

STARTER

 Commodore
AMIGA

500

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B R U K S A N S V I N G

AMIGA STARTER

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KINDWORDS 2.0

AMIGA STARTER

AN INTRODUCTION TO KINDWORDS

This chapter is a short introduction to KindWords: how to open KindWords, getting familiar with the KindWords screen, and how to quit KindWords. If you've never used a word processor before, read through the manual carefully with an Amiga beside you.

Before starting, copy the serial number as it appears on your warranty card here for future reference:

Making a Backup Disk of KindWords

We recommend you make backup copies of your three KindWords disks before using the program. If you are not familiar with how to copy disks, we suggest you consult the Amiga Users Guide.

<p>Note: You must rename your copies to the original name. That is, rename "Copy of KindWords" to "KindWords", "Copy of SuperFont" to "SuperFont", and "Copy of Dictionary" to "Dictionary". To do so, go to the menu titled "Workbench" and select the "Rename" option. When the edit box with the disk title appears, click the pointer on the cursor block that is in the edit box. Press the delete (Del) key 8 times to remove "Copy of" from the title name and then press the RETURN key. Your KindWords copy should now be named just like your original. You should now do the same with your SuperFont and Dictionary disks.</p>

512K Amiga 500 or Amiga 1000

Read This Only If Your Amiga Has 512K

KindWords works in 512K of memory. However, because of limited memory space there are some constraints. To fully utilize KindWords it is highly recommended to upgrade your machine to 1 megabyte. If you do so, you will be able to use the Spell-Checker, Thesaurus and the SuperFonts.

This is what we recommend if you have a 512K system:

- Do not run any other programs at the same time.

- Close all windows before starting KindWords.
- Do not run KindWords from the CLI
- Use 4 color screen only
- Do not open the WorkBench
- Disconnect all external drives (incl Harddisk)
- Do not Insert graphics
- Do not use any other fonts than the ROMAN 12
- Do not use any other style than PLAIN

Installing KindWords on a Hard Disk

Read this section only if you own a hard disk.

1. Create a drawer named KindWords on your hard disk.
2. Drag the KindWords icon, Examples drawer, and SuperDrivers drawer from the KindWords disk to the KindWords drawer on the hard disk.
3. Drag the "fonts" drawer from the KindWords disk onto the hard disk parent directory. If you already have a fonts drawer on your hard disk do not drag the KindWords fonts drawer onto the existing fonts drawer in your hard disk parent directory. This will create a fonts drawer within a fonts drawer. Rather, place the KindWords fonts drawer next to your existing fonts drawer.
4. Drag the fonts drawer from the SuperFont disk to the KindWords drawer on the hard disk.
5. Drag the Dictionary icon and Thesaurus icon from the Dictionary disk to the KindWords drawer on the hard disk.

You need to re-assign the device names indicating where KindWords resides on the hard disk. We recommend you modify your startup-sequence file in the s drawer from your startup disk. You can use KindWords to do so, but remember to save the file as ASCII (for more information on opening and saving files read the Working with Documents section.)

Add the following three lines after the last assign line on the startup-sequence file:

assign KindWords: dh0:KindWords
assign SuperFont: dh0:KindWords
assign Dictionary: dh0:KindWords

Using the Mouse

In order to operate KindWords and the Amiga you must use the mouse. Note that the mouse has a right and left button. The right button is used to invoke the pull-down menus, as described below. All other operations (opening documents, selecting text, moving the pointer, etc.) are accomplished with the left button.

Opening KindWords

1. Turn on the Amiga and your monitor. Insert your Kickstart™ disk (Only for Amiga 1000) into the internal drive when you are asked to.
2. When the Amiga asks for a Workbench disk, insert the KindWords disk.
3. Using the mouse, move the pointer to the KindWords disk icon and double-click the left mouse button. A small window appears with icons for KindWords, Preferences, a System drawer, a SuperDrivers drawer, fonts drawer, an Examples drawer, an Empty drawer, and a Trash Can.
4. Double-click on the KindWords icon in the window. When the KindWords screen appears you're ready to begin.

About Workbench

KindWords uses the system clipboard to save the cut or copied text or graphics. Therefore, you must not write protect the current Workbench.

If you decide to use another Workbench with KindWords, copy the KindWords icon and SuperDrivers drawer to that Workbench.

Preferences

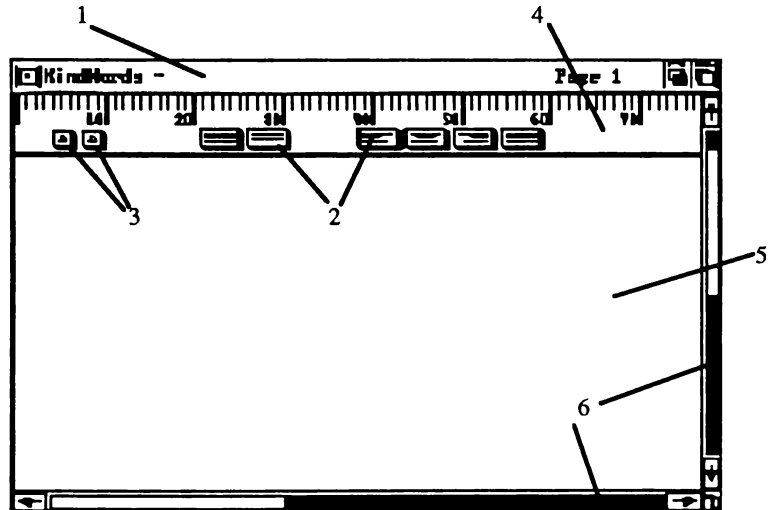
Preferences is located on the SuperFont disk. To access Preferences insert the SuperFont disk in an external drive if you have one or replace the Program disk with the SuperFont disk in the internal drive. Double-click on the SuperFont Disk icon and then double-click on the Preferences icon.

When you select the Save button in Preferences all the current Preference settings will be automatically saved to the KindWords Program disk.

The KindWords Screen

After opening the KindWords application, you should see the KindWords screen displayed on your monitor. The screen looks like this:

1. The Title and Menu Bar
2. The Line Spacing & Text Alignment Icons
3. Regular and Decimal Tabs
4. The Ruler
5. The Document Window
6. The Scroll Bars



The Title Bar tells you the program name ("KindWords"), the name of the document which is currently open, and the page on which the cursor is located in the current document. If no document is open or saved, no name is displayed.

The title bar becomes the Menu Bar when the right mouse button is held down. A menu appears when you point to one of six menu headings: File, Edit, Layout, Font, Style, Extra, and Help. The menu area remains displayed for as long as you hold down the right mouse button.

Menu Purpose

This table describes the functions of each menu.

File	To start a new document, open an existing document, insert, save, save under another document, print, print merge, change the number of screen colors, display the amount of available memory and quit KindWords.
Edit	To undo recent typing or clearing, to cut, copy or paste selected text, to clear text, copy and paste the Ruler settings, and select all.
Layout	To set the page size, format paragraphs, insert a page break, add headers or footers to the top or bottom of pages, set page numbering, and add a title page.
Font	To type or set selected text in Roman or Novell 8, 12 or 14 point size, Superscript, Subscript, Symbols, Math, or Greek.
Style	To set selected text in plain, boldface, underlined, or italic style.
Extra	To find and replace words, check spelling, check the Thesaurus, automatically hyphenate your document, change the appearance of the KindWords screen, show true graphic colors, open or close the Workbench.
Help	To get quick reminders about basic functions and a list of all keyboard shortcuts.

To select any function within a menu, point to it with the cursor while still holding down the right button, and once the function you wish to select becomes highlighted, release the right button.

Moving Within a Document

To move up or down, use the scroll bar at the right. By pointing to the bottom arrow and clicking the left mouse button once, you can move your document down two lines. By pointing to the top

arrow and clicking the left mouse button, you can move your document up two lines.

You can also use the "elevator," the rectangle inside the scroll bar. The elevator tells you which section of the document is visible on the screen by the elevator's location in the scroll bar. By pointing to and selecting the elevator, you highlight it and are able to drag it up and down within the scroll bar. Drag the elevator up to move toward the top of your document. Drag the elevator down to move toward the bottom of your document.

The size of the elevator reflects how much text is being displayed in proportion to the total amount of text in the document. For example, if the elevator is very large relative to the size of the scroll bar, most of the document is visible on the screen. If the elevator is small relative to the size of the scroll bar, the document is very large and only a small portion of the document is being displayed.

To move right or left, manipulate the arrows and the elevator on the horizontal scroll bar in the same manner as the vertical scroll bar. By pointing to a right or left arrow and clicking the left mouse button once, you can move right or left by ten characters.

The Document Window, the largest section of the screen, displays the text of your document. When you have more than one window on the screen, such as the header window, the "inactive" windows each have a ghosted title and drag bar; you are unable to enter text within them. You can make a window "active" in place of another by clicking anywhere inside the window.

Often your document is too long or too wide to fit on the KindWords screen. KindWords automatically scrolls if you move your cursor toward a margin set outside the screen border. With the scroll bars on the bottom and right borders of the screen, you can move a document up and down or from side to side by using the pointer and the left mouse button.

Opening the Read Me For News Document

A special document, called Read Me For News, is on the KindWords disk. You should read this document to learn about the latest KindWords changes and improvements.

To open Read Me For News:

1. Double click on the KindWords disk icon.
2. Double click on the Read Me For News icon.

Quitting KindWords

1. Display the File Menu and choose the "Quit" item.
2. If you've made changes to your document but haven't saved the revisions, a requester asks you if you wish to save changes to your current document. If you want to save the changed document, select "Save" (see "Saving Your Work" in Chapter 4, "Working With Documents"). If you do not wish to save the changed document select "No" and KindWords will quit without saving the changed document.

EDITING TEXT

Before getting into the mechanics of editing, you need to know how to enter text into your document, move around in the text, and specify the text you wish to work with.

Typing in Text

Typing text with KindWords is just like using a typewriter, except that you only need to press RETURN at the end of paragraphs rather than at the end of each line. After you press RETURN, KindWords automatically starts a new paragraph for you. You may adjust the paragraph indentation marker in the ruler area to have KindWords automatically indent paragraphs for you. (See Chapter "Formatting Text")

Using the Cursor

The cursor appears in the document window as a vertical bar. Be sure to distinguish between the cursor and the pointer. The Pointer is the arrow which is used to control operations of the program (menus, ruler selection, etc.). The cursor is a small vertical bar which indicates where text editing will occur. The pointer can be moved anywhere and is controlled by the mouse, but the cursor appears only in KindWords text.

As you type, the cursor moves to the right. The cursor can only appear in text; it cannot be moved where no text has been typed.

There are 3 ways to move the cursor within text:

1. Pointing to where you want the cursor and clicking the left mouse button.
2. Using the arrow keys.
3. Using one of the keyboard shortcuts.

Type in a few paragraphs of text. For now, use the BACKSPACE and DEL keys to correct your mistakes. The

BACKSPACE key erases the character to the left of the cursor and the DEL key erases the character to the right of the cursor.

Selecting Text

When you do major editing with text, such as copying or moving text, you need to tell KindWords what text you want to work with. This is called selecting the text. To select text means to highlight characters, words, lines, sentences, paragraphs, pages or entire documents for the purpose of cutting, erasing, moving, or in some other way changing their format and appearance. Highlighting reverses the color of the text. There are several ways to highlight text:

Using the Pointer

1. Point to the beginning of the text you want to select.
2. Hold down the left mouse button and move the pointer to the end of the block to be selected. As you do, the text between the place you first held down the left button and the current pointer position is highlighted.
3. Release the left button. To un-select, click the left mouse button once anywhere inside the document window.

OR:

1. Point to the beginning of the text you want selected and click the left mouse button.
2. Press the SHIFT key.
3. Move the pointer to the end of the text you want selected, and while still holding down the SHIFT key press the left mouse button.

There are also ways to quickly select a word or sentence.

To select a word

1. Point to a word you want to select.
2. Quickly double-click on the left mouse button.

To select a sentence

1. Point to a sentence you want to select.
2. Quickly triple click on the left mouse button.

Note: If you have trouble double or triple clicking the mouse, increase the delay in Preferences, and then restart KindWords.

Editing Text

To cut a block of text

1. Select the text to be cut.
2. Display the Edit Menu and select the "Cut" function by releasing the right mouse button when "Cut" is highlighted. The selected text disappears to be held in the clipboard. The Clipboard acts as a storage place for the last cut or copied text.

To paste text

1. Move the cursor to where you want to insert the text you just placed in the clipboard.
2. Display the Edit Menu and choose the "Paste" item. The most recently cut text is inserted into the main text from the clipboard.

To copy text

1. Select the text to be copied.
2. Display the Edit Menu and choose the "Copy" item.
3. Move the cursor to where you would like the text repeated.
4. Display the Edit Menu and choose the "Paste" item.

To clear text

1. Select the text to be cleared.
2. Display the Edit Menu and choose the "Clear" item. The text is deleted. If you made a mistake and you wish to retrieve the cleared text, select "Undo Clear" from the Edit Menu. You can no longer select the Undo function once you have moved the cursor.

To join paragraphs

Press DEL with the cursor in the character space following a period at the end of a paragraph. (If you have made format markers visible using the "Screen Options" item in the Extra Menu, you are deleting a paragraph marker.)

To insert text

1. Point to where you want to add text.
2. Bring the cursor to the spot by clicking the Left Button, and type. KindWords moves the existing characters to the right of the cursor when typing.

To replace text

1. Select the text to be replaced.
2. Start typing. The selected text is cleared and replaced by the new text you type.

To undo everything typed since the last left mouse button click

1. Display the Edit Menu and choose the "Undo Typing" item.

Note: KindWords will only remember the last 256 keystrokes when executing Undo.

Copy & Paste Ruler

The Copy Ruler command copies the format settings of the paragraph that the cursor is currently in or the beginning of the current selection, so that you can subsequently paste them with the Paste Ruler command. It's as though there's a separate Clipboard for the Ruler, and Copy Ruler replaces what's already on it, just as the Copy command does for text.

To copy the Ruler

1. Place the cursor in the paragraph which contains the format settings you wish to copy.
2. Display the Edit Menu and choose the "Copy Ruler" item. The current paragraph format is now copied.

The Paste Ruler command selects the paragraph containing the cursor or the current selection and replaces its paragraph format settings with the last ones you copied with the Copy

Ruler command. If the current selection is more than one paragraph, Paste Ruler selects all the paragraphs that are selected or partially selected and replaces the Ruler settings for all the selected paragraphs.

To paste the Ruler

1. Place the cursor in the paragraph or select the paragraphs you wish to change the paragraph format to.
2. Display the Edit Menu and choose the "Paste Ruler" item. The paragraph format that was last copied will now be used in the current paragraph or selected paragraphs.

Select All

The Select All command lets you quickly select all the text in your document. Keep in mind that the Select All command will only select all of the text in the currently opened window. The Header and Footer can only be selected when their respective windows are open.

To select all the text in your document

1. Display the Edit Menu and choose the "Select All" item. All the text and graphics in the currently active window will be selected.

Pressing the SHIFT key with the F5 key is a keyboard shortcut for this command.

FORMATTING TEXT

KindWords has several options for changing the format of text in your documents. This section will cover some of the simpler formatting options that KindWords offers. (Formatting options like different font sizes and styles, headers and footers, and page size, are covered in the "Advanced Features" chapter.)

Using the Ruler

The Ruler sets the left and right margins, paragraph indentation, line spacing and text alignment of the selected paragraph(s). By using the Ruler you can set up sophisticated formats like hanging indentations and formats for quoted text.

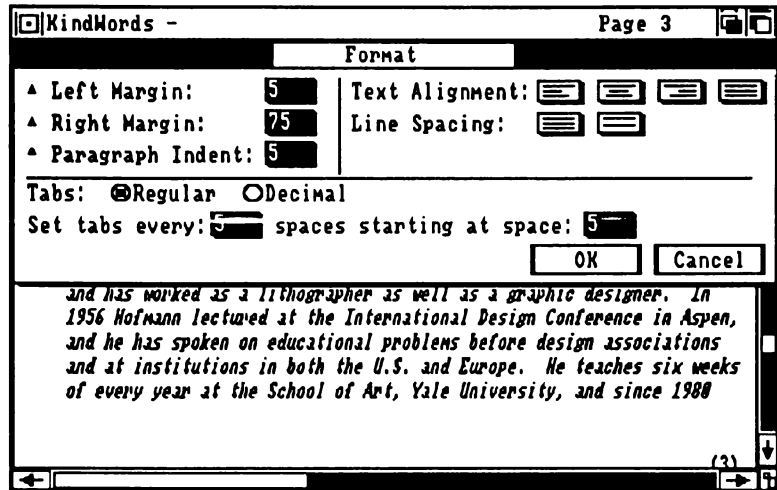
Margins and indentation are modified using the margin and indentation markers in the Ruler. The top orange triangles represent the left and right margins. The bottom blue triangle represents the margin for paragraph indentation. To move a triangle along the ruler, select it and "drag" it to where you want it. Moving the paragraph indentation marker to the right of the left margin marker will set up automatic paragraph indentation. Moving the paragraph indentation marker to the left of the left margin marker will set up outdented or hanging indentation paragraphs.

Line spacing and text alignment are also controlled by the Ruler. Select the appropriate Line Spacing icon to make your text single-spaced or double-spaced. Select the appropriate Text Alignment icon to make your text flush left, centered, flush right, or fully justified.

Tabs are typically used to set up columns of text for tables in a document. Select regular typewriter tabs (regular tabs) or tabs which evenly line up the decimals of numbers (decimal tabs). To set tabs, use the regular tab and decimal tab icons in the upper left of the screen inside the Ruler. The solid blue triangle represents regular tabs, and the open triangle represents decimal tabs. Select and "drag" the tab icons to the settings you choose. You can set up to ten tabs per paragraph.

Format Requester

After using the KindWords Ruler for a while, you may find it faster to set up the format of a Ruler all at once, rather than using the ruler to first set the margins, then the line spacing and then the text alignment for a paragraph. KindWords provides just such a short cut. Select "Format..." from the Layout menu. You will be presented with a requester which allows you to set all the paragraph formatting options at once.



You can begin by selecting your left and right margins and your paragraph indent by entering ruler numbers in the upper left boxes. The minimum amount of space between the left and right margins is two characters. The maximum is 200.

Next, select the appropriate Text Alignment icon in the upper right to make your text flush left, centered, flush right, or fully justified. Select the appropriate Line Spacing icon to make your text single-spaced or double-spaced. Unless you tell it differently, KindWords automatically aligns your text on the left, single-spaced.

Select tabs, if you need them, by entering the amount of space between tabs in the boxes beside "Set tabs every:". Tabs are automatically set every five spaces unless you instruct KindWords differently. You can have up to ten tabs per

paragraph. When selecting tabs in the Format Requester mode, the tabs will not appear in the ruler. If you later select tabs in the ruler mode, the tabs that were previously selected in the Format Requester mode will be deactivated.

Select the "OK" button to implement your choices and return to the KindWords screen.

WORKING WITH DOCUMENTS

This chapter will show you how to save your documents and open them later for further editing or printing. It will also show you how to insert other documents, including graphic files, into the document you're currently working on.

Saving Your Work

When you finish entering a new document, you must give it a name and then have KindWords save it by putting it on a document disk. If you don't save it on disk, the document will be erased when you quit KindWords. To save a KindWords document, use the following procedure:

1. Select the File menu and choose the "Save" item.
2. Remove the KindWords disk and insert a document disk. If you have another disk drive, keep the KindWords in the internal drive and insert a document disk into the external drive.
3. The Save requester will contain a mini-window displaying all the files in the current disk. If you have more document names than fit in the mini-window, you can use the scroll bar located on the right of the mini-window to move the list of names up or down.

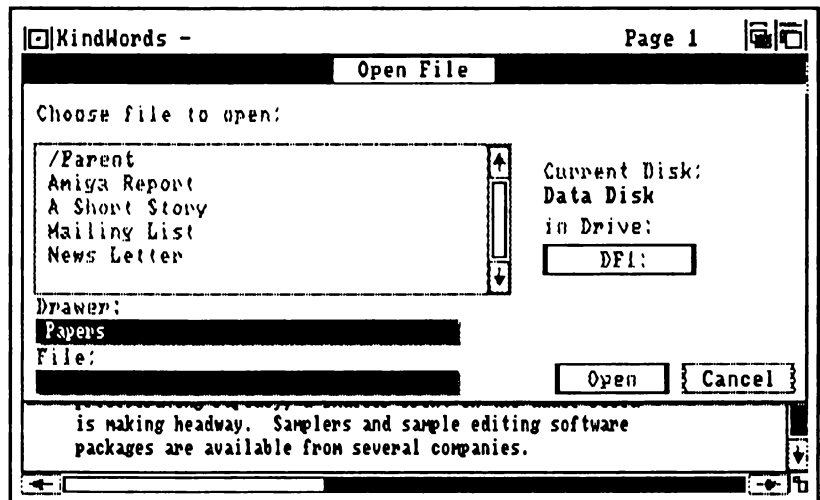
If you wish to save the document in an existing drawer, click once on the drawer in the mini window. It will then display all the files in that drawer. Notice that all drawers contain the extension "(DIR)".

Once you are in a drawer, "/Parent (DIR)" appears at the top of the mini window. Clicking once on it will allow you to back out of a drawer quickly and easily.

4. Click the left mouse button in the box labeled "File" and type the name you wish to give your document. If you use the same name as another previously saved document, a requester appears asking you if you want to overwrite the previous document with the current one. If you don't wish to, type a new name.
5. The requester also tells you to which drive KindWords will save the document, and provides a button for changing the drive if you wish to save the document to another disk. The button is located under the text "in Drive:" on the right half of the requester.

To change the current drive you are saving to, simply press the Drive button and the next available disk drive (or other device) will be displayed in the mini-window. Notice that KindWords will go through all the available disk drives or devices when you repeatedly press the Drive button.

Notice also that the current drive is also displayed within the Drive button. This button is also available in the Open, Insert, and Print Merge requesters. Below is an illustration of the Open requester. Notice that the Drive button is located on the right half of the requester with DF1: as the current device.



6. KindWords automatically makes a backup copy of your document unless you select "no" for the backup option. The backup copy is the former version of the document. When a backup file is made, the Workbench features two document icons, one with the original file name and the other labeled "____.backup".
7. You must tell KindWords what type of file you want your document to be. There are two types:
 - a) Document - Saving a file as a "Document" saves all the margin settings, type styles, line spacing, graphics images that were inserted and other conditions with which you created the document. All KindWords Documents are in Interleaved File Format (IFF).
 - b) ASCII File - This saves only your text in a standard format, without margin settings, type styles, graphics images and so forth. This is useful, for example, when you want to use the text of your document with a telecommunications program.
8. Select the "Save" button to store the document according to the options you've chosen. The disk drive will grind away for a moment, and then your document reappears on the KindWords screen. If you choose "Cancel" instead, KindWords returns you directly to your document, without saving it to the disk.

You may also save your document by pressing RETURN after typing in a file name in the "File" box. First, however, be sure the rest of the options in the requester are the way you want them.

Some Notes on Saving

- If you choose "Save" from the File menu when you're working on a previously saved document, the current version is saved automatically, and the requester does not appear.

- When you select "Save As" from the File menu, the Save requester appears. If the document was previously saved, the title of that document appears in the "File" box. You can change the name in order to make two copies of one document.
- If you're typing a lengthy document, it's a good idea to save it often while you're working on it. That way you'll have an up-to-date copy in case the power to your Amiga is interrupted.
- Sometimes you may forget to save your current document and try to start a new one or work with an old one. If you do, KindWords displays a requester asking you if you wish to save changes to your current document. If you want to save the changed document, select "Save", if you do not wish to save the changed document select "No" and KindWords will proceed with the last command without saving the changed document.

Opening and Inserting Other Files

This section will show you how to open files for editing, formatting or printing. It will also show you how to insert other files, including graphic files, into a document on which you are working.

1. Select the File menu and choose the "Open" item.
2. A list of files appears in a mini-window in the requester.
3. To identify the drawer and file you want to obtain, follow the same procedure as described above when saving a document.
4. The requester tells you which is the current drive, and provides a Drive button for changing the drive if you wish to open a document from another disk. Simply click the Drive button until the drive you wish to open a file from is displayed.

5. Once a document name is displayed in the box labeled "File", select the "Open" button at the bottom of the requester to open the document onto the screen or double click on the file in the mini window.

Another way to open a file when you are in the Workbench, is to double-click on the document icon in the Workbench screen. KindWords will be opened with the selected document.

Inserting Documents

In addition to the ability to open documents, KindWords lets you insert documents into a document that you are currently working on.

To insert a document

1. Move the cursor to the position where you want the document inserted.
2. Select the File menu and choose the "Insert" item.
3. Follow the same instructions as when using the Open requester. Select the document you wish to be inserted and click the "Insert" button to insert it.

Inserting Graphics

One of the special features of KindWords is the ability to insert graphics into the text of your document.

KindWords allows you to insert graphics made by any program which saves pictures in Interleaved File Format (IFF) format. You may insert low resolution (320 x 256 pixels) or medium resolution (640 x 256 pixels) images. You may use high resolution images (640 x 512 or 320 x 512) but KindWords will reduce them to medium resolution by removing every other horizontal line of pixels.

To insert a graphic file

1. Move the cursor to the position where the graphic is to be inserted.

2. Select the File menu and choose the "Insert" item.
3. Select a graphics file to be inserted in the same way a regular document is inserted and click the "Insert" button to insert it.

If the inserted graphic contains more than 16 different colors, the colors will be recomputed to fit into 16 colors. This conversion takes about one extra minute when inserting the graphic.

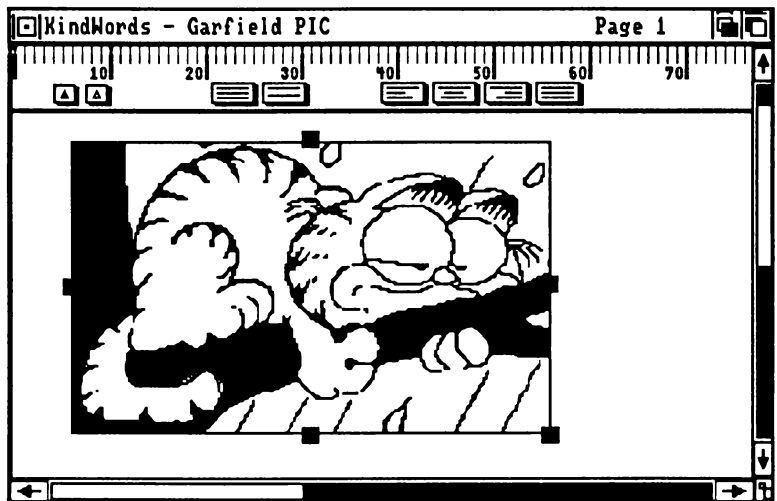
When you insert graphics in your documents, KindWords adds some invisible space around the graphic in order to adjust each printer's resolution. That space will actually not be printed. Use the Visible Format Markers from the Screen options requester in the Extra menu to better see the division in actual space.

If you stretch your graphic higher than a single page, the graphic will be printed over two pages and your entire document will not be correctly paginated.

If you stretch a graphic wider than the printer's carriage, the graphic will be printed cropped on the right edge.

Editing Graphics

KindWords allows you to modify graphics which you have inserted into a document. You can move a graphic horizontally within your document, crop a graphic on all four sides, and resize a graphic proportionally or nonproportionally. You can also display the original colors of the graphic.



To move a graphic horizontally on your page

1. Select the graphic by placing the pointer over the graphic and pressing the left mouse button. The Graphic Frame will then be displayed.
2. Keep the pointer over the graphic, and while holding down the left mouse button, "drag" the graphic left or right.

Releasing the mouse button will place the graphic in the Graphic Frame's current position.

To crop a graphic

1. Select the graphic by placing the pointer over the graphic and pressing the left mouse button. The Graphic Frame will then be displayed.

Notice that the Graphic Frame contains small editing boxes on all four sides.

2. Place the pointer over the editing box that is on the side you want cropped.
3. Keep the pointer over the editing box, and while holding down the left mouse button, drag the editing box.

Releasing the mouse button will display the graphic in the Graphic Frame's current cropping size.

Note that the edit boxes on the left and right sides of the Graphic Frame crop vertically and the editing boxes on the top and bottom sides crop horizontally.

To resize a graphic

1. Select the graphic by placing the pointer over the graphic and pressing the left mouse button. The Graphic Frame will then be displayed.

Notice that the Graphic Frame contains a small editing box in the lower right hand corner.

2. Place the pointer over this editing box.
3. Keep the pointer over the editing box, and while holding down the left mouse button, drag the editing box.

Notice that the Graphic Frame dynamically resizes according to the movement of the mouse.

Releasing the mouse button will resize the graphic in the Graphic Frame's current size.

To resize a graphic proportionally, hold down the **SHIFT** key, place the pointer over the lower right corner editing box, and while holding down the left mouse button, drag the editing box. The graphic will then be resized proportionally.

Setting the Colors

KindWords allows you to insert graphics which use up to sixteen different colors. To conserve on memory, KindWords will initially use four colors to display images on the screen. You can set KindWords to display up to 16 colors on the screen. Although this takes more memory and slows KindWords down, it is helpful to see what a graphic will look like in full color before it is printed. When printing, KindWords uses all the colors of your graphics no matter how many colors are being used to display the graphic on the screen.

To change the KindWords colors

1. Display the File Menu and choose the "Screen Colors" item.

Since KindWords is always displayed in 640 x 256 resolution, you can only choose to have 4, 8, or 16 colors.

2. Choose the amount of colors you wish to display KindWords in.
3. Select the OK button to accept the new color setting.

Note that the new color setting will be saved on disk so that when KindWords is rebooted, the last color setting that was chosen will be displayed.

Displaying a Graphic in its Correct Color

KindWords uses its own color choices when displaying images on the screen. You can use the Show Picture Colors option in the Extra Menu to display the original color for a graphic.

1. Select a Graphic.
2. Select Show Picture Colors option from the Extra menu. KindWords will now use the colors used to draw that image. At this point, the "Show Picture Color" option will change to "Show KindWords Color", allowing you the option to switch back to KindWords' own color set.

If a graphic's correct colors are not being displayed, it is because the graphic was created using a larger number of colors than is currently set in KindWords. Remember you can change the number of colors from the Screen Colors option in the File Menu.

PRINTING DOCUMENTS

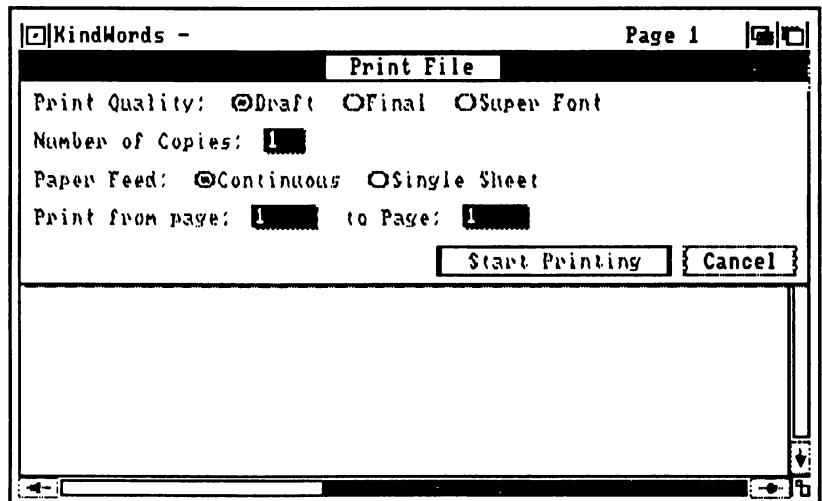
This chapter explains how to print your document. Make sure the printer you are using is selected in Preferences. Many printing problems are a result of the wrong printer selected in Preferences.

Before Printing

KindWords prints whatever document is on the screen. If you own a dot-matrix printer, your document may be printed with graphics and SuperFonts if selected, as described below. If you own a color printer, your graphics will be printed in color. If you own a letter-quality (i.e., daisy wheel) printer, your document will be printed without graphics and SuperFonts.

To print a document

1. Select "Print" from the File menu.



2. Select whether your printed document is to be Draft, Final, or SuperFont quality.

Draft Quality will use fast low resolution printer fonts. This quality is useful to get a quick idea of what your document will look like when printed. Do not be surprised if your print out is not exactly what you see on your computer screen. Fonts; Roman and Novell 8, Roman and Novell 14, Symbols, Math, and Greek will substitute Roman 12 in place of them. Superscript and subscript will also substitute Roman 12 if the printer does not support them.

Final Quality will use the printer's built-in NLQ (Near Letter Quality) font in place of Roman 12. If your printer has a nice NLQ font, it would be a good idea to use Final Quality. This quality will use your printer's internal final font for Roman 12 and SuperFonts for Roman and Novell 8, Roman and Novell 14, Symbols, Math, and Greek. This is because most printers do not have these fonts built-in and can not recognize them.

SuperFont Quality is a special feature of KindWords that will print the whole document in very high-resolution SuperFonts giving you the highest print quality. Details on SuperFont Quality printing are discussed later in this section.

3. Click on the box labeled "Number of Copies" and type in how many times you want your document printed. KindWords prints only one copy unless you tell it otherwise.
4. Select the kind of paper your printer uses. KindWords assumes that you're using continuous-feed paper unless you tell it otherwise. If you're using single sheets, KindWords displays a requester during printing that asks you to insert the next piece of paper; do so, and then select "OK" in the requester to continue. If you're using continuous-feed paper, KindWords prints your document from start to finish without stopping.
5. The "Print from Page" boxes automatically indicate the first and last page numbers respectively of your document, according to KindWords' pagination. If both boxes are made blank, the document is printed as if the automatic page numbers were in the boxes.

KindWords' automatic page numbers are affected by the "starting page number" option in Page Numbering requester.

If the first or last page you want to print is different from what KindWords automatically indicates, select each box and type the page numbers you want. KindWords then prints only that segment of the document.

Printing

Make sure your printer is turned on and that the top of the paper is aligned with the print head.

Some Amiga printer drivers send an extra carriage return command to the printer before it actually begins printing. Experiment with your printer and then adjust your page accordingly before printing so that your document is printed correctly on each page.

Select the "Start Printing" button at the bottom right of the requester.

OR

Select "Cancel" to eliminate the requester and return to the current document.

After the "Start Printing" button is selected, requesters with error messages may indicate that the printer is turned off, not connected, out of paper, or jammed. A problem in the transmission of the document between the Amiga and the printer also causes a requester to appear. Select the "Cancel" in the error requester to end printing. If you fix the problem select "OK" to resume printing.

If you are having problems with the printout, it may be that your printer does not support some of the KindWords special features such as boldfacing, underlining, degree of quality, graphic printing, color printing, and so forth.

Printing with SuperFonts

SuperFont Quality printing is a very special feature that allows you to print KindWords fonts; Roman and Novell (in 8, 12, and 14), Symbols, Math, and Greek. Printing in SuperFont quality will make even a low cost printer print like an expensive high quality printer!

When printing in SuperFont quality KindWords will ask you to insert the SuperFont disk in any drive if it is not in one already. Once the SuperFont files are downloaded, your printer will begin to print your document.

What You Should Know About SuperFont

When printing in SuperFont Quality, KindWords looks at the printer driver set in Preferences and then looks for its own special custom made printer driver in the SuperDrivers directory on the KindWords disk. These drivers have the same name as the ones in Preferences but will contain a ".PRN" extension. All you have to do is make sure the correct printer driver is set in Preferences.

Here is a list of the special custom made SuperDrivers in the Superdrivers directory:

Note: If for any reason you wish to access the SuperDrivers, you can do so only through KindWords or CLI, although there should be no reason for you to modify the settings.

1. CBM_MPS1000.PRN
2. EpsonX.PRN
The EpsonX driver can be used for all Epson 9 pin printers such as the Epson EX/FX/JX/LX/MX/RX and compatibles.
3. EpsonX-No_NLQ.PRN
Some printer models that use the Epson Driver do not have a final quality print mode, such as the Star Gemini 10-X. Use the EpsonX-No_NLQ driver in Preferences if your printer does not have a final quality print mode.
4. EpsonQ.PRN
The EpsonQ driver can be used for all Epson compatible 24 pin printers such as the Epson LQ 800, LQ 1000, or 24 pin Nec printers.

5. **HP_DeskJet.PRN**
There are some problems with the DeskJet printer driver. Please call our technical support to see if there is a new SuperDriver available or rename the HP_LaerJet.PRN to DeskJet.PRN.
7. **HP_LaserJet.PRN**
SuperFonts are not supported on laser printers because the printers own internal fonts are already high quality. If you wish to obtain SuperFonts for your laser printer please call our technical support. We will be happy to send laser printer SuperFonts on a special disk to registered users.
8. **HP_PaintJet.PRN**
9. **ImagewriterII.PRN**
10. **Okidata_293I.PRN/Okidata_293I.QUAD. PRN**
If you have an Okidata 292 or 293 printer, KindWords gives you two choices of drivers to choose from. The Okidata_293I driver will print SuperFonts in normal density. The Okidata_293I.QUAD driver will print SuperFonts in quad-density. The quad-density print out is nicer but will take longer to print. If quality is more important than speed to you, you should use the Okidata_293I.QUAD driver.
11. **Okimate_20.PRN**
The Okimate 20 has problems printing color graphics with text. You should get better results using a black ribbon and setting graphics to black and white printing in Preferences.
12. **Xerox_4020.PRN**
The Xerox 4020 has a hardware limitation of only being able to download 16 characters of SuperFonts per line of text. This limitation may create errors in your print out. For best results use only Roman 12 and print in Final Quality to use the printers own font. This driver will also support the Diablo_C-150.

13. generic

If your printer is not supported in Preferences, try using the generic driver. You will not be able to print SuperFonts but you should be able to print with your printers own final quality font.

KindWords has drivers for most of the Workbench supported printers except for:

**Alphacom_Alphapro_101
Brother_HR-15XL
Qume_LetterPro_20**

In the future, KindWords will support many more printers with SuperFonts.

If you are having problems with your printer, check the Trouble Shooting Chapter. Open the Read Me For News document to see if there is more information on printers.

Below is a list of printers that KindWords is known to support.

Company	Printer	Printer Driver
Apple	Imagewriter II	ImagewriterII
Apple	Imagewriter	ImagewriterII
Brother	1509	EpsonX (1)
CIE	CI-3500	CBM MPS1000
CIE	Lips 10	EpsonX (1)
Citizen	MSP series	EpsonX
Commodore	MPS-1000	CBM MPS1000
Diablo	C-150	Xerox_4020
Epson	Epson	EpsonX
Epson	FX series	EpsonX
Epson	JX-80	EpsonX
Epson	LX series	EpsonX
Epson	MX series	EpsonX
Epson	RX series	EpsonX
Juki	5510	EpsonX
NEC	CP2 & CP3	EpsonX
NEC	LQ series	EpsonQ
Epson	LQ series	EpsonQ
Okidata	Okimate 20	Okimate 20
Okidata	192 & 193	Okidata_293I
Okidata	292 & 293	Okidata_293I
Panasonic	1080	EpsonX
Panasonic	1091	EpsonX
Panasonic	1092	EpsonX
Panasonic	1592	EpsonX
Star	All series	EpsonX

(1) To use the EpsonX driver, the printer must be in Epson mode.

USING THE HELP MENU

KindWords provides you with two kinds of on-screen help, available through the Help Menu.

The Quick Reminder item in the Help Menu will remind you of things you might have learned about KindWords but may have forgotten. It displays and labels various basic KindWords icons, and describes the function of each. You can also display the Quick Reminder by pressing the HELP key.

The Keyboard item in the Help Menu is a reference tool that displays a scrollable window containing a list of keyboard shortcuts to using the mouse. You can also display the Keyboard item by simultaneously pressing the HELP and SHIFT keys. By clicking on the scroll arrows at the right of the window, you can move up and down the list of all keyboard shortcuts.

ADVANCED FEATURES

Changing Font and Style

At first, all the characters you type appear in Roman 12, Plain style. You can change the font and style by using the Font and Style Menus. To change the current font:

1. Display the Font Menu.
2. Choose the font for the text at the cursor location. All characters after that command are in the chosen font until you make a different choice. The current font is shown by a check mark in the Font Menu.

You can also change the font of previously typed text.

1. Select the text whose font you wish to change.
2. Display the Font Menu.
3. Choose the font to which you wish to change the selected text. The selected text should now be in the new font.

If you're inserting text into existing text, it appears in the same font as the existing text. When the cursor is moved to a new location KindWords changes the current font automatically to match that of the character directly to the right of the cursor.

Styles can be changed in the same manner as fonts, by selecting from the Style Menu.

Typing Accents with Roman and Novell Fonts

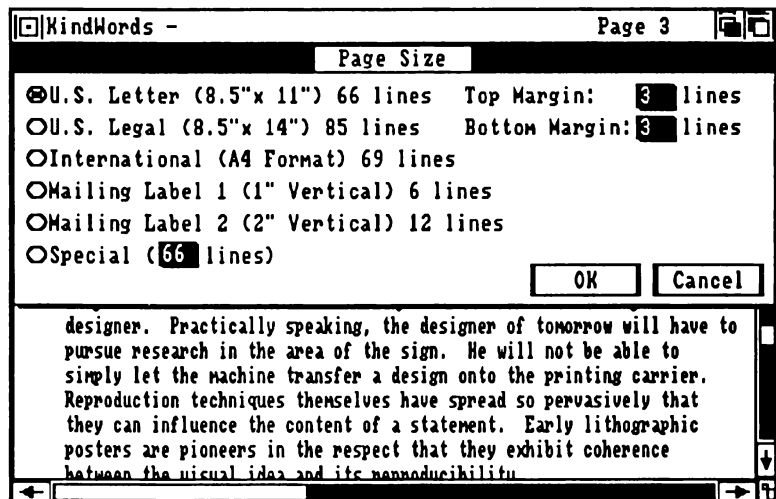
KindWords supports Amiga Keymaps. To type accents you must first press the Alt key simultaneously with another key and then press the character you wish to have the accent over. The following chart describes how to type accents:

´	Alt + F	(a, e, i, o, u, y)
˘	Alt + G	(a, e, i, o, u)
^	Alt + H	(a, e, i, o, u)
˜	Alt + J	(a, n, o)
¨	Alt + K	(a, e, i, o, u, y)

Choosing the Page Size

KindWords will allow you to choose the page size. To do so:

1. Display the Layout Menu.
2. Choose the "Page Size..." item.



- a) Select one of three conventional page sizes, or determine a special size by selecting the box beside "Special" and typing your preference. You can type in any number up to 90 lines.
- b) Set the number of lines making up your top and bottom margins. KindWords automatically makes your top and bottom margins three lines (half an inch) each when the document is printed. Select the "OK" button to implement your choices.

Setting Headers and Footers

Headers appear three lines from the top of a document and footers appear three lines from the bottom.

When you choose "Header..." (or "Footer..."), new windows appear. They will be separate text windows with separate Rulers. Both can hold up to 15 lines of text. Any text that exceeds 15 lines will not show up in the documents Header or Footer.

The Header and Footer windows also have pull-down menus like the main KindWords window, but they are modified for the specific needs of writing a header or footer.

The Header (or Footer) Menu

1. "New Header" clears the header window screen, clearing any text you may have already typed in.
2. "Close Header" causes the header window to disappear and the header text to appear on the main document.

The Format Menu in Headers and Footers

1. "Insert Page Number" will insert the page number at the current cursor position. The type of page number and page at which numbering begins can be set from the Page Numbering requester in the main KindWords window.
2. "Format..." is identical to the same item in the main document's Format Menu, except that it only affects the Ruler header window.

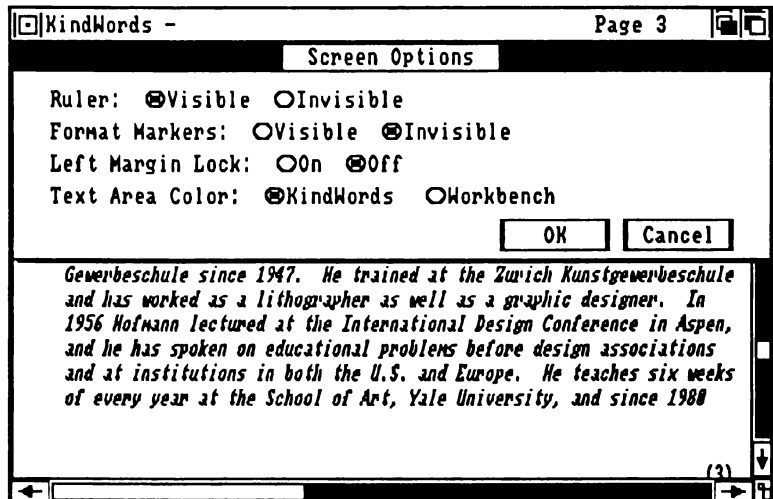
3. "Insert Date" and "Insert Time" automatically insert the current date and time at the cursor's last position in the header window. Date and time can be set in Preferences in the Workbench.

Any text in the main document that was created in the header or footer windows can be changed only by opening the header or footer windows and changing the text within them. The main document cursor does not move onto text created in header or footer windows.

Close the header, display the Format Menu, and notice the item "Add Title Page." Selecting this item changes it to "Remove Title Page," thereby preventing a header or footer from appearing on the first page of the document. Re-selecting it changes the item back to "Add Title Page," and allows a header or footer to appear on the first page of the document.

Changing Screen Display

You can affect the appearance of your screen in several ways. To list some of your choices, display the Extra Menu and choose the "Screen Options..." item.



1. You can choose to have the Ruler appear on the KindWords screen by selecting the "Visible" or "Invisible" button beside the "Ruler" option. Making the ruler area invisible displays three more lines of text on the screen, but it also makes your margin markings and line space icons invisible.
2. Select between visible or invisible format markers. The markers look like this:

Paragraph marker:	¶
Space marker:	.
Tab marker:	---
Page break marker:	§
End marker:	□

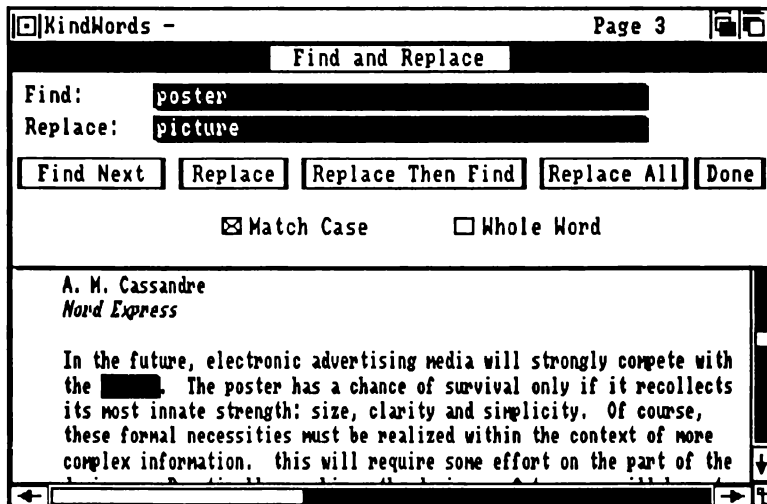
Format markers are not printed with the document.

3. If you want the left margin of your text to always be next to the left border of the KindWords window, select "On" for the "Left Margin Lock." This will allow you to see more horizontal text on your screen.
4. Choose whether you want text in the document window to be black on white ("KindWords") or white on the Workbench background color ("Workbench") in the "Text Area Color" option.
5. Select the "OK" button to save your choices. Your choices are maintained throughout rebooting and all new documents until you change them. If you want to change the cursor and its color, call up Preferences from the Workbench.

Finding and Replacing Text

The KindWords "Find and Replace" item in the Extra Menu allows you to find any word or string of characters and spaces and replace it with another string. The text is automatically realigned when text is replaced.

1. Display the Extra Menu and select the "Find and Replace" item. A requester appears with boxes labeled "Find" and "Replace," and a series of buttons.



2. Point to the box labeled "Find," click the Left Button, and type the string of characters and spaces you want to find or replace (the "Find" string).
3. Point and click in the box labeled "Replace" and type the string of characters and spaces you want in place of the original string. The replacement uses the original string's type style. If you type nothing in the "Replace" box, the "Find" string is simply deleted from the text when you select a replace button.
4. Below the "Replace" box are four buttons and two options:

Buttons:

- a) "Find Next" allows you to find and select the next occurrence of the "Find" string after the cursor, and to skip that occurrence of the string and go to the next if you choose. This is useful when you do not want to replace every occurrence of the "Find" string.

- b) "Replace" replaces the currently selected occurrence of the "Find" string with the text in the "Replace" box. If you select the "Replace" button before the "Find Next" button, a message appears saying "First select "Find Next"".
- c) "Replace Then Find" combines the "Replace" and "Find Next" buttons. It eliminates the mouse movement of switching back and forth between the two buttons.
- d) "Replace All" replaces all occurrences of the "Find" string, after a requester appears asking you if you're sure you want to.

Options:

- a) "Match Case" when checked will recognize upper and lower case in the "Find" box and will find all cases of that word that match in upper and lower case.
- b) "Whole Word" when checked will find the string of text in the "Find" box only when it occurs as an exact word (example: "cat"). It will ignore occurrences of the string when the word is embedded within words (example: "cat" is embedded within "catnip").

5. Select "Done" to return to your document.

Checking for Spelling

KindWords enables you to check for spelling errors in your document using a dictionary with over 100,000 words that comes on the Dictionary disk. You can also customize this dictionary by adding your own words to the Supplemental Dictionary, as described later in this section.

The Spell Checker will only work if KindWords can find the files; "Dictionary", "Supplemental", "Phonetics", and "Corelex". All these files are located in the "English Dictionary" drawer in the Dictionary disk. It is very important that all the files in the dictionary drawer are present or the Spell Checker will not work.

If KindWords can not find the English Dictionary drawer, a message will be displayed asking you to insert the Dictionary disk in any drive. Insert the Dictionary disk in any drive to resume.

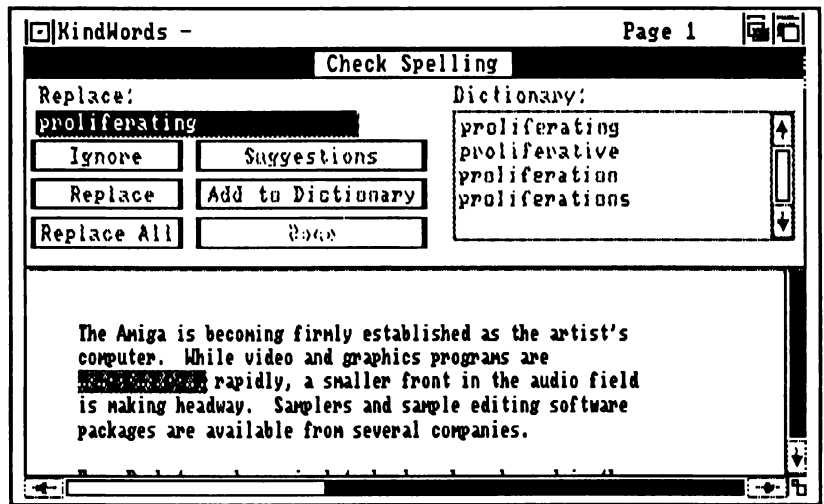
If you have copied the contents of the Dictionary disk to your hard disk and you still get a message asking you to insert the Dictionary disk into any drive it means that the startup-sequence file on your boot floppy disk has not correctly been modified. Read the "Installing KindWords on a Hard Disk" section in the first chapter to install KindWords correctly on your hard disk.

To check for spelling errors

1. First you must decide which portion of text you want checked. The spell checker works like the Find and Replace in that it checks the portion of text between the cursor and the end of the document. If you want the entire document checked, you must place the cursor at the beginning of the document.
2. Select "Check Spelling..." option under the Extra menu.

Note: If your Amiga has more than 512K of memory you will be asked if you want to load the dictionary into memory. This will significantly increase the speed of checking a document. Select the "Yes" button to load the dictionary into memory.

If KindWords finds a word it does not recognize, you will be presented with the Check Spelling requester.



To edit a misspelled word

1. Edit the word in the "Replace" edit box.
2. Select the "Replace" button.

To display spelling suggestions

1. Select the "Suggestions" button. KindWords will display a list of possibilities.
2. Select the correct spelling from the list and the word will be copied into the Replace box.
3. Select the "Replace" button.

To correct all the occurrences of the same misspelling

1. Select the "Replace All" button.

To ignore a misspelled word

Sometimes KindWords labels a word as misspelled even though the word is spelled correctly. This means that the word is not in the KindWords dictionary.

1. Select the "Ignore" button. KindWords will ignore all subsequent occurrences of that word in the document

To add words to the dictionary

1. Select the "Add to Dictionary" button.

Using the Translator on the Dictionary Disk

Once a word has been added to the dictionary it will no longer be considered misspelled in current or future documents.

The translator is a utility program that you can use to convert the Supplemental file into a KindWords ASCII file. This will allow you to then edit the Supplemental File when you are in KindWords.

Note: Once you have converted the Supplemental file into ASCII you will have to close and then reopen the Dictionary Disk in Workbench to see the Supplemental ASCII file. Double-clicking on the ASCII file will load it as a KindWords file. You will then be able to remove words that you added to the dictionary as well as add new words.

Once you have edited the file to your liking and saved it as an ASCII file you then have to reconvert the Supplemental ASCII file back to the Supplemental Dictionary File format using the Translator.

Using the Thesaurus

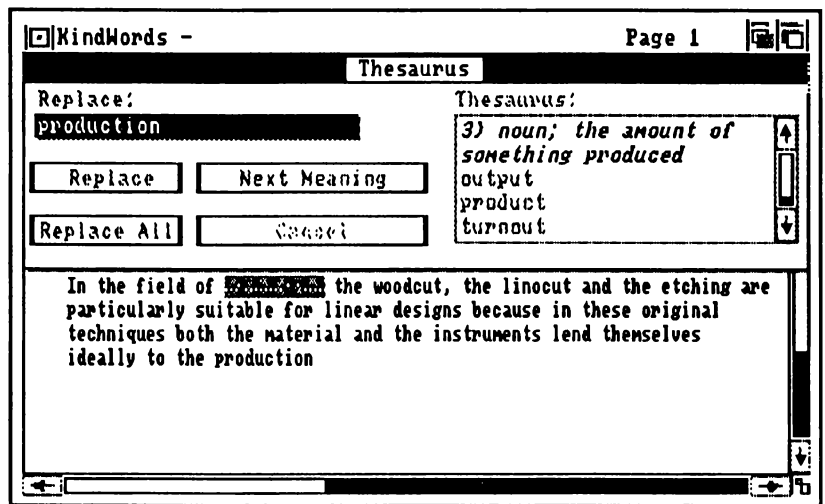
KindWords has a thesaurus that is always available to you while you are writing. It can check 40,000 words and provides 470,000 synonyms. It will help you find clearer, more appropriate ways to say what you mean. You can refer to it at any time and choose any synonym in the Thesaurus to replace any word in your document.

To use the Thesaurus

1. First you must place the cursor to the left of the word or anywhere within the word for which you wish to find synonyms.
2. Select the "Thesaurus..." option under the Extra menu.

If KindWords cannot find the Thesaurus, a message will be displayed asking you to insert the Dictionary disk in any drive. Insert the Dictionary disk in any drive to resume.

KindWords will now look at the word that the cursor is in and search the Thesaurus. It will then display the Thesaurus requester containing the meaning of the word and list all its synonyms in the scrollable mini window.



The meaning will be in black italics text and the synonyms will be plain blue text. If there are many synonyms for a particular meaning you can scroll down the list of synonyms by pressing the arrow on the mini-window scroll bar.

To replace the current word with a synonym from the Thesaurus

To replace the current word with a synonym from the Thesaurus simply click the arrow over any of the words in the mini-window that appear in blue. Notice that the synonym you clicked on now replaces the current word in the Replace box in the top left corner of the requester. Now select the "Replace" button. KindWords will automatically replace the current word in your document with the new synonym.

If you wish to replace all occurrences of a particular word without going through every occurrence individually you can select the "Replace All" button. This command will only replace all occurrences from the location of the word chosen to the end of the document or the currently selected area. Note that if you select the word instead of just placing the cursor in the word and then select "Replace All" in the Thesaurus, KindWords will only replace the one word in the selection. Remember that the selected area is the area that you defined KindWords to replace the word. All other occurrence of that word outside of the selection are not replaced.

Sometimes the meaning displayed in the Thesaurus may not be the correct context of the word in the document.

To see other meanings of the current word

Select the "Next Meaning" button. KindWords will then display a second meaning in the mini-window with synonyms that can be used for that meaning. Repeatedly selecting the "Next Meaning" button will cycle through all the possible meanings. If there is only one meaning of a particular word, KindWords will ignore the button press.

To check synonyms of synonyms

1. Click on the synonym in the mini-window you wish to check synonyms of.

Notice that the "Next Meaning" button is now replaced by a "Check Replace Word" button.

2. Select the "Check Replace Word" button.

KindWords will now check the Thesaurus for the current word that is in the Replace Edit Field and display its meaning and synonyms in the mini-window. This will allow the user to look deeper into possible words to use.

Hyphenating Your Document

KindWords allows you to hyphenate your document. This will improve the document's overall appearance. Hyphenation produces lines of text with a more even length by breaking long words at ends of lines.

To automatically hyphenate your document

1. Select the "Automatic Hyphenation" option under the Extra menu.

KindWords will now automatically look for portions of words throughout the whole document that can be moved to the end of the previous line. The program will automatically insert a hyphen between the syllables or words. Any new text entered anywhere throughout the document will automatically be reformatted with hyphens in the necessary places.

A check mark will appear next to the option "Automatic Hyphenation" when automatic hyphenation is on. To turn

automatic hyphenation off, simply reselect the "Automatic Hyphenation" option and all hyphenation will be removed.

Automatic Hyphenation will automatically place hyphens where necessary in your document but will not necessarily give your document the best appearance. Instead of Automatic Hyphenation you may wish to manually place hyphens in only specific locations. This is helpful when you are finished typing your document and are working on the layout of your final printed output.

Note: Automatic Hyphenation slows down typing speed. If you are a fast typer it would be a good idea to select Automatic Hyphenation after you have already finished typing your document.

To manually hyphenate your document

If you find a word that is too large to fit on the previous line, yet you wish to make the line length more even with the rest of the document, you can place the cursor between the characters of the word that you wish to hyphenate and press the keys (CTRL + -). This places a Soft Hyphen at the cursor position. The word will then adjust with the portion of the characters or word before the hyphen now located on the previous line. A soft hyphen is visible only when a word is split across two lines of text at the location the cursor was in when the soft hyphen was inserted. The hyphen location will behave like hyphens in Automatic Hyphenation.

You can remove a soft hyphen by selecting it and deleting it or backspacing over it when it is at the end of a line and is visible, or by deleting the word in which it's embedded. When you backspace over an invisible soft hyphen, the insertion point won't move but the hyphen will be deleted.

Note: Soft Hyphens can also be used with Automatic Hyphenation on.

Print Merge

Print Merge is a special feature to help you in producing multiple versions of a document. A typical use for this feature is to create personalized letters to different recipients. The "Main Document", which contains the main text of the letter plus "Merge Words", is combined with a "Merge List" containing the variable information.

When print merging, one or more words in a main document are coded by placing a pair of angle brackets on either side of each word. These are called Merge Words. These Merge Words are then replaced during printing with information from a separate file. The separate file containing the information that replaces the Merge Words is called a Merge List. Items in the Merge List replace the Merge Word in the main document.

For example, imagine that you want to send the same letter to ten people. You write the letter, but instead of writing any one of the recipients' ten addresses at the top, you place a code word <<Address>> in the address position. After saving the letter, you make a new file containing the names and addresses of the ten recipients. With Print Merge, you can combine these files so that the letter is printed ten times, and each time one of the ten recipients' address replaces the code word "Address."

You will learn print merging best by doing it. In the following instructions you will write and save a sample letter containing Merge Words, type and save three addresses in a Merge List, and print merge the results.

Creating a Document with Merge Words

1. Type the following letter using margins of 5 and 75.

<<Address>>

Dear <<Employee>>,

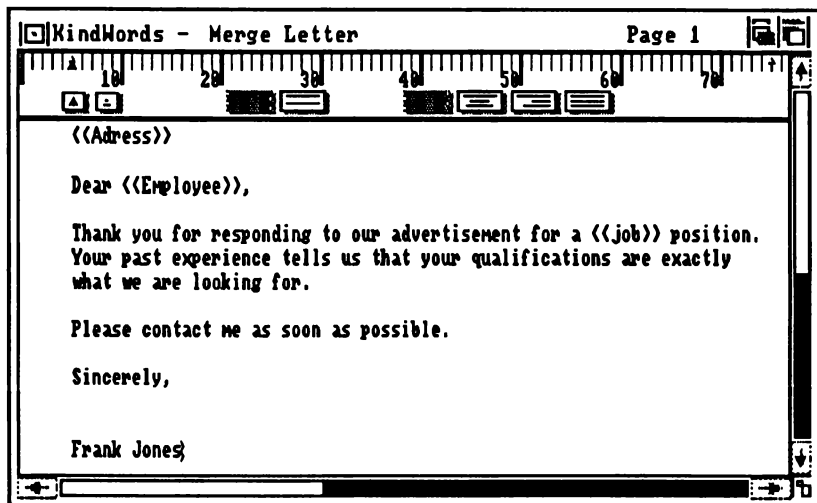
Thank you for responding to our advertisement for a <<job>> position. Your past experience tells us that your qualifications are exactly what we are looking for.

Please contact me as soon as possible.

Sincerely,

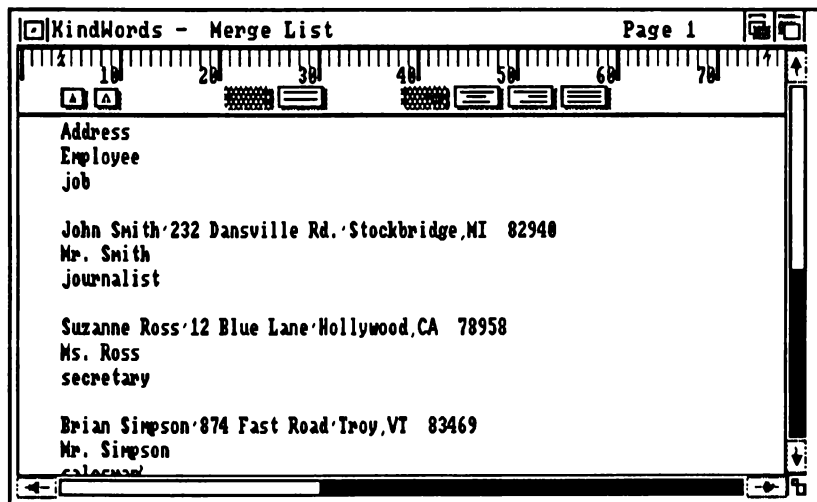
Frank Jones

The double brackets on either side of the word "Address", "Employee", and "Job" tell KindWords that they are Merge Words. Your document should look like the next screen illustration.



2. Display the File Menu and choose the "Save" item. In the Save requester, type the name "merge sample" in the "File" box. Click on the "Save" button.
1. You will now create a Merge List. Display the File Menu and choose the "New" item.

Creating a Merge List



2. At the top of the screen, type (without brackets) the Merge Word "Address." press RETURN, then type the Merge Word "Employee" press RETURN, then type the Merge Word "job". The three words combine to form a Merger Header, the first part of a Merge List. It tells KindWords what information fits where in a print merge. All Merge Words listed in a Merge Header must be exactly the same, character for character and space for space, as they appear in the main document.
3. Press RETURN twice and type the following address. But instead of pressing only RETURN after the name and street address as you normally would, hold down the CTRL key and press RETURN key [CTRL + RETURN]. Also, because the comma acts as a kind of RETURN key in a Merge List, you must press [CTRL + ,] in place of a regular comma in the addresses.

**John Smith[CTRL +RETURN]232 Dansville Rd.
[CTRL+RETURN]Stockbridge[CTRL + ,]MI 82940[RETURN]
Mr. Smith[RETURN]
journalist[RETURN twice].**

Typing RETURN and "Mr. Smith" creates the second line of the Merge Record, while RETURN and "journalist" creates the third line, which fit in the places where the Merge Words "Employee" and "job" are located in the main document.

This list is called a Merge Record. You will type two more below. Pressing RETURN twice after the end of a line separates one Merge Record from another. Therefore, RETURN cannot be pressed within one Merge Record. A special character, [CTRL + RETURN], acts as a return within a Merge Record.

In Merge Records, either a RETURN or a comma can separate elements. That is, you can use a regular comma in place of RETURN between "MI 82940" and "Mr. Smith" and between "Mr. Smith" and "journalist".

4. Add the following addresses to the list:

Suzanne Ross[CTRL + RETURN]12 Blue Lane[CTRL + RETURN] Hollywood[CTRL + ,]CA 78958[RETURN]
Ms. Ross[RETURN]
secretary[RETURN twice]

Brian Simpson[CTRL + RETURN]874 Fast Road[CTRL + RETURN]Troy[CTRL + ,]VT 83469[RETURN]
Mr. Simpson [RETURN]
salesman[RETURN twice]

5. Display the File Menu and choose the "Save" item. Type "addresses" in the "File" box. Click on the "Save" button.

You now have a file of addresses that will be merged to your main document when you print merge. That is, you will print three copies of the main document, each with one of the three addresses.

Printing with Print Merge

To do the print merge, you first have to open the document "merge sample".

1. Display the File Menu and choose the "Open..." item. Double click on the file "merge sample".
2. When the document appears in the document window, display the File Menu and choose the "Print Merge..." item. A Print Merge requester appears with a mini-window displaying all the files.
3. Double click on the file "addresses".
4. Select the "Print" button. The Print requester appears. Make sure your printer is ready. Select your choice of printer options that were described earlier in this manual, then select the "Start Printing" button. KindWords automatically merges the current document ("merge sample") with the Merge List ("addresses") file that you selected in the Print Merge requester.

The Examples drawer contains another example of a merge document called "Sample Merge Letter", and a merge list called "Sample Merge list". Try them.

Additional Print Merge Information

When you are executing a print merge, several conditions may cause error requesters to appear.

If your main document has Merge Words for which no information exists in the Merge List file, a requester tells you that some of the Merge Words were not satisfied in your main document and displays the first word that is not satisfied. It also tells you to check the Merge Header in the Merge List to make sure the words in the Merge Header match the Merge Words in the main document.

Merge Records are printed in the same type style in which the corresponding Merge Word is set. For example, if a Merge Word is in italics, <<Name>>, then it will be printed as "Joe", also in italics.

USING KEYBOARD SHORTCUTS

Keyboard shortcuts can be useful as an alternative to using the mouse if you're familiar with KindWords and want to save a little time in performing various functions.

There are two kinds of keyboard shortcuts. The first uses a variety of keys, and is used largely for cursor movement and text-changing. The second uses the AMIGA key [A] to the right of the SPACE BAR, and duplicates the function of the mouse in choosing menu items.

In the "Keyboard" item in the Help Menu, a plus (+) sign between two keys means press both keys at the same time. For example, [A] + D means press the right [A] key and the "D" key simultaneously.

Using the "Keyboard" Item

You can quickly refer to a list of keyboard shortcuts by displaying the Help Menu and choosing the "Keyboard" item. The following table lists all shortcuts included in the "Keyboard" item.

Keyboard Editing Shortcuts

Moving Through Characters

[up arrow]	Moves cursor up one character.
[left arrow]	Moves cursor left one character.
[right arrow]	Moves cursor right one character.
[down arrow]	Moves cursor down one character.

Moving to Words and Paragraphs

ALT + [right arrow]	Moves cursor to last character of next word.
ALT + [left arrow]	Moves cursor to the first character of previous word.

ALT + [up arrow] Moves cursor to the first line of the current paragraph. (If the cursor is already there, it moves to the first line of the previous paragraph.)

ALT + [down arrow] Moves cursor to the first line of the next paragraph.

Tabbing

TAB Moves to next tab setting.

Moving Through a Page With the Numeric Pad

ALT + [1] Moves to the end of current line. (If the cursor is already there, it moves to the end of the next line.) **SHIFT + [right arrow]** can also be used.

ALT + [7] Returns to the beginning of the current line. (If the cursor is already there, it moves to the beginning of the previous line.) **SHIFT + [left arrow]** can also be used.

ALT + [9] Moves cursor up one screen.

ALT + [3] Moves cursor down one screen.

CTRL + [xxx on numeric pad] Moves to beginning of page xxx.

Moving to the Beginning or End of a Document

CTRL + [up arrow] Moves to the top of the document.

CTRL + [down arrow] Moves to the bottom of the document.

Moving the cursor using the Numeric Pad	ALT + 8	Moves up one line.
	ALT + 2	Moves down one line.
	ALT + 4	Moves left one character.
	ALT + 6	Moves right one character.
Scrolling the Display Through Pages	SHIFT + [up arrow]	Scrolls to the top of the page. (If the screen is already there, it moves to the top of the previous page.)
	SHIFT + [down arrow]	Scrolls to the top of the next page.
Deleting Characters and Words	DEL	Deletes the character to the right of the cursor.
	BACK SPACE	Deletes the character to the left of the cursor.
	ALT + DEL	Deletes the word to the right of the cursor.
	ALT + BACK SPACE	Deletes the word to the left of the cursor.
	SHIFT + DEL	Deletes the word the cursor is in.
	SHIFT + BACKSPACE	Deletes the word the cursor is in.
Special Characters for Print Merge	CTRL + RETURN	Special character for a return in Merge Record data.
	CTRL + ,	Special character for using a comma in Merge Record data.
Ruler Shortcuts	F6	Moves left margin and indent 5 spaces to the left.

F7	Moves left margin and indent 5 spaces to the right.
F8	Moves right margin 5 spaces to the left.
F9	Moves right margin 5 spaces to the right.
F10	Sets margins to Preferences' margin settings.
SHIFT + F6	Alternates between single and double line spacing.
SHIFT + F7	Flush Left
SHIFT + F8	Centered
SHIFT + F9	Flush Right
SHIFT + F10	Full Justified

Selection Shortcuts

F1	Selects word to the left of the cursor.
F2	Selects word to the right of the cursor.
F3	Selects sentence to the left of the cursor.
F4	Selects sentence to the right of the cursor.
F5	Selects paragraph cursor is in.
SHIFT + F1	Selects line above.
SHIFT + F2	Selects line below.
SHIFT + F3	Selects page above.

Paste Ruler	(([A] + 0)
Select All	SHIFT + F5

Format Menu

Page Size...	(([A] + 1)
Format...	(([A] + 2)
Insert Page Break	(([A] + 3)
Header...	(([A] + 4)
Footer...	(([A] + 5)
Page Numbering...	(([A] + 6)
Add Title Page	(([A] + 7)

Style Menu

Plain	(([A] + P)
Bold	(([A] + B)
Underline	(([A] + U)
Italics	(([A] + I)

Extra Menu

Find and Replace...	(([A] + F)
Check Spelling...	(([A] + Y)
Thesaurus...	(([A] + T)
Automatic Hyphenation	(([A] + H)
Screen Options...	(([A] + D)
Show Picture Colors	(([A] + G)
Open Workbench	(([A] + W)

Help Menu

Quick Reminder

(HELP)

Keyboard

(SHIFT + HELP)

FUNCTION FOR EACH MENU

File Menu

ITEM	FUNCTION
New	To clear the screen and create a new, blank document.
Open...	To bring a document from a disk to the screen as the current document.
Insert...	To insert a document or graphic from a disk into the current document.
Save	To save a document on a disk.
Save as...	To save a document under another name.
Print...	To choose printing options and start printing.
Print Merge...	To print multiple versions of the same document with a merge list
Screen Colors...	To change the number of colors on the screen to 4, 8, or 16 colors.
About KindWords...	To display the version number and the approximate percentage of available memory.
Quit	To close current document and display Amiga Workbench. (Same as selecting close gadget in upper left corner.)

Edit Menu

Undo Typing	To cut or restore all typing since last mouse click. (Changes to "Redo Typing" after "Undo Typing" is chosen.) Also used to undo clear commands.
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Cut	To remove selected text from screen and store it in the clipboard until next cut.
Copy	To duplicate selected text and place in clipboard for later use with the paste command.
Paste	To paste the most recently cut or copied text at the cursor's position or inside a selection.
Clear	To clear selected text.
Copy Ruler	To copy the format settings of the paragraph that the cursor is currently in.
Paste Ruler	To paste the paragraph format settings that was last copied in the paragraph that the cursor is currently in.
Select All	To select the whole document.

Layout Menu

Page Size...	To choose the size and top and bottom margins of a page.
Format...	To set left and right margins, paragraph indentation, text alignment, line spacing, and tabs.
Insert Page Break	To insert page break between the cursor and next character such that the next character begins on the next page.
Header...	To place special lines of text at top of page.
Footer...	To place special lines of text at bottom of page.

Page Numbering... To choose the page number type and the starting number for the pages. Page numbers are inserted into the document from the Header and Footer Windows.

Add Title Page To prevent Header and/or Footer from appearing on first page of document. Selecting it changes item to "Remove Title Page". Re-selecting it returns it to "Add Title Page".

Font Menu

Roman 8 Sets selected and new text in Roman 8.

Roman 12 Sets selected and new text in Roman 12.

Roman 14 Sets selected and new text in Roman 14.

Novell 8 Sets selected and new text in Novell 8.

Novell 12 Sets selected and new text in Novell 12.

Novell 14 Sets selected and new text in Novell 14.

Superscript Sets selected and new text in Roman 8, raised characters.

Subscript Sets selected and new text in Roman 8, lowered characters.

Symbols

Sets selected and new text in Symbols. This font is used to type special symbols, lines, and boxes.

A	L	N		1	┌	;	▶
B	♀	O	♂	2	T	,	•
C	©	P	¶	3	└	.	●
D	J	Q	└	4	*		
E	└	R	®	5	‡		
F	➔	S	└	6	⊗		
G	←	T	™	7	⊗		
H	↑	U	♪	8			
I	↓	V	♪	9			
J	▲	W	+	0	~		
K	▼	X	-	.	†		
L	◀	Y	§	=	∞		
M		Z					

Math

Sets selected and new text in Math. This font is used to type special math symbols. To get numbers while in Math font press the Alt key simultaneously with any number key.

a	<	n	≥	A		N	→
b	≤	o	/	B	—	O	⊥
c	$\frac{1}{2}$	p	•	C	fi	P	
d	£	q	ª	D	::	Q	¬
e	≠	r	≠	E	¬	R	┌
f	≥	s	>	F	f	S	∴
g	"	t	≠	G	g	T	⊙
h	\$	u	±	H	•	U	■
i	+	v	$\frac{1}{4}$	I	∠	V	←
j	c	w	≠	J	•	W	└
k	⊃	x	≫	K	∞	X	⊛
l	ε	y	P	L	α	Y	□
m	¢	z	≪	M	└	Z	˘

Math A

·	≅	\	\	·	}	{	{
1	~	[[!	∇	}	}
2	=]]	@	L	:	
3	≈	;	'	#	∇	"	g
4	≡	'	Δ	\$	L	<	∫
5	≡	,	∅	%	2	>	»
6	∧	.	¢	^	3	?	
7	!	/	∕	&	'		
8	*			*	"		
9	÷			((
0	x))		
-	-			-	≈		
=	+			+	⊖		

Math B

Greek

Sets selected and new text in Greek. This font is used to type special Greek characters.

A	Α	Ν	Ν	a	α	η	η
B	Β	Ο	Ο	b	β	ο	ο
C	Χ	Ρ	Ρ	c	Ϸ	ρ	ρ
D	Δ	Q	Q	d	δ	q	q
E	Ε	R	Ρ	e	ε	r	ρ
F	Φ	S	Σ	f	φ	s	σ
G	Γ	T	Τ	g	γ	t	τ
H	Η	U	Υ	h	η	u	υ
I	Ι	V	Υ	i	ι	v	υ
J	Υ	W	Ω	j	υ	w	ω
K	Κ	X	Χ	k	κ	x	χ
L	Λ	Y	Υ	l	λ	y	υ
M	Μ	Z	Ζ	m	μ	z	ζ

Style Menu

Plain

Sets selected and new text in plain style.

Bold

Sets selected and new text in bold style.

Underline

Sets selected and new text in underline style.

Italics

Sets selected and new text in italics style.

Extra Menu

Find and Replace...

To find a specified string of characters in order to replace, delete or simply locate them.

Check Spelling...	To find any misspelling and give suggested spelling in the current document.
Thesaurus...	To find the meaning and give suggested synonyms for the currently selected word.
Automatic Hyphenation	To automatically hyphenate your document.
Screen Options...	To make the ruler visible or invisible; to make paragraph marker visible or invisible; to turn left margin lock on or off; to change the screen color.
Show Picture Colors	To display the correct colors of a graphic when a graphic's Graphic Frame is displayed The correct number of colors must be set in the Screen Colors requester, which is in the File Menu.
Open Workbench	To open the Workbench and display it in front of the KindWords screen. Selecting it changes item to "Close Workbench". Re-selecting it returns it to "Open Workbench".

Help Menu

Quick Reminder...	To display the name and function of important icons.
Keyboard...	To list keyboard shortcuts.

TROUBLESHOOTING

Problem With BackUp Copies

If you are using working copies and find that KW asks to insert volume KindWords in any driver before opening and printing:

Rename the copied disc exactly the same name as the original disc (i.e. your copy should not remain named "Copy of KindWords" but should be renamed to "KindWords". The same goes with SuperFonts.

If you have already done that, make sure that there is still not a space in front of the "K" or "S" (in SuperFonts) when renaming. Make sure the block cursor is directly over the "K" and "S" before pressing the RETURN key.

Printing Problems

If you have a Star printer that prints a "1" after graphics and/or SuperFonts:

Use the EpsonX-No_NLQ driver in Preferences.

If you have a Star printer that prints SuperFonts in segments and/or graphics print in segments:

Follow these directions:

1. Run KindWords
2. With KindWords disk in df0:, choose Open from the File Menu.
3. Click on directory SuperDrivers, then double-click on EpsonX.PRN (or EpsonXNo_NLQ.PRN if you are using that driver).
4. After file has been loaded, move vertical elevator all the way to the bottom of the shaft (screen will be blank).
5. Click twice in the shaft above the elevator. (This will jump the screen up two screen lengths). Locate the line:"P3 VERT=11 SCAN=0".

6. Highlight "11" in this line. Press "6". This will replace "11" with a numeral "6".
7. Select "Save" from the File Menu. Make sure you have the correct driver selected in Preferences.

Follow these directions if line spacing is too large (This elongates the page and makes page breaks print in wrong areas.):

1. Run KindWords
2. With KindWords disk in df0:, choose Open from the File Menu.
3. Click on directory SuperDrivers, then double-click on EpsonX.PRN (or EpsonXNo_NLQ.PRN if you are using that driver).
4. After file has been loaded, move vertical elevator all the way to the bottom of the shaft (screen will be blank).
5. Click twice in the shaft above the elevator. (This will jump the screen up two screen lengths). Locate the line: "P5 VERT=20 SCAN=4".
6. Lower the value of "VERT=20" by 2 values and try printing. If the line spacing is still too large modify it again by lowering the value again by 2 values and try printing. Eventually you should get what you want.
7. Select "Save" from the File Menu. Make sure you have the correct driver selected in Preferences.

If your graphics still print with horizontal spaces, try setting your page size to "Custom" in Preferences.

If Boldface does not print in Final on a Panasonic printer:

The following directions will force Bold Roman 12 SuperFont when printing in Final Quality.

1. Run KindWords
2. With KindWords disk in df0:, choose Open from the File Menu.
3. Click on directory SuperDrivers, then double-click on EpsonX.PRN (or EpsonXNo_NLQ.PRN if you are using that driver).
4. After file has been loaded, click once in shaft below vertical elevator. Locate line of text:
"FO ROMN12B B LETTER=1 PROP=0"

5. Highlight the numeral "1" in this line. Press "0". This will replace "1" with a numeral 0.
6. Select "Save" from the File Menu. Make sure you have the correct driver selected in Preferences.

If the print out is not correct on a Panasonic KX-P1091i (or similar model):

The dip switch settings may not be set correctly. They should be set as follows:

SW1 = ON
SW2 = OFF
SW3 = OFF
SW4 = OFF
SW5 = ON
SW6 = ON
SW7 = ON
SW8 = OFF

If it is not printing correctly on the Apple Imagewriter or ImagewriterII:

Most likely the dip switch settings are set incorrectly. For the Amiga they should be set as follows on switches SW-2:

1=Closed
2=Closed
3=Closed*
4=Open
5=Closed
6=Open

Also, make sure you have "Handshaking" set to "xON/xOFF" in the "Change Serial" screen of Preferences.

If your graphics are printing in black blocks on a black and white printer:

Make sure you have Preferences set to "Black and White" or "Gray Scale" printing in the Shade option in the Graphic 1 screen located in the Change Printer screen.

Inserting Graphics Problems

If you can not insert a graphic into their document because of memory:

This can happen if you only have 512K of memory. Save the graphic as a smaller brush and also save it with a fewer number of bit planes (less colors in color palette).

If it is not working on a hard disk

Read "Installing KindWords on a Hard Disk" in the first chapter of the manual. Usually the problem is because you did not modify the start-up sequence file correctly on the boot up floppy disk.

If the fonts are all in Roman 12 on the KindWords screen:

This means that the font files from the Program disk were not correctly copied to the fonts directory on the users hard disk.

To make sure you have copied the font files correctly to your hard disk make sure you have the program disk in df0: and have it has the current device in CLI. Type this command from CLI:

```
"copy df0:fonts fonts all"
```

FUSION PAINT

AMIGA STARTER

INTRODUCTION

In providing this documentation, an assumption is made that the user is already well versed in the fundamental areas necessary to use the Amiga. If the computer is new to you, it may be beneficial to read through the Amiga manuals in order to become better acquainted with its interface.

Fusion Paint is not copy protected for your convenience and economy. It is illegal to make any copy to give to another person. It is also illegal to use a copy of this program on any two computers simultaneously for any purpose and by anyone unless permission has been granted by a superseding license agreement.

Making a Backup

In order to operate this software program, you will need an Amiga personal computer with at least 512K of internal memory and a backup copy of your Fusion Paint program disk to be used as a working copy.

If you have just opened your Fusion Paint package, the first thing you should do is backup the program disk. If you are using Workbench 1.2 or 1.3, you can do this by following these steps:

1. Turn on your Amiga and load the Workbench.
2. Make certain that the write protect tab on your original disk is in the write protect position.
3. Insert the original Fusion Paint disk into one of your drives.
4. When the Fusion Paint disk icon appears on the Workbench, double-click on the icon to open the Fusion Paint window.
5. Put a blank disk into a drive.

6. When the icon for the blank disk appears on the Workbench, drag the Fusion Paint disk icon onto the blank disk's icon.
7. The disk copy procedure has started. Just follow the instructions that are displayed in the various windows that pop up.

Quick Start

To start Fusion Paint, double-click on the Fusion Paint program icon. In a few seconds, the Fusion Paint startup window will be displayed. If a system requester comes up before this happens, insert the Workbench disk in one of the drives.

If your computer has only a single drive, the system requester may appear several times during the first run of Fusion Paint. If Fusion Paint is used again before turning your computer off, the system requester will not appear as often.

The Startup window displays the dimensions of the screen and page you will be using along with the number of colors you will have available.

Click on the Start button and Fusion Paint will load the current default configuration which is a 32 color, low resolution page displayed on a low resolution screen. A 32 color screen, which is 320 pixels wide and 200 pixels high, will be displayed. Fusion Paint is capable of working in a variety of graphics modes. By defining large page sizes which use many colors, one runs the risk of not having the required memory available to run the program.

If you do not have enough memory to start with this configuration, reduce the number of colors by clicking on the color entry field.

Operational Overview

Nearly all the input Fusion Paint needs comes from the mouse pointer on the screen. This is due to the fact that all frequently used operations are accessible through the icon interface.

Close Window Button

The close window button is located at the top, left-hand corner. Click on it to exit Fusion Paint.

Title Bar

Extending across the top of the screen is the Title Bar. The program's name and the title of the current project are displayed here. If the current project is unnamed, "Untitled" will be displayed.

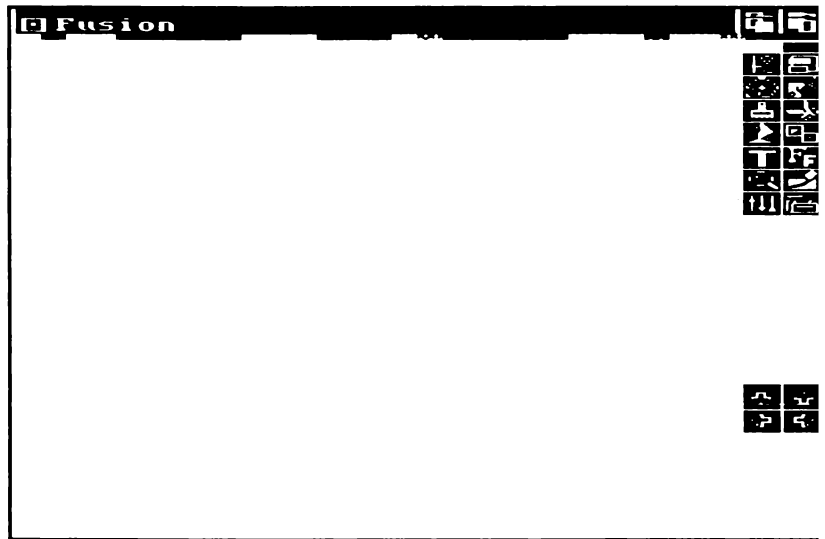


FIGURE 1 - Icon interface

1. Freehand - used for painting freehand and line images
2. Boxes - used for painting rectangular objects
3. Circles- for drawing circles, ellipses, and curves
4. Airbrush - gives an airbrush effect
5. Brush - used to brush or paste small pictures (cuts)
6. Fill - for filling an area with a solid color or pattern
7. Magnify - for detailed editing
8. Text - used to enter and position one line of text (up to 80 characters)
9. Fonts - selects the desired font

10. Cut - used to copy areas of the main painting into Fusion Paint's Cut Clipboard for use as brushes
11. Effects - allows the quick manipulation of cuts in effects various ways
12. Erase - erases selected areas or an entire page
13. Palette - allows you to change colors in the palette bar
14. Printer - used to print the document

Drag Bar

Immediately above the Title bar, and extending across the screen is the screen's Drag Bar. If you click on this and hold down the left mouse selection button while moving the mouse, you can slide the screen up and down. This reveals the Workbench and any other open screens beneath the Fusion Paint screen. This allows other programs to be executed while Fusion Paint is running.

Palette Bar

Below the Title Bar and extending all the way across the screen is the Palette Bar. The Palette Bar displays all of the various colors available. To select a color, click on the appropriate colored rectangle. If Fusion Paint is started with fewer colors, the Palette Bar will not be extended as far across the screen.

Depth Arranging Gadgets

In the top right corner of the screen are the four standard depth arranging gadgets (two for the Fusion Paint screen and two for the Fusion Paint window). Click on them by clicking at the top edge of the screen on the uppermost pixel. Use the screen gadgets to get back to the Workbench so that you can start other programs.

Pen Colors

Proceeding down the right-hand edge of the Fusion Paint screen brings you to two more colored squares which are the pen colors. These serve to display the current colors of the background and foreground pens. (It may appear that there is only one box here because the background pen is the same color as the rest of the screen's background.) To select a new color for the foreground pen click on the desired color in the Palette Bar. To select a new color for the background pen, click on the Palette Bar while holding down a Shift key.

Main Tool Bar

The area below the pen colors is the Main Tool Bar that runs along the right edge of the screen. This bar contains 14 tools. Select a tool by clicking on its icon. When the tool is selected, the colors of its icon will be reversed to show that it has been selected. The Control Panel that is associated with the selected tool will be displayed below the main tool bar.

Control Panel Area

The area below the Main Tool Bar is reserved for the Control Panel. This area is used to display the various extra controls that are needed by the different tools in the Main Tool Bar. Upon entering the program, this area is blank because to execute a function, the appropriate tool in the Main Tool Bar must be selected.

Note: The mode last selected within a tool's Control Panel before exiting that tool will be the current setting when the tool is used again.

Scroll Arrows

In the bottom right-hand corner are the Scroll Arrows. These four arrows are used to position the page on which you are painting in the window. To demonstrate their use, first go over to the Freehand tool (in the top right corner), select it and doodle a bit in the window. Now that there is something visible, the effect of scrolling can be seen by clicking on the Scroll Arrows. Clicking once will move the screen slightly (about four pixels). While the mouse's select button is held down on one of the arrows, the screen will continue to scroll. With larger pages, it may be necessary to use the rapid scroll and full scroll options. To scroll rapidly through the picture, hold down the Shift key on the left-hand side of the keyboard while you click on a Scroll Arrow. To scroll all the way to the edge of the page, hold down the Ctrl key while clicking on an arrow.

Zoom Lens

Move the mouse pointer back into the main drawing area and sketch a bit more. While continuing to sketch, press the right mouse button (the one that is usually used for menus) and look at the Scroll Arrows. While the menu button is pressed, the Scroll arrows are replaced by an expanded view (called the Zoom Lens) of the pixels surrounding the mouse pointer tip. The exact pixel coordinates of the pointer are displayed on the Title Bar. The mouse pointer will slow down to make precise positioning easier. Any time the mouse pointer is below the Title Bar (where it accesses the menus), the pop up Zoom Lens can be accessed for precise alignment work.

Preferences Menu

Appears active only while the Startup window is visible on Workbench screen. Fusion Paint is shipped with the program default set to Load Program-All. To get the program to load slightly faster, set this item to Load Program-As Needed. If this item is selected, each tool will be loaded into memory the first time it is accessed. Be sure to choose Make Permanent from the Preferences menu before pressing start on the Startup window. Whatever option you chose will remain as the default from that point on until changed again.

Pull-Down Menus

The pull-down menus may be accessed by first moving the mouse pointer to the Title Bar, then depressing the menu with the right mouse button. There are five columns of menus. The first column is the Project menu. The second column, the Modes menu, contains various tool modes. The third is the Undo menu. It contains operations which are associated with the concept of multiple undos.

QUICK TUTORIAL

To illustrate Fusion Paint, draw a doodle. Move the mouse to the top right corner of the screen and click on the Freehand tool icon there. The icon will be highlighted to show its selection and the blank area below the main tool bar will display a new Control Panel. This is the Control Panel for the Freehand tool. Now move the mouse pointer to the middle of the screen and sketch by holding down the left mouse button and moving the mouse.

The color of the pen in use can be changed by clicking on one of the colored rectangles at the top of the screen in the Palette Bar. To draw straight lines instead of free hand sketching, click on the Sloped Line icon beside the Freehand icon at the upper right of the Control Panel. Click once to anchor one end of the line and after moving the mouse a short distance to the right of the first click, click again to anchor the second end of the line.

Note: If you press a Shift key and move the mouse before the second mouse click, you can relocate the image being created before anchoring it to the screen.

Remember that the major tool icons are those that run across the right edge of the screen. When one of these is selected an additional set of sub tools are displayed as the Control Panel below the major tool icons.

Starting Fusion Paint

Via the Fusion Paint Icon

There are four ways to get Fusion Paint running. The first is to double-click on the Fusion Paint icon with the left mouse button. This will bring up Fusion Paint without loading a project (picture). Cuts (brushes) can be loaded automatically by specifications set in the Tool Types line of the Info tool of the Fusion Paint icon.

Via a Project Icon

The second way to execute Fusion Paint is by double-clicking on the icon of a project that was created with Fusion Paint. This will start Fusion Paint and automatically load any default cuts listed in the info window into the Fusion Paint Clipboard. Finally, the project that was double-clicked on will be loaded into Fusion Paint.

Fusion Paint may also be invoked by single-clicking on the project's icon. Then, while holding down the Shift key, double-click on the Fusion Paint icon. When the Startup window appears, push the Start Button. The screen and page size will be defined as previously saved for the loaded project.

An IFF file which was not created with Fusion Paint can be automatically invoked by double-clicking on its icon if the following changes are first made.

Each project has a Default tool associated with it. To change this default, single-click on the project's icon, select the Info item from the Workbench menu, and a new window will appear on the screen which displays various aspects of the project. Find the Default tool entry in this window to be used to edit this project. Click in this gadget and change the Default tool's name to "Fusion:Fusion" (if you are operating Fusion Paint from the floppy disk) and hit the Return key. There is also an entry that describes the stack size to be used with the program, it is recommended that this be set to 8000 bytes.

Another way to convert the icon of an IFF image created in a program other than Fusion Paint is to start Fusion Paint, then open the desired image and choose Save As from the Project menu. The image will then bear Fusion Paint's icon for IFF images rather than the one it had originally.

Via the CLI

Fusion Paint can also be started from the CLI by typing one of the following:

```
Fusion:Fusion (assumes Fusion Paint is on the Fusion
Paint disk)
Fusion:Fusion -i (Start an iconized copy of Fusion Paint)
Fusion:Fusion MyPicture (loads MyPicture, Startup
window bypassed)
```

The Fusion Paint master disk may be used as the Workbench disk when booting the system.

The Startup Window

Upon executing Fusion Paint the Startup window will appear on the Workbench screen (unless the default has been changed via the Preferences menu discussed in "The Preferences Menu" section of the Reference Manual). These are the screen width and height, the Page (Edit) width and height, and the number of colors in the palette.

Default Parameters

The Startup window obtains its default parameters from two places.

1. The parameters are initially set to a 320 by 200 screen, a 320 by 200 page, 32 colors, and overlays on. These may be changed by saving different settings for these parameters within the Preferences menu that is visible only while the Startup window is active.
2. Secondly, if a project is chosen to be loaded in at the start, the parameters are adjusted to suit that painting. That is, the exact dimensions and screen resolution of the picture are displayed. The Startup window also prevents the entering of inconsistent values. For example, a screen size which is larger than the current page size is not allowed. Also the settings of 32 and 64 colors are not an option with a 640 pixel wide screen.

Screen Width and Height

The screen width is normally either 320 or 640 pixels wide. However, Fusion Paint can make use of the extra width available because of overscan on some monitors. The oversized screen capability can allow you to have an editing screen up to 704 pixels wide and 470 pixels high which is a 29% larger editing surface.

Fusion Paint supports both the NTSC (North America) and PAL (European) standards because it allows you to define the exact screen size desired. The screen height is normally either 200 or 400 lines in North America (NTSC). In Europe 256 or 512 lines (PAL) can be used. Fusion Paint can make use of this overscan area that the Amiga can generate.

The first four default size gadgets are the 320, 200, 640, and 400 buttons. These are used to select various standard Amiga screen sizes. For example, the Workbench screen can be either 640 x 200 or 640 x 400. The next two gadgets select the European PAL screen heights of either 256 or 512. The final four gadgets select the Amiga's normal (for NTSC video) Overscan sizes of 352 x 220 for low res and 704 x 440 for high-res. It is possible to have screen sizes even larger than these (referred to by some as severe Overscan), but this is not recommended for normal editing. It is recommended that a normal screen size be used, but if a large Overscan area is needed for some application, it's best to use a page size that is larger than the screen size.

Edit Width and Height

The size and number of colors in a picture that Fusion Paint can edit is limited by the amount of available Chip RAM.

Opening and Saving

The Project menu contains the following options: Open, Save As, Save Quick, Save Palette, About and Quit. The About item can be used to determine the version number of Fusion Paint. If a bug in Fusion Paint is found, this is the version number that should be reported. The Open and Save items are used to direct Fusion Paint to load a project for editing or to save the current project to disk. These two modes also make use of the settings in the Disk item of the Modes menu.

Open - Picture

The Open-Picture is used to load a standard IFF graphic image. Two additional options located in the Modes menu under Disk are Use Page Size and Transparent which also may affect the loading of picture files.

Open - Icon

The Open-Icon feature is used to bring the graphic images from a Workbench icon into Fusion Paint for editing. WorkBench icons are not IFF standard graphics. They have a special format so they must be loaded into Fusion Paint using this command. Icons can be saved from Fusion Paint as well. However, the icon will still need to be attached to the proper type of file.

The Project Menu

Once the Open-Icon menu item has been selected, you must click twice with the left mouse button to indicate to Fusion Paint where to put the icon's image on the current Edit page. The standard File requester will then appear. Enter or select the name of the icon that you wish to load. WorkBench icons are stored in files whose names always end with the characters ".info". You may specify the icon by selecting either the icon's name (i.e. Fusion.info) or by selecting the name of the object which is associated with the icon (i.e. Fusion Paint). Because of the way the File requester works, it is usually best to just select the icon's true name (the one that includes the ".info"). The icon's image will be loaded with its upper left corner at the position indicated by the previous double-click.

There are currently three distinct types of icons as well as the usual types (Drawer, Garbage, Disk, Project, Tool, Kick, and Device). An explanation of each of the three types follows:

1. **Complement Highlighting.** The icon changes its colors. Complement Highlighting is characterized by rectangular parts of the background surrounding the object turning to orange.
2. **Back-Filled Complementing.** The icon changes its colors, but the orange rectangular outline does not appear. This can be a more pleasing effect.
3. **Alternate Imaging.** The image of the icon may completely change to another image. This is termed the Alternate Image mode and may be used to display additional information such as "Don't click again!". It could also be used to make an animation effect when selected.

The Open-Icon function will load all three types of icon images into Fusion Paint. The Complement and Back-Filled Complement modes will both load a single image, and the images will be identical if the icons appear that way in their non-selected state. When an Alternate Image (animated) icon is loaded, two images will appear, side by side. The image on the left is the normal state, and the image on the

right is the selected state for the icon. The images are placed side by side so that they are in the correct format for saving to disk as icons.

It is recommended that the icon be modified in the resolution in which it will be displayed. Since the Workbench usually has a resolution of 640 x 256 and 4 colors, icons which will be displayed on the Workbench should be edited in Fusion Paint in 640 x 256 and 4 colors.

Open - Cut Drawer

Selecting this option from the Project menu will activate the File requester in which you can open a drawer of cuts. This feature allows you to create as many drawers as you like for storing similar categories of clip-art. There's no need to select a cut or file name when you select the drawer to load. Just press the Ok button after the desired drawer has been selected and all the cuts and IFF files will be loaded at once.

Save As - Picture

When this option is chosen, the current project will be saved under a new name you specify in the File requester. The disk options under the Modes menu called Use Page Size and Transparent can affect the way a file is saved.

Save As - Icon

The Save As-Icon menu item is used to save a part of the current picture as a WorkBench Project icon. Once this menu item is selected, it is waiting for you to box an area to be saved. Box the desired area that is to be saved as an icon. The File requester will appear. Select the name to save the icon under as usual, but do not include the ".info" in the name. The reason for this is that Fusion Paint will create an icon with the desired image as well as an IFF picture file containing the IFF ILBM version of that image for future reference.

For example, when you select a file named "MyIcon", Fusion Paint will save the boxed area as a mini-IFF picture file called "MyIcon" and will make a WorkBench Project icon with the same called "MyIcon.info". This allows the image of the icon to be loaded into another program that does not load WorkBench icon pictures but does load IFF pictures. When the Save As-Icon feature is used, the icon will be saved in Back-Fill Complement mode.

Save As-Alt Icon

The Save As-Alt Icon menu item is used to create Alternate Image (animated) icons. It functions in the same way as the Save As-Icon item just discussed. After selecting the menu item, box the desired area to be saved as an icon. When the File requester appears, select the name to save the icon under, but do not include the ".info" in the name. Both an icon and an IFF picture containing the same image are saved. It differs from the Save As-Icon item by splitting the boxed area in half vertically and saving the two halves as the two alternate images to be used by the icon when it changes states.

Creating animated icons that line up correctly is actually quite simple if a few construction guides are used. Start by producing one of the two required images. Once completed to the point that the size of the icon is established, make the image a brush using the Cut tool. Select the Brush tool to paste down a copy of the icon either to the left or right of the original image. The image on the left is meant to be the normal state, and the image on the right is the selected state. The second image should be pasted down so that the two outline boxes just touch but do not overlap. If the image has an outline, this will result in the line separating the two images being two pixels wide.

When it is time to save the new icon, and an outline box around the icon is desired, select the Save As-Alt Icon menu item. Box the pair of icons including the outline. The rubberband should be over the top of the outline to include the outline but nothing outside of it.

If the outline is not to be part of the icon, erase the outlines completely before saving the icon. You can also just erase the double wide line dividing the two images. If this is done, use the remaining outline to line up the rubberband box during the save process by placing the Save As_Alt Icon rubberband just inside the outline. This method will keep the two images in perfect alignment, which is important for animated icons, while not giving the icons a frame.

Save Quick

The Save Quick item allows saving of the current image while bypassing the interaction with the File requester and the Overwrite requester if the image has been saved previously. It has the same subitems as the Save As menu item.

The Save Quick menu allows a project to be resaved under the same name without the need to use the File requester to select the name and say "yes" to the "Do you want to overwrite?" requester.

Save Quick will always appear disabled when Fusion Paint is started. It will remain ghosted until the project is saved manually using the Save As menu item. After the first save has occurred, the Save Quick menu will be enabled, indicating that the Save Quick option is now available. When a Save Quick is performed, it will replace the file that was just saved. Save Quick will now remain enabled until another Open operation takes place. If Save Quick becomes disabled, it will be reactivated when another Save As operation is performed.

ARP File Requester

Making a File Selection

Once the File requester window opens up, one can start to manipulate it without having to wait until the requester has stopped listing the contents of the current directory. Simply point and click with the mouse to make a selection. Alternatively, you can double-click on any of the files for access.

Viewing Drives and Directories

To get the list of disk drives and volumes currently installed, press the right mouse button while the File requester is open. When this is done, a list of all the disk drives and logical assigns currently in the system will be appended to the directory list area. Select the desired drive with the left mouse button. If this is a long list, it may be scrolled in the normal fashion to reveal any item in the list.

When a directory is selected, the files within will begin to be listed. The Parent gadget can be used to "back up" one level of the directory tree.

Finally, the desired file may be selected and the requester exited by double-clicking on the file's name. A file name may be entered from the keyboard by selecting the input gadget near the bottom of the window and typing. If you do not wish to access a file, click on the Cancel gadget.

ARP Compatibility with Other Workbench Disks

The file "Arp.library", contains the various support function that ARP programs can call on. The version of this that is needed for Fusion Paint is version 34 which is the library that comes with the ARP 1.1 release. To install this new version of ARP. LIBRARY onto your hard disk or workbench, simply double-click on the "InstallArpLibrary" icon.

For those who have already switched over to using the ARP DOS commands, there is no need to change the library file unless it is an older version. For those who have not switched over, you should consider doing so since ARP offers many benefits in the CLI environment including smaller commands (less disk space used), faster loading, and much better usage of wild cards uniformly in all the commands.

Note: if you already have a copy of the Arp.library file but you are not sure which version, it is best to go ahead and copy the version from the Fusion Paint master disk to the Workbench disks you'll be using. Be sure the Arp.library file is in the "libs" directory of the Workbench disk from which you booted.

The Palette Bar

The Palette Bar runs across the top of the Fusion Paint screen just below the Title Bar. This bar displays all of the currently available colors in the system. To select a color from the Palette Bar, click on the desired color. The Palette Bar is used to select colors for both the foreground and background pens. The current colors for these pens are shown just at the main tools. To select a new foreground pen color, click on the

desired color in the Palette Bar. To select a new background pen color, hold down a Shift key while clicking on the desired color in the Palette Bar.

The Palette Tool and Palette Bar

The palette can be used to change the background color throughout the painting without having to erase the painting. This can be executed by the following process:

- Select the Palette tool.
- Select the color on the Palette Bar which is being used as the background color. This is the left-most color in the Palette Bar.

- Alter the slider bars to display the desired color.

Color Mode

To use 64 color mode, set the screen width to 320 pixels in the Startup window. The screen height may be either 200 (low-res) or 400 (high-res) lines. Using the Color gadget of the Startup window, select 64 colors and select the Start button. The Fusion Paint screen will appear essentially the same as in the other color modes, with two exceptions. First the Palette Bar will appear to be twice as thick as normal. The reason for this is that there is only room for 32 color patches across the screen. A second row has been added to bring the total to 64 colors. The second difference is that the screen is slightly taller than normal. This is so that the extra space needed by the palette did not reduce the working window size.

The 64 color mode is slightly different from the other Amiga graphics modes since some of the colors cannot be adjusted independently. This becomes apparent when using the Palette tool to adjust colors in the Palette Bar. When the mixer is used to manipulate a color, both the color that is currently in the foreground pen and the color in the Palette Bar directly above or below it will change. The Amiga derives the colors in the bottom row of the Palette Bar from the red, green, and blue components of the colors in the top row. The bottom row of the Palette Bar is half the brightness of the top row. For this reason, the 64 color mode is called the Extra Half Brite mode. To make the most effective use of the second row of the Palette Bar, it is recommended that the top row be used to hold the bright colors. The bottom row will thus automatically have a set of darker shades available for use.

Setting Default Color Palettes

Fusion Paint has the capability of loading a custom palette automatically during the startup phase. To save a new palette as the default simply choose Save Palette from the Project menu and the current color arrangement will be used as a default for all projects using that same number of colors. A separate palette can be established for each possible setting of the number of colors in the Palette Bar.

The Title Bar

The Title Bar on the Fusion Paint screen has two functions. It serves to display the name of the project that is currently being

edited, and it is the rubberbanding cancel gadget. Clicking somewhere on the Title Bar cancels the rubberbanding of lines, circles, and boxes, etc..

The Zoom Lens

If the mouse pointer is in the painting area (below the Title Bar) and the right mouse button (menu button) is pressed, the Scroll Arrows are replaced by an expanded view (called the Zoom Lens) of the pixels surrounding the mouse pointer tip. The exact pixel coordinates of the pointer are displayed on the Title Bar.

Toggle On/Off Menus, Icons, and Mouse Pointer

This feature allows you to turn off the menu bars, icons, and mouse pointer for use in capturing video images and using genlock devices. Due to some limitations, none of the available tools are active at the same time the icons are turned off. The F9 key toggles on/off the mouse pointer, and the F10 key toggles the menu bar and all tool icons. The mouse pointer must be turned off before the icons if you want only the picture to be visible.

Since it is possible to scroll the page to a position where there is no painting surface under one set (or partially under one set) of icons, a checker board pattern will be painted on the display in areas where this occurs so the edge of the editing page is obvious. If the screen size and the page size have the same dimensions, there is only one position to which the page can be scrolled so there will be no visible checkerboard when the icons are turned off with F10. Since this position is quite important, the Return key will automatically center the page.

When using an image with 64 colors, where the page and screen size are the same dimensions, a small checkerboard pattern will appear even when the image is centered. This is unavoidable in all resolution regardless of the positioning of the page due to how the system handles Extra Half Brite mode. To avoid this problem of the checkerboard appearing when F10

is selected and the image is centered, use a page size that is slightly larger than the screen size by at least four pixels in the vertical direction.

Auto Centering of Images

Due to the very large canvas size that can be used for painting within Fusion Paint, and to avoid the limitations of the Toggle On/Off icons, an auto-centering feature has been added. This is executed simply by pressing the return key from within Fusion Paint. It results in positioning the current Edit Page so that it is perfectly centered within the screen regardless of page size.

When used in conjunction with the other scrolling options, the auto-center feature can provide additional maneuverability around your page. For example to scroll immediately to the middle of the right-hand side of the page, hit the Return key to center the page and use the Ctrl key and the right scroll arrow (key or gadget) combination to move to the right-hand side of the page.

Rubberbanding

Many of the tools found in Fusion Paint make use of a rubberbanding method. A rubberbanded form of lines, circles, boxes and other figures is displayed before becoming part of the painting. This results in the ability to manipulate the figure into the precise form before its integration with the picture. Rubberbanding is also used to define areas to fill, load, save, print, and erase. These areas are defined with a rubberbanded box.

While rubberbanding is in effect, icons in the Control Panel on the right may be selected. This allows the changing of modes during the given operation. The Scroll Arrows and Cursor keys (which can be used to scroll) are also operational, yielding the ability to draw figures or box areas which are much larger than the screen size.

Rubberbanding Boxes

To rubberband a box, click where the upper left corner of the box should be and pull the mouse down and to the right. The left edge of a box can be moved by sliding the mouse pointer past the left side of the box. Notice the box folds up and becomes a line. Once the line is placed in the desired position, move the mouse back to the right and the box will again be displayed. The position of the top of the box can be altered in the same manner. To move the entire box around the screen, hold down a Shift key and move the mouse. Once the box is sized and located correctly, click the left mouse button a second time to place the box in effect.

Dragging of Objects

The Freehand tool supports dragging of rubberbanded lines. This works for both the general straight lines and the constrained horizontal and vertical lines. As with boxes, the selector that is used to activate dragging is a Shift key. Holding down either Shift key while moving the mouse when a line is being rubberbanded will cause it to be dragged rather than rubberbanded. Therefore, once the length of the line is correct, you may place it anywhere on the screen before clicking to make it permanent on the screen.

While being rubberbanded a circle, ellipse, or curve, may be moved about the page by holding down a Shift key and moving the mouse. This is the same control sequence that is available while rubberbanding rectangles, so it should prove quite natural to use. With the Double Control Point Curve tool, the left-Alt and Ctrl keys control the two curves, leaving the Shift keys free to be used for dragging the curve if so desired.

Canceling the Rubberband Operation

Any rubberbanding operation may be canceled by clicking somewhere within the Title Bar at the top of the screen. This includes operations concerning lines, circles, curves, and boxed areas, etc..

ColorFont Support

Fusion Paint supports the ColorFonts' standard. Commodore has announced that the official way of supporting ColorFonts is the program called ColorText. ColorText is supplied by Interactive Softworks for users of ColorFonts.

Abort Function

An abort operation feature is available to stop time consuming operations. To abort an operation, click in the small Message window that is displayed in the middle of the screen.

Multiple Undos

To illustrate the Undo process, select the Boxes tool and draw a number of filled and hollow boxes. Once these have been painted, select Undo from the menu bar. The last box to be painted will disappear. Each time you select this function, another box will re-appear. Anything that can be undone can also be redone.

Limits of the Undo Feature

At the present time there are two major limits: the total amount of memory present (both Chip and Fast RAM combined) and the amount of Chip RAM present. The amount of free Chip RAM restricts the maximum size of the last operation that can be undone while the total amount of free memory and the number set in the Preferences Menu are the only limit on the number of levels to the undo feature.

Executing Undos

Since the Undo capability is so important, there are several ways in which it may be accessed. One method is via the Undo menu. Also, there are two keys on the keyboard that can also be used to operate the single element undos and reverse undos. These are the Esc and Help keys. Each time one of these is pressed, a single undo will occur. As with the Undo icon, if a Shift key is held down when either Esc or Help is pressed, a reverse undo will be done. This allows you to rest one hand on the keyboard to control undos quickly and the other on the mouse to do the painting.

Undo Menu Options

The Undo menu is an important part of undos. Undos may be flushed from memory and enabled or disabled. The menu items available are individually discussed in "The Undo Menu" portion of the Reference Manual.

Using Undos in the Brush tool

While using the Brush tool, a special type of automatic mark is placed at the beginning of the first brush operation which will not allow undo to be performed on operations which were done previous to entering the Brush mode. This will appear as a limitation, but you may continue to undo any previous operations simply by exiting the Brush mode and pressing Undo. Also, the earliest operation done in this mode cannot be undone without exiting the Brush mode. Once you have exited the Brush mode, all operations done there may be undone as usual. As a general rule, it's best to get into the habit of exiting the Brush mode to perform an Undo. This will avoid any confusion as to what is actually happening.

Apparent Loss of the Undos

When you have the undo buffer set to a number of levels that is larger than your Amiga can handle (that is, you are receiving frequent out of memory flashes), it can appear to cause the loss of your undos while not releasing the memory used to store them. When this happens, the undos are not actually lost, but you are at such a point that there is not enough free memory to restore even one undo.

When this occurs, you have several options. The first is to try to partially flush the undo buffer either with the pull-down menu or the keyboard equivalent sequences for "Flush 1/8" or "Flush 1/4", etc.. Secondly, you can continue to perform small painting operation on the page which will eventually force the earlier undos stored in memory to be deleted making room for the later ones. If these earlier ones are larger than the later ones, this exercise of doing small painting operations will free up some memory, making it again possible to activate the undos.

Loading Default Cuts

There is a feature that is useful for using various cuts, brushes and patterns for artwork. Cuts can be automatically loaded when Fusion Paint is booted. There are two ways to specify that Fusion Paint should load one or more cuts upon startup. Both of them involve the use of the Workbench Info program accessible from the Workbench menu. The two ways for doing this are:

1. Changing the Tool Types information for the Fusion Paint program icon.
2. Changing the Tool Types information for any IFF project icon created with Fusion Paint.

Method One

The Info item accessible from the Workbench menu allows you to specify any number of cuts that may be loaded automatically upon startup of Fusion Paint. To specify that cuts be loaded do the following:

1. Select the Fusion Paint icon with the left mouse button (single-click).
2. Choose the Info option from the Workbench menu.
3. Press "Add" in the lower right corner of the Tool Types area.
4. Type CUTDRAWER= followed by the path name for the desired cut to be loaded, separating each different layer of directories by a backslash. For example, the entry CUTDRAWER=Fusion: Corner.Cuts/Corner1 would load the cut "Corner1" from the Corner.Cuts drawer of the Fusion Paint disk if it resided there. The path name conventions used are the same as that for Workbench 1.3. For example, the entry CUTDRAWER=Art:Mycuts/*.box | ram:Clipart/cuts/* | dh0:*.cut? would load all the cuts which ended with .box in the Mycuts drawer on the "Art" disk, all the cuts in the cuts drawer of the Clipart drawer in the rem:device, and any cuts in the root directory of the hard disk partition dh0: which ended with ".cut" and any other single character.
5. Hit the Return key after the path name is entered.
6. Press Save to leave the Info program.

Repeat steps 3 through 5 for each different cut drawer to be loaded automatically upon startup.

Method Two

The second method is the same as the first explained above except rather than selecting the Fusion Paint program icon before choosing the Info program from the Workbench, select the IFF image file you would like to be loaded along with the cut drawers you want to work on with that image. This method allows you to attach the loading of certain cut drawers to the appropriate image.

Symbol and Brush Libraries

In the previous section, two methods for specifying cuts to be loaded into the Cut Clipboard when Fusion Paint start up were described. Since a cut may contain just about any image one can draw, from a single pixel to an entire screen size picture, these auto-load features can be used to implement symbol and brush libraries.

Library Applications

Since you can also simply choose the Open-Cut Drawer option to load an entire drawer of cuts at once within Fusion Paint, you can easily maintain and work with related categories of clip-art.

Placing related cuts in a library in the same drawer or set of drawers on a separate data disk is the recommended way of organization. When loading these cuts automatically, through the use of the Info tool specifier, use the disk name as the device designation. (The device designation is the one followed by a colon.)

REFERENCE MANUAL

The Project Menu

The project menu contains the following options: Open, Save As, Save Quick, Save Palette, About, and Quit. The Open and Save item are used to direct Fusion Paint to load a project for editing or to save the Current project to disk. These two modes also make use of the settings in the Disk item of the Modes menu.

The Modes Menu

Disk Options

The Disk item of the Modes Menu has two option. The first of these modes, the Use Page Size option, exists to address the problems with editing full screen overscanned images. The second option, Transparent, was added to allow special masking and overlay effects with the Open and Save features.

Use Page Size

When Use Page Size is not checked (the default), Fusion Paint will save the current screen size as defined in the Startup window. This is what Fusion Paint has always done. When the Use Page Size item is checked, Fusion Paint will save the current Edit Page size for the viewable document size. Thus, to save the image as overscanned, set the Edit Page size to overscan dimensions. This allows one to edit on a normal screen size, yet allows an animation or video titling program to display the full Edit Page area.

Transparent

When this option is selected before a save is executed, Fusion Paint will flag the current background color as being transparent when the picture is saved. (The current background color is not necessarily the left-most color in the palette, color zero.) This will allow you to specify that this image could be later opened and merged with another file without the background color of one blotting out the other. That is, the background is transparent.

Once a file has been saved with background transparency enabled, there must be some way of disabling this feature when the picture is being loaded and transparency is not desired. To disable transparency on loading, make certain

that the transparency item is not selected before the load takes place. Conversely, then the transparency item is checked and a picture that has transparency enabled is loaded, it will not change the portions of the current page where the incoming picture is transparent.

Pick Color

To pick the color off of an image using the Modes pull-down menu, simply choose Pick Color. Place the mouse pointer directly over the pixel or pixels of the desired color and click once with the left mouse button. If needed, you may press the right mouse button to see the zoom view in the lower right-hand corner of the screen. This is helpful if the color takes up a very small space or is adjacent to another color of a similar shade. By pressing the Shift key while picking a color, it will be selected as the current background color rather than the foreground color. The F1 key is the keyboard equivalent for the Pick Color function.

Color Brush

The Color Brush item in the Modes menu is used to change the color of the current brush (cut) to that of the foreground pen. The recoloring process works by taking all the opaque regions of the brush and replacing their colors with the current foreground pen color. All colors of the brush apart from the background color will be replaced by the foreground color creating a silhouette of the brush. This feature can be useful for shadowing brushes. You may want to use it in conjunction with the Power Borders feature of the Boxes tool.

Color Cycle

Fusion Paint supports up to six ranges of color cycling, both within Fusion Paint and in IFF Picture display programs that support color cycling through the IFF standard for color cycling information exchange. The color cycling system is controlled through four keys, four menu items, and one control window. By choosing the Color Cycle option or its keyboard equivalent, the Tab key, color cycling will be activated according to the parameters set in the Set Cycles window.

Set Cycles Window

There are two ways to access this window. It can be made active either from the Set Cycles menu item in the Modes menu or by pressing the Shift and Tab keys together. The window consists of several regions which are discussed in the following paragraphs.

In the upper left corner is the Close Window gadget which is used to close the Set Cycles window and return to Fusion Paint's edit mode.

The Rate Slider (just below the Close Window gadget) is used to set the speed of color cycling of one cycle range at a time. At its topmost setting a given cycle is effectively turned off, and at its bottom most setting the fastest cycling rate is achieved.

The maximum cycle rate is 30Hz, which means that every 1/30th of a second the cycle will make one step. Thus, with a color range of six colors, it would only take 1/5th of a second to cycle through the entire range. The minimum cycle rate is less than 1Hz, which means that it takes more than one second for a single step in the cycle to take place.

In the middle portion of the Set Cycles window are a number of gadgets that control which cycle range is being adjusted. Six independent color cycle ranges are available. These are selected by clicking on the gadgets marked R1, R2, R3, R4, R5, and R6. Each time a different range is selected, the rest of the Set Cycles window is updated to reflect the current settings of that range.

Above the range selection area are two additional gadgets which determine the current cycling mode. The top one controls whether the currently selected range will be active or not. When this gadget is highlighted, the current range is activated and will be used when the user turns color cycling on. This is an additional control over the Rate Slider's top most position. It is very useful when one is fine tuning color cycling and needs to disable a range or two temporarily without changing the rate settings. Below the active gadget is the reverse gadget. This controls whether the selected range will be cycled forward or reverse. Highlighting this gadget will reverse the direction of the color cycle.

In the right half of the Set Cycles window is an array of up to 64 colored rectangles (cells). Each of these rectangles is divided into two square tiles with a blank rectangle appearing below. This Palette Area is used to select which colors make up a particular range. To define the lower limit of the range, click in the left-hand portion of the desired color. To define the upper limit, click in the right-hand portion of the desired

color. As this is done, note that a dotted line moves about to indicate the extent of the range and that the numeric range displays change.

Note: When using Extra Half Brite mode (64 colors), the range settings of the first 32 colors must also be applied to the associated half brite colors. That is, the color cycling will occur on both the desired colors and their corresponding half brites.

Single Step

The Single Step menu item in the Modes menu (or the F2 function key) causes color cycling to advance one step and stop. Color cycling remains halted until F2 is pressed again (at which point the cycle advances one more step), or until Tab is pressed (color cycling resumes). This Single Step feature can be used to freeze a cycling display, then step through it to study the effect. Once the Single Step operation has been executed the palette is changed to the current settings in the color cycle. This means that you may actually edit or save pictures in the intermediate stages of a color cycle.

Reset Cycles

Since the palette is changed to the current settings of color cycling, when the Single Step feature is being used, the Reset Cycles menu item is provided in the Modes menu. It allows you to reset the palette back to its state before color cycling was initiated. This must be done before using the Palette tool, since this operation makes the cycled state permanent. The F3 key is the keyboard equivalent of the Reset Cycles menu item.

Grab Screen

The Grab Screen feature in Fusion Paint is very unique in that it may be activated while within the program and once the chosen screen is "grabbed" Fusion Paint automatically becomes active again containing the image. Furthermore, you may even choose a pull-down menu from another screen before the "snapshot" is taken.

To grab another screen simply choose Grab Screen. A requester will appear telling you to activate the screen to be taken in ten seconds. After responding with "Yes" you must go immediately to the screen you want to take a snapshot of and make it the front most one using the depth arranging gadgets in the upper right corner of the screen. When only four seconds remain before the snapshot is to occur, the display will flash. After these four seconds go by, the display will flash again indicating the snapshot was taken. Fusion Paint

will automatically become the front most and active screen and will contain a snapshot of the screen you just took.

Change Screen

This option allows you to change the screen resolution, page size or number of colors on the fly from within Fusion Paint. It also allows the Preference menu to become active which allows you to set several default setting.

After choosing Change Screen a requester will ask "Ok to delete cuts and change screen?". By pressing the "Yes" button, you will see the same Startup window that usually comes up when Fusion Paint is executed. Simply make the desired changed and press Start. If the number of colors was reduced, you will be asked whether or not you want Fusion Paint to intelligently recolor the image using the new color settings. Since this process attempts to build a new palette designed to least affect the reduced color picture, you will usually want to respond with "Yes" if an image is open in the program.

When Change Screen is chosen, the first thing that Fusion Paint will attempt to do is to allocate memory for a backup of the current picture. If Fusion Paint is unsuccessful at this, a second prompt will be displayed asking if it is safe to delete the picture. Although cuts are always deleted upon changing screens, the picture will only be deleted if you respond with "Yes" to this second question.

Iconize

Selecting the Iconize item from the Modes menu will cause the current Fusion Paint edit session to be suspended. The current project and cuts are stored in memory, but as much Chip RAM as possible is freed up while Fusion Paint is iconized. This mode is useful when multitasking with other programs that need access to a lot of Chip RAM. To restore the iconized Fusion Paint back to its original state, make the iconized window active with the left mouse button then click anywhere in its Title Bar with the right mouse button. Iconization will only succeed if there is enough free memory left in the system to make a backup copy of the picture before the screen is closed.

The Undo Menu

Undos may be flushed from memory and enabled or disabled.

Undo/Redo

Allows the user to undo a selected item and then "bring it back."

Goto Oldest and Newest

There are two Undo menu items that will do multiple undos in one command. These are the Goto Oldest Undos and Goto Newest Undos items. These are provided for convenience in reviewing the complete undo buffer. By selecting Goto Oldest, you will be returned to the point before any painting was done since an automatic mark is always placed there. Selecting Goto Newest will return you to the latest point in the editing process.

Undos Are: Flush

The Flush item has four subitems each allowing you to selectively delete portion or all of the undo buffer to free up memory. "Flush All" will purge the entire undo buffer. The keyboard equivalent to the Flush menu item is to hold down the left-Alt key, left-Shift, and Ctrl keys while pressing either the Esc or Help keys. This is intended to be a two-handed operation, thereby preventing accidental flushing of the undo buffer.

In order to allow only partial deletion of the undo buffer, several other options are available. "Flush 1/8" allows you to delete one eighth of the current undo buffer starting with the oldest undo first. "Flush 1/4" deletes the oldest one fourth of the buffer and "Flush 1/2" deletes the oldest one half. One of these options should be selected when the screen flashes indicating you are low on memory.

The Preferences Menu

The Preferences menu, which can be used to configure certain default startup settings for Fusion Paint, is only accessible when the Startup window is displayed. The four items that this menu has for establishing default settings are Load Program, Undo Buffer, Auto Start, and Default Tool. The Make

Permanent menu item will cause these default values to be saved to disk.

Load Program

Two options (All and As Needed) are currently supported in the Load Program menu item. Selecting All will cause Fusion Paint to load its entire program into RAM at startup. As Needed will initially load only part of the program and the code for new tools is loaded into memory when they are first accessed. The major difference here is that the As Needed setting will start noticeable faster when run from a floppy disk. Users of a single drive floppy disk system should use All, since the disk will not be accessed each time a tool is selected for the first time.

Undo Buffer

This menu item is used to specify the number of undo levels that Fusion Paint should provide. The important things to balance here are the benefits that a large number of undos provide against the memory costs of these undos. For more information on undos and recommended settings to use, see "The Undo Menu" section in Chapter One of the Reference Manual and the "Multiple Undos" section in Chapter Three of the User's Manual.

Auto Start

The third menu item controls the AutoStart feature. This is a great convenience for those who use primarily one editing configuration. When "Yes" is selected Fusion Paint will not bring up the Startup window during the startup phase. Fusion Paint will be configured to the last saved screen and page sizes and the edit window opened automatically. The Make Permanent menu item saves the current Preference menu settings and the Startup window settings.

Default Tool

The fourth menu item is of interest to WorkBench users who have customized their Amigas to some extent. The current selection of this menu item is used as the Default tool whenever Fusion Paint saves a project or cut and creates an icon for it. Four possible tool names, from which the most useful one may be chosen, are accessible.

The first "Fusion" is used when Fusion Paint is stored on the disk in the same drawer as the various pictures. The second "Fusion:Fusion" is the default setting and is useful either when Fusion Paint is stored on a disk called "Fusion" (this is how the master disk is set up), or when Fusion Paint is stored

in a directory to which the logical name "Fusion:" has been assigned with the Amiga DOS "Assign" command (this can be useful for hard disk owners). The third setting ("C:Fusion" is useful for those who wish to put Fusion Paint into their command directory. And the fourth (":Fusion") is useful when a user wishes to put one copy of Fusion Paint on each working project disk.

Make Permanent

The Make Permanent menu item will cause the current Preferences settings and Startup window values to be saved to disk. These defaults will be saved in a file called "Fusion.config" in the "S:" drawer (the same place the Startup-Sequence file is located). Note that since this file is often located on the boot disk, it may be necessary to temporarily remove the write protection on that disk to allow the file to be written.

This ability is very useful for those who work a lot in one particular resolution since doing so will cause Fusion Paint to start automatically in the desired resolution saving time during startup. Just be sure that the desired screen height and width, page height and width, and number of colors are set before selecting Make Permanent.

If for some reason the Fusion.config file gets corrupted or set into a configuration in which Fusion Paint cannot start (for example Auto Start-Yes selected and a very large screen size specified), delete the configuration file from the "S:" directory to reset everything. To accomplish this, use the CLI command:

```
Delete S:Fusion.config
```

The Freehand Tool

The Freehand tool is used to paint various types of line graphics. The Freehand tool's Control Panel, displayed on the right-hand side, shows the icons for the three main line painting modes. These are the Freehand Sketch mode, the rubberbanded Straight line mode, and the Rubberbanded Horizontal and Vertical Line mode.

Freehand Sketch Mode

The Freehand Sketch mode, is very easy to use. Click on its icon. To paint, hold the left mouse button down while moving the mouse. The Freehand mode is often used to rapidly sketch out a figure.

Rubberbanded Straight Line Mode

The General Rubberbanded Line mode is somewhat more complicated. After selecting this (Straight Line) mode, click once to set the first end point. When the mouse is moved, a straight line between this point and the current mouse position will be rubberbanded. While rubberbanding a line, it is possible to scroll the page to paint long lines. To set the second end point, click a second time in the painting.

Cancel Rubberbanding Mode

To stop the rubberbanding without painting anything permanently in the picture, make use of the general cancel rubberband feature. To cancel any rubberbanding operation that must be aborted, move the mouse up to the top of the screen and click somewhere in the Title Bar area. The line can be dragged anywhere on the screen before setting the second end point, by holding down the Shift key and moving the mouse.

Rubberbanded Horizontal and Vertical Line Mode

Horizontal and Vertical Rubberbanding works in the same fashion as the general rubberbanding method just described. However, the program forces the line to be horizontal or vertical. The direction that the line runs is determined by the direction (horizontally or vertically) in which the mouse pointer has been moved the most from the starting point of the line.

The Boxes Tool

The second icon at the right of the screen in the Main Tool Bar is the Boxes tool. This is the tool to use to paint or fill rectangular regions. The Boxes tool Control Panel appears on the right-hand side of the screen as usual.

Cut Selection Arrows

The Boxes tool is the first tool so far to have the Cut Selection Arrows in its Control Panel. These are the arrows appearing at the top of the Control Panel. They are used to scroll through the Cut Clipboard list. The first time the Boxes tool is selected you will probably not see any cuts displayed. However, if any cuts (brushes) are available on the Clipboard, clicking on one of these arrows will cause one to appear. The cut will be displayed on a window of its own in the top left-hand corner of the screen. Cuts can be used for a number of applications including patterned area filling and brushing. Below the Cut Selection Arrows are the mode selection buttons. The four available modes are: Hollow Box, Solid Box, Patterned Box, and Complemented mode.

Hollow Box Mode

Clicking on the Hollow Boxes icon will activate the Hollow Box Painting mode and will serve to illustrate how rubberbanding of a rectangular area works throughout the program. Move the mouse pointer to somewhere within the current area of view and click to set the upper left-hand corner of the box. Now, pull the pointer towards the bottom right-hand corner of the screen. As the pointer is moved, a box will stretch down and to the right. To demonstrate rubberbanding of rectangles, move the mouse pointer to the left, past the initial left edge of the box and observe what happens. The box folds up and becomes a line. It then pushes the left edge along with it. As one can readily verify, this "pushing" effect also occurs on the top edge of the box, if the pointer is moved up.

Now for another twist, move the mouse down and to the right a bit so that a box is again displayed. Next, press the left Shift key and hold it while moving the mouse in a circle. This has the effect of keeping the box at a fixed size while it is moved to the desired position. Finally, when the size and location of the box are satisfactory, it can be painted in the current foreground pen color by clicking a second time.

NOTE: To cancel a rubberbanding option, click on the Title Bar.

Solid Mode

After selecting the Solid Boxes icon in the Control Panel, rubberband the area to be filled. Upon the second click of the left mouse button, the program will fill that rectangle with the current foreground pen color. The foreground pen color is changed by choosing the desired color with the mouse from the Palette Bar. The current foreground pen color is displayed just above the Control Panel.

Pattern Mode

If a cut is visible, when this mode is selected, the box you paint will be filled with the pattern shown in the Cut window. This mode allows you to take the cut that is currently displayed in the Cut window and fill the rubberbanded rectangle with the pattern. The filling process is executed in a globally aligned sense. That is, if several areas are pattern filled with the same pattern, the patterns will link up properly at the points the areas overlap.

The Cut tool can be used to load or make more patterns for use in this and other modes. The painting speed in this mode depends on the size of the pattern in the Cut window. A smaller pattern (tile) takes longer to fill any given area than a larger tile does, but the larger tile takes up more memory.

To create a pattern in a rectangular area: select the Patterned Boxes icon in the Control Panel, select the desired pattern by clicking on the Cut Selection Arrows at the top of the Control Panel, and box the area to be patterned using the rubberband method.

Complement Mode

The fourth mode of the Boxes tool is the Complement mode (the icon with the layered squares). This mode, which is most useful when producing black and white paintings, can be used to highlight areas by "flipping" the pixel colors in the boxed region. With a black and white painting, this mode can be used to produce the reverse video effect. And with a color painting, it can be used to produce some quite abstract "negative image" effects.

To demonstrate the Complement mode: paint a solid box with one of the dark colors in the Palette Bar, select the Complement mode in the Control Panel, and rubberband a rectangle such that it overlaps part of the solid box and observe the results.

Power Borders

Power Borders are accessed through an Alt key which is held down at the second mouse click of the Hollow Box and Pattern modes of the Boxes tool. If the Hollow Box mode is currently selected, a hollow border will be drawn based on the currently displayed cut. If the Pattern mode is instead currently selected, a solid filled border (again based on the current cut) will be drawn.

Since Power Border patterns are kept in standard cuts, changing the border pattern is as simple as selecting a different cut. This approach allows custom borders to be easily designed and used. The Fusion Paint disk comes with a Borders drawer that contains sample cuts designed to be used as Power Borders. After loading these cuts with the Open-Cut Drawer item in the Project Menu, try creating borders with them. While drawing Power Borders based on these predefined cuts can be useful, you will want to be able to create your own custom borders. For this reason, the details of how Fusion Paint creates the border are given below.

Cuts which can be broken into a 4 x 3 grid by Fusion Paint will produce flaw-free borders. When Fusion Paint is about to use a cut to draw a border, it looks at the cuts dimensions (width and height) and from these determines if this border should be treated as the 3 x 3 case previously described or as a specially constructed 4 x 3 case.

The Circles Tool

Use this tool to paint circles, ellipses, and smooth curves. The four major modes for this tool are the Circle mode, the Ellipse mode, the Single Control Point Curve, and the Double Control Point Curve.

Circle Mode

Selecting this mode allows the ability to paint circles. Clicking once sets the center point. Moving the mouse pointer rubberbands the circle. Once the desired size is reached, clicking a second time will paint the final version of the circle in the current foreground pen color. Holding the Shift key down while the circle is rubberbanded, allows it to be repositioned with the mouse.

Ellipse Mode

This mode can be used to paint irregularly shaped images. Use this option following the same method as the Circle mode just described.

Single Control Point Curve

This mode can be used to connect two points by a smooth curve that is not necessarily circular. The procedure for painting such a curve is to select its icon in the Control Panel, click on the two end points that the smooth curve is to join (a line will appear between them), rubberband the curve with the mouse pointer, and when the curve assumes the desired shape, click a third time to paint it on the screen. While being rubberbanded, the curve can be positioned with the mouse by holding down a Shift key.

Double Control Point Curve

This mode is used when the need arises to join two lines with a curve that blends smoothly into both lines or when other complex curves are required. To use this mode, click on its icon, click on the two end points, and adjust the shape of the two curves by moving the mouse while holding down either the Ctrl or the left-Alt keys. Pressing the Alt key while moving the mouse specifies the slope of the curve at the first end point. Pressing the Ctrl key specifies the slope at the second point.

The Airbrush Tool

Unlike the previous tools, The Control Panel for the Airbrush tool consists of three sliders and two icons. The default settings of the Airbrush tool allow the gun to operate in a normal airbrushing mode that is common to nearly all paint programs. The Airbrush tool deposits dots of paint in the current foreground pen color.

Hold down the left mouse button while moving the mouse. With the sliders, the width of the spray can be varied from a single pixel up to about 100 pixels. There are two controls to vary the width of the spray: a horizontal (X) and a vertical (Y) width control. This allows the shape of the spray to be suited to the shape of the area to be painted. The Density (D) slider allows you to adjust how heavy the relative paint deposit will be in a given area.

Spray Patterns

The shape of the spray can be varied in another way. The two icons at the top of the Control Panel allow you to select from a rectangular and an elliptical spray pattern. The size of both shapes of spray are fully adjustable in the horizontal and vertical directions. The density (or rate) of spraying can be varied with the D slider.

The Brush Tool

As can be deduced from the Control Panel's top two icons, the Brush tool makes use of cuts as brushes. Click on the Cut Selection Arrows at the top of the Control Panel to select the brush to be used. Move the mouse pointer to the center of the screen and hold down the mouse button to paint with the current brush.

Paint Mode

The Brush tool has two modes of operation. In the first, holding down the left mouse button while moving the mouse will leave a series of images behind. The Brush icon on the left side of the Control Panel is designed for this operation and is the default. By first cutting an image with the Cut tool, you can paint with virtually any graphic which is smaller than the screen. If you need to sketch an outline which is smaller than one pixel wide, create a cut which is the desired size and use this mode to sketch with it.

Paste Mode

The Paste mode, which is activated by the icon on the right, sets exactly one copy of the current brush on the painting of each click made with the left mouse button. Because several cuts may be in the Cut Clipboard at once, the Paste mode may be used effectively in the assembly of many types of paintings which have repeated symbols such as circuit diagrams, floor plans or even organizational charts.

As you probably will have noticed by now, some regions of the brush appear to be transparent. Any area of the brush that is the same color as the background color, when the brush was made, appears transparent.

The Cut Tool

The Cut tool is used to make copies of parts of the painting for use as brushes, fill patterns, Power Borders, or to perform special effects.

The Cut Clipboard

Box or lasso the area to be copied. After the second click, a new window will appear on the top left-hand corner displaying the area that was just cut. All cuts are placed in the cut clipboard.

To see what is currently on the cut clipboard, scroll through the cuts with the Cut Selection Arrows at the top of the Cut tools Control Panel. There are four other icons in this Control Panel.

Lasso Cuts

To select the Lasso Cut mode rather than the normal rectangular mode, click on the Lasso in the Cut Control Panel. When in Lasso mode, the cut is made by depressing the left mouse button at the start of the lasso, then dragging the mouse pointer around the object (with the mouse button held down) and releasing the button. The lasso will always be closed by a straight line from the first point to the last point. This can be useful for cutting when one edge of a cut follows a straight edge.

Deleting Cuts

The Trash Can icon is used to delete the current cut from the Cut Clipboard. There is no way to recover a cut that has been deleted with this Trash Can. Again, this process is very fast, so the only effect is that the cut window will either disappear or a new cut will appear in it.

Saving and Loading Cuts

The next two icons are the Save (to disk) and the Load (from disk) Cut icons. With the Save Cut icon, the currently displayed cut may be saved to disk as an IFF image. With the Load Cut icon a previously saved cut (or even a picture if memory allows) may be loaded into Fusion Paint's Cut Clipboard. Either of these icons will immediately bring up the file requester.

When a cut is saved to disk, the current color palette is saved within the file. However, when a file is loaded from the disk using the Cut tool's Load Cut function, any color palette information is ignored. If this color palette is needed, the loading must be done with the Open item in the Project menu.

The Fill Tool

The Fill tool is a general purpose tool that allows area filling to be applied with solid colors (selected by the Palette Bar) and cuts. The Control Panel has four icons to accomplish this. At the top there are two Cut Selection Arrows which allow you to scroll through the cuts in the Clipboard. The two gadgets below the Cut Selection Arrows select either solid color fills or pattern fills. The current cut is used as fill material for patterns.

The method of indicating the area to be filled works in the same fashion with both of the area filling modes. First move the mouse into the main painting area and box (rubberband) a region that contains the area to be filled. Then click somewhere within the actual area to be filled. This indicates when to start the fill.

Cut Selection Arrows

The Cut Selection Arrows work in the same way as previously mentioned in the Boxes tool section. Simply press one of the arrows until the desired cut is visible. The visible cut becomes the current cut.

Pattern Fill Mode

The Pattern Fill mode allows an area to be filled with the currently selected cut. To demonstrate filling with a cut follow this procedure. Using the Freehand tool paint a heart shaped region. Return to the Fill tool. Using the Cut Selection Arrows select a cut. Finally, box an area on the screen which encloses the heart and click within the heart.

Effects(Fx) Tool

The Effects (Fx) tool manipulates cuts in two ways and is one of the tools that does not directly affect the main canvas. All of its work is with the cuts available on the Cut Clipboard. Selecting the Effects tool brings up a Control Panel on the right-hand side of the screen with four icons and a Cut window in the top left corner of the screen if any cuts are in the Clipboard.

The first two Control Panel icons are used to scroll through the Cut Clipboard. They operate the same way as the ones in the Box, Fill, and Cut tools. Below these Cut Selectors, there are two icons which take immediate effect on the currently displayed cut. These icons and their functions are subsequently examined.

Cut Stretch Tool

Clicking on this tool icon will cause a rectangle, the same size as the cut to be processed, to be displayed in the upper left corner. Also, a rubberbanding rectangle will appear on the screen attached to the mouse pointer. The rubberbanding rectangle indicates the size of the stretched cut when the stretching operation is complete. To resize the cut, move the mouse so that the rubberbanding rectangle is the desired size, then click.

Cut Rotate Tool

This icon can be used to rotate the current cut. To rotate a cut, scroll through the Cut Clipboard until the proper cut is displayed and click on the Rotate icon. A box which is the same size as the cut to be rotated will appear near the center of the screen. By moving the mouse, this box can be rotated to the desired orientation. When the select button is clicked, the actual rotation of the cut will begin. Depending on the size of the cut to be rotated, this action can take anywhere from a few seconds (for a small cut) to a minute for one near the size of the screen.

To abort the rotation of large brushes before they have run their course and finish normally, click in the small message window that is displayed in the middle of the screen during the operation.

<p>Note: Both the stretching and rotating operations are irreversible. For this reason, it is a good idea to make duplicate cuts of the same image before experimenting with these operations.</p>

The Text Tool

The Text tool is a line-oriented text placing tool which can be used to put small amounts of text on the page very quickly. Once text is placed in the desired position, the appearance and location can be changed before being locked into position

Entering Text

To enter text:

- Click in the box, type in the desired information, and hit the Return key. The text will appear in the painting near the center of the screen.
- The Text can then be moved to the desired position by either, clicking on the desired location, or by holding the select button down and dragging it with the mouse. The text will be rendered in a special painting mode called "complement" which prevents the background from being damaged as the text is moved around.
- When the text is in the correct position, hit the Checkmark gadget to fix it in place.

Text may be altered at anytime before selecting the Checkmark gadget. To edit text before hitting the Checkmark, click in the text entry box and make the desired changes, then hit the Return key.

When the Checkmark gadget is chosen, several operations occur:

- The final version of the text is placed on the screen.
- The contents of the text entry box will be cleared.
- The text entry box is automatically activated so that the next line of text can be immediately entered from the keyboard without the need to select the text entry box.
- An automatic carriage return and line feed is printed so that the next line of text will be placed below and left aligned with the text above.

To leave this tool, click on the icon of the Stop button, in the Control Panel. You must exit this tool in order to get access to the other tools.

The Fonts Tool

This tool can be used to load any font that is currently in the system for use in subsequent Text tool and operations. To use this tool, activate it and click on the font name and size displayed in the main window area. Then click on the Load button (the from disk icon) to load the font into memory for use. When the font has been loaded, the tool will close and the normal screen will be restored.

The Fonts Tool

Fusion Paint will look to the fonts directory of the boot disk to obtain the list of fonts which will show up in the fonts tools window. Therefore, one can have fonts other than those supplied with the system (Workbench) disk available in Fusion Paint. One method of getting Fusion Paint to see the desired fonts is to copy them to the fonts directory of the system disk. Use the CLI copy command to accomplish this. Another solution is to force the software to look to another directory which contains the desired fonts, rather than the standard fonts directory. Once the font directory has been reassigned, Fusion Paint's Fonts tool must be told to load the font list from the new location. To accomplish this, hold down an alt key while clicking on the Fonts tool icon in the Main Tool Bar. Fusion Paint will then re-scan the disk and rebuild its font list.

Another way of changing the fonts directory is to put all the fonts in the root directories (the first level) of disks called "FONTS." Then to use a particular set of fonts, put the appropriate disk in a drive. Use the Alt key while clicking on the Fonts tool to get Fusion Paint to scan the fonts when needed.

The Magnify Tool

Upon selecting this tool, a small box will be under the control of the mouse. Use this box to highlight the area in which to work, then click the left mouse button. The outlined area will be magnified on the screen. The foreground and background pens may be changed and the Pick Color item in the Modes menu can be used while in the Magnify mode. Most other tools are inactive while in Magnify mode.

The Magnify tool can be used to erase very small or irregular areas by making the foreground pen color the same as the background pen color and painting over the pixels which need to be erased.

The Erase Tool

Seven different options are available for erasing part or all of an image from the screen. These options are Lasso, Rectangle (the default), All, or any of four predefined eraser sizes supplied for your convenience.

When the Lasso icon is selected, a region of any shape may be erased by pressing the left mouse button down, dragging the mouse around the region, and releasing the button. The lasso will then finish the loop by connecting the last point to the first point with a straight line and erase the area contained in the lasso.

The All icon can be used to erase the entire painting surface. A second way to erase the entire project is to hold down the Alt key while selecting the Erase tool from the Main Tool Bar. This is the most convenient way of erasing the screen, but you will not be warned as with the All icon.

The Palette Tool

The Palette tool can be used to change any of the colors in the Palette Bar. Upon selecting this tool, three sliders and a group of icons will appear in the Control Panel.

Altering Palette Colors

Initially the three sliders will be set to the red, green and blue components of the current foreground pen. Select any element of the Palette Bar to change its color. To remix the color currently selected, drag the sliders up and down with the mouse or click below and above the sliders somewhere to move the knobs by one color level increments.

Displayed above each slider is the level of color contributed by that slider. It is a hexadecimal number which goes from 0 to 9 and from "a" to "f". The numbers are provided to facilitate easy duplication of colors. Also a group of shades of a given color can be fashioned. A gray scale, for example is easily done. A value of 0 for red would indicate that no red is mixed in the current color. A value of "f" would specify all red.

To save a specific color palette on disk, use the Save As Project menu item on a small painting. Or use the Cut tool's Save icon on a cut. The best process is to create a very small cut and save the result to the disk with the Cut tool's Save icon. When this cut is loaded with the Open item of the Project menu, the current palette will be changed to the one that is stored in the file. The image of the painting will be affected according to the size of the cut.

There are four control icons associated with the Palette. The first one is used to load the palette of a ColorFont. The second is used to make a smooth tonal scale. The third is used to copy colors in the Palette Bar. And the fourth is an undo function.

ColorFont Palettes

To load the palette that comes with a ColorFont, first use the Fonts tool to load the ColorFont. Once the ColorFont is loaded, select the Palette tool and click on the Load ColorFont Palette icon which is located in the upper left corner of the Control Panel.

Color Ranges

To make a smooth tonal range, select the end points of the range with the foreground and background pens, then click on the Range icon which is located in the upper right corner of the Control Panel. Immediately the colors between those selected by the foreground and background pens will be replaced with a smooth scale of in between colors. This feature is useful when setting up a palette for smooth shading and smooth tone airbrush painting.

NOTE: To change the foreground pen color, click on the desired color of the Palette Bar. To change the background pen color, click on the desired color while holding down a Shift key.

Copy Color

The Copy Color icon (which is just below the ColorFont Palette icon) will cause the current background pen color to be copied into the palette box currently in use as the foreground pen.

Undo Palette Changes

The Undo icon allows free experimentation with a palette. Clicking on this icon will restore the palette to what it was when the Palette tool was activated. However, once you leave the Palette tool by requesting another tool all palette changes become permanent.

The Print Tool

The Print tool provides control over how the painting in the computer will appear on the printed page. The three basic types of printing are small regions for test settings, screen format prints, and full-page prints.

Printing

To start the printing process, click on the Printer icon in the Control Panel. Fusion Paint will verify that it is really alright to commence printing. This allows the opportunity to check the printer's paper alignment and settings. A few seconds after pressing the YES button, the printing will begin.

A cancel printing feature has been built-in to save time for those situations in which you do not want the printing to be completed. To cancel the printing, click inside the window which displays the "Stop Printing..." message. How quickly the printer stops depends on several factors. But the only one that can be readily changed is to turn the printer OFF LINE. This usually sends a message back to the Amiga which will cause the printer routine to realize that it has been told to stop. If the printer has a large internal buffer, there might be additional delays before the printer stops. Small printouts may never get canceled because of the buffer effect.

All and Boxed Modes

There are several ways to specify the area to be printed by the Print tool. With Fusion Paint, any rectangular portion of the project may be printed. When the Print tool is first selected, the area to be printed is set to be the currently displayed window. This can be modified by boxing (rubberbanding) an area in the painting. Once the area has been defined, select the Printer icon to begin the output.

While boxing the area to be printed, the painting can also be scrolled. Thus the printed region can be as small as a single pixel to as large as the entire page. There is also a special icon to direct the Print tool to print the entire page. It is the All icon. If enough memory is available, a page size which would fill a page on your printer can be defined.

Auto Sized Mode

The icon just below the Boxes icon is the Auto Size icon. In the AutoSize mode, the printer driver will attempt to keep the aspect ratio of the painting the same on the printed page as it is on the display screen. This means that circles on the screen will also be circular on the printer.

Keyboard Equivalents

Fusion Paint support keyboard equivalents for the Main tools and their Control Panels. These keyboard equivalents are explained in the following sections.

The Function Keys

F1 Key

Pressing the F1 key puts Fusion Paint in the "Pick Color" mode so a new pen color may be directly selected from the picture. To do this, hit the F1 function key and click on a pixel of the desired color with the left button of the mouse. If a Shift key is held down while clicking with the mouse, the picked color will be placed in the background pen instead. It is possible to use the real time Zoom Lens to select the actual pixel to copy the color from by depressing the right mouse (menu) button before selecting the desired color. The Zoom Lens is a helpful aid when picking colors from very small areas (even a single pixel) on the screen

F2 Key

The F2 key is used to single step through a color cycling display. This is the keyboard equivalent for the Single Step menu item in the Modes menu.

F3 Key

The F3 key is used to reset the palette when a display is paused in a color cycled state. This can happen when the F2 key has been pressed to single step through a color cycling effect. It is best to reset the palette with the F3 key because some operations (accessing the Palette tool) will make the palette changes permanent.

F8 Key

The F8 key performs the same function as the Color Brush item in the Modes menu. It is used to change the color of the current brush to that of foreground pen.

F9 Key

Pressing the F9 key once will remove the mouse pointer from the display. Pressing the F9 key a second time will turn the mouse pointer back on. This is useful when doing fine detail work where the mouse pointer is obscuring the work area. It can also be used with brushes. Another use for this is to hide the mouse pointer when showing a picture for recording on film or video tape.

F10 Key

Pressing the F10 key once will remove the icons from the screen. Pressing the F10 function key a second time will restore the icons. This is a display mode only, intended for use when displaying a picture for recording it on film or video tape. As this mode pauses the editing process, any rubberbanding or brushing that is in progress will still be visible on the screen when the icons have been turned off.

Miscellaneous Keys

Right-Amiga 4 and 8

Usually it is not desirable to flush the entire undo buffer. For this reason, the right-Amiga and "4" key combination can be used to flush the oldest one fourth of the buffer.

At times it is desirable to flush only a small portion of the undo buffer. For this reason, the right-Amiga and "8" key combination can be used to flush the oldest one eighth of the buffer.

Right-Amiga O, Q, and S

The right-Amiga and "O" key combination is equivalent to choosing the Open-Picture submenu item in the Project menu. The right-Amiga and "Q" key combination is equivalent to choosing the Save Quick-Picture submenu item in the Project menu. The right-Amiga and "S" key combination is equivalent to choosing the Save As-Picture submenu item in the Project menu.

Tab Key

The Tab key is used to toggle color cycling on or off. If the Tab key is pressed while a Shift key is being held down, the Set Cycles window will be activated.

Return Key

The Return key scrolls the page so the screen is centered on it. It can also be used to scroll quickly to the center of a large painting.

Cursor Keys

The Cursor keys may be used to scroll the page in any direction. Like the Scroll Arrow icons, the effect of these arrows is modified by holding down either the Ctrl or Shift key while pressing the Cursor key. The Shift key increases the speed of scrolling by a factor of four, and the Ctrl key causes the page to scroll to the end of the page in the chosen direction. By using the Return key before Ctrl and a Cursor key, it is possible to get to nine regions on a page precisely and very quickly.

Esc and Help Keys

These keys will cause one Undo to occur each time either is pressed. The Shift keys modify these keys and cause reverse undoing to take place.

Ctrl/left-Shift/left-Alt and Help or Esc Keys

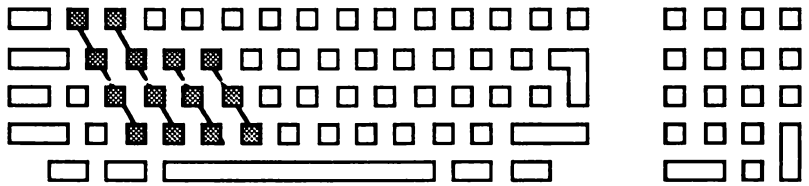
The special combination Ctrl, left-Shift, left-Alt key while pressing either the Help or Esc key will execute the Flush-All submenu item in the Undo menu. This frees the memory consumed by the undo buffer. Any undos which are flushed in this manner are gone. That is, the previous operation cannot be redone.

Usually it is not desirable to flush the entire undo buffer. For this reason, the right-Amiga and "8" key combination can be used to flush one eighth of the undo buffer, and the right-Amiga and "S" key combination can be used to flush one fourth of the buffer.

Ctrl, Shift, and Alt Keys

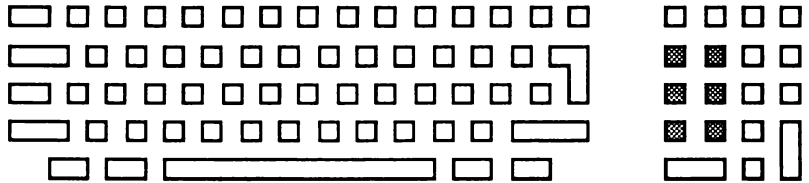
The usual designation is that the Shift keys are used to indicate that an object (for example a circle or a line) is to be dragged about the page. The Ctrl and Alt keys normally act as a modifier to adjust some other parameter of a rubberbanded object. An example of this is the Double Control Point Curve option in the Circles tool which uses the Ctrl and Alt keys to select the control point to be adjusted.

Two additional regions of the keyboard are used to duplicate the use of the mouse to select the various tools along the right of the screen and the various extra control icons along the right edge of the screen. The first of these regions is the two vertical rows of keys that read 1QAZ and 2WSX and then the two vertical rows of keys that read EDC and RFV (U.S. keyboard). These keys are used to duplicate the Main Tool Bar icons. These rows of keys have a one-to-one correspondence with the Main Tool Bar icons.



When a particular tool is selected (for example the Circles tool), a Control Panel will be displayed on the right-hand side of the screen.

The pad is set up as one column of two keys (on the Amiga 500 and 2000) which are arranged in the following fashion:



TROUBLESHOOTING

Starting

Problem 1: For the current session, Fusion Paint previously ran fine, but now will not start.

Solution: Ask for a smaller screen size or try requesting fewer colors. Close other programs that are running and all unnecessary windows.

Problem 2: A 320x200 screen and page size in two colors would not load after closing all unused windows and releasing all possible memory.

Solution: Reboot the system from the current Workbench disk and try again, or reboot with a new copy of Workbench.

Problem 3: Fusion Paint starts when the Amiga is booted from a new copy of the original Workbench disk, but does not execute properly when the Amiga is booted from the working copy of the Workbench disk.

Solution: Make certain that the libs directory contains these files:

diskfont.library
icon.library
mathtrans.library
info.library
arp.library
all printer files

Problem 4: When Fusion Paint is started, the message "Could not allocate the Edit page, not enough memory" is displayed.

Solution: Make more memory available by closing open windows and programs. Request a smaller page size, smaller screen size, and fewer colors.

Printing

Problem 1: It will not print.

Solution: Check the printer cable. Make sure you are using the correct printer driver and the latest version. Try booting from the Fusion Paint disk. It may be that the page size is too big to print. Use the box mode of the Print tool to box a small area. If this prints, select a smaller page size for printing.

Problem 2: The message "Cannot open printer" is displayed upon sending an image to be printed.

Solution: Select a printer driver on the Workbench disk.

Memory

Problem 1: When pull-down menus are selected, nothing happens.

Solution: Try the keyboard equivalent for Flushing Undos to restore memory.

Problem 2: When using the Airbrush or Brush tools, the screen starts flashing wildly.

Solution: Restore memory as described above.

INDIANA JONES AND THE LAST CRUSADE

AMIGA STARTER

THE BYZANTINE CRUSADER -- MAY 25TH, 1938

Holy Grail Search To Continue

By Bob Ellis

Dr. Henry Jones was back in hiding last night after speaking to this reporter about his continued search for the Holy Grail treasures. New information is believed to have been found by Dr. Jones on his trip to Europe.

There was a deepening mystery when Dr. Jones vanished from his home recently after many years of research into the real location of the sacred treasure. Many believed that he had travelled to the Nile Delta but this paper is proud to reveal that he has found further evidence in Central Europe. While he was not willing to give detailed information, we believe that the Dr. has found the whereabouts of the famous shield said to contain the vital directions needed to find the Holy Grail.

What, I asked Dr. Jones, was the Holy Grail? "The chalice used by Christ during the Last Supper" he replied, "The cup that caught his blood at the Crucifixion and was intrusted to Joseph of Arimathaea. It disappeared and was lost for a thousand years before being found again by three knights of the First Crusade, three brothers to be exact."

"One hundred and fifty years after finding the grail, two of the brothers began the journey home but only one of them made it back. Before dying of extreme old age, the knight told his story to a Franciscan friar. He did not reveal the location of the Holy Grail, but instead promised the friar that two 'markers' had been left to mark the way.

"The first of these markers has recently been discovered, incomplete, in the mountain regions north of Ankara and is currently in the hands of Mr. Walter Donovan, a major contributor to the Old World Museum."

The second marker is thought to be buried with the second brother, and it is this marker that Dr. Jones is seeking at this time.

Little mention is made of the third brother by most historians but it is believed by many of them that he remained behind to become the keeper of the grail. If this is so, then what has happened to him after all these years? Is he still alive ?

Dr Jones, his white beard showing a faint smile on his lips, declined to comment. With that smile our interview ended and he departed.

Your reporter watched him leave, finished making notes of the conversation, summoned a gondola, and returned to his hotel to write this report.

Grail

by Marcus Brody

The word grail is derived from 'gradule', which means step by step, degree by degree.

There are six degrees or levels of awareness in the grail quest and each one is represented by an animal. The raven was the symbol of the first degree and represented the messenger of the grail.

The peacock signified the second degree and symbolized the search for immortality.

The sign for the third degree was the swan to show that the person who searched for the grail sang a swan song to selfish and indulgent ways.

The fourth degree was the pelican, a bird willing to nurture its young by wounding its own breast.

The lion, its leadership and conquest, defined the fifth degree.

The sixth and highest level was represented by the eagle and was achieved at the end of the quest to show knowledge and power gained.

PROGRAM INSTRUCTIONS

Loading Instructions

Turn on the computer and wait for the workbench prompt by the computer. Ensure that the disk is 'write protected' and insert into disk drive.

Game Play

Indiana Jones and the Last Crusade is an exciting multilevel game in which you control Indy in his search for various artifacts. There is an important artifact on each level. The objective of the game is to fight your way through each level and collect the artifacts. Once the artifact is collected, then you need to fight your way to the end of the level.

Each level presents a different challenge and task. On level 1 you need to collect the Cross of Coronado but remember to collect the torches or it will get dark and difficult to see your way around the caves. Once you have the Cross you need to escape over the top of the train.

Level 2 takes you deep within the catacombs. When the catacombs were built, secret archways were constructed to hinder false searchers. Presented with 6 arches, the true searcher finds the correct arch and continues on his search. The false searcher, unable to choose the right arch, is doomed to wander the catacombs in vain, unable to find the Crusader's Shield that lies there. When beginning this level you will see the arches, and above each arch is a coded hieroglyphic. These change daily and the date is shown above the arches. To find the correct arch look up the date on the grid shown on the last page of the Byzantine Crusader and enter through the arch that matches the code you find. Once you have found the shield you need to scale the castle wall, but beware of the lightning.

Level 3 and the game moves onto the airship. Search for the Grail Diary that Indy's father has lost here. Be careful to pick up the passes as you move. They are made of flimsy paper and fall apart after a short time. If Indy does not have a pass the alarm will be raised, making your task more difficult.

And finally to Level 4. Dr. Jones Sr. has been shot and his only hope is that Indy can get to the Holy Grail in time. With dad's heart gradually turning to stone, you must guide Indy quickly, but safely past the traps set by the Crusade Knights. Time is your enemy and only the brave will make it in time.

Gameplay Controls

If you have a joystick connect it into the second Port.

F9/F10 will pause/Unpause the game.
Shift/ESC will abort the current game.

Hieroglyphic Grid

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1	△	△	△	△	△	△
2	△	△	△	△	△	△
3	△	△	△	△	△	△
4	△	△	△	△	△	△
5	△	△	△	△	△	△
6	△	△	△	△	△	△
7	△	△	△	△	△	△
8	△	△	△	△	△	△
9	△	△	△	△	△	△
10	△	△	△	△	△	△
11	△	△	△	△	△	△
12	△	△	△	△	△	△
13	△	△	△	△	△	△
14	△	△	△	△	△	△
15	△	△	△	△	△	△
16	△	△	△	△	△	△
17	△	△	△	△	△	△
18	△	△	△	△	△	△
19	△	△	△	△	△	△
20	△	△	△	△	△	△
21	△	△	△	△	△	△
22	△	△	△	△	△	△
23	△	△	△	△	△	△
24	△	△	△	△	△	△
25	△	△	△	△	△	△
26	△	△	△	△	△	△
27	△	△	△	△	△	△
28	△	△	△	△	△	△
29	△	△	△	△	△	△
30	△	△	△	△	△	△
31	△	△	△	△	△	△

	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1	△	△	△	△	△	△
2	△	△	△	△	△	△
3	△	△	△	△	△	△
4	△	△	△	△	△	△
5	△	△	△	△	△	△
6	△	△	△	△	△	△
7	△	△	△	△	△	△
8	△	△	△	△	△	△
9	△	△	△	△	△	△
10	△	△	△	△	△	△
11	△	△	△	△	△	△
12	△	△	△	△	△	△
13	△	△	△	△	△	△
14	△	△	△	△	△	△
15	△	△	△	△	△	△
16	△	△	△	△	△	△
17	△	△	△	△	△	△
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19	△	△	△	△	△	△
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22	△	△	△	△	△	△
23	△	△	△	△	△	△
24	△	△	△	△	△	△
25	△	△	△	△	△	△
26	△	△	△	△	△	△
27	△	△	△	△	△	△
28	△	△	△	△	△	△
29	△	△	△	△	△	△
30	△	△	△	△	△	△
31	△	△	△	△	△	△

F/A-18 INTERCEPTOR

AMIGA STARTER

OVERVIEW

F/A-18 Interceptor tests your air combat ability as you fly a super-modern jet fighter against destruction-seeking intruders. The action unfolds in a realistic flight environment; you skim over the Bay, soar above the San Francisco Peninsula, and perform maneuvers above the Pacific Ocean. You look out from the cockpit of a Navy F/A-18 Hornet or an Air Force F-16 Fighting Falcon.

Read the "Getting Started" section to begin play, and study the "Aircraft Reference" section to become familiar with the joystick and keyboard controls for F/A-18 Interceptor. The cockpit and controls are the same for both the F-16 and F/A-18. After you've seen the demonstration flight, and have flown in free flight, you practice the training maneuvers vital to successful combat. You'll qualify for active duty, practice selected combat missions, and then fly in actual combat against the intruders.

GETTING STARTED

You can play *Interceptor* on an Amiga 500, 1000, or 2000. Before you begin, write-protect your disk, then make a playing copy of the disk (refer to your Amiga User's Manual for instructions on formatting blank diskettes and copying diskettes). You can play *Interceptor* using the keyboard or joystick.

Note to new Amiga owners: F/A-18 *Interceptor* requires at least 512K bytes of memory (if your computer has 512K bytes, you should disconnect the external drive to receive improved sound). It's recommended that you have a color RGB monitor and one megabyte of memory to maximize sound capabilities, as well as to view the Demonstration Flight in full. To get started:

1. Turn on your computer and monitor.
2. Plug your mouse into Port 1, and your joystick into Port 2.
3. Insert your playing copy. If you have an Amiga 1000, use KickStart 1.2 or 1.3, then insert your playing copy when the on-screen request for the WorkBench appears. Move the pointer to the Program Disk Icon, double-click the mouse button, then double-click on the *Interceptor* icon at the center of the screen.
4. The title screen and credits appears; when prompted, enter a call-sign to enlist in a full Tour of Duty. Then press Return (see note below).
5. When the Mission Selection screen appears, press the number of the option that you want to begin to play.

Note: When you write-enable your disk, "R" for Rookie appears as the current call-sign. The Rookie is a pilot who has successfully completed the first three F/A-18 Interceptor missions; using the "R" call-sign thus lets you select from a wider variety of missions right away. If you wish to use your own call-sign (thus permanently erasing the Rookie), you must select 8 ("Your Current Flight Log"), then reset the log by pressing Shift + 2. Now press 1 to update the log to disk. A message appears requesting you to enter your own call-sign. Or, you may remove the program disk and insert a blank, initialized disk in DFO: A message appears asking you to enter a call-sign. You may opt not to enlist for a Tour of Duty. However, you must still pass Qualification in order to fly combat missions.

How to Use the F/A-18 Flight Computer

To play F/A-18 Interceptor, you need to enter a security countercode after you select any of the Flight options (see "Flight"). At the on-screen prompt, you'll use your F/A-18 Flight Computer to line up the 4 letters and/or numbers, then type in the appropriate code visible in the window above the last letter or number.

1. The first letter or number is for the innermost (smallest) dial on the wheel. Find that character.
2. Find the second character on the middle wheel, and line it up directly over the first.
3. Find the third number on the large, outer wheel. Line it up with the first two characters.
4. Now look on the innermost wheel to find the fourth character (a window is placed directly above each). Type in the numerical code visible in the window above the fourth character, and press Return.
5. You should receive confirmation to proceed with the mission. If you enter the incorrect countercode, you are given two more chances to clear security before the program asks you to re-boot.

Note: Use care when selecting characters on the Flight Computer; an "8" can look like a "B", or an "0" can resemble a "D". To practice using the F/A-18 Interceptor Flight Computer, find the number for the combination 9E5F. You're on the right track if the answer you come up with is 057247. See Flight Computer illustration.

AIRCRAFT REFERENCE

When you take to the air, you fly one of two intercept aircraft - either the General Dynamics F-16 Fighting Falcon or the McDonnell Douglas/Northrop F/A-18 Hornet. In your capable hands, the Falcon and the Hornet are both weapon and shield. Please refer to Appendix A-Aircraft Specifications, for more information on both aircraft.

Joystick Control

You control your plane in flight by using the keyboard, or a joystick. Take control of the joystick when you plane is taxiing down the runway during takeoff. Once you have achieved takeoff speed of about 200 knots, pull back on the joystick and take to the air. In flight, move the joystick in the direction that you want your aircraft to fly. The joystick's fire button fires the selected weapon against the selected target, and triggers the instructor's next maneuver in Training: Missions.

Aircraft Controls

Familiarity with the cockpit controls of both the F-16 Falcon and the F/A-18 Hornet is important to the F/A-18 Interceptor pilot. Prominent features of the cockpit are the HUD (heads-up-display) system, the radar and weapons systems, and the fuel, altitude and air speed indicators. The HUD, which appears on the canopy above the control panel, includes a target indicator, missile-aiming reticle, gun boresight line, weapon select indicator, target-in-range, target lock-on, and a G-meter (load measurement). Refer to the HUD illustrations to familiarize yourself with these features.

Note: Refer to the illustrations of the cockpit control panel and the keyboard when reviewing this list of controls:

F1-F10

Thrust. Controls throttle in 10% increments.

Note: Pressing F1 twice shuts down engine if you are at settings above 10%. Pressing F10 turns on the afterburner if you are at 100% throttle.

=key	Thrust. Increases throttle by one step.
-key	Thrust. Reduces throttle by one step.
Backspace	Brakes. Puts on speed brakes or ground brakes (depending on your location when you apply them). The "Brakes" indicator on left side of control panel lights up when you put the brakes on.
,	Rudder Control. Left Rudder, turns left ("yaws").
.	Rudder Control. Right Rudder, turns right ("yaws").
Cursor keys	Aircraft movement. The up arrow pitches the nose down, the down arrow pitches the nose up, the left arrow rolls it left, and the right arrow rolls it right.
G	Gear. Raises or lowers the landing gear.
A	Arrestor Hook. Extends the arrestor hook on F/A-18 for carrier landings
H	HUD. Turns Heads-Up Display on/off. All displays, except that for a selected weapon, disappear when you deactivate the HUD. These return when you re-select it.
J	ECM Jammer. Turns ECM (Electronic CounterMeasures) on/off. "ECM" is on the right side of the panel and is highlighted when selected.
C	Chaff. Dispenses rapid-bloom chaff to jam an enemy aircraft's electronic surveillance system, as well as radar-homing missiles.
F	Flare. Dispenses an IR flare to draw IR guided missile away from your craft.
M	Map. Displays the map of airspace and your location on the HSI (Horizontal Situation Indicator).
R	Range. Controls the radar resolution (2, 10 or 40 miles)

T	Target Select Selects the radar contact as a target. Toggle through the available targets by pressing T repeatedly.
Return	Weapon Select. Press repeatedly to toggle through the available weapons. The selected weapon is highlighted by a red bar in the weapons window on the control panel.
Space bar	Trigger. Fires active weapon at the selected target.
Shift + F	Dispense Rescue Pods. Releases rescue pods in some missions.
Shift E	Eject. Ejects you from a doomed aircraft.

Simulation Controls

P	Pause. Pauses the game; press P again to restart the action.
Esc	Reset Mission. Returns you to the beginning of the current mission.
Shift + Esc	Exit Current Mission. Returns you to Mission Selection screen.

View Controls

Keypad Enter	Switches viewing mode from first-person perspective, inside the cockpit, to third-person perspective, outside the cockpit; press Enter again to re-enter the cockpit. Press Enter to skip the "zoom down" that follows your selection of any of the scenarios; you'll go straight to the cockpit.
Shift + Enter	Takes you to the control tower nearest your starting location.
[]	Zoom. Left bracket zooms out, right bracket zooms in.

The following keys, on the numeric keypad, function when your view is from inside the plane:

4	Turns your head to the left.
----------	------------------------------

- 6 Turns your head to the right.
- 5 Locks your head in present position (see note below).
- 2 Turns your head around for backward viewing (checks your "6").
- 1 Straight-down view.
- 7 Straight-up view.
- 8 Returns you to forward view (shortcut).

Note: The program automatically returns you to the forward view after 4 seconds. To prevent this, press 5 (see above) to retain the pilot viewing mode that you have selected.

When you press Enter, the View Mode numeric keypad remains operative. However, the view each number gives is the position of the viewer outside the aircraft. Scroll through the numbers on the keypad to view your plane in flight from the different possible angles, then press Enter again to return to the cockpit view. In addition to the 7 keys mentioned above, the 3 and 9 keys are operative when you're viewing the plane from the outside views (the 5 key now shows you a view of the aircraft from directly above). In addition, the decimal point gives you a beneath-the-plane view.

ECM (Electronic CounterMeasures)

You can use electronic countermeasures to foul the enemy's radar, avoid detection and deflect an impending attack. ECM has both an active form, like jamming the enemy's radar electronically, and a passive form, like dropping chaff, composed of small lengths of wire or foil. Chaff acts as a signal decoy, confusing the tracker's radar - even causing missile guidance on the wrong target. When a pilot faces impending attack, he will often employ ECM and perform an evasive maneuver simultaneously.

Both the F-16A Falcon and the F/A-18 Hornet are fitted with standard ECM pods. There is an ECM indicator on the right side of your cockpit panel. It is highlighted in yellow when your ECM pod is active. Using ECM reduces the range and effectiveness of enemy missiles, but also provides a beacon to your current position.

Available Weapons

Each aircraft boasts medium and short-range missiles, plus a short-range cannon. The AIM-120A AMRAAM is the medium-range missile on each aircraft; it is a highly accurate "fire-and-forget" weapon. The AMRAAM has an effective range of over 30 miles; its guidance system keeps it on a strapdown, inertial course until it approaches the target. Then the AMRAAM activates a small active seeker in its nose as it hones in on the target.

The short-range missile available to the F/A-18 Interceptor pilot is the AIM-9L Sidewinder anti-aircraft missile. The Sidewinder has a range of 11 miles, and reaches a speed of Mach 3. A pilot maneuvering at 6g can still release a Sidewinder towards its target; the Sidewinder can be released when the attack craft is as close as 1,000 feet. The AIM-9 performs best when it is launched from astern at a glowing afterburner, but its "all-angle" capability allows launch at head-on targets as well.

The close-range cannon is the GE-M61. This is a 20mm cannon that fires 570 rounds at 6,000 rounds per minute. In the modern era, a close-range gun is most valuable in the midst of a close-quarters dogfight.

FLIGHT

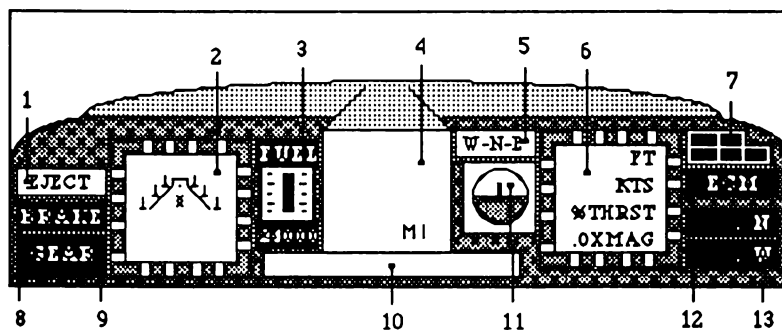
Now that you've completed your brief check-out each aircraft, you're ready to solo. Your departure point is always the Mission Selection screen, where you choose the flight option that's right for you. Select Demonstration Flight and become familiar with the basic mechanics of flight from a passenger's point of view - and some of the key landmarks of the San Francisco Bay Area.

Select Free Flight a few times if you are a beginner to get the feel of the airplanes, then select Training: Demo of Maneuvers, to get acquainted with the basic combat maneuvers. To practice the maneuvers behind an expert instructor flying an F-16, select Training: Practice Maneuvers, and go through the maneuvers (descriptions of each found in Training:Practice Maneuvers). Select Qualification to qualify for combat: now, go on to Next Active Advance Mission, where you are dispatched on active status to face one of 6 missions. As you complete them, you can relive glories by selecting a previously completed mission in Selectable Missions.

Demonstration Flight

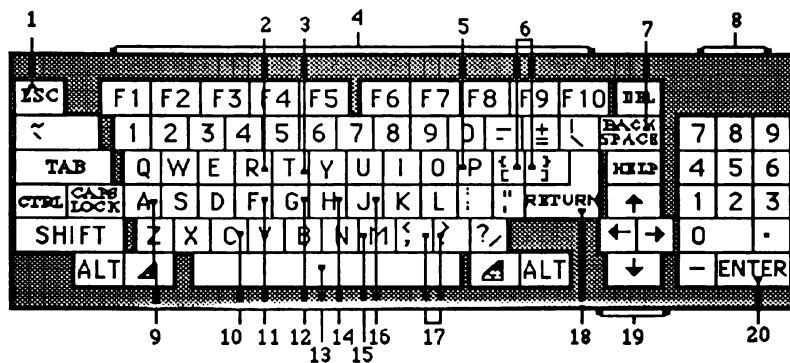
After you select the Demonstration Flight (enter 1 at the Mission Selection screen), you zoom onto the Carrier Enterprise (CVN65). You watch as the Navy's workhorse takes off from the carrier deck, with its afterburners alight. When you select the Demo, you cannot take control of the plane. The Demo gives you a brief taste of flight, then lands at Alameda Naval Air Station. The Demo is self-repeating; to exit to Mission Selection, press Shift + Esc. When you're ready to take control of the aircraft, go on to Free Flight.

Cockpit Control Panel



- 1) Ejection warning
- 2) Ordnance display
- 3) Fuel indicator
- 4) Radar screen
- 5) Compass
- 6) Status display
- 7) Warning lights
- 8) Ground Brake/Speed Brake indicator
- 9) Landing Gear indicator
- 10) Message window
- 11) Artificial Horizon
- 12) ECM indicator
- 13) Map position

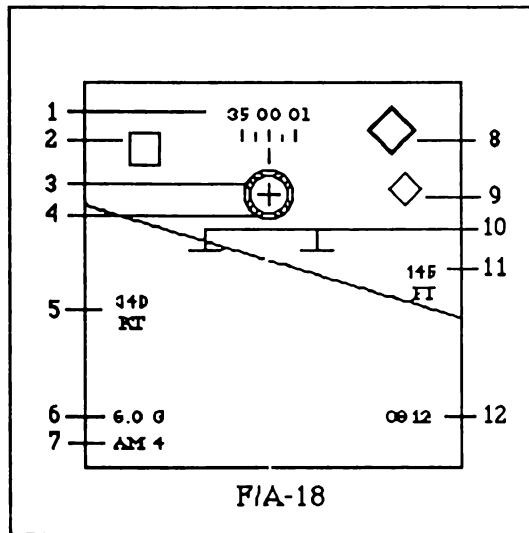
The Keyboard



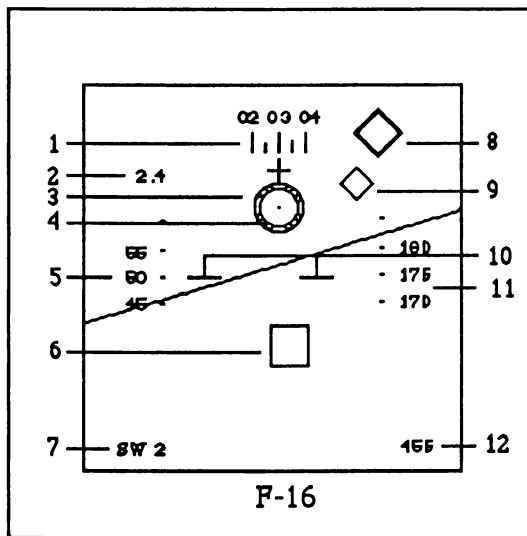
- 1) Restart mission
- 2) Range select
- 3) Target select
- 4) Throttle Control
- 5) Pause
- 6) Zoom in-out
- 7) Brakes
- 8) View direction select
- 9) Arrestor hook
- 10) Chaff
- 11) Flare
- 12) Landing Gear
- 13) Fire selected weapon
- 14) Toggle H.U.D.
- 15) Map
- 16) ECM Jammer
- 17) Rudder Control
- 18) Weapon select
- 19) Control stick
- 20) Point-of-view select

Shift-E	Eject
Shift-Esc	Main menu
Shift-Enter	Control tower
Shift-F	Rescue Pod

HUDS



- 1) Compass
- 2) Target designator
- 3) Range marker
- 4) Aiming Reticle
- 5) Airspeed
- 6) "G" Loading
- 7) Weapon selected & number remaining
- 8) Missile seeker locked
- 9) Missile seeker searching
- 10) Wings
- 11) Altitude
- 12) Target closing velocity



- 1) Compass
- 2) "G" Loading
- 3) Range marker
- 4) Aiming reticle
- 5) Airspeed
- 6) Target designator
- 7) Weapon selected & number remaining
- 8) Missile seeker locked
- 9) Missile seeker searching
- 10) Wings
- 11) Altitude
- 12) Target closing velocity

Free Flight, No Enemy Confrontation

Free Flight, No Enemy Confrontation is the perfect opportunity to become familiar with the skills of flight that build a combat pilot's base of experience. Once you select Free Flight, you enter the security countercode (see the instructions in the "Getting Started" section of this manual) and then select your standing location, choosing between San Francisco International (1), Alameda Naval Air Station (2), Moffett Field Naval Air Station (3), and an Aircraft Carrier off the coast of San Francisco (4). You choose to fly either the F/A-18 Hornet or the F-16 Falcon (if you select the carrier as your

starting location, you are assigned an F/A-18 automatically). Watch as the view zooms in to your aircraft in takeoff position then check your control panel and verify that all systems are "go". To take off, just press F10 to increase your throttle to "military power". Once your airspeed reaches 200 Knots, pull back on the joystick to lift off.

In Free Flight, you face no enemies, and have no aerial targets to sight on. However, you can explore the possibilities of flight, practice takeoffs, and familiarize yourself with the control systems and flight characteristics of your aircraft. Free Flight also lets you in on the sounds of flight - the roar of takeoff as you accelerate, the whine of your landing gear when raised, the kick of supersonic power as you light the afterburners.

Note: If you should crash in any of the F/A-18 Interceptor missions, you are returned to your starting position, in position to take off again. However, if you are enrolled in a Tour of Duty, crashing means that you won't gain mission completion credit in your flight log (see Your Current Flight Log).

Training - Demo of Maneuvers

In Training: Demo of Maneuvers, you ride as a passenger, as a flight instructor performs a sequence of basic flight maneuvers. After you select the Training Demo from the Mission Selection screen, you'll be prompted to enter a security countercode. Then you're airborne, ready to watch the first of 7 maneuvers. The pilot flies at 80% thrust throughout the Demo; he may climb to altitudes above 14,000 feet, and fly as fast as 650 knots.

As a passenger, you have no control of the aircraft. However, to skip any maneuver, or to interrupt a maneuver in progress and select the next in sequence, press Return (you may press Return more than once if you wish to jump forward several maneuvers). Once the sequence of maneuvers is complete (see Training: Practice Maneuvers for a complete list of the maneuvers), it will repeat automatically until you exit the Demo. Take advantage of the Training Demo; it gives you a leg up when you fly the maneuvers yourself in

Training:Practice Maneuvers. To exit and return to the Mission Selection screen, press Shift + Esc.

Training - Practice Maneuvers

In Training: Practice Maneuvers, the maneuvers are the same as those in Training: Demo of Maneuvers, and you perform them in the same order. Once you select Training: Practice Maneuvers, enter the security countercode, then read the on-screen instructions. Now, you're lined up on the runway, behind the instructor's plane; he'll wait for you to begin his takeoff. Accelerate to 80% thrust; when you reach 200 kts, take to the air. Try to stay in sight of the instructor as he climbs into position for the first maneuver. Follow the instructor, and perform each maneuvers in sequence as he does. If you lose the instructor once he starts to perform the maneuvers, you can reposition yourself behind his aircraft by pressing Return (once you're repositioned, make sure you stay within range of the instructor without overtaking him).

Use your experience in Training: Demo of Maneuvers, and follow the instructor as he loops or rolls, breaks or flies inverted. If a particular maneuver is too difficult, you can always trigger the next maneuver automatically. Make sure you're lined up in sight of the lead plane, then press the joystick button when the instruction to trigger appears at the bottom of the cockpit panel. The instructor executes the maneuver, and you try to keep up. To skip a maneuver, press Return; to leave a smoke trail behind the instructor's plane, press S. Just as in Training:Demo of Maneuvers, the maneuvers repeat automatically until you exit. Press Shift + Esc. to return to Mission Selection.

What follows are detailed descriptions of the 7 maneuvers you practice in Training:

Aileron Roll

To perform an aileron roll, push the stick to one side. The plane rolls around, and its nose describes a circle on the horizon, in combat, use rolls to position yourself to "lift" through climbs, dives and turns.

Break Turn

Use the Break Turn when the attacker is first seen approaching, while you're in the enemy's "cone of vulnerability." To execute this maneuver, break hard in the direction of the attack, fly with your wing pointed at the ground, then right yourself. You want to generate "angle-off" and ruin the aggressors angle, making him overshoot.

Inside Loop

In an Inside Loop, you pull up quickly and go all the way over. Your head faces the center of the loop, while you pull positive G's. It's a bit like an aerial backward somersault. Perform an inside loop to trade positions with an opponent who is near.

Split-S

In the Split-S maneuver, the defender rolls inverted and then dives away vertically, pulling out in the opposite direction from his opponent. The idea is to force the attacker to overshoot, positioning yourself for a reversal while destroying the opponent's angle of attack.

Vertical Half-Loop

In a Vertical Half-Loop, you pull back on the stick, get to the top of the loop, then fly horizontally in inverted flight. Now roll your plane upright. Also known as an Immelman, the half-loop allows you to gain altitude and reverse directions.

Barrel Roll

In the Barrel Roll, the defender first breaks, then rolls in the opposite direction of the break. The Barrel Roll involves loss of much speed; it works best when the attacker is in a high angle-off, high overtake situation. If you execute this maneuver properly, the opponent should overfly you.

Inverted Flight

Inverted Flight is a basic part of several aerial maneuvers. To accomplish it, pull the stick back until you're upside down, maintain your direction, then fly inverted. Try to maintain level flight if you can.

Qualification

When you've completed your training and orientation, choose Qualification at the Mission Selection screen. You quickly hear the roar of the F/A-18's powerful engines, and look out from the Hornet's cockpit onto the Enterprise's deck and the ocean beyond. After entering the security code, read the on-screen instructions for qualification.

In Qualification, you must take off successfully from the carrier's deck, fly around, then return to land safely on the carrier deck. You should be prepared for potential opponents in the Pacific skies; your enemies are indifferent to your mission, and will harass you with impunity. Deal with bogeys if they appear, then find your way back to the carrier. Get a bearing on the ship, reduce your speed to 175 knots, drop your altitude, and bear down on the flight deck. Put on your brakes, lower your landing gear and arrestor hook, then hit the wires to come to a full halt.

Once you pass Qualification, you are eligible for active duty (a message appears on-screen confirming your advancement to active combat status).

Escape repositions you on the carrier deck; Shift+Esc sends you back to Mission Selection.

Next Active Advanced Mission

When you select Next Active Advanced Mission, you take on the challenge of several combat missions against the intruders. Once you select Next Active Advance Mission and enter you security countercode, you'll fly the first of several missions. Each has a specific task for you to execute (see the descriptions of 4 of the missions below). To succeed in Next Active Advanced Mission, you must be versed in all phases of active combat - flying the aircraft, detecting the enemy while avoiding detection through electronic and visual measures, closing in for an attack, selecting and readying your weapon systems, attempting kills, and then maneuvering to disengage from combat.

Note: The warning lights in the upper-right corner of the cockpit control panel flash these different colors when the following situations arise:

- 1) A friendly plane in the area is green
- 2) An enemy in the area is red
- 3) A stall warning is red

- 4) An RH missile fired at you is white
- 5) An IR missile fired at you is white.

In addition, an explanatory message appears at the bottom of the control panel for each "event".

Visual Confirmation

In this first combat mission, you take off from San Francisco International in an F-16 Falcon or an F/A-18 Hornet. Your assignment is to find and identify an aircraft (it's somewhere out there!), then return to SFO unscathed. The aircraft which you must identify may be friend or foe. In Visual Confirmation, you face some danger of attack. All your weapons systems are operational, so arm your weapons if you spot a bogey. Shoot only if fired upon. If you can avoid a melee, you're better off. An on-screen message lets you know when you've completed your assignment. Head for home, and put your aircraft down in one piece.

Emergency Defense Operation

When you complete Visual Confirmation, you're ready to fly Emergency Defense Operation. Select it, and you fly an F/A-18 Hornet from the deck of the carrier anchored off the coast of San Francisco. Your mission assignment is clear and compelling: "We have hostile aircraft in your sector. Air Force One currently on course to SFO." That means that the Commander-in-Chief is unaware of the attempt to assassinate him and fatally compromise U.S. security. In this prospective mission, you must intercept and occupy the aggressor planes, allowing the Air Force One pilot time to land safely at SFO (an on-screen message informs you when the President's plane is down). Scramble to the scene of the attack, deflect or destroy the enemy, and return to the carrier to land. Emergency Defense Operation is a combat pilot's challenge of the highest magnitude - including the ability to gain attack position, out-manuever your opponent, and out-gun him if necessary.

Intercept Stolen Aircraft

Two F-16 Falcons from the U.S. Air Force have defected to the enemy's side, and are aided in their escape attempt by a couple of unidentified escorts. Your assignment is to take off from the carrier, find the would-be defectors and their co-conspirators, and deal with the enemy planes in the most convincing manner possible. Fly in front of the would-be Benedict Arnolds to inform them that the game is up. If they agree to return home, escort them there; if they disobey your signal to surrender, prevent their getaway at all costs.

Search and Rescue Operation

In Search and Rescue Operation you try to find and rescue a downed friendly pilot. Take off from the Carrier Enterprise and find the lost pilot, using radar and your keen pilot's eyes. Again, enemy aircraft seek to prevent the execution of your mission. After you locate the downed flier, you should deploy the rescue pod within his range. A message informs you if the drop is successful. Once the downed pilot is safe, your job is done - return to the carrier and safety.

Selectable Missions

Choose Selectable Missions after flying Next Active Advanced Mission. You'll be able to select any of the missions that you completed in Next Active Advanced Mission, plus one more. Each time you complete a mission in Selectable Missions, you are given a new scenario to select from the Selectable Missions screen. As you take to the air in each mission, all of your instrumentation and weapons are operational; your aircraft is standing by, so strap on your G-suit and climb aboard. Fly Selectable Missions to practice the combat scenarios before returning to combat on active status.

Note: There are other selectable missions, which we won't describe here. Once you have successfully completed an active mission, you may repeat it. The second time around, though, you may have to contend with a tougher array of opposing pilots.

Your Current Flight Log

Your Current Flight Log lets you view your progress when you enroll in a Tour of Duty (you must write-enable your disk before enrolling). Select Your Current Flight Log from the Mission Selection screen: you view a summary that includes the following:

- 1) Total missions started
- 2) Missions successfully completed
- 3) Amount of weapons fired and hits achieved
- 4) Accumulated flight time
- 5) Total number of crashes - doesn't include ejections
- 6) Hits suffered from enemy missiles

After each mission that you complete, your flight log is updated. To save the update onto your disk, press 1. Any missions you've completed count to your credit; for example, if you've completed the first two Selectable Missions, you can begin the third whenever you like. As you fly more missions, you will continue to update the Flight Log, keeping track of your progress throughout play.

If you wish to reset the Flight Log and keep statistics from scratch, press Shift+2. This erases the current log and sets all statistics at 0. When you reset the Flight Log, you erase credit for any missions completed. Remember to enter a new call-sign.

Note: You'll need to re-qualify to fly missions.

To exit from the Flight Log back to Mission Selection, press Esc.

TIPS FROM A COMBAT VETERAN

Learning the workings of today's modern fighters is a key element of the pilot's art. He needs to know where all the controls are by touch, but more than that, he needs to approach his aircraft as the wonder of aerospace technology that it is. Your F/A-18 Interceptor and F-16 aircraft are the best that the Navy and Air Force can put in the air. They are the results of thousands of hours of design and engineering, and are kept in tip-top shape by careful ground crew maintenance. In your hands, the F-16 and the F/A-18 turn into precise instruments, and the trained pilot emerges as a surgeon of the sky.

The art of combat flying is a combination of skills. Experience is any pilot's best teacher - there's no substitute for long hours spent perfecting basic flight maneuvers, the principles of attack, and successful disengagement. The qualities that a top gun must have include courage, determination, acceptance of danger, and a measured faith in his ability to get the job done without fanfare. A flashy show-off is guaranteed one of two outcomes - a quick trip to the beyond, or lots of practice separating himself from the lines of his flight chute after a dizzying fall to earth.

A solid pilot builds flight skills in stages, taking on the right challenges at the right time - taking it smart, not easy. That means graduated training, moving from Free Flight to Training, on to Qualification, then Selectable Missions, and finally Next Active Advanced Mission. He applies basic principles like achieving surprise, detection, gaining a superior attack position, closing, and using weapons in an attack. A smart pilot builds a good variety of maneuvers into his repertoire, practicing each until it is second nature. Careful preparation helps instill a calm, winning attitude in the most heated of aerial encounters.

Welcome to the combat pilot's fraternity!

APPENDIX A - AIRCRAFT SPECIFICATIONS

The General Dynamics F-16 Fighting Falcon is a state-of-the-art, lightweight, multi-role air-combat fighter with an advanced ground attack capability. The F-16 is a single-seat aircraft with a single vertical tail, mid-mounted tailerons and wings, leading-edge flaps, and trailing-edge flaperons.

Engine

The F-16 has a single Pratt and Whitney F100-PW-100 engine with 23,830 lbs of thrust.

Dimensions

The aircraft has a wing span of 31 feet and a length of 47 feet.

Weight

16,794 lbs when empty, and 37,500 lbs at maximum take-off weight.

Navigation

The Fighting Falcon's primary navigation system is a Singer-Kearfott SKN-2400 INS with a Standard ALQ-131 ECM Pod.

Radar

Its radar capability includes an I/J-band pulse-doppler set, with range scales of 2,10, or 40 miles. The Falcon's downlook capability allows detection of fighter targets over 30 miles - including treetop targets.

Ordnance

The F-16 can carry a weapon load of up to 20,450 lbs. With 2 short-range Sidewinder heat-seeking missiles boasting an 11 mile range, 4 medium-range AMRAAM missiles with a 30 mile range, and an internally-mounted GE M61 A-1 gun capable of firing 500 rounds of armor-piercing projectiles at a maximum range of 500 meters, the F-16 is a sleek and deadly weapon of defense.

Speed

The Falcon can attain a maximum velocity of about 1350 mph (Mach 2.05) at 40,000 feet; at sea level, the F-16 reaches a speed of around 915 mph (Mach 1.2).

Combat Radius

The Falcon's tactical combat radius with maximum internal fuel is 340 miles.

Ferry Range

The fighter's ferry range is 2415 miles.

The combat pilot is assured a quiet ride and an exceptional all-around cockpit view when he takes the Falcon out for a ride. Control inputs are force-sensing sidestick controller and pedal, both positioned for maximum effectiveness. The speed and range of the F-16 Falcon guarantees top performance in several areas of combat.

The carrier-based McDonnell Douglas/Northrop F/A-18 Hornet is a U.S. Navy workhorse, performing both fighter and attack functions. Designed as a replacement for the timeless F4 Phantom II and the versatile A7, Corsair, the F/A-18 has filled a critical strategic need in the Navy's combat arsenal.

Engine

The Hornet is driven by two GE F404-6E 400 engines, each of which generates 16,000 lbs of thrust.

Dimensions

It spans 37 1/2 ft. without missiles, and over 40 feet with missiles.

Weight

The F/A-18 weighs 23,050 lbs empty, and 36,710 lbs when loaded for a fighter mission.

Radar

Search and define, lock-on and multiple-pass capabilities.

Ordnance

There are 9 external weapon stations on the aircraft, plus 4 medium-range AMRAAM missiles, 2 short-range Sidewinder missiles, and a GE M61 cannon (20mm) that fires up to 570 rounds.

Speed

The F/A-18 can reach a maximum speed (clean) of 1190 mph, or Mach 1.8, and will sustain a combat maneuver ceiling of over 40,000 feet.

Combat Radius

The Hornet's air-to-air combat radius (with no external fuel) extends to 461 miles.

F40 PURSUIT

AMIGA STARTER

GETTING STARTED

Turn on your monitor, then your computer. Insert the KICKSTART disk(for Amiga 1000 owners) into the internal drive. The AMIGA will read the system from this disk, then it will require the WORKBENCH disk. Now you are in the common sequence of all AMIGA models.

Insert the F40 disk into your disk drive (instead of the WORKBENCH disk).

ATTENTION

You must never remove the F40 disk from the drive while in use.

COMMANDS

The Ferrari is controlled by the joystick or the mouse.

Joystick commands will be interpreted as follows:

UP	accelerate
DOWN	decelerate and brake
LEFT	turn left
RIGHT	turn right
FIRE BUTTON	shift up and down

Mouse commands:

The right button accelerates.
The left button decelerates and brakes.
The two buttons together shift up and down.

Keyboard Commands:

Left Arrow:	turn left
Right Arrow:	turn right
Up Arrow:	accelerate
Down Arrow:	decelerate and brake

The F2 key displays the road map.
The F3 key turns on and off the radar detector.
The F4 key selects the speed unit (MPH/Km/h).

The F5 key allows you to end the game if desired.
The F6 key displays the steering wheel.

When your speed doesn't correspond with the cornering radius, a 360 degree spin can occur.

A 360 spin can be triggered by shifting down and cranking the steering wheel at full speed.

You come out of a 360 spin by straightening the steering.

When the game ends, enter your name next to your score. You do this by selecting the letters one by one with the cursor moved by the mouse or the joystick. Press the FIRE button to store each letter. Once your name is entered, move the cursor to the END character and press the FIRE button. Your new score is now stored on the disk.

If you want to skip the opening music, press the FIRE button as soon as the music starts.

THE STORY

You're at the wheel of the fabulous Ferrari F40 in a race against time!

You'll go tearing through four states in search of the quickest way to accomplish your mission. You will encounter problems with policemen who don't appreciate the sight of a Ferrari F40 crossing their state at 200 miles per hour.....

But, it's not that easy.....

You must plan your route carefully from the map of each state displayed on screen. It will show highways you will speed on. Beware, the shortest routes aren't always the easiest as the sight and sound of a flashing light will soon make you realize.

Your Ferrari features the latest radar, which assists you in detecting police cars and road blocks. They have been set up to stop you, therefore keep an eye on the highway junctions as you may be forced to change your direction!

YOUR MISSION

At the beginning of the game, your starting positions and the first destination will be displayed on the map. You will have to consult the map repeatedly for direction information.

When nearing a junction, your on board computer will display the highway numbers and the direction arrows of the impending road. The map represents the highways of four states.

You can cut through fields, but watch out for telephone poles and retaining posts!

The police will send cars and set up road blocks to stop you. Avoid them by doing some off-roading or by sneaking through barrier gaps.

At the beginning of each stage, the timer displays the time available for this stage.

As soon as you start your engine, the countdown starts. You have to reach the finish within the allocated time. If it reaches zero, your Ferrari explodes!

SCORE AND BONUS

Your score increases with the distance covered.

If you complete the stage within the allocated time, the bonus will be added to your score.

Bonus are earned as follows:

20,000 points at the beginning of the first stage.

40,000 points at the beginning of the second stage.

60,000 points at the beginning of the third stage. Etc....

10,000 points each time you break through a police road block.

The bonus decreases as soon as you start driving. The less time you use to complete your mission, the more bonus you could earn.

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