helm.help

COLLABORATORS

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Contents

Chapter 1

helm.help

1.1 Helm Help

1.2 Browsing through a Helm Book

Helm creates electronic books of one or more pages. Each page consists of any number of buttons, textfields, imagefields, shapes, charts, and selectors. When you click on many of these objects, Helm will execute a script or a list of preprogrammed actions that are connected to the object.

There are several ways to browse through a Helm book:

1. Clicking on objects – Most books will have arrows that you can click on with the Selection button (left mouse button).

2. Using menu items – You can use the Go menu to move the first, last, next, or previous page. Many books trap the Menu button (right mouse button). This means that the menus will not appear when you press down the Menu button. You can also get the menus to appear by moving the mouse pointer to the top of the screen before pressing the Menu button.

3. Cursor Keys – At most times, you can use the cursor keys to move to another page in the book. If you are currently using tools to create or modify objects, you will not be able to use the cursor keys to change pages.

```
   Left Arrow:  Go to the previous page.
   Right Arrow: Go to the next page.
```

```
   Up Arrow:    Go to the first page in the book.
   Down Arrow:  Go to the last page in the book.
```

If you make changes to a book, Helm automatically saves the new
information. For instance, you do not have to save the book again when
you add a new name to an address book. Helm will automatically store
the new name in the book. This is why Helm does not have a menu item
for saving the current book. It does have a menu item for making a copy
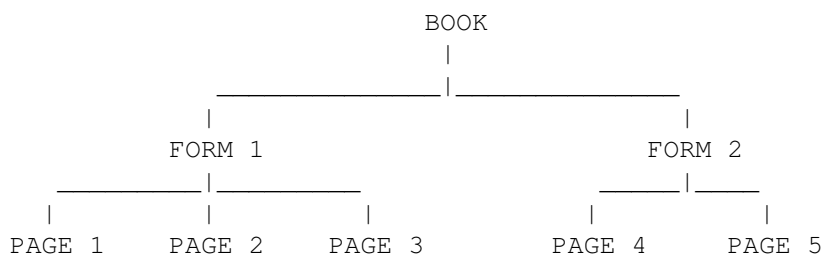of the current book. This is the "Make Copy..." menu item of the
 Book menu.

1.3   Features of Helm

```
   1.        Structure of a Book
   2.        Objects
   3.        Actions
   3.        Message Handling
   4.        User Levels
   5.        The Authoring Environment
   6.        The Bookshelf
```

1.4   Structure of a Book

 Each page of a Helm book is associated with a form. A form defines a
page's display, default font, and commonly used objects. A book must have
at least one form and one page. The objects of the page always appear on
top of the objects of the form.

 This diagram shows a book with five pages. Pages 1 through 3 belong to
form 1. When Helm is displaying any of these pages, it also displays form
1. Helm displays pages 4 and 5 with the second form.

```
                              BOOK
                               |
                _____|_____
                |                            |
             FORM 1                       FORM 2
         _____|_____            _____|____
         |        |        |            |        |
      PAGE 1   PAGE 2   PAGE 3       PAGE 4   PAGE 5
```

When the user moves from page 3 to page 4, Helm will automatically
switch to form 2 and change the display mode if necessary.

 Forms are like master pages or templates. You can define any number of
forms in a book. You edit the current form by selecting "Edit Form"
from the Edit menu. Don't forget to deselect "Edit Form" when you again
want to edit a page.

1.5 Objects

Helm has several types of objects that you can draw on a page or form.

Buttons
 Buttons are simple rectangular objects. You can quickly create an
interactive display by drawing a few buttons and attaching actions to
them. You can customize them with different borders, colors, patterns,
fonts, and shadows.

Charts
 By entering values into a textfield, you can create a chart that is
displayed on the page. You can choose from five chart types: scatter,
line, area, bar, and pie.

Imagefields
 Imagefields are like miniature paint programs. Each imagefield can
contain a single image at a time. An image consists of one or more
bitmapped frames. You can load IFF images into Helm or you can edit an
image by using Helm's paint tools. By checking the "Use as Button" option
in an imagefield's information requester, you use an imagefield as a icon
button.

Selectors
 Selectors are self-contained control panels that Helm can create and
manage. To use a selector, you decide where to put it and what choices
it should give the user. Helm handles the rest. These are the selectors
that are currently available in Helm:

  Empty   – A blank selector that does nothing. You can use it
                     to create a background by selecting a color and
                     border type within it's information requester.

  Pop-up Menu   – Displays a menu of items when pressed with the
                     Menu button. When the user selects an item, Helm
                     displays the text of the item within the selector
                     button.

  Cycle   – When pressed with the Selection button, it cycles
                     through a series of items.

  Check Box   – Select multiple options by clicking on check
                     buttons.

  Function   – A set of buttons that Helm automatically sizes and
                     positions for you. Each button is a simple non-toggle
                     button that does not change the state of the other
                     buttons within the selector.

  Multiple Choice – Select options by clicking on one or more of
                     a group of buttons that are displayed within
                     the selector.

  Single Choice   – Select an item from a group of items by clicking
                     on one of the buttons within the selector. When you
                     click on a button and highlight it, Helm automatically

clears the highlighting of the previously selected
item.

Radio Box   – Select an item from a group of items by clicking on
                     one of the radio buttons within the selector. When
                     you click on a button and highlight it, Helm
                     automatically clears the highlighting of the
                     previously selected item.

Slider   – Select a numeric value by moving a knob on the
                     selector.

Item Slider   – Select an item from a group of items by moving the
                     selector's knob.

Palette   – Choose a color from the set of colors displayed
                     within the selector.

Scrolling List   – Select an item from a group of items within a list.
                     Use the slider to scroll through the complete list
                     of items.

Matrix   – Enter numbers into a table of textfields.

Number   – Select a number by entering it into a textfield.
                     If up and down arrows are beside the textfield, you
                     can increase the value by pressing the up arrow and
                     decrease the value by pressing the down arrow.

Clock   – Display the time in 12 or 24 hour format.

Date   – Display the current date.

Information   – Display information about the book or system. This
                     includes things like the page number and free memory.

File   – Select a file path from the scroll list by entering
                     it into the drawer and file textfields.

Shapes
 Shapes are two-dimensional structured objects. They are particularly
useful in an authoring environment because they take up less memory and
load faster than imagefields. Helm includes these shapes: boxes,
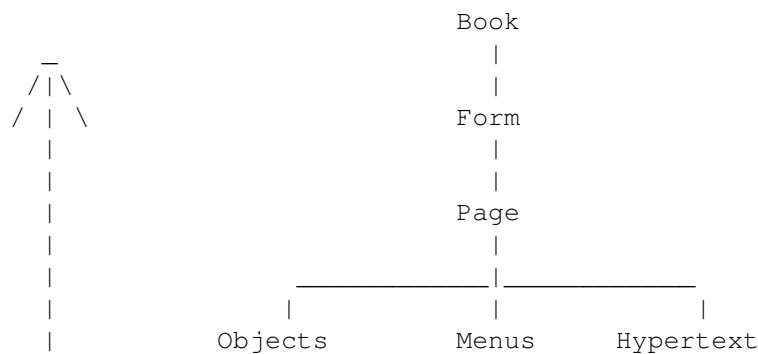ellipses, lines, curves, arrows, regular polygons, and irregular polygons.

Textfields
 Textfields are like miniature word processors. You can enter text into
these fields by clicking on the field with the mouse. Like imagefields,
you can use a textfield as a button by checking the "Use as Button"
option in the textfield's information requester.

1.6 Message Handling

The user of a book creates messages by clicking on mouse buttons, moving
the mouse, selecting items from the menu, or by typing on the keyboard.
In response to these events, Helm sends the messages to the relevant
object. For instance, if the user clicks on a button, Helm will send a
SelectDown and then a SelectUp message to the button.

If Helm does not find a match to a message, the message continues upward
through a hierarchy of objects until it is used by an object or it reaches
the end of the hierarchy. You can designate the kinds of messages that
trigger an action or script function. To program the behavior of the book, you ↩
  attach
actions and scripts to objects and menu items.

```
                                        Book
             _                           |
            /|\                          |
           / | \                        Form
            |                            |
            |                            |
            |                           Page
            |                            |
            |              _____|_____
            |             |             |            |
            |          Objects        Menus      Hypertext
```

1.7 User Levels

You can restrict access to a book by changing the book's User Level. This
lets you create books using the full power of Helm. When you are finished,
you can set the User Level to a more restrictive setting. The user of the
book gets only the options that you intend him to get. You can set one
of these five levels:

1. Navigate – Allows you to click on buttons and browse through pages.
   This level is the best level for presentations and slide shows.

2. Type – Allows you to edit text in fields and create new pages. This
   level is good for address books, personal organizers, bibliographies,
   and other similar books.

3. Art – Allows you to use the Paint window to edit images. This level
   is good for creating custom paint or image processing books.

4. Create – Allows access to all book creation features except scripting.
   You can attach actions to objects. You can also configure the menus.
   Use this level to make books that do not require scripts. Such books
   include address books, presentations, and graphics books that need no
   special programming.

5. Script – Allows you complete control over Helm's environment. You get
   all of the power of the Create level, plus the ability to create and
   edit scripts.

1.8   The Authoring Environment

Helm is built with a "seamless interface". This means that you do not go to
different places in the program to perform different tasks. The draw and
paint aspects of the program work together and are always available. In
fact, you can choose to display both the draw tools and the paint tools at
the same time. You can use the palette window to select the color of new or
existing objects. You can also use the palette window to choose the color
of paint when you are painting within an imagefield.

These are the basic steps for creating a Helm book:

Select New... from the Book menu.

Use the file requester to enter a name for your book.

Helm will display a requester asking whether you want to copy the
current form to the new book. To create a completely empty book,
click on the "No" button.

If you want to use a different display mode, select "Display..." from
the Author menu. Helm will display a requester for choosing a new
mode.

From the Tools menu, select the Palette and Draw Tools windows. The
Draw Tools window contains buttons for creating new objects. The
Palette window is used for selecting the colors of objects, paint,
and marked text.

From the Draw Tools window, select an object type. When you move the
pointer off the Draw Tools window, the pointer will turn into
crosshairs. Press the Selection button (left mouse button) and drag
the rectangle until you are satified with the size of the object.
Release the mouse button and Helm will create the object. Helm will
show control points on the object. These control points mean that the
object is currently selected. While the object is selected, you can
move the object or reposition a control point. You can also change
its color by clicking on a color in the Palette window while the
object is selected.

To create more pages in your book, select "New Page" from the Go menu.

You don't have to worry about saving your work. Helm will
automatically save pages and objects to the book.

1.9   The Bookshelf

 When you run Helm, it looks for the Bookshelf book. This book contains
buttons with the names of other books. When you click on one of the
buttons, Helm closes the Bookshelf and opens another book that is
designated by the button.

There is no difference between the Bookshelf and other Helm books. It

only has special status because Helm looks for this book when it starts
and because you can return to it by selecting the "Bookshelf" menu item
in the Go menu.

1.10   Helm Menus

Helm has nine default menus. Not all menus are available at all times. For
instance, if you are painting, Helm will display the Image, Brush, and
Paint menus. If you are drawing or modifying objects , Helm will display
the Object menu.

Default Menus when the browse tool is selected
     Book   Edit   Go   Text   Tools   Author

Default Menus when a paint tool is selected
     Book   Edit   Go   Image   Brush   Paint

Default Menus when a draw tool is selected
     Book   Edit   Go   Object   Tools   Author

1.11   Book Menu Items

New...
 Displays a file requester with which you can enter a new book name.
Selecting OK will close the current book and generate a new book with the
new name.

Open...
 Displays a requester to open a book. Assignments and devices are in a
separate scrolling list. The selected filename will remain highlighted.
Select OK to open the selected book.

Make Copy...
 Opens a file requester to select a file for backing up the current
book.

Streamline
 Reorganizes the internal structure of the current book. This command
often makes the file smaller. You should choose Streamline after you have
deleted several pages. This command requires a space on disk that is equal
to the size of the book. Streamline will fail if there is not enough disk
space.

Print...
 Opens a requester that contains settings that format a printed page.
Remember to select the appropriate printer driver in Workbench's
Preferences. You can also adjust PostScript settings and send a page using
PostScript commands.

Report...
 Opens a requester where you can generate reports from a form's nonshared
textfields. Use the page layout area to format the report on a piece of
paper.

Preferences...
 Opens a requester that controls the Helm interface. The Preferences are
divided into six sets of controls: Options, Colors, Serial, Music, and
Scripting.

Workbench
 Toggles the Workbench Screen on and off.

Help
 Uses AmigaGuide® to show this document.

About...
 Displays Helm's copyright notice and the amount of free memory. Helm
describes memory as Graphics (chip RAM) and Other memory (fast RAM).

Quit...
 Closes the current book and shuts down Helm. A requester will confirm
this command.

1.12   Edit Menu Items

Cut
 Deletes selected objects or text and stores them on the Clipboard.

Copy
 Puts a duplicate of the selected objects or text on the Clipboard.

Paste
 Moves an object, block of text, or page from the Clipboard to the current
page, textfield, or book. If a page is pasted and the form that the page
uses is not in the book, then the form is also pasted.

Clear
 Erases selected objects or text.

Select All
 Activates all objects on a page or form. If a cursor is active in a
textfield, this command will select all text in that field. @endnode

Cut Page
 Copies the current page with all its objects to the Clipboard. Disabled in
the Demo version.

Copy Page
 Puts the current page into the Clipboard.

Colors
 This item displays a submenu contain commands that change the palette.

Load...
 Opens a file requester where you can load a set of colors and sixteen
patterns. If you select the name of an IFF image, Helm will load that
image's colors.

Save...
 Opens a file requester where you can save a palette and pattern set.

Restore Palette
 Restores the palette to the colors it had before the last
palette change.

Default Palette
 Changes the colors to Helm's default palette.

Brush Palette
 Changes the palette to the colors of the brush. The brush palette is
created when the user cuts the brush or when the brush is loaded from
the disk or the Clipboard. Image Palette will change the palette to
the colors of the image that was last loaded into the active
imagefield.

Cycle
 Toggles color cycling.

Grid
 Opens the Grid requester. The grid offers means of restricting drawing
and painting to certain points on a page. When Snap to Grid is activated,
you can only draw to and from those points. Show Grid will display those
points as complemented pixels. Use the two sliders to adjust the distance
between grid points.

Show All
 Displays all objects. Helm will show objects that are invisible or
part of an invisible layer when the Show All item is checked.

Edit Form
 Toggles form editing. When this item is checked, you can
manipulate and create objects on the form. When this item is unchecked, you
edit only on pages. If you have more than one form layer, you must use the
Layers window to select specific form layers to edit.

Share
  This is item is visible when you are editing a form and using the
button, textfield, imagefield, chart, or selector tool. By checking Share,
you can create an object that will share its data when displayed on the
form's different daughter pages. A shared textfield, for example, will
display the same text on different pages. A textfield without shared data
will have different text on each page.

1.13 Go Menu Items

Next Page
 Turns to the next page in the book.

Previous Page
 Displays the page before the current page.

First Page
 Turns to the first page in the current book.

Last Page
 Moves to the last page in the current book.

Backward
 Turns to the previously displayed page in the page history. If the page
belonged to a different book, Helm will re-open that book to display the
page.

Forward
 Moves forward in the page history. Forward will have no effect if you have
not used the Backward command.

Autobrowse...
 Opens a requester where you can change the way you interact with the
program. You can choose to control the interface with a joystick, cursor
keys, or a single button. You could employ these different interfacing
techniques to assist disabled persons.

Bookshelf
 Turns to the first page in the Bookshelf book, which is used as a card
catalog for all books on your system. When you add a new book to your
system, you should add a button or item to the Bookshelf with a Go To
action that links to the new book.

New Page
 Inserts a new page after the currently displayed page. The new page will
use the same form as the current page. This command is available in the Type
User Level or higher.

Delete Page
 Removes the current page and updates sequence numbers of succeeding pages.
This command is available in the Type User Level or higher.

New Form
 Creates a new Form. To edit a form, choose Edit Form in the Edit
menu. The New Form command is available in the Create User Level or higher.

Load Form...
 Inserts a saved form along with a single page into the book.

Save Form...
 Saves the current form and page.

1.14 Tool Menu Items

Coordinates
 Toggles the display of the x and y positions of the pointer. You must
display the title bar to see the coordinates. The origin is the top left
pixel of the page. If you are using a paint tool and are over an imagefield,

the origin is the top left pixel of the image.

Title Bar
 Toggles the title bar.

Palette
 Opens the Palette window where you can select a color or pattern.

Colors
 Opens the Color Editor. The Color Editor is divided into
five sets of controls, which you can select with the pop-up menu at the
bottom of the window. The Colors controls let you change the values of
individual colors. Cycle lets you set the cycling ranges and speeds. Bias
changes a single component of color for the whole palette. With the Effect
controls, you can change all colors in a palette according to certain
formulae. The Toner controls turn the palette into a series of tones with
the same hue.

Patterns
 Opens the Pattern Editor, which you can use to edit any
of the sixteen patterns. Use the up and down arrow buttons to toggle through
the patterns eight at a time.

Paint Tools
 Toggles the Paint Tools window.

Paint Types
 Opens the Paint Types window. A paint type determines how Helm
applies pixels to an image with a painting tool.

Histogram
 Opens a window that displays a bar chart of the relative amounts
of colors in an image.

Magnifier
 Toggles the Magnifier window.

Messages
 Opens the Message window. You can use this window to type search or
navigation commands. You also use it as a calculator or to determine the
state of system properties.

Draw
 Opens or closes the Draw window.

Layers
 Opens the Layers window where you can create, delete, or select
layers to edit. A check indicates that a layer is displayed. You edit the
highlighted layer.

1.15 Object Menu Items

Load...
 Opens a requester to load selected objects to a file.

Save...
 Opens a file requester to save selected opjects to a file.

Bring To Front
 Moves the selected objects to the top of all other objects.
No other object can obscure an object that is brought to the front.

Send To Back
 Moves the selected objects to the bottom of all other objects.
All other objects obscure an object that is sent to the back.

Bring Closer
 Moves the selected objects forward. The selected objects will
obscure one more object than before.

Send Farther
 Moves the selected objects back. The selected objects will
obscure one less object than before.

Group
 Joins two or more objects. Objects that have been grouped act as a
single object when moved, sized, cut, or pasted.

Ungroup
 Splits a group of objects.

Duplicate...
 Opens a requester in which can clone the current object. Set the
number of rows and columns. Set the number of pixels between the cloned
objects with the Row Spacing and Column Spacing sliders.

Align...
 Opens a requester with commands to reposition selected objects so that
their edges line up. Left Edges lines up the left edges of the objects. The
farthest left edge of all the selected objects is the x-position on which
the objects align themselves. The commands Right Edges, Top Edges, and
Bottom Edges work similarly.

Info...
 Opens the information requester, which defines the selected object's
functionality and appearance. This requester controls the object's border
type, color, font, shadow, et cetera.

Actions...
 Opens the Action Editor, which controls many multimedia tasks. You
can add and reorder actions in a list with the pointer.

Script...
 Opens the Script Editor where you can enter a Breeze script. Scripts
are a more powerful substitute for actions. If both actions and a script are
attached to an object, then the actions are executed first.

1.16 Text Menu Items

```
Load...
 Opens a file requester to load an ASCII file into the active textfield.

Save...
 Opens a file requester to save the contents of the active textfield to an
ASCII file.

Plain
 If you choose this item, Helm will remove all text styles from a
highlighted block of text.

Underline
 Puts a line number the highlighted text.

Bold
 Changes highlighted text so that it is rendered in boldface.

Italic
 Slants the highlighted text towards the right side.

Shadow
 Puts a black silhouette of the text behind the highlighted text.

Font...
 Opens a requester in which you select font and size for highlighted
text.

Spacing...
 Opens a requester where you can adjust the line spacing of a
highlighted text. The number you enter is the number of pixels between the
bottom of each line and the top of the line immediately below.

Hypertext
 Marks a block of text as hypertext so that the block can be
attached to actions and a script. Hypertext operates much like the text
styles. You mark a block of text and choose Hypertext to indicate that the
text will function as a button. Use the Action Editor to add actions to the
hypertext. You can set the appearance of hypertext in the Hypertext
requester, opened from the Author menu.

Actions...
 Opens the Action Editor in which you can add actions to hypertext.

Script...
 Opens the Script Editor in which you can enter a Breeze script.
Scripts are a more powerful substitute for actions. If both actions and a
script are attached to a hypertext block, the actions are executed first.
```

1.17 Author Menu Items

```
Book...
 Opens a requester in which you can change properties controlled by the
Book. Here you can set the User Level and create a password.
```

```
Form...
 Opens a requester in which you can change many of the current form's
properties. Select the Default or Menu buttons to set the default and menu
fonts.

Page...
 Opens a requester in which you can change the page's properties. You
can select whether to inherit certain properties from the form or book. You
can also protect the page from deletion, enter a page name, or attach an
action list or script to the page.

Display...
 Opens the Display requester in which you can change the screen
display mode and page size for the current form. You select an available
display from a scrolling list on the left side of the screen. Use a slider
to set the number of colors.

Menus...
 Opens the Menu Editor in which you can add, edit, or delete menus and menu
items. The menus are arranged in three scrolling lists: a menu list, a menu
item list, and a subitem list. Above each list is a pop-up menu that
contains editing commands. Below each list is a context list that indicates
the circumstances when a given menu, menu item, or subitem will be available.

Narrators...
 Opens the Narrators requester where you can create narrators that can be
used throughout the book. A narrator is a group of settings that defines the
quality of a single narrator voice. You give the narrator a name that can be
selected for a Narration action or in a Breeze script.

Hypertext...
 Opens a requester in which you can choose the way hypertext will
look throughout the book. Hypertext can be any style or color.

Resources...
 Opens a requester in which you can import a file into
the book. Use one scrolling list to select files on disk. The other
scrolling list shows the files that are stored inside the book.

Effect...
 Opens the Effect requester in which you can select the visual effect
for the book, forms, or pages. This requester contains two lists of effects,
one effect for when a page appears and another for when it disappears.

Effect Area
 Lets you designate the area in which the visual effects (wipe, scroll,
etc.) will occur. After choosing this item, Helm will attach the word EFFECT
to the pointer. The rectangular area you make with the mouse will be
associated with the visual effect chosen in the Effect requester; it belongs
to a page, form, or book.
```

1.18 Image Menu Items

```
Load...
 Opens a file requester in which you load pictures and animations into
```

imagefields. You must first click in an imagefield with a paint tool or the
Browse tool. In the requester, click on Multiple Selections to put picture
files in a queue for later retrieval with the Next command.

Save...
 Opens a requester in which you can save the image of an active
imagefield.

Next
 Loads the next image or animation file in the queue. This command is
available only if you used the Multiple Selections feature of the Load
requester.

Capture...
 Displays a requester that you can use to grab a specified screen currently
opened on the computer and put the image inside an imagefield. These
screens are identified by the text in their title bars.

Clipboard
 This item displays a submenu containing commands to copy or paste frames
of the current image to the Amiga Clipboard.

Spare
 This item displays a submenu containing commands to control a spare
picture.

     Switch Images
      Exchanges the displayed bitmap with the spare bitmap.

     Copy To Spare
      Copies a duplicate of the current bitmap to the spare bitmap.

     Merge in Front
      Stamps all parts of the spare picture onto the displayed
     picture except for the parts of the spare that are drawn in the paper color.

     Merge in Back
      Stamps parts of the spare picture onto the pixels of the
     displayed picture that are drawn in the paper color.

     Delete Spare
      Removes the spare and frees its memory.

Frame
 This item displays a submenu containing commands to control the frames
of an image.

     Next
      Moves to the next frame in the animation.

     Previous
      Moves to the previous frame.

     New
      Creates a new animation frame immediately after the currently
     displayed frame, copying the image of the current frame into the new
     frame.

        Delete
         Removes the current frame. If the imagefield contains only one frame,
        then this command has no effect.

        Copy To All
         Pastes the current frame onto all other frames.

Color
 This item displays a submenu containing commands to control the palette
of an image.

        Remap
         Remaps the image to use the current palette.

        Transparency
         Sets the transparent color to the paper color.

        No Transparency
         Turns the transparent color off.

        Paper <-> Pen
         Swaps pixels of the paper color with pixels of the pen color.

        Paper -> Pen
         Merges pixels of the paper color into pixels of the pen color.

        Count
         Counts the pixels in the image and displays them in the
        Histogram window if it is open.

Flip
 This item displays a submenu contains two commands to flip an image
horizontally or vertically.

Info...
 Opens a requester with which you can adjust the size of the image
inside an imagefield.

1.19   Brush Menu Items

The Brush menu commands manipulate brushes. You can also load or save a
brush in an IFF format.

Load...
 Opens a file requester to load a new brush.

Save...
 Opens a file requester to save a brush to a file.

Restore
 This is an undo for brushes. You can undo the most recent brush
transformation, such as a Shear or Size.

Clipboard

 This item displays a submenu containing commands to copy or paste frames
of the current brush to the Amiga Clipboard.

Color
 This item displays a submenu containing commands to control the palette
of the brush.

    Remap
     Rewrites a brush that was loaded with a palette different from
     the current palette so that it more closely matches the original
     appearance of the brush.

    Transparency
     Sets the transparent color to the paper color.

    Paper <-> Pen
     Swaps pixels drawn in the paper color with pixels of the pen color.

    Paper -> Pen
     Merges pixels of the paper color into pixels of the pen color.

Hold
 This item displays a submenu for controlling the position of the pointer
relative to the brush it is dragging. You can position the pointer at the
Center of the brush, at the lower right-hand Corner, or at Any Point.

Size
 This item displays a submenu for changing the size of the brush.

    Double
      Doubles the width and height of the brush.

    Halve
      Halves the width and height of the brush.

    Any Size
     Helm will attach the word SIZE to the pointer; the pointer will
     be positioned at the lower right corner of the brush. Press
     down on the Selection button and hold it down while moving the
     mouse to adjust the size of the brush.

    To PAL
    To NTSC

The To PAL and To NTSC commands adjust the height to the PAL or NTSC aspect
ratio. To PAL stretches and To NTSC shrinks. Use these commands to convert
art between the PAL and NTSC displays.

FLIP will alter the brush so that it is a vertical or horizontal mirror
image of itself.

SHEAR distorts a brush. Shearing is like pushing a rectangle into a
parallelogram.

With the ROTATE submenu, you can rotate a brush 90 clockwise or Any Angle.
To rotate any degree, select Any Angle and drag a box representing the brush

around to the desired degree of rotation.

1.20   Paint Menu Items

Matte
 Stamps all of a brush except for the area of the brush covered by the
transparent color. The transparent color is the paper color used when the
brush was created.

Color
 Stamps a silhouette of the brush in the pen color.

Replace
 Stamps a brush just as it appeared when it was created. No masking
is done.

Copy
 Places the area of the image covered by the next painting operation
into the user-defined brush. This paint type works with all paint tools
except fill.

Smear
 Pushes pixels underneath the brush in the direction in which the brush
is dragged.

Dissolve
 Stamps the brush onto the page one pixel at a time.

Spare
 Stamps pieces of the spare image underneath the brush.

Cycle
 Stamps silhouettes of the brush in a sequence of colors ranging from
the pen to the paper color.

Cycle 2
 Stamps silhouettes of the brush, alternating between the pen and
paper colors.

Gradient
 Creates a pattern by mixing colors ranging from the pen to the
paper color. You can set the amount of mixing in a requester.

Gradient 2
 Creates a pattern by mixing only the pen and paper colors.

Tint
 Rewrites pixels under the brush to colors with hues similar to the pen
color but with intensities similar to the pixels.

Smudge
 Makes the pixels under the brush mix with each other.

Chaos
 Creates a pattern in the pen color using an iterative system function.

The patterns often look like the patterns in Persian rugs. Set the seed and scale numbers in a requester.

Count
 Updates the pixel count array for an area designated by a painting operation. If the Histogram window is open, Helm automatically updates the histogram.

Custom
 Transforms the area under a brush with a custom convolution filter. You can use a filter up to 9 by 9. The supplied filters include smoothing filters and gradient filters.

Dither
 Eliminates colors and replaces those colors with patterns of only the pen and paper color. Use dither to add textures to images.

Edges
 Draws pixels around features in an image. Adjust the edge detection threshold in a requester.

Mosaic
 Samples single pixels from areas of an image and then stamps a shape over that area in the sampled color. You can create the shape in an editor dr you can load one of the shapes supplied on a disk.

Sample
 Stamps a brush silhouette in a color sampled from underneath the pointer. You can set the sampling frequency in a requester.

Brush Tile
 Fills the area drawn with repeated stamps of the current brush.

Brush Fill
 Fills the area drawn with a resized duplicate of the brush.

Translucent
 Redraws pixels having colors in the first half of the palette with corresponding colors in the second half, while rewriting pixels from the second half into the first half. In extra-half bright mode, the image will be lightened or darkened. Similar results occur when the colors of the second half of the palette mirror the first half in hue but have different intensities.

Complement
 Complements the bits under the area dawn. Use a requester to choose the bitplanes you want changed.

Lighten
 Replaces the colors of existing pixels with lighter colors of similar hues.

Darken
 Replaces the colors of existing pixels with darker colors of similar hues.

Negative

Replaces the colors of existing pixels with negative colors. Whites
will turn black, and so on.

1.21 Action Types

AmigaGuide®

Blackboard
 Displays text in a requester that appears near the activated object.

CDTV Audio
 Selects and plays tracks on an audio CD disc inserted into a CDTV
machine.

DOS
 Executes lines of text as if they were typed into the CLI.

Execute
 Executes an ARexx script or an AmigaDOS executable program.

Flip
 Changes the animatino frame in an imagefield.

Genlock
 Controls a genlock device using Release 2 commands.

Go To
 Displays a new page within the current book or another book.

Helm Command
 Executes a Helm system command.

Layers
 Changes the visibility of a layer using a visual effect.

Move
 Moves an object to a new position on the page or form.

Music
 Plays an external SMUS file or a SMUS file that has been imported into
the book.

Musical Notes
 Plays a series of notes that are entered as text.

Narration
 Uses the Amiga narrator device to read text.

Picture
 Shows an IFF-ILBM disk file or a file that has been imported into the
book.

Scroll
 Scrolls the text in a textfield up or down.

Serial
 Sends text to the designated serial device.

Sound
 Plays an IFF-8SVX sound file. The file can be located on disk or inside
the book.

Testpattern
 Displays color bars for adjusting video equipment.

Text
 Displays a text file in a window.

Touch Tones
 Plays the telephone touch tones for a given phone number.

Visibility
 Changes the visibility of a selected object using a visual effect.

1.22 Descriptions of Tool Windows

    1.   Palette
    2.   Colors
    3.   Patterns
    4.   Paint Tools
    5.   Paint Types
    6.   Histogram
    7.   Magnifier
    8.   Draw Tools
    9.   Layers

1.23 Keys

You can quickly perform many operations by using one of Helm's key
commands. In most instances, you press a single key. Sometimes, you have
to hold down a qualifier key as you press the key. The qualifier keys
are shift, control, and ALT.

    1.   Navigation
    2.   Painting
    3.   Drawing
    4.   Text Editing

1.24 Navigation Keys

Use these keys to browse through a book. You can use the keys at any
time. The cursor keys will not work if you have selected an object
with one of the draw tools.

q Quit

```
Return  Point
? About
Up  go to first page of book
Down  go to last page of book
Left  go to previous page of book
Right   go to next page in book


              Qualifier
  Shift           Alt
F1      Coordinates Draw Tools
F2  Title Bar      Layers
F3  Palette
F4  Colors
F5  Patterns
F6  Paint Tools
F7  Paint Types Page Info
F8  Histogram Form Info
F9  Magnifier Book Info


F10     Toggle tool windows on and off.

g toggle grid on and off
G toggle display of grid on and off

Control-C will abort a script.
```

1.25 Painting Keys

```
                    Qualifier

        None            Shift    Control

F1  Matte   Gradient2 Brush Tile
F2  Color   Tint    Brush Fill
F3  Replace   Smudge    Translucent
F4  Copy    Chaos   Complement
F5  Smear   Count       Lighten
F6  Dissolve Custom      Darken
F7  Buffer    Dither       Negative
F8  Cycle   Edge
F9  Cycle2    Mosaic
F10 Gradient   Sample

1 previous frame
2 next frame
! first frame  (shift 1)
@ last frame   (shift 2)
a airbrush
b brush
B restore brush
c curve
d freehand
e ellipse
E filled ellipse
```

```
f flood
h resize brush to half size
H resive brush to double size
j switch to spare image
J copy to spare image
k clear image
l line
m magnifiy
p regular polygon
P filled regular polygon
Q Quit
r rectangle
R filled rectangle
s       select object tool
t text
u UNDO
w polygon
W filled polygon
x flip brush horizontally
X resize brush to double width
y flip brush vertically
Y resize brush to double height
z rotate brush 90 degrees
? About Requester
[ Decrement PenColor
] Increment PenColor
{ Decrement PaperColor
} Increment PaperColor
' Swap pen and paper colors (useful for reverse gradients)
< Decrease magnification
> Increate magnification
. Switch to one pixel thick brush
, pick a color
; Show options requester for current paintmode


Tab Toggle color cycling on and off

Space Bar   Interupts and cancels painting operations.
            When drawing polygons, closes the last polygon.
Shift Keys  Locks lines to x or y axis
```

1.26 Drawing Keys Keys

```
ALT +
-------
a Draw Arrow
A Draw Filled Arrow
d Draw Select
l Draw Line
c Draw Curve
b Draw Box
B Draw Filled Box
e Draw Ellipse
E Draw Filled Ellipse
```

```
s Draw Regular Polygon
S Draw Filled Regular Polygon
w Draw Polygon
W Draw Filled Polygon


ON SELECTED OBJECTS


Unmodified Cursor Keys


Up   Nudge the object up one pixel
Down   Nudge the object down one pixel
Left   Nudge the object left one pixel
Right Nudge the object right one pixel
```

Holding down a shift key when double clicking an object brings up the object's action list.

Holding down the control key when double clicking an object brings up the object's script.

Holding down a shift key when choosing a color from the palette changes the pen color of the object.

Holding down the control key when choosing a color from the palette changes the border color of the object.

Pressing the 'o' key will cycle the border number of an object.

1.27   Text Editing Keys

```
Unmodified Cursor Keys


Up   Move the cursor up one line
Down   Move the cursor down one line
Left   Move the cursor one character to the left
Right Move the cursor one character to the right


Cursor Key + Shift Key


Up   Move the cursor to the top line of the field
Down   Move the cursor to the last line of the field
Left   Move the cursor to the beginning of the current line
Right Move the cursor to the end of the current line


Cursor Key + Alt Key


Left   Move the cursor back one word
Right Move the cursor to the next word

RIGHT AMIGA KEY +

u Scroll up one page
d Scroll down one page
```

```
m Mark block
x Cut a selected block to the clipboard
c Copy a selected block to the clipboard
v Insert text from the clipboard at the cursor
a Select all text
k Delete the current line
y Delete the text after the cursor to the end of the line
t Jump to the top or bottom of the text
l Jump to the beginning or the end of the line
j Jump to a user requested line number
r Replace text with other text
s Search for matching text
g Repeat last search or replace operation
```

You can trigger hypertext links on an unlocked textfield by holding
down a shift key when you click on the hypertext.

1.28 Common Problems

```
Problem 1   I can't figure out how to save a book.

Problem 2   I can't figure out how to change the color of text.

Problem 3   When I try to paint, nothing happens.

Problem 4   If I paint in an imagefield, the changes are not saved when I
            return to the page.

Problem 5   When I closed an object's information requester,
            the object disappeared.

Problem 6   I created an imagefield on the form, but when I move to
            another page the image is gone and there is an 'X' drawn on top of  ←
               the
            imagefield.

Problem 7   I created a radio box selector on a form. When I create a new
            page, the selector reads out a different selection.

Problem 8   When I press on the Menu button, the menus do
            not appear.

Problem 9   I click on a object, but I cannot select it for editing.

Problem 10  I made a menu, but when I return to the book, the menu is not
            included.

Problem 11  I draw some objects on the page when I intended to draw the
            objects on the form.

Problem 12  I cannot paint on some imagefields.

Problem 13  When I use autobrowsing, the jump cursor does not move from
            object to object in a neat order.
```

Problem 14 The text in a textfield has disappeared.

Problem 15 When I return to a page with multiple layers, Helm displays
            all of the layers instead of just the ones I intended.

1.29   Problem 1

I can't figure out how to save a book.
_____

   You don't have to save a book. Helm automatically updates the book
as you work on it. For instance, when you add a button to the page,
Helm will save the button when you move to another page or close the
book.

1.30   Problem 2

I can't figure out how to change the color of text.
_____

   To change the color of text, highlight the text with the Browse tool
and click on a color in the Palette window. The highlighted text
will change to the new color.

1.31   Problem 3

When I try to paint, nothing happens.
_____

   You can only paint on an image and images reside inside of imagefield
objects. To create an imagefield, use the Draw Tools window from the
Tools menu. You can draw an imagefield on the page after pressing on
the imagefield button (6th row, rightside column) of the Draw Tools
window.

1.32   Problem 4

If I paint in an imagefield, the changes are not saved when I return
to the page.
_____

   You have turned off the Save Changes option in the imagefield's
information requester. This option is primarily intended for linked
files that you want to load, but do not want to change. Turn on this
option and Helm will save all subsequent changes to the image.

1.33   Problem 5

When I closed an object's information requester, the object
disappeared.

_____

   You have turned on the Invisible setting in the object's information
requester. You can retrieve the object by selecting Show All in the
Edit menu. This menu command shows all invisible objects. Select the
object again and turn off the Invisible setting. Press OK and then
turn "Show All" off from the menu. Your object should still be visible.

1.34   Problem 6

I created an imagefield on the form, but when I move to another page
the image is gone and there is an 'X' drawn on top of the imagefield.

_____

   You have created a non-shared imagefield. This means that the
contents of the imagefield are not shared by each page that uses the
form. Each page has a different image that Helm puts in the imagefield
when it loads the page. For instance, you might want to create an
imagefield for identification pictures. Although you have only one
imagefield on the form, it contains a picture for each individual in
the database.
   The 'X' means that you have not yet created the actual image for that
particular page. Click on the imagefield and Helm will display a requester
so that you can create an image for that page.
   If you want the same image to show on all pages that use the form, you
need a shared imagefield. You create shared objects by checking the
Shared menu item in the Edit menu. You can change a non-shared imagefield
to a shared imagefield by clicking on the Share setting in the object's
information requester. The image that is currently in the imagefield will
become the only image that is displayed.

1.35   Problem 7

I created a radio box selector on a form. When I create a new page, the
selector reads out a different selection.

_____

   This is similar to the preceding problem. You have created a
non-shared selector. To get a selector that stores just one set of
data for the form, go into to selector's information requester and
check the 'Share' setting.

1.36   Problem 8

_____

When I press on the Menu button, the menus do not appear.

_____

   For many applications, the author wants the Menu button for other
purposes. For example, the paint tools can use the Menu button for
painting with the paper color. You can always get the menus to appear
by moving the pointer over the title bar. If the title bar is not
visible, the menus will appear if you move the pointer to the top line
of the screen.
   You can change the Helm's response to the pressing the mouse's menu
button from the Form Information requester. It the item labelled "Trap
Menu button" is checked, then Helm will not display the menus unless
the pointer is over the title bar or is positioned over the top line
of the screen. If this item is not checked, the menus will appear
whenever you press the Menu button.

1.37   Problem 9

When I change to another display, Helm quits the program.

_____

   If there is not enough memory for the requested display or if your
hardware does not support the requested mode, Helm may shut down
rather than risk the integrity of your book.

1.38   Problem 10

I made a menu, but when I return to the book, the menu is not included.

_____

   Menus and menu items are displayed according to the context. The
current context is defined as the current user level and the current
tool type. In the menu editor, you can set in what context a menu item
will appear. If the current context matches the settings of the menu
item, Helm will display it. The menus can completely disappear if no
menu item matches the current context. In this case you can

1.39   Problem 11

I draw some objects on the page when I intended to draw the objects on the
form.

_____

   You can use the clipboard to transfer the objects from the page to
the form. Use these steps:

   Choose the Selection Tool
   Select Select All.
   Select Cut.

_____

```
   Select Edit Form.
   Select Paste.
```

1.40 Problem 12

I cannot paint on some imagefields.

   You can use all of Helm's objects as buttons that the user can click
on and generate messages. In the case of an imagefield, Helm does not
allow the user to paint on the image if it is being used as a button.
To paint on it, you have to turn off the "Use as Button" option in the
the imagefield's information requester.

1.41 Problem 13

When I use autobrowsing, the jump cursor does not move from object to
object in a neat order.

   Helm uses the depth of the objects to decide the order of objects
for autobrowsing. You can change the order by using the depth menu
items in the object menu.

1.42 Problem 14

The text in a textfield has disappeared.

   The textfield is not tall enough to show the current line of text.
This might happen after resizing a textfield. It might also happen
when you change the font of text within the line.

1.43 Problem 15

When I return to a page with multiple layers, Helm displays all of the
layers instead of just the ones I intended.

   Use the layers window to select the layers that you want visible
when the page first appears. Press the snapshot button (it looks like
a camera) on the layers window. Helm will restore the current state of
layer visibility when you next return to the page.

1.44   Design Tips

1.   If you are using Release 2 of the Amiga system software, you can
     use high quality Compugraphic fonts in a book. Unfortunately,
     there are a couple of drawbacks to using these fonts. If you plan on
     distributing your book, you cannot always count on a user having
     Release 2. Also, the Amiga renders a font into memory when it is first
     requested. This process is sometimes lengthy (less so on Amigas with
     faster processors) and can be disruptive to the flow of a presentation.
     You should make careful judgements about the compromises that using
     these fonts may require.

2.   Try to avoid the use of abbreviations for the names of buttons. Your
     books will look more professional if you can spell out the full name.
     We have followed our own advice by minimizing the number of
     abbreviations in Helm.

3.   Use a fixed width font for clock selectors. A proportional font will
     bob around as the time changes. This is particularly bad when the
     clock is reporting seconds.

4.   When building pages, try to use shapes rather than imagefields. Shapes
     take less memory and load faster. Use patterns to make pages look more
     complicated without the overhead of using bitmaps.

5.   For an easy way to create shrubbery, set the pen and paper colors
     to two different shades of green. Select the ninth builtin brush
     (third row, third column in the brush menu). Set the painttype to
     Cycle 2. Select the airbrush and start painting.

6.   In creating Helm's interface we have used many requesters that have
     multiple views. These views are selected from a group of
     buttons that are located on the top righthand side of the requester.
     You might find it useful to follow this convention. In any case, as
     you create books, try to create a few design rules to follow.

7.   Many books will require two arrows for the user to move to the
     previous or next page. Try to keep these arrows close together. If
     they are far apart, the user will have to move the pointer long
     distances just to go back and forth through the pages. Also, try to
     keep these arrows in nearly the same place throughout the pages. The
     user will have less trouble finding and using them.

8.   To create something that looks like graffiti, paint an area with a
     brick pattern. Then recolor the bricks and airbrush the new pattern
     over the original bricks. The first two patterns in the default palette
     work great for this purpose.

9.   If you are working in an interlace display mode, avoid the use of
     thin horizontal lines. Without a deinterlacer, an end user will
     find these lines annoying.

10. Do not cram lots of objects on to a single page. Distribute
     the objects over several pages.

11. Use a grid when you are laying out objects on a page. Pages will

look better if the edges of objects are in alignment with the edges
of other objects. By using the grid, you will also find it easier to
resize objects so that they have the same size. This will also help
the appearance of your pages.

12. Limit the number of border styles on a page to one or two. If you use
    too many styles, the page might appear cluttered and sloppy.

13. Minimize the size of bitmaps as much as possible. Instead of using
    one large bitmap, use a combination of shapes and small bitmaps.
    For instance, you can create a face by using an elliptical shape
    object and small bitmaps for the eyes, nose, and mouth. You can also
    take advantage of the fact that Helm can display bitmaps with fewer
    colors than the display.

14. If you want a background that uses one of Helm's borders, use an empty
    selector. You can then set the border type in the object info requester.
    You can even give the background a title.

15. Connect actions to an object with the SelectUp message. Unless you
    are toggling highlighting on and off, the user will expect the actions
    to occur when he releases the mouse button.

16. If you are running under Version 2.0 of AmigaDOS, you can get much
    better performance from your floppy disks if you format the disk using
    the Fast Filing System. Because we do not know if you have Release 2
    or not, we have to ship our disks using the Old File System.

17. Take full advantage of the fact that you can choose what bitplanes
    are used to display an object. You can dramatically improve the
    text scrolling by turning off some of the bitplanes of a textfield.

18. Use Helm's ability to save and load selected objects to create
    commonly used sets of objects. If the objects are grouped before
    you save them, you can create designs that you can load and reposition
    anywhere on the screen.

19. Timers are useful for creating kiosk like applications. If the
    kiosk has a main menu, put a timer on the other forms set to a
    one or two minutes. Connect a action to the timer that tells
    Helm to go back to the main menu. When the next user approaches
    the kiosk, the main menu is displayed.

20. If your application uses a touch screen, you should should use
    the verbs "touch" or "press" instead of "click".

21. If you want an object to have audio feedback when it is pressed,
    use the musical notes action. Put something like "c5" into the
    the textfield of the action. When the user presses the object,
    Helm will play a sixteenth c note from the octave five.

22. Take advantage of the "First Plane" highlighting option of objects.
    If this option is selected, the highlighted color of an object is
    always next to the unhilighted color in the palette. This makes it
    easier to create unlighted/hilighted pairs of colors within the
    palette.

1.45 Glossary

ALGORITHM, a series of steps that performs a task or solves a problem.

ANIM, an IFF file format for storing animation. There are several
different versions of ANIM. Helm can load, save, and play ANIM-5 files.

APPARENT RESOLUTION, the resolution that you think you see when viewing a
picture. A picture may appear to have more colors than is actually does if
it is halftoned. A picture may be anti-alaised, which reduces jaggies and
makes the image appear to be displayed with smaller pixels.

AREA PROCESS, an image processing routine that uses areas of pixels in
making calculations. This is also called group process. The edge detection
and custom filter are area processes.

AREXX, an interprocess communication language. ARexx processes and
transmits information between programs that have been modified to accept
and send commands through ARexx. ARexx is part of Release 2 of the system
software but is available for earlier versions.

ARRAY, a list of items, each of a definite size and type, that you can
create and manipulate with a computer language translator.

ARTIFACT, the unintended pattern that is created when an image is dithered.

ARGUMENT, an expression used by a function. Multiple arguments are
separated by commas.

ASCII, a standard for representing alphanumeric characters as binary
numbers. You can use the decimal form of the ASCII character set with
BreezeÕs numtochar() function.

ASPECT RATIO, the ratio of the size of horizontal pixels to an equal
number of vertical pixels. A display with square pixels has a ratio of
one. The closer the aspect ratio is to one, or rather the squarer the
pixels are, the easier it is to paint.

ASSIGNMENT, a statement with which a container is given a value: put 12
into x.

BACKUP, a copy of a file that you can use if you lose the original.

BATCH PROCESSING, processing a group of similarly formatted data with the
same procedures. You can program Helm to batch process IFF images.

BINARY, a number system that uses two states to represent a number. Binary
numbers represent the on and off states that are typical of low level
computing.

BIT, (from Binary Digit) the smallest unit used in computers. There are
only two binary digits: 0 and 1. These digits often represent on and off
states. The number in a Check box or a Multiple Choice selector, for

example, should be regarded as a binary number whose bits indicate whether the selector's individual items are selected. If the second bit of the number is 1, then the second item of the selector is on.

BITMAP, the display memory of a graphics picture. It is composed of one or more bit-planes and is located in chip ram of system memory.

BITPLANE, a continuous chunk of memory with each bit of data corresponding to exactly one pixel of the picture. A 320 x 200 display has 64,000 individual pixels. Each of these planes will have 64,000 bits of data (or 8,000 bytes of memory).

BLITTER, (from BLock Transfer) the Amiga's high speed memory mover. The blitter is used primarily for moving graphics and sound data and for disk operations.

BLOCK, a group of program statements that is controlled as a single statement. In Breeze, a block is delimited by the begin and end statements. Note the following example:

```
if z = two begin
  answer "Hello"
  put 23 into z
end
```

   In this example, the two statements, answer ÒHelloÓ and put 23 into z, constitute a block since they will always be executed together.

BOOLEAN VALUE, a value of either true or false. A bit represents a Boolean value.

BOOK, (1) the root object in Helm's object hierarchy. There can be only one book at a time. All unprocessed messages pass through the book's script. If a book cannot process a message, the message is discarded.

   (2) A book is also the application file made by Helm. It contains menus, objects, preferences, actions, and scripts.

BOOKSHELF, a Helm book that contains Go To actions to all books on the system. You should keep a bookshelf on every system that supports Helm.

BOUNDING BOX, a complemented rectangle that is usually used to represent an object as you work with it. A bounding box, for example, is used to represent an object when it is being repositioned by the mouse.

BROWSE, a term used in the Hypertext community to describe moving through a series of documents by using go to links that chain the documents together. See Hypertext.

BRUSH, a movable bitmap that you can stamp on a page or form. You can size and distort brushes.

CHAOS, an iterative function system that can produce complicated geometric patterns. Helm uses chaos as a painting type.

CHECK BOX SELECTOR, a type of object that you can define in the Create or

Script User Levels. The Check box selector puts up a number of items that you can toggle on or off with check mark buttons.

CHIP MEMORY, the Amiga's lowest 512K RAM of system memory. With the enhanced chip set, chip memory is increased to 1024K RAM. This is the only memory that the Amiga's special graphics hardware can access. The display memory must reside in chip memory.

CLIPBOARD, a place where data can be copied so that it can be moved to other pages or applications. Helm allows you to copy, cut, and paste text, images, objects, and pages to and from the Clipboard.

CMY, (for Cyan, Magenta, Yellow) a color model used in four-color process printing.

COLOR REGISTER, a system register where the Red, Green, and Blue values of a color are stored.

COLORMAP, a software structure that stores color definitions. The colors of the colormap are mapped to the actual hardware color registers.

COLOR MODEL, a method of numerically representing a color. Helm supports three models: RGB, HSV, and CMY. There are many more.

COMMAND, an instruction that can be used to start a line of in a script. In Breeze, a command is simply a function that does not return a value.

COMPLEMENT, the changing the colors of an area by reversing all the bits of the area. It is used for highlighting.

CONCATENATION, the process of adding two strings together. Breeze uses the and (&) symbol to concatenate two strings:

    put last_name & ", " & first_name into full_name

CONSTANT, a value that cannot change. All numbers are constants. Containers can never be constants. Breeze has many word constants that stand for numbers, including on for 1, off for 0, two for 2, false for 0, true for 1, up for 2, and down for 3. Other words stand for special ASCII codes: tab, space, and newline.

CONTAINER, a structure that can hold data. A container can hold integers, real numbers, strings, or images. You can manipulate string containers with slicing or string functions. All objects are also containers. Breeze uses containers instead of variables.

CONTEXT-SENSITIVE, the ability of a feature to change according to changes in other features. In Helm, the menus are context-sensitive. The User Level and the active tool provide the context for displaying specific menus, menu items, or subitems.

CONTROL POINT, a small knob attached to an object used for manipulating the size and shape of the object. Some programmers also call them handles.

CONVOLUTION, a process in which each pixel in an image is altered depending on its relationship with neighboring pixels. The Custom Filter and Edge Detector are implementations of convolution processes.

CURSOR, the vertical line inside a textfield that shows you where the next character you type will appear.

CYCLE SELECTOR, a type of input object that you can define in the Create or Script user level. The Cycle selector performs the same task as a radio box but takes up less room. The cycle selector looks like a button that cycles through a series of selections. The selection displayed is toggled on, all others are toggled off.

DEBUGGING, the process of correcting the mistakes in a program or script.

DEAD KEYS, keys used by the Amiga console for typing letters with accent marks. By pressing the Alt-key along with the f, g, h, j, or k keys and then pressing a vowel, the user can enter the accent marks used by many foreign languages.

```
Alt-f + vowel = « acute
Alt-g + vowel = Ô grave
Alt-h + vowel = ^ circumflex
Alt-j + vowel = $\div$  tilde
Alt-k + vowel = \ensuremath{\lnot} umlaut
```

  This system of dead keys is also used in Helm's textfields.

DECLARATION, a statement that introduces a variable or string to the interpreter.

DEFAULT MENUS, the set of menus that belongs to Helm.

DEFAULT TOOL, the program name and path, kept in a projectÕs Workbench information requester, that identifies the program that uses the project as a support file.

DIGITIZER, a device that turns a video signal into a digitized image.

DITHERING, a method of using patterns of pixels to represent different shades and colors. A dithering routine might reproduce the color orange as a pattern of mixed red and yellow pixels. Dithering is used to extend the colors and shades of an output device such as a monitor or printer.

DOUBLE-CLICK, the act of clicking a mouse button twice in quick succession. For example, you can open a book by double-clicking a filename in the open book requester.

DRAG, to move the pointer while holding down the Selection button. To move a window or object, you must drag it.

DRAW PROGRAM, a graphics program that can be used to create images with vector graphics. Since draw programs regard drawings as a series of x and y coordinates, draw programs can produce highly accurate output.

EDGE DETECTION, the attempt to outline the edges of features in a graphics image. In Helm, edges are detected by measuring gradients of intensity.

8SVX, an IFF file format for storing digitized audio samples. The SMUS files use 8SXV as instruments.

EMPTY SELECTOR, a type of input object that you can define in the Create
or Script user level. An Empty selector simply puts up a selector box with
a title. With an empty selector, you can do no selecting at all.

ENHANCED CHIP SET, a set of graphics chips for the Amiga. These chips can
directly access 1024K RAM -- CHIP RAM. They also have several new display
modes such as Productivity Mode and SuperHires.

EVENT, any occurrence that creates a message. For example, clicking a
mouse button and turning a page are events.

EVENT FUNCTION, a specially named function that Helm executes upon
receiving a message of the same name as the function. The following event
function will flash the border red when it receives a MenuChoose message :

```
on MenuChoose begin
  Set the rgb of 0 to 0, 10, 0
  Set the rgb of 0 to 0,  0, 0
end
```

EXPRESSION, any combination of words and symbols that, when evaluated, are
equivalent to a single string or number. Expressions can consist of
containers, constants, properties, and function calls.

EXTRA HALF-BRIGHT, a special Amiga mode in which the 320 x 200 or 320 x
400 display can double its number of colors, making 64 colors. The extra
colors in Extra Half Bright mode are half the brightness of the original
half. You cannot adjust these extra colors. They are entirely dependent on
the first 32 color registers.

FIELD, an object in which you can enter text or paint. See Textfield and
Imagefield.

FILTER, the matrix of numbers used by any convolution routine. It often
refers to a matrix plus a denominator used in simple convolution
algorithms. A filter is also called a kernel or a window.

FIXED-PITCH FONT, a font in which all the characters have the same width.
Pitch refers to the number of characters that an output device can print
per inch. Also called monospaced font. See proportional-pitch font.

FLOYD-STEINBERG, a popular error diffusion dithering routine.

FLOW CHART, a graphical representation of a program's inner workings.

FORM, an object type just below the book and just above the pages in
Helm's object hierarchy. Forms must coexist with pages, since a form sets
forth the general form of a group of pages. A form cannot exist without
being utilized by at least one page. A page cannot exist without using a
form.

   On a form, you can put any number of objects or shapes. For
example, you can put several fields on a form to hold a name and address.
Every page that is then added to that form can hold a different name and
address. The result is an address book.

FUNCTION, a grouping of script statements that can be exectuted from other
functions with a function call. Helm recognizes three varieties of
functions: event functions, system functions, and user-defined functions.
The names of event functions are reserved words; you define an event
function with these existing names. These names correspond to event
messages that are produced by an object as the user interacts with it.
These functions will execute when a message is sent to a script with a
matching event function.

   System functions are built-in functions that take arguments and
return values.

   You give a user-defined function a name. User-defined functions
can also take arguments. Functions are very much like mathematical
functions. This is an example of a Breeze function definition:

```
   flashScreen begin
     Set color zero to green
     Wait 2
     Set color zero to black
   end
```

   Parentheses must always follow the function name.

FUNCTION SELECTOR, a type of input object that you can define in the
Create or Script User Levels. The function selector is a set of buttons.

GHOSTING, the covering of a button, menu item, or screen area with dots to
indicate that they cannot be used or manipulated.

GLOBAL CONTAINER, a container that can be referenced or changed from any
script in the book.

HALFTONING, turning picture of many tones into an image consisting of dots
of one color in various patterns to represent the different intensities of
the tones.

HIGHLIGHTING, temporarily changing the appearance of an object, text, etc.
to indicate a selection. Buttons can be highlighted. See also Complement.

HUE, the definition of a color as red, green, blue, yellow, cyan, magenta,
etc. White, black, and grays are not hues. If saturation is zero, hue is
undefined. Hue is usually described in degrees. A hue of 0 degrees (red)
is identical to a hue of 360 degrees.

HYPERTEXT, a system in which text is linked to other text or other forms
of information. This system was devised so that documents can maintain
references to other documents. An electronic term paper, for example, can
reference an article in an electronic encyclopedia without having to
duplicate any part of that article. Helm does not have links, but go to
actions can be used for a similar result.

IEEE, the Institute of Electrical and Electronics Engineers. This
organization has set forth a standard in math functions which
Commodore-Amiga has followed in its use of three libraries. Helm needs two

of these libraries: mathieeedoubbas.library and mathieeedoubtrans.library.
If these two files are not in your computer's Libs drawer, Helm will
refuse to run.

IFF, (Interchange Format File) refers to a standard file structure for
various types of data (graphics, sound, text). It is widely supported by
commercial software for the Amiga and IBM. ILBM, 8SVX, SMUS, and ANIM are
IFF formats.

INHERITANCE, an object oriented programming technique in which properties
of one object are passed to other objects. In Helm, a form can pass menus,
objects, a palette, and an effect area to pages.

ILBM, (Interleaved Bitmap) a standard IFF file structure developed by
Electronic Arts and Commodore-Amiga for storing bit-mapped images.

IMAGE EDITOR, a sophisticated paint program/image processing package.
Image editors are often intended to enhance 8 or 24 bit digitized images
for high resolution printers like image setters.

IMAGE ENHANCING, image processing that improves an image, particularly if
the process brings out detail or restores a distorted image.

IMAGE PROCESSING, any process that manipulates images. Image processing
and computer graphics mean the same thing.

IMAGE SETTER, a very precise and expensive laser printer used by service
bureaus to typeset PostScript or desktop publishing files.

INTENSITY, the brightness of a color. Helm defines intensity as the sum of
its Red, Green, and Blue values.

INTERLACE, an interlaced picture is displayed with two scans of the video
beam. The Amiga displays the odd numbered lines with the first scan. It
displays the even numbered lines with the second scan. With many monitors,
a flicker may occur because the preceding set of lines begins to fade
before the more recent set.

IT, a permanent container for temporary storage of data. The get command
will put values into the it container.

ITEM, (1) a division of a container. Within a container, items are
separated by commas. Items also refer to the items in a menu or selector.

   (2) Any single part in a list, such as an item in a scrolling list.

JIFFY, a unit of time equal to one sixtieth of a second. ANIM frame delays
are measured in jiffies.

JAGGIES, the stair-stepped appearance of diagonal lines on the screen.
Jaggies are a result of a low resolution display. To reduce jaggies in a
picture you can convert the picture to a higher display mode and smooth
the image with a filter.

KEYWORD, a word that is reserved for use by a language translator. In
Breeze, you cannot use a keyword as a container, message, or function name.

LAYER, a group of objects that will obscure or be obscured by objects in
other layers. In Helm, there are two kinds of layers: form layers and page
layers. Form layers always rest beneath page layers. Layered pages are
useful in constructing overlays such as those in archaeological maps and
medical diagrams.

LOCAL CONTAINER, a container that can be used only within the function in
which it was created.

LOGICAL VALUE, a value of only two states: true or false. A bit represents
a logical value. Logical values are also called Boolean values.

MASK, a one-plane image that is used to block-out or mask-out an area of a
bitmap. The area behind the mask cannot be painted over.

MATRIX SELECTOR, a type of object that you can define in the Create or
Script User Level. The Matrix selector puts up a table of fields. You give
the number of columns and rows that make up the matrix.

MENU BUTTON, the right button on a mouse. This button is used to choose
items from pull-down or pop-up menus. See Selection Button.

MESSAGE, a code sent by an object that tells of an event. Selecting a
button object, for example, will cause the button to send out a SelectUp
and a SelectDown message.

MIDI, (Musical Instrument Digital Interface) a standard for transmitting
music between computerized devices.

MODAL, the property of a window when it changes the overall function of
the program. All requesters are modal. In Helm, all tools are nonmodal;
they do not interfere with the overall operation of the program.

MULTIMEDIA, the integration of graphics, text, and sound to produce
interactive applications. Commodore-Amiga defines multimedia as Òa method
of designing and integrating computer technologies on a single platform
that enables the end user to input, create, manipulate, and output text,
graphics, audio, and video, utilizing a single user interface.Ó

MUTUALLY EXCLUSIVE, the state of a set of buttons, fields, or items when
only one button, field, or item can be active at any single time. Radio
Boxes and cycle selectors are mutually exclusive. A set of contiguous menu
items or subitems can also be made mutually exclusive. OBJECT, a data type
that can respond to messages, as well as send messages to other objects.
In Helm, there are seven types of objects: books, forms, pages, page
objects, and menus.

OBJECT HIERARCHY, a tree of objects that sets forth how objects inherit
environmental attributes and messages. Helm's Object Hierarchy is...

Book | Forms | Pages | Objects, Menus, Hypertext

OBJECT ID, an unique identification number that Helm gives to each object
in a book.

OBJECT ORIENTED PROGRAMMING (OOP), abstract programming techniques that
use data types that respond to messages, and the creation of new data

types that inherit the properties of existing types. Helm has implemented some of these techniques.

OBJECT PROPERTY, a property such as color or border style that belongs to an object. You can retrieve and set properties with the get and set commands.

PAGE, an object type belonging to a form and containing other objects. Pages are the basic object in Helm. They are similar to records in a conventional database.

PALETTE, the set of colors and patterns that can be chosen in the Palette window.

PALETTE SELECTOR, a type of object that you can define in the Create or Script user level. You can use this selector to choose colors in your application.

PAPER COLOR, the color drawn with the right mouse button when painting or drawing.

PARITY, whether a group of bits sent through a message port is either an odd or even number. A parity bit sent with a set of bits, which often corresponds to a character, that makes the set either an odd or even number. If all sets are made odd or even, the device that receives them can detect a communication error if a received set is not of the expected parity.

PATH, a specification of how to find a file in a filing system. Helm's file requester contains a path field in which you can put disk and drawer names. If the path field is empty, the path will revert to the current directory.

PEN COLOR, the color drawn with the left mouse button.

PIXEL, (from PIcture ELement) the smallest unit of a digital picture.

PIXELATION, a process in which an area of pixels is replaced with a square of color that is the average of the pixels in that area. Mosaic in Helm is like an extended form of pixelation. Note that Mosaic does not use the average of the pixels but the median.

POSTSCRIPT®, a page description language developed by Adobe Systems. Helm creates PostScript for images and pages.

PRECEDENCE, the priority given to operations in an expression so that certain operations will be performed before certain other operations. For example, multiplication has a higher precedence than addition. In an expression that contains both addition and multiplication, the multiplication operation is evaluated first.

PRODUCTIVITY MODE, a new display mode introduced in the enhanced chip set. It is a four-color 640 x 480 display. This may be a good display for word processing, desktop publishing, and drawing programs.

PROPERTY, a value that belongs to an object that defines certain characteristics of the object. There are two types of properties: object

and system. The object properties primarily define the characteristics of
objects that rest on pages or forms. Using system properties, you should
regard the Helm system and the current book as an object. System
properties control the environment.

PROPORTIONAL-PITCH FONT, a font in which individual characters vary in
width.

RESERVED WORDS, words in a programming language that are already defined
by the translator. In Breeze, the reserved words include if, break, case,
and while. An attempt to define these words as a container, message, or
function name will cause an error. See Keywords.

RESOLUTION, the relative fineness in detail of a display. Higher
resolutions have more detail because of smaller pixel sizes. Lower
resolutions have larger pixels.

RGB, (RED GREEN BLUE) the additive primaries which if added together in
various proportions can produce a wide range of colors. Equal amounts of
each primary produce a gray.

RUN-LENGTH ENCODING, a type of file compression used in the IFF file
standard that takes advantage of the fact that many pictures have large
areas of the same color.

SATURATION, a value that defines the purity of a hue. A strongly saturated
hue is mixed with little or no white light. You cannot perceive hue in a
color with zero saturation. Saturation is usually defined as a number
between zero and one. One is full saturation. In Helm, saturation is
defined as a number from zero to 255.

SCANNER, a device that captures an image from a photograph, print,
painting, or some other representation into a digitized computer image.

SCRIPT, another name for a program. Usually scripts refer to a list of
commands to be executed in a batch file. Helm's scripts can be used in
this fashion, though Breeze can also be used to make complicated programs.

SCROLLING LIST, a type of object that you can define in the Create or
Script User Levels. A scrolling list can display a large number of
choices. You can select a single item from the list. Helm mutually
excludes all other items.

SELECTION BUTTON, the left mouse button. It is commonly used for selecting
buttons. Use the menu (right) button to display menus and pop-up menus.

SHARED OBJECT, an object, created on a form, whose settings and data
belong to the form. The object will appear exactly the same on every page
belonging to that form. When you change the data or settings of a shared
object on one page, these changes will appear on all pages of the form.
To create a shared object, select Share from the Edit menu while editing a
form and then select one of the objects from that menu.

SLICING, the specifying of items, sentences, lines, words, characters, or
bits within a container.

SLIDER SELECTOR, a type of object that you can define in the Create or

Script User Levels. The sliding selector is like an Intuition proportional
gadget. You input a list of numbers in ascending order and the program
will adjust the sliding selector proportionally.

SMUS, a simple file format for storing music. A SMUS file stores notes as
MIDI note numbers. SMUS was developed primarily to describe music for
games.

SOBEL OPERATOR, an edge detection algorithm. The Sobel operator is
probably the most popular edge detection algorithm. It is said to make the
best edge maps for the least amount of time.

STRUCTURED PROGRAMMING, programming techniques in which blocks of program
statements are segregated so that they can be more easily and efficiently
accessed. Breeze provides many features for structured programming,
including functions and the switch-case control structure.

SUPERHIRES, Amiga display mode offered by the enhanced chip set (ECS).
SuperHires is a 1280 x 200 NTSC (1280 x 256 PAL) four-color display.

SYSTEM PROPERTY, a property that belongs to the Helm system. Most system
properties define characteristics of the environment.

TEXTFIELD, an object in which you can enter text.

TOGGLE, changing the on-off or true-false value of an object or container.
For example, a menu item with a check can be toggled.

TRUNCATE, the removal of the fractional part of a number without rounding.
When a number with a fractional part is put into an object container that
can hold only an integer, then the fraction is truncated before the number
is placed into the object.

USER LEVEL, a setting for an entire book that restricts the user to many
features of the book. Helm uses five User Levels: Navigate, Type, Art,
Create, and Script.

VALUE, the brightness of a color or the amount of black mixed with the
color. Black has a value of zero.

VECTOR GRAPHICS, graphics such as lines, curves, ellipses, and rectangles
that are stored as a series of x and y coordinates. Vector graphics take
up less memory than bitmapped graphics.

VIEW RECTANGLE, the area on screen where the page is visible. Overscan
displays have large view rectangles. In the Display requester, you can set
the view rectangle by adjusting numbers in the Left, Right, Top, and
Bottom fields. A page can be larger than the view rectangle, but never
smaller.

WILD CARDS, symbols used to represent a set of strings that have similar
characteristics. Wild cards are used in the pattern field of the load and
save requesters. Sometimes the sequence #?.pic is used to display only
files that end with the sequence .pic.

1.46 Technical Support

If you are having problems using Helm, you can contact us by telephone,
mail, or by electronic mail.

Telephone support is available from Monday through Friday, 1:00 p.m. to
5:00 p.m. (Eastern Time). Call (804) 452-0623.

Our address is...
  Eagle Tree Software
  Technical Support
  P.O. Box 164
  Hopewell, VA 23860

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