

Customizer and Icon Editor User Guide

CADD5® 5i Release 14

DOC38303-009

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Preface

The *Customizer and Icon Editor User Guide* describes how to use the Customizer utility to tailor your CADDSS user interface to suit individual or department needs.

Book Conventions

The following table illustrates and explains conventions used in writing about CADD5 applications.

Convention	Example	Explanation
Menu selections and options	List Section option, Specify Layer field	Indicates a selection you must make from a menu or property sheet or a text field that you must fill in.
User-selected graphic location	X, d ₁ or P1	Marks a location or entity selection in graphic examples.
User input in CADD5 text fields and on any command line	<code>cvaec.hd.data.param</code> <code>tar -xvf /dev/rst0</code>	Enter the text in a CADD5 text field or on any command line.
System output	<code>Binary transfer complete.</code>	Indicates system responses in the CADD5 text window or on any command line.
Variable in user input	<code>tar -cvf /dev/rst0 filename</code>	Replace the variable with an appropriate substitute; for example, replace filename with an actual file name.
Variable in text	tagname	Indicates a variable that requires an appropriate substitute when used in a real operation; for example, replace tagname with an actual tag name.
CADD5 commands and modifiers	INSERT LINE TANTO	Shows CADD5 commands and modifiers as they appear in the command line interface.
Text string	"SRFGROUPA" or 'SRFGROUPA'	Shows text strings. You must enclose text string with single or double quotation marks.
Integer	<i>n</i>	Supply an integer for the <i>n</i> .
Real number	<i>x</i>	Supply a real number for the <i>x</i> .
#	# <code>mkdir /cdrom</code>	Indicates the root (superuser) prompt on command lines.
%	% <code>rlogin remote_system_name -l root</code>	Indicates the C shell prompt on command lines.
\$	\$ <code>rlogin remote_system_name -l root</code>	Indicates the Bourne shell prompt on command lines.

Window Managers and the User Interface

According to the window manager that you use, the look and feel of the user interface in CADD5 can change. Refer to the following table:

Look and Feel of User Interface Elements

User Interface Element	Common Desktop Environment (CDE) on Solaris, HP, and IBM	Window Manager Other Than CDE on Solaris, HP, IBM, and Windows
Option button	ON — Round, filled in the center OFF — Round, empty	ON — Diamond, filled OFF — Diamond, empty
Toggle key	ON — Square with a check mark OFF — Square, empty	ON — Square, filled OFF — Square, empty

Online User Documentation

Online documentation for each book is provided in HTML if the documentation CD-ROM is installed. You can view the online documentation in the following ways:

- From an HTML browser
- From the Information Access button on the CADD5 desktop or the Local Data Manager (LDM)

Please note: The LDM is valid only for standalone CADD5.

You can also view the online documentation directly from the CD-ROM without installing it.

From an HTML Browser:

1. Navigate to the directory where the documents are installed. For example,
 - `/usr/apl/cadds/data/html/htmldoc/` (UNIX)
 - `Drive:\usr\apl\cadds\data\html\htmldoc\` (Windows)
2. Click `mainmenu.html`. A list of available CADD5 documentation appears.
3. Click the book title you want to view.

From the Information Access Button on the CADD5 Desktop or LDM:

1. Start CADD5.
2. Choose Information Access, the *i* button, in the top-left corner of the CADD5 desktop or the LDM.
3. Choose DOCUMENTATION. A list of available CADD5 documentation appears.
4. Click the book title you want to view.

From the Documentation CD-ROM:

1. Mount the documentation CD-ROM.
2. Point your browser to:
CDROM_mount_point/html/doc/mainmenu.html (UNIX)
CDROM_Drive:\html\doc\mainmenu.html (Windows)

Online Command Help

You can view the online command help directly from the CADDs desktop in the following ways:

- From the Information Access button on the CADDs desktop or the LDM
- From the command line

From the Information Access Button on the CADDs Desktop or LDM:

1. Start CADDs.
2. Choose Information Access, the *i* button, in the top-left corner of the CADDs desktop or the LDM.
3. Choose COMMAND HELP. The Command Help property sheet opens displaying a list of verb-noun combinations of commands.

From the Command Line: Type the exclamation mark (!) to display online documentation before typing the verb-noun combination as follows:

```
#01#!INSERT LINE
```

Printing Documentation

A PDF (Portable Document Format) file is included on the CD-ROM for each online book. See the first page of each online book for the document number referenced in the PDF file name. Check with your system administrator if you need more information.

You must have Acrobat Reader installed to view and print PDF files.

The default documentation directories are:

- /usr/apl/cadds/data/html/pdf/doc_number.pdf (UNIX)
- CDROM_Drive:\usr\apl\cadds\data\html\pdf\doc_number.pdf (Windows)

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This chapter presents the following key topics:

- Overview
- Customizer Functions
- Terminology
- Administration

Overview

The software is delivered with an icon-based, mouse-driven user interface. The interface lets you access parts and construct geometry using menus and the mouse instead of by typing commands on the keyboard.

Please note: The Customizer is supported on Windows. For using Customizer on Windows, the parts directory must reside on a local drive. If you map it to a network drive, you cannot use the Customizer.

The Customizer is a software utility that enables you to add and rearrange icons on the user interface. It includes

- Customizer menu
- Icon Editor utility
- Color Editor utility
- Function key and mouse operations to change the locations of icons outside of the Customizer utility.

Please note: The terms `.caddsrc` file and `.caddsrc-local` file are used interchangeably throughout this chapter.

Customizer Functions

Using the Customizer you can

- Arrange existing screen items to speed routine tasks.
- Use the Icon Editor to create and edit icons.
- Define a blank pushbutton or pulldown menu item by giving it an icon, a text label, or both.
- Associate a command to a user-defined item so that when the item is selected, the command is executed.
- Change the seven colors on the user interface.

You can create a unique user interface for your own use or, if you are a system administrator, create one for all the users in your department.

You are given three menus that contain blank items that you can define with icons, text, commands, or existing interface items.

Warning

Customize only the Custom palettes. Do not customize any other palettes.

Terminology

This section describes the various Customizer terms.

Menu Item

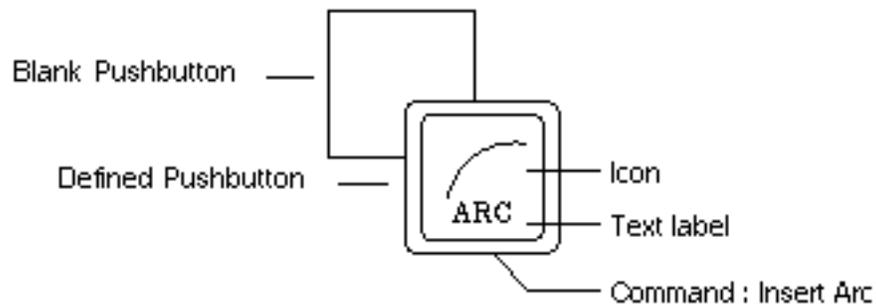
A menu item is a rectangular area of a menu that contains an icon and/or text and initiates an action if selected. Menu items come in different types; each type has a different look and a different method of action.

Menu item types include pushbuttons, pulldown menu items, text entry fields, toggles, and analog sliders. The Customizer lets you create and modify pushbuttons, toggles, and pulldown menu items on the top-level user interface only.

Pushbutton

A pushbutton is a menu item whose appearance and action imitates a push button on a mechanical object. It has a simulated three-dimensional border that highlights when the cursor is placed over it. When you select a pushbutton item with the mouse button, the item takes on the appearance of a depressed mechanical push button.

You can move existing pushbuttons and pulldown menu items from one location to another. There are three customizable menus (in each environment) with blank items. You define a blank item by giving it an icon (and/or a text label) to identify it and a command to be executed when the item is selected.



Icon

An icon is square graphic that is displayed on a menu or property sheet. Many icons are supplied and you can also create your own.

Label

A label is simply text displayed on an icon or property sheet. The Customizer makes a label center justified. You can choose its placement as top, middle, or bottom relative to the item.

user.m File

The `user.m` is the file that contains your side bar and top bar menu configuration. When you customize and save your user interface, the `user.m` file is created (or overwritten) in the directory named by the `CUE_CMP_USER_SR` environment variable in your `.caddsrc` or `.caddsrc-local` file. This is typically your CADDs create directory (=C: specification in `CVPATH`). If you already have a `user.m` file, it is updated when you select the Save icon on the Customizer property sheet.

user.il File

The `user.il` file contains any user-created icons and system-modified icons. This file resides in the directory named by the `ICON_SR` environment variable in the `.caddsrc` file or `.caddsrc-local` file. This is typically your CADDs create directory (=C: specification in `CVPATH`).

Scrapbook

The scrapbook is a buffer that contains items that you place there using copy or edit functions. The scrapbook has vertical/horizontal scroll bars to access concealed areas of the scrapbook.

Administration

This section describes various administration considerations.

Customizer Access

Access to the Customizer is controlled through the `CV_UI_CUSTOMIZE` variable in the `.caddsrc` file. Set this variable to `enabled`; the line must appear as below:

```
setenv CV_UI_CUSTOMIZE enabled
```

There are three additional relevant environment variables:

```
setenv ICON_SR "../usr/apl/cadds/data/ui/icons"  
setenv CUE_CMP_USER_SR "$HOME/parts"  
setenv CUST_SR "../usr/apl/cadds/data/config /graphics"
```

ICON_SR

Contains the `user.il` File specification where user-created icons are stored. The system-supplied icons are in `/usr/apl/cadds/data/ui/icons`.

CUST_SR

Contains the `*.mcol` file specification where user-defined menu-color palettes are stored. System-supplied menu-color palettes are in `/usr/apl/cadds/data/config/graphics`.

CUE_CMP_USER_SR

Contains the `user.m` File specification where user-defined items are stored.

Left Hand Mouse Access

The mouse buttons can be set to accommodate either the right or left hand, based on your preference. The setting changes so that your index finger falls on either the right or left mouse button and is responsible for most item selecting.

By default the variable is set as below for the right hand. This means that when you place your right hand on the mouse, your right index finger falls on the left mouse button. The left mouse button selects menu items.

If you want to set it for the left hand, change the value to left.

```
setenv CV_UI_MOUSE right
```

If you set the mouse for the left hand, the right mouse button is directly under your left hand's index finger. The right mouse button selects menu items.

Upgrading to a New Revision

When you load Revision 2.00 software, all of the items that you customized in the last revision of software are saved for you. All items that you defined or that you moved are copied to the scrapbook.

Please note: The system-supplied items in the scrapbook (that have new functionality in the new revision) will or will have upgrades from the new revision according to the following rule:

- A system-supplied item that was moved using the swapping technique is automatically upgraded when a new software revision is loaded.
- A system-supplied item that was moved first to the scrapbook and then moved to a new place retains the actions from the earlier revision in the scrapbook.

To restore your customized interface:

1. Make a back up tape of the `user.m` file for safety.
2. Load Revision 2.00.
3. Open the Customizer.
4. Open the scrapbook.
5. Move user-defined pushbuttons from the scrapbook into their preferred locations.
6. Move any other pushbuttons that you moved in the last revision to their preferred locations.

Please note: If you move around any of the CADDs icons from the Palettes or the Top Bar, the `user.m` file is not automatically upgraded when you move to a higher CADDs version. If you already have a `user.m` file, you must edit it manually when you are moving on to higher CADDs version.

Using the Customizer

This chapter presents the following key topics:

- Manipulation Methods
- Customizer Menu Icons
- Function Keys
- Color Editor
- Custom Menus
- Property Editor

Manipulation Methods

Using the Customizer utility you can edit the user interface

- By moving supplied pushbuttons and pulldown menu items to other locations.
- By defining blank pushbuttons and pulldown menu items with icons, text, and executable commands.

You can also change the locations of pushbuttons and pulldown menu items using function keys and the mouse without opening the Customizer utility. This technique is called direct manipulation, or the drag and drop technique.

Direct Manipulation

Direct manipulation is a drag and drop technique. The phrase drag and drop means that while holding a meta key (typically the black diamond key on either side of the keyboard space bar), you select something with the left mouse button (press and hold), drag it to a location, and drop it by releasing the mouse button.

You can drag and drop the following user interface items:

- Pushbuttons
- Pulldown menu items

Drag and Drop Destinations

You can move an item to one of four destinations. The drag and drop destinations on the Customizer are

- Another pushbutton or pulldown menu item location
The two items are then swapped.
- Copy option
This places a copy of the item in the scrapbook
- Delete option
This deletes the item. It can be restored immediately by using the Undo icon.
- Edit option
This opens the item for editing.

Restrictions

You cannot or should not do the following:

- Do not move a pushbutton icon that calls a palette of icons to the palette that it calls. If you were to do this and close the palette, you cannot access the palette.

For example, on the Wireframe menu, the upper-left icon calls a palette of insert line options. Do not move this upper-left icon to the insert line palette.

- You cannot move the Customizer menu item to the scrapbook. If you could and then closed the scrapbook, you cannot access the Customizer again.
- You cannot move or edit pushbuttons that are on supplied property sheets.

Direct Manipulation by Swapping

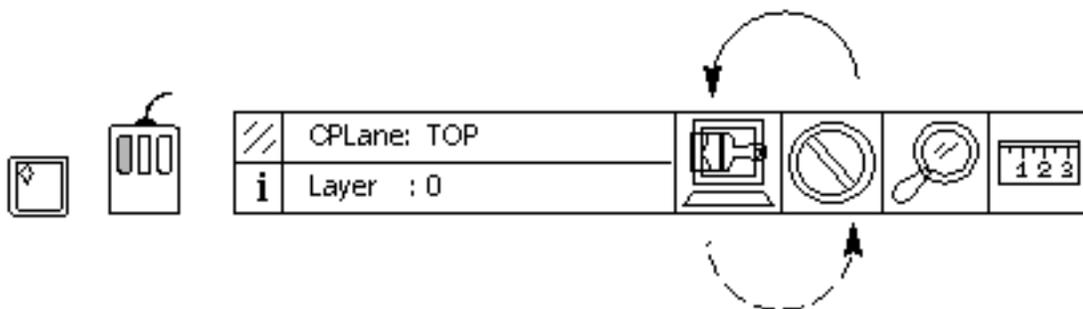
You can swap two items by using the following technique. This technique can be used without displaying the Customizer utility.

You can swap pushbuttons and pulldown menu items with themselves or each other. That is, you can swap a pushbutton with another pushbutton or swap a pushbutton with a pulldown menu item.

1. Place the cursor over the item you want to move.
2. Hold down one of the two meta keys that are next to the space bar.

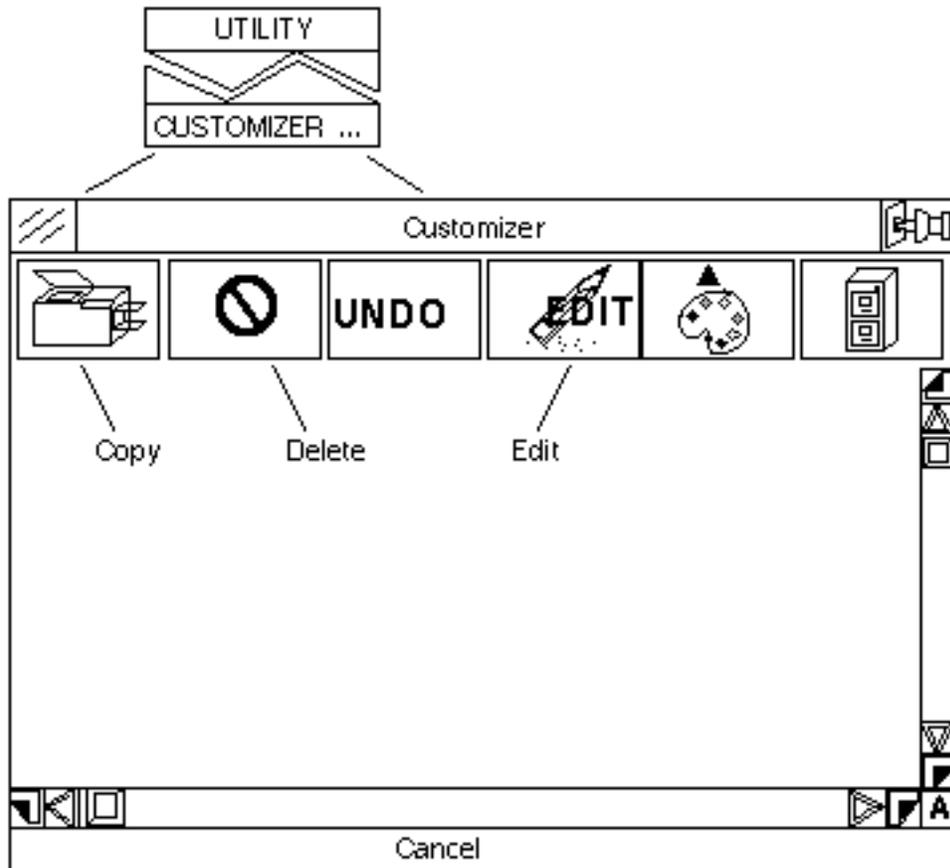


3. Press and hold the left mouse button.
4. Drag the mouse until the cursor is over the desired location and release the button.



Direct Manipulation Using Copy, Delete, Edit Icons

To use direct manipulation with the Customizer icons, display the Customizer menu (from the top bar Utility menu) and use the drag and drop technique to drag an item to the Copy, Delete, or Edit options.



The following section shows the Customizer menu icons and how to use them.

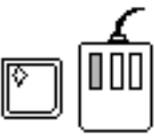
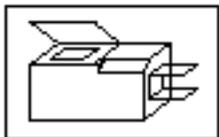
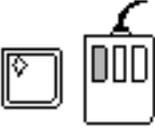
Please note: Items that are swapped are automatically upgraded when a new software revision is loaded. Items that are moved first to the scrapbook and then moved into place will retain the actions from the earlier revision in the scrapbook.

Customizer Menu Icons

The top three items in the figure on page 2-6 use the drag and drop technique with the meta key. You drag a pushbutton to these icons to activate their functions.

1. Put the cursor on the item you wish to copy, delete, or edit.
2. Simultaneously press a meta key and the left mouse button.
3. Drag the mouse until the pushbutton is over the Copy, Delete, or Edit icon and release the button.

The last four icons are selectable with the left mouse button.

<i>Press</i>	<i>Icon</i>	<i>Description</i>
		Copy allows the user to copy a valid pushbutton to the scrapbook.
		Delete deletes a user-defined item. This includes the item's visuals as well as actions.
		Edit displays the Property Editor submenu.
		Undo resets the last cut, copy, or swap function.
		Save saves changes made through the Customizer to the user.m file.
		The A icon rearranges the pushbuttons in the scrapbook by making them equally spaced. Use the scroll bars to see items outside the visible area of the scrapbook.
		Change Color displays the Color Editor, with which you can change the user interface colors and save them for future use. See the section Color Editor later in this chapter for more information.

Please note: Any CADDs blank item can be customized using the Edit icon. This is valid only for the current CADDs session. To display the customized blank item each time CADDs is invoked or when moving to a higher CADDs version, save the customized blank item using the Save icon.

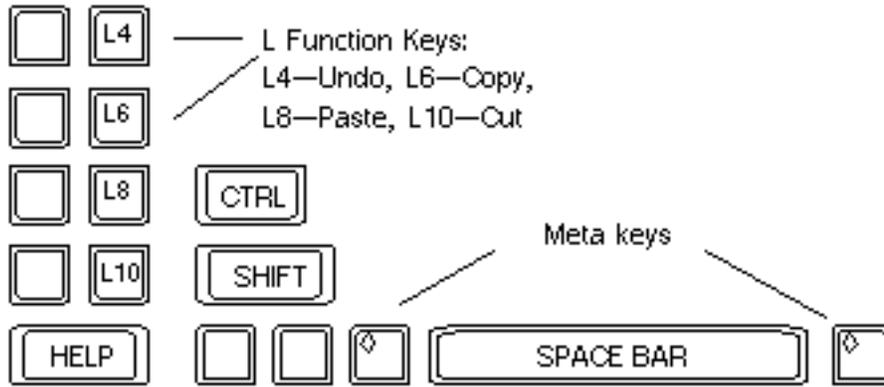
Customizing Existing Icons

You can customize the existing CADDs items or icons using the customizer menu icons.

1. Place a copy of the existing item in the scrapbook using the Copy icon.
2. Customize this item according to your requirement using the Edit icon.
3. Drag the edited item from the scrapbook to replace the blank item that you want to customize.
4. Use the Save icon to save the above changes.

Function Keys

In the Customizer, the following function keys execute the functions with which they are labelled: Undo, Copy, Paste, and Cut (same as Delete).



Using the Function Keys

Follow the illustrations below to use the function keys:

Undo



Undoes only the last move function, either cut (delete), copy, or an icon swap.

Copy



Copies an item to the scrapbook. To copy:

1. Put the cursor over the item that you want to copy.
2. Press a meta key and the Copy key.

Paste



Pastes an item from the scrapbook to a new location. To paste:

1. Put the cursor over the location where you want to paste an item.
2. Press a meta key and the Paste key.

Cut



Cut moves a user-editable item into the scrapbook. This includes the item's visuals as well as actions. To cut:

1. Place the cursor over the item that you want to cut.
2. Press a meta key and the Cut key.

Color Editor

There are seven colors present on the user interface. To change these seven colors on the user interface, use the Color Editor.

You can redefine a set of seven colors and save this set for later use. Each set of seven colors is called a menu palette. The original menu palette is called `MENUDARKGREEN`.

Please note: If you want to change the user interface colors using commands, see the online documentation for information on the menu-palette commands.

The red, green, and/or blue (RGB) values of each color can be modified using the horizontal sliders. When you select a new menu palette or change a single color with the horizontal slider, the change is immediately visible.

Changing Interface Colors

The current menu-palette name shows in the Name field.

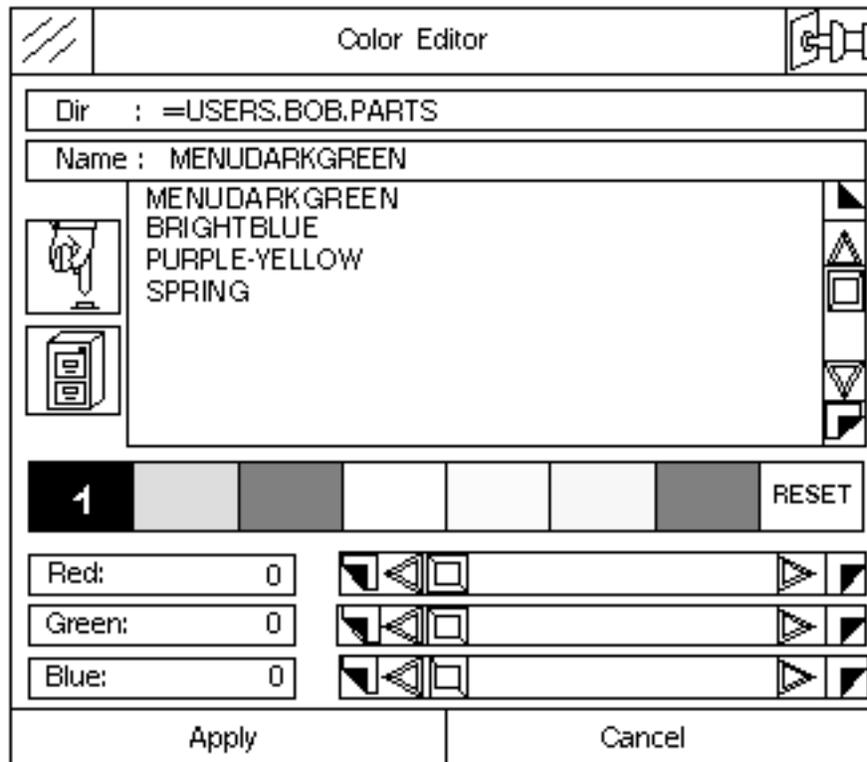
The first color is labeled with the numeral 1. The red, green, and blue values of color 1 are shown by the horizontal sliders. In the following example, color 1 is black and the sliders show that red = 0, green = 0, and blue = 0.

To change the labeled color, move the horizontal color sliders to new locations using the left mouse button. You can see the effect immediately.

Once you have changed all the seven colors, name the menu palette and select the Save option.

Please note: You cannot change an existing menu palette, either `MENUDARKGREEN` or a menu palette that you created. You must always choose a new name for a new menu palette.

The menu palette files are found in the directory specified by the CUST_SR variable in the .caddsrc file.



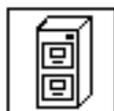
The Color Editor menu options are discussed as following:

Select Menu Palette



The Select Menu Palette option lets you select a different menu palette than the one currently being used. This enables you to customize an existing menu from the runtime list. Typically a menu palette contains a color configuration.

Save Menu Palette



The Apply option applies the edits or changes done with the Color Editor to the menus, which will be valid only for the current CADDs session. Choose the Save Menu Palette option to save the menu palette that you have defined, under \$HOME/parts by the name specified in the Name field. The Save Menu Palette option saves only the Color Edits.

Please note: The menu palette that you have specified using Color Editor must be saved under `$HOME/parts` for it to be applicable every time CADDs is invoked. This is done using the Save Menu Palette option. If you click the Apply option after performing the menu edits then these changes are valid only for the current CADDs session. The Save option in the Customizer saves menu colors to a file called `user.mcol` under `$HOME/parts`.

Reset

Select this to reset the currently selected color to its original red, green, and blue values.

Please note: Once you have started editing another color, you cannot replace a changed color with its original value using Reset. You can, however, reselect the palette to get all the original values on that palette.

Custom Menus

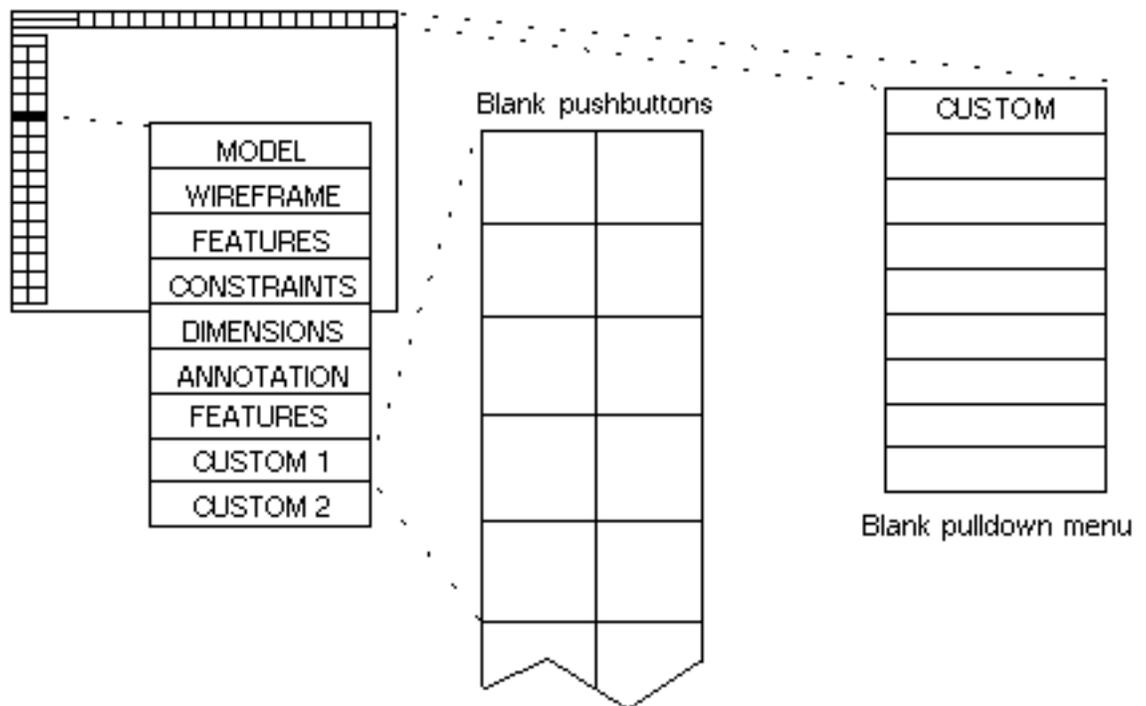
Each environment has three user-definable menus.

There are two pushbutton menus, called Custom 1 and Custom 2, available from the Task Set menu. These two definable menus each contain 24 blank pushbuttons.

The custom pulldown menu is called CUSTOM and is the rightmost menu on the top bar. Environments that share the top bar also share this custom menu.

Defining Custom Menus

You can move existing items to the custom menus or you can create unique items. Items can display icons and text, and execute commands when selected.



Placing Pushbuttons

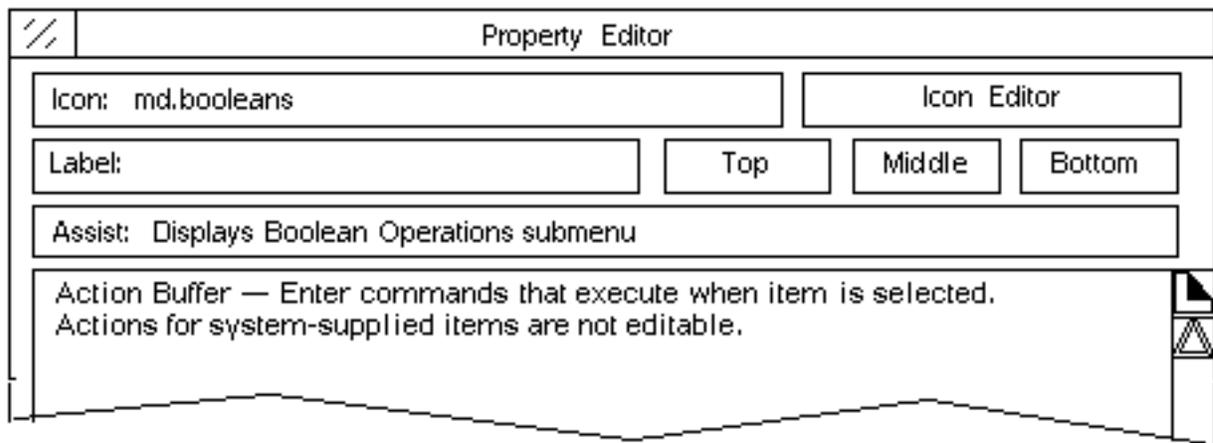
When you define your own items or move existing items to other locations, note that the user interface uses the following guidelines for item placement:

- On most task sets, immediate action items are placed at the top of the right column. (An immediate action item is one that executes immediately; it does not bring up a property sheet.)
- Items that bring up property sheets with several options are usually placed at the bottom of the left column.

Property Editor

Use the Property Editor to edit an existing or blank item as follows:

1. Place the cursor over the item you want to edit.
2. Press and hold a meta key; press the left mouse button.
3. Drag the item to the Edit icon to display the Property Editor menu (shown below).
4. Release the mouse button.



Property Editor Options

The property editor fields are:

Label

Add a text label to the item. It is always centered left to right, but you can position it at either the top, middle, or bottom of the item.

Assist

Add an assist line that describes what command the item executes.

Icon Editor

Select to create or edit an icon.

Action Buffer

Enter here the commands that execute when the item is selected.

Apply

Applies the changes.

Types of Edit Changes on Supplied Items

On items that are delivered with the system, the following applies:

- You can edit an icon with the Icon Editor.
- You can change the assist line.
- You can put a label on the item.
- You cannot edit existing (supplied) actions.

Creating an Item

To create your own pushbutton or pulldown menu item, follow these steps:

1. Display a custom menu.
2. To open the Property Editor, place the cursor over a blank item and simultaneously press a meta key and the left mouse button.
3. Drag the mouse to the Edit icon and release the button. The Property Editor appears.
4. Create an icon and/or label on your item.
5. Add an assist line to remind you what the item does.
6. Enter one or more command lines in the action buffer.

Adding Actions to Items

In addition to adding visuals (a text label and/or an icon) to the blank items through the Property Editor, you can also associate commands with these items. When the item is selected, the commands are executed. A command or set of commands associated with an item is called an action. An example of an allowable action is shown below:

```
/* comments */  
Activate Part ABC  
Activate Drawing a <CR>  
/* end of actions */
```

Writing in the Edit Buffer

The edit buffer is the area in which you define an action. You can create actions by typing into the edit buffer.

Action Buffer Cursor Movements

Your cursor is in the edit buffer and you are automatically in Insert mode. You can position the cursor by moving the mouse and clicking. The following items also move the cursor. The control characters match those used with an editor. Use the mouse to place the cursor.

Control Key Sequence	Cursor Movement Action
CTRL-A	Start of line
CTRL-E	End of line
Ctrl-F	Forward one character
CTRL-B	Back one character
CTRL-N	Next line (down)
CTRL-P	Previous line (up)
CTRL-K	Delete to end of line
CTRL-D	Delete to right one character
Delete key	Delete back one character
BackSpace key	Delete back one character

Creating an Action

Begin an action with either a blank line or a comment. This flushes anything remaining in the command line buffer.

To get a carriage return at the end of a set of actions, you must specify it explicitly using the `Return` key on the keyboard. A comment at the end of the command actions achieves the same effect.

Any valid command line can be part of an action. The command syntax is not checked for accuracy until you select the item. Several examples are given in the following section.

Action Examples

Example are provided below for creation of icons to represent the following:

- INSERT LINE PAIR command found in the Parametric modeling environment.
- DEFINE CPLANE command found in the Parametric modeling environment.
- DEFINE VIEW command found in the Explicit modeling environment.

INSERT LINE PAIR : In these examples an icon is created to represent the parametric modeling command INSERT LINE PAIR. Two methods are shown.

When you use the new icon, the command appears on the command line in the command buffer. You can then select two locations in your graphics area and enter a carriage return to complete the command.

Example 1:

```
(blank line)
Insert Line Pair
```

Example 2:

```
/* comment */
Insert Line Pair
```

The following example creates a line from x0y0 to x2y4. The blank line causes a carriage return and is used here in place of the Return key. The ending comment ensures that the blank line is retained.

```
/* comment */
Insert Line Pair [0,0] [2,4]
(blank line)
/* end */
```

DEFINE CPLANE: The two following examples show an action that executes the DEFINE CPLANE command in the Parametric environment.

```
(blank line) or /* comment */
Define Cplane Cpname TOP
```

DEFINE VIEW: The two following examples show slightly different ways of writing an action that executes the command DEFINE VIEW in the Explicit environment.

Example 1:

```
(blank line)
Define View Top: x0y0
```

```
<CR> <CR>  
/* comment */
```

Example 2:

```
/* comment */  
Define View Top: x0y0  
(blank line)  
/* comment */
```

Please note: In the Explicit environment, to run a command containing special characters, such as ^, from a customized icon, prefix the special character with backslash (\). For example, in the following command, the special character ^ is preceded by a \.

```
CHANGE DIMENSION TEXT APPEND / [H0.75] [\^]@0.1 [V] [E] [H] /
```


Creating Icons Using the Icon Editor

This chapter presents the following key topics:

- Icon Editor
- Calculator
- Icon Working Area
- Color Menu
- Create Modes Menu
- Modify Modes Menu

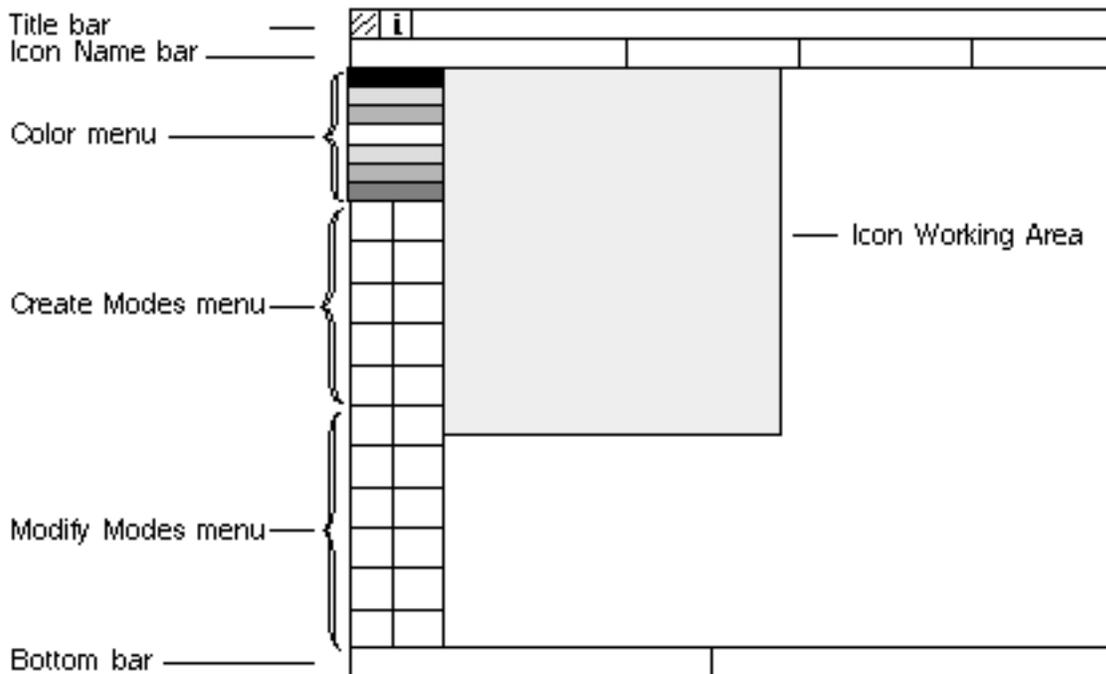
Icon Editor

The Icon Editor is an object-based graphics utility. By combining lines, arcs, circles, and rectangles, you can create icons for use in the user interface menus.

To create an icon for a blank pushbutton or to edit an existing icon, select the Icon Editor option from the Property Editor menu. The Icon Editor menu is described on the next page.

Icon Editor Menu Areas

The areas of the Icon Editor menu are defined briefly below. They are described in detail throughout this chapter.



Title Bar

The Window Manager icon, Information Access icon, and title bar (and window mover) work as in the CADDs user interface.

Icon Name Bar

Contains the Icon Name field and pulldown menus for Delete Icon, Display, and Setup.

Bottom Bar

Cancel exits the menu. Apply saves the icon and compacts the `user.il` library.

Icon Working Area

The area in which you create or edit an icon.

Color Menu

A menu of colors; the selected color is the color that a created object will have.

Create Modes

Geometric objects are created in the icon menu working area to form the icon.

Modify Modes

Enables editing actions, such as menu delete, copy, move, and group.

Icon Editor Top Bar Options

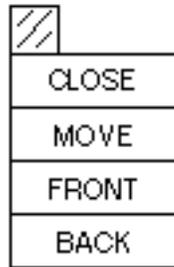
The Icon Editor top bar area contains two lines, the Title Bar and the Icon Name bar. These are described in the following sections.

	Icon Editor		
Icon Name:	DELETE ICON	DISPLAY	SETUP

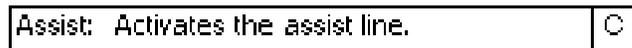
Title Bar and Standard Icons

The title bar with its two standard icons, the Window Manager and the Information Access icons, are discussed as following:

Window Manager: The hash icon is located at the upper left of the top bar. It activates the Window manager, which is a standard user interface menu with choices of Close, Move, Front and Back.



Information Access: The Information Access icon is the lower | character at the upper left of the top bar. It provides you with various information options such as enabling of the CADDs Assist bar. Choosing the Assist option displays the Assist line, an information line that describes each icon that you slide the mouse over. You can drag the Assist line to another location using the left mouse button. Use the standard C item on the right of the bar to cancel the Assist line display.



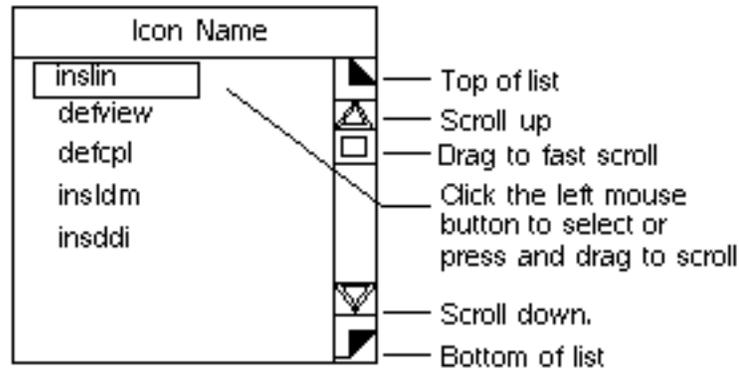
Bar Title: You can use the title bar, labeled Icon Editor, to drag the Icon Editor menu to a new location. Place the cursor on the title bar, press and hold the left mouse button, and slide the menu to the desired location.

Icon Name Bar and Options

The Icon Name bar is the second bar at the top of the Icon Editor. It contains the following fields:

- Icon Name field
- Delete Icon option
- Display option
- Setup option

Icon Name Field: The Icon Name field contains the name of the icon you want to create or edit. Select this field with your left mouse button to see a list of existing icons.



The listed icons are those in the `user.il` file in the first directory that is specified by the `ICONS_SR` variable in your `.caddsrc` file. This is typically your home directory.

Select an icon to work on in one of two ways:

- Select an existing icon from the list
- Move your cursor off the pulldown menu and enter the name of a new or an existing icon in the Icon Name field.

You can also rename the current icon in this field.

Delete Icon: The Delete Icon option displays a menu with a list of icons.

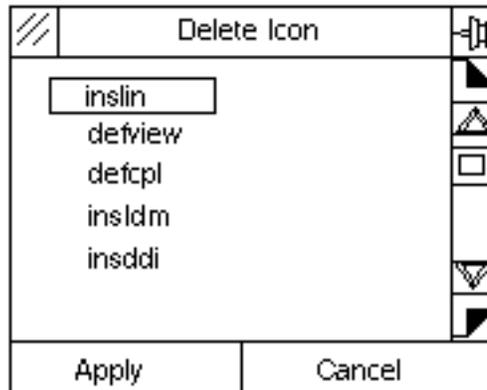
1. Select an icon to delete.

A confirmation window asks you to confirm your selection.

2. Select OK to delete the icon.

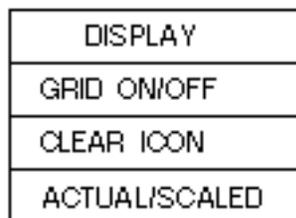
The Delete Icon menu displays an exclusive list of current icons in the `user.il` file.

Select the icon to delete and press the Apply option.



Please note: The maximum number of icons in a library is 1024.

Display: The Display option provides a Display menu from which you can alter the display of the icon. The following options are available:



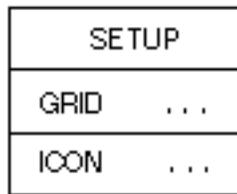
Grid On/Off: This option toggles the display of the grid on or off in the icon working area.

Clear Icon: This option clears the icon working area.

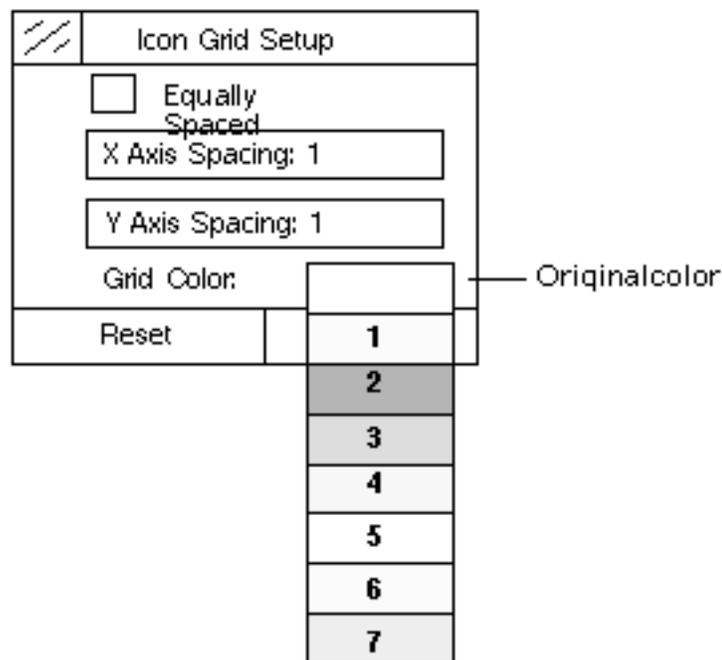
Actual/Scaled: This option toggles the displayed size of the icon from Actual to Scaled.

- Actual is the actual size that the icon is shown in the user interface. This is typically 50 pixels by 50 pixels.
- Scaled gives you the size that is defined in the Icon Setup menu. By default this scaled size is 10; that is ten times the actual icon size. This is a size that is good to work with.

Setup: The Setup option displays a Setup menu with a choice of Grid or Icon options. Each of these displays a menu.



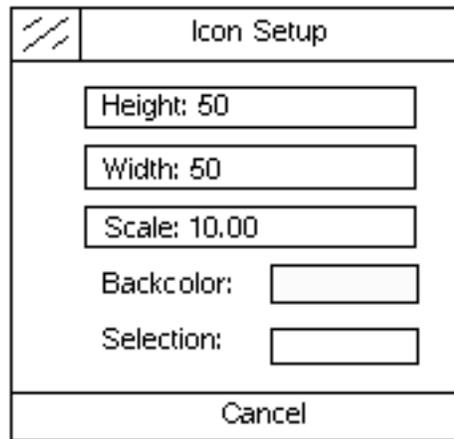
Grid: This option displays an Icon Grid Setup menu on which you can change the color and spacing of the grid in the icon working area.



- Equally Spaced
This changes both x and y axes equally.
- X Axis Spacing
This changes just the horizontal grid spacing. The default is 1 unit.
- Y Axis Spacing
This changes just the vertical grid spacing. The default is 1 unit.

- Grid Color
This changes the color of the grid points. Select to display the color menu and select one of the available colors.
- Reset
This resets the horizontal and vertical grid spacing to 1 unit.

Icon Setup: Selecting the Icon option displays an Icon Setup menu on which you can change the size of the icon.

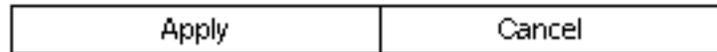


The image shows a dialog box titled "Icon Setup". It has a small icon in the top-left corner consisting of three diagonal lines. The dialog contains five input fields: "Height: 50", "Width: 50", "Scale: 10.00", "Backcolor:" followed by an empty input box, and "Selection:" followed by an empty input box. At the bottom of the dialog is a "Cancel" button.

- Height
The height of the icon in pixels. A typical square icon on the CADDSS user interface is 50 by 50.
- Width
The width of the icon in pixels.
- Scale
A scale of 1 is the actual size the icon will be on the user interface. This is usually too small to work in. A scale of 10 provides a good sized representation of the icon in the working area.
- Backcolor
The background color of the icon working area.
- Selection
The color of the geometric objects when selected; also called the highlight color.

Icon Editor Bottom Bar

The bottom bar of the Icon Editor contains two standard options, Cancel and Apply. These are discussed as following.



Apply

Saves the icon in the `user.il` file in the directory that is specified by the `ICONS_SR` variable in your `.caddsrc` file. This also compacts the `user.il` file.

Please note: The maximum number of icons that can exist in a library is 1024.

Cancel

Exits the Icon Editor and closes the Icon Editor menu.

Calculator

When you select a field on a property sheet that requires a number, a calculator appears.

Select numbers on the calculator with the left mouse button. For a value of 10, select a 1 and a 0. To apply the entered number, select the entry field.

Calculator				
				45
Clear		Cl	CM	RM
7	8	9	X	M-
4	5	6	$\frac{\square}{\square}$	M+
1	2	3	-	=
0	.	+/-	+	
$\frac{1}{x}$	\sqrt{x}	x^2	$x/2$	PI
INV	SIN	COS	TAN	E

Fields that Require Input

The Icon Editor fields that require numerical input are:

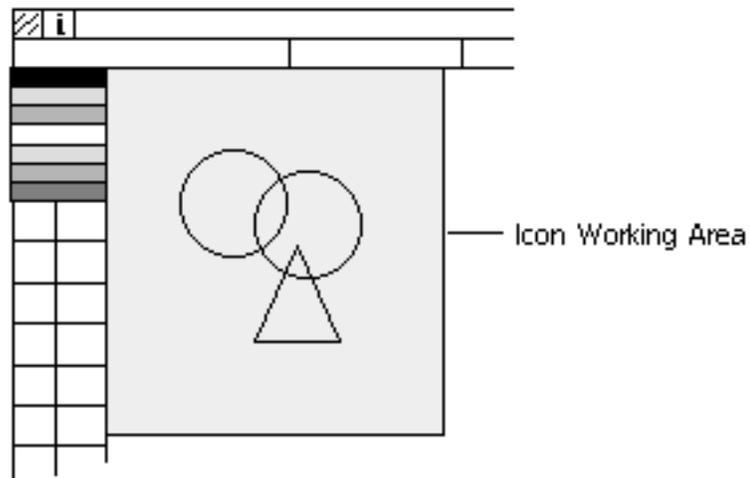
- Scale
- Icon width
- Icon height
- X-axis spacing
- Y-axis spacing

Numeric Keypad

You can also use the numeric keypad on the keyboard to display numbers in the calculator entry field. The NUM LOCK key must be on. To apply the entered number, select the entry field or press the Return key.

Icon Working Area

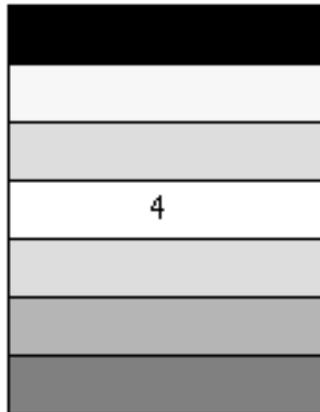
The Icon Working Area is the area in which you draw an icon. It displays the contents of the working buffer. You can define this working space using the Display and Setup menus, add geometric objects using the Create modes, and change geometric objects using Modify modes.



Color Menu

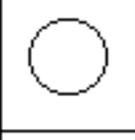
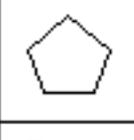
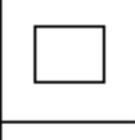
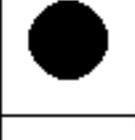
The Color menu indicates the currently selected color by displaying its number. In the menu shown here, the fourth color is selected. The selected color is:

- The color that a created object will have
- The color applied if you select Change Color and an object



Create Modes Menu

The Create modes menu contains the geometric objects you can insert into the icon working area to form an icon.

Line			Continuous Line
Arc			Circle
Polygon			Rectangle
Filled arc			Filled circle
Filled polygon			Filled rectangle

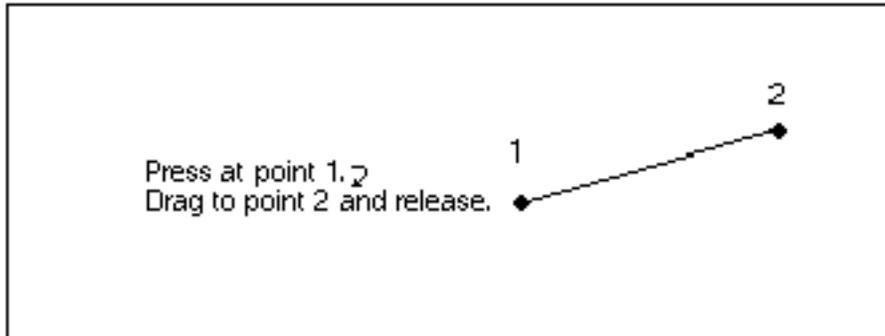
Line



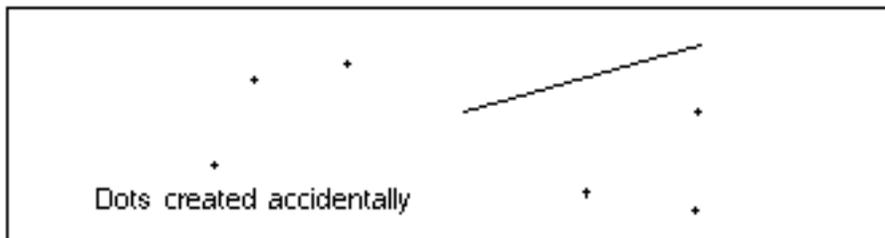
To create lines:

1. Select the Line icon.
2. Press and hold the left mouse button at the start point.
3. Drag the mouse until the line is the length and direction you want.
4. Release the button at the end point.
5. To connect a line to an existing line, press and hold the left mouse button at the end point of the existing line.
6. Drag the mouse until your next line is the length and direction you want. Release the button.
7. To create more lines, continue to press and drag the left mouse button.
8. To exit the create mode, select another create or modify icon.

In other words, if the Line icon looks selected, you are still in the line create mode. You remain in the line create mode until you choose something else in the Create or Modify mode menus.



Please note: You can accidentally create dot-sized objects by creating an object (a line, rectangle, circle, arc, or polygon), then clicking the left mouse button randomly while still in a create mode. These dots can ruin the look of a finished icon. To delete, select the Delete Object icon and select the stray dots.



Continuous Line



To create continuous lines:

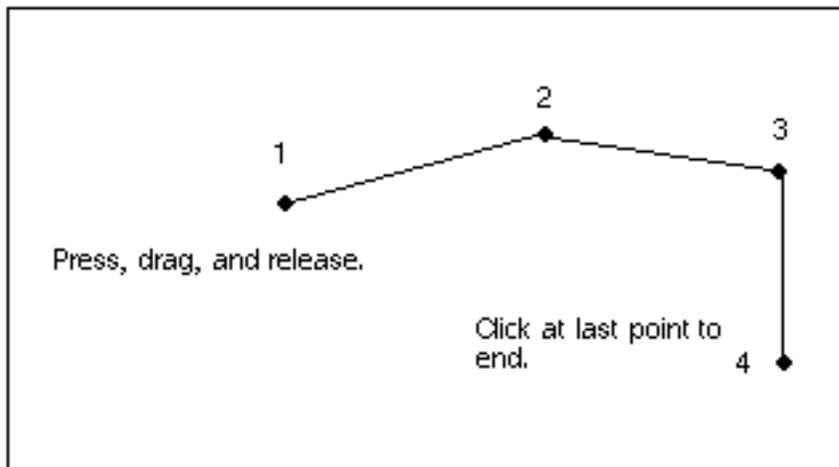
1. Select the Continuous Line icon.
2. Press and hold the left mouse button at the first point.
3. Drag the line to the desired length and direction.
4. Release the button at the second point.
5. For a second line segment, press the left mouse button, drag the line to a desired third point, and release the button.

6. Repeat the step above to create additional line segments.
7. To complete the continuous line, click the left mouse button on the last end point of the line.
8. To exit the create mode, select another create or modify icon.

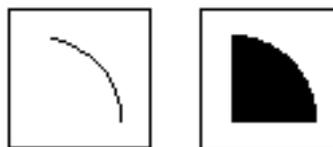
You can also just use a clicking method (instead of the press and hold method described above) to create a continuous line.

1. Select the Continuous Line icon.
2. Click the left mouse button at the first point.
3. Click in another location to create the first line segment.
4. Click in a new location to add a second line segment.
5. Continue adding line segments by clicking the left mouse button in new locations.
6. To complete the continuous line, click the left mouse button on the last end point of the line.
7. To exit the create mode, select another create or modify icon.

Please note: A polygon made by using a continuous line cannot be filled.



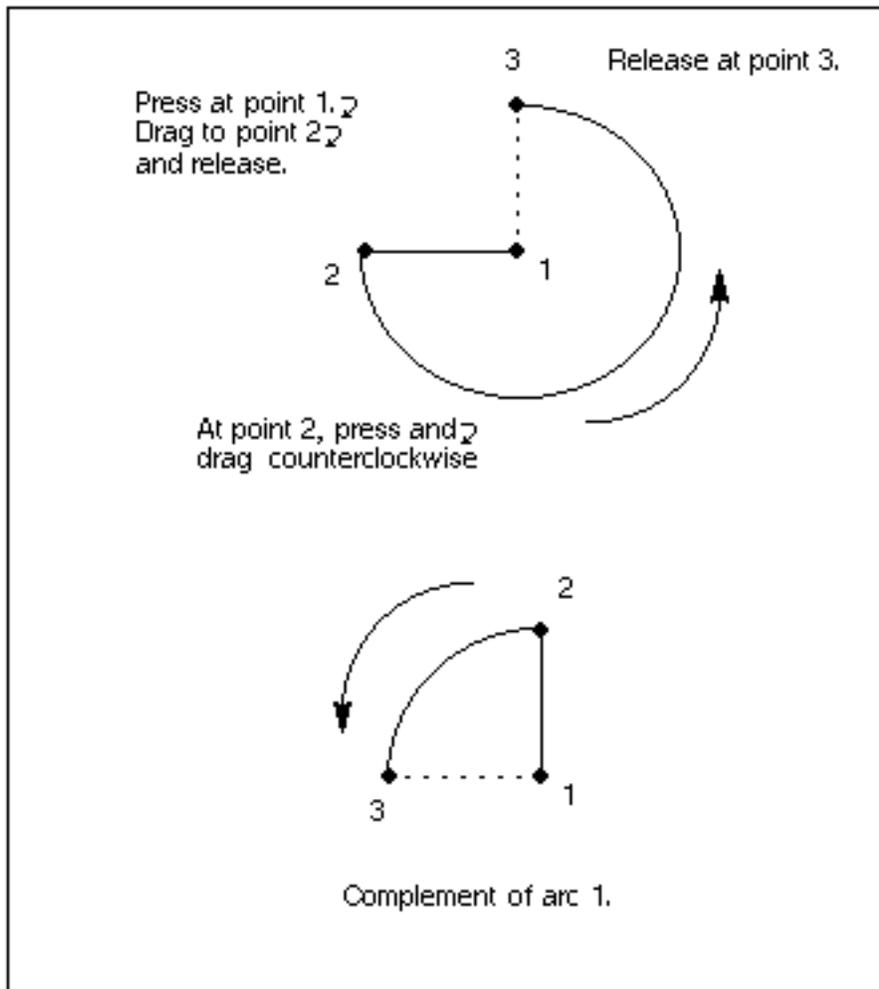
Arc and Filled Arc



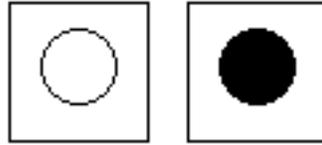
You can create arcs using a drag-and-drop method, using the clicking method, or any combination of both.

To create arcs by the drag-and-drop method:

1. Select the Arc icon.
2. Press and hold the left mouse button at the center of the arc.
3. Drag the mouse until the displayed circle has the correct radius. Release the button.
4. Press the button again and drag the arc counterclockwise until the arc is the length you want. Release the button.
5. To create more arcs, continue to press, drag, and release the left mouse button.
6. To exit the create mode, select another create or modify icon.

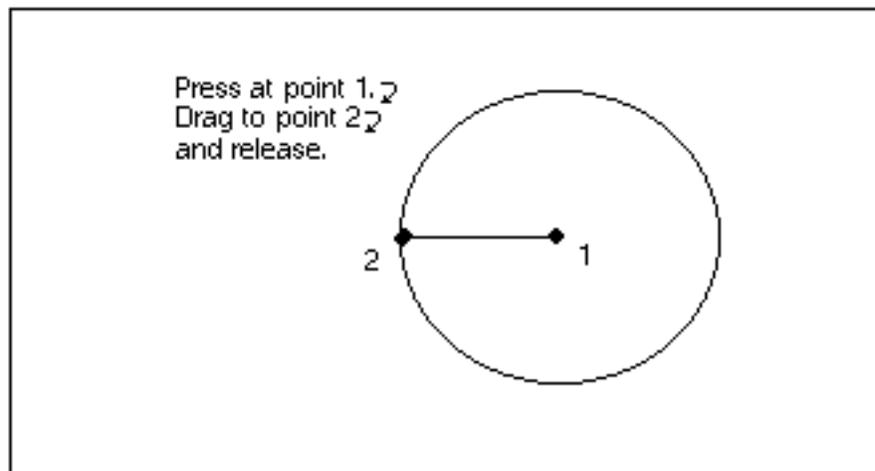


Circle and Filled Circle

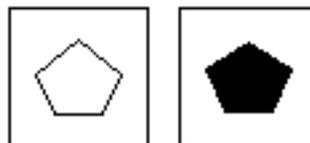


To create circles:

1. Select a Circle icon, either filled or unfilled.
2. Press and hold the left mouse button at the center of the circle.
3. Drag the mouse until the displayed circle is the size you want.
4. Release the button.
5. To create another circle of the same radius, click the button once in another location.
6. To exit the create mode, select another create or modify icon.



Polygon or Filled Polygon



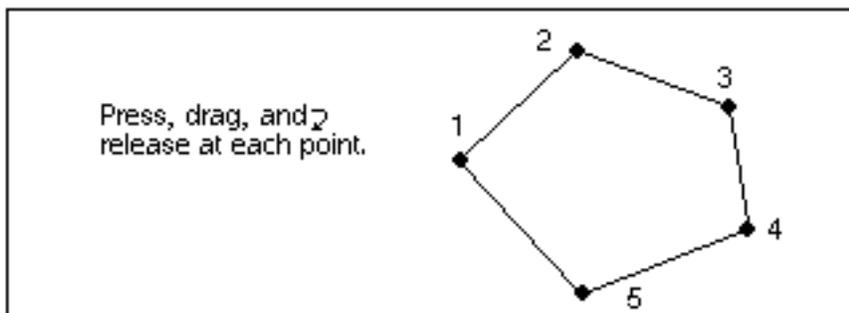
To create polygons:

1. Select a Polygon icon, either filled or unfilled.
2. Press and hold the left mouse button at the first point.
3. Drag the line to the desired length and direction.
4. Release the button at the second point.
5. For a second polygon side, press the left mouse button, drag the line to the desired point, and release the button.
6. Pressing and dragging a third line creates a triangle, another point creates a four-sided polygon.
7. Continue pressing and dragging to change the shape of the polygon.
8. To finish the polygon, click on the last point.
9. To exit the create mode, select another create or modify icon.

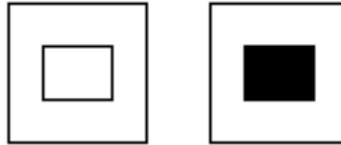
You can also just use clicks (instead of the press and hold method) to create a polygon.

1. Select a Polygon icon, either filled or unfilled.
2. Click the left mouse button at the first point.
3. Click in another location to create the first line segment.
4. Click in a new location to add a second line segment. A third click creates a triangle; a fourth click creates a four-sided polygon.
5. Continue clicking the left mouse button in new locations to change the shape of the polygon.
6. To finish the polygon, click on the last point.
7. To exit the create mode, select another create or modify icon.

Please note: The polygon cannot be ungrouped into single line segments.

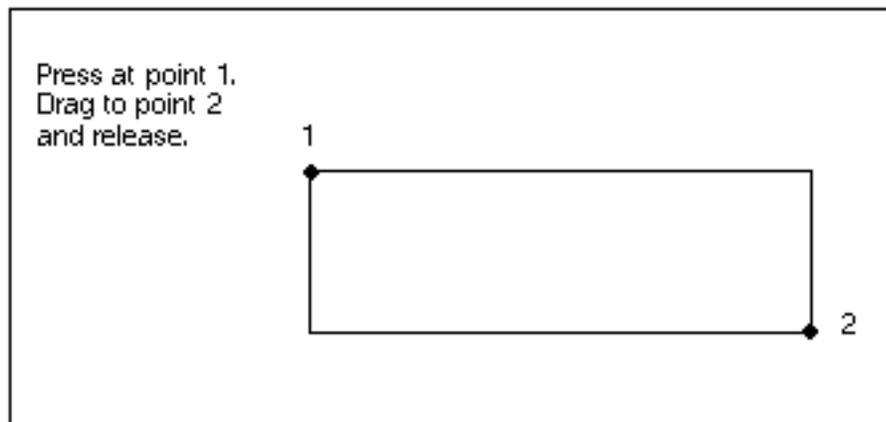


Rectangle and Filled Rectangle



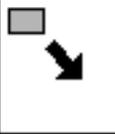
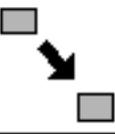
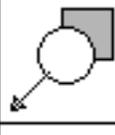
To create rectangles:

1. Select a Rectangle icon, either filled or unfilled.
2. Press and hold the left mouse button at one corner of the rectangle.
3. Drag the mouse until the displayed rectangle is the size and shape you want.
4. Release the button.
5. To create more rectangles, continue pressing and dragging the left mouse button. You remain in the create mode as long as the rectangle pushbutton appears depressed.
6. To exit the create mode, select another element or an item in another menu.



Modify Modes Menu

Once you have created objects, you can edit them using the Modify modes menu.

		Delete object	
Move object			Copy object
Fill object			Unfill object
Bring to front			Send to back
Group			Ungroup
Scale group			Change color
Undo			

Delete Object



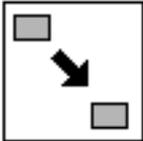
To delete one or more objects

1. Select the Delete Object icon.
2. Select one or more objects to delete with the left mouse button.

Please note: The objects take on the selection color that is defined in the Icon Setup menu, which is accessed from the Setup option.

3. To deselect a single object, select it again with the left mouse button. To deselect all the selected objects at once, click the right button.
4. Select Go, which appears below the icon.
5. To delete more objects, repeat the steps above.

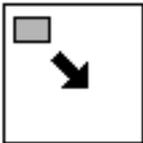
Duplicate Object



To duplicate an object

1. Select the Duplicate Object icon.
2. Select an object.
3. A duplicate of that object appears offset from the original object.

Move Object



To move a single object

1. Select the Move Object icon.
2. Select an object by pressing and holding the left mouse button.
3. Drag the object to new location.
4. Release the left mouse button.

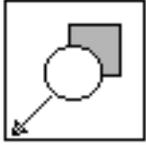
To move multiple objects

1. Select the Move Object icon.
2. Select objects with the left mouse button.

Please note: These objects appear highlighted with the selection color chosen from the Icon Setup menu.

3. When you have selected all the objects you want to move, press and hold the left mouse button.
4. Drag the mouse until the objects are in the desired location.

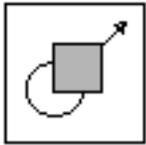
Bring to Front



To bring an overlapped object to the front

1. Select the Bring to Front icon.
2. Select an object. The object is brought to the front; in other words, it is placed in front of all other objects.
3. Continue selecting objects to bring to the front, if desired.
4. To exit this mode, select another create or modify option.

Send to Back



To send an overlapping object to the back of the pile of overlapped objects

1. Select the Send to Back icon.
2. Select an object. The object is sent behind all objects.
3. Continue selecting objects to send to the back, if desired.
4. To exit this mode, select another create or modify option.

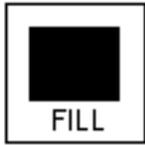
Change Color



To change the color of an object

1. Select a new desired color in the Color menu. It is marked with a number to show that it is selected.
2. Select the Change Color icon.
3. Select an object. The color of the object changes.
4. Continue selecting objects to change color, if desired.
5. To exit this mode, select another create or modify option.

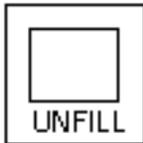
Fill Object



To fill an object

1. Select the Fill Object icon.
2. Select an object. The object becomes a solid.
3. Continue selecting objects to fill, if desired.
4. To exit this mode, select another create or modify option.

Unfill Object



To unfill an object

1. Select the Unfill Object icon.
2. Select an object. The object becomes an outline.
3. Continue selecting objects to unfill, if desired.
4. To exit this mode, select another create or modify option.

Group



To associate objects with each other, so that they can be selected and modified as a single entity

1. Select the Group icon. The Group icon is hazed until Go is selected.
2. Select one or more objects to group with the left mouse button.
3. Select Go when you have finished selecting items for a group.
4. Continue selecting objects to create other groups, if desired.

Each group of items is finished when you select Go.

5. To exit this mode, select another create or modify option.

Ungroup



To disassociate objects that were previously grouped with the Group command, so that they can be selected individually

Select the Ungroup icon. (The Ungroup icon is hazed until Go is selected.)

A grouped object is highlighted for you in your icon.

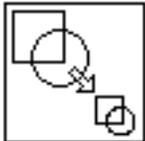
A confirmation menu appears with the items Next, Accept, and Cancel.

1. To highlight a different group, select Next. A different group is highlighted. Continue selecting Next, until the group you want to ungroup is highlighted.
2. To ungroup the highlighted group, select Accept. The objects are no longer grouped. They return to the definitions they were given when they were created.

Please note: The next group is automatically highlighted.

3. To exit this mode, select another create or modify option.

Scale Group



You can scale a group by using the Scale Group icon. You can scale a single object by making it a group by itself first.

1. Select the Scale Group icon.
2. A group is highlighted for you in your icon working area.

A confirmation menu appears with the items Next, Accept, and Cancel.

3. To scale a different group, select Next. A different group is highlighted. Continue selecting Next, until the group you want to scale is highlighted.
4. To scale the highlighted group, select Accept.
5. Press the left mouse button. Drag the button to create a box. The group is scaled to the size of the box.
6. To exit the Ungroup mode, select Cancel.

Undo



Select the Undo icon to undo the last command executed.

Please note: This function only undoes the last command. It does not continue to undo previous commands with each subsequent selection. It does not affect the following menu items:

- Delete Icon
- Grid On/Off
- Actual/Scaled

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