

DESIGN IT! 3-D

Chapter 1: Introduction

Chapter 2: Creating With Design It! 3-D

Chapter 3: The Menus

Appendix A

Installation

Windows Installation

This CD contains a Master Installer program that provides an easy and convenient way to install the programs on the CD. Follow these instructions to use the Master Installer.

- 1) Insert the program CD into the CD-ROM drive.
- 2) From the Windows Program Manager, click once in the **File** menu option to display the File menu and select *Run*.
- 3) In the Run dialog box, type **D:\INSTLL.EXE** (note the spelling, no "A"), and press Enter. If your CD-ROM drive letter is not **D**, substitute accordingly.
- 4) The Master Installer main screen is displayed and you are presented with a list of products to choose from. Make your selections from the list and click on Install to continue. Master Installer will launch the individual installers for each of the products selected, and return to the Master Installer screen. Follow the on-screen instructions to complete the installation for each program. Please note that some installations may restart your Windows session.
If you encounter problems installing several programs at once, quit the Master Installer program, and restart it. Install one program at a time.

Macintosh Installation

Design It! 3-D™ is compacted with a self-running installer. If you are familiar with basic Macintosh operating procedures, you are ready to install **Design It! 3-D** by following these steps:

- 1 Insert the CD-ROM into the CD drive and double-click on the disk icon.
- 2 Double-click on the **Design It! 3-D** disk icon to open it and double-click on the *Installer* icon.
- 3 Click on the Continue button and select the installation options in the dialog box. The default installation is the **Design It! 3-D** application, and all Galleries and Models (Scenes).
- 4 When all the installation options have been selected, click on the Install button, the program is extracted onto the user's hard disk.
- 5 After the program has extracted, double-click on the **Design It! 3-D** icon to start the program.

To begin using **Design It! 3-D** right away, read the *Creating 3-D Models* chapter.

Introduction

Design It! 3-D is a unique 3-D modeling program that features a “drag-and-drop” approach to creating your own worlds. You don’t have to build anything from scratch; to construct complex objects and structures, just drag basic 3-D shapes from the program’s object galleries and drop them into a 2-D design window. You may edit an object’s shape, size and color; and surface features (windows and doors, for example), and combine the object with other objects. Any addition or change is rendered in a companion 3-D walk window where you can roam through and explore your model by navigating with your mouse.

The program features one cubic mile of “cyberspace” in which designs may be created. Also included are numerous galleries of 2-D surface features and textures, and 3-D objects that can be added to your **Design It! 3-D** worlds. Additionally, pre-built scenes that illustrate the program’s modeling, texture mapping and real-time “walk through” capabilities are provided.

Macintosh and Windows Documentation

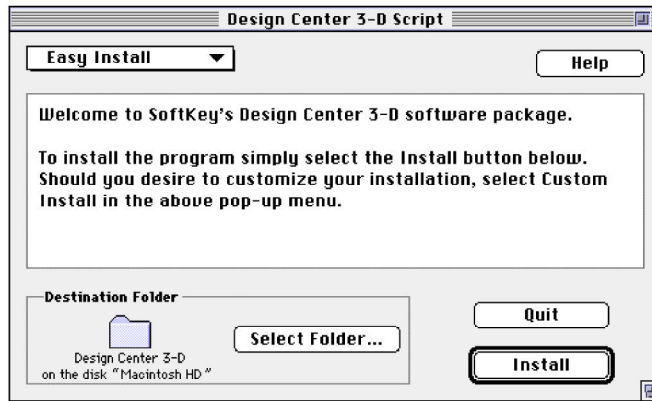
Design It! 3-D should be successfully installed on your computer before you begin modeling. If you have installation questions, please refer to the *Installation* information on the following two pages.

This document is designed for *both* Macintosh and Windows users with basic operating knowledge of one platform or the other. Most of the features of **Design It! 3-D** are identical in both the Macintosh and Windows versions.

Macintosh Installation

Design It! 3-D™ is compacted with a self-running installer. If you are familiar with basic Macintosh operating procedures, you are ready to install **Design It! 3-D** by following these steps:

- 1 Insert the CD-ROM into the CD drive and double-click on the disk icon.
- 2 Double-click on the **Design It! 3-D** disk icon to open it and double-click on the *Installer* icon.
- 3 Click on the Continue button and select the installation options in the dialog box. The default installation is the **Design It! 3-D** application, and all Galleries and Models (Scenes).
- 4 When all the installation options have been selected, click on the Install button, the program is extracted onto the user's hard disk.



The Macintosh Installation dialog box

- 5 After the program has extracted, double-click on the **Design It! 3-D** icon to start the program.

To begin using **Design It! 3-D** right away, read the *Creating 3-D Models* chapter.

Windows Installation

If Windows version 3.1 or later is successfully installed on your computer and you are familiar with basic Windows functions and features, your **Design It! 3-D™** application is ready to install by following these steps:

Please follow the instructions in the front of this document entitled

"Installing the Programs from the CD"



The Welcome dialog

To begin using **Design It! 3-D** right away, read the *Creating 3-D Models* chapter and work through the *Tutorial* chapter in this guide.

Contacting Technical Support

With your registration of this product you are entitled to technical support and to receive the SoftKey Catalog enabling you to purchase other SoftKey products at a discounted price.

Simply call 1-800-845-8692 to register.

If you have questions about the program, consult this manual and the program's on-line Help system. If you're still experiencing difficulty, gather the following information:

- The name and version of the program you have a question about.
- Amount of RAM in your system.
- A description of your problem, including any error messages.
- A list of the steps required to replicate the problem.

Technical Support may be contacted at:

(770) 428-0008
9:00 am to 8:00 pm Monday through Friday
(Eastern Standard Time)

Send correspondence to:

SoftKey International Technical Support
450 Franklin Road
Suite 100
Marietta, GA 30067

Send FAXES to:

ATTN: Technical Support
(770) 427-1150

Overview

Document Windows

There are three windows in **Design It! 3-D**: Gallery Window, Walk View Window and Design View Window. Below are descriptions of these windows and a discussion of their functions.

Gallery Window

The Gallery Window displays the 3-D library objects that you drag and drop to create your virtual environment. The gallery of objects can be changed by clicking the title button near the top of the window and selecting another gallery name.

Design View

The Design View Window is the 2-D plane where you drag and drop the Gallery Objects. Also you can resize and texturize the objects to get the desired view in the 3-D Walk View Window.

Walk View

The Walk View Window is where you see and interact with the 3-D virtual environment that you create. Gallery objects that you drag and drop into the Design View are displayed in 3-D in the Walk View. You can navigate in, around or through these objects using the navigation buttons or the mouse cursor.

Message Bar

A Message Bar is displayed at the bottom of your computer screen. Within the Message Bar, you will see information associated with the operations that you perform. For example, if you select a particular tool in the Tool Bar, the Message Bar will display the tool's purpose and how the tool is used.

Memory Indicator

There is a memory indicator to the right of the Message Bar, at the lower right corner of your screen. It contains a colored bar that alternately shrinks and grows, displaying the amount of memory currently used by **Design It! 3-D**. If the memory used is below 75%, the bar is *blue*; if not, it is *red*.

NOTE: Macintosh users, if you are running low on memory, try quitting the application and allocating more RAM to **Design It! 3-D**.



Zoom-Out Tool

The Zoom-Out Tool decreases the *apparent scale* of the Design View. If you select the Zoom-Out Tool by clicking on it once, then point to the area that you wish to zoom away from and click, the apparent scale of the Design View will decrease by a factor of two.



Resize Object Tool

The Resize Object Tool resizes an object about its center or about a specified anchor point. Objects can be resized uniformly along all three axes or non-uniformly along a single axis.



Change View Button

The Change View Button toggles you back and forth between the Design View and Walk View.



Rotate Object Tool

The Rotate Object Tool is used to rotate an object. This tool works in Top, Front and Right Design Views, allowing rotation on more than one axis.



Color Palette Button

The Color Bar allows new colors to be selected, created and assigned to objects.

3-D Movement

Movement in the Walk View is accomplished by using the standard **Design It! 3-D** navigation cursor techniques or the Navigation buttons along the top of the Walk View Appendix A provides more detail on the different navigation modes.

Standard **Design It! 3-D** Navigation Movement through the Walk View is a response to your movement of the mouse pointer relative to the cross hair in the center of the Walk View screen.

Press the mouse button to begin movement and release the mouse button to stop.

The farther away from the cross hair that the cursor is positioned, the faster the walk speed will be.

Direction is determined by the position of the pointer relative to the cross hair.

By using a combination of the **Shift** key plus the **Option** key (Macintosh) or the **Ctrl** key (Windows) with the mouse, movements like tilting your head, sliding from side to side, or increasing and decreasing your altitude are also possible.

Navigation Buttons

The Navigation buttons are only available in the Walk View. By pointing to a Navigation button and clicking, you will move in a direction according to the button's function. If you hold down the mouse button while pointing to a Navigation button, you will move continuously. From left to right along the top of the Walk View, the Navigation buttons are: Move Forward, Move Backward, Turn Left, Turn Right, Move Up, Move Down and Home. When the Home Button is clicked, your position in the virtual environment is returned to the 0,0,5.25 ft. coordinate (about eye level). If you tilted the view, using the **Shift** key, you may level your view by pressing the level observer button.



The Navigation buttons

Walk Mode Buttons

The Walk Mode buttons are displayed to the left of the Navigation buttons along the top of the Walk View. The Walk Mode buttons determine what happens when you click with the mouse cursor in the Walk View.

The Walk Mode buttons from left to right are Walk, Select Surface and Select Object. Only one Walk Mode button can be selected at any time.



Walk button

When the Walk button is depressed, you can move freely around the **Design It! 3-D** world using either the Walk Mode Navigation buttons or the standard **Design It! 3-D** mouse navigation techniques.

NOTE: If you use either the Select Surface button or the Select Object button, you must then select the Walk button again before navigation (walking) is enabled.



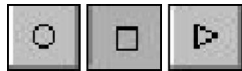
3-D Surface Selector button

The 3-D Surface Selector button allows you to quickly access a surface in the Walk View to edit; you can change the surface's color or texture, or add surface features such as doors, windows or a painting on the wall.



3-D Object Selector button

The 3-D Select Object button allows you to select an object in the 3-D Walk View and have it become highlighted and centered so that you can edit it in the 2-D Design View. This is extremely useful when you are working on a complex drawing and cannot select the correct object in the Design View because another object is blocking it. (Another way around this is to change views to the Front View or Right View, select the object, then return to the Top View to move or edit the object.)



Record and Playback Buttons

These buttons are to record a new walk path, play that walk path, and stop it whenever desired. One thing you should keep in mind is that when you press the stop button during your play session and then press the play button again it will play that walk path from the beginning. Also if you press the record button twice it will remove the old path from memory.



Observer

The Observer represents your location in the virtual environment. The Observer is represented by a circle with a line. You can move the Observer in the Design View by clicking on it and dragging it with the screen cursor. Also, you may adjust the direction of view of the Observer by holding down the Option key (Macintosh) or the Control key (Windows) then pointing to the center of the Observer and dragging in the desired direction.

Design Concepts

Containment

Every object in **Design It! 3-D** knows what objects it contains and what object contains it. Containment provides some important benefits. For example, if you move a container, all objects contained within it also move and retain their orientation to each other.

In **Design It! 3-D**, containment is an all-or-none state; an object is either fully contained within another object or it is distinct from other objects. Objects cannot overlap (but they can be joined at a common surface). It is possible to draw overlapping objects and the program does not warn you if you do this; however, the result of overlapping objects is that three-dimensional objects may appear twisted and grotesque when rendered in the Walk View.

If you drag a small object into a larger object, a state of containment will exist when the mouse pointer reaches the interior of the large object. The program indicates containment by displaying small blocks called containment markers at the vertices of the containing object. These markers will disappear when you release the mouse button.

Auto Connection

Design It! 3-D uses auto connection. Auto connection makes the adjacent surfaces of objects that you have placed against each other share the same surface attributes. For example, if you drag two objects (rooms) toward each other, the auto connection feature will attach the two parallel surfaces when they touch. Any surface feature or surface attribute can be shared between adjacent surfaces with the auto connection capability of **Design It! 3-D**.

Placement Depth

When you drag and drop an object into the Design View, it automatically drops to 0 ft. in the dimension that you cannot see. For example, if you drop an object in the Top View, you can position it anywhere in the Top View by dragging. But change it to the Front View and you will see that the object is at 0 ft. If you wanted the object to be 10 ft. off of the ground, change views to the Front View and manually drag the object up to 10 ft., using the Select Object Tool. This method is used to stack objects on top of each other (i.e. a lamp on a desk, a roof on a building). Because the Design View is two dimensional, it will be necessary at times to change views to position objects as desired.

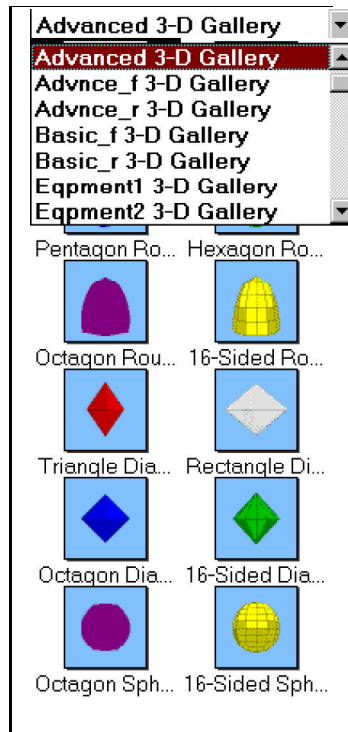
Creating 3-D Models

Opening a New File

To open a new file in **Design Center**, choose *New* under the **File** menu. If you wish to open an existing model, choose *Open* under the **File** menu and use the standard Macintosh or Windows Open dialog to select the **Design Center** file that you wish to open.

Selecting New Galleries

If you click on the Gallery Window bar, a pop-up list of the **Design Center** object galleries which are available in your main **Design Center** folder/directory will be displayed. To open a new gallery, highlight the desired gallery name and select it with the mouse.



Selecting a Gallery Object

To create a virtual environment in **Design Center**, it is necessary to first select objects to add to your world. Point to an object in the Gallery Window, click to select it.

Drag and Drop

To move the selected gallery object to the Design View, drag it with the mouse cursor from the Gallery Window to the Design View. Position the object and release the mouse button. A 2-D object outline appears in the Design View at the point where the mouse button was released.

Modifying an Object

Once an object has been dropped into the Design View, you may move it by dragging it with the mouse cursor. You may also edit the object's color, scale, rotation and surface opacity with the following tools and procedures.

Selecting an Object

Before editing an object, you must first select it. A selected object displays handles at its vertices. You may select an object in the Design View or in the Walk View.

Selecting an object in the Design View

- Click the Select Object Tool in the Tool Bar, point to the object that you wish to select and click.

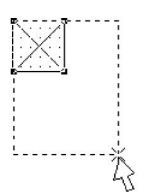
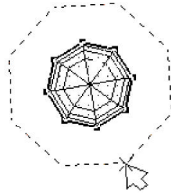
Selecting an object in the Walk View

- Click on the Select Object button in the Tool Bar at the top of the Walk View. Point to the object in the Walk View that you wish to select, then click. The object will appear in the center of the Design View and will be selected.



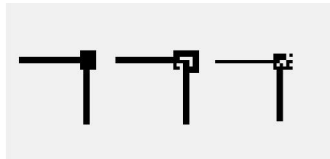
Select Object Tool

In addition to selecting objects, the Select Object Tool is also used to reshape objects. If you point with the Select Object Tool to an object handle and drag the handle, you can reshape the object.



If an object is grouped, the Select Object Tool cannot be used to reshape the grouped object. The grouped object must be ungrouped (with the *Ungroup* command under the **Edit** Menu) before the Select Object Tool can reshape it or its pieces.

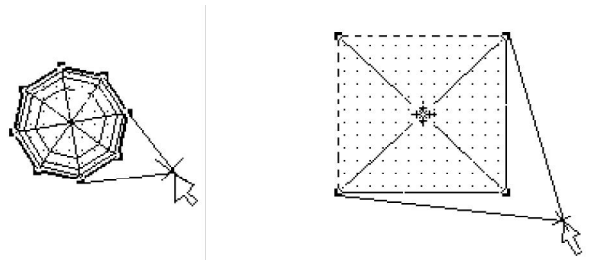
Depending on what dimension you are viewing from, in the Design View (**Top**, **Front** or **Right**), the reshaping capability of the Select Object Tool may be limited. Object handles indicate to what extent an object can be reshaped. The illustrations show the different appearances of handles and what those differences mean.



The three types of object handles

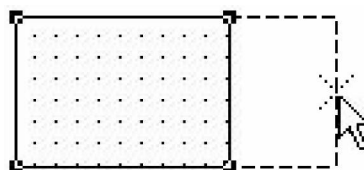
When dragging a handle, a regular object maintains its type. For example, if you drag the handle of a rectangular object, the object remains rectangular. If you drag a handle of an 8-sided polygon, the object remains an 8-sided polygon. This is true for regular-shaped objects; however, irregular-shaped object handles move individually.

If you hold down the **Option** (Macintosh) or **Ctrl** (Windows) while you drag a handle of a regular-shaped object, the object becomes irregular.



Reshaping an object

In addition to dragging a handle, you may also drag the line between two handles, depending on the type of handles. Hollow handles limit the Select Object Tool's modifying capability, and gray handles indicate a grouped object.



Reshaping an object



Resize Object Tool

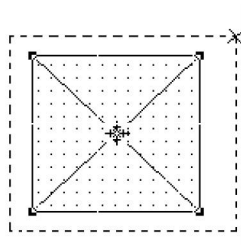
The Resize Object Tool scales or resizes an object about its center or about a specified anchor point.

Objects may be resized independently along any of the three coordinate axes (dimensions). Objects may also be resized uniformly in all dimensions (X, Y and Z) by holding down **Shift** before dragging.

When an object is resized, its contents and any surface features are resized with it. If this effect is undesirable, you may wish to use the Select Object Tool to resize or reshape the object.

Resizing an object about its center

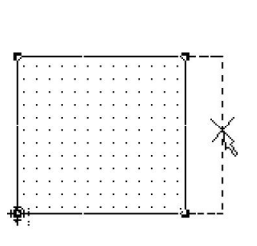
- Select the object to be scaled, select the Resize Object Tool, point to a reference point (such as a corner) and drag to the new position.



Resizing About an Object Center

Resizing an object about a specified anchor point

- Select the object, select the Resize Object Tool and point to the desired location of the anchor point. Hold down the Option key (Macintosh) or Control key (Windows) and click to establish the new anchor point. Point to a reference point and drag to a new location.



Resizing About a specified Anchor point

If you resize an object then add a surface feature to it, the surface feature will automatically resize to match the new scale of the object.

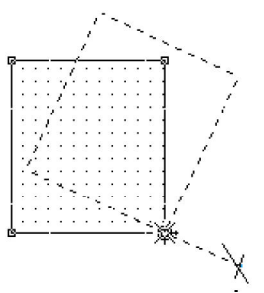


Rotate Object Tool

The Rotate Object Tool is used to rotate an object. When rotating an object, this tool works in any view (Top, Front, Right), thus allowing rotation on more than one axis.

Rotating an object

- Select the object that you want to rotate, click on the Rotate Object Tool and point to any location in the Design View to establish the center of rotation. Drag the pointer away from the center of rotation. A dotted line will appear between the pointer and the center of rotation.



Rotating an object

As you drag the pointer farther from the center of rotation, you gain finer control over the angle of rotation. Drag the pointer in an arc around the center point to rotate the object.

If Snap to Grid is selected (*see Preferences*) when you rotate the object or surface feature, the rotation snaps to 5° increments.

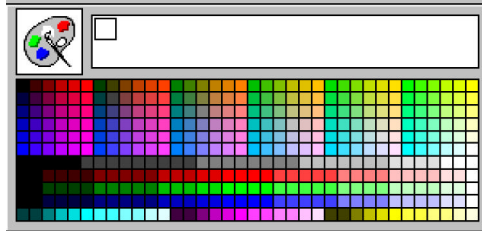
If you hold down **Shift** when you rotate the object, the rotation is constrained to 15° increments.

Contained objects are rotated with the container unless you hold down the Option key (Macintosh) or Control key (Windows) when you rotate an object. Holding the Option key (Macintosh) or Control key (Windows) rotates the container, but not the contained objects.



Color Palette Button

The Color Palette Button allows new colors to be selected, created and assigned to objects. Colors can be applied to translucent as well as opaque objects and surfaces.



Design Center (Windows) Color Selector

Changing the color of an existing object

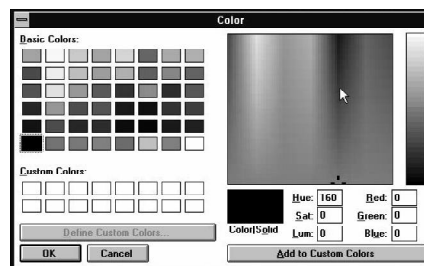
- Select the object and click the Color Palette Button to open the color selector and pick the required color for the object

Each time that you select a new color, the color appears as a small square across the top of the Color Selector. This section of the Color Selector is the Color Palette. If you have selected several colors since you started the program, each of those colors will be displayed as a small square in the Color Palette. This helps you keep color selections consistent. By recording the last 30 colors that you selected, the Color Palette allows you to select the same shade of color for the same types of objects. For example, you might select a light shade of blue from the Color Selector and apply that color to a glass window. Every time that you create another glass window, you will be able to give it exactly the same shade of blue by selecting from the Color Palette, rather than from the Color Selector.

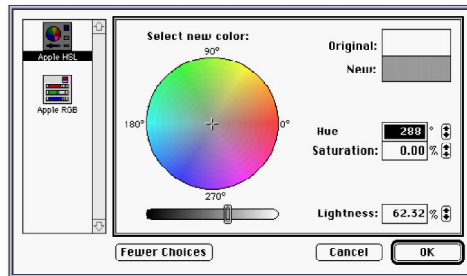
If the colors in the Color Selector do not contain the desired color, click the mouse to the icon in the upper left corner of the Color Selector. This displays the standard Macintosh Color Wheel or Windows Color Selector.

Selecting a new color from the Macintosh Color Wheel or Windows Color Selector

- Point to a shade of color in the Color Wheel/Selector and click. On the right of the Color Wheel/Selector dialog is a brightness control. You may slide the brightness control up or down to change the shade of a color, thus creating a custom color. (See your system documentation for more about working with your system and color.)



Windows Color Selector



Macintosh Color Selector



Selecting an Object Surface

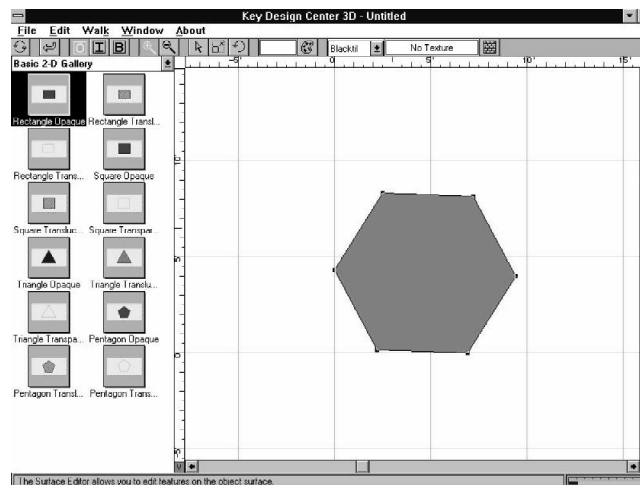
Before editing an object surface, you must select it. Like an object, a selected object surface displays handles at its vertices. You may select an object in the Design View or in the Walk View.

Selecting an object surface in the Design View

- Click on the Surface Editor Tool, then click on the surface that you wish to select. You may select a surface that is shown in your view or you may select a line representing a surface that is perpendicular to your view.

Selecting an object surface in the Walk View

- Click on the 3-D Select Surface button, then point to the 3-D surface in the Walk View and click.



A selected surface in the Surface Editor

A selected surface is displayed in the Design View and is aligned flat on your view. When the surface is displayed, you will notice that the title bar of the window has changed and the Tool Bar has also changed. This set of tools and window is called the Surface Editor.



Surface Editor

The Surface Editor appears in the Design View when a surface is selected and it allows you to edit the selected surface. Many of the tools in the Tool Bar for the Surface Editor are the same as those available in the Design View. The tools exclusive to the Surface Editor are:



Placement Buttons

O is the outside surface, **I** is the inside surface, **B** is both the inside and the outside surfaces. The selected button determines where the color, texture or surface feature is applied to the surface.



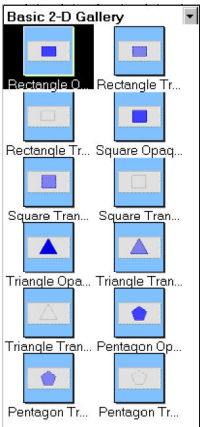
Return Button

The Return Button closes the Surface Editor and returns you to the Design View.

Surface Galleries

When the Surface Editor is open, the Gallery Window changes to show a collection of 2-D surface features. A surface feature, like an object, can be dragged from the Gallery and dropped into the Surface Editor on a selected surface. Once dropped, a surface feature can be rotated with the Rotate Object Tool and scaled with the Resize Object Tool. Surface feature color can be changed with the Color Bar and textures can be applied with the Texture Bar.

To edit the opacity of an object's surface, drag the desired shape and opacity (opaque, translucent or transparent) from the 2-D Surface Gallery to the Surface Editor



window.

The Menu

File Menu

Many of the **Design It!** File menu options and commands are standard for the Macintosh and Windows operating systems. These include *New*, *Open*, *Close*, *Save*, *Save As*, *Revert to Save*, *Page Setup/Print Setup*, *Print*, *Snapshot* and *Quit/Exit*. This is a brief description of these menu options.

File	
<u>N</u> ew	Ctrl+N
<u>O</u> pen...	Ctrl+O
<u>C</u> lose	Ctrl+W
<u>S</u> ave	Ctrl+S
Save As...	
Revert to Saved	
<u>P</u> rint...	Ctrl+P
Print Setup...	
Snapshot	▶
<u>E</u> xit	Alt+F4

File	
New	⌘N
Open...	⌘O
Close	⌘W
Save	⌘S
Save As...	
Revert to Saved	
Page Setup...	
Print...	⌘P
Snapshot	▶
Quit	⌘Q

The File Menu

New

New creates and opens a new **Design It!** file.

Open...

Open displays the standard Macintosh and Windows Open dialog from which you can select an existing file to open.

Close

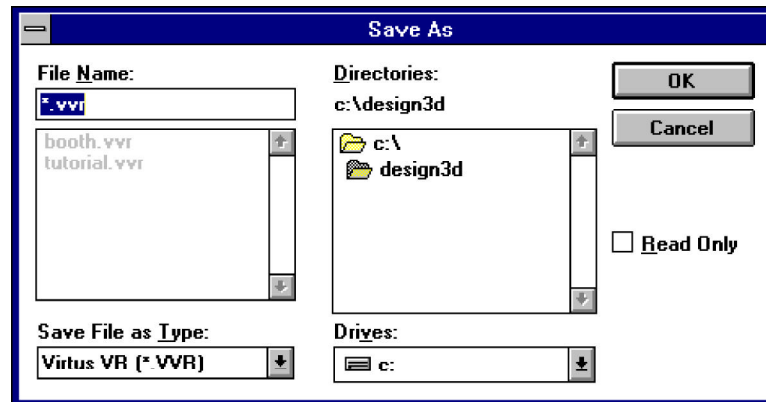
Close closes the current file. If you made any changes to the file since the last time you saved it, you will be prompted to save the changes before the file is closed.

Save

Save saves the current file under the currently used name.

Save As...

Save As opens the Macintosh and Windows Save dialog, which allows you to save the current file under a new name.



The Save As Dialog box

Revert to Saved

Revert To Saved opens the last saved version of the current file. If you select this option, any changes made to the model since the last time that you saved it will be lost unless you first use *Save As...* and save the changes to the file under another name.

Page Setup...

Page Setup/Print Setup opens the standard dialog with which you choose printout size, paper orientation and other printing features.

Print..

The *Print* command generates a hard copy of the active window centered on the page and enlarged within the constraints of the page.

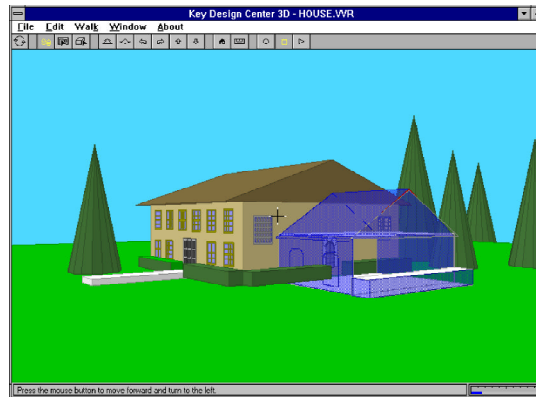
NOTE: Only what you see on the screen will print.

Printing an entire Design View

- Select the Design View to make it active, zoom out until you can see all the objects (you may also resize the window), then choose *Print*.

Printing the Walk View

- Navigate in the Walk View to the desired viewing angle, then choose *Print*.

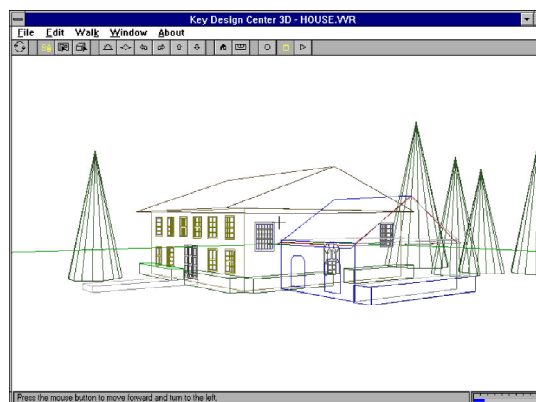


Default Color Print Mode

When printing the Walk View, if your printer does not print grayscale, you may wish to print black object frames with white shading. This gives you a clean, black-line drawing.

Printing objects with black frames and white fill

- In the Preferences dialog, click B & W Print Mode.



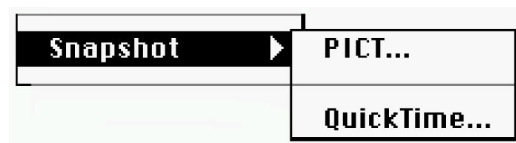
Black and White Print Mode

Snapshot

Snapshot allows you to save a view of a **DesingIt! 3d** model in another file format. The saved view can be a particular perspective in the Walk View, the drawing in a Design View, the Surface Editor window or a recorded walk path.



The Windows Snapshot Pop-up menu



The Macintosh Snapshot Pop-up menu

Taking a snapshot

- To take a snapshot of either a drawing in the Design View or a particular perspective in a Walk View select **Snapshot** from the **File** menu. Select *BMP...* from the pop-up which appears (PICT in Macintosh), this causes the **Save BMP As dialog** to appear which enables you to save the view as a **.BMP** file.
If you want to make a *Snapshot* of a recorded walk path choose *Animator Pro...* from the *Snapshot* pop-up (QuickTime for Macintosh). This option causes the **Save Animator Pro As Dialog** box to appear which enables the user to save the recorded walk path as an Animator Pro file.

Quit (Macintosh) or Exit (Windows)

Qui/Exit exits **DesingIt! 3d**. If a model is open and changes were made since the last time it was saved, you will be prompted to save any changes before exiting.

The Edit Menu

Undo

Undo undoes the last operation.

Cut

Cut removes any selected objects and places them in the Clipboard. Cut objects can then be pasted with the Paste command. The Edit Menu

Edit	
<u>U</u> ndo	Ctrl+Z
C <u>u</u> t	Ctrl+X
<u>C</u> opy	Ctrl+C
<u>P</u> aste	Ctrl+V
<u>D</u> elete	Del
<u>S</u> elect All	Ctrl+A
<u>U</u> nselect All	
<u>D</u> uplicate	Ctrl+D
<u>G</u> roup	Ctrl+G
<u>U</u> ngroup	Ctrl+Shift+G
Preferences...	

Edit	
Undo	⌘Z
Cut	⌘H
Copy	⌘C
Paste	⌘U
Clear	⌘K
Select All	⌘A
Unselect All	
Duplicate	⌘D
Group	⌘G
Ungroup	
Preferences...	

Copy

Copy copies any selected objects to the Clipboard. The difference between *Copy* and *Cut* is that *Copy* leaves the original in place, and *Cut* removes the original. Copied objects can then be pasted with the Paste command.

Paste

Paste puts the contents of the Clipboard into the model.

Clear (Macintosh) or Delete (Windows)

Clear removes or deletes selected objects, surface features or slices without placing them in the Clipboard. Selected objects can also be deleted by pressing **Delete** or the Backspace key. The difference between *Cut* and *Delete/Clear* is that *Delete/Clear* removes objects completely, whereas *Cut* removes objects to the Clipboard so that they may be pasted again.

If you *Delete*, *Cut* or *Clear* something accidentally, immediately choose *Undo* under the **Edit** menu after the cutting or clearing operation that you want to reverse.

Duplicate

Duplicate makes an exact copy of any selected object or surface feature and places it on or near the original. *Duplicate* does not copy to the Clipboard as does the Copy command.

Duplicate will duplicate objects as well as object placement, scaling and rotation. For example, you can create an object, duplicate that object, and position the second object on the right side of the original so that the objects appear to be touching. Then you can select *Duplicate* again and an identical third object, joined on the right side of the second object, will appear; you'll have a line of three identical objects spaced the same distance apart. The duplicate's position relative to the object that it duplicated is maintained as long as the original object remains selected. If you continue choosing *Duplicate*, the objects will continue duplicating to the right until you have a line of identical objects. This can be extremely helpful in modeling objects such as staircases.

NOTE: When you create the first duplication, it retains the original object's position, scaling and rotation information. The object must remain selected until the next duplication is made or the information will be lost.

Changes to object type are not duplicated. For example, if you create an object 10 feet tall and then duplicate it and increase the height of the duplication to 15 feet, subsequent duplications will have a height of 15 feet, they will not grow in height by increments of five feet.

The Duplicate command only duplicates manipulations to the entire object. It does not duplicate edits to part of an object.

Select All

Select All selects all the objects (displays all handles).

Unselect All

Unselect All unselects objects or surface features (handles are not displayed). Another method of unselecting is clicking on the background in the Design View or Surface Editor.

Group

Group joins any selected objects so that they are treated as a single object, that is, they can be moved, rotated or scaled together and selected with a single click. Grouped objects can be ungrouped with the *Ungroup* command.

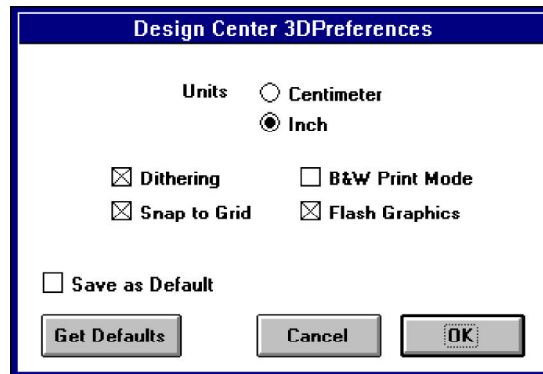
Ungroup

Ungroup ungroups a selected object if it was previously grouped with the *Group* command.

Preferences

The Preferences dialog allows you to set preferences for the appearance of **Design Center**.

Each time you save a **Design Center** model, any changes that you made to the preference settings are saved with it. When you open the model again, its preferences are restored.



The Preferences Dialog box

Units: Centimeter/Inch

Units determines the units of the ruler in the Design View.

Dithering

Dithering is a technique that allows more colors, which results in more color-accurate renderings. Dithering is activated by default. The disadvantage of Dithering is that the screen appears more grainy.

Snap to Grid

Snap to Grid snaps objects to an invisible grid when they are placed or moved.

The grid is based on the ruler tick marks in the Design View and Surface Editor.

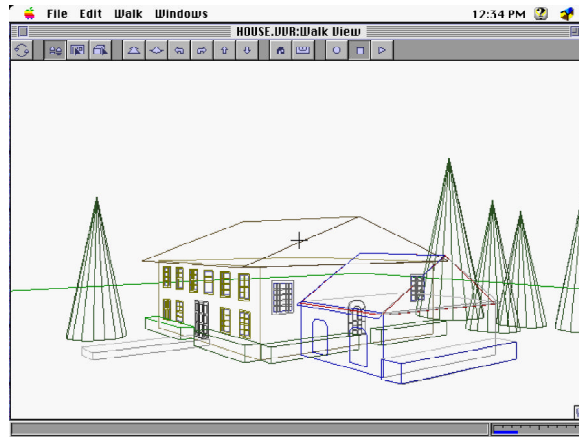
If you zoom in or out, the ruler tick marks change, therefore, the invisible grid changes. For example, if each tick mark represents one inch, handles snap to the nearest inch. If each tick mark represents one foot, handles snap to the nearest foot.

If Snap to Grid is not selected, the ability to place and move objects is constrained only by screen pixels.

Snap to Grid also affects object rotation. If Snap to Grid is selected and you rotate an object, the rotation snaps to 5° increments.

B&W Print Mode

B&W Print Mode prints objects with black lines and white surfaces. The printed result is a clean, black-line drawing.



B&W Print mode

Flash Graphics (Windows only)

Flash Graphics turns on **Design Center**'s drawing routines and uses those routines instead of the standard Microsoft Windows drawing routines. Flash Graphics substantially speeds up the **Design Center** application. Usually, Flash Graphics is turned ON by default; however, some video boards are not compatible with Flash Graphics. The **Design Center** application checks for compatibility with your system when you install, and if a conflict is detected, Flash Graphics is turned OFF.

Save As Default

Save As Default saves the current preferences as the application default preferences. Application default preferences apply to all new models that you create. If you open an existing file, that file's preferences will override the application defaults.

Get Defaults

Get Defaults resets the Preferences dialog to the original preferences settings.

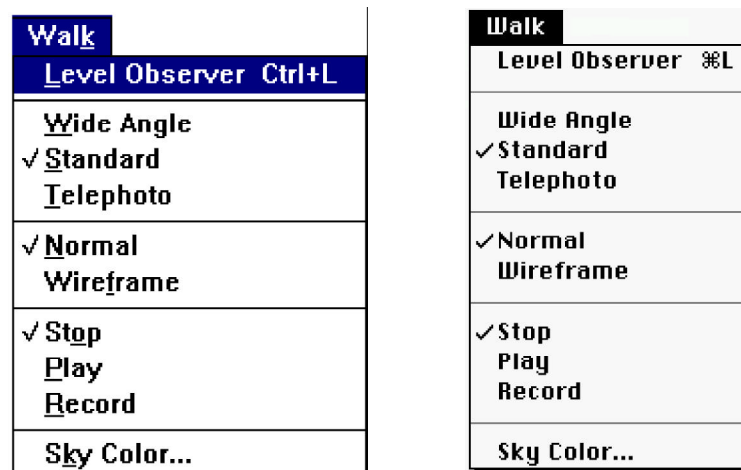
Cancel

Cancel voids changes that you made to the preferences settings.

OK

OK applies any Preferences dialog changes to the current model.

The Walk Menu



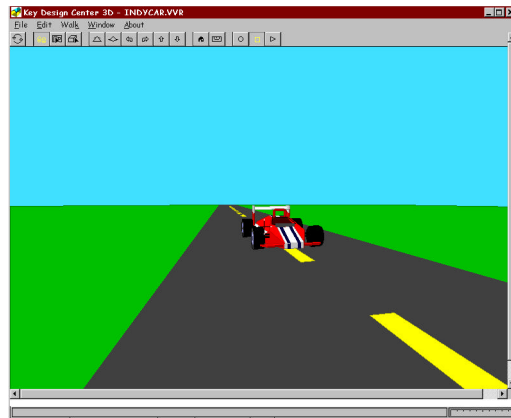
The Walk menu

Level Observer

Level Observer orients the line of sight in the Walk View, making it level if it has been altered with **Shift** during navigation.

Wide Angle

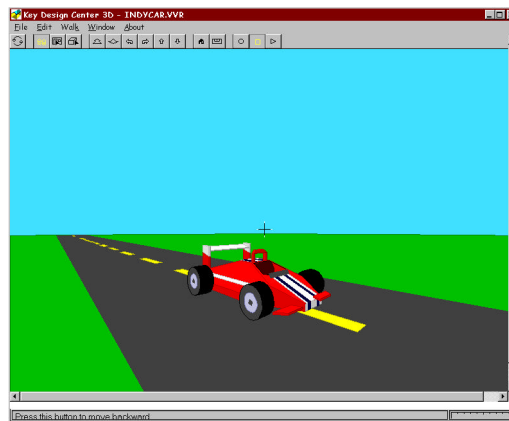
Wide Angle changes the Walk View to give the effect of looking through a 15mm, wide-angle camera lens.



Wide Angle View

Standard

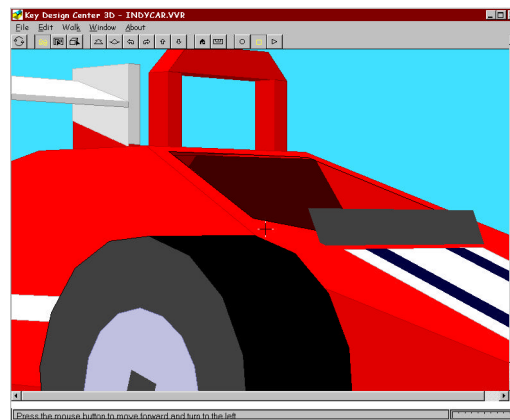
Standard displays the Walk View normally (35mm), that is, not wide angle or telephoto.



The Standard View

Telephoto

Telephoto changes the Walk View to give the effect of looking through a 135mm, telephoto camera lens.



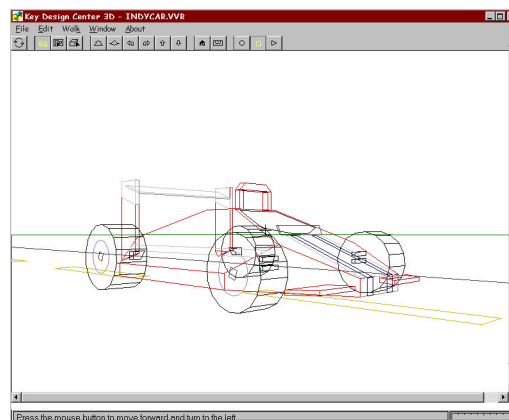
The Telephoto View

Normal

Normal displays all translucent and transparent object surfaces and surface features, and displays object color fill, wire frames and textures.

Wireframe

Wireframe speeds up your navigation by displaying only wire frames of objects. No object color fill, surface features or textures are displayed.



Wireframe selected

Stop

Stop allows you to stop the recording of a walk path. If a walk path is playing, you can stop it by clicking the mouse button. Once the playback is stopped, selecting Stop will rewind the recording to its starting point. If you select Play without first rewinding with the Stop command, the playback will continue from the point where it was stopped.

Play

Play allows you to play back a recorded walk path. Walk paths are recorded with the Record option.

Record

Record allows you to record a walk path. When you select Record, any movements that you make in the Walk View are recorded. You can then play back the recorded walk path or save it with the Snapshot option.

Sky Color

Sky Color allows you to change the background color of the Walk View. Selecting Sky Color displays the Macintosh Color Wheel or Windows Color Selector so that you can choose a new color.

The Windows Menu

The Windows menu contains commands for switching between different views in *DesingIt! 3d*.



The Window Menu

Design

Design displays the Design View.

Walk

Walk displays the Walk View.

Toggle Windows

Toggle Windows switches between the Design and Walk views.

Buttons and Keyboard Shortcuts

Windows	Function	Macintosh
Ctrl+A	Select All	Cmd+A
Ctrl+C	Copy	Cmd+C
Ctrl+D	Duplicate	Cmd+D
Ctrl+N	New	Cmd+N
Ctrl+L	Level Observer	Cmd+L
Ctrl+O	Open	Cmd+O
Ctrl+P	Print	Cmd+P
Ctrl+G	Group	Cmd+G
Ctrl+T	Toggle Windows	Cmd+T
Alt + F4	Quit	Cmd+Q
Ctrl+S	Save	Cmd+S
Ctrl+V	Paste	Cmd+V
Ctrl+X	Cut	Cmd+X
Ctrl+W	Close	Cmd+W
Ctrl+Z	Undo	Cmd+Z
Del	Delete	Del

Techniques

To create a Virtual World:

From the Galleries Window, scroll and select an item. Then drag and drop the item in the Design View.

To walk around in a Virtual World:

Use the Navigation Buttons at the top of the Walk View or use Normal or Advanced Mode Navigation Techniques shown on the following pages.

To change the color of an object:

Select an Object with the Select Object Tool in the Design View. Then select the Color Bar, press down and drag across to find a new color.

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