

Chapter 1

Introduction

Basic information regarding 3D World and 3D World plug-ins, including installation instructions and technical support details.

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◆ Introduction

Thank you for choosing 3D World, the affordable, easy to use alternative to today's complex 3D applications for the Macintosh®. Designed for novices as well as professionals, 3D World provides the tools you need to create professional 3D designs, animations and QuickTime® movies.

In addition to a core application suitable for viewing and manipulating existing 3D files, 3D World offers a plug-in architecture that makes it easy to add tools and extend the program's functionality. Plug-ins can be palettes, tools, menu items or idlers and can be loaded as the application is launched or 'hot' loaded while 3D World is running. Information about the plug-ins available is provided in this manual.

Additional rendering options, such as transparent surfaces and interactive constructive solid geometries, are available through supported QuickDraw 3D hardware renderers, and plug-in renderers from third party companies can be accessed by 3D World if they are installed in the Extensions folder. For added convenience, the 3D World product also includes the Librarian utility for cataloging and retrieving frequently used 3D objects, textures, and sounds.

Take a look at the extra items on the CD which are not installed on your hard drive during the installation procedure. Use the sample textures, libraries and 3D files to quickly and easily create 3D documents, view the movie files to see some simple examples of animations created in 3D World, and play the demo movies for a brief explanation of some 3D World features. Plus, demo copies of PhotoFix, MacInteriors, MacDraft, MacPalette and MacPlot drivers are included for those who are interested in other Microspot products.

◆ Requirements

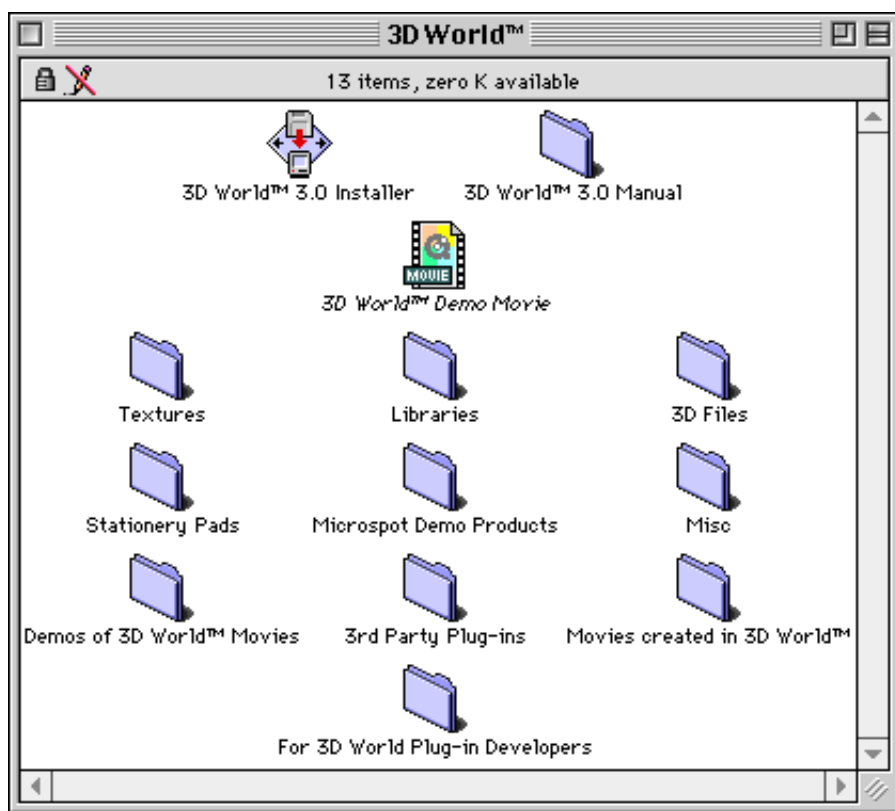
3D World minimally requires:

- Power Macintosh™ with CD drive
- System 7.1.2 or later
- QuickDraw™ 3D 1.0.2 or later (The version of QuickDraw 3D available at release date is included.)
- 16 Mb RAM to install QuickDraw 3D
- Drag & Drop Manager (built into System 7.5 and later)

◆ Installation

Before installing 3D World, we recommend that you turn off any virus protection software.

1. Insert the CD into the CD drive and double click on the CD icon on the desktop to display its contents.

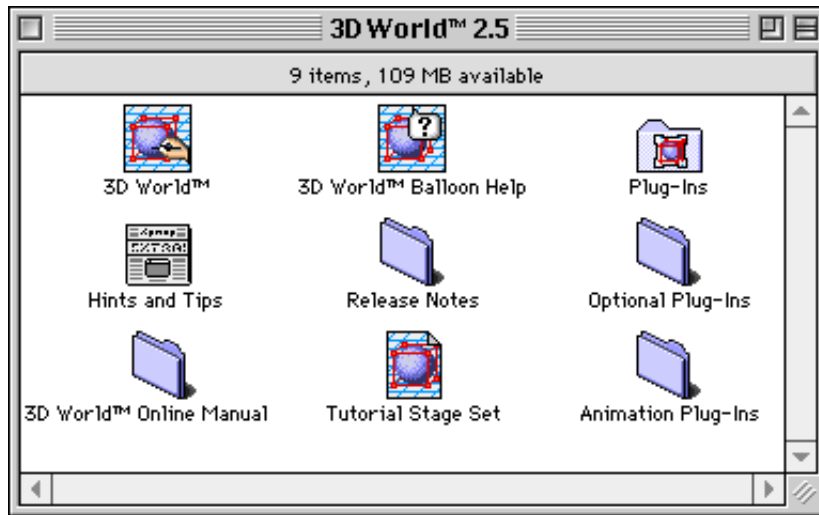


2. Double-click on the 3D World Installer icon:



Follow the instructions in the dialogs that display to install the complete 3D World application, plug-ins, Librarian application and QuickDraw 3D software. After installation you will need to restart your Mac.

The QuickDraw 3D software will be installed in the appropriate places on your hard drive. The Librarian application and its associated files will be placed in a folder called Librarian, and the remaining items will be placed in a folder called 3D World 3.0, on your hard drive:



◆ Plug-ins

3D World's plug-in architecture allows plug-ins to be used to add functionality to the application in many different ways. Plug-ins may be available in more than one category:

Import Plug-ins: Plug-in functions accessed via the Import submenu in the File menu.

DXF

MacInteriors

VRML 1.0 Format

Extrude Bitmap

Relief

Export Plug-ins: Plug-in functions accessed via the Export submenu in the File menu.

3D Movie	DXF File	VRML 1.0 Format
3DMF Text	Picture	

Menu Plug-ins: Plug-in functions accessed via the Plug-in menu in the application menu bar.

3D Controller	Delete Attributes	Save Textures
Add UV	Draw Direct	Scale Object
Animate Camera	Earthquake	Size Window
Animate Color	Floors And Ceilings	Surface Area
Animate Textures	Gravity	Spin
Array Duplicate	Interactive	Timer
Bomb	Make Wireframe	To Interactive
Color	Material	Turbocharge
Convert To Mesh	Rain	Use Conics
Counter	Random Color	

Plug-in Palettes: Palettes provide a range of options for a specific feature. Display a palette by selecting its name from the Palettes menu.

3D Controller	Construct	Nudge
Alignment	CSG	Picker
Animation Player	Find	RAM
Animation Tweener	Gradient	Renderer Options
Axis	Group Special	Section
Bevel	Layers	Subdivision
Camera	Lights	Textures
Color Palette	NaviCam	Tripod

Idler Plug-ins: Run constantly once loaded.

Draw Direct Idler	PhotoLink	Status
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Plug-in Geometries: Plug-in tools to create shapes. Accessed from the Tool Palette.

3D Text	Lathe	Pyramid
4 Walls	Math Graph	Regular Polygon
Cone	Mountain	Relief
Cube	Mountains	Sound Marker
Cylinder	Multi Walls	Sphere
Dimension	Pie Chart	Spot Lights
Gears	Pipes	Text Marker
Irregular Polygon	Point Lights	Torus

Plug-in Modifiers: Plug-in tools to modify objects. Accessed from the Tool Palette.

3D Paint	Edit NURB	Random Color
Add UV	Edit Path	Scale Object
Animate Color	Edit Vertex	Shear
Animate Object	Gravity	Spin
Animate Textures	Internet	Sun Direction
Bomb	Light Director	Teleport
Color	Make Wireframe	Triangulate
Construct	Material	VR
Delete Attributes	Orbit	Walkthrough
Distance	Pencil	

◆ Installing Plug-ins

3D World's plug-in architecture that makes it easy to add tools to 'custom build' the application and extend the program's functionality. Plug-ins can be palettes, tools, menu items or idlers.

Plug-ins can be loaded when the application starts up by placing them in the Plug-ins folder inside the 3D World 3.0 Folder. Plug-ins can also be 'hot' loaded as needed, individually or in groups, while the application is running.

To make the best use of available memory it is recommended that the plug-ins always used with 3D World are placed in the Plug-ins folder and loaded when the application is launched. Additional plug-ins can then be loaded as required, while the application is running.

When Import, Export, Idler, Menu Command and Palette plug-ins are loaded they appear in the appropriate locations in the application menus. Palettes loaded when 3D World is launched will be opened if they were open last time the application was closed. Palettes loaded when the application is running will open automatically. Plug-in Geometries and Modifiers will be added to the Tools palette, which grows dynamically to accommodate them. *See [Configuring The Tools Palette on page F-2 for more details.](#)*

Brief information about 3D World plug-ins is available via the Apple Menu. Select About Plug-ins from the Apple Menu and a popup menu lists the installed plug-ins. Select the name of a plug-in to display a dialog containing information about that plug-in.

Loading Plug-ins when 3D World is Launched

Place any plug-ins to be loaded when 3D World is launched inside the Plug-ins folder. Plug-ins can be grouped inside folders and the folders placed in the plug-ins folder if required. This allows you to group plug-ins together in folders as per your requirements, and load or unload them as a group by dragging the folder in or out of the Plug-ins folder.

Note: Hold down the Shift key when launching 3D World to stop all plug-ins from loading.

Note: Plug-in renderers from third party companies can be accessed by 3D World if they are installed in the Extensions folder.

Loading Plug-ins while 3D World is Running

Plug-ins not loaded when 3D World is launched can be loaded, while the application is running, in the following ways:

- Double click on a plug-in icon in the Finder.
- Drag a plug-in icon into the 3D World Tool palette.
- Drag a plug-in icon into the main 3DWorld document window.
- Drag a folder containing plug-ins into the Tool palette. All the plug-ins in the folder will be loaded.
- Drag a folder containing plug-ins into the main 3D World window. All the plug-ins in the folder will be loaded.

Note: When a plug-in, for example the Cube tool, is dragged and dropped into the Tool palette or document window, a cube is not added to the document, the cube tool is just added to the Tool palette.

◆ Working Efficiently

If your computer has over 32 Mb of memory, you may want to increase the amount of RAM allocated to both 3D World and Librarian by 1024K (1Mb). This will allow you to drag and drop large sounds, textures, and background pictures into your documents.

Note: Apple's QuickDraw 3D uses available free system memory to perform its functions. Therefore, you will need at least 1 Mb of free memory after 3D World has been launched. To find out how much memory is available, click on the desktop, pull down the Apple menu and select About This Macintosh. The largest unused block section of this dialog represents the amount of free memory.

◆ Help

Balloon Help is available for menu items. Select Show Balloons in the Help Menu, and move the cursor over items in the 3D World menus to display balloons containing help messages. Select Hide Balloons if you do not wish the help information to display.

If you are using ATI QuickDraw 3D Accelerator Hardware, see the following section for help dealing with any problems.

3D World Online Manual

The 3D World Online manual is included on the 3D World CD in pdf format. It will be placed in the 3D World 3.0 folder during the installation process. To access the online manual, launch 3D World and select 3D World Online manual from the help menu. A table of contents will display, allowing you to easily navigate through the pdf documents making up the complete manual.

◆ **ATI QuickDraw 3D Accelerator Hardware**

Many of the most recent Macintosh computers, such as the 6500 and G3 series, include ATI QuickDraw 3D accelerator hardware chips on the computer's motherboard. The ATI QuickDraw 3D Acceleration hardware can also be purchased in the form of a PCI card to use in a PCI Macintosh computer. These ATI hardware products include XClaim 3D, XClaim VR, and Rage Pro.

Troubleshooting

QuickDraw 3D hardware acceleration stops due to insufficient VRAM

The ATI QuickDraw 3D accelerator hardware also runs the video, and the hardware's capabilities are determined by the amount of VRAM available. If the hardware runs out of VRAM, QuickDraw 3D hardware acceleration will stop working and QuickDraw 3D will revert automatically to software rendering.

To increase the amount of VRAM available for QuickDraw 3D acceleration try the following:

- Reduce the size of the largest 3D World QuickDraw 3D window. If you are working with multiple windows open, the amount of VRAM used is determined by the largest window, but smaller windows may still be accelerated.
- Reduce the monitor color depth to thousands of colors.
- Reduce the monitor resolution towards 640 x 480.
- Install more VRAM

Textures do not display

If many textures are used in a document, there may not enough VRAM to store them. In this case the textures will not be displayed when using hardware acceleration.

Try the following solutions:

- Increase the texture compression setting in the ATI control panel.
- Increase the amount of VRAM available using one of the methods listed above.
- Turn off hardware acceleration in the Renderer Options palette. Software rendering uses real RAM to hold the textures.

Transparencies do not display

Transparency is a function of hardware acceleration and will not be seen if hardware acceleration is not running.

Try the following solutions:

- Check that hardware acceleration is turned on in the Renderer Options palette.
- Increase the amount of VRAM available using one of the methods listed above.

◆ Technical Support

You must register your product in order to receive technical support, as well as upgrade and new product information. In North America, South America and the Far East, please contact:

Microspot USA, Inc.
12380 Saratoga-Sunnyvale Road, Suite 6
Saratoga, CA 95070
USA

Technical Support: (408) 257-4000; International: + 1-408-257-4000
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