

---

# DESIGN YOUR OWN HOME

---

## *Architectural Design*

---

IIGS version 2.6

IIGS version works with all  
Apple II GSs with 1 MB



# **Design Your Own Home, Architecture for the Apple IIGS**

by Rodger Smith

Published by Abracadata, Ltd., Eugene, Oregon

## System Requirements

Apple IIGS with 1024K or more of RAM  
Color Monitor  
3.5" Disk Drive  
Mouse  
Optional: ImageWriter I, II, or LaserWriter printer  
additional drives or hard disk

Abracadata  
PO Box 2440  
Eugene, OR 97402  
503/342-3030

ISBN:0-939377-22-5

## Copyright

Copyright©1988, by Abracadata, Ltd. All rights reserved. No part of this book or the accompanying program may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the publisher.

Abracadata and Design Your Own Home, Architecture are trademarks of Abracadata, Ltd. Apple is a registered trademark of Apple Computer, Inc.

First Printing September 1988

Printed in the United States of America

APPLE COMPUTER, INC. MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, REGARDING THE ENCLOSED COMPUTER SOFTWARE PACKAGE, ITS MERCHANTABILITY OR ITS FITNESS FOR ANY PARTICULAR PURPOSE. THE EXCLUSION OF IMPLIED WARRANTIES IS NOT PERMITTED BY SOME STATES. THE ABOVE EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY PROVIDES YOU WITH SPECIFIC LEGAL RIGHTS. THERE MAY BE OTHER RIGHTS THAT YOU MAY HAVE WHICH MAY VARY FROM STATE TO STATE.

GS/OS 4.0 is a copyrighted program of Apple Computer, Inc. licensed to Abracadata, Ltd. to distribute for use only in combination with Design Your Own Home, Architecture. Apple Software shall not be copied onto another diskette (except for archive purposes) or into memory unless as part of the execution of Design Your Own Home, Architecture. When Design Your Own Home, Architecture has completed execution Apple software shall not be used by any other program.

## Contents

<b>Introduction</b> .....	6
<b>1 — Getting Started</b> .....	7
Getting Ready .....	7
<i>Using The Mouse</i> .....	7
<i>Setting Your RAM Disk</i> .....	7
<i>Write-Protecting Disks</i> .....	8
Starting The Finder .....	8
Making A Backup .....	10
Starting Architectural Design .....	11
<i>The Architecture Desktop</i> .....	13
<i>Quitting</i> .....	13
Trying Out Architectural Design .....	13
<i>Using The Selector Tool</i> .....	13
<i>Using Grids And Rulers</i> .....	15
<b>2 — Drawing Tools</b> .....	17
Line Widths .....	17
Selector Tool .....	17
<i>Selecting Objects</i> .....	17
<i>Moving Objects</i> .....	19
<i>Resizing Objects</i> .....	19
Line Tools .....	20
Rectangle, Rounded Rectangle, Oval, and Arc Tool .....	20
Polygon Tool .....	21
Sketch Tool .....	21
Stud Tool .....	22
Dimension Line Tool .....	23
Text Tool .....	23
<b>3 — Color Tools</b> .....	24
Selecting Colors .....	24
Selecting Patterns .....	24
Undo Button .....	25
Dupe, Swap, And Blend Buttons .....	25
<i>Dupe</i> .....	25
<i>Swap</i> .....	25
<i>Blend</i> .....	26
Changing Palette Colors Via Mix .....	27
Making Objects Transparent .....	27
<b>4 — Menus</b> .....	28
Apple Menu .....	29
<i>About</i> .....	29
<i>Status</i> .....	29
<i>Desk Accessories</i> .....	29

File Menu .....	29
New .....	29
Open .....	29
Close .....	30
Save .....	30
Save As .....	31
Revert .....	31
Scan .....	31
Overlay .....	31
Save Paint Files .....	32
Delete .....	33
Choose Printer .....	33
Page Setup .....	34
Print .....	35
Quit .....	38
Edit Menu .....	38
Undo .....	38
Cut .....	38
Copy .....	38
Paste .....	39
Clear .....	39
Select All .....	39
Lock .....	39
Unlock .....	39
Group .....	39
Ungroup .....	40
Info .....	40
Adjust Menu .....	40
Move To Top/Bottom .....	40
Align With Grid .....	40
Rotate Left/Right .....	40
Flip Horizontal/Vertical .....	40
Text Menu .....	41
Choose Font .....	41
Arrange .....	42
Objects Menu .....	43
Custom .....	44
Save To .....	45
Clear Some .....	45
Clear All .....	45
Load From Disk .....	46
Save To Disk .....	46

Options Menu .....	46
See Full View .....	46
Show/Hide Rulers .....	46
Show/Hide Measurements .....	47
Measure In ft-dec/inches .....	47
Snap To Grid .....	47
Auto Scroll .....	48
Scale .....	48
Grid .....	50
Drawing Size .....	51
Stud Tool .....	52
Patterns .....	53
Default Patterns .....	54
Default Colors .....	54

<b>5 — Using Paint Your Own Home</b> .....	55
Starting Paint Your Own Home .....	55
Drawing Tools And Color Tools .....	56
Selector Tool .....	57
Paint Brush Tool .....	58
Fill Tool .....	58
Zoom Tool .....	58
Menus .....	59
Load/Get Clip Art .....	59
Copy Drawing -> Clip Art .....	59
Copy Clip Art -> Drawing .....	60
Swap Drawing <-> Clip Art .....	60
Use REPLACE/OVERLAY Mode .....	60
Paint Brushes .....	60
<b>Appendix A —Error Messages</b> .....	61
<b>Appendix B —Setting The Control Panel For Printing</b> .....	63
<b>Appendix C — Setting Your RAM Disk To Zero</b> .....	65
<b>Appendix D — Installing Architecture On A Hard Disk</b> .....	65
<b>Front Views Of Sample Plans</b> .....	67
<b>Extra Copies Of Command Cards</b> .....	74
<b>Other Products From Abracadata</b> .....	back cover

# Introduction

Welcome to *Architectural Design* for the Apple IIcs, a flexible tool for easily creating floor plans, graphs, charts, architectural drawings, and more. You can create your own floor plans, experiment with them, rearrange them, make printed copies, or use any of the more than 2 dozen floor plans that you received with *Architectural Design*. Additional *Design Your Own Home* libraries are available, and each one has more than 4 dozen predrawn plans.

*Architectural Design* is an object-oriented drawing program. It differs from paint programs in that things you draw, such as lines and rectangles for example, are treated as objects that you can manipulate. You can quickly and easily change their color or size, move them around, rotate them, flip them horizontally or vertically, and much more.

You can also group objects to form more complex object units and save them for later use in other drawings (you can even group entire rooms and save them as custom objects for later use). Many commonly used architectural objects such as showers, washbowls, bathtubs, steps, doors, and others have already been created for you. You can add them to your drawing with a single keystroke.

Here are just a few of the features that provide the power and flexibility you need to make creating floor plans (or any kind of drawing) a breeze: grid lines; grid snap; standard or user-defined scales; rulers which reflect real-world distances in the chosen scale; tools for drawing perfectly spaced joists or studs; dimension lines; text in various fonts, sizes, and styles; color blending, copying, and swapping; 48 custom patterns with pattern editing capability; predrawn architectural objects; support for custom objects you design.

And as an additional bonus, a paint program is included on the program disk you received. If you need to work on your drawing in ways that only a paint program can, you can save it as paint files and use *Paint Your Own Home* (see Chapter 5).

Read on to see how quickly and easily you can: Design Your Own Home with *Architectural Design*.

## 1 – Getting Started

This part of the user's guide shows how to get *Architectural Design* up and running, gives you a hands-on introduction to some of the tools, and explains how to get the most out of many powerful, yet easy to use features.

If you are at all familiar with Apple's recommended standards for the mouse driven *desktop* environment, you'll feel right at home with *Architectural Design's* friendly human interface. If you've never used the mouse or worked within a desktop environment before, please study your *Apple IIcs System Disk User's Guide*.

**Note:** Early releases of the *Apple IIcs System Disk User's Guide* don't have information about the desktop environment. Get a recent (spiral bound) version from an Apple dealer if you need one.

### Getting Ready

#### Using The Mouse

This section reviews some common terms related to using the mouse. These terms are used frequently throughout this user's guide.

**Pointer** refers to the symbol, shape, or character on the screen that moves when you move your mouse. You'll see two basic types of pointers while using *Architectural Design*, the familiar arrow-shaped pointer and a cross-hair-shaped pointer used for drawing. They look like this:



Often in this user's guide you are told to position the pointer and **click**. Click means to press and release the mouse button quickly.

Sometimes you may be told to **double-click**. This means to quickly press and release the mouse button twice.

You'll also see the term **drag**. It means to press and hold the mouse button down, then move the mouse.

#### Setting Your RAM disk

*Architectural Design* requires 1024K (1MB) of free memory to operate properly, so to ensure enough memory is free, go to the Control Panel and set your RAM disk size to zero before continuing (remember to turn your computer off and back on again so the new settings will take effect). If you need help, refer to "Appendix C", "Setting Your RAM Disk To Zero".

## Write-Protecting Disks

You can write-protect a disk to protect it from having data accidentally changed or destroyed. When a disk is write-protected, you cannot save drawings or any other kind of data on it. However, you can load drawings from it, or copy files from it to another disk. Before you use the *Architectural Design* program disk, be sure to write-protect it. Read on through this section to find out how.

If you look at a 3.5" disk from the back side, you'll see a write-protect tab located near the top left corner. To write-protect a disk, use a pencil or appropriate item to slide the tab upward so that the small hole under the tab is uncovered. You can slide the tab back down again to cover the hole if you want to save anything on the disk at a later time.

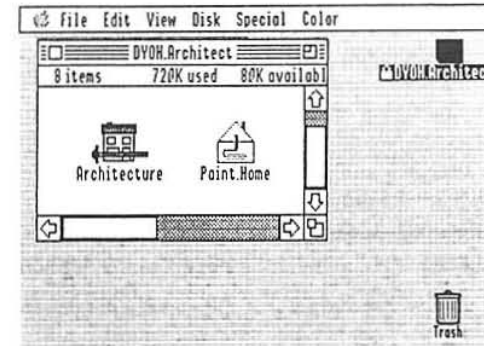
You can use this technique to protect final data disks as well. Remember though, the disk cannot have information written to it until the write-protect has been disabled (i.e. you slide the tab to cover the hole). An error message is shown if you try to save anything on a disk that is write-protected, so don't write-protect a working data disk that you'll need to save your designs on. Write-protecting a disk does not protect it against physical damage, like spilling a liquid on it, for example, so you should keep backup copies of your drawings on other disks as well.

## Starting The Finder

The **Finder** program is provided on the *Design Your Own Home* (DYOH) system disk. Among other things, the Finder lets you start *Architectural Design*, make backups, initialize data disks, and copy disks or files.

The first step to starting *Architectural Design* is to start the Finder. To do so, insert the DYOH system disk into your drive, turn off your computer (if it is on), wait for about 30 seconds, and turn it back on again.

Once the Finder screen appears, if you have one drive, remove the DYOH system disk from your drive and insert the *Architectural Design* program disk. If you have two drives, insert the program disk into your second drive. A window with the name **DYOH.Architect** at the top of it opens automatically.



If for some reason the window does not appear, you can open it yourself. To do so, use the mouse to move the arrow pointer onto the disk (or volume) icon that has the name **DYOH.Architect** beneath it, then double-click the mouse button.

The *Architectural Design* application icon is inside the **DYOH.Architect** window (if you had to open the window yourself, you may need to use the window's scroll bars to find the icon). It has the name **Architecture** beneath it and looks like this:



Designs that you create and save to disk, and the pre-drawn designs included on the data disk, appear with a document icon when viewed from the Finder screen. The *Architectural Design* document icon looks like this:



**Note:** The Finder will do much more than is covered in this user's guide. Please refer to your *Apple IIGS System Disk User's Guide* for detailed information about the finder.



## Making A Backup

Before you use *Architectural Design* for the first time, read this section and make backup copies of the original disks that you received. Then put your originals in a safe place and use the backups for everyday use. If you damage one of your backups, you can make another one from the original.

You need to use the Finder to make backups. If you haven't started the Finder, refer to the previous section and do so, then work through the following steps.

1. If you have one drive, remove the *Architectural Design* program disk from your drive and insert a blank disk. For two drives, remove the **DYOH.SYSTEM** disk and insert the blank disk in its place.
2. If the blank disk has never been used, you'll see a message asking if you want to initialize it, otherwise, the disk's icon and name appears on the desktop. Skip to 3 in that case. For an unused disk, type **DYOH.Architect2** for its name and click **Continue**. Next, click **ProDOS** and **800k 2:1** to highlight the operating system and disk size you need. Then click **Initialize** to start the initialization.
3. Once the initialization has completed, move the pointer onto the original **DYOH.Architect** disk icon, press and hold down the mouse button, and drag the icon's outline onto the backup disk icon. Release the button. Read the confirmation message and click **Ok**. If you have one drive, follow the on-screen messages instructing you when to exchange disks.
4. When the copy process finishes, drag your original disk icon to the trash can (that's on the screen, not in your kitchen) and remove the disk from the drive.
5. Click on the icon of your backup disk to highlight (select) it. Its name is **DYOH.Architect2** if you did step 2 above using a blank disk. Change the name by typing **DYOH.Architect** and pressing **return**. Don't use a different name. This name is used by the Finder to associate documents with *Architectural Design*. Your backup copy is now ready to use (it doesn't hurt to write-protect it like you did your original disk).

Now that you've made a backup copy of your original program disk, make a backup copy of the **DYOH.SYSTEM** disk and the *Architectural Design* data (library) disk. Follow the same procedure as described above to make the backups. However, use the system disk's name (or data disk's name) and not the program disk name when you work through the above steps.

You should also create an additional data disk to store designs you want to save. To do so, insert a blank disk, type an appropriate name such as **Arch.Data**, then click **Continue** and initialize the disk as described in step 2 above. Once initialized, it's ready for use. Please refer to your *Apple II GS System Disk User's Guide* for additional help in initializing and duplicating disks.

Remember, backup copies are only for your own safekeeping. It is not legal to distribute copies of this or any other software without written permission from the publisher.

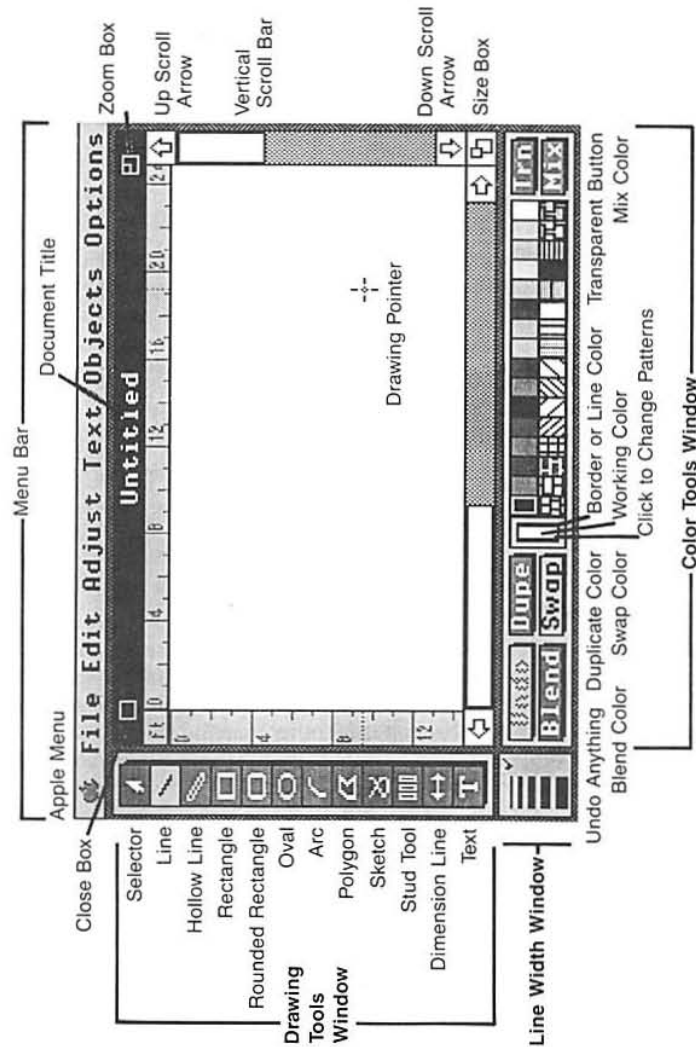
## Starting Architectural Design

If you haven't started the Finder or made backup copies of the disks you received, work through the preceding sections beginning with the "Getting Ready" section before continuing.

To start *Architectural Design* from the Finder screen, insert your backup copy of the program disk into your disk drive. Then move the pointer onto the **Architecture** application icon and double-click. If you have trouble finding it, see the "Starting The Finder" section.

You can also start *Architectural Design* from the Finder and have a drawing that you are working on automatically load for you. To do so, simply double-click on the document icon above the name of the drawing. Once *Architectural Design* loads and starts, it will automatically open the drawing. See the "Starting The Finder" section for an illustration of the document icon.

**Important:** Read this if you started your computer from a disk other than the *Design Your Own Home* system disk. *Architectural Design* requires the 5.0 version of the GS system disk. If you start the Finder from a ROM disk, Hard Disk, or any disk other than the DYOH system disk, be certain you are using GSOS before launching *Architectural Design* or it will not operate properly.



## The Architecture Desktop

You can arrange the whole desktop to suit your own needs. All the windows are movable. To move a window, move the pointer onto its frame or background area, press and hold the mouse button to make an outline of the window appear, then drag the outline to a new location. Release the button and the window moves to the new position. The document window has precedence over other windows. If a window overlaps the document window, part or all of the overlapping window may disappear beneath the document window. You may need to move or re-size the document window to get to a hidden window.

As indicated above, you can change the size of the document window. Refer to the previous illustration. At the upper right corner, there is a small box called the **zoom box**. Move onto it and click to instantly enlarge the document window to fill most of the screen. A second click restores the original window size. Use the box at the lower right corner, referred to as a **size box**, to expand or shrink the document window to any size you want. To change the size, press and hold the mouse button, then drag the window outline inward or outward to the size you want and release the button.

The box at the upper left corner is called a **close box** and is described later. Don't use it yet.

## Quitting

When you want to quit *Architectural Design*, first save your design to disk (if you want a permanent copy), then select **Quit** from the **File** menu. After *Architectural Design* quits, the Finder will start again. See the "Menus" chapter for more about how to save your designs.

## Trying Out Architectural Design

Detailed descriptions of *Architectural Design* features are given later, but for a brief introduction to some of them, read through and perform the following HANDS-ON exercises. Refer to the previous screen illustration as needed throughout this section.

## Using The Selector Tool

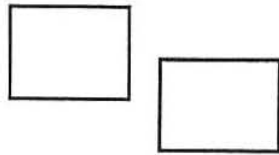
The **Selector** tool lets you select objects and change them, or move them to a new location.

Begin by referring to the preceding screen illustration and select the Rectangle tool. To select it, move the pointer onto it and click.

Move into the drawing area, press and hold the mouse button while moving the mouse to drag and create a rectangle. Then do the same

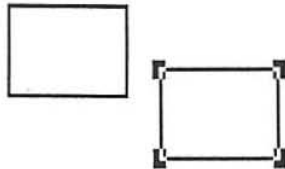


to create a second rectangle so you'll have two rectangular objects that look similar to this:



Exact locations and sizes aren't important here. The rectangles will only be used to explore some of *Architectural Design's* features.

Now choose the **Selector** tool (click on it). Notice the last rectangle you drew has small squares at each corner. They are referred to as *Handles* and indicate an object is *selected*. Don't use them yet. Later you'll see how you can use them to resize objects. Don't click anywhere in the drawing area or you may *unselect* the rectangle and we need it selected for now.



Move your pointer to the color palette and try clicking on various colors and patterns. Notice how the interior of the selected rectangle changes to the color or pattern you select. It's that simple to experiment with various color or pattern combinations in your drawings. Try holding the Apple key down when you click on a color or pattern. It lets you change an object's border color or pattern.

Now click on the *transparent* button (with the letters "Trn") by the top right side of the colors to show only the object's border (i.e. make it transparent). Click on any color or pattern to make the object solid again.

You can change the border width just as easily by clicking on different sized lines in the Line Width window. Click on the widest line in the Line Width window. Notice that the size of the rectangle remains the same – only the width of its border changes.

To see how objects are unselected, click on a blank, or unused, area of the drawing window (i.e. not on either rectangle). The rectangle's handles disappear. Select it again by moving onto it and clicking. To select both rectangles at once (or multiple objects), hold the Apple key down and click on the second rectangle. Now click on a color and notice both objects take on the color. Any change you make (by clicking on colors, changing line thickness, or whatever) affects ALL selected objects.

You can also select multiple objects with a dotted rectangle referred to as a *selection rectangle*. To do so, move the pointer beyond the top left corner of the objects to be selected – the blank screen area outside of any object, or in this case, outside of the two rectangles. Hold the mouse button down and drag the resulting dotted rectangle to the lower right corner of the objects to be selected. Release the button. All the objects that are within the selection rectangle are selected and will have handles. Click on any blank area of the screen to unselect all selected objects.

Another feature you'll use frequently is selecting objects to move them to another location. You can move a single object, or you can move many objects at once. To move both rectangles, select them both as described above. Then move onto either rectangle. Press and hold the mouse button and move the dotted outline of the objects to a new location. Release the button. To move a single rectangle, first click on a blank area to unselect both rectangles. Move the pointer onto the rectangle you want to move (either will do), hold the button down and drag its dotted outline to a new position. Then release the button.

You can perform many other operations on objects that are selected. They are described in detail in other sections of this user's guide. In general, you can use items in the **Edit**, **Adjust**, and **Text** menus on selected objects.

## Using Grids And Rulers

At start up, grid lines are invisible and the **Snap To Grid** feature is turned off. To see how this feature works, first click on the *close box*, the small box at the top left corner of the drawing window, then click on the [No] button to erase your drawing window without saving the rectangles created in the previous section. Now choose **Snap To Grid** from the **Options** menu. When this item has a check mark before it, it is enabled. Also choose **Grid** under **Options** and click on the box beside "Show Grid", then click [Ok].

Now draw two rectangles (refer to the previous section if you need help). Notice that with **Snap To Grid** enabled, all coordinates when you begin to draw and as you drag snap to the nearest intersection

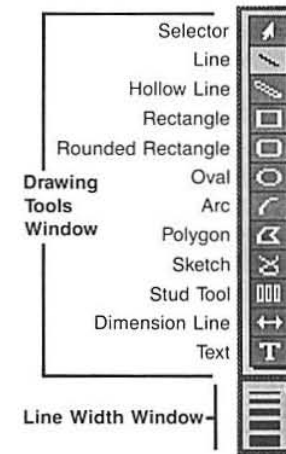
of the grid lines. This feature lets you easily draw a series of objects the same size, or align edges. You can use **Snap To Grid** with or without visible grid lines, and you can change the spacing of the grid (see **Grid** in the **Menus** section). Because the screen redraws faster without grid lines, you may want to use them only when you are trying to precisely size or align objects. It's your choice when to use them.

Next, again under the **Options** menu, select **Show Measurements**. Try drawing a few more rectangles or use another drawing tool if you like (such as ovals or rounded rectangles). As you draw, notice that the size of the object is shown above the top ruler. These features are very useful for drawing plans to scale. They are described in detail under the appropriate menu items in the *Menus* chapter.

This has been an introduction to only a few of *Architectural Design's* features. Many others remain to be tried. Go ahead and try out other tools and don't be afraid to experiment. When you are ready, read on for a detailed description of all the tools, how to change and use colors, and about all of *Architectural Design's* features.

## 2 – Drawing Tools

The drawing tools are located in the two windows at the left side of the screen. They look like this:



The large window contains tools which let you choose the kind of object you want to draw. The small window below it lets you choose the width of lines or object's borders. To make a tool active, or select a line width, move the pointer onto it and click.

### Line Widths

A check mark indicates the current working line width. Lines and objects' borders are drawn with the current working width.

### Selector Tool

The **Selector** tool lets you choose objects for moving, resizing, changing colors, border widths, or many other operations described later in the *Menus* chapter. See the *Trying Out Architectural Design* section for a hands-on guide to using the Selector tool.

### Selecting Objects

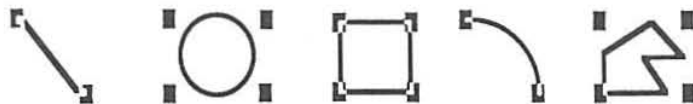
When the **Selector** is active, your pointer remains an arrow, even when it is over the drawing window. The pointer's *hot spot*, the part that is used to determine what you have selected, is the tip of the arrow.

To select a larger solid object, move the arrow onto it and click. When choosing a small object among closely-spaced objects or lines, carefully place the tip of the arrow exactly on the object you want to select and click. If an object is transparent, place the tip of the arrow on the object's border and click.

Four small squares, called handles, appear at each corner of selected objects (lines have a handle at each end). If you are trying to select a small or transparent object and handles do not appear, reposition the tip of the arrow and try again. When selecting among closely-spaced objects, if handles appear on an object other than the one you want, click on a blank area of the screen to clear the handles and try again.

**Note:** In some situations, handles can cancel each other out. Handles are drawn by reversing the colors on the screen under a given handle. That way they can efficiently and quickly be erased by reversing the colors a second time rather than by erasing the handles and redrawing the objects. The only drawback is that occasionally two handles may occupy precisely the same location. In this case, when the second handle is drawn, it reverses the colors that were already reversed from drawing the first handle. This has the effect of erasing the first handle instead of drawing a second one. The object(s) are still selected, and treated as such, even though one or more handles may not appear. This happens infrequently and if you watch closely when it does, you'll see the handles flash briefly on the screen indicating they are actually being drawn.

Here are some examples of selected objects:



You can hold the Apple key down and click on additional objects to make multiple selections. You can also select multiple objects with a dotted rectangle referred to as a *selection rectangle*. To do so, move the pointer to the top left side of the objects to be selected. Hold the mouse button down and drag the resulting dotted rectangle to the lower right corner of the objects to be selected. Release the button. If any portion of an object falls within the selection rectangle, it is selected. Click on any blank area of the screen to unselect all selected objects, or click on an object without holding the Apple key to select it and unselect all others.

Features that need at least one object selected in order to work will operate on all objects that are selected. For example, if two objects are selected and you click on a color, both objects take on the color.

In general, items from the **Edit**, **Adjust**, and **Text** menus operate on selected objects. In fact, most of the items in these menus remain disabled (dimmed) and unusable until one or more objects have been selected. Each item is described fully in the *Menus* chapter.

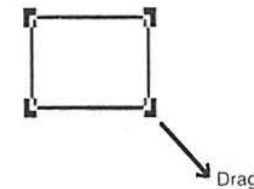
## Moving Objects

When the Selector tool is active, you can move objects by dragging them to a new location. To do so, move the pointer over an object, then press and hold the mouse button. When a dotted outline of the object appears, move the outline to the new location of the object and release the button.

You can move several objects at once by selecting all the objects you want to move, moving the pointer directly over any one of them, and dragging the outline to a new location. All objects moved at the same time will remain in the same configuration relative to each other.

## Resizing Objects

To resize a selected object, move the pointer onto one of its handles. Press and hold the mouse button. When a dotted outline of the object appears, drag the object to a new size. For example, to enlarge a rectangle downward and to the right, use the handle on its bottom right corner and drag down and to the right to the desired size.



Size an object back down by moving the dotted outline inward. Resize in other directions by dragging with a different handle.

Select **Undo** at the left side of the colors window or under the **Edit** menu to reverse the last change made. Undo is described fully in the *Menus* chapter.

## Line Tools

The **Line** and **Hollow Line** tools are for drawing straight lines. You can change a line's width by choosing a new width from the line palette below the tools. If the Selector is active, the line widths (and border widths) of selected objects also change.

To change the *working* color for lines (the color used to draw the line), hold down the Apple key and click on the color or pattern you want for the line. Do the same to set the border color for hollow lines. Click on a color to select the interior color for hollow lines (normally white). This method of selecting colors is used for other objects as well (see a complete explanation in the *Color Tools* chapter).

The **Hollow Line** tool is very useful for creating windows in floor plans, however, *it does not appear hollow unless the line size is at least 3 dots high and the interior color is white or the line is transparent*.

To draw lines, move the pointer to the starting point of the line, press and hold the mouse button while moving the mouse to drag the line to the desired end point, then release the button. You can draw straight lines at perfect 45 or 90 degree angles by pressing the Apple (or Shift) key before you begin the line.

## Rectangle, Rounded Rectangle, Oval, and Arc Tools

As their names imply, you can use these tools to draw rectangles, rounded rectangles (rectangles with round corners), circles or ovals, and arcs. You can change their border width by selecting a new line width below the drawing tools. You can change their border and fill colors or patterns the same way as described for lines above (see *Color Tools* for more).

To use these tools, place the pointer where you want one edge of the object to begin. Press and hold the mouse button, drag the object to the size and orientation you want (you can go any direction from the start point), then release the button.

You can also make objects transparent (only their borders are drawn) by clicking on the *transparent* button (with the letters "Trn") at the top right corner of the colors window. Click on any color or pattern to make objects solid again.



Transparent Button

To draw arcs (you would normally draw these transparent — see above for how), drag downward to draw the top part of a circle, and upward to draw the bottom part. For example, you can create the following arc by dragging down and to the right.



To draw perfect circles with the oval tool, squares with the rectangle tool, or 90 degree arcs with the arc tool, press the Apple (or Shift) key before you begin to draw.

## Polygon Tool

Use this tool to create a polygon, or many-sided, object. To draw a polygon, move the pointer to its start point and click. Move to the first line's end point (and next line's start) and click again. Continue this sequence until you've completed the object by ending at your original start point, *or double click (click twice rapidly) anywhere to end and have the last polygon line automatically completed for you*.

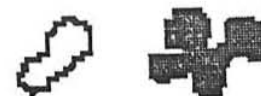
As with most other objects, you can change a polygon's border width or make it transparent.

The following are all examples of polygons:



## Sketch Tool

This is a flexible drawing tool used to create irregularly-shaped objects or regions. Here are some examples:



To sketch, move the pointer to the start position, press and hold the mouse button, and move the mouse. Release the button to stop. Remember, this tool still creates an object entity so it's desirable to end the sketch where you begin (as with polygons). If you release the button elsewhere, the object is completed for you with a straight line back to the start.

If you don't want a border on your sketched object (or any object), simply set the border color to the same color or pattern as the interior color; by holding the Apple key down and clicking on the color or pattern you want for the border.

Keep in mind that a good deal of memory is required to maintain a sketched object. All its points must be remembered and redrawn when the object is moved, or if it needs to be redrawn for any reason. This can drastically slow the process of refreshing the drawing window.

It is wise to use this tool only when really needed, and to use the other drawing tools instead when they are appropriate. When you need to sketch, complete the bulk of your drawing first and draw the sketched areas last so you aren't burdened with slow window refreshes for your entire drawing job. Also, the smaller the sketches, the better. If the Polygon tool will work, use it. Though not as fast as objects like squares and circles, polygon objects still redraw much faster than sketched objects.

## Stud Tool

This tool is a time-saver when drawing a series of rectangular shapes such as studs. The final product is treated as one object, not a series of separate objects.

To use the Stud tool, select a start location and drag a rectangle to enclose an area you want to fill with studs. You could also use this tool for other situations where you need a series of rectangular objects.

The Stud tool is an aid for doing lumber estimates too. Once you have drawn the studs, click on the Selector tool and choose **Info** under the **Edit** menu to see how many boards were used, how much material you'll need to cover them, and to get other useful measurements.

Selecting **Stud Tool** from the **Options** allows you to change a series of parameters about the studs: the spacing, board size, view point or orientation. Refer to **Stud Tool** in the **Options** menu section of Chapter 4 for a detailed description of the parameters and how to change them.

Because studs are more complex to draw, the program will take slightly longer to draw or redraw them. For this reason, you may prefer to draw studs after your drawing is mostly finished.

## Dimension Line Tool

This tool lets you quickly and easily add dimension lines, with arrows and measurements, to your drawing. Draw a dimension line the same as you would a normal line. Just select the start point, press and hold the mouse button, drag the line to the desired end point, and release the button. You'll see the line break in the center with the dimension listed.

Dimension lines are more complex objects and the program will take slightly longer to draw and redraw them. You may want to wait and use them near the completion of your drawing so screen redraws are faster for the bulk of your drawing project.

The line width of dimension lines cannot be changed, however, you can change their color like any other line, by holding down the Apple key while you click on a color.

## Text Tool

Use this tool to add text or labels to your drawing. Move the pointer to the spot you want to begin typing and click the mouse button. You'll see a flashing bar cursor appear. Go to the keyboard and type your text. Press the delete key if you make a mistake. When you have finished typing, you can simply select a different tool. The text you typed will be converted and kept as a single object.

If you want to continue typing but in a different location, use the mouse to select the new location and click. The last text you typed is kept as an object and you can begin typing a new text object as before.

You can press the Return key to end a line of text and start a new line below the previous line.

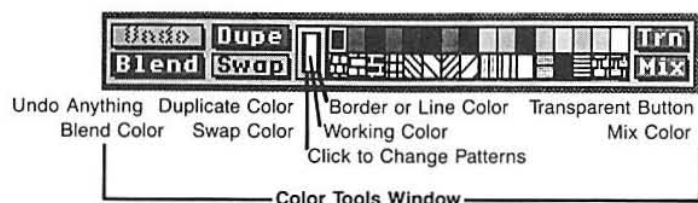
Select **Choose Font** from the **Text** menu to set the size, style, or type of font you want for your text. You can make size, style, or font changes to existing text by selecting it (with the Selector tool), then using the **Choose Font** item and making the desired changes. See the **Choose Font** in Chapter 4 for a complete description.

Change the color of text by clicking on a color at any time while typing or before you begin typing, and for existing text, change the color by selecting the text (with the Selector tool) and clicking on a color.



## 3 – Color Tools

The color tools are located near the bottom of the screen and look like this:



Each item in the color tools window is described in the following sections. Please refer back to this illustration as needed.

### Selecting Colors

The current color (or pattern) selected for drawing is referred to as the *working color*. The currently selected working color is shown at the left end of the color palette.

To change the working color, click the desired palette color or pattern. If the Selector is active, the color of selected objects change also.

When drawing occurs, unless objects are transparent, the working color is used to fill objects' interiors. To change the border color of objects, press the Apple key before you click on a color or pattern.

The current working color is framed by the current border color in the rectangle at the left side of the color palette. The lines in the Line Width window are also drawn with the working border color.

Make the border color the same as the working color to create objects without contrasting borders.

### Selecting Patterns

Patterns are selected and used the same as any color. They can be used for object borders or fill colors. There are 48 patterns available at any one time, and more can be created, saved to disk, and loaded as needed. See the **Menus** chapter to learn how.

Sixteen patterns are shown in the color tools window. Click on the working color block at the left side of the patterns to cycle through the next sixteen patterns.

### Undo Button

An **Undo** button was placed in the color tools window for quick, easy access. This Undo works in exactly the same way as the Undo under the **Edit** menu. Use it to reverse the last change made to colors or your drawing. In most instances you can click it again to Undo the Undo also, or toggle between the last change made and the state before the change was made. When Undo is not available, it is dimmed.

All other buttons in the color tools window relate to colors only.

### Dupe, Swap, And Blend Buttons

You can use the three buttons, **Dupe**, **Swap**, and **Blend**, in the color tools window to change or arrange palette colors. Click on a button to highlight it (lighten its color) and activate it for use.

**Note:** The two colors on each end of the palette (black, dark grey, light grey, and white) are reserved to maintain the integrity of the screen display and windows. They are included in the palette so you can use them in your drawing; however, if you try to change them, you'll hear a beep, and they will not change.

#### Dupe

**Dupe** (duplicate) lets you copy one palette color over another. To duplicate a color: click on Dupe, move the pointer onto the color you want to duplicate, press and hold down the mouse button, then slide the color's outline to the location where you want a duplicate and release the button. Objects on the screen which were the destination color become the new color. Click on Undo to reverse the change. You may duplicate one of the four reserved end colors (see the above note) to another unreserved square, but you may not move a color onto any of the four reserved end colors.

#### Swap

Use **Swap** to exchange the position of two colors without altering either color. Each color is moved to the other's position in the palette. This causes objects on the screen which are drawn with the colors to have their colors swapped also.

To Swap colors: click on Swap, move the pointer onto one of the colors, press and hold the mouse button, then slide the color's outline over the color you want to Swap it with and release the mouse button. You can click on Undo to reverse the Swap. The four reserved end colors may not be involved in a Swap.



## Blend

**Blend** is a feature that lets you create a series of intermediate colors between two target colors (how is explained a little later). All the colors between two target colors gradually blend from the first target color into the second target color. For example, if you choose the dark grey on the left side of the palette as the first target color and the light grey on the right side as your second target color, all the palette colors between them will turn to gradient shades of grey. Again, the two reserved colors on each end of the palette may not be changed by a blend, although a blend may include dark or light grey for a total of 14 squares that can be involved in a blend, and 12 that can be changed by a blend.

You can use **Dupe** or **Swap** to position target colors in the palette before blending. For example, you might move red (with Dupe) next to the dark grey color and place white four squares to its right, then blend between the two for varying shades of red. Then you might move green next to the last white target color, and put brown 4 squares to its right, then blend between them creating 2 separate blends in the palette.

To get the maximum number of intermediate colors from a blend, use Dupe or Swap to move the target colors to each end of the 12 changeable color squares, then blend between the two target colors. Many more variations are possible. Go ahead and experiment. You can always Undo the last change made, or restore the standard colors by selecting **Default Colors** under the **Options** menu. Remember that objects on the screen (and patterns) that were any of the original colors will take on the Blend changes also.

To do a **Blend**: click on Blend, move onto either one of the two target colors that you want to blend between, press and hold the mouse button, slide the color's outline to the second target color, and release the button. Again, you can do repeated Blends, and use Dupe or Swap to arrange the color palette as desired.

## Changing Palette Colors Via Mix

To change the amount of Red, Green, or Blue (RGB) in a palette color, click on the Mix button at the right end of the color tools window.

A window will appear with 3 scroll bars. Click on one of the colors in the palette to choose a working color. This working color will be shown below the scroll bars. Use the scroll bars to change the color's RGB Mix, or level. Each Red, Green, or Blue level can range from 0 to 15 for a total of 4096 possible colors. Click on the scroll bar arrows to change the mix slowly, one level per click. As the chosen working color changes, you'll see the same color on the palette change, and also any objects on the screen that are the working color will change.

You can click on another palette color to make it the working color and change it, or when you're finished changing colors, click on the Mix window close box (or anywhere on the drawing window) to remove the Mix window.

## Making Objects Transparent

The remaining color tool lets you draw transparent objects. Transparent objects consist of borders without any interior fill color. You can see through transparent objects – objects underneath them are visible.

To draw transparent objects, move the pointer onto the transparent button at the right side of the color palette and click. The button has the letters "Trn" on it. Now objects you draw will be transparent. Click on a pattern or color to draw solid objects again.

## 4 – Menus

This chapter describes the pull-down menus along the top of the screen. To pull a menu down, place the arrow pointer on top of its title, then press and hold the mouse button down. A list of menu choices will appear beneath the menu title. To select a menu item, continue to hold the mouse button down, then move the mouse downward. Menu choices are highlighted as the pointer passes over them. Release the mouse button to select the highlighted menu item. Menu items that cannot currently be selected are dimmed and will not highlight.

Many frequently-used menu items can be accessed quickly using the keyboard. Menu items that can be accessed with the keyboard are indicated with an Apple symbol and a keyboard character. Here are some examples:

<b>Edit</b>	
<b>Undo</b>	⌘Z
<b>Cut</b>	⌘X
<b>Copy</b>	⌘C
<b>Paste</b>	⌘V
<b>Clear</b>	
<b>Select All</b>	⌘A
<b>Lock</b>	⌘L
<b>Unlock</b>	⌘U
<b>Group</b>	⌘G
<b>Ungroup</b>	⌘H
<b>Info</b>	⌘I

To make a menu selection from the keyboard, press the Apple key along with the appropriate keyboard character. In the above illustration, if you wanted to choose **Select All**, you would press [Apple-A], which means, hold down the Apple key and press the letter "A". The " - " character inside the brackets is only used as a separator. A keyboard selection is performed just as if you had pulled-down the menu and made the selection with the mouse. You do not need to press the shift key if the character is on the upper part of a key. For example, press only [Apple-:] for the ":" character.

## Apple Menu

The Apple menu (the Apple symbol at the upper left corner) contains an **About** item and the names of **Desk Accessories** you can use.

### About

This choice shows information about *Architectural Design* such as the copyright date, the company that published it, and the programmer's name.

### Status

Select this item to see information about your current drawing and the system, such as how much memory is free and used, what the size of your drawing is, its scale, and so on.

### Desk Accessories

**Desk Accessories** are normally short programs you can choose that do some specific task (like a clock, calculator, simple game, or puzzle). A list of available Desk Accessories are added to the **Apple** menu. Choose them like any other menu item.

The choices you have depend on what Desk Accessories are in the SYSTEM/DESK.ACCS/ folder of the disk you used to start-up your computer.

On the 5.0 and later versions of the GS system disk, Apple supplies a Control Panel desk accessory. You can use it to change your Control Panel's settings (see "Appendix B" for help setting it for printing). Contact your local dealer to learn more about it, or to get the latest system disk and user's guide.

## File Menu

### New

Select **New** when you want to erase your current drawing and make a fresh start. The drawing window is erased and its name is changed to "Untitled". Before erasing, you are given the opportunity to save changes (see **Save** below) or cancel.

### Open

**Open** displays a catalog of the current drive and lets you load an existing drawing. You are given the chance to save your current drawing if changes have been made (see **Save**).

**Note:** If a drawing has text objects, *Architectural Design* tries to use the same fonts they were originally created with. The same fonts must be available in the /SYSTEM/FONTS/ folder of your boot disk so the Font Manager can load and install them. If the Font Manager cannot load the desired font, the nearest matching font is used instead.

## Close

**Close** erases the drawing window and sets the name for the new drawing to "Untitled". **Close** and **New** are implemented identically by *Architectural Design*. Both are included for completeness. As always, you'll have a chance to save your current drawing if changes have been made since the last save.

You can also select the *Close Box* at the upper left corner of the drawing window.

To end your editing session, use **Quit** rather than **Close**.

## Save

Choose **Save** to save a copy of your drawing to disk. If your drawing is "Untitled", a dialog appears so you can name it. You should give your drawing a unique name and not save it with "Untitled" as its name.

If your drawing is already named because you have saved it during the current session, or because you loaded it (with **Open**) from a library or other data disk, you are not prompted for a new name. The current name is used and the save is performed immediately. This lets you quickly save an updated version of your drawing to a data disk.

**Warning:** Any previous version of your drawing with the same name will automatically be replaced with your current drawing when you use **Save**. The program assumes you intentionally want to update the previous version on your data disk and does not remind you of this fact. To protect a previous version, use **Save As** (see below) to give your current drawing a different name.

Use **Save** frequently while you are drawing so you'll always have a recent backup of your drawing stored safely on disk. To do a save quickly, hold down the Apple key while you press [S]. Be sure to leave your work disk in the drive so *Architectural Design* can save your drawing successfully.

Frequent saves provide added protection in case a power failure occurs or your computer quits working for any reason. If you update your disk version often, you'll lose only a few recent changes and not your entire drawing or hours of work.

## Save As

Use **Save As** to save your drawing under a different name, or to save it to a different disk or directory folder. After the save, the name above the drawing window is changed to your drawing's new name. Any future saves with **Save** (above) are performed using the new name.

You can use **Save As** to save a copy of important drawings on more than one disk for added protection in case one disk is inadvertently damaged.

## Revert

This reloads the last version of your drawing that was saved to disk. You can use **Revert** if you've made changes since last saving your drawing and decide you don't want them. This choice remains dim and unselectable until you make changes to a drawing after using **Open** or **Save**.

## Scan

**Scan** lets you look at the drawings in a disk's directory. Select **Scan**, then **Open** any drawing in the specific directory you want to Scan by double-clicking on the drawing's name, or click on its name and on the **Open** button. When you open a file, it lets *Architectural Design* know which *directory* you want to Scan.

All the drawings in the directory are shown sequentially. The first drawing you see may not be the one you opened, but it will appear before the Scan is finished.

The name of the currently scanned drawing is shown at the bottom of the screen. When you are ready to continue, click [Previous] to see the drawing you saw prior to the current drawing, or [Next] for the drawing following the current one, or click [Quit] to cancel the Scan. You can also press the [Esc] key to cancel. If you go beyond the *start* or *end* of the directory, the Scan continues from the opposite end.

## Overlay

Choose **Overlay** to load a drawing, wiring, or plumbing diagram from disk and display it over the top of your current drawing. You could also use this feature to merge or append two or more drawings. If you decide you don't want to keep the overlay, click **Undo**.

Here's an example of how to create a wiring diagram overlay for a floor plan. First, be sure you have a permanent copy of your floor plan saved to disk because this procedure will alter it. Then click on the Selector tool and choose **Select All** from the **Edit** menu (or press

[Apple-A]). Handles will appear around each object. Now choose **Group** under the **Edit** menu to make a single group of all the parts of the floor plan. The handles around each object will disappear and one handle will appear at each corner of your drawing. Now the program will treat your whole drawing as one object.

Draw your wiring diagram right over the top of the floor plan. When the wiring diagram is finished, click on the Selector and move the pointer onto any object that's part of your original grouped floor plan and click to select it. Your original floor plan should be selected (indicated by a handle at each corner), and the objects in your wiring diagram should NOT be selected. If you see any object that's part of your wiring diagram selected, click on a blank area of the screen to unselect everything and try again.

Now press the Delete key to erase your floor plan leaving only the wiring diagram. If any part of your wiring diagram disappears, you can click [Undo] and try once more to select and delete only the floor plan. Once the floor plan is deleted, you can save your wiring diagram to disk with **Save As**. Be sure to save it with a name different than the one you gave to your original drawing (eg. house.wiring).

With your wiring diagram separate from your floor plan, you can view each individually, view them together, or view them with other overlays, like plumbing. Use **Overlay** to place one design over another.

## Save Paint Files

To save your drawing as standard unpacked Apple IIGS paint files (file type \$C1) that can be loaded by most popular paint programs, and by the *Paint Your Own Home* program included with *Architectural Design*, choose **Save Paint Files**.

Since a paint screen is about half the size of a drawing page, each page of your drawing saves as 2 paint files. Each file requires about 33k of disk space, so be sure you have enough free disk space before you try to save a large drawing. Sequential numbering is automatically appended to the filename you type to make unique filenames for all the files (e.g. MyPaint.1, MyPaint.2, etc.). After you have saved your drawing as paint files, you can select **Quit** to return to the Finder then launch *Paint Your Own Home* to work with the paint files.

You cannot reload drawings that are saved as paint files so if you want to load (Open) your drawing again later with *Architectural Design*, be sure to also save it the normal way with **Save** or **Save As**. Paint programs use bit-mapped pictures, not objects you can select, move, or change as with *Architectural Design*.

## Delete

Use this to delete files that you don't want on a disk. To delete a file, click on its name, then click on [Open]. If the name is correct, click on [Ok] to perform the delete, or click on [Cancel] to relist the files for another selection.

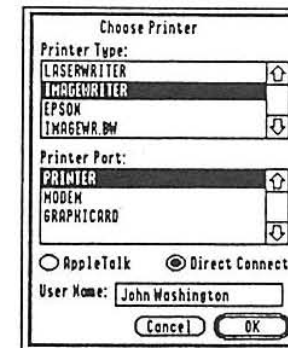
You can continue deleting files, or click on [Cancel], rather than on a file's name, to quit.

**Note:** **Delete** lets you delete only files. If you open a folder, it's opened so you can see the files within it. A folder cannot be deleted. If the folder is empty, no files are listed. Click on [Close] to exit the folder. To delete a folder, use the system utilities on your system disk, or the FINDER.

## Choose Printer

If you are using the latest system software (as you should be), you can now use the **Control Panel** desk accessory under the **Apple** menu to let *Architectural Design* (and the system software) know the type of printer you have, and how it's connected to your computer. If you use the Control Panel desk accessory, you do not need to select **Choose Printer**. For help setting the Control Panel, see "Appendix B".

If you are using an earlier version of the GSOS system disk (earlier than 4.0 will not work properly with *Architectural Design*), you need to select **Choose Printer**. Afterward, you'll see this dialog.



**AppleTalk.** Select this as your printer port if you are using a LaserWriter.

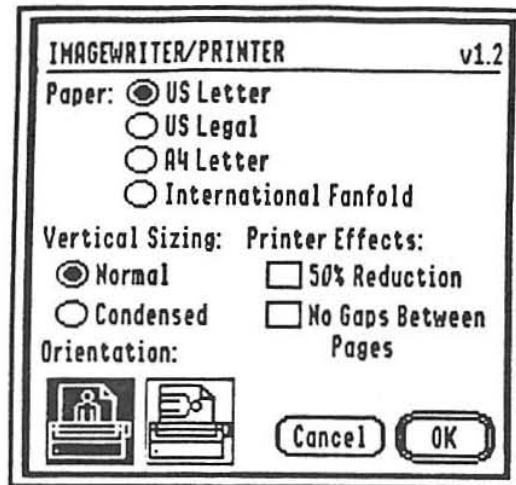
**Direct Connect.** Choose this option if your printer is connected directly to your computer.

**User Name.** Type your user name if you are using AppleTalk. Click the printer and port you are using then click **Ok** to use the new settings, or click **Cancel** to retain your original settings.

## Page Setup

Use **Page Setup** to set the paper size and way you want your image printed. This is optional. Standard settings are used if you don't change them.

The ImageWriter **Page Setup** dialog looks like this:



**US Letter.** This is the default paper setting. It's for paper that's 8½ by 11 inches.

**US Legal.** Use this option for paper that's 8½ by 14 inches.

**A4 Letter.** This option is for European standard paper. Its size is 8-1/4 by 11-2/3 inches (210 by 297 mm).

**International Fanfold.** This option is for the ImageWriter only. It's the International standard size of 8-1/4 by 12 inches (210 mm by 12 inches).

**B5 Letter.** This option is for the LaserWriter only (see the next dialog illus.). Its paper size is 15 by 11 inches (250 by 176 mm).

**Normal.** This setting prints drawings with the same proportions they have on the screen.

**Intermediate.** *Intermediate* prints drawings approximately two thirds their normal size (for the LaserWriter only).

**Condensed.** Drawings printed with this option are about half their normal height. This option causes drawing width / height ratios to distort, so don't use this option unless you have a special need for that effect.

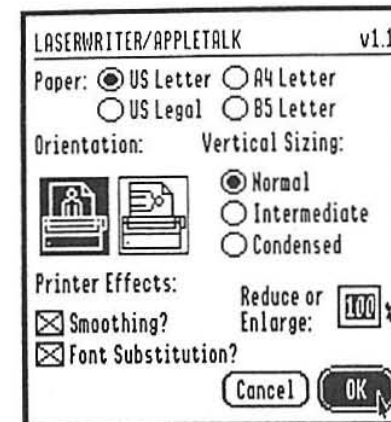
**50% Reduction.** Drawings are printed at half their normal width and height.

**No Gaps Between Pages.** Printing is continuous without page breaks when this option is selected.

**Portrait.** Drawings are printed with the same upright orientation they have on the screen.

**Landscape.** Select this option to print sideways (turned right 90 degrees).

Here is the LaserWriter dialog followed by options that differ from the above descriptions:



**Printer Effects.** These LaserWriter options are for bit mapped fonts.

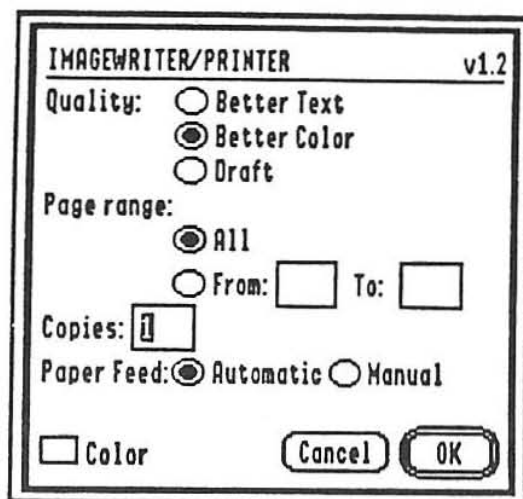
**Reduce or Enlarge.** You can type a number from 25 to 200 to reduce or enlarge your printout. A value of 100 is normal size (100% of image), 200 enlarges a drawing to twice its size (100% X 2 = 200%), and 50 reduces a drawing to half its normal size (100% / 2 = 50%).

## Print

Select this to set the number of copies you want to print, whether to print in color, and to print a drawing. Before you print, be sure to use the Control Panel desk accessory or **Choose Printer**. Otherwise, your computer may hang-up (see the "Choose Printer" section and "Appendix B" for more).



This is the dialog you'll see for the ImageWriter:



**Better Text.** This option doubles the printer resolution. It produces the best quality text and lines. However, fewer colors are available. Use this option when the quality of lines, black and white patterns, and text is more important than a wide range of colors.

**Better Color.** More color and better shades of grey are produced with this option, but the printer resolution is lower (than better text, above) so lines are more coarse and text may not be readable.

**Draft.** Don't use this option. Its used for dumping text straight to the printer and doesn't work for graphic drawings.

**Page Range.** This option is ignored. An entire drawing is always printed.

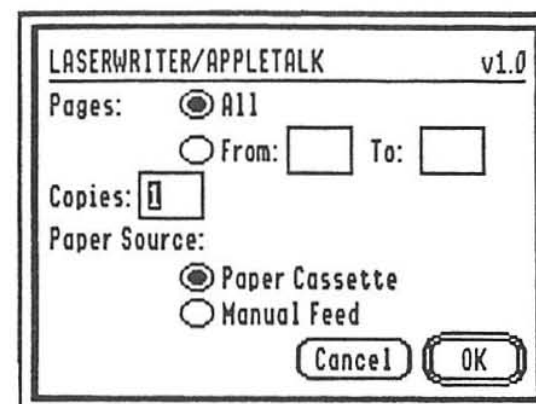
**Copies.** Type the number of copies you want to print. The computer automatically moves the printer's paper to the next page and prints each copy (if the *Paper Feed* is set to Automatic – see below).

**Automatic.** Used for continuous paper. The computer advances the printer's paper and continues to print if you are printing multiple copies.

**Manual.** If printing multiple copies, you are prompted before each copy, and can continue to print or stop.

**Color.** If you have an ImageWriter II and a color ribbon, you can select this option to print images in color. An ImageWriter I can't print in color, so you shouldn't use this option with an ImageWriter I.

Here is the print dialog you'll see for the LaserWriter.



**Pages.** As with *Page Range* for the ImageWriter, this option is not used.

**Copies.** Type the number of copies you want to print. If you need to, use the [tab] key to move to the copies' box to type a number (or click on the box).

**Paper Tray.** You can use this option if you have a paper tray.

**Manual Feed.** Use this option for feeding single sheets of paper by hand.

**To Start Printing.** Once you have all the Print dialog options set as desired, click on the [Ok] button to start printing. Remember to make sure your printer is on and ready for printing. *You can press [Apple-period] to stop printing in progress, or when a drawing has completely printed, press [Apple-period] to save time and avoid waits for the printing sequence to end.*

Be sure your computer's Control Panel settings are set to the right slots for your printer or your computer may hang up when you try to print.

If you decide not to print, click on the [Cancel] button.

**Note for LaserWriter users:** Horizontal scale adjustments must be made when printing to a LaserWriter to make drawings print to scale correctly. For this reason, approximately one half inch is lost on the right side of the drawing page. If your drawing extends all the way to the right side of the drawing window, and you need to do a LaserWriter printout, you can choose **Select All** and move the whole drawing slightly to the left.



## Quit

When you are completely finished using *Architectural Design*, select **Quit**. You are given the chance to save recent changes before quitting.

## Edit Menu

All the choices under **Edit** work with objects that have been selected with the Selector tool. Before using one of the menu items discussed here, you must select one or more objects.

To select an object, click on the Selector tool to activate it (it's the arrow at the top of the tools window), then move onto an object and click to select it. Press the [Apple] key before clicking to select more than one object at once.

For additional help selecting objects, do the **Trying Out Architectural Design** section in chapter 1, and see **Selecting Objects** in chapter 2, *Drawing Tools*.

## Undo

This works the same as the **Undo** button in the color tools window. You can use it to reverse the last change made to your drawing or color palette. In most instances you can select it again and **Undo the Undo** (restore and keep the last change you made prior to selecting Undo).

## Cut

**Cut** removes selected objects (selected with the Selector tool) from your drawing and places them in a clipboard file. The current directory of the disk you used last is used for the clipboard file. Any objects which were already in the clipboard file are replaced.

Be sure the disk is ready and in the drive or the **Cut** will be unsuccessful and an error will be reported. If you change your mind and want to restore your objects, click [Undo].

You can **Paste** the objects back into your current drawing, or Open a different drawing and **Paste** them into it (see **Paste**).

## Copy

Use **Copy** to store a copy of selected objects into the clipboard file. Your drawing is not changed. The objects you copy replace any objects already in the clipboard file.

You can **Paste** the objects back into your current drawing or another drawing at a later time (see below).

## Paste

Choose **Paste** to copy all the objects from the clipboard file (on the disk you used last) into your drawing. The objects are automatically selected, and the Selector tool is activated so you can easily move the pasted objects where you want them. Click [Undo] to remove pasted objects.

## Clear

You can use **Clear** to remove objects from your design. In this case, the objects are not placed in the clipboard. If you change your mind and want to restore your objects, click [Undo]. You must click on objects to select them before you choose **Clear**.

## Select All

When the Selector tool is active, choose **Select All** or press [Apple-A] to quickly select every object in your drawing. You might want to do this to change the border color, working color, or line width for all objects, or to move all objects at once.

## Lock

First select one or more objects, then select **Lock** to keep them from being moved or changed. Locked objects cannot be moved, grouped, deleted, or changed in any way (except with *New* or *Close* for starting a new drawing).

Objects that are locked have a small key-like symbol above their top left *handle* when they are selected. The only editing operation that will have an effect on locked objects is **Unlock**.

This feature can be quite useful. For example, you may want to lock floor plan walls and other objects so you can arrange objects nearby without accidentally changing the objects you don't want changed.

## Unlock

First select one or more locked objects, then choose **Unlock** to unlock them.

## Group

This converts a collection of selected objects (objects that have been selected with the Selector tool) into a single grouped unit. You must have more than one object selected before you can use **Group**. For help selecting objects, see **Using The Selector Tool** in the **Trying Out Architectural Design** section of chapter 1, and also **Selecting Objects** in chapter 2.

The objects' screen coordinates and sizes are not changed by grouping them. Once grouped, the objects are treated as a single object until they are ungrouped. This means if you select a grouped object, then click on a color, all the individual objects within the group take on the color. You can use **Ungroup** (below) to separate grouped objects and make a change to a single object within a group, then regroup them again afterwards.

## Ungroup

You can select one or more grouped objects and choose **Ungroup** to separate them into their individual component objects.

## Info

Choose this to display information about a selected object. The type of information varies according to the type of object but always includes its measurements (size). Use rulers and measurements for other size information (see **Show/Hide Rulers** and **Show/Hide Measurements** under **Options**).

## Adjust Menu

All the choices under **Adjust** work with objects that have been selected with the Selector tool. Work through the **Trying Out Architectural Design** section of chapter 1 and see **Selecting Objects** in chapter 2 if you need help selecting objects.

## Move To Top/Bottom

These two choices let you rearrange the stacking order of selected objects. You can select an object and place it beneath (or behind) another object with **Move To Bottom**, or move a selected object in front of another object with **Move To Top**.

## Align With Grid

If the **Snap To Grid** feature is enabled (see **Options Menu**), you can choose **Align With Grid** to align *selected objects* with the grid using the coordinates of their upper left corner.

This feature is useful if you draw objects with the grid snap feature turned off and later decide you want them aligned, or for any situation where objects are not aligned with the grid.

## Rotate Left/Right

Use these menu items to rotate *selected objects* left or right 90 degrees.

## Flip Horizontal/Vertical

Choose these items to flip the orientation of *selected objects* from left to right (horizontally) or top to bottom (vertically).

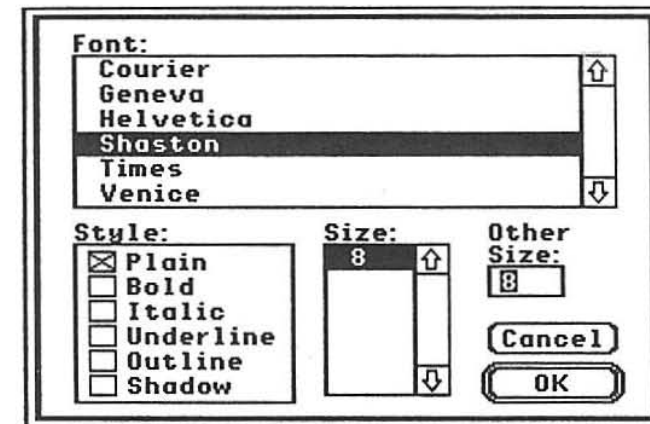
# Text Menu

## Choose Font

Use **Choose Font** to pick the font you want for typing text with the Text tool. You can also set the font's size and style.

The changes you make are used the next time you type using the Text tool. If the Selector tool is active and you've selected one or more text objects, the selected text also takes on the changes. This lets you change the size, style, or font of existing text.

After you select **Choose Font**, the following dialog appears:



**Font.** When *Architectural Design* begins, the font for the Text tool is defaulted to the system font. The default system font is called "Shaston". Remember its name in case you want to use it again after you have changed fonts. Its default size is 8, and its default style is Plain.

To choose a font, click on its name. The chosen font is highlighted (darkened). If you need to, use the scroll bar arrows to scroll the list of font names.

**Note:** The fonts you can choose from are in the /SYSTEM/FONTS/ folder of the disk that you started-up your computer with. These names are listed in the **Choose Font** dialog.

**Style.** A font's style refers to the way a font looks. Style choices include **Plain**, **Bold**, **Italic**, **Underline**, **Outline**, and **Shadow**. Here's how they look:

Plain  
Bold  
Italic  
Underline  
Outline  
Shadow

You can use all the styles at once except Plain, which cancels all other styles (it's plain). Also, Underline is not supported for the system font, Shaston.

To select a style, click the box next to its name. A second click unselects it.

**Size.** To select or change the size of a font, click on a number in the **Size** catalog (the larger the number, the bigger the text), or type a number in the **Other Size** box. The fonts look best at the cataloged sizes, but you can specify other sizes. The nearest matching font is scaled to the size you want.

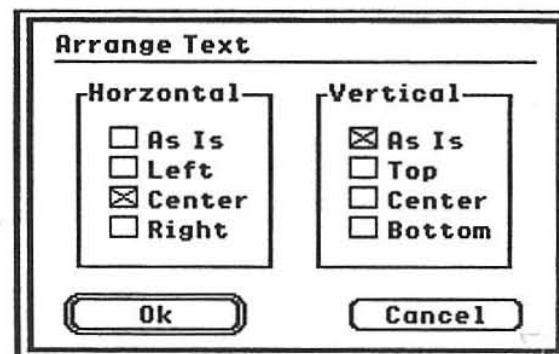
When all the settings are what you want, be sure the disk that you booted from is in the drive so the Font Manager can load the font you have chosen from the /SYSTEM/FONT/ folder, then click on [Ok] to install the new font and use any size or style changes that you have made. If the Font Manager cannot load the chosen font, it will default to the nearest matching font it can find. Click on [Cancel] to discard any changes and keep the original font, size, and style.

## Arrange

This menu item works with *selected* text objects that have been typed using the Text tool. It's dimmed if no text objects are selected.

If you need help selecting objects, work through the **Trying Out Architectural Design** section in chapter 1 and see **Selecting Objects** in chapter 2. See the **Text Tool** section of chapter 2 for how to type and create text objects.

After selecting **Arrange**, the following dialog appears:



Options on the dialog are selected when an [X] appears in the box beside them. Click on the box to select an option.

**Horizontal Options.** Use these options to arrange selected text horizontally (left – right) on your drawing page, not just within the drawing window. You can use **View** under the **Options** menu to examine the results.

Use [As Is] to keep your text where it is horizontally or select [Left], [Center], or [Right] to position text as the left edge, in the center, or at the right edge of your drawing, respectively.

**Vertical Options.** These arrange text vertically (top – bottom) on your drawing page. Here again, you can use [As Is] for no change, or select [Top], [Center], and [Bottom] to position the *selected* text as desired.

## Objects Menu

Just as the name implies, the items under this menu let you choose predrawn commonly-used, architectural objects (shapes and symbols). The items that let you see and choose predrawn objects include Bath, Doors, Windows, Stairs, Electrical, and Other. If you select any of these, a dialog appears so you can see and choose a specific object.

A box encloses the object that will be chosen if you click the mouse button. Move the mouse so the box surrounds the object you want, then click. Objects are placed in the center of the drawing window and the Selector tool is activated so you can easily move them to the location you want.

Each letter on the keyboard corresponds to more commonly used objects. You can add them to your drawing quickly simply by pressing a letter for the object you want. When possible, the first letter of an object's name is used. For example, [B] for [Bathtub] or [D] for [Door]. Sometimes the previous or following letter in the alphabet gives another orientation of the same object, such as [A] for a bathtub rotated 90 degrees (horizontal orientation). A quick reference card is included with *Architectural Design* showing what objects correspond to what keys.

When a letter is pressed, the corresponding object is placed in your drawing as described above, and the Selector tool is activated so you can position it.

You can also create and save your own custom objects for later use. The remaining choices in the **Objects** menu let you choose custom objects, save new ones, clear (delete) them, or load and save them to disk. Each of these items are described below.

## Custom

This menu selection lets you pick a custom object and add it to your drawing. Before you can pick a custom object, you must create some or load them from disk.

Your program disk has a sample custom object file called CUSTOM.OBJS. You can use the **Load From Disk** menu item to load them (see below).

You can also create your own custom objects. See **Save To** below for how.

Once you have created or loaded some custom objects, select **Custom** to use them in your drawing. The way you choose which custom object you want to use is the same as the way you choose a ready-made object. When the custom dialog appears, use the mouse to move the *selection box* and enclose the object you want, then click. The chosen object appears in the center of the drawing window. It is automatically selected so you can easily move it where you want it (see **Moving Objects** in chapter 2 for help moving).

You can also select up to 26 custom objects from the keyboard. To do so, press the [control] key and a letter. The letter [A] selects the first custom object, the letter [B] the second, and so on. You can create your own command cards, or lists, of which keys correspond to what objects. You may select up to 26 custom objects in any one custom object file and can have any number of files then load them from disk as needed, or you can select additional objects by choosing **Custom** under the **Objects** menu when there are more than 26 objects.

If more objects are available than will fit in the dialog window at one time, a *More* button is shown. Click on the *More* button until you see all the objects or the one you want.

## Save To

You can create your own custom objects and use **Save To** to save them. Once saved, select **Custom** (above) to use them in your drawing as needed. If you want to keep your custom objects permanently, **be sure to use Save To Disk below before you quit Architectural Design.**

You can load custom objects saved to disk and use them again later or in other drawings with **Load From Disk** (also explained below).

**Save To** lets you save only grouped objects as custom objects. To create and save a custom object, you must first draw it. Use any of the drawing tools to draw a custom object.

Once your custom object is drawn, click on the Selector tool. Now *select* all the individual objects that make up your custom object so you can group them into one object. Either press the Apple key and click on each object until they are all selected, or move the pointer outside the objects, press and hold the mouse button, drag the *selection box* around all of the objects, then release the button to select them all. Once selected, choose **Group** from the **Edit** menu to group them into a single object. Now you can choose **Save To** and save your grouped object as a custom object.

You can select and group entire rooms if you want, then save them as custom objects too. Or use this feature to create your own libraries of custom objects that you can load and use in your drawings as needed.

## Clear Some

You can delete one or more unwanted custom objects. To do so, select **Clear Some**.

Choose objects you want to *clear* (delete) the same way you choose them to use in your drawing. Use the mouse to move the selection box and enclose the object you want to clear, then click. Do the same to clear more objects or click [Cancel] when done.

**Warning: Use care clearing custom objects. You cannot recover an object once it has been cleared!**

## Clear All.

Choose **Clear All** to delete ALL custom objects. You are given a chance to change your mind before the clear takes place. Be sure you no longer want any of the custom objects before you do the clear. **You cannot recover the cleared custom objects!**

## Load From Disk

Use **Load From Disk** to load custom objects from disk. You can load the sample custom objects called CUSTOM.OBJS or load objects you created and saved with **Save To Disk** below.

Before the load occurs, you are given the option of clearing any existing custom objects or adding the objects you're going to load to them. This lets you merge custom object files together or load more than one group of objects at a time.

Once the objects are loaded, you can select **Custom** (see above) to use them in your drawing.

## Save To Disk

To permanently keep custom objects you've created, use this menu choice. The standard disk dialog will appear and let you name a file for your objects.

You can create as many files of custom objects as you want and save them for later use in your drawings.

Before quitting *Architectural Design*, be sure to use **Save To Disk** and save custom objects you want to keep permanently. Any objects that are not saved to disk are lost when you select **Quit** or turn off your computer.

## Options Menu

### See Full View

Select this to see your entire drawing at once. Click the mouse button or press a key to return to the work screen.

### Show/Hide Rulers

Choose **Hide Rulers** if you don't want visible rulers while drawing. If rulers are not used, this item changes to **Show Rulers** so you can use them later if you want.

The ruler units change depending on the scale and grid spacing you set up. Where the rulers meet at the top left corner of the drawing window, you'll see an abbreviation of what the working unit is as follows:

- ft = feet
- in = inches
- cm = centimeters (when Scale is set to metric)
- mm = millimeters (when Scale is set to metric)

Numbers on the rulers represent real-world distances in the scale you are using. Before beginning a serious drawing that uses rulers and precise measurements, be sure to read the **Scale** and **Grid** sections. You'll want to begin with the correct scale so your drawing page width and height are large enough to accommodate what you are drawing.

## Show/Hide Measurements

After you select **Show Measurements**, an object's size appears above the drawing window as you are drawing it. For rectangular objects, width and height measurements appear. Length and angle measurements are shown for line objects.

Performing calculations and updating the measurements does slow down drawing so you'll want to use measurements only when they are needed. You can find an existing object's size by selecting it and choosing **Info** under the **Edit** menu, or by moving onto its lower right handle, then pressing and holding the mouse button (when **Show Measurements** is activated).

After you choose **Show Measurements**, it changes to **Hide Measurements** so you can remove the measurement display if it is no longer needed.

## Measure In ft - dec

The default measurements are shown in feet - inches. For example, 3'3". You can also show the measurements in feet - decimal. The example just given would then become 3.25. Choose this menu item to change between the two options.

## Snap To Grid

A check mark beside this menu item indicates grid snap is enabled. When enabled (turned on), the start location for the object you are drawing is automatically adjusted to coincide with the nearest horizontal and vertical grid intersection. Then as drawing continues (via dragging), all *points* or *line ends* are adjusted to the nearest grid intersection, (i.e. snapped to the grid).

You can turn on and use grid snap even if the grid lines are hidden. This feature is especially useful for drawing objects which must be exactly the same size or horizontally and vertically aligned. Don't forget, you can also press [Apple-Y] to quickly toggle the grid snap on and off. See **Grid** for more related information.



## Auto Scroll

The **Auto Scroll** feature is enabled at start-up as indicated by the check mark beside it. While enabled, if you draw beyond the bottom or right side of the window, your drawing is automatically scrolled. This lets you more easily draw objects that are larger than the window viewing area.

If you don't want to use **Auto Scroll**, select this item to disable it. When disabled, you can use the scroll bars to scroll your drawing if you need to. Click on the scroll bar arrows for small moves, in the page area (beside the box) for larger moves, or drag the scroll bar box to position your drawing as desired.

## Scale

When you choose **Scale**, the following dialog appears:

Units

☒ Feet-Inches ☐ Metric

Scale

☐ 1/32" = 1' ☒ 1/8" = 1' ☐ 1/2" = 1'

☐ 1/16" = 1' ☐ 1/4" = 1' ☐ 1" = 1'

Drawing width: 64.00 ft

Height: 44 ft

☐ Rescale Objects

Ok Cancel

You can select **Scale** to change your drawing scale, or to see what the current scale is. The round button beside the current scale is automatically selected (darkened) when the dialog appears.

**Units.** Click on the box next to the type of units you want to use, either feet-inches or metric. A chosen box has an [X] inside it. If you select metric, the standard scale choices (see below) change to metric scales.

**Scale.** Choose one of the six most commonly used scales or type the width you want for your drawing. Click on the button beside a standard scale to select it, or simply begin typing to specify your own width (scale). The maximum width you can use is 10,000 feet per page (80,000 feet for the largest possible drawing size that is 8 pages wide), or 10,000 centimeters per page if you are using metric units. Use the [delete] key to edit your typing.

**Rescale Objects.** Click on the box beside this option if you want the size of objects changed (rescaled) when you change scales. When the box is empty, object sizes are not changed. Following is more related information (see the **Scale changing problems** section also).

**Choosing a scale.** Do some planning before choosing a scale. When *Architectural Design* begins, the scale is 1/4" = 1'. This means when you print a hard copy, 1 inch on paper is equal to 4 feet in the real world. Since a one-page, printed drawing is 8 inches wide, the real-world width of a page is 32 feet using the start-up scale.

If the project you are beginning will be larger than 32 feet wide, then you'll need to set a drawing size larger than one page (a drawing that prints on 2 or more pages of paper — see *Drawing Size* later in this chapter) or choose a different scale if you want to keep your drawing size to one printed page. Each step in the standard scale choices doubles the drawing width, or cuts it in half. So if you choose 1/8" = 1', your drawing's page width increases to 64 feet. The maximum width for the standard scale choices is 256 feet with the 1/32" = 1' scale. If you want a drawing page width that's wider than 256 feet, you'll need to type the width you need.

You should consider the height of your drawing too. The height is shown in the scale dialog below the **Page Width**. It automatically changes as you select different scales or type a width. You cannot change a page's height independently so that the width to height ratio of a printed page is maintained. You can independently control the number of pages high your drawing is (see *Drawing Size*).

When the scale is what you want, click on [Ok] to change to the new scale, or click on [Cancel] to discard any changes and stay with the original scale.

**Note for LaserWriter users:** Horizontal scale adjustments must be made when printing to a LaserWriter. The adjustments are needed to make drawings print to scale correctly. For this reason, approximately one half inch is lost on the right side of the drawing page. If you plan to do a LaserWriter printout, take this into consideration and don't draw right up to the right edge of the drawing page. Leave an inch or so to allow for the horizontal scale adjustment. This is needed only for the LaserWriter.

**Scale changing problems.** Although *Architectural Design* can rescale any existing objects when you change scales, **it's much better to choose the correct scale before you begin drawing and stay with that scale.** Due to rounding, differences in line widths, screen resolution, and for other reasons, objects may become misaligned to some degree during the rescaling process. In general, the more drastic the change in the scale, the greater the chance of having problems when your objects are rescaled. Another side effect is that the scale change



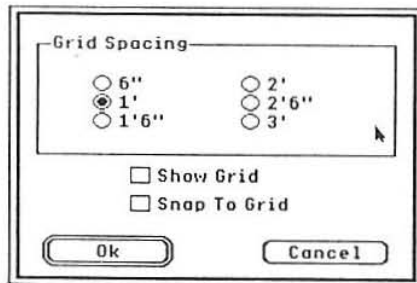
could cause objects to go beyond the bounds of the drawing area in the new scale, creating additional problems.

For the reasons listed above, **if you try to rescale an existing drawing, you should always save a copy to disk as a safeguard first!** Once objects have rescaled during a scale change, you may not be able to simply go back to the original scale and have them be as they were! The next scale change rescales objects based on their new size and new coordinates.

The same alignment problems can occur with the predrawn objects. They were designed for the start-up scale,  $1/4" = 1'$ . When you change scales, a predrawn object is automatically resized to the new scale when you choose it under the **Objects** menu, or when you display it by pressing a keyboard letter. The greater the change from the start-up scale, the more likely it is that an object will not scale perfectly (the end of one line may not meet perfectly with another line, etc.). If you need to, you can ungroup a predrawn object (see **Ungroup** and **Resizing Objects**) and correct small problems that may occur with rescaling.

## Grid

Choose this menu item to set the spacing of the grid or show and hide the grid lines. After choosing this item, you'll see this dialog:



**Grid Spacing.** For any given scale, you'll have six choices for the grid spacing; choose the you want by clicking on the button next to it.

**Show Grid.** An [X] in the box beside this option causes grid lines to show. Click on the box to select or empty it.

**Snap To Grid.** This is the same as the **Snap To Grid** menu choice. You can click on the box beside it here to turn the grid snap on and off, or use the menu item. The menu choice was included for faster access to this often-used feature.

Click on [Ok] to keep the new grid settings, or click on [Cancel] to discard them and use the original settings.

## Drawing Size

This item lets you change the page size of your drawing, which increases or decreases the amount of space inside the drawing window. Each page in size corresponds to a printed page on paper, so if you create drawings that are larger than one page, they print to more than one page on paper. You can trim the edges off the paper and attach the pages together to make a large-drawing printout. You may prefer to use the **No Gaps Between Pages** option under **Page Setup** when printing multiple-page drawings (this option is turned on when the program starts). This causes the drawing to print continuously down the paper vertically (right through the perforations). You will need only to attach each vertical column side by side to complete the entire printed drawing.

When *Architectural Design* begins, the drawing size is set to 1 page wide by 1 page high. You can create drawings that are up to  $8 \times 8$  pages in size, however, you should limit the size to what you really need for a given project. Remember that an  $8 \times 8$  page drawing contains a total of 64 pages which could take a considerable amount of time to print. It's unlikely that you would ever need a drawing that large but the option is available. The width and height do not have to be the same. The following drawing size examples are all okay:  $1 \times 2$ ;  $2 \times 1$ ;  $2 \times 2$ ;  $2 \times 4$ ;  $4 \times 4$ ; and so on.

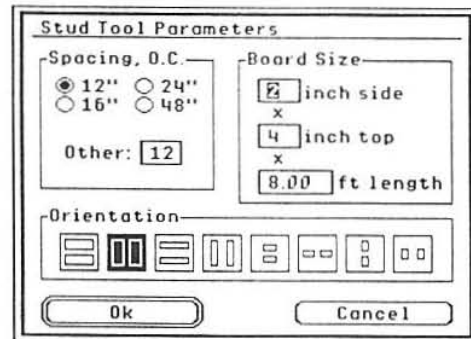
To change the size, select **Drawing Size** from the **Options** menu then type the desired width and height. Use the tab key to move between size boxes, or click on the box that you want to change. Use [delete] to edit your typing. Click [Ok] to use the new size or [Cancel] to keep your original size.

If you are changing the size of an existing drawing, you cannot reduce its size smaller than the number of pages currently used by the drawing. The number of pages used are shown, and the range limits for the width and height are shown in parenthesis, ( ). It's okay to increase a drawing's size up to the maximum size limits, and if necessary, you might delete part of a drawing or change the scale using the re-scale objects option to reduce its size so you can decrease the number of pages it uses (see *Scale*). You can also print using 50% reduction to print a drawing using half the number of pages it would normally require (see *Page Setup*).

## Stud Tool

Select the **Stud Tool** menu item to change the parameters for the Stud drawing tool. The changes you make to the parameters are remembered and used when you draw studs by clicking on the Stud tool icon. See **Stud Tool** in chapter 2 for information on how to draw studs.

After selecting **Stud Tool**, you'll see this dialog:



**Spacing, O.C.** O.C. stands for a contractor's term, *On Center*. It's the spacing between studs measured from the center of the boards. You can set the spacing you want for your studs or boards. Four commonly used spacings are provided. Click on a button beside one to choose it. To specify a spacing other than those provided, use the tab key to move to the **Other** box, or click on the box to move to it, then type the spacing you want.

**Board Size.** If you want to change the board size, use the tab key to move to the desired box and type the size you want, or click on a box to move to it for typing. There's more related information on board size below.

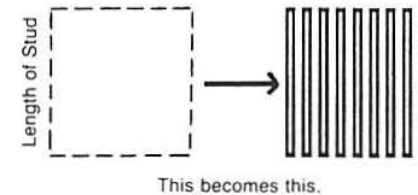
**Orientation.** You can change how you want to view boards by clicking on the desired orientation icon. The currently selected orientation is highlighted.

Beginning from the left, the first two icons are top views. The next pair of icons represent side views. The last four icons are various orientations of end views. If you want to view from the top with a horizontal orientation, click the first icon on the left.

The size of the orientation icons will not change as you specify the boardsize; only the size of the studs in your drawing will change.

When using the Stud tool to draw, you have direct control over the length of studs viewed from the top or side by dragging a sizing rectangle to the size you want. The area the rectangle encloses will be

filled with studs. See **Stud Tool** in chapter 2 for help drawing studs. The rectangle defines the length of the studs and the width of the area you want filled with studs, as shown here using the default start-up orientation:

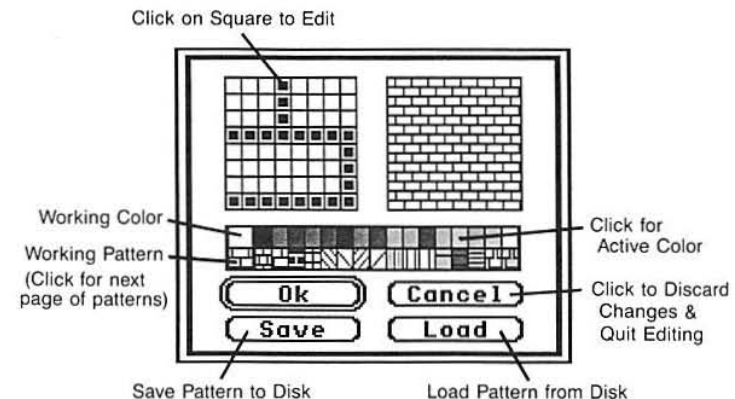


The length of studs drawn from an end view is unknown unless you specify it in the **Stud Tool** dialog box. When you select **Info** for a stud object viewed from the end, the length that you specify in the dialog box is used for all the information calculations. Be sure to provide the correct length parameter in the dialog box for end views, or information shown with **Info** will not be correct.

When you have all the stud parameters set the way you want, click on [Ok] to keep them, or click on [Cancel] to discard any changes and use the original parameters.

## Patterns

Choose **Patterns** to change existing patterns or to load patterns from disk. After selecting this item, this dialog appears.



To edit a pattern, click on the pattern you want to change to make it the working pattern, then click on the color you want to use. Move the pointer onto the pattern square that you want to change and click (in the large box on the left). You can hold the button down and move the mouse for continuous drawing. Squares under the pointer change to the working color. The reference area in the large box on the right is updated for a true size perspective of your changes.

You can get the next page of patterns by clicking on the working pattern square that's next to the line of patterns in the palette.

To copy patterns, move onto the pattern you want to copy, then press and hold down the mouse button. Move the pattern's outline to the new location and release the button. You can drag the outline off the left or right end to copy to the next page of patterns.

Click on [Save] to save a permanent copy of your patterns to disk, or click on [Load] to load patterns that you have previously saved.

If you click on [Cancel], all changes made to the patterns are discarded, the pattern dialog disappears, and your original patterns are restored.

If you click on [Ok], all changes to the patterns are kept, the pattern dialog disappears, and your working patterns on the palette are redrawn using the newly changed patterns. Until you make other changes to your drawing or colors, you can still click on [Undo] to restore your original patterns.

### Default Patterns

This menu item initializes the palette patterns to the default patterns, the same as when *Architectural Design* first begins. Select [Undo] to reverse this selection.

### Default Colors

**Default Colors** initializes the palette colors to the standard default colors, the same as when *Architectural Design* first begins. Click [Undo] to reverse this selection.

## 5—Using Paint Your Own Home

While an object oriented program like *Architectural Design* is an ideal tool for drawing floorplans and arranging architectural symbols, there may be times when you'll want to work with a drawing in ways that only a paint program can. You can do things with paint layer drawings that you cannot do with an object oriented program like *Architectural Design*. For example, you may want to *zoom in* and edit your drawing at a single dot (pixel) level, fill irregular areas with colors and patterns, or use various types of paint brushes. For your convenience, we've included a program called *Paint Your Own Home* (PYOH) with *Architectural Design* so you can save drawings as paint files and use paint-type features when you prefer. In addition, *Paint Your Own Home* lets you load clip art screens. You can create your own clip art or experiment with the sample clip art that's provided.

Many of the *Paint Your Own Home* features, such as lines, rectangles, and ovals work like they do in *Architectural Design*, except they draw paint layer images rather than create objects. Features that are different or apply only to *Paint Your Own Home* are explained here. When features work the same, you are referred to other sections of this manual.

### Starting Paint Your Own Home

Before starting *Paint Your Own Home*, if you have not already done so, refer to the "Making A Backup" section and make backup copies of the *Architectural Design* disks that you received.

**Note:** If you are already using *Architectural Design*, you can select **Quit** under the **File** menu to return to the Finder. In this case, you do not have to turn off your computer and start the Finder from scratch, so you can skip the steps described in the following paragraph.

The first step to starting *Paint Your Own Home* is to start the Finder. To do so, insert the *Design Your Own Home* (DYOH) system disk into your drive, turn off your computer (if it is on), wait for about 30 seconds, and turn it back on again.

Once the Finder screen appears, if you have one drive, remove the DYOH system disk from your drive and insert the *Architectural Design* program disk. If you have two drives, insert the program disk into your second drive. A window with the name **DYOH.Architect** at the top of it opens automatically.

If for some reason the window does not appear, you can open it yourself. To do so, use the mouse to move the arrow pointer onto the disk (or volume) icon that has the name **DYOH.Architect** beneath it, then double-click the mouse button.

The *Paint Your Own Home* application icon is inside the **DYOH.Architect** window (if you had to open the window yourself, you may need to use the window's scroll bars to find the icon). It has the name **Paint.Home** beneath it and looks like this:



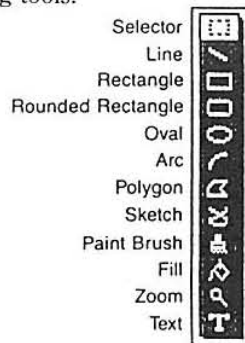
*Paint Your Own Home* drawings that you create and save to disk, as well as clip art or any picture file that you can load appear with a document icon when viewed from the Finder screen. The document icon looks like this:



To start *Paint Your Own Home* from the Finder screen, insert your backup copy of the program disk into your drive. Then move the pointer onto the **Paint.Home** application icon (not the name) and double-click.

## Drawing And Color Tools

Many of the drawing tools and all of the color tools are the same as those provided in *Architectural Design*. See chapter 2, "Drawing Tools", for a complete description of the drawing tools that are not described here and refer to chapter 3, "Color Tools", for a description of all the color tools. When *Paint Your Own Home* starts, you'll see these drawing tools:



Though the hollow line tool isn't visible in the tools window, it's still available. To use it, select the line tool, click the line width you want, then hold down the **option** key while you draw.

## Selector Tool

To use the selector tool, click the dotted box icon (the top tool). Now move into the drawing window, press and hold down the mouse button, and drag the resulting dotted box to the desired size. Then release the button.

The area enclosed by the selector box remains selected as indicated by the animated box (it appears to flash or rotate). You can manipulate the selected area with items under the **Edit** menu (see "Menus" in this chapter), or you can use the mouse to move or copy the selected area. You can press **delete** to quickly erase the selected area.

To move the selected area (or image), position the pointer anywhere within the animated selection box. The pointer changes to an arrow when it is within the selection box. Press and hold down the mouse button and move the dotted outline to the desired location, then release the button. The image is erased and moved to the new location. To make a copy of a selected image, hold down the **apple** key before you press the mouse button. The original image is left as it is and a duplicate is copied to the new location when the **apple** key is pressed. Select **Undo** to reverse the most recent change.

You have the option of having images drawn to the screen in either of two drawing modes, **replace** or **overlay**. This applies to images that are moved and copied, clip art images, and those that are pasted into your drawing using **Paste**. The replace mode draws an exact copy of the area that's within the selection box, including any white background area. The overlay mode causes white, the background color, to be treated as a transparent color. So only colors other than white, the foreground colors, that are within the selected area are drawn (overlaid) to the screen. If you want white to be treated as a foreground color and not be transparent, you can set another palette color to white with the **Mix** button and use it as a foreground color. The only white that becomes transparent is the one at the right end of the color palette (this applies to patterns as well).

When the program starts, overlay mode is used. You can temporarily override whichever mode is active by holding down the **option** key before you move, copy, or do any operation that draws a selected image to the screen. You can also select **Use REPLACE/OVERLAY Mode** under **Edit** to change the active mode. The new mode is used until you change it again with the same menu item, or override it with the **option** key.



## Paint Brush Tool

To use this tool, click the paint brush icon in the tool window. Move into the drawing window, press and hold down the mouse button, then move the mouse.

Additional paint brushes are available. To choose a brush, you can hold the **apple** key down and press **B**, or select the **Paint Brushes** item from the **Options** menu. Then move the selection box left or right with the mouse and click the button to select the desired brush.

## Fill Tool

This tool lets you fill an area with a color or pattern. To begin, click the icon that looks like a paint can tipped to the left (with paint pouring out), then click the color or pattern you want to use. Position the center of the pointer exactly where you want the fill to begin and click. If you fill a large area, it may take a few seconds to complete the fill. You'll see a watch cursor indicating the program is working. If needed, select **Undo** to reverse the fill.

**Note:** This is a vertically limited fill. This means the fill begins at the point where you click and fills upward and downward until a color different from the color you were on top of when you clicked is encountered. Though you may need to click at more than one location to fill complex areas with this type of fill, you can use this feature to your advantage because you have a greater degree of control.

## Zoom Tool

This tool lets you **zoom in** on (or magnify) your drawing. Each pixel, or screen dot, is enlarged so you can easily see and change an individual pixel. To begin, click on the icon that resembles a tilted magnifying glass. Now you can increase or decrease the magnification by selecting a size in the line width window. You'll probably need to use the scroll bars afterward to move to the area of your drawing that you want to edit.

To draw, click on the color or pattern you want to use, move the pointer onto the pixel that you want to change, then click. You can also hold down the mouse button and move the mouse for continuous drawing. Hold down the **apple** key and press **W** or select **See Full View** under the **Options** menu to see your changes at their normal size. Use **Undo** to reverse the most recent change.

## Menus

All the *Paint Your Own Home* menu items under the **File** and **Text** menus work as described for *Architectural Design*. Many of the items under **Edit** and **Options** do also. Please refer to chapter 4 for a description of those. Menu items that apply to *Paint Your Own Home* only, or those that are implemented differently, are described here.

**Note:** The **Cut**, **Copy**, **Paste**, and **Clear** items work as in *Architectural Design* except the clipboard is maintained in memory rather than on disk.

## Load/Get Clip Art

Use this item to load clip art screens. Clip art screens are standard, unpacked, IIGS picture screens. You can draw your own clip art using *Paint Your Own Home* (or any other paint program that lets you save standard unpacked pictures), then use this item to load the images for use in your drawing. If you need help using the load file dialog, see "Open" in chapter 4.

After the clip art screen loads, it's shown on the screen so you can select an image (or area) to add to your drawing. For future selections, you'll need to choose **Get Clip Art**.

To select an image, hold down the mouse button and drag the resulting selection box around it just like you do when using the selector tool. When you release the button, the image is placed in your drawing and automatically selected so you can position it as desired. The selector tool is automatically activated also. If you don't want to place any clip art into your drawing, simply click without dragging the selection box around anything. This lets you use **Load Clip Art** without immediately having to add something into your drawing, or lets you select **Get Clip Art** for viewing only. Remember, you can selectively use overlay or replace drawing modes to control how images are drawn (see the "Selector Tool" section in this chapter). **Undo** removes an image should you change your mind after selecting it.

## Copy Drawing > Clip Art

This item copies your entire drawing page to the clip art page replacing any clip art that is presently there. Select **Undo** to restore your original clip art (before doing anything else).

If you are not using clip art, this is a handy feature for keeping a temporary backup copy of your current drawing. It lets you experiment by making multiple changes to your current drawing and use **Copy Clip Art > Drawing** to restore your original if you don't like the changes.

## Copy Clip Art > Drawing

You can use this to copy the clip art page to the drawing page. The clip art replaces any current drawing. You can select **Undo** (before doing anything else) to restore your original drawing.

You might want to use **Copy Drawing > Clip Art** and this item to save a backup copy of your drawing and later revert back to the backup copy, or to transfer clip art to the drawing window so you can edit it. Afterward, you could save the edited clip art with **Save As** and use it at a later time.

## Swap Drawing < > Clip Art

This menu item exchanges your drawing with the clip art page. You can select **Undo** or this item a second time to restore both your drawing and the clip art.

You can use this when you need to make minor changes to clip art before using it with your current drawing.

## Use REPLACE/OVERLAY Mode

Choose this to change the drawing mode that's used to draw images that are moved, copied, and pasted into your drawing (including clip art images). The **Use REPLACE Mode** item changes to **Use OVERLAY Mode** after it is selected (and visa versa) so you can change to whichever mode is not currently active.

Please refer to the "Selector Tool" section near the beginning of this chapter for a complete description of how these modes work.

## Paint Brushes

This menu choice lets you change the paint brush that's used for painting with the paint brush tool (the icon tool). To choose a brush after selecting this item, use the mouse to move the selection box left or right to enclose the desired brush, then click. The selected brush is used the next time you use the paint brush tool. See the "Paint Brush Tool" section of this chapter for more.

# Appendix A

## Error Messages

### No clipboard file

This error message indicates there isn't an *Architectural Design* clipboard file on the last disk that you used. This occurs if you try to **Paste** before using **Cut** or **Copy**. Use **Cut** or **Copy** to create a clipboard file and place (cut or copy) objects into it, then don't change disks before you use **Paste**. If you need to switch disks, do it before you perform the initial **Cut** or **Copy** since the working disk is used for the clipboard file. You can make another disk the working disk by cataloging it (with **Open** for example), then clicking **Cancel**.

### Object file I/O

You'll see this only when *Architectural Design* first starts if no pre-drawn objects can be loaded. You can click **Ok** and still have limited use of *Architectural Design* (you can't use pre-drawn objects). To avoid this error, if you've copied *Architectural Design* to a different volume or Hard Disk, be sure the **Arch.Data** folder resides in the same folder as the *Architectural Design* application and that it contains a good copy of the **Arch.Obj**s file.

### Pattern file I/O

You'll see this only when *Architectural Design* first starts if no patterns can be loaded. You can click **Ok** and still have limited use of *Architectural Design* (the default patterns for the pre-drawn objects will not be available). To avoid this error, if you've copied *Architectural Design* to a different volume or Hard Disk, be sure the **Arch.Data** folder resides in the same folder as the *Architectural Design* application and that it contains a good copy of the **Arch.Pats** file.

### A 1MB+ system is needed

This is shown at start-up if your computer doesn't have enough free memory for *Architectural Design* to start.

### ProDOS (GSOS) I/O

The operating system was unable to read or write data to disk. The reason may vary. The disk may be physically damaged or have had data on it compromised in some way.



## Write-protect

A disk is write-protected and cannot be written to. Remove it from the drive and disable the write-protect tab. See chapter 1 for how.

## Volume or Path not found

This might occur if you switch disks or remove a disk from the drive and try to do a **Save**, **Cut**, or **Copy**. See the "No clipboard file" section above and "Save" in the "Menus" chapter for related information. You can use **Save As** to save to a different disk.

## Volume full

There isn't any more room on the disk. You'll need to save to a different disk or initialize (with the Finder) another data disk to use. See the "Getting Started" section in chapter 1 for help making data disks.

## Invalid directory

The directory or subdirectory on the disk has probably been compromised. You'll likely need to use the Finder and copy all the files you can to another disk, then initialize and verify the bad disk. Discard the bad disk if it does not verify as being error-free after it is initialized again.

## Out of memory

You don't have enough free memory to do whatever it is you are trying to do. If you are using a RAM disk, you may be able to set it to zero or reduce its size to free more memory. Be sure to turn your computer off and restart after doing this.

# Appendix B

## Setting The Control Panel For Printing

### Using The Control Panel NDA

The latest version of Apple's system disk lets you change Control Panel settings using a New Desk Accessory (NDA) called **Control Panel**. This section describes how to use it to set your Control Panel for printing. For complete information about this desk accessory and the latest system disk, contact your local Apple dealer.

If the **Control Panel** item is available under the **Apple** menu, select it to set your Control Panel for printing, otherwise, see the "Using The Control Panel CDA" section (below) for setting your Control Panel.

When the Control Panel window appears on the screen. Click on the icon for the type of printer setup that you have, **DC Printer** (Direct Connect Printer) for an ImageWriter printer (or other printer that isn't on an AppleTalk network). You may need to use the scroll bar to find the icon. Click on the name of the printer you have, and on the port it's connected to at the back of your computer. Don't write-protect the DYOH system disk so the settings you choose can be saved to disk, then you won't have to do this the next time you start *Architectural Design*.

Now find the **Slots** icon and click on it (use the scroll bar if needed to find the icon). To change a slot, move the pointer onto the box beside its number, hold down the mouse button and move the mouse to select the desired option then release the button. Use this procedure to set slots 1, 2, and 7 as appropriate for your hardware setup (see #4 in the "Using The Control Panel CDA" for more help with slot settings if needed). Click the close box at the top left corner of the Control Panel window when finished.

**Note:** When using the Control Panel desk accessory, the options shown in italics are the default settings. The **Alphabet** keyboard translation must be set to **None** (if not already). This is how the GS translates characters and it's required for the *option* key to work correctly with *Architectural Design*. The **Standard** setting is how the Macintosh translates characters.

## Using The Control Panel CDA

This section helps you set the Control Panel for printing. If you have already started *Architectural Design*, you'll need to save any existing design since you'll have to restart your computer after working through this section. Please consult your *Apple IIGS Owner's Guide* for more information about the Control Panel.

1. If your computer is on, press the **apple**, **control**, and **esc** keys simultaneously to access the desk accessories menu. If your computer isn't on, hold down the **option** key and turn it on, then at the resulting menu, press **1** and go to step 3.
2. Use the up or down arrow key to highlight the **Control Panel** item and press **return**.
3. Use the up or down arrow key to highlight the **Slots** item and press **return**.
4. Now, use the arrows to highlight **Slot 1** if your printer cable is plugged into the printer port at the back of your computer, or **Slot 2** if it is plugged into the modem port. Use the right arrow key to change the highlighted slot as follows.
  - a. If your printer is connected to the printer port, set the highlighted slot (should be 1) to **Printer Port**.
  - or
  - b. If your printer is connected to the modem port, set the highlighted slot (should be 2) to **Modem Port**.
  - or
  - c. If you are using a LaserWriter or an AppleTalk network (a LaserWriter uses an AppleTalk network setup), set the highlighted slot (1 or 2) to **Your card** and set **Slot 7** to **Built-In-AppleTalk**.
5. Press **return** to keep the new settings, highlight **Quit** and press **return** again to exit.
6. Turn your computer off and wait about 30 seconds before turning it back on. You need to turn your computer off to initialize the system with the new Control Panel settings. Refer to the "Getting Started" section for help in restarting.

## Appendix C

### Setting Your RAM Disk To Zero

*Architectural Design* requires a minimum of 1024K (1MB) of free memory to operate, so to ensure enough memory is free, set your RAM disk size to zero. The following steps show you how.

1. If your computer is on, press the **apple**, **control**, and **esc** keys at the same time to access the Desk Accessories menu. If your computer is off, hold down the **option** key and turn it on.
2. If you began with your computer off, press **1** to select **Control Panel**. If your computer was on, then at the Desk Accessories menu, use the **arrow** keys to highlight **Control Panel** and press **return**.
3. Use the up and down **arrow** keys to highlight **RAM Disk** and press **return**.
4. Use the right and left **arrow** keys to set both the minimum and maximum RAM disk sizes to zero and press **return**.
5. Turn off your computer so the new settings will take effect. Wait about 30 seconds, then you can start *Architectural Design* as described at the beginning of this user's guide.

## Appendix D

### Installing Architecture On A Hard Disk

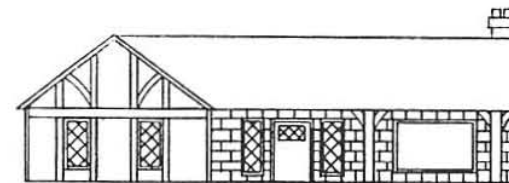
1. Use the Finder to copy the **Architecture** application file to the desired Hard Disk folder. You can use an existing folder or create a new folder.
2. Copy the entire **Arch.Data** folder that resides on the program disk (not the data disk) to the same folder that contains the **Architecture** application file on the hard disk.
3. Copy the **Arch.Icons** file inside the **Icons** folder of the original *Architectural Design* program disk to the **Icons** folder of the boot volume on the Hard Disk so the Finder will use the *Architectural Design* program and document icons if you boot from the Hard Disk.

## Front Views of Sample Plans

These illustrations correspond to the plans on your data disk.



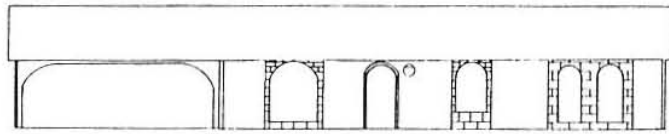
colonial 1



Tudor 1



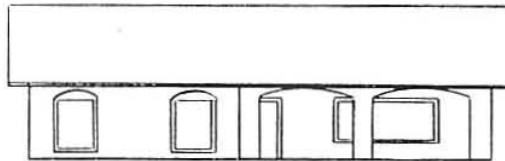
Tudor 2



Spanish 1



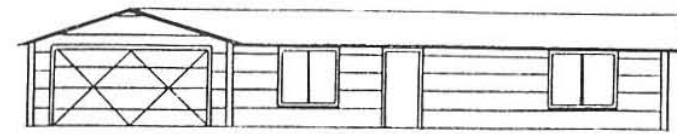
Spanish 2



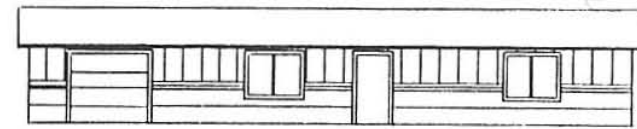
Spanish 3



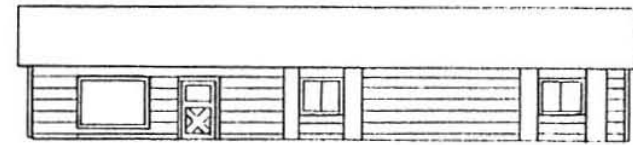
Cape Cod 1



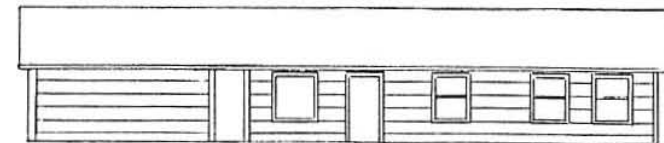
ranch 1



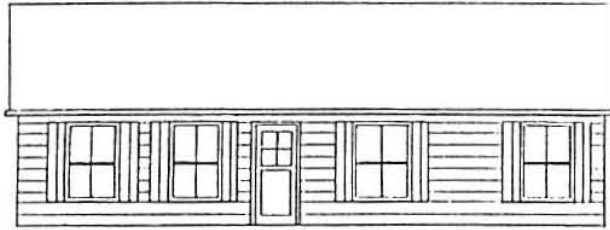
ranch 2



ranch 3



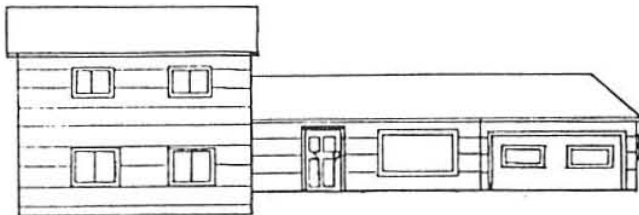
ranch 4



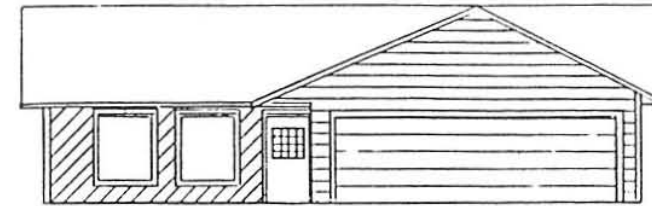
traditional 1



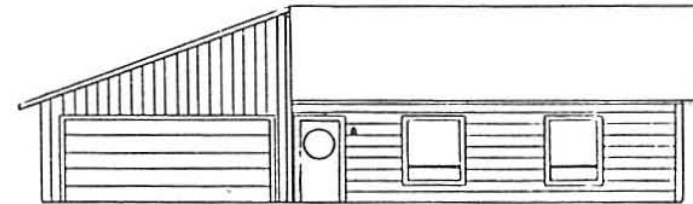
traditional 2



traditional 3



modern 1

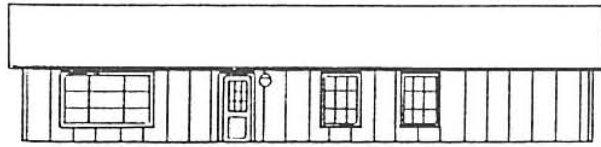


modern 2



modern 3

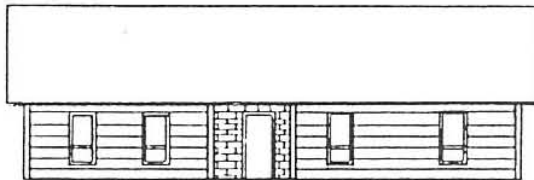




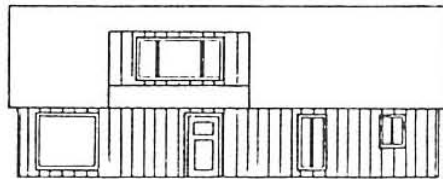
country 1



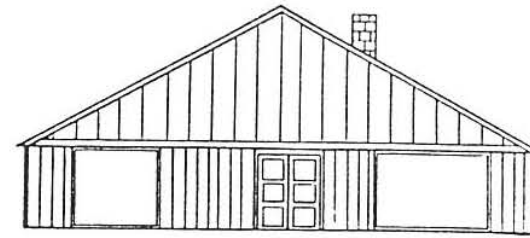
country 2



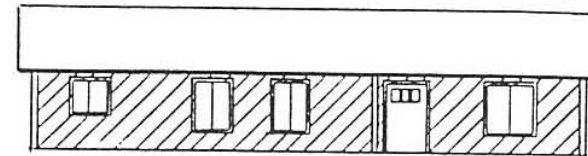
solar 1



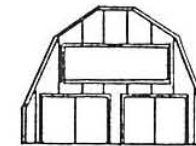
solar 2



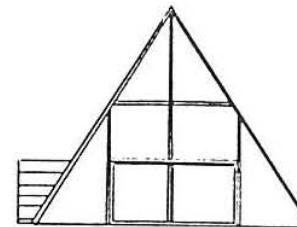
vacation 1



vacation 2
















































vacation 3



A-frame 1

## Extra Copies of Command Cards

IIGS ARCHITECTURE COMMAND CARD	
SHAPES	
A = Bathtub (Horiz.) ... 	N = Elevation Heights ... 
B = Bathtub (Vert.) ... 	O = Outlet (110V) ... 
C = Bathtub (Square) ... 	P = Outlet (220V) ... 
D = Door (Top) ... 	Q = Break Line ... 
E = Door (Side) ... 	R = Shower (Diag.) ... 
F = Light Fixture ... 	S = Shower ... 
G = Chimney (Top) ... 	T = Toilet ... 
H = Chimney (Side) ... 	U = Toilet (Diag.) ... 
I = Steps/Stairs (Top Spiral) ... 	V = Wire Jump ... 
J = Steps/Stairs (Top Diag. Spiral) ... 	W = Washbowl (Horiz.) ... 
K = Steps/Stairs (Top Straight 1) ... 	X = Washbowl (Diag.) ... 
L = Steps/Stairs (Top Straight 2) ... 	Y = Window (Top) ... 
M = Scale Marker ... 	Z = Window (Side) ... 

MENU COMMAND KEYS	
<p>  A = Select All   B = Move to Bottom   C = Copy   F = Choose Font   G = Group   H = Ungroup   I = Info   K = Close   L = Lock   M = Show Measurements   N = New   O = Open   P = Print   Q = Quit   R = Hide Rulers   S = Save   T = Move to Top </p>	<p>  U = Unlock   V = Paste   W = View   X = Cut   Y = Snap to Grid   Z = Undo   — = Align with Grid   ~ = Rotate Left     = Rotate Right   " = Flip Horizontal   : = Flip Vertical </p>
<p>OBJECT GROUPS</p> <p>  1 = Bath   2 = Doors   3 = Windows   4 = Stairs   5 = Electrical   6 = Other   0 = Custom   + = Save to </p>	

## Limited Warranty, Disclaimer of Warranties, and Limitations of Liabilities

Abracadata, Ltd. warrants to the licensee and no other person or entity the disks on which DESIGN YOUR OWN HOME, ARCHITECTURE are recorded (but not the software nor this manual) to be free from defects in materials and workmanship under normal use for a period of 30 days after the date of original purchase. If during this 30-day period a defect should occur, the disk may be returned with a copy of your dated sales receipt and a brief description of the problem to Abracadata, Ltd. P.O. Box 2440, Eugene, OR 97402, for replacement free of charge. Your sole remedy in the event of a defect in a disk is limited to replacement of the disk as provided above. Any implied warranties applicable to the disk shall terminate not later than 30 days after the original date of purchase. If the disk has been physically damaged, is beyond the 30 day limit, or is not accompanied by proof of purchase, include \$10 per each disk plus \$4.00 postage and handling per request. Please return the disk only, not the entire package. Do not staple or paper clip the disk. Package the disk carefully to prevent bending, and mark the package "Do not X-Ray or Use Magnets." Ship via UPS or U.S. Postal Service with return receipt requested. Abracadata, Ltd. is not responsible for disks not received when you cannot provide proof of your shipment and our receipt.

DESIGN YOUR OWN HOME, ARCHITECTURE is sold or licensed on an "as is" basis. Except as provided above with respect to the disks, Abracadata, Ltd. makes no other warranty or guarantee of any kind, express or implied or statutory, with respect to DESIGN YOUR OWN HOME, ARCHITECTURE, its quality, performance, accuracy, merchantability, or fitness for any particular purpose; and assumes no responsibility or liability to the licensee or any other person or entity with respect to any damage caused or alleged to be caused by use of DESIGN YOUR OWN HOME, ARCHITECTURE. The entire risk as to the quality, suitability, accuracy and performance of DESIGN YOUR OWN HOME, ARCHITECTURE is with the licensee. Except as provided above with respect to the disk, if DESIGN YOUR OWN HOME, ARCHITECTURE proves defective after purchase, the licensee (and not Abracadata, Ltd., its distributor, its retail seller or others involved in the development of the product) assumes the entire cost of all necessary servicing, repair, or correction. In no event will Abracadata, Ltd. be liable for direct, indirect, incidental or consequential damages resulting from any defect in DESIGN YOUR OWN HOME, ARCHITECTURE or from any particular application of DESIGN YOUR OWN HOME, ARCHITECTURE by the licensee or any other person or entity, even if Abracadata, Ltd. has been advised of the possibility of such damages. Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. If any exclusion or limitation shall be determined by a court to be invalid or enforceable, the determination shall not affect in any respect the validity or enforceability of remaining exclusions or limitations or of the same exclusion or limitation in different circumstances.

Abracadata Ltd. gives no assurance that the information used in the development of DESIGN YOUR OWN HOME, ARCHITECTURE is reliable and accurate. The recommendations by DESIGN YOUR OWN HOME, ARCHITECTURE represent only the opinion and judgement of the author and are intended to be applicable in normal circumstances. Individual circumstances may vary and may render certain recommendations inapplicable. AL gives no assurance that the opinions of judgement of the author are reliable and accurate.

### If you have read the manual and you are having trouble with the program, please follow the procedure below to get help.

1. Read ALL of the enclosed sheets (if any) included in the program box.
2. Contact your dealer for further information and help with the operating system and finder. This program works only with the operating system supplied with it.
3. Did you mistakenly erase your data disk?

**If you're sure you've done everything correctly** (or you're positive you've erased your data), read the first paragraph of the Warranty statement, above.

Then, **before you do anything else, CALL** us for assistance. If we determine that there is something wrong with your disk, we'll give you a Return Authorization number for a return, and will instruct you regarding payment if you are beyond the warranty period.

And Be Patient...

## Other Abracadata Products

**Adventure of Learning:** The revolutionary educational program for home and school. Runs or creates Learning Modules, Learning Adventures, and Entertainment Adventures.

**Design Your Own Train,** the first transit system construction set that puts a model railroad inside your computer. For all Apple II's (GS too), IBM/compatibles; and for the Macintosh, **MacInooga Choo-Choo.**

**Train Library,** Includes a dozen complete ready-to-go layouts will work with *Design Your Own Train* or *Run Your Own Train*. For Apple II, IBM, Macintosh.

**Run Your Own Train,** the "flight simulator" for down-to-earth people, puts you in the engineer's seat as you run trains over layouts that you design yourself. For all Apple II's (GS too). IBM version coming.

**Everybody's Planner,** project management and flowcharting for all Apple II's (GS too) and IBM/compatibles.

**Everybody's Planner Reports,** provides 13 extra reports for above, all Apple II's (GS too) and IBM/compatibles.

**Design Your Own Home,** Architecture, Interiors, Landscape design, all Apple II's (GS too), Macintosh, IBM/compatibles, special IIGS versions available.

**Design Your Own Home Libraries,** 4 Architecture, 2 Interiors, 1 Landscape library, each with 48 complete plans. 7 libraries for each computer: Apple II, IIGS, Macintosh, IBM/compatibles.

**Landscape Regional Image Libraries,** enable you to insert regional-specific trees and other landscape items into your landscape plan. Five libraries for Apple II, IIGS, IBM.

**Welcome!,** organizational handbook for any type of organization, for all Apple II's (GS too).

**Electronic Drawing,** 98 pre-drawn shapes make electronic schematics a breeze, all Apple II's (GS too) and IBM/compatibles.

**Graphics Supermarket,** IIGS shape utility, creates and saves shapes, animates and (programmers!) provides source codes for the shapes; prints; special developer's version available with complete program source codes (C and assembler); IIGS.

*Write or call us for more information.*

