Welcome to Ray Dream Studio 5

Welcome to Ray Dream Studio™ 5, the leading 3D program for desktop artists and animators, Web designers, and multimedia producers. Ray Dream Studio 5 is ideal for creating 3D graphics for magazines, ads, or virtually any illustration that would benefit from the powerful 3D impact of realistic perspective and shading.

Ray Dream Studio's powerful animation features let you create professional quality animations for video and multimedia. With Ray Dream Studio's key-event and timeline-based animation, you can produce anything from flying logos to character animations.

Ray Dream Studio 5 can also be an invaluable tool for interactive multimedia. It support for low-polygon modeling and popular formats like GIF, JPEG, VRML and Real VR ™.

Your Ray Dream Studio 5, package includes:

- The Ray Dream Studio CD-ROM
- The Ray Dream Studio 5 User Guide
- The Ray Dream Studio Quick Reference Card
- Your Ray Dream Studio 5 serial number

- A Fractal Design Software Registration Card

If you are missing any of these items, please contact your Ray Dream Studio 5 dealer or distributor, or contact Fractal Design Customer Service at (800) 846-0111.

About your User Guide

This manual provides all the information you need to get the most out of Ray Dream Studio 5. It will help you learn the application and serve as a reference as you attempt more sophisticated procedures and effects.

This user 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 Ray Dream Studio 5 is to read Chapter 4, "Ray Dream Studio 5 Basics,"and then complete Chapter 5, "Tutorial." The tutorial leads you through the process of creating illustrations and animations in Ray Dream Studio and also explains some of the important concepts you'll need to know to model and animate in 3D.

After you complete the tutorial, open a new file and start building your own scene. Take advantage of Ray Dream Studio 5's Scene Wizard and the Modeling Wizard™. Use the Scene Wizard as a quick way to set up your indoor or outdoor scene with the appropriate lighting and background, and use the Modeling Wizard to build objects.

You may also want to review Appendix C, "Technical Tips," which provides answers to many commonly asked questions.

Computer graphics and three-dimensional modeling use special terms that are usually explained where they are introduced. In addition, Appendix B, "Glossary," provides concise definitions of a number of terms.

Conventions

The Ray Dream Studio 5 User 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. Screenshots usually alternate between the Macintosh and Windows versions. The Ray Dream Studio 5 interface for both 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 rule of the `menu name▸ menu item`. The

convention to a palette follows the rule of the `palette name: subpalette name` or `palette item`. 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 the **Alt** key.

Getting Help

Ray Dream Studio offers a few ways to get help. From within Ray Dream Studio 5, you can access Ray Dream Studio's on-line help. You may also connect to the Fractal Design Web site.

If you're connected to the internet via a dedicated line or modem connection, Ray Dream Studio's Internet toolbar offers and easy way to access the Web sites of Fractal Design and selected third-party partners.

On the Fractal Web site, you'll find technical support, software updates, the latest Ray Dream Studio news and information on Ray Dream Studio extensions.

You can also register your copy of Ray Dream Studio 5 online.

Connecting to the Web Site

To visit the Fractal Design Web site:

Click the **Goto Fractal Online** button on the **Internet** toolbar.

If the toolbar is not visible choose **View menu▶ Toolbars** and enable the **Internet** option.

To visit a third-party Web site:

Click the appropriate button on the **Internet** toolbar.

If the toolbar is not visible choose **View menu▶ Toolbars** and enable the **Internet** option.

On-Line Help

Detailed on-line help can be accessed from within Ray Dream Studio, using the Help menu. The help file contains a wealth of information from the Ray Dream Studio User Guide. With the Ray Dream Studio Help system, you can do keyword searches, and set bookmarks.

Using Macintosh Help

To use Ray Dream's help on the Macintosh:

1. Choose **Help menu▶ Ray Dream Studio Help** to display the help dialog.

2. Use the **Contents** button to view the table of contents, the first page of the file. Use the underlined hypertext to jump to a topic.

3. Use the **Go Back** button to retrace your steps. Use the **History** button to return to any previously-viewed screen.

4. The **Search** button lets you search by keyword or topic.

5. Drag a sticky note from the pad onto a specific page. You can type your own note on the sticky note.

Using Windows Help

To use Ray Dream's help in Windows:

1. Choose **Help men▶ Contents** to display the Ray Dream Studio Help contents.

2. Use the **Contents** tab to view the table of contents. Select a "book" icon and then click **Open** to see the topics available. To view a topic, select it and click **Display**.

3 Use the **Help Topics** button to return to the table of contents. Use the **Back** button to retrace your steps.

4 The **Index** tab lets you search by keyword or topic.

Using Ray Dream Studio Tool Tips

On Windows, Tool Tips are displayed by default whenever you rest your cursor over an interface element.

On the Macintosh, Tool Tips are provided by Balloon Help.

To turn off Tool Tips (Windows):

1 Choose **File menu** ▸**Preferences.**

2 Choose **General** from the popup.

3 Disable the **Show Tooltips/Help Balloons** option.

To turn off Tool Tips (Macintosh):

Choose **Help menu**▸ **Show Balloons**.

What's New in Ray Dream Studio 5

The new Ray Dream Studio 5 has many new tools, features and improvements. For those upgrading, the following overview will provide a head start on locating, learning, and taking advantage of these additions.

Properties and Browser Palettes

One of the biggest changes in Ray Dream Studio 5 is the new compact user interface. The new **Properties** palette displays the controls and data for any object you select. As you select different scene elements, the palette's controls change.

To learn more about the **Properties** palette refer to "Properties Palette" on page 10.

The **Browser** palette acts like warehouse of all the items you can use to create a scene in Ray Dream. You can use the **Browser** palette to store Objects, Shaders, Deformers, Behaviors, Lights, Cameras and more.

To learn more about the **Browser** refer to "Using the Browser Palette" on page 28.

Physically-Based Behaviors

The new **Physically-Based Behaviors** let you create incredibly realistic animations. The behaviors automatically simulate natural forces like gravity, wind, and friction. With these new behaviors you can shoot a bullet out of gun or drop a ball down a flight of stairs.

To learn more about **Physically-Based Behaviors** refer to "Physical Forces" on page 318.

Mesh Form Modeler

The new **Mesh Form** modeler adds a new way of creating 3D objects to Ray Dream Studio. The new modeler lets you create polymesh objects. Objects are created by adjusting the position of vertices to change the object's shape. This way of modeling is similar to creating an object out of clay or some other malleable medium.

It also provides precise control over intricate details, for unprecedented modeling power.

To learn more about the **Mesh Form** modeler, refer to "Mesh Form Modeling" on page 137.

Environmental Primitives

The new environmental primitives let you quickly create natural objects like clouds, fog, fire and fountains.

To learn more about environmental primitives, refer to "Creating Environmental Primitives" on page 99.

Render Filters

Ray Dream Studio now includes a series of render filters that let you add some spectacular lighting and camera effects to your scene. Some of the effects you can add are: Depth of Field, 3D Light Cones, Lens Flares, and Stars.

To learn more about the new render filters, refer to "Render Filters" on page 349.

New Deformers

There are several new **Deformers** included in Ray Dream Studio that you can apply to your objects. This new set of **Deformers** let you create amazing new effects.

To learn more about the new **Deformers**, refer to "Deformers" on page 171.

Natural Media Renderer

The **Natural Media** renderer expands the stylistic range of Ray Dream Studio beyond photorealism. This new renderer lets you create 3D images in a number of hand-drawn styles.

To learn more about the Natural Media renderer, refer to "The Natural-Media Renderer" on page 343.

Collision Detection

Collision Detection lets you turn all the objects in your scene into physical solids. When this feature is active, objects collide instead of passing through each other. This feature can be extremely useful when you're trying to align objects directly in the **Perspective** window.

To learn more about **Collision Detection**, refer to "Collision Detection" on page 236.

Direct Manipulation Controls

The **Direct Manipulation** controls let you adjust the properties of many scene elements directly on screen. When you click an element that has **Direct Manipulation** controls, its control handles appear. As you drag these handles, you change the elements properties.

There are several scene elements that have direct manipulation controls:

- For Light controls, refer to "Controlling a Spot Light Directly" on page 277.

- For Camera controls, refer to "Controlling a Camera Directly" on page 288.

- For Link controls, refer to "Controlling Links Directly" on page 264.

- For Deformer controls refer to "Controlling a Deformer Directly" on page 172.

Formula Editor

The **Formula Editor** lets you use mathematical formulas to customize many of the features of Ray Dream Studio. You can create formula objects, deformers, links, shaders and others.

To learn more about creating Formula objects, refer to "Creating Formula Objects" on page 106.

Since formula editing is such a technical process, the **Formula Editor** is covered separately. Refer to the "Using Formulas in Ray Dream Studio 5" PDF on the Ray Dream Studio 5 CD.

And More

In addition to the new features listed here, Ray Dream Studio features dozens of user-requested improvements, and a wide variety of new content.

Getting Technical Support

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

Phone: 408 430-4200 between the hours of 8am and 5pm, Pacific Standard Time

FAX: 408 438-9672

www: http://www.fractal.com To automatically launch your Web Browser and go to Fractal's Web site, choose Windows menu▸ Goto Fractal Online or click the Goto Fractal Online button on the **Internet** toolbar.

Mail: Technical Support c/o Fractal Design Corporation P.O. Box 66959 Scotts Valley, CA 95067

Who is Fractal Design

Fractal Design is a major force in multi-platform graphic software, developing and marketing next generation products that unite traditional art and design techniques with digital technology. Fractal Design products are engineered to facilitate and extend the range of creativity for all design professionals and graphic hobbyists working on desktop computers.

Fractal Design's 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 Fractal Design products, see our World Wide Web site on the Internet:

www: http://www.fractal.com

Supplementary Products

The following companies have contributed to this software package:

Acuris, Inc.

Included with your Ray Dream Studio 5 software are 3D models from Acuris, Inc. All 3D models are copyright Acuris. For more information on the 3D models that Acuris has to offer, contact Acuris at:

1313 Lord Sterling Road Washington Crossing, PA 18977

Phone: (215) 493-4302

Toll-Free: (800) OK-ACRUS

www: http://www.acuris.com

ArtBeats

Included with your Ray Dream Studio 5 software are textures from ArtBeats. All images are copyright ArtBeats. For more information, contact ArtBeats:

PO Box 709 Myrtle Creek, OR 97457

Phone: (541) 863-4429

Toll-Free: (800) 444-9392

Fax: (541) 863-4547

www: http://www.artbeats.com

Form and Function

Included with your Ray Dream Studio 5 software are textures from Form and Function. All images are copyright Form and Function. For more information, contact Form and Function:

1595 17th Avenue
San Francisco, CA 94122

Phone: (415) 664-4010

KETIV Technologies, Inc.

Included with your Ray Dream Studio 5 software are 50 textures from Just Textures™. You can use the textures royalty free in your rendering work. Just Textures is a library with 1,250 royalty free textures on CD-ROM for use in Ray Dream Studio 5. Over 900 textures are seamlessly tileable and repeat in all directions when wrapped onto 3D objects.

The tileable textures include brick, carpets, clouds, fabric, fences, floor tiles, flower fields, food, granite, ground, laminates, marbles, metals, plants, rock, roof tiling, soil, stone, walls, wallpapers, water, wood and much more. The remaining 250 textures show cut-out objects than can be rendered in any 3D scene. The object textures include animals, bush, cars, people, plants, rugs, trees, and much more. **Just Textures** is a product of KETIV

Technologies, Inc. and Modern Medium Inc. For more information contact KETIV Technologies, Inc.:

KETIV Technologies, Inc.
6601 NE 78th Court, Suite A-8
Portland, OR 97218

Phone: (503) 252-3230

Fax: (503) 252-3668

Toll-Free: (800) 458-0690

www: http://www.ketiv.com

MetaTools

Included with your Ray Dream Studio 5 software are textures created with MetaTools TextureScape™. This Eddy-award winning program allows you to create an infinite variety of textures for print, multimedia, and desktop video. TextureScape not only allows you to create your own textures, it also comes with a CD-ROM filled with over 800 textures for your use.

MetaTools
6303 Carpinteria Ave.
Carpinteria, CA 93013

Phone: (805) 566-6200

Fax: (805) 566-6367

Toll-Free: (800) 472-9025

www: http://www.metatools.com

Viewpoint DataLabs

Included with your Ray Dream Studio 5 software are models from Viewpoint DataLabs International, Inc. All 3D Datasets are copyright Viewpoint DataLabs. For more information on the over 1000 3D Datasets that Viewpoint has to offer, contact Viewpoint DataLabs:

625 South State St.
Orem, UT 84058

Phone: (801) 229-3000

Fax: (801) 229-3300

Toll-Free: (800) DATASET (328-2738)

www: http://www.viewpoint.com

PhotoDisc

Included with Ray Dream Studio 5 is a sample of professional images from PhotoDisc, the Leader in Digital Stock Photography!

PhotoDisc award winning Photos give you a powerful edge for conveying your message. The images are part of the carefully edited PhotoDisc collection of stock photographs selected for advertising, creative design and corporate communications. Each of the photographs is carefully scanned with the highest quality drum scanning

technology, color-corrected and stored in full-color for dazzling impact. You are licensed to use the photographs for all of your design, advertising and multimedia needs, with no additional fees.

PhotoDisc Customer Service

Phone: (206)-441-9355 (International)

Fax: (206)-441-4961

Toll-Free: (800)-528-3472 (8am-6pm PST)

www: http://www.photodisc.com

Royalty free and color correct for immediate use.