations." on page 131 for more on the Animation Controls.

The Animation palette lets you edit key frame positions and create more complex animations. It also lets you animate individual body parts and edit the key frames within your animation. Refer to "Editing Animations." on page 136 for more on the Animation palette.

WHAT YOU CAN ANIMATE.

Any series of changing images can be an animation. The "change" can be of any description. Virtually any type of change you can make in Poser can be animated.

No matter what it is you animate, you'll go about it in the same way—by setting key frames at the start and end of each action (change).

Animating Figures.

Figures change pose and move about the studio. They walk, dance, climb, fight, tumble, fly, and fall to earth.

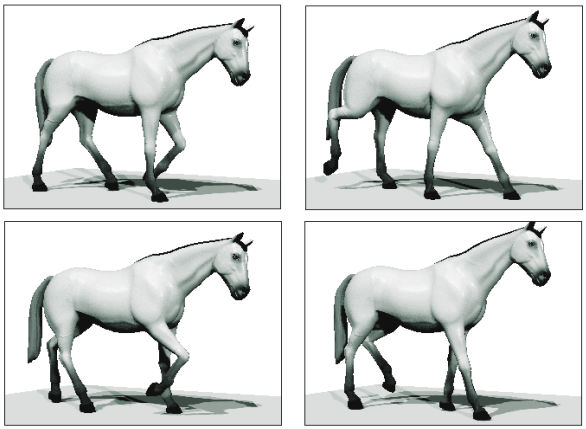
Often, the pose is what you animate; however, you might use Scale on a body part to shrink it away.

Animating the figure is straightforward, but keep these points in mind:

- Inverse Kinematics can be set for the legs and arms of any figure. It applies globally to the file. That is, there is one IK setting for the entire animation. You cannot have IK on in one key frame and off in the next.
- Turning IK on or off can affect interpolated motion. For this reason, whenever you change the status of IK for any limb, Poser 3 creates key frames that secure the motion approximately "as is."
- Inverse Kinematics determines the pose of some body parts based on the pose of another part. For example, the knee might be bent but the shin won't have a key frame. The foot or hip, one of which *is* key framed, determines how and when the shin bends.

For more information on IK refer to "Inverse Kinematics." on page 70.

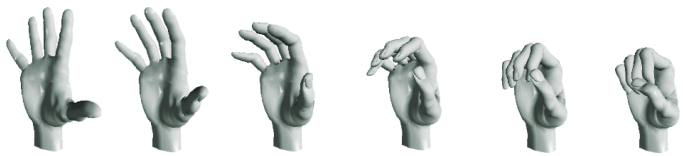
Fig. 1—Example of an animated figure.



Animating Hands.

Now that the hands on Poser 3's People figures are fully articulated, you can create animated hands just as you would animate any other body part. By creating a starting and ending position for the fingers on a hand you can create almost any type of hand motion.

Fig. 2—Example of animating a hand.



Animating Faces.

Like hands, the faces on Poser 3's People figures are fully articulated, meaning that you can animate facial expressions. Facial animations can be extremely powerful. With a moving face, you can simulate a wide range of emotions and even speech.

The Pose libraries provide a series of phoneme presets that can help you simulate speech motions. The phoneme presets provided, are not all the facial positions you'll need to fully create realistic speech, but they can certainly be used as a starting point.

Fig. 3—Example of animating a face.

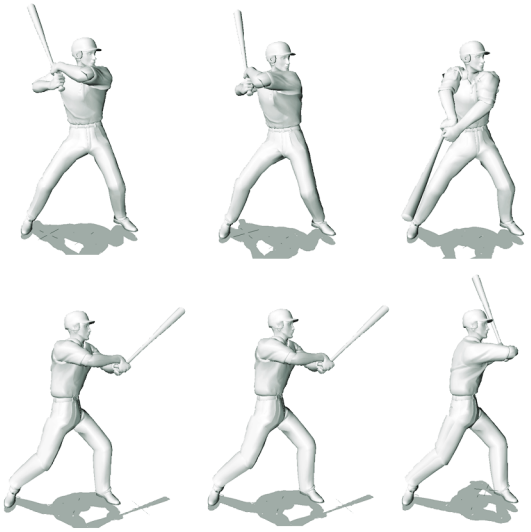


Animating Props.

Props can move, rotate, and change size. A ball can bounce. An axe can swing. A chair can be overturned. Use the Set Parent feature to attach props to the figure. This keeps props moving with the figure through any pose.

For more information on setting prop parents refer to "Set Prop Parent." on page 105.

Fig. 4—Example of animating prop.



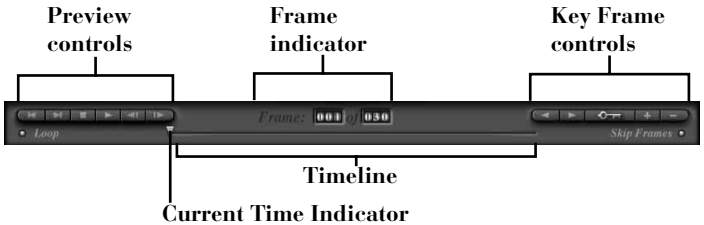
CREATING ANIMATIONS.

The Animation Controls, located at the bottom of the screen, are the tools you'll use most to create animations. They contain controls for adding key frames, editing key frames, and previewing animations.

The main area of the Animation Controls displays the Timeline. The Timeline represents time in Poser. The Current Time indicator on the Timeline represents the current time.

By positioning the Current Time indicator at different points in time you can move through time setting up key frames. The counter in the center of the controls lets you know which frame you're currently viewing in the Document window.

Fig. 5—The Animation Control's Time Display Area controls the creation and playing of animations.



The controls on the left side of the Animation Controls let you preview all the frames on the Timeline. You can play all the frames or step through all the frames one at a time.

The controls on the right side of the Animation Controls let you edit the key frames on the Timeline. You can add frames, delete frames, and preview key frames.

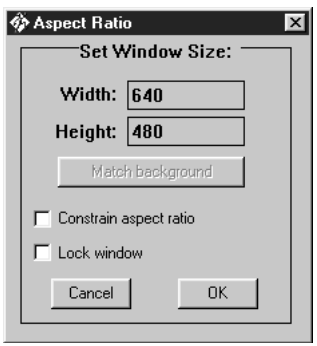
SETTING UP YOUR ANIMATION.

When you begin an animation, you can set the basic description of your project—its dimensions and duration.

To set up an animation:

1. Choose **Window menu> Document Window Size** and set the dimensions of the Document window according to the aspect ratio of the frame size you want.

Fig. 6—The Document window Aspect Ratio dialog.



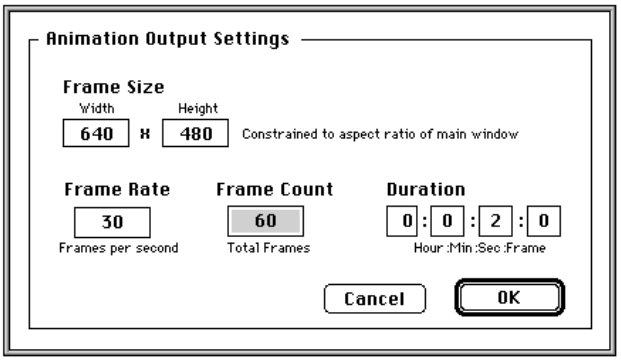
The Document window need not equal the frame size for your intended animation output, but it must be consistent with the aspect ratio.

Any aspect ratio you want is acceptable. If you wanted an extremely wide animation, you could use an aspect ratio of 3:1 and create a window that's 600 x 200.

If you are going to be working with an imported background, either still or moving, you can import that file now. Poser will ask you if you want to set the dimensions of the Document window to match the imported background.

2. Choose **Animation menu> Animation Setup**. Poser displays the Animation Setup dialog.

Fig. 7—The Animation Output Settings dialog.



3. Set the Frame Size for the animation output you want. Enter either the width or height value. Poser uses the aspect ratio of the Document window to determine the other value.
4. Set the Frame Rate you want. Frame Rate determines the speed the animation plays—how many frames are displayed each second.

   NTSC video plays at 30 fps. Film plays at 24 fps. Many computer animations work quite well at 12 to 15 fps. Animations for display on the World Wide Web can be successful with as few as 8 frames per second.
5. Set either the Frame Count or the Duration. These values are interdependent. Set one, and Poser fills in the other.
   - Frame Count is the total number of frames in the animation.
   - Duration describes how long the animation lasts. The display uses the SMPTE standard—hours: minutes: seconds: frames.

Working with the Animation Background.

By default, your animation moves over the background you set for the Document window. You might want to animate over a changing background. For example, in some animations, walking characters stay in the center of the screen. The background scrolls, which gives the impression that they are actually moving.

Poser lets you import a QuickTime or AVI file as the background. Each frame of the imported movie appears sequentially as the background in frames of the animation.



When you make the movie, Poser composites the figures with the background imagery by default. This is an easy way to get your animated Poser figure in a moving scene.

You might want to use the background footage as a guide for animating. For example, if you imported a video clip of a gymnast, you could pose the figure to match the actions of the gymnast.

To import background footage:

1. Prepare a QuickTime or AVI movie as the background.
2. Open your Poser animation file.
3. Choose **File menu> Import> QuickTime Footage or AVI Footage.**
4. Use the **Display menu> Show/Hide Background Footage** and **Clear Background Footage** to control background display.

WORKING WITH THE TIMELINE.

The Timeline that appears at the bottom of the screen is a graphic representation of time. The Current Time Indicator on the Timeline represents the current time as displayed in the Document window. As you move the Current Time Indicator along the Timeline, you're moving through time.

Fig. 8—The Timeline



Setting the Current Time for an Animation.

The Current Time Indicator is the tool you'll use most to create animations. The Indicator controls when in time a key frame occurs. When you're creating key frames, you'll need to move the indicator to tell Poser when the event occurs.

As you move the Indicator, the Time Display area changes to show the number of the current frame. You can use this display to move to a specific point in the animation. You can also type in a frame number to move to a specific frame.

Fig. 9—The Current Time Indicator plays an important role in creating and playing animations.



The Current Time Indicator also controls which portion of your animation is displayed in the Document window. When the Indicator is at the beginning of the Timeline, you're seeing the first frame of your animation. As you move the indicator, you'll see the how your pose changes over the course of your animation.

To move the current time manually:

- ⌘ Drag the Current Time Indicator along the Timeline. As you drag, watch the Time Display area. It shows the number of the current frame in your animation.

  Release the mouse button when you reach the desired frame.

To move the current time numerically:

1. Click the frame number in the Time Display area. A text field appears.
2. Type in the number of the frame you want to move to and press Return/Enter. The Current Time Indicator jumps to the frame you entered.

RECORDING KEY FRAMES.

The Poser animation system records every change in position and properties as you create key frames. This way you can create key frames by simply moving to different points in time.

A recorded key frame can store changes in position for each of the body parts in the figure. It can also store changes in scale, color, lighting, or camera position.

However, a key frame can only store one change per body part property at a specific point in time. This means that a single point in time, you can only store one change in position, scale, color, etc. for each body part. If you continue changing the same property at the same point in time, the changes are recorded on top of existing changes, so only the last change is recorded as the key frame.

To record more than one change in the same object's properties you have to move to a different point in time. This way all your changes are recorded and applied to the animation.

For example if you move a figure's arm up and then down at the same point in time, only the down motion is recorded as the key frame. To make the arm move up and then down, you need to record the up motion in one frame, move to a different point in time, then record the down motion.

To record key frames:

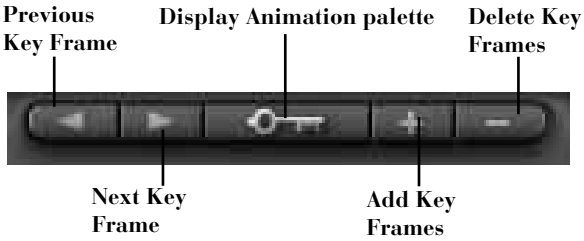
1. Move the Current Time Indicator to a position in time.
2. Use the Editing Tools to adjust the pose of your figure. A new key frame is created.
3. Move the Current Time indicator to a different point and adjust the pose again.
4. Continue creating key frames until your motion is complete.

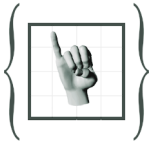
ADDING AND DELETING KEY FRAMES.

In most cases, the key frames in your animation will be recorded by the Animation system, but there are some cases where you'll need to force the Animation system to create a key frame. For instance, if you accidentally make a number of changes while the Animation system is off. You'll need to create a key frame to store your changes or they'll be discarded when you move to a different point in time.

The Animation Controls let you quickly delete and add key frames. When you delete a key frame all the stored properties for the figures are deleted. When you add a key frame, the position of the figure currently in the Document window is saved as a key frame.

Fig. 10—The Key Frame controls allow you to add and delete key frames.





To add a key frame:

1. Move the Current Time indicator to the desired point in time.
2. Click the Add Key Frames (+) button.

To delete key frames:

1. Click either the Previous Key Frame or Next Key Frame button until the key frame you want to delete is displayed in the Document window.
2. Click the Delete Key Frames (-) button.

EDITING ANIMATIONS.

The Animation palette is where you edit the key frames in your animation. The palette shows the layout of the key frames and provides for setting and navigating between them. The palette also provides the controls for playing animations.

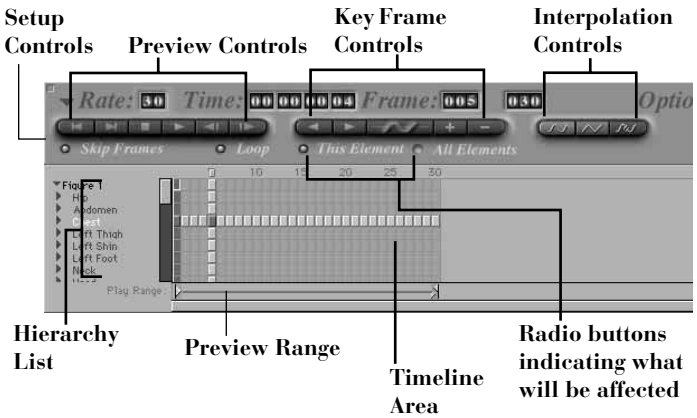
To display the Animation palette:

⌘ Choose **Window menu> Animation Controls**.

or

Click the Display Animation Palette button on the right side of the Animation Controls.

Fig. 11—The Animation palette allows you to edit key frames.



When you first display the palette, it shows all the key frames you've previously created using the Animation Controls.

The Animation palette is divided into three sections: the Setup controls, the Hierarchy List and the Timeline Area.

The Setup controls let you set the Frame Rate, Duration, Frames, and display options for the Timeline Area. These controls also let you preview your animation and navigate through the key frames.

The Hierarchy List displays a listing of all the objects in the studio. The "Figure" listings in the hierarchy contains a listing for each of the parts that make up the figure.

The Timeline Area, displays all the key frames stored for each of the body parts. Key frames are displayed as red squares in the grid and interpolated frames are shown in different colors to identify the interpolation type. An *interpolated* frame is an animation frame created by Poser to fill in the gaps between key frames.

EDITING ANIMATION SETUP.

The Animation palette's Setup controls can be used to edit your animation setup parameters. Many of the controls found in the palette can also be accessed from the Animation Setup dialog (**Animation menu> Animation Setup**).

Changing the Frame Rate.

The Frame Rate of your animation determines how many frames it takes to display a second of action. That's why the frame rate is measured as Frames Per Second (fps). Higher frame rates have more frames in a second which produces smoother motion, but requires more time to render.

To edit the frame rate:

1. Click the FrameRate indicator at the top of the Animation palette. A text field appears.
2. Enter a frame rate.

   You can also click the arrow icon next to the Frame Rate indicator and pick a frame rate from the menu.

Moving the Current Time.

The Current Time display at the top of the Animation palette lets you keep track of the current time being shown in the Timeline area and also lets you change the current time.

As you edit key frames in the Timeline Area, this display changes to show you the current time in SMPTE format (Hours: Minutes: Seconds: Frame). You can also enter a time to display a specific point in time.

To move to a specific time:

1. Click one of the Current Time display fields. A text field appears.
2. Enter the hour, minute, second, or frame you want to see.

Changing the Number of Frames.

The two Frame indicators in the top-right of the Animation palette show you the number of the currently selected frame and the total number of frames in the animation. You can move to a specific frame by selecting, the Frame field and entering a frame number.

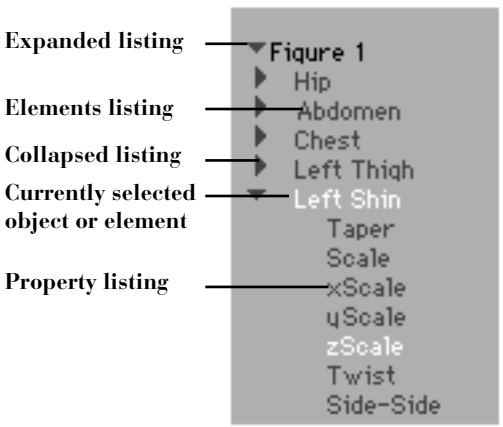
You can also change the total number of frames in your animation, by changing the value in the Total Frames field. When you change the total number of frames you set the maximum number of frames in your animation. If you have more frames in the animation than the Total Frames value, frames are deleted.

VIEWING FIGURE HIERARCHIES.

The Hierarchy List displays all the figures, lights, cameras, and props currently in the studio. The listing for a figure can be expanded to display all the objects that make up the figure. Each object within a figure can be further expanded to display all the properties of the object. For example, you can view the Scale or Translation key frames.

Using this listing, you can select an object or studio element to animate.

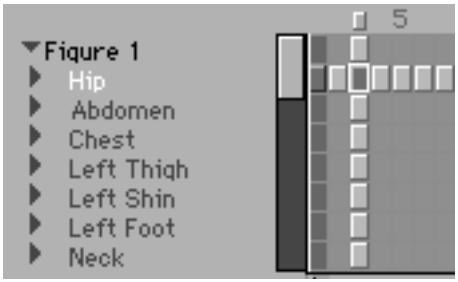
Fig. 12—Hierarchy List in the Animation palette.



Selecting Elements in the Hierarchy.

You can select an element by clicking its listing in the Hierarchy List. Selecting an object here is equivalent to clicking on it in the Document window or choosing it from the Current Element pop-up at the bottom of the Document window. Poser highlights the name and grid row of the selected object.

Fig. 13—The hip is the selected element.



To scroll down the list of elements:

- ⌘ Drag the vertical scroll bar (between the element listings and the grid).

Fig. 14—Scrolling the Animation palette to display additional elements.



Collapsing a Hierarchy Listing.

Each figure has many parts and each of those parts have many properties. This makes for a very long Hierarchy List. Any of the figure listings can be collapsed to save on space, or expanded to show more detail. When you are not working with a particular figure, you can collapse its listing. This shortens the Hierarchy List and makes other objects easier to locate.

Note: When you collapse a Figure hierarchy, the key frame line displayed controls the figure's position in the studio. Posing changes are only shown when the listing is expanded.

To collapse/expand a listing:

1. Click the triangle beside the figure name.

   A down-facing arrow indicates that a listing is expanded. A right-facing arrow indicates a collapsed listing.

2. Click the triangle again to collapse the list.

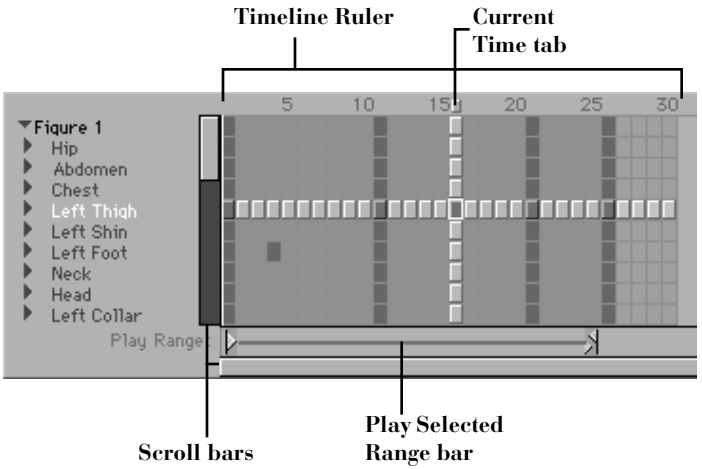
Fig. 15—You can collapse or expand the figure listing in the Animation palette.



EDITING KEY FRAMES ON THE TIMELINE.

The Timeline area can be used to select key frames and edit their position or delete them from the animation. You can also add new frames for specific properties or objects.

Fig. 16—Timeline Area on the Animation palette



The Timeline area displays time as a grid. On this grid are displayed the key frames for each of the elements in the Hierarchy List.

Time is displayed as columns. Each column can represent either a specific point in time, or a frame in the animation. The Ruler at the top of the area indicates whether the columns represent points in time or frames.

Each object or property in the Hierarchy List is represented on a row in the Timeline area.

Key frames are displayed as red squares. The interpolated frames between frames are displayed in different colors depending on the type of interpolation used to create them. Green is used to demonstrate Spline, and red for Linear.

To change the Timeline Ruler display:

⌘ Click the Options label at the top of the palette, and choose either Display Frames or Display Time Code from the menu.

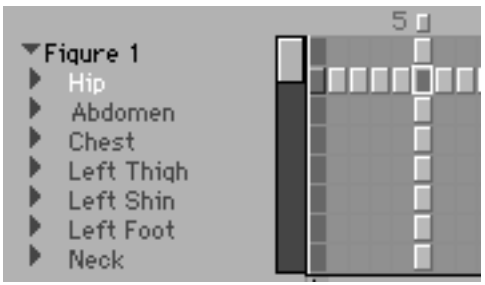
Selecting Key Frames.

Poser starts with the first frame selected (frame #1). You can select any frame by clicking in, or above, its column. You can also enter a number in the Frame field at the top of the palette. Poser displays the number of that frame and highlights the column.



When you select a key frame, the element row is highlighted and the time column is also highlighted, creating an intersection. Selecting another key frame moves the intersection to a different point.

Fig. 17—The hip is the selected object. Frame #6 is the current frame.



To select a key frame:

⌘ Click one of the dark red squares on the grid.

To scroll across the frames:

⌘ Drag the horizontal scroll bar. The scroll bar only appears when the number of frames exceeds what the window can display.

Fig. 18—The Frame scroll bar appears when there are more frames than can be displayed at one time.



Adding Key Frames.

You can add key frames to store a specific pose, or to save one of the interpolation frames created by Poser.

Key frames can be added for a specific object or property using the This Element option. When enabled, any key frame you create is only applied to the selected element.

You can also use the All Elements option to add frames to store all changes for all the elements in the animation at a specific point in time. This creates a kind of checkpoint. Once all element properties are saved into key frames, you can experiment with poses in the remaining part of the animation while leaving the first half of your animation unchanged.

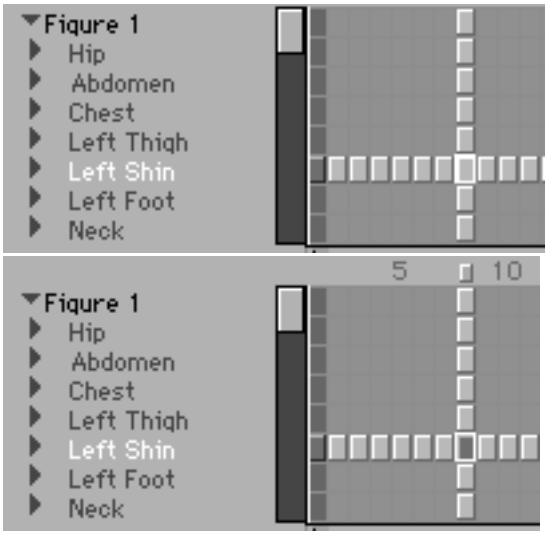
To add a key for one element:

1. Select the frame where you want to add the new key frame.
2. Click the This Element radio button.
3. Select the object you want to set.
4. Click the Add Key Frames (+) button.

Fig. 19—To add a key frame for a selected element, click the Add Key Frames button for This Element.



Fig. 20—Add a key frame for this element.



To add a key for all elements:

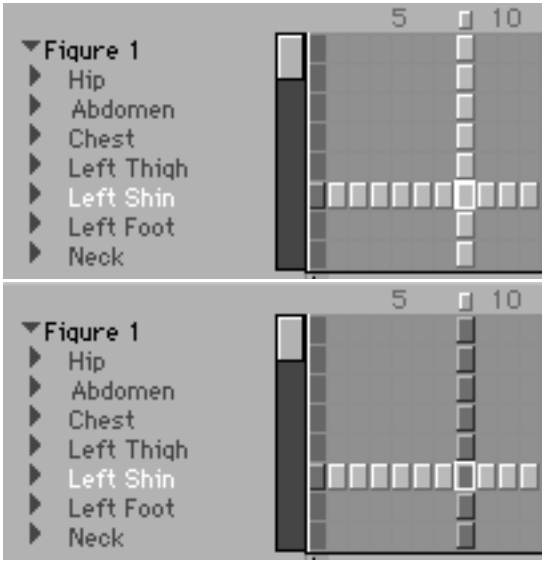
1. Select the frame where you want to add the key.
2. Click the radio button for All Elements.

3. Click the Add Key Frames (+) button.

Fig. 21—To add a key frame for the entire figure, click the Add Key Frames button for All Elements.



Fig. 22—Add a key frame for all elements. Notice the color changes in key frame #8.



Clearing Key Frames.

At some point, you might decide that you'd like to remove a key frame. Once a key frame is removed, the animation will change.

You can clear a key frame for a single object/element or for all objects/figures in the scene.

Clearing does not delete the frame. It removes the settings that make this frame a key frame. The frame is still in the animation, but it does not have a key assigned to it. Once the key frame is removed, the values at that frame are recomputed to blend in with the neighboring keys properly.

To clear a key for one element:

1. Move the Current Time tab to the point in time where you want to clear the frame.
2. In the Hierarchy List, select the element whose key frame you want to clear.
3. Enable the This Element radio button.
4. Click the Delete Key Frames (-) button. You can also press the Delete/Backspace key.

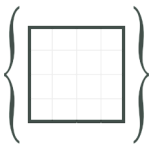
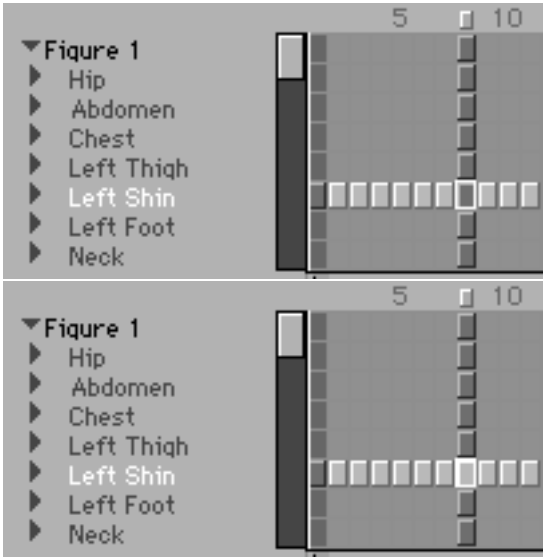


Fig. 23—To clear a key frame for one element/object, click the Delete Key Frames button for This Element.



Fig. 24—After clicking Delete Key Frame, the key frame is removed and Poser interpolates between the previous and next key frame.



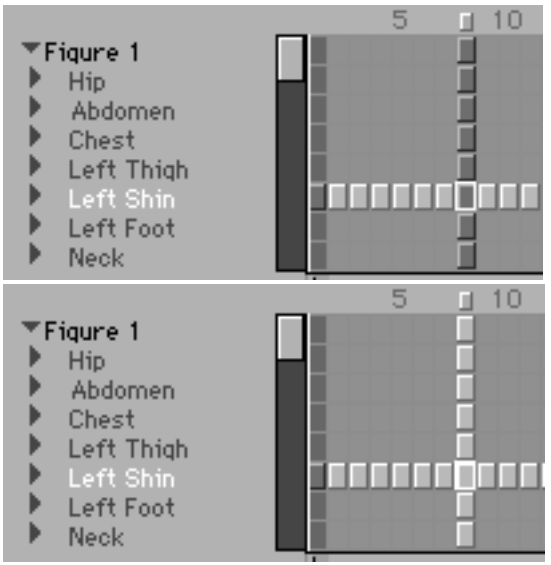
To clear the key for all elements at a point in time:

1. Move the Current Time tab to the point in time where you want to delete the frame.
2. Enable the All Elements radio button.
3. Click the Delete Key Frames (-) button. You can also press the Delete/Backspace key.

Fig. 25—To clear a key frame for all elements, click the Delete Key Frames button for All Elements.



Fig. 26—The selected key frames are cleared for all elements at this time.



To clear a range of frames:

1. Shift-drag over the range of frames you want to clear.
2. Press the Delete key.

To clear specific frames:

1. Press Shift and click each of the frames you want to delete.
2. Press the Delete key.

Navigating the Timeline.

You can move to a key frame in the Timeline using the Navigation controls at the top of the palette. The This Element and All Elements radio buttons let you move to the key frames for a selected element or to key frames for any element.

To advance to the next key frame for a specific element:

1. Click the row for the desired element.
2. Enable the This Element radio button.
3. Click the Next Key Frame button.

Fig. 27—To advance to the next key frame for a given element, click the Next Key Frame button for This Element.



To move back to the previous key frame for a specific element:

1. Click the row for the desired element.
2. Enable the This Element radio button.
3. Click the Previous Key Frame button.

Fig. 28—To move back to the previous key frame for a given element, click the Previous Key Frame button for This Element.



To advance to the next key frame (for any element):

1. Click the Next Key Frame button for All Elements.

Fig. 29—To advance to the next key frame for any element, click the Next Key Frame button for All Elements.



To move back to the previous key frame (for any element):

1. Click the Previous Key Frame button for All Elements.

Fig. 30—To move back to the previous key frame for any element, click the Previous Key Frame button for All Elements.



To go to a specific frame:

1. Click to highlight the current frame display in the upper-left corner of the Animation palette.
2. Type the value you want. Press Return/Enter.

Fig. 31—The current frame display lets you jump to a specific frame.



Moving and Copying Key Frames.

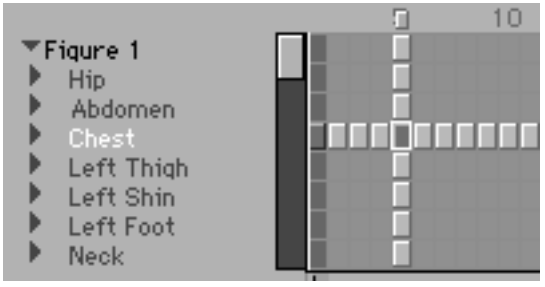
As you work, you might decide you want certain key frames to occur sooner, or later, or that you want to use the settings in one key frame somewhere else in the animation. Poser makes this easy by allowing you to move or copy key frames or groups of key frames.

Key frames are only valid for a given object or element. Key frames cannot be copied across objects or elements. For example, a key frame cannot be copied from the left shin to the right hand.

To move a key frame:

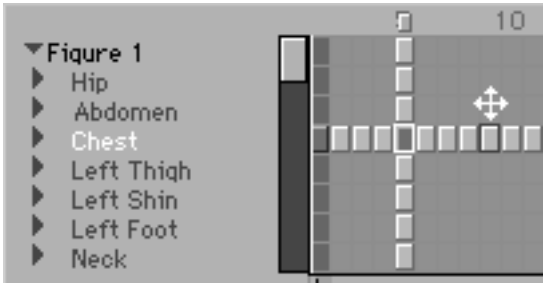
1. Click the key frame to select it.

Fig. 32—Select an element and a frame.



2. Drag the colored grid cell horizontally to the frame where you want it.

Fig. 33—When you click on the grid cell, the cursor turns into a four-way arrow. Drag the key frame where you want it.

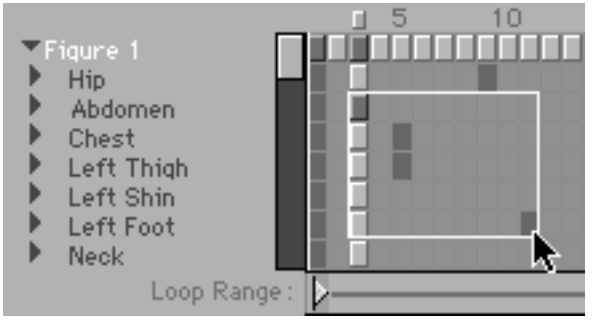


To move a block of frames:

1. Drag a marquee around all the frames you want to move, or Shift-click the desired frames.

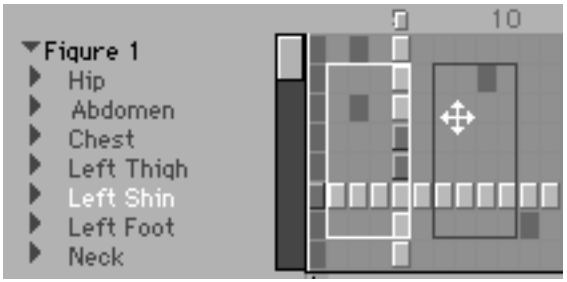
   Poser outlines the selected block of frames.

Fig. 34—Select a block of frames by Shift-clicking.



2. Drag the block of frames to a different position on the Timeline.

Fig. 35—Drag a block of frames to a new location.



To copy a key frame:

1. Click the key frame to select it.
2. Option/Alt-drag the key frame to the point in time where you want it to appear. When it's positioned, release the mouse button, then release the Option/Ctrl.

To copy a block of frames:

1. Drag a marquee around all the frames you want to move, or Shift-click the desired frames.
2. Option/Alt-drag the block of key frames where you want them. Poser copies the frames to the new location.

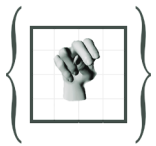
RETIME KEY FRAMES.

Retime keys is a command that allows you to take a motion, or a set of keys, and change the amount of time it takes for that motion to occur.

A powerful feature of the retime keys command is that it doesn't destroy any key frames inside the source range and outside of the destination range. This allows the command to be used to repeat motions by copying them from one time to another. By selecting a motion in one area, and selecting a non-overlapping destination, you will be remapping the motion to another time without deleting the original motion.

To set retime keys:

1. Choose **Animation menu> Retime Animation**. A dialog appears asking you to fill in your Source and Destination frames.
2. For the Source frames, enter the start and end frames of the part of the animation you want to retime.
3. For the Destination frames, enter the range of frames that you would like to retime this animation to.
   - If the destination range is longer than the source range, the animation will be expanded, or slowed down.
   - If the destination range is shorter than the source range, the animation will be compressed, or sped up. Old key frames that were previously in the destination range will be deleted. The key frames that were in the source range will be retimed and placed in the proper time in the destination range.
4. Click OK.



ADVANCED EDITING.

The following section deals with the editing of an element's animatable properties and applying different interpolation methods. Both these techniques are advanced features of Poser 3 and it is recommended that you become comfortable with the animation process before continuing.

KEY FRAME INTERPOLATION.

Poser interpolates the intermediate figure poses and element settings between key frames. Interpolation refers to the way Poser calculates the "in between" position of objects/elements.

You have several options for the rules used to interpolate the poses or settings. In this way, you can make subtle changes in the animated motion.

Interpolation settings apply to a range of frames. This means you can use one interpolation type up to a key frame and another after it.

If the beginning and end of a selected range does not already have key frames, changing interpolation type will automatically insert key frames at the beginning and ending frames.

There are four types of interpolation you can apply to your key frames:

- **Spline** which places intermediate poses (and settings) on a curve. The element/object accelerates and decelerates in and out of the motion.
- **Linear** which places intermediate poses at equal increments so the motion is smooth and straight. The speed of motion does not change *in between* key frames, but can change speed suddenly *at* key frames
- **Constant** which has no intermediate poses, position changes abruptly only at the key frames.
- **Break Spline** which stops the interpolation at the break point, so that another type of interpolation can begin. This type of interpolation is useful for ending a series of interpolated frames to begin a fresh series.

  For example, a bouncing ball has a smooth arc until it hits the floor and then starts off in another arc. With Break Spline you can create this type of abrupt change in the arc.

Fig. 36—Examples of interpolation methods.



Spline **Linear** **Constant**

You will want to use different interpolation options depending on the motion you want. Using a walk as an example, you would use Spline interpolation for the key frames of a foot while it's moving through the air. However, you would use Linear interpolation while it's on the ground to make it easier to keep it planted.

Interpolation types are shown in different colors on the Animation palette. Green is used for Spline, and red for Linear. A cross in the key frame indicates that Break Spline has been applied. Key frames that use Constant interpolation are grayed out.

To choose an interpolation method:

1. Select a range of key frames in the Timeline Area.
2. Click one of the three Interpolation Controls.

Fig. 37—Select one of the Interpolation Controls.



Spline **Linear** **Spline Linear**

To use Constant interpolation press Control/Shift+C.

EDITING KEY FRAME INTERPOLATION.

The Graph palette let you perform precise edits on key frames and adjust the interpolation methods used in the your animation.

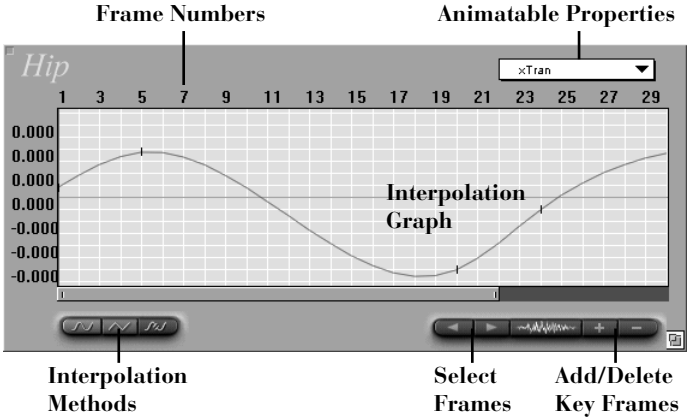
To display the Graph palette:

- ⌘ Click the Show Graph Display button on the Animation palette.

Fig. 38—The Show Graph Display button.



Fig. 39—The Graph palette allows you to perform precise edits on key frames.



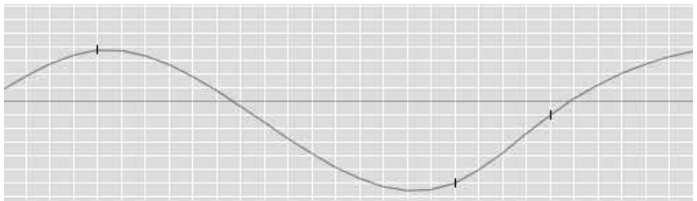
The palette is made up of two axes and a graph. The horizontal axis represents time in your animation, displayed as frame numbers.

The values in the vertical axis change depending on the attribute you select. If you choose a position attribute (xTrans, yTrans, etc.) the values on the axis represent positions in 3D space. If you choose a figure editing property (Taper, Bend, Side-to-Side, etc.) the values on the axis indicate degrees of change.

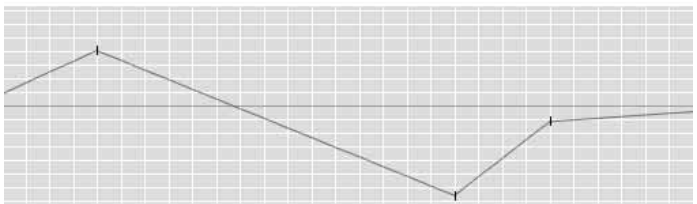
The graph itself shows the actual change in the selected element over the course of the animation. Depending on the selected attribute, the graph can show changes in position, rotation, scale, or tapering. The shape of the graph indicates the type of interpolation used to move from one key frame to another.

A smooth curve indicates that Spline interpolation is being used, a straight line means that Linear interpolation is being used.

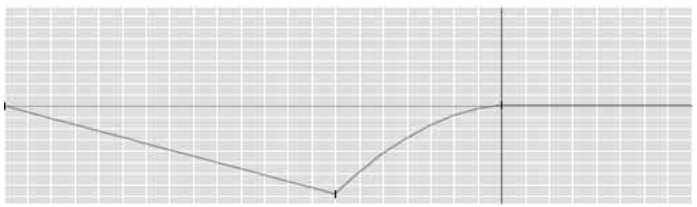
Fig. 40—Different shapes of the Interpolation graph.



Spline Interpolation



Linear Interpolation



Break Spline

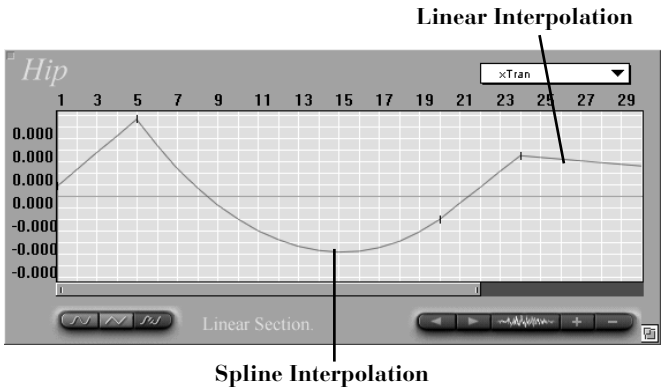
The Graph palette also provides controls for synching sound to motion in your animation. Refer to "Syncing Sound and Motion" on page 161 for more.

Editing the Graph.

You can edit the graph to achieve varying degrees of interpolation. So, you can decrease the amount of Spline interpolation used, by straightening the curve.

The shape of the curve can be determined by the preset interpolation methods, or by just dragging the curve's points until it's the shape you want. As well, you can apply different interpolation methods to different parts of the graph.

Fig. 41—A graph edited using different interpolation methods.



Remember, you're affecting how the figure moves as you change the shape of the graph, so make sure that the graph reflects the type of motion you want to create.

To edit the shape of the graph:

1. Click the pop-up at the top of the palette and choose the attribute you want edit.
2. Drag any point on the graph in the direction you want to move the curve.

Depending on the type of interpolation you've applied to the curve, it will either reshape smoothly or linearly.

To change the type of interpolation applied to the graph:

1. Drag over a portion of the graph to select it.

   The selected portion is highlighted.

2. Click one of the interpolation method buttons at the bottom of the dialog.

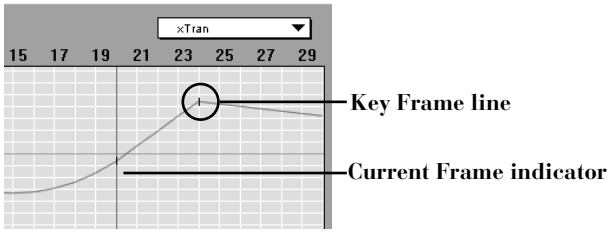
   The graph is re-shaped using the selected method.

   If you have a range of frames selected in the Animation palette, changing the interpolation method can add new key frames.

Editing Key Frames on the Graph.

The vertical lines on the graph represent key frames. You can move these points, to change when key frames occur, or you can add new key frames.

Fig. 42—Key frames on the graph.



The Current Frame indicator lets you know which frame you're currently working on.

To select a key frame;

1. Click the Next Key Frame or Previous Key Frame button.

Fig. 43—Use the Next Key Frame or Previous Key Frame to select key frames.



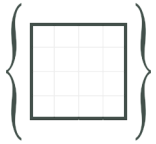
   You can also click on a black key frame line on the graph, or drag the Current Frame indicator to the frame you want to edit.

To select a range of key frames:

⌘ Drag an area around the desired frames. A selected area is highlighted in dark grey.

To reposition a key frame:

⌘ Select a key frame and drag to a different position on the graph.



To add a key frame:

1. Move the Current Frame indicator to the position where you want to add a frame.
2. Click the Add Key Frames button.

To duplicate existing key frames:

⌘ Option/Alt-drag a frame, or range of frames to a new location.

To move a key frame:

⌘ Command/Ctrl-drag a key or range of keys to a new point in time.

To delete a key frame:

1. Move the Current Frame indicator to the position where you want to delete a frame.

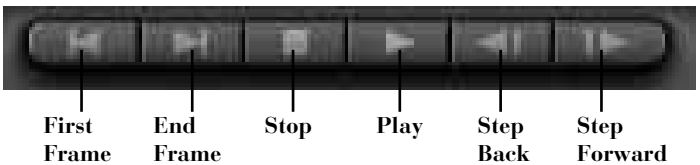
2. Click the Delete Key Frames button.

PREVIEWING ANIMATIONS

Animations can be previewed using either the VCR style controls in the Animation Controls, or the Animation palette.

When you use the Preview controls to preview your animation, the animation plays in the Document window. The quality of the preview depends on the display style you currently have selected and the Tracking mode that's currently enabled. Refer to "Previewing your Figure." on page 17 for more on display styles and refer to "Figure Tracking." on page 11 for more on tracking modes.

Fig. 44—Use the Preview Controls to preview your animations.



Play starts the animation. While the animation plays, the readouts display the current frame and time. The Play button becomes the Pause button during a preview.

Stop halts play and jumps the animation to the first frame.

Pause halts play at the currently displayed frame.

Fast Forward advances to the last frame of the animation.

Rewind returns to the first frame of the animation.

Step Reverse moves back one frame.

Step Forward advances to the next frame.

Loop plays the animation over and over again until you stop the playback.

Skip Frames displays all frames in animation when disabled. When enabled, frames are dropped from the preview to speed up play.

To preview an animation in the Document window:

1. Click the Play button in the Preview controls.

   The Play button becomes the Pause button.
2. Click the Stop button to stop the preview.

To view a specific key frame:

- ⌘ Click either the Previous Key Frame or Next Key Frame button in the Key Frame controls.

Fig. 45—The Previous and Next Key Frame controls.



The Document window changes to display the poses stored in the selected key frame.

SETTING THE PLAY RANGE.

By default, the entire animation is previewed when you click the Play button, however, you can choose to play only a section of your animation. You can adjust the length of the

Loop Range bar in the Animation palette to set in and out points for the preview. Only frames between the in and out points are played.

To change the range:

1. Drag the end of the Play Range bar to set the in or out point of the preview.

Fig. 46—The Play Range bar sets which frames will play. In this case, Poser plays all frames of the animation.

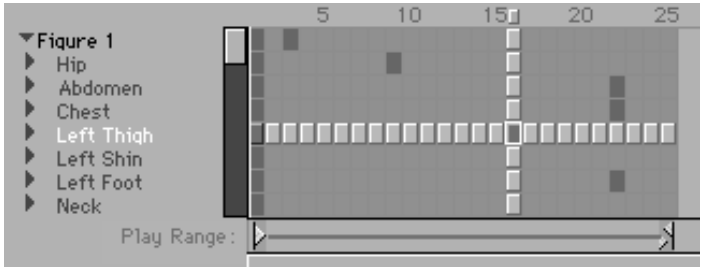
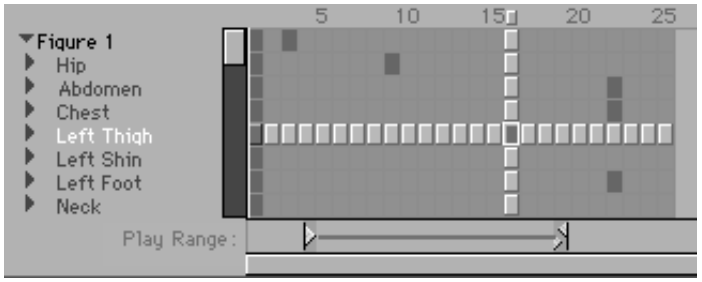


Fig. 47—Drag the ends of the Play Range bar to set the range of frames. In this case, Poser plays frames 5 through 19.



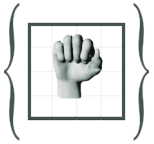
USING THE LIBRARIES PALETTE FOR ANIMATIONS.

The Libraries palette lets you save single frame or multi-frame poses. A multi-frame pose is an animated figure.

Adding an Animation to the Library.

When you add to the Libraries palette, Poses category, Poser will ask whether you want to save one or multiple frames. For a multi-frame animation, you can specify the range of frames.

When you name the animation for the library, you might want to include the number of frames in the name. For example, you might name a listing Strut_48 to indicate that this animation has 48 frames. This information will be helpful later when you use the animation.



Using a Multi-Frame Animation from the Library.

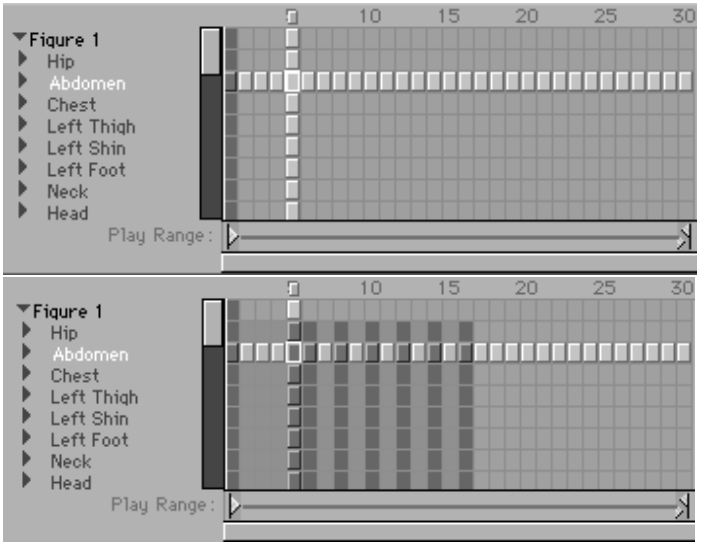
When you use an animation from the library, Poser applies it to a series of frames, beginning with the current frame. The series extends the number of frames in the saved animation. However, it will not exceed the number of frames in the current document. You might have to increase the number of frames in the animation so that all of the key frames in the saved pose are placed into the current document.

Scale changes are not stored in pose sets. This allows stored poses to be used for reproportioned figures without modifying their scales. Animated changes in scales will not be stored in pose sets.

To add a multi-frame animation from the Libraries palette:

1. If the scene has more than one figure, select the figure you want to apply the animation to.
2. Select the frame where you want the animated sequence to begin. Frame #1 of the library animation applies to the current frame.
3. Make sure you have enough frames ahead to accommodate the multi-frame pose. You might need to add frames to the file or move a set of key frames farther to the right.
4. In the Libraries palette, click the Poses category button.
5. Click the Poses pop-up and choose Animation Sets.
6. Double-click the preview of the set you want to use.

Fig. 48—Poser applies the 18 frames of the "Turn" animation set frames 13 through 30.



ANIMATION TECHNIQUES.

The animation process begins with the creation of key frames and poses, but it certainly doesn't stop there. A simple jerky motion can become a smooth flowing one, if you just know a few techniques for using Poser's tools to their full potential.

The techniques described in this chapter will help you create more realistic motion and enhance your basic animations.

WHERE DO YOU SET KEY FRAMES?

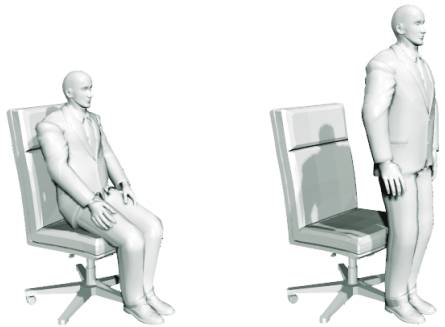
How do you know how to space key frames? You have to consider time and frame rate. You should space key frames so that at the chosen frame rate, the animated action will take the right amount of time.

- Frame Rate • Duration = Number of Frames

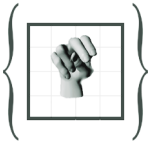
The duration of the movement refers to how long it should take the actor to move from Point A to Point B.

For an example, we'll look at a simple animated action—getting up from a chair. In this action, the extremes are (1) sitting in the chair (2) standing in front of the chair. These are the key frames we'll set.

Fig. 1—Two examples of key frames.



Decide on the duration of the action. You might want to time yourself getting up from a chair to get a better idea. Let's say the action should take three-quarters of a second (0.75 sec).



At a 30 frame per second rate, you can calculate the number of frames for the action: 0.75 • 30 = 22.5

Dropping the decimal, you see it should take 22 frames to complete the action.

With the first key frame (sitting in the chair) at frame #1 of the Poser animation, you should place the second key frame (standing in front of the chair) at frame #21.

Set these key frames, then work in, adding more key frames to improve the motion.

HOW DO YOU CREATE REALISTIC MOTION?

The key to human motion is to examine the parts of the move. If you look at a baseball player's swing, it looks like the arm is simply moving in an arcing motion. However, on closer inspection you can see that the motion is a combination of the hips, shoulder, hand, neck, head, back and arm. To create this kind of motion in Poser, you work from the large motions to the smaller ones.

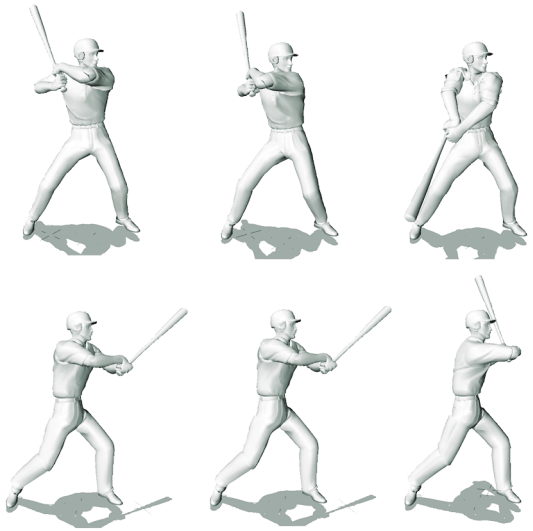
The first thing you do to create a motion is "rough out" the larger movements. In the case of the baseball swing, you'd determine where the arm starts at the top of the swing and where it ends up a the end of the swing. In Poser these two points would be determined by two key frames: one for the start, the other for the end.

Fig. 2—A motion starts with large actions.



Once the larger motions are set up, you can start adding in the smaller, more subtle, motions. Continuing the baseball swing example, you'd start by adding in the hip swings, the shoulder tilt and so on. It's these smaller motions that make the entire action look realistic. Poser's Animation palette is ideal for adding these little motions. In the palette you can add key frames in between the frames for the start and end of the swing.

Fig. 3—The more you examine a motion, you can see the smaller, or secondary motions, that make up the action.



Working this way, you an create almost any kind of action. When you start, first examine the big movements, then fill in the smaller, or secondary motions, in between the big movements.

MAKING YOUR FIGURE WALK.

One of the most complicated human motions to simulate is the simple act of walking. What might on the surface appear to be a rather straight-forward matter—just put one foot in front of the other—is actually an incredibly complex interaction between a variety of muscles in the legs and torso. Realistic walking motion would normally take a great deal of precision posing. However, using the new Walk Designer, it's just a matter of setting up a few parameters and then letting Poser do the rest.

Creating a walking figure is a two step process: first you determine where in the studio, and then you determine how the figure walks.

CREATING A WALK PATH.

Before you design *how* the figure walks, you have to determine *where* it walks. That's what the Walk Path is used for. The path is a line, or curve, you draw in the Document window to determine the figure's course as it moves about the studio. When you apply the walk, the figure starts walking a the start of the path and stops at the end of the path.

Fig. 4—A Walk Path in the studio.



To draw a walk path:

1. Choose **Figure menu> Create Walk Path**. A path appears in the studio.
2. Click one of the Editing Tools and adjust the position or shape of the path.

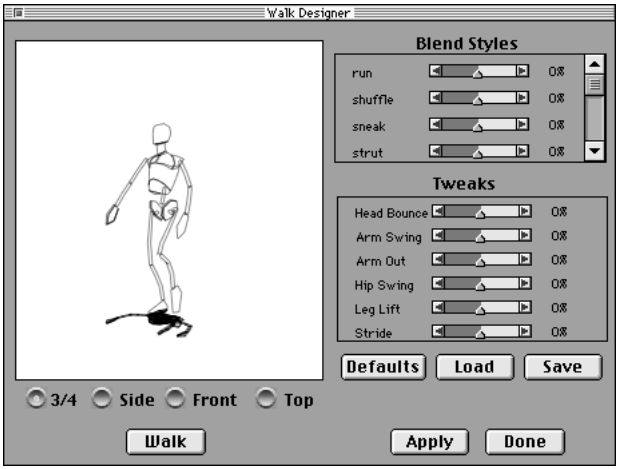
   Click on a point to reshape the path, or click on the ring that surrounds the entire path to reposition it.

DESIGNING A WALK

Walks are designed in the Walk Designer. As its name suggests, the designer lets you create realistic walking motions which you can then apply any human figure. The

designer is divided into two sections: the upper set of controls let you create the larger motions of a walk, the lower set of controls let you set up the secondary motions of a walk.

Fig. 5—Use the Walk Designer to define the characteristics of the walk.



The designer also provides a real-time preview of your walk. As you change the parameters, the walking figure in the preview also changes.

To design a walk:

1. Choose **Window menu> Walk Designer**. The Walk Designer dialog appears.
2. Click Walk to start the real-time preview of the walk.
3. Drag the Blend Styles sliders to set the large motions of your walk.
4. Drag right to increase the intensity of an action, or left to decrease the action.

   Try several settings in conjunction. You might have to combine more than one attribute to get the desired walk type.
5. Adjust the positions of the Tweaks sliders to set the smaller, or secondary, motions of the walk.

   You can click Defaults to reset the sliders to their default positions.
6. Click Apply to apply the walk to a Walk Path.

   The WalkApplyDialog appears.
7. Set walk options and click OK. Refer to "Applying a Walk." on page 157 for more on walk options.

   Click Done to exit the dialog without applying the walk.

To save a walk:

1. Set up your walk by adjusting the sliders.
2. Click Save.
3. Choose a location and filename for your walk and click Save.
4. Click Done to exit the dialog, or click Apply to apply the walk to a Walk Path.

To load a walk:

1. Click Load. The Open dialog appears.
2. Locate the walk you want to load and click OK.

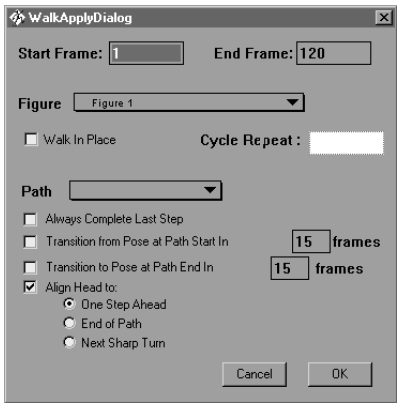
APPLYING A WALK.

There are several options you can set when applying the walk to a Walk Path.The WalkApplyDialog provides options for setting where the walk begins, how the walk effects the animation and the behavior of the figure as it walks.

To display the WalkApplyDialog:

1. Choose **Window menu> Walk Designer**. The Walk Designer dialog appears.
2. Set your walk characteristics as described in the previous section and click Apply. The WalkApplyDialog appears.

Fig. 6—The WalkApplyDialog



Walk Start and Stop Frame.

When you apply a walk, you can set the frame where it begins and the frame where it ends. The more frames you assign for the walk, the more nature the motion.

Figure/Path.

If you have more than one figure or path in the studio, you can use these pop-up menus to choose a specific Figure to use for the walk and a specific Path to follow.

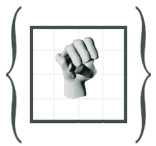
Walk In Place.

This option makes the figure walk in a single spot. When this option is enabled, the figure will not walk along the path.

Cycle Repeat.

This field indicates how many times you want a walk to repeat along the path.

Always Complete Last Step.



This option forces the walk animation to complete within the allotted time. If you find that the walk stops in mid-stride at the end of your animation, enable the option. This will force the walk animation to end at the same time as your animation.

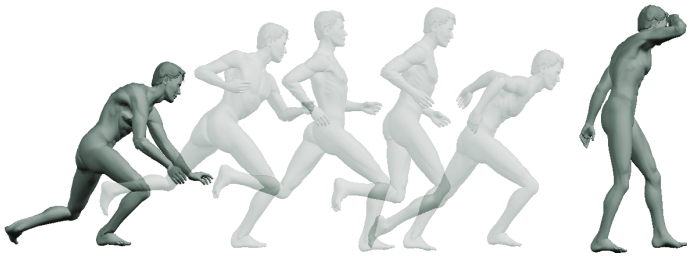
Transition from/to Path Start In/End In.

These two options can be used to create smooth motion from your pose into and out of the walk. When these options are enabled, Poser interpolates between the pose of the figure before the walk, and between the last position of the walk and the final pose creating smooth transitions.

The frame fields let you determine how many frames Poser will use to accomplish the transition.

For example, you can use this option to quickly set up a runner animation. You can create the crouched starting position of the runner, and a finish line pose, then enable the Transition options. When you apply the run you designed, the figure will move smoothly from the crouch, into the run, and then into the finish line pose.

Fig. 7—An example of the Transition options used to create smooth motion.



Align Head Options.

The Align Head options let you control how the figure's head acts as it moves along the Walk Path.

One Step Ahead. Keeps the head aligned with the body. As the figure changes direction, so does the head. This options produces the most changes in head position.

End of Path. Keeps the head aligned to the end point of the path. The head remains pointed at the end of the path regardless of the direction of the body.

Next Sharp Turn. Aligns the head to the turns in the path. The head only changes positions when there's a curve in the path.

ANIMATING CAMERAS.

When the camera is animated, the view of your scene changes over the course of the animation. The moving viewpoint adds interest to the animation. Watch a movie and pay attention to how much the camera moves. You might be surprised.

The camera can be animated just like any other object in the studio, and since it's in 3D space, the camera can slowly rotate around the figures, zoom in for a close-up or sweep high for a birds-eye-view. The cameras are animated by storing their properties (i.e., position) as part of a key frame. This means that you can create camera key frames, exactly the same way you create posing key frames.

The motion of the camera depends on which camera you use to render your animation. The Main Camera rotates around the center of the studio. The Dolly Camera rotates on its own center as if it were on a tripod. This difference allows the Dolly Camera to move through the scene in ways that are not possible with the Main Camera. If you want to emulate a motion picture camera, use the Dolly Camera.

The Face and Hand Cameras rotate around the face and hand of the figure, so animating these cameras gives you moving views of the figure's body parts.

You can only make a movie from one camera. You can't switch cameras in an animation or animate between different cameras. If this is what you want, you should make separate clips, then edit them together in a movie-editing application.

Fig. 8—Animating the Main Camera—it orbits the studio.

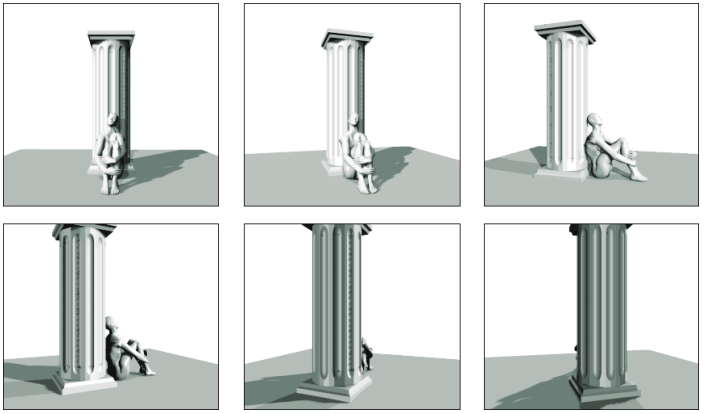
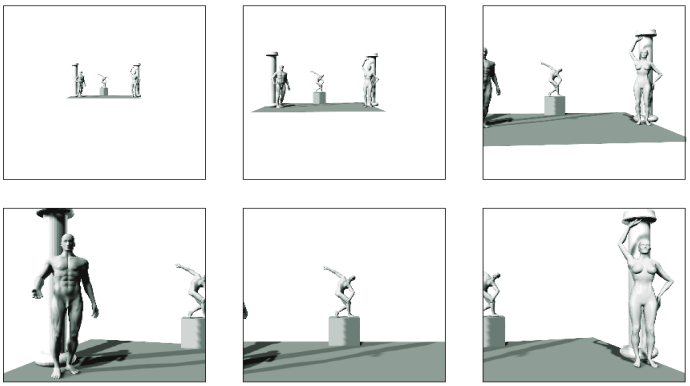


Fig. 9—Animating the Dolly Camera allows you to move the camera to the center of the studio.



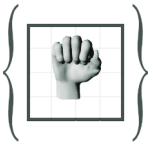
TURNING CAMERA ANIMATION ON/OFF.

By default, every movement of a camera can be recorded as a key frame. However there may be times when you only want the figure to be animation—not the camera. In this case you can turn camera animation off. When the camera's animation if disabled, you can move the camera freely during your animation without changing the view of the studio.

Animation can be turned on or off for each individual camera. The key-shaped icon in the Camera controls indicates whether camera animation is on or off. When the icon appears white animation is on. When it appears red, animation is disabled.

Fig. 10—The key-shaped Animation indicator.





If you want to record changes in camera position while camera animation is off, you'll have to manually add a new frame. Refer to "Adding and Deleting Key Frames." on page 135 for more on adding frames.

ANIMATING LIGHTS.

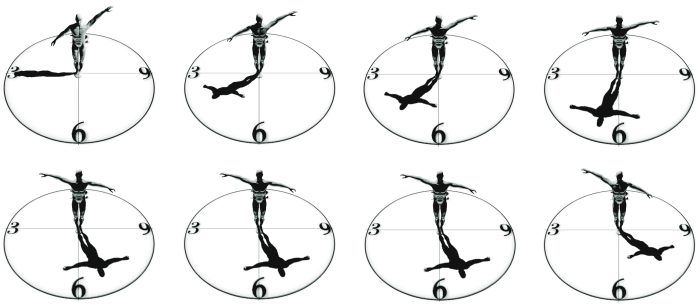
Like cameras, the properties of lights can also be recorded into a key frame. During the course of an animation, a light can change color and position. As the lights move, the shadows they cast move with them.

Animated lighting can produce exciting effects. You can show a figure caught in the headlights of a passing car or a figure illuminated by lights in a storm.

Lights are animated by storing the position and color and of the Light Controls in a key frame. This way you can animate a light exactly as you would a camera or body part.

For lights, the default animation interpolation is Spline. When animating changing light colors, use Linear or Break Spline interpolation. The Spline type of interpolation can be more difficult to control. Keep in mind interpolation applies to both light color and position, they cannot be interpolated independently.

Fig. 11—Animating lights. As light position change, shadows follow.



ADDING SOUND

Poser 3 lets you import sound clips that can play as a soundtrack for your animation. When you import a sound it's added to the beginning of the animation and plays every time you play the movie.

You can control the sound's start and end point using the Animation palette.

To import a sound:

1. Choose **File menu> Import> Sound**. An Open dialog appears.
2. Locate the sound file you want to add and click Open.

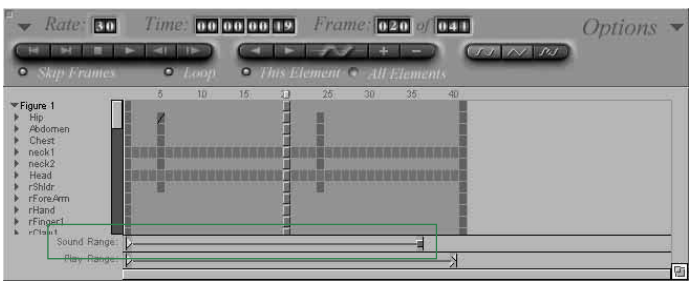
   The sound file is attached to the animation at the first frame. The sound plays whenever the animation is played.

EDITING SOUND

When you import a sound, it's duration is displayed in the Sound Range bar at the bottom of the Animation palette. You can clip the sound file by shortening the length of this range bar. You can use the bar to control when the sound begins. However, if the Sound Range starts at any frame other than Frame 1, the beginning of the sound will be clipped.

For information on accessing the Animation palette, refer to "Editing Animations." on page 136.

Fig. 12—Sound in the Animation palette.



To clip a sound file:

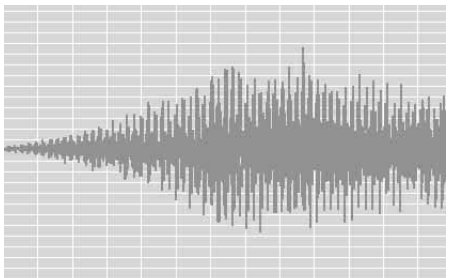
⌘ Drag the end of the Sound Range bar to the left.

SYNCING SOUND AND MOTION

The Graph palette displays a graphic representation of the sound file, called a *waveform*. This lets you see where the changes in sound occur. Using this information you can then position key frames to happen at the same time spikes in the sound file occur.

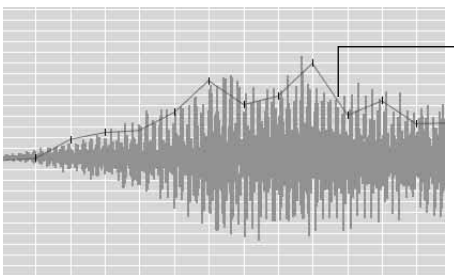
For information on accessing the Graph palette, refer to "Editing Key Frame Interpolation." on page 147.

Fig. 13—Sound in the Graph palette.



You can simulate speech using by matching the peaks in the sound file with the changes in mouth position.

Fig. 14—Syncing sound and motion.



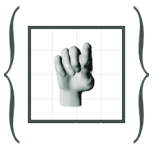
To display a waveform in the Graph palette:

1. Display the Graph palette, by click the Show Graph Display button in the Animation palette.
2. Click the Toggle Sound Display button. The waveform appears in the palette.

Fig. 15—The Toggle Sound Display button.



HOW POSER WORKS WITH OTHER MOTION GRAPHICS PROGRAMS.



Poser does a great job of animating the human figure. However, there are animation techniques and movie-making tasks that you can accomplish in other programs.

Typically, you'll want to create relatively short animation clips in Poser. You can then open these clips in another program for post-production work, like retouching or adding other animated foreground elements.

After you've prepared a series of clips, you can assemble them in a movie-editing program. At this point, you can also incorporate the soundtrack.

As well, you can render your animation with an alpha channel. This lets you overlay your Poser animation in a video composition application. Refer to "Rendering an Animation." on page 178 for more on rendering.

SURFACE MATERIALS.

HOW SURFACE MATERIALS WORK.

A surface material defines the surface properties of an object in the studio. A material can turn a human figure into a statue or a glass sculpture. They provide fur for the animal models or scales for the reptile models.

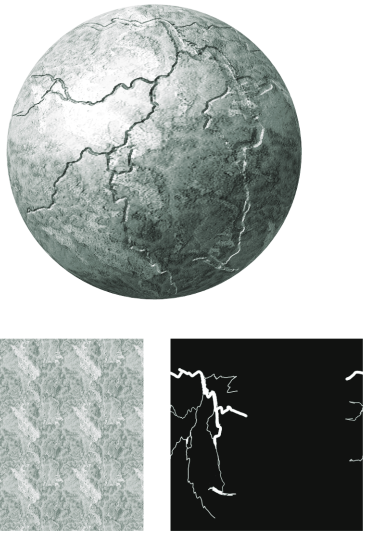
Poser provides several features for customizing the surface of the figure, props, and ground plane. These features include Bump maps, Texture maps, and surface material color.

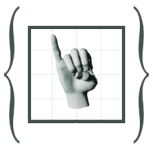
The Bump map determines the shape of bumps or dents on the object's surface. This map can create the effect of cracks in rock or raised patterns. The Texture map determines the patterns of colors on the surface. The surface color determines the base color of the object and the color of its highlights.

Poser also provides several map templates that let you create your own custom Texture or Bump maps. Refer to "Creating a Custom Bump Map." on page 166 and "Creating a Custom Texture Map." on page 169 for more on creating custom maps.

Texture maps and Bump maps can be used in conjunction to create a surface. For example, you can use the Texture map to create the pattern of rock veins for marble, and a Bump map to create the cracks in the rock. By combining different Texture and Bump maps you can re-create almost any type of surface material.

Fig. 1—A Bump and Texture map combined.

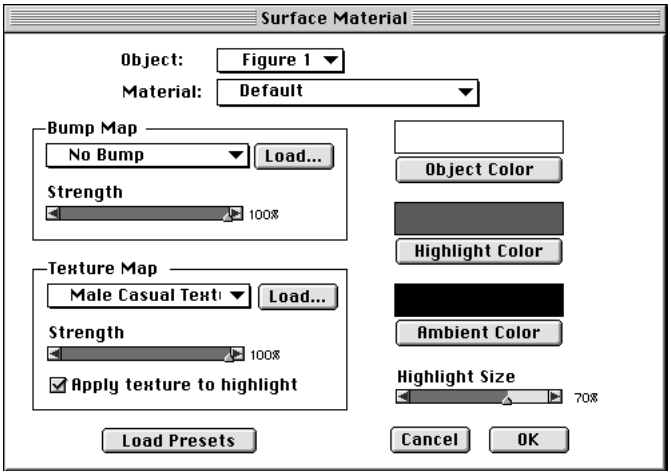




APPLYING SURFACE MATERIALS.

Surface material maps are applied using the Surface Material dialog. The dialog lets you load a Texture and Bump map for any object in the studio. It also lets you set the color qualities of the object's surface.

Fig. 2—The Surface Material dialog.



You can select and set surface options for each object in the scene—all figures and props, or for individual body parts within a figure. The Object pop-up at the top of the dialog lets you choose the figure or prop you want to control and the Material pop-up lets you choose a figure part.

To display the Surface Properties dialog:

- Choose **Render menu> Surface Material**.

You can also open the Surface Material dialog by clicking the Surface Material button in the Render Options dialog.

To choose an object to edit:

- Choose the desired object from the Object pop-up. The changes you make in the surface properties are applied to the selected object.

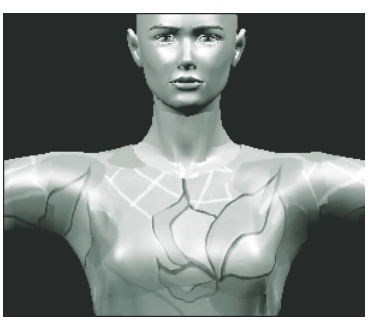
To turn off a surface material:

- Choose No Bump from the Bump Map pop-up and No Texture from the Texture Map pop-up.

APPLYING MAPS TO INDIVIDUAL FIGURE PARTS.

Surface maps can affect either to the whole figure or to just a part of it. Some figures, like animals and Poser 3 People models, have maps for each individual figure part, while others, like the Poser 2 figures, have one map for the entire figure. The Surface Material dialog lets you pick the exact, figure and part to use for s specific map. This way you can have one map for the head and a different map for the arm.

Fig. 3—An object with different materials on the head, and shirt.



The figure parts listed in the Material pop-up depends on the currently selected figure.

To apply a map to a specific body part:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. Choose the desired figure from the Object pop-up. The changes you make in the surface properties are applied only to the selected figure.
3. Choose a figure part from the Material pop-up. The map is applied only to the part selected.
4. Click the Load button for either the Bump or Texture map.
5. Locate the desired map and click OK.

   The selected map is applied to the figure part.

Applying Maps to Props.

Poser uses Implicit (UV) mapping to apply the map image to the 3D model. The props you import must have UV coordinate information for Poser to apply Texture or Bump maps to them.

Some models might not have UV information, in which case, mapping is not possible. DXF models and models created in certain programs do not carry UV data. Try using another format, for example Wavefront OBJ, Detailer text, or 3DMF.

APPLYING A BUMP MAP TO YOUR FIGURE.

A Bump map is a 3D technique for adding surface relief to an object. The Bump map is a special image, wrapped around the object, that works with the studio lighting to give the appearance of 3D texture on an otherwise smooth object.

In Poser, Bump maps allow you to customize the figure. For example, you can import a crackly surface to give the figure the look of a cracked statue. As well, by importing different Bump maps onto different figure parts you can create effects like a rough shirt on smooth skin.

Bump maps can also enhance the appearance of props. Making smooth bars into stone columns or a torus into a tire tube.



Fig. 4—A figure with different Bump maps applied to the hand and shirt.



To load the default Bump map:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. Choose the default map for this figure type from the Bump Map pop-up. For example, if you're using the Male Nude choose the male nude texture.
3. Adjust the position of the Bump Strength slider, to set the level of surface relief. The range is from -100% to 100%. Negative values invert the bump—what was raised becomes depressed.

To clear the Bump map:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. Choose No Bump from the Bump Map pop-up.

   Not all figures have Bump maps, but you can create them for all figures.

CREATING A CUSTOM BUMP MAP.

A Bump map is a grayscale image that Poser uses to determine which areas of the surface are indents and which are bumps. You can create your Bump map from any grayscale image.

The new models in Poser let you apply different Bump maps to different body parts, so you can have several different Bump maps attached to the same figure.

Using a grayscale image, you'll be creating a surface "terrain." Keep in mind the darker you paint, the more depression you will create on the surface of the figure. Use 50% gray for medium depressions and solid black for deep indentations. Save your document as a PICT (Macintosh), TIF, or BMP (Windows) file. Poser automatically converts the image into a Bump map, allowing you to save it under a new name.

By customizing the Bump map, you can add wrinkles to clothing, buckles, or blemishes. You can use any type of image. Create a Bump map with scales to mutate the figure into a reptile.

When creating a custom Bump map, consider the following suggestions:

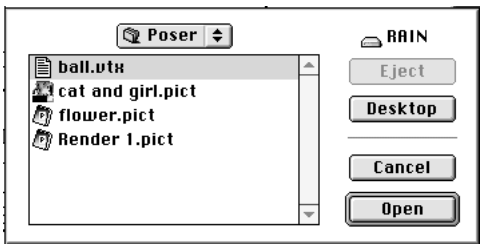
- Use an 8-bit, gray scale image. The brightness of the map's pixels is the only factor used, and an 8-bit image requires less memory.
- Bump maps do not require a 1:1 ratio to the final resolution. Increasing the dimensions does not necessarily improve definition in the final rendering. It does, however, require more memory to load, which can make the Bump map impossible to load on some systems.
- If you do increase the image dimensions, be sure to maintain the proportions. Keeping this aspect ratio is crucial for Poser to wrap the image onto the figure.
- As you paint your Bump map, use an airbrush tool or another brush that creates smooth edges. The smoother the transitions you have in your custom map, the smoother the appearance of your rendered figure. Hard edges will create blocky forms on your rendered figure.

To load a custom Bump map:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.

2. Click the Load button in the Bump Map section. An Open dialog appears.

Fig. 5—Loading a custom Bump map.



If you select an image file, Poser will ask if you want to convert it to a Bump map. Conversion takes a little while, the status bar on the Document window displays the progress

3. Select a Bump map (.BUM) or image file.

Using Templates.

If you did a complete install, templates are provided in **Poser3:Textures:Templates**. If you didn't, the templates can be found on the Poser 3 CD-ROM. Both Bump maps and Texture maps are found in the Textures folder.

By editing the maps in this template you can edit the different parts of the figure. For example, you can use an image-editing application, like Painter or Painter Classic, to paint a grayscale pattern of the map of the face. When you apply the template, the edited template will produce bumps on the face.

Fig. 6—A sample Texture template.

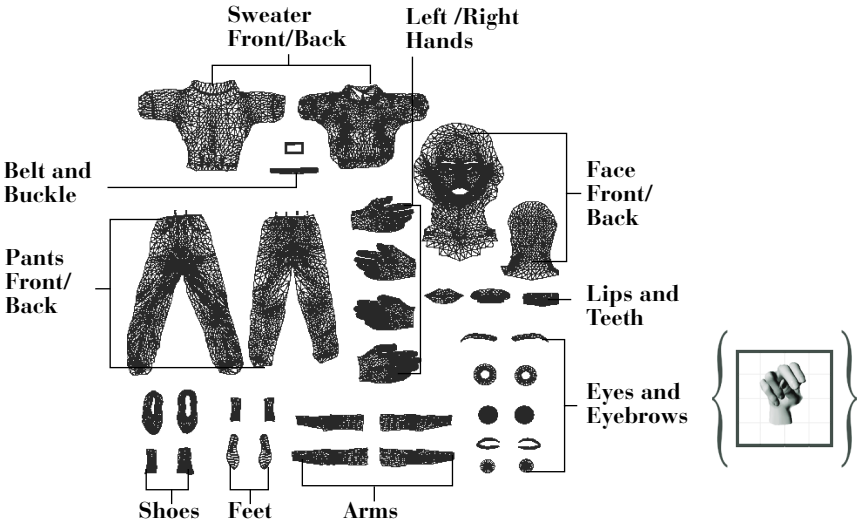
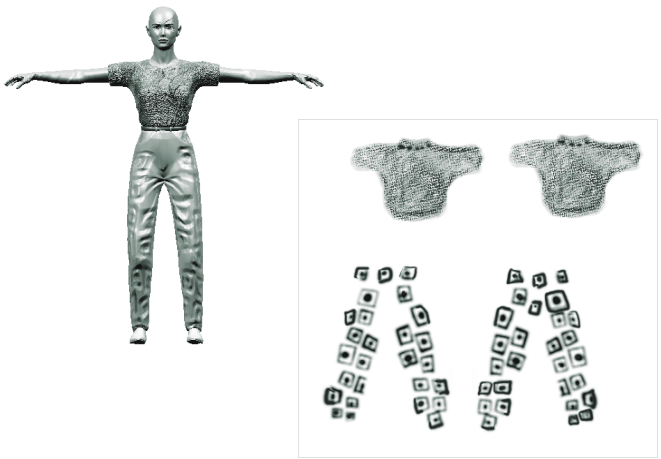


Fig. 7—The Bump map template applied to a figure.



To apply an edited Bump map template:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. Choose the figure you want to edit from the Object pop-up.
3. Choose a body part from the Material pop-up.
4. Click the Load button in the Bump Map section. An Open File dialog appears.
5. Locate the edited template file and click Open. The portion of the template that corresponds to the body part you selected is applied to the figure.
6. If you edited other body parts, choose the body part you want to change from the Materials pop-up.
7. Click the Bump Map Load button again and load the edited template file again.
8. Continue selecting body parts and loading the template file, until all the body parts on your figure have the desired Bump map.

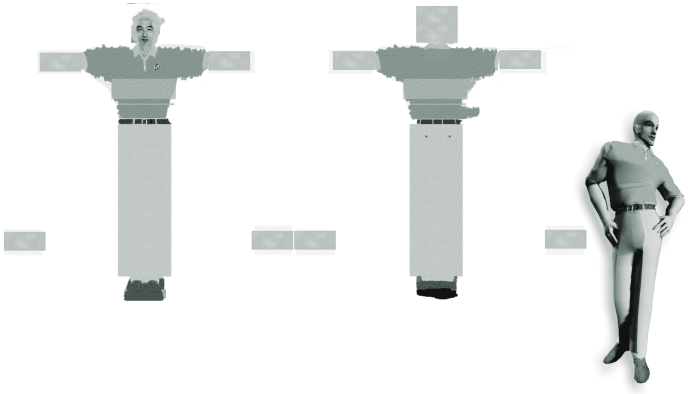
APPLYING A TEXTURE MAP TO YOUR FIGURE.

A Texture map is a 3D technique that wraps an image around an object to paint the surface. A real-world parallel to using a Texture map would be to rip a picture out of a magazine and physically wrap it around an object, like a baseball or drinking glass.

Poser's default Texture maps provide shading to enhance the appearance of the figures. You can create a custom Texture map to change the fabric of the clothes or to color any other feature on your figure.

Like, Bump maps, different Texture maps can be applied to different body parts. Using this technique, you can have a unique pattern on the shirt of a figure and a different texture for the skin tones.

Fig. 8—The Texture map image for the Poser 2 male casual figure.



To load the default Texture map:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. Choose a Texture map for this figure type from the Texture Map pop-up.

To clear the Texture map:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. Choose No Texture from the Texture Map pop-up.

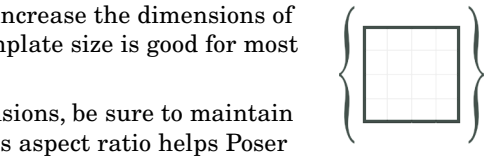
CREATING A CUSTOM TEXTURE MAP.

You have a few options for creating custom Texture maps. You can use an image or you can paint your own.

To create a custom Texture map, you need to create an image file. When you design your custom Texture map, you are "painting" the surface of your Poser figure. Make a texture or pattern, or paint a skintight super-suit for a comic book hero.

There are a few tips for creating Texture maps:

- Usually, 8-bit color is all you need for a Texture map. Images with a color depth of 16 or 24 bits require more memory, which can make them difficult to load on some systems.
- You probably won't need to increase the dimensions of the template image. The template size is good for most uses.
- If you do increase the dimensions, be sure to maintain the proportions. Keeping this aspect ratio helps Poser wrap the image onto the figure.



To load a custom Texture map:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. In the Texture Map section, click the Load button. An Open dialog appears.
3. Select your custom Texture map and click Open.
4. Use the Strength slider in the Texture map section to adjust the intensity of the Texture map. You can lighten the Texture map by setting the slider lower.

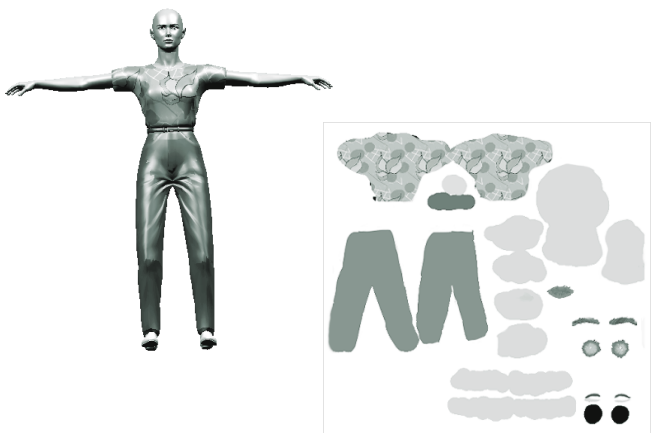
5. Use the Apply Texture to Highlight checkbox to control whether highlights are pure (disabled) or combined with the texture (enabled). When disabled, you can get shiny spots on a black area of the texture.

Using Templates.

Templates are provided in **Poser3:Textures:Templates**. Both Bump maps and Texture maps are found in the Textures folder. The templates let you precisely align the image you paint with the figure.

The template provides Texture maps for every available part of a figure. They contain maps for everything from teeth to the shoe laces. By painting on the template, you can edit the color or pattern of a body part.

Fig. 9—The Texture map template applied to a figure.



When you have modified the Texture map, save it as a PICT (Macintosh), TIF (Windows) or BMP (Windows) file. Put it in the Textures folder with the Poser application for easy loading.

To load an edited Texture map template:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. Choose the figure you want to edit from the Object pop-up.
3. Choose a body part from the Material pop-up.
4. Click the Load button in the Texture Map section. An Open dialog appears.
5. Locate the edited template file and click Open. The portion of the template that corresponds to the body part you selected is applied to the figure.
6. If you edited other body parts, choose the body part you want to change from the Materials pop-up.
7. Click the Texture Map Load button again and load the edited template file.
8. Continue selecting body parts and loading the template file, until all the body parts on your figure have the desired Texture map.

SETTING OBJECT COLOR AND HIGHLIGHT.

The color of the figure's "skin" in a rendering is determined by the lighting environment and three surface material factors:

- Object color

- Highlight color,
- The Texture map.

These features apply to both figures and props.

Object Color.

The object color is the surface color of the current figure or prop. If there is no Texture map, the object color is the only color of the figure—not considering the effect of colored lights. In a high quality rendering, when a Texture map is loaded, the object color influences the appearance of the Texture map by coloring it. If you don't want the Texture map affected by the object color, set the object color to white (the default color is tan).

To set the object color:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. Click the Object Color button. The color picker appears.
3. Choose a surface color for the object and click OK.

   You can also use the Color tool in the Editing Tools. Refer to "Document Window Color." on page 10 for more information on the Color tool.

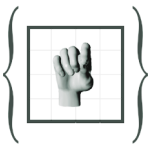
The Texture Map vs. The Object Color.

When a Texture map is loaded, the object color is used as a multiplier on the Texture map. What does this mean? The complete answer is rather technical. The result, however, is quite simple. The object color influences the Texture map in a rendering as though some of its pigment was washed over the Texture map image. How much of the pigment depends on the brightness of the object color—the lighter the object color, the less pigment is used. Therefore, when the object color is white, it has no effect on the Texture map whatsoever. When the object color is near black, it obliterates the Texture map; this effect is only apparent in renderings.

HIGHLIGHTS.

Highlights are bright areas appearing where the light is reflected directly toward the eye—or camera. As Poser renders the figure, it determines where highlights should occur and adds the highlight color to the base color at these points.

In daylight and under most room lights, highlights are white. To complement the lighting environment you've set, you might select a color similar to your main light.



To select the highlight color:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. Click the Highlight button. The color picker appears.
3. When you've chosen a color, click OK.

   You can also hold down Option/Alt and select the Color tool. Refer to "Document Window Color." on page 10 for more.

You can control the size of the highlights by moving the Highlight Size slider. The default value is 70%. Higher settings increase the size of the highlight, creating a dull effect. At 100%, the highlights overwhelm the figure. At 20%,

the highlights are small, creating a shiny effect. At zero, no highlights appear. If you set the highlight color to black, no highlights appear

Fig. 10—Setting highlight size.



AMBIENT COLOR.

In Poser, you can set the Ambient color for each figure or object individually. The Ambient color of an object is the color the object emits equally in all directions. It simulates an ambient (overall room) lighting contribution. Unlike the other color properties, it acts without taking into account any light positions or colors.

The Ambient color will add with the other lighting properties. Note that too much ambient will flatten out the detail of an object, since it looks the same no matter how the surface faces lights. If you want to turn ambient light down or off, set the Ambient color to gray or black. If you want more intense ambient light, set the Ambient color to white or a bright color.

To select the ambient color:

1. Choose **Render menu> Surface Material**. The Surface Materials dialog appears.
2. Click the Ambient button. The color picker dialog appears.
3. When you've chosen a color, click OK.

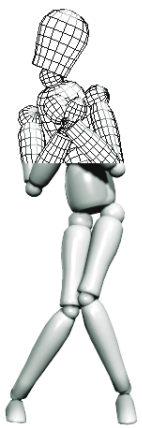
RENDERING.

HOW RENDERING WORKS.

Rendering is the process of converting the 3D view of your figure into a 2D image. Once an image has been rendered, it can be used in other image-editing applications.

During the course of a Poser project, you'll want to render a number of times—whenever you want to check the progress of your pose, body shape, camera, surface material, or lighting changes.

Fig. 1—A rendering in progress.



Renderings show more detail, so you'll see things in a rendering that aren't otherwise apparent. Based on these results, you'll go back to posing, body shaping, etc., to adjust anything that needs improvement. You'll probably go back and forth—making changes, then rendering to check your changes, over and over again.

A new render mode called *Anti-alias Preview render* lets you quickly generate an anti-aliased image that can be used to check lighting or surface materials. Refer to "Using Preset Rendering Options." on page 177 for more on generating previews.

These "check" renderings are typically displayed in the Document window. You probably won't save them. They're just a by-product of the work process.



Finally, when you've made all the changes you want, you'll generate a high-quality rendering that you *will* save—either by exporting the Document window as an image file or by rendering to a new window. Rendering an animation takes longer, depending on the number of frames.

Rendering an animation is similar to rendering an image; however, instead of creating one image, you create one for each frame. Render an animation with **Animation menu> Make Movie**. This procedure is covered in "Rendering an Animation." on page 178.

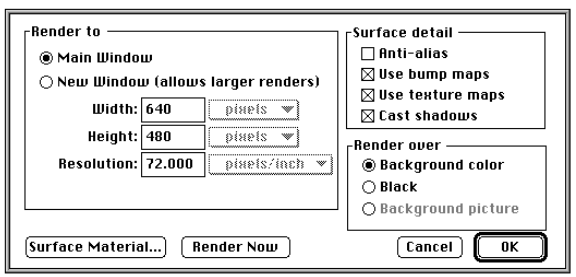
Renderings do not include guides, with the exception of the Ground Plane. If you don't want to show the Ground Plane, hide it before rendering.

SETTING UP A RENDER.

The Render Options dialog allows you to control the size and attributes of the final output rendering.

Render Options include rendered image size, background color, anti-aliasing, shadows, and whether to apply the Texture or Bump map, if either has been "loaded."

Fig. 2—The Render Options]



To display the Render Options dialog:

⌘ Choose **Render menu> Render Options**. The Render Options dialog appears.

SETTING RENDER DESTINATION.

By default, renderings are displayed in the Document window. Poser clears the image from the window as soon as you make an adjustment. This saves on memory and keeps your Desktop from getting cluttered with windows.

When you want renderings to go to a separate window, enable the New Window option. Future renderings of this file are displayed in separate windows.

To set the render destination:

1. Choose **Render menu> Render Options**. The Render Options dialog appears.
2. Enable the New Window radio button if you want to open a new window for a rendering. Otherwise enable the Main Window button and the rendering will replace the image in the Document window.

SETTING IMAGE SIZE.

When you render to a new window, you can set that window to any size.

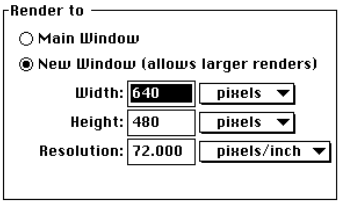
If you've imported a background image, Poser automatically sets the new window to the dimensions of the background. This is really handy when you're planning to composite the figure with the background.

To render at a particular size:

1. Choose **Render menu> Render Options**. The Render Options dialog appears.
2. Enable the New Window radio button and enter the size you want.

   You can specify the render size either in pixels or in inches. Use the pop-up to select the units you want.

Fig. 3—You can render to a specific size and resolution.



3. Enter the height or width for the rendering. Poser automatically adjusts the other value to maintain the aspect ratio of the window.

Renderings are always at the aspect ratio of the Document window. If you want a different aspect ratio, resize the Document window.

CHOOSING A RENDERING BACKGROUND.

By default, Poser will render to the Document window over the background color or imported background picture. When you render to a new window, you can specify which background is rendered with the window. The Render Options dialog provides three alternatives:

- **Background color** indicates the figure is rendered over the current background color. You can change the background using the color icons on the right side of the Document window or using the Color tool.
- **Black** is the best option when you are planning to composite the figure with an image in another application. The pixels on the edge of the figure are anti-aliased darker with a black background. This is usually what you'll want.
- The **Background Picture** option is available only when you've imported a background image. In this case, Poser composites the rendering of the figure with the imported background image.

  For more information on background pictures, refer to "Pasting a Figure onto the Studio Background." on page 21 or "Importing and Exporting." on page 24.

Fig. 4—You can render over a background image to add interest.



To choose a rendering background:

1. Choose **Render menu> Render Options**. The Render Options dialog appears.

2. In the Render Over section, enable one of the three radio buttons.

Fig. 5—Choose an option from the Render over section in the Rendering Options dialog.

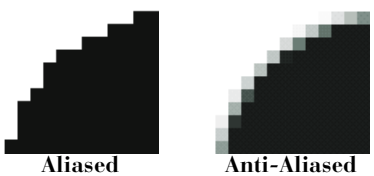


SETTING SURFACE DETAIL.

The Surface detail section of the Render Options dialog provides checkboxes for controlling rendering features. Disabling these features allows the rendering engine to work more quickly by skipping detail. In the final rendering, however, you'll want all these features turned on. There are four options available:

- The Anti-alias checkbox lets you control whether anti-aliasing is used in the rendering. Anti-aliasing reduces the appearance of jagged edges by blending the pixels along the edge of one area with the pixels along the edge of the adjacent area. This creates a softer, smoother edge.

Fig. 6—Choose Anti-Aliased to create a smooth, high quality rendering.

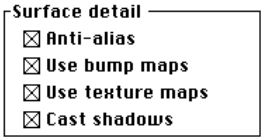


- The Use Bump Maps, and Use Texture Maps checkboxes control whether these surface material features—if currently loaded—are used in the rendering.
- The Cast Shadows checkbox controls whether Poser renders the light shadows. Shadows increase render time, so you might want to render without them if you're in a hurry.

To set surface detail:

1. Choose **Render menu> Render Options**. The Render Options dialog appears.
2. In the Surface detail section, click one or more of the four options provided.

Fig. 7—Choose as many features needed from the Surface detail section in the Rendering Options dialog.



RENDERING AN IMAGE.

You can render an image in one of two ways: using the Render command or using one of the preset rendering options. The Render command uses the options you set in the Render Options dialog to render your image, and should be used to render your final image. The preset rendering options temporarily override the Render Options parameters. They produce lower quality renders you can use to periodically check your work.

USING THE RENDER COMMAND.

The Render command uses all of the current settings in the Render Options and Surface Material dialogs.

To start a rendering:

- ⌘ Choose **Render menu> Render**. A status dialog appears letting you know the status of your render. When completed, a new rendered image appears in either the Document window or a separate window.

USING PRESET RENDERING OPTIONS.

The Smooth and Preset Render commands temporarily override the features set in the Render Options and Surface Material dialogs.

These commands are designed for preview "check" renderings. For complete control over rendering, you'll want to set surface and rendering options and use the Render command.

Both predefined render commands have *Fast* and *Clean* modes.

- Fast creates an aliased rendering. These renderings have a jagged edge.
- Clean creates an anti-aliased rendering. These renderings have a smooth edge.

Anti-aliasing the image takes longer, but the results are better. If you are in a hurry, choose Fast.

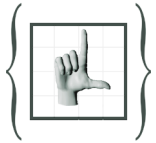
In addition to the Preset and Smooth render commands. Poser can also generate a fast anti-aliased image of the Document window using the Anti-Alias Document command.

Smooth Render.

Smooth Render does not apply any Bump or Texture maps during rendering. This is the fastest way to see your figure fully rendered.

Fig. 8—A Smooth rendering of the Poser 1.0 figure.





Preset Detail Render.

Preset Detail Render applies the default Texture and Bump maps for this figure, assuming any are assigned.

Fig. 9—A Preset Detail rendering of the Poser 1.0 figure.



Anti-alias Document Render

Anti-alias Document render creates an anti-aliased image from the Document window. The image is created using the current display style and lighting. When you click the Document window, the anti-aliased image is replaced by the current display style.

RENDERING AN ANIMATION.

Making a movie renders the Poser animation as a QuickTime or AVI movie file. Poser renders each frame of the animation to a frame in the output movie.

Typically, you'll make the movie several times to check smoothness and continuity. Each time, you'll go back to your animation file and improve settings in key frames. You can trash these test movies shortly after viewing them.

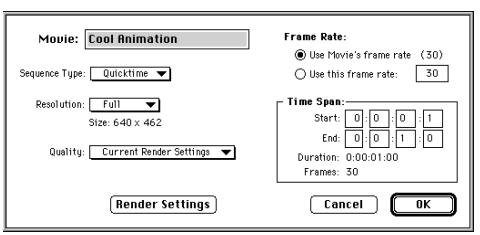
Finally, when you're satisfied with the entire animation, you'll make the movie at its full resolution and render settings. This is the final product that you'll save and open in a post-production program.

The figures in the final movie are masked in each frame. This makes it easy to composite the movie with other images.

USING THE MAKE MOVIE DIALOG.

The Make Movie dialog contains all the controls you'll need to set and render an animation.

Fig. 10—Set your movie options in the Make Movie dialog.



To make a movie:

1. Make sure the current camera is the one for which the animation was created.
2. Choose **Animation menu> Make Movie**.
3. Type a name for the movie.

If you are saving to numbered files, Poser automatically appends 4-digit numbering to the file name.

4. Click the Sequence Type pop-up and choose a format for the output movie.
   - For viewing, you'll want to use QuickTime or AVI. These formats are also suitable for saving your movie for other applications.
   - For exporting to a motion graphics program, you might want to use numbered PICT (Macintosh), BMP or TIF files (Windows). This type of output allows you to save your animations without any loss of data.
5. Click the Resolution pop-up and choose a resolution.

   Choose Full, Half, or Quarter resolution. You might use a lower resolution, which renders faster, for test movies.

   Remember, you set the dimensions of the full sized frame in the Animation Setup dialog.
6. Click the Quality pop-up and set the level of display detail.

   You can choose between the current display settings and the render settings. Render settings include Surface Material and the surface detail settings of the Render Options dialog.

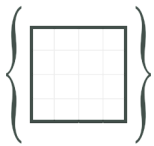
   If you want to use the render settings, you should verify that they are set as you want them before making the movie. Some options, like anti-aliasing, add to the rendering time.
7. Enable a Frame rate option to choose whether you want to use the frame rate you set in the Animation Setup dialog or a new frame rate.

   You might use a lower frame rate, which renders faster, for test movies. Frame Rate does not apply to numbered files.
8. Enter the Start and End time of your rendered animation. This sets the range of frames that rendered as the final movie.

   Poser displays the number of frames and duration of your selection.

   Usually, you'll use the entire set of frames. In some cases, though, you might select a subset of frames to check a particular motion.

   The Time Span display uses the standard SMTPE time code format (Hours: Minutes: Seconds: Frames).
9. Click OK to start the rendering. A Save dialog appears.
10. Choose a save location. If you're saving to numbered files, you might want to create a special folder to contain them.



11. Click Save to proceed.

    If you are saving to numbered files, the rendering begins.

    If QuickTime or AVI is the selected sequence type, Poser displays the QuickTime Compression or MS Video Compression options dialog.
12. Choose compression options and click OK. This might take a little while.

    Poser will render a frame and display it in the QuickTime dialog so you can visually check compression quality.

    For more information about QuickTime and AVI movie compression options, consult your operating system's User Guide.

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